BIBLIOGRAPHY OF THE GEOLOGY OF INDONESIA AND SURROUNDING AREAS

Edition 7.1 – 8 June 2020

J.T. VAN GORSEL

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ABOUT THIS BIBLIOGRAPHY (Edition 7.1, June 2020)

The purpose of this bibliography is to facilitate access to the vast heritage of geological studies in Indonesia, as well as that of surrounding areas whose geological characteristics extend into parts of Indonesia (mainland SE Asia, SW Pacific, NW Australia). Awareness of the vast body of existing literature on the geology of Indonesia should improve the quality of future work, limit redundant research and maintain credit where credit is due.

This is a 'traditional' bibliography, with public-domain publications listed alphabetically by region or by subject. It resumes a tradition of annotated bibliography work that started with 13 issues by Verbeek between 1912 and 1925, listing 4000 titles on the geology of 'Netherlands Indies' and surrounding regions. This work was continued by Wing Easton (1926-1937), De Neve (1950, 1951), Steenhuis (1951), Klompe (1954-1957) and Tjia (1977). The Geological Survey of Indonesia maintains lists of their publications since 1979.

This bibliography aims to be a comprehensive listing of papers on regional geology, tectonics, structure, stratigraphy, biostratigraphy, paleontology, paleobiogeography, sedimentology, petrography, geochemistry and hydrocarbon occurrences, regardless of date, country or language of publication. Also included are selected papers from specialized fields like coal and mineral occurrences, modern volcanoes, Quaternary geology, mammals and hominid evolution, geothermal, petroleum production and engineering, geological modeling and economic analyses, but these are not complete listings.

Generally not included in this listing are (1) conference abstracts and 'student literature reviews', unless they contain new data or concepts not published elsewhere; (2) papers describing tools, methods, workflows, economic evaluations, project management, etc. without significant geological information; (3) papers in which locations of fields and wells were renamed and disguised beyond recognition; (4) 'vendor brochures' (papers promoting data sets, studies, organizations, farmouts, etc., unless they contain new, unbiased geological information or ideas). Relatively few papers were deliberately omitted for perceived poor quality or redundancy.

The first edition of this bibliography was published as a 700-page pdf addendum to: J.T. van Gorsel (2009) A bibliography and brief history of Indonesia geology literature. Proc. 33rd Ann. Conv. Indonesian Petroleum Association, Jakarta 2009, vol. 1, p. 429-460 (on CD-ROM edition). The 3rd edition (1099p.) went online in May 2011; followed by editions 4 (1253p.; November 2011), 5 (1655p.; October 2013), 6 (2202p., ~19,400 titles; October 2016) and 7.0 (2726p., 22,925 titles, July 2018).

This edition 7.1 of June 2020 contains >23,720 titles (>800 new entries since Ed. 7.0) on 2826 pages, with ~5900 links to open-access papers.

This bibliography is believed to be more comprehensive than what is available from academic reference data bases like Georef, which tend to capture few of the older publications or recent papers published in Indonesia. Besides, they tend to be dominated by not-always-informative conference abstracts and generally require subscription fees that are prohibitive to most academic and independent geoscientists in Indonesia.

Organization

Titles are classified primarily by area. For instance, a paper entitled 'Coal from SW Java' will be under 'Java', not under 'Coal, Petroleum Source Rocks'. Papers on a specific theme, covering multiple areas, like hydrocarbon occurrences, volcanism, source rocks, etc., will be under that topic. General geological and regional tectonic papers will be under 'Regional'.

Annotation and Links

Most papers are annotated with a summary of key points. Absence of annotation does not necessarily mean that these papers are less significant (usually because the paper or abstract were not available).

The ~5900 links to online digital versions of papers included in this bibliography are only for publications in open-access repositories. These links were valid at the time of entry, but unfortunately, internet sites tend to be updated frequently, so several of these links may no longer work. Many additional copyrighted papers can be found online through author's postings on www.academia.com, www.researchgate.com and other sites, or may be obtained by direct requests from authors. Access to other copyrighted digital papers generally require society memberships, institutional subscriptions or payments.

Geographic Names

Many of the geographic names used in this listing are names used at the time of publication or are names of popular usage or convenience, and may or may be not be the currently politically correct or preferred names.

Updates

It is our intention to continue to update this bibliography. Users noticing missing titles are requested to bring this to my attention at e-mail: jtvangorsel@gmail.com.

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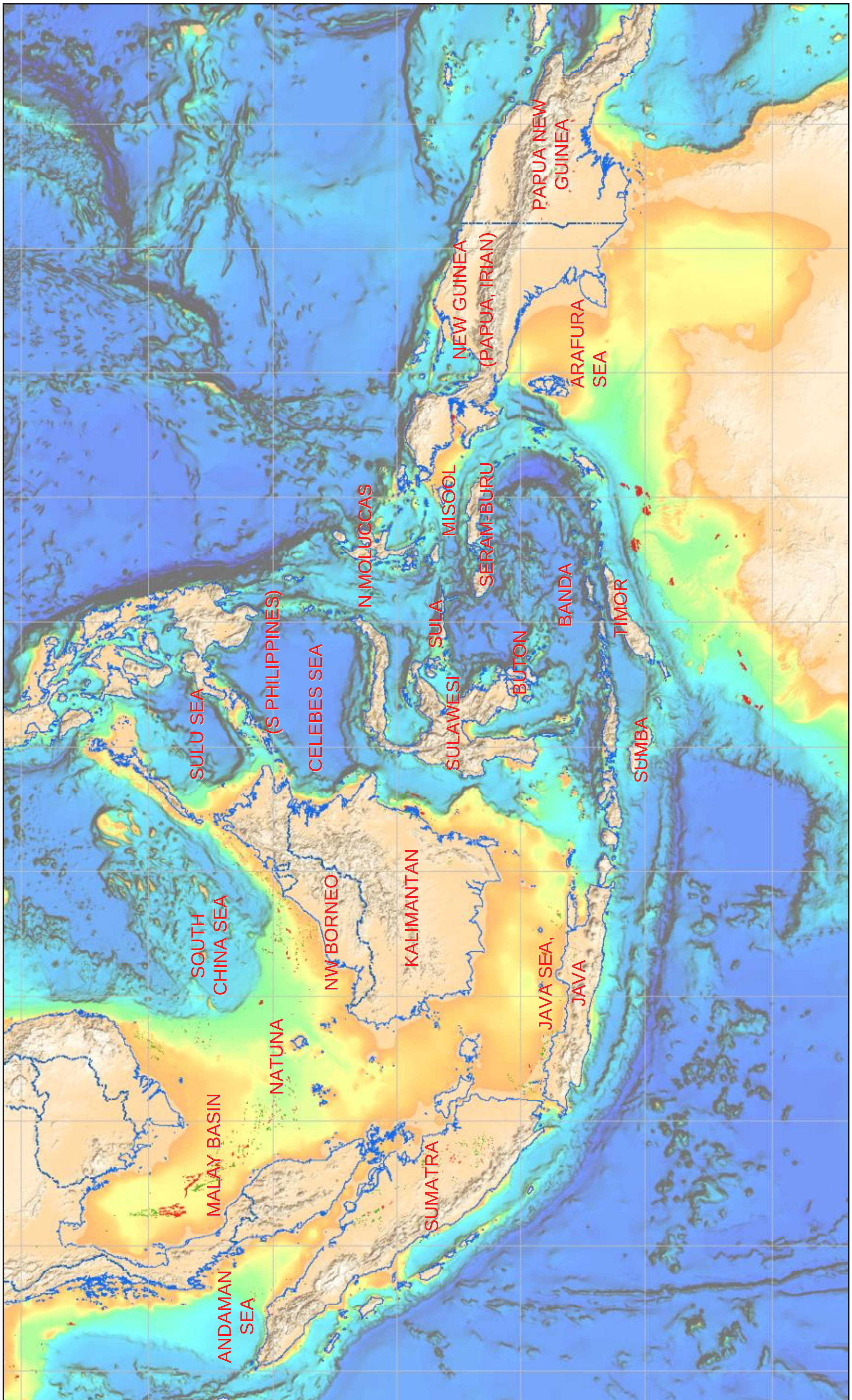
- Debbie Gilbert for moral support and building and maintaining the website and digital data base.

J.T. (Han) van Gorsel
Houston, Texas, USA

Common Abbreviations

Commonly used abbreviations include:
- Directions: *N, S, E, W = North, South, East, West*
- Journals: *J. = Journal, Bull. = Bulletin, Mag. = Magazine, Proc. = Proceedings, Soc. = Society*
- Geological units: *Fm = Formation, Mb= Member, Gp = Group*
- Rock Types: *Sst = Sandstone, Lst = Limestone*
- Time: *My = Million years, Ma = Millions of years ago, ka = thousands of years ago*
- Physical parameters: *T = Temperature, P = Pressure*
- Distances: *m = meter, km = kilometer, ' = feet*
- Rotations: *CW = clockwise, CCW = counterclockwise*
- ~ = about

Online at: *www.vangorselslist.com*


PAPUA NEW GUINEA
NEW GUINEA (PAPUA, IRIAN)
ARAFURA SEA
MISOOL
SERAM-BURU
N. MOLUCCAS
BANDA
TIMOR
SULA
BUTON
(S PHILIPPINES)
CELEBES SEA
SULU SEA
SULAWESI
SUMBA
SOUTH CHINA SEA
NW BORNEO
KALIMANTAN
JAVA SEA,
JAVA
NATUNA
MALAY BASIN
SUMATRA
ANDAMAN SEA

"The first place to start in the hunt for oil is the library" (A.I. Levorsen, 1946)

PUBLICATION TRENDS THROUGH TIME

Figures 1, 2 and 3 illustrate historic trends in the publications on the geology of Indonesia, i.e. total numbers of publications, areas of interest, dominant languages, areas of interest and nationality of lead author, which all changed significantly trough time, reflecting changes in political situations, economic drivers and scientific developments over the last 150+ years. These graphs only include the ~11,000 papers that deal specifically with geology of areas in Indonesia, and do not include 'special topics' or 'Circum-Indonesia' papers (~50% of total in this Bibliography 7.0).

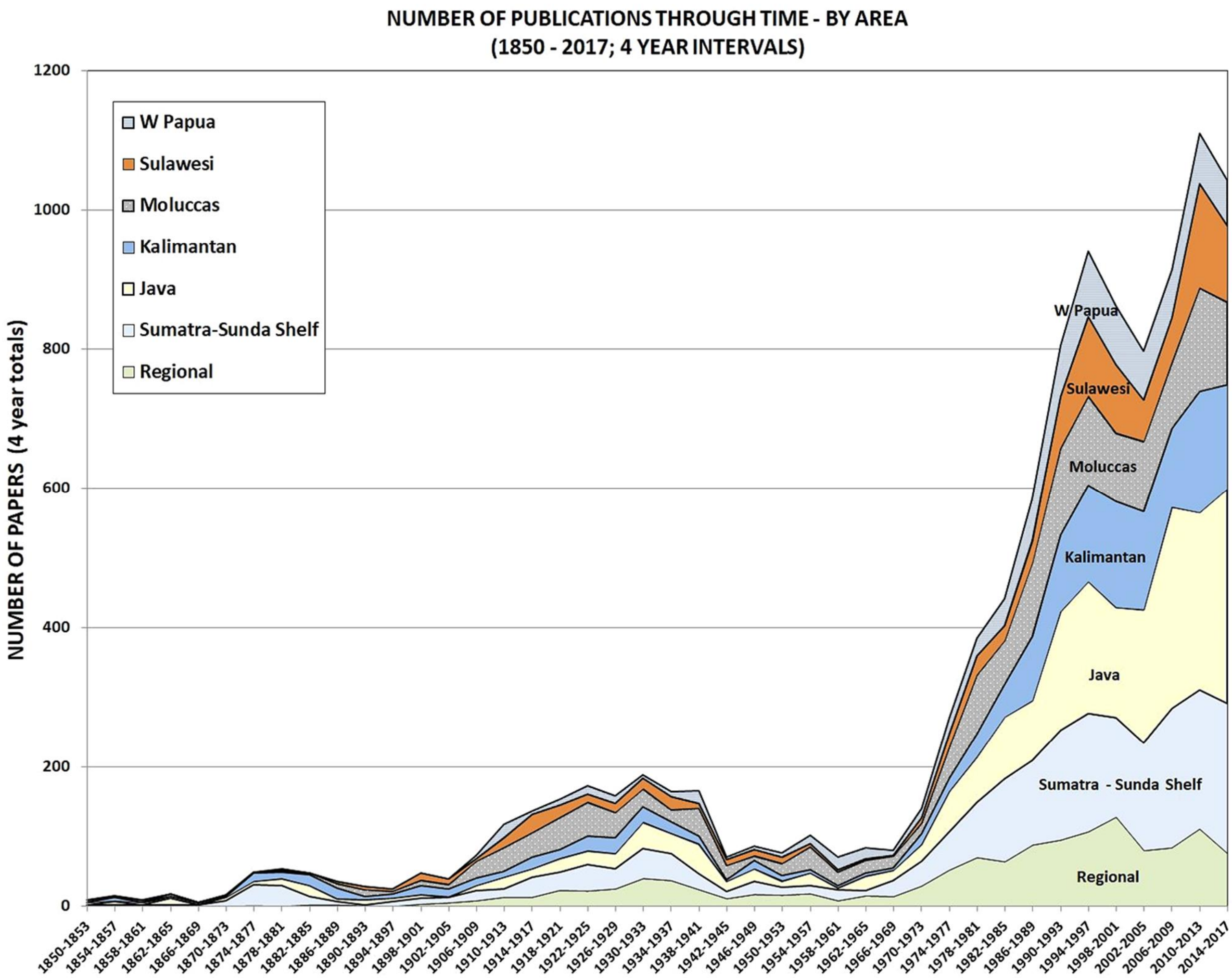


Fig. 1- Number of publications on the geology of Indonesia from 1850-2017, categorized by geographic areas. This graph represents a subset of ~10,630 geological papers in the current Bibliography that are tied to specific areas of Indonesia.

Four major periods may be distinguished (Figure 1):

(1) 1850-1905: Geoscience publications from this early period are mainly summaries of mineral, coal and oil exploration work, or initial reconnaissance surveys. They are generally short, poorly illustrated papers in Dutch and in German, focusing mainly on western Indonesia. Exceptions to this rule were the impressive first regional descriptions and maps by Verbeek on West Sumatra (1875), Bangka- Belitung (1897), SE Kalimantan and Java-Madura (1896).

(2) 1905-1940: This was a period of significant expansion of mapping and other geological studies, with many new hydrocarbon and metals discoveries. A systematic mapping program of Sumatra and Java was started by the government geological survey. There was an increase in industry, government and academic reconnaissance surveys into Eastern Indonesia and New Guinea. Many large volumes on surface geology,

paleontology, petrography, etc., were published of all parts of Indonesia. Principal languages were still Dutch and German, but English became increasingly common in the 1930's.

(3) 1940-1970: Survey and publishing activity had already started to slow down during the Great Depression of the 1930's, but came to an almost complete standstill between 1941 and 1950 (World War II, Revolutionary years), followed by very low levels of research and publishing until the late 1960's. The oldest geology paper in the bibliography in Indonesian language is from 1962.

(4) 1970-2018: After political changes in the late 1960's expansions of investment, exploration and research led to spectacular growth in resource-related and academic publishing after 1970.

The data in this bibliography suggests the total number of geoscience publications on Indonesia:
- increased from about 100 papers in 4 years in 1970 to >1000/ 4 years after 2005;
- it decreased after the Asian financial crisis of 1997, but came back to new record levels after ~2010.

Before 1945 the main languages of publication were Dutch and German, with increasing share of English-language papers after ~1915. Since 1945 by far the dominant language has been English, with increasing numbers of papers in Indonesian since the late 1970's (Figure 2).

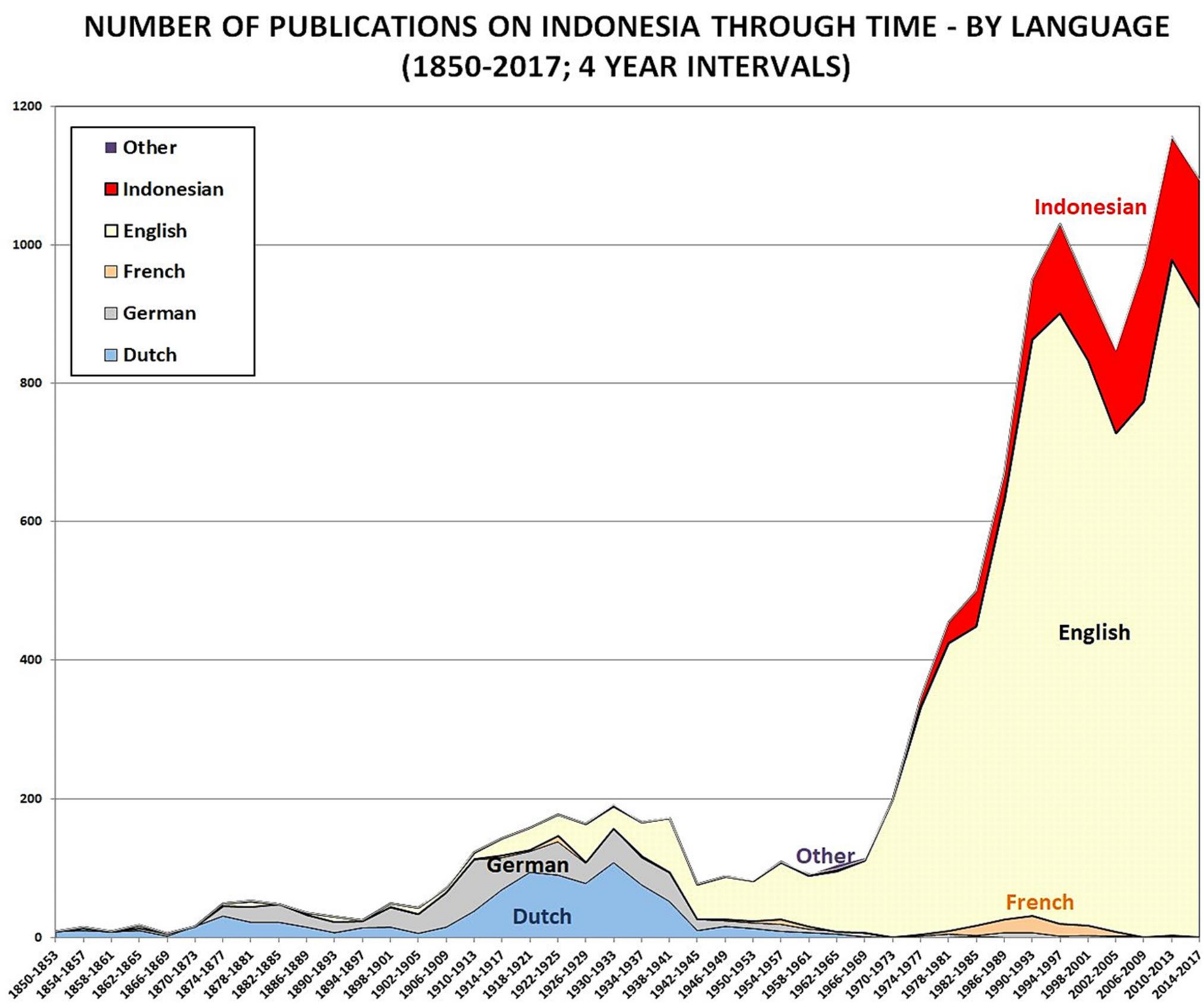


Fig. 2- Number of Indonesia geology publications through time, by language. Prior to 1945 the main languages of publication were Dutch and German, after which English became dominant. Indonesian has been the second most common language of publication since the 1970's.

Figure 3 shows the number of Indonesia geology publications through time, categorized by nationality of first author. This graph shows that until the late 1950's virtually all publications on Indonesian geology were by foreign nationals. After this, the number of publications with Indonesian nationals as first author gradually increases until ~60% of total today.

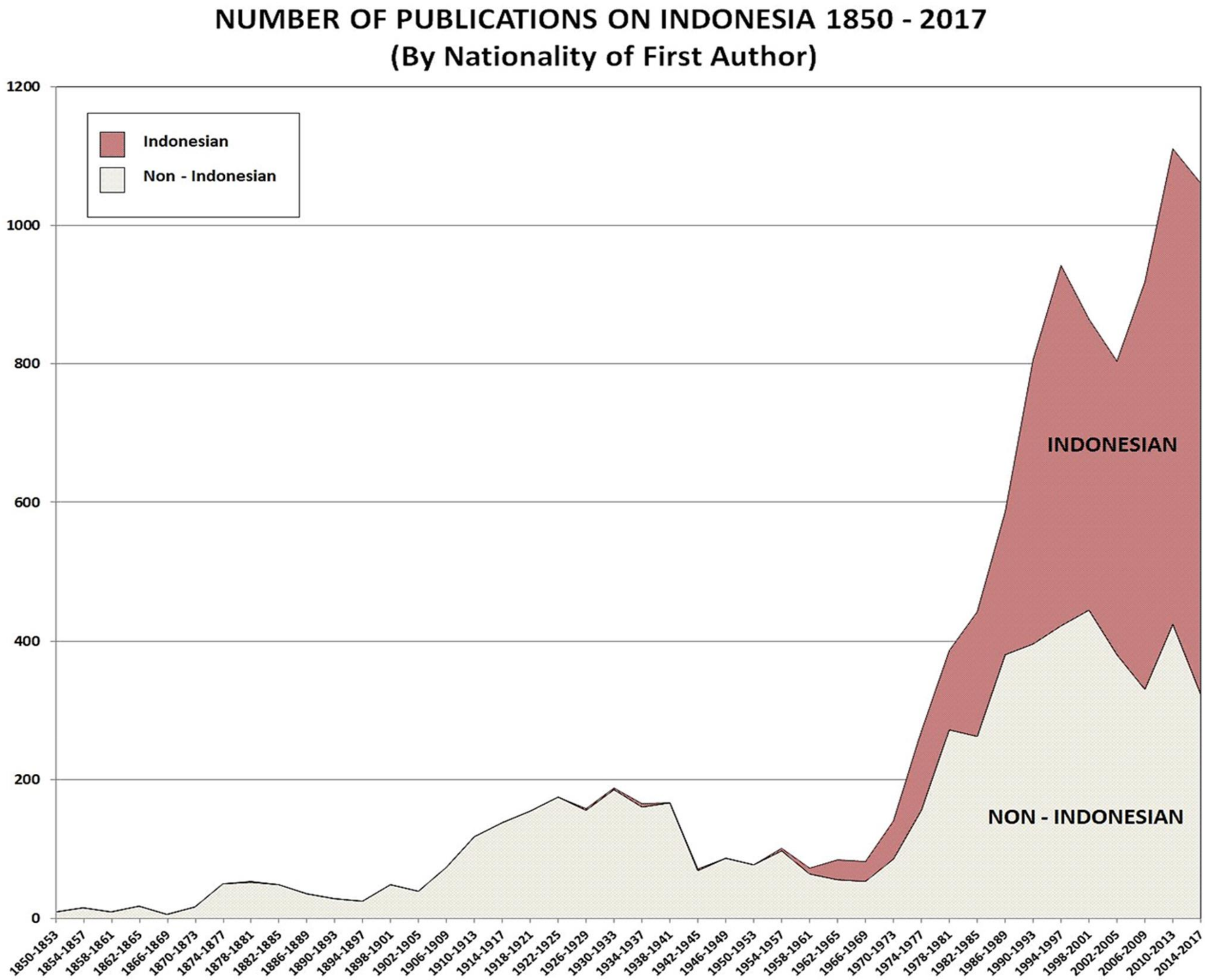


Fig. 3- Number of Indonesia geology publications through time, by nationality of first author.

I. REGIONAL GEOLOGY

I.1. Indonesia Regional Geology

Aadland, A.J. & R.S.K. Phoa (eds.) (1981)- Geothermal gradient map of Indonesia, 2nd ed.. Indon. Petroleum Assoc. (IPA), Spec. Publ., p. 1-43.
(Compilation of temperature data from petroleum wells in Indonesia. With two map sheets 1: 2,500,000. See also updated version by Thamrin & Mey, 1987)

Abdurrachman, M., S. Widiyantoro, B. Priadi, M.Z.A. Alim & A.H. Dewangga (2015)- Proposed new Wadati-Benioff zone model in Java-Sumatra subduction zone and its tectonic implication. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-376, 4p.
(Previous models of Wadati Benioff Zone (derived from earthquake hypocenters) in Java- Sumatra deemed too simple. In Java hypocenter depths recorded >500 km, while in Sumatra earthquakes all <300 km deep. In C and E Java area aseismic area between 300-500 km interpreted as tear zone in subducting plate)

Abendanon, E.C. (1914)- Geologische schetskaart van Nederlandsch Oost-Indie, schaa1:2,500,000. Koninkl. Nederlands Aardrijkskundig Genootschap, Smulders, 's-Gravenhage, Toelichting, p. 1-6 + 6 map sheets.
(online at: https://nl.wikipedia.org/wiki/Wikipedia:GLAM/Expedities/Mediadonaties/media/File:UB_Utrecht_-_CARTO_II_L_2_-_1914.jpg)
('Geological overview map of the Netherlands East Indies'. First geological overview map of Indonesia, 120x225cm, commissioned by Netherlands Royal Geographical Society. Compiled from published and unpublished maps by many authors. Java and Sumatra rel. complete, but much of Kalimantan, Sulawesi and New Guinea still uncharted territory)

Abendanon, E.C. (1914)- Grossfalten im Niederlandisch-Ostindischem Archipel. In: Die Grossfalten der Erdrinde, Chapter 2, Brill, Leiden, p. 38-57.
(online at: https://catalog.hathitrust.org/Record/006573206)
('Mega-folds in the East Indies Archipelago'. Chapter in Abendanon's 183-page book on his global tectonic theory of 'mega-folds': recently uplifted mountain chains, caused by shrinking of the globe, accompanied by extensional central rifts, gravity sliding, etc. Examples of 'mega-folds' in Indonesia in Sulawesi, Timor and Sumatra. In C Sulawesi Mountain chain W of Lake Poso looks like almost flat peneplain now uplifted to 2000m, cut by ~N-S faults/ rift valleys like Poso Depression. Timor also recently uplifted foldbelt with central graben. Etc. Very few illustrations)

Abendanon, E.C. (1915)- De geotektonische positie van de Nederlandsch-Indischen Archipel. In: Handelingen XV Nederlandsch Natuur- Geneeskundig Congres, Kleynenberg, Haarlem, p. 510-523.
('The geotectonic position of the Netherlands Indies Archipelago'. Old tectonic hypotheses of Abendanon including idea that distribution of old schists across Indonesia suggests that in geologically early periods the entire Indonesian Archipelago was occupied by mainland with high mountain chains. In C Sulawesi old fold trends E-W, Neogene folding more N-S trending. Whimsical shapes of Sulawesi and Halmahera can be explained by their location at junction of three geotectonic components)

Abendanon, E.C. (1919)- Aequinoctia, an old Palaeozoic continent. J. Geology 27, 7, p. 562-578.
(Early tectonic interpretation of tectonics of Indonesia. Presence of crystalline schists across E Indonesia suggests area from Borneo to New Guinea may all have been parts of one ancient continent, here named Aequinoctia, extending from Sulawesi to Tasmania)

Adinegoro, A.R. Udin (1973)- Stratigraphic studies by the Indonesian Petroleum Institute (LEMIGAS). United Nations ECAFE, CCOP Techn. Bull. 7, p. 55-74.
(Review of Cenozoic stratigraphic successions in NE Java, Jambi-Sumatra, NE Sumatra and E Kalimantan. One of first attempts to tie these local stratigraphies to global low latitude planktonic foram zonations)

Ali, J.R. & R. Hall (1995)- Evolution of the boundary between the Philippine Sea plate and Australia: paleomagnetic evidence from eastern Indonesia. Tectonophysics 251, p. 251-275.

(New paleomag from Sorong Fault Zone, Obi and Taliabu. Sula Platform Coniacian- Santonian paleolatitude at 19°± 6°, similar to Misool, suggesting Sula/Taliabu and Misool parts of single microcontinent, >10° farther N than expected if attached to Australia, implying region separated from Australia before Late Cretaceous. Obi contains rocks of Philippine Sea and Australian origin. Volcanic arc at S edge Philippine Sea Plate collided with New Guinea at ~25 Ma, changing Philippine Sea-Australian plate boundary from subduction to strike-slip)

Ali, J.R., S.J. Roberts & R. Hall (1994)- The closure of the Indo-Pacific ocean gateway: a new plate tectonic perspective. In: F. Hehuwat et al. (eds.) Proc. Int. Workshop Neogene evolution of Pacific Ocean gateways, IGCP-355, Bandar Lampung 1993, p. 10-20.
(online at: http://searg.rhul.ac.uk/pubs/ali_etal_1993_Indo-Pacific_Gateway.pdf)
(Reconstructions of W Pacific 45-10 Ma. Area N of Sorong Fault Zone ~40° CW rotation and 15° N-ward motion since ~25 Ma. Prior to 22 Ma collision between Australia (New Guinea)- Philippine Sea open Equatorial seaway between Indian and Pacific oceans. Connection mostly closed by initiation of Halmahera Arc at 11 Ma)

Alzwar, M. (1986)- Geothermal energy potential related to active volcanism in Indonesia. Geothermics 15, p. 601-607.
(90 geothermal areas identified in Indonesia, mostly located in active volcanic belts)

Amiruddin (2007)- Permo-Triassic magmatic arc and back arc basins of Gondwana land with reference of Eastern Indonesia, Papua New Guinea and Eastern Australia. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, JCB2007-019, 1p. *(Abstract only)*
(Permian-Triassic granitoid plutons and volcanics exposed in E Indonesia, in belt from Banggai Sula in W through Birds Head (Netoni, Anggi, Maransabadi), Birds Neck, Central Range of W Papua (Eilanden, Idenburg) to PNG (Strickland and Kubor Granodiorites) in E, then belt continues S to E Australia through Cape York, NE Queensland to New England Fault Belt. Syn-collision and volcanic arc I and S-type granites)

Amiruddin (2009)- A review on Permian to Triassic active or convergent margin in southeasternmost Gondwanaland: possibility of exploration target for tin and hydrocarbon deposits in the Eastern Indonesia. J. Geologi Indonesia 4, 1, p. 31-41.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20090104.pdf)
(Permian-Triassic magmatic-volcanic belts signify active Paleo-Pacific margin along New Guinea (Banggai, Netori, Anggi, Kwatisor, Kubor, etc. granites)- E Australia part of SE Gondwanaland. Granitic plutons of S-type and may be tin-bearing. Back-arc basins of S Papua and Galille-Bowen-Gunnedah-Sydney basins filled by fluvial, fluvio-deltaic to marine Permian-Triassic sediments, locally with coal, unconformably overlain by marine Jurassic-Cretaceous)

Anderson, R.N. (1980)- Update of heat flow in the East and Southeast Asian seas. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands, 1, American Geophys. Union (AGU), Geophys. Monograph Ser. 23, p. 319-326.

Angelich, M.T., R.L. Brovey, M.E. Ruder & C.C. Wielchowsky (1986)- Use of Seasat-derived free-air gravity to interpret the structure of Southeast Asia. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-18.
(In areas of low sea-bottom relief SEASAT-derived gravity data can be treated qualitatively as low-pass-filtered Bouguer gravity field. Examples from SE Asia)

Astjario, P. (1995)- A study of the uplifted coral reef terraces in the eastern part of Indonesia. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 116-121.

Atkinson, C., T. Wain, H. Sugiatno & S. Hayes (2017)- Hidden basins and undrilled anticlines: The legacy of early oil exploration in Indonesia. SEAPEX Exploration Conference 2017, 9, Singapore, 36p.

Audley-Charles, M.G. (1965)- Permian palaeogeography of the northern Australia-Timor region. Palaeogeogr. Palaeoclim. Palaeoecology 1, p. 297-305.
('Autochthonous' Permian rocks of Timor believed to be detritus from Kimberley region of N Australia. This conflicts with suggestions of large crustal dislocations immediately N of Australia recently advocated on basis of regional paleomagnetic studies)

Audley-Charles, M.G. (1966)- Mesozoic palaeogeography of Australasia. Palaeogeogr. Palaeoclim. Palaeoecology 2, p. 1-25.
(Broad Triassic- Cretaceous paleogeographic sketch maps of Indonesia- N Australian region, following recent studies on Timor. Rather different from more recent work (incl. Audley-Charles 1988, etc.; e.g. conclusions: 'the spatial relationships between N Australia, Timor and the other parts of the archipelago have not greatly altered since the Middle Triassic' and 'the contention of some authors that continental drift has occurred between the N coast of Australia and SE Asia, is strongly contradicted by stratigraphic evidence, and by paleogeographic history of the region as developed in this article')

Audley-Charles, M.G. (1976)- Mesozoic evolution of the margins of Tethys in Indonesia and The Philippines. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 25-52.

Audley-Charles, M.G. (1978)- The Indonesian and Philippine archipelagoes. In: M. Moullade & A.E.M. Nairn (eds.) The Phanerozoic geology of the world, II, The Mesozoic, Elsevier, p. 165-207.

Audley-Charles, M.G. (1981)- Geological history of the region of Wallaceôs Line. In: T.C. Whitmore (ed.) Wallaceôs Line and plate tectonics. Clarendon Press, Oxford, p. 5-25.

Audley-Charles, M.G., D.J. Carter & A.J. Barber (1974)- Stratigraphic basis for tectonic interpretations of the Outer Banda Arc, Eastern Indonesia. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 25-44.
(Outer Banda Arc islands (Timor, Tanimbar, etc.) are imbricated N margin of Australian shelf and slope on which overthrust Asian elements and major olistostrome have been superimposed, all emplaced from N)

Audley-Charles, M.G., D.J. Carter & J.S. Milsom (1972)- Tectonic development of Eastern Indonesia in relation to Gondwanaland dispersal. Nature Physical Sci. 239, 90, p. 35-39.
(Reconstruction of Banda Arc region. Timor formed part of Australian continental margin since at least E Permian. Unusual Early Cretaceous reconstruction with Borneo- W Sulawesi- Sumatra- Java- Indochina and India all still part of Gondwanaland and attached to W Australia))

Bachri, S. (2013)- Peran system tunjaman, sesar mendatar transform dan pemekaran terhadap sebaran cekungan sedimen di Indonesia. J. Geologi Sumberdaya Mineral 14, 1, p. 19-27.
('The role of subduction systems, transform faults and rifting in the distribution of sedimentary basins in Indonesia'. Basins in W dominated by Tertiary basins and mainly controlled by subduction systems. In E Indonesia Pre-Tertiary and Tertiary basins with semi-concentric pattern and random pattern, controlled transform faults and transport of continental plates originating from Australia)

Badings, H.H. (1936)- Het Palaeogeen in den Indischen Archipel. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 11, 3, p. 233-292.
('The Paleogene in the Indies Archipelago'. Overview of Paleogene sediments in Indonesia and Philippines. With outcrop distribution/ basic paleogeographic maps for Tertiary a, b, c and d (Eocene- Oligocene). Useful compilation, but harshly criticized in series of papers by Van Bemmelen, Koolhoven, Ubaghs, etc. in 1936)

Baillie, P., J. Decker, D. Orange, P. Teas & N. Wagimin (2009)- IndoDeep: new insights into the geology of Indonesia. Proc. 2009 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, p. 1-50. *(Abstract + Presentation)*
(Three 'conventional' paradigms in areas of TGS IndoDeep project: (1) Sumatra fore-arc unprospective, (2) not sufficient sediment thickness in Bone Bay to have generated hydrocarbons; (3) Cenderawasih Bay underlain by

oceanic crust and unprospective (pretty pictures of seismic lines and seafloor bathymetry but no explanations of new insights; JTvG))

Baker, S., R. Hall & E. Forde (1994)- Geology and jungle fieldwork in Eastern Indonesia. Geology Today 10, 1, p. 18-23.
(Brief account on fieldwork on coastal outcrops of Halmahera region by University of London)

Balazs, D. (1968)- Karst regions in Indonesia. Karszt-Es Barlangkutatas 5, Budapest, Globus nyomda, p. 3-57.
(online at: http://epa.oszk.hu/02900/02967/00005/pdf/EPA02967_karszt_es_barlangkutatas_1963-1967_05_003-062.pdf)
(Review of limestone karst development in Indonesia (mainly in Tertiary limestones). Tropical karst areas generally controlled by heavy torrential tropical rains and characterized by predominantly positive landforms (conical and pinnacle karst hills), while depressions (sinkholes, etc.) more common expression of dissolution in areas of slow rains in temperate belt)

Balazs, D. (1971)- Intensity of the tropical karst development based on cases of Indonesia. Karszt-Es Barlangkutatas 6, Budapest, Globus nyomda, p. 33-67.
(online at: http://epa.oszk.hu/02900/02967/00006/pdf/EPA02967_karszt_es_barlangkutatas_1968-1971_06_033-068.pdf)
(Discussion of karst weathering in Gunung Saribu (W Sumatra; Permo-Carboniferous), Gunung Sewu (S Mountains) and other localities on Java and SW Sulawesi (Maros))

Barber, A.J. (1985)- The relationship between the tectonic evolution of Southeast Asia and hydrocarbon occurrences. In: D.G. Howell (ed.) Tectonostratigraphic terranes of the Circum-Pacific region, Circum-Pacific Council Energy and Mineral Resources, 1, Houston, p. 523-528.
(SE Asia consists of cratonic Sundaland core of continental fragments that had stabilized by end-Mesozoic. Additional terranes added through Late Mesozoic- Tertiary in Sumatra, Borneo, E Indonesia and Philippines. Early Tertiary widespread extension, followed by Late Tertiary compression, resulting in favorable locations for hydrocarbon generation and accumulation)

Barber, A.J. (1993)- Dispersion, subduction and collision in Eastern Indonesia. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 23. *(Abstract only)*

Barber, A.J. (2013)- The origin of melanges: cautionary tales from Indonesia. J. Asian Earth Sci. 76, p. 428-438.
(online at: http://searg.rhul.ac.uk/pubs/barber_2013%20Indonesian%20melanges.pdf)
(Description of two examples of melanges from Banda arc (Timor Bobonaro melange) and Sunda arc (Nias, Oyo melange, with common ophiolitic blocks). Evidence from Australian continental shelf S of Sumba shows large quantities of diapiric melange generated in accretionary complex. Comparable diapirs in Timor accreted at earlier stage. Evidence from Timor and Nias shows diapiric melange can be generated well after initial accretion process was completed)

Barber, A.J. & S. Wiryosujono (eds.) (1981)- The geology and tectonics of Eastern Indonesia. Proc. CCOP-IOC Working Group Meeting, Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 1-415.
(Conference volume with many benchmark papers on tectonics of Eastern Indonesia)

Barley, M.E., P. Rak & D. Wyman (2002)- Tectonic controls on magmatic-hydrothermal gold mineralization in the magmatic arcs of SE Asia. In: D.J. Blundell, F. Neubauer & A. von Avadt (eds.) The timing and location of major ore deposits in an evolving orogen, Geol. Soc. London, Spec. Publ. 204, p. 39-47.
(Most gold deposits in SE Asian arcs formed during tectonic reorganization intervals rather than steady-state subduction: (1) 25 Ma collision of Australian craton with Philippine Sea plate arc; (2) M Miocene/ 17 Ma mineralization following maximum extrusion of Indochina and cessation of S China Sea spreading; (3) majority and largest deposits formed since 5 Ma during plate reorganization with change in relative motion between Indian-Australian and Pacific plates between 5- 3.5 Ma following Philippine arc- Eurasia collision in Taiwan)

Baumann, P. (1982)- Depositional cycles on magmatic and back arcs: an example from Western Indonesia. Revue Inst. Francais Petrole 37, 1, p. 3-17.
(Five main depositional cycles in Eocene- Recent of Java, Sumatra: (1) M Eocene- E Oligocene (P11-P17), followed by uplift, block faulting, volcanism; (2) Latest Oligocene- E Miocene (P22/N3- N7?, ending with volcanism- uplift?; (3) late E Miocene- M Miocene (N8- N10-11; poorly known); (4) M- Late Miocene (N11/12-N14/17), followed by uplift, faulting; (5) Pliocene-Recent, starting with major transgression at Miocene-Pliocene boundary, N18. Major Late Pliocene- Recent volcanic phase)

Beck, R.H. & P. Lehner (1974)- Oceans, new frontier in exploration. American Assoc. Petrol. Geol. (AAPG) Bull. 58, 3, p. 376-395.
(Vintage regional seismic profiles and interpretation NW Australia- Sunda Arc. Seismic examples of imbricated sediments North of Java and Timor Trough trenches)

Becker, M., E. Reinhart, S. Bin Nordin, D. Angermann, G. Michel & C. Reigber (2000)- Improving the velocity field in South and South-East Asia: the third round of GEODYSSEA. Earth Planets and Space 52, p. 721-726.
(online at: www.terrapub.co.jp/journals/EPS/pdf/5210/52100721.pdf)
(Review of GEODYnamics of S and SE Asia (GEODYSSEA) project, a network of 42 GPS stations across SE Asia, observed between 1994-1998)

Beckley, L., L.A. Lawver & T.Y. Lee (1993)- Cenozoic basin formation in Southeast Asia. University of Texas, Austin, PLATES Project, Progress Rept. 62, 16p. *(Unpublished)*

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(Vintage Indonesian basins map and basin summaries by Stanvac (Standard Oil NJ) geologist)

Benioff, H. (1954)- Orogenesis and deep crustal structure; additional evidence from seismology. Geol. Soc. America (GSA) Bull. 65, p. 385-400.
(Sunda Arc example of large 'marginal fault', deduced from dipping earthquake zones below volcanic arc, landward dipping at ~35° at intermediate depths of 70-300km, steepening with depth to 61° between 300-700km. Philippine Islands example of similar 'oceanic fault' (now called 'Wadati-Benioff zones'))

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(Old, but still interesting discussion of Australia- E Indonesia paleogeography)

Benson, W.N. (1925)- The structural features of the margin of Australasia. Trans. Proc. Royal Soc. New Zealand 55, p. 99-137.
(Old, but still interesting discussion of tectonics- structure of East Indonesia, NW Australia, etc.)

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(First text to notice deep earthquakes in Indonesia are concentrated in plane dipping toward Asian mainland (now known as Benioff zone or Wadati-Benioff zone; should have been named 'Berlage zone'?;JTvG))

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('Discussion of buckling potential and plastic deformation of the Earth's crust as related to the East Indies Archipelago'. On the physics of plastic deformation of Earth's crust in the Indonesian region. Expansion of Vening Meinesz' theory of crustal downbuckling)

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(‘The explanation for gravity anomalies, deep sea troughs, geosynclines, mountain building and volcanism near local plastic deformation of the earth’s crust’. Reply to Van Bemmelen (1936) critical remarks on Bijlaard (1935) theory)

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('Geological problems in the Malayan Archipelago'. Overview of pre-1934 tectonic theories on Indonesia, without new synthesis or opinion)

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(Review of tectonic settings of mineral deposits, with example of SE Asia- W Pacific arc system. In Indonesia all known mineral deposits lie within magmatic arcs and formed during or shortly after magmatic activity, but only 6 out of 15 Cenozoic magmatic arcs are known to contain significant mineralization)

Bock, Y., L. Prawirodirdjo, J.F. Genrich, C.W. Stevens, R. McCaffrey, C. Subarya, S.S.O. Puntodewo & E. Calais (2003)- Crustal motion in Indonesia from Global Positioning System measurements. J. Geophysical Research 108, B8, 2367, p. 1-22.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2001JB000324)
(GPS surveys suggest tectonics dominated by interaction of 4 blocks: Sunda Shelf (moves 6 mm/yr SE rel. to Eurasia), S Banda Arc (CW rotation rel. to Sunda and Australia), Birds Head (rapidly moves WSW, subducting beneath Seram Trough) and E Sulawesi (CW rotation, transfering E-W Pacific motion into N-S shortening across N Sulawesi trench. Crustal blocks all experience significant internal deformation)

Boehm, G. (1901)- Aus den Molukken. Zeitschrift Deutschen Geol. Gesellschaft 53, Briefl. Mitteilungen, p. 4-10.
(online at: https://www.biodiversitylibrary.org/item/150066page/686/mode/1up)
('From the Moluccas'. First brief report by Boehm from his geological travels in E Indonesia in 1900-1901, and first report on Mesozoic fossils in 200 years since 'stone fingers' (belemnites) described by Rumphius in 1705. Mainly on visit to S coast of Sula Islands, with M Jurassic dark grey clayey limestones rich in ammonites (Sphaeroceras), belemnites and Inoceramus; also lower Cretaceous with Hoplites. No figures)

Boehm, G. (1902)- Weiteres aus den Molukken. Zeitschrift Deutschen Geol. Gesellschaft 54, Briefl. Mitteilungen, p. 74-78.
(online at: https://www.biodiversitylibrary.org/item/150077page/796/mode/1up)
('More from the Moluccas'. Continuation of paper above, on visits to Ambon, Buru, Misool. On Ambon Mesozoic sandstone-limestone, etc. Jurassic of Sula and Misool islands with fauna of European character and rel. undeformed. No figures)

Boehm, G. (1904)- Geologische Ergebnisse einer Reise in den Molukken. Proc. Comptes Rendus 9^{th} Int. Geological Congress, Vienna 1903, p. 657-662.

('Geological results of a trip in the Moluccas'. Brief, early report on widespread Triassic and Jurassic marine sediments on islands of E Indonesia, noticing similarities of rocks and faunas with those from European Alps)

Boehm, G. (ed.) (1904-1959)- Beitrage zur Geologie von Niederlandisch-Indien. Palaeontographica, Suppl. Vol. IV, 5 vols.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/structure/4499189)
('Contributions to the geology of the Netherlands Indies'. Series of mainly paleontological papers from E Indonesia. Listed individually)

Boehm, G. (1906)- Geologische Mitteilungen aus dem Indo-Australischen Archipel I. Neues aus dem Indo-Australischen Archipel, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 22, p. 385-412.
('News from the Indo-Australian Archipelago, etc.' Early overview of Mesozoic macrofossil localites in E Indonesia: Sula islands (Jurassic belemnites, Macrocephites, etc.), W Cenderawasih Bay (Wendesi M Jurassic ammonite Phylloceras), New Guinea N Coast (Walckenaer Bay ammonites and Inoceramus), Buru (Jurassic Perisphinctes, Late Triassic Tissotia), Ceram, etc. Remarkable similarities of Moluccas Mesozoic and Spiti Fauna of Himalayas)

Bostrom, R.C. (1984)- Westward Pacific drift and the tectonics of eastern Asia. Tectonophysics 102, p. 359-376.
(Brief overview of tectonic history, involving W-ward displacement of Sundaland, and shared Paleozoic-Mesozoic petroleum systems between N Australia, New Guinea, Timor and other parts of eastern Indonesia)

Bothe, A.C.D. (1932)- Over de phasen van gebergtevorming in het Neogeen van den Indischen Archipel. De Mijningenieur 13, p. 71-77 and 88-92.
('On the phases of mountain formation in the Indies Archipelago'. Two or three phases of orogenesis observed in Tertiary of many places across Indies Archipelago)

Bradshaw, M. (2001)- Australia and Eastern Indonesia at the cross-roads of Gondwana and Tethys- the implications for petroleum resources. SEAPEX Expl. Conf. 2001, Singapore, 8p.

Branson, C.C. (1941)- Age of abyssal deposits of East Indian Archipelago. American Assoc. Petrol. Geol. (AAPG) Bull. 41, 2, p. 320-322.
(Brief review of very deep marine deposits in East Indies, including Danau Fm of Borneo (Molengraaff, 1910, 'probably Jurassic', but could be E Cretaceous: JTvG) and Permian, Triassic and Lower Cretaceous abyssal deposits of Timor)

Brouwer, H.A. (1915)- Over de tektoniek der Oostelijke Molukken. Proc. Kon. Akademie Wetenschappen, Amsterdam 24, p. 987-994.
('On the tectonics of the Eastern Moluccas'. Early, brief overview of tectonics of the E Moluccas. See Brouwer (1917) for English version)

Brouwer, H.A. (1916)- Reisbericht omtrent geologische verkenningstochten op verschillende eilanden der Molukken. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 33, p. 83-89.
('Travel notes of geological reconnaissance trips to various islands of the Moluccas')

Brouwer, H.A. (1916)- Geologische verkenningen in de Oostelijke Molukken. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 3 (Molengraaff issue), p. 31-56.
(online at: https://ia601908.us.archive.org/30/items/verhandelingenva3191geol/verhandelingenva3191geol.pdf)
('Geological reconnaissance in the East Moluccas'. Brief overview of reconnaissance trips in E Indonesia islands)

Brouwer, H.A. (1917)- On the tectonics of the eastern Moluccas. Proc. Kon. Akademie Wetenschappen, Amsterdam 19, 1, p. 242-248.
(online at: www.dwc.knaw.nl/DL/publications/PU00012350.pdf)

(Early review of E Indonesia tectonics. Among recent significant discoveries is the presence of large overthrusts on Timor and adjacent islands, probably continuing along entire outer belt of Banda islands to Babar, Yamdena, Seram and Buru. The Sula Islands, Obi and Misool do not show overthrust structures. No figures)

Brouwer, H.A. (1918)- Phasen der bergvorming in de Molukken. Inaugural speech, Technische Hogeschool Delft (Delft Technical University), p. 1-32.
('Phases of mountain building in the Moluccas'. Early, dated overview of Indonesia tectonics. No maps, figures)

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('On mountain building and volcanism in the Moluccas'. Brief discussion of geology East Indonesia. First author to note the apparent relationship between extinction of volcanoes in Alor-Wetar sector of the Banda Arc adjacent to mountain-forming processes on Timor)

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(On a variety of different age volcanic-plutonic rocks in E Indonesia)

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(Rel. comprehensive overview of 1917 state of knowledge of East Indonesia geology)

Brouwer, H.A. (1920)- Nieuwere opvattingen omtrent de geologie van den O.I. Archipel. In: Algemeen Ingenieurs Congres, Batavia 1920, Sect. 5, Mijnbouw en Geologie, Mededeeling 12, p. 3-16.
('Newer views on the geology of the East Indies Archipelago'. Brief review of recent developments. No figures)

Brouwer, H.A. (1920)- On the crustal movements in the region of the curving rows of islands in the eastern part of the East-Indian Archipelago. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 22, 7-8, p. 772-782.
(online at: www.dwc.knaw.nl/DL/publications/PU00012027.pdf)
(Curving rows of islands of Moluccas similar to many chains of Alpine structure. Rows of islands of Moluccas may be grouped into (1) zone characterized by outward-directed overthrusts (Timor-Ceram row); (2) marginal zone without overthrust tectonics (Sula-islands, Misool, W New Guinea S of Mac Cluer Bay (= Bintuni) and probably also Kei-islands; (3) inner zone with young active volcanoes)

Brouwer, H.A. (1920)- Die horizontale Bewegung der Inselreihen in den Molukken. Nachrichten Kon. Gesellschaft Wissenschaften Gottingen, Mathem.-Phys. Klasse, p. 172-173.
(online at: https://www.digizeitschriften.de/dms/img/?PID=GDZPPN002505738)
('The horizontal movement of the island belts in the Moluccas'. Brief response to H. Stille critique of Brouwer (1917) paper on mountain building and volcanism in the Moluccas. Stille questioned presence of important horizontal movements on Timor, Timor, etc., but Brouwer insists they are important)

Brouwer, H.A. (1921)- Some relations of earthquakes to geologic structure in the East Indian archipelago. Bull. Seismological Soc. America 11, 3-4, p. 166-182.

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Brouwer, H.A. (1922)- The major tectonic features of the Dutch East Indies. J. Washington Academy Sci. 12, 7, p. 172-185.
(Brief discussion; summary of 1922 lecture)

Brouwer, H.A. (1925)- The geology of the Netherlands East Indies. MacMillan, New York, p. 1-160.
(First 'text-book' on the geology of Indonesia, based on series of lectures at University of Michigan)

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(online at: http://repository.naturalis.nl/document/549383)
(Overview of occurrences of Paleozoic in Indonesia. Pre-Carboniferous rocks known only from New Guinea. Carboniferous and Permian in N Sumatra, C and S Sumatra, Timor, Savu, Roti, Luang, Babar, New Guinea)

Brouwer, H.A. (1941)- De bouw van den zuidoostelijken Indischen archipel. Programma 22e Koloniale Vakantiecursus voor Geografen, 6p.
('The structure of the southeastern Indies Archipelago'. Brief review. No figures/ maps)

Brouwer, H.A. (1949)- Evolution orogenique ou consolidation prochaine aux Indes orientales. In: Livre jubilaire Charles Jacob, Annales Hebert et Haug, Universite de Paris, 7, p. 31-42.
('Orogenic evolution or next consolidation in the East Indies'. Early review of orogenic history of Indonesia, with special reference to Sulawesi (junction of two arcs) and Timor (with large nappe tectonics))

Brown, J.L. & J.E. McCallum (1997)- An atlas of sealing faults in SE Asia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems SE Asia & Australia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 837-841.

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(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0RGQxdG1sTnNoalE/view)
(Includes chapter on Seram arc and Banda Sea. Sumba (erroneously) viewed as promontory of NW Australian margin. With Hamilton (1979) one of first to suggest Banda sea formed by longitudinal extension))

Bucking, H. (1900)- Cordierit von Nord-Celebes und aus den sog. verglasten Sandsteinen Mitteldeutschlands. Bericht Senckenbergischen Naturforschenden Gesellschaft, Frankfurt 1900, Wissensch. Abhandl., p. 1-20.
(online at: https://ia802705.us.archive.org/25/items/naturundmuseum1900senc/naturundmuseum1900senc.pdf)
('Cordierite from North Sulawesi and the so-called vitrified sandstones of Central Germany'. Cordierite mineral in andesites from Soputan volcano S of Menado in N Sulawesi))

Bucking, H. (1904)- Zur Geologie des nordostlichen Indischen Archipels. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 7, p. 231-253.
(online at: www.repository.naturalis.nl/document/552406)
('On the geology of the NE Indies archipelago'. Brief descriptions of islands Bacan, Mandioli, Kasiruta, Obi Besar, Manipa and Sulabesi. No figures)

Budiman, I., J. Nasution, I. Sobari & W.H. Simamora (2000)- Gravity anomaly map of western part of Indonesia, scale 1:2,000,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Calais, E., L. Dong, M. Wang, Z. Shen & M. Vergnolle (2006)- Continental deformation in Asia from a combined GPS solution. Geophysical Research Letters 33, L24391, p. 1-6.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006GL028433/epdf)
(New model of Asia tectonic plates relative horizontal motions from GPS measurements)

Cardwell, R.K. (1980)- Geometry of the lithosphere subducted beneath the Eastern Indonesian and Philippine islands as determined from the spatial distribution of earthquakes and focal mechanism solutions. Ph.D. Thesis Cornell University, Ithaca, p. 1-143.
(Mainly two published papers by Cardwell and Isacks (1978) and Cardwell et al. (1980), below)

Cardwell, R.K. & B.L. Isacks (1978)- Geometry of the subducted lithosphere beneath the Banda Sea in Eastern Indonesia from seismicity and fault plane solutions. J. Geophysical Research 83, B6, p. 2825-2838.
(Earthquake data fault plane solutions suggest two lithospheric plates descending into upper mantle beneath Banda Sea: (1) along Banda arc, laterally continuous slab that subducted at plate boundary defined by Java trench-Timor Trough-Aru Trough system; (2) descends to SW to ~100 km depth in Seram Trough region and may be joined to Banda subduction system by W extension of New Guinea Tarera- Aiduna fault zone. Banda arc slab contorted at E end of arc where trench and line of active volcanoes curve NE. Contortion appears to be lateral bend in subducted slab that is continuous from surface to depths of 600 km)

Cardwell, R.K. & B.L. Isacks (1981)- A review of the configuration of the lithosphere subducted beneath the eastern Indonesian and Philippine Islands. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 29-47.
(Identification of subducting slabs from earthquake data. Seismic zone from Timor Trough to >600km depth below S Banda Basin, but does not appear to be linked to Seram Trough)

Cardwell, R.K., B.L. Isacks & D.E. Karig (1980)- The spatial distribution of earthquakes, focal mechanism solutions and subduced lithosphere in the Philippine and North-eastern Indonesian islands. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands, American Geophys. Union (AGU), Geophys. Monograph 23, p. 1-35.
(Earthquake focal mechanisms show configuration of lithosphere subducted beneath Philippine and NE Indonesian islands and geometry and nature of plate boundaries in region. Philippine region aggregate of island arcs between Philippine Sea Plate and SE Asian Plate, with main deformation along Philippine Fault and opposing subduction zones (Manila Trench, Negros Trench, Cotabato Trench). S-dipping zone of earthquake hypocenters indicates lithosphere of Celebes Basin subducted along W part of N Sulawesi Trench to depth of >200 km beneath N arm of Sulawesi. Convergence between Philippine Islands and W boundary of Philippine Sea Plate along E Luzon Trough and Philippine Trench. S Philippine Trench is young feature)

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(Tectonic model for SE Asia using the 'Expanding earth' theory (Carey believed in continental drift, but not in subduction))

Carey, S.W. (1975)- The subduction myth. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 2, Singapore, p. 41-69.
(Entertaining discussion by leader of expanding earth movement. Plate tectonic and Expansion 'tectonic schools' agree on seafloor spreading, but not subduction)

Carey, S.W. (1986)- Geotectonic setting of Australasia. In: R.C. Glenie (ed.) Second South-Eastern Australia oil exploration symposium, Melbourne 1985, Petroleum Expl. Soc. Australia (PESA), p. 3-25.
(Controversial/ unconventional tectonic model. 'most prospectors accept plate tectonics, although subduction is patently false, and Earth is expanding at accelerating rate')

Carlile, J.C. & A.H.G. Mitchell (1994)- Magmatic arcs and associated gold and copper mineralization in Indonesia. In: T.M. van Leeuwen et al. (eds.) Indonesian mineral deposits- discoveries of the past 25 years. J. Geochemical Exploration 50, p. 91-142.
(Gold mineralization in andesitic arcs, active for 3-20 My intervals from Cretaceous- Pliocene. Fifteen major arcs; known ore bodies in six mid-Tertiary- Pliocene arcs. Indonesia arcs total ~7,000 kms in length. Individual arcs or segments of arcs characterized by specific mineralization types reflecting arc basement related to earlier collisions and reversals in tectonic polarity and erosion level)

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(History of S China Craton (= Yangtze + Cathaysia blocks). Isolated outcrops of Archean rocks in Yangtze Block preserve record of Meso- to Neo-Archean magmatism, sedimentation and metamorphism associated with global craton formation and stabilization (Kenor supercontinent). Paleoproterozoic tectonostratigraphic records suggest Yangtze Block linked to NW Laurentia, whereas Cathaysia was joined to N India. During formation of Rodinia at end of Mesoproterozoic through Pangea in M Paleozoic, Cathaysia remained joined to N India. During final assembly of Gondwana in E Paleozoic suturing of India- S China with W Australia-Mawson blocks resulted in accretion of Sanya Block of Hainan Island with rest of Cathaysia. Accretion of Laurussia to Gondwana in M-Paleozoic to form Pangea corresponds with initiation of lithospheric extension along N margin of Gondwana and separation of continental blocks, including S China, which then drifted N across Paleo-Tethys to collide with Asian segment of Pangea in Permo-Triassic)

CCOP-IOC (1981)- Studies in East Asian tectonics and resources. ESCAP, CCOP Techn. Paper 7a, 2nd ed., p. 1-250.
(Report on ongoing geological research along nine SEATAR mega-regional transects)

CCOP (1991)- Total sedimentary isopach maps, offshore East Asia. CCOP Techn. Bull. 23, sheets 1-6, p. 1-116.
(Sediment isopach maps and summaries of SE and E Asia basins)

Chamot-Rooke, N. & X. Le Pichon (1999)- GPS determined eastward Sundaland motion with respect to Eurasia confirmed by earthquakes slip vectors at Sunda and Philippine trenches. Earth Planetary Sci. Letters 173, p. 439-455.
(GPS over SE Asia revealed Indochina, Sunda shelf and part of Indonesia behave as rigid 'Sundaland' platelet, which rotates clockwise relative to Eurasia. Sundaland E-ward velocity of ~10 mm/yr on S boundary increasing to 16-18 mm/yr on N boundary)

Chamot-Rooke, N., X. Le Pichon, C. Rangin, P. Huchon, M. Pubellier, C. Vigny & A. Walpersdorf (1999)- Sundaland motion in a global reference frame detected from GEODYSSEA GPS measurements: implications for relative motions at the boundaries with the Australo-Indian plates and the South China block. In: The Geodynamics of S and SE Asia (GEODYSSEA) Project, GeoForschungsZentrum, Potsdam, STR 98/14, p. 39-74.

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(Review of widespread Pleistocene tektites, distributed several 1000 km across SE Asia and Australia. Tektites remarkably similar in composition. Probably caused by major meteorite impact, probably on moon. Size and shape of tektites interpreted to reflect higher T portion of crater ejecta descended over SE Australia and lower T portions were strewn progressively over SW Australia-Indonesia and further North. 'Glass pebbles' locally known as billitonites, philippinites, australites, javanites, philippinites, etc.))

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(E Indonesia interpreted in terms of rel. simple three plate indentation model)

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(Postcollisional extension common in E Indonesia orogenic belts, starting <5 My after compressional deformation (Timor area, Gulf of Bone in Sulawesi, Wandamen -Wondiwoi Terrane of W Papua). Extension results from decoupling of subducting oceanic lithosphere from unsubductable continental lithosphere. Superimposition of extension virtually unavoidable consequence of arc-continent collision)

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(online at: https://pdfs.semanticscholar.org/7a4a/60abf67172f74729c322539e1e4c62ff2d78.pdf)
(Interpretations of last 35 My of tectonic evolution of E Indonesia, with plate reconstructions at 5 My intervals. Oldest reconstruction predates collisional deformation between N-moving Australian continent and E-W oriented, S- facing subduction zone extending from S margin of Eurasian continent E-wards. Beginning at ~30 Ma the Australian continental margin commenced collision with subduction zone along restored N margin, from Sulawesi in W to PNG in E. At ~24 Ma present-day pattern of oblique convergence between N margin of Australia and Philippine Sea Plate began. From ~18 Ma S-directed subduction commenced at Maramuni Arc in N New Guinea. Sorong Fault Zone strike-slip system active from ~12 -6 Ma)

Charlton, T.R. (2001)- Permo-Triassic evolution of Gondwanan eastern Indonesia, and the final Mesozoic separation of SE Asia from Australia. J. Asian Earth Sci. 19, 5, p. 595-617.
(E Indonesia continental fragments with Australian/Gondwanan affinities remarkably uniform Permo-Triassic tectonostratigraphy, ranging from granitoid belt in N, through continental platform, to intracontinental rift system in S. In rift system complementary upper and lower plate rifted margins recognised in N and S Banda Arcs. N granitoid belt initiated in mid-Carboniferous, intracontinental rift system began in latest Carboniferous- earliest Permian. Extension in N rift margin ceased in M Carnian, with decline in igneous activity in granitoid belt to North. Sibumasu Terrane originated on Gondwanaland margin, rifted away in E Permian. Gondwanan E Indonesia acted as continental connection between Sibumasu/Indochina and Australia in Permian- Triassic, permitting limited floral- faunal interchange between Gondwanaland and SE Asia until final separation in Late Triassic. M Carnian structural event in E Indonesia may be related to this separation)

Charlton, T.R. (2004)- The petroleum potential of inversion anticlines in the Banda Arc. American Assoc. Petrol. Geol. (AAPG) Bull. 88, 5, p. 565-585.
(Timor, Tanimbar and Seram perceived structural complexity may be overstated. Proposes inversions of Permian-Jurassic grabens as fundamental structural style)

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(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-24-timor-and-arafura-sea.html)
(Paleogeographic maps of S and E Banda forearc (Savu to Kai islands, incl. Timor-Tanimbar) and adjacent parts of NW Australian continental margin for E Permian, M-L Permian, E-M Triassic, Late Triassic, and E, M and Late Jurassic. Three main rift phases (E Permian, Late Triassic and M-Late Jurassic) separated by quieter tectonic intervals with low facies diversity)

Charlton, T.R. (2013)- Sundaland Timor Paleogene rifting and regional palaeotectonics. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-005, p. 1-11.
(Alternative plate reconstruction of Paleogene of Indonesia- NW Australia, suggesting E Sundaland and Gondwanaland/ NW Australia remained attached until final separation by rifting in Paleogene. Main driver for model is similarity of Paleogene rifting in both Sundaland and on Timor island, which is interpreted as part of Australian continental margin)

Charlton, T.R. (2016)- Neogene plate tectonic evolution of the Banda Arc. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-21-G, 16p.
(New East Indonesia plate reconstructions at 1 My intervals from 30 Ma- Present. Main differences between previous reconstructions are >30° CCW rotation of Bird's Head since ~6 Ma, and origin of backarc spreading in N and S Banda Basins by process of 'fixed slot' subduction geometry, not trench rollback. Four phases: (1) 30-18 Ma: collision, then indentation of 'Greater Sula Spur' promontory into E continuation of Sunda Arc subduction system; (2) 18-12 Ma: Terranes N of Sorong Fault Zone move WSW relative to Australia, with motion of Pacific plate. (3) 12-6 Ma: Development of proto-Banda Arc by fixed-slot backarc spreading in N Banda Basin; (4) 6-0Ma: Collision around Banda Arc and rotation of Bird's Head)

Choi, D.R. (2005)- Deep earthquakes and deep-seated tectonic zones: a new interpretation of the Wadati-Benioff zone. In: F.C. Wezel (ed.) Earth dynamics beyond the plate paradigm, Bol. Soc. Geol. Italiana, Spec. Vol. 5, p. 79-118.
(Unorthodox non-plate-tectonic model for SE Asia tectonics, etc.)

Clements, B., P.M. Burgess, R. Hall & M.A. Cottam (2011)- Subsidence and uplift by slab-related mantle dynamics: a driving mechanism for the Late Cretaceous and Cenozoic evolution of continental SE Asia? In: R. Hall et al. (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc., London, Spec. Publ. 355, p. 37-51.
(Extensive Cretaceous-Paleocene regional unconformity from Indochina to Java may be due to subduction-driven mantle processes. Cessation of subduction, descent of N- dipping slab into mantle, and consequent uplift and denudation of sediment-filled Late Jurassic- E Cretaceous dynamic topographic low help explain extent and timing of unconformity. Sediments started to accumulate above unconformity from M Eocene when subduction recommenced under Sundaland)

Clements, B. & R. Hall (2011)- A record of continental collision and regional sediment flux for the Cretaceous and Palaeogene core of SE Asia: implications for early Cenozoic palaeogeography. J. Geol. Soc. London 168, p. 1187-1200.
(online at: http://searg.rhul.ac.uk/pubs/clements_hall_2011%20Sundaland%20emergence.pdf)
(Detrital zircons from Eo-Oligocene sandstones of SW West Java derived from local volcanic sources and Sundaland. Populations with ages of 50-80 Ma (from two discrete volcanic arcs in Java and Sulawesi), 74-145 Ma (E-M Cretaceous granites of Schwaner Mts of SW Borneo), 202-298 Ma (Permian-Triassic Tin Belt granites), 480-653 Ma and 723-1290 Ma (Proterozoic SE Asia basement once part of Gondwana). M Eocene sediment derived mainly from Tin Belt, Late Eocene and younger Borneo source more important. Microcontinental collision at Java margin (~80 Ma) halted Cretaceous subduction and resulted in elevation of large parts of continental SE Asia)

Clermonte, J. (1982)- Eastern Indonesia peripheral to northern Australia: post-Mesozoic structures and orogeny. Bull. Centr. Rech. Expl.-Prod. Elf- Aquitaine 6, 2, p. 503-511.

Clure, J. (1998)- Complex Eastern Indonesia poses exploration challenges. Oil and Gas J. 96, 38, p. 91-95.

Cockroft, P. & K. Robinson (1988)- Chemistry of oilfield waters in South East Asia and their application to petroleum exploration. Proc. Offshore South East Asia Conf., Singapore 1988, SEAPEX Proc. 8, p. 221-238.
(Study of formation waters from 400 SE Asia wells. Majority fresh or brackish meteoric to connate waters)

Cole, J.M. & S. Crittenden (1997)- Early Tertiary basin formation and the development of lacustrine and quasi-lacustrine/marine source rocks on the Sunda Shelf of SE Asia. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 147-183.
(Tertiary basins of Sunda Shelf of SE Asia formed in ?Mid- Late Eocene and accumulated thick syn-rift lacustrine and low salinity organic-rich shales through Late Paleogene. Towards end Oligocene- E Miocene marine transgression throughout region. Syn-rift sediments most important hydrocarbon source rocks)

Collette, B.J. (1954)- On the gravity field of the Sunda region (West Indonesia). Geologie en Mijnbouw 16, 7, p. 271-300.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0Yi13a19UM20tQ0k/view)
(Part of University of Utrecht Ph.D. Thesis. Interpretation of five gravity profiles through Sumatra and Java, based on broadly spaced gravity data from Vening Meinesz and BPM (see also Van Bemmelen 1954))

Collette, B.J. (1954)- On the gravity field of the Sunda region (West Indonesia)- a postscript. Geologie en Mijnbouw 16, p. 335-339.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0QzA4cUJzVmlrNGM/view)
(Response to Van Bemmelen(1954) critique of Collette (1954) thesis work)

Corbett, G.J. & T.M. Leach (1998)- Southwest Pacific Rim gold-copper systems: structure, alteration and mineralization. Soc. Economic. Geol. (SEG), Spec. Publ. 6, p. 1-238.
(draft online at: www.corbettgeology.com/corbett_and_leach_1997.pdf)
(On Indonesia- New Guinea- Philippines gold deposits. Includes discussions of Masupa Ria, Kalimantan, Wetar, etc.)

CoreLab/ PERTAMINA (1995)- The petroleum geology and economic assessment of the foreland basin areas of Eastern Indonesia. 5 vols. *(Unpublished)*

Courteney, S. (1995)- Sequence stratigraphy applied to the hydrocarbon productive basins of western Indonesia. In: G.H. Teh (ed.) Southeast Asian basins: oil and gas for the 21st century, Proc. AAPG-GSM Int. Conf. 1994, Bull. Geol. Soc. Malaysia 37, p. 363-394.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a27.pdf)
(>3000 exploratory wells drilled since 1870 in W Indonesia with 750 discoveries. By 1992 over 300 producing fields in 11 basins and 100 fields shut-in or abandoned. Published work is of regional nature. Lithostratigraphy mainly based on pre-1960's work, with terminology varying between companies. Biostratigraphy handicapped by lack of age diagnostic fossils in E Miocene and older sediments in most of Sumatra and Natuna. Java-Kalimantan older section more marine with age diagnostic fossils, but errors in age determination due to reworking. Propose correlative framework using sequence stratigraphy)

Courteney, S. (1996)- Western Indonesia-1: Sequence stratigraphy buoys W. Indonesia basins. Oil and Gas J. 94, May 20, p. 86-90.

Courteney, S. (1996)- Western Indonesia-2: Middle Eocene, older sequences in rifts key to potential in Western Indonesia. Oil and Gas J. 94, 22, May 27, p. 71-74.
(Hydrocarbons in Sumatra, Natuna, Sunda Basin, Lombok, Barito, NW Java, possibly also E Java basins all tied to M Eocene source rocks, mainly lacustrine, limited to Paleogene rifts)

Curray, J.R. (1989)- The Sunda Arc: a model for oblique plate convergence. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, p. 131-140.
(Sunda Arc extends from Himalayas to Banda Arc. Variations along arc function of direction and speed of convergence across subduction zone and sediment thickness on underthrusting plate. Highly oblique convergence may lead to lateral terrane transport and opening - closing of marginal basins like Andaman Sea)

Daly, M.C., M.A. Cooper, I. Wilson, D.G. Smith & B.G.D. Hooper (1991)- Cenozoic plate tectonics and basin evolution in Indonesia. Marine Petroleum Geol. 8, 1, p. 2-21.

(BP plate reconstruction. evolution. India collision and indentation led to major clockwise rotation of SE Asia. Sumatran basins opened due to back arc extension in Eocene. Closure of marginal ocean basin resulted in major contractional event in Late Oligocene. Gulf of Thailand basins and Andaman Sea opened in response to rotation of Indochina and oblique convergence at Sunda trench. Inversion S end of these basins and uplift in Borneo coincided with collision of Reed Bank Terrane with Borneo. Opening of Makassar Straits, Kutei, Tarakan and Barito basins in Eocene. Inversion of these basins result of collision of Australia and Australia-derived microplates in Late Miocene/Pliocene. Pliocene foldbelt and foreland basin formation in New Guinea result of oblique arc collision. Basin evolution of SE Asia not result of lateral extrusion in front of India indenter; main effect of collision is CW rotation of Indochina and extension along Sumatran active margin. Includes Oligocene arc polarity reversal in Sumatra, Timor is part of NW Australian margin, etc.)

Daly, M.C., B.G.D. Hooper & D.G. Smith (1987)- Tertiary plate tectonics and basin evolution in Indonesia. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 399-428.
(Late 1980's BP plate reconstructions of Tertiary of SE Asia since 55 Ma. (see also Daly et al. 1991))

Daly, M.C., B.G.D. Hooper & D.G. Smith (1989)- Tertiary plate tectonics and basin evolution in Indonesia. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 105-134.
(Same paper as Daly et al. (1987) above. With reconstructions since 70 Ma. N-ward motion of Australia started at ~50 Ma, at about same time as India-Eurasia collision and initiation of SE Asia Tertiary basins formation. Sumatra back-arc basins geometry of pull-apart basins between dextral strike-slip displacement. Banda-Celebs Sea (erroneously) viewed as trapped Mesozoic Indo-Australian oceanic crust?. Kutai- Tarakan- Barito-Makassar Straits basins viewed as Eocene back-arc extension along Pacific margin. Etc.)

Darian, J.P., A.L. Clark & Djumhani (1985)- A geologic and mineral resource assessment of Indonesia. East-West Resource Systems Institute, Honolulu, Working Paper 85-5, p. *(Unpublished?)*

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(see also online version at: http://geoseismic-seasia.blogspot.com/p/home.html)
(24 chapters of of Indonesian basins with short basin characterization and typical seismic lines)

Darman, H. & H. Sidi (eds.) (1999)- Tectonics and sedimentation of Indonesia. Proc. 1st Reg. Mtg. Indonesian Sedimentologists Forum (FOSI), Bandung 1999, 99p.
(Symposium commemorating 50th anniversary Van Bemmelen (1949) book Geology of Indonesia)

Darman, H. & H. Sidi (eds.) (2000)- An outline of the geology of Indonesia. Indonesian Assoc. Geol. (IAGI), Jakarta, p. 1-192.
(Concise overview of Indonesian geology by collective of 25 Indonesian geologists. Much of book also as online chapters on Wikipedia)

Darman, H., R.A. Tampubolon & M. Arisandy (2018)- Geological features observations in Eastern Indonesia based on selected P3GL seismic data. Berita Sedimentologi 40, p. 55-64.
(online at: http://www.iagi.or.id/fosi/berita-sedimentologi-no-40.html)
(Examples of P3GL seismic lines over several East Indonesia basins around Waigeo, Misool, Seram, Aru, etc.))

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(Discussion of new INDOGEO sediment thickness map)

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(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/1999GL010865)

(New data set of relocated earthquakes >400 km under Indonesia, developed by Schoffel and Das 1999. Slab thickens, shortens and weakens before penetrating below 670 km by shearing along conjugate fault planes on upper and lower portions of seismic zone)

De Bruyn, J.W. (1951)- Isogam maps of Caribbean Sea and surroundings and of Southeast Asia. Proc. Third World Petroleum Congress, The Hague 1951, Sect. 1, Brill, Leiden, p. 598-612.
(Two 1:10 million scale isogam maps based on published data and Royal Dutch Shell gravity surveys:(1) Caribbean Sea and surroundings; (2) SE Asia, including Indonesia, Philippines and New Guinea)

Decker, J., F. Ferdian, A. Morton, M. Fanning & L.T. White (2017)- New geochronology data from Eastern Indonesia- an aid to understanding sedimentary provenance in a frontier region. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-551-G, 18p.
(New zircon ages of igneous rocks in E Indonesia. Biotite-cordierite dacites (ambonites) from Ambon Pliocene (3-4 Ma), with inherited material from ~150-450 Ma. Banggai-Sula granites mainly M-L Triassic age (226-244 Ma), with inherited zircons of ~1000, ~1400-1500, 1800 and 2200 Ma. Birds Head granites similar Triassic ages (~235-248 Ma; roots of Triassic volcanic arc system). Bacan diorite ~330 Ma. Seram Triassic Kanikeh Fm sst same zircon age spectra as metasediments of Tanusa and Tehoru complexes. Sirga Fm quartz clastics in New Guinea Lst several units of different ages, derived from local uplifts in Eocene-Oligocene)

Deninger, K. (1914)- Einige Bemerkungen uber die Stratigraphie der Molukken und uber den Wert palaeontologischer Altersbestimmungen uberhaupt. Neues Jahrbuch Mineral. Geol. Palaontologie 1910, 2, Abhandl., p. 1-15.
('Some remarks on the stratigraphy of the Moluccas and the value of paleontological age determinations'. Early discussion on significance of Mesozoic fossils of Buru and age of Buru Limestone)

Derksen, S.J. & J. McLean-Hodgson (1988)- Hydrocarbon potential and structural style of continental rifts: examples from East Africa and Southeast Asia. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 8, p. 47-62.
(Review of continental rift systems, with examples from Tertiary basins of Sundaland. In intracratonic setting sedimentation typically non-marine during active graben formation; later regional subsidence may give rise to marine transgression in rifts near cratonic margins. Best potential source rocks in non-marine rifts lacustrine shales, with TOC up to 20%. Volume of oil generated may be very large for depocentre of limited areal extent. Long distance migration from oil kitchens (20 km) not common in continental rift settings. Basin size typically 20-60 km wide and 70-300 km in length)

De Smet, M.E.M. (1989)- A geometrically consistent plate-tectonic model for Eastern Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Symposium Snellius II Expedition, Jakarta 1987, 1, Netherlands J. Sea Research 24, 2/3, p. 173-183.
(E Indonesia plate tectonic model for last 10 Myr assuming six rigid rotating plates: Banda Sea, Buru-Seram, Sula, W Pacific, Irian Jaya, Australia)

De Smet, M.E.M. (1999)- On the origin of the outer Banda Arc. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 81-82. *(Abstract only)*
(Order of structure belts/ rocks around Banda Sea is not logical one in terms of plate tectonics. Outer Banda Arc not accretionary complex but compressed northern rim of Australian continental margin)

De Vos van Steenwijk, J.E. Baron (1946)- Plumb-line deflections and geoid in Eastern Indonesia as derived from gravity. Publ. Netherlands Geodetic Commission, Delft, p. 1-23.
(online at: https://www.ncgeo.nl/downloads/08DeVos.pdf)
(Calculations on gravity measurements by Vening Meinesz suggest irregularities in vertical gravity deflections and shape of geoid in E Indonesia. No discussion of geologic implications)

De Waele, B., P. Williams & G. Chan (2009)- Tectonic controls on the distribution of large copper and gold deposits in Southeast Asia to identify productive and non-productive structures. In: P.J. Williams et al. (eds.) Proc. 10th Biennual SGA Meeting, Smart science for exploration and mining, Townsville 2009, p. 933-935.
(Extended abstract) (On distribution of porphyry copper and epithermal gold deposits in SE Asia region and plate-tectonic controls)

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(online at: http://onlinelibrary.wiley.com/doi/10.1029/2012GC004417/pdf)
(Seismic shear wave splitting indicates direction of mantle flow. Deformational features across Indonesian region: (1) block rotation history of Borneo reflected in coast-parallel fast directions; (2) mantle flow patterns in Sulawesi and Banda region: toroidal flow around Celebes Sea slab, oblique corner flow in Banda wedge, and sub-slab mantle flow around arcuate Banda slab; (3) evidence for deep, sub-520 km anisotropy at Java subduction zone; (4) Sumatran backarc trench-perpendicular fast orientations (mantle flow beneath overriding Eurasian plate?))

Durbaum, H.J. & K. Hinz (1984)- SEATAR-related geophysical studies by BGR in the Southwest Pacific. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, American Assoc. Petrol. Geol. (AAPG), p. 129-133.
(Brief summary of results of German BGR 1977-1981 geophysical surveys in Sulu Sea, Makassar Straits, Arafura Sea, Wharton Basin and Coral Sea. No clear seismic evidence of seafloor spreading in Makassar Straits)

Earle, W. (1845)- On the physical structure and arrangement of the islands of the Indian Archipelago. J. Royal Geographic Soc. London 15, p. 358-365.
(online at: https://ia601700.us.archive.org/35/items/jstor-1797916/1797916.pdf)
(Early depiction of major structural elements elements of Indonesian archipelago: two continental blocks ('Great Asiatic Bank' in W and 'Great Australian Bank' in SE, surrounded by mountain and volcanic ranges)

Edelman, C.H. (1941)- Studien over de bodemkunde van Nederlandsch-Indie. Veenman, Wageningen, p. 1-416.
(online at: http://library.wur.nl/isric/fulltext/isricu_i00000621_001.pdf)
('Studies on the soil science of Netherlands Indies')

Elbert, J. (1911)- Die Sunda-Expedition des Vereins fur Geographie und Statistik zu Frankfurt am Main. Festschrift zur Feier des 75 jahrigen Bestehens des Vereins. Verein fur Geographie und Statistik, Hermann Minjon, Frankfurt, vol. 1, XXV, p. 1-274.
(online at: http://digital.staatsbibliothek-berlin.de/werkansicht?PPN=PPN683553704&PHYSID=PHYS_0009&DMDID=DMDLOG_0001)
('The Sunda-Expedition of the Frankfurt Geographic Society, etc'. Report of 1910 geographic expedition lead by Johannes Elbert to Bali, Lombok, Salayer, Tukang Besi, Muna, Buton, Rubia, Mengkoda, and parts of Java and Sumatra. Main purpose of expedition was to explore geographic relationship between Asia and Australia. Rel. little geology)

Elbert, J. (1912)- Die Sunda-Expedition des Vereins fur Geographie und Statistik zu Frankfurt am Main, vol. II. Verein fur Geographie und Statistik, Hermann Minjon, Frankfurt, 15, p. 1-373.
(online at: http://digital.staatsbibliothek-berlin.de/werkansicht?PPN=PPN683554255&PHYSID=PHYS_0009&DMDID=DMDLOG_0001)
(Volume 2 of 'The Sunda-Expedition of the Frankfurt Geographic Society, etc'.. Covers islands Kabaena, Sumbawa, Flores and Wetar and geographic summaries)

Elbert, J. (1913)- Geosynklinale und Rahmenfaltung, Zerrungsgebirge und Vulkanismus im australasiatischen Archipel. Zeitschrift Gesellschaft Erdkunde Berlin, 1913, p. 224-230.
(online at: www.digizeitschriften.de/download/PPN391365657_1913/PPN391365657_1913___LOG_0060.pdf)

(Brief, early discussion of tectonics of Indonesian archipelago. No figures)

England, P., R. Engdahl & W. Thatcher (2004)- Systematic variation in the depths of slabs beneath arc volcanoes. Geophysical J. Int. 156, 2, p. 377-408.
(Depth to top subducting slab below Java volcanoes ~100km. Worldwide ranges 65-130 km. Inverse correlation between depth and descent speed of subducting plate. No correlation with age of subducting ocean floor or thermal parameters of slab)

Ernst, W.G., S. Maruyama & S. Wallis (1997)- Buoyancy-driven, rapid exhumation of ultrahigh-pressure metamorphosed continental crust. Proc. National Academy Sciences USA 94, p. 9532-9537.
(online at: www.pnas.org/content/94/18/9532.full.pdf)
(Preservation of ultrahigh-pressure (UHP) minerals formed at depths of 90-125 km require unusual conditions. Our subduction model involves (1) underflow of continental crust embedded in cold, largely oceanic crust-capped lithosphere, (2) loss of leading portions of high-density oceanic lithosphere by slab break-off as increasing volumes of microcontinental material enter subduction zone, (3) buoyancy-driven return to mid-crustal levels of thin (2-15 km thick), low-density slice, (4) uplift, backfolding, normal faulting and exposure of UHP terrane. Intracratonal position of most UHP complexes reflects consumption of intervening ocean basin and introduction of sialic promontory into subduction zone. UHP metamorphic terranes consist chiefly of transformed continental crust (otherwise could not return to shallow depths). UHP paragneisses contain crustal diamonds. Banda Arc used as example)

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(online at: www.dwc.knaw.nl/DL/publications/PU00016465.pdf)
(Pre-plate tectonics paper exploring the apparent relationships between belts of active volcanoes, dipping zone of earthquakes and zone of negative gravity anomalies as recently identified by Vening Meinesz (early recognition of what became known in 1960's as Benioff-Wadati subduction zones; JTvG))

Escher, B.G. (1933)- Over het indirecte verband tusschen het vulkanisme in Ned.-Indie en de strook van negatieve anomalie van Vening Meinesz. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 50, 5, p. 727-740.
('On the indirect relationship between volcanism and Vening Meinesz' belt of negative gravity anomalies in E Indies'. (Escher supports Vening Meinesz' idea of significant horizontal movements of crust in the Indonesian region, but disputed by Van Bemmelen 1933 and many other papers)

Escher, B.G., I.M. van der Vlerk, J.H.F. Umbgrove & P.H. Kuenen (eds.) (1931)- De palaeontologie en stratigraphie van Nederlandsch Oost-Indie, Leidsche Geol. Mededelingen 5 ('Feestbundel Prof. Dr. K. Martin'), 1, p. 1-648.
('The paleontology and stratigraphy of Netherlands East Indies'. Commerative volume at 80st birthday of Prof. Dr. K. Martin. Voluminous book with 20 chapters summarizing 'state of knowledge' of paleontology and stratigraphy in Netherlands East Indies. With listings of species and fossil localities and stratigraphic tables. No illustrations of fossils)

Evans, C.D., C.P. Brett, J.W.C. James & R. Holmes (1995)- Shallow seismic reflection profiles from the waters of east and southeast Asia: an interpretation manual and atlas. British Geol. Survey (BGS) Techn. Report, WC/94/60, p. 1-94.
(Includes shallow sparker profiles in Indonesia, illustrating Neotectonics of Lampung Bay (faults cutting Pleistocene sediments), Neotectonics and diapyrism off N Madura (Neogene-Recent compressional anticline, a diapyric structure and possible gas chimneys) and Seabed erosion of Sunda Shelf W of Kalimantan (incl. 20m deep/ 600m wide buried lowstand channels)

Fairhead, J.D., I. Somerton & G. Gifford (2004)- A new global satellite gravity dataset for screening and evaluating offshore basins in S.E. Asia. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), DFE04-PO-006, 7p.
(New GETECH processing method ERS-1 and GEOSAT satellite gravity recovers gravity anomalies with wavelengths down to 10 km)

Fainstein, R. (1998)- Deep water exploration off Southeast Asia. In: Offshore South East Asia Conf. (OSEA98), Singapore, SEAPEX, p. 272. *(Abstract only)*

Fitch, T.J. (1970)- Earthquake mechanisms and island arc tectonics in the Indonesian-Philippine region. Bull. Seismological Soc. America 60, 2, p. 565-591.
(One of first papers applying plate tectonics concepts to Indonesia. New focal mechanisms from shallow-focus earthquakes in Indonesian-Philippine region suggest dominant thrust and normal faulting rather than strike-slip faulting. Along Sunda and Philippine arcs most activity between ocean trench and line of active volcanoes. Mechanism solutions from earthquakes in this zone all thrust type (underthrusting beneath island arc))

Fitch, T.J. (1972)- Plate convergence, transcurrent faults and internal deformation adjacent to southeast Asia and western Pacific. J. Geophysical Research 77, p. 4432-4460.
(Earthquake data used to delineate convergence and transcurrent fault zones in Indonesia. Weber Deep erroneously interpreted in earlier Fitch papers as E continuation of Java Trench. See also comment by Audley Charles and Milsom 1974)

Fitch, T.J. & W. Hamilton (1974)- Reply to Audley-Charles and Milsom comments on Fitch 1972 paper. J. Geophysical Research 79, 32, p. 4982-4985.
(Authors agree with Audley Charles and Milsom that Timor is product of collision of Banda island-arc system with continental shelf of Australia and New Guinea. Advancing arc has ramped up onto shelf, bulldozing shelf strata and incorporating them into imbricated and melanged material riding at front of arc. Timor trough, like Java trench with which it is continuous to W, is angle between gently dipping undersliding southern continental crustal plate and wedge of shuffled material above it to N)

Fitch, T.J. & P. Molnar (1970)- Focal mechanisms along inclined earthquake zones in the Indonesia- Philippine region. J. Geophysical Research 75, p. 1431-1444.
(28 new focal mechanisms for intermediate and deep-focus earthquakes in Indonesia-Philippine region. At intermediate depths of Sunda and Philippine arcs descending slab of lithosphere is under extension. Deep-focus mechanisms beneath Sunda arc suggest descending slab is under compression at great depth. In Banda Sea and N Celebes regions seismicity indicates possible contortions in underthrust slabs)

Fletcher, G.L. & R.A. Soeparjadi (1976)- Indonesia's Tertiary basins- the land of plenty. In: Proc. SEAPEX 1976, Offshore South East Asia Conf., Singapore, Paper 8, p. 1-54.
(Good overview of geology and hydrocarbon plays in Indonesian Tertiary basins)

Ford, R.J. (1988)- An empirical model for the Australasian tektite field. Australian J. Earth Sci. 35, p. 483-490.
(Australasian strewn-field contains radial sequence of tektite shapes ranging from rel. large unmodified impactite (Muong Nong type in S Laos, E Thailand), through dumb-bells and discs (thailandites, indochinites; 400-1000 km from impact site), and spheres (phillipinites, billitonites, javanites; 1000-3000 km from impact) to ablated button shapes (australites). Shapes of tektites from mainland SE Asia derived from uncongealed spinning glassy fragments passing through atmosphere. Sequence extends from suspected impact area in NE Cambodia to SE, to SE Australia and Tasmania)

Fortuin, A.R. & M.E.M. de Smet (1991)- Rates and magnitudes of Late Cenozoic vertical movements in the Indonesian Banda Arc and the distinction of eustatic effects. In: D.I.M. MacDonald (ed.) Sedimentation, tectonics and eustasy: sea level changes at active margins, Int. Assoc. Sedimentologists (IAS), Spec. Publ. 12, p. 79-89.

Fraser, A.J., S.J. Matthews & R.W.Murphy (eds.) (1997)- Petroleum geology of SE Asia. Geol. Soc., London, Spec. Publ. 126, 427p.
(Good collection of papers on SE Asia tectonics, basins and hydrocarbon plays)

Fugro-Robertson (2008)- Exploration opportunity screening: Eastern Indonesia-Papua New Guinea. Multi-client study, vol. I: Text; vol. II: Enclosures. *(Unpublished)*

Gage, M.S. & R.S. Wing (1980)- Southeast Asian basin-types versus oil opportunities. Proc. 9th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 124-147.
(Genetic classification of 63 SE Asia basins. Over 35 billion bbl oil found, another 35 remains to be found. Four of 11 recognized basin types contain 84% of all SE Asian oil: ocean margin, backarc, wrench and suture-related basins)

Gaina, C. & D. Muller (2007)- Cenozoic tectonic and depth/age evolution of the Indonesian gateway and associated back-arc basins. Earth-Science Reviews 83, p. 177-203.
(Reconstruction of tectonics and depth history of Indonesian seaway and associated SE Asian back-arc basins. All marginal seas N of Australia formed in back-arc setting, with Caroline (37-24 Ma) and Celebes Seas (48-35 Ma) opening N of N- dipping subduction zone, and Solomon Sea (42-33 Ma) S of S- dipping subduction. Several major tectonic events N of Australia at ~45 Ma, related to relocation of subduction zone NW of Australia under Philippine Sea plate due to collision and accretion of old Pacific plate material to N-subducting Australian plate. Negative anomalous depth of several back-arc basins is ~650-800m (range 300-1100m), accompanied by negative regional heatflow anomalies, suggesting mantle-driven dynamic topography. Tomography shows marginal basins with negative dynamic topography underlain by massive buried slab material, suggesting negative dynamic topography and heatflow anomalies due to basin formation above slab burial grounds)

Garwin, S.L. (1997)- The settings and styles of gold mineralisation in Southeast Asia. Bull. Geol. Soc. Malaysia 40, p. 77-111.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997008.pdf)
(Majority of gold in SE Asia in porphyry (64%), low-sulfidation epithermal (17%), carbonate-base metal-gold (7%) and skarn (4%) deposits. 90% of these deposits (>95% of gold) associated with 14 middle to late Cenozoic magmatic arcs)

Garwin, S., R. Hall & Y. Watanabe (2005)- Tectonic setting, geology and gold and copper mineralization in Cenozoic magmatic arcs of Southeast Asia and the West Pacific. Economic Geology 100, p. 891-930.
(Gold and copper deposits in SE Asia and W Pacific largely in M-L Cenozoic (25-1 Ma) magmatic arcs. Twenty major arcs and several less extensive Cenozoic arcs form complex border to Sundaland core and N margin of Australian continent. Three major plate reorganizations at ~45, 25 and 5 Ma, characterized by collisional events that changed plate boundaries and motions. Most deposits developed during episodes of plate reorganization. Hydrothermal systems active for durations of <100,000 years)

Garwin, S., R. Hall & Y. Watanabe (2005)- Descriptions of the geologic settings and mineral deposit styles for major Cenozoic magmatic arcs of Southeast Asia and the West Pacific. Appendix I of Garwin, S., R. Hall & Y. Watanabe (2005), Economic Geology 100, p. 1-32.
(Descriptions of major Cenozoic volcanic arcs and associated mineral deposits from Japan through Philippines to Indonesia/ New Guinea)

Genrich, J.F., Y. Bock, R. McCaffrey, E. Calais, C.W. Stevens & C. Subarya (1996)- Accretion of the southern Banda Arc to the Australian plate margin determined by global positioning system measurements. Tectonics 15, p. 288-295.
(GPS measurements show Australian continent has accreted to Banda arc. Timor Trough now mostly inactive. Most of Australia- Eurasia convergence appears to occur as N-ward translation of Banda Arc, with shortening on Flores and Wetar thrusts)

Geological Survey of Indonesia (2008)- Gravity anomaly map of Indonesia, 1: 1,000,000.

Geological Survey of Indonesia (2009)- Peta Cekungan sedimen Indonesia/ Sedimentary basin map of Indonesia, based on gravity and geological data, 1:5000,000. Geol. Survey Indonesia, Bandung.
(online at: www.grdc.esdm.go.id)
(Map of Indonesia sedimentary basins, color-coded by age and labeled by basin type)

Geological Survey of Japan (2004)- Digital geologic map of East and Southeast Asia, 1: 2,000,000, 2nd ed. Digital Geoscience Map Series G-2, CD-ROM.

Ghose, R. & K. Oike (1988)- Characteristics of seismicity distribution along the Sunda Arc: some new observations. Bull. Disaster Prev. Res. Inst., Kyoto University, 38, 2, p. 29-48.
(online at: http://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/124954/1/b38p2n332p03.pdf)
(Depth distribution of earthquakes revealed zone of rare seismicity at intermediate depth in eastern Sunda arc)

Ghose, R., S. Yoshioka & K. Oike (1990)- Three-dimensional numerical simulation of the subduction dynamics in the Sunda arc region, Southeast Asia. Tectonophysics 181, p. 223-255.

Gingele, F.X., P. De Deckker & C.D. Hillenbrand (2001)- Clay mineral distribution in surface sediments between Indonesia and NW Australia- source and transport by ocean currents. Marine Geology 179, p. 135-146.

Granath, J.W., J. Christ, D. Fairhead & W. Dickson (2001)- Tertiary tectonic compilation in a GIS for Indonesia. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 345-351.
(E Indonesia tectonic blocks in GIS format)

Green, R., J.S. Adkins, H.J. Harrington & M. Untung (1979)- Bouguer gravity anomaly map of Indonesia. University of New England, Armidale, Australia.

Green, R., J.S. Adkins, H.J. Harrington & M. Untung (1981)- Bouguer gravity map of Indonesia. Tectonophysics 71, p. 267-280.
(Summary of 1:5M map; map not included)

Grevemeyer, I. & V.M. Tiwari (2006)- Overriding plate controls spatial distribution of megathrust earthquakes in the Sunda-Andaman subduction zone. Earth Planetary Sci. Letters 251, p. 199-208.
(Thermal models and structural constraints derived from seismic and gravity data used to explain seismogenic behaviour in Sunda subduction zone. With respect to Java, oblique subduction of young oceanic crust shifts seismogenic coupling zone roughly 40 km trenchward offshore of N Sumatra and increases width of locked megathrust. Prominent positive gravity anomaly offshore Java caused by shallow mantle wedge underlying forearc basin. Serpentinized mantle wedge would limit width of coupling zone to 30–40 km, compared to N120 km off Sumatra. Sumatra remains therefore most vulnerable for future megathrust earthquakes, while shallow mantle wedge may limit violence of rupture off Java)

Gribi, E.A. (1973)- Tectonics and oil prospects of the Moluccas, Eastern Indonesia.In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 11-16.
(online at: www.gsm.org.my/products/702001-101357-PDF.pdf)
(Early brief review of tectonics and oil prospectivity of E Indonesia)

Gribi, E.A. (1974)- Petroleum geology of the Moluccas, Eastern Indonesia. Proc. SEAPEX 1973 Conf., Singapore, 1, p. 23-30.
(Older, brief overview of potential hydrocarbon plays in E Indonesia)

Griffiths, J.R. & C.F. Burrett (1973)- Were South-East Asia and Indonesia parts of Gondwanaland? Nature Physical Sci. 245, p. 92-93.

(Brief comments on recent Ridd et al. (1971) and Audley-Charles (1972) SE Asia plate reconstructions, in which India has been placed adjacent to W Australia and against Antarctica)

Grunau, H.R. (1965)- Radiolarian cherts and associated rocks in space and time. Eclogae Geol. Helvetiae 58, p. 157-206.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1965:583)
(Review of radiolarian cherts worldwide, incl. descriptions of ?Jurassic Danau Fm and Cretaceous Lupar Fm of Borneo, and similar rocks from Sumatra, Triassic and Cretaceous of Seram, Cretaceous of Timor, Jurassic-Cretaceous of E Sulawesi and Triassic of Malay Peninsula. Radiolarian cherts typical deep water 'geosynclinal' deposits (mainly Tethys eugeosyncline), typically intensely folded and associated with turbidites and ophiolites. As already concluded by Molengraaff (1909) these are remnants of former ocean basins)

Guntoro, A. (1995)- Tectonic evolution and crustal structure of the Central Indonesian region from geology, gravity and other geophysical data. Ph.D. Thesis University College London, p. 1-335. *(Unpublished)*
(Central Indonesian Region represents transition between mainly Eurasian elements of W Indonesia and Pacific-Australian elements of E Indonesia. Bounded by two subduction zones: in W by pre-Tertiary subduction zone at SE Sundaland margin, to E by E Tertiary subduction zone (Selayar-Bonerate ridge). Variations in gravity demonstrate that continental crust in CIR was attenuated by subduction roll-back and then subjected to rifting by extensional forces. Extension in Makassar Strait, C Java Sea and E Java Sea in Eocene, forming marginal basins. Bone Bay opened due to collision between Banggai- Sula microcontinent and Sulawesi in M Miocene and was followed by CW rotation of Java, Sumbawa and Flores which caused opening of Flores Sea)

Guntoro, A. (1999)- A new propose of geological division in the Indonesian archipelago from tectonic evolution point of view. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 20-21. *(Extended Abstract)*
(Indonesian archipelago often divided into E and W parts, with boundary in Makassar Straits and Lombok Strait. New subdivision introducing C Indonesia Province, transition between Eurasian W Indonesia and Pacific- Australasian related elements of E Indonesia. Boundary between W and C Indonesian regions is Pre-Tertiary subduction zone at SE Eurasian margin. Boundary between C and E Indonesia at Paleogene subduction complex accreted to this margin, marked by Selayar-Bonerate Ridge, separating Flores and Banda Seas. C Indonesian region Cretaceous- Eocene site of complex subduction, fore arcs and magmatic arcs and subsequent opening of Makassar Strait)

Hafkenscheid, E. (2004)- Subduction of the Tethys oceans reconstructed from plate kinematics and mantle tomography. Ph.D. Thesis University of Utrecht, Geologica Ultraiectina 241, p. 1-191.
(online at: http://dspace.library.uu.nl/handle/1874/591)
(On large-scale history of subduction win Tethyan region from Mediterranean to Indonesian archipelago by combining plate tectonic reconstructions with independent seismic tomography results. Plate tectonic reconstructions of Tethyan region generally agree on first-order motions. E Tethyan region characterised by active subduction of various oceanic basins. Subduction zones modelsfrom regional tectonic reconstructions, converted into seismic velocity anomalies, which are compared to tomographic images of mantle structure)

Hafkenscheid, E., S.J.H. Buiter, M.J.R. Wortel, W. Spakman & H. Bijwaard (2001)- Modelling the seismic velocity structure beneath Indonesia: a comparison with tomography. Tectonophysics 333, p. 35-46.
(Generally good agreement between modeled tomography velocity structure and Rangin (1999) and Lee & Lawver (1995) plate reconstructions)

Hafkenscheid, E., M.J.R. Wortel, W. Spakman (2006)- Subduction history of the Tethyan region derived from seismic tomography and tectonic reconstructions. J. Geophysical Research 111, B08401, p. 1-26.
(Tomography, mainly on Western Tethys)

Haile, N.S. (1973)- The recognition of former subduction zones in Southeast Asia. In: D.H. Tarling & S.K. Runcorn (eds.) Implications of continental drift to the earth sciences, vol. 2, Academic Press, London, p. 885-892.
(Early paper on plate tectonics application in SE Asia, focused around W Borneo- Malay Peninsula)

Haile, N.S. (1976)- The regional implications of paleomagnetic research in Southeast Asia. SEAPEX Proc. 3, p. 39-44.
(Review of recent paleomagnetic work in SE Asia. Cretaceous rocks from W Kalimantan suggest this part of Borneo lay on equator, as Malay Peninsula with which it formed part of single plate, which subsequently rotated ~45°. Late Mesozoic radiolarian cherts from SW arm of Sulawesi also indicate low latitudes and CCW rotation of 35°. At W end of Seram late Cenozoic Kelang Fm rotated probably anticlockwise ~ 80°. Triassic rocks from S C Seram high magnetic inclination, indicating origin in higher latitudes (~26°) than today (see also Haile 1978, 1981))

Haile, N.S. (1978)- Progress report on paleomagnetic research in Southeast Asia. In: Wiryosujono & A. Sudradjat (eds.) Proc. 2nd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 33-36.
(New paleomagnetic research suggests Malay Peninsula moved S ~15° and rotated ~31° clockwise (CW) since Late Paleozoic. Malay Peninsula and West Kalimantan rotated together by ~40° CCW since Cretaceous, similar to SW Sulawesi)

Haile, N.S. (1981)- Paleomagnetism of Southeast and East Asia. In: M.W. McElhinny & D.A. Valencio (eds.) Paleoreconstruction of the continents, American Geophys. Union (AGU), Geodyn. Ser. 2, p. 129-135.
(Summary of paleomagnetic results from Borneo, Sumatra (40° CW rotation since Mesozoic, 34° of which accomplished since Oligocene), Sulawesi, Sumatra, Sumba, Timor, Seram (Seram at 12°S in Late Triassic, rotated CCW 98° since then). Late Mesozoic of W Kalimantan and SW Sulawesi little change from present latitude, but 49° and 33° CCW rotation)

Haile, N.S. (1981)- Paleomagnetic evidence and paleotectonic history and paleogeography of eastern Indonesia. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 81-87.
(Seram 74° anticlockwise rotation since Late Miocene. Timor Permian Cribas Fm higher paleolatitude (34°) than Maubisse Fm (27°), but within margin of error. SW Sulawesi E Cretaceous radiolarian chert formed at ~3° and, with Kalimantan and Malay Peninsula, may have rotated 30-40° anticlockwise since Jurassic. Similar cherts from E arm Sulawesi formed at 42°S)

Haile, N.S. & J.C. Briden (1983)- Past and future paleomagnetic research and tectonic history of East and Southeast Asia. Proc. CCOP Workshop Paleomagnetic Research in E and SE Asia, Kuala Lumpur 1982, p. 25-46.

Hall, R. (1990)- Subduction-related ophiolite terrains: evidence from southeast Asia. In: J. Malpas et al. (eds.) Ophiolites: oceanic crustal analogues, Geol. Survey Cyprus, 1987, p. 449-460.

Hall, R. (1995)- Plate tectonic reconstructions of the Indonesian region. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 71-84.
(online at: http://searg.rhul.ac.uk/pubs/hall_1995_IPA%20reconstructions.pdf)
(Early version of R. Hall SE Asia plate reconstructions series, Eocene (50 Ma)- Recent)

Hall, R. (1996)- Reconstructing Cenozoic SE Asia. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 153-184.
(Major review of plate reconstructions of SE Asia at 5 Ma intervals for past 50 Ma)

Hall, R. (1997)- Cenozoic plate tectonic reconstructions of SE Asia. In: A.J. Fraser et al. (eds.) Petroleum geology of Southeast Asia, Geol. Soc. London, Spec. Publ. 126, p. 11-23.

Hall, R. (1997)- Cenozoic tectonics of SE Asia and Australasia. In: J.V.C. Howes & R.A. Noble (eds.) Petroleum systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 47-62.

Hall, R. (1998)- The plate tectonics of Cenozoic SE Asia and the distribution of land and sea. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 99-131.
(SE Asia plate reconstructions 50 Ma-Recent)

Hall, R. (1998)- Cenozoic tectonics of South East Asia: myths, models and methods; reconstructions, implications and speculations. In: Offshore South East Asia Conf. (OSEA98), Singapore, SEAPEX, p. 69-72.
(Brief review of issues in SE Asia tectonic models. Three important periods in regional development: ~45 Ma, 25 Ma and 5 Ma, when plate boundaries and motions changed, probably due to major collision events. Little indication that India was driving force of tectonics in SE Asia. Principal 'myths': myth of India indentor, myth of Australian micro-continent collision events and myth of convergence in New Guinea. No figures)

Hall, R. (2001)- Extension during Late Neogene collision in East Indonesia and New Guinea. J. Virtual Explorer 4, 13p.
(Important plate motion changes in SE Asia- W Pacific at ~45 Ma, 25 Ma and 5 Ma. Australia and SE Asia made contact at ~25 Ma, with collision-related deformation in Sulawesi and between Philippines-Halmahera- S Caroline Arc and New Guinea. Ophiolites obducted in SE Sulawesi in E Miocene)

Hall, R. (2001)- Cenozoic reconstructions of SE Asia and the SW Pacific: changing patterns of land and sea. In: I. Metcalfe et al. (eds.) Faunal and floral migrations and evolution in SE Asia-Australasia. Balkema, Lisse, p. 35-56.

Hall, R. (2002)- Cenozoic geological and plate tectonic evolution of SE Asia and the SW Pacific: computer-based reconstructions, model and animations. J. Asian Earth Sci. 20, 4, p. 353-431.
(Most comprehensive of R. Hall papers on SE Asia- SW Pacific plate reconstructions from Early Eocene (55 Ma)- Recent. See also updated/ expanded version of Hall (2012))

Hall, R. (2008)- Continental growth at the Indonesian margins of SE Asia. In: J.E. Spencer & S.R. Titley (eds.) Ores and orogenesis: Circum-Pacific tectonics, geologic evolution and ore deposits, Arizona Geol. Soc. Digest 22, p. 245-258.
(Indonesia continental core reassembled from blocks rifted from Gondwana, and surrounded by subduction zones for much of Mesozoic and Cenozoic. Weak and thin lithosphere beneath much of Sundaland, responsive to changing forces at the plate boundaries. Continental growth mainly by arrival of continental fragments at subduction margins, with subordinate contributions from ophiolite and sediment accretion or arc magmatism)

Hall, R. (2009)- Southeast Asiaős changing palaeogeography. Blumea- biodiversity, evolution and biogeography of plants 54, 1-3, p. 148-161.
(online at: http://www.ingentaconnect.com/content/nhn/blumea/2009/00000054/f0030001/art00026)
(SE Asia grew incrementally by addition of continental fragments, mainly rifted from Australia, and added to margins of Sundaland as result of subduction. Sundaland almost permanent land area from beginning of Mesozoic. Addition of continental fragments of SW Borneo and later East Java-W Sulawesi formed larger emergent land area by Late Cretaceous. Subduction resumed at Sundaland margin in Eocene, leading to widespread rifting within Sundaland and formation of Makassar Straits. Australia began to collide with SE Asia at ~25 Ma, effectively closing former deep ocean between two continents)

Hall, R. (2009)- Hydrocarbon basins in SE Asia: understanding why they are there. Petroleum Geoscience 15, 2, p. 131-146.
(online at: http://searg.rhul.ac.uk/pubs/hall_2009_SE%20Asia%20hydrocarbon%20basins.pdf)

Almost all hydrocarbon basins in SE Asia began to form in Early Cenozoic and filled with Cenozoic sediments. Most are rifted basins formed by regional extension on continental crust. Weakness of Sundaland lithosphere, unusually responsive to changing forces at plate edges, meant that basins record complex tectonic history)

Hall, R. (2009)- The Eurasian SE Asian margin as a modern example of an accretionary orogen. In: P.A. Cawood & A. Kroner (eds.) Earth accretionary systems in space and time, Geol. Soc. London, Spec. Publ. 318, p. 351-372.
(Eurasian margin in SE Asia surrounds Sundaland continental core. Continental growth since Cretaceous in episodic way, related primarily to arrival of continental fragments at subduction margins, after which subduction resumed in new locations. There have been subordinate contributions from ophiolite accretion, and arc magmatism. Relatively small amounts of material accreted during subduction from downgoing plate. In E Indonesia the wide plate boundary zone includes continental fragments and several arcs. (This paper is first of several versions that show Early Cretaceous age of addition of SW Borneo Block to Sundaland and Late Cretaceous addition of E Java- W Sulawesi accreted block outboard of Meratus- C Java trend))

Hall, R. (2009)- Indonesia, Geology. In: R.G. Gillespie & D.A. Clague (eds.) The encyclopedia of islands, University of California Press, p. 454-460.

Hall, R. (2011)- Australia-SE Asia collision: plate tectonics and crustal flow. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of the Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 75-109.
(Jurassic- Recent Indonesia tectonic reconstruction. Sundaland core of SE Asia is heterogeneous assemblage of Tethyan sutures and Gondwana fragments. Fragments that rifted from Australia in Jurassic collided with Sundaland in Cretaceous and terminated subduction. From 90-45 Ma Sundaland surrounded by inactive margins with localized strike-slip deformation, extension and subduction. At 45 Ma Australia began to move N and subduction resumed beneath Sundaland. At 23 Ma Sula Spur promontory collided with Sundaland margin. From 15 Ma subduction hinge rollback into Banda oceanic embayment, major extension, and later collision of Banda volcanic arc with S margin of embayment. Sundaland has weak thin lithosphere, highly responsive to plate boundary forces and hot weak deep crust flowed in response to tectonic and topographic forces and sedimentary loading. Gravity-driven movements of upper crust, unusually rapid vertical motions, exceptionally high rates of erosion and massive movements of sediment characterized region)

Hall, R. (2011)- SE Asian reconstructions, plate tectonics and crustal flow- any importance for hydrocarbon exploration? SEAPEX Expl. Conf., Singapore 2011, Presentation, 82p. *(Abstract and presentation)*
(Most of SE Asia not rigid plate or multiple rigid microplates bounded by lithospheric faults. Sundaland formed by collision of Sibumasu and E Malaya-Indochina in Triassic and other fragments rifted from Australia in late Jurassic- E Cretaceous were added in Cretaceous (now in Borneo, Java, Sulawesi))

Hall, R. (2012)- Late Jurassic-Cenozoic reconstructions of the Indonesian region and the Indian Ocean. Tectonophysics 570-571, p. 1-41.
(online at: www.sciencedirect.com/science/article/pii/S0040195112002533)
(Mesozoic- Cenozoic plate tectonic reconstructions. Luconia-Dangerous Ground continental block rifted from E Asia and was added to E Sundaland N of Borneo in Cretaceous. Banda (SW Borneo) and Argo (E Java- W Sulawesi) blocks separated from NW Australia and collided with SE Asia between 110- 90 Ma. At 90 Ma Woyla intra-oceanic arc collided with Sumatra margin. Subduction beneath Sundaland terminated at this time. Between 90-45 Ma Australia remained close to Antarctica and there was no significant subduction beneath Sumatra and Java, while Sundaland was surrounded by inactive margins with some strike-slip deformation and extension, except for subduction beneath Sumba- W Sulawesi between 63- 50 Ma. At 45 Ma Australia began to move N; subduction resumed beneath Indonesia and has continued to present. Cenozoic deformation influenced by deep structure of Australian fragments added to Sundaland core, shape of Australian margin formed during Jurassic rifting, and age of now-subducted ocean lithosphere)

Hall, R. (2012)- Sundaland and Wallacea: geology, plate tectonics and palaeogeography. In: D.J. Gower et al. (eds.) Biotic evolution and environmental change in Southeast Asia, The Systematics Association, Cambridge University Press, p. 32-78.
(online at: http://searg.rhul.ac.uk/pubs/hall_2012%20Sundaland%20&%20Wallacea.pdf)
(Plate tectonic and paleogeographic reconstructions since 80 Ma))

Hall, R. (2012)- East Indies. In: McGraw-Hill Encyclopedia of Science and Technology, 11th Ed., 5, p. 850-853.

Hall, R. (2013)- The palaeogeography of Sundaland and Wallacea since the Late Jurassic. J. Limnology 72, 2, p. 1-17.
(online at: www.jlimnol.it/index.php/jlimnol/article/view/685)
(Asia-Pacific boundary active continental margin until M Cretaceous. Subduction ceased around Sundaland in Late Cretaceous. From ~80 Ma most of Sundaland emergent and connected to Asia. One or more India-volcanic collisions in Eocene may have preceded India-Asia collision. During Late Cretaceous- E Cenozoic no significant subduction beneath Sumatra, Java and Borneo, until ~45 Ma when Australia began to move N; also time widespread rifting within Sundaland. During Paleogene E and N Borneo largely submerged. By E Miocene proto-South China Sea had been eliminated by subduction leading to emergence of land in C Borneo, Sabah and Palawan. Microplate or terrane concept of slicing fragments from New Guinea followed by multiple collisions in Wallacea implausible. Neogene subduction drove extension and fragmentation of Wallacea)

Hall, R. (2014)- Indonesian tectonics: subduction, extension, provenance and more. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-360, 13p.
(online at: http://searg.rhul.ac.uk/pubs/hall_2014%20Indonesian%20tectonics.pdf)
(Mainly summary of recent Royal Holloway group research. In E Indonesia subduction zones at different stages of development, from mature examples like Banda system that began to roll back from ~16 Ma, to younger systems such as N Sulawesi. Close relationship between subduction and extension, causing both dramatic elevation of land regions with exhumation of deep crust, and spectacular subsidence of basins. Many metamorphic rocks in Indonesia proved to be younger than previously suggested (SW Borneo, N and C Sulawesi, Seram). Triassic igneous and metamorphic rocks at W end of Schwaner region and N of Pontianak suggesting suture between Sundaland and SW Borneo further E than previously postulated)

Hall, R. (2014)- The origin of Sundaland. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 1-25.
(online at: http://searg.rhul.ac.uk/pubs/hall_2014%20Sundaland%20origin.pdf)
(Updated version of SE Asia plate tectonic reconstruction. Core of SE Asia was assembled from continental blocks that separated from Gondwana in Paleozoic and amalgamated with Asian blocks in Triassic. Some fragments rifted and separated from Asia and later re-amalgamated with western part of SE Asian continental core in Mesozoic. Fragments of Cathaysian/Asian continental crust form parts of N Borneo and offshore shelf N of Sarawak and E of Vietnam. Other continental blocks rifted from Australia in Jurassic (SW Borneo, E Java-W Sulawesi, Sabah-NW Sulawesi, S Sulawesi-Sumba) and Woyla intra-oceanic arc of Sumatra and were added to Sundaland in Cretaceous. Subduction ceased around Sundaland in early Late Cretaceous)

Hall, R. (2017)- Southeast Asia: new views of the geology of the Malay Archipelago. Annual Review Earth Planetary Sci. 45, p. 331-358.
(Recent review of SE Asia tectonics. W part of SE Asia (Sundaland) heterogeneous and weak region, not underlain by thick, cold Precambrian lithosphere like typical cratons. In E subduction zones in different stages of development. Metamorphism in many parts of E Indonesia much younger than previously assumed. Close relationship between subduction rollback and extension, causing dramatic elevation of land, exhumation of deep crust and spectacular subsidence of basins)

Hall, R. (2018)- The subduction initiation stage of the Wilson cycle. In: R.W. Wilson et al. (eds.) Fifty years of the Wilson cycle concept in plate tectonics, Geol. Soc., London, Spec. Publ. 470, 23p.
(online at: http://sp.lyellcollection.org/content/specpubgsl/early/2018/02/12/SP470.3.full.pdf)

(Discussion of initiation of subduction process, with examples from East Indonesia (Banda, Sulawesi-Philippines))

Hall, R., J. Ali, C. Anderson & G.J. Nichols (1992)- Dispersion and accretion recorded in Eastern Indonesia. In: Proc. First Int. Symp. Gondwana dispersion and Asian accretion, China 1991, IGCP Project 321, p. 133-138.

Hall, R., B. Clements & H.R. Smyth (2009)- Sundaland: basement character, structure and plate tectonic development. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-134, 26p.
(New plate reconstructions going back to 150 Ma, showing Borneo terranes separating from Australian NW shelf in Late Jurassic and colliding with Asia in Early Cretaceous)

Hall, R. & J.D. Holloway (eds.) (1998)- Biogeography and geological evolution of SE Asia. Backhuys Publishers, Leiden, p. 1-410.
(Collection of papers from 1996 conference on SE Asia tectonics and biogeography. Some papers available online at: http://searg.rhul.ac.uk/publications/papers/pdf_publications/..)

Hall, R. & C.K. Morley (2004)- Sundaland Basins. In: P. Clift, P. Wang et al. (eds.) Continent-ocean interactions within the East Asian marginal seas, American Geophys. Union (AGU), Geophys. Monograph 149, p. 55-85.
(Continental core of Sundaland, comprising Sumatra, Java, Borneo, Thai-Malay Peninsula and Indochina, was assembled during Triassic Indosinian orogeny. Region includes extensive shallow seas, is not significantly elevated, but not stable for long time. Today surrounded by subduction and collision zones. Cenozoic deformation recorded in numerous deep sedimentary basins along highlands. Sediment fill mostly locally derived. Conventional basin modeling fails to predict heat flow, elevation, basin depths and subsidence history of Sundaland and overestimates stretching factors. Can be explained by interaction of hot upper mantle, weak lower crust, and lower crustal flow in response to changing forces at plate edges)

Hall, R. & I. Sevastjanova (2012)- Australian crust in Indonesia. Australian J. Earth Sci. 59, 6, p. 827-844.
(at: http://searg.rhul.ac.uk/pubs/hall_sevastjanova_2012%20Australian%20crust%20in%20Indonesia.pdf)
(Core of SE Asia assembled from continental blocks that separated from Gondwana in Paleozoic and collided with Asian blocks in Triassic. Fragments of Gondwana/Cathaysia blocks rifted and separated from Asia and later re-amalgamated with SE Asian continental core. Mesozoic rifting of fragments from Australian margins followed by Cretaceous collisions. Cenozoic collision of Australia with SE Asian margin added more continental crust. Fragments of Cathaysian/Asian continental crust form parts of NW Borneo and offshore and Australian blocks underlie much of Borneo. W Sulawesi and Java rifted from Australia in Jurassic and arrived in present positions in Cretaceous. Sula Spur collided with SE Asian margin in E Miocene, then fragmented by subduction-driven extension)

Hall, R. & H.R. Smyth (2008)- Cenozoic arc processes in Indonesia: identification of the key influences on the stratigraphic record in active volcanic arcs. In: A.E. Draut et al. (eds.) Formation and applications of the sedimentary record in arc collision zones. Geol. Soc. America (GSA), Spec. Paper 436, p. 27-54.
(Record of Cenozoic subduction volcanic activity at SE Asia margins. Stratigraphic record in Indonesian region reflects complex tectonic history, including collisions, changing plate boundaries, subduction polarity reversals, elimination of volcanic arcs and extension. Growth of region in episodic way by addition of ophiolites and continental slivers, and as result of arc magmatism)

Hall, R. & W. Spakman (2002)- Subducted slabs beneath the eastern Indonesia-Tonga region: insights from tomography. Earth Planetary Sci. Letters 201, 2, p. 321-336.
(Tomographic images of mantle structure N and NE of Australia show anomalously fast regions, interpreted in terms of current and former subduction systems)

Hall, R. & W. Spakman (2004)- Mantle structure and tectonic evolution of the region North and East of Australia. In: R.R. Hillis & R.D. Muller (eds.) Evolution and dynamics of the Australian Plate, Geol. Soc. America (GSA), Spec. Paper 372, p. 361-381.

(Tomographic images of mantle show high seismic-velocity anomalies, interpreted as subducted slabs. Several generally flat deeper anomalies not related to present subduction. Mainly discussion of potential Tertiary subducted slabs around NE Australia-New Guinea)

Hall, R. & W. Spakman (2005)- Mantle tomography and Southeast Asian tectonics. Indon. Petroleum Assoc. (IPA) Newsletter, July 2005, p. 31-36.
(online at: www.ipa.or.id/download/news/IPA_Newsletter_07_2005_9.pdf)

Hall, R. & W. Spakman (2015)- Mantle structure and tectonic history of SE Asia. Tectonophysics 658, p. 14-45.
(Review of tomography and tectonic interpretations of Greater Indonesian region)

Hall, R. & M.E.J. Wilson (2000)- Neogene sutures in Eastern Indonesia. J. Asian Earth Sci. 18, p. 781-808.
(online at: https://pdfs.semanticscholar.org/5a2c/ccdb9a1eb5e74a2e0fa57d5381f9fd8dc1ee.pdf)
(Five suture zones: (1) Molucca (Pliocene- Recent Halmahera and Sangihe arcs collision), (2) Sorong, (3) Sulawesi (Late Oligocene- E Miocene West and East Sulawesi continent-continent collision), (4) Banda (Banda Volcanic arc and N Australia collision) and (5) Borneo sutures (E-M Miocene S China- N Borneo collision), each with relatively short history)

Hamilton, W. (1970)- Tectonic map of the Indonesian region, a progress report. U.S. Geol. Survey, Denver, Open File Report 70-150, p. 1-29.
(Preliminary report on Hamilton's major work, superseded by Hamilton (1978))

Hamilton, W. (1973)- Tectonics of the Indonesian Region. In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 3-10.
(online at: www.gsm.org.my/products/702001-101358-PDF.pdf)
(Early paper on plate tectonic interpretation of Indonesia, following assumptions that subduction zones are characterized by ophiolite, melange, wildflysch and blueschist, that intermediate and silicic calc-alkaline igneous rocks form above Benioff zones, and that truncations of orogenic belts indicate rifting. SE Asia and 'Sundaland' are aggregates of small continental fragments. Philippines, Sulawesi and Halmahera consist of Mesozoic? and Cenozoic island-arc subduction and magmatic complexes and lack old continental foundations)

Hamilton, W. (1974)- Map of the sedimentary basins of the Indonesian region. U.S. Geol. Survey (USGS) Map I-875-B, 1:5,000,000.
(online at: http://pubs.usgs.gov/imap/0875b/plate-1.pdf)

Hamilton, W. (1974)- Earthquake map of the Indonesian region. U.S. Geol. Survey (USGS), Misc. Inv. Ser., Map I-875-C, 1:5,000,000.
(online at: http://pubs.usgs.gov/imap/0875c/plate-1.pdf)
(Map showing earthquake epicenters and depth recorded from 1961-1971, with interpreted subduction zones)

Hamilton, W. (1976)- Subduction in the Indonesian region. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 3-23.
(Early plate tectonic interpretation of Indonesia)

Hamilton, W. (1977)- Subduction in the Indonesian region. In: M.Talwani & W.C. Pitman (eds.) Island arcs, deep sea trenches and back-arc basins, American Geophys. Union (AGU), Maurice Ewing Ser. 1, p. 15-31.
(As above. Outer-arc ridge between Java-Sumatra and active Java Trench is top of wedge of melange and imbricated rocks whose steep-moderate dips are sharply disharmonic to gently dipping, subducting oceanic plate beneath. Wedge has grown by scraping off of oceanic sediments and basement against and beneath its toe, and by internal imbrication. Outer-arc basin behind ridge originated from Paleogene continental shelf-and-slope assemblage whose seaward side was raised by melange stuffed beneath it by Neogene subduction. Banda Arc now colliding with Australian-New Guinea continent. Sumba is microcontinental fragment derived from Java Shelf. Philippines are product of aggregation of segments of various island arcs)

Hamilton, W.B. (1978)- Tectonic map of the Indonesian region. U.S. Geol. Survey (USGS) Map I-875-D, 1:5,000,000.
(online at: http://pubs.usgs.gov/imap/0875d/plate-1.pdf)
(Reprinted with corrections in 1981. Mainly surface geology with structural elements, not 'terrane map')

Hamilton, W. (1979)- Tectonics of the Indonesian Region. U.S. Geol. Survey (USGS) Prof. Paper 1078, p. 1-345.
(online at: http://pubs.usgs.gov/pp/1078/report.pdf)
(Classic, first comprehensive overview and synthesis of Indonesia tectonics in plate tectonics context, both land and offshore areas. An aging, but unrivaled masterpiece on geology of Indonesia, still with abundant good information, observations and insights. First to interpret Banda Sea as Neogene extensional basin. Etc.)

Hamilton, W. (1988)- Plate tectonics and island arcs. Geol. Soc. America (GSA) Bull. 100, p. 1503-1527.
(Discussion of plate tectonics, with many examples from Indonesia. Modern Sunda volcanic arc system, involving subduction of Indian Ocean lithosphere beneath Sumatra and Java, was inaugurated only in middle Tertiary time. Variations in composition of lavas along Sunda-Banda Arc reflects continental crust in Sumatra segment, transitional crust in Java and mature oceanic island arc developing from Bali to Sumbawa. Much of the older geology records subduction in quite different tectonic systems. Sumatra may have rifted from what is now medial New Guinea in M Jurassic time. Java constructed entirely by post-Jurassic subduction-related processes of magmatism and tectonic accretion. Etc.)

Hamilton, W. (1989)- Convergent-plate tectonics viewed from the Indonesian region. In: A.M.C. Sengor (ed.) Tectonic evolution of the Tethyan region, Kluwer Academic Publishers, Dordrecht, p. 655-698.
(Thorough review of plate tectonic elements and processes in zones of convergence, with examples from Indonesian region. Overriding plates generally rel. undeformed. Subduction systems along continental margins typically inaugurated by reversal of subduction after island arc or continental mass collision. High-pressure metamorphism only where crustal material subducted beneath overriding plate. Sunda Arc system changes along strike from continental in Sumatra to transitional in Java to mature oceanic island arc in Bali and Lombok. Sumatra Block separated from New Guinea in mid-Jurassic. Etc.)

Hamilton, W. (1989)- Convergent plate tectonics viewed from the Indonesian region. Geologi Indonesia 12, 1 (IAGI Katili special volume), p. 35-88.
(Same paper as above)

Hamilton, W.B. (1995)- Subduction systems and magmatism. In: J.L. Smellie (ed.) Volcanism associated with extension at consuming plate margins, Geol. Soc., London, Spec. Publ. 81, p. 3-28.
(Subducting oceanic plates not fixed. Hinges roll back into oceanic plates and slabs sink more steeply than inclinations of Benioff zones. Common regime in overriding plates is extensional; leading edges crumpled only in collisions. Shear coupling between subducting slabs and overriding plates limited to shallow depths. Subduction cannot occur simultaneously beneath opposite sides of rigid plate. Inception ages, collisions, polarity reversals and stage of petrological evolution vary greatly along continuous arc systems. Back-arc basins form by spreading behind migrating arcs. Etc.)

Hammond, J.O.S., J. Wookey, S. Kaneshima, H. Inoue, T. Yamashina & P. Harjadi (2010)- Systematic variation in anisotropy beneath the mantle wedge in the Java-Sumatra subduction system from shear-wave splitting. Physics Earth Planetary Interiors 178, p. 189-201.
(Splitting in S-waves from local earthquakes across Sumatra- Java subduction zone between 75- 300km depthp show trench parallel fast directions. Deeper local events shows larger time-lags and significant variation in fast direction. Significant differences between slab subducted beneath Sumatra and older slab beneath Java)

Hantoro, W.S. (1992)- Etude des terrasses recifales quaternaries soulevees entre le detroit de la Sonde et l'Ie de Timor, Indonesie: mouvements verticaux de la croute terrestre et variations du niveau de la mer. Ph.D Thesis Universite Aix Marseille II, Vol. 1, p. 1-761 and Vol. 2, p. 1-225. *(Unpublished)*

('Study of Quaternary reef terraces between Sunda Strait and Timor island: vertical crustal movements and sea level variations')

Hantoro, W.S., R. Lafont, S. Bieda, L. Handayani, E. Sebowo & S. Hadiwisastra (1996)- Holocene to Recent vertical movement in Indonesia; study on emerged coral reef. In: Proc. IGCP Symp. Geology SE Asia and adjacent areas, Hanoi 1995, J. Geology, B, 7-8, p. 93-113.
(Many Indonesian islands have emerged Holocene coral reef platforms in sheltered beach setting, refecting mid-Holocene sea level highstand, ~3m above present-day sea level. Vertical movements identified by coral reefs 'outside stepping' (uplift; Banda Arc from Alor to E) or 'inside stepping' (subsidence, e.g. S Sunda Strait))

Harahap, B.H., S. Bachri, Baharuddin, N. Suwarna, H. Panggabean & T.O. Simanjuntak (2003)- Stratigraphic lexicon of Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 29, p. 1-729.
(Comprehensive overview of names, definitions, ages and type localities of 1856 formations used on Geological Survey maps in Indonesia. Many formation names used through Indonesia by other authors, oil industry, etc., not included)

Harder, S.H., R.J. McCabe & M.F.J. Flower (1992)- A single mechanism for Cenozoic extension in and around Indonesia. In: Symposium on Tectonic framework and energy resources of the western margin of the Pacific Basin, Kuala Lumpur 1992, Warta Geologi 18, 6, p. 263. *(Abstract only)*
(online at: https://gsmpubl.wordpress.com/2014/09/17/warta-geologi-1985-1994/)
(SE Asia has large Tertiary basins and major strike-slip faults on and around Indochina Peninsula. Basins in different orientations and intersected by strike-slip faults. Creation mechanism is collision of Indian plate with Eurasian continent and rotating stress regime created by collision. Rotating stress mechanism began in Eocene when Indian plate first contacted Eurasian continent forming Ranong fault in Thailand. As stress field increased and propagated N-ward from collision zone stress field in Indochina rotated. No figures)

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(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1992006.pdf)
(Comparison of free-air gravity with sediment thickness of SE Asia sedimentary basins shows no correlation due to differences in crustal structure under basins in extensional vs. convergent regimes. Thickened crust in convergent regimes creates negative anomalies)

Hardjawidjaksana, K. & H. Prasetyo (1994)- Review of the development of the eastern Indonesia triple junction. Proc. 30th Sess. Comm. Co-ord Joint Prospecting Mineral Resources Asian Offshore Areas (CCOP), Bangkok, 2, p. 109-136.
(Review of structure and tectonic development of Eastern Indonesia. Complex area for which at least seven different tectonic frameworks have been proposed)

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(online at: http://geology.byu.edu/home/sites/default/files/2003-geodynamic-patterns-opt.pdf)
(Ophiolites in E Indonesia- New Guinea region suggest strong correlation with marginal basin development and closure. Most ophiolite slabs represent fragments of oceanic lithosphere with subduction zone component as indicated by petrochemistry and occurrence of boninite)

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(online at: http://geology.byu.edu/Home/sites/default/files/2016_harris_and_major_eq_catalog_small.pdf)
(Two volumes of Arthur Wichmann's Die Erdbeben des Indischen Archipels (1918 and 1922) document 61 regional earthquakes and 36 tsunamis between 1538- 1877 in Indonesian region)

Harrold, T.W.D., R.E. Swarbrick & N. Goulty (1999)- Pore pressure estimation from mudrock porosities in Tertiary basins, Southeast Asia. American Assoc. Petrol Geol. (AAPG) Bulletin 83, 7, p. 1057-1067.

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(Many lithostratigraphic names used in Indonesia may be considered as informal because they do not meet requirements of stratigraphic rules or were never formally proposed. Recommends Geological Survey must take immediate steps towards standardization of stratigraphic nomenclature in Indonesia (!))

Hartono, M.H.S. (1979)- Geological mapping in Indonesia: the state of the art. Bull. Geol. Res. Dev. Centre (GRDC), 1, p. 1-6.

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(Overview of SEATAR Banda Sea crustal Transect. Banda Sea underlain by oceanic crust, believed to be Cretaceous age. Oldest Banda Sea volcanics 12 Ma)

Hartono, H.M.S. & S. Tjokrosapoetro (1984)- Preliminary account and reconstruction of Indonesian terranes. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 185-226.
(Indonesian Archipelago 13 terranes (accretionary terranes excluded). Proto-Kalimantan and Sumatra basement include island arcs and amalgamated in Late Triassic along Bentong-Raub suture to form Sunda Platform. In Paleogene SW Sulawesi rifted from E Kalimantan to collide with oceanic crust to E. In Tertiary W Sulawesi magmatic arc came into existence. Sulawesi Ophiolite from oceanic crust pushed W by Banggai-Sula terrane and blocked by Tertiary W Sulawesi arc. Sumba, Buton, Seram and Timor terranes result of rift-drift from NW Australia in Jurassic. Banggai-Sula, Bacan and Buru terranes formed by Sorong Fault slicing off NW Irian Jaya and moving W. NW Australia /Irian Jaya passive margin, moving N behind front of oceanic crust. It collided with N Irian Jaya island Arc in Oligocene, after which polarity of subduction changed to S)

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(On relationship between K-content of andesitc volcanoes and depth of seismic (Benioff) zone below volcano. One of first 'new plate tectonics' concepts applied to Indonesia)

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Hayes, D.E. (1984)- Marginal seas of Southeast Asia- their geophysical characteristics and structure. In: Origin and history of marginal and inland seas. Proc. 27th Int. Geological Congress, Moscow 1984, VNU Science Press, 23, p. 123-154.
(Identification and dating of magnetic lineaments in oceanic crust below marginal basins if SE Asia relatively difficult and associated with uncertainties, because small basin sizes and limited age range of ocean floor makes it difficult to identify a unique sequential pattern. Also, basins formed in low geomagnetic latitudes, where magnetic lineations tend to have low amplitudes and more difficult to map)

Hedervari, P. & Z. Papp (1981)- Seismicity maps of the Indonesian region. Tectonophysics 76, p. 131-148.
(Rel. dated, general earthquakes distribution maps)

Hehuwat, F. (1976)- Isotopic age determinations in Indonesia: the state of the art. In: Proc.CCOP Seminar on isotopic dating, Bangkok 1975, United Nations ESCAP CCOP Techn. Bull. 3, p. 135-157.

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('A review of Quaternary deformation in Indonesia'. In: Quaternary Geology and environment)

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(online at: https://arxiv.org/ftp/arxiv/papers/1210/1210.4958.pdf)
(Banda Arc subduction system shows bowl-shaped geometry in seismic tomographic images, indicating Argo-Tanimbar-Seram oceanic lithosphere still attached to surrounding continental margins of N Australia and Birds Head microcontinent. Slab unfolding model suggests Birds Head block rotated 20-35° CW relative to present-day position. Birds Head block is autochthonous to W Irian Jaya, with W margin continental transform margin during rifting and opening of ATS ocean)

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('Geodynamics of eastern Indonesia in its kinematic framework'. Basins and microcontinents of Banda Sea region. N Banda Sea backarc basin opened between 12.5 and 7 Ma, S Banda Sea between 6.5- 3.5 Ma. Banda Ridges that separate N and S Banda basins derived from single continental block. Weber Basin deepest basin in region (7400m); migrated to NE in Late Pliocene- Pleistocene. With plate reconstructions of last 15 Myrs)

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(E Indonesia M Miocene- Recent plate reconstruction model, involving Late Miocene- Pliocene opening of Banda Sea)

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Hoffman, N. (2002)- Australian geology in Indonesia: new frontiers and new discoveries. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 289-300.
(Discussion of Australian Mesozoic geology in Timor sea area. Reservoirs predominantly Jurassic, with recent Laminaria and Sunrise/Troubadour gas discoveries close to Indonesian border. First significant Indonesian Mesozoic hydrocarbon discovery in Tangguh, Irian Jaya, with Jurassic source-reservoir similar to Plover Fm)

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(Earthquake foci suggest Indian Ocean plate underthrust only 200 km under C Sumatra, but >600 km under Java Sea. May be due to oblique India-Eurasia convergence caused by rotation of Sunda backarc area relative to Eurasia. Backarc rotation also explains pattern of Cenozoic volcanicity in Sumatra, and nature of Andaman Basin, which may be rhombochasm forming behind locally divergent plate margin)

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(Significant fault movement during Tertiary in continental SE Asia, part of Eurasia plate. Three separate but linked rotations (1) Indochina subplates wrench rotation, (2) Sunda shear rotation, and (3) rotation of Malay Peninsula and Sunda Platform by movements along Ranong and Semangko faults. Pre-Oligocene map reconstruction of SE Asia offers explanations for patterns of Quaternary faulting and Tertiary sedimentation)

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(in Japanese) (online at: www.journalarchive.jst.go.jp/...)
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Hutabarat, S. (1993)- Khuluk dan ploa umum diagenesis mineral-mineral lempung dalam batuan waduk klastik di Cekungan-Cekungan Indonesia-Barat. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1015-1027.
(On diagenesis of clay minerals in clastic reservoirs in West Indonesian basins)

Hutasoit, L.M. & A.M. Ramdhan (2014)- Similarities of overpressuring in some of Western Indonesiaôs sedimentary basins. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-356, 10p.

(In W Indonesia basins top of overpressure is mostly located near top of sag phase deposits. Top of 'hard' overpressure in several areas at onset of smectite-illite transformation.Almost all carbonate build-ups located below sag deposits low overpressure to normal hydrostatic pressure regime)

Hutchison, C.S. (1973)- Tectonic evolution of Sundaland; a Phanerozoic synthesis. In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 61-86.
(online at: www.gsm.org.my/products/702001-101353-PDF.pdf)
(Early paper on tectonic evolution of Sundaland in terms of plate tectonic model. Interesting paleo-tectonic maps of Sundaland since Permian. Infers W Borneo has been part of 'continental' Sundaland since Permian, with opposing subduction systems under Sundaland for Permian- Cretaceous)

Hutchison, C.S. (1975)- Ophiolite in Southeast Asia. Geol. Soc. America (GSA) Bull. 86, p. 797-806.
(Twenty belts of ultramafic assemblages identified in SE Asia (not including E Indonesia), but fewer than half can be classified as ophiolite. Complete ophiolite sequences only in NE Borneo and Philippine Islands; others incomplete or dismembered)

Hutchison, C.S. (1978)- Southeast Asian tin granitoids of contrasted tectonic setting. J. Physics of the Earth, Tokyo, 26, Suppl., p. 221-232.
(online at: https://www.jstage.jst.go.jp/article/jpe1952/26/Supplement/26_Supplement_S221/_pdf)
(Three major tin granitoid belts in SE Asia: (1) West (Phuket to Tenasserim). Tin associated with Cretaceous adamellite, granite and pegmatite; (2) Main Range (Bangka to S Thailand). Tin associated with Late Carboniferous and Late Triassic granite; (3) East (Billiton to Pahang-Trengganu). Tin-tungsten associated with Permian- M Triassic adamellite-granite)

Hutchison, C.S. (1980)- Southeast Asia. In: A.E. Nairn & F.G. Stehli (eds.) The Indian Ocean, The ocean basins and margins 6, Plenum Press, New York, p. 451-512.
(Substantial overview of Precambrian- Recent rocks distribution from Burma to W Indonesia)

Hutchison, C.S. (1983)- Multiple Mesozoic Sn-W-Sb granitoids of Southeast Asia. In: J.A. Roddick (ed.) Circum-Pacific Plutonic terranes, Geol. Soc. America (GSA) Mem. 159, p. 35-60.
(SE Asia complex array of granitoid belts, mainly of Mesozoic age. Eastern belt (E Malay Peninsula, Bangka and Billiton(?) is Andean-type Permian- Late Triassic calc-alkaline volcano-plutonic arc (peak ages ~222 Ma and 250 Ma). Probably underlain by continental basement (isoclinally folded Carbo-Permian metasediments, Permian limestones, Namurian shales and sandstones). Abundant volcanic and plutonic activity through Permian and ending active history in Late Triassic with subaerial ignimbritic flows. Narrow central belt of Permian-Triassic granitoids and metamorphic complexes with local Cretaceous granites. Main Range E margin is serpentine-marked Bentong-Raub suture zone. Main Range batholith Sn-granite mainly Late Triassic (~230 and 200 Ma), but with E Permian (~280 Ma) granites; grades W-ward through Penang, Langkawi, and peninsular Thailand to higher level plutons. N Thailand granites mainly Triassic. Main Range and N Thai granites no volcanic associations, and tied to collision and closure of central marginal basin in Late Triassic. Triassic granites and some Cretaceous granites associated with tin, tungsten and antimony deposits, thought to be recycled from continental infrastructure of Sundaland)

Hutchison, C.S. (1984)- Is there a satisfactory classification for Southeast Asian Tertiary basins. Proc. 5th South East Asia Offshore Conf., SE Asia Petroleum Expl. Soc. (SEAPEX), Singapore 1984, p. 6.64- 6.76.
(SE Asia Tertiary basins classification complicated by presence of microcontinents, originating from Jurassic-E Miocene rifting from S China and N Australian continental margins)

Hutchison, C.S. (1986)- Tertiary basins of S.E. Asia- their disparate tectonic origins and eustatic stratigraphical similarities. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 109-122.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986010.pdf)
(72 Tertiary basins in greater SE Asia developed by extensional tectonics, combined with wrench control. With exception of marginal seas sedimentation kept pace with subsidence. Basin unconformities, transgressions,

regressions good correspondence to global sea level changes, but may be artifact of overdependence on SE Asian basins for compilation of eustatic curves)

Hutchison, C.S. (1986)- Formation of marginal seas in Southeast Asia by rifting of the Chinese and Australian continental margins and implications for the Borneo region. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 201-220.
(With exception of Okinawa and Ayu Troughs, all SE Asia marginal seas formed by processes other than backarc rifting. Andaman Sea is leaky transform system. W Philippine Sea, Banda Sea, Celebes Sea and Sulu Sea basins all remnants of former oceans now trapped behind younger arc-trench systems. S China Sea formed by post-Early Cretaceous rifting of continental margin of SE China. (NB: all these basins are probably younger than assumed by Hutchison, so some conclusions here are not valid; JTvG)

Hutchison, C.S. (1987)- Displaced terranes of the southwest Pacific. In: Z. Ben Avraham (ed.) The evolution of the Pacific Ocean margins, Oxford Monographs Geol. Geophysics 8, Oxford University Press, p. 161-175.

Hutchison, C.S. (1987)- Tectonic settings of tin-tungsten granites in Southeast Asia. In: C.S. Hutchison (ed.) Proc. IGCP Project 220 Conference, Techn. Bull. 6, Ipoh, Malaysia, SEATRAD Centre, p. 1-24.

Hutchison, C.S. (1989)- The Palaeo-Tethyan realm and Indosinian orogenic system of Southeast Asia. In: A.M.C. Sengor (ed.) Tectonic evolution of the Tethyan Regions, Kluwer, Dordrecht, p. 585-644.
(Extensive review with Paleozoic- Mesozoic reconstructions of SE Asia. SE Asia is composite of Precambrian continental blocks, overlain in part by Paleozoic carbonate-dominated platforms. Major suture in Song Ma, N Vietnam, welded Indosinia and S China blocks in E Carboniferous to form E Asian Continent together with N China Block. E Asian Continent in equatorial latitudes in Permian and developed Cathaysian Gigantopteris flora. W Borneo Basement is detached part of E Asian continent. Paleo-Tethys suture/ Indosinian orogenic system extends S from Dien Bien Phu through Thailand into Peninsular Malaysia (Raub-Bentong). All terrains E of suture have Cathaysian affinities, those to W are of Permian Gondwana affinity. Suture closed in Late Triassic. Most Jurassic-Cretaceous age formations are of continental molasse facies. S Sumatra contains Cathaysian flora at Djambi, but N Sumatra strong affinities with Gondwana part of Malay Peninsula. An Indosinian suture may separate the two, but not well defined)

Hutchison, C.S. (1989)- Geological evolution of South-East Asia. Oxford Monographs Geol. Geophysics 13, p. 1-368.
(Comprehensive textbook of SE Asia geology. See also 2007 second edition)

Hutchison, C.S. (1992)- The Eocene unconformity on Southeast and East Sundaland. Bull. Geol. Soc. Malaysia 32, p. 69-88.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992016.pdf)
(Early Paleogene Sundaland landmass extended as far SE as W Sulawesi. Cratonic nature of Malay Peninsula and China did not extend into or beyond Borneo region of Sundaland, where pre-Eocene outcrops are dominated by Cretaceous rocks. Deep water sediments, melange and ophiolite terrains characteristic of non-cratonic SE peninsula of Sundaland. India collided with Eurasia by 45 Ma (anomaly 1), spreading ceased at NW Wharton Basin, etc.. Push of India resulted in clockwise rotation of Sundaland. Regional event causing major Eocene unconformity on and around Sundaland)

Hutchison, C.S. (1994)- Gondwana and Cathaysian blocks, Palaeotethys sutures and Cenozoic tectonics in South-East Asia. Int. J. Earth Sciences (Geol. Rundschau) 83, 2, p. 388-405.
(Triassic 'Indosinian Orogeny' suturing of Gondwanan and Cathaysian blocks closed Paleotethys Ocean. W Malaysia Sinoburmalaya block has Carboniferous-Permian mudstones with glacial dropstones and is traced into Sumatra. Cathaysian E Malaya block Late Permian Gigantopteris flora and fusulinid limestones with andesitic volcanism, similar to W Sumatra block (also E Permian volcanism, fusulinid limestones and early Cathaysian Jambi flora). S-SSE trending central Peninsular Malaysian Triassic orogenic belt swings SE from Singapore to Bangka, then E to Billiton. Paleo-Tethys suture (Bentong-Raub Line) unlikely to continue S along

Paleogene Bengkalis Graben, which transects NW-SE orogenic fabric of Sumatra. Oroclinal bending of Indosinian Orogen, from NW-SE in Sumatra to Peninsular Malaysia, attributed to Paleocene collision of India and indentation into Eurasia. Bending accomplished by clockwise rotation and right-lateral shear parallel to orogenic grain. Mesozoic Paleotethyan sutures transformed into Paleocene and younger shear zones)

Hutchison, C.S. (1996)- South-East Asian oil, gas, coal and mineral deposits. Oxford Monographs Geol. Geophysics 36, p. 1-265.
(Major review of SE Asia oil-gas, coal and mineral deposits)

Hutchison, C.S. (1998)- The quest for an understanding of Southeast Asian Cenozoic tectonics and the importance of pre Tertiary structures. In: Offshore South East Asia Conference 1998 (OSEA98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 73-74. *(Extended Abstract)*
(N-wards movement of Indian-Australian plate caused (1) cratonic India to begin its collision with continental Eurasia in Eocene, causing CW bending of pre-Tertiary fabric of Sundaland, predominantly by right-lateral wrench faulting, and (2) cratonic Australia to begin collision with Indonesian island arcs in Miocene, causing CCW bending, accomplished by left-lateral faulting (e.g. Sorong Fault). Fracture systems displaced micro-continents SE-ward from Sundaland and W-ward from Australia- New Guinea. N-S Indosinian fabric of Peninsular Malaysia bends East through Bangka and Billiton. Triassic correlation of NW Borneo possibly with E Vietnam. Most but not all Cenozoic structures follow pre-Tertiary fabric. Etc.)

Hutchison, C.S. (2007)- Geological evolution of South-East Asia, 2nd edition. Geol. Soc. Malaysia, Kuala Lumpur, p. 1-433.
(Second edition of 1989 textbook of SE Asia geology; with relatively minor revisions)

Hutchison, C.S. (2014)- Tectonic evolution of Southeast Asia. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 1-18.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014001.pdf)
(Brief review of SE Asia tectonic history, mainly of Sundaland area (Malay Peninsula- Thailand- Sumatra). Key events Late Triassic collision Sibumasu and E Malaya/Indochina after Permian E-ward subduction beneath E Malaya and development of E-M Triassic Semanggol-Mutus basin foredeep. M-Late Triassic tin granites of Peninsular Malaysia continue in curve through Bangka and Billiton. Late Cretaceous- Paleocene belts of migmatites and plutons. Oroclinal bending of N Sundaland from E-W fabric in Billiton- Borneo to N-S in N Peninsular Malaysia, resulted from indentation of India. Much of Borneo rotated ~50° CCW between 30-10 Ma and ~40° between 80-30 Ma, caused by collision between Australian plate and Indonesian arc at Timor)

Hutchison, C.S. (ed.) R. Sukamto, H.Z. Abidin, T.C., Amin, M.S. Andi et al. (1991)- Studies in East Asian tectonics and resources (SEATAR) Crustal transect VII: Jawa- Kalimantan- Sarawak- South China Sea. CCOP, Bangkok, CCOP/TP 26, p. 1-66.

Hutchison, C.S. (ed.), R. Sukamto, A.P. Madrid et al. (1995)- Studies in East Asian tectonics and resources (SEATAR), Crustal transect VIII, South China- Sulu- Sulawesi- Maluku- Philippine Seas. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 20, p. 1-45.
(Review of geology and geophysics along regional transect including Sulu Sea, Celebes Sea, Molucca Sea, Philippine Sea)

Irsyam, M., M. Asrurifak, Hendriyawan, B. Budiono, W. Triyoso & A. Firmanti (2010)- Development of spectral hazard maps for a proposed revision of the Indonesian seismic building code. Geomechanics and Geoengineering 5, 1, p. 35-47.
(Good review of present-day earthquake distribution and tectonic belts of Indonesian region)

Irsyam, M., Hendriyawan, M. Asrurifak, M. Ridwan, F. Aldiamar, I.W. Sengara, S. Widiyantoro et al. (2013)- Past earthquakes in Indonesia and new seismic hazard maps for earthquake design of buildings and infrastructures. In: J. Chu et al. (eds.) Geotechnical predictions and practice in dealing with geohazards, Chapter 3, Springer, p. 33-46.

Jablonski, D. (2007)- Insights into S.E. Asian plate reconstructions as guided by the 2005-2006 regional seismic surveys, Central-Eastern Indonesia. Presentation SEAPEX Conf., Singapore 2007, Abstract, 2p.
(>10 km of Eocene- Recent sediment in Gorontalo Basin which is underlain by pre-rift section of sedimentary origin. Pre-break-up section evidence of older collision that may be related to collision of Mangkalihat-NW Sulawesi microplate with NE Sulawesi. Integration of this observation with onshore geology of SE Sulawesi indicates likely Late Cretaceous collision. Eocene- Miocene in Gorontalo Basin mainly extensional tectonics with late compression estimated approximately at 5.5 Ma)

Jacques, J.M. (2007)- Geotectonic map of SE Asia- basins and hydrocarbon occurrences. Presentation SEAPEX 2007 Conf., Singapore, p.
(GIS-based digital tectonic elements map and sediment thickness map of SE Asia. Map available from SEAPEX)

Jacobson, R.S., G.G. Shor, R.M. Kieckhefer & G.M. Purdy (1981)- Seismic refraction and reflection studies in the Timor-Tanimbar-Aru Trough system and Australian continental shelf. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 153-169.
(Timor-Aru Trough is not deeper than 3.6 km and is extension of Java Trench. Underlain by continental crust. Data strongly support trough is surface trace of subduction zone)

Jarrard, R.D. & S. Sasajima (1980)- Paleomagnetic synthesis for Southeast Asia: constraints on plate motions. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands-1, American Geophys. Union (AGU) Geophys. Monograph Ser. 23, p. 293-316.
(Compilation of paleomagnetic data Japan, Philippines, Indonesia. E Mesozoic Sumatra was 10-20°S of present latitude; in Late Mesozoic drifted N with 30° CW rotation, reaching present position by E Tertiary)

Kadarusman, A. (2001)- Geodynamic aspects of Indonesian region: a petrological approach. Ph.D. Thesis, Tokyo Institute of Technology, p. 1-456. *(Unpublished)*
(Study of metamorphic rocks Timor-Tanimbar (Banda Outer Arc) region)

Kadarusman, A. (2002)- Plume tectonics and Eastern Indonesia. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, p.

Kadarusman, A. (2009)- Ultramafic rock occurrences in Eastern Indonesia and their geologic setting. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PIT IAGI2009-188, 7p.
(Ultramafic rocks exposed in E Indonesia in E Kalimantan, Sulawesi, Halmahera, Banda Arc and Papua. Mostly derived from peridotite layer of ophiolite rocks, but some believed to be from orogenic peridotite. Source of nickel laterite, nickel sulfide deposits, also cobalt, chromite, platinum group metals and lateritic iron ores. E Sulawesi Ophiolite (Cretaceous-Oligocene age) occupies large part of E Sulawesi, resulted from Late Oligocene accretion to Sundaland margin and Late Miocene collision with Banggai Sula microcontinent)

Kadarusman, A. (2012)- The geology and tectonic of the Banda Arc, Eastern Indonesia:update from the outer arc. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Convention 2012, Malang, p. 193-200.

Kadarusman, A., Y. Kaneko, T. Ohta & S. Maruyama (2003)- The geology and tectonic of the Banda Arc, Eastern Indonesia. Proc. 32nd Ann. Conv. Indon. Assoc. Geol. (IAGI) and 28th HAGI Ann. Conv., Jakarta, 17p.
(Non-magmatic S Banda arc from Timor to Tanimbar exposes one of youngest high P/T metamorphic belts in world. Deformation and metamorphic grade increase towards center of 1 km thick crystalline belt. High P/T metamorphic rocks extruded as thin sheet into space between overlying ophiolites and underlying continental shelf sediments ('wedge extrusion model'). Quaternary uplift, marked by elevation of recent reefs, ~1260 m in Timor, decreasing toward Tanimbar in E. Exhumation of high P/T metamorphic belt started in W Timor in Late Miocene time and migrated east. Quaternary rapid uplift to rebound of subducting Australian continental crust beneath Timor after break-off the oceanic slab fringing continental crust)

Katili, J.A. (1970)- Large transcurrent faults in Southeast Asia with special reference of Indonesia. Geol. Rundschau 59, p. 581-600.
(Large transcurrent faults present in Taiwan-Philippine region and in the area between Sulawesi and E New Guinea, with mainly sinistral movement. Sumatran fault-system 1650km long, dextral lateral displacement. On Java smaller transcurrent faults with strike more or less parallel to island. Palu-Kuro Fault ('Fossa Sarasina') in C Sulawesi also sinistral transcurrent fault. Dextral transcurrent fault of ~100 km length in Gorontalo area, N Sulawesi. In W Papua E-W trending Sorong Fault. Two groups of transcurrent faults in SE Asia: NW-SE and E-W. Indonesian Archipelago is being protruded SE-ward, with major block movements along Philippine and Sumatran fault-zones)

Katili, J.A. (1971)- A review of the geotectonic theories and tectonic maps of Indonesia. Earth-Science Reviews 7, p. 142-165. *(also in Bull. Nat. Inst. Geology and Mining, Bandung (1970) 3, 2, p. 57-69)*
(Good review of tectonic syntheses proposed for Indonesia from 1920's to 1970. Long ago Indonesian Archipelago recognized as place of intersection of two of large mountain systems and zone between Asian and Australian continents. They also realized that Indonesian island arcs represent early stage formation of mountain belt with systematic relationship of active tectonic and magmatic features to deep submarine trenches. New concept of plate tectonics best basis to explain features of Indonesian island arcs)

Katili, J.A. (1972)- Plate tectonics of Indonesia with special reference to the Sundaland area. Proc. First Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 57-61.
(One of the early papers re-interpreting Indonesia tectonics in a plate tectonic context)

Katili, J.A. (1973)- Plate tectonics and its significance for the search of mineral deposits in western Indonesia. United Nations ECAFE CCOP Tech. Bull. 7, p. 23-37.
(Early interpretation of Indonesia on basis of plate tectonic theory. W Indonesia magmatic arcs and subduction zones in Permian, Triassic-Jurassic, Cretaceous and Tertiary- Recent, tied to styles and ages of mineralization provinces. Late Jurassic Malayan Orogen contains tin, gold and bauxite. Cretaceous and Miocene arcs contain epithermal gold-silver ores, etc.)

Katili, J.A. (1973)- On fitting certain geological and geophysical features of the Indonesian island arc to the new global tectonics. In: P.J. Coleman (ed.) The Western Pacific: island arcs, marginal seas, geochemistry. University of Western Australia Press, p. 287-305.
(One of the early Katili papers re-interpreting Indonesia tectonics in a plate tectonic context)

Katili, J.A. (1973)- Geochronology of West Indonesia and its implication on plate tectonics. Tectonophysics 19, 3, p. 195-212.
(New radiometric ages of igneous rocks allow recognition of paleo-subduction zones of Permian, Triassic-Jurassic, Cretaceous, Miocene and Pliocene-Recent age. Radiometric ages of granites of Lassi Massif, Padang Highlands, C Sumatra (~112 Ma), Lampong Massif, S Sumatra (~88 Ma), offshore N Java (100 Ma), Sunda Shelf Anambas (~86 Ma), Tembelan (~85 Ma) and Natuna (~75Ma). Permian granites near Jambi, S Sumatra ~276-298 Ma. With map of volcanic arcs of Paleozoic- Tertiary ages)

Katili, J.A. (1974)- Geological environment of the Indonesian mineral deposits; a plate tectonic approach. Geological Survey of Indonesia, Publ. Teknik, Ser. Geol. Ekonomi 7, p. 225-236.
(Tertiary mineralization more significant in Sulawesi, Halmahera, Irian Jaya than Sumatra, Java, Lesser Sunda islands, possibly because Pacific Plate richer in metals than Indian Ocean)

Katili, J.A. (1975)- Geological environment of the Indonesian mineral deposits; a plate tectonic approach. CCOP Techn. Bull. 9, p.
(Same paper as above)

Katili, J.A. (1975)- Volcanism and plate tectonics in the Indonesian island arcs. Tectonophysics 26, p. 165-188.

(Reconstruction of outward migration of Indonesian volcanic arcs from Permian-Cretaceous- Oligo-Miocene to Recent)

Katili, J.A. (1980)- Geotectonics of Indonesia- a modern view. Directorate General of Mines, p. 1-271.
(Reprint collection of Katili papers 1962-1978)

Katili, J.A. (1981)- Contradicting views on the plate tectonics of Indonesia and their bearing on heat flow research. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 5, p. 21-29.

Katili, J.A. (1984)- Evolution of plate tectonic concepts and implication for the exploration of hydrocarbon and mineral deposits in Southeast Asia. Pangea, CIFEG, Paris 3, p. 5-18.

Katili, J.A. (1985)- Advancement of geoscience in the Indonesian region. Indon. Assoc. Geol. (IAGI), Bandung, 248p.
(Reprint collection of Katili papers 1963-1985)

Katili, J.A. (1986). On understanding the geological environment of the Southeast Asian mineral and hydrocarbon deposits in relation to the progressive development of plate tectonic concepts. Mem. Geol. Soc. China (Taiwan) 7, p. 45-68.

Katili, J.A. (1989)- Review of past and present geotectonic concepts of Eastern Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 103-129.
(History of geotectonic concepts since early 1900's)

Katili, J.A. (1989)- Evolution of the Southeast Asian arc complex. Geologi Indonesia (J. Indon. Ass. Geol., IAGI) 12, 1 (Katili Special Volume), p. 113-143.

Katili, J.A. (1991)- Tectonic evolution of Eastern Indonesia and its bearing on the occurrence of hydrocarbons. Marine Petroleum Geol. 8, 1, p. 70-83.
(New Guinea first collided with Sepik island arc at ~30 Ma. At ~20 Ma subduction pattern reorganization resulted in 8000 km long, E-W arc-trench system from Sumatra to Buru. Prior to arrival of Australian continent at SE Asian continental margin, a N-S oriented Sulawesi-Mindanao volcanic arc existed ~800 km E of Borneo. New Guinea and Sepik collided with Inner Melanesian island arc, opening Australian Plate to influence of WNW moving Pacific Plate. At ~10 Ma S-dipping subduction zone broke through N of Irian Jaya but no volcanism. Oil and gas in pull-apart basins of Irian Jaya in Tertiary deposits, but source rocks in collision zones likely Mesozoic. Exploration targets in E Indonesia: Arafura Shelf intracratonic basins, marginal (rift) basins skirting S and E of Banda arc, collision zones of Timor, Seram, E Sulawesi and W Papua thrustbelt)

Katili, J.A. & S. Asikin (1985)- Hydrocarbon prospects in complex paleo subduction zones. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 83-103.
(No significant hydrocarbons in accretionary wedge of W Indonesia. Sumatra fore-arc basin lacks coarse quartz-rich reservoirs; hydrocarbon source rocks are immature. Arc-trench system of E Indonesia different. Two phases in Banda Arc: (1) Indian-Australian plate oceanic crust subducted under Banda oceanic plate, (2) subduction of Australian continental crust into Banda Arc subduction zone. Oceanic crust dipping in Sumatra-Java Trench covered by thin pelagic sediments, but parts of shelf -slope sequences of Arafura Platform carried into Tanimbar Trench and Aru Through. Consolidated lower part of sequence greater shear strength and little material from there scraped off and incorporated in wedge. If rich in organic material, tectonic processes in trench and beneath wedge will mature organic material. If reservoir rocks exist in front of wedge, migration and accumulation possible. Oil and gas in subduction complex of E Sulawesi may be explained in same way)

Katili, J.A. & S. Asikin (1987)- Hydrocarbon prospects in complex paleo subduction zones. Proc. 22nd Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Guangzhou 1985, 2, p. 279-301.
(Same paper as above)

Katili, J.A. & H.M.S. Hartono (1983)- Complications of Cenozoic tectonic development in Eastern Indonesia. In: T.W.C. Hilde & S. Uyeda (eds.) Geodynamics of the western Pacific-Indonesian region, American Geophys. Union (AGU) and Geol. Soc. America (GSA) Geodyn. Ser. 11, p. 387-399.
(Tectonic development of Indonesian archipelago as SE margin of Eurasian plate can be followed since Late Paleozoic from continental nucleus located between Sumatera and Kalimantan Archipelago developed E-ward until it attained present position as represented by Banda volcanic arc. During Late Paleozoic and throughout Mesozoic development of Sunda Arc system regular and always had arcuate shape of volcanic arc around continental margin. Tertiary more complicated)

Katili, J.A. & P. Marks (1963)- Geologi. Departemen Urusan Research Nasional, Kilatmadju Bandung, p. 1-855.
('Geology'. First general geology textbook in Indonesian language, with numerous illustrations from Indonesia)

Katili, J.A. & J.A. Reinemund (1984)- Southeast Asia: tectonic framework, earth resources and regional geological problems. Int. Union Geol. Sciences (IUGS), Publ. 13, p. 1-68.

Katili, J.A. & R. Soetadi (1971)- Neotectonics and seismic zones of the Indonesian Archipelago. In: B.W. Collins & R. Fraser (eds.) Proc. Int. Symposium Recent crustal movements and associated seismicity, Bull. Royal Soc. New Zealand 9, p. 39-45.

Katili, J.A. & H.D. Tjia (1969)- Outline of Quaternary tectonics of Indonesia. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 2, 1, p. 1-12.
(online at: http://jrisetgeotam.com/index.php/NIGM/article/viewFile/164/159)
(Four types of Quaternary tectonic deformation. Marine terraces around Bangka and Billiton on stable Sunda Shelf formed by Quaternary sea level highstands. Post-glacial strandlines at 0.5-1m (3500 BP), 1.5-2m (5000 BP) and 5m (6000 BP) above present sea level)

Kaufmann, G.F. (1951)- The tectonic framework of the Far East and the influence on the origin and accumulation of petroleum. Proc. 3rd World Petroleum Congress, The Hague, 1, p. 87-118.

Kaymakci, N., J. Decker, D. Orange, P. Teas & P. Van Heiningen (2013)- Geodynamic evolution of the Banda Sea region. American Geophys. Union (AGU) Fall Meeting, San Francisco, 1p. *(Abstract only)*
(online at: http://adsabs.harvard.edu/abs/2013AGUFM.T41B2574K)
(Summary of main structural elements of E Indonesia, from Sulawesi in W to W Papua in E, across N part of Banda Arc. N boundary of 'Birds Head' of W Papua is sinistral Sorong strike-slip fault zone with >48km displacement over last few Myrs. W boundary fault of Cendrawasih Basin defines E boundary of Birds Head and corresponds to Wandamen Peninsula with high-P metamorphic rocks with exhumation ages from 4- 1 Ma. Birds Head and Pacific Plate coupled, so Birds Head completely detached from Irian Jaya. Etc.)

Kenyon, C.S. & L.R. Beddoes (1977)- Geothermal gradient map of Southeast Asia. SEAPEX/ Indonesian Petroleum Assoc. (IPA) Publ., p.
(see also later version by Rutherford & Qureshi 1981)

Kenyon, C.S., K. Roberti, M. Hughes-Clarke & M. de Matharel (1976)- Geothermal gradient map of Indonesia, a progress report. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 81-90.

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(Pre-plate tectonic tectonic synthesis of Indonesia. Stratigraphic and structural features of Indonesia suggests major differences between E and W parts. In E Indonesia extensive Paleozoic ('Variscan orogeny') land mass development, modified by later regeneration and epeirogenic movements. No trace of Paleozoic/ Variscan orogeny in W part, but widespread effects of Pacific orogeny (Mesozoic))

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(Early overview of offshore basins, originally presented at 12th Pacific Science Congress in 1971. With schematic cross sections of Sunda Shelf, Java Sea and Paternoster Platform)

Koesoemadinata, R.P., L. Samuel & M.I. Tachjudin (1995)- Subsidence curves and modelling of some Indonesian Tertiary basins. In: G.H. Teh (ed.) Southeast Asian basins: oil and gas for the 21st century, Proc. AAPG-GSM Int. Conf., Kuala Lumpur 1994, Bull. Geol. Soc. Malaysia 37, p. 205-230.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a15.pdf)
(Subsidence curves of N and S Sumatra, Barito, NE Java and Salawati Basins constructed from well-bore data, calibrated by micropaleontology and seismic sections. All basins Tertiary age, but differences and similarities in basin forming mechanics, depositional fill and final modifying tectonics. Barito Basin typical foreland basin subsidence curve related to flexuring of continental crust, related to docking of Paternoster-East Sunda microcontinent on Sunda continent. N and S Sumatra and NW and NE Java basins back-arc basins)

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(GPS measurements of surface deformation show convergence between Australian Plate and Sunda Block in E Indonesia partitioned between megathrust and continuous zone of back-arc thrusting extending 2000 km from E Java to N of Timor. Partitioning occurs via CCW rotation of arc segment called Sumba Block, and left-lateral movement along major NE-SW strike-slip fault W of Timor. Also W-ward extension of back-arc thrust for 300 km onshore into E Java, accommodating slip of ~6 mm/yr)

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(Review of variations in character along Sunda subduction zone from N Sumatra to East of Java. Off Sumatra wider seismogenic zone with larger earthquakes. Variations controlled by increasing age of crust of subducting plate from W to E, decrease in thickness of sediment cover from W to E, topography of downgoing plate, etc.)

Kreemer, C., W.E. Holt, S. Goes & R. Govers (2000)- Active deformation in Eastern Indonesia and the Philippines from GPS and seismicity data. J. Geophysical Research 105, B1, p. 663-680.
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(GPS and seismicity data show Java Trench delineates Australian plate (AU)- Sunda block boundary W of Sumba, but E of Sumba, convergence distributed over back-arc and Banda Sea and no subduction at Timor Trough. In New Guinea most motion is strike-slip in N part of island, delineating Pacific- Australian plate boundary. Some trench-normal convergence at New Guinea Trench, evidence that strain is partitioned to accommodate oblique Pacific- Australia motion. Sulawesi Trench may take up some of AU-Sunda motion)

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Kuenen, P.H. (1934)- Relations between submarine topography and gravity field. In: F.A. Vening Meinesz (1934), Gravity expeditions at sea 1923-1932, Waltman, Delft, 2, Chapter 8, p. 183-193.
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Kuenen, P.H. (1935)- Geological interpretation of the bathymetrical results. In: The Snellius Expedition in the eastern part of the Netherlands East Indies (1929-1930), 5. Geological Results, 1, Kemink, Utrecht, p. 1-124.
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('The geology of granitoid rocks in Indonesia and their distribution'. Brief review of distribution of granitoids in Indonesia. In Sumatra 3 groups: (1) Volcanic Arc Granitoid/ U Triassic- Pliocene (203- 5 Ma), (2) Main Range Granitoid/ E Triassic- E Cretaceous (247-143 Ma), (3) Eastern Granitoid/ U Permian- U Jurassic (264-216 Ma). In Kalimantan 4 groups: (1) Natuna-Semitau-Sanggau/ Triassic-Jurassic, (2) Meratus/ Carboniferous-Cretaceous, (3) Schwaner/ Cretaceous- E Tertiary, (4) C Kalimantan Tertiary Arc/ Late Eocene- E Miocene. Also Java, Lesser Sunda Islands, Sulawesi- Banggai Sula (3 groups) and W Papua (2 groups: (1) Birds Head/ Permian-Triassic and (2) Papuan foldbelt U Pliocene). No maps)

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(Proposed geological monuments in Indonesia)

Lacroix, M.A. (1932)- Les tectites de l'Indochine. Archives Museum Hist. Nat., Paris, ser. 6, 8, p. 139-236.
('The tektites of Indochina'. Old but extensive review of distribution of Pleistocene glass tektite field from Indochina to W Indonesia and Australia. Variously called billitonite, australite, etc. See also Verbeek 1897, Von Koenigswald 1960, Chapman 1964, Stauffer 1978, Ford 1988, etc.))

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(Paleocene (60 Ma)- Recent plate reconstructions of SE Asia)

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(Reconstructions of SE Asia region from 60- 5 Ma. Impact between Greater India and SE Asia in NW part of SE Asia, probably from M Eocene- E Miocene, W of Burma block, so no reason to assume Sumatra, Malay Peninsula, and Kalimantan should extrude to SE along left-lateral Mae Ping and Three Pagodas fault zones as suggested by Peltzer and Tapponnier (1988). Opening of C Thailand basins, Gulf of Thailand, and Malay Basin require dextral megashear zone to compensate relative motion between Indochina and Malay Peninsula, which may extend into W Kalimantan and serve as boundary between Indochina block and Kalimantan)

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('Gravimetry and tectonics of the Netherlands Indies')

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(N Banda-Molucca area at junction of three converging plates, a mosaic of remnant and active island arcs and continental and oceanic fragments. NW-SW late Neogene thrusts and anticlines in NE part of S Halmahera. S of Halmahera several sinistral, transcurrent, reverse faults prolong Sorong fault. From deep Salawati basin to N Buru large tectonic zone with mud diapirs. Due to collision, possible remnants of Molucca Sea Plate outcrop in E arm of Sulawesi and Obi Island. Good cross-sections Seram- Halmahera area)

Letouzey, J. & C. Muller (1988)- Structure of sedimentary basins in Eastern Asia. Proc. 7th Offshore SE Asia Conf., Singapore 1988, SEAPEX Proc. 8, p. 63-68.
(Cross sections through E Asian basins S China Sea, Philippines, NW Borneo, etc.)

Letouzey, J., L. Sage & C. Muller (1988)- Geological and structural maps of eastern Asia- introductory notes. American Assoc. Petrol. Geol. (AAPG), Tulsa, 52p. + 3 map sheets 1: 2,500,000.
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(Three main Cenozoic tectonic periods:(1) Paleogene- E Miocene extension with graben fill (2) quiescent period, (3) M Miocene- Recent folding/ inversion/ thrusting. Many folds on E Sunda Platform are inversions of Paleogene grabens)

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(online at: www.repository.naturalis.nl/document/549456)
(Overview of Tertiary formations and correlations across the 'Netherlands Indies' in K. Martin memorial volume. With formation correlation table and Tertiary larger foraminifera range chart))

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(Miocene shallowing and closure of Indonesian Seaway between Indian Ocean-Pacific related to plate-tectonic developments at S margins of Banda Sea. Model good agreement with 9.9-7.5 Ma history of shallowing and closure of Indonesian Seaway, as inferred from biogeographic patterns and thermal evolution of Miocene equatorial Pacific waters)

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(New tectonic model requires separate Timor microplate in Neogene, now part of Banda collision zone. Paleomagnetic data suggests Timor island contains allochthonous terranes that were separated from N Australian margin by >2500km in E Cretaceous; Late Neogene Banda Arc not related to subduction of 2500km of oceanic crust between Cretaceous- Pliocene; upside-down metamorphism of Late Miocene age in soles of ultramfites requires obduction of hot lithosphere, etc. No figures)

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(Tertiary tectono-stratigraphic evolution of SE Asia four phases: (1) 50-43.5 Ma: Start of India-Eurasia collision, reducing in convergence along Sunda Arc subduction system, resulting in extension in adjacent fore-arc and back arc areas; (2) 43.5-32 Ma: termination of oceanic subduction beneath India-Eurasia collision zone caused plate reorganization, producing second phase of rifting, with onset of extension in S China Sea and Makassar Straits failed rift. First major collision of Luconia Shoals block with subduction along NW Borneo margin; (3) 32-21 Ma): first phase of S China Sea seafloor spreading, rotations creating Malay Basin and inversion along Sunda Arc ending rifting in these basins; (4) 21–0 Ma: cessation of first phase of seafloor spreading inS China Sea caused by collsion of Baram block with NW Borneo subduction system. Collisions in NW Borneo, Sulawesi and Timor areas, with rotation of Sumatra resulted in extensive structural inversion)

Longley, I.M. (2000)- Extrusion collusion and rotational confusion in SE Asian tectonic models. AAPG Int. Conf. Exhib. Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1458. *(Abstract only)*
(In Paleogene SE Asia experienced rift phase with no significant transtension or transpression. Extrusion tectonics also fails to explain origin of backarc basins of Sumatra and Java, Malay Basin, etc. Paleogene evolution mainly driven by M Eocene plate re-organisation caused by India-Eurasia collision, with extrusion tectonics as Neogene modifier to basins formed by Paleogene rifting. Model suggests all Tertiary rotations in SE Asia are clockwise, initially due to opening of S China Sea and later due to effects of extrusion tectonics)

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(Non-plate tectonic interpretation, suggesting island arcs, deep-sea trenches and seismofocal zones of Indonesia differ from those of Pacific ring proper)

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(online at: http://palaeoelectronica.org/paleo/2003_2/geo/issue2_03.htm)
(Eocene larger foram assemblages can help distinguish between carbonates from Asian-Pacific-Mediterranean (Pellatispira-Assilina) or Australian- New Guinea (Lacazinella) realms (Nummulites and Discocyclina-Asterocyclina present in both realms))

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(Retreats or advances in subducting plates trench hinge important control on presence or absence of magmatism. Several locations in SE Asia show magmatism with geochemical signature of subduction, but are far from active subduction zones. Such magmatism requires earlier period of mantle enrichment by subduction

but may also result from localized extension. Adakitic magmatism occurred in tectonic settings where there is no evidence for subduction of young oceanic crust at that time)

MacPherson, C.G. & R. Hall (2002)- Timing and tectonic controls in the evolving orogen of SE Asia and the western Pacific and some implications for ore generation. In: D.J. Blundell et al. (eds.) The timing and location of major ore deposits in an evolving orogen, Geol. Soc., London, Spec. Publ. 204, p. 49-67.
(Review of SE Asia tectonics and associated mineral deposits. Timing and location of hydrothermal mineralization often related to major events at plate boundaries)

Madon, M.B.H. (1999)- Plate tectonic elements and evolution of Southeast Asia. In: The Petroleum Geology and Resources of Malaysia, Chapter 4, Petronas, Kuala Lumpur, p. 61-76.

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(online at: www.gl.rhul.ac.uk/seasia/ages/SEAsia_GIS.pdf)

Marks, P. (1956)- Indonesia. In: L. Dubertret (ed.) Lexique Stratigraphique International III, 7, Int. Geological Congress, Stratigraphy Commision, Paris, p. 5-241.
(Alphabetical overview of Indonesian formation names and characteristics)

Marks, P. (1957)- Stratigraphic lexicon of Indonesia. Indonesia Geol. Survey, Publ. Keilmuan 31, Ser. Geol., Bandung, p. 1-242.
(Reprint of Marks (1956); see also 1961 Atlas. Useful overview of Indonesian formation names and characteristics. See also updated and expanded version by Harahap et al., 2003)

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(Brief overview of geological knowledge and ages of rocks of Indonesian islands, as known in 1883)

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(online at: http://resolver.staatsbibliothek-berlin.de/SBB0000778100030000)
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Martin, K. (1911)- Wann loste sich das Gebiet des Indischen Archipels von der Tethys? Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 9, 1, p. 337-355.
(online at: www.repository.naturalis.nl/document/552392)
('When did the Indies Archipelago separate from the Tethys?'. Mesozoic faunas of Indonesia have significant numbers of European species but Eocene and younger mollusc faunas have no European species, suggesting there was no longer a 'Tethys' marine connections between the two)

Martin, K. (1931)- Wann loste sich das Gebiet des Indischen Archipels von der Tethys? (eine Fortsetzung). Leidsche Geol. Mededelingen 4, p. 1-8.
(online at: www.repository.naturalis.nl/document/549337)
('When did the area of the Indies Archipelago separate from the Tethys? (a continuation)'. Follow up on Martin (1914) paper). Late Eocene and Neogene mollusc assemblages of Java (and Philippines, Burma, NW India) of Indo-Pacific/ Indo-Malayan character with few or no European species, suggesting no marine connections between the two)

Martini, R. (2007)- An overview of Upper Triassic carbonate deposits of Indonesia: palaeogeographic and geodynamic implications. 5th Swiss Geoscience Mtg, Geneve 2007, p. 201-202.
(Upper Triassic carbonates around Banda Sea (Sinta Ridge, C-E Sulawesi, Buru, Seram, Misool and off NW Australia (Wombat Plateau, W Timor). In Upper Triassic, Seram-Buru and E Sulawesi/ Kolonodale Block two separate entities, former located in more tropical position. Seram-Buru Block originated from Irian Jaya area, Kolonodale Block (E Sulawesi) from Australian NW Shelf/ Argo Abyssal Plain. No clear similarities between Triassic of Timor and Papua-New Guinea, NW coast of Australia, Wombat Plateau. Allochthonous Triassic of Timor sedimentary evolution different from that of Australian margin and microcontinents of Banda Sea)

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(online at: www.iagi.or.id/wp-content/uploads/2012/04/Sandi-Stratigrafi-Indonesia-1996.pdf)
('Stratigraphic code of Indonesia'. Indonesian version of International Stratigraphic Guide)

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(Compilation of heat flow data in SE Asia from published data as of 1988 and unpublished data obtained from combining published temperature gradient data of hydrocarbon exploratory wells with average thermal conductivity for individual basins estimated from published data)

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McCaffrey, R. (1996)- Slip partitioning at convergent plate boundaries of SE Asia. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of SE Asia, Geol. Soc. London, Spec. Publ. 106, p. 3-18.
(Active tectonics of Sumatra, Philippines, New Guinea fold-and thrust belt, Huon-Finisterre collision and San Cristobal trench can be understood in terms of upper plate deformation associated with oblique convergence. W Java may also exhibit partitioning of oblique subduction. Structures accommodating normal and shear components of motion often very close. Arc-parallel strain rates estimated for forearcs of region. In Sumatra oblique convergence results in NW translation and stretching of forearc area)

McInnes, B.I.A., N.J. Evans, F.Q. Fu, S. Garwin, E. Belousova, W.L.Griffin, A. Bertens, D. Sukarna, S. Permanadewi et al. (2005)- Thermal history analysis of selected Chilean, Indonesian and Iranian porphyry Cu-Mo-Au deposits. In: T.M. Porter (ed.) Super porphyry copper and gold deposits: a global perspective, PGC Publishing, Adelaide, p. 27-42.
(U-Pb-He triple-dating age determinations for porphyry Cu±Mo±Au deposits, including. Modelling results for Indonesian porphyry deposits: (1) Grasberg (W Papua), emplaced at 800m at 3.1 Ma, exposed at surface 1.7 Ma; (2) Batu Hijau (SW Sumbawa), emplaced at 2400m at ~3.8 Ma, exposed at surface 1.23 Ma; (3) Ciemas (SW Java), emplaced at 5500m at ~17.8 Ma, exposure at surface 5.34 Ma)

Merritts, D., R. Eby, R.A. Harris, R.L. Edwards & H. Cheng (1998)- Variable rates of Late Quaternary surface uplift along the Banda Arc- Australian collision zone, eastern Indonesia. In: I.S. Stewart & C. Vita-Finzi (eds.) Coastal Tectonics, Geol. Soc., London, Spec. Publ. 146, p. 213-224.
(Radiometrically dated emergent coral terraces from SE Indonesia provide estimates of vertical strain in Banda Arc-continent collision complex. Roti island uplift 170m in last ~125,000 years. Late Quaternary surface uplift rates vary significantly along strike of Banda orogen. Vertical displacement rates greatest in young parts of orogen where shelf-slope break recently has been underthrust beneath orogenic wedge, as at Roti, and in older parts of orogen where retroarc thrust faulting occurs, as at Alor island)

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(online at: https://link.springer.com/content/pdf/10.1186%2FBF03352270.pdf)
(GPS measurements across SE Asia show differential plate motions. Sundaland-South China is stable tectonic block, decoupled from Eurasia, moving S relative to India and Australia)

Michel, G.W., Y.Q. Yu, S.Y. Zhu, C. Reigber, M. Becker, E. Reinhart, W. Simons et al. (2001)- Crustal motion and block behaviour in SE Asia from GPS measurements. Earth Planetary Sci. Letters 187, p. 239-244.
(online at: www.geologie.ens.fr/~vigny/articles/sunda_epsl.pdf)
(Sundaland stable tectonic block, moving E rel. to Eurasia at ~12 mm/yr; moves S rel. to India and Australia)

Miller, M.S., L.J. OćDriscoll, N. Roosmawati, C.W. Harris, R.W. Porritt, S. Widiyantoro, L.T. da Costa, E. Soares, T.W. Becker & A.J. West (2016)- Banda Arc experiment- transitions in the Banda Arc-Australian continental collision. Seismological Research Letters 87, 6, p. 1-7.
(online at: http://www-udc.ig.utexas.edu/external/becker/preprints/mm16.pdf)
(About ongoing Banda Arc passive seismic experiment. Recorded >600 local earthquakes by June 2016 (see also Porritt et al. 2016))

Milsom, J. (1999)- Arc-continent collision in SE Asia: Eastern Indonesia and Papua New Guinea. London University SE Asia Research Group, Report 201, p. 1-32. *(Unpublished)*
(Arc-continent collisions taking place today in NE New Guinea and E Indonesia and Taiwan, all started between 7- 3 Ma. Evidence of older collisions in E Indonesia and New Guinea)

Milsom, J. (2000)- Stratigraphic constraints on suture models for Eastern Indonesia. J. Asian Earth Sci. 18, p. 761-779.
(online at: https://pdfs.semanticscholar.org/4f6d/18a4c0e67d6a95281d4fb7916cf6d70b42de.pdf)
(Tectonostratigraphies of Outer Banda Arc island suggest these were once part of Sundaland margin and that N and S Banda Sea basins are Late Cenozoic extensional features (first author to propose the slab rollback model for Banda Seas, subsequently supported with tomographic data by Spakman and Hall 2010; JTvG). Three separate tectonostratigraphic groups (1) Sundaland margin (SW Sulawesi, Sumba) (2) Birds Head/ Sula Spur; with Late Paleozoic granites similar to central PNG; and (3) Banda Association (Buton, Buru, Seram, W Kai, Banda ridges, E Sulawesi; rifted from Gondwanaland in Jurassic)

Milsom, J. (2001)- Subduction in eastern Indonesia: how many slabs? Tectonophysics 338, 2, p. 167-178.
(Seismicity associated with arc-continent collision in E Indonesia testifies to past N-directed subduction of Indian Ocean lithosphere beneath Banda Sea. Shallow-intermediate seismicity around Banda Arc supports

subduction of two separate slabs, but between 150-500 km continuous 'shoehorn' shape. This shape confirms presence of subducted lithosphere beneath Seram in N, as well as beneath Timor in S. This is incompatible with subduction of two unconnected plates, and implies rapid E-wards retreat of subduction trace (first author to suggest 'roll-back' of subducting Indian Ocean slab as mechanism for creation of Banda Sea; JTvG))

Milsom, J. (2003)- Forearc ophiolites: a view from the western Pacific. In: Y. Dilek & P.T. Robinson (eds.) Ophiolites in earth history, Geol. Soc., London, Spec. Publ. 218, p. 507-515.
(Review of ophiolites in New Guinea and farther East)

Milsom, J. (2003)- The shape of subduction in Eastern Indonesia. Indon. Petroleum Assoc. (IPA) Newsletter, March 2003, p. 10-14.

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(Interesting comparisons between Caribbean oroclinal system and Banda Sea region of E Indonesia)

Milsom, J. & M.G. Audley-Charles (1986)- Post-collision isostatic readjustment in the Southern Banda Arc. Geol. Soc., London, Spec. Publ. 19, p. 351-364.
(Late Miocene-Mid-Pliocene compression resulted in emplacement from N of large thrust sheets on deformed Australian margin near Timor. During last 3 Ma compression unimportant but vertical movements common and rapid. In N Timor and Banda volcanic arc, uplift is occurring where gravity data suggest there should be subsidence. Possible explanation of high gravity values is cold, dense, subducted slab which is now sinking independently after rupture near continental margin. Because of rupture, sinking slab no longer exerts downward pull on overlying lithosphere which now rebounds isostatically)

Milsom, J., M.G. Audley-Charles, A.J. Barber & D.J. Carter (1983)- Geological-geophysical paradoxes of the Eastern Indonesia collision zone. In: T.W.C. Hilde & S. Uyeda (eds.) Geodynamics of the western Pacific-Indonesian region, American Geophys. Union (AGU) and Geol. Soc. America (GSA) Geodyn. Ser. 11, p. 401-411.
(Geology of Sunda and Banda arcs not all in accord with classic plate tectonic models; many unanswered questions)

Milsom, J., D. Masson & G. Nichols (1992)- Three trench endings in Eastern Indonesia. Marine Geology 104, p. 227-241.
(Terminations of Sunda, Philippine and New Guinea trenches in E Indonesia associated with presence of blocks of thickened crust. Transition between Sunda Trench and Timor-Tanimbar Trough consequence of collision with NW Australian continent. S termination of Philippine Trench defined by presence of oceanic plateau. New Guinea Trench terminates in W at N-trending Mapia Ridge seafloor rise. No clear indications of present day subduction along N margin of New Guinea and subduction may have ceased in W-most part of New Guinea Trench and oceanic crust of Ayu Basin W of Mapia Ridge and N of Birds Head postdates active subduction)

Milsom, J. & V. Rocchi (1998)- The long wavelength gravity field in SE Asia. J. Geol. Soc. China, Taipei, 41, 4, p. 489-495.
(In SE Asia long wavelength field strongly correlated with anomalously high seismic velocities in mantle due to presence of deep subducted lithosphere. Comparisons with tomography indicate long wavelength field influenced most strongly by mass excesses in lower mantle, below 600 km discontinuity. Gravity patterns suggest subduction zones formerly existed close to present-day E and possibly W coastlines of Borneo and that E-ward extension of active margin of Eurasian Plate to Banda Arc is very recent)

Milsom, J., Sardjono & A. Susilo (2001)- Short-wavelength, high-amplitude gravity anomalies around the Banda Sea, and the collapse of the Sulawesi Orogen. Tectonophysics 333, 1-2, p. 61-74.
(High-density ophiolitic rocks outcropping on islands around Banda Sea in many cases associated with strong gravity anomalies and steep gravity gradients. Bouguer gravity levels and gradients over extensive E Sulawesi Ophiolite generally low. Most positive anomalies in Banda Arc due to ophiolites superimposed on steep

regional gravity gradient but in W Seram spatial separation between two. On Buru gradient >10 mGal/km suggests presence of shallow, very dense rocks, despite absence of ophiolites in outcrop. Ophiolite distribution on Sulawesi and around Banda Sea compatible with ?Oligocene collision that produced Sulawesi orogen, which collapsed following collision with Australian-derived microcontinent)

Milsom, J., J. Thurow & D. Roques (2000)- Hydrocarbon source rocks and the paleogeography of Eastern Indonesia. SEAPEX Press 3, 4, p. 42-44, 49.
(Many of the islands surrounding Banda Sea are fragments of 'East Sulawesi Microcontinent' (ESM), which rifted off Australia- New Guinea margin in Late Triassic or E Jurassic, to collide with Eurasia margin in E Miocene. Parts of this continent are now in E Sulawesi, Buton, Buru and Seram and share Late Triassic bituminous marine shale deposits. Parts of Timor similar as well. Late Triassic of Sula Spur and New Guinea in continental facies and with granite intrusions, so clearly still part of Gondwana. In 'bacon-slicer model' Sula Spur therefore must have rifted off New Guinea at later date)

Mitchell, A.H.G. (1984)- Initiation of subduction by post-collision foreland thrusting and back-thrusting. J. Geodynamics 1, 2, p. 103-120.
(Ages of subduction zones bordering five collisional orogens suggest subduction may have initiated by foreland thrusts and backthrusts. Examples used include Late Jurassic at N Sunda Arc (Sumatra- Malaya), end-Miocene in Negros trench (Philippines) and incipient S-ward subduction of e Banda Sea beneath Timor)

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(online at: https://resolver.kb.nl/resolve?urn=MMKB21:045974000:pdf)
('The soils of Java and Sumatra'. 2nd edition of 1922 book)

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('The soils of the tropics in general and those of the Netherlands Indies in particular'. See also 3 more volumes between 1933-1938 and English translation in 1944)

Mohr, E.C.J. (1944)- The soils of equatorial regions with special reference to the Netherlands East Indies. J.W. Edwards, Ann Arbor, p. 1-766.

Molengraaff, G.A.F. (1915)- Folded mountain chains, overthrust sheets and block-faulted mountains in the East Indian archipelago. 12th Int. Geological Congress, Toronto 1913, p. 689-702.
(Island chain from Timor and Babar to Ceram and Buru much alike in geological structure: nucleus of thrust-faulted Permian- Eocene, covered by Neogene-Pleistocene that is not folded but generally uplifted high above sea level. Two main thrust sheets on Timor: lower 'Tethys sheet' (Triassic-Cretaceous oceanic deposits) and upper 'Fatu sheet' (Permian- Eocene in different facies; shallow marine limestones, schists, serpentinites, often found as isolated blocks). With simplified geologic map and cross-section of Central Timor)

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(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)
('The influence of the geological setting of the Dutch colonies in the East Indies on its economic significance'. Lecture summary Amsterdam; no figures)

Molengraaff, G.A.F. (1922)- Geologie. In: De zeeen van Nederlandsch Oost Indie, Kon. Nederlands Aardrijkskundig Genootschap, Brill, Leiden, Chapter 6, p. 272-357.
(online at: https://www.biodiversitylibrary.org/item/86172page/346/mode/1up)
(Geology chapter in 'The seas of the Netherlands East Indies' book. Early overview of morphology and bottom sediments of Indonesian Seas, distribution of coral reefs, etc. Earliest recognition of incised Pleistocene river channels on Sunda Platform)

Morley, R.J. (2014)- Rifting and mountain building across Sundaland, a palynological and sequence biostratigraphic perspective. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-011, 20p.
(On timing of rifting and uplift events of Sundaland, constrained by palynology and sequence stratigraphy. Makassar/ Java Sea rifts initially formed at start of M Eocene (~49 Ma), with non-marine deposition and low paleo-elevations, followed by marine deposition in second rift phase in Late Eocene. Extensive uplift in Borneo began in latest E Miocene, and further uplift at ~8 Ma. N and W rifts of Sunda region initiated in Late Eocene, with synrift phase ending at ~31 Ma. Some rifts, especially in W Natuna and Malay Basin, characterised by Oligocene deep lake systems, which persisted for >6 Myrs)

Morley, R.J. (2018)- The complex history of mountain building and the establishment of mountain floras in Southeast Asia and Eastern Indonesia. In: C. Hoorn & A. Antonelli (eds.) Mountains, climate and biodiversity, Wiley, p. 475-494.

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(Discussion of main phases of plant dispersal into and out of SE Asia in relation to plate tectonics and changing climates. Late Cretaceous poorly understood, but Paleocene topography mountainous, and climate probably seasonally dry. India's drift into perhumid low latitudes in Eocene brought dispersal into SE Asia of megathermal angiosperms which originated in W Gondwana, starting at ~49 Ma, and with terrestrial connection after~41 Ma. Oligocene seasonally dry climates except along E and SE seaboard of Sundaland, but with collision of Australian Plate with Sunda at end of Oligocene widespread perhumid conditions in region. With Late Miocene strengthening of Indian monsoon, seasonally dry conditions expanded. Some dispersals from Australasia after collision with Sunda. Pleistocene refuge theory applies to SE Asian region).

Morley, R.J. & H.P. Morley (2018)- Montane pollen indicates character of Mid Cenozoic uplands across Sunda Shelf. In: PESGB SEAPEX Asia Pacific E&P Conference, London, 4p *(Extended Abstract)*
(Montane pollen common element of palynomorph assemblages across Sundaland region and provides insight into paleoaltitudes and paleoclimates from Paleocene- Pliocene. In Late Eocene-Oligocene, Natuna Arch, Con Son Swell and Ammanite Ranges likely of sufficient altitude to support temperate broadleaf and cool temperate conifer forests at summits, with altitudes of 2500m or more. Late Miocene-Pliocene uplifts in Borneo, (Kinabalu, Meratus) and Sumatra Barisan Range. Volcanoes of Java formed in Pleistocene)

Morley, R.J., H.P. Morley & T. Swiecicki (2016)- Mio-Pliocene palaeogeography, uplands and river systems of the Sunda region based on mapping within a framework of VIM depositional cycles. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-506-G, p. 1-26.
(Paleogeography and sedimentation rates for Sunda region. Paleogeographic maps for 10 E Miocene-Pleistocene time slices. In M Miocene bulk of sedimentation across Sunda region on enlarged Proto-Mahakam Delta (4 times larger than today's Mahakam Delta) with minimal sedimentation off Sarawak. In latest Middle-Late Miocene sedimentation rates increased off Sarawak and sharply reduced in Makassar Straits; interpreted to reflect redirection of sediment transport as result of Borneo uplift and capture of Proto Mahakam River by Sarawak rivers in Late Miocene)

Morley, R.J., H.P. Morley & T. Swiecicki (2017)- Constructing Neogene palaeogeographical maps for the Sunda region. In: SEAPEX Exploration Conference 2017, Singapore, Session 7, 10p. *(Extended Abstract)*
(online at: https://www.seapex.org/wp-content/themes/seapex/images/pdf/Session-7/7_1-Palynova.pdf)
(Generalized paleogeography maps of Sunda shelf for 10 time slices from E Miocene (23 Ma)- Pleistocene. Maximum development of 'Proto-Mahakam' delta at ~15-12 Ma, at time of limited clastic deposition rates along N Borneo margin (major deltas here Late Miocene- Pliocene). (abbreviated version of Morley et al. 2016))

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('The distribution of ancient magnetism directions in Indonesia'. 1:5M scale map compilation of paleomagnetic direction data from Indonesia. Includes Birds Head paleolatitudes for Late Carboniferous Aimau Fm (47˚S), E Permian Aifat Fm (46˚S), Late Permian Ainim Fm (35˚S), and Late Triassic- Jurassic Tipuma Fm (42˚S))

Mukti, M.M., S. Aribowo & A. Nurhidayati (2018)- Origin of melange complexes in the Sunda and Banda arcs: tectonic, sedimentary, or diapiric melange. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012003, p. 1-5.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012003/pdf)
(Brief review of possible different melange types of W Sumatra, Java, Timor. Remnants of Cretaceous subduction zone at Ciletuh, Luk Ulo and Meratus formed along S margin of Sundaland subduction and are known as tectonic melanges. Younger melange complexes in Sunda arc (Nias) and Banda arc (Timor) more likely diapiric melange)

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(46 basins, classified into four types: shelfal, continental margin, archipelagic and marginal seas)

Murphy, R.W. (1976)- Pre-Tertiary framework of Southeast Asia. SEAPEX Offshore SE Asia Conf., Singapore 1976, 3, p. 1-2. *(Abstract only)*

Murphy, R.W. (1987)- Southeast Asia: a tectonic triptych. In: M.K. Horn (ed.) Trans. 4th Circum Pacific Energy and Mineral Resources Conf., Singapore 1986, p. 395-400.
(SE margin of Eurasia has been compressional margin since Late Paleozoic, onto which dozens of arcs and microcontinents from Gondwanaland accreted. Map showing 10 Triassic-Recent magmatic arc systems. Late Cenomanian- E Turonian accretion of Meratus ophiolite cuts obliquely across older E-W trending arcs. Throughgoing wrench faults W of Sunda Strait right-lateral, those to E are left-lateral. Etc.)

Murphy, R.W. (1992)- Southeast Asia: linkage of tectonics, unconformities and hydrocarbons. In: M. Flower, R. McCabe & T. Hilde (eds.) Southeast Asia structure, tectonics and magmatism, Symposium Texas A&M University, College Station, 5p. *(Extended abstract only)*

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1998008.pdf)
(SE Asia reconstruction, modification of Hall (1996). Sunda and Philippine Sea plates treated as rigid blocks between 50-15 Ma. Borneo CCW rotation, required by paleomagnetic data, probably Late Cretaceous in age)

Murphy, R.W. (2002)- Southeast Asia reconstruction with a non-rotating Cenozoic Borneo. SEAPEX Press 5, 3, p. 30-41.
(Similar to paper above. Modified plate reconstruction of SE Asia between 50- 15 Ma. In this interpretation Sunda block and Philippine Sea Plate treated as relatively rigid blocks and Indochina extruded ~700km between 35- 15 Ma. Right-lateral movement along Sumatra Fault/ Andaman/Sagaing system is paired with left-lateral movement along Red River Fault and its precursor, West Baram Line. No large-scale CCW rotation of Borneo between 20-10 Ma, as suggested by Hall (1996) model)

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(SE Asia 2539 heat flow measurements, but contribution of heat flux from active volcanoes overlooked in regional heat-flow maps)

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(Collection of papers dealing with tectonics, deposits, paleoenvironments of Permian- Eocene Tethys Ocean(s), now consumed in Alpine- Himalayan- SE Asian foldbelts)

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(Overview of Mio-Pliocene carbonate distribution in Indonesia)

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(Elegant overview of Indonesia Tertiary geology, basins and hydrocarbons)

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(SE Asia paleogeographic maps at 3, 17, 25 Ma)

Nishimura, S. & S. Suparka (1986)- Tectonic development of East Indonesia. J. Southeast Asian Earth Sci. 1, 1, p. 45-57.
(Outer non-volcanic arc in E Indonesia formed as a marginal part of the Australian continent in S hemisphere before Upper Jurassic. Timor and Sumba did not reach present positions until M Miocene or later. Ambonites on Wetar date time of collision between Australian Plate and proto- Banda Arc at 3 Ma, etc.)

Nishimura, S. & S. Suparka (1990)- Tectonics of East Indonesia. Tectonophysics 181, p. 257-266.
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(online at: http://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=1552&context=etd)
(GPS measurements from 14 sites in active E Sunda- Banda arc during 2001-2003. Most blocks move in same direction as Australian lower plate, but at different rates. Block boundaries may exist between Lombok and Komodo, Flores and Sumba, Savu and W Timor, and between Timor and Darwin. Timor Trough may account for 20 mm/yr of motion between Timor and Darwin. Major transverse fault off W Timor separates Savu/ Flores/ Sumba block from Timor/Wetar Block. Flores thrust moves E Sunda arc N relative to Asia, by decreasing amounts to W. Back-arc Wetar Thrust system takes up most of plate convergence between Australia and Asia)

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(online at: www.gsm.org.my/products/702001-101658-PDF.pdf)
(Discussion of diachronous opening of Tertiary marginal basins along E part of the Sundaland: (1) Proto S China Sea and S China Sea (with rifted off continental Palawan Block), (2) NW Sulu Sea, separated by Cagayan Arc; (3) late E Miocene Sulu Sea back-arc basin (W Mindanao and Sulu arc continental basement);

(4) M Eocene Celebes Sea basin (N Arm of Sulawesi), Late Miocene N Banda Basin, Pliocene S Banda Basin. Basin closures started in E Miocene)

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(NW New Guinea at least two marginal basins, both formed in back-arc settings. Older basin opened between M Jurassic- E Cretaceous, a remnant of which is now preserved as New Guinea Ophiolite. Its obduction started at 40 Ma and finally emplaced on Australian margin at ~30 Ma. Younger basin active in Oligocene- M Miocene and obducted in E Pliocene. W edge of Philippine Sea also hitherto unexplained Oligocene deformation of Philippine arc. Extensive area of oceanic crust extended Australian Plate N of craton. As Australia began N-ward drift in E Eocene, this lithosphere was subducted. Thus, portion of Philippine Sea Plate carrying Taiwan-Philippine Arc to present site may have actually been in contact with ophiolite now in New Guinea and obduction led to deformation of Philippine Sea Plate. Neogene Plate kinematics transported deformed belt in contact with Sunda block in Late Miocene-Pliocene)

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(online at: www.geologie.ens.fr/~rooke/NCRpdf4web/Pubellier&al-2003.pdf)
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(History of Sundaland tectonic interpretations. Sundaland is mosaic of microplates, initially accreted in Late Triassic. Zone of weakness between rigid microplates in Sumatra locus of extensional tectonism, high heatflow and subsequent compression, which lead to optium conditions for generation and trapping of Tertiary oils)

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(online at: https://epic.awi.de/38705/2/south-china-sea_1990.pdf)
(Celebes and S China Seas rifted from Asian continental margin in Paleogene. Now completely subducted Proto-S China Sea probably same origin. Basins resulted partly from Indo-Asian collision and partly from slab-pull forces along Sunda Trench. Neogene collision of Banggai Sula Block with S margin of Celebes Sea in Sulawesi forced progressive closure of basins. Proto S China Sea was first to subduct below Cagayan Ridge in E Neogene, inducing opening of Sulu Sea and spreading reorganisation in S China Sea. Following collision of

Cagayan Ridge with rifted margin of S China Sea in E Miocene, the Sulu Sea initiated subduction along Sulu Archipelago and Celebes Sea along N Sulawesi Trench. Paleogene was period of stretching of Eurasian margin and opening of marginal basins, in Neogene mainly progressive subduction of these oceanic basins)

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(Both West and East Sunda block margins affected by Late Eocene- E Miocene continental crust thinning just before E Neogene impingement of Philippine Mobile Belt and Indian Ridges. This extension was controlled by subduction retreat along Sumatra Java trench and its E extension in C Sulawesi. Early M Miocene (15 Ma) multiple collisions around S China Sea (Banggai Sula- E Sulawesi, Mindanao Zamboanga microcontinent- Philippine Mobile Belt, Mindoro Palawan- Philippine Mobile Belt, Luzon-Taiwan), causing end of spreading in Sulu and S China Seas)

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(W boundary of Philippine Sea Plate (PH) wide deformation zone that includes stretched continental margin of Sundaland, Philippine Mobile Belt and continental blocks around PH-Australia-Sunda triple junction. 80% of PH-Sunda convergence absorbed in Molucca Sea double subduction system and <20% along continental margins of N Borneo. In triple junction between Sundaland, PH and Australia plates, from Sulawesi to Irian Jaya, preferential subduction of Celebes Sea induces CW rotation of Sulu block, which is escaping toward Celebes Sea from E-ward-advancing PH Plate. Undeformed Banda block rotates CCW with respect to Australia and CW with respect to Sundaland. Kinematics of this block enabled to compute rates of S-ward subduction of Banda block in Flores Trench and E-ward convergence of Makassar Straits with Banda block. Deformation compatible with E-ward motion of Sundaland with respect to Eurasia determined by GEODYSSEA, not with assumption that Sundaland belongs to Eurasia)

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(Eight geodynamic reconstructions maps Early Tertiary- Present. 35 distinct crustal blocks distinguished. All marginal basins opened in Cenozoic, after complete closure of Tethys. Final Tethys suture traced from S Sumatra-C Java, Meratus Range in Borneo to W Philippines)

Rangin, C., M. Pubellier & L. Jolivet (1989)- Collision entre les marges de l'Eurasie et de l'Australie: un processus de fermeture des bassins marginaux du Sud-Est Asiatique. Comptes Rendus Academie Sciences, Paris 309, p. 1223-1229.
('Collision between the margins of Eurasia and Australia: a process of closing of marginal basins of SE Asia'. Convergence between Philippine Sea and Indo-Australian plates interpreted as E-M Miocene collision between

two thinned continental margins with marginal basins floored by oceanic crust. This 'soft collision' initiated progressive subduction and closure of these basins and predate 'hypercollision' between Eurasia and Australia. So-called 'exotic fragments' also include Timor and Seram as parts of thinned continental margins of Eurasia and Australia respectively)

Rangin, C., W. Spakman, M. Pubellier & H. Bijwaard (1999)- Tomographic and geological constraints on subduction along the eastern Sundaland continental margin (South-East Asia). Bull. Soc. Geologique France 170, 6, p. 775-788.
(Tomographic model suggests rel. continuous active margin from Taiwan to Java before collision of Banda Block with Sundaland in M Miocene. N-dipping slab below Timor- Banda Arc reflects new subduction after this collision (12- 0 Ma). Shortening within Sunda Block accommodated by subduction of SE Asia marginal basins that opened in Paleogene. Closure of Sulu and Celebes basins is recent, whereas subduction of Proto-South China Sea marked by 300 km long slab below Borneo)

Ranneft, T.S.M. (1972)- The effects of continental drift on the petroleum geology of W Indonesia. Australian Petrol. Explor. Assoc. (APEA) J. 2, p. 55-63.

Richards, S., G. Lister & B. Kennett (2007)- A slab in depth: three-dimensional geometry and evolution of the Indo-Australian Plate. Geochem. Geophys. Geosystems 8, 12, Q12003, p. 1-11.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2007GC001657)
(3D image of subducted Indo-Australian plate below SE Asia and show geometry of subducted slab at depth is related to geometric evolution of SE Asia over past 50 Ma. Once semi-continuous subducting Indo-Australian plate segmented during collision between India, Australia and subduction margin to N. Complexities and evolution of subducted plate manifest in evolution of overriding plate)

Richter, B.W. (1996)- The Tertiary tectonic evolution of Southeast Asia; insights from paleomagnetism and plate reconstructions. Ph.D. Thesis, University of California, Santa Barbara, p. 1-247. *(Unpublished)*
(Paleomagnetic studies of parts of mainland SE Asia. Shan Plateau of Myanmar 33± 8° CW rotation relative to S China Block since M Cretaceous= 15.4 ± 5.4 ° CW rotation relative to Indochina Block. Peninsular Malaysia CCW declinations, similar to Borneo, Celebes Sea and Sulawesi, supporing hypothesis that much of Sundaland region rotated 35-40° CCW as rigid block since M Cretaceous. Java-Australia boundary probably passive margin until M Oligocene, so N-ward movement of Australia since Late Eocene initially pushed Borneo N-ward, driving CCW rotation of Borneo and Malaysia. Philippine Sea Plate rotating CW and moving NW through much of Tertiary, and arc fragments of this plate collided with Borneo through Tertiary)

Richter, B. & M. Fuller (1996)- Palaeomagnetism of the Sibumasu and Indochina blocks- implications for the extrusion tectonic model. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 203-224.
(Paleomagnetic data implications for extrusion tectonic model: (1) Sundaland only rotated 25-30° CW relative to S China during Tertiary; (2) SE-ward translation only 300-500 km; and (3) Sundaland composed of smaller sub-blocks, some of which moved N. This indicates deformation of Sibumasu dominated by oblique Indian Ocean Plate subduction, while deformation of Indochina dominated by extrusion, driven by Indian Craton)

Richter, B., I. Norton, E. Schmidtke & M. Fuller (1992)- Paleomagnetic rotations from Southeast Asia- implications for tectonic reconstructions of Sundaland. In: M. Flower et al. (conv.) Southeast Asia structure, tectonics and magmatism, Texas A&M University Symposium, College Station 1992, 3p. *(Abstract only)*
(Paleomagnetic data from Thailand- E Myanmar suggest ~45° CW rotation since Cretaceous. Peninsular Malaysia, Borneo, SW Sulawesi and Celebes Sea mainly CCW declinations)

Ritsema, A.R. (1952)- Over diepe aardbevingen in de Indische Archipel. Ph.D. Thesis University of Utrecht, p. 1-132. *(Unpublished)*
('On deep earthquakes in the Indies Archipelago'. Study of 22 intermediate and deep earthquakes, only 2 with good data. Promotor Prof. F.A. Vening Meinesz)

Ritsema, A.R. (1953)- New seismicity maps of the Banda Sea. J. Scientific Research Indonesia 2, 2, p. 48-54.

Ritsema, A.R. (1953)- Some new data about earthquake movements at great depth in the Indonesian Archipelago. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 109, p. 34-40.
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Ritsema, A.R. (1954)- The seismicity of the Sunda Arc in space and time. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 110, p. 41-49.

Ritsema, A.R. (1956)- The seismicity of the Sunda Arc in space and time. Proc. 8th Pacific Science Congress 1953, 2a, p. 753-765.

Ritsema, A.R. (1957)- Earthquake-generating stress systems in SE Asia. Bull. Seismological Soc. America 47, 3, p. 267-278.
(Data from 28 earthquakes in SEAsia between 1934-1954 suggest earthquakes (1) at crustal-depth dominated by transcurrent movements; (2) at intermediate depths mainly reverse fault movements and (3) at deep levels mainly normal fault movements)

Ritsema, A.R. & J. Veldkamp (1960)- Fault plane mechanisms of Southeast Asian earthquakes. Meded. en Verhandelingen 76, Kon. Nederl. Meteorologisch Instituut, De Bilt, p. 1-63.
(online at: www.knmi.nl/bibliotheek/knmipubmetnummer/knmipub102-76.pdf)
(In SE Asia fault movement and earthquake-generating stresses associated with deep-seated earthquakes are located in essentially vertical plane, those of shallow earthquakes in essentially horizontal plane. Eight seismic zones of ~2000km length: (1) Sumatra- Sunda Strait (NNE-SSW horoizontal pressure), (2) Java- Timor and (3) N Sulawesi (N-S horizontal pressure), (4) Philippines, (5) Solomon Islands, (6) E New Guinea, (7) W New Guinea and (8) Moluccas)

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Robertson Research Int. (1998)- Global play fairways and petroleum systems: Eastern Indonesia. Multi-client study, p. . *(Unpublished)*
(Comprehensive hydrocarbon systems study Eastern Indonesia)

Robertson Utama Indonesia/ Horizon (2001)- Eastern Indonesia palaeogeography and sequence stratigraphy studies. Multi-client study, p. 1-107 + Encl. *(Unpublished)*

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(Russian point of view on 40+ sedimentary basins and petroleum content of Indo-Pacific region)

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(Variations in buoyancy of subducting lithosphere control subduction rate, slab dip and position of volcanic arc. More buoyant slab segments correlate with slower subduction rates and steeper slab dip. In Banda and S Apennine subduction systems subduction slowed and ended shortly after entry of continental lithosphere into trench. Time period of ~10 m.y. needed for model subduction rates to slow to near zero, longer than ~3 m.y. observed in Banda systems. Possible explanation is slab break-off or formation of large slab windows during the last stages of subduction allowing slab to steepen rapidly into final position)

Rutherford, K.J. & M.K. Qureshi (1981)- Geothermal gradient map of Southeast Asia, 2nd Edition. SE Asia Petroleum Expl. Soc. (SEAPEX) and Indon. Petroleum Assoc. (IPA), Jakarta, 51p.

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(online at: www.dwc.knaw.nl/DL/publications/PU00014881.pdf)
(Similarities between the Antilles and Southern Moluccas islands chains already noted by Wichmann (1887), Martin (1890), etc. In both areas Mesozoic and Tertiary radiolarian deposits. No good maps, etc.)

Rutten, L.M.R. (1927)- Voordrachten over de geologie van Nederlandsch Oost-Indie. J.B. Wolters, Groningen, p. 1-839.
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('Presentations on the geology of Netherlands East Indies'. Classic, comprehensive lecture series, summarizing 1927 state of knowledge of geology of Indonesia)

Rutten, L.M.R. (1932)- De geologie van Nederlands Indie. Van Stockum, The Hague, p. 1-216.
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('The geology of Netherlands Indies'. Concise, early textbook on the geology of Indonesia)

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(online at: http://onlinelibrary.wiley.com/doi/10.1029/2001GL013629/epdf)
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Samuel, L. & L. Gultom (1984)- Daur pengendapan dicekungan-cekungan minyak, Indonesia Barat. Geologi Indonesia (IAGI) 11, 1, p. 14-23.
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(Mainly brief review of Spakman & Hall (2010) on how Banda arc is formed above single horseshoe-shaped subducted slab, reflecting slab rollback. Large intermediate-depth earthquakes may reflect rupturing of slab)

Sano, S., M. Untung & K. Fujii (1978)- Some gravity features of island arcs of Java and Japan and their tectonic implications. Geol. Survey Indonesia, Spec. Publ. 6, p. 183-207.

Sapiie, B., I. Gunawan, A. Rudyawan, A. Pamumpuni, A.H. Harsolumakso, C.I. Abdullah, A.H.P. Kusumadjana et al. (2017)- Development of new tectonic model and paleogeography as challenge for future hydrocarbon exploration of Eastern Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Malang (JCM 2017), 5p.

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(Models for Paleogene rifting along W margin of Sundaland include purely extensional and strike slip fault control. Thermal anomalies in grabens parallel to subduction zone suggest back arc setting during rift phase, but other grabens not parallel to subduction zone. Different orientations suggest basins in W Indonesia developed by different tectonic system in Eocene-E Miocene. Sandbox modeling shows pre-existing basement structures fundamental control element on rifting)

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(online at: https://www.e-periodica.ch/digbib/view?pid=sng-005:1900:8380)
('On the geological history of the Malay Archipelago based on the animal distribution'. No figures)

Sartono, S. (1962)- The Banda geosyncline during Permian time: a palaeogeographic synthesis. Proc. (Madjalah) Inst. Teknologi Bandung 2, 4, p. 8-43.
(online at: http://citation.itb.ac.id/pdf/pdf/A6162/A61013.PDF)
(Presence of marine Permian rocks around Banda Sea on Savu, Roti, Timor, Leti, Luang and Babar (outer Banda Arc), E Sulawesi, Sula Spur, West Papua suggests existence of Banda geosyncline in Permian time. Banda geosyncline bordered land mass which included Sahul shelf. Trend of geosynclines follows present geanticlinal ridge of Outer Banda Arc islands. Distribution of Permian rocks and overthrust units in Timor suggests Permian geosyncline in SE Indonesia formed by two parallel basins, i.e. Sonnebait- Mutis in N (with neritic volcanic rocks of and Mutis overthrust units) and Kekneno basin in S)

Sartono, S. (1979)- Stratigrafi Indonesia. Dep. Teknik, Inst. Geol. Bandung (ITB), p.
('Stratigraphy of Indonesia. Course manual?)

Sartono, S. & S. Hadiwisastra (1988)- Comparison of post-Variscan tectonostratigraphic framework of Western and Eastern Indonesia. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta,1, p. 447-459.
(Somewhat 'different' tectonics paper. Tectonostratigraphic reconstructions of Permo-Carboniferous to Quaternary rock formations in Sumatra and Timor indicate very similar geotectonic elements)

Sartono, S., S. Hadiwisastra & K.A.S. Astadiredja (1984)- Orogenesa intra-Miosen di Indonesia. Proc. 13th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 491-516.
('Intra-Miocene orogenesis in Indonesia')

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(Sundaland made up of terranes or micro-plates from N Gondwanaland. SE Sundaland accreted crustal masses include oceanic Meratus, continental Paternoster, Ciletuh-Luk Ulo-Bayat subduction complex, Bantimala-Barru-Biru subduction complex, Flores Sea Islands, and continental Sumba Island. These crustal masses accreted to 'original' SE Sundaland (Schwaner Core) during 150-60 Ma (Late Jurassic- E Tertiary). Starting at ~50 Ma, in M Eocene, parts of SE Sundaland rifted and drifted E and SE-ward slivering continent. Dispersed

masses include SW Sulawesi through opening of Makassar Strait, Flores Sea Islands, and Sumba. Slivering caused segmentation of E Java Sea basement to presently extend more E than should be)

Satyana, A.H. (2006)- Post-collisional tectonic escapes: fashioning the Cenozoic history. Proc. 35th Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-036, 27p.
(Five major collisional events fashioned Cenozoic tectonics of Indonesia, all with lateral escape features: (1) collision of India to Eurasia at 50 or 45 Ma (E-M Eocene), followed by escape of Sundaland SE-ward, formation of Sundaland sedimentary basins, opening of marginal seas of S China Sea, Andaman Sea; (2) 25 Ma (Late Oligocene) collision of oceanic island arc at S margin of Philippine Sea Plate collided with New Guinea; (3) collision of Bird's Head microcontinent with Papua at 10 Ma (Late Miocene) creating Lengguru foldbelt; (4) 11-5 Ma Buton-Tukang Besi and Banggai-Sula microcontinents collision with E Sulawesi ophiolite; (5) ~3 Ma N margin of Australian continent collision with Banda Island Arc)

Satyana, A.H. (2007)- Cekungan sedimen Indonesia 1949-2006: Perkembangan konsep dan status terkini. Majalah Geologi Indonesia (IAGI) 21, 1, p. 1-5.
('Sedimentary basins of Indonesia 1949-2006- The development of concepts and the current status')

Satyana, A.H. (2007)- Sumbangsih eksplorasi minyak dan gas bumi terhadap pengetahuan geologi Indonesia: data dan pandangan baru geodinamika Indonesia. In: Geologi Indonesia: dinamika dan produknya, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 33, 2, p. 1-26.
('Contributions of oil and gas exploration towards the knowledge of Indonesia geology and geodynamics'. Discussion of aspects of Indonesia tectonics and sedimentation, particularly E Kalimantan, Java, Makassar straits and Salawati Basin)

Satyana, A.H. (2009)- Finding remnants of the Tethys Oceans in Indonesia: sutures of the terranes amalgamation. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang 2009, 21p.
(Indonesia built by terranes rifted off Gondwana between Devonian and Paleogene. Three successive Tethyan oceans opened and closed, leaving five belts of sutures. Paleo-Tethys (Devonian opening, M-L Triassic closing): Karimun-Bangka suture off NE Sumatra, linking E Malaya and Sibumasu terranes, and Natuna-Belitung suture between SW Borneo and E Malaya terranes. Meso-Tethys (Jurassic opening, mid-Cretaceous closing): Takengon-Bandar Lampung, W Sumatra, between Sibumasu and Woyla terranes and Meratus-Bawean suture between SW Borneo/Schwaner and Paternoster-Kangean terranes. Ceno-Tethys suture is E Sulawesi Ophiolite Belt, marking suture between Banggai microcontinent and W Sulawesi terrane)

Satyana, A.H. (2010)- Finding remnants of the Tethys Oceans in Indonesia: sutures of the terranes amalgamation and petroleum implications. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-153, 26p.
(Same paper as above)

Satyana, A.H. (2010)- Crustal structures of the Eastern Sundalandȏs rifts, Central Indonesia: geophysical constraints and petroleum implications. Proc. HAGI-SEG Int. Geosci. Conf., Bali 2010, IGCE10-OP-108, Jurnal Geofisika, 10p.
(Discussion of M Eocene (~50Ma) and younger rift basins along E margin of Sundaland. Seimic sections across Makassar Straits, East Java Sea, Gorontalo and Bone Basins)

Satyana, A.H. (2010)- Gravity tectonics in Indonesia- a companion to plate tectonics: cases of isostatic exhumation and gravitational sliding. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-205, 12p.
(At several areas in Indonesia geologic phenomena can not be explained by plate tectonics only. Uplifts in collision zones of Indonesia (Meratus (SE Kalimantan), Batui (E Sulawesi), Central Ranges of Papua, and Timor-Tanimbar uplifts may be caused by isostatic exhumation of once subducted microcontinents in collision zones. Compressional structures such as Samarinda Anticlinorium (E Kalimantan) and N Serayu fold-thrust belt (N C Java) may be related to gravitational gliding after hinterlands uplifts. Collision of microcontinents is by plate tectonics, but their subsequent uplifts of collisional through gravity tectonics)

Satyana, A.H. (2012)- Origins of the Banda Arcs collisional orogen and the Banda Sea. Berita Sedimentologi 23, p. 17-20.
(online at: www.iagi.or.id/fosi/files/2012/03/FOSI_BeritaSedimentologi_BS-23_March2012.pdf)
(Review of literature on the origin of the oceanic Banda Sea and Banda collisional zone)

Satyana, A.H. (2012)- Accretion and dispersion of Southeastern Sundaland: the growing and slivering of continent and petroleum implications. AAPG Int. Conv. Exh., Singapore 2012, Search and Discovery Art. 30261, 39p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/30261satyana/ndx_satyana.pdf)
(Sundaland made up of terranes from N Gondwanaland, which rifted, drifted, and amalgamated in Late Paleozoic- Mesozoic. A number of SE Sundaland crustal masses accreted to original SE Sundaland (Schwaner Core) in 150-60 Ma. Starting at ~50 Ma (M Eocene), some of accreted mass of SE Sundaland rifted and drifted apart (SW Sulawesi, Flores Sea Islands, Sumba), due to transtension rifting related to tectonic escape of India-Eurasia collision and/or back-arc spreading by rollback of slower subduction, resulting in opening of Makassar Straits and Bone Basins, segmentation of E Java Basement and slivering of Sumba terrane)

Satyana, A.H. (2013)- Gravity tectonics in Indonesia: petroleum implications. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-161, p. 1-14.
(Examples of gravity tectonics (compressional structures not requiring tectonic shortening) in Indonesia: (1) Meratus Uplift, SE Kalimantan, (2) Samarinda Anticlinorium (E Kalimantan), (3) growth faults and toe thrusts in Tarakan offshore and N Makassar Basins, and (4) N Serayu Anticlinorium, C Java (reminescent of Van Bemmelen's 'undation theory'; JTvG))

Satyana, A.H. (2014)- New consideration on the Cretaceous subduction zone of Ciletuh- Luk Ulo- Bayat-Meratus: implications for southeast Sundaland petroleum geology. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-129, p. 1-41.
(Cretaceous subduction under SE Sundaland more complex than previously considered. Subduction ceased in Bantimala and Meratus trenches in mid-Cretaceous due to docking of W Sulawesi and Paternoster-Kangean microcontinents, respectively. Late Cretaceous subduction migrated to Paternoster trench resulting in volcanic and magmatic rocks as well as forearc sediments in Meratus and Bantimala. Subduction in Ciletuh and Luk Ulo continued into Late Cretaceous. Bayat area may not be subduction continuation of Luk Ulo due to absence of subduction zone rock assemblages. Presence of NW Australian-derived microcontinents (W Sulawesi, Paternoster-Kangean, SE Java) opens petroleum possibilities in pre-Tertiary deposits)

Satyana, A.H. (2014)- Tectonic evolution of Cretaceous convergence of Southeast Sundaland: a new synthesis and its implications on petroleum geology. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 28p.
(SE Sundaland recorded subduction of oceanic plate in Jurassic- Late Cretaceous (Meratus, Bantimala, Luk Ulo, Ciletuh). Subduction ceased in Bantimala and Meratus trenches in mid-Cretaceous due to docking of W Sulawesi and Paternoster-Kangean microcontinents. In Late Cretaceous, subduction migrated to Paternoster trench, resulting in volcanic- magmatic rocks and forearc sediments in Meratus and Bantimala. In Paleogene Meratus and Bantimala separated by opening of Makassar Straits. Subduction in Luk Ulo and Ciletuh trenches continued into Late Cretaceous (but no Late Cretaceous subduction-related metamorphic rocks). Jiwo Hills, Bayat, not subduction zone, but part of SE Java Microcontinent that docked in E Cretaceous)

Satyana, A.H. (2018)- Contribution of post-2000's petroleum exploration in Indonesia to some issues of tectonics: solutions to problems, new knowledge, and hydrocarbon implications. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-591-G, 23p.
(Recent petroleum exploration contributed to solving debates on tectonics of Indonesia: (1) N Makassar Straits opening mechanism and nature of basement (extended continental crust from interpretation of volcanic geochemistry in well), (2) origin of Sumba micro-continent (rifted block from Sulawesi), (3) basement of Cendrawasih Bay (Pacific Plate oceanic/ arc volcanic crust). Some issues now better defined: (4) forearc areas of Sumatra- W Java (with Paleogene rift structures), and (5) foredeep areas of Seram-Tanimbar-Timor troughs (foredeeps, not subduction troughs). New knowledge of tectonics: (6) presence of Late Paleozoic-Mesozoic

sections of Gondwanan micro-continents in East Java and S Makassar Straits (from interpretation of seismic and geochemical data), and (7) multiple rifts/terranes of Gorontalo Basin (from seismic interpretation))

Satyana, A.H., C. Armandita & R.L. Tarigan (2008)- Collision and post-collision tectonics in Indonesia: roles for basin formation and petroleum systems. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-140, 18p.
(Collision following subduction and accretion of buoyant crustal masses and post-collision tectonics significant for basin formation and resultant petroleum systems. Examples of collisions important for petroleum geology: (1) Meratus (SE Kalimantan), (2) Buton and Banggai (E Sulawesi), (3) Seram, (4) Timor-Tanimbar, (5) Lengguru (Birds Head of Papua) and (6) Central Range of Papua)

Satyana, A.H., R.L. Tarigan & C. Armandita (2007)- Collisional orogens in Indonesia: origin, anatomy, and nature of deformation. Proc. Joint Conv. 36th IAGI, 32nd HAGI, and 29th IATMI, Bali 2007, p. 1003-1061.
(Extensive review of Indonesia collisional orogens: (1) Meratus: collision of Schwaner continental core with Paternoster micro-continent, (2) Sulawesi: collision of Banggai-Sula microcontinent and E Sulawesi Ophiolite, (3) Molucca Sea: collision of accretionary wedges of Sangihe and Halmahera arc-trench systems, (4) Seram: collision of Seram/N Banda arc and Bird's Head micro-continent, (5) Lengguru: collision between Bird's Head of N margin of Australian continent, (6) Papua Central Range: collision of island arc to S of Philippine Sea plate and N margin of Australian continent, and (7) Timor-Tanimbar: collision of Australian continent and Timor-Tanimbar/ S Banda arc)

Schneider, C.F.A. (1876)- Geologische Uebersicht uber den hollandisch-ostindischen Archipel. Jahrbuch kon. kaiserl. Geol. Reichsanstalt, Vienna, 26, 2, p. 113-134.
(online at: https://www.zobodat.at/pdf/JbGeolReichsanst_026_0113-0134.pdf)
('Geological overview of the Dutch East Indies archipelago'. First? countrywide review of Indonesia geology and useful minerals by German Dr. Schneider. With two plates with small maps Timor, Ambon, Leitimor, and Upper Siak and Anee Gorge in Sumatra)

Schoffel, H. & S. Das (1999)- Fine details of the Wadati-Benioff zone under Indonesia and its geodynamic implications. J. Geophysical Research 104, B6, p. 13101-13114.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/1999JB900091)
(Relocated earthquakes hypocenters show (1) portion of Indonesian arc between ~110°E- 123°E and >500 km deep, dips S at ~75° angle, direction opposite to upper part of N dipping slab, and (2) E of ~108 °E seismic zone wider near 670km than near 500 km depth. The first suggests S-ward lateral flow in mantle, relative to plate motion vector. From contortion of seismic zone along E portion of arc, average lateral shear strain rate in 300-670 km depth range is ~10-16s-1 over last 10-20 Myr)

Schuppli, H.M. (1946)- Geology of oil basins in the East Indian archipelago. American Assoc. Petrol. Geol. (AAPG) Bull. 30, 1, p. 1-22.

Schwartz, M.O., S.S. Rajah, A.K. Askury, P. Putthapiban & S. Djaswadi (1995)- The Southeast Asian tin belt. Earth-Science Reviews 38, p. 95-290.
(N-S trending SE Asian tin belt 2800 km long/ 400 km wide, from Myanmar- Thailand to Malay Peninsula and Indonesian Tin Islands Bangka- Belitung. Five granitoid provinces: (1) Main Range in W Malay Peninsula, S Peninsular Thailand and C Thailand (184-230 Ma; almost entirely biotite granite, 55% of tin production); (2) Northern Province of N Thailand (200-269 Ma; 0.1% of tin production, also mainly biotite granite); (3) Eastern Province of E Peninsular Malaysia- E Thailand (Malaysian part subdivided into E Coast Belt (220-263 Ma), Boundary Range Belt (197-257 Ma) and Central Belt (79-219 Ma; wide compositional range; tin deposits only in biotite granite in E Coast Belt) (3% of production); (4) Western Province in N Peninsular and W Thailand and Burma (22-149 Ma; biotite granite, 14% of tin production); (5) Granitoids of Indonesian Tin Islands (193-251 Ma) do not permit grouping into above units; most tin deposits associated with Main Range-like plutons)

Scotese, C.R., L.M. Gagahan & R.L. Larson (1988)- Plate tectonic reconstructions of the Cretaceous and Cenozoic ocean basins. Tectonophysics 155, p. 27-48.

(Nine global reconstructions of ocean basins and continental plates for E Cretaceous- Pleistocene times. Late Cretaceous and Early Tertiary plate reorganizations in Indian Ocean e result of progressive subduction of intra-Tethyan rift/ spreading system)

Setiawan, N.I. (2013)- Metamorphic evolution of Central Indonesia. Ph.D Thesis, Kyushu University, p. 1-318. *(Unpublished)*
(Study of metamorphic complexes of S Sulawesi, Kalimantan, C Java)

Setiawan, N.I., S. Husein & M.F. Alfyan (2014)- Speculative models of exhumation of High-Pressure Low-Temperature metamorphic rocks from central part of Indonesia: an implementation of concepts and processes. Proc. Seminar National Kebumian 7, Universitas Gadjah Mada, Yogyakarta 2014, P3O-02, p. 504-523.
(online at: https://repository.ugm.ac.id/135217/1/504-523%20P3O-02.pdf)
(Published exhumation models of high-P/low-T metamorphic rocks in subduction zones suggest buoyancy is only effective force to exhume rocks from deeply subducted levels to base of crust. Serpentinites are extremely buoyant and may facilitate exhumation. Requires rapid uplift and cooling to maintain high-P minerals in rocks. Presence of melange units intercalated with high-P metamorphics and chaotic occurrence of different metamorphic facies typically in subduction channel environment)

Setiawan, N.I., Y. Osanai & M.I. Khalif (2016)- U-Pb detrital zircon geochronology of metamorphic rocks from South Kalimantan, South Sulawesi, and Central Java, Indonesia: related metamorphism and tectonic implications in Central Indonesia region. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 289-292.
(High P metamorphics from Meratus in SE Kalimantan, Bantimala in S Sulawesi and Luk Ulo in C Java generally tied to NW-directed Cretaceous subduction. Zircons show no metamorphic rims and therefore viewed as detrital grains and provenance ages of metamorphic rock protoliths. Youngest detrital zircon ages in Bantimala- Meratus ~199-194 Ma, in Luk Ulo ~100 Ma. Ages from Bantimala glaucophane-quartz schist ~430-199 Ma (Silurian- E Jurassic), Barru garnet schist ~1930, 1730, 1600-1400 Ma, 1050 Ma (Proterozoic), and 550-280 Ma (Cambrian-Permian); Meratus epidote-barroisite schist 232 ± 39 Ma (Late Triassic; range 296-194 Ma); Luk Ulo gneiss mainly 127-100 Ma (E Cretaceous; also older)

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi, Y. Tatsuro, K. Yonemura, A. Yoshimoto, J. Wahyudiono & K. Mamma (2013)- An overview of metamorphic geology from central Indonesia: importance of South Sulawesi, Central Java and South-West Kalimantan metamorphic terranes. Bull. Graduate School Social and Cultural Studies, Kyushu University 19, p. 39-55.
(online at: https://qir.kyushu-u.ac.jp/dspace/bitstream/2324/26209/1/p039.pdf)
(Study of metamorphic complexes at Bantimala and Barru (S Sulawesi; High P), Luk Ulo (C Java; High P; pelitic schist, eclogite, blueschist), Meratus (S Kalimantan) and Nangapinoh area of Schwaner Mountains (W Kalimantan). Metamorphic rocks from S Sulawesi, C Java and S Kalimantan E Cretaceous ages (~110-130 Ma) and possibly derived from single subduction complex. Metamorphic rocks in Schwaner Mountains metatonalite, with U-Pb zircon ages suggesting Late Triassic magmatic ages (~233 Ma), i.e. older than most Schwaner Mts granitoids (Late Jurassic-Cretaceous), but within range of NW Kalimantan granitoids (Carboniferous-Triassic; 204-320 Ma))

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi, K. Yonemura, A. Yoshimoto, L.D. Setiadji, K. Mamma & J. Wahyudiono (2014)- Geochemical characteristic of metamorphic rocks from South Sulawesi, Central Java, South and West Kalimantan in Indonesia. ASEAN Engineering J., C, 3, 1, p. 107-127.
(online at: www.seed-net.org/download/GeoE013_revised_060513.pdf)
(Metamorphic complexes as products of Cretaceous subduction outcrop in C Java, S Kalimantan and S Sulawesi. Mainly high-pressure metamorphic rocks from metabasic and sedimentary protoliths. Metabasic rocks from S Sulawesi and C Java basalts with both MORB and within-plate signatures. Metatonalites from Schwaner Mountains calc-alkaline arc volcanics; adakitic metatonalite age of 233± 3 Ma (Late Triassic))

Setijadji, L.D. (2010)- Cretaceous subduction zones in Indonesia: paleogeography, arc granitoid plutonism and metallic mineralizations. Proc. IGCP 507 Project Symp. Paleoclimates in Asia during the Cretaceous, Yogyakarta 2010, p. 59-60. *(Abstract only)*
(Two or three separate Cretaceous subduction zones in W Indonesia, with oceanic crust subducting under Eurasia plate (1) M-Lt Cretaceous Sumatra-Meratus arc, E and N- facing subduction, 2000 km long, with granitoid plutonism from W Sumatra (Sikuleh, Manunggal, Ulai, Garba and Sulan granites; 120-75 Ma), N of Java, to Meratus Mountains of SE Kalimantan; (2) S-facing subduction at NW Kalimantan, resulting in two granitoid plutonic arcs, i.e. late E Cretaceous Schwaner Arc and Late Cretaceous Sunda Shelf Arc. Both are parallel in E-W direction, ~1500 km long, in W-C Kalimantan, with Late K arc south of Early K arc. Cretaceous arc granitoid plutonism very different from Triassic granitoids of Bangka- Belitung)

Seubert, B.W. (2015)- Volcaniclastic petroleum-systems- theory and examples from Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-026, 19p.
(Potential volcaniclastic reservoirs present in Indonesia across range of stratigraphic intervals, but underexplored. Presence of volcanic material may enhance preservation and of organic matter and maturation of hydrocarbons. Porosity prediction still problematic. Examples of volcaniclastic reseroirs in Indonesia: Bengkulu, W, C and E Java, S Sulawesi, etc.)

Sevastjanova, I. & R. Hall (2011)- Detrital zircon from the Banda Arc: insights into the palaeogeographic reconstructions. In: Conf. Sediment provenance studies in hydrocarbon exploration & production, Geol. Soc., London, 2011, p. 27-28. *(Abstract only)*
(Zircon U-Pb ages from Karimunjawa Arch (SW Borneo Block) similar to those from Seram, suggesting similar source areas. Mesoproterozoic zircons in Karimunjawa Arch uncommon on Cathaysian Blocks, providing evidence against Cathaysian affinity for SW Borneo Block. Triassic zircons abundant in Karimunjawa Arch. Zircons suggest existence of local Permian-Triassic zircon source in E Indonesia and/or on Australia NW Shelf)

Sevastjanova, I., R. Hall & S. Zimmermann (2012)- Detrital zircon provenance and insights into palaeogeographic reconstructions of the Banda Arc. In: 1st Congr. Int. Geologia de Timor-Leste, Dili 2012, Abstract book, p. 103-105. *(Abstract only)*

Shaw, R.D. (1990)- Frontier basins of Southeast Asia: a review of their hydrocarbon potential. In: 8th Offshore SE Asia Conf., Singapore 1990, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 9, OSEA 90176, p. 69-80.
(70% of SE Asian basins frontier basins with no significant hydrocarbon production, but contain estimated 22% of recoverable oil reserves. Basins in regions of oceanic-continent convergence (N Australia, Sunda margin) more prospective than areas of oceanic plates convergence)

Shaw, R.D. & G.H. Packham (1992)- The tectonic setting of sedimentary basins of Eastern Indonesia: implications for hydrocarbon prospectivity. Australian Petrol. Explor. Assoc. (APEA) J. 32, 1, p. 195-213.

Shaw, R.D. & G.H. Packham (1992)- Heatflow trends in Southeast Asia: implications for petroleum prospectivity. In: 9th SEAPEX Offshore Southeast Asia Conf. (OFFSEA 92), Singapore 1992, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 10, OSEA 92243, p. 130-144.
(75% of SE Asia oil reserves in basins with contemporary heatflow of 2 HFU or more)

Shulgin, A. (2012)- Subduction zone segmentation along the Sunda margin. Doct. Thesis Christian-Albrechts-Universitat, Kiel, p. 1-128.
(online at: http://d-nb.info/1023870339/34)
(Mainly collection of five papers on Java-Sumatra forearc regions. Geophysical models show significant variations of crustal and upper mantle structure of Sunda Arc subduction complex along-strike and across-strike of margin. Increased thickness of crystalline crust in Savu Sea attributed to approach of Australian shelf to trench. Offshore Lombok oceanic crust thickness 7 km thick and heavily fractured by normal faults. Crustal structure of Roo Rise oceanic plateau revealing crustal thickness of 15km, its subduction causing deformation of forearc and complex evolution of subduction processes)

Sigit, S. & T.H.F. Klompe (1962)- I. A brief outline of the geology of the Indonesian Archipelago. II. Geological Map of Indonesia, scale 1:5,000,000, p. 1-18.
(Brief summary of Indonesia geology, with schematic structural map and 1:5m geologic map)

Simandjuntak, T.O. (1988)- An outline of tectonic development of the Indonesian archipelago and its bearing on occurrence of energy resources. In: Symposium on Tectonics and energy resources in East Asia, WGMM-CCOP, Tsukuba, Japan, p.

Simandjuntak, T.O. (1992)- Tectonic development of the Indonesian archipelago and its bearing on the occurrence of energy resources. Indonesia. J. Geologi Sumberdaya Mineral 2, 9, p. 2-23.
(Review of Indonesian tectonics and relation to hydrocarbons, coal, geothermal potential. Indonesia triple junction convergence since Neogene. Pre-Neogene tectonics (1) Paleozoic- Mesozoic_Paleogene convergence in W Indonesia; (2) Mesozoic- Paleogene divergence in E Indonesia, producing allochthonous terranes in E Indonesia. Permian convergence recorded by Permian andesitic volcanics, similar to rocks present in W Kalimantan and E Main Range of Malay Peninsula. Similarities between E Indonesian microcontinents include Permo-Carboniferous metamorphics, Permo-Triassic plutonics, overlain by Mesozoic passive margin seqeunce, E Cretaceous mostly missing, Late Cretaceous radiolarian calcilutites and Tertiary platform carbonates, etc.;generally regarded as derived from New Guinea. No plate reconstructions)

Simandjuntak, T.O. (1992)- Review of tectonic evolution of Central Indonesia. J. Geologi Sumberdaya Mineral 2, 15, p. 2-18.
(C Indonesia nine tectonic provinces or belts: (1) W Sulawesi Magmatic Arc (Late Cretaceous- Paleogene flysch and arc volcanics and some probably Cretaceous granitoids); (2) C Sulawesi Metamorphic Belt (tightly folded schist, incl. blueschist, N-S fold axes, probably Late Cretaceous metamorphism); (3) E Sulawesi Ophiolite Belt (>1000km long belt from E Arm Sulawesi to Kabaena and Buton in SE, possibly up to 15km thick; in places with deformed Late Cretaceous radiolarian chert, K-Ar ages of ophiolite ~93-37 Ma; E Miocene obduction?); (4) Banda Micro-continents (Banggai-Sula, Seram-Buru platform, Misool-Birds Head, etc., terranes of Paleozoic metamorphic basement with Permo-Triassic granitic plutons, overlain by Late Triassic sediments, E Jurassic hiatus, M-L Jurassic passive margin sediment, etc.; originated from N Papuan margin); (5) Banda Sea floor (Cretaceous?)/ Sulawesi Sea floor (Eocene), (6) N Maluku Basin and Talaud-Tifore Ridge; (7) Minahasa- Sangihe Volcanic Arc; (8) W Halmahera Province (Tertiary Arc volcanics) and (9) E Halmahera Province (ophiolites of poorly known age))

Simandjuntak, T.O. (1993)- Neogene tectonics and orogenesis of Indonesia. In: G.H. Teh (ed.) Proc. Symp. Tectonic framework and energy resources of the western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 43-64.
(online at: www.gsm.org.my/products/702001-101022-PDF.pdf)
(Indonesian Archipelago developed during Neogene convergence of 3 megaplates, Eurasian craton, Pacific plate and Australian craton. Five major crustal elements, 4 orogenic belts: Sunda orogeny, (2) Banda orogeny, (3) Melanesian orogeny, (4) Talaud orogeny. 'Transitional Complex': between 3 major plates composed of 17 disctinct units: E Sulawesi, Banggai-Sula, Timor-Tanimbar, Misool-Birds Head, etc.)

Simandjuntak, T.O. (1993)- Neogene tectonics and orogenesis of Indonesia. J. Geologi Sumberdaya Mineral 3, 20, p. 2-32.
(Similar to other Simandjuntak (1993) above)

Simandjuntak, T.O. (1994)- Tectonic evolution of Central Indonesia. In: J.L. Rau (ed.) Proc. 29th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, 2, p. 91-113.
(Central Indonesia is triple junction of Indo-Australian, Pacific and Eurasian plate convergence. Seven tectonostratigraphic provices, various episodes of convergence and divergence. Reconstructions show Banda Microcontinent (which subsequently breaks up into Banggai-Sula, Tukang-Besi, Seram-Buru, Misool-Birds Head, etc.) attached to Papua New Guinea part of Australian continent in Triassic-Jurassic time (similar to Pigram, Struckmeyer reconstructions, but not Hall and others))

Simandjuntak, T.O. (1994)- Neogene orogeny and mountain building in Indonesia. In: J.L. Rau (ed.) Proc. 30th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bali 1993, 2, p. 47-86.
(Neogene tectonics of Indonesia marked by five different orogenic belts, Barisan, Sunda, Banda, Talaud and Melanesian)

Simandjuntak, T.O. (1998)- Tsunamis in active plate margins of Indonesia. Proc. 33rd Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Shanghai 1996, 2, p. 334-361.
(Overview of active tectonics across Indonesia and relation to tsunamis. Tsunamis triggered by earthquakes below seafloor, most of them over graben-like structures in areas of extensional tectonics, but transtensional zones also have tsunami potential)

Simandjuntak, T.O. (2000)- Geotectonic of Indonesia: the birth of the Indonesian Archipelago. J. Geologi Sumberdaya Mineral 10, 104, p. 8-21.
(Tectonic development of Indonesia initiated by collision in Sumatra and Kalimantan in E Triassic of Paleozoic microcontinents detached from Gondwana, followed by reccurring subduction systems until today. In Sumatra 3 terrnanes: (1) SE part of Sibumasu Terrane (Mergui, Tigapuluh Mts and Kuantan- Duabelas Mts); (2) SE end of Lhasa- W Burma Terrane (Woyla, Sikuleh, Natal and Asai-Garba Terranes); (3) SE-most Malaysia Terrain (Gunungkasih-Lingga-Singkep). W Kalimantan and Meratus also parts of S-most China- Indochina terranes. Irian Jaya and PNG part of N Australian continental margin, which rifted in Triassic, followed by development of passive margin in Jurassic- Cretaceous and carbonate platform in Paleogene. At end-Paleogene promontory of Australian continent collided with oceanic island arc at S margin of Philippine Sea Plate. Prior to Neogene emplacement of allochthonous microcontinents from N margin of Australia in Banda Sea, E Indonesia was part of N Indian Ocean and S Philippine Sea plates, in which a number of oceanic island arcs formed in Paleogene. Six Neogene orogenic belts in Indonesian region. No reconstruction maps (refers to map of 1999 Indonesian-Japanese Geotectonics Working Group; Sato et al.))

Simandjuntak, T.O. (2000)- Neogene tectonics of Indonesia. AAPG Int. Conf. Exhib., American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1492. *(Abstract only)*
(Seven distinctive Neogene orogenies in Indonesia: 1) Sunda Orogeny in Java and E Indonesia: normal convergence producing Andean type orogenic belt, 2) Barisan Orogeny: oblique convergence and dextral transpressional wrenching in Sumatra, 3) Talaud Orogeny in N Maluku Sea: double-arc collision with sinistral transpressional wrenching, 5) Banda Orogeny: M Miocene collision between Banggai-Sula, Tukangbesi- Buton and Mekongga Platform against E Sulawesi ophiolite belt; 6) Melanesian Orogeny in Irian Jaya and PNG: oblique convergence with thin-skinned tectonics, 7) Dayak Orogeny in Kalimantan: triple junction extensional tectonics with hot spots of Neogene volcanics)

Simandjuntak, T.O. (2003)- The Indonesian active margins. J. Geologi Sumberdaya Mineral 13, 136, p. 2-24.
(Discussion of young collisional and strike-slip belts of Indonesia)

Simandjuntak, T.O. & A.J. Barber (1996)- Contrasting tectonic styles in the Neogene orogenic belts of Indonesia. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 185-201.
(Six separate Neogene orogenic belts: Sunda (W Java-Flores), Barisan, Talaud, Sulawesi, Banda (Timor-Tanimbar) and Melanesian (New Guinea))

Simatupang, M. (1988)- Indonesian mineral development digest: a sourcebook on mining and mineral development in Indonesia. Indonesian Mining Association, Jakarta, p. 1-565.

Simons, W.J.F., B.A.C. Ambrosius, R. Noomen, D. Angermann, P. Wilson, M. Becker, E. Reinhart, A. Walpersdorf & C. Vigny (1999)- The final geodetic results of the GEODYSSEA project: the combined solution. In: The GEODYnamics of S and SE Asia (GEODYSSEA), Project. GeoForschungsZentrum, Potzdam, (STR 98/14), p. 27-38.

Simons, W.J.F., B.A.C. Ambrosius, R. Noomen, D. Angermann et al. (1999)- Observing plate tectonics in SE Asia: geodetic results of the GEODYSSEA project. Geophysical Research Letters 26, p. 2081-2084.
(Geodetic results of GEODYSSEA Project 1994-1996 GPS data)

Simons, W., B. Ambrosius, C. Vigny, A. Socquet, C. Subarya et al. (2003)- Crustal motion and block behaviour in S.E. Asia: a decade of GPS measurements. EGS-AGU-EUG Joint Assembly, Nice 2003, Abstract 10940.
(SE Asia region was observed with 45 GPS site 'GEODYSSEA project (1991-1998). Additional GPS sites have set-up since 2000. High-quality GPS data set, spanning almost decade, combined into a kinematic model, with 100+ station motions in ITRF-2000. Highlights are relative motion and boundaries of Sundaland block. In Sulawesi, two micro-blocks confirmed and number of sites on E Malaysia, indicate small but consistent relative motion with respect to Sundaland block)

Simons, W.J.F., A. Socquet, C. Vigny, B.A.C. Ambrosius, S. Haji Abu, C. Promthong, C. Subarya, D.A. Sarsito, S. Matheussen, P. Morgan & W. Spakman (2007)- A decade of GPS in Southeast Asia: resolving Sundaland motion and boundaries. J. Geophysical Research 112, B06420, p. 1-20.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2005JB003868)
(GPS velocity field of SE Asia based on 10 years (1994-2004) of GPS data at more than 100 sites in Indonesia, Malaysia, Thailand, Myanmar, the Philippines, and Vietnam. Sundaland moves E at ~6 mm/yr in S to 10 mm/yr in N. Sundaland moves independently with respect to S China, E Java, Sulawesi and N tip of Borneo. Slow W-ward movement of N tip of Borneo relative to Sundaland absorbed at NW Borneo Trench. Red River fault still active. Sundaland deformation occurs along its boundaries with fast-moving neighboring plates)

Situmorang, B. (1977)- The western Indonesia fault pattern: tectonic significance with relation to wrench tectonics. Lemigas Scientific Contr. 1, 2, p. 5-18
(Four compression phases in W Indonesia since pre M Mesozoic: (1) N80°- 260E pre- M Mesozoic equatorial compression; (2) N158- 338E M Mesozoic meridional compression; (3) N2- 182E late Cretaceous- E Tertiary meridional compression, and (4) N174- 35E Plio-Pleistocene compression. Bantam trend three fault systems of different ages: M-Mesozoic left lateral strike-slip faults in C and S Sumatra, late Cretaceous- E Tertiary right lateral strike-slip faults in Sunda Strait and on Java, and Plio-Pleistocene left lateral strike-slip faults in Sumatra. M Mesozoic and late Cretaceous- E Tertiary compression responsible for creation of basic basin configuration in C and S Sumatra, W Java and W Java Sea areas. En echelon folds forming hydrocarbon bearing anticlines in Sumatra and Java related to Plio-Pleistocene compression)

Situmorang, B. (1986)- Notes on the Pre-Tertiary petroleum potential of Eastern Indonesia. Lemigas Scientific Contr. 10, 2, p. 16-23.
(online at: www.journal.lemigas.esdm.go.id/index.php/SCOG/article/view/70)
(Thick late Paleozoic-Mesozoic rift-drift facies formed excellent hydrocarbon plays in NW Australia and potential prospects extend into microcontinental blocks of E Indonesia)

Situmorang, B. (1987)- Pre Tertiary petroleum potential of Eastern Indonesia. Proc. 23rd Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Madang 1986, 2, p. 72-79.
(E Indonesia prospective hydrocarbon plays in Pre-Tertiary, mainly in microcontinental blocks of Australian origin and associated Pre-Tertiary rift basins)

Situmorang, B. (ed.) (1989)- Proceedings Sixth Regional Conference on the geology, mineral and hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987. Indon. Assoc. Geologists (IAGI), Jakarta, p. 1-504.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_2/1987/7...)

Situmorang, B., Siswoyo, M. Thamrin & B. Yulianto (1983)- Heatflow variation in Western Indonesian basinal areas: implication on basin formation and hydrocarbon potential. Proc. 12th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 157-169.
(Average heat flow in Tertiary Basins of W Indonesia ~1.95- 2.58 μ Cal/cm2 s, except in C Sumatra where heat flow is ~3.27 ± 0.9 μ Cal/cm2 s. Less variability of heat flow in Java than in Sumatra basins. Lowest variability in S Sumatra, largest in C Sumatra. Variability probably reflects variation in amount of extension)

Situmorang, M. (1994)- Distribution and characteristics of detrital heavy minerals in Eastern Indonesian waters. In: J.L. Rau (ed.) Proc. 29th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, Bangkok, 2, p. 231-251.
(Heavy minerals in seafloor sediments around Banda Arc region mainly mafic volcanic and sedimentary minerals, with some metamorphic minerals. Principal minerals hyperstene, augite, zircon, tourmaline, enstatite, garnet, chlorite and hornblende)

SKK Migas (2017)- Petroleum systems of the Eastern Indonesia region- Guidance for hydrocarbon exploration in Eastern Indonesia. SKK Migas Memoir 1, Jakarta, p. 1-489.

Sladen, C. (1997)- Exploring the lake basins of East and Southeast Asia. In: A.J. Fraser et al. (eds.) Petroleum geology of Southeast Asia, Geol. Soc. London, Spec. Publ. 126, p. 49-76.
(SE Asia contains large number of lake basins producing significant amounts of oil and gas: Late Mesozoic-Early Tertiary basins of China, Early Tertiary basins of Malaysia- West Indonesia. Wax content commonly 10-35% in oils from lacustrine source-rocks, occasionally reaching 45%. Source rock petroleum generators dominated by Botryoccocus and Pediastrum green algae)

Slancova, A., A. Spicak, V. Hanus & J. Vanek (2000)- How the state of stress varies in the Wadati-Benioff zone: indications from focal mechanisms in the Wadati-Benioff zone beneath Sumatra and Java. Geophysical J. Int. 143, p. 909-930.
(Earthquake focal mechanisms define eight stress domains: 3 in Sumatra (SI-SIII), 5 in Java region (JI-JV). Domains with similar states of stress occur in both regions in similar positions. Maximum compression perpendicular to trench in SI, SII and JII (depth range 0-165 km). Orientation of max. compression almost parallel to trench in SIII and JIII (depth 25-225 km). Focal mechanisms of domains SII, SIII, and JII, JIII different stress layers and overlap of earthquakes with different focal mechanisms from two different stress-state layers, parallel to Wadati-Benioff zone. Slab-dip-parallel extension observed in JIV (depth 225-315 km), slab-dip-parallel compression in JV (>400 km))

Smit Sibinga, G.L. (1926)- De geologische bouw van het Euraziatisch grensgebied. Handelingen 4e Nederl.-Indie Natuurwetenschappelijk Congres, Weltevreden 1926, p. 440- .
('The geological structure of the Eurasian border area')

Smit Sibinga, G.L. (1927)- Wegener's theorie en het ontstaan van den Oostelijken O.I. Archipel. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 44, p. 581-598.
(Discussion on merits of Wegener's continental drift theory (1912) in the Indonesian archipelago. Considers basic idea of horizontal movements of continents and associated polar wandering as valid. As did Molengraaff, SS struggles with origin of the configuration of the 'circum-synclinal Banda basin'. Remarkable conclusion: 'Various reasons to believe 'the Lesser Sunda islands, Sulawesi and the Moluccas are originally marginal chains of Sundaland, from which they separated and developed their present position and character as result of collision with the Australian continent'. No figures)

Smit Sibinga, G.L. (1928)- De geologische ligging der Boven-Triadische olie- en asfaltafzettingen in de Molukken. Natuurkundig Tijdschrift Nederlandsch-Indie 58, p. 111-121.
('The geological setting of the Upper Triassic oil and asphalt deposits in the Moluccas'. Triassic oil and asphalt deposits in Moluccas in similar facies on Timor, Ceram, Buru, Buton and SE Sulawesi. Formed at edge of Mesozoic Sundaland craton. No figures)

Smit Sibinga, G.L. (1933)- The Malay double (triple) orogen, I. Proc. Kon. Akademie Wetenschappen, Amsterdam, 36, 2, p. 202-210.
(online at: www.dwc.knaw.nl/DL/publications/PU00016394.pdf)
(Discussion of orogenetic belts of Indonesia: Sunda Orogen, Molucca Orogen, Pelew orogen. One of early authors suggesting current geotectonic structure of the Indonesian region is result of N-ward movement of

Australian continent (similar to Wegener suggestion; now commonly accepted, but rejected by Van Bemmelen 1933 and others), etc.' JTvG))

Smit Sibinga, G.L. (1933)- The Malay double (triple) orogen, II. Proc. Kon. Akademie Wetenschappen, Amsterdam, 36, 3, p. 323-330.
(online at: www.dwc.knaw.nl/DL/publications/PU00016411.pdf)
(Discussion of 'Australian double orogen' in New Guinea, etc. No figures)

Smit Sibinga, G.L. (1933)- The Malay double (triple) orogen, III. Proc. Kon. Akademie Wetenschappen, Amsterdam, 36, 4, p. 447-453.
(online at: www.dwc.knaw.nl/DL/publications/PU00016429.pdf)
(East Indian Archipelago consists of double, partly triple orogen between Asiatic and Australian continental masses. Molucca-orogen shows larger negative gravity anomalies than Sunda-orogen)

Smit Sibinga, G.L. (1935)- Geologie en zwaartekracht in den Indischen Archipel. Critische beschouwing over eenige recente publicaties van Prof. Dr. J.H.F. Umbgrove. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 52, p. 581-598.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001683001:pdf)
('Geology and gravity in the Indies Archipelago; a critical review of some recent publications of Prof. Umbgrove'. Discussion of timing of Old Tertiary (Te4?), M Miocene (Tf2?) and Plio-Pleistocene (underappreciated by Umbgrove 1932, 1935) folding events)

Smit Sibinga, G.L. (1937)- On the relation between deep-focus earthquakes, gravity and morphology in the Netherlands East Indies. Gerlands Beitrage Geophysik, Leipzig, 51, 4, p. 402-409.
(On zones of deep earthquakes that dip towards SE Asia mainland, recently identified by Berlage (now known as Wadati-Benioff zone), with apparent irregularies in Molucca Sea, etc.. Asiatic and Australian deep-focus earthquake hypocenter planes down to 700km, both with increasing focal depth towards continent, may be regarded as deep-seated fault- or thrust planes. Remarkable coincidence between morphological discrepancies, excessive negative gravity anomalies and active bathyseismic belt suggest intimate relationships and consequently great youth of these phenomena. With two maps)

Smit Sibinga, G.L. (1938)- Additional note on the relation between deep-focus earthquakes, gravity and morphology in the Netherlands East Indies. Gerlands Beitrage Geophysik, Leipzig, 53, 4, p. 392-394.
(Reply to Visser (1938) critique of Smit Sibinga (1937) conclusions. New hypocenter data from Gutenberg and Richter support earlier conclusion))

Smit Sibinga, G.L. (1939)- The Malay Archipelago in Pre-Tertiary times. Proc. Sixth Pacific Science Congress, San Francisco 1939, p. 231-240.
(Review of pre-Tertiary stratigraphy of Indonesia, from crystalline schists of pre-Paleozoic or E Paleozoic age through Silurian and Devonian, Carboniferous, Permian, Triassic, Jurassic, and Cretaceous, with observations on tectonics and paleogeography)

Smit Sibinga, G.L. (1940)- Der Malayische Archipel. Geologische Jahresberichte (Borntraeger, Berlin) II, B, p. 393-416.
('The Malay Archipelago'. Part 1 of review of geology of Indonesian region)

Smit Sibinga, G.L. (1942)- Der Malayische Archipel. Geologische Jahresberichte (Borntraeger, Berlin) IV, B, p. 362-382.
(('The Malay Archipelago'. Continuation of paper above. Brief reviews of geology of Timor, Mesozoic stratigraphy, etc. No new synthesis)

Smit Sibinga, G.L. & L.F. de Beaufort (1925)- Over het ontstaan van den Maleischen Archipel. Verslagen Geol. Sectie Geol. Mijnbouwkundig Genootschap 3, 4, p. 64- .
(Summary of lecture on tectonics of Indonesian region, incorporating zoogeographic data)

Smith, N.G., A.J. Bertagne, L.Samuel, Purwoko et al. (1995)- Eastern Indonesia Megaregional Project- principles and results of a regional study. AAPG Ann. Conv. Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 79, 6, p. 912. *(Abstract only)*

Sobari, I., A. Susilo, Subagio & E. Mirnanda (1993)- Bouguer anomaly map of Indonesia, scale 1:5M. Geol. Res. Dev. Centre (GRDC), Bandung, p. .

Soeria-Atmadja, R., R.C. Maury, H. Bellon, J.L. Joron, Y. Cyrille, H. Bougault & Hasanuddin (1986)- The occurrence of back-arc basalts in western Indonesia. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 125-132.
(Inc. Quaterny back-arc basaltic volcanics of Sukadana in S Sumatra. Lack plagioclase phenocrysts and closer to MORB-type tholeiites than island-arc basalts)

Soeria-Atmadja, R., H. Permana & A. Kadarusman (2005)- High-pressure metamorphics and associated peridotite in Eastern Indonesia. Majalah Geologi Indonesia (IAGI) 20, 2, Spec. Ed., p. 61-67.
(Association of high-pressure metamorphic rocks and ophiolites in E Indonesia, SE Kalimantan and Java)

Soesilo, J. (2012)- New Cretaceous tectonic setting of southeast Sundaland based on metamorphic evolution. Ph.D. Thesis, Inst. Teknologi Bandung (ITB), p. 1-224. *(Unpublished)*
(Soesilo et al. 2015: Includes new U-Pb dating of zircons in high-metamorphic rocks of Meratus (136.8 ± 3.6 and Luk Ulo (125-101 Ma))

Soesilo, J., V. Schenk, E. Suparka & C.I. Abdullah (2015)- The Mesozoic tectonic setting of SE Sundaland based on metamorphic evolution. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-205, 13p.
(SE Sundaland marked by two tectonic sutures, separated by Paternoster microcontinent: (1) Jurassic accretionary remnant W of micro-continent (S Meratus Suture, with metamorphic belt extending offshore beneath Java Sea and N-ward to Mangkalihat Peninsula or to W part of C Sulawesi. Part of Jurassic high-P belt, overprinted by lower P and thermal metamorphism, in response to crustal thickening due to collision of Paternoster against Sundaland in E Cretaceous and subsequent Cretaceous calc-alkaline magmatism; (2) mid-Cretaceous accretionary complex E of Paternoster micro-continent, extending from Karangsambung, C Java, to Bantimala-Latimojong-Pompangeo in Sulawesi (HP metamorphic rocks ages ~100-128 Ma))

Sopaheluwakan, J. (1994)- Tectonic evolution of the Banda Arc, East Indonesia: Southern Tethyan crust obduction metamorphism and fragmentation of eastern Gondwanaland. Proc. 30th Anniv. Symposium, Res. Dev. Centre for Geotechnology (LIPI), Bandung 1994, 2, p. 157-162.
(online at: elib.pdii.lipi.go.id/katalog/index.php/searchkatalog/.../1194.pdf)
(Studies of metamorphic aureoles at base of dismembered ophiolites on Timor, Seram, etc., suggest ophiolite obduction is major mechanism for emplacement of southern Tethyan crust onto Australian continental margin)

Sopaheluwakan, J. (1994)- Critiques and a new perspective on basement tectonic studies in Indonesia: a review of current results and their significance in geological exploration. Proc. 30th Anniv. Symposium, R&D Centre for Geotechnology (Puslitbang Geoteknologi) LIPI, Bandung 1994, 2, p. 163-175.
(online at: elib.pdii.lipi.go.id/katalog/index.php/searchkatalog/.../1195.pdf)
(Not all metamorphic rocks in Indonesia are of pre-Tertiary age and of continental origin. Places like Timor and Seram have very young metamorphic rocks, formed during ophiolite obduction. Mutis Complex of Timor formed in oceanic setting near Jurassic spreading center)

Sopaheluwakan, J. (1995)- Cenozoic tectonic evolution of Indonesian seaways. In: S. Nishimura & R. Tsuchi (eds.) Proc. Oji Seminar on Neogene evolution of Pacific Ocean Gateways, Kyoto, IGCP-355, p. ?

Sopaheluwakan, J. (1999)- Understanding the Indonesian orogeny: a basement geology perspective. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 19. (*Abstract)*
(Indonesia three types of orogeny: (1) Sunda type, Late Mesozoic Cordilleran-type Meratus-Karangsambung orogen along rim of SE Sundaland and Neogene orogeny. Suspected collision of microcontinent in Meratus-Karangsambung orogen. (2) Makassar type, outboard of Meratus-Karangsambung orogen, Oligocene and Miocene orogenies as result of obduction events of E Arm of Sulawesi and docking of Australian-derived microcontinents onto Sulawesi; (3) Banda type, with repeated pre-collisional obductions of short-lived spreading ridges in front of Australian passive margins in Oligocene and Miocene)

Sopaheluwakan, J. (2007)- Geodinamika Indonesia dan keberlangsungan hidup Manusia: dari ilmu kebumian ke ilmu-ilmu sistem kebumian. In: Geologi Indonesia: dinamika dan produknya, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 33, 1, p. 1-27.
('Indonesian geodynamics and human survival: from geography to the sciences of the earth system'. Three major tectonic theories for Indonesia: (1) undation theory, (2) plate tectonics and more recently (3) plume tectonics becoming fashionable)

Spakman, W. & H. Bijwaard (1998)- Mantle structure and large-scale dynamics of South-East Asia. In: P. Wilson & G.W. Michel (eds.) The geodynamics of S and SE Asia (GEODYSSEA) Project. Sci. Techn. Report STR/14, Geoforschungszentrum, Potsdam, Germany, p. 313-339.
(Tomography data general agreement with previous findings (e.g. subduction of Indian plate below Sunda Arc), but do not find detachment of (or tear in) slab around 400 km below Sumatra. Sunda slab bends W toward Andaman island arc below N Sumatra. Subduction below Sunda arc imaged down to 1500km, indicating penetration into lower mantle. Subduction below Sulawesi is S extension of Philippines subduction. Slab also imaged below Halmahera (Molucca collision zone))

Spakman, W. & R. Hall (2010)- Surface deformation and slab-mantle interaction during Banda arc subduction rollback. Nature Geoscience 3, p. 562-566.
(with supplementary material, movie at http://searg.rhul.ac.uk/current_research/plate_tectonics/index.html)
(Tomography velocity model of mantle under suggests Banda arc results from subduction of single slab. Jurassic embayment of dense oceanic lithosphere enclosed by continental crust once existed within Australian plate. Banda subduction began at ~15 Ma when active Java subduction tore E-ward into embayment. Present morphology of subducting slab only partially controlled by shape of embayment. As Australian plate moved N, Banda oceanic slab rolled back towards SSE. Increasing resistance of mantle to plate motion folded slab and caused strong deformation of crust)

Spakman, W., C. Rangin & H. Bijwaard (1998)- Tomographic constraints on the tectonic evolution of SE Asia. In: AAPG Int. Conf. Exhib, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1495. *(Abstract only)*
(New 3D image of P-wave seismic velocity heterogeneity of lithosphere and mantle of SE Asia. Subducted oceanic slab found below most of Sunda arc but with varying depth penetration. A 500 km long slab under Burma separated from Andaman-Sumatra slab (~700 km deep) by 300-400 km wide gap associated with Andaman Basin. Central Sunda slab penetrates lower mantle to 1500 km, but subduction below Banda arc confined to 700 km. No clear slab imaged below W New Guinea; long N dipping slab under E New Guinea)

Spicak, A., R. Matejkova & J. Vanek (2013)- Seismic response to recent tectonic processes in the Banda Arc region. J. Asian Earth Sci. 64, p. 1-13.
(Analysis of shallow (<100 km) seismological data. 11 domains of earthquakes identified. Two discrete recent subduction zones in region: N- dipping Banda subduction in S and S-dipping Seram subduction in N; no W-dipping subduction zone observed to interconnect Banda and Seram zones into a single bent subduction zone. Instead, area between them is cut by elongated domain of earthquakes corresponding to W-ward continuation of Tarera-Aiduna fault zone)

Stauffer, H.K. (1945)- The geology of the Netherlands Indies. In: P. Honig & F. Verdoorn (eds.) Science and scientists in the Netherlands Indies, New York, p. 320-335.

(Old, general overview of Indonesia geology)

Steinshouer, D.W., J. Qiang, P.J. McCabe & R.T. Ryder (1999)- Maps showing geology, oil and gas fields, and geologic provinces of the Asia-Pacific region. U.S. Geol. Survey (USGS) Open- File Report 97-479F, 13p.
(Online at: https://pubs.usgs.gov/of/1997/ofr-97-470/OF97-470F/aspac.PDF)
(Report with three 1:7.5 M scale maps of geology, geologic provinces and oil-gas fields: 1 The Far East, 2 Southeast Asia, 3 Australia and New Zealand)

Stille, H. (1920)- Die angebliche junge Vorwartsbewegung im Timor- Ceram Bogen. Nachrichten Kon. Gesellschaft Wissenschaften Gottingen, Mathem.-Phys. Klasse, p. 174-180.
(online at: https://www.digizeitschriften.de/dms/img/?PID=GDZPPN002505746)
('The supposed young forward movements in the Timor- Ceram arc'. Discussion of Brouwer (1917 and 1920) papers, questioning the importance of horizontal movements. Not much new, no figures)

Stille, H. (1943)- Malaiischer Archipel und Alpen. Abhandl. Preussischen Akademie Wissenschaften, Math.-naturw. Klasse, Berlin, 16p.
('The Malay Archipelago and Alps'. Comparison of Indonesian region tectonics and Alps)

Stille, H. (1945)- Die tektonische Entwicklung der hinterindischen Festlands- und Inselgebiete. In: H. Stille & F. Lotze (eds.) Die tektonische Entwicklung der pazifischen Randgebiete II, Geotektonische Forschungen 7/8, Borntraeger, Berlin, p. 34-153.
('The tectonic development of the SE Asian mainland and island areas'. Review of geology and tectonic development of Indonesian region, in chapter 3 of textbook on tectonic developments of Circum-Pacific regions (p. 67-122). Interpretations in framework of Stille's famous but outdated ideas of geosynclines and continental growth during 'Variscan', Cimmeride', 'Laramide', etc. orogenic cycles)

Stille, H. (1945)- Die tektonische Entwicklung der neoaustralischen Inselwelt. In: H. Stille & F. Lotze (eds.) Die tektonische Entwicklung der pazifischen Randgebiete II, Geotektonische Forschungen 7/8, Borntraeger, Berlin, p. 210-260.
('The tectonic development of the Neo-Australian island world'. Chapter 5 of textbook on tectonic developments of Circum-Pacific regions)

Storetvedt, K.M., L.S. Leong & M. Adib (2003)- New structural framework for SE Asia, and its implications for the tectonic evolution of Borneo. Bull. Geol. Soc. Malaysia 47, p. 7-26.
(online at: www.gsm.org.my/products/702001-100611-PDF.pdf)
(Unconventional 'Global Wrench Tectonics' model for SE Asia tectonics, particularly NW Borneo margin)

Storetvedt, K.M. & B. Longhinos (2014)- Australasia within the setting of global wrench tectonics. NCGT Journal 2, 1, p. 66-96.
(online at: www.ncgt.org/)
(Another unconventional SE Asia tectonic paper from 'Global Wrench Tectonics' school)

Subarya, C. (2004)- The maintenance of Indonesia geodetic control network- in the earth deforming zones. In: 3rd Int. Fed. Surveyors (FIG) Regional Conference, Jakarta 2004, TS8, 6p.
(online at: www.fig.net/pub/jakarta/papers/ts_08/ts_08_1_subarya.pdf)
(On increase of GPS geodetic measurements in Indonesia since 1992 and velocities across plate boundaries)

Subono, S. & Siswoyo (1995)- Thermal studies of Indonesian oil basins. In: Y. Togashi (ed.) Symposium on Heat flow map, geodynamic implications and maturity modelling for hydrocarbons, Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, 25, p. 37-53.

Sudarmono, T. Suherman & B. Eza (1997)- Paleogene basin development in Sundaland and it's role to the petroleum systems in Western Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 545-560.

Sudradjat, A., H.D. Tjia et al. (eds.) (1989)- J.A. Katili Commemorative Volume (60 years). Geologi Indonesia 12, 1, p. 1-635.
(19 papers in English, 5 in Indonesian, mostly on tectonic history and volcanism)

Suggate, S. & R. Hall (2003)- Predicting sediment yields from SE Asia: a GIS approach. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA03-G-015, 16p.
(Areas of Indonesia like New Guinea, Borneo, Sumatra, etc., produce very high volumes of sediments relative to size of its landmasses. Possibly tied to intense precipitation/ runoff and many areas of recent rapid uplift)

Sukamto, R., T.C. Amin & D. Sukarna (eds.) (2003)- Atlas geologi dan potensi sumberdaya mineral dan energi kawasan Indonesia, scale 1: 10,000,000. Geol. Res. Development Centre, Bandung, p. 1-39.
('Atlas of geology and potential of minerals and energy in Indonesia'. Atlas with 33 Indonesia-wide maps of regional geology, volcanic rocks, radiometric ages, gravity, carbonates, ophiolites, Pre-Tertiary rocks, earthquakes, mineral resources, energy resources, etc.)

Sukamto, R. & M.M. Purbo-Hadiwidjoyo (1997)- Regional geology of Indonesia. In: E.M. Moores & R.W. Fairbridge (eds.) Encyclopedia of European and Asian regional geology, Chapman and Hall, London, p. 376-384.

Sukamto, R., B. Setyogroho, S. Atmawinata, S. Aziz, B. Jamal, Suharsono & S. Andi-Mangga (1990)- The Jurassic rocks in Indonesia. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 14, p. 1-14.
(Overview of the 17 regions in Indonesia with Jurassic rocks in outcrop, mainly in E Indonesia, also in Kalimantan and Sumatra)

Sukamto, R. & Sidarto (1990)- Gagasan baru tentang asal berbagai mintakat geologi di Indonesia. Bull. Geol. Res. Dev. Centre 14, p. 59-72. *(also in Proc. 16th Ann. Mtg. IAGI, Bandung 1987)*
('New thoughts on the origin of geological terranes in Indonesia'. Brief overview of terranes)

Sukamto, R. & T. Suhanda (1977)- Some notes on magmatic activities and metallic mineral occurrences in northeastern Indonesia. Bull. Geol. Soc. Malaysia 9, p. 253-271.
(online at: www.gsm.org.my/products/702001-101288-PDF.pdf)
(Permian-Recent volcanic and non-volcanic arcs in NE Indonesia different types of metallic mineral belts)

Sukamto, R. & G.E.G. Westermann (1992)- Indonesia and Papua New Guinea. In: G.E.G. Westermann (ed.) The Jurassic of the Circum-Pacific, Cambridge University Press, p. 181-193.
(Summary of Jurassic stratigraphy and ammonites in Irian Jaya, Waigeo, Misool, Obi, Bangai-Sula, SE and S Sulawesi, Buton, Buru, Seram, Tanimbar-Babar, Timor-Roti, Kalimantan, Sumatra and PNG)

Sunarjanto, D., B. Wicaksono, Sriwijaya, S. Munadi & B. Wiyanto (2008)- Updating of Indonesian Tertiary basin sedimentary basins. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-163, 12p.
(LEMIGAS (2007) basins map lists 63 Tertiary sedimentary basins in Indonesia. Example of use of gravity data in S Kalimantan to determine basin outlines: propose to combine Pembuang and Barito basins)

Surjono, S.S. & H.D.K. Wijayanti (2012)- Tectono-stratigraphic framework of Eastern Indonesia and its implication to petroleum systems. ASEAN Engineering J., C 1, 1, p. 138-152.
(online at: www.seed-net.org/download/C1-1_Paper10.pdf)
(Brief review of East Indonesia tectonics and stratigraphy, and geology of Tanimbar Islands)

Susilo, I. Meilano, H.Z. Abidin & B. Sapiie (2015)- A new definition of Sunda Block rotation model. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-373, 3p.
(GPS observations from 1996-2013 suggest Sunda block (Indochina, Thailand, Peninsular Malaysia, Sumatra, Borneo, Java) moves ESE-ward at 26-32 mm/yr)

Susilo, I. Meilano, H.Z. Abidin, B. Sapiie, J. Efendi & A.B. Wijanarto (2016)- Preliminary result of Indonesian strain map based on geodetic measurements. Proc. 5th Int. Symposium on Earth hazard and disaster mitigation, AIP Conference Proc. 1730, 040004, 3p. *(Extended Abstract)*
(GPS measurements from 1993-2014 across Indonesia region provide 2-3mm-level precision of surface velocity estimates. GPS velocities used here to construct crustal strain rate map. Highest strain rates along Sumatran fault, Sumatra-Java trench, North Molucca Sea and Seram- northern West Papua areas)

Suzuki, Y. (1993)- On the formation of Southeast Asia island arcs. Hokuriku Geol. Inst. Rept. 3, p. 107-123.

Syracuse, E.M. & G.A. Abers (2006)- Global compilation of variations in slab depth beneath arc volcanoes and implications. Geochem. Geophys. Geosystems 7, 5, Q05017, p. 1-18.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2005GC001045)
(Depth to top of subducting slab below volcanoes 72- 173 km, global average 105 km. Depths correlate poorly with most subduction parameters, but correlations exist between depth and slab dip. Largest along-strike variation in Java, where depth shifts by 70 km on either side of 108° E from 90 km in W Java- SE Sumatra to 150 km in Central and East Java, changing over ~150 km along strike. Jump at overlapping of ends of two volcanic lines. Dominant change is shift in location of volcanoes in relation to slab and trench. E of 119° E (W Banda Sea), volcanoes step back toward trench, and slab depths once again become near 100 km. Not clear what causes this shift)

Tandon, K.A. (1998)- Study of models and controls for basin formation during continental collision: (1) Australian lithosphere along Banda Orogen (Indonesia) and (2) Alboran Sea Basin (Western Mediterranean). Ph.D. Thesis Louisiana State University, Baton Rouge, p. 1-197.
(online at: http://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=7792&context=gradschool_disstheses)

Tandon, K., J.M. Lorenzo & G.W. O'Brien (2000)- Effective elastic thickness of the northern continental lithosphere subducting beneath the Banda orogen (Indonesia): inelastic failure at the start of continental subduction. Tectonophysics 329, p. 39-60.
(Pliocene-Recent Australian continent- arc collision from Roti to Kai created underfilled foreland basin in Timor-Tanimbar-Aru Trough. Collision most advanced near C Timor. Australian continental lithosphere N of Timor detached from oceanic lithosphere. Change in Effective Elastic Thickness (EET) at start of continental subduction at Mio- Pliocene boundary due to change in curvature of N Australian lithosphere near shelf-slope, in map and cross-section. Evidence for inelastic yielding of N Australian continental lithosphere near present-day shelf-slope at continental subduction: (1) maximum change of EET near shelf-slope in laterally variable EET calculations, and (2) cessation of most normal faulting in Late Miocene- E Pliocene on seismic)

Tandon, K., J.M. Lorenzo, S. Widiyantoro & G.W. O'Brien (2002)- Variations in inelastic failure of subducting continental lithosphere and tectonic development: Australia-Banda Arc convergence. In: S. Stein & J.T. Freymueller (eds.) Plate boundary zones, American Geophys. Union (AGU), Geodynamics Series 30, p. 341-357.
(online at: http://www.geol.lsu.edu/jlorenzo/literature/Juan/papers_pdf/Tandonetal_AGU.pdf)
(Effective Elastic Thickness map at incipient continental collision (Pliocene-Recent) along N Australian continental lithosphere along Banda orogen suggests more rigid N Australian lithosphere indenting between 125-127°E longitude. Sharp decrease in EET from 230-180 km on continental shelf (from Roti to W of Aru Island) down to ~40 km on continental slope and beneath Banda orogen favoring inelastic failure at start of continental subduction)

Taylor, D. & T.M. van Leeuwen (1980)- Porphyry-type deposits in Southeast Asia. In: S. Ishihara, & S. Takenouchi (eds.) Granitic magmatism and related mineralization, Tokyo, Mining Geology, Spec. Issue 8, p. 95-116.
(14 porphyry copper or molybdenum deposits known from SE Asia outside Philippines; Sabah (Mamut), N and W Sulawesi (Tapadaa, Tombuililado, Sassak, Malala), Sumatra (Tangse + 4 non-economic; all associated with C Sumatra Fault Zone, Thailand (2; Triassic?)) and C Burma (Monywa). All except Thailand of Miocene and younger ages. Sabah and Sulawesi occurrences underlain by oceanic crust, similar to Philippines)

Thamrin, M. (1985)- An investigation of the relationship between the geology of Indonesian sedimentary basins and heat flow density. Tectonophysics 121, 1, p. 45-62.
(Geothermal data from 929 wells in 20 Tertiary basins. Thermal conductivity increases with depth of burial and compaction. T gradient controlled by depth and T of heat source beneath basin. High heat-flow densities in C Sumatra, S Sumatra, Salawati Basin and Bintuni Basin may be caused by shallow magmatic diapirism)

Thamrin, M. (1985)- Heat flow study in the oil basinal areas in Indonesia. CCOP Techn. Publ. TP 15, p. 435-444.

Thamrin, M. (1986)- Terrestrial heat flow map of Indonesian Basins. Indonesian Petroleum Assoc. (IPA), Jakarta, p. 33-70.

Thamrin, M. & P.H. Mey (1987)- Terrestrial heat flow map of Indonesian Basins. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-70.

Thamrin, M., Prayitno & Siswoyo (1984)- Heat flow study in the oil basinal areas in Indonesia. Proc. Joint ASCOPE/ CCOP Workshops I and II, p. 49-60.

Thurow, J. & J. Milsom & D. Roques (2000)- Mesozoic tectono-sedimentary evolution of the Banda Arc area. AAPG Int. Conf., American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1505-1506.
(Abstract only. Mesozoic on Buru, Buton, Seram, E Sulawesi and plateaus off NW Australian Shelf. Pre-collision sediments record complicated rift-drift-history from higher latitudes at NW Australian margin and include source and reservoir rocks (e.g. Triassic sandstone and platform carbonates/ black shales), some with oil, oil seeps, asphalt. Sediments represent rifting off NW Australia. Widespread condensed oceanic sediments with Late Jurassic macrofossils overlie them. This sequence may be preceded by basaltic volcanic phase. E Cretaceous sediments pelagic with abundant radiolaria. Late Cretaceous 'couches rouges' facies rich in calcareous plankton. First Eurasian microfauna in Maastrichtian, indicating beginning of collision. Mesozoic pelagic microfaunas of NW-Australia typical Austral affinities (high latitude); those from Banda Arc mixed Austral-Tethyan elements, deposited in subtropical environment)

Tjia, H.D. (1964)- Nature of some volcanic lineaments. Inst. Technology Bandung, Contrib. Dept. Geology 54, p. 5-18.

Tjia, H.D. (1968)- New evidence of recent diastrophism in East Indonesia. Inst. Technology Bandung, Contrib. Dept. Geology 69, p. 71-76.

Tjia, H.D. (1970)- Rates of diastrophic movement during the Quaternary in Indonesia. Geologie en Mijnbouw 49, 4, p. 335-338.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0MWZtWTJsb0ZnT1U/view)
(In mobile regions of Indonesia average rate of Quaternary uplift, with or without attendant folding, 0.5- 1.0 mm/yr (common coral reefs uplifted to 500-1000m on Outer Arc islands like Sumba, Timor, Babar, Kai, Seram; also E Sulawesi, Buton, etc.). Subsidence occurs at rates of 2.0 mm/yr. Diastrophic movements in continental areas much slower. Wrench faulting most rapid movements, with rates of strike-slip of 5 mm/yr or more)

Tjia, H.D. (1973)- Displacement patterns of strike-slip faults in Malaysia- Indonesia- Philippines. Geologie en Mijnbouw 52, 1, p. 21-30.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0Yjl3aHFCa0w1cE0/view)
(Field studies on 7 important strike-slip faults in Malay Peninsula, Sarawak, W Sumatra, W Java, C Sulawesi New Guinea and Seram, using fault-plane markings to determine the sense of displacement. Directions of regional compression, parallel to computed compressive stress directions. Directions of regional compression are 10°-190° (Sumatra and Java) and ~E-W for Philippines and islands E of Makassar Straits)

Tjia, H.D. (1978)- Active faults in Indonesia. Bull. Geol. Soc. Malaysia 10, p. 74-92.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1978006.pdf)
(Main known active faults in Indonesia: Sumatra Fault Zone (1600 km). Palu-Koro FZ, Sulawesi (700km), Irian FZ (1300km), central depression of Timor, Lembang Fault, W Java, Banyumas Depression of Java, active volcanoes and extensive limestone terrains (caving))

Tjia, H.D. (1981)- Examples of young tectonism in Eastern Indonesia. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, Bandung, p. 89-104.
(Tectonic mobility of E Indonesia reflected in high topographic relief between mountainous islands (+5000m in W Papua) and adjacent deep oceanic sea floors (Weber Deep -7440m), zones of negative isostatic gravity anomalies, volcanic arcs earthquake belts and major wrench fault zones. Also uplifted Pliocene-Recent reef terraces on many E Indonesian islands, up to +1293m on Timor, with long-term uplift rates of 3mm/year)

Tjia, H.D. (1983)- Earthquake stress directions in the Indonesian Archipelago. In: T.W.C. Hilde & S. Uyeda (eds.) Geodynamics of the western Pacific-Indonesian region, American Geophys. Union (AGU) and Geol. Soc. America (GSA) Geodyn. Ser. 11, p. 413-422.

Tjia, H.D. (1987)- Tectonics, volcanism and sea level changes during the Quaternary in Southeast Asia. In: N. Thiramongkol (ed.) Proc. Workshop on Economic geology, tectonics, sedimentary processes and environment of the Quaternary in Southeast Asia, Haid Yai, Thailand 1986, IGCP 218/ Chulalongkorn University, Bangkok, p. 3-21.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1986/5083...)
(Sundaland Holocene sealevel rise 2cm/year after last deglaciation, reaching 4m above present 6000 yrs ago. Vertical uplifts of coral reef terraces and abrasion surfaces in region up to ~1300m. 500 Quaternary volcanic centers identified, 130 active. Etc.)

Tjia, H.D. (1989)- Active tectonics in the Indonesian Archipelago. In: N. Thiramongkol (ed.) Proc. Workshop on Correlation of Quaternary successions in South, East and Southeast Asia, Bangkok, p. 165-185.

Tjia, H.D. (1991)- Active tectonics in the Indonesian Archipelago-2. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 281-300.
(During Quaternary vertical displacement in Indonesian archipelago ranged from +2000m to -2000m). Most uplift vertical, as suggested by untilted appearance of most of highest terraces. Lateral slip movements response to convergence of SE Asia, India-Australia and Pacific plates. Influence of Pacific convergence reached W of Makassar Straits, Indian-Australian convergence only traceable in Java and Sumatra. Discussion of uplifted calcirudites at Banyuwangi, E Sulawesi raised reef terraces at Luwuk and Peleng island,etc.)

Tjia, H.D. (1998)- Meridian-parallel faults and Tertiary basins of Sundaland. Bull. Geol. Soc. Malaysia 42, p. 101-118.
(online at: www.gsm.org.my/products/702001-100852-PDF.pdf)
(Pre-Tertiary core of Sundaland contains numerous N-S striking regional faults. In Malay Peninsula Thai-Bentong- Bengkalis FZ coincides with Raub-Bentong suture, which existed since M Triassic. N-S faults of Sundaland functioned as (1) originators/ initiators of Tertiary basins (Mekong, Nam Con Son), (2) determinants of basin location (C Thailand, Gulf of Thailand, Balam-Pematang Trough, BengkalisTrough, Benakat Gully, Asri, Seribu, Arjuna, basement depressions in Malacca Strait), and (3)modifiers of basin geometry (Peusangan fault in N Sumatra basin; dextral offsets of old series in Malay basin))

Tjia, H.D. (2001)- Wrench tectonics in Sundaland; subsurface and offshore evidence. In: G.H. Teh et al. (eds.) Geological Society of Malaysia Ann. Geol. Conf. 2001, Pangkor Island, p. 71-77.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_12.pdf)
(Wrenching widespread in Sundaland. Principal stress directions from wrench patterns, well-bore breakouts and major earthquakes show most of Sundaland currently subjected to N-S stress. Towards margins stress trajectories deviate due to convergence of adjoining megaplates and SE extrusion of Indosinia. Until onset of M Miocene most wrenching transtensional, forming pull-apart depressions and modifying structure of large

depocentres. Cessation of spreading in Philippine Sea and Caroline basins by M Miocene changed wrenching into transpression, accompanied by slip-sense reversals and structural inversion)

Tjia, H.D. (2014)- Wrench-slip reversals and structural inversions: Cenozoic slide-rule tectonics in Sundaland. Indonesian J. Geoscience 1, 1, p. 35-52.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/174/174)
(Sundaland Oligocene transtension evolves into post-E Miocene transpression at Langhian time (~17-15.5Ma), after end of S China sea spreading)

Tjia, H.D., S. Fujii, K. Kigoshi, A. Sugimura & T. Zakaria (1972)- Radiocarbon dates of elevated shorelines, Indonesia and Malaysia. Part 1. Quaternary Research 2, 4, p. 487-495.
(Four radiocarbon dates of elevated strandlines in tectonically active areas of E Indonesia and E Malaysia indicate uplift rates between 4.5- 9 mm/ year during past 24,000 yr. Data from S arm of Sulawesi indicate rates of uplift of 1.4-2.5 mm/ year. At Langkawi islands, W Malaysia, one of regionally common shorelines at 2 m above sea level dated at 2590 ± 100 yr BP)

Tjia, H.D., S. Fujii, K. Kigoshi, A. Sugimura & T. Zakaria (1974)- Late Quaternary uplift in Eastern Indonesia. Tectonophysics 23, 4, p. 427-433.
(Radiocarbon dates of 15 samples from raised shorelines on various islands of E Indonesia suggest rates of tectonic uplift up to 12.5 mm/year)

Tjia, H.D. & K.K. Liew (1996)- Changes in tectonic stress field in northern Sunda Shelf basin. In: R.Hall & D. Blundell (eds.) Tectonic Evolution of Southeast Asia, Geol. Soc. London, Special Publ. 106, p. 291-306.
(Tertiary basins of N Sunda Shelf underlain by normal and attenuated continental crust with moderate- high geothermal gradients >5°C/100 m. In Malay basin, U Oligocene and younger sediments >12 km thick; other basins, 4-8 km thick. Malay, Penyu and W Natuna basins are aulacogens meeting at triple junction that marks Late Cretaceous hot spot in centre of Malay Dome. Sub-basins developed as pull-apart basins within regional, N-NW striking, wrench fault zones. Initial basin subsidence Eocene-Oligocene, with extension prevailing until E Miocene. M-Late Miocene regional compression caused inversions of basin-fill. Some N-striking wrench faults indications of up to 45 km right-lateral displacement, possibly post-Miocene)

Tsuboi, C (1957)- Crustal structure along a certain profile across the East Indies as deduced by a new calculation method. Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 18 (Gedenkboek Vening Meinesz), p. 295-304.

Umbgrove, J.H.F. (1930)- Tertiary sea-connections between Europe and the Indo-Pacific area. Proc. Fourth Pacific Science Congress, Java 1929, IIA, p. 91-104.
(On similarities and differences between Indo-Pacific and European Tertiary faunas. Similarities suggest open sea connections in M Eocene, no connection in Late Eocene, and some faunal interchange of fauna in Oligocene and later)

Umbgrove, J.H.F. (1932)- Het Neogeen in den Indischen Archipel. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 49, 6, p. 769-834.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001678001:pdf)
'The Neogene in the Indies Archipelago'. Substantial review of Neogene stratigraphy in Indonesia, with comments on 163 areas. Neogene sediments highly variable in thickness and intensity and timing of deformation. With map showing 11 Neogene tectostratigraphic regions A-M)

Umbgrove, J.H.F. (1933)- Verschillende typen van Tertiaire geosynclinalen in den Indischen archipel. Leidsche Geol. Mededelingen 6, 1, p. 33-43.
(online at: www.repository.naturalis.nl/document/549704)
('Different types of Tertiary geosynclines in the Indies Archipelago'. Tertiary basins of Sumatra, Java and Kalimantan relatively rapid subsidence and sedimentation. Most of fill is neritic with some hemipelagic

sediments, but no abyssal sediments. Subsidence and sedimentation starts in continental areas with fluvial-alluvial deposits. Tertiary basins not continuous 'geosynclines', but rel. independent basins)

Umbgrove, J.H.F. (1934)- Tijd en type der tertiaire plooiingen binnen de zone van sterk negatieve afwijkingen der zwaartekracht in den Indischen archipel. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 51, 1, p. 20-34.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001682001:pdf)
('Timing and types of Tertiary folding in zone of negative gravity anomalies in the Indies Archipelago'. Discussion of timing and styles of Tertiary folding in E Indonesian islands, many of which show evidence of folding episode between Eocene Tb or Td and-Early Miocene Te5 (Timor, Seram, Buru, etc.). With information of Tanimbar stratigraphy from unpublished work by F. Weber and H. Terpstra. Kai and Tanimbar Islands and East Sulawesi main folding after Te5)

Umbgrove, J.H.F. (1934)- The relation between geology and gravity field in the East Indian Archipelago. In: F.A. Vening Meinesz (1934), Gravity expeditions at sea 1923-1932, Waltman, Delft, 2, Chapter 6, p. 140-162.
(online at: www.ncg.knaw.nl/Publicaties/Groen/pdf/04VeningMeinesz.pdf)

Umbgrove, J.H.F. (1934)- A short survey of theories on the origin of the East Indian Archipelago. In: F.A. Vening Meinesz (1934), Gravity expeditions at sea 1923-1932, Netherlands Geodetic Commision, Waltman, Delft, 2, Chapter 7, p. 163-182.
(online at: www.ncg.knaw.nl/Publicaties/Groen/pdf/04VeningMeinesz.pdf)
(Critical review of more than two dozen theories proposed for origin of Indonesian archipelago, published since early 1900's)

Umbgrove, J.H.F. (1935)- Over het ontstaan van den Indischen Archipel. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap II, 52, p. 17-24.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001683001:pdf)
('On the origin of the Indies Archipelago'. Brief discussion on origin of Indonesian archipelago, mainly focused on gravity anomaly belts of Vening Meinesz. No new model proposed, but is skeptical about 'continental drift theory' of Wegener. With regional gravity anomaly map)

Umbgrove, J.H.F. (1935)- De Pretertiaire historie van den Indischen Archipel. Leidsche Geol. Mededelingen 7, p. 119-155.
(online at: www.repository.naturalis.nl/document/549307)
('The Pre-Tertiary history of the Indies Archipelago'. Review of Paleozoic-Mesozoic rocks in Indonesian Archipelago. With small distribution maps of Triassic, Jurassic, Cretaceous fossils and map/ table showing grouping in 7 Mesozoic tectonostratigraphic units A-G)

Umbgrove, J.H.F. (1938)- On the time of origin of the submarine relief in the East Indies. Comptes Rendus Congres Int. Geographie, Amsterdam 1938, Brill, Leiden, 2, p. 150-159.
(online at: https://resolver.kb.nl/resolve?urn=MMKB06:000004273:pdf)
(Like Kuenen (1935) and others, the deep sea basins of Eastern Indonesia are believed to have fromed recently by the subsidence of 'continental (sialic) area))

Umbgrove, J.H.F. (1938)- Geological history of the East Indies. American Assoc. Petrol. Geol. (AAPG) Bull. 22, 1, p. 1-70.
(Classic overview of geologic evolution Indonesian archipelago, with maps of tectonostratigraphic provinces from Permian- Eocene)

Umbgrove, J.H.F. (1949)- Structural history of the East Indies. Cambridge University Press, p. 1-63.
(online at: https://archive.org/details/in.ernet.dli.2015.85833)
(Elegant overview of Indonesian seas, deep sea basins, volcanoes, structural zones, etc., with series of broad paleogeographic maps)

Umbgrove, J.H.F. (1950)- The origin of deep-sea troughs in the East Indies (with discussion). Int. Geological Congress 18th Sess., Great Britain 1948, 8, p. 73-80.
(Pre-plate tectonic explanation of origin of deep sea trenches by 'downbuckling of crust')

Untung, M. (1996)- Geoscientific study along Jawa-Kalimantan-Sarawak-South China Sea transect. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 163-183.
(W Borneo tectonically active from Triassic- Late Cretaceous. CCW rotation of ~90° since then. Tectonic activity resulted in uplift and erosion of basement rocks, formation of melange (Boyan, Lubok Antu), followed by sedimentation of shallow marine deposits and magmatism. In Java tectonic activities only since Late Cretaceous (Luk-U1o Melange). Etc.)

Untung, M. & B.C. Barlow (1981)- The gravity field of Eastern Indonesia. In: A.J. Barber & S. Wiryusujono (eds.) The geology and tectonics of East Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 53-63.
(Incl. strong E-W trending gravity gradient along N coast Irian Jaya, etc.)

Vacquier, V. (1984)- Oil fields- a source of heat flow data. Tectonophysics 103, p. 81-98.
(Heat flows somewhat elevated in Tertiary basins of W Indonesia, with values decreasing from 130 mW/m2 in C Sumatra to 70 mW/m2 in E Kalimantan)

Vanacore, E., F. Niu & H. Kawakatsu (2006)- Observations of the mid-mantle discontinuity beneath Indonesia from S to P converted waveforms. Geophysical Research Letters 33, L04302, p. 1-4.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2005GL025106)
(Data from nine deep earthquakes confirmed existence of mid-mantle discontinuity beneath Java arc and also revealed its presence N to Kalimantan. S to P waves converted at discontinuity at depth range ~1080 km in W to ~930 km in E)

Van Bemmelen, R.W. (1931)- De bicausaliteit der bodembewegingen. Natuurkundig Tijdschrift Nederlandsch-Indie 91, 3, p. 363-413.
(online at: http://62.41.28.253/cgi-bin/...)
('The double causes of ground movements'. Preliminary unveiling of Van Bemmelen's 'undation theory', a tectonic theory that is variation of the oscillation-theory of Haarmann, but never found much acceptance. Crystallization processes in upper mantle trigger uplift ('geotumors'), subsidence and outward flows to re-establish hydrostatic equilibrium)

Van Bemmelen, R.W. (1932)- De undatie-theorie (hare afleiding en toepassing op het westelijk deel van de Soenda boog). Natuurkundig Tijdschrift Nederlandsch-Indie 92, 1, p. 85-242.
(online at: http://62.41.28.253/cgi-bin/…)
(Principal unveiling of Van Bemmelen's 'undation theory' and its application to the W part of the Sunda orogenic arc. With discussion of deep tectonic processes and also of geology of S Sumatra. See also critical discussion by Van Tuijn and Westerveld (1932))

Van Bemmelen, R.W. (1932)- Nadere toelichting der undatie-theorie. Natuurkundig Tijdschrift Nederlandsch-Indie 92, 2, p. 373-402.
('Clarifying comments on the undation-theory'. Reply to critical comments of Van Tuijn & Westerveld (1932))

Van Bemmelen, R.W. (1933)- Versuch einer geotektonischen Analyse Sudostasiens nach der Undationstheorie. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 36, 7, p. 730-739.
(online at: www.dwc.knaw.nl/DL/publications/PU00016473.pdf)
('Attempt at a geotectonic analysis of SE Asia after the undation theory'. Historically interesting, but otherwise very controversial interpretation of SE Asia tectonics)

Van Bemmelen, R.W. (1933)- Versuch einer geotektonischen Analyse Australiens und des Sudwestpazifik nach der Undationstheorie. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 36, 7, p. 740-749.
(online at: www.dwc.knaw.nl/DL/publications/PU00016473.pdf)
('Attempt at a geotectonic analysis of Australia and the SW Pacific after the undation theory'. Historically interesting, but otherwise very controversial interpretation of Australia-Pacific tectonics)

Van Bemmelen, R.W. (1933)- Die Neogene Struktur des Malaysischen Archipels nach der Undationstheorie. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 36, 10, p. 888-897.
(online at: www.dwc.knaw.nl/DL/publications/PU00016473.pdf)
('The Neogene structure of the Malay Archipelago after the undation theory'. Historically interesting, but otherwise very controversial interpretation of Indonesia tectonics)

Van Bemmelen, R.W. (1933)- Moderne richtingen in de geotektoniek (in verband met de geotektonische positie van den Nederlandsch-Indischen archipel. De Mijningenieur 14, 12, p. 205-212.
('Modern theories in geotectonics (in relation to the geotectonic position of the Netherlands Indies archipelago'. Discussion of tectonic theories. At that time in the Indonesian region were several supporters of the Wegener/ Holmes-inspired 'mobilist' school (Vening Meinesz, Escher, Umbgrove, Smit Sibinga), while Van Bemmelen with his undation theory is firmly in 'fixist' camp)

Van Bemmelen, R.W. (1935)- Over het karakter der jongtertiaire ertsgangen in den vulkanischen binnenboog van het Soenda systeem. Geologie en Mijnbouw 14, p. 21-25.
(online at: https://drive.google.com/file/d/1YydzhGQK3nsnG_MkVDjsU0QQB5CrNviF/view)
('On the nature of the young Tertiary ore veins in the volcanic inner arc of the Sunda system'. During M-U Miocene Sunda Mountain system became geanticlinal. Associated intrusions of granitoid batholiths caused gold-silver mineralization. No figures)

Van Bemmelen, R.W. (1935)- Uber die Deutung der Schwerkraft-Anomalien in Niederlandisch Indien. Geol. Rundschau 26, 3, p. 199-226.
('On the significance of the gravity anomalies in the Netherlands Indies'. Belt of negative gravity anomalies identified by Vening Meinesz and explained by him as downwarping/ buckling of light sialic crust thought to be better explained with Van Bemmelen's 'undation theory')

Van Bemmelen, R.W. (1936)- Kritische beschouwingen naar aanleiding van Bijlaard's theorie over plastische defomaties van de aardkorst. De Ingenieur in Nederlandsch-Indie 1936, (I), 7, p. 87-93.
('Critical discussion of Bijlaard's theory on plastic deformations of the Earth's crust')

Van Bemmelen, R.W. (1936)- Geologische contra mechanische analyse der geotektoniek (Geologische bezwaren tegen Bijlaard's theorie der lokal, plastische deformaties van de aardkorst). De Ingenieur in Nederlandsch-Indie 1936, (I), 11, p. 150-160.
('Geological versus mechanical analysis of geotectonics (Geological objections against Bijlaard's theory of local plastic deformations of the Earth's crust)'. Second part of discussion between Van Bemmelen and Bijlaard on tectonic theory for Indonesian region)

Van Bemmelen, R.W. (1937)- De isostatische anomalieen in den Indischen Archipel. De Ingenieur in Nederlandsch-Indie (IV), 4, 2, p. 9-29.
('The isostatic anomalies in the Indies Archipelago'. Discussion of models explaining belts of negative gravity anomalies by crustal downbuckling (Vening Meinesz, Bijlaard, Umbgrove, Kuenen). These models do not explain observed asymmetric thrust tectonics. VanB proposes alternative 'fixist' 'undation theory')

Van Bemmelen, R.W. (1938)- The distribution of the regional isostatic anomalies in the Malayan Archipelago. De Ingenieur in Nederlandsch-Indie (IV), 5, 4, p. 61-67.
(Review of regional gravity anomalies and apparent relations to deep-focus earthquakes, with interpretation)

Van Bemmelen, R.W. (1939)- Gravitational tectogenesis in the Soenda Mountain System. In: Proc. 17th Int. Geological Congress, Moscow 1937, 2, p. 361-382.

Van Bemmelen, R.W. (1949)- The geology of Indonesia, vol. 1A, General geology of Indonesia and adjacent archipelagoes. Government Printing Office, Government Printing Office, The Hague, p. 1-732.
(also in 1970 reprint edition by Martinus Nijhoff Publishers, with updated references list)
(Classic, monumental overview of pre-WWII knowledge of Indonesia geology, in 3 volumes. Still the most comprehensive compilation of geology of region. Excellent documentation of state of knowledge of regional geology and stratigraphy of Indonesia at end of colonial period. Many of the tectonic interpretations using the 'undation theory' model are controversial and outdated)

Van Bemmelen, R.W. (1949)- The geology of Indonesia, vol. 1B, Portfolio. Government Printing Office, (Martinus Nijhoff), The Hague.
(Box set of 41 plates and Literature references list, accompanying vol. 1A)

Van Bemmelen, R.W. (1949)- The geology of Indonesia, vol. 2, Economic geology. Government Printing Office (Martinus Nijhoff), The Hague, p. 1-265.
(Comprehensive review of deposits of oil, coal, metals, industrial minerals in Indonesia, as known in 1949)

Van Bemmelen, R.W. (1950)- On the origin of igneous rocks in Indonesia. Geologie en Mijnbouw 12, 7, p. 207-220.
(online at: https://drive.google.com/file/d/1VmYPZcRfi805lErwX2tKGVTeF7M89i6j/view)
(On relationships between igneous rock types and tectonic settings. Rather outdated)

Van Bemmelen, R.W. (1950)- Gravitational tectogenesis in Indonesia. Geologie en Mijnbouw 12, 12, p. 351-361.
(online at: https://drive.google.com/file/d/1wRMmVn3SPhsuaGvt1Sezvz2B-GtkN9Ev/view)
(Similar title to Van Bemmelen 1939. Only vertical movements are result of endogenic forces; all other tectonic forces are reactions to gravitation: (1) 'epidermal (within sedimentary cover: slumping, volcano-tectonic collapse (Tambakan Ridge folding N of Bandung), free gliding (Karangkobar, C Java, Seram, Timor, Jambi nappes), compressive settling in lows (Samarinda anticlinorium in E Kalimantan, Kendeng zone in E Java), etc.), (2) 'dermal' (includes crystalline crust; Flores, Npart of southern mountains from Lombok to W Java), (3) bathydermal' (sidewards displacement mainly in lower crust; Sunda Straits) and (4) subcrustal (sideward displacements in base of crust or deeper). With examples from Indonesia)

Van Bemmelen, R.W. (1952)- De geologische geschiedenis van Indonesie. Van Stockum, Den Haag, p. 1-139.
(online at: http://lib.ui.ac.id/file?file=digital/20379081-De%20geologische%20geschiedenisuan%20indonesie,%201952.pdf)
('The geological history of Indonesia'. Popular summary of Indonesia geological evolution)

Van Bemmelen, R.W. (1953)- Relations entre le volcanisme et la tectogenese en Indonesie. Bull. Volcanologique, ser. II, 13, p. 57-62.
('Relations between volcanism and tectonics in Indonesia'. Summary of 1951 lecture. Uses Sunda Arc region as examples, but not much detail)

Van Bemmelen, R.W. (1954)- Mountain building; a study primarily based on Indonesia region of the worldôs most active deformations. Martinus Nijhoff, The Hague, p. 1-177.
(Pre-plate tectonics text book on mountain building, primarily based on Indonesian geology and interpreted mainly in terms of the controversial 'undation theory'. Two parts: 'Principles of mountain building' (p. 1-35) and 'The orogenic evolution of the Earth's crust in Indonesia' (p. 36-167))

Van Bemmelen, R.W. (1954)- The geophysical contrast between orogenic and stable areas. Geologie en Mijnbouw 16, 8, p. 326-334.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0QzA4cUJzVmlrNGM/view)

(Extended commentary of Collette (1954) thesis 'On the gravity field of the Sunda region'. Includes chapter on interpretation of gravity field of West Indonesia. Positive anomaly with steep gradients over Wijnkoopsbaai (Ciletuh Bay) on Profile VI probably results from ophiolithic high-density rocks near surface. Belt of negative anomalies over Kendeng zone of NE Java result of either bending down of crust and filling with low-density sediments or small asthenolithic blisters at base of sialic crust. Etc. With Collette reply)

Van Bemmelen, R.W. (1955)- Lôevolution orogenetique de la Sonde (Indonesie). Bull. Soc. Belge Geol. Paleont. Hydrologie 64, 1, p. 124-152.
('The orogenetic evolution of Indonesia'. Another overview of Indonesia tectonic evolution in terms of Van Bemmelen's 'undation theory')

Van Bemmelen, R.W. (1965)- Mega-undations as the cause of continental drift. Geologie en Mijnbouw 44, 9, p. 320-333.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0N3RER1RoZ0J2d1E/view)
(Modification in Van Bemmelen's 'unique' tectonic views, now allowing some mobilism in his previously fixist 'undation theory'. Where 'mega-undations' (large mantle-driven uplifts) occur in continental areas, such as Gondwana, new oceanic basins will open up above a 'basaltic blister', with mid-oceanic rifts forming on crest by 'oceanization'. Overlying units drift sidewards under gravity, towards 'mega-undatory downwarps'. Not much on SE Asia)

Van Bemmelen, R.W. (1965)- The evolution of the Indian Ocean mega-undation (causing the Indico-fugal spreading of Gondwana fragments). Tectonophysics 2, 1, p. 29-57.
(online at: http://igitur-archive.library.uu.nl/geo/2006-1215-204156/bemmelen_65_evolution.pdf)

Van Bemmelen, R.W. (1976)- Plate tectonics and the undation model. Tectonophysiscs 32, p. 145-182.
(One of later papers by Van Bemmelen on his undation theory', first proposed by him in 1931, but debated from start and never found general acceptance. Unlike most of the rest of the world, Van B never accepted plate tectonics theory or subduction)

Van Bemmelen, R.W. (1978)- The present formulation of the undation theory. Zeitschrift Geologische Wissenschaften 6, 6, p. 523-540.
('Final?' review of Van Bemmelen's Undation theory, with short summary how it drives Indonesian tectonics)

Van der Voo, R. (1993)- Paleomagnetism of the Atlantic, Tethys and Iapetus Oceans. Cambridge University Press, p. 1-411.
(Review of global paleomagnetic data, including Sibumasu, Borneo, E Indonesia, etc.. Misool-Timor probably not continuously part of Australian Plate: Misool paleolatitudes 10-20° lower than predicted if remained with Australia. Good paleomagnetic data set for Borneo suggests all paleolatitudes close to Equator. Large rotations suggested for Cretaceous of Sumba and Timor, etc.)

Van Es, L.J.C. (1918)- De voorhistorische verhoudingen van land en zee in den Oost-Indischen Archipel, en de invloed daarvan op de verspreiding der diersoorten. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 2, p. 255-304.
('The prehistoric relationships of land and sea in the East Indies Archipeago and its influence on the distribution of the animal species'. Pliocene paleogeography of Indonesian archipelago)

Van Es, L.J.C. (1919)- De tectoniek van de westelijke helft van de Oost Indische Archipel. Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen 2, p. 15-144.
('The tectonics of the western half of the East Indies Archipelago'. Synthesis of Western Indonesia geology as known in 1917. With 4 map sheets)

Van Es, L.J.C. (1930)- Beschouwingen over een nieuwe geotektonische kaart van Nederlandsch-Indie. De Mijningenieur 11, 32p.

('Comments on a new geotectonic map of the Netherlands Indies'. Critical discussion of new tectonic map of Indonesia by Zwierzycki (1929-1930))

Van Hinte, J.E., T.C.E. van Weering & A.R. Fortuin (eds.) (1989)- Proceedings of the Snellius II Symposium, Geology and geophysics of the Banda Arc and adjacent areas, Jakarta 1987, vol. 1. Netherlands J. Sea Research 24, 2-3, p. 93-381.

Van Hinte, J.E., T.C.E. van Weering & A.R. Fortuin (eds.) (1989)- Proceedings of the Snellius II Symposium, Geology and geophysics of the Banda Arc and adjacent areas, Jakarta 1987, vol.2. Netherlands J. Sea Research 24, 4, p. 383-622.

Van Tuijn, J. & J. Westerveld (1932)- Opmerkingen naar aanleiding der 'undatie theorie' van Bemmelen en hare toepassing op het westelijk deel van de Soendaboog. Natuurkundig Tijdschrift Nederlandsch-Indie 92, p. 341-372.
(online at: http://62.41.28.253/cgi-bin/)
(Critical review of Van Bemmelen's (1932) new tectonic 'undation theory' and its application to the western part of the Sunda Arc. With discussion of Sumatra geology, which is not believed to fit 'undation theory')

Vening Meinesz, F.A. (1930)- Maritime gravity survey in the Netherlands East Indies, tentative interpretation of provisional results. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 33, p. 566-577.
(online at: www.dwc.knaw.nl/DL/publications/PU00015922.pdf)
(First account of Vening Meinesz' well-known shipboard gravity work. Principal feature discovered is 'Axis of Vening Meinesz', a ~100 miles wide narrow strip of strong negative anomalies through whole archipelago (W of Sumatra, S of Java, islands of Timor, Tanimbar, Kei, Seram, then to North), bordered at both sides by fields of positive anomalies. With map of ship traverses and stations, and axis of negative gravity anomalies)

Vening Meinesz, F.A. (1932)- Gravity expeditions at sea 1923-1930, Vol. I. The expeditions, the computations and the results. Netherlands Geodetic Commision, Waltman, Delft, p. 1-109.
(online at: www.ncg.knaw.nl/Publicaties/Groen/pdf/03VeningMeinesz.pdf)
(First report on marine gravity surveys in Indonesia and other areas)

Vening Meinesz, F.A. (1933)- The mechanism of mountain-formation in geosynclinal belts. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 36, p. 372-377.
(online at: www.dwc.knaw.nl/DL/publications/PU00016417.pdf)
(Speculation on process of mountain building, mainly driven by VM's observation of long belts of highly negative gravity anomalies and associated earthquake centra in Indonesian region. Apparent crustal downbuckling and associated folding-thrusting are early stages of alpine-style mountain building. 'Probable that the earth's crust is pushing laterally under the islands of the Indonesia orogenic belt'. (No figures)

Vening Meinesz, F.A. (1934)- Gravity expeditions at sea 1923-1930, Vol. II. Report of the gravity expedition in the Atlantic of 1932 and The interpretation of the results. Netherlands Geodetic Commision, Waltman, Delft, p. 1-208.
(online at: https://www.ncgeo.nl/downloads/04VeningMeinesz.pdf)
(Includes chapters on 'Relation between geology and gravity field in the East Indian Archipelago' and 'Theories on the origin of the East Indian Archipelago' by Umbgrove (p. 140-182) and 'Relations between submarine topography and gravity field' by Kuenen (p. 183-194))

Vening Meinesz, F.A. (1934)- Interpretation of the gravity anomalies in the Netherlands East Indies. In: F.A. Vening Meinesz (1934), Gravity expeditions at sea 1923-1932, Netherlands Geodetic Commision, Waltman, Delft, 2, Chapter 5, p. 116-139.
(online at: www.ncg.knaw.nl/Publicaties/Groen/pdf/04VeningMeinesz.pdf)
(One of first Indonesia-wide gravity anomalies maps. Control density is limited, but clearly shows belts of negative anomalies outlining accretionary wedge belts, maximum positive anomalies for oceanic basins, etc.

First paper to suggest trenches with their negative anomalies are site of seafloor 'downbuckling', later understood as subduction)

Vening Meinesz, F.A. (1939)- De theorie van Wegener. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 56, p. 453-457.
(Geophysical work in Netherlands Indies and other regions no clear data to support or negate the Wegener theory of continental drift)

Vening Meinesz, F.A. (1940)- The earth's crust deformation in the East Indies. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 43, 3, p. 278-293.
(online at: www.dwc.knaw.nl/DL/publications/PU00017410.pdf)
(New regional isostatic gravity anomaly map of Indonesia. Shift of axis of Sunda-Banda trench minimum gravity zone between Sumba and Timor)

Vening Meinesz, F.A. (1946)- Deep focus and intermediate earthquakes in the East Indies. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 49, 8, p. 855-865.
(online at: www.dwc.knaw.nl/DL/publications/PU00015922.pdf)
(Earthquake centres in 3 groups: (1) shallow (<60 km) in rigid crust and mostly in tectonically active areas; (2) intermediate shocks at depths of 60-300 km, and (3) deep shocks between 300-700 km. In many cases these centres are more or less located in inclined planes cutting surface in belts of strong tectonic activity. No deep shocks in Sumatra area. Deep earthquakes tied to convection currents in mantle)

Vening Meinesz, F.A. (1954)- Indonesian archipelago- a geophysical study. Geol. Soc. America (GSA) Bull. 65, p. 143-164.
(Paper on belts of strong negative gravity anomalies and VM's theory of 'crustal downbuckling' (which came close to recognizing subduction). Main tectonic arcs of Indonesia caused by SSE movement of inner crustal block relative to crust outside arc and, for second tectonic arc, by movement of a NE block in E direction. Mantle convection currents may account for relative block movements and crustal compression and also explain deep and intermediate earthquake foci, the sinking of the deep basins, etc. North Makassar Straits, Celebes Sea and N and S Banda Seas positive isostatic anomalies of +50- +100 mgal (remarkably, no mention of Van Bemmelen work/theories))

Verbeek, R.D.M. (1900)- Voorlopig verslag over eene geologische reis door het oostelijk gedeelte van den Indischen Archipel. Extra bijvoegsel Javasche Courant 1900, 66, p. 3-48.
('Preliminary account of a geological trip through the eastern part of the Indies Archipelago'. Early summary of Verbeek (1908) book)

Verbeek, R.D.M. (1908)- Molukkenverslag. Geologische verkenningstochten in het oostelijke gedeelte van den Nederlandsch Oostindische Archipel. Jaarboek Mijnwezen Nederlandsch Oost-Indie 37 (1908), Wetenschappelijk Gedeelte, 826p. + Atlas
('Moluccas Report- geological reconnaissance trips in the eastern part of the Netherlands East Indies archipelago'. Classic early geological reconnaissance survey of 250 islands in E Indonesia, and last of Verbeek's voluminous reports on geology of parts of Indonesia. Includes brief paleontological reports by specialist paleontologists. 'Old schist formation' metamorphics rel. widespread. Permian present on Timor and adjacent islands, possibly also on Ambon and Babar. Locally bituminous Triassic brachiopod limestones on Ambon. Widespread marine Mesozoic sediments. Triassic- Jurassic rocks and faunas similarities with Himalyas and Alps, etc.)

Verbeek, R.D.M. (1908)- Rapport sur les Moluques. Reconnaissances geologiques dan la partie orientale de l'archipel des Indes orientales neerlandaises. Government Printing Office, Batavia, 844p. + Atlas.
(French edition of Verbeek (1908))

Verbeek, R.D.M. (1910)-Geologie van den Nederlandsch Oost-Indischen Archipel. In: Geillustreerd handboek van Insulinde, Uitgeversmaatschappij Vivat, Amsterdam, p.

Vergnolle, M., E. Calais & L. Dong (2007)- Dynamics of continental deformation in Asia. J. Geophysical Research 112, B11403, p. 1-22.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006JB004807/pdf)
(Another model of Asia tectonic plates relative horizontal motions from GPS measurements)

Verstappen, H.Th. (2010)- Indonesian landforms and plate tectonics. J. Geologi Indonesia 5, 3, p. 197-207.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/275)
(Landforms in Indonesia resulted primarily from plate tectonics. Greatest relief amplitudes near plate boundaries: deep ocean trenches at subduction zones and mountain ranges at collision belts. Living and raised coral reefs, volcanoes, and fault scarps are important geomorphic indicators of active plate tectonics)

Villeneuve, M., J.J. Cornee, J.P. Rehault, C. Honthaas et al. (2000)- Tectonostratigraphy of the East Indonesian blocks. AAPG Int. Conf. Bali 2000, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1511. (*Abstract*).

Villeneuve, M., R. Martini, H. Bellon, J.P. Rehault, J.J. Cornee, O. Bellier, S. Burhanuddin, F. Hinschberger, C. Honthaas & C. Monnier (2010)- Deciphering of six blocks of Gondwanan origin within Eastern Indonesia (South East Asia). Gondwana Research 18, p. 420-437.
(manuscript online at: https://hal-insu.archives-ouvertes.fr/file/index/docid/462636/filename/Villeneuve-GondwanaResearch-2010.pdf)
E Indonesia 3 main plates (Eurasian, Indo-Australian, Philippine-Pacific), 7 blocks (six from NE Gondwanan margin, Halmahera from Pacific plate). Timor and Kolonodale (or Argo) blocks came from NW Australian margin. Lucipara, Seram and Banggai-Sula blocks originated from W extension of PNG while Irian Jaya block is still linked to N Australian margin. Timor and Kolonodale blocks detached from Gondwana in Jurassic; Lucipara, Seram and Banggai-Sula detached from PNG in Neogene. All Gondwanan blocks collided with Eurasian active margin near Sulawesi. Timor and Kolonodale joined Eurasian margin by end Paleogene. Lucipara, Seram and Banggai-Sula collided with Sulawesi between M Miocene- M Pliocene and, with Kolonodale, suffered opening of N and S Banda back-arc basins by Late Miocene. Timor block moved S with S margin of S Banda basin and collided with N Australian margin in M Pliocene)

Villeneuve, M., J.P. Rehault, J.J. Cornee, C. Honthaas & W. Gunawan (1998)- Geodynamic evolution of Eastern Indonesia from the Eocene to the Pliocene. Comptes Rendus Academie Sciences, Paris, Ser. IIA, Earth Planetary Sci., 327, 5, p. 291-302.
(Geodynamic reconstruction based on evolution of 4 continental blocks, trapped by convergence of Asian, Australian and Pacific plates: (1) Banda (= dismembered E Sulawesi, Buru, Seram, Sinta Ridge), (2) Banggai-Sula, (3) Lucipara (S Banda Ridges, Tukang-Besi Ridge + Kur, Tanimbar; Oligocene-E Miocene arc, with E Miocene metamorphism event) and (4) Halmahera. Main events: (1) Late Eocene-Oligocene collision Banda block- Sulawesi; (2) E Miocene collision Lucipara Block (incl. Tukang Besi)- Banda Block in Buton; (3) Late Miocene extension with opening of N. Banda, S. Banda, Savu basins; (4) E Pliocene collision Banggai Sula- E Sulawesi; (5) Late Pliocene collisions of Australia and Banda and Irian Jaya blocks. Timor with its Late Miocene calc-alkaline intrusions in N was part of Banda Arc before M Pliocene collision with Australia)

Villeneuve, M., J.P. Rehault, J.J. Cornee, C. Honthaas, W. Gunawan, Geobanda-Group (1998)- The main steps of the geodynamic evolution of Eastern Indonesia since Upper Eocene times. In: The geodynamics of S and SE Asia (GEODYSSEA) Project, p. 264-275.

Visser, S.W. (1930)- On the distribution of earthquakes in the Netherlands East Indian Archipelago II, 1902-1926. Verhandelingen Kon. Magnet. en Meteorologisch Observatorium, Batavia, 22, Albrecht, Weltevreden, p. 1-120.

Visser, S.W. (1937)- Aardbevingen met zeer diepen haard in Nederlandsch Indie. Natuurkundig Tijdschrift Nederlandsch-Indie 97, 3, p. 168-172.
(online at: http://62.41.28.253/cgi-bin/...)

('Earthquakes with very deep source in Netherlands Indies'. Describes Berlage (1937) observation that deep-focus earthquakes occur along inclined surface, dipping 30-40° from borders of ocean under continent in Indonesia)

Visser, S.W. (1937)- A connection between deep-focus earthquakes and anomalies of terrestrial magmatism and gravity. Terrestrial Magnetism and Atmospheric Electricity 42, 4, p. 361-362.
(online at: www.agu.org/journals/te/v042/i004/TE042i004p00361/TE042i004p00361.pdf)
(Deep-focus earthquakes occur in well-defined areas. Loci deeper than 600km in Japan, Philippines, Moluccas, Java Sea, etc., all along inclined surface, sloping 30-40° from borders of ocean down below continents. Associated with axis of negative gravity anomalies of Vening Meinesz. May be related to current systems in inner earth (NB: first discovery of what later became known as Wadati-Benioff zone; JTvG))

Visser, S.W. (1938)- Seismic isobaths in the East Indian Archipelago. Gerlands Beitrage Geophysik 53, p. 389-391.
(On earthquake belts and possible connection with Vening Meinesz's gravity anomalies)

Volz, W. (1912)- Der Malaiische Archipel, sein Bau und sein Zusammenhang mit Asien. Sitzungsberichte Physikalisch-Medizin. Sozietat Erlangen 44, p. 178-204.
('The Malay Archipelago: its framework and relation with Asia'. Early, obsolete tectonic model of Indonesia)

Voris, H.K. (2000)- Maps of Pleistocene sea levels in Southeast Asia: shorelines, river systems and time durations. J. Biogeography 27, 5, p. 1153-1167.
(Rather simplistic series of maps from Australia to Sri Lanka to Taiwan showing areas of exposed land in Indo-Australian region during periods of Pleistocene when sea levels were below present day levels)

Vroon, P.Z., M.J. Van Bergen & E.J. Forde (1996)- Pb and Nd isotope constraints on the provenance of tectonically dispersed continental fragments in East Indonesia. In: R. Hall & D. Blundell (eds.) Tectonic Evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 445-453.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1030.8906&rep=rep1&type=pdf)
(Pb-Nd isotope signatures of igneous and (meta) sedimentary rocks from E Indonesia continental fragments help identify provenance areas: Ambon-Seram= southern New Guinea, Bacan= North Australia, Banda Ridges = 'Pacific' New Guinea and Sumba= Sundaland)

VSI (Volcanological Survey Indonesia) (2005)- Geothermal resources in Indonesia. Volc. Survey Indon. (VSI) Geothermal Division, p.
(online at: www.vsi.esdm.go.id/pbumi/index.html)

Wakita, K. (1996)- Cretaceous subduction, accretion and collison along the southeastern margin of Sundaland. In: S.Y. Kim et al. (eds.) Proc. 32nd Ann. Sess.Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Tsukuba 1995, p. 201-218.
(Early version of Wakita series of papers on Cretaceous accretionary complexes at SE Sundaland margin, particularly Luk-Ulo melange complex in C Java and Bantimala Complex of S Sulawesi)

Wakita, K. (1997)- Oceanic plate stratigraphy and tectonics in East and Southeast Asia. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution in Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 388-401.
(Components of ancient accretionary complexes include pillow basalt, limestone, radiolarian chert and shale, ultramafic rocks, glaucophane schist, etc. Radiolarian biostratigraphy useful for reconstruction of accretionary complexes, as shown in example of Luk-Ulo Melange of C Java. Lithologic successions in different tectonic units similar and reflect 'Oceanic Plate Stratigraphy' sequence:(1) birth of oceanic plate at oceanic ridge, (2) formation of volcanic islands near ridge covered by reefs (= Orbitolina Limestone?; HvG), (3) calcilutite sedimentation at flank of volcanic islands, (4) pelagic deposition of radiolarians on oceanic plate, (5) mixing with detrital clays to form hemipelagic siliceous shale, and (6) sandstone- shale near trench of convergent margin. Radiolarian biostratigraphy of Luk Ulo show Valanginian- Campanian oceanic chert deposition)

Wakita, K. (1999)- Mesozoic melange formation in Indonesia; with special reference to Jurassic melanges of Japan. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 19-30.
(online at: www.gsm.org.my/products/702001-100838-PDF.pdf)
(Cretaceous melanges in (1) C Java (Luk Ulo; mainly HP metamorphics, bedded cherts siliceous shale, ultramafics, etc.; overlain by Eocene), (2) S Sulawesi (Bantimala; also mainly HP metamorphics, ultramafics, bedded cherts etc.) and (3) S Kalimantan (Meratus; mainly bedded chert, ultramafics, schist; unconformably overlain by Eocene). Clasts of metamorphic and ultrabasic rocks derived from blocks exhumed following microcontinent collision; incorporated within melanges during microcontinental collision)

Wakita, K. (2000)- Cretaceous accretionary: collision complexes in central Indonesia. J. Asian Earth Sci. 18, 6, p. 739-749.
(Cretaceous accretionary complexes in W Java (Ciletuh), C Java (Karangsambung, Jiwo), S and C Sulawesi and SE Kalimantan (Meratus, Pulau Laut) reflect Cretaceous convergent SE margin of Sundaland craton, which was surrounded by marginal sea, with immature volcanic arc at periphery. Oceanic plate subducted beneath arc from S, carrying microcontinents detached from Gondwanaland. Accretionary wedge with fragments of oceanic crust. Jurassic shallow marine allochthonous formation was emplaced by collision of continental blocks in Bantimala, S Sulawesi. Collision exhumed very high pressure metamorphic rocks from deeper parts of accretionary wedge)

Wakita, K. & I. Metcalfe (2005)- Ocean plate stratigraphy in East and Southeast Asia. J. Asian Earth Sci. 24, p. 679-702.
(Ancient accretionary wedges recognized by glaucophane schist, radiolarian chert and melange. Typical 'Ocean Plate Stratigraphy' (OPS) from old to young: pillow basalt s(birth of oceanic plate at mid-ocean ridge), limestone (ridge covered by reefs), radiolarian chert (pelagic sediment), siliceous shale (mixed radiolarians and detrital grains in hemipelagic setting) and shale- sandstone (sedimentation at or near trench of convergent margin). Radiolarian biostratigraphy provides information on time and duration of ocean plate subduction)

Wakita, K., I. Metcalfe, S. Hada & M.J.N. Daigo (2000)- Digital terrane map of East and Southeast Asia. Geosciences J. 4, p. 19-22.

Wakita, K., K. Miyazaki, J. Sopaheluwakan, I. Zulkarnain, C. Parkinson & Munasri (1997)- Cretaceous subduction complexes along the southeastern margin of Sundaland. Mem. Geol. Soc. Japan 48, p. 152-162.
(Sundaland surrounded by accretionary complexes and accreted microcontinents rifted from Gondwanaland. Cretaceous accretionary complexes in C Java, S Sulawesi and S Kalimantan similar components, but different histories. Luk-Ulo, C Java, subduction complex formed by continuous subduction of oceanic plate throughout Cretaceous. Meratus (S Kalimantan), also product of oceanic plate subduction in island arc setting. Bantimala, S Sulawesi, ocean plate subduction followed by collision of continental fragment)

Wakita, K., M. Pubellier & B.F. Windley (2013)- Tectonic processes, from rifting to collision via subduction, in SE Asia and the western Pacific: a key to understanding the architecture of the Central Asian orogenic belt Lithosphere 5, 3, p. 265-276.
(On processes of accretion of continental blocks in Tertiary in SE Asia and W Pacific. Subduction associated with back-arc extension, particularly in Indonesia and SW Pacific region. Arc-arc collisional complexes present in Taiwan, Philippines and Japan. Geological record of SE Asia and W Pacific provides modern analogue for geological and tectonic history of Central Asian Orogenic Belt)

Waluyo (1992)- Seismotectonics of eastern Indonesian region. Ph.D. Thesis St. Louis University, p. 1-343. *(Unpublished)*
(Earthquake data (ISC 1970-1986) used for interpretation of East Indonesia tectonics)

Wang, J.H., A. Yin, T.M. Harrison, M. Grove, Y.Q. Zhang & G.H. Xie (2001)- A tectonic model for Cenozoic igneous activities in the eastern Indo-Asian collision zone. Earth Planetary Sci. Letters 188, p. 123-133.

Wanner, J. (1907)- Triaspetrefakten der Molukken und des Timorarchipels. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 24, p. 159-220.
('Triassic fossils from the Moluccas and Timor Archipelago'. Late Triassic molluscs, corals, ammonites faunas from Misool (Carnian dark shales with Daonella), Seram (typical Tethys-Mediteranean Norian molluscs Monotis salinaria, Amonotis and brachiopod Halorella). From Seram limestone come corals Thecosmilia n.sp. aff. clathrata and Montlivaltia molukkana n.sp. and Pachypora intabulata n.sp. (= Lovcenipora vinassai; JTvG). Also Triassic fossils from Timor-Roti- Savu (generally deeper water facies, but potentially similar 'alpine' character with mainly Halobia, Daonella, but also 'Pacific' mollusc Pseudomonotis ochotica). Timor/Roti/ Savu Triassic reminiscent of North Sumatra Upper Triassic described by Volz, 1899. First author to recognize Alpine/ Tethyan affinities of Late Triassic bivalves and ammonites of Seram and Timor)

Wanner, J. (1910)- Einige geologische Ergebnisse einer im Jahre 1909 ausgefuhrten Reise durch den Ostlichen Teil des indoaustralischen Archipels: Vorlaufige Mitteilung. Centralblatt Mineralogie Geologie Palaont. 1910, 5, p. 137-147.
(online at: www.biodiversitylibrary.org/item/192869page/159/mode/1up)
('Some geological results of a 1909 trip through the eastern part of the Indo-Australian Archipelago; preliminary communication'. Summary of journey to Misool (fossil-rich Mesozoic), C Halmahera (ultramafic rocks, ?Mesozoic red-brown radiolarite, Tertiary clastics), Obi (found M Jurassic Stephanoceras and other ammonites at W coast along Akelamo River, and Miocene fossil-rich clastics) and Timor (Permian rich in fossils, Eocene Alveolina- Nummulites limestones, etc.. No figures)

Wanner, J. (1910)- Neues uber die Perm-, Trias- und Juraformation des Indo-Australischen Archipels. Centralblatt Mineralogie Geologie Palaont. 1910, p. 736-741.
(online at: www.biodiversitylibrary.org/item/192869page/766/mode/1up)
('News on the Permian, Triassic and Jurassic formations of the Indo- Australian Archipelago'. Short note on Timor Permian ammonites (incl. common Agathiceras), and U Triassic fauna of platy limestone of Bukit Kandung/ Lurah Tambang in W Sumatra, previously decribed by Boettger and interpreted as Eocene, with Myophoria, Cardita. Fauna very similar to Nucula Marl of Misool and probably of U Norian age. No figures)

Wanner, J. (1921)- Zur Tektonik der Molukken. Geol. Rundschau 12, 3-5, p. 155-165.
(online at: https://www.digizeitschriften.de/dms/img/?PID=GDZPPN000456594)
(Early paper on the tectonics of the Moluccas, with focus on geology of Buru Island)

Wanner, J. (1925)- Die Malaiische Geosynklinale im Mesozoikum. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Gedenkboek Verbeek volume), p. 569-599.
('The Malayan geosyncline in the Mesozoic'. Rel. lengthy review of Mesozoic stratigraphy and macrofaunas across Indonesia. No figures)

Wanner, J. (1931)- Echinodermata In: B.G. Escher et al. (eds.) De palaeontologie en stratigraphie van Nederlandsch Oost-Indie, Leidsche Geol. Mededelingen 5 (K. Martin memorial volume), p. 436-460.
(online at: www.repository.naturalis.nl/document/549766)
(Listings of Paleozoic- Neogene echinodermata described from Indonesia. Permian of Timor richest in world with 320 species (50 blastoids, 270 crinoids). Number of Mesozoic species ~10% of Permian, mainly in Triassic. In Jurassic only two species, Pentacrinus rotiensis from Roti and Holectypus from Buru, Cretaceous similarly poor). Tertiary 85 species)

Wanner, J. (1931)- Mesozoikum. In: B.G. Escher et al. (eds.) De palaeontologie en stratigraphie van Nederlandsch Oost-Indie, Leidsche Geol. Mededelingen 5 (K. Martin memorial volume), p. 567-609.
(online at: www.repository.naturalis.nl/document/549402)
(Comprehensive review of distribution of Mesozoic rocks and fossils in E Indonesia, Sumatra, Borneo, etc.. With correlation tables for Triassic, Jurassic and Cretaceous)

Wanner, J. (1940)- Gesteinsbildende Foraminiferen aus dem Malm und Unterkreide des ostlichen Ostindischen Archipels, nebst Bemerkungen uber *Orbulinaria* Rhumbler und andere verwandte Foraminiferen. Palaeont. Zeitschrift 22, 2, p. 75-99.
('Rock-building foraminifera from the Malm and Lower Cretaceous in the eastern East Indies Archipelago'. First description of Upper Jurassic calcispheres (Stomiosphaera moluccana, Cadosina fusca) from Timor, Misool, Seram, Roti, Buton and E Sulawesi. Marker species for Tethyan latest Jurassic (+earliest Cretaceous?) (NB: these are not foraminifera; JTvG))

Watkinson, I.M. & R. Hall (2017)- Fault systems of the eastern Indonesian triple junction: evaluation of Quaternary activity and implications for seismic hazards. In: P. Cummins & I. Meilano (eds.) Geohazards in Indonesia: Earth science for disaster risk reduction, Geol. Soc, London, Spec. Publ. 441, p. 71-120.
(Study of 27 fault systems in Eastern Indonesia. Most fault systems highly segmented, many linked by narrow (<3 km) stepovers to form quasi-continuous segments capable of M> 7.5 earthquakes. Sinistral shear across soft-linked Yapen and Tarera- Aiduna faults and continuation into transpressive Seram fold thrust belt perhaps most active belt of deformation. Palu-Koro Fault of Sulawesi long, straight and capable of super shear ruptures, considered to be greatest seismic risk in region)

Watkinson, I.M., R. Hall, M.A. Cottam, I. Sevastjanova, S. Suggate, I. Gunawan et al. (2012)- New insights into the geological evolution of Eastern Indonesia from recent research projects by the SE Asia Research Group. Berita Sedimentologi 23, p. 21-27.
(online at: www.iagi.or.id/fosi/)
(Brief review of ongoing Indonesia research projects at University of London/ Royal Holloway group)

Wegener, A. (1922)- Die Entstehung der Kontinente und Ozeanen. 3rd ed., Vieweg, Braunschweig, p. 1-144.
(online at: https://babel.hathitrust.org/cgi/pt?id=uc1.$b34771;view=1up;seq=1)
('The origin of the continents and oceans'. Third edition of classic book on continental drift theory and breakup of Pangea supercontinent after Late Carboniferous. Explanation for arcuate shape of Banda Arc by NW movement of Australia- New Guinea continent into Indonesian archipelago)

Wensink, H. (1987)- Displaced terranes of Gondwana origin in Indonesia: paleomagnetic implications. Annales Soc. Geologique du Nord VII, p. 81-87.
(Summary of paleomagnetic data from E Indonesia. Timor: Permian is displaced terrane of Australian origin; Early Cretaceous deep sea sediment formed ~1000km to S, shifted N with N drift of Australia). Original position of Misool rel. to Australia was farther N than today)

Westerveld, J. (1936)- The granites of the Malayan tin belt compared with tin-granites from other regions. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 39, 10, p. 1199-1209.
(online at: www.dwc.knaw.nl/DL/publications/PU00016993.pdf)
(Great petrographic uniformity of tin-bearing and related granite rocks of Inner Malayan Arc (Malay PeninsuIa, Indonesia Tin Islands, etc.) Tin-granites end-stages of differentiation of acid magmas, with proportions of main constituents not essentially different from non- tin-bearing biotite-granites)

Westerveld, J. (1939)- Metaalprovincies in Nederlandsch Oost-Indie. Public address at the start of position of lecturer in economic geology at the University of Amsterdam. Amsterdam, 30p.
('Metal provinces in the Netherlands East Indies'. Four main metallogenic provinces: (1) tin islands Bangka-Billition, etc. (2) Gold-silver mineralization on Sumatra, associated with ?Cretaceous intrusives, (3) W and S Sumatra gold-silver associated with post-Miocene intrusives and (4) nickel-iron in Banda Arc- E Sulawesi, associated with ultrabasic rocks. No figures)

Westerveld, J. (1949)- Fasen van gebergtevorming en ertsprovincies in Nederlands Oost-Indie. De Ingenieur 1949, 12-13, p. 1-25.
('Phases of mountain building and ore provinces in Netherlands East Indies'.Review of tectonics of Indonesia and associated mineral deposits. W of New Guinea four concentric orogens: (1) Late Jurassic 'Malaya orogen', connecting W Borneo with E Burma through Malaya, with tin, gold and bauxite; (2) Cretaceous 'Sumatra

orogen' (Sumatra-Java- SE Borneo), with Au-Ag-bearing base metals in Sumatra, iron laterites and diamond-gold placers in Borneo (3) M Miocene 'Sunda orogen' from W Burma through inner Sunda islands to W arc of Sulawesi, with epithermal Au-Ag-and Mn-ores; (4) Late Cretaceous- M Miocene 'Moluccas orogen' with nickel and lateritic iron ores on peridotites. Good maps of ore deposits)

Westerveld, J. (1952)- Phases of mountain building and mineral provinces in the East Indies. Repts. 18th Sess. Int. Geological Congress, Great Britain 1948, Sect. 1, 13, p. 245-255.
(Abbreviated, English version of Westerveld (1949))

Wheeler, P. & N. White (2000)- Quest for dynamic topography: observations from Southeast Asia. Geology 28, 11, p. 963-966.
(Absence of measurable dynamic topography in SE Asia)

Wheeler, P. & N. White (2002)- Measuring dynamic topography: an analysis of Southeast Asia. Tectonics 21, 1040, doi:10.1029/2001TC900023, p. 1-24.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2001TC900023)
(Models of dynamic topography generated by subducting slabs, predict ~1-2 km of subsidence on wavelengths of 100- 1000 km. Existence of such subsidence important for understanding basin formation, relative sea level changes, etc. Analysis of SE Asia constrains maximum amplitude of dynamic subsidence to ~300m with range of 0-500 m, less than predicted. Distribution of anomalous subsidence suggests this may not be caused by dynamic topography and subducting slabs)

Whittaker, J.M., R.D. Muller, M. Sdrolias & C. Heine (2007)- Sunda-Java trench kinematics, slab window formation and overriding plate deformation since the Cretaceous. Earth Planetary Sci. Letters 255, p. 445-457.
(Plate motions and reconstructions of subducted ocean floor used to analyse subduction kinematics and observed upper plate strain since 80 Ma along Sunda-Java trench. Upper plate advance and retreat is main influence on upper plate strain, but subduction of large bathymetric ridges also significant. Compression in Sundaland back-arc region linked to upper plate advance. Sundaland backarc extension correlates with (a) retreat of upper plate, and (b) advance of upper plate with more rapid advance of Sundaland margin due to hinge rollback. Subduction of large bathymetric ridges causes compression in upper plate, especially Wharton Ridge subduction under Sumatra between 15-0 Ma)

Wichmann, A. (1890)- Bericht uber eine im Jahre 1888-89 im Auftrag der Niederlandischen Geographischen Gesellschaft ausgefuhrte Reise nach dem Indischen Archipel, Part 1: I. Java and II. Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 7, p. 907-994.
(Report on a 1888-1889 geographic reconnaissance trip to Indies Archipelago- part 1 (Java, Sulawesi) by first geology professor at University of Utrecht, A. Wichmann, supported by Netherlands Geographical Society. Mainly travel and scenery descriptions)

Wichmann, A. (1925)- Geologische Ergebnisse der Siboga Expedition. Siboga Expeditie Monograph LXVI, Brill, Leiden, p. 1-164.
(Geological results of rocks collected during the 1899-1900 Siboga marine expedition around Banda arc islands, etc. Schists-phyllites-amphibolites on small islands between Seram and Kai strikingly similar to Seram pre-Upper Triassic (Valk 1945, p. 38))

Widiyantoro, S., J.D. Pesicek & C.H. Thurber (2011)- Complex structure of the lithospheric slab beneath the Banda arc, eastern Indonesia depicted by a seismic tomographic model. Research in Geophysics 1, 1, p. 1-6.
(online at: http://www.pagepress.org/journals/index.php/rg/article/view/rg.2011.e1/pdf)
(New seismic tomographic images of E Indonesia confirm previous observations of spoon-shaped structure of subducted slab beneath curved Banda arc. A slab lying flat on 660 km discontinuity beneath Banda Sea also well imaged. Data support scenario of Banda arc subduction rollback. Slab detachment beneath Buru also confirmed by new model)

Widiyantoro, S., J.D. Pesicek & C.H. Thurber (2011)- Subducting slab structure below the eastern Sunda Arc inferred from non-linear seismic tomographic imaging. In: R. Hall et al. (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 139-155.
(New seismic tomographic images across Sunda Arc from Java to Timor. Confirm previous observations of hole in subducted slab in upper mantle beneath E Java, which may be related to arrival of buoyant plateau near E Java at ~8 Ma. Images also suggest tear in slab below E-most part of Sunda arc, where downgoing slab is deflected in mantle transition zone, possibly related to arc-continent collision around Timor at ~3 Ma)

Widiyantoro, S. & N.T. Puspito (1998)- Tomografi waktu tempuh gelombang S dan struktur 3-D zona penunjaman di bawah Busur Sunda. J. Matematika Sains 3, 2, p. 97-104.
(online at: http://journal.fmipa.itb.ac.id/jms/article/viewFile/48/43)
('S-wave travel time tomography and 3-D structure of the subduction zone beneath the Sunda Arc'. Tomographic imaging using S-wave traveltime show 3-D mantle structure below Sunda arc subduction zone. Lithospheric slab penetrates into lower mantle beneath Sunda arc. Under Sumatra deep slab may be detached from seismogenic slab, under Java slab in upper mantle is necking)

Widiyantoro, S. & R. van der Hilst (1996)- Structure and evolution of subducted lithosphere beneath the Sunda arc, Indonesia. Science 271, p. 1566-1570.
(Tomographic imaging reveals seismic anomalies below Sunda island arc, suggesting lithospheric slab down to at least 1500 km. Sunda slab forms E end of deep anomaly associated with past subduction of Mesozoic Tethys Ocean. Lithospheric slab continuous feature from surface to lower mantle below Java, with local deflection where slab continues into lower mantle. Deep slab seems detached from upper mantle slab beneath Sumatra)

Widiyantoro, S. & R. van der Hilst (1997)- Mantle structure beneath Indonesia inferred from high-resolution tomographic imaging. Geophysical J. Int. 130, p. 167-182.
(online at: https://academic.oup.com/gji/article-pdf/130/1/167/6033214/130-1-167.pdf)
(Tomographic inversions give images of subducted slabs. Beniof zone steep (60°N) below Java, gently dipping at 60° W below E Banda Arc. Sunda Arc slab below 300 km looks detached in Sumatra, possibly also in Java)

Wiyanto, B., Sulistiyono, T. Junaedi & S. Hadipanjoyo (2009)- The re-analysis of the mature western area of Indonesian Tertiary basins for finding additional oil and gas resources. Lemigas Scientific Contr. 32, 1, p. 45-55.

Wikarno, R., T. Hardjono & D.S. Graha (1993)- Distribution of radiometric ages in Indonesia. 1:5,000,000. map. Geol. Res. Dev. Centre (GRDC), Bandung.

Wilson, P., B.A.C. Ambrosius, R. Noomen, D. Angermann, P. Wilson, M. Becker, E. Reinhart, A. Walpersdorf & C. Vigny (1999)- Observing plate motions in S.E. Asia: Geodetic results of the GEODYSSEA project. Geophysical Research Letters 26, 14, p. 2081-2084.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1999GL900395/pdf)
(Brief review of geodetic results and precision of 1994-1998 GPS project with 42 observation stations across SE Asia. Sundaland block does move E relative to stable Eurasian plate. Island of Biak moved >1 m horizontally due to two heavy earthquakes in 1996. Etc.)

Wilson, P. & G.W. Michel (1998)- The geodynamics of S and SE Asia (GEODYSSEA) Project. GeoForschungs Zentrum Potsdam, Scient. Techn. Report 98/14, p. 1-359.

Wilson, P., J. Rais & The GEODYSSEA project (1998)- An investigation of the geology and geodynamics of South and Southeast Asia. In: P. Wilson, G.W. Michel (eds.) The geodynamics of S and SE Asia (GEODYSSEA) Project, Scientific Techn. Report STR, 98/14, p. 9-27.

Wilson, P., J. Rais, C. Reigber, E. Reinhart, B.A.C. Ambrosius, X. Le Pichon et al. (1998)- Study provides data on active plate tectonics in Southeast Asia Region. AGU EOS Transactions 79, 45, p. 545-549.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/98EO00398/epdf)

(On GEODYSSEA Geodynamics of SE Asia GPS project)

Wing Easton, N. (1921)- Het ontstaan van den Maleischen archipel in het licht van Wegenerôs hypothesen. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 38, p. 484-512.
('The origin of the Malay Archipelago in the light of Wegener's hypotheses'. Early paper in support of Wegener's continental drift theory. Major differences in geology between W and E part of 'Malay Archipelago' lend support to model of series of drifing continental plates, with E Indonesian islands derived from Australia)

Wing Easton, N. (1921)- On some extensions of Wegener's hypothesis and their bearing upon the meaning of the terms geosynclines and isostasy. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, p. 113-133.
(General discussion of Wegener's continental drift theory, with few references to W Borneo geology. Mainly of historic interest, showing early support for Wegener in the Netherlands Indies)

Wirakusumah, A.D. (2008)- Tectonics and geothermal potential of Indonesia. In: J.A. Katili et al. (eds.) Tectonics and resources of Central and SE Asia (Halbouty volume), Pusat Survei Geol., Bandung, Spec. Publ. 34, p. 139-150.
(251 geothermal fields identified in Indonesia. 80% can be tied to volcanic processes, in four volcanic arcs)

Wiryosujono, S. & S. Tjokrosapoetro (1978)- Ophiolites in Eastern Indonesia. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 641-651.
(Most or all mafic-ultramafic assemblages in E Indonesia may be regarded as ophiolites, but complete suites only on Timor and E Sulawesi. W Timor ophiolites limited to Mutis Zone, where low-angle overthrusts of allochthonous units commonly have sheared/ serpentinized ultramafics at base. Overlying ultramafic base are metamorphics and Permian- Triassic limestones associated with volcanics that probably developed on ancient seamounts. Two parallel ophiolite belts in W Papua, where N-dipping subduction zone at N margin of Australian Plate during Late Cretaceous- Eocene changed to S-dipping subduction in M-L Miocene and later)

Witoelar Kartaadiputra, L., Z. Ahmad & A. Reymond (1982)- Deep-sea basins in Indonesia. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 53-81.

Wood, B.G.M. (1985)- The mechanics of progressive deformation in crustal plates- a working model for Southeast Asia. Bull. Geol. Soc. Malaysia 18, p. 55-99.
(online at: www.gsm.org.my/products/702001-101144-PDF.pdf)
(Model for Tertiary deformation of SE Asian plates, linking Wrench Tectonics and Plate Tectonics. Irian shear system, Sabah shear system, Trans-Borneo shear system, etc. Back-arc basins form along margins of major continental plates where there is large component of strike-slip movement due to oblique plate convergence)

Yang, T., M. Gurnis & S. Zahirovic (2016)- Mantle-induced subsidence and compression in SE Asia since the Early Miocene. Geophysical Research Letters 43, 5, p. 1901-1909.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2016GL068050)
(Rift basins developed extensively across Sundaland since Eocene. Starting in E Miocene, basins in S Sundaland experienced poorly understood, widespread synchronous compression (inversion) and marine inundation, despite large drop in global sea level. Models suggest slab stagnates in transition zone beneath SE Asia before Miocene, but penetrated through 660 km mantle discontinuity during E Miocene and formed slab avalanche event, causing large-scale marine inundation, compression and basin inversion across S Sundaland (poor fit between subsidence predition model and observed subsidence?; also, most or all Sundaland basins timing of early inversion and inundation not synchronous?; JTvG))

Yokoyama, T. & S. Nishimura (1981)- Results of age determination of Neogene rocks in Indonesia. Proc. 4th Regional. Conf. Geology and Mineral Energy Res. Southeast Asia (GEOSEA IV), Manila 1981, p. 239-244.

Yong, C.Z., P.H. Denys & C.F. Pearson (2017)- Present-day kinematics of the Sundaland plate. J. Applied Geodesy 11, 3, p. 169-177.

Zimmermann, S. & R. Hall (2014)- Provenance of Mesozoic sandstones in the Banda Arc, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-301, 13p.
(online at: http://searg.rhul.ac.uk/pubs/zimmermann_hall_2014%20Banda%20arc%20sandstones.pdf)
(Triassic and Jurassic sandstones from outer Banda Arc islands Timor, Babar and Tanimbar texturally immature, with volcanic quartz. Heavy minerals mainly from acidic igneous and metamorphic rocks and also ultramafic material. Zircon populations similar to Triassic sandstones of Birds Head, not nearby Australian continent. Cretaceous sandstones from Sumba, E Timor and Tanimbar with zircons suggesting reworking of Triassic and Jurassic sediments, but also Jurassic and Cretaceous zircons. These represent fragments rifted from Australian margin in Late Jurassic and added to SE Asia in Late Cretaceous which record volcanic activity associated with rifting and accretion to active Sundaland margin)

Zimmermann, S. & R. Hall (2016)- Triassic and Jurassic sandstones in the Banda Arc: provenance and correlations with the Australian NW Shelf. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-77-G, 18p.
(online at: http://searg.rhul.ac.uk/pubs/zimmermann_hall_2016%20Banda%20sandstones%20IPA.pdf)
Most Triassic-Jurassic sandstones of Banda Arc between Timor and Tanimbar quartz-rich and of recycled origin and/or continental affinity, but commonly texturally immature and with volcanic quartz and lithics. Heavy mineral assemblages dominated by rounded stable minerals, but also angular grains and origin from acid igneous and metamorphic sources. Detrital zircon ages Archean-Mesozoic, suggesting source mainly from Birds Head/ Sula Spur, W and C Australia in Triassic. In Jurassic new local sources close to Timor and recycled NW Shelf material. Tanimbar Islands and Babar sediment came from both Australian continent and Birds Head. Sandstones in Timor dominant acid igneous signature in E and metamorphic sources in W (NB: no mention of key papers on similar topic by Ely 2009, 2014, Zobell 2007, Kwon et al. 2014, JTvG))

Zimmermann, S. & R. Hall (2016)- Provenance of Triassic and Jurassic sandstones in the Banda Arc: petrography, heavy minerals and zircon geochronology. Gondwana Research 37, p. 1-19.
(online at: http://searg.rhul.ac.uk/pubs/zimmermann_hall_2016_%20Provenance%20Banda%20Arc.pdf)
(Same as Zimmermann and Hall 2016, above)

Zimmermann, S. & R. Hall (2019)- Provenance of Cretaceous sandstones in the Banda Arc and their tectonic significance. Gondwana Research 67, p. 1-20.
(Cretaceous sandstones from Sumba, Timor and Tanimbar deposited in SE Sundaland. Syn-sedimentary Cretaceous (68- 140 Ma) sources probably Schwaner Mts in SW Borneo and Sumba. Material from older recycled sediments from Bird's Head, W and C Australia, and local sources close to Timor)

Zwierzycki, J. (1925)- Overzicht der Triasformatie in Nederlandsch Indie. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie, 8 (Gedenkboek Verbeek volume), p. 633-648.
('Overview of the Triassic formations in the Netherlands Indies'. Lower- Middle Triassic found only on Timor; U Triassic present on Savu/ Roti, Timor, Leti/Babar, Ceram, Ambon, Misool, Buru, Buton, Borneo, Lingga, Sumatra and Malay Peninsula. Everywhere in Indonesia U Triassic developed in 'Alpine facies'. With one overview map)

Zwierzycki, J. (1928)- The stratigraphy of the coal and oil fields in the Netherlands East Indies. Proc. 3rd Pan-Pacific Science Congress, Tokyo 1926, 2, p. 1572-1593.

Zwierzycki, J. (1930)- Toelichting bij de geotektonische kaart van Nederlandsch-Indie. Jaarboek Mijnwezen Nederlandsch-Indie 58 (1929), Verhandelingen, p. 347-371.
('Explanatory notes of the geotectonic map of the Netherlands East Indies'. With map at scale 1:5,000,000. Assumes all metamorphic rocks are Paleozoic or older and maps limited number of 'orogenic periods':mid-Cretaceous (Sumatra), base Eocene?, Miocene (East), Late Pliocene (West part of archipelago))

Zwierzycki, J. (1957)- Pojecie geosynkliny w swietle nowszych badan Indonezji. Kosmos, B, 3, p.1-9.
('The concept of geosynclines in the light of more recent research from Indonesia'. In Polish)

I.2. SE Asia Regional Geology, Tectonics, Paleobiogeography

Achache, J., A. Abtout & J.J. Mouel (1987)- The downward confirmation of Magsat crustal anomaly field over Southeast Asia. J. Geophysical Research 92, B11, p. 11584-11596.

Achache, J., V. Coutillot & J. Besse (1983)- Paleomagnetic constraints on the Late Cretaceous and Cenozoic tectonics of Southeast Asia. Earth Planetary Sci. Letters 63, p. 123-136.
(Cretaceous- Cenozoic paleomagnetic data show negligible rotation of S China and CW rotation of Indochina, consistent with Tapponnier India indentation model. Malaya and Borneo data can be reconciled with model, but less straightforward. Large CCW rotation of S Tibet implies rotation with India during collision. M Cretaceous reconstruction of S margin of Asia shows continuity of geological features in Tibet and Indochina, with active subduction of Indian plate oceanic crust taking place to S at subtropical latitudes)

Acharyya, S.K. (1998)- Break-up of the greater Indo-Australian continent and accretion of blocks framing South and East Asia. J. Geodynamics 26, 1, p. 149-170.
(Plate tectonic history of SE Asia, with emphasis on India-Andaman region. Tibetan and 'Sibumasu' continental blocks rifted from N margin of Gondwanan Indo-Australia in Permian; IndoBurma-Andamans, Sikuleh, Lolotoi micro-continents in Late Jurassic. Tibetan and Sibumasu blocks drifted N in M-L Permian, opening Neo-Tethys. Indian and Australian continents separated in Cretaceous opening up Indian Ocean and closing Tethyan ocean. Etc.. Ophiolite trail on IBA does not represent E suture of Indian continent. Convergence between Australian continent and Indonesian Arc emplaced Lolotoi continental rocks. Maubisse exotic blocks and ophiolitic rocks as nappes over Timor shelf, which possibly remained attached to Australian continent.)

Acharyya, S.K. (2000)- Break up of Australia-India-Madagascar Block, opening of the Indian Ocean and continental accretion in Southeast Asia with special reference to the characteristics of the peri-Indian collision zones. Gondwana Research 3, p. 425-443.
(Tibetan and Sibumasu- W Yunnan continental blocks were located near proto-Himalayan part of Indian continent, rifted and drifted from N margin of E Gondwana continent in Late Paleozoic. Indo-Burma-Andaman, Sikule and Lolotoi blocks rifted and drifted from same margin in Late Jurassic, followed by break-up of Australia-India-Madagascar continental block in Cretaceous)

Ager, D.V.A. & D.L. Sun (1988)- Distribution of Mesozoic brachiopods on the northern and southern shores of Tethys. Palaeontologia Cathyana 4, p. 23-51.
(Late Triassic brachiopod Misolia widely distributed in S Tethys; recorded from Middle East to E Indonesia (Misool, Timor, Seram). Halorella/ Timorhynchia more typical of Late Triassic of N Tethys margin))

Ahmad, S., W. Jalal, F. Ali, M. Hanif, Z. Ullah, S. Khan, A. Ali, I.U. Jan & K. Rehman (2015)- Using larger benthic foraminifera for the paleogeographic reconstruction of Neo-Tethys during Paleogene. Arabian J. Geosciences 8, 7, p. 5095-5110.
(Comparison of Paleogene larger foraminifera from E part of NeoTethys in Kohat Basin of Pakistan compared with W, C Neo-Tethys to establish Paleogene migration pathways in Neo-Tethys. LBF species mostly confined to blocks derived from Gondwana (Iran, Iraq, Pakistan, India, Indonesia) and Laurasia (Italy, France, Spain), with only few on margin of Gondwanan continents (Oman). Includes brief review of Indonesian LBF)

Ali, J.R. (2006)- Biogeographical and geological evidence for a smaller, completely-enclosed Pacific basin in the Late Cretaceous: a comment. J. Biogeography 33, 9, p. 1670-1674.
(Critical discussion of McCarthy 2005 paper that describes Pacific history in expanding earth model))

Ali, J.R., J.C. Aitchison, H.M.Z. Cheung, S.S.Y. Chik & Y. Sun (2012)- Late Paleozoic development of Gondwana: detachment of the >13,500-km-long Cimmerian super terrane and its drift to Asia. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geologica Sinica 33, Suppl. 1, 2p. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/pdf/02-ALI%20Jason.pdf; Presentation at http://rwg-tag.bravehost.com/Conferences/geocon/ppt/1120-1140%20Ali.pdf)

(Cimmerian terrane almost unbroken chain stretching >13,500 km, from S Europe, via Middle East, Afghanistan, Tibet, SW China, Myanmar to W Indonesia. Example of 'sliver terrane' dwarfing other examples like Palawan Block in W Philippines and Lord Howe Rise in Tasman Sea. Dispersal from Gondwana in E Permian. Sibumasu lay offshore of Australia; Qiangtang and Lhasa off Greater India- SE Arabia)

Archbold, N.W. (1983)- Permian marine invertebrate provinces of the Gondwanan realm. Alcheringa 7, p. 59-73.
(Permian chonetidine brachiopods allow distinction of five Permian Gondwanan faunal provinces: Andean, Paratinan, Austrazean (E Australia- New Zealand), Westralian (W Australia) and Cimmerian (Cimmerian terranes, from Tunisia, Himalayas, Thailand, Sumatra, Leti to W Papua). With description of Waterhouseiella n.gen. for Waagenites speciosus)))

Archbold, N.W. (1987)- South-western Pacific Permian and Triassic marine faunas: their distribution and implications for terrane identification. In: E.C. Leith & E. Scheibner (eds.) Terrane accretion and orogenic belts, American Geophys. Union (AGU), Geodyn. Ser. 19, p. 119-127.
(Three provinces of SW Pacific Permian faunas: (1) Cimmerian (Arabia to Irian Jaya, Timor: cold earliest Permian with bivalve Eurydesma, etc., warm-tropical later in E Permian), (2) Westralian (cold earliest Permian followed by temperate faunas, with tropical elements only in Late Permian) and (3) Austrazean (E Australia- New Zealand, New Caledonia) cold and cool temperate conditions throughout Permian). Marine Triassic faunas two provinces: (1) Tethyan- cosmopolitan, (2) cool Maori Province in New Zealand (not including Torlesse))

Archbold, N.W. (1998)- Correlations of Western Australian Permian and Permian Ocean circulation patterns. Proc. Royal Soc. Victoria 110, p. 85-106.

Archbold, N.W. (1999)- Permian Gondwanan correlations: the significance of the western Australian marine Permian. J. African Earth Sci. 29, 1, p. 63-75.
(Conodonts, fusulinid foraminifera and ammonoids, commonly used for Permian correlations, are absent or rare in Gondwanan marine sequences. Marine faunas of Permian exhibit pronounced provincialism. W Australia marine sections 18 brachiopod zones and offer correlation interface between new global standard and extensive Permian sequences of Gondwana)

Archbold, N.W. (2000)- Palaeobiogeography of the Australasian Permian. In: A.J. Wright et al. (eds.) Palaeobiogeography of Australasian faunas and floras, Mem. Assoc. Australasian Palaeontologists (AAP) 23, p. 287-310.

Archbold, N.W. (2001)- Pan-Gondwanan, Early Permian (Asselian-Sakmarian-Akastinian) correlations. In: R.H. Weiss (ed.) Contributions to Geology and Paleontology of Gondwana in honour of Helmut Wopfner, Cologne 2001, p. 29-39.
(Correlation tables of E Permian formations and faunas from Gondwanan and peri-Gondwanan regions. Incl. Malay Peninsula and Timor Somohole ammonoid fauna (E Sakmarian?) and Bisnain brachiopod fauna (Late Sakmarian?)

Archbold, N.W. (2001)- Wallace lines in eastern Gondwana: palaeobiogeography of Australasian Permian brachiopoda. In: I. Metcalfe, J.M.B. Smith et al. (eds.) Faunal and floral migrations and evolution in SE Asia-Australasia, Balkema, Lisse, p. 73-83.
(Australian continent was major component of NE Gondwana in Permian. Surrounding what is now Australia, were additional elements of NE Gondwana that are now incorporated into New Zealand, New Caledonia, New Guinea, Timor, SE Asia, Himalaya and S Tibet. Pronounced provincialism of global marine faunas in Permian. Brachiopoda can be used to define Westralian and Austrazean provinces)

Archbold, N.W. (2002)- Peri-Gondwanan Permian correlations: the Meso-Tethyan margins. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basins Symposium, Perth 2002, p. 223-240.

(Permian of 16 regions of NE Gondwana compared with Australian continent. Paleoclimatic changes and tectonic events: (1) Asselian- E Artinskian change from cold to temperate environments, associated with basaltic volcanism and initial rifting of peripheral N Gondwanan margin; (2) Late Artinskian-Kungurian warming with onset of carbonate deposition in several Cimmerian terranes. Basaltic volcanism in several terranes indicative of rifting and opening of Meso-Tethys; (3). Roadian (Late Ufimian) and (4) Wordian-Capitanian: widespread, subtropical, marine carbonates on Cimmerian blocks as they drifted N and on N parts of Meso-Tethys S margin. Equivalent carbonates in subsurface W Australia. Andesitic volcanism in E Australia; (5) Wuchiapingian: marine transgressions extending into NW basins of Australia; (6) Changhsingian: minor marine transgressive events in Trans-Himalaya with Selong section of Tibet most complete Permo-Triassic for S Meso-Tethys margin)

Archbold, N.W., C.J. Pigram, N. Ratman & S. Hakim (1982)- Indonesian Permian brachiopod fauna and Gondwana-South-East Asia relationships. Nature 296, p. 556-558.
(First description of late E Permian articulate brachiopods in Birds Head. Assemblage similar to Thailand Rat Buri Limestone, suggesting geographical proximity of Thailand and Irian Jaya in E Permian)

Archbold, N.W. & G.R. Shi (1995)- Permian brachiopod faunas of Western Australia: Gondwanan-Asian relationships and Permian climate. J. Southeast Asian Earth Sci. 11, 3, p. 207-215.
(W Australian Permian brachiopod faunas mixture of Gondwanan, endemic Westralian and Asian (Tethyan) genera. Presence of Tethyan genera largely temperature dependent; no apparent geographical barriers to migration of such genera into intracratonic basins of W Australia. Paleotemperature curve indicates peak warm conditions in Sterlitamakian and Late Baigendzhinian and subtropical conditions in Dzhulfian)

Archbold, N.W. & G.R. Shi (1996)- Western Pacific Permian marine invertebrate palaeobiogeography. In: Z.X. Li, I. Metcalfe & C.M. Powell (eds.) Breakup of Rodinia and Gondwanaland and assembly of Asia, Australian J. Earth Sci. 43, 6, p. 635-641.
(Permian of W Pacific 4 provinces for Asselian-Tastubian (Indoralian, Himalayan, Cathaysian, Verkolyma), 6 for Sterlitamakian-Aktastinian (Austrazean, Westralian, Cimmerian, Cathaysian, Sino-Mongolian, Verkolyma), 7 for Baigendzhinian- E Kungurian (Austrazean, Westralian, Cimmerian- with Sibumasu and Himalayan subprovinces- Cathaysian, Sino-Mongolian, Verkolyma) and 3 for Kazanian-Midian (Austrazean, Cathaysian, Verkolyma). Changing pattern of provincialism best understood in terms of evolution of Sino-Mongolian Sea in N and rift-drift history of Cimmerian continental blocks in S, and climate amelioration during Permian)

Arias, C. (2006)- Northern and Southern Hemispheres ostracod palaeobiogeography during the Early Jurassic: possible migration routes. Palaeogeogr. Palaeoclim. Palaeoecology 233, p. 63-95.
(Australian E Jurassic ostracod faunas similar to W Tethyan and C European assemblages, probably indicating communication route along western Tethys, aided by action of western currents)

Asama, K. (1976)- *Gigantopteris* flora in Southeast Asia and its phytopalaeogeographic significance. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 17, p. 191-207.
(Gigantopteris flora is typical Cathaysian flora, best developed in N and NE China and Korea, but also in Yunnan and extending S to Malay Peninsula (Johore). Gigantopteris species described from E Permian Jambi flora of W Sumatra by Jongmans & Gothan 1935 differ from typical Gigantopteris flora. Djambi flora may still belong to Cathaysian flora, but probably older than typical Gigantopteris flora. W New Guinea Permian flora most likely part of Glossopteris flora)

Asama, K. (1984)- *Gigantopteris* flora in China and Southeast Asia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 311-323.
(Mainly on classification and evolution of 'Cathaysian' Permian Gigantopteris flora. C Sumatra Permian Jambi flora typical Asian Gigantopteris flora, not Gondwanan Glossopteris flora)

Audley-Charles, M.G. (1983)- Reconstruction of eastern Gondwanaland. Nature 306, p. 48-50.
(Model of E Gondwanaland on basis of distribution of floras and faunas, lithofacies patterns and identification of Triassic magmatic arc that characterized E margin of Gondwanaland. Continental fragments that rifted from

N Australia-New Guinea in Jurassic identified as S Tibet-Burma-Thailand-Malaya and Sumatra. Sumatra attached to New Guinea through Triassic. Original site of deposition of 'Maubisse' subtropical Permian limestones and tropical Late Triassic limestones, overthrust onto N margin of Australia in late Cenozoic collision, is located in this greater Gondwanaland)

Audley-Charles, M.G. (1988)- Evolution of the southern margin of Tethys (North Australia region) from Early Permian to Late Cretaceous. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys. Geol. Soc., London, Spec. Publ. 37, p. 79-100.
(online at: http://searg.rhul.ac.uk/pubs/audley-charles_1988%20N%20Australia%20evolution.pdf)
(Review of Mesozoic stratigraphies of Banda terranes and Permo-Carboniferous- Cretaceous paleogeography. Mid-Permian rift event removed continental blocks now in Asia from Gondwana. Present NW Australia- New Guinea margin formed in Jurassic with breakup of S. Tibet/Burma/Malaya/ W and E Borneo/Sumatra/W Sulawesi/ Banda allochthons. E Sulawesi/ Banggai-Sula/ Kemum still part of N Guinea margin in Early Cretaceous. Margin E of Scott Plateau modified by Tertiary collisions with arc systems)

Audley-Charles, M.G., P.D. Ballantyne & R. Hall (1988)- Mesozoic-Cenozoic rift-drift sequence of Asian fragments from Gondwanaland. Tectonophysics 155, p. 317-330.
(online at: http://searg.rhul.ac.uk/pubs/audley-charles%20et%20al%201988.pdf)
(Reconstruction of continental blocks dispersal from E Gondwanaland from Latest Jurassic- Late Miocene. Burma-Malaya-Sumatra rifted off New Guinea in Jurassic and colliding with SE Asia in Late Cretaceous (clearly too late; JTvG), etc.)

Audley-Charles, M.G. & R. Harris (1990)- Allochthonous terranes of the Southwest Pacific and Indonesia. Philos. Trans. Royal Soc. London, A 331 (1620), p. 571-587.
(Mesozoic breakup of Gondwana and subsequent collisional events led to formation and emplacement of allochthonous terrranes in fold-thrust mountain belts. Many allochthonous terranes of SW Pacific and E Indonesia accreted during last 3 Ma))

Audley-Charles, M.G. & R. Harris (1991)- Allochthonous terranes of the Southwest Pacific and Indonesia. In: J.F. Dewey, I.G. Gass et al. (eds.) Allochthonous terranes, Cambridge Unversity Press, Cambridge, p. 115-127.
(Same paper as Audley-Charles & Harris (1990) above)

Baumgartner, P.O., P. Bown, J. Marcoux, J. Mutterlose et al. (1992)- Early Cretaceous biogeographic and oceanographic synthesis of Leg 123 (Off Northwestern Australia). Proc. Ocean Drilling Program (ODP), Scient. Results 123, p. 739-758.
(Neocomian fossil record off NW Australia important southern high-latitude affinities and weak Tethyan influence. Pelagic radiolarian chert and nannofossil limestone dominant in Tethyan Lower Cretaceous, but only minor lithologies in Exmouth-Argo sites, suggesting Argo Basin not part of Tethys Realm)

Beckinsale, R.D. (1979)- Granite magmatism in the tin belt of South-East Asia. In: M.P. Atherton & J. Tarney (eds.) Origin of granite batholiths: geochemical evidence, Shiva Publ. Ltd, Kent, p. 34-44.

Ben-Avraham, Z. (1978)- The evolution of marginal basins and adjacent shelves in East and Southeast Asia. In: S. Uyeda (ed.) Active plate boundaries of the Western Pacific, Tectonophysics 45, p. 269-288.
(In Mesozoic W Pacific Ocean and E Indian Ocean were parts of Tethys Sea, moving N relative to Antarctica, causing E-W Mesozoic ridge system, E-W trending magnetic anomalies and N-S transform faults. In Late Cretaceous-Eocene segments of spreading ridge gradually submerged at trenches to N, causing gradual change in direction of Pacific plate motion, separating Pacific and E Indian Ocean plates. Only remnant of Mesozoic ridge system today at W Philippine Basin)

Berry, W.B.N. & A.J. Boucot (1972)- Correlation of the Southeast Asian Silurian rocks. Geol. Soc. America (GSA), Spec. Paper 137, p. 1-35.

Besse, J. & V. Courtillot (1988)- Paleogeographic maps of the continents bordering the Indian Ocean since the Early Jurassic. J. Geophysical Research 93, B10, p. 11791-11808.
(Plate reconstructions primarily driven by paleomagnetism)

Bird, P. (2003)- An updated digital model of plate boundaries. Geochem. Geophys. Geosystems 4, 3, 1027, p. 1-52.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2001GC000252/epdf)
(Global plate boundaries, showing 14 larger plates (incl. Australia, Eurasia, Pacific, Philippine Sea) and 38 small plates (in SE Asia-SW Pacific: Sunda, Burma, Molucca Sea, Banda Sea, Timor, Birds Head, Maoke, Caroline, Mariana, N Bismarck, Manus, S Bismarck, Solomon Sea, Woodlark, New Hebrides (Maoke Plate is newly-defined small tectonic plate in West Papua, underlying western Central Range/ Mamberamo area to Cenderawasih Bay)

Blendinger, W., W.M. Furnish & B.F. Glenister (1992)- Permian cephalopod limestones, Oman Mountains: evidence for a Permian seaway along the northern margin of Gondwana. Palaeogeogr. Palaeoclim. Palaeoecology 93, p. 13-20.
(Cephalopod limestones of M Permian (M Guadalupian, Wordian) age at base of Hawasina nappes in Oman Mts are condensed sequence on N side of Arabian platform (or allochthonous unit thrust onto N margin). Ammonoid and conodont faunas remarkably similar to W Mediterranean (Siclily Sosio Lst) and Timor, suggesting unrestricted faunal exchange in Permian seaway along pelagic N margin of Gondwana (or distal margins of Cimmerian terranes?; JTvG))

Bodet, F. & U. Scharer (2000)- Evolution of the SE Asian continent from U-Pb and Hf isotopes in single grains of zircon and baddeleyite from large rivers. Geochimica Cosmochimica Acta 64, p. 2067-2091.
(Three Paleoproterozoic crust-formation episodes in mainland SE Asia (2.5 Ga, 2.2-2.3 Ga and ~1.9 Ga), identified from zircons of Red River, Mekong, Salween and Irrawaddy Rivers)

Boucot, A. (2003)- Some thoughts about the Shan-Tai Terrane. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 4-13.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2002/6368.pdf)
(Review of stratigraphy and fossils of Silurian- Permian of Shan-Tai (= Sibumasu) terrane of W Thailand. Rel. cool climate 'Gondwanan' faunas through E Permian. Includes carbonate-rich Ordovician, Silurian black graptolite shales, E Devonian carbonates and 'tentaculite' mudstones, E Permian pebbly mudstones, etc.)

Boucot, A.J. (2007)- What happens at the northern end of the Shan-Thai terrane, where does it go from there. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIô07), Bangkok, Dept. Mineral Resources, p. 373-377.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2007/12752.pdf)
(Scattered Cambrian- E Devonian lithofacies and biogeographic data from Himalayan area (Nepal, Xizang) consistent with Shan-Thai Terrane (= Sibumasu) having originally been E extension of former. E extension of S end of Shan-Thai Terrane in Sumatra is poorly known, with S half of New Guinea being a possibility)

Brandon-Jones, D. (2001)- Borneo as a biogeographic barrier to Asian-Australasian migration In: I. Metcalfe et al. (eds.) Faunal and floral migrations and evolution in SE Asia-Australasia. Balkema, Lisse, p. 365-372.

Brayard, A., G. Escarguel & H. Bucher (2007)- The biogeography of Early Triassic ammonoid faunas: clusters, gradients and networks. Geobios 40, p. 749-765.
(E Triassic ammonoid assemblages, incl. Timor, which is 'highly connected' with Afghanistan and S China, defining an equatorial Tethyan group)

Brayard, A., G. Escarguel, H. Bucher & T. Bruhwiler (2009)- Smithian and Spathian (Early Triassic) ammonoid assemblages from terranes: paleoceanographic and paleogeographic implications. J. Asian Earth Sci. 36, p. 420-433.

(Cluster analysis of E Triassic ammonoid faunas. Timor grouped with Afghanistan, South China, Oman, Iran, etc., as S Tethyan cluster. (Very little detail on locations/ origin of samples; JTvG))

Brookfield, M.E. (1996)- Paleozoic and Triassic geology of Sundaland. In: M. Moullade & A.E.M. Nairn (eds.) The Phanerozoic geology of the world, 1, The Palaeozoic, B, Elsevier, Amsterdam, p. 183-264.

Brookfield, M.E. (1996)- Reconstruction of Western Sibumasu. In: J. Geology, Spec. Issue, Proc. Int. Symp. Geology of Southeast Asia and adjacent areas, Hanoi 1995, Geol. Survey of Vietnam B, p. 65-80.
(Core of Sibumasu terrane (Shan Plateau, Kanchanaburi, W Malaya) is S-facing Paleozoic passive margin, rifted off Gondwanaland in Permian and collided with Indochina in Triassic-E Jurassic. Equivalent of Qiantang Block of C Tibet)

Brookfield, M.E. & V.J. Gupta (1988)- The Devonian of Northern Gondwanaland: a Himalayan viewpoint and terrane analysis. In: N.J. MacMillan et al. (eds.) Devonian of the World, Proc. 2nd Int. Symposium on the Devonian System, Calgary, 1, Regional Syntheses, Canadian Soc. Petrol. Geol., Mem. 14, p. 579-589.
(Microcontinents that rifted off N Gondwana like Lut, Helmand, Nowshera, Karakorum, High Himalaya and Thai-Malaya terranes have Devonian stratigraphies indicating they were part of Gondwanaland in Devonian)

Buerki, S., F. Forest & N. Alvarez (2014)- Proto-South-East Asia as a trigger of early angiosperm diversification. Botanical J. Linnean Soc. 174, p. 326-333.
(online at: https://academic.oup.com/botlinnean/article/174/3/326/2416344)
(Angiosperms (flowering seed plants) originated abruptly in E Cretaceous (Hauterivian), followed by rapid diversification in Hauterivian-Aptian. Islands in SE Asia region today probably played major role in angiosperm diversification in Late Jurassic- E Cretaceous (but no discussion of support from actual fossil botanical records of SE Asia; HvG)

Buffetaut, E. (1981)- Elements pour une histoire paleobiogeographique du Sud-est Asiatique: l'apport des vertebres fossiles continentaux. Bull. Soc. Geologique France (7) 23, 6, p. 587-593.
('Elements for a paleobiogeographic history of SE Asia: the contribution of continental vertebrate fossils'. Incl. report of Jurassic fresh-water crocodilian Sunosuchus from NE Thailand, of Laurasian affinity)

Buffetaut, E. (1984)- The palaeobiogeographical significance of the Mesozoic continental vertebrates from South-East Asia. Mem. Soc. Geologique France, N.S., 147, p. 37-42.

Bunopas, S. & S. Khositanont (2004)- Did Shan-Thai twice marry Indochina and then India?: a review. Bull. Earth Sci. Thailand (BEST) 1, p. 1-27.
(Shan-Thai (= Sibumasu) and Indochina microcontinents migrated from W Australia since latest Devonian, to settle in Late Norian. During Late Triassic both microcontinents drifted up latitude and stayed in N Hemisphere. Pre-first continent-continent collision between Shan-Thai and Indochina occurred just under Equator as early as Early Triassic. Breakup of Pangea in Late Cretaceous time. At 45 Ma Himalayan extrusion, caused by 2nd continent-continent collision, began and have its paroxysm in M Miocene. Etc.)

Bunopas, S., P. Vella, H. Fontaine, S. Hada, C. Burrett, P. Haines, S. Potisat, T. Wongwanich, P. Chaodumrong, K.T. Howard & S. Khositanont (2001)- Growth of Asia in the Late Triassic continent- continent collision of Shan-Thai and Indochina against South China. Gondwana Research 4, 4, p. 584-585.
(Abstract only. Late Triassic (M-L Norian) continent-continent collision between Shan-Thai (=Sibumasu) and Indochina microcontinents resulted in formation of axial core of SE Asia. Continent-continent collision terminated marine environments between Shan-Thai - Indochina and S China. Lower-Middle Triassic volcanic arc-trench systems developed on E active margin of Shan-Thai W of Pha Som Suture zone from Nan-Uttaradit-Sra Kaeo and Bentong-Raub line. Etc.)

Bunopas, S., P. Vella, H. Fontaine, S. Hada, C. Burrett, P. Haines, S. Potisat, T. Wongwanich, P. Chaodumrong, K.T. Howard & S. Khositanont (2002)- Growing of Asia in the Late Triassic continent- continent collision of

Shan-Thai and Indochina against South China. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 129-135.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6385.pdf)
(Extended version of Bunopas et al. 1991, Gondwana Research (2001). Collision of Sibumasu (Shan-Thai) and Indochina in late Norian terminatedPaleotethys in SE Asia, along suture zone from W Yunnan- Nan-Uttaradit-Sra Kaeo- Yala to Raub-Bentong at 23°N above Equator. Cenozoic CW rotation of Thailand of >30°)

Bunopas, S., P. Vella, H. Fontaine, S. Hada, C. Burrett, P. Haines, S. Potisat, T. Wongwanich, P. Chaodumrong, K.T. Howard & S. Khositanont (2002)- Shan-Thai and Indochina, Lower Paleozoic Gondwana derived paired microcontinents growing Pangea by first continent-continent collision in Late Norian with South China suffered second continent-continent collision of India to Asia. In: Geodynamic processes of Gondwanaland-derived terranes in East and Southeast Asia, their crustal evolution, emplacement and natural resources potential, Phitsanulok 2002, p. 120-133.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_3/2547/9535.pdf)

Buratti, N. & S. Cirilli (2007)- Microfloristic provincialism in the Upper Triassic Circum-Mediterranean area and palaeogeographic implication. Geobios 40, 2, p. 133-142.
(Two U Triassic (Carnian) palynoflora provinces: (1) Onslow of NW Australia (incl. European forms Camerosporites, Aulisporites, Enzonalasporites, Ovalipollis, Samaropollenites, Infernopollenites, Minutosaccus) and (2) Ipswich of S and E Australia. W Timor floras from U Triassic pelagic deposits placed in Onslow microflora. Suggests Onslow microflora assemblages, with minor variations, present from W Tethys to N Australian margin (W Timor))

Burollet, P.F. & C. Salle (1986)- Problemes tectoniques en Indonesie. In: P. Le Fort et al. (eds.) Evolution des domaines orogeniques d'Asie meridionale (de la Turquie a l'Indonesie) (Pierre Bordet Memorial Volume), Mem. Sciences de la Terre 47, Nancy, p. 113-127.
('Tectonic problems in Indonesia'. Brief review of tectonics of Indonesia, with more detail on Tanimbar- Kai islands)

Burrett, C.F. (1974)- Plate tectonics and the fusion of Asia. Earth Planetary Sci. Letters 21, p. 181-189.
(Early paper describing amalgamation of Asia. Nine blocks defined. Paleogeographical, paleontological and tectonic evidence suggest Asia did not fuse completely until well into Mesozoic)

Burrett, C., N. Duhig, R. Berry & R. Varne (1991)- Asian and South-western Pacific continental terranes derived from Gondwana, and their biogeographic significance. In: P.Y. Ladiges et al. (eds.) Australian biogeography, Australian Syst. Botany 4, 1, p. 13-24.
(Most small geological terranes in Indo-Pacific region rifted from Gondwana. Shan-Thai terrane rifted from Australia in Permian and collided with Indo-China in Triassic. Parts of Sumatra and Kalimantan may have rifted from Australia in Cretaceous and carried angiosperm flora to North. Other terranes now in SE Asia and Pacific were part of Australian continent at various times in Cenozoic)

Burrett, C., J. Long & B. Stait (1990)- Early-Middle Palaeozoic biogeography of Asian terranes derived from Gondwana. In: W.S. McKerrow & C.R. Scotese (eds.) Palaeozoic palaeogeography and biogeography. Geol. Soc., London, Mem. 12, p. 163-174.
(Contiguity of Shan-Thai (=Sibumasu) Terrane and NW Australia suggested by faunal affinities in Late Cambrian trilobites, Ordovician molluscs, stromatoporoids, brachiopods and conodonts. Re-evaluation of E Paleozoic paleomagnetism places Shan-Thai against NW Australia. N China Block was next to N Australia/ New Guinea, rifted off in E Devonian or earlier. S China micro-vertebrates and conodonts suggest Shan-Thai still close to Australia in M Devonian)

Burrett, C. & B. Stait (1986)- Southeast Asia as a part of an early Palaeozoic Australian Gondwanaland. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 103-107.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986009.pdf)

(Provenance of Paleozoic sediments from Thailand and Malaysia and trilobite- mollusc studies suggest Sibumasu block was adjacent to NW Australia in Ordovician. Probable Upper Carboniferous glacial sediments in Thailand and Malaysia, with boulders from cratonic source and detrital diamonds. Early Carboniferous breakup most likely. Collision with Indochina Block in Triassic)

Burrett, C.F. & B. Stait (1986)- Southeast Asia as a part of an Ordovician Gondwanaland- paleogeographic test of a tectonic hypothesis. Earth Planetary Sci. Letters 75, p. 184-190.
(Upper Cambrian- Ordovician micro- and macrofaunas very close similarities between Thailand-Malaysia Sibumasu Block and NW Australia, suggesting E Paleozoic proximity)

Burrett, C., M. Udchachon & H. Thassanapak (2016)- Palaeozoic correlations and the palaeogeography of the Sibumasu (Shan-Thai) terrane - a brief review. Research and Knowledge 2, 2, p. 1-17.
(online at: https://rk.msu.ac.th/wp-content/uploads/2017/09/01-Clive-Burrett4-compressed.pdf)
(Review of Cambrian-Permian predominantly shelfal marine siliciclastics and carbonates of Sibumasu Terrane in NW Malaysia (Langkawi), S Thailand (Satun), Shan States of Myanmar and Baoshan Block of W Yunnan. Continuous platform sequences in W Sibumasu and deep-water shales and cherts in E Sibumasu, without significant unconformities. Silurian-Devonian faunas mainly peri-Gondwana distributions. Sibumasu part of Australia until E Permian breakup (oriented with Baoshan near Himalayan margin; Sumatra closer to West Papua). Late Triassic (late Norian?) collision with Indochina/Sukhothai Arc terrane)

Burrett, C., K. Zaw, S. Meffre, C.K. Lai, S. Khositanont, P. Chaodumrong, M. Udchachon, S. Ekins & J. Halpin (2014)- The conýguration of Greater Gondwana- evidence from LA ICPMS, U-Pb geochronology of detrital zircons from the Palaeozoic and Mesozoic of Southeast Asia and China. Gondwana Research 26, p. 31-51.
(Detrital zircon ages from Paleozoic-Mesozoic in Malaysia, Thailand, Laos, Vietnam, Cambodia and China, compared to zircon ages from Australia, Asia. Indochina and S China terranes and Tethyan Himalayas close to similar source areas. E Paleozoic paleobiogeographic data suggest N China was close to Gondwana, but not supported here. Similarity between Ordovician Tarutao Fm of Sibumasu and Tumblagooda Sst of W Australia and Tethyan Himalaya. Quartzite and granite clasts in Permian glaciomarine deposits of Sibumasu with age spectra similar to W and N Australia (incl. 1850 Ma Barramundi Orogeny). Triassic Lampang and Song Groups of N Thailand detrital zircons suggest Indochina terranes source for basins of Sukhothai Terrane)

Cai, F., L. Ding, A.K. Laskowski, P. Kapp, H. Wang, Q. Xu & L. Zhang (2016)- Late Triassic paleogeographic reconstruction along the Neo-Tethyan Ocean margins, southern Tibet. Earth Planetary Sci. Letters 435, p. 105-114.
(online at: https://manuscript.elsevier.com/S0012821X15007906/pdf/S0012821X15007906.pdf)
(Petrographic and detrital zircon analyses of U Triassic sandstones from N margin of India (Tethyan Himalaya Sequence, S Tibet) dominated by Indian-affinity Precambrian detrital zircons, but nearby areas with populations of Permian- E Jurassic (291-184 Ma) zircons for which there is no known Indian source, so probably derived from continental crustal fragments that were adjacent to NW margin of Australia. May be part of Late Triassic submarine fan along N Australian shelf, together with age-equivalent beds in W Sulawesi, Timor and W Papua with similar zircon age populations. U Triassic Mailonggang Fm from S margin of Eurasia (S Lhasa terrane) dominated by Permian zircons from proximal Lhasa terrane sources; differs from Tethyan Himalaya beds, suggesting separation from Greater India by Neo-Tethys Ocean)

Cai, J.X. & K.J. Zhang (2009)- A new model for the Indochina and South China collision during the Late Permian to the Middle Triassic. Tectonophysics 467, p. 35-43.
(Indochina and South China separated from Gondwana in Silurian Analysis of E Paleozoic suggests Indochina may be extended to include N Vietnam, part of Qinzhou tectonic zone and S Hainan Island (traditionally regarded as parts of S China). U Paleozoic turbidites and mid-oceanic ridge basalts along new Dian-Qiong suture illustrate ocean between Indochina and S China consumed by S-directed subduction under Indochina in Late Permian- M Triassic)

Cai, Z.R., J.Y. Xiang, Q.T. Huang, Z.X. Yin, Y.J. Yao, H.L. Liu & B. Xia (2016)- Textural and map contrasts of the subduction-collision boundary between the Philippine Arc and the Sunda margin. Arabian J. Geosciences 9, 4, p. 1-10.
(Review of active subduction-collision boundary between Philippine Arc and Sunda margin, from Taiwan, S along Manila Trench, through thrust fault zone of Mindoro, to Negros Trench at E edge of Sulu Sea, then through thrust fault zone of Zamboanga to Cotabato Trench at E side of Celebes Sea/ Sangihe Arc)

Campbell, H.J. & J.A. Grant-Mackie (2000)- The marine Triassic of Australasian and its interregional correlation. In: H. Yin et al. (eds.) Permian-Triassic evolution of Tethys and Western Circum-Pacific, Developments in palaeontology and stratigraphy 18, Elsevier, p. 235-255.
(Review of stratigraphy/ fauna of marine Triassic outcrops of E Indonesia, New Caledonia, Australia and New Zealand. Including brief summaries of PNG (Yuat River gorge argillites with Anisian ammonites), Misool, Seram, Buru (Norian- Rhaetian Fogi Beds with Misolia), Timor-Roti and SE Sulawesi-Buton (late Norian Monotis subcircularis in Winto beds). No maps, strat columns)

Capitanio, F.A. & A. Replumaz (2015)- Subduction and slab breakoff controls on Asian indentation tectonics and Himalayan western syntaxis formation. Geochem. Geophys. Geosystems 14, 9, p. 3515-3531.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/ggge.20171/pdf)
(On link between large-scale Asian continent deformations and Indian slab subduction and breakoff. Formation of C Asian intracontinental faulting, the Bangong-Red River Fault and Altyn Tagh fault followed successive Indian slab breakoff episodes

Caputo, M.V. & J.C. Crowell (1985)- Migration of glacial centers across Gondwana during Paleozoic era. Geol. Soc. America (GSA), Bull. 96, p. 1020-1036.

CCOP-IOC (1974)- Metallogenesis, hydrocarbons and tectonic patterns in Eastern Asia. Report of the IDOE Workshop on Tectonic Patterns and Metallogenesis in East and Southeast Asia, Bangkok 1973, UN Dev. Progr. (CCOP), Bangkok, CCOP Techn. Publ. 2, p. 1-158.
(online at: www.jodc.go.jp/info/ioc_doc/Workshop/015652eo.pdf)
(Overview of SE Asia tectonics and proposals by Katili et al. for SEATAR transect for future work)

Cesari, S.N. & C.E. Colombi (2015)- A new Late Triasssic phytogeographical scenario in westernmost Gondwana. Nature Communications, DOI: 10.1038/ncomms2917, 7p.
(Floral provincialism in S Hemisphere in Late Triassic characterized by Ipswich and Onslow provinces of E Gondwana here extended to NW Argentina. Previously considered part of Ipswich, but diagnostic Euramerican species in assemblages with Gondwanan taxa allows placing palynofloras in Onslow province)

CGMW/UNESCO (1986)- Metallogenic map of South and East Asia, Sheet 4 (1: 5M scale). Geol. Survey Japan.

Cecca, F. (1999)- Palaeobiogeography of Tethyan ammonites during the Tithonian (latest Jurassic). Palaeogeogr. Palaeoclim. Palaeoecology 147, p. 1-37.
(Focused on Western and CentralTethys; little or nothing on SE Asia/ Australia)

Chablais, J., R. Martini, E. Samankassou, T. Onoue & H. Sano (2009)- Microfacies and depositional setting of the Upper Triassic mid-oceanic atoll-type carbonates of the Sambosan accretionary complex (southern Kyushu, Japan). Facies 56, 2, p. 249-278.
(Sambosan U Triassic shallow-water limestones remnant of mid-oceanic atoll on seamount in Panthalassan Ocean, accreted along with deep-water ribbon-cherts rocks to E margin of Asia in Late Jurassic- E Cretaceous. Seventeen microfacies distinguished. Foraminifers (incl. Triasina hantkeni) indicate Late Carnian- Rhaetian age. Tethyan affinity of faunas suggests Sambosan seamount located in low- middle-latitude of S Hemisphere during Late Triassic)

Chaloner, W.G. & G.T. Creber (1988)- Fossil plants as indicators of Late Palaeozoic plate positions. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys, Geol. Soc., London, Spec. Publ. 37, p. 201-210.
(On latest Carboniferous and Early Permian floral provinces. In SE Asia juxtaposition of Cathaysian (S China, Thailand, Malay Peninsula, Sumatra) and Gondwanan (India, Australia, New Guinea) floras)

Chaloner, W.G. & W.S. Lacey (1973)- The distribution of Late Palaeozoic floras. In: N.F. Hughes (ed.) Organisms and continents through time, Spec. Paper Palaeontplogy 12, p. 271-289.
(online at: www.palass.org/sites/default/files/media/publications/special_papers_in_palaeontology/number_12/spp12_pp271-290.pdf
(33 plant genera can be used to define four main Permian floral provinces)

Chandra, U. (1984)- Tectonic segmentation of the Burmese-Indonesian Arc. Tectonophysics 105, p. 279-290.
(Transverse boundary zones (North Andaman Boundary Zone, Sunda Boundary Zone) separate segments of Burmese-Indonesian volcanic arc)

Chatterjee, S. & S. Bajpai (2016)- Indiaŝ northward drift from Gondwana to Asia during the Late Cretaceous-Eocene. Proc. Indian Nat. Science Academy 82, 3, Spec. Issue, p. 479-487.
(online at: https://insajournals.in/insaj/index.php/proceedings/article/view/225/125)
(Brief version of Chatterjee et al. 2017)

Chatterjee, S., C.R. Scotese & S. Bajpai (2017)-The restless Indian plate and its epic voyage from Gondwana to Asia: its tectonic, paleoclimatic, and paleobiogeographic evolution. Geol. Soc. America, Spec. Paper 529, p. 1-147.
(Review of tectonic evolution of India plate since breakup of Gondwana in Late Jurassic, partial isolation in E Cretaceous, collision with Kohistan-Ladakh arc at ~80 Ma (= continuation of Woyla Arc of W Sumatra?), Cretaceous- Paleogene boundary Shiva impact and Deccan volcanism. In Late Cretaceous (~67 Ma), Indian plate motion acceleration between two transform faults that facilitated N-ward movement, etc.)

Chen, H., S. Sun, J. Li, F. Heller, J. Dobson, M. Haag & K.J. Hsu (1993)- Early Triassic paleomagnetism and tectonics, South China. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 269-276.
(Paleomagnetic data from Lower Triassic limestones in S China support existence of four continental blocks, in E Triassic all scattered in E Paleotethys low latitude, separated by oceans: Yangtze, Xianggui, Cathaysia and Dongnanya (=S China Sea NW margin). Cathaysia block ~90° CW rotation. Permian on Hainan island ~25° CCW rotation)

Chen, X.F., J. Ye, Y. Xiang & X. Chen (2017)- Metallogenic characteristics of the major type deposits in Southeast Asia. Acta Geologica Sinica (English Edition), 91, Suppl. 1, p. 257-258.
(online at: https://onlinelibrary.wiley.com/doi/pdf/10.1111/1755-6724.13283)
(Extended Abstract. Major types of deposits in SE Asia: porphyry type copper (gold-molydenum), orogenic type gold, skarn type copper-gold, epithermal type gold-silver. Other deposits include intrusion-related golds, VHMS, MVT, SEDEX, IOCG, granitoid-related tungsten-tin, REE and potash deposits).

Chen, Y., V. Courtillot, J.P. Cogne, J. Besse, Z. Yang & R. Enkin (1993)- The configuration of Asia prior to the collision of India: Cretaceous paleomagnetic constraints. J. Geophysical Research 98, B12, p. 21927-21941.
(Paleomagnetic data from C Asia show 1700±610 km of shortening of S Asia since Cretaceous absorbed by distributed deformation between S Tibet and Siberia craton, based on Cretaceous poles from Junggar, Tarim, Tibet, Indochina, S and N China and Mongolia blocks. Remarkable consistency between upper and lower Cretaceous results, suggesting Cretaceous time of little displacement. Paleogeographic reconstruction of Asia in Cretaceous)

Chiu, J.M., B.L. Isacks & R.K. Cardwell (1991)- 3-D configuration of subducted lithosphere in the western Pacific. Geophysical J. Int. 106, p. 99-111.

(online at: https://academic.oup.com/gji/article/106/1/99/740584)
(Interesting 3-D displays of subducting slabs in W Pacific region (incl. Indonesia) (Benioff-Wadati zones of deep earthquake hypocenter distributions. Depth of deepest earthquakes decreases in W direction along Sunda Arc)

Chumakov, N.M. & M.A. Zharkov (2002)- Climate during Permian- Triassic biosphere reorganizations, 1: Climate of the Early Permian. Stratigraphy Geol. Correl. 10, 6, p. 586-602.

Chumakov, N.M. & M.A. Zharkov (2003)- Climate during Permian- Triassic biosphere reorganizations, 2. Climate of the Late Permian and Early Triassic: general inferences. Stratigraphy Geol. Correl. 11, 4, p. 361-375.

Claude, J. (2017)- The continental fossil record and the history of biodiversity in Southeast Asia. In: S. Morand et al. (eds.) Biodiversity conservation in Southeast Asia- Challenges in a changing environment, Chapter 2, 13p.
(Brief review of land plant assemblages in SE Asia,from Late Paleozoic-now)

Cloetingh, S. & R. Wortel (1986)- Stress in the Indo-Australian plate. Tectonophysics 132, p. 49-67.
(Modeling of state of stress in Indo-Australian plate. Regional stress field along Sunda arc varies from compression seaward of and parallel to Sumatra trench to tension perpendicular to Java-Flores segment)

Cobbing, E.J., D.I.J. Mallick, P.E.J. Pitfield & L.H. Teoh (1986)- The granites of the Southeast Asian tin belt. J. Geol. Soc., London, 143, p. 537-550.
(Four granite provinces, each with its own pattern of cassiterite mineralization: (1) Main Range Province (Triassic), 2. Eastern Province, 3. Western (Peninsular Thailand-Burma) Province, 4. North Thailand Migmatitic Province. Peninsular Malaysia granites from Main Range and E Provinces two contrasted suites which correspond to I and S-types)

Cobbing, E.J. & P.E.J. Pitfield (1986)- South-East Asia granite project- Field report for Thailand 1985. British Geol. Survey, Overseas Report MP/86/16/R, p. 1-213.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1985/1633.pdf)

Cobbing, E.J., P.E.J. Pitfield, D.P.F. Darbyshire & D.I.J. Mallick (1992)- The granites of the South-East Asian tin belt. British Geol. Survey, Overseas Memoir 10, p. 1-369.
(online at: http://pubs.bgs.ac.uk/publications.html?pubID=B04056)
(Extensive study of granites in Malaysia, Indonesia, Thailand and Myanmar. Not all granites have age-equivalent volcanics. Distinct belt. In Malaysian segment Permo-Triassic- lower Jurassic Eastern Belt with tin deposits (incl. Bangka- Belitung calk-alkaline I-types in Indonesia) (mainly cassiterite-magnite skarns), while neighboring Central Belt more gold-bearing. Western Province Cretaceous granites with tin in S-type granites only. Rb-Sr ages for Bangka granites mainly ~220 Ma (213-229 Ma (Norian); in line with Priem and Bon (1982)). Some age results of 200 Ma, 251-252 Ma; Barber et al. 2005)

Cocks, L.R.M. & R.A. Fortey (1988)- Lower Palaeozoic facies and faunas around Gondwana. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys, Geol. Soc., London, Spec. Publ. 37, p. 183-200.
(Ordovician and Silurian paleogeographic maps, some with W Papua data control points)

Cocks, L.R.M. & T.H. Torsvik (2013)- The dynamic evolution of the Palaeozoic geography of eastern Asia. Earth-Science Reviews 117, p. 40-79.
(Paleogeographical reconstructions for 11 intervals from M Cambrian- end Permian through E Asia region, centred on continental blocks of N China, S China and Annamia (Indochina). Annamia and S China left Gondwana margin area together during Lower Devonian opening of Paleotethys Ocean, but shortly afterwards they separated into two, not to reunite until Triassic. Cambrian- Permian rocks in Japan largely represent active volcanic arcs which originally lay to SE of S China. Neotethys Ocean opened in M Permian, dividing Sibumasu and Tibetan terranes from Gondwana, and Paleotethys Ocean started to close)

Copley, A., J.P. Avouac & J.Y. Royer (2010)- India-Asia collision and the Cenozoic slowdown of the Indian plate: Implications for the forces driving plate motions. J. Geophysical Research, Solid Earth, 115, 3, B03410, 14p.
(Plate motion of India changed dramatically between 50-35 Ma, with convergence between India and Asia dropping from 15 to 4 cm/yr, coincident with onset of India-Asia collision. Apparent relationship between plates velocities and length of subduction zones along boundaries, probably reflecting importance of slab pull as driving mechanism)

Copper, P. & C.R. Scotese (2003)- Megareefs in Middle Devonian supergreenhouse climates. Geol. Soc. America (GSA), Spec. Paper 370, p. 209-230.
(>7 Mid-Devonian 'Great Barrier Reefs', including S. China plate (Vietnam-Hunan, ~1700 km), E Australia-New Guinea (spottily preserved isolated platforms; ~2000 km) and Canning Basin (~400 km))

Crame, J.A. (1986)- Late Mesozoic bipolar bivalve faunas. Geol. Magazine 123, 6, p. 611-618.
(Bipolar bivalve genera probably existed through greater part of late Jurassic- Cretaceous, probably controlled by global climatic zonation. Examples of 'anti-tropical genera: Buchia s.l. and inoceramids (Retroceramus) in latest Jurassic, Aucellina in E Cretaceous, etc.)

Crowell, J.C. (1995)- The ending of the Late Paleozoic ice age during the Permian period. In: P.A. Scholle et al. (eds.) The Permian of Northern Pangea, Springer, Berlin, 1, p. 62-74.

Crowell, J.C. (1999)- Pre-Mesozoic ice ages: their bearing on understanding the climate system. Geol. Soc. America (GSA), Mem. 192, p. 1-106.
(Cenozoic Ice Age from ~43 Ma-Recent, preceded by warmer interval of ~70 My back into mid-Cretaceous time. Next older Mesozoic icy intervals are E Cretaceous (~105-140 Ma) and Jurassic (~160-175 Ma and ~188-195 Ma). Late Paleozoic Ice Ages waxed and waned between ~256-338 Ma. Iciness expanded during Late Devonian-E Carboniferous (353- 363 Ma). Ordovician-Silurian strong and short ice age between ~429-445 Ma. During Late Proterozoic-Cambrian, three or four ice ages (~520–950 Ma). At some localities glaciation occurred at low latitudes)

Cuneo, N.R. (1996)- Permian phytogeography in Gondwana. Palaeogeogr. Palaeoclim. Palaeoecology 125, p. 75-104.
(Review of Gondwanan phytogeogeographic units for five Permian time slices. Nothing on SE Asia)

Dagys, A.S. (1993)- Geographic differentiation of Triassic brachiopods. Palaeogeogr. Palaeoclim. Palaeoecology 100, p. 79-87.
(Maximum paleobiogeographic differention of Triassic brachiopods in Late Triassic, with at least five biochores: Boreal, N Tethyan, peri-Gondwanian, Notal or Maorian and E Pacific. E part of peri-Gondwana Tethys with Misolia, Timorhynchia)

Damborenea, S.E. (2002)- Jurassic evolution of Southern Hemisphere marine palaeobiogeographic units based on benthonic bivalves. Geobios 35, Suppl. 1, p. 51-71.
(Latest Triassic- earliest Cretaceous distribution of bivalves in S Hemisphere. Tethyan Realm with Australian unit restricted to Late Triassic. Late Jurassic Maorian Province extends to Antarctic and W Pacific localities incl. Timor, Sula, Buru, Seram, but overall endemism diminishes from Oxfordian to Tithonian-Berriasian. Oxfordian-Kimmeridgian Malayomaorica has Austral distribution, reaching Australia-New Guinea. Austral Province of Indo-Pacific Region (South Temperate) strongly developed at beginning of Cretaceous, incl. Australia, New Zealand, New Guinea)

Darbyshire, D.P.F. (1987)- Rb/Sr and Sm/Nd isotope studies of granites of Southeast Asia. Warta Geologi 13, p. 117-120.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1987003.pdf)
(Summary of British Geological Survey program of radiometric dating of SE Asia granites (see also Cobbing et al. 1992))

Delescluse, M. & N. Chamot-Rooke (2007)- Instantaneous deformation and kinematics of the India-Australia Plate. Geophysical J. Int. 168, 2, p. 818-842.
(Present-day deformation distributed around Afanasy Nikitin Chain in Central Indian Basin (CIB; shortening) and within Wharton Basin (WB; strike-slip). N portion of NinetyEast ridge (NyR) major discontinuity for strain and velocity. Taking into account intraplate velocity field in vicinity of Sumatra trench, we obtain convergence rate of 46 mm/ yr towards N18°E at epicentre of 2004 Aceh mega-earthquake. Predicted shortening in CIB and WB and extension near Chagos-Laccadive in agreement with deformation measured from plate reconstructions and seismic lines, suggesting continuum of deformation since onset of intraplate deformation around 7.5-8 Ma)

Denham, D. (1973)- Seismicity, focal mechanisms and the boundaries of the Indian-Australian plate. In: P.J. Coleman (ed.) The Western Pacific: island arcs, marginal seas, geochemistry. University of Western Australia Press, p. 35-53.

Deng, J., Q. Wang, G. Li, C. Li & C. Wang (2013)- Tethys tectonic evolution and its bearing on the distribution of important mineral deposits in the Sanjiang region, SW China. Gondwana Research 26, p. 419-437.
(online at: http://www.cugb.edu.cn/uploadCms/file/20600/papers_upload/20141011142419767420.pdf)
(Sanjiang region in SE Tibet Plateau and NW Yunnan formed by amalgamation of Gondwana-derived continental blocks and arc terranes from Paleozoic-Mesozoic. E Paleozoic ophiolites (473-439 Ma) in Changning-Menglian belt indicate existence of Proto-Tethys ocean. Proto-Tethys succeeded in E Devonian by Paleo-Tethys. Changning-Menglian main ocean existed from M Devonian- M-Triassic. E-ward subduction of oceanic plate from E Permian to E Triassic formed >1500 km arc terrane from Yunnan to E Tibet. Numerous Late Triassic S-type granite plutons (230-219 Ma), produced W-Sn deposits. E-ward oceanic subduction of Mesotethys (Late Permian- M Cretaceous) produced E Cretaceous granitoids with skarn-type Pb-Zn and Sn-Fe deposits in Baoshan and Tengchong blocks. Neo-Tethys subduction (Late Cretaceous-~50 Ma) beneath Tengchong block formed S-type granitoids with skarn-type and greisen-type Sn-W deposits. Etc.)

Dercourt, J., L.E. Ricou & B. Vrielynck (eds.) (1993)- Atlas Tethys, Palaeoenvironmental maps. Gauthier-Villars, Paris, p. 1-307.
(Fourteen plate reconstructions and paleogeography maps of Tethys Oceans from mid-Permian-Tortonian. Maps do not include much of SE Asia)

De Wever, P. & F. Baudin (1996)- Palaeogeography of radiolarites and organic-rich deposits in Mesozoic Tethys. Geol. Rundschau 85, 2, p. 310-326.
(Siliceous and marine organic-rich deposits both result of high planktonic productivity, but sometimes associated, sometimes separate in space and time. Siliceous marine phtanite family facies contains organic material and are blackish (vs red/green for radiolarite facies) and deposited generally in shallower environments. Paleogeographic analysis for three Mesozoic high sea-level intervals (Toarcian, Kimmeridgian and Cenomanian) show: (a) in Jurassic siliceous deposits closer to open ocean waters than organic-rich ones; (b) during Cretaceous times often associated)

De Wever, P., F. Baudin, J. Azema & E. Fourcade (1995)- Radiolarians and Tethyan radiolarites from primary production to their paleogeography. In: J. Dercourt & A.E.M. Nairn (eds.) The ocean basins and margins 8, The Tethys Ocean, Plenum Press, p. 267-318.

Dewey, J.F., S. Cande, S. & W.C.I. Pitman (1989)- Tectonic evolution of the India/ Eurasia collision zone. Eclogae Geol. Helvetiae 82, p. 717-734.
(online at: http://dx.doi.org/10.5169/seals-166399)
(Since collision of India with Eurasia at ~45 Ma in M Eocene, N-S intracontinental convergence continued at ~5 cm/ year. Convergence accommodated principally by lithospheric thickening in widening zone between E transpressive sinistral megashear from Makran- Baikal and W dextral megashear from Sumatra to Tanlu Fault System. Lateral extrusion or escape was not major factor in accommodating India/Eurasia convergence)

Dickins, J.M. (1985)- Late Palaeozoic glaciation. Bureau Mineral Res. J. Australian Geol. Geophysics 9, p. 163-169.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/81179/)
(Review of Carboniferous- Permian glaciation in Australia- SE Asia. Main widespread terrestrial glaciation across Gondwana in Asselian (earliest Permian). In all areas rel. warm conditions returned in Sakmarian)

Dickins, J.M. (1985)- Palaeobiofacies and palaeobiogeography of Gondwanaland from Permian to Triassic. In: K. Nakawara & J.M. Dickins (eds.) The Tethys, Tokai University Press, Tokyo, p. 83-92.

Dickins, J.M. (1992)- Permian geology of Gondwana countries: an overview. Int. Geology Review 34, p. 986-1000.
(Earliest Permian of most Gondwanan areas characterized by glacial deposits and cold-water marine faunas. In W Australia glaciation confined to Asselian, followed by amelioration and rise in sea level in Sakmarian)

Dickins, J.M. (1996)- Problems of a Late Palaeozoic glaciation in Australia and subsequent climate in the Permian. Palaeogeogr. Palaeoclim. Palaeoecology 125, p. 185-197.
(Two main periods of glaciation: (1) Namurian (E Carboniferous) possibly extending into beginning of Late Carboniferous; (2) Asselian (earliest Permian). End of glaciation asssociated with worldwide eustatic rise in sea-level in basal Sakmarian (after this no good evidence for glaciation in Australia). In some places in Australia subtropical or tropical conditions in U Sakmarian, U Artinskian, Kungurian, Kazanian and Dzhulfian, all separated probably by colder periods. Marine Carboniferous Levipustula fauna may represent less cold sea water than E Permian Eurydesma fauna)

Dickins, J.M. (2000)- The northern margin of Gondwanaland: uppermost Carboniferous to lowermost Jurassic and its correlation. In: H.F. Yin, J.M. Dickins et al. (eds.) Permian-Triassic evolution of Tethys and Western Circum-Pacific, Developments in Palaeontology Stratigraphy 18, Elsevier, p. 257-270.
(In latest Carboniferous- early E Permian no apparent continuous sea in Tethys sensu Suess. Earliest Permian land barrier separated C Asian Sea from southern sea connecting 'Gondwana' countries. Youngest recognized marine deposits connecting through warm water C Asian Sea not younger than E Permian (Sakmarian). In U Permian-Triassic a N shore of Gondwanaland can be traced with southern sediment source. N shore of Tethys largely remains to be delineated)

Dickins, J.M. & Phan Cu Tien (1997)- Indosinian tectogeny in the geological correlation of Vietnam and adjacent regions. In: J.M. Dickins et al. (eds.) Late Palaeozoic and Early Mesozoic Circum-Pacific events and their global correlation. Cambridge University Press, p. 87-96.
(Review of U Devonian- Triassic stratigraphy of Vietnam. Indosinian orogeny manifested by Dzhulfian (U Permian) widespread unconformity and volcanic activity. Second Indosinian orogenic phase at end-Carnian, with widespread intrusive activity and deposition of coal-bearing molasse)

Dickins, J.M., Y. Zunyi, Yin Hongfu et al. (eds.) (1997)- Late Palaeozoic and Early Mesozoic Circum-Pacific events and their global correlation. Cambridge University Press, p. 1-255.
(Mainly mainland E Asia papers; nothing on Indonesia)

Diener, C. (1916)- Die marinen Reiche der Triasperiode. Denkschriften Kaiserl. Akademie Wissenschaften, Wien, Math.- Naturwiss. Klasse, 92, p. 405-549.
(online at: www.landesmuseum.at/pdf_frei_remote/DAKW_92_0405-0549.pdf)
('The marine realms of the Triassic period'. Review of global Triassic macrofaunas as known in 1916. Four main faunal provinces (Boreal, Mediterranean, Himalayan and Andean), based on cephalopods, bivalves, etc. Indonesian area groups in Himalayan Domain. Brief reviews of Triassic on Timor, Roti, Savu, Sumatra, Seram, Buru. Only Timor has complete Triassic section, with cephalopods and corals very similar to Alps. In other areas Triassic starts with Carnian transgression. Triassic of Sumatra mainly shallow marine clastics)

Domeier, M. (2018)- Early Paleozoic tectonics of Asia: towards a full-plate model. Geoscience Frontiers (Beijing) 9, 3, p. 789-862.

(online at: https://www.sciencedirect.com/science/article/pii/S1674987117302074)
(Extensive review of Cambrian- Silurian plate tectonics of Asia. Not much on SE Asia- Indonesian region)

Domeier, M. & T.H. Torsvik (2014)- Plate tectonics in the late Paleozoic. Geoscience Frontiers (Beijing), 5, p. 303-350.
(online/open access at: www.sciencedirect.com/science/article/pii/S1674987114000061)

Doust, H. (2017)- Petroleum systems in Southeast Asian Tertiary basins. Bull. Geol. Soc. Malaysia 64 (Geol. Soc. Malaysia 50th Anniversary Issue 2), p. 1-16.
(online at: www.gsm.org.my/products/702001-101723-PDF.pdf)
(Productive Tertiary basins in SE Asia similar geodynamic developments, with 5 facies associations: (1) lacustrine (early synrift of Sundaland; mainly oil) (2) paralic (late synrift); (3) open marine shelf (post-rift, E Indonesia and Philippines) (4) deeper marine (post-rift; mainly gas) and (5) pre-Tertiary (E Indonesia and Thailand, mainly terrestrial). Around Borneo thick late postrift passive margin delta sequences with oil- and gas-prone coaly source rock; transported terrigenous organic material common in related deep marine environments and contributes to marine source facies. In SE Asia terrestrial and lacustrine source rocks rel. difficult to locate, variable in quality and often distributed in thin beds)

Doyle, P. (1992)- A review of the biogeography of Cretaceous belemnites. Palaeogeogr. Palaeoclim. Palaeoecology 92, p. 207-216.
(Belemnites display Boreal and Tethyan marine faunal realms from Early Jurassic- earliest Cretaceous. Austral marine realm was lacking. In late Barremian- early Aptian Austral Realm was initiated with first Gondwanan family, Dimitobelidae. Tethyan belemnite realm cannot be recognised after Cenomanian)

Doyle, P. & P. Howlett (1989)- Gondwana Antarctic belemnite biogeography and the break-up of Gondwana. In: J.A. Crame (ed.) Origins and evolution of Antarctic biota, Geol. Soc., London, Spec. Publ. 47, p. 167-182.
(In Late Jurassic, belemnite genera Hibolithes and Belemnopsis abundant and widespread in Tethys, characterizing Tethyan Realm from S Europe and Asia to Antarctica. Distinct S Hemisphere 'Austral' belemnite realm was absent, although some endemicity exists at species level. Late Jurassic Indo-Pacific belemnites dominated by Belemnopsis with Hibolithes as minor element of fauna)

Duan, L., Q.R. Meng, N. Christie-Blick & G.L. Wu (2017)- New insights on the Triassic tectonic development of South China from the detrital zircon provenance of Nanpanjiang turbidites. Geol. Soc. America (GSA) Bull., 11p.
(Triassic turbidites of Nanpanjiang basin reflect collision between S China and Indochina blocks. Turbidite system filled primarily from E to W. U-Pb ages and Hf isotope data for detrital zircons from M Triassic turbidites suggest provenance not from collisional orogen, but from poorly preserved arc at convergent plate boundary of S China. Zircon ages clusters: ~250-300 Ma, 350-400 Ma, 400-550 Ma, 900-1050 Ma and ~1600-1950 Ma. Andean-type (Paleo-Pacific subduction) Cathaysian margin of S China probable source for much of sediment of S China block. New model for Triassic tectonic evolution of S China)

Duan, L., Q.R. Meng, G.L. Wu & S.X. Ma (2012)- Detrital zircon evidence for the linkage of the South China block with Gondwanaland in early Palaeozoic time. Geol. Magazine 149, 6, p. 1124-1131.
(Detrital zircons from Lower Devonian sections in S China block dominant Grenvillian and Pan-African populations, similar to E Paleozoic from Gondwana, Tethyan Himalaya and WAustralia. Hf isotopes indicate contributions of juvenile crust at 1.6 Ga and 2.5 Ga. S China block was integral part of E Gondwana in E Paleozoic, not continental block in Paleo-Pacific or fragment of Laurentia)

Ehiro, M. (1996)- Permian and Triassic paleogeography based on ammonoid fossils of East Asia. Chikyu Monthly, 18, p. 724-729. *(in Japanese)*

Ehiro, M. (1997)- Ammonoid palaeobiogeography of the South Kitakami palaeoland and palaeogeography of eastern Asia in Permian to Triassic time. Proc. 30th Int. Geological Congress, Beijing 1996, 12, Palaeontology and historical geology, VSP, Utrecht, p. 18-28.

(Biogeographic analysis of Permian- Triassic ammonoids in E Asia suggests Kikatami Terrane in NE Japan, was in equatorial realm near S China/ Khanka Terranes. Four ammonoid provinces in Permian: (1) Boreal, (2) Equatorial American, (3) Equatorial Tethyan (incl. S China, SE Asia, Iran, Timor; with E Permian perrinitids, M Permian Timorites, Waagenoceras?) and (4) Peri-Gondwanan (incl. Australia, Himalayas, Salt Range))

Ehiro, M. (1998)- Permian ammonoid fauna of the Kitakami Massif, Northeast Japan- biostratigraphy and Paleobiogeography. In:Y. Jin et al. (eds.) Permian stratigraphy, environments and resources 2, Palaeoworld 9, p. 113-122.
(online at: http://work.geobiology.cn/ebook/)
(Similar to above. Late M Permian Timorites- Waagenoceras ammonites of 'allochthonous Timor' affiliated with Tethyan instead of peri-Gondwanan assemblages)

Enay, R. & E. Cariou (1996)- Identification du Kimmeridgien du domaine Indo-Sud-Ouest Pacifique: la faune a *Paraboliceras* (Ammonitina) de l'Himalaya a la Nouvelle-Zelande. Comptes Rendus Academie Sciences, Paris, ser. 2, 322, 6, p. 469-474.
('Recognition of the Kimmeridgian Stage in the Indo-SW Pacific: the Paraboliceras fauna from the Himalayas to New-Zealand'. Kimmeridgian Stage not easily recognizable in Indo-SW Pacific because of lack of European taxa. Faunal sequence of Spiti Shales in C Nepal shows faunas with Paraboliceras (previously thought be of Tithonian age) are diagnostic of Kimmeridgian. This endemic Kimmeridgian biogeographic association extends from Himalayas to New Zealand.)

Enay, R. & E. Cariou (1997)- Ammonite faunas and palaeobiogeography of the Himalayan belt during the Jurassic: initiation of a Late Jurassic austral ammonite fauna. Palaeogeogr. Palaeoclim. Palaeoecology 134, 1, p. 1-38.
(Jurassic ammonite faunas form basis for new biogeographical interpretation of U Bathonian- Tithonian/ Berriasian peri-Gondwanan faunas. Low diversity Austral ammonite fauna around E and S Gondwanaland, from Himalaya to Patagonia)

Enay, R. & E. Cariou (1999)- Jurassic ammonite faunas from Nepal and their bearing on the palaeobiogeography of the Himalayan belt. J. Asian Earth Sci. 17, 5-6, p. 829-848.
(M-L Jurassic Himalayan ammonite faunas rel. low diversity and dominance of indigenous genera. Faunas extending from Himalayas to Antarctica represent an actual biogeographical unit: Indo Pacific Realm. With Blanfordiceras wallichi in Tithonian)

Enkin, R.J., Z. Yang, Y. Chen & V. Courtillot (1992)- Palaeomagnetic constraints on the geodynamic history of the major blocks of China from the Permian to the present. J. Geophysical Research 97, p. 13953-13989.
(Review of paleomagnetic data of China region suggests major blocks probably in contact in Permian-Triassic, but Jurassic key age for present configuration. During Cretaceous, Chinese poles agree with poles from other continents transferred onto Eurasia. Much of China affected by small (<20°) rotations, interpreted as deformation caused by extrusion away from India collision)

ESCAP (1990)- Triassic biostratigraphy and paleogeography of Asia. ESCAP Atlas of Stratigraphy IX, Min. Res. Dev. Ser. 59, United Nations, New York, p. 1-92.
(Brief descriptions of Triassic across Asia, incl. Malaysia and Timor)

Fan, W., Y. Wang, Y. Zhang, Y. Zhang, F. Jourdan, J. Zi & H. Liu (2015)- Paleotethyan subduction process revealed from Triassic blueschists in the Lancang tectonic belt of Southwest China. Tectonophysics 662, p. 95-108.
(Subduction of Paleotethys Ocean and subsequent continental collision recorded in blueschists in Lancang SE Paleotethyan belt in SW China. Suyi blueschists zircon U-Pb age of 260 ± 4 Ma and glaucophane formed during prograde metamorphism with 40Ar/39Ar plateau age of 242 ± 5 Ma (M Trias). Protolith formed at 260 Ma and originated from basaltic seamount. Basaltic rocks subducted down to 30-35 km under Lincang arc to form epidote blueschists at ~242 Ma. Blueschists subsequently transported to shallower crustal levels in response to continuous underthrust of subducted slab and continent–continent collision in M-L Triassic)

Fang, N.Q., Q. Feng, S. Zhang & X. Wang (1998)- Paleo-Tethys evolution recorded in the Changning-Menglian Belt, western Yunnan. Comptes Rendus Academie Sciences, Paris, Sciences de la Terre, 326, p. 275-282.
(Changning-Menglian belt of W Yunnan is ~400km long, 60 km wide remnant of Paleo-Tethyan archipelago. With E Devonian- M-L Triassic volcano-sedimentary record, incl. flysch, radiolarites, MORB basalts, seamount carbonates. Flanked by Cathaysian Lincang-Simao massif in E (M-L Devonian paleolatitude ~38-43°S) and Gondwanan Gengma-Baoshan massif in W (Devonian paleolatitude ~0-4.5°S; with Permo-Carboniferous moraine deposits))

Fang, Wu (1989)- Paleozoic paleomagnetism of the South China block and the Shan Thai block: The composite nature of Southeast Asia. Ph.D. Thesis, University of Michigan, p. 1-165.
(Paleomag of Paleozoic samples from E Yunnan (S China Block) and W Yunnan (N end of Shan-Tai Block). Contrasting paleolatitudes for Devonian samples: equatorial position for E Yunnan, of ~40° for W Yunnan, which probably was part of Gondwana supercontinent)

Fang, Z.J. (1991)- Sibumasu biotic province and its position in Paleotethys. Acta Palaeontologica Sinica 30, 4, p. 344-349.
(Sibumasu province characterized by: (1) No reliable Gondwana cold-water biota or glacial deposits (interpreted glaciomarine pebble-bearing layers are debris flows; molluscs identified as Eurydesma are Schiziodus). Temperate and warm water fauna dominant; carbonates not common; (2) No tropical Cathaysian biotas and reef complexes. Absence of Late Paleozoic coal seams and occurrence of mixed Permian Cathaysian-Gondwana flora in W Yunnan suggest Sibumasu between equatorial coal swamp zone (Cathaysian flora) and S temperate coal swamp zone (Glossopteris flora); (3) Contains Peri-Gondwana and Cathaysian elements but also European, Ural and Boreal elements; (4) Common endemic genera and species)

Fang, Z.J. (1994)- Biogeographic constraints on the rift-drift accretion history of the Sibumasu block. J. Southeast Asian Earth Sci. 9, 4, p. 375-385.
(Paleozoic biogeographic history of Sibumasu block stages: (1) Cambrian-Ordovician with Australian faunal affinities; (2) Silurian-Devonian with Rhenish-Bohemian faunal affinities; (3) Carboniferous- Permian independent biotic province, different from both peri-Gondwanaland (no true E Permian glacial deposits) and Cathaysian biotas (no Permian coals) in Tethyan realm. Towards end Permian, Cathaysian elements more important, especially in E margin, indicating Cathaysian and Sibumasu biotas began to merge. Sibumasu rifted from Gondwanaland in M Ordovician or earlier and sutured to East Continent in Late Permian and E Triassic)

Fang, Z.J., Z.C. Zhou & M.J. Lin (1992)- On several questions concerning Changning-Menglian Suture from perspect of stratigraphy. J. Stratigraphy 16, p. 292-303.

Fedorov, P.I. & A.V. Koloskov (2005)- Cenozoic volcanism of Southeast Asia. Petrology 13, 4, p. 352-380.
(Three main periods of activity in Cenozoic volcanic complexes of SE China, Vietnam, Thailand and S China Sea: E Tertiary, Miocene and Pliocene-Quaternary. First period characterized by potassic basalt (Vietnam) and tholeiitic bimodal (SE China) volcanism. Subsequent periods dominated by intraplate-type tholeiitic and alkaline volcanism and minor bimodal tholeiitic magmatism (basalts and rhyolites of Okinawa Trough))

Fernandez, V., J. Claude, G. Escarguel, E. Buffetaut & V. Suteethorn (2009)- Biogeographical affinities of Jurassic and Cretaceous continental vertebrate assemblages from SE Asia. In: E. Buffetaut (ed.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London. Spec. Publ. 315, p. 285-300.
(Late Jurassic- Early Cretaceous vertebrate assemblages from Khorat Gp of Thailand strong provincialism)

Ferrari, O.M., C. Hochard & G.M. Stampfli (2008)- An alternative plate tectonic model for the Palaeozoic-Early Mesozoic Palaeotethyan evolution of Southeast Asia (Northern Thailand-Burma). Tectonophysics 451, p. 346-365.
(Alternative model for Cambrian- Triassic geodynamic evolution of SE Asia. Differs in Paleotethys suture location in Thailand at Mae Yuam fault. Closure of E Paleotethys related to S-ward oceanic subduction that triggered E Neotethys opening as back-arc, due to Late Carboniferous- E Permian arc magmatism in Mergui

(Burma) and Lhasa block (S Tibet) and absence of arc magmatism E of suture. To explain Carboniferous-E Permian and Permo-Triassic arcs in Cambodia, U Triassic magmatism in E Vietnam and L-M Permian arc volcanics in W Sumatra, we introduce Orang Laut terranes, which detached from Indochina and S China during back-arc opening due to W-ward subduction of Paleopacific. This also explains location of Cathaysian W Sumatra block W of Cimmerian Sibumasu block (see also comments by Metcalfe 2009))

Fielding, C.R., T.D. Frank & J.L. Isbell (2008)- The late Paleozoic ice age- a review of current understanding and synthesis of global climate patterns. Geol. Soc. America (GSA), Spec. Paper 441, p. 343-354.
(Late Paleozoic ice age was series of 1-8 My duration discrete glacial events separated by periods of warmer climate. After smaller precursor events massive expansion of ice at Carboniferous-Permian boundary, and glaciation became bipolar. Ice sheets at maximum in Asselian- E Sakmarian, after which they decayed rapidly over much of Gondwana. Minor glaciations continued in Australia and Siberia through late E- M Permian)

Flower, M., R.M. Russo, K. Tamaki & N. Hoang (1998)- Mantle contamination and the Izu-Bonin-Mariana (IBM) 'high-tide mark': evidence for mantle extrusion caused by the Tethyan closure. Tectonophysics 333, p. 9-34.
(Discussion of SE Asia- W Pacific tectonics and plate kinematics. W Pacific back-arc basins opened in 3 main episodes of arc-trench rollback: (1) Eocene W Philippine Sea and Celebes Sea, (2) Oligocene-Miocene Japan, South China, Sulu and Makassar Seas, and (3) Late Miocene- Quaternary Okinawa, Mariana Troughs and Andaman Sea. Extrusion of Tethyan astenosphere, contaminated by sub-Asian cratonic lithosphere, was major cause of W Pacific arc rollback and basin opening)

Flower, M., K. Tamaki & N. Hoang (1998)- Mantle extrusion: a model for dispersed volcanism and DUPAL-like asthenosphere in East Asia and the Western Pacific. In: M.F.J. Flower et al. (eds.) Mantle dynamics and plate interactions in East Asia, American Geophys. Union (AGU), Geodyn. Ser. 27, p. 67-88.
(On dispersed volcanic clusters over much of Asia and W Pacific following India-Asia and Australia-Indonesia collisions: (1) variably potassic tholeiites and alkali basalts in tension gashes, pull-apart basins, etc., and (2) shoshonite series (K-rich boninite) at extensional, near-collision shear zones and sundered arcs)

Fluteau, F., J. Besse, J. Broutin & M. Berthelin (2001)- Extension of Cathaysian flora during the Permian-climatic and paleogeographic constraints. Earth Planetary Sci. Letters 193, 3, p. 603-616.
(Mixed Gondwanan, Euramerian and Cathaysian floral elements in 'Mid' Permian Gharif Fm of Oman (see also Berthelin et al. 2003))

Fontaine, H. (1986)- Shan-Thai Block and Indochina Block during the Carboniferous and the Permian; palaeontological and stratigraphical data. In: Proc. First Conf. Geology of Indochina, Ho Chi Minh City 1986, Gen. Dept. of Geology Vietnam, 1, p. 101-103.

Fontaine, H. (1986)- The Permian of Southeast Asia. CCOP Techn. Bull. 18, p. 1-111.
(Extensive review of geology and paleontology of Permian of Thailand, Vietnam, Laos, Malaysia, Sumatra, etc. Followed by 7 appendices on Permian fauna-flora by Fontaine, Nguyen Tien, Vachard and Vozenin-Serra))

Fontaine, H. (2002)- Permian of Southeast Asia: an overview. J. Asian Earth Sci. 20, 6, p. 567-588.
(Permian rocks widespread in SE Asia. Many limestones with fusulinaceans recognized as Permian, but ones without fusulinaceans and previously assigned to Permian, found to be Triassic. Widespread massive limestones represent extensive carbonate platforms. Local occurrences of thick-bedded cherts indicate deep marine environments. Pebbly mudstones in Myanmar, Thailand, NW Malaysia and Sumatra formed in glacial environment. Volcanic rocks absent in NW Peninsular Malaysia and Thailand, but widespread in N Vietnam, Sumatra, E Malay Peninsula and Timor. Faunal and floral assemblages used to establish climatic conditions, environments of deposition and to define crustal blocks and Permian paleogeography)

Fontaine, H., P. David, R. Pardede, N. Suwarna, J.P. Bassoullet, L. Beauvais, E. Buffetaut & R. Ingavat (1983)- The Jurassic in Southeast Asia (Thailand, Laos, Cambodia, Viet Nam, Malay Peninsula, Sumatra, Borneo, West Philippines). CCOP Techn. Bull. 16, p. 1-75.

(Extensive review of Jurassic in SE Asia. Jurassic in Cambodia, Laos, Vietnam, E Thailand and Malay Peninsula mainly in continental facies, with occasional thin, shallow marine interbeds. Busuanga, Linapacan and Ili islands, NE of Palawan, Philippines, 200m thick Late Jurassic limestone with Cladocoropsis, Pseudocyclammina lituus, Salingoporella spp., Thaumatoporella, etc. (Fontaine et al. 1983, Bassoulet 1983). Late Jurassic- E Cretaceous limestones with Cladocoropsis- Pseudocyclammina at many localities across W Sumatra (NW Sumatra, Jambi, S Sumatra; all tied to 'Woyla Terranes'?; JTvG), U Jurassic Bau Limestone in W Sarawak, etc.)

Fontaine, H., C. Chonglakmani, I. Amnan & S. Piyasin (1994)- A well-defined Permian biogeographic unit: peninsular Thailand and northwest Peninsula Malaysia. J. Southeast Asian Earth Sci. 9, p. 129-151.
(M-U Permian-Triassic Ratburi Lst of Peninsular Thailand and Chuping Lst of NW Peninsular Malaysia with rel. low diversity corals and fusulinids (Pseudofusulina, Staffella, Monodiexodina), and with forams incl. Hemigordiopsis and Shanita. These characterize a well-defined biogeographic unit (Shan-Tai/ Sibumasu terrane; JTvG). Noted similarities of several fossil groups with Timor Permian faunas)

Fontaine, H., P. David, R. Pardede & N. Suwarna (1983)- Marine Jurassic in Southeast Asia. UN-ESCAP CCOP Techn. Bull. 16, p. 3-30.
(Jurassic in W Philippines (Palawan Block), W Borneo, W Sumatra, Malay Peninsula, Thailand, Kampuchea and Vietnam. Marine Jurassic generally in limited areas only, and incomplete sections. Strong faunal affinities with Tethyan realm in E-M Jurassic, with Jurassic of Japan in Upper Jurassic)

Fontaine, H. & V. Suteethorn (1992)- Permian corals of Southeast Asia and the bearing of a recent discovery of Lower Permian corals in Northeast Thailand. In: C. Piencharoen (ed.) Proc. Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, Dept Min. Resources, p. 346-354
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1992/6234.pdf)
(Brief review of Permian corals of SE Asia. Permian corals of Thailand more diverse than Peninsular Thailand, NW Peninsular Malaysia and Timor, all of which are richer and more prolific than those from Australia. Timor corals rel. low diversity, mainly solitary Rugosa. Sumatra corals of Padang and W Jambi regions high diversity reefal limestone. Terbat Lst of W Borneo common fusulinids, but few or no corals. New Lower Permian fossil localities in NE Thailand (Loei) with solitary and compound rugose corals, incl. Kepingophyllidae)

Fortey, R.A. & L.R.M. Cocks (1998)- Biogeography and palaeogeography of the Sibumasu terrane in the Ordovician: a review. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Amsterdam, p. 43-56.
(online at: http://searg.rhul.ac.uk/searg_uploads/2016/01/Fortey_Cocks.pdf)
(Sibumasu (=Shan-Tai) paleocontinent comprises Sumatra, Malaysia, W Thailand and Burma. Ordovician rocks in China, Burma, S Thailand and interior Australia mainly carbonates. Lower Ordovician shelf faunas from Thailand- Langkawi low-latitude faunas, with affinities with N China- Australia, but M-U Ordovician trilobites most similar to S China)

Fourcade, E., J. Azema, J.P. Bassoullet, F. Cecca, J. Dercourt et al. (1995)- Palaeogeography and palaeoenvironments of the Tethys during Jurassic Pangaean break-up. In: A.E.M. Nairn, L.E. Ricou et al. (eds.) The ocean basins and margins 8, The Tethys Ocean. Plenum, New York, p. 191-214.

Fournier, M., L. Jolivet, P. Davy & J. Thomas (2004)- Backarc extension and collision: an experimental approach to the tectonics of Asia. Geophysical J. Int. 157, 2, p. 871-889.
(online at: https://academic.oup.com/gji/article/157/2/871/2080608)
(Modeling of E Asia deformation. Large parts of SE Asia affected by subduction-related extension, interacting with far field effects of India- Asia collision. Major backarc basins associated with ~N-S right-lateral strike-slip faults which accommodate N-ward penetration of India into Eurasia)

Fujikawa, M. & T. Ishibashi (2000)- Paleozoic ammonoid paleobiogeography in Southeast Asia. Geosciences J. 4, 4, p. 295-300.

(Paleobiogeography of Late Paleozoic ammonoids in SE Asia. Sibumasu terrane separated from Gondwanaland in E-M Permian. Contrary to previous opinion, no close faunal resemblance between Indochina and S China from Pennsylvanian to M Permian)

Fujiwara, K.P., H. Zaman, A. Surinkum, N. Chaiwong, M. Fujihara, H.S. Ahn & Y. Otofuji (2014)- New insights into regional tectonics of the Indochina Peninsula inferred from Lower-Middle Jurassic paleomagnetic data of the Sibumasu Terrane. J. Asian Earth Sci. 94, p. 126-138.
(Sibumasu Terrane between CW-rotated Indochina Block and CCW-rotated S Sundaland Block. Paleomagnetic data from E-M Jurassic Umphang Gp red sandstones in Ratchaburi area variable declinations(348.5° and 44.7°) for Sibumasu. Sibumasu Terrane behaved as independent fragment when Indochina was undergoing CW rotation and S-ward displacement, as result of extrusion tectonics after India-Asia collision. CCW rotation of 15° estimated for Sibumasu Terrane, as result of continuous N-ward indentation of Australian Plate into S Sundaland Block)

Fuller, M., R. Haston, J.L. Lin, B. Richter, E. Schmidtke & J. Almasco (1991)- Tertiary paleomagnetism of regions around the South China Sea. J. Southeast Asian Earth Sci. 6, 3-4, p. 161-184.
(Paleomag data for Borneo, Malay Peninsula, Philippines)

Fyhn, M.B.W., P.F. Green, S.C. Bergman, J. Van Itterbeeck, T.V. Tri, P.T. Dien, I. Abatzis, T.B. Thomsen, S. Chea, S.A.S. Pedersen et al. (2016)- Cenozoic deformation and exhumation of the Kampot Fold Belt and implications for south Indochina tectonics. J. Geophysical Research, Solid Earth, 121, 7, p. 5278-5307.
(Latest Mesozoic- earliest Cenozoic deformation of Sundaland core between SE Asian fusion and Cenozoic era of rifting and basin formation. In S Cambodia and Vietnam major latest Cretaceous- Paleocene thrusting and uplift of Kampot Fold Belt and surrounding regions, with up to ~11 km exhumation. Latest Cretaceous-Paleocene orogenesis affected much of greater Indochina, probably due to plate collision along E Sundaland or combination of collisions along E and W Sundaland. AFTA and ZFTA data document protracted cooling of Cretaceous granites and locally elevated thermal gradients 10's of My afterr emplacement. Thermalgradient stabilized by E Miocene time, and Miocene cooling probably reflects renewed denudation pulse)

Gao, X., X. Ma & X. Li (2011)- The great triangular seismic region in eastern Asia: thoughts on its dynamic context. Geoscience Frontiers 2, 1, p. 57-65.
(online at: http://ac.els-cdn.com/)
(On SE Asia earthquake distributions and major plate movements)

Gardiner, N.J., M.P. Searle, C.K. Morley, M.P. Whitehouse, C.J. Spencer & L.J. Robb (2016)- The closure of Palaeo-Tethys in Eastern Myanmar and Northern Thailand: new insights from zircon U-Pb and Hf isotope data. Gondwana Research 39, p. 401-422.
(Main Range and E Province granite belts of SE Asia represent magmatic expression of closure of Paleo-Tethys in Late Paleozoic- E Mesozoic times. New U-Pb zircon age data from N Thailand and E Myanmar constrain closure in Myanmar to ~230 Ma. Age of 219-220 Ma from Kyaing Tong granite imply N extension of Main Range Province into E Myanmar (E Triassic). Tachileik granite in far E Myanmar 266 Ma, consistent with E Province ages. Hf data suggest Paleoproterozoic crust underlies both Main Range and E Province granites)

Gatinsky, Y.G. (1986)- Geodynamics of Southeast Asia in relation to the evolution of ocean basins. Palaeogeogr. Palaeoclim. Palaeoecology 55, p. 127-144.
(Geodynamics of SE Asia closely connected with cyclic development of large oceanic basins: Paleotethys (M Paleozoic-E Mesozoic), Tethys (end Paleozoic- beginning Cenozoic), and Indian and Pacific Oceans (Late Mesozoic- Cenozoic). Opening of basins accompanied by simultaneous closing of earlier basins)

Gatinsky, Y.G. & C.S. Hutchison (1986)- Cathaysia, Gondwanaland, and the Paleotethys in the evolution of continental Southeast Asia. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 179-199.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b10.pdf)

(Continental SE Asia dominated by Precambrian continental blocks overlain by Late Proterozoic-Paleozoic platform successions. Most blocks rifted and drifted from Australian Gondwanaland in Early Paleozoic and were in equatorial position by Permian time. Between blocks are intensely folded mobile belts. West Borneo block initial separation from Eurasia in Late Triassic-Jurassic (creation of Proto-South China Sea), then detached from Indosinia in Late Cretaceous-Paleogene and moved S along fault margin of Vietnam shelf)

Gatinsky, Y.G., C.S. Hutchison, N. N. Minh & T.V. Tri (1984)- Tectonic evolution of Southeast Asia. 27th Int. Geological Congress, Moscow, Rept. 5, p. 225-239.

Gatinsky, Y.G., A.V. Mischina, I.V. Vinogradov & A.A. Kovalev (1978)- The main metallogenic belts of Southeast Asia as the result of different geodynamic conditions interference. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, Asian Inst. Techn., p. 313-318.
(Majority of mineral occurrences of SE Asia in five metallogenic belts)

Gatinsky, Y.G., Y.G. Zorina & A.A. Chistyakov (1983)- Fault tectonics in Southeast Asia. Proc. 19th Sess. CCOP, Tokyo 1982, 2, Techn. Reports, p. 243-253.
(Brief descriptions of characteristics of main fault zones in SE Asia)

Geyer, O.F. (1977)- Die "*Lithiotis*-Kalke" im Bereich der unterjurassischen Tethys. Neues Jahrbuch Geol. Palaont. Abhandl. 153, p. 304-340.
('The Lithiotis limestones' in the Early Jurassic Tethys Realm'. Tethyan Early Jurassic reefal limestones commonly dominated by large thick-walled Lithiotis-type bivalves (also present in Fatu Limestones of Timor; Krumbeck 1923, Hayami 1984))

Gibbons, A. (2012)- Regional plate tectonic reconstructions of the Indian Ocean. Ph.D. Thesis University of Sydney, p. 1-185.
(online at: http://ses.library.usyd.edu.au/handle/2123/8580)
(New model of Indian Ocean plate tectonic history, suggesting smaller extent of Greater India and later collision than previous models. Main driver is Jurassic rock sample dredged from Cretaceous Wharton basin off W Australia. Argoland accreted to equatorial intra-oceanic arc at ~126 Ma (E Cretaceous; obduction event recorded in zircons from ophiolites in Yarlung-Tsangpo suture zone between Indian and Eurasian blocks). E Argoland accreted to Sumatra at ~80 Ma, possibly re-attaching Woyla Terranes back to Sumatra margin. Greater India's indenter, Gascoyne block, reached W Burma and E edge of intra-oceanic arc at ~50 Ma, as India continued to migrate North. Final collision between Greater India (accreted to intra-oceanic arc) and Eurasia did not take place until ~35 Ma)

Gibbons, A., J.M. Whittaker & R.D. Muller (2013)- The breakup of East Gondwana: assimilating constraints from Cretaceous ocean basins around India into a best-fit tectonic model. J. Geophysical Research, Solid Earth, 118, doi:10.1002/jgrb.50079, p. 1-15.

Gibbons, A.D., S. Zahirovic, R.D. Muller, J.M. Whittaker & V. Yatheesh (2015)- A tectonic model reconciling evidence for the collisions between India, Eurasia and intra-oceanic arcs of the central-eastern Tethys. Gondwana Research 28, 2, p. 451-492.
(Plate tectonic model for India-Eurasia collision. With plate reconstructions since Middle Jurassic (160 Ma) and including chapter on SE Asia and Woyla Arc of Sumatra)

Gobbett, D.J. (1973)- Carboniferous and Permian correlation in Southeast Asia In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 131-142.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973010.pdf)
(Late Paleozoic rocks from Thailand, Malaysia, Myanmar, Vietnam, Laos, Cambodia, Sumatra, Borneo, etc.))

Goldfarb, R.J., R.D.Taylor, G.S. Collins, N.A. Goryachev & O.F. Orlandini (2014)- Phanerozoic continental growth and gold metallogeny of Asia. Gondwana Research 25, p. 48-102.

(Review of tectonic evolution and associated gold deposits of mainland Asia in past 800 Myrs. Nothing on Indonesia)

Golonka, J. (2007)- Late Triassic and Early Jurassic palaeogeography of the world. Palaeogeogr. Palaeoclim. Palaeoecology 244, p. 297-307.
(Paleogeographic maps for Late Triassic (Carnian-Norian) and E Jurassic (Hettangian-Toarcian). Triassic continued N-ward drift of Cimmerian continent corresponded with closure and consumption of Paleotethys and opening of Neotethys. Most significant Late Triassic convergent event was Indosinian orogeny, result of consolidation of S and N China blocks. Also, Indochina and 'Indonesia' sutured to S China. Triassic- Jurassic boundary important biotic extinction event)

Golonka, J. (2007)- Phanerozoic paleoenvironment and paleolithofacies maps- Late Paleozoic. Geologia 33, 2, p. 145-209.
(online at: http://journals.bg.agh.edu.pl/GEOLOGIA/2007-02/Geologia_2007_2_01.pdf)
(Global plate tectonic and paleogeographic maps for 8 E Devonian- Permian time intervals. Includes Australia- SE Asia blocks evolution. 'Indonesia' shown as part of Cimmerian Blocks that rifted off Gondwana in Permian and collide with mainland SE Asia in Triassic)

Golonka, J. (2007)- Phanerozoic paleoenvironment and paleolithofacies maps- Mesozoic. Geologia 33, 2, p. 211-264
(Global plate tectonic and paleogeographic maps for 8 Mesozoic time intervals. Most significant Triassic convergent event was Indosinian orogeny (collision of Indochina and Indonesia with S China). N-ward drift of Cimmerian continents driven by closing of Paleotethys and opening of Neotethys Ocean. SE Asia not very well portrayed in this global map series)

Golonka, J. (2009)- Phanerozoic paleoenvironment and paleolithofacies maps- Cenozoic. Geologia 35, 4, p. 507-587.
(online at: http://journals.bg.agh.edu.pl/GEOLOGIA/2009-04/Geologia_2009_4_01.pdf)

Golonka, J. (2009)- Phanerozoic paleoenvironment and paleolithofacies maps- Early Paleozoic. Geologia 35, 4, p. 589-654.
(online at: http://journals.bg.agh.edu.pl/GEOLOGIA/2009-04/Geologia_2009_4_02.pdf)
(Global plate tectonic and paleogeographic maps for 8 Cambrian- Silurian time intervals. Australia and China blocks in low northern latitudes)

Golonka, J. (2012)- Paleozoic paleoenvironment and paleolithofacies maps of Gondwana. AGH University of Science and Technology Press, Krakow, p. 1-82.
(Paleozoic global plate reconstructions, with focus on Gondwana region)

Golonka, J., A. Embry & M. Krobicki (2018)- Late Triassic global plate tectonics. In: L.H. Tanner (Ed.) The Late Triassic World, Earth in a time of transition, Topics in Geobiology 46, Springer International, Chapter 2, p. 27-57.
(Late Triassic global plate reconstruction, at time of Early Cimmerian and Indosinian orogenies that closed Paleotethys Ocean (earlier in Alpine-Carpathian-Mediterranean area, and latest in SE Asia). Pulling force of N-dipping subduction along N margin of Neotethys (= Mesotethys) caused drifting of new set of plates from passive Gondwana margin, dividing Neotethys Ocean (= opening of Cenotethys; Lhasa plate separation))

Golonka, J. & D. Ford (2000)- Pangean (Late Carboniferous-Middle Jurassic) paleoenvironment and lithofacies. Palaeogeogr. Palaeoclim. Palaeoecology 161, p. 1-34.
(Six global rconstructions for Pangea from Late Carboniferous- M Jurassic. Most of Indonesia shown as part of 'Cimmerian Plates' that rifted from Gondwana in Permian and sutured with SE Asia in Late Triassic)

Golonka J. & A. Gaweda (2012)- Plate tectonic evolution of the southern margin of Laurussia in the Paleozoic. In: E. Sharkov (ed.) Tectonics- Recent advances, Chapter 10, InTech, p. 261-282.

(online at: http://cdn.intechopen.com/pdfs-wm/37859.pdf)
(Trench-pulling effect of N-dipping subduction at S margin of Eurasia caused rifting as well as transfer of plates from Gondwana to Laurasia. This model applied here to S margin of Laurussia in Paleozoic times. With 12 plate tectonic maps for time slices from Early Cambrian- Late Carboniferous)

Golonka, J., M. Krobicki & Nguyen Van Giang (2006)- Paleogeographic maps of Southeast Asia. In: Proc. Second Int. Workshop IGCP Project 480, Structural and tectonic correlation across the Central Asian orogenic collage, Ulaanbaatar 2006, p. 71-74. *(Extended Abstract only)*
(online at: www.igcp.itu.edu.tr/Publications/GolonkaKrob_06.pdf)

Golonka, J., M. Krobicki, J. Pajak & Nguyen Van Giang & W. Zuchiewich (2006)- Phanerozoic palaeogeography of Southeast Asia. Geolines 20, p. 40-43. *(Extended Abstract only)*
(online at: http://geolines.gli.cas.cz/fileadmin/volumes/volume20/G20-040.pdf)
(Brief summary of larger SE Asia project)

Golonka, J., M. Krobicki, Z. Paul & A. Khudoley (2006)- Central Asia- Southeast Asia connection during Paleozoic orogenies: problems and questions. Geolines 20, p. 21-23.
(online at: www.igcp.itu.edu.tr/Publications/Golonka_06.pdf)
(Peak of Paleozoic orogenesis in SE Asia and S China in Silurian- earliest Devonian. In N Vietnam deep water Ordovician and Silurian synorogenic deposits overlain by continental E Devonian red beds. With plate tectonic map for Early Ordovician)

Golonka, J., M. Krobicki, J. Pajak, Nguyen Van Giang & W. Zuchiewicz (2006)- Global plate tectonics and paleogeography of Southeast Asia. Fac. Geology, Geophysics Environmental Protection, AGH University of Science and Technology, Arkadia, Krakow, p. 1-128.
(Major review of global plate tectonic evolution from Cambrian- Recent in 32 maps/ time slices, with detailed maps for SE Asia (Vietnam focused). Differs from recent Hall and Metcalfe models in depicting the more 'traditional' view of SW Borneo as always having been part of Indochina-Sibumasu (which rifted off Indochina/ S China by opening of Proto- South China Sea in Jurassic or Cretaceous))

Gorur, N. & A.M.C. Sengor (1992)- Paleogeography and tectonic evolution of the Eastern Tethysides: implications for the Northwest Australian margin breakup history. In: U. von Rad et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 122, College Station, p. 83-106.
(online at: www-odp.tamu.edu/publications/122_SR/VOLUME/CHAPTERS/sr122_05.pdf)
(Last major breakup from NW Australian continental margin (Exmouth, Wombat, Scott Plateaus) in Berriasian-Hauterivian. Major continental fragments in Asiatic Tethyside orogenic collage already collided with Asia by that time. Similarity of Mesozoic geological record suggests Sikuleh-Natal continental sliver in Sumatra, plus possible extensions in Java probably continental object that left NW Australia in Berriasian- Hauterivian. This sliver records E Cretaceous rapid subsidence and collision with Sumatra along Woyla suture in Late Cretaceous. NW Australian margin two older breakup events: (1) latest Carboniferous-earliest Permian: departure of Sibumasu block and E Cimmerian continent (Baoxan, W Thailand, E Burma), W Malaya and part of C Sumatra; (2) Late Triassic-Jurassic. Lhasa- C Burma block left Gondwanaland, which leads us to think breakup event was latest Triassic, probably Rhaetian)

Grant-Mackie, J.A., Y. Aita, B.E. Balme, H.J. Campbell, A.B. Challinor, D.A.B. MacFarlan, R.E. Molnar, G.R. Stevens & R.A.Thulborn (2000)- Jurassic palaeobiogeography of Australasia. In: A.J. Wright (ed.) Palaeobiogeogeography of Australasia, Mem. Assoc. Australasian Palaeontologists (AAP) 23, p. 311-353.
(Review of Australian Jurassic fossils distribution)

Grunow, A.M. (1999)- Gondwanan events and palaeogeography: a palaeomagnetic review. J. African Earth Sci. 28, 1, p. 53-69.

Guillot, S., K. Hattori, P. Agard, & S. Schwartz & O. Vidal (2009)- Exhumation processes in oceanic and continental subduction contexts: a review. In: S. Lallemand and F. Funiciello (eds.) Subduction zone geodynamics, Springer-Verlag p. 175-205.
(Review of exhumation of high and ultrahigh pressure metamorphic rocks and ophiolites. Three types of subduction zones: (1) Accretionary-type subduction zones exhume HP metasedimentary rocks by underplating; (2) Serpentinite-type subduction zones exhume HP to UHP in 1-10 km thick serpentinite subduction channel (incl. Bantimala, Sulawesi, Luk Ulo, C Java); (3) continental-type subductions exhume UHP rocks of continental origin. With examples from SE Asia)

Guo, F. (1990)- Terranes of Southwest China since the Late Paleozoic. In: T.J. Wiley et al. (eds.) Terrane analysis of China and the Pacific Rim, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Sci. Publ. 13, p.

Guo, F. (1991)- The boundary between Gondwana and Pacifica and the suturing ages of their allied terranes in Southwestern China. Acta Geologica Sinica (English Ed.) 4, p. 87-95.
(Two terrane groups in SW China: (1) with Permo-Carboniferous ice-rafted marine sediments and cold-water fauna of Gondwana facies (Gangmar Co, Lhasa, Sa' gya, Tengchong, Baoshan terranes), (2) with Yangtze-type U Paleozoic with Cathaysian flora and Pacific-type fusulinids (Changning-Menglian, Shuangjiang-Lancang, Qamdo and Bayan Har terranes). Longmu Co-Shuanghu-Dengqen- N Lancang River- Kejie-Mengding suture zone between two groups is boundary between Gondwana and Pacifica in SW China. Baoshan and Nyainrong-Sog in Lhasa composite terrane first combined with Asian continent in early E Jurassic. N Tibet- W Yunnan microplate (with Gangmar Co, Lhasa, Tengchong terranes) collided with Asia at end of E Cretaceous)

Hada, S., S. Bunopas, K. Ishii & S. Yoshikura (1997)- Rift-drift history and the amalgamation of Shan-Thai and Indochina/ East Malaysia Blocks. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 273-286.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Same paper as Hada et al. 1999)

Hada, S., S. Bunopas, K. Ishii & S. Yoshikura (1999)- Rift-drift history and the amalgamation of Shan-Thai and Indochina/East Malaysia Blocks. In: I. Metcalfe (ed.) Gondwana dispersion and Asian accretion (IGCP 321 Final Results Volume), Balkema, Rotterdam, p. 67-87.
(Nan-Chanthaburi suture zone in SE part of C Thailand, between Shan-Thai (=Sibumasu) in W and Indochina/ E Malaya Blocks in E, regarded as main branch of Paleo-Tethys ocean. Two belts: in W imbricated bedded Chanthaburi chert-clastic sequence (former active margin of Shan-Thai terrane; cherts with M-L Triassic radiolaria), in E Thung Kabin serpentinite melange (incl. red cherts with E, M and L Permian radiolaria and blocks of E and M Permian fusulinid limestone). Both belts unconformably overlain by ?U Triassic greywacke-andestic tuffaceous sequence, then Khorat Gp redbeds. Collision age believed to be latest Triassic)

Hada, S., K. Ishii, C.A. Landis, J. Aitchison & S. Yoshikura (2001)- Kurosegawa Terrane in Southwest Japan: disrupted remnants of a Gondwana-derived terrane. Gondwana Research 4, p. 27-38.
(Kurosegawa Terrane in SW Japan, between two Mesozoic subduction complex terranes, is exotic terrane with Permian limestones with fusulinacean forams Cancellina, Colania and Lepidolina, suggesting terrane once situated within Colania- Lepidolina territory in E Tethys-Panthalassa region at equatorial latitude, possibly close to E margin of S China or Indochina-E Malaya continental blocks. These blocks had rifted from Gondwana by Late Devonian. Amalgamated with proto-Asian continent (S China?) in Late Triassic (or later))

Hall, R. (2015)- Provenance and basement studies of SE Asia. In: Asia Petrol. Geosc. Conf. Exhib. (APGCE), Kuala Lumpur, 5p. *(Extended Abstract)*
(Brief review of recent Royal Holloway sandstone provenance work (Gunawan, Sevastjanova, Zimmermann))

Hall, R. & H. Breitfeld (2017)- Nature and demise of the Proto-South China Sea. Bull. Geol. Soc. Malaysia 63 (Geol. Soc. Malaysia 50th Anniversary Issue 1), p. 61-76.

(online at: www.gsm.org.my/products/702001-101708-PDF.pdf
(Proto-South China Sea should be used only for oceanic slab subducted beneath Sabah and Cagayan between Eocene- E Miocene; Paleo-Pacific Ocean used here for lithosphere subducted under Borneo in Cretaceous. Good evidence for subduction between Eocene- E Miocene below Sabah, and W limit of Proto-S China Sea subduction was W Baram Line; subducted slab imaged in lower mantle by P-wave tomography. Present-day NW Borneo Trough and Palawan Trough not subduction trenches: NW Borneo Trough flexural response to gravity-driven deformation of Neogene sediment wedge NW of Sabah. Palawan Trough is continent-ocean transition at SE edge of modern S China Sea)

Hall, R., M.A. Cottam & M.E.J. Wilson (2011)- The SE Asian gateway: history and tectonics of the Australia-Asia collision. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of the Australia-Asia collision, Geol. Soc, London, Spec. Publ. 355, p. 1-6.
(Introduction to collection of geological papers on E Indonesia from 2009 SAGE conference)

Hallam, A. (1986)- Evidence of displaced terranes from Permian to Jurassic faunas around the Pacific margins. J. Geol. Soc. London 143, p. 209-216.
(Permian- Jurassic Tethyan marine invertebrate faunas from low latitude can be distinguished from less diverse higher latitude faunas. Displacement of these low-latitude faunas high latitudes around Pacific margins provides evidence for movement of displaced terranes. Fullest story worked out for W margin of N America, as far N as S Alaska. Also evidence for N-ward movement of continental segments along NE Asian margin. Torlesse Terrane of New Zealand appears to have moved considerable distance S-wards)

Halle, T.G. (1935)- On the distribution of the Late Palaeozoic floras in Asia. Geografiska Annaler 17, Suppl. (Sven Hedin volume), p. 106-111.
(First paper to recognize three Permian floral provinces in Asia: Indian Gondwanan-Glossopteris in SW, Angara flora in N, Cathaysian/ Sino-Malayan or Gigantopteris flora in SE. No figures)

Hao, S. & P.G. Gensel (1998)- Some new plant finds from the Posongchong Formation of Yunnan, and consideration of a phytogeographic similarity between South China and Australia during the Early Devonian. Science in China, ser. D, 41, 1, p. 1-13.
(online at: http://engine.scichina.com/publisher/scp/journal/Sci%20China%20Earth%20Sci-D/41/1/10.1007/BF02932414?slug=full%20text)
(E Devonian plants from Posongchong Fm of SE Yunnan, suggest E Devonian NE Gondwana phytogeographic unit in Equatorial position, comprising Australia, S China Block and perhaps Shan-Thai Block)

Harzhauser, M., A. Kroh, O. Mandic, W.E. Piller, U. Gohlich, M. Reuter & B. Berning (2007)- Biogeographic responses to geodynamics: a key study all around the Oligo-Miocene Tethyan Seaway. In: 48th Phylogenetic Symposium on historical biogeography, Zoologischer Anzeiger 246, 4, p. 241-256.
(Extensive terrestrial exchanges initiated by closure of Tethyan Seaway in Early Miocene. Until closure, marine faunal exchange via Mesopotamian Trough and Zagros Basin, reflected by Indonesian corals in Iran and 'western' gastropods in Pakistan and India. Divergences on both sides of seaway starting in Oligocene. Around closure event Proto-Mediterranean faunas already little in common with Indo-West Pacific Region)

Hasegawa, S. (1996)- Ridge subduction model- a mechanism for an earlier South China Sea opening and an alternative paleogeographic reconstruction of Southeast Asia. In: 11th Offshore SE Asia Conf. Exhib. (OSEA96), Singapore 1996, p. 155-167.
(Late Mesozoic- Tertiary plate reconstruction, generally compatible with Tapponnier extrusion model. The now subducted Kula-Pacific Ridge beneath Eurasia Plate caused S China basins rifting and provides heat under S China continental crust))

Hashimoto, W., E. Aliate, N. Aoki, G. Balce, T. Ishibashi, N. Kitamura, T. Matsumoto, M. Tamura & J. Yanagida (1975)- Cretaceous system of Southeast Asia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 219-287.
(online at: http://twgeoref.moeacgs.gov.tw/star/1975/19750026/0219.pdf)

(Extensive review of Japanese work on Cretaceous stratigraphy and paleontology of Taiwan, Philippines, Borneo, Java, Sulawesi, etc.. Incl. significant details on Cretaceous Orbitolina occurrences on Borneo)

Hashimoto, W. & T. Sato (1980)- Correlation of the structural belts in East and Southeast Asia. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 343-356.
(Brief review of Mesozoic and Cenozoic structural belts of SE and East Asia)

Hayami, I. (1984)- Jurassic marine bivalve faunas and biogeography in Southeast Asia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia 25, University of Tokyo Press, p. 229-237.
(Unique E Jurassic (Pliensbachian?) heavy bivalve assemblage from Timor with Lithiotis, Pachymegalodon, Gervilleioperna, etc. described from Fatu Lst of Timor by Krumbeck (1923). Upper Jurassic bivalves in W Borneo part of East Asian Province with Philippines and Japan. Timor-Roti, Seram, Misool, etc., are part of Maorian Province with Malayomaorica and Retroceramus haasti)

He, C., S. Dong, M. Santosh & X. Chen (2012)- Seismic evidence for a geosuture between the Yangtze and Cathaysia Blocks, South China. Nature Scientific Reports 3, 2200, p. 1-7.
(online at: https://www.nature.com/articles/srep02200.pdf)
(S China block composed of sub-blocks Yangtze in NW and Cathaysia in SE, , which collided and amalgamated in Neoproterozoic along Jiangnan Orogen. Felsic lower crust of Cathaysia Block and Jiangnan orogenic belt may represent fragments derived from Gondwana supercontinent)

Heine, C. (2002)- The tectonic evolution of the Northwest Shelf of Australia and southern Southeast Asia. M.Sc. Thesis Ruhr-Universat Bochum and University of Sydney, p. 1-94.
(online at: www.earthbyte.org/people/christian/media/Heine_02_MScThesis_e-version.pdf)
(Argo and Gascoyne Abyssal Plains off NW Australia are the only preserved patches of Tethyan ocean floor; rest destroyed by subduction. W Burma Block identified as continental fragment breaking up from NW Shelf in Late Jurassic and accreted to SE Asian mainland in Santonian-Coniacian (85-80Ma) near W Thailand)

Heine, C., R.D. Muller & C. Gaina (2004)- Reconstructing the lost Eastern Tethys Ocean basin: convergence of the SE Asian margin and marine gateways. In: P. Clift et al. (eds.) Continent-ocean interactions within East Asian marginal seas, American Geophys. Union (AGU), Geophys. Monograph Ser. 149, p. 37-54.
(Reconstruction of E Tethys (Mesotethys and Neotethys) ocean basin for last 160 Myr, with reconstructions in 20 Myr increments, constrained by magnetic anomalies in Argo and Gascoyne abyssal plains of Australia NW shelf, assuming symmetrical spreading, etc.)

Helmcke, D. (1983)- On the Variscan evolution of Central Mainland Southeast Asia. Earth Evolution Sciences, 1982, 4, p. 309-319

Helmcke, D. (1984)- The orogenic evolution (Permian-Triassic) of central Thailand. Implications on paleogeographic models for mainland SE Asia. Mem. Soc. Geologique France, N.S., 147, p. 83-91.

Helmcke, D. (1985)- The Permo-Triassic óPaleotethysô in mainland Southeast Asia and adjacent parts of China. Geol. Rundschau 74, 2, p. 215-228.
(Discussion of geodynamic evolution of mainland SE Asia and China. Permo-Triassic 'Paleotethys' suture must be expected S of Tibet and in Burma. All sutures in Thailand, Vietnam and Yunnan already closed during Paleozoic)

Helmcke, D., R. Ingavat-Helmcke & D. Meischner (1993)- Spatvariszische Orogenese und Terranes in Sudost-Asien. Gottinger Arbeiten Geologie Palaeontologie, 58, p. 29-38.
('Late Variscan orogenesis and terranes in Southeast Asia')

Henderson, R.A., J.S. Crampton, M.E. Dettmann, J.G. Douglas, D. Haig, S. Shafik, J.D. Stilwell & R.A. Thulborn (2000)- Biogeographical observations on the Cretaceous biota of Australasia. In: A.J. Wright et al.

(eds.) Palaeobiogeography of Australasian faunas and floras, Mem. Assoc. Australasian Palaeontologists (AAP) 23, p. 355-404.
(Overview of Cretaceous macrofauna, microfauna, flora in Australia. Maximum paleobiogeographic gradients in Albian, Late Campanian and Maastrichtian)

Hennig, D., B. Lehmann, D. Frei, B. Belyatsky, X.F. Zhao, A.R. Cabral, P.S. Zeng, M.F. Zhou & K. Schmidt (2009)- Early Permian seafloor to continental arc magmatism in the eastern Paleo-Tethys: U-Pb age and Nd-Sr isotope data from the southern Lancangjiang zone, Yunnan, China. Lithos 113, 3/4, p. 408-422.
(SW Yunnan complex geological evolution of Paleo-Tethys and Eurasia-Gondwana collision at end of Paleozoic. S Lancangjiang zone at Laos border gabbros with U-Pb zircon age of 292 Ma, indicative of E Permian sea-floor spreading. Also arc-like andesites and granodiorite intrusions with zircon ages of 284-282 Ma. Point to Permian subduction of oceanic crust between Lincang Block and Lanping-Simao Block. M Triassic Lincang granite (239 Ma) batholith marks closure of Paleo-Tethys. Nd-model ages from 1.7- 2.1 Ga point to Paleoproterozoic basement, probably fragment of Yangtze Block)

Herngreen, G.F.W., M. Kedves, L.V. Rovnina & S.B. Smirnova (1996)- Cretaceous palynological provinces: a review. In: J. Jansonius & D.C. MacGregor (eds.) Palynology: principles and applications, American Assoc. Stratigr. Palynologists (AASP) Found. 3, p. 1157-1188.
(Includes map of Albian-Cenomanian tropical-subtropical Elaterosporites microfloral province (peaking in subtropical arid climate?). Also known from PNG)

Hirsch, F., K. Ishida, T. Kozai & A. Meesook (2006)- The welding of Shan-Thai. Geosciences J. (Geol. Soc. Korea), 10, 3, p. 195-204.
(online at: www.geosciences-journal.org/home/journal/...)
(Shan-Thai Terrane is remnant of 'poly-island' Paleo-Tethys oceanic system in SE Asia. It is composite terrane, with Cathaysian internal elements and transitional 'Sibumasu' central part. External 'Shan' elements left Gondwana last and have clear cold-water imprint. Final welding and Paleotethys closure in end Triassic-earliest Jurassic Late Indosinian event. Cenozoic Himalayan escape tectonics compressed Shan-Thai, opened Gulf of Thailand and disrupted original alignment of Gondwana-Tethys divide)

Hobbs, W.H. (1944)- Mountain growth, a study of the Southwestern Pacific Region. Proc. American Philosophical Soc. 88, 4, p. 221-268.
(Old review of SW Pacific mountain systems, including Sunda-Banda Arc)

Holcombe, C.J. (1977)- How rigid are the lithospheric plates? Fault and shear rotations in southeast Asia. J. Geol. Soc., London, 134, p. 325-342.
(Significant fault movement in Tertiary in continental SE Asia. Three rotations: Indochina subplates wrench rotation, Sunda shear rotation, and rotation of Malay Peninsula and Sunda Platform by movements along Ranong and Semangko faults)

Holloway, J. & R. Hall (1998)- SE Asian geology and biogeography: an introduction. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., p. 1-23.

Holloway, J. (1998)- Geological signal and dispersal noise in two contrasting insect groups in the Indo-Australian tropics: R-mode analysis of patterns in Lepidoptera and cicadas. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publishers, p. 291-314.

Honza, E. & K. Fujioka (2004)- Formation of arcs and backarc basins inferred from the tectonic evolution of Southeast Asia since the Late Cretaceous. Tectonophysics 384, p. 23-53.
(New data in NW West Philippines basin Daito Ridge used to reconstruct Late Cretaceous- Tertiary plate tectonics of SE Asia. In model S Borneo rotated 90° CCW since Cretaceous)

Hou, Z. & H. Zhang (2015)- Geodynamics and metallogeny of the eastern Tethyan metallogenic domain. Ore Geology Reviews 70, p. 346-384.

(Major review of metallogeny of eastern Tethysides)

Houseman, G. & P. England (1993)- Crustal thickening versus lateral expulsion in the Indian-Asian continental collision. J. Geophysical Research 98, B7, p. 12233-12249.
(Since beginning of continental collision between India and Asia ~2500 km of convergence. N-ward movement of India accommodated by major internal deformation of Asian lithosphere, incl. crustal thickening in and around Tibetan Plateau. Experimental modeling suggests crustal thickening dominant mode of indentation strain accommodation. Although common 10- 30° paleomagnetic rotations, probably not accompanied by large Eastward 'extrusion')

Hsu, K.J., J. Li, H. Chen, Q. Wang, S. Sun & A.M.C Sengor (1990)- Tectonics of South China: key to understanding West Pacific geology. Tectonophysics 183, p. 9-39.
(S China is composite of Proterozoic-Mesozoic orogenic belts. Three continental blocks: Yangzi, Huanan, and Dongnanya. Yangzi separated from Gondwana in Late Precambrian. N margin of Huanan was N active Gondwana margin until Devonian. Huanan and Yangzi collided in Triassic. Huanan separated in Devonian, with continuous Devonian-Triassic sequence on S passive margin of Huanan. Dongnanya with Permian glacial marine deposits, separated from Gondwana in Late Permian and may be E continuation of Sibumasu)

Huang, H. & X. Jin (2014)- Paleoclimatic implications of Permian fusulinids and carbonates from the Baoshan Block, southwestern China. In: R. Rocha et al. (eds.) Strati 2013- First Int. Congress on Stratigraphy, At the cutting edge of stratigraphy, Springer, p. 1105-1108.
(Permian fusulinids of Baoshan Block (= part of 'Sibumasu Group') lower generic diversity than coeval tropical assemblages. Dominant elements change from mainly eurytopic genera in E Permian/Sakmarian grainstones (>30°S; Pseudofusulina, Eoparafusulina) to warmer water algal-foram limestones in M Permian Murghabian (with Schwagerina, Eopolydiexodina) and Midian (with Sumatrina, Verbeekina))

Huang, W., D.J.J. Hinsbergen, P.C. Lippert, Z. Guo & G. Dupont-Nivet (2015)- Paleomagnetic tests of tectonic reconstructions of the India-Asia collision zone. Geophysical Research Letters 42, 8, p. 2642-2649.
(Late Cretaceous and Paleogene paleolatitudes of Tibetan Himalaya difficult to reconcile with current hypotheses of collision age (34, 52 or 65 Ma) and inferred Asian shortening (600-900km))

Huang, Z.C., D.P. Zhao & L. Wang (2015)- P wave tomography and anisotropy beneath Southeast Asia: insight into mantle dynamics. J. Geophysical Research, Solid Earth, 120, 7, p. 5154-5174.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2015JB012098/epdf)
(Tomographic images of mantle under SE Asia show high-velocity zones high-V zones around SE Asia which generally represent subducting slabs. Slabs generally extend down to the Mantle Transition Zone. Low-velocity zones with trench-normal anisotropy in uppermost mantle, indicating back-arc spreading or secondary mantle-wedge flow induced by slab subduction. Trench-parallel anisotropy in deep upper mantle reflects structures in subducting slab or in upper mantle surrounding slab. Gap in slab under area between Sumatra and Java)

Hutchison, C.S. (2005)- The geological framework. In: A. Gupta (ed.) The physical geography of Southeast Asia, Oxford University Press, p. 3-23.
(Review of SE Asia tectonic framework)

Isbell, J.L., M.F. Miller, K.L. Wolfe & P.A. Lenaker (2003)- Timing of late Paleozoic glaciation in Gondwana: was glaciation responsible of the development of northern hemisphere cyclothems? In: M.A Chan & A.W. Archer (eds.) Extreme depositional environments: mega end members in geologic time, Geol. Soc. America (GSA), Spec. Paper 370, p. 5-24.

Izokh, E.P. (1997)- Australasian tektites and a global disaster of about 10,000 years BP, caused by collision of the Earth with a comet. Russian Geol. Geophysics 38, 3, p. 669-699.
(Based on evidence from Vietnam, age of gigantic Australasian Tektite Strewn Field here considered to be close to 10,000 years ago, much younger than commonly accepted age of 0.7 Ma, and may have triggered global climate changes and mass extinctions at Pleistocene/Holocene boundary)

Jenny, C. & G. Stampfli (2000)- Permian palaeogeography of the Tethyan Realm. Permophiles 37, p. 24-33.
(Well-illustrated series of Tethys reconstructions for Late Carboniferous- Late Permian, showing generally accepted model of Paleozoic ocean N of Cimmerian continents (Paleotethys), a Late Paleozoic- Mesozoic ocean S of this continent (Neotethys; = Mesotethys of other authors?;JTvG), and M Jurassic ocean (Alpine Tethys))

Jin, X.C. & X.N. Yang (2004)- Paleogeographic implications of the *Shanita-Hemigordius* fauna (Permian foraminifer) in the reconstruction of Permian Tethys. Episodes 27, 4, p. 273-278.
(online at: www.episodes.co.in/www/backissues/274/273-278%20Jin.pdf)
(Permian foraminifer Shanita of special paleobiogeographic importance. Occurs in Gondwana-derived blocks, in strip from Peninsular Thailand to Burma, S China, S Afghanistan, Oman, etc. to Turkey. Often associated with Hemigordius. Shanita-Hemigordius fauna considered as marker of marginal Gondwana environment (more specifically 'Cimmerian' strips that rifted off Gondwana in M-L Permian?; JTvG))

Jin, X.C. & K. Zhao (2001)- Permo-Triassic paleogeographic, paleoclimatic and paleoceanographic evolutions in eastern Tethys and their coupling. Science in China, D, 44, 11, p. 968-978.
(Reconstructions of paleogeography and paleoceanography of Chihsian (E Permian), Wujiapingian, Anisian and Norian (Late Triassic) intervals in E Tethys. Paleogeographic change of the E Tethys and N-ward shift of Pangea during Permo-Triassic periods governed coeval paleocurrent pattern and evolution)

Jolivet, L., C. Faccenna, T. Becker, M. Tesauro, P. Sternai & P. Bouilhol (2018)- Mantle flow and deforming continents: from India-Asia convergence to Pacific subduction. Tectonics 37, p. 2887-2914.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2018TC005036)
(Tectonic and kinematic records of last 50 Ma with seismic tomography and anisotropy models suggest closure of Tethys Ocean and extensional deformation of E Asia best explained if asthenospheric mantle transporting India N-ward reaches East Asia, where it overrides W-flowing Pacific mantle and contributes to subduction dynamics, distributing extensional deformation over 3000-km wide region)

Jones, P.J., I. Metcalfe, B.A. Engel, G. Playford, J. Rigby, J. Roberts, S. Turner & G.E. Webb (2000)- Carboniferous palaeobiogeography of Australasia. In: A.J. Wright (ed.) Palaeobiogeogeography of Australasia, Mem. Assoc. Australasian Palaeontologists (AAP) 23, p. 259-286.
(Mainly on Carboniferous biostratigraphy of Australian region and Australian-derived SE Asia terranes)

Kamata, Y., K. Ueno, H. Hara, M. Ichise, T. Charoentitirat, P. Charusiri, A. Sardsud & K. Hisada (2009)- Classification of the Sibumasu and Paleo-Tethys tectonic division in Thailand using chert lithofacies. Island Arc 18, 1, p. 21-31.
(Two chert types used to map Paleotethys suture in N Thailand- Malaysia: (1) Devonian- M Triassic pelagic chert (common radiolarians, no terrigenous material) as blocks in sheared matrix, originated in Paleo-Tethys; (2) Triassic hemipelagic chert (scattered radiolarian tests and calcareous organisms such as foraminifera), accumulated on E margin of Sibumasu Block. Cherts in two N-trending zones: W zone hemipelagic cherts and glaciomarine successions on Precambrian basement (Sibumasu), E zone pelagic chert and limestone (Paleo-Tethys). Boundary between zones is N-trending, E-dipping, low-angle thrust, resulting from collision of Sibumasu and Indochina blocks)

Kanmera, K. & K. Nakazawa (1973)- Permian- Triassic relationship and faunal changes in the eastern Tethys. Canadian Soc. Petrol. Geol., Mem. 2, p. 100-119.
(Audley-Charles et al. 1979: Permian Maubisse Fm of Timor close affinities with Asian facies and faunas)

Kasuya, A., Y. Isozaki & H. Igo (2012)- Constraining paleo-latitude of a biogeographic boundary in mid-Panthalassa: fusuline province shift on the Late Guadalupian (Permian) migrating seamount. Gondwana Research 21, p. 611-623.
(Using Permian fusulinid forams and paleomagnetic data to reconstruct low latitude origin of M Permian seamount, which accreted to S China (Japan) margin in Jurassic. Two or three coeval M Permian

biogeographic territories in Tethys-Panthalassa realms: Neoschwagerina-Yabeina territory (>12 °S) and Colania-Lepidolina territory (<12°), and higher latitude Eopolydiexodina territory (>~25°S))

Katili, J.A. (1971)- Neotectonics of Southeast Asia. Bull. Assoc. Francaise Etude du Quaternaire 4, p. 851-856.

Kato, H., A. Reedman, Y. Shimazaki et al. (eds.) (2016)- Stone heritage of East and Southeast Asia. Geol. Survey of Japan and CCOP, Thailand, p. 1-234.
(online at: www.ccop.or.th/download/pub/ccop_stone_book_low_res.pdf)
(Examples of use of natural stone in construction of temples, monuments, castles, forts, etc., in 9 SE Asian countries. Incl. chapter on Indonesia by S. Baskoro (not much detail on rock types and nothing on West Papua)

Kennett, J.P., G. Keller & M. Srinivasan (1985)- Miocene planktonic foraminiferal biogeography and paleoceanographic development of the Indo-Pacific region. In: J.P. Kennett (ed.) The Miocene ocean: paleooceanography and biogeography, Geol. Soc. America (GSA) Mem. 163, p. 197-236.
(Planktonic foraminifera distribution patterns suggest closure of Indonesian Seaway around 13-12 Ma)

Khan, P.K., S. Shamim, M. Mohanty, P. Kumar & J. Banerjee (2017)- Myanmar-Andaman-Sumatra subduction margin revisited: insights of arc-specific deformations. J. Earth Science (China) 28, 4, p. 683-694.
(online at: http://en.earth-science.net/PDF/20170721111758.pdf)
(Analysis of concave and convex sectors of subducting Indian Ocean plate along >3000km long Myanmar-Andaman-Sumatra active margin from earthquake data)

Kiessling W., E. Flugel & J. Golonka (1999)- Paleoreef maps: evaluation of a comprehensive database on Phanerozoic reefs. American Assoc. Petrol. Geol. (AAPG) Bull. 83, 10, p. 1552-1587.

Kiessling W., E. Flugel & J. Golonka (2003)- Patterns of Phanerozoic carbonate platform sedimentation. Lethaia 36, 3, p. 195-225.
(Review of carbonate platforms and distribution from Ordovician-Neogene)

Kimura, T. (1984)- Mesozoic floras of East and Southeast Asia, with a short note on the Cenozoic floras of Southeast Asia and China. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia 25, University of Tokyo Press, p. 325-350.
(Review of Triassic- Cretaceous floras in SE Asia and China. Late Triassic- E Jurassic flora from Krusin Fm near Kuching. W Sarawak is part of Indochina/ South China Dictyophyllum-Chlathropteris floristic province)

Kimura, T. (1985)- Notes on the present status of Late Triassic floras in East and Southeast Asia. In: III Congr. Latino America Paleontology, Mexico City, Simposium sobre Floras Trias, Mem. 3, p. 5-9.

Kimura, T. (1987)- Geographical distribution of Paleozoic and Mesozoic plants in East and Southeast Asia. In: A. Taira & M. Tashiro (eds.) Historical biogeography and plate tectonic evolution of Japan and Eastern Asia, Terra Science Publ., Tokyo, p. 135-200.

Kirillova, G.L. (1993)- Types of Cenozoic sedimentary basins of the East Asia and Pacific Ocean junction area. Palaeogeogr. Palaeoclim. Palaeoecology 105, p. 17-32.
(Classification of marginal basins in W Pacific (incl. Philippine Sea, E China Sea, etc.): (1) oceanic and transitional crust basins: mainly deep water trenches, back-arc, inter-arc, forearc and intra-arc basins; (2) basins with continental crust: marginal-continental shelf and intracontinental basins, filled with alluvial deltaic and lacustrine sediments up to 11 km thick)

Klimetz, M.P. (1987)- The Mesozoic tectonostratigraphic terranes and accretionary heritage of south-eastern mainland Asia. In: E.G. Leitch & E. Scheibner (eds.) Terrane accretion and orogenic belts, American Geophys. Union (AGU) Geodyn. Ser. 19, p. 221-234.
(On mainland SE Asia tectonic terranes, with focus on Mesozoic accretionary history of China)

Kobayashi, F. (1997)- Middle Permian biogeography based on fusulinacean faunas In: C.A. Ross et al. (eds.) Late Paleozoic foraminifera, their biostratigraphy, evolution and paleoecology, and the Mid-Carboniferous boundary, Cushman Foundation Foraminiferal Research, Spec. Publ. 36, p. 73-76.
(Permian fusuline foram faunas three provinces: (A) Western Tethys, with Yabeina, Afghanella and Sumatrina and without Lepidolina; extends from Mediterranean to N Arabia; (B) Eastern Tethys, with diverse neoschwagerinids and verbeekinids, incl. Afghanella and Sumatrina, covering SE Asia, S China, Indochina, and limestone units in SW Japan Permian accretionary complex; (C) Panthalassan: without sumatrinids, dominant Yabeina and less Lepidolina, in exotic limestone blocks around Circum-Pacific (N America, Siberia, Japan))

Kobayashi, F. (1997)- Middle Permian fusulinacean faunas and paleobiogeography of exotic terranes in the Circum-Pacific. In: C.A. Ross et al. (eds.) Late Paleozoic foraminifera, their biostratigraphy, evolution and paleoecology, and the Mid-Carboniferous boundary, Cushman Foundation Foraminiferal Research, Spec. Publ. 36, p. 77-80.

Kobayashi, F. (1999)- Tethyan uppermost Permian (Dzhulfian and Dorashamian) foraminiferal faunas and their paleogeographic and tectonic implications. Palaeogeogr. Palaeoclim. Palaeoecology 150, p. 279-307.
(Latest Permian Palaeofusulina fauna serves as paleogeographic constraints on E and SE Asian terranes. Common in S China, Indochina and E Malaya shelf limestone facies. Also present on Early Permian rifted terranes, like N Thailand (Sibumasu terrane) and Tibet (Qiangtang Terrane). Absence of Palaeofusulina fauna and presence of late Midian Lepidolina multiseptata faunas in Lhasa Terrane (Tibet) and Woyla Terrane in Sumatra important for identifying rift-drift-collision process of Gondwana-affinity terranes)

Kobayashi, T. (1944)- Reciprocal development of radiolarian rocks as between Asiatic and Australian sides. Proc. Imperial Academy (Tokyo) 20, 4, p. 234-238.
(online at: https://www.jstage.jst.go.jp/article/pjab1912/20/4/20_4_234/_pdf)
(Brief review of radiolarian bearing formations in Japan, SE Asia, Australia. Sambosan and Higashigawa suites of Japan mainly Permo-Triassic age. Also in chert series in Malay Peninsula, Tuhur Fm of Sumatra and Danau Fm in Borneo. Danau Fm suggested by Hinde to be Jurassic age, but here thought to be mostly Permo-Triassic (based on Krekeler observations). Danau facies appears continues into Philippines via Palawan and Jolo or Sulu arcs, where radiolarian cherts are called Babuyan Fm)

Kobayashi, T. (1973)- The early stage of the Burmese-Malayan Geosyncline. In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 118-129.
(online at: www.gsm.org.my/products/702001-101351-PDF.pdf)
(Discussion of belt of Paleozoic (Ordovician- Permian) and Triassic rocks, extending from Shan Plateau (Myanmar) and W Yunnan (S China)in N through Thai-Malayan Peninsula in south and continuing into Borneo. No figures, maps)

Kobayashi, T. (1978)- The Jurassic palaeogeography of Japan and Southeast Asia. Proc. Japan Academy 54, B 10, p. 583-588.

Kobayashi, T. (1979)- The *Trigonioides* basins and the Cretaceous palaeogeography of East and Southeast Asia. Proc. Japan Academy 55, B 1, p. 1-5.
(online at: https://www.jstage.jst.go.jp/article/pjab1977/55/1/55_1_1/_pdf)
(On distribution of Early-Middle Cretaceous non-marine bivalve mollusc Trigonioides in SE Asia, including in continental facies of Rantaulajung Fm near Martapura, SE Kalimantan with Upper Cretaceous conchostracans)

Kobayashi, T. & M. Tamura (1983)- On the Oriental Province of the Tethyan Realm in the Triassic period. Proc. Japan Academy, Ser. B, 59, 7, p. 203-206.
(Short paper on provinciality in Triassic bivalves. Oriental Province of Tethys with species indigenous to E and SE Asia. Stretches from Kashmir, Burma, S China, Malay Peninsula, to E Indonesia. No maps)

Konyukhov, A.I. (2009)- Geological structure, sedimentation conditions, and petroleum potential of sedimentary basins in Southeast Asia. Lithology and Mineral Res. 44, 5, p. 427-440.

(Russian review of SE Asian basins. Most sedimentary basins of SE Asia related to processes of rifting that activated in Paleo-Eocene after consolidation of continental crust of the Sunda (Malay) microplate, which ended in Late Cretaceous. Wide development of lacustrine basins, which accumulated main source rocks for oil and gas in region)

Kozur, H. (1973)- Faunenprovinzen in der Trias und ihre Bedeutung fur die Klarung der Paleogeographie. Geol. Palaont. Mitteilungen Innsbruck 3, 8, p. 1-41.
(online at: www2.uibk.ac.at/downloads/c715/gpm_03/03_08_001-041.pdf)
('Faunal provinces in the Triassic and their significance for paleogeography'. Paleobiogeography based on conodonts: Triassic of SE Asia, incl. Timor, is in Asiatic Tethyan faunal province. No maps)

Kristan-Tollmann, E. (1987)- Triassic of the Tethys and its relations with the Triassic of the Pacific realm. In: K.G. MacKenzie (ed.) Int. Symposium on Shallow Tethys 2, Wagga Wagga, Balkema, Rotterdam, p. 169-186.

Kristan-Tollmann, E. (1988)- Unexpected microfaunal communities within the Triassic Tethys. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys, Geol. Soc., London, Spec. Publ. 37, p. 213-223.
(Remarkable uniformity in Triassic faunas throughout Tethyan region. Both planktonic and benthic organisms. Very little on SE Asia)

Kristan-Tollmann, E. (1988)- Pandemic ostracod communities in the Tethyan Triassic. In: R. Whatley & C. Maybury (eds.) Ostrocoda and global events, British Micropal. Soc. Publ., p. 541-544.
(Tethyan Late Triassic ostracodes in Sahul Shoals 1 well, 1880-1890m, Australia NW Shelf. Most common species Cytherella acuta, with other Tethyan species Nodobairdia mammilata and Tethyscythere austriaca. Similar Triassic ostracode faunas on N and S sides of Tethys (Timor, NW Australia))

Krobicki, M. & J. Golonka (2006)- Caledonian orogeny in Southeast Asia: questions and problems. Geolines, 20, p. 75-78. *(Extended Abstract)*
(online at: http://geolines.gli.cas.cz/fileadmin/volumes/volume20/G20-076.pdf)

Krobicki, M. & J. Golonka (2009)- Palaeobiogeography of Early Jurassic *Lithiotis*-type bivalve buildups as recovery effect after Triassic/Jurassic mass extinction and their connections with Asian palaeogeography. In: Proc. 5th Int. Symposium of IGCP-516, Geologial anatomy of East and South Asia, Kunming, Acta Geoscientica Sinica 30, Suppl. 1, p. 30-33.
(online at: www.cagsbulletin.com/)
(Buildups of large bivalves of Lithiotis group are first reefal features after end-Triassic extinction. Present across S Tethys margin, including Nepal-Tibet(Lhasa Block?) and Timor (Krumbeck 1923))

Lacassin, R., P.H. Leloup & P. Tapponnier (1993)- Bounds on strain in large Tertiary shear zones of SE Asia from boudinage restoration. J. Structural Geol. 15, p. 677-692.
(Restoration of stretched, boudinaged layers in mylonitic gneisses of Oligo-Miocene Red River-Ailao Shan (Yunnan) and Wang Chao (Thailand) shear zones suggests layer-parallel extension of 250-870%, implying minimum left-lateral strike-slip displacements of ~330 km (Red River-Ailao Shan) and ~35 km (Wang Chao))

Lam, H.J. (1930)- Het genetisch-plantengeografisch onderzoek van den Indischen Archipel en Wegenerôs verschuivingstheorie. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 2, 47, p. 553-581.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001673001:pdf)
('The genetic plant-geographic investigation of the Indies Archipelago and Wegener's continental drift theory'. Historically interesting review of plant communities and possible relations to plate movements)

Lambiase, J.J. (2011)- The stacked-channel reservoir sands of SE Asia. SEAPEX Expl. Conf., Singapore 2011, Presentation 26, 40p. *(Presentation package)*

Langford, R.P., B. Cairncross & M. Friedrich (1992)- Permian coal and palaeogeography of Gondwana. Bureau Mineral Res. Geol. Geophysics, Canberra, Record 1991/95, Palaeogeography 39, p. 1-136.

(online at: www.ga.gov.au/corporate_data/14505/Rec1991_095.pdf)
(Review of Early and Late Permian coal distribution across Gondwana (Australia- W Papua, India, Antarctica, etc.). Coal deposition mainly in paleolatitudes from ~45° S to 75° S, representing cold to cool temperate climate with high precipitation, ideal for peat swamp development (Permian equatorial peat swamp coal deposits in Cathaysia not discussed). Most prolific period of coal deposition late E Permian, during climatic amelioriation after glaciation (No details on thin Permian coals of West Papua))

Laveine, J.P., B. Ratanasthien & A.H. Hussin (1999)- The Carboniferous floras of Southeast Asia: implications for the relationships and timing of accretion of some Southeast Asian blocks. In: I. Metcalfe (ed.) Gondwana dispersion and Asian accretion, IGCP 321 Final Results Volume, Balkema, Rotterdam, p. 229-246.
(Carboniferous flora of E Peninsular Malysia ('Kuantan flora' of Asama) and NE Thailand typical Euramerican aspect, suggesting Indo-China Block was in terrestrial connection with N Paleotethyan landmass, probably S China Block since at least E Carboniferous. E Malaya Block also part of North Paleotethyan domain)

Laveine, J.P., S. Zhang & Y. Lemoigne (2000)- Palaeophytogeography and palaeogeography, on the basis of examples from the Carboniferous. Revue Paleobiologie, Geneve 19, 2, p. 409-425.

Laveine, J.P., S. Zhang, Y. Lemoigne & B. Ratanasthien (1999)- Paleogeography of East and Southeast Asia during Carboniferous times on the basis of paleobotanical information: some methodological comments and additional results. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symposium on Shallow Tethys (ST) 5, Chiang Mai, p. 55-72.

Le Fort, P., M. Colchen & C. Montenat (eds.) (1986)- Evolution des domaines orogeniques d'Asie meridionale (de la Turquie a l'Indonesie). Livre jubilaire en l'honneur de Pierre Bordet, Mem. Sciences de la Terre 47, Fondation Scientifique de la geologie et de ses application, Nancy, p. 1-429.
('Evolution of the orogenic domains of southern Asia (from Turkey to Indonesia): volume in honor of Pierre Bordet')

Le Pichon, X., M. Fournier & L. Jolivet (1992)- Kinematics, topography, shortening, and extrusion in the India-Eurasia collision. Tectonics 11, p. 1085-1098.
(Spatial distribution of topography in Greater India- Eurasia suggest transfer of lower crust to mantle by eclogitization and lateral extrusion account for minimum of one third/ one half of total amount of shortening between India -Asia since 45 Ma)

Li, C. & R. van Der Hilst (2010)- Structure of the upper mantle and transition zone beneath Southeast Asia from traveltime tomography structure of the upper mantle and transition zone beneath Southeast Asia from traveltime tomography. J. Geophysical Research, Solid Earth, 115, B07308, p. 1-19.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2009JB006882/epdf)
(Tomographic sections mainly in area of India-Asia collision and China margin)

Li, C., R.D. van der Hilst, E.R. Engdahl & S. Burdick (2008)- A new global model for P wave speed variations in Earthȏs mantle: Geochem. Geophys. Geosystems 9, 5, Q05018, 21p.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2007GC001806/epdf)
(Include examples of tomography sections across Indonesia))

Li, C., R.D. van der Hilst & M.N. Toksoz (2006)- Constraining P-wave velocity variations in the upper mantle beneath Southeast Asia. Physics Earth Planetary Interiors 154, 2, p. 180-195.
(Tomographic inversions reveal high-velocity roots beneath Archean Ordos Plateau, Sichuan Basin and other continental blocks in SE Asia. Beneath Himalayan Block high velocities, associated with subduction of Indian lithospheric mantle, visible above 410 km discontinuity, and may not connect to remnant of Neo-Tethys oceanic slab in lower mantle. Only SW part of Tibetan plateau underlain by Indian lithosphere)

Li, C.F. & J. Wang (2016)- Variations in Moho and Curie depths and heat flow in Eastern and Southeastern Asia. Marine Geophysical Research 37, 1, p. 1-20.

(Oldest continental and oceanic domains (N China craton, Pacific and Indian Ocean) thermally perturbed by events probably linked to small-scale convection or serpentinization in mantle and volcanic seamounts and ridges. W Philippine Sea Basin anomalously small Curie depths. W Pacific marginal seas have lowest Moho temperature; contrary in most parts of easternmost Eurasian continent.Magmatic processes feeding Permian Emeishan large igneous province along plate boundary may be caused by tectonic processes along plate margins, rather than by deep mantle plume)

Li, P., Gao Rui, J. Cui & Guan Ye (2004)- Paleomagnetic analysis of eastern Tibet: implications for the collisional and amalgamation history of the Three Rivers Region, SW China. J. Asian Earth Sci. 24, p. 291-310.
(Analysis of paleolatitudes and latitudinal displacements for S China, Simao, Baoshan, Shan-Thai, Indochina, Qiangtang, Lhasa and Himalayan blocks: (1) Simao Block S China-derived; (2) Baoshan and Shan-Thai blocks rapid N drift from Late Carboniferous- Late Permian; (3) Baoshan Block collided with Simao Block in Late Permian and continued to drift N, together with S China and Shan-Thai blocks until Late Triassic; (4) Paleo-Tethys separating Baoshan and Simao blocks possibly opened in E Silurian; (5) Meso-Tethys ranged in age from E Permian- E Cretaceous, and reached greatest width of ~42° latitude in Late Triassic)

Li, S., E. Advokaat, D.J.J. van Hinsbergen, M. Koymans, C. Deng & R. Zhu (2017)- Paleomagnetic constraints on the Mesozoic-Cenozoic paleolatitudinal and rotational history of Indochina and South China: review and updated kinematic reconstruction. Earth-Science Reviews 171, p. 58-77.
(Review of paleomagnetic data suggests (1) no significant rotations of S China Block relative to Eurasia since latest Jurassic; (2) No paleomagnetically resolvable S-ward motion of Indochina Block (inclinations lower than expected, probably due to inclination shallowing in sediments; (3) large rotating blocks in N Indochina and SE Tibetan margin (up to 70° CW), more than ~10-15° rotation of stable SE Indochina Block. Blocks bounded by fold-thrust belts and strike-slip faults, accommodating Cenozoic block rotations. NW part of Indochina extruded 350 km more along Ailao Shan-Red River fault than SE part, accommodated by internal NW Indochina rotation and deformation. 250 km of extrusion of SE part of Indochina)

Li, S., B.M. Jahn, S. Zhao, L. Dai, X. Li, Y. Suo, L. Guo, Y.M. Wang et al. (2017)- Triassic southeastward subduction of North China Block to South China Block: insights from new geological, geophysical and geochemical data. Earth-Science Reviews 166, p. 270-285.
(Subduction prior to assembly of S China and N China blocks traditionally considered directed N-ward, but new tectonic model suggests SE ward subduction of N China under S China. S margin of N China Block passive margin in Triassic, without arc magmatism, etc. Suture lateral subduction zone rather than collision zone)

Li, S., D.J.J. van Hinsbergen, C. Deng, E. Advokaat & R. Zhu (2018)- Paleomagnetic constraints from the Baoshan area on the deformation of the Qiangtang-Sibumasu terrane around the Eastern Himalayan syntaxis. J. Geophysical Research, Solid Earth 123, 2, p. 977-997.
(Sibumasu Block in SE Asia E-ward continuation of Qiangtang Block. New paleomagnetic study on M Jurassic and Paleocene rocks from Baoshan block (N Sibumasu) suggests ~70-80° CW rotation since Paleocene (rotation in Eocene- M Miocene associated with Indochina extrusion + rotation after M Miocene associated with E-W extension in C Tibet)

Li, S.Z., S.J. Zhao, X. Liu, H.H. Cao, S. Yu, S. Li, I. Somerville, S.Y. Yu & Y.H. Suo (2018)- Closure of the Proto-Tethys Ocean and Early Paleozoic amalgamation of microcontinental blocks in East Asia. Earth-Science Reviews 186, p. 37-75.
(Proto-Tethys paleo-ocean located between Tarim/N China and Sibamusu/Baoshan blocks opened from rifting of supercontinent Rodinia and mainly closed at end of E Paleozoic. Several continents/microcontinents in ocean. S suture marked by Longmu Co-Shuanghu-Changning-Menglian Suture. Tarim- Alax- N China Block to N of the Proto-Tethys Ocean no clear affinity with Gondwana, had S-ward subduction polarity and collided with Gondwana along N margin of Gondwana in E Devonian. Etc.)

Li, X.X. (1986)- The mixed Permian Cathaysia-Gondwana flora. The Palaeobotanist 35, 2, p. 211-222.
(online at: http://14.139.63.228:8080/pbrep/bitstream/123456789/1262/1/PbV35N2_211.pdf)
(Mixed Gondwanan- Cathaysian floras from Turkey to Saudi Arabia, Kashmir to Western New Guinea)

Li, X.X. & G.L. Shen (1996)- A brief review of the Permian macrofloras in southeast Asia and their phytological delimitation. J. Southeast Asian Earth Sci. 13, p. 161-170.
(Overview of Permian macrofloras of SE Asia, with map of Permian phytogeographical provinces. Djambi flora of C Sumatra is southernmost Cathaysian flora. New Guinea Permian flora mixed Gondwanan and Cathaysian)

Li, X.X. & X.Y. Wu (1994)- The Cathaysian and Gondwana floras; their contribution to determining the boundary between eastern Gondwana and Laurasia. J. Southeast Asian Earth Sci. 9, 4, p. 309-317.
(Permian floras suggest boundary between E Gondwana and Laurasia runs along Bangongeo-Dengqen suture of Qinghai-Xizang plateau, turns S near Qamdo in E Xizang, then possibly extends through Baoshan District of W. Yunnan to link up with Pham Sore and Bentong-Raub sutures of Thailand- Peninsular Malaysia, from where it continues further S across E Sumatra to Indian Ocean. Jambi flora of Sumatra, Jengka and Linggiu floras of Malaysia and Phetchabun and Loei floras of Thailand all contain elements of Cathaysian flora. W New Guinea Permian floras mixed Cathaysian-Gondwana flora.)

Li, X.X. & X.Y. Wu (1996)- Late Paleozoic phytogeographic provinces in China and its adjacent regions. Review Palaeobotany Palynology 90, p. 41-62.
(Review of Devonian-Permian floral provinces of China. Cathaysian Floral province two major blocks: Sino-Korean-Tarim (N China) and S China Block, both vegetated by Euramerican floras until Late Carboniferous when Cathaysian elements first began to differentiate Two Cathaysian provinces established by Permian. Cathaysian flora developed in tropical, ever-wet climatic zone. Tropical conditions persisted in S China throughout Permian, but in N China, by early Late Permian alternating wet and dry climates, and by late Late Permian most of N Hemisphere in extreme arid conditions. Large leaved forms like Taeniopteris more common in N China and Gigantopteris almost completely restricted to S China. S China also with abundant Psaronius tree ferns and Gleicheniaceous ferns)

Li, Z.X. & C.M. Powell (2001)- An outline of the palaeogeographic evolution of the Australasian region since the beginning of the Neoproterozoic. Earth-Science Reviews 53, p. 237-277.
(Plate reconstructions of Australian region from 1000 Ma- recent)

Li, Z.X., L. Zhang & C.M. Powell (1996)- Positions of the East Asian cratons in the Neoproterozoic supercontinent Rodinia. Australian J. Earth Sci. 43, p. 593-604.
(Three major E Asian crustal blocks (Tarim, N China and S China) have records of the Neoproterozoic rifting events that broke up supercontinent Rodinia. Tarim Block may have been adjacent to Kimberley region, S China Block between E Australia and Laurentia, and N China Block adjacent to NW corner of Laurentia and Siberia during E Neoproterozoic. All three blocks probably separated from larger cratons towards end of Neoproterozoic but stayed close to Australian margins of Gondwanaland from Cambrian-Devonian)

Liao, S.Y., D.B. Wang, Y. Tang, F.G. Yin, S.N. Cao, L.Q. Wang, B.D. Wang & Z.M Sun (2015)- Late Paleozoic Woniusi basaltic province from Sibumasu terrane: implications for the breakup of eastern Gondwanaôs northern margin. Geol. Soc. America (GSA), Bull. 127, 9-10, p. 1313-1330.
(Late Paleozoic detachment of E Cimmerian Sibumasu terrane from Australian Gondwana margin may be initiated by mantle plume of Woniusi basaltic province in Yunnan, SW China (Baoshan Block= N Sibumasu terrane). Woniusi basalt province spread over ~12,000 km2 and ~300-500m thick. Zircon U-Pb ages Late Carboniferous- late E Permian (301-282 Ma), synchronous with basaltic rocks from Panjal Traps, Tethyan Himalaya, Lhasa, and S Qiangtang, forming large, fragmented igneous province, possibly sharing common mantle plume centered in N Greater India. Baoshan Block no thick Permian rift series (basalts mainly E Permian?: overlie glacial diamictite; faunal data suggest post-M Artinskian age (Ueno 2002)?JTvG))

Liao, S.Y., F.G. Yin, Z.M. Sun, D.B. Wang, Y. Tang & J. Sun (2013)- Early Middle Triassic mafic dikes from the Baoshan subterrane, western Yunnan: implications for the tectonic evolution of the Palaeo-Tethys in Southeast Asia. Int. Geology Review 55, 8, p. 976-993.

(Zircon U-Pb data indicate tholeiitic dikes similar to enriched mid-ocean ridge basalts emplaced at N part of Sibumasu terrane at 240± 3 Ma. Mafic dikes interpreted to be generated during suturing of Baoshan (Sibumasu) and Simao (Indochina) subterranes)

Liao, W.H. (1990)- The biogeographic affinities of East Asian corals. In: W.S. McKerrow and C.R. Scotese (eds.) Palaeozoic biogeography and biogeography, Mem. Geol. Soc., London, 12, p. 175-179.
(In E Asia tabulate and rugose corals present from E Ordovician- end Permian. Ordovician corals of N China related to Americo-Siberian region; S China close affinity to E Australia in Early Silurian, but more akin to Urals and C Asia in M-L Silurian. E-M Devonian 5 biogeographic provinces in E Asia: (1) Arctic; (2) Junggar-Hinggan; (3) Uralo-Tian Shan; (4) Paleotethys and (5) S China. In E Permian N and S parts of Asia belong to cold-water Lytvolasma fauna, middle part warm-water Tethyan with Iranophyllum/ Ipciphyllum fauna)

Lin, J.L., M. Fuller & W.Y. Zhang (1985)- Paleogeography of the North and South China blocks during the Cambrian. J. Geodynamics 2, p. 91-114.
(Paleomagnetic results show S China block close to equator in Cambrian, probably adjacent to N Australia. This juxtaposes Cambrian marine basins in S China and Australia, explains stratigraphic similarity between late Precambrian Sinian System in S China and Adelaide System in Australia and continuing fossil affinities in Cambrium- Ordovician. Proposed geographic configuration lasted from late Precambrian (800 Ma)- E Ordovician (470 Ma). Paleomag from Cambrian of N China block indicates it was in S Hemisphere, with paleontological evidence suggesting it was close to Tibet, Iran and N India during Paleozoic)

Liou, J.G., W.G. Ernst, R.Y. Zhang, T. Tsujimori, B.M. Jahn (2009)- Ultrahigh-pressure minerals and metamorphic terranes- the view from China. J. Asian Earth Sci. 35, p. 199-231.
(Review of Ultra High-Pressure (UHP) metamorphic terranes in China and adjacent areas. These represent continental and oceanic crustal protoliths which experienced P-T conditions near coesite stability field (>~2.7 GPa and ~700°C). Typical products include eclogite, garnet peridotite, and UHP varieties of metapelite, quartzite, marble, paragneiss and orthogneiss. UHP metamorphic assemblages require relatively cold lithospheric subduction to mantle depths. Includes some data from Indonesia (Sulawesi,))

Liu, B.P., Q.L. Feng, C. Chonglakmani & D. Helmcke (2002)- Framework of Paleotethyan archipelago ocean of western Yunnan and its elongation towards north and south. Earth Science Frontiers 9, 3, p. 161-171.
(Changning Menglian belt of W Yunnan continues N to Gangmacuo suture of NW Tibet and S to cryptic suture in N Thailand. Nan Uttaradit suture of NE Thailand probably extends N, but hidden under Mesozoic Cenozoic red beds of Simao basin. No evidence for stable Simao block during Paleotethys stage: sedimentary melanges consist of oceanic bedded cherts, seamount carbonates and passive margin clastics (Mae Sariang zone of NW Thailand). E Paleotethys probably double main branches. Mae Sariang zone probably connects NW to Luxi ophiolitic melange zone between Baoshan and Tengchong blocks in W Yunnan)

Liu, B.P., Q.L. Feng & N.Q. Fang (1991)- Tectonic evolution of the Paleo-Tethys in Changning-Menglian Belt and adjacent Regions, Western Yunnan. J. China University of Geosciences 2, p. 18-28.

Liu, B.P., Q.L. Feng & N.Q. Fang, J. Jia & F. He (1993)- Tectonic evolution of paleo-Tethys poly-island-ocean in the Changning-Menglian and Lancangjiang belts, southwestern Yunnan, China. Earth Science, Journal of China University of Geoscience 18, 5, p. 529-539. *(in Chinese, with English Abstract)*
(Changning-Mengliang belt between Baoshan-Gengma and Simao-Lincang massifs is suture zone, representing closed branch of Devonian- M Triassic poly-island Paleotethys Ocean. Lincang Massif probably isolated Gondwana-affinity terrane that accreted to W margin of Simao massif in M Permian. May be connected to Nan-Uttaradit suture of N Thailand before Late Permian))

Liu, B.P., Q.L. Feng, N.Q. Fang, J. Jia & F. He, W. Yang & D. Liu (1997)- Tectono-paleogeographic framework and evolution of the Paleotethyan archipelagoes ocean in Changning-Menglian belt, Western Yunnan, China. In: Devonian to Triassic Tethys in Western Yunnan, China University of Geosciences Press, p. 1-12.

Liu, S., Tao Qian, Wangpeng Li, Guoxing Dou, and Peng Wu (2015)- Oblique closure of the northeastern Paleo-Tethys in central China. Tectonics 34, 10.1002/2014TC003784, p. 1-22.
(NE branch of Paleo-Tethys Ocean that separated N China and South China plates closed by oblique collision along two N-dipping suture zones in C China. Shangdan suture developed in Late Paleozoic; Mianlue suture to S in M-L Triassic (collisional sutures obscured by thrust faults in S Qinling-Dabieshan orogen))

Lohman, D.J., M. de Bruyn, T. Page, K. von Rintelen, R. Hall, P.K.L. Ng, H.T. Shih, G.R. Carvalho & T. von Rintelen (2011)- Biogeography of the Indo-Australian Archipelago. Annual Review Ecology Evolution Systematics 42, p. 205-226.
(online at: http://searg.rhul.ac.uk/pubs/lohmann_etal_2011%20Biogeography%20of%20Indo-Australian%20archipelago.pdf)
(Extraordinary species richness and endemism in Indo-Australian Archipelago. Present distribution patterns of species shaped largely by pre-Pleistocene dispersal and vicariance events, whereas more recent changes in connectivity of islands in Archipelago influenced partitioning of intraspecific variation)

Long, J.A. & E. Buffetaut (2001)- A biogeographic comparison of the dinosaurs and associated vertebrate faunas from the Mesozoic of Australia and Southeast Asia. In: I. Metcalfe et al. (eds.) Faunal and floral migrations and evolution in SE Asia-Australasia. Balkema, Lisse, p. 97-104.
(dinosaurs and associated vertebrate faunas known from Late Triassic- Cretaceous of Australia and mainland SE Asia. Most taxa are of Early Cretaceous age. No similarities between SE Asia and Gondwana, but clear affinities between SE Asia and northern hemisphere)

Luyendyk, B.P. (1974)- Gondwanaland dispersal and the early formation of the Indian Ocean. In: B.P. Luyendyk & T.A. Davies (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 26, p. 945-952.
(online at: www.deepseadrilling.org/26/volume/dsdp26_37.pdf)
(Early paper on formation of Indian Ocean and dispersal of Gondwana pieces towards Asia. Shows Late Jurassic separation of Borneo and Sulawesi from NW Australian margin)

Lynner, C. & M. D. Long (2014)- Sub-slab anisotropy beneath the Sumatra and circum-Pacific subduction zones from source-side shear wave splitting observations. Geochem. Geophys. Geosystems 15, 6, p. 2262-2281.
(Source-side shear wave splitting measurements for C America, Alaska-Aleutians, Sumatra, Ryukyu and Izu-Bonin-Japan-Kurile subduction systems. Trench parallel fast splitting dominant beneath Izu-Bonin, Japan, S Kurile slabs and part of Sumatra system; fast directions paralleling motion of downgoing plate dominant in Ryukyu, C America, N Kurile, W Sumatra and Alaska-Aleutian regions. Older subducting lithosphere (>95 Ma) associated with trench parallel splitting, younger lithosphere with plate motion parallel fast splitting directions)

Marcoux, J. & A. Baud (1996)- Late Permian to Late Triassic Tethyan paleoenvironments. Three snapshots: Late Murgabian, Late Anisian, Late Norian. In: X. Nairn et al. (eds.) The Tethys Ocean, Plenum Press, New York, p. 153-190.
(Three paleogeographic reconstructions of Tethys Ocean, from Europe to Australia (similar to maps of Tethys Atlas Project by Dercourt et al., 1993))

Maruyama, S., J.G. Liou & T. Seno (1989)- Mesozoic and Cenozoic evolution of Asia. In: Z. Ben-Avraham (ed.) The evolution of the Pacific Ocean margins, Oxford University Press, Monogr. Geol. Geoph. 8, p. 75-99.

Maruyama, S., J.G. Liou & M. Terabayashi (1996)- Blueschists and eclogites of the world and their exhumation. Int. Geology Review 38, 6, p. 485-594.
(Includes brief descriptions of Indonesian (Java, SE Kalimantan, Sulawesi, Timor, N New Guinea) and SW Pacific (E PNG, New Caledonia, etc.) blueschist occurrences)

Maruyama, S., H. Masago, I. Katayama, Y. Iwase, M. Toriumi, S. Omori & K. Aoki (2010)- A new perspective on metamorphism and metamorphic belts. Gondwana Research 18, p. 106-137.
(Includes discussion of ongoing exhumation of continent collision-type metamorphic belt in Timor-Tanimbar region)

Maruyama, S., S. Omori, H. Senshu, K. Kawai & B.F. Windley (2011)- Pacific-type orogens: new concepts and variations in space and time from present to past. J. Geography (Chigaku Zasshi) 120, p. 115-223.
(online at: www.jstage.jst.go.jp/article/jgeography/120/1/115/_pdf)
(In Japanese with English summary. Overview of Pacific-type active margins, with examples from Indonesia. Show Miocene forearc spreading in Banda outer arc, creating ophiolites that now rest on metamorphic belts from Timor, through Leti-Moa-Sermata to Dai islands, etc.)

Maung, H. (1983)- A new reconstruction of Southeast Asia and Gondwanaland in relation to mantle plumes or hotspots. Proc. South East Asia Petroleum Expl. Soc. (SEAPEX) 6, p. 66-70.

Mayr, E. (1945)- Wallaceõs Line in the light of recent zoogeographic studies. In: P. Honig & F. Verdoorn (eds.) Science and scientists in the Netherlands Indies. Board for the Netherlands Indies, Surinam and Curacao, New York, p. 241-250.
(Wallace's zoogeographic line not boundary between Indo-Malayan and Australian regions, rather the edge of Sunda shelf area. Weber's Line separates islands in W with predominantly Indo-Malayan elements from islands in E with dominantly Australo-Papuan elements)

Mazur, S., C. Green, M.G. Stewart, J.M. Whittaker, S. Williams & R. Bouatmani (2012)- Displacement along the Red River Fault constrained by extension estimates and plate reconstructions. Tectonics 31, 5, TC5008, p. 1-22.
(New plate tectonic interpretations for Greater S China Sea area since 35 Ma, partly constrained by amounts of extension computed from gravity models. Best-fit plate model assumes 250 km of left-lateral displacement along Red River Fault (calculated at Vietnamese coast of Gulf of Tonkin) from 35- 20.5 Ma)

McCabe, R. (1984)- Implications of paleomagnetic data on the collision related bending of island arcs. Tectonics 3, 4, p. 409-428.
(Paleomagnetic studies from C Philippines, Sulawesi, Fiji-New Hebrides, etc., show differences in declination within same arc. Rotated segments of upper plate where buoyant feature on downgoing plate (seamount, continental fragment or island arc) locally deforms margin of upper plate. Stresses resulting from collision may result in (1) strike-slip faults causing sideward extrusion of portions of upper plate; (2) changes in subduction zone polarity; (3) strike-slip faults around margin of indenter; or (4) reorganization of entire plate margin)

McCabe, R. & J. Cole (1987)- Speculations on the Late Mesozoic and Cenozoic evolution of the South East Asian margin. In: M.K. Horn (ed.) Trans. 4th Circum-Pacific Energy and Mineral Resources Conference, Singapore 1986, p. 375-394.
(Sulu, Celebes and Banda Sea marginal basins all have E-W trending magnetic anomalies, progressively younging to North from Cretaceous to Paleogene, therefore believed to be parts of single marginal oceanic basin. With 6 plate reconstruction maps Cretaceous-Miocene (Subsequent work suggests Banda Sea not Cretaceous but Neogene age: JTvG))

McCabe, R. & J. Cole (1989)- Speculations on the Late Mesozoic and Cenozoic evolution of the Southeast Asian margin. In: Z. Ben-Avraham (ed.) The evolution of the Pacific Ocean margins, Oxford Monographs Geol. Geophysics 8, Oxford University Press, p. 143-160.
(Same as McCabe and Cole 1987)

McCabe, R., S. Harder, J.T. Cole & E. Lumadyo (1993)- The use of palaeomagnetic studies in understanding the complex Tertiary tectonic history of East and Southeast Asia. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 257-268.
(Paleomag data from Philippines, Indo-China, Japan. Many published paleomagnetic studies on Mesozoic-Paleozoic rocks show magnetizations that are same as that of overlying Cenozoic volcanics, suggesting possible resetting, and making older rocks results suspect)

McCabe, R., D. Merrill, J.T. Cole & E. Lumadyo (1996)- The use of palaeomagnetic studies in understanding the complex Tertiary tectonic history of East and Southeast Asia. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 369-383.
(Same paper as McCabe et al. 1993)

McElhinny, M.W., B.J.J. Embleton, H. Max & Z.K. Zhang (1981)- Fragmentation of Asia in the Permian. Nature 293, p. 212-216.
(Compilation of Permian paleomagnetic data. Asia is composite continent formed by accretion of crustal blocks. Malay Peninsula and Japan were situated near Equator in Permian and therefore separated from Asian continent. Permian of Sino-Korean and Yangtze blocks of China also near Equator)

McElhinny, M.W., N.S. Haile & A.R. Crawford (1974)- Paleomagnetic evidence shows Malay Peninsula was not a part of Gondwanaland. Nature 252, 5485, p. 641-645.
(Reconnaissance paleomagnetic survey on Malay Peninsula suggests it lay at 15° N in Late Paleozoic, so could not have been part of Gondwanaland)

McGowran, B., M. Archer, P. Bock, T.A. Darragh et al. (2000)- Australasian palaeobiogeography: the Palaeogene and Neogene record. In: A.J. Wright et al. (eds.) Palaeobiogeography of Australasian fauans and floras, Mem. Assoc. Australasian Palaeontologists (AAP) 23 23, p. 405-470.

McLoughlin, S. (2001)- The breakup history of Gondwana and its impact on pre-Cenozoic floristic provincialism. Australian J. Botany 49, 3, p. 271-300.
(From Carboniferous to Cretaceous S continents broadly similar floras but some species-level provincialism apparent at all times. Gondwanan floras radical turnovers near end Carboniferous, end Permian and end Triassic that appear unrelated to isolation or fragmentation of supercontinent. Throughout Late Paleozoic and Mesozoic high-latitude southern floras maintained different composition to paleoequatorial and boreal regions even though they remained in physical connection with Laurasia for much of this time)

McManus, J. & R.B. Tate (1978)- Fragmentation of the China Plate and the development of marginal seas of S.E. Asia. Proc. SEAPEX Offshore SE Asia Conf., Singapore 1978, 14p.
(Tectonics of SE Asia, particularly Sulu- Celebes Seas. Some marginal seas originated by intraplate spreading, others by border spreading)

Meert, J. (2003)- A synopsis of events related to the assembly of eastern Gondwana. Tectonophysics 362, p. 1-40.
(Assembly of E part of Gondwana supercontinent (incl. E Africa, Arabia, India, E Antarctica and Australia) resulting from complex series of orogenic events from ~750- 530 Ma. Rel. little on Australia, which in ~800-700 Ma restores to N Hemisphere)

Mei, S. & C.M. Henderson (2001)- Evolution of Permian conodont provincialism and its significance in global correlation and paleoclimate implication. Palaeogeogr. Palaeoclim. Palaeoecology 170, p. 237-260.
(Early Permian Gondwana Cool Water Province with Vjalovognathus in Canning, Carnarvon basins and W Timor. Permian conodont provincialism not distinct until Kungurian)

Mei, S. & C.M. Henderson (2002)- Comments on some Permian conodont faunas reported from Southeast Asia and adjacent areas and their global correlation. J. Asian Earth Sci. 20, 6, p. 599-608.
(Conodont faunas from SE Asia classified in new faunal provinces: Equatorial Warm Water (EWWP), peri-Gondwana Cool Water (GCWP) and N Cool Water (NCWP; N China). GCWP marked by Vjalovognathus, etc., EWWP by absence of Gondolelloides and Vjalovognathus in E-M Cisuralian, abundance of Sweetognathus and Pseudosweetognathus in Kungurian, etc. Mixed faunas between EWWP and GCWP include W Timor Artinskian, SE Pamirs Kungurian and Salt Range Guadalupian- Lopingian)

Mei, S., C.M. Henderson & B.R. Wardlaw (2002)- Evolution and distribution of the conodonts *Sweetognathus* and *Iranognathus* and related genera during the Permian, and their implications for climate change. Palaeogeogr. Palaeoclim. Palaeoecology 180, p. 57-91.
(On evolution of conodonts of E-M Permian Sweetognathus and Late Permian Iranognathus lineages)

Meister, C. (2007)- Les Phricodoceratidae Spath, 1938 (Mollusca, Cephalopoda): ontogenese, evolution et paleobiogeographie. Geodiversitas 29, 1, p. 87-117.
(p. 112-113: Lower Jurassic ammonites described from Roti by Krumbeck (1922; Pliensbachian Ibex zone) have N Tethys affinities, suggesting these are from exotic blocks now on S Tethys/ Australian margin?)

Metcalfe, I. (1983)- Southeast Asia. In: R.H. Wagner et al. (eds.) The Carboniferous of the world, 1, Int. Union Geol. Sci. Publ. 16, p. 213-243.
(Extensive review of Carboniferous in W and E Malay Peninsula, W and NE Thailand, Vietnam, Laos, N and E Sumatra, W Sarawak, etc. Sumatra Alas Fm of Late Visean age)

Metcalfe, I. (1984)- Stratigraphy, palaeontology and palaeogeography of the Carboniferous of Southeast Asia. Mem. Soc. Geologique France, N.S. 147, p. 107-118.
(Older continental part of SE Asia four tectonic blocks (Sibumasu, Manabor (Malaya- Natuna- W Borneo), Indochina, S China), with independent pre-Triassic histories. Carboniferous mainly shallow marine with subordinate epicontinental and continental deposits. Carboniferous of Sibumasu continental margin deposits with glacial-marine diamictites. Manabor block shallow marine clastics with reefal limestones and abundant volcanics interpreted as possible island arc. C part of Indochina Block emergent in Carboniferous and bordered by non-marine. Carboniferous faunas of SE Asia mainly of Eurasian aspect)

Metcalfe, I. (1986)- Late Palaeozoic palaeogeography of Southeast Asia: some stratigraphical, palaeontological and palaeomagnetic constraints. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 153-164.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986012.pdf)
(First of many Metcalfe papers on SE Asian tectonic blocks, their Gondwanan origins and histories of rifting, drift and collision with Asia. SE Asia 4 tectonic blocks, SIBUMASU, MANABOR, Indochina and South China. Indochina and S China rifted off Gondwana in Late Devonian- E Carboniferous and sutured to each other by M Carboniferous. SIBUMASU separated from Australian Gondwana in late Lower Permian. MANABOR accreted to Indochina/S China by Late Triassic, possibly earlier)

Metcalfe, I. (1988)- Origin and assembly of South-East Asian continental terranes. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys, Geol. Soc., London, Spec. Publ. 37, p. 101-118.
(Documentation of stratigraphic successions and paleobiogeographic affinities of Sibumasu, East Malaya, Indochina and SW Borneo blocks)

Metcalfe, I. (1989)- Carboniferous and Permian palaeogeography of Southeast Asia. Comptes Rendus 9th Congres Intern. Stratigraphie Geologie Carbonifere, Beijing 1987, 4, p. 245-264.

Metcalfe, I. (1990)- Allochthonous terrane processes in Southeast Asia. In: J. Dewey et al. (eds.) Allochthonous Terranes, Philos. Trans. Royal Soc. London, Ser. A, 331, 1620, p. 625-640.
(online at: http://journals.royalsociety.org/content/d673155257474040/fulltext.pdf)

Metcalfe, I. (1991)- Late Palaeozoic and Mesozoic palaeogeography of Southeast Asia. Palaeogeogr. Palaeoclim. Palaeoecology 87, p. 211-221.

Metcalfe, I. (1992)- Ordovician to Permian evolution of Southeast Asian terranes: NW Australian Gondwana connections. In: B.D. Webby & J.R. Laurie (eds.) Global perspectives on Ordovician geology, Proc. 6th Int. Symposium on the Ordovician System, A. A. Balkema, Rotterdam, p. 293-305.

(Continental 'core' of SE Asia four main terranes: South China. Sibumasu, Indochina and East Malaya. Ordovician faunas of S China and Sibumasu strong affinities with N and NW Australia and Tasmania and include forms endemic to Australia and Gondwana. Affinities of E Palaeozoic faunas of Indochina and E Malaya not yetknown. N China placed near N Australia, Sibumasu adjacent to NW Australia and S China, Indochina, Tarim, Tsaidam, Lhasa and Changtang blocks formed part of North India-Iran margin of Gondwana.)

Metcalfe, I. (1993)- Palaeomagnetic research in Southeast Asia: progress, problem and prospects. Exploration Geophysics 24, 2, p. 277-282.
(Stratigraphical, sedimentological, paleobiogeographic and paleomagnetic data suggest that probably all SE Asian continental terranes derived from Gondwana. Terranes assembled between Late Paleozoic and Cenozoic. Progressive CCW rotation of Borneo- Malay Peninsula region during Late Cretaceous- Cenozoic. Most Paleozoic data from mainland Asia probably affected by Late Carboniferous and Cretaceous resets. Paleomagnetic data vital for constraining movements of crustal blocks)

Metcalfe, I. (1993)- Southeast Asian terranes: Gondwanaland origins and evolution. In: R.H. Findlay et al. (eds.) Gondwana Eight- Assembly, evolution and dispersal, Proc. 8th Gondwana Symposium, Hobart, 1991, Balkema, Rotterdam, p. 181-200.

Metcalfe, I. (1994)- Late Palaeozoic and Mesozoic palaeogeography of Eastern Pangea and Tethys. In: A.F. Embry et al. (eds.) Pangea: global environments and resources, Canadian Soc. Petrol. Geol. Mem. 17, p. 97-111.
(Evolution of E Pangea and Tethys in Late Paleozoic- Mesozoic involved rifting of continental slivers/fragments from NE Gondwanaland, N-wards drift and amalgamation/accretion to form proto East Asia. Three continental slivers rifted from NE Gondwanaland in Silurian- E Devonian (N China, S China, Indochina/ E Malaya, Qamdo-Simao and Tarim terranes), E-M Permian (Cimmerian continent, incl. Sibumasu, Lhasa and Qiangtang terranes) and Late Jurassic (W Burma terrane, Woyla terranes). N-ward drift of terranes effected by opening and closing of three successive Tethys oceans, Paleo-Tethys, Meso-Tethys and Ceno-Tethys)

Metcalfe, I. (1994)- Gondwanaland origin, dispersion, and accretion of East and Southeast Asian continental terranes. J. South American Earth Sci. 7, 3-4, p. 333-347.
(Assembly of Gondwana-derived terranes in SE Asia)

Metcalfe, I. (1996)- Pre-Cretaceous evolution of SE Asian terranes. In: R. Hall & J. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 97-122.
(Pre-Cretaceous continental terranes of E and SE Asia all derived from Gondwanaland. Continental slivers rifted from N margin of Gondwanaland in Devonian (N China, S China, Indochina/East Malaya/Simao, Qaidam and Tarim), E-M Permian (Cimmerian continent incl. Sibumasu and Qiangtang); and Late Triassic-Late Jurassic (Lhasa, W Burma and Woyla). N drift of terranes accompanied by opening and closing of Paleo-Tethys, Meso-Tethys and Ceno-Tethys. Assembly of Gondwanaland-derived terranes began with amalgamation of S China and Indochina/ E Malaya in Late Devonian/E Carboniferous to form 'Cathaysialand'. Suturing of Sibumasu and Qiangtang to Cathaysia in Late Permian-Triassic. S and N China amalgamated, then accreted to Laurasia by Late Triassic-E Jurassic. Kurosegawa Terrane of Japan possibly from Australian Gondwana, accreted to Japanese Eurasia in Late Jurassic. Lhasa, W Burma and Woyla terranes accretion to SE Asia in Cretaceous. SW Borneo and Semitau terranes derived from S China/ Indochina by Cretaceous opening of marginal basin, subsequently destroyed by S-ward subduction during rifting of Reed Bank-Dangerous Grounds terrane from S China when S China Sea opened)

Metcalfe, I. (1996)- Gondwanaland dispersion, Asian accretion and evolution of the eastern Tethys. Australian J. Earth Sci. 43, p. 605-623.

Metcalfe, I. (1997)-The Palaeo-Tethys and Palaeozoic- Mesozoic tectonic evolution of Southeast Asia. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 1, p. 260-272.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)

(Main Paleotethys Ocean basin, which separates Late Paleozoic Gondwanaland terranes from Late Paleozoic Cathaysian terrane, represented by Triassic suture zones Lancangjian and Changning-Menglian (SW China), Nan-Uttaradit and Sra Kaeo (Thailand) and Bentong-Raub (Peninsular Malaysia). Subsidiary branches of Paleotethys represented by Ailaoshan suture in Yunnan, Song Ma suture in Vietnam (E Carboniferous) and other possible suture segments in N Thailand and S China. Radiolarian assemblages from deep marine cherts show Paleotethys opened in M-L Devonian and closed in Late Triassic)

Metcalfe, I. (1998)- Palaeozoic and Mesozoic geological evolution of the SE Asian region: multidisciplinary constraints and implications for biogeography. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia. Backhuys Publ., Leiden, p. 25-41.
(online at: http://searg.rhul.ac.uk/searg_uploads/2016/01/Metcalfe.pdf)
(On E and SE Asia 'jigsaw puzzle' of continental terranes))

Metcalfe, I. (1999)- The ancient Tethys Oceans of Asia: how many? how old? how deep? how wide? UNEAC Asia papers, University of New England, Armidale, 1, p. 1-9.
(online at: www.une.edu.au/asiacentre/PDF/Metcalfe.pdf)
(Tethys in E Asia three successive ocean basins: Paleo-Tethys (late E Devonian- M Triassic), Meso-Tethys (late E Permian- Late Cretaceous) and Ceno-Tethys (Late Triassic (W)/Late Jurassic (E)- Cenozoic). Ocean basins water depths comparable to modern ocean basins and all three had widths of 2000- 3000 km in E parts at maximum development)

Metcalfe, I. (1999)- The ancient Tethys Oceans of Asia: how many? how old? how deep? how wide? In: Ratanasthein, B. & S.L. Rieb (eds.) Proc. Int. Symposium on Shallow Tethys (ST) 5, Chiang Mai, Thailand, 1999, p. 1-15.
(Same paper as above)

Metcalfe, I. (1999)- Gondwana dispersion and Asian accretion: an overview. In: I. Metcalfe (ed.) Gondwana dispersion and Asian accretion, IGCP 321 Final Results Volume, A.A. Balkema, Rotterdam, p. 9-28.

Metcalfe, I. (1999)- The Palaeo-Tethys in East Asia. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 131-143.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999013.pdf)
(Paleo-Tethys opened in Devonian when N China, S China, Tarim, Indochina separated from N Gondwanaland and closed in Permian- Triassic when Sibumasu/-Qiangtang terrane amalgamated with Indochina/ S China. Main suture zone in E Asia represented by Lancangjiang and Changning-Menglian zones of SW China, Nan-Uttaradit and Sra Kaeo zones of Thailand and Bentong-Raub suture zone of Peninsular Malaysia)

Metcalfe, I. (2000)- The nature and ages of Palaeo-Tethyan suture zones in East Asia. In: Papers 2nd Symp. IGCP Project 411, Geodynamic processes of Gondwanaland-derived terranes in Eastern Asia, Geosciences J.(Korea) 4, Spec. Ed., p. 33-38.
(All East Asian terranes derived from Gondwanaland. Rifted and separated as three continental strips in Devonian, late early Permian and Late Triassic- Late Jurassic, opening Paleo-Tethys, Meso-Tethys and Ceno-Tethys oceans. East Asia formed by assembling/ closing of these oceans)

Metcalfe, I. (2000)- The Bentong-Raub suture zone. J. Asian Earth Sci. 18, 6, p. 691-712.
(Bentong-Raub Suture Zone of Malay Peninsula is closed segment of Devonian- M Triassic Paleo-Tethys ocean and boundary between Sibumasu and Indochina terranes. Suture zone result of Permian N-ward subduction of Paleo-Tethys under Indochina and Triassic collision of Sibumasu terrane. Sibumasu separated from Gondwana in late Sakmarian (E Permian), then drifted N in Permian-Triassic, with E Malaya I-type volcano-plutonic arc on Indochina margin. Main structural discontinuity in Peninsular Malaysia between Paleozoic and Triassic. Orogenic deformation started in U Permian-Lower Triassic. E-M Triassic, A-Type subduction and crustal thickening generated Late Triassic- E Jurassic Main Range syn- to post-orogenic

granites. Foredeep basin developed on margin of Sibumasu in front of accretionary complex with Semanggol Fm rocks. Suture zone covered by latest Triassic- Cretaceous red bed overlap sequence)

Metcalfe, I. (2001)- The Bentong-Raub suture zone, Permo-Triassic orogenesis and amalgamation of the Sibumasu and Indochina terranes. Gondwana Research 4, 4, p. 701-702.
(Abbreviated version of above paper)

Metcalfe, I. (2001)- Warm Tethys and cold Gondwana: East and SE Asia in Greater Gondwana during the Phanerozoic. In: R.H. Weiss (ed.) Contributions to Geology and Palaeontology of Gondwana- in honour of Helmut Wopfner, Kolner Forum fur Geologie und Palaeontologie 22, Koln, p. 333-348.

Metcalfe, I. (2002)- Permian tectonic framework and palaeogeography of SE Asia. J. Asian Earth Sci. 20, 6, p. 551-566.
(On Gondwanan versus S China/Indochina-derived continental terranes in SE Asia. 'Cathaysian' S China-Indochina and Simao terranes at equatorial paleolatitude in Permian, but derived from Gondwana in Devonian. Sibumasu attached to NW Australia Gondwana until Sakmarian, then evolved through Permian intermediate stage to Cathaysian, reflecting separation and N ward drift. W Birma and smaller terranes (Paternoster, W Sulawesi, Mangkalihat) split off Gondwana in Late Triassic- Jurassic. SW Borneo, Luconia, Reed Bank, Palawan derived from S China/ Indochina in Cretaceous. Various terranes in E Indonesia derived from New Guinea in Cenozoic)

Metcalfe, I. (2002)- Tectonic history of the SE Asian-Australian region. In: P. Kershaw et al. (eds.) Bridging Wallace's Line: the environmental and cultural history and dynamics of the SE Asian- Australian region, Advances in Geology 34, Catena Verlag, p. 29-48.

Metcalfe, I. (2005)- Asia: South-East. In: R.C. Selley et al. (eds.) Encyclopedia of Geology 1, Elsevier, Oxford, p. 169-198.
(Elegant review of plate tectonic evolution of SE Asia since Early Paleozoic and distributions of mineral resources)

Metcalfe, I. (2008)- Gondwana dispersion & Asian accretion: an update. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok, p. 23-25.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/003.pdf)
(Re-evaluations suggest W Sumatra and W Burma blocks separated from Gondwana in Devonian, along with Indochina and E Malaya and together with S China formed 'Cathaysialand' in Permian. 'Argoland', which separated from NW Australia in Jurassic previously interpreted to be W Burma but may be SW Borneo)

Metcalfe, I. (2009)- Late Palaeozoic and Mesozoic tectonic and palaeogeographic evolution of SE Asia. In: E. Buffetaut, G. Cuny et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia. Geol. Soc. London, Spec. Publ. 315, p. 7-23.
(online at: https://imetcal2.une.edu.au/web-data/PDF%20Files/Metcalfe%202009%20Geol%20Soc.pdf)
(SE Asia collage of continental terranes derived from India-Australian margin of E Gondwana. Late Paleozoic-Mesozoic rifting and separation of three elongate continental slivers from E Gondwana and opening and closure of Paleo-Tethys, Meso-Tethys and Ceno-Tethys ocean basins. W Sumatra, W Burma, Indochina and East Malaya blocks separated from Gondwana in Devonian and with S China formed 'Cathaysialand' in Permian. They were translated W to positions outboard of Sibumasu Terrane by strike-slip tectonics in Late Permian-E Triassic at convergence between Meso-Tethys and Palaeo-Pacific plates. SW Borneo, previously considered of 'Cathaysian' origin, is possibly 'Argoland' that separated from NW Australia in Jurassic)

Metcalfe, I. (2009)- Comment on ñAn alternative plate tectonic model for the Palaeozoic-Early Mesozoic Palaeotethyan evolution of Southeast Asia (Northern Thailand-Burma)ò by O.M. Ferrari et al. (2008). Tectonophysics 471, p. 329-332.

(Critique of Ferrari et al. redefining 'Shan-Thai' terrane in Thailand as Cathaysian, Indochina-derived terrane instead of traditional view of Gondwanan continental block, introducing unnecessary confusion. Mai Yuam Fault, identified as Paleo-Tethys suture, is Cenozoic fault. Paleo-Tethys suture zone represented by Inthanon Suture zone in Thailand, equivalent to previously recognized Inthanon zone. Concept of derivation of 'Orang Laut' terranes from S China- Indochina by back-arc spreading is innovative. Little evidence to support proposed S-wards subduction of Paleo-Tethys beneath E Gondwana in Permian)

Metcalfe, I. (2010)- Gondwana dispersion and Asian accretion: tectonic and palaeogeographic evolution of eastern Tethys. In: 6th Symp. Int. Geol. Correl. Program Project 516, Geological anatomy of East and South Asia, Kuala Lumpur 2010, p. 13-15.
(online at: http://geology.um.edu.my/gsmpublic/IGCP516/IGCP516_2010_Proceedings.pdf)
(Brief version of Metcalfe 2011, etc.))

Metcalfe, I. (2011)- Tectonic framework and Phanerozoic evolution of Sundaland. Gondwana Research 19, p. 3-21.
(online at: https://imetcal2.une.edu.au/web-data/PDF%20Files/Metcalfe%202011%20Gond%20Res%20Sundaland.pdf)
(Sundaland collage of continental blocks derived from E Gondwana and assembled by closure of multiple Tethyan and back-arc ocean basins. Core of Sundaland comprises Sibumasu block in W and Indochina-E Malaya block in E, with island arc terrane, which formed on Indochina- E Malaya margin, in-between. Paleo-Tethys represented by Changning-Menglian, Chiang Mai/Inthanon and Bentong-Raub suture zones. W Sumatra and possibly W Burma blocks separated from Gondwana, with Indochina and E Malaya in Devonian and accreted to Sundaland core in Triassic. W Burma now considered Cathaysian, similar to W Sumatra, from which it separated by Andaman Sea opening. SW Borneo and E Java-W Sulawesi tentatively identified as 'Banda Block' and 'Argoland', which separated from NW Australia in Jurassic and accreted to SE Sundaland in Cretaceous (puzzling how these rifted off NW Australia at same time, switch relative E-W positions along way, then both accreted to Sundaland margin at similar time but with Meratus suture separating them?; JTvG))

Metcalfe, I. (2011)- Palaeozoic-Mesozoic history of SE Asia. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc., London, Spec. Publ. 355, p. 7-35.
(online at: https://www.academia.edu/13303900/Palaeozoic_Mesozoic_history_of_SE_Asia)
(One of later versions of Metcalfe SE Asia Cambrian- Eocene reconstructions of Gondwana-derived blocks and Tethyan oceans. Recent modification is identification of SW Borneo and/or E Java- W Sulawesi as missing ‘Argoland’ that separated from NW Australia in Jurassic and accreted to SE Sundaland in Cretaceous)

Metcalfe, I. (2013)- Gondwana dispersion and Asian accretion: tectonic and palaeogeographic evolution of eastern Tethys. J. Asian Earth Sci. 66, p. 1-33.
(online at: https://s3.amazonaws.com/academia.edu.documents/36381227/Metcalfe_2013_)
(Review paper on SE Asian plate tectonics. SW Borneo and E Java- W. Sulawesi now identified as missing 'Banda' and 'Argoland' blocks, separated from NW Australia in Late Triassic- Late Jurassic by opening of Ceno-Tethys and accreted to SE Sundaland by subduction of Meso-Tethys in Cretaceous)

Metcalfe, I. (2017)- Tectonic evolution of Sundaland. Bull. Geol. Soc. Malaysia 63 (Geol. Soc. Malaysia 50th Anniversary Issue 1), p. 27-60.
(online at: www.gsm.org.my/products/702001-101709-PDF.pdf)
(Latest in series of Metcalfe review papers on SE Asian plate tectonics. By Late Triassic principal continental core blocks of Sundaland (Sibumasu, Sukhothai Arc, Simao, Indochina) had amalgamated and collided with S and N China to form proto-E and SE Asia. Paleo-Tethys represented by Changning-Menglian, Chiang Mai-Chiang Rai, Chanthaburi and Bentong-Raub Suture Zones that form boundary between Sibumasu and Sukhothai Arc. Sukhothai Arc formed on margin of Indochina in Carboniferous, then separated by back-arc spreading in Permian. Jinghong, Nan-Uttaradit and Sra Kaeo Sutures represent this closed back-arc basin. Cathaysian W Sumatra Block with its continental margin arc may well be displaced segment of Sukhothai Arc system, translated outboard of Sibumasu by strike-slip tectonics in Triassic. W Burma Block was already attached to Sundaland

before Late Triassic and is likely disrupted part of Sibumasu. Nature of any hidden continental core of SW Borneo remains enigmatic. Etc.)

Metcalfe, I., C. Jen, J. Chavet & S. Hade (eds.) (1999)- Gondwana dispersion and Asian accretion. IGCP 321 Final Results Volume, A.A. Balkema, Rotterdam, p. 1-361.
(Final results of IGCP Project 321 'Gondwana dispersion and Asian accretion'. Collection of 19 papers on tectonics of SE Asia)

Metcalfe, I., J.M.B. Smith, M. Morwood & I. Davidson (eds.) (2001)- Faunal and floral migrations and evolution in SE Asia- Australasia. A.A. Balkema, Lisse, p. 1-416.
(Collection of 31 papers on biogeography and paleobiogeography of SE Asia- Australia, presented at Armidale 1999 conference)

Metcalfe, I., F.C.P. Spiller, B. Liu, H. Wu & K. Sashida (1999)- The Paleo-Tethys in Mainland East and Southeast Asia: contributions from radiolarians studies. In: I. Metcalfe (ed.) Gondwana dispersion and Asian accretion, Final Results IGCP Project 321. Balkema, Rotterdam, p. 259-281.
(Radiolarian biostratigraphy in Thailand, S China, Malaysia, etc., constrains ages of Paleotethys Ocean opening (Devonian) and closing (Triassic))

Metivier, F., Y. Gaudemer, P. Tapponnier & M. Klein (1999)- Mass accumulation rates in Asia during the Cenozoic. Geophysical J. Int. 137, p. 280-318.

Meyerhoff, A.A. (1996)- Surge-tectonic evolution of southeastern Asia: a geohydrodynamics approach. J. Southeast Asian Earth Sci. 12, 3-4, p. 145-247.
(Unorthodox, non-plate tectonic model for SE Asia)

Meyerhoff, A.A., A.J. Boucot, D. Meyerhoff Hull & J.M. Dickins (1996)- Phanerozoic faunal and floral realms of the Earth: the intercalary relations of the Malvinokaffric and Gondwana realms with the Tethyan faunal realm. Geol. Soc. America (GSA) Mem. 189, p. 1-69.
(Review of global paleobiogeographic realms through time from 'anti-plate tectonics' perspective)

Michaux, B. (1981)- Distributional patterns and tectonic development in Indonesia: Wallace reinterpreted. Australian Syst. Botany 4, 1, p. 25-36.

Michaux, B. (1994)- Land movements and animal distributions in east Wallacea (eastern Indonesia, Papua New Guinea and Melanesia). Palaeogeogr. Palaeoclim. Palaeoecology 112, p. 323-343.
(Present-day animal distribution patterns linked to plate tectonics)

Michaux, B. (1995)- Distributional patterns in west Wallacea and their relationship to regional tectonic structure. Sarawak Mus. J., p. 163-179.

Michaux, B. (2010)- Biogeology of Wallacea: geotectonic models, areas of endemism, and natural biogeographical units. Biol. J. Linnean Soc. 101, 1, p. 193-212.
(Review of models of geological development of Indonesia and Philippines. Areas of present-day endemism within Wallacea identified. Tanimbar Islands biologically part of S Maluku. Timor (plus Savu, Roti, Wetar, Damar, Babar) and W Lesser Sunda islands form separate areas of endemism. Wallacea formed from complex of predominantly Australasian exotic fragments linked by geological processes within complex collision zone)

Min, M., K.L. Khin, Q. Feng, C. Chonglakmani, D. Meischner, R. Ingavat-Helmcke & D. Helmcke (2001)- Tracing disrupted outer margin of Paleoeurasian continent through Union of Myanmar. J. China University of Geosciences 12, 3, p. 201-206.
(Discussion of difficulty of carrying Paleotethys suture between Gondwanan 'Sibumasu' terranes and Paleo-Eurasia continent through Myanmar and into Yunnan, S China. Main point of contention is position of Boashan

Block, which has both Gondwanan and Tethyan characteristics in Permian. Margin farther W than usually assumed)

Mishra, H.K. (1996)- Comparative petrological analysis between the Permian coals of India and Western Australia: paleoenvironments and thermal history. Palaeogeogr. Palaeoclim. Palaeoecology 125, p. 199-216.

Mitchell, A.H.G. (1977)- Tectonic settings for emplacement of Southeast Asian tin granites. Bull. Geol. Soc. Malaysia 9, p. 123-140.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977026.pdf)
(Most tin-bearing granitic rocks in SE Asia in one of three main belts: (1) Late Carboniferous- E Triassic East Belt (tin-bearing, emplaced in continental crust of E Malaya- E Central Thailand above E-dipping Benioff zone); (2) Late Triassic Central Belt ('Indosinian orogeny' syn-collisional granites, emplaced during collision of 'Sibumasu' (W Malaya, etc.); and (3) Western belt with widespread Late Cretaceous-E Eocene plutons (emplaced in W zone above E-dipping Benioff zone))

Mitchell, A.H.G. (1979)- Rift, subduction and collision-related tin belts. Bull. Geol. Soc. Malaysia 11, p. 81-102.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1979003.pdf)
(General discussion of tin belts in different tectonic settings, incl. SE Asian province)

Mitchell, A.H.G. (1981)- Phanerozoic plate boundaries in mainland SE Asia, the Himalayas and Tibet. J. Geol. Soc., London, 138, p. 109-122.
(Recognition of Phanerozoic subduction systems and two continental fragments of Gondwanaland through mainland SE Asia. Cambrian subduction system and 5 Mesozoic-early Cenozoic collision belts identified. Indochina, E Thailand and Cl Tibet accreted to China in E Triassic; western SE Asia and S Tibet separated from Gondwanaland in Permian or E Triassic and collided with Asia in Late Triassic. W Burma island arc system collided with Asia in Jurassic. U Triassic flysch and schist in E Indoburman Ranges accreted to W Burma in Jurassic- E Cretaceous)

Mitchell, A.H.G. (1985)- Collision-related fore-arc and back-arc evolution of the northern Sunda Arc. Tectonophysics 116, p. 323-334.
(In fore-arc area of N Sunda Arc (W Burma-Andaman-Nicobar- W Thailand) emplacement of serpentinite melange diapirs and deposition of olistostromes were caused by Campanian collision with continental fragment since underthrust E-wards beneath arc. Age and position of E-directed thrusts and associated tin granites in continental back-arc area implies thrusting and generation of granites genetically related to collision)

Mitchell, A.H.G. (1986)- Mesozoic and Cenozoic regional tectonics and metallogenesis in mainland SE Asia. In: G.H. Teh & S. Paramananthan (eds.) Proc. GEOSEA V Conf., Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 221-239.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b12.pdf)
(Main Mesozoic tectonic event in mainland SE Asia was Late Triassic Indosinian orogeny. Deformation and uplift in Malaysia Main Range and N Thailand, emplacement of syn- to late-tectonic two-mica granites of Central Tin Belt, and imbricate thrusting in Bangka Island best be explained by E Triassic collision of Shan-Thai block foreland with Indochina block to E. Continental fragment, exposed in Indoburman Ranges, collided with Burma in latest Jurassic, etc.)

Mizutani, S. & S. Kojima (1992)- Mesozoic radiolarian biostratigraphy of Japan and collage tectonics along the eastern continental margin of Asia. Palaeogeogr. Palaeoclim. Palaeoecology 96, p. 3-22.
(On belt of Jurassic accretionary complex along E Asian margin from Japan to S, composed of deformed sediments with U Permian limestone, Triassic bedded cherts and Lower Jurassic siliceous shales and younger clastic rocks)

Mizutani, S., J. Shao & Q. Zhang (1990)- The Nadanhada Terrane in relation to Mesozoic tectonics on continental margins of East Asia. Acta Geologica Sinica (English Ed.) 3, 1, p. 15-29.

(Nadanhada Jurassic disrupted terrane in NE China mainly composed of Permo- Carboniferous limestone and greenstone, Triassic bedded chert and M Jurassic siliceous shale enclosed in Late Jurassic- E Cretaceous clastics. Identical to Mino terrane of Japan, and representing parts of long E Asian Late Jurassic- Cretaceous accretionary belt along E Asia continental margin after Triassic amalgamation of Chinese continent. Also included Ryukyu arc, Palawan Blocks of Philippines and probably Borneo (Danau Fm))

Molnar, P. & P. Tapponnier (1975)- Cenozoic tectonics of Asia: effects of a continental collision. Science 189 (4201), p. 419-426.
(Classic paper linking major strike slip faults in Asia to India-Asia collision)

Monnier, C. (1996)- Mechanismes dôaccretion des domaines oceaniques arriere-arc et geodynamique de lôAsie du Sud-Est. These Doct. Universite de Bretagne Occidentale, p. 1-605.
('Accretion mechanisms of oceanic fore-arc domains and geodynamics of SE Asia')

Morley, C.K. (2001)- Combined escape tectonics and subduction rollback-back arc extension: a model for the evolution of Tertiary rift basins in Thailand, Malaysia and Laos. J. Geol. Soc., London, 158, 3, p. 461-474.
(Tertiary rift basins of Thailand and adjacent countries show considerable variability in timing of rifting and inversion episodes. Rift basins developed on blocks that were extruded SE-ward, possibly tied to Himalayan extrusion tectonics. In Thailand major sinistral strike-slip motion ceased at ~30 Ma, prior to formation of most rift basins. Alternative mechanism to open rift basins is subduction rollback of Indian plate W of Thailand)

Morley, C.K. (2002)- A tectonic model for the Tertiary evolution of strike-slip faults and rift basins in SE Asia. Tectonophysics 347, p. 189-215.
(Two types of SE Asia Tertiary evolution models: (1) escape tectonics with no proto-S China Sea, (2) subduction of proto-S China Sea oceanic crust beneath Borneo. Proposed tectonic model with key points: (1) Ailao Shan- Red River shear zone mainly active in Eocene-Oligocene tied to extension in S China Sea, less active in Miocene; (2) three regions of metamorphic core complex development affected Indochina from Oligocene-Miocene; (3) Subduction of proto-S China Sea in Eocene- E Miocene necessary to explain evolution of NW Borneo; (4) Eocene-Oligocene collision of NE India with Burma activated extrusion tectonics in mainland SE Asia and right lateral motion along Sumatran subduction zone)

Morley, C.K. (2004)- Nested strike-slip duplexes, and other evidence for Late Cretaceous-Palaeogene transpressional tectonics before and during India-Eurasia collision in Thailand, Myanmar and Malaysia. J. Geol. Soc. London 161, p. 799-812.
(Late Cretaceous S-type granites from Malaysia-Thailand to Myanmar long used to infer episode of crustal thickening, supported by late Cretaceous-Eocene ophiolites in Myanmar, but no evidence for associated fold-thrust belt. Fission-track studies of Thailand indicate modest regional uplift from ~80-40 Ma. Left lateral motion on major NW-SE-trending strike-slip fault zones (Mae Ping and Three Pagodas faults) in Myanmar and Thailand attributed to Himalayan-Tibetan escape tectonics, but fault zones are network of branching faults with important N-S trends as well as NW-SE trends. This diffuse 1000 km long/up to 250 km wide, branching network of strike-slip faults may represent Late Cretaceous- Paleogene transpressional belt. Himalayan escape tectonics represent later deformation)

Morley, C.K. (2007)- Variations in Late Cenozoic- Recent strike-slip and oblique-extensional geometries, within Indochina: the influence of pre-existing fabrics. J. Structural Geol. 29, p. 36-58.
(From Yunnan to N Thailand, Late Cenozoic-Recent faults strike predominantly NNE-SSW, N-S to NNE–SSW and NE-SW to ENE-WSW. Associated sedimentary basins are aligned NE-SW to N-S. Fault patterns commonly interpreted as strike-slip dominated deformation, but N Thailand interpreted to have evolved mainly by oblique extension. Multiple episodes of basin inversion in N Thailand during Miocene require changes in stress pattern)

Morley, C.K. (2009)- Evolution from an oblique subduction back-arc mobile belt to a highly oblique collisional margin: the Cenozoic tectonic development of Thailand and eastern Myanmar. In: P.A. Cawood & A. Kroner (eds.) Earth accretionary systems in space and time, Geol. Soc., London, Spec. Publ. 318, p. 373-403.

(N to NE subduction beneath SE Asia during Mesozoic-Cenozoic resulted in development of hot, thickened crust in Thailand-Myanmar region in back-arc mobile belt setting. Setting changed in Eocene-Recent to highly oblique collision when India coupled with W Burma block)

Morley, C.K. (2012)- Late Cretaceous- Early Palaeogene tectonic development of SE Asia. Earth-Science Reviews 115, p. 37-75.
(Late Cretaceous-E Paleogene history of continental core of SE Asia (Sundaland), prior to India- Asia collision. In Myanmar and Sumatra subduction s interrupted in Aptian-Albian by phase of arc accretion (Woyla and Mawgyi arcs) and in Java, E Borneo and W Sulawesi by collision of continental fragments rifted from N Australia. Subsequent resumption of subduction in Myanmar-Thailand sector explains: (1) early creation of oceanic crust in Andaman Sea in supra-subduction zone setting at ~95 Ma;(2) belt of granite plutons of Late Cretaceous- E Paleogene age in W Thailand and C Myanmar; (3) amphibolite grade metamorphism at 70-80 Ma in W and C Thailand; and (4) accretionary prism development in W Belt of Myanmar, until glancing collision with NE corner of Greater India promoted ophiolite obduction and deformation in E Paleogene)

Morley, C.K. (2013)- Discussion of tectonic models for Cenozoic strike-slip fault-affected continental margins of mainland SE Asia. J. Asian Earth Sci. 76, p. 137-151.
(On relationship between Cenozoic strike-slip faults of mainland SE Asia and adjacent sedimentary basins (Gulf of Thailand, Gulf of Martaban/Andaman Sea, Gulf of Tonkin. Most major onshore SE Asia strike-slip faults probably do not extend far offshore)

Morley, C.K. (2018)- Understanding Sibumasu in the context of ribbon continents. Gondwana Research 64, p. 184-215.
(Ribbon continent collision belts like Zealandia, provide analogues for Permo-Triassic development of Sibumasu. Key parameters for ribbon continents are width, and how rifting developed. Characteristics of Sibumasu tectonics: (1) basin inversion in Late Triassic and possibly E Jurassic, and mixed thick- and thin-skinned deformation; (2) extensional collapse around 215 Ma; 3) Slab delamination and extension-related decompression melting probably important for generating granites in addition to crustal thickening; (4) metamorphism is relatively high T, lower P).

Morley, C.K., R. King, R. Hillis, M. Tingay & G. Backe (2011)- Deepwater fold and thrust belt classification, tectonics, structure and hydrocarbon prospectivity: a review. Earth-Science Reviews 104, p. 41-91.
(Overview of deepwater fold-thrust systems. Two types: Type 1 mainly on passive margins, driven by sediment loading or local uplift, typically with high-quality continent-derived quartz sst reservoirs; Type 2 on active margins, in areas of continental convergence. Examples include NW Borneo, W Sulawesi- Makassar Straits, Banda Arc, Seram)

Morley, R.J. (2000)- Origin and evolution of tropical rain forests. John Wiley & Sons, New York, p. 1-362.
(SE Asia chapter describes Cenozoic vegetation response to plate tectonic evolution, as reflected in Indonesia palynology records. Middle Eocene arrival of palynomorphs known from older deposits in India is consequence of India-Asia collision. In M Eocene SW Sulawesi has Laurasian flora, and was attached to E Kalimantan. Makassar Straits became floral-faunal migration barrier in Late Eocene. First Australian- New Guinea floral elements (Casuarina, etc.) start appearing in W Java Sea around 22-21 Ma)

Moyne, S. & P. Neige (2007)- The space-time relationship of taxonomic diversity and morphological disparity in the Middle Jurassic ammonite radiation. Palaeogeogr. Palaeoclim. Palaeoecology 248, p. 82-95.
(Australia biogeographic realm comprises Western Australia, New Zealand, New Guinea and Sula Islands. Not much specific data/ interpretation)

Moyne, S., P. Neige, D. Marchandet & J. Thierry (2004)- Repartition mondiale des faunes dōammonites au Jurassique moyen (Aalenien superieur a Bathonien moyen): relations entre biodiversite et paleogeographie. Bull. Soc. Geologique France 175, 5, p. 513-523.
('Global distribution of ammonite faunas in the Middle Jurassic (Upper Aalenian to Middle Bathonian): relations between biodiversity and paleogeography'. Tethyan, Pacific, Boreal domains and associated

epicratonic platforms divided into 16 paleobiogeographical provinces. Provinces that show strong endemism are isolated (Boreal and SE Tethyan margins))

Muller, R.D. & M. Seton (2015)- Paleophysiography of ocean basins. In: Encyclopedia of Marine Geosciences, Springer, Dordrecht, p. 1-15.
(Review of ocean basins, with global reconstructions for last 200 Myrs)

Muller, R.D., M. Seton, S. Zahirovic, S.E. Williams, K.J. Matthews, N.M. Wright, G.E. Shephard, K.T. Maloney, N. Barnett-Moore, M. Hosseinpour, D.J. Bower & J. Cannon (2016)- Ocean basin evolution and global-scale plate reorganization events since Pangea breakup. Annual Review Earth Planetary Sci. 44, p. 107-138.
(Revised global plate motion model from Triassic at 230 Ma- present day. Plate velocities controlled or modified by increases in subduction processes and collisional events and ridge subduction events)

Nakamura, K., D. Shimizu & Z. Liao (1985)- Permian palaeobiogeography of brachiopods based on faunal provinces. In: K. Nakazawa & J.M. Dickins (eds.) The Tethys, her paleogeography and paleobiogeography from Paleozoic to Mesozoic, Tokai University Press, Tokyo, p. 185-198.

Nicoll, R.S. (2004)- New Permian cold water conodont faunas from the Tethyan Gondwanan margin of Australia. GSA Rocky Mountain and Cordilleran Joint Meeting, 20-11 *(Abstract only)*

Nicoll, R.S. & I. Metcalfe (1998)- Early and Middle Permian conodonts from the Canning and southern Carnarvon basins, W Australia; their implications for regional biogeography and paleoclimatology. In: G.R. Shi et al. (eds.) Strzelecki Int. Symp. Permian of eastern Tethys; biostratigraphy, palaeogeography and resources. Proc. Royal Soc.Victoria 110, 1-2, p. 419-461.
(Small, low diversity conodont faunas from E-M Permian of S Carnarvon- Canning basins of W Australia (paleolatitude up to 60°S). Species of Hindeodus and Vjalovognathus cool-temperature tolerant forms were first conodonts to invade after Late Carboniferous-E Permian glaciation. Faunas of similar age from Timor (paleolatitude ~45°S) significantly greater faunal diversity)

Nicoll, R.S. & I. Metcalfe (2001)- Cambrian to Permian conodont biogeography in East Asia-Australasia. In: I. Metcalfe et al. (eds.) Faunal and floral migrations and evolution in SE Asia-Australasia. Balkema, Lisse, p. 59-72.
(Conodont faunas of allochthonous East Asian terranes show biogeographic affinities with Australasia during Cambrian- Permian, suggesting close proximity or Australian Gondwanaland from ~500- 250 Ma)

Nie, S., D.B. Rowley & A.M. Ziegler (1990)- Constraints on the location of Asian microcontinents in Palaeo-Tethys during the Late Palaeozoic. In: W.S. McKerrow & C.R. Scotese (eds.) Palaeozoic palaeogeography and biogeography, Geol. Soc., London, Mem. 12, p. 397-409.
(Overview of Permian terranes history, mainly of mainland Asia. Biogeographic provinces well developed in Late Paleozoic due to steep equator-to-pole gradients. As continents rifted from S margin of Paleo-Tethys, they lost temperate Gondwanan affinities and acquired sub-tropical to tropical floras and faunas. A S belt of terranes, from Helmand block in Iran-Afghanistan, through W Qiangtang and Lhasa blocks of Tibet to Sibumasu block of Thailand-Malaya, all rifted off margins of Gondwana in Permian. Cathaysian floras existed in N parts of Gondwana (New Guinea), and since Cathaysian plants like Gigantopteris had to be dispersed by seeds this suggests land connections between Cathaysian microcontinents and Gondwana)

Niu, Y., Y. Liu, Q. Xue, F. Shao, S. Chen, M. Duan, P. Guo, H. Gong, Y. Hu, Z. Hu, J. Kong et al. (2015)- Exotic origin of the Chinese continental shelf: new insights into the tectonic evolution of the western Pacific and eastern China since the Mesozoic. Science Bull. (China) 60, 18, p. 1598-1616.
(online at: http://engine.scichina.com/publisher/scp/journal/SB/60/18/10.1007/s11434-015-0891-z?slug=full%20text)
(Basement of continental shelf beneath E and S China Seas may be of exotic origin, geologically unrelated to continental lithosphere of E China. Jurassic-Cretaceous granitoids in region associated with W Pacific oceanic

subduction. 'Sudden' termination of granitoid magmatism at ~88 ± 2 Ma suggests trench jam at ~100 Ma, pointing to collision of buoyant oceanic plateau or microcontinent. Jammed trench (suture) located near coastline of SE continental China. Trench jam at ~100 Ma led to re-orientation of Pacific plate motion, making boundary between Pacific plate and newly accreted plate of E Asia transform fault E of exotic-origin continental shelf. This explains apparent ~40 Myr magmatic gap from ~88 to ~50 Ma)

Noakes, L.C. (1977)- Review of provenance for mineral sands and tin in Southeast Asia. United Nations ESCAP, CCOP Techn. Bull. 11, p. 157-168.

Ogg, J.G., F.M. Gradstein, J.A. Dumoulin, M. Sarti & P. Brown (1994)- Sedimentary history of the Tethyan margins of Eastern Gondwana during the Mesozoic. In: R.A. Duncan et al. (eds.) Synthesis of results from Scientific Drilling in the Indian Ocean, American Geophys. Union (AGU), Geophys. Monograph 70, p. 203-224.
(Review of Mesozoic of Gondwana margins of E Tethys Ocean (Australian and Himalayan margins, Timor and ODP Legs 122-123). Region drifted N in Triassic, entering tropical paleolatitudes in Late Triassic- E Jurassic, then returned to mid-latitudes for M Jurassic- E Cretaceous. Episodes of deltaic sandstone progradation over shelves. Widespread hiatus between Callovian shelf deposits and Oxfordian deep-water sediments, coinciding with block faulting off NW Australia. Shallow depths of carbonate compensation during Late Jurassic- E Cretaceous over most of Argo basin off NW Australia caused deposition of radiolarian-rich claystone. Volcanism accompanied final stages of rifting between India and Australia in Late Berriasian-Valanginian. Late Barremian and Aptian rise in CCD, with warming and increased organic-rich claystone)

Oh, C., J. Legrand, K. Kim, M. Philippe & I. Paik (2011)- Fossil wood diversity gradient and Far-East Asia palaeoclimatology during the Late Triassic- Cretaceous interval. J. Asian Earth Sci. 40, p. 710-721.
(Mesozoic fossil floras of E Asia (China, Mongolia, Siberia, Korea, Japan) with (1) northern Tetori flora reflecting warm-temperate and moderately humid climate and (2) southern Ryoseki-type floras with features of hot and arid/ semi-arid floras and Tetori-type plants being 'typical of conditions' (nothing on SE Asia))

Okada, H. & N.J. Mateer (eds.) (2000)- Cretaceous environments of Asia. Developments in Palaeontology and Stratigraphy 17, Elsevier, p. 1-255.
(Collection of 15 papers on Cretaceous of Japan, Philippines, mainland E Asia; nothing on Indonesia/ New Guinea)

Oostingh, C.H. (1938)- Betrekkingen tusschen het Indische en het Mediterrane Tertiair. Handelingen 8e Nederlands-Indisch Natuur Wetenschappelijk Congres, Soerabaja 1938, p.
('Relationships between the East Indies and Mediterranean Tertiary'. Neogene mollusc biostratigraphy and comparisons)

Ozawa, T. (1987)- Permian fusulinacean biogeographic provinces in Asia and their tectonic implication. In: A. Taira & M. Tashiro (eds.) Historical biogeography and plate tectonic evolution of Japan and Eastern Asia, Terra Scient. Publ., Tokyo, p. 45-63.

Page, K.N. (2008)- The evolution and geography of Jurassic ammonoids. Proc. Geologists Assoc. 119, 1, p. 35-57.
(Jurassic ammonites 7 suborders, in ~20 distinguishable biogeographical provinces and subprovinces. S Pan-Tethyan Realm includes Mediterranean-Caucasian, E Pacific, Indo-Pacific and Austral realms/ subrealms. Indo-Malgach Province recognizable first in Callovian, with endemic Sphaeroceratidae (Macrocephalites, Subkossmatia) and Perisphinctidae (Indosphinctes, Choffatia, Kinkeliniceras, etc.). Persisted into Oxfordian times, with place of Macrocephalitinae taken by endemic Mayatinae. By Tithonian, several restricted Indo-Pacific/Austral genera and endemic species: Pachysphinctes, Virgatosphinctes, Aulacosphinctoides, Himalayitidae, Neocomitidae (incl. endemic Blanfordiceras), Uhligites, etc.)

Peltzer, G. & P. Tapponnier (1988)- Formation and evolution of strike-slip faults, rifts, and basins during the India-Asia collision: an experimental approach. J. Geophysical Research 93, B12, p. 15085-15117.

(More extensive discussion of Tapponnier et al. 1982 plasticine models, used to explain SE Asia extrusion)

Philippe, M., M. Bamford, S. McLoughlin, L.S.R. Alves, H.J. Falcon-Lang, S. Gnaedinger, E.G. Ottone, M. Pole, A. Rajanikanth, R.E. Shoemaker, T. Torres & A. Zamuner (2004)- Biogeographic analysis of Jurassic-Early Cretaceous wood assemblages from Gondwana. Rev. Paleobotany Palynology 129, p. 141-173.
(Distribution of Jurassic- Early Cretaceous fossil wood across Gondwana suggests 5 climate zones: summer wet, desert, winter wet, warm temperate, cool temperate. Araucarian-like conifer wood dominant, cosmopolitan element, whereas other taxa more provincialism)

Pitfield, P.E.J. (1987)- Report on the geochemistry of the Tin islands of Indonesia. British Geological Survey, Overseas Directorate, Report No. MP/87/9/R, p.

Pitfield, P.E.J. (1987)- Geochemistry of the Tin Islands granites of Indonesia in relation to those of Peninsular Malaysia. Warta Geologi 13, p. 125-133.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1987003.pdf)
(In Thai-Malay Peninsula two separate granite provinces established, separated by Raub-Bentong line suture: (1) Main Range granitoids (associated with 'Sibumasu' Lower Paleozoic shallow marine sequences) and (2) Eastern Province (C and E Belts) granitoids (associated with Permo-Triassic deeper water volcano-sedimentary sequences). Tin Islands of Indonesia largely fall in Permo-Triassic volcano-sedimentary terrain, but characteristics of granites variable. Comparisons of granitoids suggest S-ward extrapolation of Raub-Bentong line between Karimun (E Province type) and Kundur (Main Range type) along chain of isles comprising Merak gabbro. Further S it may pass through C Singkep Island between Dabo (E Province type) and unnamed Main Range pluton in SW Belitung seems to comprise largely E Province plutons)

Pitfield, P.E.J., E.J. Cobbing, M.C.G. Clarke, D.I.J. Mallick & L.H. Teoh (1987)- Granite provinces in the Southeast Asian Tin Belt. In: M.K. Horn (ed.) Trans. 4th Circum Pacific Energy and Mineral Resources Conf., Singapore 1986, p. 575-589.
(Four granite provinces delineated in SE Asia tin belt: (1) Eastern Province (I-type, Carboniferous- Triassic 200-280 Ma; volcanic arc, and 70-80 Ma), (2) Main Range (S-type, mainly Triassic, 200-230 Ma; syn-collisional), (3) N Thailand Migmatitic (S-type, Permo-Triassic; syn-collisional) and (4) Western (Peninsular Thailand- Burma, S and I-types, Cretaceous 82-98 and 130 Ma). E and C Belts of Peninsular Malysia distinguished by Hutchison (1977), but are similar. Tin Islands of Indonesia part of E Province, Permo-Triassic. Widespread Cretaceous post-orogenic plutons, but not in Main Range and Tin Islands and not associated with mineralization)

Pitfield, P.E.J., L.H. Teoh & E.J. Cobbing (1990)- Textural variation and tin mineralization in granites from the main range province of the Southeast Asian Tin Belt. Geological Journal 25, p. 419-429.
(Textural evolution from coarse K-feldspar megacrystic granite, through heterogeneous granite porphyry to microgranite corresponds to sequence of geochemical evolution)

Polhemus, D.A. (1996)- Island arcs, and their influence on Indo-Pacific biogeography. A. Keast & S.E. Miller (eds.) The origin and evolution of Pacific island biotas, New Guinea to eastern Polynesia: patterns and processes, SPB Academic Publishing, Amsterdam, p. 51-66.

Powell, C.M. & B.D. Johnson (1980)- Constraints on the Cenozoic position of Sundaland. Tectonophysics 63, p. 91-109.
(Old paper on India collision and evolution of Sundaland)

Powell, C. McA., B.D. Johnson & J.J. Veevers (1980)- Constraints on the positions of India, Australia and Southeast Asia since the Late Cretaceous. Proc. 5th Conf. SE Asia Petroleum Expl. Soc. (SEAPEX V), Singapore, p. 82-89.
(Paleomagnetic data from Indochina, Malaysia and Kalimantan show similar declination at similar times, suggesting much of older continental nuclei of SE Asia acted as single continental block ('Sundaland') at least since ~80 Ma. Plate motions derived from continental paleomagnetism and seafloor spreading show continental

Sundaland moved W-ward across wake of N-moving Greater India ~15 My ago (M Miocene) while at same time Australia moved N-ward across Sundaland 's wake)

Qiu, Y. & B. Zhang (2000)- Eastern extension of the Paleotethys in southern China. Zhongquo Quyu Dizhi (Regional Geology of China), Beijing, 19, 2, p. 175-180.
(E section of Paleotethys suture extends from Qinghai-Tibet to W Yunnan, S to Putong, Changning-Menglian, Uttarradit and Bentong-Raub, through Kalimantan (Kuching), Palawan, Luzon, Taiwan and Japan. Present 'U' shape of suture zone caused by N-moving Indian plate, S China Sea spreading and W-pushing Philippine Sea plate since 45 Ma. Restored Paleotethys suture orienteded E-W from Late Cretaceous- Early Cenozoic)

Rangin, C. (2016)- Rigid and non-rigid micro-plates: Philippines and Myanmar-Andaman case studies. Comptes Rendus Geoscience 348, 1, p. 33-41.
(online at: https://www.sciencedirect.com/science/article/pii/S163107131500200X)
(Philippine Mobile Belt complex tectonic zone composed of rigid rotating crustal blocks. In Myanmar, N-most tip of Sumatra-Andaman subduction system also complex zone of various crustal blocks in-between convergent plates, but sustaining internal deformation with platelet buckling, indicative of non-rigid behavior)

Raven, P.H. & D.I. Axelrod (1972)- Plate tectonics and Australasian paleobiogeography. Science 176, 4042, p. 1379-1386.
(On relationship between modern faunal- floral distributions and Australia- SE Asia plate tectonic history)

Rees, P. M., A.M. Ziegler, M.T. Gibbs, J.E. Kutzbach, P.J. Behling & D.B. Rowley (2002)- Permian phytogeographic patterns and climate data/model comparisons. J. Geology 110, 1, p. 1-31.
(online at: www.geo.arizona.edu/rees/2202-4.pdf)
(Global 'icehouse-hothouse' climate transition began during Permian. Reconstructions for two stages, Sakmarian (285-280 Ma) and Wordian/ Kazanian (267-264 Ma), integrating floral with lithological data to determine climates globally)

Ren, J., B. Niu, J. Wang, X. Jin, L. Zhao & R. Liu (2013)- Advances in research of Asian geology- a summary of 1:5M International Geological Map of Asia project. J. Asian Earth Sci. 72, p. 3-11.
(Asia is composite continent consisting of three major cratons: Siberian, Indian and Arabian and three huge orogenic belts with minor cratons and microcontinents. Main body of Asian continent took its shape in Mesozoic. Main orogenic belts: Paleo-Asian, Tethyan and Pacific. Small cratons, like Sino-Korea, Yangtze, Tarim, and Sibumasu were on N margin of Gondwana before disappearance of Paleo-Asian Ocean. Ophiolites in Asia progressively younger from N to S, reflecting accretion of Asia by S-ward migration of orogenic belts. Large amounts of Mesozoic volcanic rocks in E Asian coastal areas mainly of Cretaceous age. Most Carboniferous- Permian volcanic rocks in C. Asia not arc volcanics, but product of extensional stage)

Ren, J., K. Tamaki, Sitian Li & J. Zhang (2002)- Late Mesozoic and Cenozoic rifting and its dynamic setting in Eastern China and adjacent areas. Tectonophysics 344, p. 175-205.
(On widespread Late Mesozoic and Cenozoic extension in E China and adjacent areas. First rift stage in Late Jurassic- E Cretaceous, second phase in NE Asia. Paleogene stage widespread continental rift systems and continental margin basins in E China (incl. S China Sea))

Rensch, B. (1936)- Die Geschichte des Sundabogens, eine tiergeographische Untersuchung. Borntraeger, Berlin, p. 1-318.
('The history of the Sunda Arc: a zoogeographic investigation'. Results of 1927 German biological expedition to the Lesser Sunda Islands (Lombok, Sumbawa, Flores))

Replumaz, A. (1999)- Reconstruction de la zone de collision Inde-Asie, Etude centree sur lôIndochine. Ph.D. Thesis, Universite Paris 7, p. 1-230.
('Reconstruction of the India- Asia collision zone- a study centered on Indochina')

Replumaz, A., F.A. Capitanio, S. Guillot, A.M. Negredo & A. Villasenor (2014)- The coupling of Indian subduction and Asian continental tectonics. Gondwana Research 26, 2, p. 608-626.
(Reconstruction of India-Asia subduction-continent deformation history, using tomography, etc. Major breakoff between India and Tethys Ocean at ~45 Ma. In W vertical slab continuous to continent overrides deeper detached Tethys slab; in E no slab imaged. After Tethys slab broke off, subduction only resumed in C of margin. Second breakoff event detached C Indian slab from margin at ~15 Ma, which renewed Indian lithosphere underthrusting below Asia. Breakoff followed by large stresses in upper plate interiors, propagating at large distance from margin, along belt oriented at ~45° from trench. Successive strike-slip faulting across Asian continent, in agreement with models)

Replumaz, A., S. Guillot, A. Villasenor & A.M. Negredo (2013)- Amount of Asian lithospheric mantle subducted during the India/Asia collision. Gondwana Research 24, p. 936-945.
(Seismic tomography suggests existence of three Asian continental slabs. Asian continental subduction could accommodate up to 45% of Asian convergence; rest of convergence possibly accommodated by extrusion and shallow subduction/ underthrusting processes. Continental subduction major lithospheric process in intraplate tectonics of supercontinent like Eurasia)

Replumaz, A, H. Karason, R.D. van der Hilst, J. Besse & P. Tapponnier (2004)- 4-D evolution of SE Asiaȏs mantle from geological reconstructions and seismic tomography. Earth Planetary Sci. Letters 221, p. 103-115.
(Reconstructions of SE Asia block motions from India to Taiwan since ~50 Ma from tomography of subducted lithosphere)

Replumaz, A., A.M. Negredo, S. Guillot & A. Villasenor (2010)- Multiple episodes of continental subduction during India/Asia convergence: insight from seismic tomography and tectonic reconstruction. Tectonophysics 483, p. 125-134.
(Tomographic anomalies at <1100 km under India/Asia collision zone interpreted as continental slabs subducted during collision, and used to constrain evolution of episodes of continental subduction. In W part two episodes of steep subduction of N margin of India: (1) starting at~40-30 Ma and ending by slab breakoff at ∼15 Ma; (2) subduction beneath Hindu Kush mountains since ∼8 Ma. E of collision zone, beneath Burma and Andaman Sea, two episodes of SE-ward extrusion followed by subduction. Extruded portions initially located along N margin of India)

Replumaz, A. & P. Tapponnier (2003)- Reconstruction of the deformed collision zone between India and Asia by backward motion of lithospheric blocks. J. Geophysical Research 108, B6, p. 101029-101053.
(Reconstructions of SE Asia block motions from India to Taiwan since ~50 Ma. Extrusion absorbed ~30% of convergence between India and Siberia during entire collision span, but varied with time)

Rich, T.H. & G.C. Young (1996)- Vertebrate biogeographic evidence for connections of the east and southeast Asian blocks with Gondwana. In: Z.X. Li, I. Metcalfe & C.McA. Powell (eds.) Breakup of Rodinia and Gondwanaland and Asembly of Asia, Australian J. Earth Sci. 43, 6, p. 625-634.
(Fluctuating affinities between aquatic faunas of China and Australia in Devonian. Within S China Block similar endemic freshwater fish faunas on Yangtze and Huanan terranes demonstrate juxtaposition in mid-Paleozoic. Triassic tetrapod faunas of Australia quite distinct from China and Thailand)

Richards, J.P. (2015)- Tectonic, magmatic, and metallogenic evolution of the Tethyan orogen: from subduction to collision. Ore Geology Reviews 70, p. 323-345.
(Review of tectonic, magmatic and metallogenic history of Tethyan orogen fromt Carpathians to Indochina, with focus on formation of porphyry Cu±Mo±Au deposits, the most characteristic mineral deposit type formed during both subduction and collisional processes in region)

Richter, B., M. Fuller, E. Schmidtke, U Tin Myint, U Tin Ngwe, U Mya Win & S. Bunopas (1993)- Paleomagnetic results from Thailand and Myanmar: implications for the interpretation of tectonic rotations in Southeast Asia. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 247-255.

(Shan Hills of E Myanmar (Cretaceous Phuket-Mandalay foldbelt) and Khorat Plateau of Thailand rotated ~40° CW since Cretaceous)

Ricou, L.E. (1994)- Tethys reconstructed: plates, continental fragments and their boundaries since 260 Ma from Central America to Southeastern Asia. Geodinamica Acta 7, 4, p. 169-218.
(Evolution of the former Tethys ocean)

Ricou, L.E. (1995)- Tethys and transit plate patterns viewed against long-term periodicity of magnetic field reversals. Physics Earth Planetary Interiors 87, p. 255-265.
(On Tethyan pattern of transit plates between converging boundary in N and diverging boundary in S (repeatedly offset by S-ward shifts))

Ridd, M.F. (1971)- South East Asia as part of Gondwana. Nature 234, p. 531-533.
(Stratigraphic evidence in Thailand and Malaya suggest they were once joined with India (E Permian tilloids in Phuket Group of Thailand, etc., cratonic clastic source from W for Malay Peninsula and Thailand, detrital diamonds in Permian Phuket Gp of Thailand, etc.). India and SE Asia must have drifted N to collide with mainland Asia after break-up of Gondwanaland. 'Interesting' reconstruction)

Ridd, M.F. (1980)- Possible Palaeozoic drift of SE Asia and Triassic collision with China. J. Geol. Soc., London, 137, 5, p. 635-640.
(Paleozoic- E Mesozoic of Thai-Malay Peninsula provide evidence of subduction zone to E and, in Lower Paleozoic, cratonic sediment source to W. First paper to recognize separation of W Thai- Malay Peninsula from Gondwana in mid-Paleozoic and collision with mainland Asia in Late Triassic)

Ridd, M.F. (2015)- East flank of the Sibumasu block in NW Thailand and Myanmar and its possible northward continuation into Yunnan: a review and suggested tectono-stratigraphic interpretation. J. Asian Earth Sci. 104, 5 160-174.
(E flank of Sibumasu block was passive continental margin, marked in NW Thailand by absence of M Permian-Triassic platform carbonates, widespread across Sibumasu further W. Instead, hemipelagic cherts, mudstones and sandstones including turbidites. Devonian-Triassic accretionary wedge in front of Sukhothai volcanic arc thrust W-wards across E flank of Sibumasu in M-L Triassic, then became source of terrigenous clastic rocks in foredeep basin in W. Boundary with Sibumasu Permo-Triassic carbonate platform further W is Mae Ping-Nam Teng Fault system. N-wards in Myanmar and Yunnan Sibumasu Permo-Triassic carbonate shelf continues as Shan Plateau and Baoshan Block. E flank is represented by Changning-Menglian Belt, and Paleotethys 'cryptic suture' in Thailand possibly joins with Lancangjiang Suture)

Ridd, M.F. (2016)- Should Sibumasu be renamed Sibuma? The case for a discrete Gondwana-derived block embracing western Myanmar, upper Peninsular Thailand and NE Sumatra. J. Geol. Soc., London, 173, 2, p. 249-264.
(Luxi-Nujiang suture extends from Yunnan into Myanmar and continues into Thailand and Malacca Strait. It separates the Gondwana-derived Sibumasu Block' into two terranes: (1) Irrawaddy Block in W, with thick Lower Permian, glacial diamictite-bearing sediments (= 'Phuket Slate Belt' of Thailand/ Tengchong Block of Yunnan/ Lhasa Terrane in Tibet? and much of Bohorok facies of Sumatra); (2) Sibuma Block in E, with local, rel. thin, Lower Permian marine ice-rafted deposits (= Shan-Tai Plateau of E Myanmar/ Baoshan Block of Yunnan/ Qiantang Terrane of Tibet?). NE Sumatra diamictite-bearing E Permian probably also part of Irrawaddy Block. Late Cretaceous-Paleogene dextral India-Australia oceanic transform propagated onshore as strike-slip fault, which disrupted Irrawaddy Block)

Rigby, J.F. (1998)- Upper Palaeozoic floras of SE Asia. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 73-82.
(online at: http://searg.rhul.ac.uk/searg_uploads/2016/01/Rigby.pdf)
(Minor Carboniferous flora in Thailand and W Malaysia (including 'Kuantan flora'), probably similar to S China floras. More extensive Permian floras known from Thailand, Laos, W. Malaysia, Sumatra and Irian

Jaya. All are 'Cathaysian' floras, but some floras from Thailand and Irian Jaya also contain Gondwanan Glossopteris)

Rong, J., A.J. Boucot, Y.Z. Su & D.L. Strusz (1985)- Biogeographical analysis of late Silurian brachiopod faunas, chiefly from Asia and Australia. Lethaia 28, 1, p. 39-60.
(Silurian shallow marine brachiopod Retziella Fauna known from SW Tienshan, China, N Vietnam and E Australia. Possibly also in N Korea, C Pamirs, Afghanistan and New Zealand (Sino-Australian Province). Coeval Tuvaella Fauna occurs only in S marginal belt of Siberian Plate (Mongolo-Okhotsk Province))

Ross, C.A. & J.R.P. Ross (1985)- Carboniferous and Early Permian biogeography. Geology 13, 1, p. 27-30.

Rowley, D.B. (1992)- Reconstructions of the Circum-Pacific region. In: G.E.G. Westermann (ed.) The Jurassic of the Circum-Pacific, Cambridge University Press, p. 15-26.

Roy, S.S. (1978)- Eastern Tethys and microplates framed in Himalayan, Central and Southeast Asian geology. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources SE Asia, GEOSEA III, Bangkok 1978, p. 165-172.
(Early version of SE Asian plates history)

Safonova, I. & S. Maruyama (2014)- Asia: a frontier for a future supercontinent Amasia. Int. Geology Review 56, 9, p. 1051-1071.
(online at: www.tandfonline.com/doi/pdf/10.1080/00206814.2014.915586)
(Review of tectonic blocks and continental growth of Asia and prediction of formation of future supercontinent 'Amasia' 200-250 Myrs from now)

Santini, F. & R. Winterbottom (2002)- Historical biogeography of Indo-Western Pacific coral reef biota: is the Indonesian region a centre of origin? J. Biogeography 29, 29, p. 189-205.
(Most lineages of Indo-West Pacific marine fauna may have originated in western Indian Ocean, Australia, or SW Pacific, probably from lineages that remained isolated after breakup of Gondwanan supercontinent, or because of movement of island arcs)

Sashida, K. & H. Igo (1999)- Occurrence and tectonic significance of Paleozoic and Mesozoic radiolaria in Thailand and Malaysia. In: I. Metcalfe (ed.) Gondwana dispersion and Asian accretion, IGCP 321 Final Results Volume, Balkema, Rotterdam, p. 175-196.
(Cherts and associated shales of Thailand and Peninsular Malysia contain rich U Devonian- M Triassic radiolarian faunas, allowing subdivision in 13 zones (representing Paleo-Tethys Ocean sediments). Timing of collision of Shan-Thai with E Malaya is E Triassic and Shan-Tai with Indochina Late Triassic or later)

Sato, T. (1975)- Marine Jurassic formations and faunas in Southeast Asia and New Guinea. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 151-189.
(Compilation of Jurassic fossils/ stratigraphy in SE Asia. Jurassic rel. rare. May be classified as (1) thick geosynclinal sequences in Sumatra, Java (?; JTvG), Timor and New Guinea; (2) marine calcareous facies with rich macrofaunas in E Sulawesi, Sula, Buru, Ceram and Misool; (3) marine clastic sediments with poor molluscs in W Thailand/ Burma, W Sarawak/NW Kalimantan, Laos, Cambodia, Vietnam, etc. and (4) Khorat Group continental red beds in NE Thailand- S Laos)

Sato, T. and CCOP Working Group (2000)- Geotectonic map of East and Southeast Asia: sheets 4, 5 and 6. CCOP-CPCEMR Geotectonic map project. CCOP Tech. Bull. 27, p. 1-16.
(Geotectonic Map of E and SE Asia. Sheet 4: Philippines, Vietnam, S China, Sheet 5: Malaysia, W Indonesia, Sheet 6: E Indonesia)

Sato, T. and CCOP Working Group (2002)- Geotectonic map of East and Southeast Asia: sheets 1, 2, 3 and 8. CCOP-CPCEMR Geotectonic map project. CCOP Tech. Bull. 31, p. 1-16.

(Tectonic maps E and SE Asia: Sheet 1: Shikhote Alin, Korea, NE China, Japan), Sheet 2: C and S China, Taiwan, Ryukyu arcs), Sheet 3: S China, Indochina, Malaysia, Myanmar), Sheet 8: W Pacific Ocean. Also available in digital format)

Schellart, W.P., Z. Chen, V. Strak, J.C. Duarte & F.M. Rosas (2019)- Pacific subduction control on Asian continental deformation including Tibetan extension and eastward extrusion tectonics. Nature Communications 10, 4480, p. 1-15.
(online at: https://www.nature.com/articles/s41467-019-12337-9.pdf)
(India-Asia collision causes extensive intraplate deformation in Asia. Synchronous interaction of collision and subduction zones explain Asian deformation. E-ward continental extrusion and Asian backarc basin formation controlled by large-scale Pacific and Sunda slab rollback. Indentation and rollback produce ~260–360 km of E-ward extrusion and large-scale CW upper mantle circulation from Tibet to E Asia and back to India)

Schellart, W.P. & G.S. Lister (2005)- The role of the East Asian active margin in widespread extensional and strike-slip deformation in East Asia. J. Geol. Soc., London 162, p. 959-972.
(Most of E Asia Cenozoic deformation not extrusion tectonics, but back-arc extension caused by E-ward rollback of subducting slab along E Asian active margin and collapse of overriding plate towards retreating hinge-line. Extension took place along ~7400 km long stretch of E Asian margin during most of Cenozoic)

Schwan, W. (1985)- The worldwide active Middle/Late Eocene geodynamic episode with peaks at ±45 and ±37 Mybp, and implications and problems of orogeny and sea-floor spreading. Tectonophysics 115, p. 197-234.
(Numerous tectonic events globally in M-L Eocene at ~45 Ma and ~37 Ma, suggesting major reorganization in plate tectonic pattern. Not much specifically on SE Asia)

Scotese, C. (2001)- Atlas of Earth History, PALEOMAP Project, University of Texas, Arlington, p. 1-52.
(Atlas of global plate and paleogeographic reconstructions for 20 time periods from 650 Ma- Recent. For SE Asia major source was Hutchison (1989))

Scotese, C.R., A.J. Boucot & W.S. McKerrow (1999)- Gondwanan palaeogeography and palaeoclimatology. J. African Earth Sci. 28, p. 99-114.
(Reconstructions of Gondwana with interpreted paleoclimates from Late Ordovician-Cretaceous)

Scotese, C.R. & R.P. Langford (1995)- Pangea and paleogeography of the Permian. In: P.A. Scholle et al. (eds.) The Permian of Northern Pangea. Springer, Berlin, p. 3-19.

Searle, M.P., L.J. Robb & N.J. Gardiner (2016)- Tectonic processes and metallogeny along the Tethyan mountain ranges of the Middle East and South Asia (Oman, Himalaya, Karakoram, Tibet, Myanmar, Thailand, Malaysia). In: J. Richards (ed.) Tectonics and metallogeny of the Tethyan orogenic belt, Soc. Economic Geol., Spec. Publ. 19, Chapter 12, p. 301-327.
(Genesis of mineral deposits in Tethyan collision zones of Asia, in: (1) oceanic crust (hydrothermal Cu-Au; Fe, Mn nodules) and mantle (Cr, Ni, Pt), in ophiolite complexes around Arabia/India- Asia collision (Oman, to Myanmar, Andaman Islands); (2) island arcs and ancient subduction complexes (VMS Cu-Zn-Pb), in Dras-Kohistan arc (Pakistan) and arc complexes along Myanmar-Andaman segment; (3) Andean-type margins (Cu-Au-Mo porphyry; epithermal Au-Ag) in Jurassic-Eocene Transhimalayan ranges and Myanmar; (4) continent-continent collision zones prominent along Myanmar-Thailand-Malaysia Sn-W granite belts, less common along Himalaya. Mogok metamorphic belt of Myanmar known for gemstones associated with regional high T metamorphism (ruby, spinel, sapphire, etc))

Sengor, A.M.C. (1979)- Mid-Mesozoic closure of Permo-Triassic Tethys and its implications. Nature 279, 5714, p. 590-593.
(First definition of the Cimmerian continent as thin and very long continental strip between Paleo- and Neo-Tethys (in SE Asia= Sibumasu; JTvG))

Sengor, A.M.C. (1984)- The Cimmeride orogenic system and the tectonics of Eurasia. Geol. Soc. America (GSA), Spec. Paper 195, p. 1-74.
(Major review of plate tectonic history of the Alpine- Himalayan system, which is product of obliteration of the Tethys Ocean. During E-M Mesozoic Tethyan domain consisted of two oceans, separated by string of continents called Cimmerian continent, which had begun separating from N margin of Gondwanaland in Triassic (although rifting in E-most parts had begun earlier). N of Cimmerian continents was Paleo-Tethys, S of it was Neo-Tethys. Closure of Paleo-Tethys formed Cimmerides (Carpathians- Caucasus-Tibet to E Sulawesi), closure of Neotethys formed the Alpides)

Sengor, A.M.C. (1985)- The story of Tethys: how many wives did Okeanos have? Episodes 8, 1, p. 3-12.
(online at: www.episodes.co.in/www/backissues/81/ARTICLES--3.pdf)
(Tethys ocean is ancestral sea out of which Alpine-Himalayan mountain ranges grew. The main Tethys had formed until Triassic, but older Tethys (Paleo-Tethys) existed, the closure of which formed Cimmeride orogenic system, which is distinct from, but largely overprinted by Alpide orogenic system, which is product of demise of 'classical Tethys' (Neo-Tethys))

Sengor, A.M.C. (1985)- Die Alpiden und die Kimmeriden: Die verdoppelte Geschichte der Tethys. Geol. Rundschau 74, 2, p. 181-213.
(Similar to Sengor (1986) below. Repeated episodes of Tethyan Ocean closing: Paleotethys by accretion of Cimmerides terranes, Neotethys by accretion of Alpide terranes)

Sengor, A.M.C. (1986)- The dual nature of the Alpine-Himalayan system: Progress, problems and prospects. Tectonophysics 127, 3, p. 177-195.
(Alpine-Himalayan system interpreted as places where two independent Tethyan ocean complexes (Palaeo- and Neo-Tethys) vanished during Permo-Carboniferous- E Cretaceous and late Cretaceous- Present respectively. Older orogen is called Cimmerides, younger Alpides. Cimmerides, together forming Tethysides)

Sengor, A.M.C. (1987)- Tectonics of the Tethysides: orogenic collage development in a collisional setting. Annual Review Earth Planetary Sci. 15, p. 213-244.
(Review of plate tectonic history of the Alpine- Himalayan- Indonesian mountain ranges since Late Paleozoic)

Sengor A.M.C. (1992)- The Palaeo-Tethyan suture: a line of demarcation between two fundamentally different architectural styles in the structure of Asia. Island Arc 1, 1p. 78-91.
(Paleo-Tethyan suture separates regions characterized by two different tectonic styles in Tethysides. N of suture (Iran, Turkmenistan, Afghanistan, Tadjikistan, Kirgizstan, Uzbekistan, Kazakhstan large parts of Russia and China), orogenic development characterized by large subduction-accretion complexes developed since Late Proterozoic. S of Paleo-Tethyan suture, orogeny characterized by Sumatra- or Andean-type continental margin arc that in places became island arc by back-arc basin rifting and later collided with Atlantic continental margin to create Alpine- or Himalayan-type orogenic belts. Paleo-Tethyan suture is line across which rate of continental enlargement by subduction-accretion changed dramatically. Rel. little on SE Asia)

Sengor A.M.C. (1998)- Die Tethys: vor hundert Jahren und heute. Mitteilungen Osterreichischen Geol. Gesellschaft 89 (1996), p. 5-177.
(online at: www2.uibk.ac.at/downloads/oegg/Band_89_5_177.pdf)
('The Tethys: hundred years ago and today'. Extensive historic review of discovery and development of interpretations of Tethys Ocean(s). Includes chapter (p. 104-114) on contributions to tectonic understanding of mountain building by the Dutch 'heroes' geologists working in Indonesia between 1900-1940, particularly Molengraaff, Brouwer, Wing Easton, Smit Sibinga, who were early supporters of 'mobilism', i.e. Wegener's continental drift hypothesis)

Sengor, A.M.C., D. Altiner, A. Clin, T. Ustaosmer & K.J. Hsu (1988)- Origin and assembly of the Tethyside orogenic collage at the expense of Gondwana Land. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys, Geol. Soc., London, Spec. Publ. 37, p. 119-181.

(Major review of plate tectonic history of the Alpine- Himalayan- Indonesian mountain ranges since Late Paleozoic. Mainly on mainland S Asia)

Sengor, A.M.C. & S. Atayman (2009)- The Permian extinction and the Tethys: an exercise in global geology. Geol. Soc. America (GSA), Spec. Paper 448, p. 1-85.
(End-Permian faunal extinctions may be consequence of sealing off of Paleo-Tethys ocean from Panthalassa by land bridge formed from Cimmerian Continent, Cathaysian and Manchuride orogenic collages and Tuva-Mongol fragment of eastern Altaids. Limited Late Permian water exchange between Paleo-Tethys and Panthalassa and Neo-Tethyan rifts, starting anoxia in Paleo-Tethys)

Sengor, A.M.C., S. Atayman & R. Presnell (2008)- Paleo-Tethys, Permian extinction, and stratabound copper-sulfide deposits of the Cimmerides. In: J.E. Spencer & S.R. Titley (eds.) Ores and orogenesis: Circum-Pacific tectonics, geologic evolution and ore deposits, Arizona Geol. Soc. Digest 22, p. 19-30.

Sengor, A.M.C., A. Cin, D.B. Rowley & S. Nie (1991)- Magmatic evolution of the Tethysides. Palaeogeogr. Palaeoclim. Palaeoecology 87, p. 411-440.
(Five maps showing spatial and temporal evolution of magmatic activity along Tethysides for: (1) late Carboniferous- Permian; (2) Triassic- E Jurassic; (3) M Jurassic-early Cretaceous; (4) late Cretaceous-early Cenozoic and (5) late Cenozoic-present)

Sengor, A.M.C., A. Cin, D.B. Rowley & S.Y. Nie (1993)- Space-time patterns of magmatism along the Tethysides: a preliminary study. J. Geology 101, 1, p. 51-84.
(Five maps of magmatism along the Tethysides for: Late Carboniferous and Permian (320-248 Ma), Triassic and Early Jurassic (247-188 Ma), Middle Jurassic-Early Late Cretaceous (187-98 Ma), early Late Cretaceous-early Cainozoic (97-25 Ma), and late Cainozoic (24-0 Ma))

Sengor, A.M.C. & K.J. Hsu (1984)- The Cimmerides of Eastern Asia: history of the eastern end of Palaeo-Tethys. Mem. Soc. Geologique France 17, p. 139-167.

Sengor, A.M.C. & B.A. Natalin (1996)- Palaeotectonics of Asia, fragments of a synthesis. In: A. Yin & T.M. Harrison (eds.) Tectonic evolution of Asia, Cambridge University Press, p. 486-640.

Setchell, W.A. (1930)- The Wallace and Weber lines: a suggestion as to climate boundaries. Proc. 4th Pacific Science Congress, Java 1929, III, p. 311-321.

Seton, M. & R.D. Muller (2008)- Reconstructing the junction between Panthalassa and Tethys since the Early Cretaceous. In: J.E. Blevin et al. (eds.) Eastern Australasin basins symposium III, Energy security for the 21st century, Sydney, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 263-266.
(Series of reconstructions of now mostly vanished oceanic plates between Australia and Eurasia since 140 Ma)

Seton, M., R.D. Muller, S. Zahirovic, C. Gaina, T. Torsvik, G. Shephard, A. Talsma, M. Gurnis, M. Turner, S. Maus & M. Chandler (2012)- Global continental and ocean basin reconstructions since 200 Ma. Earth-Science Reviews 113, p. 212-270.
(Major review of ocean basins evolution, incl. Indian Ocean and Tethys)

Sevastjanova, I., R. Hall, M. Rittner, S.M.T.L. Paw, T.T. Naing, D.H. Alderton & G. Comfort (2015)- Myanmar and Asia united, Australia left behind long ago. Gondwana Research 32, p. 24-40.
(New data from heavy minerals and detrital zircon ages of Late Triassic Halobia-bearing Pane Chaung Fm turbidite sandstones of Chin Hills in E Indo-Burman Ranges of W Myanmar. Intercalated with ultramafic rocks. Sandstones derived from mix of metamorphic, sedimentary and contemporaneous volcanic rocks. Pre-Devonian ages of Myanmar ('W Burma') Triassic sands closely resemble Sibumasu and W Australia (incl. >2.6 Ga Archean zircons), but differ from Indochina. Significant Permian-Triassic zircon populations (peaks at ~240 and 260 Ma) in W Burma, but not present in NW Australia. This points to proximity of W Burma to SE Asia (tin granites, etc.) in Triassic, which is therefore not elusive Argo block, as suggested in some models)

Sewell, R.J., A. Carter & M. Rittner (2016)- Middle Jurassic collision of an exotic microcontinental fragment: Implications for magmatism across the Southeast China continental margin. Gondwana Research 38, p. 304-313.
(Major deformation event in Hong Kong between 164-161 Ma (M-L Jurassic) linked to collision of microcontinent along SE China continental margin. Accreted terrane zircon age spectra close affinities to sources along N Gondwana margin. Collision of exotic terrane and subduction rollback, hastened foundering of postulated flat slab beneath SE China, leading to widespread igneous event at 160 Ma)

Shahabpour, J. (2009)- Analagous tectonic evolution of the Tethyan and SE Asian regions. Iranian J. Science Techn., Trans. A, 33, A1, p. 57-64.
(Similar tectonic histories in W Tethys and SE Asia of microcontinents rifting off Gondwana in Devonian-Permian and collisions with Eurasia in Late Triassic, etc.)

Shao, W.Y., S.L. Chung, W.S. Chen, H.Y. Lee & L.W. Xie (2015)- Old continental zircons from a young oceanic arc, eastern Taiwan: implications for Luzon subduction initiation and Asian accretionary orogeny. Geology 43, 6, p. 479-482.
(Chimei igneous complex in Coastal Range of E Taiwan is N part of intra-oceanic Luzon arc that accreted onto Eurasian continental margin since ~5 Ma. Magmatic zircons with mean Pb/U age of ~9 Ma probably of emplacement age. Inherited older zircons with ages clustering at ~14 Ma, ~218 Ma (largest peak) and older ages of ~726, ~1863 and ~2522 Ma suggest Cathaysia-type sources, attributed to continental fragment that split off Eurasian margin by opening of S China Sea, then drifted and accreted to W Philippine Sea plate before Luzon subduction initiation. Shows importance of ribbon continents in Asian orogenesis)

Shaw, R.D. (1997)- Some implications of Eurasian and Indo-Australian plate collision on the petroleum potential of Tertiary intracratonic basins of Southeast Asia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia & Australia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 63-80.
(Extensive intra-cratonic rift system within intra-cratonic SE Asia, with >70 Tertiary basins from N Thailand across Gulf of Thailand, SE-wards to Natuna Ridge. It includes significant hydrocarbon provinces (Malay, W Natuna, Pattani, Phitsanulok) and represents transtension along major faults and suture zones. Most rift basins affected by subsequent Miocene and Pliocene transpressional deformation. Onset of rifting tied to Eocene start of India- Eurasia plates collision)

She, Z., C. Ma, Y. Wan, J. Zhang, M. Li, L. Chen, W. Xu, Y. Li, L. Ye & J. Gao (2012)- An Early Mesozoic transcontinental palaeoriver in South China: evidence from detrital zircon U-Pb geochronology and Hf isotopes. J. Geol. Soc., London, 169, p. 353-362.
(Late Triassic- E Jurassic fluvial sandstones from S China Craton basins with four similar detrital zircon age populations: 2.6-2.4 Ga, 2.0-1.7 Ga (with remarkable age peaks at ~1.85 Ga), 850-700 Ma and 480-210 Ma. Hf values between -22.5 and +3.6, suggest derivation from reworked Archaean crust and minor late Paleoproterozoic juvenile crustal additions. Correlate well with E Cathaysia Block (not Yangtze). Similarities in provenance of Triassic- Jurassic around S China Craton delineate E-W sediment belt from Korea to W China and ~2000km long W-draining transcontinental paleo-river feeding basins in Korea, S and W China)

Shen, S., S. Dongli & G.R. Shi (2003)- A biogeographically mixed late Guadalupian (late Middle Permian) brachiopod fauna from an exotic limestone block at Xiukang in Lhaze county, Tibet. J. Asian Earth Sci. 21, p. 1125-1137.
(Km-size late M Permian limestone blocks in Indus-Tsangbo suture, Tibet, may be from carbonate build-up or seamount on oceanic crust. Fauna transitional between warm-water Cathaysian and cold- temperate Gondwanan faunas. Timorites ammonoid present, largely cool bi-temperate genus, occurring in W Timor, Japan, Tibet, Iran and W Texas. W Timor assigned to transitional Cathaysian- Gondwanan Cimmerian realm in M Permian (Shi and Archbold, 1995))

Shen, S.Z. & G.R. Shi (2000)- Wuchiapingian (early Lopingian, Permian) global brachiopod palaeobiogeography: a quantitative approach. Palaeogeogr. Palaeoclim. Palaeoecology 162, 3-4, p. 299-318.

(Late Permian brachiopods five marine biotic province: Cathaysian (tropical), W Tethyan (tropical), Himalayan (warm temperate), Austrazean (cold temperate) and Greenland-Svalbard (cold temperate). Also Cimmerian biogeographical region from Middle East through Afghanistan and Himalayas SE to Shan-Thai terrane and Timor, typified by mix of genera of both Cathaysian and Gondwanan affinities)

Shen, S.Z. & G.R. Shi (2004)- Capitanian (Late Guadalupian, Permian) global brachiopod palaeobiogeography and latitudinal diversity pattern. Palaeogeogr. Palaeoclim. Palaeoecology 208, p. 235-262.
(*Six paleogeographic provinces based on M Permian brachiopods: (A) Greenland-Svalbard (Arctic region), (B) Grandian (W North America), (D) Cathaysian (Paleotethys and Mesotethys), (F) Austrazean (E Australia- New Zealand), and two transitional zones (C) Sino-Mongolian-Japanese (N temperate zone) and (E) Himalayan (S temperate zone) Province. West Timor Aileu-Maubisse assemblages grouped with Lhasa, Chitichun and Zhongba assemblages of S Tibet and Salt Range (Pakistan) in 'Himalayan Province'*)

Shen, S.Z., G.R. Shi & N.W. Archbold (2003)- A Wuchiapingian (Late Permian) brachiopod fauna from an exotic block in the Indus-Tsangpo suture zone, southern Tibet, and its palaeobiogeographical and tectonic implications. Palaeontology 56, 2, p. 225-256.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/1475-4983.00296/pdf)
(Late Permian (Wuchiapingian) brachiopod fauna from exotic reddish crinoidal limestone block in Indus-Tsangpo suture zone in S Tibet (= suture between Eurasian/Lhasa Block and Indian Plate). Comparable with faunas in Salt Range of Pakistan, Chitichun Lst in S Tibet and Basleo area of W Timor (incl. 'antitropical' peri-Gondwanan species Stenoscisma purdoni and S. timorense, etc.). Fauna mixed peri-Gondwanan and Cathaysian character, possibly seamount biota originally from S margin of Neotethys in Late Permian, displaced and sandwiched into younger marine deposits in Cenozoic India- Eurasia collision)

Shen, S.Z., G.R. Shi & Z.J. Fang (2002)- Permian brachiopods from the Baoshan and Simao Blocks in Western Yunnan, China. J. Asian Earth Sci. 20, 6, p. 665-682.
(Four Permian brachiopod assemblages from W Yunnan, SW China. Faunas from Baoshan Block dominated by species characteristic of Cathaysian Province with some links with Peri-Gondwanan faunas. Simao Block characterised exclusively by taxa of Cathaysian Province)

Shen, S.Z., H. Zhang, Q.H. Shang & W.Z. Li (2006)- Permian stratigraphy and correlation of Northeast China: a review. J. Asian Earth Sci. 26, p. 304-326.
(Review of Permian successions and fossils in NE China. Dominated by brachiopods, fusulinids and land plants, with limited ammonoids, conodonts and bivalves. Guadalupian (M Permian) in Manchuride, Altaid and Yanbian Belts with bi-temperate Roadian- E Wordian Monodiexodina fauna and late Wordian- Capitanian Codonofusiella- Schwagerina or Neoschwagerina-Yabeina faunas)

Shen, S.Z., H. Zhang, G.R. Shi, W.Z. Li, J.F. Xie, L. Mu & J.X. Fan (2013)- Early Permian (Cisuralian) global brachiopod palaeobiogeography. Gondwana Research 24, p. 104-124.
(Three paleolatitude-related brachiopod paleobiogeographic realms in E Permian. Six provinces distinguished in Asselian: Faunas from Gondwana not well differentiated at province level and form Indoralian province. From Sakmarian large transition zone (S Transitional Zone) between Paleoequatorial and Gondwanan Realms formed, with Austrazean province(E Australia- New Zealand) in E margin of Gondwanaland, contemporaneous with peak of Late Paleozoic Ice (Sakmarian Eurydesma- Bandoproductus-Cimmeriella assemblage, followed by Stereochia, Kasetia, Dyschrestia and Spiriferella faunas). Large Cathaysian province stretching from S China, Iran in W Palaeotethys to Mongolian continent in N. In E Permian cluster analyses Timor group brachiopods closest to Baoshan block in Group D (Southern Transition Zone, with links to paleoequatorial))

Sheng, J.Z. & Y.G. Jin (1994)- Correlation of Permian deposits in China. Palaeoworld 4, p. 14-113.

Shi, G.R. (1998)- Aspects of Permian marine biogeography: a review on nomenclature and evolutionary patterns, with particular reference to the Asian- Western Pacific region. In: Y. Jin. et al. (eds.) Permian stratigraphy, environments and resources 2, Palaeoworld 9, p. 97-112.

Shi, G.R. (2001)- Possible influence of Gondwanan glaciation on low-latitude carbonate sedimentation and trans-equatorial faunal migration: the Lower Permian of South China. In: IGCP Project No. 411 on the Geodynamic Processes of Gondwanaland-derived Terranes in Eastern Asia, Geosciences J. 5, 1, p. 57-63.
(Early Permian from S China Block with mixed Cathaysian and cold-water Gondwanan brachiopod taxa, widespread rosettes of calcite prisms ('Chrysanthemum stones') and lack of significant reef buildups, suggesting cold water influence in paleo-equatorial S China in E Permian (ample paleomag data for equatorial setting). Possibly upwelling of cold water along W coast of S China terrane during E Permian)

Shi, G.R. & N.W. Archbold (1995)- Permian brachiopod faunal sequences of the Shan-Thai terrane: biostratigraphy, palaeobiogeographical affinities and plate tectonic/palaeoclimatic implications. J. Southeast Asian Earth Sci. 11, p. 177-187.
(Five Permian brachiopod assemblages known from Shan-Thai terrane: Late Asselian-Tastubian cool-water fauna, three 'transitional' faunas of Sterlitamakian, Baigendzhinian- E Kungurian and Kazanian-Midian ages, and Late Permian (Dorashamian) warm-water Cathaysian fauna. Shan-Thai belonged to Indoralian Province of Gondwanan Realm in Asselian-Tastubian and was incorporated into Cathaysian Province in latest Permian)

Shi, G.R. & N.W. Archbold (1995)- A quantitative analysis on the distribution of Baigendzhinian- Early Kungurian (Early Permian) brachiopod faunas in the western Pacific region. J. Southeast Asian Earth Sci. 11, 3, p. 189-205.
(Cluster analysis of distribution of 222 species of E Permian brachiopods from 25 localities across E Asia-Australia suggest 6 bioprovinces. In SE Asia two provinces (both sub-provinces of Cimmerian terranes): (1) Group B, Shan-Tai/ Sumatra/ W Papua Birds Head (warm temperate to S-subtropical; with Stereochia-Stictozoster) and (2) Group C, Himalayan/ Lhasa/ Timor (S-temperate; with Reedoconcha, Callytharella; also fusulinid Monodiexodina). Notable conclusions: Timor (Maubisse) was southern extension of Lhasa terrane, W Thailand most similar to Birds Head, Sumatra Jambi and Padang faunas similar and grouped with Shan Tai)

Shi, G.R. & N.W. Archbold (1995)- Palaeobiogeography of Kazanian-Midian (Late Permian) western Pacific brachiopod faunas. J. Southeast Asian Earth Sci. 12, p. 129-141.
(*W Timor transitional Cimmerian province between Cathaysian and Gondwanan Realms in M Permian)*

Shi, G.R. & N.W. Archbold (1998)- Permian marine biogeography of SE Asia. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 57-72.
(Three main Permian biotic provinces in SE Asia: Cathaysian (Simao, Indo-China, E Malaya), Sibumasu (Shan-Tai, Tengchong, Baoshan, W Malaysia, NE Sumatra; until Late Midian when joined Cathaysian province) and short-lived Sakmarian-Asselian Indoralian province)

Shi, G.R., N.W. Archbold & M. Grover (eds.) (1998)- Strzelecki International Symposium on Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources. Proc. Royal Soc. Victoria 110, p. 1-480.

Shi, G.R., N.W. Archbold & L.P. Zhan (1995)- Distribution and characteristics of mixed (transitional) mid-Permian (Late Artinskian-Ufimian) marine faunas in Asia and their palaeogeographical implications. Palaeogeogr. Palaeoclim. Palaeoecology 114, p. 241-271.
(Asia Permian marine biogeography 3 realms: Boreal, Tethyan and Gondwanan. In early E Permian sharp biogeographical boundaries, due to Gondwanan glaciation. In M Permian two transition zones with mixed faunas: (1) North (N China, Japan, etc.), with warm Cathaysian and temperate Boreal genera, (2) South (Arabia, Iran, Shan-Tai, Timor, W Irian Jaya, etc.) with both Gondwanan and Cathaysian elements. Both transition zones have anti-tropically distributed genera like Monodiexodina, Lytvolasma and Spiriferella and are succeeded by Late Permian tropical Tethyan faunas. Timor brachiopods from Sakmarian Maubisse Fm similar to W. Australia, Bitauni late E Permian assemblage mixed Gondwana-Tethyan elements, Late Permian Basleo fauna is 'Tethyan' subtropical-tropical)

Shi, G.R., Z.Q. Chen & L.P. Zhan (2005)- Early Carboniferous brachiopod faunas from the Baoshan Block, west Yunnan, southwest China. Alcheringa 29, 1, p. 31-85.

(38 brachiopod species from Yudong Fm in W Yunnan. Associated coral and conodont faunas suggest late Tournaisian (E Carboniferous) age, possibility extending into earlyVisean)

Shi, G.R., Z.J. Fang & N.W. Archbold (1996)- An Early Permian brachiopod fauna of Gondwana affinity from the Baoshan block, western Yunnan, China. Alcheringa 20, 81-101.
(E Permian brachiopod fauna from U Dingjiazhai Fm, 30km S of Baoshan, W Yunnan. Dominated by Stenoscisma. and Elivina yunnanensis n.sp.. Strong links with faunas from Bisnain assemblage of Timor and Callytharra Fm of W Australia. Late Sakmarian age suggested)

Shi, G.R. & T.A. Grunt (2000)- Permian Gondwana-Boreal antitropicality with special reference to brachiopod faunas. Palaeogeogr. Palaeoclim. Palaeoecology 155, p. 239-263.
(Permian marine antitropicality (genera from Boreal and Gondwanan Realms but absent in Paleoequatorial Realm) reported from most marine pelagic or benthic invertebrate groups, suggesting biotic interchanges between Gondwanan and Boreal Realms. Possible migration pathways and mechanisms reviewed: 'stepping-stone' migration via islands in E Paleotethys, migration along W coast of Paleotethys, etc.)

Shi, G.R. & S.Z. Shen (2001)- A biogeographically mixed, middle Permian brachiopod fauna from the Baoshan Block, Western Yunnan, China. Palaeontology 44, p. 237-258.
(Baoshan Block (= part of Sibumasu complex; JTvG) M Permian brachiopod assemblage with Cryptospirifer in from lower Shazipo Fm. Associated with fusulinids Nankinella, Polydiexodina spp. and Schwagerina. Overlying U Shazipo Fm 500-700m carbonate contains Shanita- Hemigordiopsis foram assemblage. Paleogeographical distribution of Cryptospirifer overlaps with slightly younger (Capitanian-Wuchiapingian) Shanita-Hemigordius (Hemigordiopsis) foram fauna, also endemic or largely confined to M Permian transitional faunas of Cimmerian region (Baoshan Block))

Shi, G.R. & J.B. Waterhouse (1990)- Sakmarian (Early Permian) brachiopod biogeography and constraints on the timing of terane rifting, drift and amalgamation in SE Asia, with reference to the nature of Permian óTethysô. Pacific Rim 90 Congress, p. 271-276.

Shi, G.R., J.B. Waterhouse & S. McLoughlin (2010)- The Lopingian of Australasia: a review of biostratigraphy, correlations, palaeogeography and palaeobiogeography. Geological Journal 45, 2-3, p. 230-263.
(Distribution of Lopingian (Late Permian) strata and biota in Australia, New Zealand, Timor and New Caledonia, with new paleogeographic reconstruction. In New Zealand Lopingian beds in several terranes, mainly representing displaced segments of volcanic arcs, fore-arc basins and accretionary complexes, originally located near NE Australia on convergent margin. Most non-marine successions in E Australia rich in coal. Marine Lopingian of W Australia and Timor dominated by carbonates with sparse siliciclastic sediments and volcanoclastics, accumulated in large basin on passive and rifted continental margin, sharing many shallow-marine invertebrate species with Himalayan region of Nepal, S Tibet and N India)

Shi, X., J. Kirby, C. Yu, A. Jimenez-Diaz & J. Zhao (2017)- Spatial variations in the effective elastic thickness of the lithosphere in Southeast Asia. Gondwana Research 42, p. 49-62.
(Maps of spatial variations of Effective elastic thickness for SE Asia from coherence of topography and Bouguer gravity anomaly data. Results suggest E Borneo may share similar crustal basement, and represent broad tectonic zone of destroyed Mesotethys Ocean extending from W-C Java, through E Borneo to N Borneo. Indosinian suture between Indochina and Sibumasu may extend further SE across Billiton to offshore SE Borneo, and Singapore platform and SW Borneo may belong to same block)

Shi, Y. & X. Jin (2015)- Is the West Burma block Gondwana- or Cathaysia-derived?- A Permian paleobiogeographic and regional geological reappraisal. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 97-99. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(W Burma block (= Mt Victoria Land), generally considered as small block of Gondwanan origin, but Barber and Crow (2009) suggested it could be extension of 'Cathaysian' West Sumatra block based on similarities of fusulinid faunas. W Burma two fusulinid assemblages: (1) Pseudofusulina postkraffti and (2)

Rugososchwagerina sp. and Parafusulina, which occur in Cathaysian region, but also in Gondwana-derived blocks Baoshan, Tengchong, etc.)

Shu, L., M. Faure, B. Wang, X. Zhou & B. Song (2008)- Late Palaeozoic-Early Mesozoic geological features of South China: response to the Indosinian collision events in Southeast Asia. Comptes Rendus Geoscience 340, 2, p. 151-165.
(Late Permian- E Triassic collision of S China- Indosinian blocks along Song Ma-Menglian suture closed Paleo-Tethys Ocean, caused folding and thrusting and granitic magmatism in S China Block (SCB). E and C parts of SCB SW-dipping paleoslope in Late Paleozoic-Early Mesozoic. Ophiolitic melanges of E SCB formed in Neoproterozoic, not Permian or Triassic (Neoproterozoic oceanic relics with Proterozoic acritarchs). M-U Triassic granitoids (235-205 Ma) belong to post-collision peraluminous S-type granites)

Shu, L.S., X.M. Zhou, P. Deng, B. Wang, S.Y. Jiang, J.H. Yu & X.X. Zhao (2009)- Mesozoic tectonic evolution of the Southeast China Block: new insights from basin analysis. J. Asian Earth Sci. 34, p. 376-391.
(On SE China Block two types of Mesozoic basins (1) Late Triassic- E Jurassic post-Indosinian orogenic basins and (2) M Jurassic- Cretaceous intracontinental extensional graben and half-graben basins. Modern basin and range framework was settled down in Cretaceous. In Late Triassic–Early Jurassic sediment source areas were to N and NE of outcrop region)

Silberling, N.J. (1985)- Biogeographic significance of the Upper Triassic bivalve *Monotis* in Circum-Pacific accreted terranes. In: D.G. Howell (ed.) Tectonostratigraphic terranes of the Circum-Pacific region, Circum-Pacific Council Energy and Mineral Resources, Houston, p. 63-70.
(Five biogeogeographic areas in Circum-Pacific region, based on Late Triassic thin-shelled bivalve Monotis. In SE Asia: (1) Bipolar fauna C (Monotis subcircularis + Eomonotis + Entomonotis ochotica) in E Asia, Japan, NW Borneo; (2) Fauna E (Monotis salinaria) in Tethyan rocks of Alpine- Himalayan belt and Banda Sea region (Timor, Seram?)

Silver, E.A. & R.B. Smith (1983)- Comparison of terrane accretion in modern Southeast Asia and the Mesozoic North American Cordillera. Geology 11, p. 198-202.
(Indo-Pacific region from Tonga Trench to E Indonesia proposed as analog with tectonic setting of North American Cordillera, which is also composed of numerous suspect terranes)

Simmons, N.A., S.C. Myers, G. Johannesson, E. Matzel & S.P. Grand (2015)- Evidence for long-lived subduction of an ancient tectonic plate beneath the southern Indian Ocean. Geophys. Res. Letters 42, 10.1002/2015GL066237, p. 1-9.
(New global tomographic image shows slab-like structure under S Indian Ocean, interpreted as ancient tectonic plate that sank into mantle along extensive intra-oceanic subduction zone that retreated SW across Tethys Ocean in Mesozoic. Jurassic-E Cretaceous oceanic volcanic arc system of Woyla terranes of W Sumatra may represent exposed remnant of this intra-oceanic system)

Simpson, G.G. (1977)- Too many lines; the limits of the Oriental and Australian zoogeographic regions. Proc. American Philosophical Soc. 121, p. 107-120.
(Discussion of boundary between Oriental/Asian and Australian zoogeographic regions (Muller Line, Wallace Line, Murray Line, Huxley Line, Weber Line, Lydekker Line, etc.))

Smith, A.B. (1988)- Late Palaeozoic biogeography of East Asia and palaeontological constraints on plate tectonic reconstructions. Philosophical Trans. Royal Soc. London, A, 326, p. 189-227.
(Biogeographic patterns of Carboniferous- Permian rugose corals of E Asia. In Carboniferous Cathaysian region one cohesive block (N and S China, Tarim, Kunlun, Qiangtang teranes), lying tropically or subtropically, biotically isolated from C Asia. S boundary of Cathaysian region does not coincide with single suture, nor sharply defined: gradual faunal impoverishment S-ward across Tibetan Plateau, implying faunal ranges controlled by prevailing climate, not by geographical barrier ('Paleotethys'). Region formed part of Gondwanaland craton, extending into tropical latitudes until separation in late Lower Permian)

Socquet, A., C. Vigny, N. Chamot-Rooke, W. Simons, C. Rangin & B. Ambrosius (2006)- India and Sunda plates motion and deformation along their boundary in Myanmar determined by GPS. J. Geophysical Research 111, B05406, p. 1-11.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2005JB003877/epdf)
(New GPS India-Eurasia motion slower than previous determinations and predict India-Sunda relative motion of 35 mm/yr oriented N10° at latitude of Myanmar. Sagaing Fault only accommodates 18 mm/yr of right-lateral strike slip. Two models of how and where remaining deformation may occur)

Sone, M. & I. Metcalfe (2008)- Parallel Tethyan sutures and the Sukhothai Island-arc system in Thailand and beyond. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516, and 5th APSEG Bangkok, p. 132-134.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/039.pdf)
(Short version of paper below)

Sone, M. & I. Metcalfe (2008)- Parallel Tethyan sutures in mainland Southeast Asia: new insights for Palaeo-Tethys closure and implications for the Indosinian orogeny. Comptes Rendus Academie Sciences, Paris, Geoscience 340, 2, p. 166-179.
(Two parallel tectonic sutures in Yunnan-Thailand region: (1) Changning-Menglian and Inthanon= M Triassic closure of M Devonian- M Triassic Paleo-Tethys Ocean (collision of Sibumasu) and (2) Jinghong- Nan-Sra Kaeo= Late Permian collapse of local Permian back-arc basin. Sukhothai Zone not part of Sibumasu Terrane, but part of Permian island-arc on W margin of Indochina Terrane)

Sone, M. & I. Metcalfe (2010)- Stratigraphic correlation between the Sukhothai island arc in Thailand and the East Malaya Terrane in Peninsular Malaysia. In: Proc. 6th Symp. Int. Geol. Correl. Progr. Project 516, Geological Anatomy of East and South Asia, Kuala Lumpur, p. 55. *(Abstract only)*
(Permo-Triassic Sukhothai island arc system, situated between Indochina and Sibumasu continental terranes, extends S into East Malaya Terrane, with similar granitoids and Carboniferous- Triassic marine sediments. At W side Paleo-Tethys/ Raub-Bentong suture, at E side short-lived Permian back-arc basin. Late Permian marine shales with Cathaysian lyttonid brachiopods succeeded by latest Permian limestones)

Song, P., L. Ding, Z. Li, P.C. Lippert, T. Yang, X. Zhao, J. Fu & Y. Yue (2015)- Late Triassic paleolatitude of the Qiangtang block: implications for the closure of the Paleo-Tethys Ocean. Earth Planetary Sci. Letters 424, p. 69-83.
(U Triassic Jiapila Fm volcanics on N edge of Qiangtang block of C Tibet (34.1°N) dated to 204-213 Ma. Paleomagnetic data suggest Late Triassic latitude for block at 31.7 ± 3.0°N. Closure of Paleo-Tethys Ocean at longitude of Qiangtang block most likely in Late Triassic)

Song, P., L. Ding, Z. Li, P.C. Lippert & Y. Yue (2017)- An early bird from Gondwana: paleomagnetism of Lower Permian lavas from northern Qiangtang (Tibet) and the geography of the Paleo-Tethys. Earth Planetary Sci. Letters 475, p. 119-133.
(online at: https://www.sciencedirect.com/science/article/pii/S0012821X17304016)
(Paleomagnetic data from Lower Permian Kaixinling Gp lavas on N Qiangtang block suggest paleolatitude of 21.9 ±4.7 °S at ~297 Ma. Corroborates earlier hypothesis that N Qiangtang block rifted away from Gondwana before Permian, and accreted to Tarim- N China continent by Norian time. Total N-ward drift ~7000km over ~100 My (~7 cm/yr). N Qiangtang no Laurasian affinity. C Qiangtang metamorphic belt possible intra-Qiangtang suture that developed at S latitudes outboard of Gondwanan margin)

Srivastava, A.K. & D. Agnihotri (2010)- Dilemma of Late Palaeozoic mixed floras in Gondwana. Palaeogeogr. Palaeoclim. Palaeoecology 298, p. 54-69.
(Carboniferous and Permian plant assemblages of N and S hemispheres distributed in four floral provinces. Mixed M and U Permian Cathaysian- Gondwanan floras from margins of Paleo-Tethys, i.e. New Guinea, Tibet, Kashmir, Oman, Jordan, etc. No clear explanation)

Srivastava, A.K., V.A. Krassilov & D. Agnihotri (2010)- Peltasperms in the Permian of India and their bearing on Gondwanaland reconstruction and climatic interpretation. Palaeogeogr. Palaeoclim. Palaeoecology 310, p. 393-399.
(First find of peltasperms in Permian of Gondwana, in Lower Permian Barakar Fm of Satpura Basin, C India, where they co-occur with diverse glossopterids. These are dominant group of N American- European arboreal vegetation and suggest floristic exchanges between Laurasia and Gondwana. Satpura occurrence assigns Indian subcontinent to low-latitude zone of mixed Laurasian/Gondwanan floristic assemblages)

Stait, B. & C. Burrett (1987)- Biogeography of Australian and Southeast Asian Ordovician nautiloids. In: G.D. McKenzie (ed.) Gondwana Six: stratigraphy, sedimentology and paleontology, American Geophys. Union (AGU), Geophys. Monograph 41, p. 21-28.
(E Ordovician faunas of SE Asia Sibumasu plate similar to those of Canning Basin, NW Australia)

Stampfli, G.M. (2000)- Tethyan Oceans. In: E. Bozkurt et al. (eds.) Tectonics and magmatism in Turkey and the surrounding area. Geol. Soc., London, Spec. Publ. 173, p. 1-23.
(Ordovician- Permian plate reconstructions of early Tethyan oceans (focused on W Tethys). Paleotethys opened in Ordovician-Silurian, with detachment of ribbon-like Hun Superterrane along Gondwana margin. Neotethys opened from Late Carboniferous- late E Permian from Australia- E Mediterranean, with drifting of Cimmerian superterrane and final closing of Paleotethys in M Triassic. N-ward subduction of Paleotethys triggered opening of back-arc oceans along Eurasian margin. Some closed during Eocimmerian collisional event, others stayed open and their delayed subduction induced opening of younger back-arc oceans (Black Sea, etc.). Subduction of Neotethys mid-ocean ridge responsible for major change in Jurassic plate tectonics)

Stampfli, G.M. & G.D. Borel (2002)- A plate tectonic model for the Paleozoic and Mesozoic constrained by dynamic plate boundaries and restored synthetic oceanic isochrons. Earth Planetary Sci. Letters 196, p. 17-33.
(Ordovician- Cretaceous reconstructions of greater Tethyan realm)

Stampfli, G.M., C. Hochard, C. Verard, C. Wilhem & J. von Raumer (2013)- The formation of Pangea. Tectonophysics 593, p. 1-19.
(New Neoproterozoic- Triassic global reconstructions, with latest Neoproterozoic creation of Gondwana, Devonian opening of Paleotethys, Carboniferous Variscan orogeny along W Paleotethys and creation of Pangea super-continent. E of Spain Paleotethys remained open until Triassic, subducting N under Laurasia. Rollback of Paleotethyan slabbed caused Permian rifts/ backarc basins, some becoming oceanized in Triassic. End-Triassic breakup of Pangea and opening of Alpine- Tethys oceanic seaways))

Stauffer, P.H. (1974)- Malaya and Southeast Asia in the pattern of continental drift. Bull. Geol. Soc. Malaysia 7, p. 89-138.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973026.pdf)
(Review of early plate tectonic models of SE Asia)

Stauffer, P.H. (1978)- Anatomy of the Australasian tektite strewnfield and the probable site of its crater. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 285-289.
(Most likely location of Pleistocene impact crater that created large tektite fields is under Mekong River Delta. On Malay Peninsula in Gambang tinfield tektites at base of lower tin-bearing 'Old Alluvium'))

Stauffer, P.H. (1983)- Unravelling the mosaic of Paleozoic crustal blocks in Southeast Asia. Geol. Rundschau 72, 3, p. 1061-1080.
(Many parts of SE Asia have Paleozoic or older continental crust. Ophiolite belts indicate mosaic of different blocks. If Permian pebbly mudstones are glacial deposits much of SE Asia was attached to Gondwana and rifting-separation took place after Permian)

Stauffer, P.H. (1985)- Continental terranes in Southeast Asia: pieces of which puzzle ? In: D.G. Howell (ed.) Tectonostratigraphic terranes of the Circum-Pacific region, Circum-Pacific Council for Energy and Min. Res., Houston, Earth Sci. Ser. 1, p. 529-539.
(Continental crust under much of pre-Tertiary core of SE Asia. Late Paleozoic glacial marine deposits in W SE Asia indicate attachment to Gondwana in Permian)

Stauffer, P.H. & D.J. Gobbett (1972)- Southeast Asia a part of Gondwanaland? Nature 240, 102, p. 139-140.
(Brief discussion of Ridd (1971) and Tarling (1972) reconstructions)

Stauffer, P.H. & C.P. Lee (1986)- Late Paleozoic glacial marine facies in Southeast Asia and its implications. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 363-397.
(Carbo-Permian glacial-marine pebbly mudstones in S. Thailand, Langkawi islands (Singa Fm) and other areas form 2000 km long belt from Sumatra to C Burma. This suggests W side of Western SE Asia was attached to Gondwanaland in Carbo-Permian, while warm-climate Permian floras on other blocks suggest separate drift histories)

Stauffer, P.H. & C.P. Lee (1987)- The Upper Palaeozoic pebbly mudstone facies of peninsular Thailand and western Malaysia- continental margin deposits of Palaeoeurasia- Discussion. Geol. Rundschau 76, p. 945-948.
(Discussion of Altermann (1986) paper. Disputes Altermann's conclusions that Paleozoic pebbly mudstones are not glacial deposits)

Stauffer, P.H. & N. Mantajit (1981)- Late Palaeozoic tilloids of Malaysia, Thailand and Burma. In: M.J. Hambrey & W.B. Harland (eds.) Earthôs Pre-Pleistocene glacial records. Cambridge University Press, p. 331-335.
(Brief review of Carboniferous- earliest Permian glacial deposits. Extend from southern Malay Peninsula through W Thailand (Phuket region), Myanmar, into SW China. Best known section is thick Singa Fm of Langkawi islands, NW Malaya. Most common clasts quartz sandstones, minor limestone, granite, trondhjemite. Generally overlain by late E- M Permian limestone (Chuping Lst in Malaya, Ratburi Lst in Thailand, Plateau Lst in E Myanmar))

Stephenson, M.H. & L. Angiolini (2006)- Relating the fossil record to deglaciation in the early Permian of Gondwana: development of a Gondwana-wide biotic deglaciation model. Permophiles 47, p. 18. *(Abstract)*
(Maximum rate of deglaciation around time of Granulatisporites confluens Oppel-zone in late Asselian-early Sakmarian time)

Stephenson M.H., L. Angiolini & M.J. Leng (2007)- The Early Permian fossil record of Gondwana and its relationship to deglaciation; a review. In: M. Williams et al. (eds.) Deep-time perspectives on climate change: marrying the signal from computer models and biological proxies, Geol. Soc.London, p. 169-189.
(Biotic criteria for E Permian deglaciation sequences in Gondwana. Marine cold-water bivalves Eurydesma and Deltopecten and brachiopods Lyonia and Trigonotreta in earliest post-glacial marine transgressions, replaced by more diverse, temperate fauna. Palynomorph succession changes from monosaccate pollen assemblages, associated with fern spores, to more diverse assemblages with common bisaccate pollen. Organic matter shows decreasing d13 C trend, believed to be due to post-glacial global warming. E Permian O isotopes show d18O decline in Asselian- Artinskian, likely due to melting of glaciers at high latitudes)

Stern, R.J., Shi-Min Li & G.R. Keller (2018)- Continental crust of China: a brief guide for the perplexed. Earth-Science Reviews 186, p. 72-94.
(Useful review of crustal architecture of China. Three major Precabrian cratonic blocks: Proterozoic South China, Paleoproterozoic North China and Archean Tarim cratons, surrounded by Paleozoic and Mesozoic accreted terranes)

Stevens, C.H. (1985)- Reconstruction of Permian paleogeography based on distribution of Tethyan faunal elements. Proc. 9th Int. Congress of Carboniferous Stratigraphy and Geology, Washington 1979, 5, p. 383-393.

Stevens, G.R. (1963)- Faunal realms in Jurassic and Cretaceous belemnites. Geol. Magazine 100, 6, p. 481-497.
(Three faunal realms recognized for Jurassic and Cretaceous belemnites. Boreal and Tethyan realms for Jurassic ammonites, but no equivalent for Pacific. They apparently are divided, partly in the Boreal and partly in the Indo-Pacific. Boundary between Boreal and Tethyan realms was distinct and stable, boundary between Tethyan and Indo-Pacific realms varied considerably in Upper Jurassic and Lower Cretaceous)

Stevens, G.R. (1977)- Mesozoic biogeography of the South-West Pacific and its relationship to plate tectonics. In: Int. Symposium Geodynamics in South-West Pacific, Noumea 1976, Technip, Paris, p. 309-326.

Stevens, G.R. (1980)- Southwest Pacific faunal palaeobiogeography in Mesozoic and Cenozoic times: a review. Palaeogeogr. Palaeoclim. Palaeoecology 31, p. 153-196.
(Review of faunal provinciality of SW Pacific (focus on New Zealand- New Caledonia). In late Middle- Late Jurassic region received repeated waves of benthic immigrants from Tethyan/Indo-Pacific region, etc.)

Stonely, R. (1974)- Evolution of the continental margins bounding a former southern Tethys. In: C.A. Burk & C.L. Drake (eds.) The geology of continental margins, Springer Verlag, New York, p. 889-903.
(Early interpretation of S part of Tethyan orogenic belt, from Mediterranean Sea to Indonesia)

Sun, Dong-Li (1993)- On the Permian biogeographic boundary between Gondwana and Eurasia in Tibet, China as the eastern section of the Tethys. Palaeogeogr. Palaeoclim. Palaeoecology 100, p. 59-77.
(Mainly on China terranes; no mention of Timor. Glossopteris flora, bivalve Eurydesma, rugose coral Lytvolasma, brachiopod Globiella and fusulinid Monodiexodina are cool climate flora/fauna, often occurring with tillites along N margin of Gondwanaland in E Permian. In late M Permian Gondwana Tethys became still warmer and warm tropical fauna of Neoschwagerina and Verbeekina replaced cool water one)

Talent, J.A. (1984)- Australian biogeography past and present: determinants and implications. In: J.J.Veevers (ed.) Phanerozoic Earth history of Australia, Oxford Monographs Geol. Geophysics 2, Clarendon Press, Oxford, p. 57-93.
(In Permian most of Australia in cold Gondwana realm (Glossopteris flora), but N edge intruded into warm Tethyan realm (Bonaparte Gulf, Timor, New Guinea; temporary extension of Cathaysian Gigantopteris flora into W New Guinea. Late Triassic mollusc fauna of Jimi River/PNG no species in common with contemporaneous faunas from Misool, Seram, Timor, suggesting some paleobiogeographic boundary between these, although all are supposedly in warm-water Tethyan realm)

Talent, J.A., R. Manson, J.C. Aitchison, R.T. Becker et al. (2000)- Devonian palaeobiogeography of Australia and adjoining regions. Mem. Assoc. Australian Palaeont. 23, p. 167-257.
(Summaries of Devonian fossil groups in Australia. No maps)

Tan, B.K. (1996)- óSuture zonesô in peninsular Malaysia and Thailand: implications for palaeotectonic reconstruction of southeast Asia. J. Southeast Asian Earth Sci. 13, p. 243-249.
(Correlating geological belts/ suture zones from N Thailand to S Peninsular Malaysia very difficult)

Tan, D.N.K. (1983)- Cherts of Southeast Asia. In: A. Iijima et al. (eds.) Siliceous deposits in the Pacific Region, Developments in Sedimentology 36, Elsevier, p. 79-91.
(Lower Paleozoic chert confined to peninsular Thailand and NW and C Peninsular Malaysia. Upper Paleozoic chert in Thailand, Indochina, and Peninsular Malaysia, with isolated occurrence in W Sarawak. Triassic chert in N Thailand, N Peninsular Malaysia, Singapore, Sumatra, Bangka, Sarawak, and N Palawan. Jurassic-Cretaceous chert in SE and NE Kalimantan, S and W Sumatra, C Java, S Sulawesi, Natuna, Sarawak, Sabah and Philippines (but not Thailand, Indochina, and Peninsular Malaysia). Tertiary age chert or older blocks in Tertiary melange in Indonesia (Nias, Timor, Philippines, Sarawak and Sabah)

Tapponnier, P., R. Lacassin, P.H. Leloup, U. Schairer, Zhong D., Liu X., Ji S., Zhang L. & Zhong J. (1990)- The Ailao Shan/Red River metamorphic belt: Tertiary left-lateral shear between Indochina and South China. Nature 343, p. 431-437.
(Ductile shear in Ailao Shan/Diancang Shan metamorphic belt along Red River in Yunnan, S. China, with >500 km of mylonites with horizontal lineations on steep, NW-striking foliation planes, and left-lateral kinematic indicators. U-Pb radiometric ages of ~23 Myr imply strike-slip movement in earliestMiocene. Collision of India with Asia displaced Indochina at least 500km SE relative to S China)

Tapponnier, P., G. Peltzer, A.Y. LeDain & R. Armijo (1982)- Propagating extrusion tectonics in Asia: new insights from simple experiments with plasticine. Geology 10, p. 611-616.
(Interesting and popular, but disputed tectonic model explaining major strike slip zones and blocks rotations in SE Asia as results of India- Asia collision in Eocene)

Tapponnier, P., G. Peltzer & R. Armijo (1986)- On the mechanics of the collision between India and Asia. In: M.P. Coward & A.C. Ries (eds.) Collision tectonics, Geol. Soc., London, Spec. Publ. 19, p. 115-157.
(Extended and updated version of SE Asia extrusion model. Since Eocene large prograding zone of deformation migrated across Asia, concurrently with N-ward movement of India collision front. Several large left-lateral strike-slip faults activated. In first 20-30 Ma of collision process, India may have pushed sideways S part of Sundaland (incl. SW Borneo, Sumatra and Peninsular Malaysia) then all of Sundaland (incl. S Yunnan, Indochina, Thailand and Shan Plateau. Red River Fault may have taken up 800-1000 km of extrusion to SE. In Oligocene- E Miocene Sundaland would have rotated clockwise by ~20-25°)

Tarling, D.H. (1988)- Gondwanaland and the evolution of the Indian Ocean. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys, Geol. Soc., London, Spec. Publ. 37, p. 61-77.

Teasdale, J. & J. Bon (2017)- A new plate model for South East Asia aimed at understanding basin evolution. In: SEAPEX Exploration Conference 2017, Singapore, Session 7, 15p. *(Abstract + Presentation)*
(Eight SE Asia plate reconstruction models from 55- 0 Ma. SW Borneo and Peninsular Malaysia part of same rigid Sundaland basement terrane. 'Rotational extrusion' of Sundaland caused clockwise rotation of Sundaland + Borneo in two phases in Late Eocene and Oligocene. Counter-clockwise rotation of Bird's Head. E Indonesian 'salami-slicer' extends NW to Borneo, where it accounts for M Miocene Sabah Orogeny. Etc.)

Teichert, C. (1951)- The marine Permian faunas of Western Australia. Palaeont. Zeitschrift 24, 1-2, p. 75-90.
(W Australian Permian faunas more in common with Tethys than with E Australia. Timor faunas appear related, but significant differences. One record of fusulinid foraminifera in Desert Basin could not be relocated and is probably erroneous. Low diversity coral fauna, mainly indigenous with Australian species. Crinoid faunas related to Timor, but much impoverished)

Teichert, C. (1974)- Marine sedimentary environments and their faunas in Gondwana area. In: Plate Tectonics- assessments and reassessments, AAPG Mem. 23, p. 361-394.
(Widespread Paleozoic-Mesozoic marine rocks in W Australia, S Africa Antarctica, etc., inconsistent with hypothesis of Gondwanaland (?))

Tingay, M., C. Morley, R. King, R. Hillis & D. Coblentz (2009)- Southeast Asian stress map: implications for petroleum exploration and production. First Break 27, p. 81-88.
(Overview of new SE Asian Stress Map, with stress information from borehole breakouts, drilling-induced fractures, and focal mechanism solutions across 14 provinces in SE Asia. Intraplate stress field of SE Asia (Sundaland) is variable and not aligned with absolute plate motion)

Tingay, M., C. Morley, R. King, R. Hillis, D. Coblentz & R. Hall (2010)- Present-day stress field of Southeast Asia. Tectonophysics 482, p. 92-104.
(Variable stress pattern throughout SE Asia largely inconsistent with Sunda plate ESE motion direction. Present-day maximum horizontal stress in Thailand, Vietnam and Malay Basin predominately N-S, consistent with radiating stress patterns from E Himalayan syntaxis. Maximum horizontal stress in Borneo primarily NW–

SE; may reflect plate-boundary forces or topographic stresses exerted by C Borneo highlands. S and C Sumatra basins maximum horizontal stress NE–SW, perpendicular to Indo-Australian subduction front. Plate-scale stress field in SE Asia controlled by combination of Himalayan-related deformation, subduction forces (trench suction, collision) and intraplate sources of stress such as topography and basin geometry)

Tjia, H.D. (2008)- Tertiary stress regimes of western Southeast Asia. In: J.A. Katili et al. (eds.) Tectonics and resources of Central and SE Asia (Halbouty volume), Pusat Survei Geol., Bandung, Spec. Publ. 34, p. 125-138.
(In W SE Asia pre-Middle Miocene mainly extensional regimes. Changes in plate dynamics towards end E Miocene terminated spreading of S China Sea and Philippines basins and allowed impact of W-directed Pacific convergence. After short transition in Langhian (16.3-14.2 Ma) start of compressional regimes)

Tollman, A. & E. Kristan-Tollman (1985)- Paleogeography of the Tethys from the Paleozoic to the Mesozoic. In: K. Nakazawa & J.M. Dickens (eds.) The Tethys, her paleogeography and paleobiology, from the Paleozoic to the Mesozoic, Tokai University Press, Japan, p. 20-199.

Tong-Dzuy, T., H.F. Hou, T.H. Phuong, H.H. Nguyen et al. (1996)- Outlines of stratigraphy and remarks on paleobiography of Devonian in Southeast Asia. In: Proc. IGCP Symp. on Geology of SE Asia, Hanoi 1995, J. Geology, B, 1996, 7-8, p. 10-34.
(Review of Devonian stratigraphies and macrofaunas of of S China, Indochina W Malaysia. Lower Devonian in most places marine clastics, M Devonian mainly carbonates. Devonian faunas of SE Asa greater similarities with Europe than with Australia, questioning common wisdom that this region was derived from Gondwana)

Tong-Dzuy, T., P. Janvier & P. Ta Hoa (1996)- Fish suggest continental connections between South China and Indochina blocks in Middle Devonian times. Geology 24, 6, p. 571-574.
(Yunnanolepiform antiarch (placoderm fish) from Givetian Dong Tho Fm, C Vietnam, on Indochina Block, well S of Song Ma suture. Previously known only from Lower Devonian of South China block. Massive sandstones of Dong Tho Fm may be southern extension of Do Son Sst of Hai Phong area, S China)

Torsvik, T.H. & L.R.M. Cocks (2004)- Earth geography from 400 to 250 Ma: a palaeomagnetic, faunal and facies review. J. Geol. Soc., London 161, 4, p. 555-572.

Torsvik, T.H. & L.R.M. Cocks (2009)- The Lower Palaeozoic palaeogeographical evolution of the northeastern and eastern peri-Gondwanan margin from Turkey to New Zealand. In: M.G. Bassett (ed.) Early Palaeozoic peri-Gondwana terranes: new insights from tectonics and biogeography, Geol. Soc., London, Spec. Publ. 325, p. 3-21.
(Review of E Paleozoic of NE sector of Gondwanan and peri-Gondwanan margin from Turkey through Middle East, N Indian subcontinent, S China- SE Asia, to Australia and New Zealand. SE Australia enlarged through accretion of island arcs. Most of area represented passive margin. Paleotethys opened no earlier than Late Silurian. N China and others probably not attached to Gondwana in Lower Paleozoic. S China close to Gondwana, but not part of it, and Sibumasu probably part of Gondwana. New paleogeographical maps for Cambrian (500 Ma), Ordovician (480 Ma) and Silurian (425 Ma))

Torsvik, T.H. & L.R.M. Cocks (2013)- Gondwana from top to base in space and time. Gondwana Research 24, p. 999-1030.
(Review of evolution of Gondwana supercontinent, from unification of several cratons in Late Neoproterozoic, combination with Laurussia in Carboniferous to form Pangea, to progressive fragmentation in Mesozoic. New paleogeographic reconstructions from E Cambrian (540 Ma) to 200 Ma. Sibumasu microcontinent stretches from Burma and Yunnan to Sumatra (unlike earlier Cocks-Fortey papers, now accepted to have been part of E Gondwana craton adjacent to NW Australia, until opening of Neotethys Ocean in Permian)

Tozer, E.T. (1982)- Marine Triassic faunas of North America: their significance for assessing plate and terrane movements. Geol. Rundschau 71, 8, p. 1077-1104.
(Marine Triassic paleobiogeography. Norian 'Tethyan/ low paleolatitude' Monotis salinaria in Hallstatt facies of Timor, 'Pacific/ mid-high paleolatitude' Monotis ochotica in New Caledonia, New Zealand, etc.)

Truswell, E.M. (1981)- Pre-Cenozoic palynology and continental movements. In: M.W. McElhinny & D.A. Valencio (eds.) Paleoreconstruction of the continents, American Geophys. Union (AGU) Geodyn. Ser. 2, p. 13-25.

Truswell, E.M., P.A. Kershaw & I.R. Sluiter (1987)- The Australian-Malaysian connection: evidence from the paleobotanical record. In: T.C. Whitmore (ed.) Biogeographical evolution of the Malay Archipelago, Oxford Monographs Biogeography 4, Oxford University Press, p. 32-49.

Twidale, C.R. (2005)- Granitic terrains. In: A. Gupta (ed.) The physical geography of Southeast Asia, Oxford University Press, p. 123-141.
(Basic review of granitic rocks, weathering and distribution in Southeast Asia)

Ueno, K. (1999)- Gondwana/Tethys divide in East Asia: solution from Late Paleozoic foraminiferal paleobiogeography. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symposium on Shallow Tethys 5, Chiang Mai 1999, Dept. Geol. Science, Chiang Mai University, p. 45-54.

Ueno, K. (2000)- Permian fusulinacean faunas of the Sibumasu and Baoshan Blocks: implications for the paleogeographic reconstruction of the Cimmerian continent. Geosciences J. 4 (Spec. Ed.), p. 160-163.
(Expanded version see Ueno (2003) below)

Ueno, K. (2002)- Geotectonic linkage between West Yunnan and mainland Thailand: Toward the unified geotectonic evolution model of East Asia. In: Geodynamic Processes of Gondwanaland-derived terranes in East and Southeast Asia, their crustal evolution, emplacement and natural resources potential, Fourth Symp. IGCP Project 411, Phitsanulok, p. 35-42.

Ueno, K. (2003)- The Permian fusulinoidean faunas of the Sibumasu and Baoshan blocks: their implications for the paleogeographic and paleoclimatologic reconstruction of the Cimmerian Continent. Palaeogeogr. Palaeoclim. Palaeoecology 193, p. 1-24.
(Permian fusulinids in four levels in Baoshan and Sibumasu Blocks. East Cimmerian continent poor Tethyan neoschwagerinid and verbeekinid genera in M Permian. Increase in diversity from E to late M Permian (N-ward drift of Cimmerian continent) and from E to W (W Cimmerian closer to tropical Tethyan domain than E). M Permian Cimmerian two subregions: W= Tethyan Cimmerian and E= Gondwanan Cimmerian. Rare Tethyan fusulinids in Baoshan and Sibumasu blocks suggests E Cimmerian continent still far from Cathaysian domain and in warm temperate- subtropical zone until end-Permian. E Cimmerian block migrated into tropical zone by Late Triassic with Carnian sponge-coral buildups in Sibumasu Block)

Ueno, K. (2006)- The Permian antitropical fusulinoidean genus *Monodiexodina*: distribution, taxonomy, paleobiogeography and paleoecology. J. Asian Earth Sci. 26, p. 380-404.
(Review of 'subtropical', late E Permian fusulinid genus Monodiexodina from 33 areas, incl. several Timor occurrences, all in middle part of Maubisse Fm. Type species of Monodiexodina is Schwagerina wanneri Schubert 1915 first described from Timor. Monodiexodina-bearing areas can be restored to either N or S middle latitudes, suggesting genus is paleobiogeographically anti-tropical taxon. Generally found in monotypic, crowded manner in sandy sediments with uni-directionally aligned shells. Long-ranging 'mid-Permian', Artinskian- E Midian (=Capitanian))

Ueno, K. & K. Hisada (1999)- Closure of Paleo-Tethys caused by the collision of Indochina and Sibumasu. Chikyu Monthly 21, p. 832-839. *(in Japanese)*

Ueno, K., A. Miyahigashi & T. Charoentitirat (2010)- The Lopingian (Late Permian) of mid-oceanic carbonates in the Eastern Palaeotethys: stratigraphical outline and foraminiferal faunal succession. Geological Journal 45, p. 285-307.
(SW China Changning-Menglian Belt and N Thailand Inthanon Zone best-studied Paleotethys collisional belts in Asia. Thick E Carboniferous- Late Permian carbonate build-ups with basalt at base formed on top of oceanic

seamounts. Foraminiferal faunas record shallow-marine domain in Paleotethys (Cathaysian Province) with high diversity fusulinids. Coeval Neotethyan domain also high diversity fusulinids. Lopingian Panthalassan mid-oceanic build-ups likely lower foraminiferal diversity than Paleo- and Neotethys)

Uhlig, V. (1911)- Die marinen Reiche des Jura und der Unterkreide. Mitteilungen Geol. Gesellschaft Wien, 4, 3, p. 389-448.
(online at: www2.uibk.ac.at/downloads/oegg/GG_004_329_448.pdf)
('The marine realms of the Jurassic and the Lower Cretaceous'. Subdivision of Jurassic- Cretaceous into 5 main faunal provinces. Includes review of Indonesian Mesozoic macrofossils known at that time, all classified in 'Himalayan Province', whch stretches from Tibet to Indonesia- New Guinea, possibly into New Zealand. Common deep-water faunas with Liassic dominated by Phylloceras, Dogger with Stephanoceras and, Macrocephalites)

Umbgrove, J.H.F. (1929)- Tertiary sea connections between Europe and the Indo-Pacific area. Proc. 4th Pan-Pacific Science Congress, Java 1929, 2A, p. 91-104.

Unesco (1972)- Geological map of Asia and the Far East 1:5M; Explanatory note, 2nd ed. Unesco, Paris, p. 1-100.

Uno, K., K. Furukawa & S. Hada (2011)- Margin-parallel translation in the western Pacific: paleomagnetic evidence from an allochthonous terrane in Japan. Earth Planetary Sci. Letters 303, 1-2, p. 153-161.
(Paleomagnetic study shows latitudinal translation of allochthonous Kurosegawa ribbon continent of Japan along W margin of Pacific Ocean. Terrane was at 4°N paleolatitude in Late Triassic, 18°N in E Cretaceous, then translated ~1500km N to present position, associated with sinistral strike-slip along E Asian continental margin, in Mid-Late Cretaceous. Also show SW Borneo plate in Equatorial position since Jurassic)

Uno, K., K. Hisada, K. Ueno, Y. Kamatad, H. Hara, M. Fujikawa et al. (2010)- Paleomagnetic evidence for latitudinal change of the Indochina Block during the Late Paleozoic to Mesozoic. In: C.P. Lee et al. (eds.) 6th Symp. Int. Geol. Correl. Progr. Project 516 (IGCP516), Geological anatomy of East and South Asia, Kuala Lumpur 2010, p. 26. *(Abstract only)*
(Paleomagnetic paleolatitude calculated for samples from around Loei, Thailand (17.6°N), suggest W Indochina Block was at 9°N or 9°S in E Permian and at 5°N or 5°S in Carboniferous. Two tectonic models conceivable. Most likely Indochina Block was near equator in Carboniferous and N-motion of block lasted through Permian)

Usuki, T., C.Y. Lan, K.L. Wang & H.Y. Chiu (2013)- Linking the Indochina block and Gondwana during the Early Paleozoic: evidence from U-Pb ages and Hf isotopes of detrital zircons. Tectonophysics 586, p. 145-159.
(Detrital zircons from river sediment in Truong Son Belt of Indochina block in N-C Vietnam with mainly Neoarchean (~2.5 Ga), Mesoproterozoic (1.7-1.4 Ga), Grenvillian (~0.95 Ga) and Pan-African (0.65–0.5 Ga) ages. Similarity of age distribution and Hf isotope compositions of Indochina and those of Tethyan Himalaya, W Cathaysia, and Qiangtang suggests Indochina was outboard of Qiangtang and S of S China in Indian margin of Gondwana in E Paleozoic. Results consistent with paleontological correlations of E Gondwana margin)

Van Balgooy, M.M.J. (1987)- A plant geographic analysis of Sulawesi. In: T.C. Whitmore (ed.) Biogeographical evolution of the Malay Archipelago, Clarendon Press, Oxford, p. 94-102.

Van der Meer, D.G., W. Spakman, D.J.J. van Hinsbergen, M.L. Amaru & T.H. Torsvik (2010)- Towards absolute plate motions constrained by lower-mantle slab remnants. Nature Geoscience 3, p. 36-40.
(Global mantle tomography model used to estimate longitude of past oceanic subduction zones. Identified 28 remnants of oceanic plates subducted into lower mantle and link these to mountain building zones from which they likely originated. Assuming remnants sank vertically through mantle, we reconstruct longitude at which they were subducted. No oceanic plate remnants from Carboniferous (~300-360 Ma))

Van der Meer, D.G., T.H. Torsvik, W. Spakman, D.J.J. van Hinsbergen & M.L. Amaru (2012)- Intra-Panthalassa Ocean subduction zones revealed by fossil arcs and mantle structure. Nature Geoscience 5, p. 215-219.

(Vast Panthalassa Ocean once surrounded supercontinent Pangaea, but subduction since then consumed most of ocean floor. Extinct intra-oceanic volcanic arcs accreted to N American and Asian continental margins. To constrain paleoposition of extinct arcs, they were correlated with remnants of subducted slabs identified in mantle from-wave tomographic models)

Van der Meer, D.G., D.J.J. van Hinsbergen & W. Spakman (2018)- Atlas of the underworld: slab remnants in the mantle, their sinking history, and a new outlook on lower mantle viscosity. Tectonophysics 723, p. 309-448.
(online at: www.sciencedirect.com/science/article/pii/S0040195117304055)
(Global inventory of 94 subducted slabs in mantle, as identified from tomography. Including slabs from SE Asia: Arafura, Banda, Burma (formerly part of Sunda slab), Halmahera (15-0 Ma), Kalimantan (active from ~70- 20 Ma: interpreted by some as deeper part of Sunda slab), Papua (base age 90-45 Ma, top age 26-20 Ma), Sangihe (base age 30-25 Ma; at shallow upper mantle levels separated into several slabs: Philippine Trench slab, Molucca Sea West slab, Sulu and Celebes Sea South slab) and Sunda slab (active since 50-45 Ma). (see also associated website: www.atlas-of-the-underworld.org/)

Van Leeuwen, T.M. (2014)- The enigmatic Sundaland diamonds- a review. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 181-204.
(Review of alluvial diamond occurrences with no obvious primary sources in Myanmar, Thailand and Sumatra ('Sibumasu diamonds'; spatially associated with Carboniferous-Permian glacial pebbly mudstones, stretching from Myanmar to Sumatra) and in 4 districts in Kalimantan ('Kalimantan diamonds'). Together they are referred herein as 'Sundaland diamonds'. Three possible scenarios for formation of Kalimantan diamonds)

Van Waterschoot Van der Gracht, W.A.J.M. (1928)- The problem of continental drift. In: Proc. Symposium Theory of continental drift; a symposium on the origin and movement of land masses, both inter-continental and intra-continental, as proposed by Alfred Wegener, New York 1926, American Assoc. Petrol. Geol. (AAPG), p. 1-75.
(Overview of merits of the then still controversial theory of continental drift. On p. 57 points out that Dutch geologists working in 'East Indies' (Molengraaff, Brouwer, Wing Easton) all supportive of Wegener's hypothesis, because New Guinea obviously rapidly drifted to N, and very rapid active uplift and subsidence can be observed in E Indonesia)

Van Welzen, P.C., J.A.N Parnell & J.W.F. Slik (2011)- Wallaceȇs Line and plant distributions: two or three phytogeographical areas and where to group Java? Biol. J. Linnean Society 103, p. 531-545.
(online at: www.naturalscience.tcd.ie/assets/pdf/Wallace's%20line.pdf)
(No sharp E-W boundary in modern plant distributions in SE Asia. Three areas on basis of floristic affinities/ similarities (1) islands of Sunda Shelf, W Java (everwet Sundaland floristic group); (2) Wallacea, consisting of central islands and E Java, with two sub-areas: Java, the Philippines and Lesser Sunda Islands with more Oriental flora and Sulawesi and Moluccas with more Australian flora; (3) New Guinea/Sahul Shelf)

Van Welzen, P.C., J.W.F. Slik & J. Alahuhta (2005)- Plant distribution patterns and plate tectonics in Malesia. Biologische Skrifter Danske Vidensk. Selskab 55, p. 199-217.
(online at: http://phylodiversity.net/fslik/index_files/BiolSkr2005.pdf)
(Philippines, Borneo, and especially New Guinea comprise significantly more than average endemic plants. Three major distribution patterns in Malesia: Indian-Malesian, Circum-Pacific and Wallacea, the transition zone between Sunda and Sahul floras)

Veevers, J.J. (ed.) (2000)- Billion-year earth history of Australia and neighbours in Gondwanaland. GEMOC Press, Sydney, p. 1-388.

Veevers, J.J. (2004)- Gondwanaland from 650-500 Ma assembly through 320 Ma merger in Pangea to 185-100 Ma breakup: supercontinental tectonics via stratigraphy and radiometric dating. Earth-Science Reviews 68, p. 1-132.

Veevers, J.J. (2013)- Pangea: geochronological correlation of successive environmental and strati-tectonic phases in Europe and Australia. Earth-Science Reviews 127, p. 48-95.
(Supercontinent Pangea formed from Ouachita-Variscan oblique collision of Laurussia and Gondwanaland in Late Carboniferous (~320-300 Ma) (in European region). Shortening in C Australia, megakinking in Lachlan orogen and bending of oroclines in E. Australia possibly tied to this event (but 10,000 km away!). Followed by Extensions I (~300 Ma, Carboniferous-Permian boundary; E Australia cut into long magmatic rift) and II (235 Ma, Carnian), expressed as rifts and sags that accumulated second set of coal-bearing strata)

Veevers, J.J. & C.M. Powell (eds.) (1994)- Permian-Triassic Pangean basins and foldbelts along the Panthalassan margin of Gondwanaland. Geol. Soc. America (GSA) Mem. 184, p. 1-368.

Veevers, J.J. & R.C. Tewari (1995)- Permian-Carboniferous and Permian-Triassic magmatism in the rift zone bordering the Tethyan margin of southern Pangea. Geology 23, p. 467-470.
(Magma emplaced in India-Australia rift zone along Tethyan margin in Permian-Carboniferous and Permian-Triassic times)

Veevers, J.J. & R.C. Tewari (1995)- Gondwana master basin of Peninsular India between Tethys and the interior of the Gondwanaland Province of Pangea Geol. Soc. America (GSA) Mem. 187, p. 1-73.
(Deposition in Gondwana master basin of Peninsular India in latest Carboniferous- E Jurassic on Archean-Proterozoic basement. Gondwana deposition ceased with breakup of Greater India from rest of Gondwanaland in Late Jurassic- E Cretaceous, followed by rift-drift succession along its margins. Master basin 1000km inboard of passive margin of Tethyan Gondwanaland; filled initially with lobes of glaciogenic sediment)

Von Hagke, C., M. Philippon, J.P. Avouac & M. Gurnis (2016)- Origin and time evolution of subduction polarity reversal from plate kinematics of Southeast Asia. Geology 44, 8, p. 659-662.
(online at: http://web.gps.caltech.edu/~avouac/publications/vonHagke-Geology-2016.pdf)
(Regional model of plate geometry and kinematics of SE Asia since Late Cretaceous and origin of subduction polarity reversal currently observed in Taiwan)

Von Koenigswald, G.H.R. (1960)- Tektite studies I: The age of the Indo-Australian tektites. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 63, p. 135-141.
(On the distribution of glassy tektites, widespread in M Pleistocene of SE Asia and Australia, and derived from meteorite impact somewhere in Indochina. (Age ~0.8 Ma; JTvG). In Sangiran, C Java, tektites in Upper Kabuh Fm?)

Von Koenigswald, G.H.R. (1960)- Tektite studies II: The distribution of the Indo-Australian tektites. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 63, p. 142-153.
(Stauffer 1983: First paper to point out distribution of Australasian tektites in terms of size and shape from NW (Indochina) to SE (Australia), an observation crucial to later understanding of origin of these bodies)

Von Koenigswald, G.H.R. (1964)- The problem of tektites. Space Science Rev. 3, 3, p. 433-445.
(Early significant review of tektites, including Pleistocene Australasian strewn field and their extra-terrestrial impact origin)

Von Koenigswald, G.H.R. (1968)- Tektite studies X: The relationship of shape, size and texture in Asiatic tektites. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 71, p. 1-9.

Wang, S., Y. Mob, C. Wang & P. Yea (2016)- Paleotethyan evolution of the Indochina Block as deduced from granites in northern Laos. Gondwana Research 38, p. 183-196.
(online at: www.sciencedirect.com/science/article/pii/S1342937X15002890)
(Jinsha River- Song Ma Suture- Kontum Massif suture is boundary between Indochina Block and S China Block. Granitoids from N Laos I-type Indosinian volcanic arc granites of 234-256 Ma age (~M Triassic))

Wallace, A.R. (1869)- The Malay Archipelago. MacMillan & Co, UK, p. 1-525.

(With several reprint editions. Classic work of natural history/ faunal provinces of Indonesia (not much on geology))

Wang, P. (2004)- Cenozoic deformation and the history of sea-land interactions in Asia. In: P. Clift et al. (eds.) Continent-ocean interactions within East Asian marginal seas, American Geophys. Union (AGU), Geophys. Monograph Ser. 149, p. 1-22.
(After India-Asia collision in Eocene, Asia significantly enlarged its size and increased its altitude. W-tilting topography of E Asia reversed with uplift of Tibetan Plateau and opening of marginal seas, resulting in Asian fluvial system radiating from uplifted center of continent. Cenozoic deformation of Asia also responsible for initiation of Asian monsoon system in E Miocene and further strengthening at ~8 Ma and ~3 Ma)

Wang, W., Q.M. Qu & M. Zhu (2010)- A brief review of the Middle Palaeozoic vertebrates from Southeast Asia. Palaeoworld 19, p. 27-36.
(On Silurian-Devonian fish remains from Shan-Thai (=Sibumasu), Indochina and S China blocks and their biogeographic affinities. Vertebrate fossils suggest proximity between S China and Indochina terranes in M Paleozoic and close relationship between Shan-Thai and E Gondwana (Australia) in M Devonian)

Wang, Q., J. Deng, C. Li, G. Li, L. Yu & L. Qiao (2016)- The boundary between the Simao and Yangtze blocks and their locations in Gondwana and Rodinia: Constraints from detrital and inherited zircons. Gondwana Research 26, p. 438-448.
(Simao (N Indochina) and Yangtze (S China) continental blocks amalgamated in Late Paleozoic- Triassic by closure of Paleotethys branch (Ailaoshan ocean). Detrital and inherited zircons suggest Laowangzhai-Mojiang suspect terrane belongs to Simao-Indochina block, so Paleotethys suture along Ailaoshan late-Devonian- E Carboniferous ophiolite belt. Precambrian detrital zircon ages suggest Yangtze block not part of Australia or India in Rodinia, while Simao-Indochina block derived from Indian Gondwana)

Wang, X., K. Makato & W. Hongzhen (1996)- On the tectonic position of the Baoshan region during the Late Palaeozoic. J. Southeast Asian Earth Sci. 13, p. 171-183.
(Devonian- Permian fauna of Baoshan block in Yunnan, SW China, very similar to S Tibet, but not Yangtze region. Faunal and paleomagnetic data for Late Paleozoic show Yangtze region very close to Equator, but Baoshan and S Tibet in middle latitudes (~32-43°S; probably in Gondwana domain))

Wang, X., I. Metcalfe, P. Jian, L. He & C. Wang (2000)- The Jinshajiang- Ailaoshan suture zone: tectono-stratigraphy, age and evolution. J. Asian Earth Sci. 18, p. 675-690.
(On M Triassic age for Jinshajiang- Ailaoshan suture, formed by collision of Changdu-Simao Block with S China Block. Jinshajiang oceanic lithosphere formed (as oceanic marginal basin of S China Block) in latest Devonian- earliest Carboniferous)

Wang, X., I. Metcalfe, P. Jian, L. He & C. Wang (2000)- The Jinshajiang suture zone: tectono-stratigraphic subdivision and revision of age. Science in China, ser. D, 43, 1, p. 10-22.
(Jinshajiang suture zone in W Yunnan- W Sichuan is remnants of backarc basin in E part of Paleo-Tethys. Basin started in Late Devonian, closed in E-M Triassic)

Wang, X.D, W. Lin, S.Z. Shen, P. Chaodumrong, G.R. Shi, X. Wang & Q.L. Wang (2013)- Early Permian rugose coral *Cyathaxonia* faunas from the Sibumasu Terrane (Southeast Asia) and the southern Sydney Basin (Southeast Australia): paleontology and paleobiogeography. Gondwana Research 24, 1, p. 185-191.
(Sibumasu Terrane rifted from Gondwana in E Permian. Small solitary rugose Cyathaxonia coral faunas in Lower Permian of Sibumasu in SE Asia and Sydney Basin, SE Australia, suggesting cool shallow marine conditions, while Cathaysian corals reflect location near Paleo-equator. M Permian corals in Sibumasu dominated by solitary and compound Waagenophyllidae ('Cathaysian'), but, some endemic taxa in Sibumasu Terrane during this time suggest it was still independent paleobiogeographical entity. Eleven coral species including 5 new taxa described. No Late Carboniferous corals known from Gondwanan terranes in SE Asia)

Wang, X.D., G.R. Shi & T. Sugiyama (2002)- Permian of West Yunnan, Southwest China: a biostratigraphic synthesis. J. Asian Earth Sci. 20, p. 647-656.
(Permian stratigraphic successions in Changning-Menglian Belt range from passive margin, active margin to oceanic basin and seamounts. Permo-Carboniferous carbonate faunas typical Cathaysian (common fusulinids, compound rugose corals). Permian of Tenchong and Baoshan blocks different: Baoshan Block Lower Permian mainly siliciclastic with cool-water faunas and possibly glaciogene diamictites, overlain by basalts and volcaniclastics of probable rift origin, U Permian carbonates with mixed Cathaysian- Gondwanan faunas. Tengchong Block similar to Baoshan, but lacks volcanics)

Wang, X.D., G.R. Shi, T. Sugiyama & R.R. West (2003)- Late Palaeozoic corals of Tibet (Xizang) and West Yunnan, Southwest China: successions and palaeobiogeography. Palaeogeogr. Palaeoclim. Palaeoecology 191, 3, p. 385-397.
(On coral faunal provincialism on Carboniferous- Permian of Tibet- W Yunnan and Cimmerian terranes. Sakmarian-Artinskian Cyathaxonia fauna. In late E Permian development of Himalayan (N margin of Gondwana) and Cimmerian provinces (Lhasa- Qiantang, Tengchong, Baoshan, W Yunnan), with Roadian solitary corals, Wordian-Capitanian Waagenophyllidae and endemic Cimmerian taxa such as Thomasiphyllum and Wentzellophyllum persicum. Thomasiphyllum has distinctive paleogeographical distribution in M Permian of Cimmerian continents, also in W Sumatra, etc. Late Permian Himalayan fauna with small solitary corals only (Lytvolasma fauna) and Cathaysian with Ipciphyllum, Liangshanophyllum, etc.)

Wang, X.D. & T. Sugiyama (2002)- Permian coral faunas of the eastern Cimmerian continent and their biogeographical implications. J. Asian Earth Sci. 20, p. 589-597.
(Early Permian corals of E Cimmerian continent (= Sibumasu) of Peri-Gondwanan affinity with small solitary forms; different from Cathaysian area, where abundant large solitary and compound corals occur. In M Permian endemic Cimmerian- Cathaysian fauna of large solitary and massive Waagenophyllidae, with Cathaysian aspect. Late Permian corals all Cathaysian. Changes related to rifting of Cimmerian continent from Gondwanaland in late Early Permian and subsequent N-ward drift)

Wang, X.D., T. Sugiyama, K. Ueno, Y. Mizuno, Y. Li, W. Wang et al. (2000)- Carboniferous and Permian zoogeographical change of the Baoshan Block, SW China. Acta Palaeontologica Sinica 39, 4, p. 493-506.
(Carboniferous- Permian of Baoshan block three main sequences: (1) Lower Carboniferous carbonates (warm, diverse, and abundant 'Eurasian' faunas), (2) Lower Permian siliciclastics (cold, low diverse faunas; conodont Sweetognathus fauna at top; glacio-marine diamictites, Sakmarian- E Artinskian ;'peri-Gondwanan') (3)M Permian carbonates (warm water but low diverse fauna; 'marginal Cathaysian/Cimmerian'). Cimmerian blocks comparable in Carboniferous- E Permian. In M Permian E Cimmerian blocks (Sibumasu s.s, Baoshan, Tengchong) not far from palaeoequator, but further than W Cimmerian blocks (lack of Eopolydiexodina and Neoschwagerina fusulinids, corals Thomasiphyllum, Wentzellophyllumm)

Wang, X.D., K. Ueno, Y. Mizuno & T. Sugiyama (2001)- Late Paleozoic faunal, climatic, and geographic changes in the Baoshan block as a Gondwana-derived continental fragment in southwest China. Palaeogeogr. Palaeoclim. Palaeoecology 170, p. 197-218.
(Carboniferous-Permian of Boashan Block of W Yunnan 3 main sequences: (1) Lower Carboniferous carbonate (diverse warm-water 'Eurasian-affinity' faunas, incl. Cyathaxonia coral fauna), (2) Lower Permian Asselian-Sakmarian 'peri-Gondwanan' cold water siliciclastics with diamictites overlain by E Artinskian carbonate with low diversity fusulinids Pseudofusulina- Eoparafusulina, also Cyathaxonia coral fauna, and Artinskian rift basalts; (3) M Permian 'marginal Cathaysian/ Cimmerian' carbonates; warm water, but low diversity fusulinids incl. Eopolydiexodina, also Shanita and coral assemblage with Wentzellophyllum and of lower diversity than in Cathaysian regions. Upper Carboniferous absent)

Wang, X.D., Y.Q. Zhang & Wei Lin (2010)- Carboniferous-Permian rugose coral *Cyathaxonia* faunas in China. Science China, Earth Sciences, 53, 12, p. 1864-1872
(Cyathaxonia faunas of small solitary corals widely distributed in Carboniferous- Permian beds across China. 12 families and 40 genera recognized. Cyathaxonia faunas of Baoshan, W Yunnan and S Anhui, occur just below large dissepimented solitary and compound corals in continuous sequence, implying occurrence not

strictly related to Gondwanan or peri-Gondwanan cold water environment, but may reflect by deeper water, mud-rich, quieter sedimentary environments)

Wang, Y., X. Xing, P.A. Cawood, S. Lai, X. Xia, W. Fan, H. Liu & F. Zhang (2013)- Petrogenesis of early Paleozoic peraluminous granite in the Sibumasu Block of SW Yunnan and diachronous accretionary orogenesis along the northern margin of Gondwana. Lithos 182-183, p. 67-85.
(SW Yunnan Shan-Tai terrane with E-M Ordovician granitoids with zircon ages of 492-460 Ma. S-type granites, representing S-ward continuation of E Paleozoic granitic belt of E Gondwana N margin)

Wang, Y., X. Qian, P.A. Cawood, H. Liu, Q. Feng, G. Zhao, Y. Zhang, H. He & P. Zhang (2018)- Closure of the East Paleotethyan Ocean and amalgamation of the Eastern Cimmerian and Southeast Asia continental fragments. Earth-Science Reviews 186, p. 195-230.
(Review of geological features of Paleotethys suture zones, bounding continental fragments and magmatic, metamorphic and sedimentary records. Data from Changning-Menglian, Inthanon and Bentong-Raub suture zones argue for linkage with Longmu Co-Shuanghu suture zone in C Tibet and together constitute main E Paleotethys Ocean relict. E-ward subduction of ocean resulted in series of magmatic arc/ backarc basin/ continental fragments in SE Asia (from W to E: Lincang-Sukhothai-E Malaya arc, Jinghong-Nan-Sa Kaeo back-arc basin, Simao/ W Indochina fragment, Luang Prabang-Loei back-arc basin, S Indochina fragment, Wusu and Truong Son back-arc basins, N Indochina fragment, Jinshajiang-Ailaoshan-Song Ma branch/back-arc basin and S China Block. Assembly of these fragments resulted in Triassic (Indosinian) metamorphism and related tectonothermal event. Switch from subduction of main E Paleotethyan Ocean to collision of Sibumasu with Simao/Indochina at ~237 Ma. Timing of collision events along Jinshajiang-Ailaoshan-Song Ma suture generally ~10 Ma older than along Changning-Menglian, Inthanon and Bentong-Raub suture zones)

Wang, Y., L. Zhang, P.A. Cawood, L. Ma, W. Fan, A. Zhang, Y. Zhang & X. Bi (2014)- Eocene supra-subduction zone mafic magmatism in the Sibumasu Block of SW Yunnan: implications for Neotethyan subduction and India-Asia collision. Lithos 206-207, p. 384-399.
(Metabasic rocks in NW Yunnan crystallized at 50-55 Ma and metamorphosed at ~39 Ma. Suggest E Eocene magmatism in NW Yunnan represents E-ward continuation of Gangdese magmatic belt and Neotethyan subduction continued until ~50 Ma, followed by India-Asia collision. At least two E-dipping subduction zones in Neotethyan suprasubduction system before 55 Ma. Sudden decrease in convergence rate in E Eocene (55-50 Ma) stimulated rollback of downgoing slab and induced melting of mantle sources)

Wanless, H.R. & J.R. Cannon (1966)- Late Paleozoic glaciation. Earth-Science Reviews 1, 4, p. 247-286.
(Late Paleozoic glaciation reported from many localities on Gondwana, including India, Pakistan, Australia, etc. Nothing known from SE Asia yet)

Waterhouse, J.B. (1972)- The evolution, correlation, and paleogeographic significance of the Permian ammonoid family Cyclolobidae. Lethaia 5, 3, p. 251-270.
(Cyclolobidae of M Permian age. Waagenoceras- Timorites lineage inhabited paleotropical latitudes, and Timorites is found around rim of Pacific Ocean (both also found on Timor; JTvG))

Waterhouse, J.B. (1982)- An Early Permian cool-water fauna from pebbly mudstones in south Thailand. Geol. Magazine 119, 4, p. 337-354.
(E Permian (Asselian) small brachiopod fauna from E Permian pebbly mudstones- sandstones of Phuket Gp at Ko Muk and Ko Phi Phi islands, Andaman Sea. With Komukia, Cancrinelloides, Rhynchopora, Sulciplica, etc. At one locality associated with solitary coral Euryphyllum. Most genera found in temperate- high paleolatitudes, suggesting pebbly mudstones are cool water deposits, contemporaneous with Late Asselian Gondwana glacial deposits (=Phuket Gp is part of 'Sibumasu terrane'; JTvG))

Waterhouse, J.B. (1987)- Perceptions of the Permian Pacific- the Medusa hypothesis. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy, Parkville, p. 607-614.

Waters, J.A. (1990)- The palaeobiogeography of the Blastoidea (Echinodermata). In: W.S. McKerrrow & C.R. Scotese (eds.) Palaeozoic palaeogeography and biogeography, Geol. Soc., London, Mem. 12, p. 339-352.
(Permian blastoids widespread but most diverse in SE Asia and Australia. Timor faunas Sakmarian-Asselian and Kazanian, and most diverse and abundant. Paleoecology and stratigraphy poorly understood. Some common species between Timor and Australia, but others conspicuously absent: Angioblastus, Deltoblastus not in Australia; Australoblastus not in Timor. Reasons for local endemism unclear. Kazanian Timor fauna is last successful blastoid community before going extinct)

Webby, B.D., I.G. Percival, G. Edgecombe, F. Vandenberg, R. Cooper, J. Pickett et al. (2000)- Ordovician biogeography of Australasia. In: J. Wright et al. (eds.) Palaeobiogeography of Australasian faunas and floras, Assoc. Australian Palaeont., Mem. 23, p. 63-126.

Webster, G.D. (1998)- Palaeobiogeography of Tethys Permian crinoids. In: G.R. Shi, N.W. Archbold & M. Grover (eds.) Strzelecki Int. Symposium on Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources, Proc. Royal Soc. Victoria 110, 1-2, p. 289-308.
(No Permian crinoid fauna in world as diverse and abundant as Timor. Five horizons between Sakmarian-Wuchiapingian. Australian faunas generally considered as cooler water faunas, >35°S. Timor warm-water shelf. In Artinskian greater similarity beween W Australia and Timor than between W and E Australia)

Westermann, G.E.G. (1980)- Ammonite biochronology and biogeography of the circum-Pacific Middle Jurassic. In: M.R. House & J.R. Senior (eds.) The Ammonoidea, Academic Press, London, p. 459-498.

Westermann, G.E.G. (1988)- Middle Jurassic ammonite biogeography supports ambi-Tethyan origin of Tibet. In: M.G. Audley-Charles & A. Hallam (eds.) Gondwana and Tethys, Geol. Soc., London, Spec. Publ. 37, p. 235-239.
(M Jurassic ammonites from Tibet Tethyan Himalaya (Spiti Shale) typical of SE margin of Tethys, with connections to W India, E Africa, NW Australasia. N Tibet (Qamdo) and S Tibet (Lhasa) consistent with Eurasian position in M Jurassic. Tithonian ammonoid affinities of Tethyan Himalaya very close to NW Australia, which Uhlig (1911) correctly included in Himalayan province)

Westermann, G.E.G. (ed.) (1993)- The Jurassic of the Circum-Pacific. Cambridge University Press, p. 1-688.
(Collection of 27 papers on Jurassic geology, floras, faunas and biogeography of circum-Pacific region, incl. Sukamto & Westermann on Indonesia/ PNG and Sato on SE Asia and Japan)

Westermann, G.E.G. (1993)- Global bio-events in mid-Jurassic ammonites controlled by seaways. In: M.R. House (ed.) The Ammonoidea: environment, ecology and evolutionary change. Systematics Association Spec. Vol. 47, Oxford Science Publ., p. 187-226.

Westermann, G.E.G. (2000)- Marine faunal realms of the Mesozoic: review and revision under the new guidelines for biogeographic classification and nomenclature. Palaeogeogr. Palaeoclim. Palaeoecology 163, p. 49-68.
(Review of published Mesozoic marine realms subrealms and superrealms and problems in defining them. Most important superrealms: (1) Boreal/Euroboreal (Arctic and Boreal-Atlantic) and (2) Tethys-Panthalassa (Tethyan, Mediterran-Caucasian, Indo-Pacific (Jurassic-E Cretaceous) and Austral (M-Late Cretaceous))

Whitmore, T.C. (ed.) (1981)- Wallace's Line and place tectonics. Clarendon Press, Oxford, p. 1-90.
(Collection of papers on relation between present-day faunal provinces and plate tectonic history of Indonesia, incl. Audley-Charles paper on plate tectonics)

Whitmore, T.C. (ed.) (1987)- Biogeographical evolution of the Malay Archipelago. Oxford Monographs Biogeography 4, Clarendon Press, Oxford, p. 1-145.

Wilson, K.M., M.J. Rosol & W.W. Hay (1989)- Global Mesozoic reconstructions using revised continental data and terrane histories: a progress report. In: J.W. Hillhouse (ed.) Deep structure and past kinematics of accreted terranes, American Geophys. Union (AGU) Geophys. Monograph Series 50, p. 1-39.
(online at: www.agu.org/books/gm/v050/GM050p0001/GM050p0001.pdf)
(Series of interesting M Triassic- E Cretaceous global plate reconstructions, largely driven by faunal records)

Wnuk, C. (1996)- The development of floristic provinciality during the Middle and Late Paleozoic. Review Palaeobotany Palynology 90, p. 5-40.
(On evolution of floristic provinces since Silurian. Three main phytogeographic units in earliest fossil floras (Angara, Euramerica, Gondwana). Fourth unit (Cathaysia) differentiated from Euramerica in latest Carboniferous. Includes mention of New Guinea Gondwanan flora. Nothing on Sumatra or other SE Asia)

Wood, G.D., M.A. Miller, D.T. Pocknall, A.M. Aleman, J.A. Stein & R. Dino (1998)- Paleoclimatologic, paleoecologic and biostratigraphic significance of the Middle Cretaceous elaterate microfloral province, Gondwana. In: AAPG Int. Conf. Exhib., Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 82, 10, p. 1982. *(Abstract only)*
(One of best defined Cretaceous phytogeographic realms is Albian-Cenomanian elaterate microfloral province, bracketing Cretaceous paleo-equator, in tropical-subtropical Africa- S America and outliers in China, Middle East and PNG. Typified by elater bearing pollen Elaterocolpites, Elateroplicites, Elateropollenites, etc. Parent plants inhabited paleotropical humid coastal plains of Proto-South Atlantic and Tethys oceans)

Wopfner, H. (1996)- Gondwana origin of the Baoshan and Tengchong terranes of West Yunnan. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 539-547.
(Baoshan and Tengchong Blocks in W Yunnan, China, have Permo-Carboniferous glaciomarine deposits, cold-water faunas and Glossopteris flora, indicating Gondwana position at that time and part of Sibumasu tectono-stratigraphic unit. Glacial series of Baoshan Block rel. thin and overlain by thick basalts and red beds (volcanic rift setting?). Tengchong Block glacial marine beds >1000 m, followed by thick Lower Permian reefal limestones (passive margin?). Both terranes separated from Australian Gondwana in late E Permian. Docking started in Late Triassic, with closure of Changning-Menglian Belt)

Wopfner, H. (1999)- The Early Permian deglaciation event between East Africa and Northwestern Australia. J. African Earth Sci. 29, p. 77-90.
(Late Paleozoic glacigene deposits form base of Gondwana megasequence along entire length of Tethyan margin of Gondwana. Examples of deglaciation sequences, including Tanzania, S Oman, Lesser Himalaya, NW Australia and SW China. All deglaciation sequences Late Asselian- E Sakmarian age. High content of organic matter in deglaciation deposits, like Late Asselian-E Sakmarian Treachery Shale of Australian NW Shelf with microflora of Pseudoreticulatispora (= Granulatisporites) confluens. Peak sea level in Late Sakmarian- E Artinskians. Swift and synchronuous climatic amelioration reflect rapid and substantial global warming)

Wopfner, H. (2001)- Gondwana terranes of southwest China and their connections to India and Australia. J. Indian Assoc. Sedimentologists, Delhi, 20, p. 1-19.
(Two groups of terranes with Late Carboniferous-E Permian glacial deposts that separated from Gondwana in Permian (together also referred to Sibumasu Blocks?; JTvG): (1) LBS (Lhasa Block, Tibet and Baoshan, W Yunnan) and Shan Thai (E Burma) which evolved in volcanic rift setting with margin of Greater India and NW Australia, and separated from Gondwana in Artinskian; (2) TMS (Tengchong Block, peninsular Thailand, W Malay Peninsula and N Sumatra), developed on peri-continental non-volcanic rift along N margin of Australia and pre-Permian New Guinea and separated slightly earlier than LBS)

Wopfner, H. & X.C. Jin (2009)- Pangea megasequences of Tethyan Gondwana-margin reflect global changes of climate and tectonism in Late Palaeozoic and Early Triassic times- a review. Palaeoworld 18, p. 169-192.
(Late Carboniferous- M Triassic 'Pangea stage' similar trends across Gondwana. Late Carboniferous- E Permian glacial- periglacial deposits followed by deglaciation in E Sakmarian, with typical facies with coal measures and redbeds. In E Permian, large graben structures started to develop between Africa and India and between India and Australia. Rifting along Tethyan margin started in E Permian, associated with volcanism

between Kashmir and Yunnan and in NW Australia. Spreading of Neo-Tethys lead to separation of Cimmerian Blocks from Gondwana in late E Permian- Triassic. Two facies realms (1) intracratonic rift (Cashmere, Lhasa, Baoshan blocks) and (2) detached more distal blocks (Tengchong, Malaya, Sumatra))

Wright, A.J., G.C. Young, J.A. Talent & J.R. Laurie (eds.) (2000)- Palaeobiogeography of Australasian faunas and floras. Assoc. Australasian Palaeontologists, Mem. 23, p. 1-515.
(Collection of 10 papers describing Australasian floras-faunas and paleobiogeography from Cambrian-Quaternary (not including Triassic; JTvG))

Wu, G.Y. & B.L. Cong (1995)- Tethyan evolution and SE Asian continental accretion. In: Proc. Int. Symp. Geology of Southeast Asia and adjacent areas, Hanoi 1995, J. of Geol. Hanoi, B, 1995, 5-6, p. 293-301.

Wu, H.R., C.A. Boulter, B.J. Ke, D.A.V. Stow & Z.C. Wang (1995)- The Changning-Menglian suture zone; a segment of the major Cathaysian-Gondwana divide in Southeast Asia. Tectonophysics 242, p. 267-280.
(Changning-Menglian suture zone of W Yunnan, SW China, is major Cathaysia- Gondwana divide, representing closing of Paleo-Tethys Ocean. Narrow N-S zone of E Devonian- M Permian oceanic siliceous sediments and dismembered ophiolite complexes, including reef-capped oceanic islands. Simao terrane is E of suture, has Cathaysian affinities and not part of Sibumasu terrane as suggested by various authors. Subduction created active continental margin on W edge of Simao terrane throughout much of Triassic;until closure of this branch of Paleotethys in early Late Triassic)

Wu, J. & J. Suppe (2017)- Proto-South China Sea plate tectonics using subducted slab constraints from tomography. J. Earth Science (China), 29, p. 1304-1318.
(online at: https://link.springer.com/article/10.1007/s12583-017-0813-x)
(Reconstruction of vanished Proto-South China Sea ocean from tomography imaging of subducted slab. Two slabs identified, now at depths of 750-900 km. Proto-South China Sea consumed by double-sided subduction: (1) 'N Proto-South China Sea' (now under N S China Sea- Philippines) subducted in Oligo-Miocene under Dangerous Grounds southward, expanding S China Sea by in-place 'self subduction' similar to W Mediterranean basins; (2) limited S-ward subduction of proto-S China Sea under Borneo before Oligocene (35 Ma), represented by 800-900 km deep 'S Proto-South China Sea' slab (now under S S China Sea- N Borneo))

Wu, J., J. Suppe & R.V.S. Kanda (2012)- Constraints on the extrusion of SE Asia from subducted slabs of the Indian, Australian, Philippine Sea and Molucca Sea plates. EGU General Assembly, Vienna 2012, p. 10019 *(Abstract only)*
(Subducted slabs under SE Asia mapped from seismic tomography and seismicity, when unfolded and restored, show incompatibilities with existing plate-tectonic models. Philippine Sea, Molucca Sea and Celebes Sea plates are fragments of once much larger NE Indian-Australian Ocean, once continuous with Sunda slab and present Indian Ocean)

Wu, J., J. Suppe, R. Lu & R. Kanda (2016)- Philippine Sea and East Asian plate tectonics since 52 Ma constrained by new subducted slab reconstruction methods. J. Geophysical Research, Solid Earth, 121, 6, p. 4670-4741.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2016JB012923/epdf)
(Reconstructed Philippine Sea and E Asian plate tectonics since E Eocene from 28 slabs mapped from global tomography, with subducted area of ~25% of present-day global oceanic lithosphere. Slab constraints include subducted parts of existing Pacific, Indian and Philippine Sea oceans, plus subducted proto-S China Sea and newly discovered 8000 × 2500 km 'East Asian Sea' between Pacific and Indian Oceans at 52 Ma based on lower mantle flat slabs. Philippine Sea formed above Manus plume near Pacific- E Asian Sea plate boundary. Philippine Sea W-ward motion and post-40 Ma max. 80° CW rotation accompanied late Eocene-Oligocene collision with Caroline/Pacific plate. Philippine Sea moved N post-25 Ma over northern East Asian Sea, forming N Philippine Sea arc that collided with SW Japan-Ryukyu margin in Miocene (~20-14 Ma))

Xia, Y., X. Xu, Y. Niu & L. Liu (2017)- Neoproterozoic amalgamation between Yangtze and Cathaysia blocks: The magmatism in various tectonic settings and continent-arc-continent collision. Precambrian Research 309, p. 56-87.
(manuscript online at: http://dro.dur.ac.uk/21242/1/21242.pdf)
(Neoproterozoic amalgamation history of Yangtze and Cathaysia blocks, forming S China Block: (1) ~1000-860 Ma NW-ward intra-oceanic subduction and SE-ward ocean-continent subduction (with continental margin magmatism in Cathaysia Block); (2) ~860-825 Ma steepening subduction caused development of back-arc basin in intra-oceanic arc zone and slab rollback induced arc and back-arc magmatism in Cathaysia Block. NW-ward ocean-continent subduction formed continental margin magmatism in Yangtze Block; (3) ~825-805 Ma continent-arc-continent collision and final amalgamation between Yangtze and Cathaysia blocks (Jiangnan Orogen); (4) ~805-750 Ma collapse of Jiangnan Orogen and Nanhua rift basin formed)

Xu, C., H. Shi, C.G. Barnes & Z. Zhou (2016)-Tracing a late Mesozoic magmatic arc along the Southeast Asian margin from the granitoids drilled from the northern South China Sea. Int. Geology Review 58, p. 71-94.
(Granitoids drilled in N S China Sea two magmatic episodes: Late Jurassic (162-148 Ma) and E Cretaceous (137-102 Ma). Jurassic magmatism probably began in late M Jurassic, documented by inherited zircons. I-type granites, generated in continental arc environment. Arc granites of SCS, with accretionary wedge of Palawan terrane to SE and zone of lithospheric extension to N throughout SE China, define late Mesozoic SW-NE trench-arc-backarc setting for SE Asian continental margin , related to subduction of Paleo-Pacific slab beneath Asia)

Xu, C., L. Zhang, H. Shi, M.R. Brix, H. Huhma, L. Chen, M. Zhang & Z. Zhou (2017)- Tracing an Early Jurassic magmatic arc from South to East China Seas. Tectonics 36, 3, p. 466-492.
(E Jurassic granite and diorite in wells in NE South China Sea and SW East China Sea (198-187 Ma), probably part of arc-related granitoids,that, along with those from SE Taiwan, could define E Jurassic NE-SW trending Dongsha-Talun-Yandang magmatic arc zone along East Asian continental margin paired with Jurassic accretionary complexes from SW Japan, E Taiwan to W Philippines. Arc-subduction complex associated with oblique subduction of Paleo-Pacific slab beneath Eurasia)

Xu, J., Z. Ben-Avraham, T. Kelty & H.S. Yu (2014)- Origin of marginal basins of the NW Pacific and their plate tectonic reconstructions. Earth-Science Reviews 130, p. 154-196.
(Basins of Bohai Gulf, S China Sea, E China Sea, Japan Sea, Andaman Sea, Okhotsk Sea and Bering Sea typical geometry of dextral pull-apart. Java, Makassar, Celebes and Sulu Seas basins together with grabens in Borneo also dextral, transform-margin type basin system. Formation of gigantic linked dextral pull-apart basin system in NW Pacific due to NNE- to ENE-ward motion of E Eurasia, mainly response to Indo-Asia collision which started at ~50 Ma)

Xu, Y., P.A. Cawood, Y. Du, L. Hu, W. Yu, Y. Zhu & W. Li (2013)- Linking south China to northern Australia and India on the margin of Gondwana: Constraints from detrital zircon U-Pb and Hf isotopes in Cambrian strata. Tectonics 32, 6, p. 1547-1558.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/tect.20099/epdf)
(Cambrian sedimentary rocks in S part of S China Craton derived from source to S or SE, beyond current limits of craton. U-Pb ages and Hf isotope data on detrital zircons from Cambrian two age peaks at 1120 Ma and 960 Ma, with εHf(t) values similar to coeval detrital zircons from W Australia and Tethyan Himalaya zone, respectively. ~1120 Ma detrital zircons likely derived from Wilkes-Albany-Fraser belt (between SW Australia-Antarctica); ~960 Ma zircons possibly sourced from Rayner-Eastern Ghats belt (between India-Antarctica). Suggesting S China was at nexus between India, Antarctica, and Australia along N margin of E Gondwana)

Xu, Y., P.A. Cawood, Y.S. Du, H. Huang, & X. Wang (2014)- Early Paleozoic orogenesis along Gondwana's northern margin constrained by provenance data from South China. Tectonophysics 636, p. 40-51.
(Cambrian- Ordovician boundary unconformity in S part of S China Craton related to coeval orogenic activity along Indian margin of E Gondwana. Disconformity at base Ordovician part of regional break also documented in Himalaya, Qiangtang, Lhasa, Sibumasu and W Australia, with angular unconformity, metamorphism of older units and widespread magmatic activity. S China Craton also deformed and metamorphosed during mid-

Paleozoic intra-continental Kwangsian orogeny, with regional angular unconformity between Devonian cover and metamorphosed pre-Devonian along with granite intrusion between 460-400 Ma)

Xu, Y., Z. Yang, Y.B. Tong, H. Wang, L. Gao & C. An (2015)- Further paleomagnetic results for lower Permian basalts of the Baoshan Terrane, southwestern China, and paleogeographic implications. J. Asian Earth Sci., 104, p. 99-114.
(Baoshan Terrane of SW China part of Cimmerian block in Late Paleozoic. Paleomagnetic studies on lower Permian Woniusi Fm basalts suggest Baoshan Terrane located at latitude 38°S ± 3.7° in late E Permian. Comparison with E Permian from Gondwanan blocks suggests Baoshan Terrane located near junction of N India and NW Australia, and broke away from W Australia after E Permian. Basalts represent extensional setting and may represent start of separation between Baoshan and Gondwana)

Yamashita, I., A. Surinkum, Y. Wada, M. Fujihara, M. Yokoyama, H. Zaman & Y. Otofuji (2011)- Paleomagnetism of the Middle-Late Jurassic to Cretaceous red beds from the Peninsular Thailand: implications for collision tectonics. J. Asian Earth Sci. 40, 3, p. 784-796.
(Paleomagnetic data of Jurassic- Cretaceous red sandstones from Peninsular Thailand suggests two opposite tectonic rotations in Trang area. As part of Thai-Malay Peninsula underwent CW rotation after Jurassic together with Shan-Thai and Indochina blocks. Between Late Cretaceous and M Miocene, as part of S Sundaland Block (incl. Peninsular Malaysia, Borneo and S Sulawesi), up to 24.5° ± 11° CCW rotation relative to S China Block. N boundary of CCW rotated zone between Trang area and Khorat Basin)

Yan, J.X. & H. Yin (2000)- Paleoclimatic constraints for early Permian paleogeography of Eastern Tethys. In: H. Yin et al. (eds.) Permian-Triassic evolution of Tethys and Western Circum-Pacific, Developments in Palaeontology and Stratigraphy 18, Elsevier, p. 1-15.
(Paleoclimate indicators used to distinguish major Asian blocks. Early Permian cooler climate areas with diamictites and Glossopteris flora, warm climates have fusulinid limestones, Gigantopteris floras, etc.. Suggest N-ward movement in Permian of blocks like Sibumasu from S Hemisphere Gondwana to N Hemisphere Asia)

Yan, J.X. & D. Zhao (2001)- Advancement of the Mesotethys along the northern margin of the South China Sea. Marine Geol. Quaternary Geology, Beijing, 21, 4, p. 49-54.
(In Chinese. Marine Mesozoic strata along N margin of S China Sea indicate marine basin. Basin was a large ocean in Mesozoic and can be traced W-ward to Mesotethys (Meratus suture of Kalimantan, and Woyla suture on Sumatra), E-ward ocean connected to extinct ocean in Sakawa zone of Japan through Taiwan Straits. Ocean closed around M Cretaceous, resulting from docking of N Palawan Terrane and Reed Bank terrane)

Yan, J.X. & K. Zhao (2001)- Permo-Triassic paleogeographic, paleoclimatic and paleoceanographic evolutions in eastern Tethys and their coupling. Sci. China, Ser. D, 44, p. 968-978.
(Permian and Triassic (Chihsian, Wujiapingian, Anisian and Norian) reconstructions and paleogeography of E Tethys area, mainly driven by paleoclimate records)

Yan, Q.S. & X.F. Shi (2007)- Hainan mantle plume and the formation and evolution of the South China Sea. Geol. J. Chinese Universities 13, 2, p. 311-322.
(Seismic tomographic images suggest possible mantle plume beneath and around Hainan island (sub-vertical low-velocity column, extending from shallow depths to 660-km seismic discontinuity and continuously to depth of 1900 km. Large quantity of Cenozoic alkali basalts distributed in S China Sea and adjacent areas)

Yan, Q., X. Shi, I. Metcalfe, S. Liu, T. Xu, N. Kornkanitnan, T. Sirichaiseth, L. Yuan, Y. Zhang & H.Zhang (2018)- Hainan mantle plume produced late Cenozoic basaltic rocks in Thailand, Southeast Asia. Nature Scientific Reports 8, 2640, p. 1-14.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5805767/pdf/41598_2018_Article_20712.pdf)
(Intraplate volcanism started after 16 Ma, shortly after cessation of seafoor spreading in S China Sea, affecting large areas. Geochemistry of Late Miocene- Pleistocene basalts from Khorat Plateau and Sukhothai arc terrane in Thailand show Oceanic Island Basalt -like characteristics. Post-spreading intra-plate volcanism around S China Sea region probably induced by Hainan mantle plume)

Yan, Q., Z. Wang, S. Liu, Q. Li, H. Zhang, T. Wang et al. (2005)- Opening of the Tethys in southwest China and its significance to the breakup of East Gondwanaland in late Paleozoic: evidence from SHRIMP U-Pb zircon analyses for the Garze ophiolite block. Chinese Science Bull. 20, 3, p. 256-264.
(U-Pb zircon analyses of gabbro from Garze ophiolite block from Garze-Litang melange mean age 292±4 Ma, suggesting earliest Permian age for sea floor spreading/ age of opening of Tethys at East Gondwanaland)

Yang, J., P.A. Cawood & Y. Du (2015)- Voluminous silicic eruptions during late Permian Emeishan igneous province and link to climate cooling. Earth Planetary Sci. Letters 432, p.166-175.
(Case study for ~260 Ma Emeishan Large Igneous Province in S China, where silicic volcanic rocks are minor component of preserved rock due to extensive Late Permian erosion. Silicic volcanic rocks ~30% of volume of eroded Emeishan volcanics. Basalt-derived silicic eruptions released sulfur gases into higher atmosphere, contributing to climate cooling at Capitanian-Wuchiapingian transition at ~260 Ma)

Yang, J., P.A. Cawood, Y. Du, H. Huang & L. Hu (2014)- A sedimentary archive of tectonic switching from Emeishan plume to Indosinian orogenic sources in SW China. J. Geol. Soc., London, 171, 2, p. 269-280.
(U Permian- M Triassic sediments in Youjiang Basin, S China, record change from Late Permian within-plate mafic-dominated source to NW (zircons ages ~260 Ma; mainly from Emeishan Large Igneous Province), to E-M Triassic mixed magmatic arc-recycled orogenic source to W (subduction–collision rocks of Indosinian Orogeny) and E (recycled Precambrian- E Paleozoic rocks in S China hinterland))

Yang, K. (1998)- A plate reconstruction of the Eastern Tethyan orogen in Southwestern China. In: M.F.J. Flower et al. (eds.) Mantle dynamics and plate interactions in East Asia, American Geophys. Union (AGU) Geodyn. Ser. 27, p. 269-287.
(E Tethyan orogenic belt in SW China includes S Tibet, N Tibet, Baoshan-Shan-Thai, Changdu-Simao-Indochina and Zhongza terranes between India and Yangtze continental plates, separated by sutures with dismembered ophiolites and arc volcanic belts, recording series of closed Carboniferous- Tertiary Tethyan ocean basins. Lancangjiang suture records Permo-Carboniferous Tethyan ocean, separating Gondwanaland and Eurasia. Two phases (1) Carboniferous-Triassic spreading of Lancangjiang, Jinshajiang and Garze-Litang oceans and breakup of Changdu-Simao-Indochina and Zhongza terranes from S margin of Eurasia; (2) Triassic-Tertiary spreading of Nujiang and Yarlung Zangpo oceans associated with breakup of S Tibet, N Tibet and Baoshan-Shan-Thai terranes from N Gondwanaland)

Yang, Z. & J. Besse (1993)- Paleomagnetic study of Permian and Mesozoic sedimentary rocks from Northern Thailand supports the extrusion model for Indochina. Earth Planetary Sci. Letters 117, p. 525-552.
(Paleomagnetic study of Jurassic- Cretaceous sediments on Khorat Plateau suggests 1500 ± 800 km of post-M Cretaceous left-lateral slip along Red River and Xian Shui He fault zones and 14 ± 7° CW rotation for Indochina block relative to S China block, in agreement with lateral extrusion model of Indochina during India-Asia collision. Additional data of Permian, U Triassic and Lw Jurassic suggest Indochina, Yunnan (S China), N China block and S China block probably in contact at least since Late Triassic)

Yang, Z., J. Besse, V. Sutheetorn, J.P. Bassoullet, H. Fontaine & E. Buffetaut (1995)- Lower-Middle Jurassic paleomagnetic data from the Mae Sot area (Thailand): paleogeographic evolution and deformation history of Southeastern Asia. Earth Planetary Sci. Letters 136, p. 325-341.
(Paleomagnetic study of E-M Jurassic limestones and sandstones from Mae Sot area, W Thailand (part of Shan-Thai-Malay).Mae Sot paleolatitude show STM was close to or had already accreted with Simao or Khorat blocks in E-M Jurassic (in Late Triassic). Relative S-ward motion of 8 ± 4° of Indochina and CW rotations (14-75°) relative to China)

Yap, S. (2002)- On the distributional patterns of Southeast-East Asian freshwater fish and their history. J. Biogeography 29, 9, p. 1187-1199.
(Present-day fresh water fish distributions classified into 19 biogeographical zones/ main river systems Sundaic islands grouped into four pairs: Malay Peninsula- N Sumatra, C Sumatra-W Borneo, N Borneo-E Borneo-

Sarawak and S Borneo-Java. Java is relatively small, but landbridge island connected it with large islands of Sumatra and Borneo during Pleistocene low sea level periods)

Yeh, M.W. & J.G. Shellnutt (2016)- The initial break-up of Pangaea elicited by Late Paleozoic deglaciation. Nature Scient. Reports 6, 31442, p. 1-9.
(online at: www.ncbi.nlm.nih.gov/pmc/articles/PMC4980595/pdf/srep31442.pdf)
(Rifting of Pangea began in E Permian along S Tethys margin and produced lenticular-shaped Cimmeria continent. Mantle-plume model explained rift-related volcanism but Cimmerian rifts do not correlate well with pre-existing suture zones. Location and timing of Cimmerian rifting resulted from exploitation of structural heterogeneities within crust that formed due to repeated glacial-interglacial cycles in Late Paleozoic. Effects of continental deglaciation helped to create shape of Cimmeria and Neotethys Ocean, suggesting climate change may influence location of rifting)

Yin, An (2010)- Cenozoic tectonic evolution of Asia: a preliminary synthesis. Tectonophysics 488, p. 293-325.
(Cenozoic tectonic evolution model of Asia, including lateral extrusion of SE Asia between 32- 17 Ma after India- Asia collision)

Yin, Hongfu (1997)- Triassic biostratigraphy and palaeobiogeography of East Asia. In: J.M. Dickins (ed.) Late Palaeozoic and Early Mesozoic Circum-Pacific events and their global correlation, Cambridge University Press, p. 168-185.
(Timor Triassic classified as 'Gondwanan Tethys' facies, similar to Lhasa- W. Birma?; different from 'India-Gondwana' and 'Cathaysian-Tethys'. Misolia is element of subtropical 'Gondwanan Tethys'. Gondwanan Tethys and Tropical Tethys merged in Late Triassic due to S-ward expansion of tropical-subtropical biota)

Yin, Hongfu, J.M. Dickins, G.R. Shi & J. Tong (eds.) (2000)- Permian-Triassic evolution of Tethys and Western Circum-Pacific. Developments in Palaeontology and Stratigraphy 18, Elsevier, 412p.
(Reviews of Permian-Triassic in mainland E Asia, New Zealand, etc.. Little on Indonesia, New Guinea)

Yin, Hongfu & Y. Peng (2000)- The Triassic of China and its interregional correlation. In: H. Yin et al. (eds.) Permian-Triassic evolution of Tethys and Western Circum-Pacific, Developments in Palaeontology and Stratigraphy 18, Elsevier, p. 197-220.
(Review of Triassic stratigraphy of China. Six regions, incl. NW Pacific (marine), tropical Cathaysian Tethys and warm-temperate Gondwanan Tethys (Himalayas and SE extension into Yunnan-Tengchong area)

Yin, Hongfu, S.D. Wu, Y. Du, J. Yan & Y. Peng (1999)- South China as a part of archipelagic Tethys during Pangea time. Proc. Int. Conf. on Pangea and the Paleozoic- Mesozoic transition, Wuhan 1999, p. 69-73.
(South China composed of several microplates in Late Paleozoic, at time when Eastern Tethys was an 'archipelagic Ocean' with numerous microplates that amalgamated into Paleoasia during Late triassic Indosinian orogeny)

Yin, Hongfu, K. Zhang & Q. Feng (1999)- The Archipelagic Ocean system of the Eastern Eurasian Tethys. Acta Geologica Sinica (English Edition) 78, 1, p. 230-236.
(Unlike typical oceans such as wide and 'clean' Atlantic, Tethys Ocean showed archipelagic pattern during all stages, especially E Tethys. Evolutionary history of Qinling-Qilian-Kunlun, S China and Xizang (Tibet) - Yunnan regions)

Yin, J. (2003)- Oxfordian (Jurassic) mayaitid (ammonite) dispersal in the Tibetan Himalaya as the first signal of the establishment of the Indo-Austral subrealm. Progress in Natural Science 13, 4, p. 282-287.
(Mid-Oxfordian ammonite fauna in Lanongla area, Tibetan Himalaya, characterized by endemic epimayaitids. Distribution of mayaitids around E Gondwana can be regarded as first signal establishment of Indo-Austral Subrealm in Late Jurassic-E Cretaceous)

Yu, C., X. Shi, X. Yang, J. Zhao, M. Chen & Q. Tang (2017)- Deep thermal structure of Southeast Asia constrained by S-velocity data. Marine Geophysical Research 38, 4, p. 341-355.

(Deep thermal structure of SE Asia, derived from empirical relation between S-velocity and T. Temperature at depth of 80 km in rifted and oceanic basins (Thailand Rift Basin, Gulf of Thailand, Andaman Sea and S China Sea) is ~200 °C higher than in plateaus (Khorat Plateau, Sumatra Island) and subduction zones (Philippine Trench). Surface heat flow in S China Sea mainly dominated by deep thermal state. Temperatures at 100-120 km depths more uniform. Estimated base of lithosphere corresponds to ~1400 °C isotherm; good correlation with tectonic setting.

Zahirovic, S., N. Flament, R.D. Muller, M. Seton & M. Gurnis (2016)- Large fluctuations of shallow seas in low-lying Southeast Asia driven by mantle flow. Geochem. Geophys. Geosystems 17, 9, p. 3589-3607.
(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=5216&context=smhpapers)
(On link between mantle flow and surface tectonics. SE Asia one of lowest lying continental regions in world, with half of continental area presently inundated by shallow sea. Widespread Late Cretaceous-Eocene regional unconformity in SE Asia likely driven by dynamic topography, i.e. several 100m of dynamic uplift and emergence of Sundaland between ~80-60 Ma due to slab breakoff after Late Cretaceous collision of Gondwana-derived terranes with Sundaland. Renewed subduction from ~60 Ma re-initiated dynamic subsidence of Sundaland, leading to submergence from ~40 Ma)

Zahirovic, S., K. Matthews, N. Flament, R. Muller, K. Hill, M. Seton & M. Gurnis (2016)- Tectonic evolution and deep mantle structure of the eastern Tethys since the latest Jurassic. Earth- Science Reviews 162, p. 293-337.
(Major review of plate tectonics of since 160 Ma. Rifting of 'Argoland' (E Java and W Sulawesi) in latest Jurassic from NW Australian shelf, likely colliding first with parts of Woyla intra-oceanic arc in mid-Cretaceous, and accreting to Borneo (Sundaland) core by ~80 Ma. Neo-Tethyan ridge likely consumed along intra-oceanic subduction zone S of Eurasia from ~105 Ma, leading to major change in motion of Indian Plate by ~100 Ma)

Zahirovic, S., K. Matthews, Ting Yang, N. Flament, D. Garrad, G. Brocard, J. Iwanec, K. Hill, M. Gurnis, R. Hassan, M. Seton & D. Muller (2018)- Tectonics and geodynamics of the eastern Tethys and northern Gondwana since the Jurassic. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, p. 1-6. *(Extended Abstract)*
(online at: http://www.publish.csiro.au/ex/pdf/ASEG2018abM1_1C)
(Evolution of E Neo-Tethys since latest Jurassic rifting along N Gondwana. New Guinea N-ward motion over subducted slabs (related to Sepik back-arc basin and Maramuni subduction system), resulted in long-term flooding of margin since ~20 Ma. Sundaland continental promontory dynamic uplift in latest Cretaceous-Eocene due to accretion of Woyla Arc at ~80 Ma, leading to slab breakoff and temporary interruption of subduction. Renewed subduction along Sunda margin resulted in renewed dynamic subsidence from ~30 Ma, amplified by regional basin rifting events. Sinking Sunda slab likely triggered mantle slab avalanche, resulting in contemporaneous basin inversion and dynamic subsidence from ~15 Ma)

Zahirovic, S., M. Seton & R.D. Muller (2014)- The Cretaceous and Cenozoic tectonic evolution of Southeast Asia. Solid Earth 5, p. 227-273.
(online at: www.solid-earth.net/5/227/2014/se-5-227-2014.pdf)
(Major review and new model of tectonic evolution of SE Asia in last 155 My, with significant differences from Hall, Metcalfe, etc. models. SW Borneo already part of SE Asia in Late Jurassic, and did not originate from NW Australian shelf. SE Java and W Sulawesi blocks rifted off New Guinea margin in Late Jurassic, etc.. With animation model in supplement)

Zakharov, Y.D., A.M. Popov & A.S. Biakov (2008)- Late Permian to Middle Triassic palaeogeographic differentiation of key ammonoid groups: evidence from the former USSR. Polar Research 27, p. 441-468.
(Incl. paleogeographic reconstructions with Late Permian- earliest Triassic (260- 247 Ma) distributions of ammonites in Paleotethys)

Zaw, K. (2014)- Metallogeny of mainland SE Asia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 27-33.

(Brief review of mainland SE Asia mineral resources associated with complex tectonic history; see also Zaw (2014) paper below)

Zaw, K., S. Meffre, C.K. Lai, C. Burrett, M. Santosh, I. Graham, T. Manaka, A. Salam, T. Kamvong & P. Cromie (2014)- Tectonics and metallogeny of mainland Southeast Asia- a review and contribution. Gondwana Research 26, p. 5-30.
(Review of SE Asia mineral resources associated with complex tectonic history of Gondwana supercontinent break-up, arc magmatism, backarc basin development and collisions that created present-day mainland SE Asia. This paper summarizes historical and current SE Asian geological research and ore deposit studies. Incipient arc/backarc basin magmatism is key to formation of many important ore deposits in Truong Son and Loei fold belts. Triassic to Cenozoic arc-continent and continent-continent collisions have led to the formation of sediment-hosted/orogenic gold deposits in Sukhothai and Sibumasu terranes. Oblique Cretaceous- Recent subduction along Andaman-Sunda trench responsible for gold and copper-gold-molybdenum porphyry and epithermal mineralization along arc in Myanmar and Sumatran volcanic arc)

Zenonos, A., L. De Siena, S. Widiyantoro & N. Rawlinson (2019)- P and S wave travel time tomography of the SE Asia-Australia collision zone. Physics Earth Planetary Interiors 293, 106267, p.
(P and S wave tomography show clear evidence of subducted slabs penetrating into mantle along Sunda arc, Banda arc and Halmahera arc. Also evidence for slab gaps or holes near E Java. Banda arc slab single curved subduction zone. High velocity mantle connection between N Australia and E margin of Sunda arc)

Zhang, C.L., M. Santosh, Q.B. Zhu, X.Y. Chen & W.C. Huang (2015)- The Gondwana connection of South China: evidence from monazite and zircon geochronology in the Cathaysia Block. Gondwana Research 28, 3, p. 1137-1151.
(E Paleozoic structures, metamorphism and magmatic activity suggest Cathaysia (= SE part of S China block) collisional orogenic belt rather than intraplate type. Angular unconformity between Silurian- Devonian; transition from collision to post-collision at ~430Ma. Some E Paleozoic clastics probably of Gondwana origin.)

Zhang, K.J. (1998)- The Changning-Menglian suture zone: a segment of the major Cathaysia-Gondwana divide in Southeast Asia- comment. Tectonophysics 290, p. 319-321.
(Commentary of Wu et al. 1995 paper. Jinshajiang-Ailaoshao suture is main Cathaysia- Gondwana divide in China, not Lancangjiang-Changning-Menglian suture)

Zhang, K.J. & J.X. Cai (2009)- NE-SW-trending Hepuï Hetai dextral shear zone in southern China: penetration of the Yunkai Promontory of South China into Indochina. J. Structural Geol. 31, 7, p. 737-748.
(NE-SW-trending Hepu-Hetai shear zone extends for ~480 km along Guangdong-Guangxi provinces boundary in S China.Dextral ductile strike-slip deformation, with estimated displacement of >500 km. Inclusions in quartz within mylonite suggest that ductile shear deformation under medium T/P conditions of greenschist facies; 40Ar/39Ar muscovite ages of 213-195 Ma. Shear zone originated via penetration of Yunkai Promontory of South China into Indochina during Late Triassic)

Zhang, Z.K. & J.X. Zhang (1986)- Paleomagnetic research on the upper Carboniferous basalts in Baoshan block, Yunnan and the tectonic belonging of the block. Bull. Inst. Geol. Chinese Acad. Geol. Sci., p. 184-189. *(In Chinese with English abstract. Xu et al. 2014: Paleomagnetic work on E Permian Woniusi Fm basalts 12 km NE of Baoshan, SW China, suggest terrane was at 34.1° S in E Permian. Result comparable to Xu et al. 2014)*

Zhang, Z.W., Q. Shu, X.Y. Yang, C. Wu, C. Zheng & J. Xu (2019)- Review on the tectonic terranes associated with metallogenic zones in Southeast Asia. J. Earth Science 30, 1, p. 1-19.
(Review of relations between tectonic terranes and distribution of 24 tectonic-metallogenic zones in SE Asia)

Zhao, D. (2012)- Tomography and dynamics of Western-Pacific subduction zones. Monogr. Environ. Earth Planets 1, 1, p. 1-70.
(online at: www.terrapub.co.jp/onlinemonographs/meep/pdf/01/0101.pdf)

Zhao, D., S. Maruyama & S. Omori (2007)- Mantle dynamics of Western Pacific and East Asia: insight from seismic tomography and mineral physics. Gondwana Research 11, p. 120-131.
(Tomography of E Asia, the location of double-sided subduction zone where old Pacific plate subducts from E, and Indo-Australia plate subducts from S)

Zhao, T., Q. Feng, I. Metcalfe, L.A. Milan, G. Liu & Z. Zhang (2017)- Detrital zircon U-Pb-Hf isotopes and provenance of Late Neoproterozoic and Early Paleozoic sediments of the Simao and Baoshan blocks, SW China: Implications for Proto-Tethys and Paleo-Tethys evolution and Gondwana reconstruction. Gondwana Research 51, p. 193-208.
(Detrital zircons from Ordovician? Lancang Gp (separate Lancang Block?) and Mengtong and Mengdingjie Gps (Baoshan Block) with three age peaks: older Grenvillian (1200-1060 Ma), younger Grenvillian (~960 Ma) and Pan-African (650-500 Ma), with εHf(t) values similar to W Australia and N India. E Paleozoic Proto-Tethys represents narrow ocean basin separating 'Asian Hun superterrane' (N China, S China, Tarim, Indochina, N Qiangtang blocks) from N margin of Gondwana in Late Neoproterozoic- E Paleozoic. Proto-Tethys closed in Silurian at ~440–420 Ma when 'Asian Hun superterrane' collided with N Gondwana margin. Lancang Block separated from Baoshan Block in E Devonian when Paleo-Tethys opened as back-arc basin)

Zhao, T., X. Qin & Q. Feng (2015)- Zircon U-Pb-Hf isotopes and whole-rock geochemistry of the Late Triassic rhyolites from Lampang Zone, northern Thailand: implications for the closure of Paleo-Tethys. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 102-106. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(E Norian (225.1±1.2 Ma) ages of post-collisional rhyolites in Lampang area minimum age of final closure of E Paleo-Tethys between Sibumasu and Indochina blocks. Older age from inherited zircons (242±1.9 Ma) resembles arc volcanic rocks from Doi Luang belt in same area. High-K calc-alkaline Lampang rhyolites formed in post-collisional extensional environment, controlled mainly by lithospheric delamination or slab breakoff. Youngest pelagic sediments in Changning-Menglian and Inthanon Suture Zones M Triassic (Triassocampe deweveri radiolarian assemblage), suggesting Paleo-Tethys ocean not yet closed in M Triassic)

Zhao, X., R.S. Coe, S.A. Gilder & G.M. Frost (1996)- Palaeomagnetic constraints on the palaeogeography of China: implications for Gondwanaland. Australian J. Earth Sci. 43, 6, p. 643-672.
(Paleomagnetic data show three main blocks of China (North China, South China, Tarim) were at or near equatorial latitudes in E and M Paleozoic. Late Paleozoic data suggest they were too far N to be attached to Gondwanaland and suggest they rifted from Gondwanaland in Late Devonian and Carboniferous. Etc.)

Zharkov, M.A. & N.M. Chumakov (2001)- Paleogeography and sedimentation settings during Permian- Triassic reorganizations in biosphere. Stratigraphy Geol. Correl. 9, 4, p. 340-363.
(Artinskian- Kungurian Metaperrinites and Kungurian Perrinites faunas in Ratburi Group in N Central and S Central Thailand, represent part of Tethyan perrinitid belt from Crimea in W to Timor in E)

Zhong, D. (2000)- Paleotethysides in West Yunnan and Sichuan, China. Science Press, Beijing, p. 1-248.
(Collection of papers on evolution of W Yunnan- Sichuan, containing sector of Paleotethysides where it turns from E-W belts of Tibetan Plateau to N-S mountain belts of mainland SE Asia. Formed by closure of Paleotethys in Late Paleozoic by collision of Gondwan Tengchong and Baoshan Blocks with Eurasia (Yangtze, Simao blocks). Paleotethys composed of main intercontinental ocean with several smaller intra-continental oceans and troughs)

Zhou, Z. (1990)- The Early Mesozoic orogeny in the northern shelf of the South China Sea and its adjacent lands. In: X. Jin et al. (eds.) Proc. Symposium Recent contributions to the geological history of the South China Sea, Hangzhou 1990, p. 119-125.
(E Triassic continental collision (of Cimmerian Blocks) in SE China, marking beginning of E Mesozoic orogeny in region. In end-Jurassic, Borneo began rifting away from S China margin, creating Proto-South China Sea. Present S. China Sea has evolved after drifting away from S China margin of continental fragments such as N Palawan, Reed Bank, Xisha Islands, Zhongsha Islands and others)

Zhu, Z. & Z. Yang (2008)- Distribution, origin and mineralization of two types of Cenozoic adakite and adakite-like rocks in southeastern Asia. Dizhi Lixue Xuebao = J. Geomechanics, Beijing, 14, 4, p. 328-338.
(In Chinese with English summary.) (Adakite and adakite-like intermediate-acid magmatic rocks well developed in Cenozoic of Indonesia- New Guinea. Two types of origin: (1) oceanic type tholeiitic/calc-alkaline series with REE pattern of oceanic island arcs, seen at the oceanic islands; (2) continental type high-K calc-alkaline series with continental type REE patterns, often in continental margin orogenic zone and related to arc-continent collision zone or post-collision. Continental-type adakite similar distribution to large porphyry copper-gold deposits; oceanic island arc type adakite rocks related to epithermal gold zones and ehalation ore deposits)

Ziegler, A.M., M.L. Hulver, A.L. Lottes & W.F. Schmachtenberg (1997)- Permian world topography and climate. In: I.P. Martini (ed.) Late glacial and post-glacial environmental changes- Quaternary, Carboniferous-Permian and Proterozoic, Oxford University Press, p. 111-146.

Ziegler, A.M., P.M. Rees, D.B. Rowley, A. Bekker, L. Qing & M.L. Hulver (1996)- Mesozoic assembly of Asia: constraints from fossil floras, tectonics, and paleomagnetism. In: A. Yin & M. Harrison (eds.) The tectonic evolution of Asia. Cambridge University Press, p. 371-400.
(Permian- Jurassic reconstructions of terranes of N parts of Asia (Eurasia- China) based on paleomagnetic and flora data. Little or nothing on SE Asia)

I.3. Volcanism, Volcanic rocks geochemistry

(This listing is a limited selection of an extensive body of literature on Indonesia volcanic activity and its products. Many additional titles on volcanism specific to one region are included under these regions)

Abdurrachman, M., S. Widiyantoro, B. Priadi & T. Ismail (2017)- Geochemistry and seismic tomogram beneath Krakatoa volcano, Sunda Strait, Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Malang (JCM 2017), 3p.
(S-wave tomographic image under Krakatoa shows subducted slab has been intruded by hot mantle material, suggesting possible tearing of subducting plate)

Abdurrachman, M., S. Widiyantoro, B. Priadi & T. Ismail (2018)-Geochemistry and structure of Krakatoa volcano in the Sunda Strait, Indonesia. Geosciences, 8, 4, 111, p. 1-10.
(online at: www.mdpi.com/2076-3263/8/4/111)
(Tomographic image and geochemical data of Krakatoa area lavas suggests subducted slab intruded by hot material of mantle upwelling. Partial melting of mantle wedge and mantle upwelling in upper mantle may be caused by thinning of subducted slab under Krakatoa Volcano)

Abdurrachman, M., M. Yamamoto, E. Suparka, I.G.B.E. Sucipta, I.A. Kurniawan & R.F. Hasibuan (2015)- Across arc variation of strontium isotope and K2O composition in the Quaternary volcanic rocks from West Java: evidence for crustal assimilation and the involvement of subducted components. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-138, 5p.
(No across-arc variation of K2O and Sr isotopic ratios in West Java Arc. Papandayan volcano medium-K series with high 87Sr/86Sr (0.7052-0.7059); Cikuray low-K, with low 87Sr/86Sr (0.70417-0.70426). Across arc variation of magma chemistry explained by crustal assimilation and involvement of subducted components)

Abrams, L.J. & H. Sigurdsson (2007)- Characterization of pyroclastic fall and flow deposits from the 1815 eruption of Tambora volcano, Indonesia using ground-penetrating radar. J. Volcanology Geothermal Res. 161, p. 352-361.
(Ground-penetrating radar helps image and characterize fall and pyroclastic flow deposits from Tambora 1815 eruption. Reflection of interface between pre-eruption clay-rich soil and pyroclastics reaches maximum thickness of 4m. Soil surface terraced and used for agriculture and buildings)

Agangi, A. & S.M. Reddy (2016)- Open-system behaviour of magmatic fluid phase and transport of copper in arc magmas at Krakatau and Batur volcanoes, Indonesia. J. Volcanology Geothermal Res. 327, p. 669-686.

Bahar, I. (1984)- Contribution a la connaissance du volcanisme indonesien: le Merapi (Centre Java), cadre structural, petrologie, geochimie et implications volcanologiques. Ph.D. Thesis Universite de Montpellier, p. 1-213. *(Unpublished)*
('Contribution to the knowledge of Indonesian volcanism: the Merapi (C Java), structural setting, petrology, geochemistry and volcanological implications')

Bahar, I. & M. Girod (1983)- Controle structural du volcanisme indonesien (Sumatra, Java-Bali); application et critique de la method de Nakamura. Bull. Soc. Geol. France (7), 25, 4, p. 609-614.
('Structural control on Indonesian volcanism (Sumatra, Java-Bali); application and critique of the Nakamura method')

Bani, P., G. Tamburello, E.F. Rose-Koga, M. Liuzzo, A. Aiuppa, N. Cluzel, I. Amat, D.K. Syahbana, H. Gunawan & M. Bitetto (2018)- Dukono, the predominant source of volcanic degassing in Indonesia, sustained by a depleted Indian-MORB. Bull. Volcanology 80, 5, p. 1-14.
(Little known Dukono volcano on N Halmahera island regularly erupting since 1933. Gas emissions show huge magmatic volatile contribution into atmosphere, with annual output of ~290 kt SO2, 5000 kt H2O, 88 kt CO2, 5 kt H2S and 7 kt H2 (in top 10 volcanic SO2 sources on Earth). Degassing sustained by depleted Indian-MORB mantle source, currently undergoing lateral pressure from steepening of subducted slab, downward force from Philippine Sea plate and W-ward motion of continental fragment along Sorong fault)

Borisova, A.Y., A.A. Gurenko, C. Martel, K. Kouzmanov & S. Sumarti (2016)- Oxygen isotope heterogeneity of arc magma recorded in plagioclase from the 2010 Merapi eruption (Central Java, Indonesia). Geochimica Cosmochimica Acta 190, p. 13-34.

Bronto, S. & Surono Martosuwito (eds.) (2014)- Indonesian arc magmatism- a collection of papers by Professor Udi Hartono. Center for Geological Survey (CGS), Geological Agency, Bandung, p. 1-623.
(Reprint collection of 39 papers, originally published between 1987-2011)

Broom-Fendley, S., M. Thirlwall, M. Cottam & R. Hall (2011)- Geochemistry and tectonic setting of Una-Una Volcano, Sulawesi, Indonesia. Goldschmidt Mtg, Prague 2011, Mineralogical Magazine 75, 3, p. 585. *(Abstract only)*
(Volcanic rocks from Una-Una (<~100 Ka) and nearby Togian islands (~2 Ma) both alkaline or high-K calc-alkaline trachyte. Isotopic trends and geochemistry indicate ancient continental contribution to magma source, possibly Indian Ocean pelagic sediment. Probably related to young extension of Gorontalo Bay due to slab rollback)

Brouwer, H.A. (1916)- Het vulkaaneiland Roeang (Sangi eilanden) na de eruptie van 1914. Tijdschrift Kon. Nederlandsch Aardrijkskundig Gen. 33, p. 89-94.
('The volcanic island Ruang (Sangi Islands) after the eruption of 1914')

Brouwer, H.A. (1921)- Het vulkaaneiland Roeang. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 2, p. 6-30.
('The volcano island Raung'. Active volcano in Sangi islands group)

Brouwer, H.A. (1939)- Leucite rocks of the active volcano Batoe Tara (Malay Archipelago). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 42, 1, p. 23-29.
(online at: www.dwc.knaw.nl/DL/publications/PU00017280.pdf)
(Batoe Tara or Komba ~50 km N of Lomblen, E of Flores, rises from deep sea to nearly 750m above sea-level. Active volcano with different types of leucite rocks: leucite basanite, biotite-leucite tephrites, etc.)

Budd, D.A., V.R. Troll, F.M. Deegan, E.M. Jolis, V.C. Smith, M.J. Whitehouse, C. Harris, C. Freda, D.R. Hilton, S.A. Halldorsson & I.N. Bindeman (2017)- Magma reservoir dynamics at Toba caldera, Indonesia, recorded by oxygen isotope zoning in quartz. Nature Scientific Reports 7, 40624, p. 1-11.
(online at: https://www.nature.com/articles/srep40624.pdf)
(Quartz crystals from 75ka Toba tuffs rel. high δ18O values (up to 10.2‰), due to magma residence within and assimilation of local granite basement. Decrease in δ18O values in outer growth zones suggests assimilation of altered roof material and may represente eruption trigger in large Toba-style magmatic systems)

Buhring, C., M. Sarnthein & Leg 184 Shipboard Scientific Party (2000)- Toba ash layers in the South China Sea: evidence of contrasting wind directions during eruption ca. 74 ka. Geology 28, 3, p. 275-278.
(Cores from southern S China Sea with up to 3.5cm thick ash layers with rhyolithic glass shards. Dated at ~74 ka (O-isotope Stage 4-5 boundary), the age of youngest Toba eruption in N Sumatra. Composition of glass similar to Toba ash. Youngest Toba ash layers in S China Sea expand previously known ash-fall zone over >1800 km to E and increased volume estimates of erupted Toba ash. See also comments by Chen et al. 2000)

Carey, S. & H. Sigurdsson (1992)- Generation and dispersal of tephra from the 1815 eruption of Tambora volcano, Indonesia. In: E.T. Degens, H.K. Wong & M.T. Zen (eds.) The sea off Mount Tambora, Mitteilungen Geol. Paleont. Inst. Universitat Hamburg 70, p. 207-226.

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(Plagioclase and biotite phenocrysts in ignimbrites erupted from Toba caldera show microstructures and textures indicative of shock stress levels >10 GPa)

Chaussard, E. & F. Amelung (2012)- Precursory inflation of shallow magma reservoirs at west Sunda volcanoes detected by InSAR. Geophysical Research Letters 39, L21311, p. 1-6.
(Interferometric Synthetic Aperture Radar data across Sumatra-Java- Bali arc provided evidence of inflation at six volcanoes (Sinabung, Kerinci in Sumatra; Slamet, Lawu, and Lamongan in Java; Agung in Bali), three of which erupted after observation period (Sinabung, Kerinci, Slamet). These volcanoes have shallow magma reservoirs. Globally, arc volcanoes in extensional and strike-slip settings (W Sunda) can develop shallow reservoirs, whereas volcanoes in compressional settings may lack them)

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(Fieldtrip guide to young volcanoes of SE PNG Peninsula, Bougainville and New Britain)

De Silva, S.L., A.E. Mucek, P.M. Gregg & I. Pratomo (2015)- Resurgent Toba- field, chronologic, and model constraints on time scales and mechanisms of resurgence at large calderas. Frontiers Earth Sci. 3, 25, p. 1-17.
(online at: http://journal.frontiersin.org/article/10.3389/feart.2015.00025/full)
(Samosir Island in Lake Toba caldera was submerged below lake level (~900m above s.l.) at 33 ka. Since then uplifted 700m as tilted block dipping to W. 14C ages and elevations of sediment reveal minimum uplift rates of ~4.9 cm/yr from ~33.7-22.5 ka, but diminished to ~0.7 cm/yr after 22.5 ka)

De Hoog, J.C.M. (2001)- Behavior of volatiles in arc volcanism. Geochemical and petrologic evidence from active volcanoes in Indonesia. Geologica Ultraiectina 204, p. 1-220.
(online at: http://igitur-archive.library.uu.nl/dissertations/1954688/full.pdf)

De Hoog, J.C., B.E. Taylor & M.J. van Bergen (2001)- Sulfur isotope systematics of basaltic lavas from Indonesia: implications for the sulfur cycle in subduction zones. Earth Planetary Sci. Letters 189, p. 237-252.
(Sulfur isotope compositions of basaltic and basaltic andesite lavas from 7 modern volcanoes of Java and Lesser Sunda islands range in d14S from +2.0 to +7.8, average +4.7. Magmas in Indonesian arc system originate from mantle sources enriched in 34S relative to MORB and OIB sources. Enrichment in 34S reflects addition of slab-derived material, presumably from sediments rather than altered oceanic crust)

De Hoog, J.C.M., B.E. Taylor & M.J. van Bergen (2009)- Hydrogen-isotope systematics in degassing basaltic magma and application to Indonesian arc basalts. Chemical Geology 266, 3, p. 256-266.
(Predictive model for hydrogen-isotope shifts during degassing of basaltic-andesitic magma, from samples from 7 volcanoes along Sunda and Sangihe arcs (Batur, Rinjani, Guntur, Galunggung, Krakatau, Soputan, etc.))

De Jong Boers, B. (1995)- Mount Tambora in 1815: a volcanic eruption in Indonesia and its aftermath. Indonesia 60, p. 37-60.
(Historic account of Tambora 1815 eruption and its consequences. No geology)

De Neve, G.A. (1951)- Luchtverkenningen boven de vulkanen van Sumatra, Java en de Kleine Sunda Eilanden. De Ingenieur in Indonesie 3, 2, p. IV.13- IV.22.
(online at: http://colonialarchitecture.eu/islandora/object/uuid%3A06ae693a-f6c5-4059-b67b-6a508aba5680/datastream/PDF/view)
('Air reconnaissances above the volcanoes of Sumatra, Java and the Lesser Sunda Islands')

De Neve, G.A. (1953)- Volcanological investigations in co-operation with the AURI (1950-1952). Berita Gunung Berapi, Volcanological Survey Indonesia, 1, 1-2, p. 34-65.
(With assistence of Indonesian Air Force the number of known active volcanoes in Indonesia increased to 167. 15 new centers of volcanic activity identified in Sumatra, N Sulawesi and Flores since count of 152 by Stehn (1940))

Della-Pasqua, F.N., V. S. Kamenetsky, M. Gasparon, A.J. Crawford & R. Varne (1995)- Al-spinels in primitive arc volcanics. Mineralogy and Petrology 53, p. 1-26.
(Al-rich spinels common in alpine peridotites and in certain metamorphic rocks, but rare in terrestrial volcanic rocks. Descriptions of occurrences of Al-rich spinel inclusions in olivine phenocrysts in island arc volcanics from five localities, including basaltic andesites of Bukit Mapas (S Sumatra) and high-K shoshonitic ankaramites of SE Bali)

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('The shadow of Tambora. The greatest natural disaster in human memory'. Review of the impacts of the 1815 eruption of Tambora on Sumbawa in 1815 on humans across the world)

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(Unpublished) (Incl. volcanic rock chemistry of Gunung Guntur, Ringgit-Besar, Muriah, Flores, etc.)

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(Combining B/Be with Sr, Nd and Pb isotopes of alkaline, calk-alkaline and tholeiitic lavas of young volcanoes from Java (Guntur, Ringgit) and Flores (Kelimutu, Lewitobi, Mandiri). High B/Be and 10Be/9Be ratios in tholeiitic and calk-alkaline lavas are partial melts of mantle produced by fluxing by fluids from subducted slabs. Alkaline lavas always low B/Be and derived from mantle not modified by recent subduction)

Ehrenberg, C.G. (1855)- Nahere Bestimmung der Mischung des frischen Auswurfs des Schlammvulkans von Poerwodadi auf Java. Bericht Bekanntmachung konigl. Preussische Akademie Wissenschaften Berlin, p. 570-576.
(online at: www.biodiversitylibrary.org/item/41576page/584/mode/1up)
('Determination of the mixture of fresh eruptive products of the mud volcano of Purwodadi on Java'. Muds with mix of marine and non-marine foraminifera and diatoms)

Elburg, M., J.D. Foden, M.J. van Bergen & I. Zulkarnain (2004)- Along- and across-arc geochemical constraints on sources and transfer processes in the Sunda-Banda Arc, Indonesia. 4p.
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(Alor, Lirang, Wetar and Romang in extinct section of Sunda-Banda arc, where collision with Australia brought subduction to halt. Pb isotopes reflect mixing from subducting Australian crust)

Elburg, M.A. & V.S. Kamenetsky (2008)- Limited influence of subducted continental material on mineralogy and elemental geochemistry of primitive magmas from Indonesia-Australia collision zone. Lithos 105, p. 73-84.
(Two basalt-andesite samples from Alor Island. Sr, Nd and Pb isotope data show influence of subducted continental material, but major and trace element compositions not very different from typical subduction-related magmas)

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(‘Work program for a proposed department or commision for Volcanology of the Koninklijke Natuurkundige Vereeniging (Royal Natural Science Society)’. BPM geologist and future geology professor in Leiden Escher arguing for the creation of new organization for volcano studies and co-ordination of hazard risks. This resulted in creation of the Volcanology Department within the Dienst van het Mijnwezen in 1920)

Escher, B.G. (1937)- Rapport sur les phenomenes volcanologiques dans lô Archipel Indien pendant les annees 1933, 1934 et 1935 et sur les ouvrages de volcanologique publies durant ces annees, concernant les volcans des Indes Neerlandaises. Bull. Volcanologique 1937, 1, p. 127-177.
('Report on the volcanological phenomena in the Netherlands Indies Archipelago in the years 1933, 1934 and 1935, and on works on volcanology published on volcanoes of the Netherlands Indies')

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(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0TFBuVUhtcWk2d2c/view)
('Mud bullets, marl concretions or ash bullets from Krakatoa'. Example of spherical mud balls or 'ash-balls' up to 7 cm in diameter. Origin somewhat unclear. Some shapes reminescent of billitonite/australite tektites)

Foden, J.D. (1979)- The petrology of some young volcanic rocks from Lombok and the Lesser Sunda islands. Ph.D. Thesis University of Tasmania, Hobart, p. 1-306.
(online at: http://eprints.utas.edu.au/17675/1/Foden_Thesis.pdf)
(Study of 5 modern volcanoes in E Sunda arc: Rindjani (Lombok) and G. Sangenges, Tambora, Soromundi and Sangeang Api (Sumbawa) island. All occur 165-190 km above active, N dipping Benioff Zone. Volcanoes of this sector of arc erupted diverse range of lavas, ranging from ankaramite-high-Al basalt-andesite-dacite suite of Rindjani, through moderately potassic ne-trachybasalt- trachyandesite suites from Tambora and Sangeang Api, to highly undersaturated, leucite-bearing types from G. Sangenges and Soromundi. The K20-content of these suites shows no correlation with depth to Benioff Zone)

Foden, J.D. (1983)- The petrology of the calcalkaline lavas of Rindjani Volcano, East Sunda Arc: a model for island arc petrogenesis. J. Petrology 24, p. 98-130.
(Rindjani large, active compound strato-volcano on Lombok, in W part of E Sunda Arc. Pleistocene-Recent calcalkaline suite composed of diverse lavas, including ankaramite, high-Al basalt, andesite, high-K andesite and dacite. Sr-isotopic and geochemical constraints suggest derivation from sub-arc mantle)

Foden, J.D. (1986)- The petrology of Tambora volcano, Indonesia: a model for the 1815 eruption. J. Volcanology Geothermal Res. 27, p. 1-41.
(Lavas of Tambora volcano on Sumbawa lavas of unusual, moderately undersaturated, K2O-rich types, ranging from ne-trachybasalt to ne-trachyandesite. Products of 1815 eruption are black, glassy, biotite-bearing, ne-trachyandesites with scoria, pumice and tuff of same composition. 1815 eruption followed lengthy period of inactivity)

Foden, J.D. & R. Varne (1980)- The petrology and tectonic setting of the Quaternary- Recent volcanic centres of Lombok and Sumbawa. Chemical Geology 30, p. 201-226.
(Bali-Lombok-Sumbawa sector of Sunda arc flanked in N and S by oceanic crust. Oldest rocks from Lombok and Sumbawa islands Lower Miocene- Pliocene sediments and volcanics beneath Quaternary volcanic centres. Three large active volcanoesin N parts of Lombok (Rindjani; basalt-andesite-dacite) and Sumbawa (Tambora and Sangeang Api; trachybasalt-trachyandesite), all ~150-190 km above N-dipping Benioff zone. Extinct Quaternary centres S of active volcanoes on Sumbawa (Soromundi, Sangenges). Volcanic composition-space-time relations in Lombok-Sumbawa sector not in accordance with general island-arc schemes)

Foden, J.D. & R. Varne (1981)- The geochemistry and petrology of the basalt-andesite-dacite suite from Rinjani volcano, Lombok: implications for the petrogenesis of island arc, calcalkaline magmas. In: A.J. Barber & S.

Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, Bandung, p. 115-134.
(Rinjani lavas compositionall diverse, from ankaramites and high-Al basalts to andesites and dacites, representing typical calkalkaline association erupted by many Circum-Pacific volcanoes)

Foden, J.D. & R. Varne (1981)- Petrogenetic and tectonic implications of near coeval calk-alkaline volcanism on Lombok and Sumbawa islands in the eastern Sunda Arc. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, Bandung, p. 135-152.
(Quaternary volcanoes of Lombok- Sumbawa sector of E Sunda Arc occur 165-190km above N-dipping Benioff zone. Diverse range of lavas. No correlation between K2) content and depth to Benioff zone. Between-volcano variations reflect mantle source heterogeneity)

Fontijn, K., F. Costa, I. Sutawidjaja, C.G. Newhall & J.S. Herrin (2015)- A 5000-year record of multiple highly explosive mafic eruptions from Gunung Agung (Bali, Indonesia); implications for eruption frequency and volcanic hazards. Bull. Volcanology 77, 59, p. 1-15.

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(40Ar/39Ar dating of biotite, sanidine, hornblende, and plagioclase from youngest Toba Tuff of 75 ka suggests hornblende and some plagioclase are xenocrysts and came from at least 1.5 Ma old source)

Gasparon, M., D.R. Hilton & R. Varne (1994)- Crustal contamination processes traced by helium isotopes: examples from the Sunda arc, Indonesia. Earth Planetary Sci. Letters 126, p. 15-22.
(Helium He-3/He-4 isotope data from olivine and clinopyroxene from 13 volcanic centres between C Sumatra and Sumbawa in Sunda arc indicate crustal contamination unrelated to subduction in Sunda arc)

Gasparon, M. & R. Varne (1998)- Crustal assimilation versus subducted sediment input in west Sunda arc volcanics: an evaluation. Mineralogy and Petrology 64, p. 89-117.
(Geochemical analyses of Quaternary-Cretaceous sediments from NE Indian Ocean used to estimate composition of sedimentary material subducted along Sunda Trench. Post-Miocene siliceous clastic sediments near Sunda arc largely derived from arc itself, largely accreted and not subducted. The least contaminated arc volcanics in W section of W Sunda arc, where sediment flux highest. Assimilation of crustal material by uprising melts from Indian Ocean-type mantle wedge better accounts for isotope changes of arc volcanics, and ties to variations in crustal thickness and composition along arc)

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(online at: https://petrology.oxfordjournals.org/content/early/2011/12/15/petrology.egr062.full.pdf+html)
(Eruption of Tambora volcano (Sumbawa) in 1815 one of largest explosive eruptions in historical time. Extensive pyroclastic deposits from emptying of 30-33 km3 trachyandesite magma body. Parental trachybasalt magma can be produced by ~2% partial melting of garnet-free, Indian-type mid-ocean ridge basalt-like mantle source contaminated with ~3% fluids from altered oceanic crust and <1% sediment. Differentiation from primary trachybasalt to trachyandesite in two-stage polybaric differentiation)

Gill, J.B. & R.W. Williams (1990)- Th isotope and U-series studies of subduction-related volcanic rocks. Geochimica Cosmochimica Acta 54, 5, p. 1427-1442.
(On U, Th, Po, Ra isotopes in volcanic arc rocks, incl. data from Sunda, Banda and Sangihe Arcs, Indonesia)

Gogarten, E. (1918)- Die Vulkane der nordlichen Molukken. Zeitschrift fur Vulkanologie, Erganzungsband 2, p. 1-298.
('The volcanoes of the Northern Moluccas')

Guillet, S., C. Corona, M. Stoffel, M. Khodri, F. Lavigne, P. Ortega, N. Eckert, P. D. Sielenou, V. Daux et al. (2017)- Climate response to the Samalas volcanic eruption in 1257 revealed by proxy records. Nature Geoscience 10, p. 123-128.
(Eruption of Samalas volcano on Lombok in 1257 with sulfur in ice cores twice volume of 1815 Tambora eruption. >40 km3 of dense magma expelled; eruption column up to 43 km altitude. Years 1258 and 1259 some of coldest N Hemisphere summers of past millennium. Eruption aggravated existing famine crises)

Gulyas, E. & P. Hederveri (1976)- Concentration of seismic energy within the two active domains beneath individual volcanoes and groups of volcanoes of Java, Indonesia. Tectonophysics 30, p. 129-140.
(Two seismically active domains under all individual active volcanoes of Java, separated by aseismic space)

Gunawan, H., Surono, A. Budianto, Kristianto, O. Prambada, W. McCausland, J. Pallister & M. Iguchi (2019)- Overview of the eruptions of Sinabung eruption, 2010 and 2013-present and details of the 2013 phreatomagmatic phase. J. Volcanology Geothermal Res. 382, p. 103-119.
(online at: www.sciencedirect.com/journal/journal-of-volcanology-and-geothermal-research/vol/382/suppl/C)
(Small phreatic eruption of Sinabung Volcano, N Sumatra, in August 2010 marked first eruption in last ~1200 years. New eruption began on 15 September 2013 and continues to present. Ongoing eruption 5 major phases)

Hadikusumo, D. (1961)- Report on the volcanological research and volcanic activity in Indonesia for the period 1950-1957. Bull. Volcanological Survey Indonesia 100, p. 1-122.

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Halldorsson, S.A., D.R. Hilton, V.R. Troll & T.P. Fischer (2013)- Resolving volatile sources along the western Sunda arc, Indonesia. Chemical Geology 339, p. 263-282.
(Chemical and isotope (He-C-N) data of fumaroles and hydrothermal fluids from 19 volcanic centers along W Sunda arc suggest subducting slab is principal provider of volatiles. Increased contribution of CO2 in N Sumatra suggest subducted sediment (particularly Nicobar Fan Himalayan-derived sediment) strong control on magmatic CO2 characteristics, suggesting significant part must enter trench)

Harijoko, A., N.A.S. Mariska & F. Anggara (2018)- Estimated emplacement temperatures for a pyroclastic deposits from the Sundoro volcano, Indonesia, using Charcoal Reflectance analyses. Indonesian J. Geoscience 5, 1, p. 1-11.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/386/247)
(Maximum emplacement temperature of pyroclastic flows based on charcoal reflectance is 487°C)

Hartmann, M. (1935)- De werkende vulkanen van het eiland Lomblen (Solor Archipel). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 52, p. 817-836.
('The active volcanoes of Lomblen Island (Solor Archipelago)'. Lomblen E of Flores, with 3 active (Lewotolo, Labalekan, Ili Weroeng) and 2 recently active (Kedang, Mingar) volcanoes)

Hartmann, M. (1935)- Der Vulkan Batoe Tara. Zeitschrift Vulkanologie 16, p. 180-191.
('The Batu Tara volcano'. Active volcano, ~700m high, in Banda (Flores) Sea, NE of Flores, 50km N of Lembata (Lomblen) island. Known for its potassic leucite-bearing basanitic and tephritic rocks (see also Stolz et al. 1988, Van Bergen et al. 1992, etc.))

Hartono, U. (2000)- Island arc magmatism: a general review on petrogenetic models. J. Geologi Sumberdaya Mineral 10, 110, p. 16-23.

(General discussion of genesis of island arc magmas. Three potential sources, mantle wedge above subducting slab, subducted slab of oceanic crust and possibly sediments and arc crust)

Hartono, U. (2009)- Contribution of arc magmatism studies in early stage mineral exploration. J. Sumber Daya Geologi 19, 5, p. 287-296.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/213/203)
(Indonesia has 15 or more volcanic arcs with total length of ~9000 km. Eight arcs contain known mineral deposits, while rest may be prospective. Mainly general discussion on arc magmatism and mineral deposits No correlation between porphyry-Cu or epithermal mineralizations and single petrological/ geological factor)

Hartono, U. & R.I.H. Sulistyawan (2011)- An overview of arc magma petrogenesis. J. Sumber Daya Geologi 21, 4, p. 179-190.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/145/141)
(Review of subduction-related magmas. Most arc magmas derived from melting of upper mantle induced by released fluids and incompatible elements from subducted oceanic crust. Crustal-derived magmas, from melting of either subducted slab or lower crust, also present in some arcs)

Hartono, U. & R.I.H. Sulistyawan (eds.) (2011)- Indonesian arc magmatism: petrology, tectonics, and mineralization. Geological Agency, Bandung, Spec. Publ., p. 1-278.

Hasibuan, R.F., T. Ohba, M. Abdurrachman & T. Hoshide (2017)- Magmas characteristics of Rajabasa volcanic complex inferred by petrological approach. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(Rajabasa dormant Quaternary volcano at S tip of Sumatra. Volcanics mainly basaltic andesite, with K-Ar ages of volcanics 0.31-0.12 Ma (Pleistocene). Older volcanics SE of Rajabasa at nearby Tangkil (4.33 Ma; Pliocene). Two distinct type of magmas in Tangkil, calc-alkaline dacite and tholeiitic basalt)

Haslam, M. (2013)- Climate effects of the 74 ka Toba super-eruption: multiple interpretive errors in óA high-precision 40Ar/39Ar age for the Young Toba Tuff and dating of ultra-distal tephraô by D. Mark, et al.. Quaternary Geochronology 18, p. 173-175.
(Critique of Mark et al 2013 paper)

Hatherton, T. & W.R. Dickinson (1969)- The relationship between andesitic volcanism and seismicity in Indonesia, the Lesser Antilles, and other island arcs. J. Geophysical Research 74, p. 5301-5310.
(Early paper documenting increase in K-content with depth to seismic Benioff zone)

Heyckendorf, K. & D. Jung (1992)- Tambora volcano, Sumbawa Island, Indonesia; a comparison of ancient and modern volcanic products. Mitteilungen Geol.-Palaont. Inst. Universitat Hamburg 73, p. 1-35.

Hidayati, S. & C. Sulaeman (2013)- Magma supply system at Batur Volcano inferred from volcano-tectonic earthquakes and their focal mechanism .
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/159/159)
(Volcano-tectonic earthquakes in September- November 2009 show epicentres aligning in NE- SW direction, coinciding with weak zone of Batur Volcano Complex, Bali. Focal zone depths ~1.5- 5.5 km beneath summit)

Hilton, D.R. & H. Craig (1989)- A Helium isotope transect along the Indonesian archipelago. Nature 342, 6252, p. 906-908.
(Banda arc 3He/4He ratios significantly lower than common ratio in mid-ocean-ridge basalts (MORB). 80% of radiogenic He is from subducting continental material. Measurements along Sunda arc show MORB-like ratios from W Java to sharp transition zone at Lomblen Island (N/NW of Timor), where low ratios of Banda arc begin)

Hilton, D.R., J.A. Hoogewerff, M.J. van Bergen & K. Hammerschmidt (1992)- Mapping magma sources in the east Sunda-Banda arcs, Indonesia: constraints from Helium isotopes. Geochimica Cosmochimica Acta 56, p. 851-859.

(He isotope analyses from 11 volcanoes from Flores (E Sunda arc) through inactive segment between arcs to Banda Island. Results consistent with involvement of crustal material in magma genesis throughout E Sunda/ Banda arcs, as far W as Iya in C Flores. Source of He in crustal component unlikely to be terrigenous sediments derived from Australian continent; rather, degassing of Australian continental crust)

Hoogewerff, J.A. (1999)- Magma genesis and slab-wedge interaction across an island-arc collision zone, East Sunda Arc, Indonesia. Geologica Ultraiectina 178, p. 1-199. (*Ph.D. Thesis University of Utrecht*)
(online at: http://dspace.library.uu.nl/handle/1874/272287)
(Study of Sr, Nd, Pb, Ra, Th and U isotopes and major and trace elements from five active and >10 inactive volcanic centres in Adonara-Lomblen-Pantar Sector of E Sunda Arc (E of Flores and W of volcanically inactive Alor-Wetar sector). Both mantle components (depleted Indian Ocean mantle) and subduction-related components (subducted continental material, which changes in composition from E to W (Indian Ocean pelagic sediment and detrital Australian shelf sediment?, and crystalline Australian continental crust) contribute to magma generation. Active Adonara-Pantar Sector volcanoes display strongest sedimentary or even 'continental' signal of Sunda-Banda Arcs volcanoes. Volcanic activity in Alor-Wetar sector started at least 12 Ma ago as intra-oceanic are, and ceased about 3 Ma ago)

Hoogewerff, J.A., M.J. van Bergen, P.Z. Vroon, J. Hertogen, R. Wortel et al. (1997)- U-series, Sr-Nd-Pb isotope and trace-element systematics across an active island arc-continent collision zone: implications for element transfer at the slab-wedge interface. Geochimica Cosmochimica Acta 61, 5, p. 1057-1072.
(Isotopic and trace element data consistent with three-component mixing whereby slab-derived hydrous fluid and siliceous melt both added to sub-arc mantle source. Hydrous fluid largely controls input in shallow part of subduction zone, siliceous melt dominates flux at deeper levels. Sedimentary material primary source of both)

Hutchison, C.S. (1975)- Correlation of Indonesian active volcano geochemistry with Benioff zone depth. Geologie en Mijnbouw 54, 3-4, p. 157-168.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0ak95aEQ5THJ5TWc/view)
(Indonesian arc >6000 km long from N Sumatra to Molucca Sea. Majority of products augite-hypersthene andesite or basalt. Leucite in volcanoes over deepest seismic contours. Overall increase in K and alkali % with Benioff zone depth, but rather high variability)

Hutchison, C.S. (1976)- Indonesian active volcanic arc: K, Sr, and Rb variation with depth to the Benioff zone. Geology 4, p. 407-408.
(K, Sr, and Rb vary with depth to Benioff zone. K2O increase most useful for Benioff zone depth prediction)

Hutchison, C.S. (1977)- Banda Sea volcanic arc: some comments on the Rb, Sr and cordierite contents. Warta Geologi (Newsl. Geol. Soc. Malaysia) 3, 2, p. 27-35.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1977002.pdf)
(Unusually high Rb/Sr ratios in volcanic rocks and cordierite in rhyolite at Tanjong Illipoi (Wetar) indicate of strong continental crustal influence in source of volcanic rocks. Romang also higher Rb/Sr ratios than active volcanic arc. Wetar very different from other islands of Banda Arc because of abundant light grey rhyolite and dacite. This extinct, eroded and uplifted portion of Banda volcanic arc N of Timor affected by subducted Australian continental Plate. Cordierite in rocks of Ambon also imply continental crustal basement in N part of Banda Arc)

Hutchison, C.S. (1981)- Review of the Indonesian volcanic arc. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia. Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 65-80.
(Indonesian volcanic arc extends for 6000km from N Sumatra to Molucca Sea. Volcanism mainly calk-alkaline-high-K calc-alkaline with minor tholeiite and shoshonite. Lavas predominantly andesitic. Good correlation between depth of underlying Benioff zone of subduced Indian Ocean Plate and K2O content and Sr isotopes, indicating magma is of mantle origin. E-ward increase of 87Sr/86Sr from W Java to Bali suggests transition from continental to oceanic basement. Volcanoes above deep seismic contours are shoshonitic. Extinct arc of W

Sulawesi also shoshonitic. Pliocene cordierite dacite-granites very high Sr ratios, consistent with continental origin. And much more; JTvG)

Hutchison, C.S. (1982)- Indonesia. In: R.S. Thorpe (ed.) Andesites. John Wiley, New York, p. 207-224.
(Review of Indonesian volcanic arc, similar to Hutchison (1981))

Isnawan, D. & S. Bronto (1997)- Penentuan sumber erupsi batuan gunungapi Tersier dan implikasinya terhadap bahan tambang. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 226-236.
('Determination of source of eruption of Tertiary volcanic rocks and their implications for minerals')

Jezek, P.A. (1978)- Submarine volcanoes in Banda and Celebes Seas. Berita Direktorat Geologi, Geosurvey Newsl. 10, 20, p. 254-256.

Jezek, P.A. & C. Hutchison (1978)- Banda arc of eastern Indonesia: petrology and geochemistry of the volcanic rocks. Bull. Volcanology 41, 4, p. 586-608.
(Banda Arc volcanics major geochemical discontinuity near S end of Weber Deep. Alkali contents and Sr isotope ratios suggest Nila-Teun-Damar volcanic group distinct from Banda-Manuk, and Serua transitional. Lavas generally typical of oceanic island arc, ranging from tholeiitic basalt- dacite on SW Ambon and Banda, low-K calc-alkaline andesites on Manuk-Serua, to high-K calc-alkaline andesites on Nila-Teun-Damar-Gunung Api-Romang. Increasing potassium from Banda to Manuk may be related to increasing Benioff Zone depth. Older cordierite dacites (ambonites) on N Ambon must be derived from continental crust, but younger tholeiitic lavas of SW Ambon and Banda may be related to subduction zone dipping S-wards from Seram)

Johnson, R.W. (ed.) (1976)- Volcanism in Australasia. Elsevier Scientific Publ. Co., Amsterdam, p. 1-422.
(28 papers on volcanism of Australia, Indonesia, PNG, Soloman Islands, Tonga, to New Zealand)

Jolis, E.M., V.Troll, F. Deegan, L. Blythe, C. Harris et al. (2012)- Tracing crustal contamination along the Java segment of the Sunda Arc, Indonesia. EGU General Assembly 2012, Vienna, p. 9291. *(Abstract only)*
(Arc magmas crustal contamination can take place in mantle source or as magma traverses upper crust. Source contamination generally considered dominant process, but Java segment of Sunda arc shows increase in 87Sr/86Sr and δ18O and decrease in 143Nd/144Nd values from Krakatau towards Merapi. Volcanoes E of Merapi, where upper crust is thinner, show less crustal input)

Kaehlig, C.B., A. Wight & C. Smith (1996)- Volcanoes of Indonesia, creators and destroyers. Times Editions, Singapore, p. 1-144.

Kamenetsky, V.S., M. Elburg, R. Arculus & R. Thomas (2006)- Magmatic origin of low-Ca olivine in subduction-related magmas: co-existence of contrasting magmas. Chemical Geology 233, p. 346-357.
(Comparison of olivines in mafic, high-Ca subduction-related magmas from Indonesia (S Sulawesi), Solomon Islands, Kamchatka and Lau Basin. Two populations: (1) high-Ca; crystallized from melt that dominantly contributed to whole rock composition. (2) low-Ca; generally interpreted as mantle or lithospheric xenocrysts)

Kandlbauer, J., S. Carey & R. Sparks (2013)- The 1815 Tambora ash fall: implications for transport and deposition of distal ash on land and in the deep sea. Bull. Volcanology 75, 4, p. 1-11.

Kandlbauer, J. & R.S.J. Sparks (2014)- New estimates of the 1815 Tambora eruption volume. J. Volcanology Geothermal Res. 286, p. 93-100.
(Volume estimates of 1815 Tambora eruption, Sumbawa, re-analysed. Total volume ~41 ± 4 km3 Dense Rock Equivalent (23 ± 3 km3 ash fall and 18 ± 6 km3 pyroclastic flows))

Katili, J. & A. Sudradjat (1984)- The devastating 1983 eruption of Colo volcano, Una Una island, Central Sulawesi, Indonesia. Proc. Reg. Conf. Min. Hydrocarbon Res. SE Asia, p. 467-482.

Katili, J.A. & A. Sudradjat (1984)- The devastating 1983 eruption of Colo volcano, Una Una island, Central Sulawesi, Indonesia. Geol. Jahrbuch B75, p. 27-47.
(Colo Volcano on Una-Una, Gulf of Gorontalo, is related to SE dipping subduction of Sulawesi Sea Plate. Devastating pyroclastic flows during 1983 eruption phase, almost entire island swept by nuee ardente, but no casualties due to timely evacuation)

Kemmerling, G.L.L. (1918)- De vulkanen Goenoeng Batoer en Goenoeng Agoeng op Bali. Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen, 1, p. 50-77.
('The Batur and Agung volcanoes on Bali'. Investigation in 1917 of active volcanoes Gunung Agung (3142m) and Batur (1717m))

Kemmerling, G.L.L. (1920)- De ôPiek van Ternateö. Een beklimming van de ôPiek van Ternateö, 28/29 Juli 1918. Natuurkundig Tijdschrift Nederlandsch-Indie 80, 1, p. 37-76.
(online at: https://archive.org/details/mobot31753002490180/page/n39)
('An ascent of the Peak of Ternate volcano, 28-29 July 1918')

Kemmerling, G.L.L. (1922)- Uit Indie's vulkaanrijk. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 39, 1, p. 1-41.
('From the Indies volcano empire'. Popular review with descriptions of selected volcanoes and their eruptions on Java and Sumatra between 1913-1921. Little science. With nasty comments on the work of B.G. Escher)

Kemmerling, G.L.L. (1923)- De vulkanen van den Sangi-Archipel en van de Minahassa. Vulkanologische Mededeelingen (Dienst Mijnbouw Nederlandsch-Indie, Weltevreden), 5, p. 1-157. *(2 vols.)*
('The volcanoes of the Sangi Archipelago and the Minahassa', Molucca Sea, N Sulawesi)

Kemmerling, G.L.L. (1926)- LôArchipel indien centre important de volcanisme. Bull. Volcanologique 3, 1, p. 87-98.
('The Indies Archipelago, important center of volcanism'. Early overview of volcanism in Indonesian Archipelago. 90 active volcanoes)

Kemmerling, G.L.L. (1929)- Vulkanen van Flores. Vulkanologische Seismologische Mededeelingen, Dienst Mijnbouw Nederlandsch-Indie, Bandung, 10, p. 1-138. + Atlas.
('Volcanoes of Flores island')

Kemmerling, G.L.L. (1929)- De actieve vulkanen van den Nederlandsch-Indischen Archipel in 1928/29. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 46, 4, p. 468-505.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001672001:pdf)
('The active volcanoes of the Netherlands Indies Archipelago in 1928/29'. 106 known active volcanoes)

Kimberly, P., L. Siebert, J.F. Luhr & T. Simkin (1998)- Volcanoes of Indonesia, v. 1.0. Smithsonian Institution, Washington, Global Volcanism Program, Digital Information Series GVP-1 (CD-ROM).
(Compilation of data and images for modern volcanoes of Indonesia)

Koperberg, M. (1910)- Verslag van een onderzoek naar de uitbarstingen in 1904 op het vulkaan-eiland Roeang bij Tagoelandang (Sangi- en Talaoet-eilanden). Jaarboek Mijnwezen Nederlandsch Oost-Indie 38 (1909), Wetenschappelijk Gedeelte, p. 205-295.
('Report of investigation of the eruptions in 1904 on the volcano island Ruang near Tagulandang (Sangi and Talaud islands')

Kuenen, P.H. (1930)- Voorlopig resultaat van een onderzoek van de G. Penanggoengan bij Soerabaia. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 47, p. 48-51.
('Preliminary result of an investigation of the Gn. Penangungan near Surabaya'. Description of 1600m high extinct volcano in N part of Arjuna-Welirang compex. Rocks 7 types of andesite)

Kuenen, P.H. (1933)- Experiments on the formation of volcanic cones (in connection with East Indian volcanic islands). Leidsche Geol. Mededelingen 6, 1, p. 99-118.
(Most stratovolcanoes have concave slope, steep slopes of 20°-40° near crater edge, gradually slope decreasing towards foot in broad flat plain. In volcanic cones in which loose ejecta dominate over lava flows profile tends to be straight line, corresponding to natural angle of repose of materials. Variations in strength of eruption may cause convex slopes, but practically always tend to produce concave profiles. Concavity of most volcanoes attributed to secondary causes)

Kuenen, P.H. (1935)- Contributions to the geology of the East Indies from the Snellius expedition. Part I. Volcanoes. Leidsche Geol. Mededelingen 7, p. 273-334.
(online at: www.repository.naturalis.nl/document/549556)
(Brief descriptions and sketches of volcanoes on E Java, Gunung Api, Serua and Tidore, based on observations during 15-month Snellius Expedition (1929-1930) to Indonesia)

Kuenen, P.H. (1945)- Volcanic fissures, with examples from the East Indies. Geologie en Mijnbouw, N.S., 7, 3-4, p. 17-23.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0S3ZmOTNXYmR6Qk0/view)
(Review of volcanic fissures and volcanic lines, with examples of Halmahera, E Java, etc.)

Kuno, H. (1966)- Lateral variation of the basalt magma type across continental margins and island arcs. Bull. Volcanologique 29, p. 195-222.
(Quaternary basalts in Circum-Pacific belt and in Indonesia change from more alkaline olivine lavas farther from trench (deeper source), to more tholeiitic closer to trench (ocean side, shallower source))

Kurnio, H., S. Lubis & H.C. Widi (2015)- Submarine volcano characteristics in Sabang waters. Bull. Marine Geol. 30, 2, p. 85-96.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/78/79)
(Weh Island with Sabang City at NW tip of Sumatra with volcanic cone morphology and with fumaroles, on surrounding seafloor and coastal area vents. Fumarole vents associated with common rare earth elements (REE). Co-existence between active Sumatra fault of current volcanism produce hydrothermal mineralization)

Kurnio, H., I. Syafri, A. Sudradjat & M.F. Rosana (2016)- Sabang submarine volcano Aceh, Indonesia: review of some trace and Rare Earth Elements abundances produced by seafloor fumarole activities. Indonesian J. Geoscience 3, 3, p. 173-183.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/247/224)
(Rare earth elements at fumaroles surrounding submarine craters off Sabang island)

Kurnio, H. & E. Usman (2016)- Rare Earth Elements vapor transport by fumaroles in the post caldera complex of Weh Island submarine volcano, Aceh Province, Northern Sumatra. Bull. Marine Geol. 31, 2, p. 99-108.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/317/278)
(Fumaroles and solfataras are REE vapor transport agents in Weh Island submarine volcano, Aceh. Central part of Weh submarine volcano most active REE deposition, where normal faults and N-S grabens acted as channel for hydrothermal fluids reaching seafloor surface)

Kushendratno, J.S. Pallister, Kristianto, F.R. Bina (2012)- Recent explosive eruptions and volcano hazards at Soputan volcano- a basalt stratovolcano in north Sulawesi, Indonesia. Bull. Volcanology 74, 7, p. 1581-1609.
(Soputan high-alumina basalt stratovolcano in N Sulawesi-Sangihe magmatic arc. Adjacent to Quaternary Tondono caldera, but magmas distinct from caldera and other arc magmas. Soputan produces explosive eruptions with high ash plumes and pyroclastic flows. Open-vent-type volcano that taps basalt magma from greater depth, in arc-mantle wedge)

Kusumadinata, K. (Ed.) (1975)- 125 years of geological research in Indonesia (1850-1975). Berita Direktorat Geologi (Geosurvey Newsletter), Bandung 8, 2, p.
(In Indonesian. Includes chapter on biography of R.W. van Bemmelen)

Kusumadinata, K., R. Hadian, S. Hamidi & L.D. Reksowirogo (1979)- Data dasar gunung api Indonesia. Direkt. Volkanologi, Bandung, p. 1-819.
('Basic data of Indonesian volcanoes'. Descriptions of 67 Indonesian 'A-type' volcanoes, with eruptions in historical time: 10 in Sumatra/ Sunda Strait, 17 on Java, 5 in Bali/ W Nusateggara, 13 in E Nusateggara, 7 in Banda Islands, 11 in Sulawesi/ Sangir islands and 4 in N Moluccas. Eight aditional known A-type volcanoes not yet described)

Lagmay, A.M.F. & W. Valdivia (2006)- Regional stress influence on the opening direction of crater amphitheaters in Southeast Asian volcanoes. J. Volcanology Geothermal Res. 158, p. 139-150.
(Holocene volcanoes in Philippines and Indonesia studied to determine relationship between regional maximum horizontal stress and opening direction of volcanic amphitheatre craters. Opening of craters occurs at acute angle relative to max. stress direction)

Lavigne, F., J.P. Degeai, J.C. Komorowski, S. Guillet, V. Robert, P. Lahitte, C. Oppenheimer, M. Stoffel, C.M. Vidal, I. Pratomo et al. (2013)- Source of the great A.D. 1257 mystery eruption unveiled, Samalas volcano, Rinjani Volcanic Complex, Indonesia. Proc. National Academy Sciences USA 110, 42, p. 16742-16747.
(online at: www.pnas.org/content/110/42/16742.full.pdf+html)
(Polar ice cores with evidence of colossal volcanic eruption in 1257 or 1258 A.D., most probably in tropics, which yielded largest volcanic sulfur release to stratosphere of the past 7000 yrs. Likely source is Samalas volcano, adjacent to Mt Rinjani on N Lombok Island, where >40 km3 of tephra were deposited. Three principal pumice fallout deposits in region and thick pyroclastic flow deposits at coast, 25 km from source. Pre-caldera topography of Mt Samalas calculated as ~4200m above sea level. Glass geochemistry of pumice matches shards in Arctic and Antarctic ice cores (see also Vidal et al. 2015))

Liu, Z., C. Colin & A. Trentesaux (2006)- Major element geochemistry of glass shards and minerals of the Youngest Toba Tephra in the southwestern South China Sea. J. Asian Earth Sci. 27, p. 99-107.
(4cm thick ash layer in Core MD01-2393 from SW S China Sea at Marine Isotope Stage 4-5 transition at ~74 ka. Morphology and geochemistry of glass shards confirm origin from Youngest Toba eruption, N Sumatra)

Luais, B. (1987)- Petrologie et geochimie (elements trace et rapports isotopiques du Sr) du magmatisme associe aux zones de subduction. Examples du Bassin Mediterraneen et des Isles de la Sonde (Merapi, Java). Thesis, Universite de Montpellier (Documents Travaux Centre Geol. Geoph. Montpellier, 9, p. 1-237.
('Petrology and geochemistry (trace elements and Sr isotopic ratios) of magmatism associated with subduction zones: examples from the Mediterraneen Basin and the Sunda Islands (Merapi, Java)')

Lundberg, J. & D.A. McFarlane (2012)- A significant middle Pleistocene tephra deposit preserved in the caves of Mulu, Borneo. Quaternary Research 77, 3, p. 335-343.
(Fluvially transported tephra in caves of Mulu, Sarawak, not Younger Toba Tephra, but older (before ~125 or before ~156 ka. Most likely location of source in Philippines)

MacLeod, N. (1989)- Sector-failure eruptions in Indonesia volcanoes. Geologi Indonesia (IAGI) 12, 1 (Katili Volume), p. 563-601.
(Study of 54 volcano craters that erupted with sector failures)

Marinelli, G. & H. Tazieff (1968)- LôIgnimbrite et la caldera de Batur (Bali, Indonesie). Bull. Volcanologique 32, p. 89-120.
('The ignimbrite and the Batur caldera (Bali, Indonesia)'. Batur caldera result of collapse of strato-volcano following outpouring of an ignimbritic unit (ash flow) covering N and S flanks of Batur ~22,000 years ago. Island of Bali tilted N-wards around its long axis. Outflow of ignimbrite followed long period of andesitic activity, preceded and followed by flows of bandaite, a leucocratic lava with highly basic plagioclase (~80-90% An), probably generated, at shallow dephts by assimilation of aluminous strata by basaltic magma)

McGeary, S., A. Nur & Z. Ben-Avraham (1985)- Spatial gaps in arc volcanism: the effect of collision or subduction of oceanic plateaus. Tectonophysics 119, 1, p. 195-221.
(Many volcanic chains worldwide show gaps in pattern of active volcanoes, often related to collisions of oceanic plateaus. Examples from Indonesia include Wetar gap of Banda Arc (due to Australia collision S of Timor region) and New Guinea)

Neumann van Padang, M. (1930)- Het vulkaaneiland Paloeweh en de uitbarsting van den Rokatinda in 1928. Vulkanologische Seismologische Mededeelingen, Dienst Mijnbouw Nederlandsch-Indie, Bandung, 11, p. 1-92.
('The volcanic island Paluweh and the eruption of the Rokatinda in 1928'. Erution of Rokatinda volcano on Paloweh island N of Flores may have killed 1000 people. With petrographic descriptions of rocks by Esenwein)

Neumann van Padang, M. (1937)- Bestaat er verband tusschen den regenval op den top van de vulkanen Semeroe en Lamongan en hunne uitbarstingen? De Ingenieur in Nederlandsch-Indie (IV), 4, 1, p. 1-7.
('Is there a relationship between rainfall on the tops of volcanoes Semeru and Lamongan and their eruptions?'. Junghuhn suggested possible increased number of small eruptions of Semeru, East Java, during rainy season, but not supported by available data)

Neumann van Padang, M. (1938)- Uber die Unterseevulkane der Erde. De Ingenieur in Nederlandsch-Indie (IV), 5, 5, p. 69-83 and 6, p. 85-104.
('On the submarine volvanoes on Earth'. Review of 158 submarine volcanoes worldwide, incl. 7 from Indonesia (Anak Krakatau, Nieuwerkerk, Emperor of China, Yersey Reef, Banua Wuhu and 3 unnamed features))

Neumann van Padang, M. (1940)- Shifting craters of the Talakmau volcano, Sumatra. J. Geomorphology 3, p. 218-226.
(Talakmau (Talamau, Ophir) in W Central Sumatra is composite volcano, with progressively shift of younger eruptive centers from NE to SW)

Neumann van Padang, M. (1951)- Catalogue of the active volcanoes of the world including solfatara fields. Part 1: Indonesia. Int. Volcanological Assoc., Napoli, p. 1-271.

Neumann van Padang, M. (1959)- Changes in the top of Mount Ruang (Indonesia). Geologie en Mijnbouw 21, 4, p. 113-118.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0QTJrWms0Rmd6cFk/view)
(Activity and changes in shape of Mt Ruang in S part of Sangihe Archipelago since 1808)

Neumann van Padang, M. (1971)- Two catastrophic eruptions in Indonesia, comparable with the Plinian outburst of the volcano of Thera (Santorini) in Minoan time. Acta First Int. Scient. Congress on the volcano of There, p. 51-63.
(Comparison of Plinian eruption with enormous volumes of pumice of Santorini with those of Tambora (Sumbawa, 1815) and Krakatoa (W of Java, 1883). Krakatoa and Tambora eruptions lasted only two days and led to collapse of tall volcanic edifices)

Neumann van Padang, M. (1983)- History of the volcanology in the former Netherlands East Indies. Scripta Geologica 71, p. 1-76.
(online at: www.repository.naturalis.nl/document/148698)
(History of volcano research in Indonesia, with listing of active volcanoes/ activity from late 1800's to ~1930)

Newhall, C.G. & D. Dzurisin (1988)- Historical unrest at large calderas of the world. U.S. Geol. Survey (USGS) Bull. 1855, 2 vols., 1108p.
(online at: http://pubs.usgs.gov/bul/1855/report.pdf)
(Global review of Recent activity of volcanoes with large calderas. With sizeable chapters on Indonesia (p. 255-351) and Papua New Guinea (p. 197-244))

Nho, E.Y., M.F. Le Cloarec, B. Ardouin & W.S. Tjetjep (1996)- Source strength assesment of volcanic trace elements emitted from the Indonesian arc. J. Volcanology Geothermal Res. 74, p. 121-129.
(Estimates of emission of volatile metals in volcanic sources of Indonesian Arc. SO2 emission 3.5 × 106 tons/ year, or ~20% of the annual worldwide volcanic flux of SO2. Trace metal (210Po, Pb, Bi, Cd, Zn and Cu) fluxes ~5-30% of global volcanic flux, i.e. low relatively low)

Nicholls, I.A. & D.J. Whitford (1976)- Primary magmas associated with Quaternary volcanism in the western Sunda arc. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier, Amsterdam, p. 77-90.
(Pleistocene- Recent lavas of W Sunda Arc dominated by basaltic andesite and andesite, with average 55% silica. Most lavas have Mg/Mg +Fe2 values too low to be unmodified products of partial melting of peridotitic mantle. Further differentiation to produce andesitic- dacitic magmas probably at rel. low pressure)

Nicholls, I.A. & D.J. Whitford (1978)- Geochemical zonation in the Sunda volcanic arc, and the origin of K-rich lavas. Bull. Australian Soc. Exploration Geophysicists (ASEG) 9, p. 93-98.
(*Sunda volcanic arc good example of variation in geochemistry of lavas across island arc. In addition to correlation between K2O/SiO2 ratios and depths to Benioff Zone in Pleistocene-Recent-lavas of Java, there are well-defined relationships for 'incompatible' elements (Rb, Cs, Ba) and light rare earth elements. Volcanic centres of Java indicate progressive change in conditions of primary basaltic magma production across arc)*

Nicholls, I.A., D.J. Whitford, K.L. Harris & B. Taylor (1980)- Variation in the geochemistry of mantle sources for tholeiitic and calc-alkaline mafic magmas, western Sunda volcanic arc, Indonesia. Chemical Geology 30, p. 177-199.
(Quaternary lavas of normal island-arc basalt-andesite-dacite association in Java-Bali range from tholeiitic series over Benioff-zone depths of ~150 km to high-K calc-alkaline series over Benioff-zone depths of 250km. More abundant and diverse calc-alkaline lavas over intermediate Benioff-zone depths. Basaltic lavas become slightly more alkaline with increasing depth to the Benioff zone. Levels of incompatible minor and trace elements (K, Rh, Cs, Ba, Nb, U, Th, light REE) show increase of almost order of magnitude)

Ninkovich, D. (1979)- Distribution, age and chemical composition of tephra layers in deep-sea sediments off western Indonesia. J. Volcanology Geothermal Res. 5, p. 67-86.
(Volcanic ash layers in deep-sea sediments of NE Indian Ocean, adjacent to W Indonesian range in age from Late Miocene- Recent. Three provinces: (1) large Late Miocene and younger rhyolitic tephra province off Sumatra; (2) restricted dacitic province off Sunda Strait and W Java; and (3) andesitic province off E Java and Lesser Sunda Islands. Chemical composition of tephra layers in each province remains constant with time. E-ward decrease in silica content in tephras coincides with similar decrease in Indonesian arc lavas. High silica content in Sumatra linked to thick pre-Cenozoic crust. E of Sumatra crust is Cenozoic and thin)

Ninkovich, D. & W.L. Donn (1976)- Explosive Cenozoic volcanism and climatic implications. Science 194, 4268, p. 899-906.
(Study of volcanogenic material in DSDP and other cores from E and SE Asia. Indonesia Cenozoic magmatic history two major phases: first extended into Ey Miocene, second began in Late Miocene and lasted until today. With map of Indian Ocean areas covered with rhyolitic and andesitic ash layers SW of Sumatra and S of Java)

Ninkovich, D. & W.L. Donn (1977)- Cenozoic explosive volcanism related to East and Southeast Asian arcs. In: M. Talwani & W. Pitman (eds.) Island arcs, deep sea trenches and back-arc basins, American Geophys. Union (AGU), Maurice Ewing Ser. 1, p. 337-347.
(Study of history of Cenozoic explosive volcanism using DSDP and piston core data from Indian Ocean off Indonesia and W Pacific Ocean)

Oppenheimer, C. (2002)- Limited global change due to the largest known Quaternary eruption, Toba ~74kyr BP?. Quaternary Science Reviews 81, p. 1593-1609.
(≈74 kyr BP 'super-eruption' of Toba volcano in Sumatra is largest known Quaternary eruption. Possible 6 yr duration 'volcanic winter' following eruption has been proposed, but previous estimates of globally averaged surface cooling of 3-5°C after eruption probably too high; closer to 1°C)

Oppenheimer, C. (2003)- Climatic, environmental and human consequences of the largest known historic eruption; Tambora Volcano (Indonesia) 1815. Progress in Physical Geography 27, 2, p. 230-259.

Pacey, A., C.G. Macpherson & K.J.W. McCaffrey (2013)- Linear volcanic segments in the central Sunda Arc, Indonesia, identified using Hough Transform analysis: implications for arc lithosphere control upon volcano distribution. Earth Planetary Sci. Letters 369-370, p. 24-33.
(In Sunda Arc most volcanoes define four en echelon, linear segments, each of 500-700 km length. Volcanoes of Java that do not lie on these segments either formed at early stage in history of arc and erupted anomalous magma, or lie along other mapped structures)

Palfreyman, W.D., R.W. Johnson, R.J.S. Cooke & R.J. Bultitude (1986)- Volcanic activity in Papua New Guinea before 1944: an annotated bibliography of reported observations. Bureau Mineral Res. Geol. Geophysics, Canberra, Report 254, p. 1-194.
(online at: https://d28rz98at9flks.cloudfront.net/15175/Rep_254.pdf)
(Annotated bibliography of 750 references on volcanoes and volcanic activity in PNG before 1944)

Paris, R., A.D. Switzer, M. Belousova, A. Belousov, B. Ontowirjo, P.L. Whelley & M. Ulvrova (2014)- Volcanic tsunami: a review of source mechanisms, past events and hazards in Southeast Asia (Indonesia, Philippines, Papua New Guinea). Natural Hazards 70, 1, p. 447-470.
(Many volcanoes in SE Asia potentially tsunamigenic and present hazard to rapidly developing coasts)

Pearce, N.J.G., J.A. Westgate, E. Gatti, J.N. Pattan, G. Parthiban & H. Achyuthan (2014)- Individual glass shard trace element analyses conýrm that all known Toba tephra reported from India is from the c. 75-ka Youngest Toba eruption. J. Quaternary Sci. 29, 8, p. 729-734.
(Glass shards from all Toba tephra samples from India thus far analysed, same multi-population composition as Young Toba Tuff and are products of ~75-ka Youngest Toba eruption. Composition different from Oldest Toba Tuff (OTT) in Layer D from ODP site 758 (~800 ka))

Petroeschevsky, W.A. (1949)- A contribution to the knowledge of the Gunung Tambora (Sumbawa). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Amsterdam, 66, p. 688-703.
(Description of Tambora volcano on Sumbawa. Considered to be extinct until major 1815 eruption, which reduced it in height from ~4000- 2850m, produced ~150 km3 of ash, and directly and indirectly killed 92,000 people)

Petroeschevsky, W.A. & T.H.F. Klompe (1950)- Het vulkanologisch onderzoek in Indonesia. In: Een eeuw natuurwetenschap in Indonesia 1850-1950, Gedenkboek Kon. Natuurkundige Vereeniging, Chronica Naturae 106, 5, Vorkink, Bandung, p. 51-70.
('History of volcanological investigations in Indonesia', in 'A century of natural sciences in Indonesia 1850-1950' book)

Pratomo, I. (2006)- Klasifikasi gunung api aktif Indonesia, studi kasus dari beberapa letusan gunung api dalam sejarah. J. Geologi Indonesia 1, 4, p. 209-227.
(New classification of Indonesian active volcanoes: Tambora (caldera formation), Merapi (lava dome), Agung (open crater), Papandayan (sector failure), Batur (post-caldera activities), Sangeangapi (lava flows) and Anak Krakatau types (volcano islands and submarine volcano))

Prothero, D.R. (2018)- When humans nearly vanished: the catastrophic explosion of the Toba volcano. Smithsonian Books, p. 1-187.

Rachmat, H. & I. Mujitahid (2003)- Gunungapi Nusa Tenggara Barat. Indon. Assoc. Geol. (IAGI), Spec. Publ. 1, p. 1-141.
('Volcanoes of West Nusa Tenggara')

Rampino, M.R. & S. Self (1982)- Historic eruptions of Tambora (1815), Krakatau (1883) and Agung (1963), their stratospheric aerosols, and climatic impact. Quaternary Research 18, 2, p. 127-143.
(Decreases in surface temperatures after eruptions of Tambora, Krakatau and Agung were of similar magnitude, although amounts of dust and volatiles injected into stratosphere differed greatly. Large amounts of fine ash and volatiles dispersed into upper atmosphere by Krakatau and Tambora; Agung eruption in 1963 was smaller, but injected dust and volatiles into stratospheric aerosol layer more directly. Agung eruption relatively rich in SO2 and Cl. Relative amounts of fine ash produced by Tambora, Krakatau and Agung eruptions estimated at 150: 20: 1, atmospheric sulfate aerosols ~7.5: 3: 1. Decreases in surface T after volcanic eruptions mainly result of sulfate aerosols, rather than silicate dust)

Ranneft, T.S.M. (1979)- Segmentation of island arcs and application to petroleum geology. J. Petroleum Geol. 1, 3, p. 35-53.
(Island arcs commonly depicted as curved or sinuous, but most are composed of straight segments whose trend changes suddenly at hinge or boundary zones (multiple transverse faults). Fracture system may be related to structural, morphological, or movement of underthrusting slab, or movement in backdeep or overthrusting sheet. Transverse structural systems had effect on petroleum accumulations of island arc regions, both from stratigraphic and structural viewpoint. Examples of modern Indonesian arc system)

Reubi, O. & A. Nicholls (2004)- Variability in eruptive dynamics associated with caldera collapse: an example from two successive eruptions at Batur volcanic field, Bali, Indonesia. Bull. Volcanology 66, 2, p. 134-148.
(Batur volcanic field in Bali two caldera-forming eruptions, at 29,300 and 20,150 years BP., resulting in deposition of dacitic ignimbrites. Ubud Ignimbrite covers most of S Bali and consists dominantly of pyroclastic flow with minor pumice fall deposits. Gunungkawi Ignimbrite more limited extent, occurs only in central S Bali)

Reubi, O. & A. Nicholls (2004)- Magmatic evolution at Batur volcanic field, Bali, Indonesia: petrological evidence for polybaric fractional crystallization and implications for caldera-forming eruptions. J. Volcanology Geothermal Res. 138, p. 345-369.
(Batur volcanic field in Bali underwent complex evolution that comprised three periods of building and two major caldera-forming eruptions)

Reubi, O. & A. Nicholls (2005)- Structure and dynamics of a silicic magmatic system associated with caldera-forming eruptions at Batur Volcanic Field, Bali, Indonesia. J. Petrology 46, 7, p. 1367-1391.
(online at: http://petrology.oxfordjournals.org/content/46/7/1367.full.pdf+html)
(Quaternary Batur volcanic field in Bali ~150 km above Benioff zone and adjacent to active Agung volcano and extinct or dormant Bratan caldera. Two caldera-forming eruptions and broad range of compositions from low-SiO2 andesite to high-SiO2 dacite. Earliest volcanism was building of Penulisan basaltic-dacitic stratovolcano starting at least at ~510 ka. Collapse of first caldera associated with eruption of dacitic Ubud ignimbrite at 29,300 yrs BP. After formation of Bunbulan lava-dome complex collapse of second caldera, with eruption of Gunungkawi Ignimbrite at 20,150 yrs BP. Followed by 1700 m high, basaltic andesite Batur stratovolcano)

Rittmann, A. (1953)- Magmatic character and tectonic position of the Indonesian volcanoes. Bull. Volcanology 14, p. 45-58.
(Review of chemical compositions of magmas of Indonesian active volcanoes. Volcanoes classified as (1) Calc-alkaline (= Pacific; 30/ 91%), (2) Alkaline (= Atlantic; 2; 6%) and Potassic (= Mediterranean; 1/ 3%). Calc-alkaline character of magmas of active volcanoes decreases regularly in direction from foredeep to hinterland, becoming alkaline in hinterland itself. Also, at single volcanoes calc-aIkaline character decreases with time, 'confirming migration of axis of orogen towards foredeep')

Rohiman, Y., I G.B.E. Sucipta, M. Abdurrachman & S.R.A. Sugiono (2016)- Petrogenesis of Malabar Volcano, West Java, Indonesia. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 295-300.

Romeur, M. (1991)- Series magmatiques arc et arriere-arc de la Sonde: nature des sources impliquees (elements en trace et isotopes Sr-Nd-Pb). Doct. Thesis Universite de Bretagne Occidentale, Brest, p. 1-451. *(Unpublished)*

(online at: http://archimer.ifremer.fr/doc/00034/14540/11815.pdf)
('Arc and back-arc magmatic series of Sunda arc: nature of involved sources'. Three geochemical zones: arc, backarc and an intermediate zone. Focus on back-arc potassic basalts of Sumatra (Jambi, Sukadana) and Karimunjawa islands)

Rubin, K.H., G.E. Wheller, M.O. Tanzer, J.D. MacDougall, R. Varne & R. Finkel (1989)- 238U decay series systematics of young lavas from Batur volcano, Sunda Arc. J. Volcanology Geothermal Res. 38, p. 215-226.

Ryu, S., H. Kitagawa, E. Nakamura, T. Itaya & K. Watanabe (2013)- K-Ar analyses of the post-caldera lavas of Bratan volcano in Bali Island, Indonesia- Ar isotope mass fractionation to light isotope enrichment. J. Volcanology Geothermal Res. 264, 4, p. 107-116.
(Post-caldera lavas of Bratan volcano on Bali are basalts to andesites and typical of subduction-related tectonic setting. K-Ar ages ~14, 31, 55, 66, 94 and 125 ka)

Saing, U.B., P. Bani & Kristianto (2014)- Ibu volcano, a center of spectacular dacite dome growth and long-term continuous eruptive discharges. J. Volcanology Geothermal Res. 282, p. 36-42.
(Ibu volcano on NW Halmahera one of most active volcanoes in Indonesia. Resumed activity in 1998. Lava dome of dacite composition is developing at rate of 3182 m^3 per day)

Scher, S. (2012)- Fumarolic activity, acid-sulfate alteration and high sulfidation epithermal precious metal mineralization in the crater of Kawah Ijen Volcano (Java, Indonesia). M.Sc. Thesis McGill University, Montreal, p. 1-114.
(online at: digitool.library.mcgill.ca/dtl_publish/7/110439.html)

Scher, S., A.E. Williams-Jones & G. Williams-Jones (2013)- Fumarolic activity, acid-sulfate alteration, and high sulfidation epithermal precious metal mineralization in the crater of Kawah Ijen Volcano, Java, Indonesia. Economic Geology 108, 5, p. 1099-1118.
(Kawah Ijen crater in E Java ~1 km in diameter, and hosts one of world's largest hyperacidic lakes. With small actively degassing solfatara field, surrounded by much larger area of acid-sulfate alteration. Area exposed after phreatomagmatic eruption in 1817, which excavated crater to depth of 250m. Magmatic vapors caused (uneconomic) high sulfidation epithermal Cu-Au-Ag ore deposits at very shallow depth)

Schulz, H., K.C. Emeis, H. Erlenkeuser, U. von Rad & C. Rolf (2002)- The Toba volcanic event and interstadial/stadial climates at the marine isotopic stage 5 to 4 transition in the northern Indian Ocean. Quaternary Research 57, 1, p. 22-31.
(Toba volcanic event documented in marine sediment cores from NE Arabian Sea. Distinct concentration spikes and ash layers of rhyolithic volcanic shards near marine isotope stage 5-4 boundary with chemical composition of 'Youngest Toba Tuff'. Toba event between two warm periods lasting few millennia. Toba had only minor impact on evolution of low-latitude monsoonal climate on centennial to millennial time scales)

Self, S., R. Gertisser, T. Thordarson, M.R. Rampino & J.A. Wolff (2004)- Magma volume, volatile emissions, and stratospheric aerosols from the 1815 eruption of Tambora. Geophysical Research Letters 31, L20608, p. 1-4.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2004GL020925/epdf)
(New estimates for mass of magma and aerosol generated by Tambora in 1815: 30 -33 km3 magma, 53-58 Tg SO2, and 93-118 Tg sulfate aerosols. Aerosol cloud distributed globally, but more in S than in N Hemisphere)

Self, S. & M.R. Rampino (2012)- The 1963-1964 eruption of Agung Volcano (Bali, Indonesia). Bull. Volcanology 74, 6, p. 1521-1536.
(On largest volcanic eruption in Indonesia since Krakatoa in 1883. Early lava flow followed by two explosive phases. Two related but distinctly different magma types: porphyritic basaltic andesite and andesite)

Sigurdsson, H. & S. Carey (1989)- Plinian and co-ignimbrite tephra fall from the 1815 eruption of Tambora volcano. Bull. Volcanology 51, p. 243-270.

(Deposits of April 1815 Tambora eruption sequence starting with four widespread ash fall layers, locally overlain by up to eight pyroclastic flow deposits. Wioth isopach maps of F1, F2, F3 and F4 Plinian tephra layers. F-5 deposit is co-ignimbrite ash fall, generated largely during entrance of pyroclastic flows into ocean. Large volume of F-5 ash requires eruption of 50 km3)

Sigurdsson, H. & S. Carey (1992)- Eruptive history of Tambora volcano, Indonesia. In: E.T. Degens, H.K. Wong & M.T. Zen (eds.) The sea off Mount Tambora. Mitteilungen Geol.-Palaont. Inst. Universitat Hamburg 70, p. 187-206.

Sigurdsson, H. & S. Carey (1992)- The eruption of Tambora in 1815: environmental effects and eruption dynamics. In: C.R. Harington (ed.) The year without a summer? World climate in 1816. Canadian Museum of Nature, Ottawa, p. 16-45.

Situmorang, T. & K.A.S. Astadiredja (1983)- Volkanistratigrafi suatu konsep pemetaan geologi gunungapi Kuarter. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 189-199.
('Volcanostratigraphy, some mapping concepts of the geology of Quaternary volcanoes')
(Lake Toba ash event (75 ka; ~20 cm thick) and Australasian tektite layer (0.7 Ma; near Brunhes/Matuyama magnetic reversal) identified in Hole 758C, Indian Ocean W of N Sumatra)

Smit, J., A.J.M van Eijden & S. Troelstra (1991)- Analysis of the Australasian microtektite event, the Toba Lake event, and the Cretaceous/Paleogene boundary, eastern Indian Ocean. In: J. Weissel et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, College Station, 121, p. 489-503.
(online at: www-odp.tamu.edu/publications/121_SR/VOLUME/CHAPTERS/sr121_25.pdf)
(Lake Toba ash event (75,000 yrs ago) recovered in Hole 758C, had minor influences on foraminiferal populations. Australasian tektite event (just below Brunhes/Matuyama magnetic reversal at ~0.7 Ma) probably had some influence on foraminiferal ecology, because larger specimens become scarce just above microtektite layer. Cretaceous-Paleogene boundary of Hole 752B does not show obvious anomalous trace-element concentrations)

Soeria-Atmadja, R., R.C. Maury, H. Bellon, J.L. Joron, Y. Cyrille et al. (1985)- The occurrence of back-arc basalts in Western Indonesia. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 125-132.
(Back-arc volcanics, behind Sunda Arc and different composition: primitive basalts resembling basalts from extensional environments. Sukadana in S Sumatra volcanics Quaternary in age, Karimunjawa in C Java Sea Latest Miocene- Pliocene 6.5- 1.8 Ma)

Soeria-Atmadja, R., Y. Sunarya, Sutanto & Hendaryono (1998)- Epithermal gold-copper mineralization associated with Late Neogene magmatism and crustal extension in the Sunda- Banda arc. Bull. Geol. Soc. Malaysia 42, p. 257-268.
(online at: www.gsm.org.my/products/702001-100841-PDF.pdf)
(Majority of gold-copper mineralization along Sunda- Banda arc low-sulphide- epithermal, related to Late Neogene eruptions of fine silicic/acidic pyroclastics of calc-alkaline affinity. Rel. wide distribution of Late Miocene- Pliocene acidic tuffs on Java, possibly related to caldera collapse or graben subsidence)

Soeria-Atmadja, R., Y. Sunarya, Sutanto & Hendaryono (2001)- Epithermal gold-copper mineralization, Late Neogene calc-alkaline to potassic calk-alkaline magmatism and crustal extension in the Sunda- Banda arc. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf., Pangkor 2001, p. 39-46.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_07.pdf)
(Similar to Soeria-Atmadja, Sunarya et al. 1998)

Soeria-Atmadja, R., S. Suparka, C. Abdullah, D. Noeradi & Sutanto (1998)- Magmatism in western Indonesia, the trapping of the Sumba Block and the gateways to the east of Sundaland. J. Asian Earth Sci. 16, 1, p. 1-12.
(Similarities in Late Cretaceous-Paleogene stratigraphy and calc-alkaline magmatism between Sumba, S Sulawesi and SE Kalimantan suggest Sundaland origin for all these areas. S-ward migration of Sumba to present fore-arc position is after Late Cretaceous-Paleocene time)

Stehn, C.E. (1926)- Volcanologic work in the Dutch East Indies during 1923-1926. Proc. 3rd Pan-Pacific Science Congress, Tokyo 1926, p. 718-733.

Stehn, C.E. (1927)- List of active volcanoes in the Netherlands East Indies. Bull. Netherlands East Indian Volcanological Survey, Bandung, 2, p. 15-19.
(Inventory of 103 active volcanoes in Indonesia)

Stehn, C.E. (1928)- De Batoer op Bali en zijn eruptie in 1926. Vulkanologische Seismologische Mededeelingen (Dienst Mijnbouw Nederlandsch-Indie, Bandung) 9, p. 1-65.
('The Batur volcano on Bali and its eruption in 1926')

Stehn, C.E. (1936)- Register of the spots of volcanic activity in the Netherlands Indies. Bull. Netherlands East Indian Volcanological Survey, Bandung, 75, p. 1-6.
(Count of active volcanoes in Indonesia increased to 125)

Stehn, C.E. (1940)- Vulkanologische onderzoekingen in Oost en Midden Flores. Vulkanologische Seismologische Mededeelingen, Dienst Mijnbouw Nederlandsch-Indie, Bandung, 13, p. 1-82.
('Volcanological surveys of modern volcanoes in East and Central Flores)

Stolz, A.J., R. Varne, G.E. Wheller, J.D. Foden & M.J. Abbott (1988)- The geochemistry and petrogenesis of K-rich alkaline volcanics from the Batu Tara volcano, eastern Sunda arc. volcano, eastern Sunda arc. Contrib. Mineralogy Petrology 98, 3, p. 374-389.
(K-rich alkaline leucite basanite and leucite tephrite eruptives and dykes from Batu Tara volcano (50 km N of Lembata (Lomblen) in Flores Sea) reflect variable amounts of phenocrysts in melts with different compositions. Uninhabited volcano, 748m high, ~230 km above Benioff zone in region of relatively young and thin arc crust)

Stolz, A.J., R. Varne, G.R. Davies, G.E. Wheller & J.D. Foden (1990)- Magma source components in an arc-continent collision zone: the Flores-Lembata sector, Sunda arc, Indonesia. Contrib. Mineralogy Petrology 105, p. 585-601.
(Trace-element and isotope data for 12 active volcanoes from Flores, Adonara, Lembata and Batu Tara in E Sunda arc suggest mantle beneath E Sunda arc is heterogeneous mixture of 3 or 4 major source components: MORB-source or depleted MORB-source, OIB-source and subducted Indian Ocean sediment)

Stothers, R.B. (1984)- The great Tambora eruption in 1815 and its aftermath. Science 224, 4654, p. 1191-1198.
(Tambora 1815 eruption on Sanggar Peninsula of Sumbawa largest and deadliest volcanic eruption in recorded history. Combined volumes of ejecta 40-90 km3 (dense rock equivalent), most probably ejected in 3-24 hours. Sound range was 2600 km, ash range >1300 km, pitch darkness (up to 2 days) over 600 km, pyroclastic flows at least 20 km from summit and tsunami of 1-4m shore height over at least 1200km)

Stothers, R.B. (2004)- Density of fallen ash after the eruption of Tambora in 1815. J. Volcanology Geothermal Res. 134, 4, p. 343-345.
(Tambora 1815 eruption produced largest known ashfall in historical times (~100 km3). Density of fallen ash measured at Makassar (~380 km N of Tambora) shortly after eruption: 636 kg/ m3)

Sucipta, I.G.B.E., I. Takahashima & H. Muraoka (2006)- Morphometric age and petrological characteristics of volcanic rocks from the Bajawa Cinder Cone Complex, Flores, Indonesia. J. Mineralogical Petrological Sci. 101, 2, p. 48-68.
(online at: https://www.jstage.jst.go.jp/article/jmps/101/2/101_2_48/_pdf)
(Bajawa complex 78 cinder cones, grouped into five morphometric ages. Oldest group 0.53-0.73 Ma, Bajawa 02 (0.41- 0.51 Ma), 03 (0.32- 0.40 Ma) and 04 (0.22-0.31 Ma), youngest group 0- 0.20 Ma)

Sudradjat, A. (1975)- Batuan gunungapi dan struktur geologi di Jawa bagian Timur dan Nusatenggara bagian Barat. Geologi Indonesia (IAGI) 2, 3, p. 19-22.

('Volcanic rocks and geological structures in Eastern Java and west Nusa Tenggara')

Sudradjat, A. (1987)- The Quaternary activities of volcano island arc of Indonesia. In: Geologi Kuarter dan lingkungan hidup, Geol. Res. Development Center, Bandung, Spec. Publ. 7, p. 51-63.

Sukhyar, R. (1982)- Vulkanostratigrafi. Proc. 11th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 205-212.

Sutawidjaja, I.G. (2009)- Ignimbrite analyses of Batur Caldera, Bali, based on 14C dating. J. Geologi Indonesia 4, 3, p. 189-202.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20090304.pdf)
(Batur caldera, NE Bali, is 10 x 7.5 km collapse structure with two stages of collapse at 29.3 ka and 20.1 ka, interrupted by silicic andesite welded ignimbrite and domes)

Sutawidjaja, I.G. (2011)- Effects of the 1815 Tambora eruption to the atmosphere and climate. Majalah Geologi Indonesia (IAGI) 26, 2, p. 65-71.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/763)
(Erupted ash and volcanic aerosols from 1815 Tambora eruption caused global climate changes for 1-2 years. Aerosol cloud spread around Earth in ~3 weeks and caused surface cooling in N Hemisphere of 0.4- 0.7 ° C)

Sutawidjaja, I.G., H. Sigurdsson & L. Abrams (2006)- Characterization of volcanic deposits and geoarchaeological studies from the 1815 eruption of Tambora volcano. J. Geologi Indonesia 1, 1, p. 49-57.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/166)
(Eruption of Tambora on Sumbawa on 5-11 April 1815 generally considered as largest volcanic event in recorded history, leaving caldera 7 km in diameter and 1100m deep. Cataclysmic eruption initiated by Plinian eruption on 5 April, killing >90,000 people on Sumbawa and nearby Lombok, and depositing 40-150 cm of gray pumice and ash on slopes mainly over district W of volcano. On 11 April 8 pyroclastic surges and flows, burying ancient villages to N)

Sutawidjaja, I.S. (1990)- Evolusi kaldera Batur, Bali. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 165-194.
('Evolution of the Batur caldera, Bali')

Sutawidjaja, I.S., M.F. Rosana, K. Watanabe (2015)- Magma chamber model of Batur Caldera, Bali, Indonesia: compositional variation of two facies, large-volume dacitic ignimbrites. Indonesian J. Geoscience 2, 2, p. 111-124.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/224/196)
(Large Batur caldera is source of two major ignimbrite eruptions of similar dacitic-rhyodacitic composition, with combined volumes of ~84 and 19 km3. Batur magma equilibrated at T of 1100- 1300° C and P of 20 kbar)

Takada, A. (2010)- Caldera-forming eruptions and characteristics of caldera volcanoes in the Sunda Arc, Indonesia. J. Geol. Soc. Japan 116, 9, p. 473-483. *(in Japanese, with English abstract)*
(online at: www.jstage.jst.go.jp/article/geosoc/116/9/116_9_473/_pdf)
(Discussion of caldera-formining eruptions in Sunda Arc (Krakatau, Tambora, Rinjani, etc.))

Takada, A., T. Yamamoto, N. Kartadinata, A. Budianto, A. Munandar, A. Matsumoto, S. Suto & M.C. Venuti (2000)- Eruptive history and magma plumbing system of Tambora volcano, Indonesia. Res. Volc. Hazard Assess. in Asia, ITIT Japan, p. 42-79.

Taneda, S. (1961)- Petrochemical study on the volcanic rocks of Indonesia. Science Repts. Faculty of Science, Kyushu University, Geology, 5, 4, p. 181-195.

Taneda, S. (1963)- Petrochemical studies on the active volcanoes in Eastern and Southeastern Asia. Bull. Volcanology 26, 1, p. 415-430.

('Alkali-lime index' decreases inward from outer zone of the arcuate zone in volcanic arcs of Kamchatka, Kurile Islands, Japan and Indonesia Islands)

Taverne, N.J.M. (1923)- Vulkanologie in Nederlandsch Indie. De Mijningenieur 4, p. 69-98.
('Volcanology in the Netherlands Indies')

Ter Braake, A.L. (1945)- Volcanology in the Netherlands Indies. In: P. Honig & F. Verdoorn (eds.) Science and scientists in the Netherlands Indies, Board for Netherlands Indies, Surinam and Curacao, New York, p. 22-35.
(Brief review of active volcanism in Indonesia)

Tjia, H.D. (1967)- Volcanic lineaments in the Indonesian island arcs. 11th Pacific Science Congress, Tokyo 1966, Bull. Volcanologique 31, 1, p. 85-96.
(More than 400 linear arrangements of active volcanic centers of Indonesia. Subdivided into small (on the same volcano), medium (same volcanic range), and large (connections between volcanic loci on separate cones or ranges). >70% of lineaments classified as first and second order shear, tension, and extension directions. Most volcanic lineaments along narrow zones of weakness, related to regional structure)

Tjia, H.D. (1968)- Volcanic lineaments in the Indonesian island arcs. Pacific Geology 1, p. 175-182.
(Same paper as Tjia 1967, above)

Tjia, H.D. (1969)- Breaks in slope on strato-volcanoes. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 2, 3, p. 35-40.
(Many stratovolcanoes of Indonesia have two slope breaks, separating three slope segments: uppermost slope of 27-30° (angle of repose of young pyroclastics), middle slope 7-11° (area of common lahars) and lower slopes 3-4° (flood-laid sediments))

Tjia, H.D. & R.F. Muhammad (2008)- Blasts from the past impacting on Peninsular Malaysia. Bull. Geol. Soc. Malaysia 54, p. 97-102.
(online at: www.gsm.org.my/products/702001-100478-PDF.pdf)
(At Plio-Pleistocene transition 3 large volcanic centres in Barisan Mts. (Sumatra) began producing large amounts of felsic tephra and pyroclastic flows. At Toba perhaps 4 paroxysmal events between 1.9 Ma- ~30 ka. Centres marked by 100's of m of ignimbrite, pyroclastic tuffs and air-fall tephra. Air-fall tuff identified throughout Peninsular Malaysia, up to 1m thick and generally attributed to single 'Toba eruption' at 70-75 ka, but possibly multiple eruptions)

Turner, S. & J. Foden (2001)- U, Th and Ra disequilibria, Sr, Nd and Pb isotope and trace element variations in Sunda arc lavas: predominance of a subducted sediment component. Contrib. Mineralogy Petrology 142, p. 43-57.
(Isotope and major and trace element data from 19 lavas along Sunda arc. Lavas range in SiO2 from 49-75%. Important shallow-level contamination by ancient crustal materials in Sumatra. Little evidence for any effect of Australia-Indonesia collision on composition of lavas. Across-arc trends in lava composition indicate increasing relative contribution from subducted sediment)

Turner, S., J. Foden, R. George, P. Evans, R. Varne, M. Elburg & G. Jenner (2003)- Rates and processes of potassic magma evolution beneath Sangeang Api volcano, East Sunda arc, Indonesia. J. Petrology 44, 3, p. 491-516.
(online at: http://petrology.oxfordjournals.org/content/44/3/491.full.pdf+html)
(Sangeang Api active volcano at NE side of Sumbawa. High K, silica-undersaturated, with mafic-ultramafic (pyroxenite)and gabbroic xenoliths)

Umbgrove, J.H.F. (1930)- Het vulkaaneiland Oena-Oena (Noord Celebes). Leidsche Geol. Mededelingen 3, 5, p. 249-258.
(online at: www.repository.naturalis.nl/document/549452)

('The volcanic island Una Una (N Sulawesi)'. Profile is of an 'older' volcano. Erupted in 1898. Typical lahars present. Crater floor flat with lava dome. Some coral growth on submarine slope, but no true reefs)

Umbgrove, J.H.F. (1945)- Different types of island-arcs in the Pacific. The Geographical J. 106, p. 198-209.
(W Pacific- Indonesia island arcs associated with deep continent-ward dipping shear plane and deep trench along outer sides (came very close to characterizing a subduction zone, long before plate tectonic theory was formulated; JTvG). Three types island arcs: double arcs (Indonesia), pseudo-single arcs (Kurile-Aleutian) and single (Marianas- Bonin) arcs)

Van Bemmelen, R.W. (1929)- Het caldera probleem. De Mijningenieur 10, 5, p. 101-112.
('The caldera problem'. Model for creation of calderas by volcano collapse after major explosive 'emptying-out' eruption, with reference to mainly Indonesian volcanoes (Toba, Tengger, Krakatau, etc.)

Van Bemmelen, R.W. (1931)- Positieve en negatieve vulkaanvormen. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Amsterdam, 2, 48, p. 1-9.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001675001:pdf)
('Positive and negative volcano forms'. No figures)

Van Bemmelen, R.W. (1932)- Over de genetische classificatie van negatieve vulkaanvormen. Geologie en Mijnbouw 10,19, p. 187-193.
(online at: https://drive.google.com/file/d/1jRqaykbyXVsMRHh3XHXChtFN7HbN4pCo/view)
('On the genetic classification of negative volcano forms'. Discussion of earlier papers on the 'caldera problem' by Escher, Sandberg, Tanakadate, van Bemmelen, Neumann van Padang and Van den Bosch. No figures)

Van Bemmelen, R.W. (1938)- On the origin of the Pacific magma types in the volcanic inner arc of the Soenda Mountain System. De Ingenieur in Nederlandsch-Indie (IV), 5, 1, p. 1-15.
(Discussion on origin of Miocene and younger calc-alkaline or Pacific magmatism on S Sumatra (Barisan Mts.) and Java (Bantam intrusions and Merawan granite batholith))

Van Bemmelen, R.W. (1943)- Register of the localities of volcanic activity in the East Indian Archipelago. Bull. East Indian Volcanological Survey 95-98 (1941), p. 5-14.
(Inventory of 130 active volcanoes in Indonesia)

Van Bemmelen, R.W. (1949)- Volcanism. Chapter III in Van Bemmelen (1949)- The geology of Indonesia, vol. 1A, The Hague, p. 188-256.
(Review of active volcanism (177 volcanoes), products volcanic eruptions, composition of volcanic products and distribution and composition of associated igneous rocks)

Van Bemmelen, R.W. (1949)- Report on the volcanic activity and volcanological research in Indonesia during the period 1936-1948. Bull. Volcanologique, ser. 2, 9, 1, p. 3-28.
(Summary of activity of Indonesia's 130 active volcanoes from 1936-1948. Detailed records collected by Volcanological Survey until Japanese occupation in 1942; after that limited information, mainly from Java)

Van Bemmelen, R.W. (1961)- Volcanology and geology of ignimbrites in Indonesia, North Italy, and the USA. Geologie en Mijnbouw 40, 12, p. 399-411.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0U2R2R3pNcmtqcWM/view)
(Same title as Van Bemmelen 1963. On Java- Sumatra three Cenozoic pulses of uplift with intrusions and extrusions of acid magmas. Cenozoic deposits start with deposition of Eocene quartz sandstones and marine sediments without tuffaceous components. This was followed by Oligocene- E Miocene 'Old-Andesite' volcanoes, which are largely submarine and represent first cycle of andesitic, calc-alkaline Pacific volcanism. M Miocene second pulse of uplift with formation of proto-Semangko rift with acid magma on Sumatra (between E Miocene Telisa and M Miocene Lower Palembang beds. In Mio-Pliocene time subsidence again prevailed in Sumatra-Java belt. Andesitic volcanism resumed, forming 2nd Andesite Fm (M Palembang Beds of Sumatra,

Bentang Beds, etc of Java). At end Tertiary a third pulse of orogenic uplift, creating present Sumatra-Java geanticline and again accompanied by rifting and voluminous outbursts of acid pumiceous tuffs on Sumatra)

Van Bemmelen, R.W. (1963)- Volcanology and geology of ignimbrites in Indonesia, North Italy, and the U.S.A.. Bull. Volcanologique, ser. 2, 25, 1, p. 151-173.
(Same as Van Bemmelen 1961. Sumatra -Java arc of Indonesia three pulses of orogenic uplift after its Mesozoic geosynclinal subsidence. All three accompanied by rise and occasional ignimbritic eruptions of acid magma. 'Normal' igneous rocks of intermediate composition erupted during intervening periods)

Van Bemmelen, R.W. (1971)- Four volcanic outbursts that influenced human history. Toba, Sunda, Merapi and Thera. In: Acta First Int. Scientific Congress on the Volcano of Thera, Archaeological Service of Greece, Athens 1971, p. 5-50.

Van Bergen, M.J., R.D. Erfan, T. Sriwana, K. Suharyono, R.P.E. Poorter, J.C. Varekamp et al. (1989)- Spatial geochemical variations of arc volcanism around the Banda Sea. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 313-322.
(Active volcanoes of E Sunda Arc and Banda Arc 100-250 km above Benioff zone. Wide range of lavas, from are-tholeiitic (low-K) to leucite-bearing (alkaline) suites. Variations along and across arc. For volcanoes with similar distance to Benioff zone potassium and other incompatible elements progressively increase towards collision area near Timor, and close to Timor also increasing with increasing distance to Benioff zone)

Van Bergen, M.J., P.Z. Vroon & J.A. Hoogewerff (1993)- Geochemical and tectonic relationships in the east Indonesian arc-continent collision region: implications for the subduction of the Australian passive margin. Tectonophysics 223, 1-2, p. 97-116.
(Variations in isotope signatures along E Sunda Arc show maximum magma source contamination near extinct sector N of Timor. Increasing contribution of subducted continental material in direction of collision. Leading part of Australian continental margin reached magma generation zone in E Sunda- W Banda arc, implying subduction of continental margin deeper than 100 km)

Van Bergen, M.J., P.Z. Vroon, J.C. Varekamp & R.P.E. Poorter (1992)- The origin of the potassic rock suite from Batu Tara volcano (East Sunda arc, Indonesia). Lithos 28, p. 261-282.
(Batu Tara is active potassic volcano in E Sunda arc. Leucite-bearing rock suite two groups, suggesting parental magmas with different mantle origins. Trace element and isotopic compositions consistent with involvement of subducted sedimentary/crustal component as well as MORB and OIB mantle)

Van Tongeren, W. (1938)- Contributions to the knowledge of the chemical composition of the earth's crust in the East Indian Archipelago. I. The spectrographic determination of the elements according to arc methods in the range 3600-5000A., II. On the occurrence of rarer elements in the Netherlands East Indies. Doct. Thesis, University of Utrecht, Centen, Amsterdam, p. 1-181. *(Unpublished)*
(Incl. observation that Tin Islands granites are rel. rich in Rare Earth Elements)

Varekamp, J. C., M.J. Van Bergen, P.Z. Vroon, R.P.E. Poorter, A.D Wirakusumah, R. Erfan, K. Suharyono & T. Sriwana (1989)- Volcanism and tectonics in the Eastern Sunda Arc, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, p. 303-312.
(Four segments distinguished by Sr isotopes in Java-Sunda-Banda volcanic arc. Adonara-Pantar segment between Flores and Alor studied here, transition between W Banda Arc volcanics (in E) with clear 'continental' signature and Sunda Arc volcanics (in W) with little evidence of subduction of continental material)

Varne, R. (1985)- Ancient subcontinental mantle; a source for K-rich orogenic volcanics. Geology 13, 6, p. 405-408.
(Mafic volcanics, ranging from calc-alkaline basalts through shoshonitic trachybasalts to leucitites, along E Sunda Arc arc from Bali (Agung) to Flores. With 3-fold enrichment in K, Rb, Sr, Ba, La and Nb, increasing toward collision zone, correlating with increasing 87Sr/86Sr and decreasing 143Nd/144Nd values. K-rich material derived from ancient subcontinental mantle. E Sunda K-rich mafic volcanism first appeared after

collision began. Before collision, ancient NW Australian mantle erupted K-rich, diamond-bearing ultramafics with high Sr and low Nd ratios, part of ultrapotassic continental volcanic association)

Varne, R. & J.D. Foden (1986)- Geochemical and isotopic systematics of Eastern Sunda Arc volcanics: implications for mantle sources and mantle mixing processes. In: F.C. Wezel (ed.) The origin of arcs, Developments in Geotectonics 21, Elsevier, p. 159-189.

Verstappen, H.Th. (1963)- Geomorphological observations on Indonesian volcanoes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 80, 3, p. 237-251.

Verbeek, R.D.M. (1885)- Krakatau. Landsdrukkerij, Batavia, Indonesia, p. 1-567.
(Dutch and French editions; With two Atlas volumes)
(Dutch text online at: https://books.google.com/books/about/Krakatau.html?id=j5Q0AQAAMAAJ)
(French text volume online at: https://archive.org/details/krakatau00verbgoog)
(Classic account of the 1883 cataclysmic eruption of Krakatoa volcano in Sunda Straits and its effects (incl. human casualties, tuffs and tsunami deposits, etc.))

Verstappen, H.Th. (2005)- Volcanic islands. In: A. Gupta (ed.) The physical geography of Southeast Asia, Oxford University Press, p. 142-156.
(Brief review of distribution of volcanic islands and volcanic landforms in SE Asia)

Vidal, C.M., J.C. Komorowski, N. Metrich, I. Pratomo, N. Kartadinata, O. Prambada, A. Michel, G. Carazzo, F. Lavigne, J. Rodysill, K. Fontijn & Surono (2015)- Dynamics of the major plinian eruption of Samalas in 1257 A.D. (Lombok, Indonesia). Bull. Volcanology 77, p. 73-
(Caldera-forming eruption of Samalas (Lombok) in 1257 AD associated with largest sulphate spike of last 2 ky recorded in polar ice cores. Four-phase continuous eruption produced 33-40 km3 dense rock equivalent of deposits, mainly pumiceous plinian fall products, pyroclastic density current deposits and ash that could be identified 660 km from source. Eruption dynamics consistent with efficient dispersal of sulphur-rich aerosols across globe)

Vidal, C.M., N. Metrich, J.C. Komorowski, I. Pratomo, A. Michel, N. Kartadinata, V. Robert & F. Lavigne (2016)- The 1257 Samalas eruption (Lombok, Indonesia): the single greatest stratospheric gas release of the Common Era. Nature Scientific Reports 6, 34868, p. 1-13.
(online at: https://www.nature.com/articles/srep34868.pdf)
(Great 1257 eruption of Samalas (Lombok) released enough sulfur and halogen gases into stratosphere to produce reported global cooling during second half of 13th century)

Von Rad, U., K.P. Burgath, M. Pervaz & H. Schulz (2002)- Discovery of the Toba Ash (c. 70 ka) in a high-resolution core recovering millennial monsoonal variability off Pakistan. In: P.D. Clift et al. (eds.) The tectonic and climatic evolution of the Arabian Sea region, Geol. Soc., London, Spec. Publ. 195, p. 445-461.
(Toba Ash layer in NE Arabian Sea SW of Pakistan near base of 20.2m piston core. Also two younger ash layers, presumably from Indonesian volcanoes. Toba event (70 ±4 ka BP) well documented in Arabian Sea and Bay of Bengal records at end of Oxygen Isotope Stage 20. With map of known Toba ash distribution)

Vroon, P.Z. (1992)- Subduction of continental margin material in the Banda Arc, Eastern Indonesia. Sr-Nd-Pb isotope and trace-element evidence from volcanics and sediments. Ph.D. Thesis University of Utrecht, Geologica Ultraiectina 90, p. 1-205.
(online at: http://dspace.library.uu.nl/handle/1874/316569)
(Isotope and trace element geochemistry study of eastern part of Banda Arc, in area controlled by active arc-continent collision (Romang, Damar, Teon, Nila, Serua, Manuk, Banda). Composition of samples from 7 volcanoes suggests subducted continental sedimentary material in magma increases from <1% in NE to 5-10% in SW)

Vroon, P.Z., D. Lowry, M.J. van Bergen, A.J. Boyce & D.P. Mattey (2001)- Oxygen isotope systematics of the Banda Arc: low d18O despite involvement of subducted continental material in magma genesis. Geochimica Cosmochimica Acta 65, 4, p. 589-609.
(Oxygen isotope data for 60 volcanic rocks and 15 sediments along entire Banda Arc. Generally low d18O values (excluding Serua, Ambon) compatible with 1-5% addition of subducted continental material to depleted MORB-type source in sub-arc mantle. Assimilation of up to 20% and 80% arc-crust material thought to be cause of high d18 O values of Serua and Ambon)

Vroon, P.Z., M.J. van Bergen & E.J. Forde (1996)- Pb and Nd isotope constraints on the provenance of tectonically dispersed continental fragments in East Indonesia. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 445-453.
(Pb-Nd isotopes of igneous rocks on microcontinents are indicators of provenance: Ambon-Seram= S. New Guinea, Bacan= N Australia or W New Guinea, Banda Ridges= Pacific New Guinea, Sumba= Sundaland)

Vroon, P.Z., M.J. van Bergen, G.J. Klaver & W.M. White (1995)- Strontium, Neodymium and lead isotopic and trace-element signatures of the East Indonesian sediments: provenance, and implications for Banda Arc magma genesis. Geochimica Cosmochimica Acta 59, 12, p. 2573-2598.
(Trace elements and Sr-Nd-Pb isotopes show 4 major provenance areas: N New Guinea + Seram, S New Guinea, Timor, North Australia)

Vroon, P.Z., M.J. van Bergen, W.M. White & J.C. Varekamp (1993)- Sr-Nd-Pb isotope systematics of the Banda Arc, Indonesia: combined subduction and assimilation of continental material. J. Geophysical Research 98, B12, p. 22349-22366.
(Isotope datas for six active and one extinct volcano over Banda Arc. Rock types low-K tholeiitic in NE, high-K calc-alkaline in SW. Volcanoes in NE 'normal' arc signatures, in SW extreme values. Evidence for contribution of subducted continent-derived material to magma sources. Addition of 0.1-2% local sediment in NE Banda arc, and 1-3% in SW Banda Arc to Indian Ocean MORB source explain isotope trends. Serua and Romang require >5% sediment)

Wasmund, E. (1934)- Vulkano-telmatischer Melanientuff am Caldera-See Danau Batur auf Bali (Insulinde). Archiv fur Hydrobiologie, Suppl.-Band 13, p. 292-315.
('Vulkano-telmatic melanien tuff at the Danau Batur caldera lake on Bali (Indonesia)'. Recent tuffs of Batur)

Watanabe, K., T. Yamanaka, A. Harijoko, C. Saitra & I.W. Warmada (2010)- Caldera activities in North Bali, Indonesia. J. Southeast Asian Applied Geol. (UGM) 2, 3, p. 283-291.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-2/no-3/jsaag-v2n3p283.pdf)
(Two Quaternary caldera systems on Bali: Batur caldera and Buyan-Bratan caldera)

Westerveld, J. (1954)- Radioactivity and chemistry of some Indonesian eruptive rocks. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, Ser. 1, 20, 4, p. 1-52.
(online at: www.dwc.knaw.nl/DL/publications/PU00010947.pdf)
(Four Mesozoic- Tertiary concentric belts of fold structures and plutonic rocks in Indonesia, connecting Burma with Philippines, each with own types of plutonic rocks and ore deposits: (1) Jurassic Malayan orogen of Malay Peninsula, Tin islands, possibly W, SW and C Kalimantan; (2) Late Cretaceous Sumatra orogen of Sumatra, C Java, Meratus; (3) M Miocene Soenda orogen (should be E Miocene; 'Old Andesites'; JTvG) of SW Sumatra, Java S Mountains, volcanic Lesser Sunda islands) and (4) the active Moluccan orogen. Late Quaternary volcanics two groups, 'Pacific' calc-alkaline and 'Mediteranean' potassic. Analyzed 157 samples for radioactivity and bulk chemical composition. Mesozoic granites from Tin islands very different petrochemistry from Kalimantan (Schwaner Mts, etc.) granites)

Westgate, J.A. P.A.R. Shane, N.J.G. Pearce, W.T. Perkins, R. Korisettar, C.A. Chesner et al. (1998)- All Toba tephra occurrences across Peninsular India belong to the 75,000 yr B.P. eruption. Quaternary Research 50, 1, p. 107-112.

Wetzel, A. (2009)- The preservation potential of ash layers in the deep-sea: the example of the 1991-Pinatubo ash in the South China Sea. Sedimentology 56, p. 1992-2009.
(After 1991eruption of Mount Pinatubo, Philippines, volcanic ash transported W to S China Sea in atmospheric plume, formed up to 10cm thick graded layer over >400,000 km2. Immediately after deposition surviving deep-burrowing animals re-opened connection to sea floor. Later, small meiofauna and macrofauna recolonized sea floor, mixing newly deposited organic material with underlying ash. Ash deposits <1mm thick not often observed as continuous layer when cored 6 years after eruption; ash ~2mm thick now patchily bioturbated. Areas affected by deposition of turbidites ash layer often preserved due to rapid burial)

Wheller, G.E. (1986)- Petrogenesis of Batur caldera, Bali, and the geochemistry of Sunda-Banda arc basalts. Ph.D. Thesis, University of Tasmania, p. 1-156. *(Unpublished)*

Wheller, G.E. & R. Varne (1986)- Genesis of dacitic magmatism at Batur volcano, Bali, Indonesia: Implications for the origin of stratovolcano calderas. J. Volcanology Geothermal Res. 28, p. 363-378.
(Batur active stratovolcano on Bali, Indonesia, with large caldera correlated with eruption at ~23,700 years ago that formed thick ignimbrite sheet. Formation of caldera due to change in lava composition from basaltic-andesitic to dacitic. Dacitic rocks characteristics consistent with origin by crystal-liquid fractionation from more mafic parent magmas in shallow chamber, possibly at 1.5 km depth and 1000-1070°C)

Wheller, G.E., R. Varne, J.D. Foden & M.J. Abbott (1987)- Geochemistry of Quaternary volcanism in the Sunda- Banda arc, Indonesia, and three-component genesis of island-arc basaltic magmas. J. Volcanology Geothermal Res. 32, 1-3, p. 137-160.
(Excluding Sumatra and Wetar (mainly dacitic and rhyolitic volcanics), four geochemical arc sectors in Sunda-Banda arc: W Java, Bali, Flores (each more K-rich eastwards, culminating in leucitite volcanoes Muriah, Soromundi, Sangenges and Batu Tara). Dominant source component common to all sectors probably peridotitic mantle. Second component, with high 87Sr/86Sr value, may be crustal material, most apparent in Banda sector, but also present to lesser extents in W Java and Flores sectors)

Whelley, P.L., C.G. Newhall & K.E. Bradley (2015)- The frequency of explosive volcanic eruptions in Southeast Asia. Bull. Volcanology 77, 1, p. 1-11.
(online at: http://link.springer.com/article/10.1007/s00445-014-0893-8?view=classic)
(~733 active and potentially active volcanoes in SE Asia region, of which 70 have erupted in last 100 years)

Whitford, D.J. (1975)- Strontium isotopic studies of the volcanic rocks of the Sunda arc, Indonesia, and their petrogenetic implications. Geochimica Cosmochimica Acta 39, p. 1287-1302.
(Pleistocene-Recent lavas from Sunda arc range from island arc tholeiitic series, through calc-alkaline to high-K alkaline rocks. Calc-alkaline suite decrease in 87Sr/86Sr from W Java to Bali with some evidence for increasing 87Sr/86Sr with increasing depth to Benioff zone. 87Sr enrichment due to isotopic equilibration of oceanic crust with sea water and disequilibrium melting in slab. Calc-alkaline lavas with high ratios best explained by sialic contamination, or presence of alkali basalt as component of downgoing slab. Sr isotopic data for high-K alkaline lavas suggest mantle origin. High ratio in Lake Toba rhyolite implies crustal origin)

Whitford, D.J., W. Compston, I.A. Nicholls & M.J. Abbott (1977)- Geochemistry of Late Cenozoic lavas from Eastern Indonesia: role of subducted sediments in petrogenesis. Geology 5, p. 571-575.
(Late Cenozoic basalts N of Timor from Solor to Serua primitive tholeiitic, but associated more silicic rocks suggest involvement of continental crust or sediment)

Whitford, D.J. & P.A. Jezek (1979)- Origin of Late Cenozoic lavas from the Banda arc, Indonesia: trace element and Sr isotope evidence. Contrib. Mineralogy Petrology 68, p. 141-150.
(Active arc located on what appears to be oceanic crust whereas associated subduction trench is underlain by continental crust. Recent lavas predominantly andesitic, tholeiitic in N to calc-alkaline varieties in S islands. High 87Sr/86Sr ratios in calc-alkaline lavas interpreted to result from mixing of sialic component with mantle derived component. Likely cause is subduction and melting of sea-floor sediments or continental crust)

Whitford, D.J. & P.A. Jezek (1982)- Isotopic constraints on the role of subducted sialic material in Indonesian island-arc magmatism. Geol. Soc. America (GSA) Bull. 93, 6, p. 504-513.
(In Banda Arc continental material (probably subducted sediments) appears to be subducting beneath volcanic arc that is underlain by oceanic crust)

Whitford, D.J. & I.A. Nicholls (1975)- Geochemistry of the volcanic rocks of the Sunda island arc of Indonesia. Exploration Geophysics 6, 2/3, p. 76-77. *(Abstract only)*
(Sunda volcanic arc from N of Sumatra, through Java, Bali, Lombok, Sumbawa, Flores, Lesser Sunda Islands, after which becomes Banda arc. Variety of tectonic environments. Sumatra crust ~40 km thick with Paleozoic granites. Benioff zone only to ~200 km. Beneath Java crust thinner and younger; oldest exposed rocks Mesozoic, and Benioff zone to ~600km beneath Java Sea to N. Further E, crust thinner (~15 km), oceanic in velocity structure and Benioff zone to great depths)

Whitford, D.J. & I. A. Nicholls (1976)- Potassium variation in lavas across the Sunda arc in Java and Bali. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier, Amsterdam, p. 63-75.
Sunda arc of Java-Bali relatively simple tectonic setting above N-dipping Benioff seismic zone. Quaternary lavas of 'normal island arc association' (tholeiites to high-K calc-alkaline lavas) over Benioff zone depths from 120-250 km. High-K alkaline lavas above Benioff zone depths >300 km. Magmas derived mainly from mantle wedge above Beioff zone, where modified by water and/or melt from the subducted oceanic crust)

Whitford, D.J., I.A. Nicholls & S.R. Taylor (1979)- Spatial variations in the geochemistry of Quaternary lavas across the Sunda arc in Java and Bali. Contrib. Mineralogy Petrology 70, 3, p. 341-356.
(Island arc lavas range from tholeiites to high-K calc-alkaline lavas over Benioff zone depths 120 to 250 km. More abundant calc-alkaline lavas between these extremes. High-K alkaline lavas over Benioff zone depths over 300 km. Incompatible elements increase with depth to seismic zone. Java and Bali lavas geochemistry best explained by combination of mantle source melting and partial melting of that material at progressively greater depths. Primary tholeiitic magmas may form by 20-25% melting at 30-40 km, primary high-K calc-alkaline magmas by 5-15% melting at 40-60 km, and primary alkaline magmas by 5% melting at 80-90 km)

Whitford, D.J. & W.M. White (1981)- Neodymium isotopic composition of Quaternary island arc lavas from Indonesia. Geochimica Cosmochimica Acta 45, p. 989-995.
(143Nd/144Nd ratios in Quaternary lavas from Java and Banda arc exhibit inverse correlation with 87Sr/86Sr. Indonesian samples resemble Andean rather than island arc lavas)

Wichmann, C.E.A. (1910)- Uber den Vulkan Soputan in der Minahassa. Zeitschrift Deutschen Geol. Gesellschaft, Monatsberichte 62, 8, p. 589-595.
('On the Soputan volcano in the Minahasa', NE Sulawesi. Critique of Ahlburg (1910) description of Soputan eruption history on date of last major eruption (1828 or 1838), etc.)

Wichmann, C.E.A. (1911)- Uber die Ausbruche des Soputan in der Minahassa. Zeitschrift Deutschen Geol. Gesellschaft, Monatsberichte 63, 4, p. 228-232.
(online at: https://www.biodiversitylibrary.org/item/182872page/926/mode/1up)
('On the eruptions of the Soputan in the Minahasa', NE Sulawesi'. Continuation of unusually harsh critique of Ahlburg 1910 papers. Nothing new here)

Wichmann, C.E.A. (1918)- Over de vulkanen van het eiland Tidore (Molukken). Verslagen Kon. Akademie Wetenschappen, Amsterdam 27, 9p.
('On the volcanoes of Tidore island (Moluccas)')

Wichmann, C.E.A. (1918)- On the volcanoes in the island of Tidore island. Proc. Kon. Akademie Wetenschappen, Amsterdam 21, p. 983-990.
(online at: www.dwc.knaw.nl/DL/publications/PU00012167.pdf)
(English version of Wichmann (1918). Tidore Island composed of several andesitic volcanic centers, the tallest Matubu ~1730m high, others ~400-800m high)

Wickman, F.E. (1966)- Repose-period patterns of volcanoes. II. Eruption histories of some East Indian volcanoes. Arkiv Mineralogi Geologi 4, 4, p. 303-317.

Wille, M., O. Nebel, T. Pettke, P.Z. Vroon, S. Konig & R. Schoenberg (2018)- Molybdenum isotope variations in calc-alkaline lavas from the Banda arc, Indonesia: assessing the effect of crystal fractionation in creating isotopically heavy continental crust. Chemical Geology 485, p. 1-13.
(Large Mo isotope variability in Banda Arc convergent margin lavas)

Willems, H.W.V. (1939)- Over de magmatische provincien in Nederlandsch Oost-Indien. Geologie en Mijnbouw 1, 3, p. 47-55.
(online at: https://drive.google.com/file/d/1OPkJAkiygxWc4S32mpkzBjgyUQxhm_ef/view)
('On the magmatic provinces in the Netherlands East Indies'. Not overly useful)

Willems, H.W.V. (1940)- On the magmatic provinces in the Netherlands East Indies. Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 12, 3, p. 289-477.
(Mainly listings of chemical analyses of 1220 volcanic rock samples)

Winchester, S. (2003)- Krakatoa: the day the world exploded, 27 August 1883. HarperCollins Publishers, New York, p. 1-416.
(Popular, but thorough account of the 1883 eruption of Krakatoa volcano in Sunda Strait that killed nearly 40,000 people)

Wing Easton, N. (1929)- Volcanic science in past and present. In: L.M.R. Rutten (ed.) Science in the Netherlands Indies, Kon. Akademie Wetenschappen, Amsterdam, p. 80-100.
(Brief overview of volcano studies in Indonesia until 1929)

Wirakusumah, A.D. (ed.) (2012)- Gunung api, ilmu dan aplikasinya. Centre for Geological Survey, Bandung, Spec. Publ., p.
('Volcanoes, science and its applications')

Wirakusumah, A.D.& H. Rachmat (2017)- Impact of the 1815 Tambora eruption to global climate change. In: 2nd Int. Conf. Transdisciplinary research on environmental problems in Southeast Asia (TREPSEA), Bandung 2016, IOP Conf. Series, Earth Environm. Science, 71, 012007, p. 1-9.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/71/1/012007/pdf)
(April 1815 paroxysmal destructive eruption of Tambora formed caldera and emitted 60-80 megatons of SO2 to stratosphere. SO2 circled the world and oxidized to form H2SO4, an aerosol limiting sunlight to reach earth surface. 1816 was year without summer in Europe, epidemic diseases in Benggal, etc.)

Wood, G.D. (2014)- Tambora: the eruption that changed the world. Princeton University Press, p. 1-312.
(Review of 1815 eruption of Tambora volcano on Sumbawa island and its global impact)

Xia, L. & R. Clocchiatti (1986)- Magmatic inclusions in phenocrystals from andesitic lavas, Krakatau volcano, Indonesia. Chinese J. Geochemistry 5, 4, p. 331-346.

Yokoyama, I. & S. Siswowidjojo (1970)- A gravity survey on and around Batur Caldera, Bali. Bull. Earthquake Res. Inst. 48, p. 317-329.

Zaennudin, A. (2010)- The characteristic of eruption of Indonesian active volcanoes in the last four decades. J. Lingkungan Bencana Geol. 1, 2, p. 113-129.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/287)
(Indonesia has 129 active volcanoes (~13% of world). Three types: A (79) with recorded eruptions since 1600; B (29) with solfataric and or fumarolic activity and crater; C (21) in solfataric stage, but volcanic edifice not clear)

Zelenov, K.K. (1964)- The submarine volcano Banua Wuhu, Indonesia. Inst. Techn Bandung (ITB), Contrib. Dept. Geology 55, p. 19-34.
(Submarine volcano, rising >400m from sea floor in Sangihe Islands, Moluccas Sea. Erupted in 1918)

Zen, M.T. (1963)- On the roots of volcanoes. Contr. Dept. Geologi Inst. Teknologi Bandung 53, p. 49-72.

Zen, M.T. (1964)- The volcanic calamity in Bali in 1963. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 81, p. 92-100.

Zen, M.T. (1966)- The formation of various ash flows in Indonesia. Bulletin Volcanologique 29, 1, p. 77-78.
(Abstract and discussion from IAV Int. Symposium on Volcanology, New Zealand 1965. Important difference in mechanism of formation between ash-flow tuff sheets common on Sumatra and minor ash flows of nuee ardentes type likeMerapi and Mt Agung in Java and Bali. Sumatra 'welded tuffs' are collapsed froth flows emitted from fissures and related to emplacement of granite batholiths during orogenic uplift in Plio-Pleistocene time)

Zen, M.T. (1968)- On the possible relationship between the origin of andesitic rocks and the growth of continents. Contr. Dept. Geology, Institute Technology Bandung (ITB) 6, p. 23-41.

Zen, M.T. (1969)- The occurrence of hill swarms and wave-like undulations around some Indonesian volcanoes. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung 2, 3, p. 41-49.
(Three types of hills around Indonesian volcanoes: (1) parasitic volcanic cinder cones (Slamet, Lamongan, etc.), (2) hillocks formed by lahar deposits (e.g. Galunggung, Raung, etc.), and (3) anticlinal structures resulting from collapse of volcanic cones or squeezing of soft sediment by weight of volcano itself (N floor Ungaran, Gendol SW of Mt Merapi, N of Tangkuban Perahu, N of Arjuna, etc.))

Zielinski, G.A., P.A. Mayewski, L.D. Meeker, S. Whitlow, M. Twickler & K. Taylor (1996)- Potential atmospheric impact of the Toba mega-eruption. Geophysical Research Letters 23, 8, p. 837-840.
(~6-year long period of volcanic sulfate recorded in Greenland GISP2 ice core at ~71.1 ± 5 ka may reflect Toba mega-eruption. Deposition of these aerosols at beginning of ~1000-year long stadial event, but not immediately before longer glacial period beginning ~67.5 ka. Toba aerosols may be responsible for enhanced cooling during initial 200 yrs of ~1000-year cooling event ('volcanic winter'))

Zwierzycki, J. (1923)- Kilka uwag o wulkanach Archipelagu Malajskiego. Kosmos 48. Krakow, p.
('Some notes about the volcanoes of the Malay Archipelago'. In Polish)

I.4. Modern depositional environments, Climate, Oceanography, Indonesian Throughflow

Ahmad, S.M., F. Guichard, K. Hardjawidjaksana, M.K. Adisaputra & L.D. Labeyrie (1995)- Late Quaternary paleoceanography of the Banda Sea. Marine Geology 122, p. 385-397.
(Oxygen and carbon isotopes of benthic (Uvigerina, Cibicidoides) and planktonic (Gs. ruber) foraminifera from Banda Sea deep-sea over last 180 kyr indicate increase in Banda surface and deep water salinity during glacial conditions. Planktonic data influenced by precession (23 kyr periodicity) while benthic values reflect intermediate Pacific water fluctuations. Banda Sea records indicate general good ventilation. Deepening of lysocline resulted in higher carbonate content during glacial periods, similar to N Pacific)

Aldrian, E. & R.D. Susanto (2003)- Identification of three dominant rainfall regions within Indonesia and their relationship to sea-surface temperature. Int. J. Climatology 23, p. 1435-1452.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/joc.950/epdf)
(Three rainfall regions in Indonesia, related to island topography and sea-surface Temperature variability: (A) S Indonesia (S Sumatera to Timor, S Kalimantan, Sulawesi and part of Irian Jaya); (B) NW Indonesia (N Sumatra to NW Kalimantan); (C) Maluku and N Sulawesi. All with strong annual and (except A) semi-annual variability. Region C strongest El Nino- Southern oscillation influence)

Alongi, D.M., M. da Silva, R.J. Wasson & S. Wirasantosa (2013)- Sediment discharge and export of fluvial carbon and nutrients into the Arafura and Timor Seas: a regional synthesis. Marine Geology 343, p. 146-158.
(Islands of Timor and New Guinea significant sources of sediment. Most material delivered into Arafura and Timor Seas comes from New Guinea. Island and continental materials overlap with volcanic input from Banda Arc. Discharge from New Guinea and Timor greater than from N Australia)

Alongi, D.M., L.A. Trott, F. Tirendi, A.D. McKinnon & M.C. Undu (2008)- Growth and development of mangrove forests overlying smothered coral reefs, Sulawesi and Sumatra, Indonesia. Marine Ecology Progress Ser. 370, p. 97-109.
(Human-induced shifts from fringing reef-dominated to mangrove-dominated coastal habitats in S Sumatra and SW Sulawesi)

Amijaya, H. & Ngisomuddin (2007)- Textural characteristics of tsunamiite: study on recent tsunami deposit at Pangandaran coast, Ciamis and Parendog coast, Yogyakarta. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali, p. 1103-1109.
(Recent tsunamiites of Java S coast have erosional base, homogeneous m-f sand grain size and no fining-upward trend. Sedimentary structures parallel lamination in lower part and ripples in upper part)

Andersson, H.C. & A. Stigebrandt (2005)- Regulation of the Indonesian Throughflow by baroclinic draining of the North Australian Basin. Deep Sea Research I, 52, 12, p. 2214-2233.
(Mainly low-saline N Pacific water fills upper part of Indonesian seas and downstream buoyant (surface) pool (DBP) that stretches over large part of N Australian Basin. Long-term mean steric sea level in Indonesian seas equal to neighboring Pacific Ocean sea level. Change of steric sea level from Pacific to Indian Ocean sea level at border between DBP and Indian Ocean. Darwin situated inside DBP. Control of ITF set by baroclinic transport capacity of DBP relative to adjacent (Indian Ocean) water. Mean ITF, estimated as outflow from DBP to S Equatorial Current, is about 10 Sv. ITF imprint is fresh and cold. Atmospheric transfer of freshwater to N Pacific and vertical mixing in N Pacific provide driving of mean ITF and ITF is major branch of estuarine-type vertical circulation of N Pacific)

Andruleit, H. (2007)- Status of the Java upwelling area (Indian Ocean) during the oligotrophic northern hemisphere winter monsoon season as revealed by coccolithophores. Marine Micropaleontology 64, p. 36-51.
(Coccolithophores used as indicators for present-day functioning of Java upwelling)

Andruleit, H., A. Luckge, M. Wiedicke & S. Stager (2008)- Late Quaternary development of the Java upwelling system (eastern Indian Ocean) as revealed by coccolithophores. Marine Micropaleontology 69, 1, p. 3-15.

(Coccolithophores help decipher Pleistocene paleoproductivity changes in E Indian Ocean in past 300-65.3 kyr. Core SO139-74KL at seaward limit of fore-arc basin of Indonesian continental shelf, beneath Java upwelling system. Dominated by Florisphaera profunda (41.5%), followed by Gephyrocapsa ericsonii, Emiliania huxleyi and G. oceanica. Warm tropical conditions prevailed throughout)

Arifin, S.R.D. (1996)- Studi paleosalinitas perairan Indonesia sejak Glasial Maksimum terakhir sampai Resen. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 148-159.
('Study of paleosalinity of Indonesian waters from the Last Glacial Maximum until Recent')

Arp, G., A. Reimer & J. Reitner (2003)- Microbialite formation in seawater of increased alkalinity, Satonda Crater Lake, Indonesia. J. Sedimentary Res. 73, p. 105-127.
(Crater lake of Satonda, a small volcanic island 3 km NW of Sumbawa, with red-algal microbial reefs in marine-derived water of increased alkalinity. Potential analogue for ancient microbialites in open-marine facies)

Arp, G., J. Reitner, G. Worheide & G. Landmann (1996)- New data on microbial communities and related sponge fauna from the alkaline Satonda crater lake (Sumbawa, Indonesia). Gottinger Arbeiten Geologie Palaeontologie, Sonderband SB2, p. 1-7.
(Crater lake of Satonda, a small volcanic island 3 km NW of Sumbawa, with high-alkaline water. With well-developed 'stromatolitic' red algal- microbialite reefs with demosponges in upper ~20m)

Ashton, P.S. (2014)- On the forests of tropical Asia- lest the memory fade. Royal Botanic Gardens Kew and Arnold Arboretum, Harvard University, p. 1-670.

Ashton, P.S. (2017)- Patterns of variation among forests of tropical Asian mountains, with some explanatory hypotheses. Plant Ecology Diversity 10, 5-6, p. 361-377.
(online at: https://www.tandfonline.com/doi/abs/10.1080/17550874.2018.142902)
(Review of modern forests zonation in tropical Asia: lowland forests, lower montane forests, upper montane forests, subalpine thicket/ shrublands)

Atmadipoera, A., S.M. Horhoruw, M. Purba & D.Y. Nugroho (2016)- Variasi spasial dan temporal arlindo di Selat Makassar. J. Ilmu dan Teknologi Kelautan Tropis 8, 1, p. 299-320.
(online at: http://journal.ipb.ac.id/index.php/jurnalikt/article/view/13221/10223)
('Spatial and temporal variation of Indonesian Throughflow in the Makassar Strait'. On the main axis of southward jet of Indonesian Throughflow in Makassar Straits, mainly following western shelf slope)

Atmadipoera, A., R. Molcard, G. Madec, S. Wijffels, J. Sprintall, A. Koch-Larrouy, Indra Jaya & A. Supangat (2009)- Characteristics and variability of the Indonesian throughflow water at the outflow straits. Deep Sea Research I, 56, 11, p. 1942-1954.
(Revised structure and variability of Indonesian Throughflow Water in major outflow straits (Lombok, Ombai, Timor))

Atmadipoera, A. & P. Widyastuti (2014)- A numerical modeling study of upwelling mechanism in southern Makassar Strait. J. Ilmu dan Teknologi Kelautan Tropis 6, 2, p. 355-371.
(online at: http://journal.ipb.ac.id/index.php/jurnalikt/article/view/9012/7080)
(On upwelling events in S Makassar Strait during SE Monsoon period, associated with low sea surface temperature and high chlorophyll-a concentrations in seawater. Upwelling controlled by SE monsoon winds and enhanced by Indonesian Throughflow TF Makassar jet that creates large circular eddies flow due to complex topography in triangle area of S Makassar- E Java Sea- W Flores Sea)

Auer, G., D. de Vleeschouwer, R.A. Smith, K. Bogus, J. Groeneveld, P. Grunert, I.S. Castaneda et al. (2019)- Timing and pacing of Indonesian Throughflow restriction and its connection to Late Pliocene climate shifts. Paleoceanography Paleoclimatology 34, 4, p. 635-657.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2018PA003512)

Ayers, J.M., P.G. Strutton, V.J. Coles, R.R. Hood & R.J. Matear (2014)- Indonesian throughflow nutrient fluxes and their potential impact on Indian Ocean productivity. Geophysical Research Letters 41, 14, p. 5060-5067.
(ODP Site U1463 provides record of local surface water conditions and Australian climate in relation to changing ITF connectivity. ITF configuration culminated ~3.54 Ma. Decrease in warm, oligotrophic taxa with shift from Gephyrocapsa to Reticulofenestra and increase of mesotrophic taxa suggest tropical Pacific ITF sources replaced by cooler, fresher, N Pacific waters. After 3.3 Ma restructured ITF established conditions for inception of Sahul-Indian Ocean Bjerknes mechanism and increased response to glacio-eustatic variability)

Bachtiar, A., M. Reza, A. Krisyunianto & Y.S. Purnama (2011)- Sedimentology of Kalianyar Delta, Indramayu, Northwest Java basin: uniques tidal and wave interaction in a supposedly river dominated delta. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-470, 15p.
(Kalianyar Delta modern delta on N coast of Indramayu, NW Java. Morphologically classified as river-dominated 'bird-foot' delta, but field survey common influence of wave and tidal processes)

Bachtiar, A., J. Wiyono, Liyanto, M. Syaiful, Y.S. Purnama et al. (2010)- The dynamic of Mahakam Delta components based on spatial and temporal variations of grab samples, cores, and salinity. Proc. HAGI-SEG Int. Geosciences Conf., Bali 2010, IGCE10-OP-009, 10p.
(Modern Mahakam delta sediments study. Most channel thalwegs devoid of sands; grab samples usually found semi-consolidated clay instead. Active sand transportation and deposition on slopes of point bars and side bars. Shallow cores in lower delta plain generally characterized by clay drapes, suggesting tidal processes)

Baker, E.K., P.T. Harris, J.B. Keene & S.A. Short (1995)- Patterns of sedimentation in the macrotidal Fly River delta, Papua New Guinea. In: B.W. Flemming & A. Bartholomae (eds.) Tidal signatures in modern and ancient sediments, Int. Assoc. Sedimentologists (IAS), Spec. Publ. 24, p. 193-211.

Barmawidjaja, D.M., E.J. Rohling, W.A. van der Kaars, C. Vergnaud Grazzini & W.J. Zachariasse (1993)- Glacial conditions in the northern Molucca Sea region (Indonesia). Palaeogeogr. Palaeoclim. Palaeoecology 101, p. 147-167.
(Core K12 from 3510m water depth N of N Halmahera spans last 27,000 yrs. Palynology suggests glacial time climate drier than today. This and lower sea level resulted in expansion of Lower Montane oak forests on Halmahera. Surface water salinities probably higher. Also well-developed 'Deep Chlorophyll Maximum layer'. With elevated planktonic forams Neogloboquadrina dutertrei and presence of Ng. pachyderma in glacial times (similar to observed in Sulu Sea by Linsley et al. 1985))

Barmawidjaja, D.M., A.F.M de Jong, K. van der Borg, W.A. van der Kaars & W.J. Zachariasse (1989)- Kau Bay, Halmahera, a late Quaternary palaeoenvironmental record of a poorly ventilated basin. In: J.E. van Hinte et al. (eds.) Snellius-II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 591-605.

Barmawidjaja, D.M., A.F.M de Jong, K. van der Borg, W.A. van der Kaars, W.J.M. van der Linden & W.J. Zachariasse (1989)- The timing of postglacial marine invasion of Kau Bay, Halmahera, Indonesia. Radiocarbon 31, 3, p. 948-956.
(Kau Bay, Halmahera, E Indonesia is small 470m deep marine basin, separated from SW Pacific Ocean by 40m deep shallow sill. Bay water below depth of ~350m devoid of oxygen and high dissolved H2S. Radiocarbon dating on piston cores and study on microfossils demonstrate Kau Bay was freshwater lake in Weichselian times (freshwater diatoms). At 10,000 BP reconnected with open ocean. If sill depth did not change in intervening years, sea level at 10,000 BP stood 40m below present level)

Barrows, T.T. & S. Juggins (2004)- Sea-surface temperatures around the Australian margin and Indian Ocean during the Last Glacial Maximum. Quaternary Science Reviews 24, p. 1017-1047.
(Sea-surface temperature maps for oceans around Australia based on planktonic foraminifera assemblages. During Last Glacial Maximum cooling in tropics of up to 4 °C in E Indian Ocean, mostly between 0- 3 °C elsewhere along equator. High latitudes cooled more, with maximum of 7-9 °C in SW Pacific Ocean)

Baumgart, A., T. Jennerjahn, M. Mohtadi & D. Hebbeln (2010)- Distribution and burial of organic carbon in sediments from the Indian Ocean upwelling region off Java and Sumatra, Indonesia. Deep Sea Research I, 57, 3, p. 458-467.
(On marine organic carbon productivity and preservation in Indian Ocean off Sumatra- Java- Banda Islands. Maximum concentrations of organic carbon (3.0%) and nitrogen (0.31%) in N Mentawai and Savu and Lombok basins. High productivity related to seasonal upwelling in Indian Ocean S of Java-Sumatra between June-November responsible for high carbon accumulation S of E Java- Lombok and in Savu Basin. Better preservation by reduced ventilation contributes to high carbon in N Mentawai)

Benzerara, K., A. Meibom, Q. Gautier, J. Kazmierczak, J. Stolarski et al. (2010)- Nanotextures of aragonite in stromatolites from the quasi-marine Satonda crater lake, Indonesia. In: H.M. Pedley & M. Rogerson (eds.) Tufas and speleothems: unravelling the microbial and physical controls, Geol. Soc., London, Spec. Publ. 336, p. 211-224.
(On composition and texture of aragonite in lacustrine stromatolites from alkaline crator lake of Satonda)

Bird, E.C.F. & O.S.R. Ongkosongo (1980)- Environmental changes on the coasts of Indonesia. United Nations University, 55p.
(online at: www.unu.edu/unupress/unupbooks/80197e/80197E00.htm)
(Overview of coastal progradation in various areas of Indonesia)

Bird, M.I., D. Taylor & C.Hunt (2005)- Palaeoenvironments of insular Southeast Asia during the last glacial period; a savanna corridor in Sundaland? Quaternary Science Reviews 24, 20-21, p. 2228-2242.
(Geomorphology, palynology, biogeography and vegetation/climate modelling suggests N-S 'savanna corridor' through Sundaland continent at Last Glacial Period at time of lowered sea-level. Minimal interpretation of 50-150 km wide zone of open savanna vegetation along divide between S China and Java Seas, forming land bridge between Malay Peninsula, Sumatra, Java and Borneo and served as barrier to dispersal of rainforest-dependent species between Sumatra and Borneo. Savanna corridor may have provided convenient route for rapid early dispersal of modern humans through region and on into Australasia)

Boettger, A. (1890)- Ad. Strubell's Konchylien aus Java I. Bericht Senckenbergische Naturforschenden Gesellschaft Frankfurt 1890, p. 137-173.
(online at: https://www.zobodat.at/pdf/Berichte-der-Senckenberg-naturf-Ges-Frankfurt_1890_0137-0173.pdf)
('Adolf Strubell's mollusc shells from Java-1'. Early description of fresh and brackish water gastropods and bivalves from West Java)

Boettger, A. (1890)- Ad. Strubell's Konchylien aus Java II und von den Molukken. Bericht Senckenbergische Naturforschenden Gesellschaft Frankfurt 1891, p. 241-318.
('Adolf Strubell's mollusc shells from Java II and from the Moluccas')

Bray, N.A., S. Hautala, J. Chong & J. Pariwono (1996)- Large-scale sea level, thermocline, and wind variations in the Indonesian throughflow region. J. Geophysical Research 101, p. 12239-12254.

Brown, I.M. (1990)- Quaternary glaciations of New Guinea. Quaternary Science Reviews 9, p. 273-280.
(New Guinea mountains covered by glaciers at ~300 ka and at ~700 ka. Mean annual T was at least 6-7°C lower. Glaciers receded by 13 ka BP and New Guinea may have been ice free by 7 ka. Glaciers developed again at ~5 ka. At least four significant re-advances during last 3.5 ka. Little Ice Age ended 120-150 years ago and glaciers retreating to present day)

Brune, S., A.Y. Babeyko, S. Ladage & S.V. Sobolev (2010)- Landslide tsunami hazard in the Indonesian Sunda Arc. Natural Hazards Earth System Sci. 10, p. 589-604.
(online at: https://www.nat-hazards-earth-syst-sci.net/10/589/2010/nhess-10-589-2010.pdf)
(Review of tsunamigenic events triggered by submarine landslides. Largest documented recent slides (SE of Sumba, etc.) volume of 15-20 km3. Many large tsunamigenic landslides ultimately triggered by earthquakes)

Brune, S., S. Ladage, A.Y. Babeyko, C. Muller, H. Kopp & S.V. Sobolev (2009)- Submarine landslides at the eastern Sunda margin: observations and tsunami impact assessment. Natural Hazards 54, 2, 547-562.
(online at: http://edoc.gfz-potsdam.de/gfz/get/14283/0/b800b700926b1f854f8f70c2e84b0c4a/14283.pdf)
(New bathymetric data show six large submarine slides at E Sunda margin between C Java and Sumba. Volumes between 1 km³ in Java fore-arc basin up to 20 km³ at trench off Sumba and Sumbawa)

Burnett, W.H., V.M. Kamenkovich, G.L. Mellor & A.L. Gordon (2000)- The influence of the pressure head on the Indonesian Seas circulation. Geophysical Research Letters 27, 15, p. 2273-2276.
(online at: https://www.gfdl.noaa.gov/bibliography/related_files/burnett0001.pdf)
(Model suggests pressure difference between Pacific and Indian Ocean does not significantly influence total transport of Indonesian throughflow)

Caline, B. & J. Huong (1992)- New insights into the recent evolution of the Baram Delta from satellite imagery: Bull. Geol. Soc. Malaysia 32, p. 1-13.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992012.pdf)

Cane, M.A. & P. Molnar (2001)- Closing of the Indonesian seaway as a precursor to east African aridification around 3-4 million years ago. Nature 411, p. 157-162.
(Closure of Indonesian seaway 3-4 Myr ago may be responsible for global climate changes. N movement of New Guinea, ~5 Myr ago, switched source of flow through Indonesia from warm S Pacific to colder N Pacific waters, decreasing Indian Ocean sea surface temperatures and leading to aridification of E Africa. Changes in equatorial Pacific may have reduced atmospheric heat transport from tropics to higher latitudes, stimulating global cooling and growth of ice sheets)

Cannon, C.H., R.J. Morley & A.B.G. Bush (2009)- The current refugial rainforests of Sundaland are unrepresentative of their biogeographic past and highly vulnerable to disturbance. Proc. National Academy Sciences USA 106, 27, p. 11188- 11193.
(online at: www.pnas.org/content/early/2009/06/18/0809865106.full.pdf)
(Model reconstruction of forest types across exposed Sunda Shelf during Pleistocene Last Glacial Maximum, suggesting rainforests covered substantially larger area than today (see also Wurster et al. 2010 who argue for more savannah vegetation; JTvG))

Cappelli, E.L.G. (2015)- Late Pleistocene variability in Timor Sea hydrology: evidence from paleotemperature proxies. Doct. Thesis Kiel University, p. 1-194.
(online at: http://macau.uni-kiel.de/...)

Cappelli, E.L., G.A. Holbourn, W. Kuhnt & M. Regenberg (2016)- Changes in Timor Strait hydrology and thermocline structure during the past 130 ka. Palaeogeogr. Palaeoclim. Palaeoecology 462, p. 112-124.
(Data from core from 485m depth at S edge of Timor Trough suggest lower thermocline warming during globally cold periods (MIS 4-MIS 2), related to weaker and contracted thermocline ITF and advection of warm-salty Indian Ocean waters)

Cecil, C.B., F.T. Dulong, J.C. Cobb & Supardi (1993)- Allogenic and autogenic controls on sedimentation in the central Sumatra basin as an analogue for Pennsylvanian coal-bearing strata in the Appalachian basin. In: J.C. Cobb & C.B. Cecil (eds.) Modern and ancient coal-forming environments, Geol. Soc. America (GSA), Spec. Paper 286, p. 3-22.
(Modern influx of fluvial sediment to Sunda shelf/ Strait of Malacca from Sumatra restricted by rain forest cover in equatorial ever-wet climate belt. Much of marine and estuarine environments erosional or non-depositional, except for localized deposition in slack water areas, such as downstream end of islands. Thick (>13m), laterally extensive (>70,000 km2) peat deposits forming on poorly drained coastal lowlands)

Cecil, C.B., F.T. Dulong, R.A. Harris, J.C. Cobb, H.G. Gluskoter & H. Nugroho (2003)- Observations on climate and sediment discharge in selected tropical rivers, Indonesia. In: C.C Blaine et al. (eds.) Climate controls on stratigraphy, Soc. Sedimentary Geology (SEPM), Spec. Publ. 77, p. 29-50.

(Factors influencing fluvial sediment discharge include catchment-basin size, relief, gradient, tectonic setting, bedrock lithology, rainfall. Dominant variable affecting fluvial sediment discharge among islands of Indonesia appears to be seasonality in rainfall, regardless of tectonic setting, relief or catchment-basin size)

Chabangborn, A., K.K.A. Yamoah, S. Phantuwongraj & M. Choowon (2018)- Climate in Sundaland and Asian monsoon variability during the last deglaciation. Quaternary Int. 479, p. 141-147.

Christensen, B.A., W. Renema, J. Henderiks, D. de Vleeschouwer, J. Groeneveld, I.S. Castaneda, L. Reuning, K. Bogus et al. (2017)- Indonesian Throughflow drove Australian climate from humid Pliocene to arid Pleistocene. Geophysical Research Letters 44, 13, p. 6914-6925.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2017GL072977/epdf)
(Late Miocene- M Pleistocene sedimentary proxy records (incl. IODP Site U1463) show NW Australia underwent abrupt transition from arid to humid climate conditions at 5.5 Ma, likely receiving year-round rainfall. After ~3.3 Ma climate shift to increasingly seasonal precipitation, back to arid interval after 2.4 Ma. Linked to progressive restriction of flow of warm surface currents from Pacific (Indonesian Throughflow))

Clift, P.D. (2006)- Controls on the erosion of Cenozoic Asia and the flux of clastic sediment to the ocean. Earth Planetary Sci. Letters 241, p. 571-580.
(Rates of continental erosion reconstructed from volumes of clastic sediment, most of which offshore. Sediment flux from mainland Asia first peaked in E-M Miocene (24-11 Ma), well before initiation of glacial climate, indicating that rock uplift and precipitation are key controls on erosion over long periods of time. In E Asia faster erosion correlates with more humid, warm climates in E-M Miocene, changing to less erosive, drier climates after 14 Ma when Antarctic glaciation begins. Average sedimentation rates on most E Asian continental margins since 1.8 Ma 5-6 times less than modern fluvial flux)

Clift, P.D. & R.A. Plumb (2008)- The Asian monsoon: causes, history and effects. Cambridge University Press, p. 1-288.
(Asian monsoon large-scale seasonal reversal of normal atmospheric circulation pattern. Low-pressure systems develop in tropics due to rising hot air that cools and descends in subtropics (arid regions). In contrast, summer heating of Asian continent (mainly Tibetan Plateau) generates low-pressure cells and summer rains in S and E Asia. In winter reversed high-P system established, with dry, cold winds blowing out of Asia. Monsoon intensity varies in 21, 40 and 100 thousand year timescale, with periods of glacial advance and retreat: summer monsoons strong and winter monsoons weaker during warm, interglacial periods (reverse during glacial times)

Coleman, J.M., S.M. Gagliano & W.G. Smith (1970)- Sedimentation in a Malaysian high tide tropical delta. In: J.P. Morgan & R.H. Shaver (eds.) Deltaic sedimentation, modern and ancient. Soc. Econ. Min. Paleont. (SEPM), Spec. Publ. 15, p. 185-197.
(Study of sedimentation in Klang and Langat Rivers delta in Malacca Strait)

Consentius, W.U. (1974)- Die Kusten des Sudostlichen Asien. Ph.D. Thesis, Technische Universitat Berlin, p. 1-231.
('The coasts of SE Asia'. Geographic description of coastlines and processes in SE Asia)

Corlett, R.T. (2009)- The ecology of tropical East Asia. Oxford University Press, New York, p. 1-272.
(Review of terrestrial ecology of East Asian tropics and subtropics, from S China to W Indonesia)

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(Current measurements in Timor Strait suggest transport of about 7 Sv toward Indian Ocean, with about half of this in upper 350m)

Darlan, Y., Y. Noviadi & H. Prasetyo (1996)- Studi proses sedimentasi perairan Serwatu dan sekitarnya, Kepulauan Aru, Maluku Tenggara. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 127-147.
(Study of sedimentation processes in waters around Serwatu, Aru Islands, Moluccas')

Dawson, A.G., S. Shi, S. Dawson, T. Takahashi & N. Shuto (1996)- Coastal sedimentation associated with the June 2nd and 3rd, 1994 tsunami in Rajegwesi, Java. Quaternary Science Reviews 15, 8-9, p. 901-912.
(NE Java tsunami deposits)

De Bruyn, M., L. Ruber, S. Nylinder, B. Stelbrink, N.R. Lovejoy, S. Lavoue, H.H. Tan, E. Nugroho et al. (2013)- Paleo-drainage basin connectivity predicts evolutionary relationships across three Southeast Asian biodiversity hotspots. Systematic Biology 62, 3, p. 398-410.

De Bruyn, M., B. Stelbrink, R.J. Morley, R. Hall, G.R. Carvalho, C.H. Cannon, G. van den Bergh, E. Meijaard, I. Metcalfe, L. Boitani, L. Maiorano, R. Shoup & T. von Rintelen (2014)- Borneo and Indochina are major evolutionary hotspots for Southeast Asian biodiversity. Systematic Biology 63, 6, p. 879-901.
(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=3379&context=smhpapers)
(SE Asia (in particular Borneo and Indochina) major 'evolutionary hotspots' for diverse range of fauna- flora. Most region's biodiversity result of accumulation of immigrants and in situ diversification. Colonization events comparatively rare from younger emergent islands like Java, which show increased immigration events)

De Deckker, P. (2016)- The Indo-Pacific Warm Pool: critical to world oceanography and world climate. Geoscience Letters (AOGS) 3, 20, p. 1-12.
(online at: https://geoscienceletters.springeropen.com/articles/10.1186/s40562-016-0054-3)
(Review of climatic significance of Indo-Pacific Warm Pool, a large area with permanent surface T >28 °C in SW Pacific/ Indonesian region ('heat and steam engine' of globe))

De Deckker, P., N.J. Tapper & S. van der Kaars (2002)- The status of the Indo-Pacific Warm Pool and adjacent land at the Last Glacial Maximum. Global Planetary Change 35, p. 25-35.
(During Last Glacial Maximum significant drop in precipitation in Warm Pool region that would explain increase in salinity while Sea surface T decreased by ~2°C, causing decrease of atmospheric convection over Indo-Pacific Warm Pool. Drier atmosphere and diminished level of cloud cover also reduced nocturnal temperatures at elevation, forcing tree line to drop and glaciers to much lower altitudes than today)

De Vleeschouwer, D, G. Auer, R. Smith, K. Bogus, B. Christensen, J. Groeneveld et al. (2018)- The amplifying effect of Indonesian Throughflow heat transport on Late Pliocene Southern Hemisphere climate cooling. Earth and Planetary Science Letters 500, p. 15-27.
(Unusually short glaciation interrupted warm Pliocene around 3.3 Ma (MIS M2).. Onee proposed mechanism for glaciation and quick return to normal is reduced equator-to-pole heat transfer in response to tectonically reduced Indonesian Throughflow (ITF). Multi-proxy orbital-scale record for 3.7-2.8 Ma interval from IODP Site U1463 shows heat-transport through ITF did not shut down completely, but intensity decreased prior to and during MIS M2, amplifying global cooling by advancing the thermal isolation of Antarctica)

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('Delta sedimentation types along North coast of Java'. Two main types: (1) fluvial-dominated Mississippi/ birdfoot type and (2) Sao Francisco type (more dominant marine control and low sediment supply)

Ding, X., F. Bassinot, F. Guichard & N.Q. Fang (2013)- Indonesian Throughflow and monsoon activity records in the Timor Sea since the last glacial maximum. Marine Micropaleontology 101, p. 115-126.
(online at: http://www.cugb.edu.cn/upload/20600/papers_upload/291.pdf)
(Foraminifera-based multi-proxy study in main Indonesian Throughflow (ITF) outflow area of Timor Sea)

Ding, X., F. Guichard, F. Bassinot, L. Labeyrie & N.Q. Fang (2002)- Evolution of heat transport pathways in the Indonesian Archipelago during last deglaciation. Chinese Science Bull. 47, 22, p. 1912-1917.

Dubois, N., D.W. Oppo, V.V. Galy, M. Mohtadi, S. van der Kaars, J.E. Tierney, Y. Rosenthal et al. (2014)- Indonesian vegetation response to changes in rainfall seasonality over the past 25,000 years. Nature Geoscience 7, p. 513-517.
(online at: http://www.whoi.edu/fileserver.do?id=186164&pt=2&p=17766)
(Climate proxy data 30 surface marine sediment samples from throughout Indo-Pacific warm pool. Sediment core from offshore NE Borneo show broadly similar vegetation during Last Glacial Maximum and Holocene, suggesting that, despite generally drier glacial conditions, no pronounced dry season. Core off Sumba indicates enhanced dry season aridity and water stress during most recent glaciation)

Ehlert, C., M. Frank, B.A. Haley, U. Boniger, P. De Deckker & F.X. Gingele (2011)- Current transport versus continental inputs in the eastern Indian Ocean: radiogenic isotope signatures of clay size sediments. Geochem. Geophys. Geosystems 12, Q06017, p.
(Nd, Sr and Pb of clay-sized sediments allow tracing of source areas of sediment and current transport off NW Australia and SW of Java)

Engelhart, S.E., B.P. Horton, D.H. Roberts, C.L. Bryant & D.R. Corbett (2007)- Mangrove pollen of Indonesia and its suitability as a sea-level indicator. Marine Geology 242, p. 65-81.
(SE Sulawesi mangrove zonations parallel to shoreline and dominated by Rhizophoraceae, with Avicennia, Heritiera and Sonneratia also important. Elevation significant control on distribution of pollen assemblages)

Fan, W., Z. Jian, Z. Chu, H. Dang, Y. Wang, F. Bassinot, X. Han & Y. Bian (2018)- Variability of the Indonesian Throughflow in the Makassar Strait over the last 30 ka. Nature Scientific Reports 8, 5678, p. 1-8.
(online at: https://www.nature.com/articles/s41598-018-24055-1.pdf)
(Thermocline T and salinity gradient across Makassar Strait increased during last glacial period relative to Holocene and was significantly larger during 13.4~19 ka BP and 24.2~27 ka BP)

Feng, M., N. Zhang, Q. Liu & S. Wijffels (2018)- The Indonesian throughflow, its variability and centennial change. Geoscience Letters 5, 3, p. 1-10.
(online at: https://link.springer.com/content/pdf/10.1186%2Fs40562-018-0102-2.pdf)

Ffield, A.L., K. Vranes, A.L. Gordon, R.D. Susanto & S.L. Garzoli (2000)- Temperature variability within Makassar Strait. Geophysical Research Letters 27, 2, p. 237-240.
(Average thermocline T varies with S-ward Makassar transport volume: during high volume transport, average T of thermocline also high)

Fieux, M., C. Andrie, P. Delecluse, A.G. Ilahude, A. Kartavtseff, F. Mantisi, R. Molcard & J.C. Swallow (1994)- Measurements within the Pacific-Indian oceans throughflow region. Deep Sea Research I, 41, 7, p. 1091-1130.
(online at: https://core.ac.uk/download/pdf/39857022.pdf)
(Two hydrographic sections between Australian shelf and Indonesia, where throughflow between Pacific Ocean and Indian Ocean emerges. Subtropical and Central waters separated from waters of Indonesian seas by sharp hydrological front, around 13°30 S, below thermocline down to 700 m. Off Sumba, Savu, Roti and Timor channels a core of low salinity and high oxygen near-surface water in axis of each channel, suggesting strong currents from Indonesian seas towards Indian Ocean. Deep water flowing in opposite direction, from Indian Ocean to Timor basin below 1400 m to sill depth)

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Fontaine, H. (1971)- Depots coquilliers du delta du Mekong. Archives Geol. Vietnam 14, p. 135-141.

('Shell deposits of the Mekong Delta'. During Flandrian large area of Mekong delta was covered by sea, which after withdrawal left traces of paleo-shorelines and shell deposits. C14 ages of shells 4150- 5680 BP)

Gagan, M.K., E.J. Hendy, S.G. Haberle & W.S. Hantoro (2004)- Post-glacial evolution of the Indo-Pacific warm pool and El Nino-Southern Oscillation. Quaternary Int. 118, p. 127-143.
(Sea surface temperature of Indo-Pacific Warm Pool during Last Glacial Maximum ~3°C cooler than today)

Galey, M.L., A. van der Ent, M.C.M. Iqbal & N. Rajakaruna (2017)- Ultramafic geoecology of South and Southeast Asia. Botanical Studies 58,18, p. 1-28.
(online at: https://link.springer.com/content/pdf/10.1186%2Fs40529-017-0167-9.pdf)
(Globally, ultramafic outcrops known for floras with high levels of endemism, including plants adapted to nickel or manganese hyperaccumulation. Soils derived from ultramafic regoliths generally nutrient-deficient, with major cation imbalances and high concentrations of potentially toxic trace elements, especially nickel. SE Asian region large surface occurrences of ultramafic regoliths, but geoecology still poorly studied)

Gallagher, S.J., M.W. Wallace, C.L. Li, B. Kinna, J.T. Bye, K. Akimoto & M. Torii (2009)- Neogene history of the West Pacific Warm Pool, Kuroshio and Leeuwin currents. Paleoceanography 24, PA1206, p. 1-27.
(Presence of Indo-Pacific larger foraminifera and smaller taxa Asterorotalia and Pseudorotalia on Australia NW Shelf at ~4 Ma and from 1.6- 0.8 Ma suggest periods of increased Indonesian Throughflow (connecting W Pacific Warm Pool and Indian Ocean). From 10 to 4.4 Ma lack of biogeographic connectivity between Pacific and Indian Oceans suggests Indonesian Throughflow restriction, when collision of Australia and Asia trapped warmer waters in Pacific, creating WPWP biogeographic province from equator to 26°N)

Ganssen, G., S.R. Troelstra, B. Faber, W.A. van der Kaars & M. Situmorang (1989)- Late Quaternary paleoceanography of the Banda Sea, Eastern Indonesian piston cores (Snellius-II expedition, cruise G5). In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 491-494.
(Late Quaternary paleoclimatology and oceanography deduced from two Banda Sea piston cores. Two-step deglaciation seen in oxygen isotopes, but did not lead to higher surface water temperatures but to wetter climate as recorded in palynofacies. Increasing monsoon regime around 10 ka. At ~10.5 ka climate got wetter. Upwelling intensity increased around 9.2 ka and monsoonal intensity decreased again at ~2.7 ka)

Gathorne-Hardy, F.J., Syaukani, R.G. Davies, P. Eggleton & D.T. Jones (2002)- Quaternary rainforest refugia in south-east Asia: using termites (Isoptera) as indicators. Biological J. Linnean Soc. 75, p. 453-466.
(online at: https://academic.oup.com/biolinnean/article/75/4/453/2639628)
(In SE Asia, during Quaternary glaciations increased seasonality and sea level drops of ~120m caused fragmentation of rainforest. During Last Glacial Maximum, most of Thailand, Peninsula Malaysia, W and S Borneo, E and S Sumatra, and Java probably covered by savannah. Rainforest refugia probably present in N and E Borneo, N and W Sumatra and Mentawai islands.)

Gingele, F.X., P. De Deckker, A. Girault & F. Guichard (2002)- History of the South Java Current over the past 80 ka. Palaeogeogr. Palaeoclim. Palaeoecology. 183, p. 247-260.
(Sediment core below South Java Current (SJC) used to reconstruct paleoclimate/ paleoceanography of past 80 ka. Considerable contrasts from glacial to Holocene. Presently below low-salinity tongue from Java Sea via Sunda Strait, with characteristic terrigenous matter. During last glacial stage sea level was lower, Sunda Strait was closed and terrigenous supply from that source ceased. Circulation patterns alternatively dominated by N Hemisphere E Asian Monsoon system and S Hemisphere Australian Monsoon system. Between 20-12 ka, (Australian) SE Winter Monsoon reached maximum and intensified W flowing S Java Current)

Godfrey, J.S. (1996)- The effect of the Indonesian Throughflow on ocean circulation and heat exchange with atmosphere: a review. J. Geophysical Research 101, p. 12217- 12238.

Godfrey, J.S., A.C. Hirst, and J. Wilkin (1993)- Why does the Indonesian throughflow appear to originate from the North Pacific? J. Physical Oceanography 23, p. 1087-1098.

Goltenboth, F., K.H. Timotius, P.P. Milan & J. Margraf (eds.) (2006)- Ecology of insular Southeast Asia, The Indonesian Archipelago. Elsevier Science, p. 1-568.
(Reviews of modern marine and terrestrial ecosystems of Indonesia (mainly biology))

Gordon, A.L. (1995)- When is appearance reality? A comment on why does the Indonesian throughflow appear to originate from the North Pacific. J. Physical Oceanography 25, p. 1560-1567.
(online at: http://journals.ametsoc.org/doi/pdf/10.1175/1520-0485%281995%29025%3C1560%3AWIARAC%3E2.0.CO%3B2)
(Transfer of water from Pacific to Indian Oceans in the Indonesian Seas comprised primarily of North Pacific water masses)

Gordon, A.L. (2005)- Oceanography of the Indonesian Seas and their throughflow. Oceanography 18, 4, p. 14-27.
(online at: www.tos.org/oceanography/issues/issue_archive/issue_pdfs/18_4/18.4_gordon.pdf)
(Elegant review of Indonesian Throughflow between Pacific and Indian Oceans)

Gordon, A., A. Ffield & A.G. Ilahude (1994)- Thermocline of the Flores and Banda Seas. J. Geophysical Research 99 (C9), p. 18235-18242.

Gordon, A.L. & R.A. Fine (1996)- Pathways of water between the Pacific and Indian Oceans in the Indonesian seas. Nature 379, p. 146-149.
(Indonesian Throughflow dominated by (1) low-salinity well ventilated N Pacific water through Makassar Strait upper thermocline and (2) more saline S Pacific water through lower thermocline of E Indonesian Seas)

Gordon, A.L., C.F. Giulivi, & A.G. Ilahude (2003)- Deep topographic barriers within the Indonesian seas. In: F. Schott (ed.) Physical oceanography of the Indian Ocean during the WOCE period, Deep Sea Research II, 50, p. 2205-2228.
(Pacific water spills over deep topographic barriers into Sulawesi, Seram and Banda seas. W-most flow through Makassar Strait shallower barriers: 1350m deep Sangihe Ridge, providing access to Sulawesi Sea and 680m deep Dewakang Sill between S Makassar Strait- Flores Sea. Along E path, Pacific water must flow over 1940 m barrier of Lifamatola Passage before passing into deep Seram and Banda Seas. Deepest barrier encountered by W and E paths is 1300-1450 m Sunda Arc sill near Timor. Savu Sea connected to Banda Sea down to 2000 m, but closed to Indian Ocean at depth shallower than Timor Sill. Density-driven overflows force upwelling of resident waters within confines of basins)

Gordon, A.L., B.A. Huber, E.J. Metzger, R.D. Susanto, H.E. Hurlburt & T.R. Adi (2012)- South China Sea throughflow impact on the Indonesian throughflow. Geophysical Research Letters 39, L11602, 11, p. 1-7.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2012GL052021)
(Increased SCS throughflow during El Nino events increases S-ward flow of buoyant surface water through Sulu Sea into N Makassar Strait, inhibiting tropical Pacific surface water injection into Makassar Strait)

Gordon, A.L., S. Ma, D.B. Olson, P. Hacker, A. Ffield, L.D. Talley, D. Wilson & M. Baring (1997)- Advection and diffusion of Indonesian throughflow water within the Indian Ocean South Equatorial Current. Geophysical Research Letters 24, 21, p. 2573-2576.
(Warm, low salinity Pacific water flows through Indonesian Seas into E Indian Ocean, spreading within S Equatorial Current. Low salinity throughflow trace, centered along 12°S, stretches across Indian Ocean, separating monsoon-dominated regime of N Indian Ocean from subtropical stratification to S)

Gordon, A.L. & J.L. McClean (1998)- Thermohaline stratification of the Indonesian seas: model and observations. J. Physical Oceanography 29, p. 198-216.
(Oceanographic models)

Gordon, A.L., R.D. Susanto & A. Ffield (1999)- Throughflow within the Makassar Strait. Geophysical Research Letters 26, 21, p. 3325-3328.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/1999GL002340)
(Velocity measurements in constriction in Makassar Straits near 3°S suggest average throughflow is 9.3 Sv. Throughflow within Makassar Strait can account for all of Pacific to Indian interocean transport)

Gordon, A.L., R.D. Susanto, A. Ffield, B.A. Huber, W. Pranowo & S. Wirasantosa (2008)- Makassar Strait throughflow, 2004 to 2006. Geophysical Research Letters 35, L24605, p. 1-5.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2008GL036372)

Gordon, A.L., R.D. Susanto & K. Vranes (2003)- Cool Indonesian throughflow as a consequence of restricted surface layer flow. Nature 425, p. 824-828.
(online at: https://www.atmos.umd.edu/~dwi/papers/gordon_dwi_nature03.pdf)
Within Makassar Strait (primary pathway of Indonesian throughflow), flow far cooler than estimated earlier. During boreal winter monsoon, wind drives buoyant, low-salinity Java Sea surface water into S Makassar Strait, creating N-ward pressure gradient in surface layer of strait. This surface 'freshwater plug' inhibits warm surface water from Pacific Ocean from flowing S into Indian Ocean, leading to cooler Indian Ocean sea surface, which may weaken Asian monsoon. Summer wind reversal eliminates obstructing pressure gradient, by transferring more-saline Banda Sea surface water into S Makassar Strait)

Gourlan, A.T., L. Meynadier & C.J. Allegre (2008)- Tectonically driven changes in the Indian Ocean circulation over the last 25 Ma: Neodymium isotope evidence. Earth Planetary Sci. Letters 267, p. 353-364.
(Nd isotopic composition of Indian and Pacific Ocean cores for past 25 Ma reflect paleo-oceanography. Prior to 14 Ma broad passage between Indian and Pacific Oceans. Progressive closure of Indonesian gateway due to N movement of Australia and S-ward motion of Sunda block induced reorganization of paleoceanic circulation at ~14 Ma. Further reduced flux of Pacific water into Indian Ocean between 4- 2.5 Ma caused by final closure of Indonesian Gateway)

Griffiths, M.L., R.N. Drysdale, M.K. Gagan, J.X. Zhao, J.C. Hellstrom, L.K. Ayliffe & W.S. Hantoro (2013)- Abrupt increase in East Indonesian rainfall from flooding of the Sunda Shelf ~9500 years ago. Quaternary Science Reviews 74, p. 273-279.
(Stalagmite record from Liang Luar Cave, Flores, suggests rapid increase in Indonesian monsoon rainfall at ~9.5 ka, synchronous with rapid expansion of rainforest in NE Australia, regional freshening of S Makassar Strait and ~1.5 °C cooling in upper thermocline of Timor Sea, indicative of reduced surface heat transport by Indonesian Throughflow when Java Sea opened during postglacial sea-level rise. Increase in monsoon rainfall tied to sudden increase in ocean surface area and/or temperature in monsoon source region as Sunda Shelf flooded during deglaciation)

Gugliotta, M., Y. Saito, V.L. Nguyen, T.K.O. Ta, T. Tamura & S. Fukuda (2018)- Tide- and river-generated mud pebbles from the fluvial to marine transition zone of the Mekong River delta, Vietnam. J. Sedimentary Res. 88, 9, p. 981-990.
(Mud clasts present in most samples from channel in Mekong River and Delta channels. Formed by erosion of previously deposited fluvial and tidal mud layers)

Gupta, A. (ed.) (2005)- The physical geography of Southeast Asia. Oxford University Press, Oxford, p. 1-440.

Hanebuth, T.J.J., U. Proske, Y. Saito, V. Nguyen & K. Thi (2012)- Early growth stage of a large delta-transformation from estuarine-platform to deltaic-progradational conditions (the northeastern Mekong River Delta, Vietnam). Sedimentary Geology 261-262, p. 108-119.
(Mekong Delta early delta growth during transgression-related inundation between 8 ka BP (maximum flooding) and 5.7 ka BP (sea-level highstand), characterized by tide-and marine-influenced nearshore conditions with extensive mangrove and tidal-flat deposits aggrading on wide abrasion platform. Onset of regression/ progradation at ~4.8 ka)

Hantoro, W.S. (1993)- Dynamics of Indian-Pacific ocean gateways: Pleistocene sea-level study in Savu area using uplifted coral reef terraces. In: F. Hehuwat et al. (eds.) Proc. Int. Workshop on Neogene Evolution of Pacific Ocean Gateways, Bandar Lampung 1993, p. 21-28.

Hantoro, W.S. (1996)- Quaternary sea level variations in the Pacific- Indian Ocean gateways: response and impact. Quaternary Int. 37, p. 73-80.
(On Pacific to Indian Ocean water flow during last glacial maximum)

Harris, P.T., E.K. Baker, A.R. Cole & S.A. Short (1993)- A preliminary study of sedimentation in the tidally dominated Fly River delta, Gulf of Papua. Continental Shelf Research 13, 4, p. 441-472.
(Tidal currents dominate in transport of sandy sediments throughout Fly River Estuary, PNG)

Harris, P.T., M.G. Hughes, E.K. Baker, R.W. Dalrymple & J.B. Keene (2004)- Sediment transport in distributary channels and its export to the pro-deltaic environment in a tidally dominated delta: Fly River, Papua New Guinea. Continental Shelf Research 24, 19, p. 2431-2454.

Hautala, S., J. Reid & N. Bray (1996)- The distribution and mixing of Pacific water masses in the Indonesian seas. J. Geophysical Research 101, C5, p. 12375-12389.

Hautala, S., J. Sprintall, J.T. Potemra, J.C. Chong, W. Pandoe, N. Bray & A. Ilahude (2001)- Velocity structure and transport of the Indonesian Throughflow in the major straits restricting flow into the Indian Ocean. J. Geophysical Research 106, p. 19527-19546.

Heads, M. (2002)- Regional patterns of biodiversity in New Guinea animals. J. Biogeography 29, p. 285-294.

Heads, M. (2003)- Ericaceae in Malesia: vicariance biogeography, terrane tectonics and ecology. Telopea 10, 1, p. 311-449.
(online at: www.rbgsyd.nsw.gov.au/_data/assets/pdf_file/0006/72726/Tel10Hea311.pdf)
(Paper discussing present-day plant distribution in SE Asia (mainly Erica, Rhododendron groups) and relation to plate tectonic history. Many terranes or groups of terranes have endemic species. Many distributions are hard to explain with present-day ecology, but can be understood through tectonic history)

Heaney, L.R. (1991)- A synopsis of climatic and vegetational change in Southeast Asia. Climatic Change 19, 1-2, p. 53-61.
(Tropical rain forest in SE Asia developed in extensive archipelago during past 65 My or more. Miocene rain forest extended further N (to S China and Japan). Pleistocene development of continental glaciers at high latitudes associated in SE Asia with lowered sea level, cooler temperatures, and modified rainfall patterns. SE Asian vegetation during last glacial maximum (ca. 18,000 BP) different from that of today, with increase in extent of montane vegetation and savannah and decline in rain forest)

Hehanussa, P.E., S. Hadiwisastra & S. Djoehanah (1975)- Sedimentasi delta baru Cimanuk. Geologi Indonesia (IAGI) 3, 1, p. 21-35.
('Sedimentation of the new Cimanuk delta', NW Java)

Heikoop, J.M., C.J. Tsujita, M.J. Risk, T. Tomascik & A.J. Mah (1996)- Modern iron ooids from a shallow-marine volcanic setting; Mahengetang, Indonesia. Geology 24, 8, p. 759-762.
(Unconsolidated deposit of iron ooids and pisoids off volcanic island Mahengetang, Sangihe Arc, in shallow-marine setting, in area of venting of hydrothermal fluids and expulsion of gas. Ooids composed of concentric accretionary layers of limonite admixed with amorphous silica, precipitated around andesitic rock fragments)

Hendrizan, M., W. Kuhnt & A. Holbourn (2017)- Variability of Indonesian Throughflow and Borneo runoff during the last 14 kyr. Paleoceanography 32, 10, p. 1054-1069.
(Reconstruction of hydrological changes in Makassar Strait over last 14 kyr from Core SO217-18517 off Mahakam Delta (698 m water depth). Sea surface T based on Mg/Ca of Globigerinoides ruber, etc. provide

evidence for increased precipitation during Bølling-Allerød (BA) and E Holocene, and for warmer/ more saline surface waters and decrease in Indonesian Throughflow during Younger Dryas (YD). Changes in Makassar Strait surface hydrology reflect S-ward displacement of Intertropical Convergence Zone)

Hirst, A.C. & J.S. Godfrey (1993)- The role of the Indonesian Throughflow in a global GCM. J. Physical Oceanography 23, p. 1057-1086.
(online at: http://journals.ametsoc.org/doi/pdf/)
(Global Climate Modeling of effects of variations in Indonesian Throughflow. Throughflow generally warms Indina Ocean and cools the Pacific)

Hirst, A.C. & J.S. Godfrey (1994)- The response to a sudden change in Indonesian Throughflow in a global ocean GCM. J. Physical Oceanography 24, p. 1895-1910.

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(Ranges of many tropical marine species overlap in centre of maximum marine biodiversity in Indo-Malayan region ('East Indies Triangle': Malaysia, Philippines, Indonesia and Papua New Guinea))

Hoekstra, P. (1989)- River outflow, depositional processes and coastal morphodynamics in a monsoon-dominated deltaic environment, East Java, Indonesia. Doct. Thesis University of Utrecht, Netherlands Geogr. Studies (Koninklijk Nederlands Aardrijkskundig Genootschap) 87, p. 1-214.
(On sediment discharge at Solo and Brantas/ Porong River deltas, E Java. Part of 1984-1985 Snellius II program)

Hoekstra, P. (1989)- Hydrodynamics and depositional processes of the Solo and Porong Deltas, East Java, Indonesia. In: W.J.M. van der Linden (ed.) Coastal Lowlands, Proc. KNGMG Symposium 'Coastal lowlands geology and Geotechnology', Kluwer Acad. Publ., Dordrecht, p. 161-173.
(High input of sediment into coastal waters by Solo and Porong rivers resulted in rapid development of two-delta-systems. Solo delta mud-dominated, rapidly prograding elongate (single-finger) delta, while Porong delta is lobate, multidistributary delta)

Hoekstra, P. (1993)- Late Holocene development of a tide-induced elongate delta, the Solo delta, East Java. Sedimentary Geology 83, p. 211-233.
(Review of delta of monsoonal Solo River. Late Quaternary mud-dominated, rapidly prograding, elongate 'single-finger' delta with well-developed natural levees)

Hoekstra, P., R.F. Nolting & H.A. van der Sloot (1989)- Supply and dispersion of water and suspended matter of the rivers Solo and Brantas into the coastal waters of East Java, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 23, 4, p. 501-515.

Hoekstra, P. & Tiktanata (1988)- Coastal hydrodynamics, geomorphology and sedimentary environments of two major Javanese river deltas; program and preliminary results from the Snellius-II expedition (Indonesia). J. Southeast Asian Earth Sci. 2, 2, p. 95-106.
(Study of river outflow, sediment transport, depositional facies and delta morphology of Solo and Porong river deltas, E Java. Very high denudation rates. Sediment transport mainly restricted to wet season. Solo delta single-finger delta. Porong delta half-circular, lobate delta with multidistributary network of channels)

Holbourn, A., W. Kuhnt, H. Kawamura, Z. Jian, P. Grootes, H. Erlenkeuser & J. Xu (2005)- Orbitally paced paleoproductively variations in the Timor Sea and Indonesian Throughflow variability during the last 460 kyr. Paleoceanography 20, 3, PA3002, p. 1-18.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2004PA001094)

(Timor Sea, productivity fluctuations over last 460 kyr strongly influenced by monsoonal wind patterns off NW Australia (23 and 19 kyr). Also modulated by sea level-related variations in intensity of Indonesian Throughflow (100 kyr))

Holbourn, A., W. Kuhnt & J. Xu (2011)- Indonesian Throughflow variability during the last 140 ka: the Timor Sea outflow. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 283-303.
(Steeper thermocline T gradient in Timor Strait than in E Indian Ocean during glacials, implying decrease in Indonesian Throughflow cool thermocline outflow. Major freshening and cooling of thermocline waters at ~9.5 ka, when sea level rose above critical threshold, allowing establishment of shallow marine connection from S China Sea to Java Sea)

Hoogendoorn, R.M. (2006)- The impact of changes in sediment supply and sea-level on fluvio-deltaic stratigraphy. Ph.D. Thesis, Technische Universiteit Delft, p. 1-153. *(Unpublished)*
(online at: repository.tudelft.nl/assets/uuid.../ceg_hoogendoorn_20060131.pdf
(With chapter of Late Holocene evolution of Mahakam Delta, E Kalimantan, based on Storms et al. (2005))

Hope, G.S. (2001)- Environmental change in the Late Pleistocene and later Holocene at Wanda site, Soroako, South Sulawesi, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 171, p. 129-145.

Hope, G.S. (2004)- Glaciation of Malaysia and Indonesia, excluding New Guinea. In: Quaternary Glaciations Extent and Chronology- III: South America, Asia, Africa, Australasia, Antarctica. Dev. Quaternary Science 2, 3, p. 211-214.
(On Pleistocene glaciation of Mt Kinabalu (4100m), Sabah, above ~3000m)

Hope, G.S. (2005)- The Quaternary in Southeast Asia. In: A. Gupta (ed.) The physical geography of Southeast Asia, Oxford University Press, p. 24-37.

Hope, G.S. (2015)- Peat in the mountains of New Guinea. Mires and Peat 15, 13, p. 1-21.
(online at: http://mires-and-peat.net/media/map15/map_15_13.pdf)
(Peatlands common in montane areas above 1000m in New Guinea and extensive above 3000m. Montane mires up to 4-8m deep and up to 30,000 years in age. Above 3000m peat soils form under blanket bog on slopes as well as on valley floors. Typical peat depths 0.5-1 m on slopes, but valley floors up to 10m of peat. Peats record vegetation shifts at 28, 17-14 and 9 ka and variable history of human disturbance from 14 ka)

Hope, G.S., A.P. Kershaw, S. van der Kaars, X. Sun, P.M. Liew, L.E. Heusser, H. Takahara et al. (2004)- History of vegetation and habitat change in the Austral-Asian region. Quaternary Int. 118, p. 103-126.
(Climate reconstruction of last 200kyrs from Russian Arctic to SE Asia and SW Pacific)

Horton, B.P., P.L. Gibbard, G.M. Milne, R. J. Morley, C. Purintavaragul & J.M. Stargardt (2005)- Holocene sea levels and palaeoenvironments of the Malay-Thai Peninsula, southeast Asia. The Holocene 15, 8, p. 1199-1213.
(Sedimentology and palynology studies at Great Songkhla Lakes and other areas of Malay-Thai Peninsula suggest Holocene relative sea level rise from -22 m at ~9500 yr BP to mid-Holocene high stand of 4850-4450 yr BP, followed by sea-level fall at steady at ~1.1 mm/yr)

Huang, Y.S., T.Q. Lee & S.K. Hsu (2011)- Milankovitch scale environmental variation in the Banda Sea over the past 820 ka; fluctuation of the Indonesian through-flow intensity. J. Asian Earth Sci. 40, 6, p. 1180-p. 1188.
(Environmental variation in Banda Sea over past 820 ka from core MD012380 data. Magnetic spectral data show Milankovitch periods, especially eccentricity period (400-ka and 100-ka) after 420 ka, but before 420 ka obliquity (41-ka) and precession (23-ka and 19-ka) cycles. In Banda Sea main factor controlling variation of magnetic minerals fluctuation of Indonesian Throughflow intensity due to sea-level change)

Hummel, K. (1931)- Sedimente indonesischer Susswasserseen. Archiv fur Hydrobiologie, Suppl.-Band 8, p. 615-676.

('Sediments of Indonesian fresh water lakes'. Analyses of sediment samples from lakes on Java and Sumatra)

Husein, S. (2006)- Tidal influence on sedimentation processes of the Mahakam Delta, East Kalimantan. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, 13p.
(Hydrodynamic measurements and bottom samples study in Mahakam Delta. Sand at bottom of distributaries at delta apex and gradually fines seaward but does not extend to channel mouths. Most bedload sediment transport during spring tide. Mud dominates offshore, in estuaries and distal reaches of distributaries. Sand-mud couplets upstream to at least delta apex. Benthic marine organisms up to 20 km upstream in distributaries. Fluvial dominance constrained to upper reaches of active distributaries, tides most important process on delta)

Husein, Salahuddin (2008)- Modern sediment dynamics and depositional systems of the Mahakam Delta, Indonesia Ph.D. Thesis, Universiti Brunei Darussalam, Bandar Seri Begawan, p. 1-740. *(Unpublished)*

Husein, Salahuddin & J.J. Lambiase (2005)- Modern sediment dynamics of the Mahakam Delta. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 367-379.
(Description of present-day Mahakam Delta environments. Mixed fluvial and tide-dominated delta)

Ilahude, A.G. & A.L. Gordon (1996)- Water masses of the Indonesian Seas Throughflow. Proc. Third Int. IOC-WESTPAC Scientific Symp., Bali 1994, p. 572-587.

Ilahude, A.G. & A.L. Gordon (1996)- Thermocline stratification within the Indonesian Seas. J. Geophysical Research 101, C5, p. 12401-12410.
(Makassar Straits carries bulk of Pacific water throughflow, consisting of North Pacific water (upper thermocline Smax) and North Pacific Intermediate Water (lower thermocline Smin). Relatively salty water of South Pacific origin in lower thermocline in Seram and S Moluccu seas, particularly in NW monsoon)

Iwatani, H., M. Yasuhara, Y. Rosenthal & B.K. Linsley (2018)- Intermediate-water dynamics and ocean ventilation effects on the Indonesian Throughflow during the past 15,000 years: ostracod evidence. Geology 46, 6, p. 567-570.
(Ostracods in core from central part of Makassar Strait suggest warm water/ low oxygen water fauna and species diversity rapidly increased at ~12 ka, reaching maxima during Younger Dryas. Interpreted as response to stagnation of intermediate water due to decline in Inonesian Throughflow intensity. After ~7 ka, ostracod faunal composition changed to deeper, colder and high oxygen fauna, responding to deglacial E Holocene sea-level rise. Etc.)

James, N.P., L.B. Collins, Y. Bone & P. Hallock (1999)- Rottnest shelf to Ningaloo reef: coolwater to warm-water carbonate transition on the continental shelf of Western Australia. J. Sedimentary Res. 69, p. 1297-1321.
(W continental margin from Cape Naturaliste to NE Cape 1200km long and with carbonate deposition throughout. Temperate (cool) water in S to tropical in N, influenced by Leeuwin current)

Jian, Z., B. Huang, W. Kuhnt & H.L. Lin (2001)- Late Quaternary upwelling intensity and East Asian monsoon forcing in the South China Sea. Quaternary Research 55, p. 363-370.

Kamaludin B. & B.Y. Azmi (1997)- Interstadial records of the last glacial period at Pantai Remis, Malaysia. J. Quaternary Science 12, 5, p. 419-434.
(Two eustatic high sea stands during last glacial period recognised at Pantai Remis, both lower than present-day sea-level: (1) -14.6m , synchronous with Oyxgen Isotope Stage 5a ; (2) -4.3 m , dated as ~54ka. Palynology data show interstadial coastal Pandanus and mangrove swamps, succeeded by mixed freshwater swamp forests of Campnosperma- Calophyllum assemblage, followed by drier mixed swamp forest)

Kamikuri, S. & T.C. Moore (2017)- Reconstruction of oceanic circulation patterns in the tropical Pacific across the Early/Middle Miocene boundary as inferred from radiolarian assemblages. Palaeogeogr. Palaeoclim. Palaeoecology 487, p. 136-148.

(Reconstruction of changes in tropical Pacific oceanic circulation patterns across E-M Miocene boundary based on radiolarian assemblages at IODP Site U1335 in E tropical Pacific. Upwelling taxa increased during four intervals between 18.4-13.4 Ma. Sea surface T relatively high from 16.8-16.0 Ma and gradually decreased from 16.0-14.6 Ma and thereafter to 12.7 Ma. Starting around 17 Ma radiolarian assemblages dominated by different taxa in E and W tropical Pacific, indicating deeper thermocline in W. Increasing difference between E and W since latest E Miocene tied to closure of Indo-Pacific seaway and development of W Pacific warm pool along with development of strong Equatorial Undercurrent)

Karas, C. (2010)- Mid-Pliocene restriction of the Indonesian Gateway and its implication on ocean circulation and climate. Ph.D. Thesis Christian-Albrechts University, Kiel, p. 1-96. *(online at: https://macau.uni-kiel.de/servlets/MCRFileNodeServlet/dissertation_derivate_00003139/Karas_diss.pdf)*

Karas, C., D. Nurnberg, A.K. Gupta, R. Tiedemann, K. Mohan & T. Bickert (2009)- Mid-Pliocene climate change amplified by a switch in Indonesian subsurface throughflow. Nature Geoscience 2, June 2009, p. 434-438.
(Partial closing of Indonesian Gateway between 4-3 Ma supposedly triggered switch in source of waters feeding Indonesian Throughflow into Indian Ocean from warm- salty S Pacific water to cool and relatively fresh N Pacific Ocean waters. Planktonic foraminifera suggest surface conditions in E tropical Indian Ocean rel. stable from 5.5- 2 Ma, but subsurface waters freshened and cooled by about 4°C between 3.5- 2.95 Ma. Restriction of Indonesian Gateway led to cooling and shoaling of thermocline in tropical Indian Ocean)

Karas, C., D. Nurnberg, R. Tiedemann & D. Garbe-Schonberg (2011)- Pliocene Indonesian Throughflow and Leeuwin Current dynamics: implications for Indian Ocean polar heat flux. Paleoceanography 26, PA2217, 9p.
(Planktonic foraminifera reflect Pliocene hydrography of W tropical Indian Ocean (Site 709C) and Leeuwin Current in E subtropical Indian Ocean (Site 763A) in response to Indonesian Gateway dynamics. Indonesian Throughflow and warm S-flowing Leeuwin Current off W Australia are essential for polar heat transport in Indian Ocean. During 3.5-3 Ma, sea surface T Leeuwin Current area 2-3°C cooler than rather unchanged sea surface T from tropical Indian Ocean, probably induced by tectonically reduced surface Throughflow)

Kawamura, H., A. Holbourn & W. Kuhnt (2006)- Climate variability and land-ocean interactions in the Indo-Pacific Warm Pool: a 460-ka palynological and organic geochemical record from the Timor Sea. Marine Micropaleontology 59, 1, p. 1-14.
(Climatic conditions in W Timor Sea and adjacent NW Australia reconstructed for last 460 ka from IMAGES Core MD01-2378. Reduced precipitation and elevated productivity characterize glacial stages. Long-term reduction in precipitation over last 320 ka in two steps at ~300 ka and 180 ka BP. Paleoproductivity and paleoclimate appear to be related to precession-controlled Australian monsoon system)

Kazmierczak, J. & S. Kempe (1993)- Recent cyanobacterial counterparts of Paleozoic *Wetheredella* and related problematic fossils. Palaios 7, p. 294-304.
(Recent calcareous structures resembling stromatolites generated by cyanobacteria in alkaline crater lake of small Satonda island, N of Sumbawa)

Kempe, S. & J. Kazmierczak (1990)- Chemistry and stromatolites of the sea-linked Satonda Crater Lake, Indonesia: A recent model for the Precambrian sea? Chemical Geology 81, 4, p. 299-310.
(First discovery of Recent stromatolites, produced by coccoid cyanobacteria in crater Lake of Satonda Island near Sumbawa. Started to grow 4000 yrs ago. pH (8.45) and calcite saturation higher than in seawater, due to biogenic CO2 and weathering of volcanic silicates. May provide analogue to Precambrian stromatolite environments)

Kempe, S. & J. Kazmierczak (1993)- Satonda crater lake, Indonesia: hydrogeochemistry and biocarbonates. Facies 28, p. 1-32.
(Recent calcareous structures resembling stromatolites in crater lake of small Satonda island, N of Sumbawa)

Kershaw, A.P., D. Penny, S. van der Kaars, G. Anshari & A. Thamotherampillai (2001)- Vegetation and climate in lowland southeast Asia at the Last Glacial Maximum. In: I. Metcalfe et al. (eds.) Faunal and floral migration and evolution in SE Asia-Australasia. Balkema, Lisse, p. 227-236.
(Pollen records from SE Asia suggest that during Lst Glacial Maximum (~18 ka) precipitation was probably lower by ~30-50% than today, and temperature was reduced by as much as 6-7°. Rainforest was replaced by grassland in some areas. Montane forest elements descended to low altitudes. Exposed continental shelves covered largely by rainforest in wetter areas, by grassland and open woodlands in drier areas)

Kershaw, A.P., S. van der Kaars & J.R. Flenley (2011)- The Quaternary history of Far Eastern rainforests. In: M.B. Bush et al. (eds.) Tropical rainforest responses to climatic change, 2nd Ed., Springer-Praxis, Chapter 4, p. 85-123.

Khider, D. (2011)- Paleoceanography of the Indonesian Seas over the past 25,000 years. Ph.D. Thesis University of Southern California, p. 1-233.

Konecky, B., J. Russell & S. Bijaksana (2016)- Glacial aridity in central Indonesia coeval with intensified monsoon circulation. Earth Planetary Sci. Letters 437, p. 15-24.
(Last Glacial Maximum was cool and dry over Indo-Pacific Warm Pool region. Pervasive aridity and reduced rainfall coincided with apparent increase in circulation intensity in IPWP)

Koopmans, B.N. (1972)- Sedimentation in the Kelantan delta (Malaysia). Sedimentary Geology 7, 1, p. 65-84.
(Kelantan River (NE Malay Peninsula) flows into S China Sea through two main channels. Mouth of river gradually shifted W under influence of beach drift generated by NE monsoon)

Korus, J.T. & C.R. Fielding (2015)- Asymmetry in Holocene river deltas: patterns, controls, and stratigraphic effects. Earth-Science Reviews 150, p. 219-242.
(Review of sediment distribution patterns in 27 deltas worldwide, incl. Mahakam)

Krebs, U., W. Park & B. Schneider (2011)- Pliocene aridification of Australia caused by tectonically induced weakening of the Indonesian throughflow. Palaeogeogr. Palaeoclim. Palaeoecology 309, p. 111-117.
(Climate model to test response of climate to E-M-Pliocene tectonic changes, which constricted and uplifted passages between New Guinea and Sulawesi. Associated changes in Indonesian throughflow influenced amount of heat transported from Pacific to Indian Ocean and contributed to Pliocene climate change of Indo-Pacific)

Kuenen, P.H. (1939)- Sediments of the East Indian Archipelago. In: P.D. Trask (ed.) Recent marine sediments: a symposium, SEPM Spec. Publ. 4 (1955?), p. 348-355.
(Sediments of Indonesian Archipelago vary greatly in different areas. In shallow Java Sea relatively fine-grained and rich in volcanic debris on S side near Java, relatively coarse-grained and quartz-rich on N side near Borneo. Deep water sediments generally low in carbonate, mainly due to relatively high % terrigenous debris. Calcium carbonate decreases with depth from ~50% in water <500m deep to <5% for water >5000m deep. Sediments of Kau Bay contain H2S and FeS; also rich in organic matter and black in color, suggesting condition of stagnation in this bay (500m deep and shallow connection with sea)

Kuenen, P.H. (1942)- Bottom samples, Section I: Collecting of the samples and some general aspects. In: The Snellius Expedition in the eastern part of the Netherlands East Indies (1929-1930), 5. Geological Results, 3, 1, Brill, Leiden, p. 1-46.

Kuenen, P.H. (1948)- Het gehalte aan kalk en organische stof van de Indische diepzee-afzettingen. Handelingen 28e Nederlandsch Natuur- Geneeskundig Congres, Utrecht 1946, p. 258-259.
('The lime and organic content of Indies deep sea deposits')

Kuenen, P.H. (1948)- Influence of the earth's rotation on ventilation currents of the Moluccan deep-sea basins. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 51, 4, p. 417-426.
(online at: www.dwc.knaw.nl/DL/publications/PU00018509.pdf)

(Oxygen content of bottom water suggests currents ventilating Celebes Sea- Banda Sea deep-sea basins deflected by Coriolis force. N of equator the currents are forced to right, S of equator to left)

Kuenen, P.H. (1950)- Marine Geology. John Wiley, New York, p. 1-568.
(online at: https://ia800501.us.archive.org/23/items/marinegeology030411mbp/marinegeology030411mbp.pdf)
(General textbook on marine geology, with many examples from Indonesian waters, incl. Chapter 3, 'The Indonesian deep-sea depressions' (p. 175-209), and discussions of formation of coral reefs, ancient river courses on Sunda Shelf (Fig. 203), etc. ('Pre-plate tectonics' discussions of origins of seas and continents; Kuenen skeptical of Wegener's continental drift theory; JTvG))

Kuhnt, W., A. Holbourn, R. Hall, M. Zuvela & R. Kase (2004)- Neogene history of the Indonesian Throughflow. In: P. Clift et al. (eds.) Continent-ocean interactions within East Asian marginal seas, American Geophys. Union (AGU), Geophys. Monograph Ser. 149, p. 299-318.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.719.3415&rep=rep1&type=pdf)
(Early evolution of Indonesian Gateway characterized by tectonic restriction of deep water pathway between Pacific and Indian Oceans at ~25 Ma. By E Miocene already closed as deep water pathway)

Kusnida, D. (2009)- Occurrence of phillipsite mineral in sub-seafloor of Roo Rise- Indian Ocean: a tectonic erosion synthesis. Indonesian Mining J. 12, 1, p. 23-27.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/573/435)
(Phillipsite at 30-30.3m in core from Indian Ocean seafloor S of W Timor at 3884m water depth. Marks hiatus between Eocene and Late Miocene nannoplankton-rich marls, possibly related to volcanic activity)

Kuswardani, R.T.D. & F. Qiao (2014)- Influence of the Indonesian Throughflow on the upwelling off the east coast of South Java. Chinese Science Bull. 59, 33, p. 4516-4523.
(Wave-tide-circulation model used to simulate upwelling off S coast of Java. Strongest vertical velocity at ~80m depth. Upwelling off W Java has seasonal variability, but steady and strong off E Java. Wind not dominant for upwelling off S part E Java. Indonesian Throughflow probably accounts for ~60% of E Java upwelling)

Lanuru, M. & R. Fitri (2008)- Sediment deposition in a South Sulawesi seagrass bed. Marine Res. Indonesia 33, 2, p. 221-224.
(Deposition of suspended sediment in shallow coastal waters colonized by Thallasia-dominated seagrass in Pannikiang Island measured with sediment traps. Amounts of sediment deposition inside seagrass beds significantly higher than in adjacent unvegetated area)

Lee, T., I. Fukumori, D. Menemenlis, Z.F. Xing & L.L. Fu (2002)- Effects of the Indonesian Throughflow on the Pacific and Indian Oceans. J. Physical Oceanography 32, p. 1404-1429.
(online at: https://journals.ametsoc.org/doi/pdf/10.1175/1520-0485%282002%29032%3C1404%3AEOTITO%3E2.0.CO%3B2)
(Circulation modeling to investigate effects of Indonesian Throughflow on circulation and thermal structure of Pacific and Indian Oceans. Blockage of ITF cuts off heat transport from Pacific to Indian Ocean, causing overall warming deepening and shoaling of thermocline in tropical Pacific and cooling and shoaling of thermocline in S Indian Ocean)

Li, D., T.L. Chiang, S.J. Kao, Y.C. Hsin, L.W. Zheng, J.Y. Terence Yang, S.C. Hsu, C.R. Wu & M. Dai (2017)- Circulation and oxygenation of the glacial South China Sea. J. Asian Earth Sci. 138, p. 387-398.
(online at: https://phyoce.es.ntnu.edu.tw/pdf/JAES_Circulation%20and%20oxygenation%20of%20the%20glacial%20South%20China%20Sea.pdf)

Li, Q., B. Li, G. Zhong, B. McGowran, Z. Zhou, J. Wang & P. Wang (2006)- Late Miocene development of the western Pacific warm pool: planktonic foraminifer and oxygen isotopic evidence. Palaeogeogr. Palaeoclim. Palaeoecology 237, p. 465-482.

(Disappearance at ~10 Ma of Globoquadrina dehiscens from W Pacific and S China Sea, increase in warm-water species, decrease in deepwater species and evidence of sea surface warming and deepened local thermocline interpreted as early development of W Pacific warm pool. Late Miocene warm pool became paleobiologically detectable from ~10 Ma, but modern warm pool did not appear until ~4 Ma, in M Pliocene)

Li, Z., X. Shi, M.T. Chen, H. Wang, S. Liu, J. Xu, H. Long, R.A. Troa, R. Zuraida & E. Triarso (2016)- Late Quaternary fingerprints of precession and sea level variation over the past 35 kyr as revealed by sea surface temperature and upwelling records from the Indian Ocean near southernmost Sumatra. Quaternary Int. 425, p. 282-291.
(Paleoclimate reconstructions from core SO184-10043 offshore southernmost Sumatra, 2171m water depth)

Linsley, B.K. (1991)- Carbonate sedimentation in the Sulu Sea linked to the onset of Northern Hemisphere glaciation, 2.4 Ma. In: E.A. Silver at al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 124, p. 375-378.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_28.pdf)
(Sulu Sea ODP Sites 768 and 769 currently above carbonate compensation depth (4800 m), in deep marine silled basin. Pliocene- Pleistocene sediments with common pelagic material, but no pelagic carbonate before 2.4 Ma. Timing of increase in carbonate accumulation constrained by Gauss/Matuyama paleomagnetic reversal and coincides with onset of N Hemisphere glaciation at 2.4 Ma. Not clear if increase in carbonate accumulation at 2.4 Ma is due to productivity changes, preservation changes, or combination of two)

Linsley, B.K., Y. Rosenthal & D.W. Oppo (2010)- Holocene evolution of the Indonesian Throughflow and the western Pacific warm pool. Nature Geoscience 3, 8, p. 578-583.
(online at: https://marine.rutgers.edu/pubs/private/Holocene%20WPWP-ITF_N.Geo2010_w_SOM.pdf)
(Sediment cores from across Indonesian Throughflow area suggest that from ~10,000 to 7000 years ago, (Holocene Climate Optimum) sea surface T in western W Pacific warm pool ~0.5 °C higher than during pre-industrial times. About 9500 years ago, when South China and Indonesian seas connected by rising sea level, surface waters in Makassar Strait became relatively fresher)

Linsley, B.K., R.C. Thunell, C. Morgan & D.F. Williams (1985)- Oxygen minimum expansion in the Sulu Sea, western equatorial Pacific, during the last glacial low stand of sea level. Marine Micropaleontology 9, p. 395-418.
(Sulu Sea deep silled, dysaerobic basin, ventilated through single sill at 420m depth to China Sea. Increases in planktonic foraminifera Neogloboquadrina dutertrei and Ng. pachyderma and light d18 O values suggest reduced surface water salinities during last glacial maximum, with expansion of mid-water oxygen minimum layer and increased organic carbon preservation at mid-water depths at this time. Oridorsalis umbonatus dominant benthic foram species between water depths of 2000-4200m. Bolivina robusta found only in oxygen minimum zone at 1700 m and in zone of oxygen depletion in deep part of basin. Below 4000 m, bottom waters maintained some degree of oxygenation during last glacial maximum. Radiolarians 3-8% of fauna at water depths <4000 m, gradually increasing in abundance to >50% below 4500 m)

Liu, J.P., D.J. DeMaster, T.T. Nguyen, Y. Saito, V.L. Nguyen, T.K.O. Ta & X. Li (2017)- Stratigraphic formation of the Mekong River Delta and its recent shoreline changes. In: Sedimentation and survival of the Mekong Delta, Oceanography 30, 3, p. 72-83.
(online at: https://tos.org/oceanography/assets/docs/30-3_liu.pdf)
(Mekong River discharges into S China Sea and formed third largest delta plain in world (~50,000 km2; after Amazon and Ganges-Brahmaputra). Subaerial delta prograded ~220 km SE-ward in last 7500 years, showing 15m thick sigmoidal clinoforms immediately off distributaries. Mekong-derived sediment extends ~300 km along shelf to SW. From 1973- 2005 seaward shoreline growth decreased gradually, due to construction of dams, sand mining, delta subsidence, increasing storms and sea level rise)

Liu, Z., H. Wang, W.S. Hantoro, E. Sathiamurthy, C. Colin, Y. Zhao & J. Li (2012)- Climatic and tectonic controls on chemical weathering in tropical Southeast Asia (Malay Peninsula, Borneo, and Sumatra). Chemical Geology 291, p. 1-12.

(Clay mineralogy and major element geochemistry of 58 surface sediment samples in 27 rivers draining Malay Peninsula, Borneo, and Sumatra. High kaolinite in Malay Peninsula (av. 80%), Sumatra (58-78%), and S Borneo (41-55%), high illite in N Borneo (47-77%), moderate smectite in Sumatra (6-29%). Intensive chemical weathering in all three regions, increasing from N Borneo to S Borneo, and further to Malay Peninsula and Sumatra. Monsoon climate with constant warm temperature and abundant precipitation principal forcing factor on chemical weathering)

Lowemark, L., C.H. Chen, C.A. Huh, T.Q. Lee, Y.P. Ku et al. (2004)- Biogenic reworking of tephra layers in the South China Sea (core MD972142) and the Celebes Sea (core MD012388). Berita Sedimentologi 19, p. 31-41.

Luo, C., G. Lin, M. Chen, R. Xiang, L. Zhang, . Liu, A. Pan, S. Yang & M. Yang (2016)- Characteristics of pollen in surface sediments from the southern South China Sea and its paleoclimatic significance. Palaeogeogr. Palaeoclim. Palaeoecology 461, p. 12-28.
(Pollen-spores from 62 seafloor sediments of southern Sh China Sea dominated by trilete spores (from ferns). Most pollen and spores on Kalimantan Island coast from herbaceous plants and trees, with few trilete spores)

Mann, T., A. Rovere, T. Schoene, A. Klicpera, P. Stocchi, M. Lukman & H. Westphal (2016)- The magnitude of a mid-Holocene sea-level highstand in the Strait of Makassar. Geomorphology 257, p. 155-163.
(Literature suggests two relative sea-level highstands over last 6000 years, with magnitudes >2m, but emergent fossil microatolls on Pulau Panambungan, Spermonde Shelf, indicate relative sea-level highstand not >0.5 m above present at ~5600 yr BP. Highstand followed by rapid sea-level fall to present level at ~4000 cal. yr BP)

Martinez, J.I., P. De Deckker & T.T. Barrows (1999)- Palaeoceanography of the last glacial maximum in the eastern Indian Ocean: planktonic foraminiferal evidence. Palaeogeogr. Palaeoclim. Palaeoecology 147, p. 73-99.

Maryunani, Khoiril Anwar (2009)- Microfosil approach based on Cendrawasih Bay data, to interpreting and reconstructing Equatorial Western Pacific paleoclimate since Last Glacial (Late Pleistocene). Dokt. Dissertation Inst. Teknologi Bandung (ITB), p. 1-141. *(Unpublished)*

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(Simulated total Indonesian Throughflow (-13.4 Sv) is similar to observational estimate (-15.0 Sv) and distributed among three outflow passages (Lombok Strait, Ombai Strait and Timor Passage). Makassar Strait carries ~75% of observed total ITF inflow. Wide and shallow Java and Arafura Seas carry -0.8 Sv of inflow)

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(Paleoceanographic evolution of E Indian Ocean At 60-35 kyr BP (ka) higher productivity than today at Banda Sea surface. Last Glacial Maximum reduction of deep-water circulation in E Indian Ocean, with more active circulation at intermediate depths. At 15-5 ka reduction in productivity over Banda Sea related to increased atmospheric precipitation with low-salinity water cap. From 5 ka- Present: W Australian coast increased influence of oxygen-depleted Indonesian Intermediate Water)

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(Core in 2034m of water off S Sumatra. Micropaleontological proxies used to reconstruct conditions over last 35,000 years. Marine isotopic stage 3 sharper thermocline than today, shallower and absence of low-salinity 'barrier layer' from high monsoonal rains. Deglaciation marked by change in surface salinity and progressive alteration of thermocline with less productive deep chlorophyll maximum. Monsoonal activity commenced around 15 ky. Holocene marked by increase in river discharge to ocean, pulsed by delivery of organic matter to sea floor. No obvious and persistent upwelling conditions off Sumatra for last 35,000 years)

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(Development of West Pacific Warm Pool linked with restriction of surface water flow through Indonesian Seaway. Preliminary results suggest Seaway narrowed during Middle to Late Miocene, ~11.5- 8.5 Ma)

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(Fluvial channel reservoirs most commonly meander pointbars or braided sheets. Deltaic distributary channel reservoirs typically elongate sandy channel sidebars attached to straight channel walls. Deltaic distributary channels usually thinner and shallower than fluvial channel belts, and not thicker than their depositional mouthbars. Width-thickness ratios for fluvial distributary channel reservoirs average 50:1, meandering fluvial channel reservoirs have width-thickness ratios typically >100:1, braided river reservoirs 500:1 or higher)

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entrained by tsunami run-up and subsequently transported seaward by backwash, where they end up as allochthonous assemblages in low-energy submarine sediments)

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(During the mid-Holocene when sea level was between ~2.5-4.5 m above present level, broad mangrove belts (Rhizophora pollen, Avicennia, Sonneratia, Bruguiera, etc.) along numerous coasts of Sunda and Sahul shelves. With subsequent seaward migrating shoreline gradually replacement by back-mangroves)

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(Sedimentological and palynological study of sediment cores from N Mekong River Delta show delta development since M-Holocene sea level highstand. M Holocene Sub- to intertidal flat deposit followed by late Holocene regression and delta progradation)

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(Mahakam Delta presently subsiding and being transgressed and modified by marine processes. Most or all, fluvially-derived sand stored onshore in distributaries, whilst finer-grained sediment moves offshore. Marine

benthic organisms inhabit distributaries up to 20 km landward from shoreline. Facies distribution is better indicator of modern depositional processes than delta morphology)

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(Planktonic foraminifera from sites DSDP 292 and ODP 806 in W Pacific Ocean. Site 292 is located at N margin, and site 806 near center of modern West Pacific Warm Pool. Between 8.5-4.4 Ma Site 806 overlain by warm surface water but not Site 292. N-ward expansion of WPWP from 4.4-3.6 Ma and establishment of modern WPWP by 3.6 Ma related to closure of Indonesian and Central American seaways)

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(Review of short-term variations in throughflow)

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(Indonesian Throughflow provides low-latitude pathway for transfer of warm, low salinity Pacific waters into Indian Ocean. Primary ITF source is N Pacific thermocline water, flowing through Makassar Strait (sill depth of 650m at Dewakang Sill) and exiting into E Indian Ocean through passages along Lesser Sunda Island chain at Ombai Strait, Lombok Strait and Timor Passage. Recent flow measurements show variability patterns)

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(Quaternary sea surface temperature and O-isotopes changes from Celebes Sea, Makassar Strait, Flores Sea, and NW Banda Sea over the past 25 kyr. Deglacial warming generally gradual with amplitude of 3-4 °C. Onset of deglacial sea surface warming in tropical Indonesian Sea earlier than global atmospheric CO2 rise. O-isotopic data do not support widespread aridity in C Indonesia during last glacial period, as suggested by earlier land records)

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(online at: https://elib.suub.uni-bremen.de/edocs/00104747-1.pdf)
(Sea surface conditions derived from sediment cores in Indian Oean S of Sunda Strait cooler and saltier during Last Glacial compared to Holocene. Holocene sea surface warmer and fresher conditions, particularly after opening of Sunda Strait at ~10 ka due to transport of low salinity water from Java Sea via Sunda Strait)

Setiawan, R.Y., M. Mohtadi, J. Southon, J. Groeneveld, S. Steinke & D. Hebbeln (2015)- The consequences of opening the Sunda Strait on the hydrography of the eastern tropical Indian Ocean. Paleoceanography 30, 10, p. 1358-1372.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1002/2015PA002802)
(Advection of relatively fresh Java Sea water through Sunda Strait presently responsible for low-salinity tongue in E Indian Ocean with salinities as low as 32‰. During last glacial period Sunda Shelf was exposed and advection via Sunda Strait was cut off. Sediment cores from E tropical Indian Ocean off Sunda Strait show lower T and higher δ18Osw during last glacial)

Setyobudi, P.T., P.A. Suandhi, Z.L. Tarigan, A. Bachtiar, A.G. R. Jayanti & L. Budin (2016)- Sedimentology and limnology of Singkarak and Toba Lakes, Sumatra, Indonesia: depositional and petroleum system model for tropical fluvio-lacustrine and volcanic related rift basins in Southeast Asia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-660-G, 21p.

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(Heavy mineral study of river sand samples from Malay Peninsula and Sumatra. Malay Peninsula granitic and contact metamorphic provenance (zircon, tourmaline, hornblende, andalusite, epidote, monazite, rutile and titanite, etc.). Sumatra two main sources: (1) modern volcanic arc (pyroxene, particularly hypersthene), and (2) basement. Zircon, apatite, hornblende, epidote, and olivine also common and likely of mixed provenance. Heavy mineral assemblages of Malay Peninsula and Sumatra modern rivers different from Cenozoic sediments, suggesting rapid source unroofing)

Shearman, P., J. Bryan & J.P. Walsh (2013)- Trends in deltaic change over three decades in the Asia-Pacific region. J. Coastal Research 29, 5, p. 1169-1183.
(Analysis of recent changes of five major mangrove deltaic systems in Asia-Pacific region: Fly and Kikori-Purari, Ganges-Brahmaputra, Irrawaddyand Mekong. Overall net contraction in mangrove areas)

Sidi, F.H., D. Nummedal, P. Imbert, H. Darman & H.W. Posamentier (eds.) (2003)- Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology. SEPM Spec. Publ. 76, p. 1-269.

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(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-36.html)
(Modern sediments of Sumpur axial-fluvial delta and Malalo alluvial fan delta in N part of Lake Singkarak, and comparison to Paleogene rift-fill of C Sumatra Basin)

Situmorang, M., D. Ilahude, T. Kuntoro, D. Kusnida & D. Arifin (1993)- Core lithology and Quaternary sedimentation in Masalembo-Bawean waters, Eastern Java Sea. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1003-1014.

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Slingerland, R., R.W. Selover, A.S. Ogston, T.R. Keen, N.W. Driscoll, and J.D. Milliman (2008)- Building the Holocene clinothem in the Gulf of Papua: an ocean circulation study. J. Geophysical Research 113, F01S14, p. 1-17.
(On role of tidal and wind-driven flows and buoyant river plumes in development of Holocene clinoform in Gulf of Papua. Tidal flows on modern clinoform are strong and are landward and seaward directed.

Soegiarto, A. (1992)- The role of the Southeast Asian Seas in regional and global climate change. Global Change 22, p. 32-37.

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Song, Q., A. Gordon & M. Visbeck (2004)- Spreading of the Indonesian throughflow in the Indian Ocean. J. Physical Oceanography 34, p. 772-792.
(online at: https://journals.ametsoc.org/doi/pdf/10.1175/1520-0485%282004%29034%3C0772%3ASOTITI%3E2.0.CO%3B2)
(In upper thermocline Indonesian Throughflow crosses Indian Ocean, from Makassar Strait to E coast of Africa, on time scale of ~10 yr and reaches Arabian Sea in >20 yr)

Song, Q., G.A. Vecchi & A.J. Rosati (2004)- The role of the Indonesian Throughflow in the Indo-Pacific climate variability in the GFDL coupled climate model. J. of Climate 20, p. 2434-2451.
(online at: http://journals.ametsoc.org/doi/pdf/10.1175/JCLI4133.1)
(Oceanic circulation model to study response of closure of Indonesian Throughflow on climate)

Spooner, M.I., T.T. Barrows, P. De Deckker & M. Paterne (2005)- Palaeoceanography of the Banda Sea, and Late Pleistocene initiation of the Northwest Monsoon. Global Planetary Change 49, 1-2, p. 28-46.
(Late Quaternary paleoceanography of Banda Sea based on core at 1805m bsl E of Timor, below pathway of Indonesian Throughflow. Site characterised by high surface T and high precipitation, forming low-salinity boundary layer. Minimal surface T cooling during last glacial maximum. Sea-surface seasonality never >3 °C. Abundance of Neogloboquadrina dutertrei, Neogloboquadrina pachyderma and Globigerinoides quadrilobatus indicates mixed layer (low-salinity boundary layer of Throughflow) thinned during Marine Isotope Stages 3 and 2. This enhanced deep chlorophyll maximum (DCM) layer. NW Monsoon 'switched on' at 15,000 kyr BP. This thickened mixed layer, reducing DCM, and increased SST seasonality in Banda Sea)

Sprintall, J., J. Chong, F. Syamsudin, W. Morawitz, S. Hautala, N. Bray & S. Wijffels (1999)- Dynamics of the South Java Current in the Indo-Australian basin, Geophysical Research Letters 26, 16, p. 2493-2496.
(S Java Current poorly understood boundary current, reversing to SE-ward flow semi-annually around May and November. June-October SE monsoon winds lead to upwelling of cold, salty water)

Sprintall, J., A.L. Gordon, A. Koch-Larrouy, T. Lee, J.T. Potemra, K. Pujiana & S.E. Wijffels (2014)- The Indonesian seas and their role in the coupled ocean-climate system. Nature Geoscience 7, p. 487-492.
(online at: http://aoe.scitec.kobe-u.ac.jp/~mdy/library/papers/Sprintalletal2014NG.pdf)
(Indonesian Throughflow from Pacific to Indian Ocean through series of narrow straits. Strong velocities at depths of ~100 m. Intense vertical mixing within Indonesian seas, resulting in net upwelling of thermocline water, lowering sea surface temperatures by ~0.5 °C. Throughflow slows and shoals during El Nino events)

Sprintall, J. & W. T. Liu (2005)- Ekman mass and heat transport in the Indonesian Seas. Oceanography 18, 4, p. 60-69.

Sprintall, J., J.T. Potemra, S.L. Hautala, N.A. Bray & W. Pandoe (2003)- Temperature and salinity variability in the exit passages of the Indonesian Throughflow. Deep Sea Research 50, 12-13, p. 2183-2204.

Sprintall, J. & A. Revelard (2014)- The Indonesian Throughflow response to Indo-Pacific climate variability. J. Geophysical Research, Oceans, 119, 2, p. 1161-1175.
(Indonesian Throughflow is only open pathway for interocean exchange between Pacific and Indian Ocean basins at tropical latitudes. ITF transport variability measured from remotely sensed altimeter data, with focus on outflow passages of Lombok, Ombai, and Timor. Strong interannual variability. Increased transport in the upper layer of Lombok Strait and all of Timor Passage likely related to enhanced Pacific trade winds. El Nino-Southern Oscillation variability strongest in Timor Passage)

Sprintall, J., S. Wijffels, R. Molcard & I. Jaya (2010)- Direct evidence of the South Java Current system in Ombai Strait. Dynamics Atmospheres Oceans 50, 2, p. 140-156.
(Velocity data from Ombai Strait N of Timor confirm E-ward flowing surface South Java Current and deeper Undercurrent cross Savu Sea to reach Ombai Strait, a main outflow portal of Indonesian Throughflow (ITF))

Srinivasan, M.S. & D.K. Sinha (1998)- Early Pliocene closing of the Indonesian Seaway: evidence from north-east Indian Ocean and tropical Pacific deep sea cores. J. Asian Earth Sci. 16, p. 29-44.
(Neogene planktic forams from NE Indian Ocean and Tropical Pacific deep sea cores generally similar until beginning Pliocene (5.2 Ma) when faunal record indicates divergence, suggesting Indonesian Seaway became biogeographic barrier to planktic foraminifera. However, still exchange of surface waters through this seaway. Earlier studies suggested M- Late Miocene occurrence for this biogeographic barrier).

Srinivasan, M.S. & D.K. Sinha (2003)- Planktic foraminiferal biogeography and ocean circulation in Southwest Pacific during last 3.3 My. In: P. Kundal (ed.) Proc. XVIII Indian Colloq. Micropal. Strat., Nagpur, Gondwana Geol. Soc., Spec. Vol. 6, p. 23-31.
(In SW Pacific marked differences in biogeographic distribution of the Menardella and Globoconella groups before and after 1.77 Ma, reflecting changes in surface water circulation. Spatial distribution of Neogloboquadrina pachydermia changed little in last 3.3 My, but frequency increased around 2.58 Ma and again at 0.78 Ma. Distribution pattern of Globigerina bulbides shows intense upweiling at 2.58 Ma)

Steinke, S. M. Prange, C. Feist, J. Groeneveld & M. Mohtadi (2014)- Upwelling variability off southern Indonesia over the past two millennia. Geophysical Research Letters 41, p. 7684-7693.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2014GL061450/pdf)
(Along S coasts of Java, S Sumatra and Lesser Sunda Islands, SE winds from Australia generate intensive coastal upwelling in austral winter (June-September), bringing cooler nutrient-rich waters to surface resulting in enhanced biological productivity. Proxies for upwelling for last 2000 years in deep sea cores show strong upwelling during Little Ice Age and weak during Medieval Warm Period and Roman Warm Period)

Stevenson, J. (2018)- Vegetation and climate of the Last Glacial Maximum in Sulawesi. In: S. O'Connor et al. (eds.) The Archaeology of Sulawesi: Current Research on the Pleistocene to the Historic period, Terra Australis 48, Australian National University Press, p. 17-29.
(https://press-files.anu.edu.au/downloads/press/n4569/pdf/book.pdf)
(Geochemical and paleovegetation records from last 60,000 years in cores from Lake Towuti suggest climate during Last Glacial Maximum (~20 ka) was exteremely dry and more seasonal than today, and bracketed by much wetter conditions of Marine Isotope Stage 3 and the Holocene)

Stumpf, R., S. Kraft, M. Frank, B. Haley, A. Holbourn & W. Kuhnt (2015)- Persistently strong Indonesian Throughflow during marine isotope stage 3: evidence from radiogenic isotopes. Quaternary Science Reviews 112, p. 197-206.
(online at: https://www.geomar.de/fileadmin/personal/fb1/p-oz/mfrank/Stumpf_et_al_2015.pdf)
(Investigation of intensity changes of Indonesian Throughflow and reconstruction of depositional environment at Scott Plateau, W Timor Sea, during Marine Isotope Stage 3 (~60- 30 ka), using radiogenic isotopes)

Sudjono, E.H, D.K. Mihardja & N. Sari Ningsih (2004)- Indikasi fluktuasi arus lintas Indonesia di sekitar Selat Makassar. J. Geologi Kelautan 2, 1, p. 29-35.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/106/96)
('Indication of fluctuations in Indonesian Throughflow in the Makassar Strait')

Sukawati, E., H. Amijaya & E. Yulianto (2009)- Sedimentology of December 2004 and March 2005 tsunami deposit at Busung Bay, Simeulue Island, Sumatra. Proc. 38th Ann. Conv. Exh. Indon. Assoc. Geol. (IAGI), Semarang, 7p.
(Tsunami deposits from Aceh earthquake of 26 December 2004 and Nias earthquake on March 2005. In 2004 tsunami sediments basal rip-up clasts and 6 (9?) fining-upward patterns and 6 coarsening upward patterns; in 2005 tsunami sediment only 1 fining upward pattern. With foraminifera assemblages from inner shelf (2004 and 2005) and middle shelf (2004 only))

Sumner, E.J., M.I. Siti, C. McNeill, P.J. Talling, T.J. Henstock, R.B. Wynn, Y.S. Djajadihardja & H. Permana (2013)- Can turbidites be used to reconstruct a paleoearthquake record for the central Sumatran margin? Geology 41, 7, p. 763-766.

(Sumatra has well-characterized earthquake record spanning past 200 yr, but sediment cores from Sumatran margin reveal few turbidites emplaced in past 100-150 yrs. No evidence of turbidites that correlate with large 2004 and 2005 earthquakes, suggesting not all large earthquakes generate widespread turbidites (Comment by Goldfinger et al. 2014 suggests absence of turbitides possibly because cores not in right locations))

Sun, H., T. Li, C. Liu, F. Chang, R. Sun, Z. Xiong & B. An (2017)- Variations in the western Pacific warm pool across the mid-Pleistocene: evidence from oxygen isotopes and coccoliths in the West Philippine Sea. Palaeogeogr. Palaeoclim. Palaeoecology 483, p. 157-171.
(Planktonic foraminifera O-isotope and Florisphaera profunda abundance data from Core MD06-3050 in W Philippine Sea on margin of W Pacific Warm Pool)

Surachmat, A. (1999)- Salinity of the modern Mahakam Delta, East Kalimantan. Berita Sedimentologi 12, p. 14-16.
(In Mahakam Delta upper delta plain (10-30 km from head-pass) only fresh water. Only last 10km of lower delta plain has brackish water withn salinties from 0-10 kppm. Brackish water in tidal channels with salinity 0-25 kppm. In active distributaries fresh water floats above saline water for 4-6 km)

Susanto, R.D., G. Fang, I. Soesilo, Q. Zheng, F. Qiao, Z. Wei & B. Sulistyo (2010)- New surveys of a branch of the Indonesian Throughflow. EOS 91, 30, p. 261-263.
(online at: https://agupubs.onlinelibrary.wiley.com/toc/23249250/91/30)
(Indonesian Throughflow branch through S China Sea- Karimata Strait important role in Throughflow, despite rel. shallow depths)

Susanto, R.D., A. Ffield, A.L. Gordon & T.R. Adi (2012)- Variability of Indonesian throughflow within Makassar Strait, 2004-2009. J. Geophysical Research, Oceans, 117, C9, p.
(Makassar Straits annual mean transport is S-ward at ~13.3 Sv (12.5-14.0 Sv), substantially higher than measurements from 1997 when El Nino suppressed transport (9.2 Sv))

Susanto, R.D. & A.L. Gordon (2005)- Velocity and transport of the Makassar Strait throughflow. J. Geophysical Research 110, C01005, p. 1-10.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.725.7432&rep=rep1&type=pdf
(S-ward transport in Makassar Strait confined mainly to upper 750m, above blocking topographic sill of Makassar Strait. Transport maximum occurs within thermocline (100-300m))

Susanto, R.D., A.L. Gordon & J. Sprintall (2007)- Observations and proxies of the surface layer throughflow in Lombok Strait. J. Geophysical Research 112, C03S92, p. 1-11.

Susanto, R.D., A.L. Gordon & Q. Zheng (2001)- Upwelling along the coasts of Java and Sumatra and its relation to ENSO. Geophysical Research Letters 28, 8, p. 1599-1602.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2000GL011844)
(Upwelling along Java-Sumatra Indian Ocean coasts response to regional monsoon winds. Upwelling center with low sea surface T migrates W-ward and toward equator during SE monsoon (June-October), driven by alongshore winds and latitudinal changes in Coriolis parameter. Upwelling terminated due to reversal of winds at onset of NW monsoon. During El Nino episodes upwelling extends in time and space, when ITF carries colder water, shallowing thermocline depth (by 20-60m) and enhancing upwelling strength)

Susanto, R.D., Z. Wei, T.R. Adi, Q. Zheng, G. Fang, B. Fan, A. Supangat, T. Agustiadi, S. Li, M. Trenggono & A. Setiawan (2016)- Oceanography surrounding Krakatau Volcano in the Sunda Strait, Indonesia. Oceanography 29, 2, p. 264-272.
(online at: https://tos.org/oceanography/assets/docs/29-2_susanto.pdf)
(Sunda Strait current velocity strongly affected by seasonal monsoon winds. During boreal winter monsoon NW winds draw waters from Indian Ocean into Java Sea. During the summer monsoon higher T, lower-salinity, and lower-density waters from Java Sea exported to Indian Ocean through Sunda Strait)

Syahrir, M.R., T. Hanjoko, A. Adnan, M. Yasser, M. Efendi, A.A. Budiarsa & I. Suyatna (2018)- The existence of estuarine coral reef at eastern front of Mahakam Delta, East Kalimantan, Indonesia, a first record. AACL Bioflux, Int. J. of the Bioflux Society 11, 2, p. 362-378.
(online at: http://www.bioflux.com.ro/docs/2018.362-378.pdf)
(Coral reef at NE front of Mahakam Delta with 30 genera of hard coral and 11 genera of soft coral)

Szczucinski, W. (2012)- The post-depositional changes of the onshore 2004 tsunami deposits on the Andaman Sea coast of Thailand. Natural Hazards 60, 1, p. 115-133.
(online at: https://link.springer.com/article/10.1007/s11069-011-9956-8)
(2004 Indian Ocean tsunami flooded Andaman Sea coastal zone, leaving few mm to 10's of cm thick deposits over ~1 km-wide inundation zone. After 4 years tsunami deposits preserved at only half of studied sites)

Ta, T.K.O., V.L. Nguyen, M. Tateishi, I. Kobayashi & Y. Saito (2001)- Sedimentary facies, diatom and foraminifer assemblages in a late Pleistocene-Holocene incised-valley sequence from the Mekong River Delta, Bentre Province, Southern Vietnam: the BT2 core. J. Asian Earth Sci. 20, 1, p. 83-94.
(71m long core in incised vally fill shows post-glacial transgressive -regressive fill cycle. Maximum Holocene marine influence at ~5300 yr BP, with bay/estuary muds with common planktonic diatoms (Coscinodicus, Thalassionema, etc.) and open marine foraminifera (Bolivina, Bulimina, Quinqueloculina, Pararotalia). Regressive succession of prodelta- delta front (4000-3000 yr BP)- delta plain)

Ta, T.K.O., V.L. Nguyen, M. Tateishi, I. Kobayashi, Y. Saito & T. Nakamura (2002)- Sediment facies and Late Holocene progradation of the Mekong River Delta in Bentre Province, southern Vietnam: an example of evolution from a tide-dominated to a tide- and wave-dominated delta. Sedimentary Geology 152, p. 313-325.

Ta, T.K.O., V.L. Nguyen, M. Tateishi, I. Kobayashi, S. Tanabe & Y. Saito (2002)- Holocene delta evolution and sediment discharge of the Mekong River, southern Vietnam. Quaternary Science Reviews 21, p. 1807-1819.
(Last 3000 yr of Mekong delta evolution characterized by progradation with increasing wave influence, SE-ward sediment dispersal, decreasing progradation rates, beach-ridge formation and delta front face steepening)

Ta, T.K.O., V.L. Nguyen, M. Tateishi, I. Kobayashi & Y. Saito (2005)- Holocene delta evolution and depositional models of the Mekong River Delta, Southern Vietnam. In: L. Giosan & J.P. Bhattacharya (eds.) River deltas- concepts, models, and examples, Soc. Sedimentary Geology (SEPM) Spec. Publ. 83, p. 453-466.

Ta, T.K.O., V.L. Nguyen, M. Tateishi, I. Kobayashi, Y. Saito & T. Nakamura (2002)- Sediment facies and Late Holocene progradation of the Mekong River Delta in Bentre Province, southern Vietnam: an example of evolution from a tide-dominated to a tide- and wave-dominated delta. Sedimentary Geology 152, p. 313-325.
(Mekong Delta is mixed tide and wave energy delta with wide delta plain formed during last 6 ka and is one of largest deltas in world. Changed from tide-dominated to tide-wave-dominated during Late Holocene. Late Pleistocene Paleo-Mekong River incised valley >70 m deep and formed during last glacial period)

Takahashi, K. & H. Okada (2000)- The paleoceanography for the last 30,000 years in the southeastern Indian Ocean by means of calcareous nannofossils. Marine Micropaleontology 40, p. 83-103.
(Latest Quaternary paleoceanography based on calcareous nannofossils from deep-sea cores along N-S transect between 12-25° S off W Australia. Java upwelling system operates above N site and increases counts of small placoliths)

Tamuntuan, G., S. Bijaksana, J. King, J. Russell, U. Fauzi, K. Maryunani, N. Aufa & L.O. Safiuddin (2015)- Variation of magnetic properties in sediments from Lake Towuti, Indonesia, and its paleoclimatic significance. Palaeogeogr. Palaeoclim. Palaeoecology 420, p. 163-172.
(Sediment core from Lake Towuti in E Sulawesi Ophiolite belt with three zones of varying magnetic properties, corresponding to levels of iron oxide dissolution and magnetite precipitation. Magnetically strongest zone weak iron oxide dissolution and intense magnetite precipitation, likely driven by lake conditions during dry conditions in Marine Isotope Stage 2)

Tamura, T., Y. Saito, V.L. Nguyen, T.K.O. Ta, M.D. Bateman, D. Matsumoto & S. Yamashita (2012)- Origin and evolution of interdistributary delta plains; insights from Mekong River delta. Geology 40, 4, p. 303-306.
(Mekong River delta characterized by several shore-perpendicular elongate delta plains, with sequences of beach ridges, reflecting progradation in last 3.5 ka))

Tamura, T., Y. Saito, S. Sieng, B. Ben, M. Kong, I. Sim, S. Choup & F. Akiba (2009)- Initiation of the Mekong River delta at 8 ka: evidence from the sedimentary succession in the Cambodian lowland. Quaternary Science Reviews 28, 3-4, p. 327-344.
(Most modern deltas initiated around 7.5-9 ka, in response to deceleration of Holocene sea-level rise. Initial stage of Mekong River delta recorded in Cambodian lowland sediment cores: (1) aggrading flood plain and tidal-fluvial channels during postglacial sea-level rise (10- 8.4 ka); (2) aggrading to prograding tidal flats and mangrove forests around maximum flooding of sea (~8.0 ka;);(3) prograding fluvial system on delta plain (6.3 ka- Present). Delta progradation initiated as result of sea-level stillstand at around 8-7.5 ka. Thick mangrove peat accumulation from ~7.5- 6.3 ka. Since 6.3 ka fluvial system and delta progradation)

Talley, L.D. & J. Sprintall (2005)- Deep expression of the Indonesian Throughflow: Indonesian intermediate water in the South Equatorial Current. J. Geophysical Research 110, C10009, p. 1-30.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2004JC002826)

Tan, K.H. (2008)- Soils in the humid tropics and monsoon region of Indonesia. CRC Press, Boca Raton, p. 1-557.

Tanabe, S., T.K.O. Ta, V.L. Nguyen, M. Tateishi, I. Kobayashi & Y. Saito (2003)- Delta evolution model inferred from the Holocene Mekong Delta, southern Vietnam. In: F.H. Sidi et al. (eds.) Tropical deltas of Southeast Asia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 76, p. 175-188.
(Mekong Delta at SE tip of Indochina Peninsula with large delta plain ranked third largest in world. Present delta classified as tide-dominated/ wave-influenced. Delta evolved from tide-dominated from 6.5- 2.5 ka to tide-wave mixed delta from 2.5 ka- Present. Wave energy will become more pronounced as delta continues to prograde towards shelf margins)

Thomas, R. B. & E.J. Lesleighter (1983)- Sediment transport and deposition in the Cimanuk Delta region, Indonesia. In: Sixth Australian Conf. Coastal and Ocean Engineering, Aust. Inst. Engin., Nat. Comm. Coast. and Ocean Engin., Barton, Australia, p. 139-144
(Many rivers in volcanic areas of Java discharge huge quantities of sediment, forming actively growing deltas like Cimanuk, 170 km E of Jakarta)

Tillinger, D. (2010)- The Indonesian Throughflow of the last 50 years. Ph.D. Thesis Columbia University, Palisades, New York, p. 1-101.
(Indonesian Throughflow transports ~15 Sv (1 Sv = 1 million m3/sec) of relatively cool and low salinity water from tropical Pacific Ocean into Indian Ocean. 50-year time series of transport calculated))

Tillinger, D. (2011)- Physical oceanography of the present day Indonesian Throughflow. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 267-281.
(online at: www.statisticstutors.com/articles/debrat-indonesian-throughflow.pdf)
(Indonesian Throughflow transfers ~15 Sv (1 Sv = Mm3/second) of relatively cool, fresh water from tropical Pacific Ocean to Indian Ocean. Flow freshens the Indian Ocean and transports heat between basins. Etc.)

Tillinger, D. & A. Gordon (2009)- Fifty years of the Indonesian Throughflow. J. of Climate 22, 23, p. 6342-6355.
(online at: http://journals.ametsoc.org/doi/pdf/10.1175/2009JCLI2981.1)

Tomascik, T., A.J. Mah, A. Nontiji & M. Moosa (1997)- The ecology of the Indonesian Seas, Part I. The ecology of Indonesia 7, Periplus Ed., Singapore, p. 1-642.
(Extensive overview of Indonesian seas, with chapters on geology, oceanography and coral reefs)

Tomascik, T., A.J. Mah, A. Nontiji & M. Moosa (1997)- The ecology of the Indonesian Seas, Part II. The ecology of Indonesia Ser. 8, Periplus Ed., Singapore, p. 643-1388.
(Continuation of overview of Indonesian seas, with additional chapters coral reefs, pelagic systems, mangroves and environmental issues)

Tozuka, T., T. Qu & T. Yamagata (2007)- Dramatic impact of the South China Sea on the Indonesian Throughflow. Geophysical Research Letters 34, L12612, p. 1-5.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2007GL030420/epdf)
(S China Sea throughflow may play important role in climate variability of Indo-Pacific region)

Tsuchi, R. (1997)- Marine climatic responses to Neogene tectonics of the Pacific Ocean seaways. Tectonophysics 281, p. 113-124.

Umbgrove, J.H.F. (1930)- The amount of maximal lowering of sea level in the Pleistocene. Proc. 4th Pacific Science Congress, Java 1929, IIA, p. 105-113.
(Submarine topography of Sunda Shelf in S China Sea, Java Sea and Straits of Malacca indicate Pleistocene rivers debouched near 100m isobath, suggesting about 100m of maximum sea level lowering)

Unverricht, D., W. Szczucinski, K. Stattegger, R. Jagodzinski, X.T. Le & L.L.W. Kwong (2013)- Modern sedimentation and morphology of the subaqueous Mekong Delta, southern Vietnam. Global and Planetary Change 110, B, p. 223-235.
(Mekong River Delta influenced by tides (meso-tidal system), waves, coastal currents, monsoon-driven river discharge and human impact. Subaqueous part large lateral variability, with two delta fronts, 200 km apart, one at mouth of Bassac distributary,one around Cape Ca Mau in SW. Two different sediment types in delta)

Valsala, V. & S. Maksyutov (2010)- A short surface pathway of the subsurface Indonesian Throughflow water from the Java Coast associated with upwelling, Ekman transport, and subduction. Int. J. Oceanography 2010, 540783, 15p.
(online at: https://www.hindawi.com/journals/ijocean/2010/540783/)
(Circulation modeling suggests Pacific-origin Indonesian Throughflow water can upwell from position below 100m to surface along S Java coast during upwelling season)

Van Aken, H.M., J. Punjanan & S. Saimima (1988)- Physical aspects of the flushing of the East Indonesian basins. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 22, p. 315-339.

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(In late Quaternary climate in Timor Sea region more arid than adjacent land is today. Area mainly above sea level during last glaciation and covered by savanna vegetation. Subsequent transgression rapid. Supports Fairbridge contention that during glacial periods W-wind belts with associated rainfall displaced 5-10° N - ward and equatorial pluvial zone was compressed)

Van der Kaars, S. & G.D. van den Bergh (2004)- Anthropogenic changes in the landscape of west Java (Indonesia) during historic times, inferred from a sediment and pollen record from Teluk Banten. J. Quaternary Science 19, 3, p. 229-239.
(Palynological and charcoal analyses of core from coastal area of NW Java provide vegetation history for last few centuries. Effect of Krakatau eruption insignificant compared to human impact on vegetation in Banten)

Van der Meij, S.E.T., R.G. Moolenbeek & B.W. Hoeksema (2009)- Decline of the Jakarta Bay molluscan fauna linked to human impact. Marine Pollution Bull. 59, p. 101-107.
(online at: https://pdfs.semanticscholar.org/91ea/86518ab13496eec4055c5af9d2477c02e2d2.pdf)
(Molluscan fauna of Jakarta Bay deteriorated between 1937 and 2005 due to increased sewage from Jakarta and sediment input from deforested W Java hinterland. Predatory gastropods and mollusc species associated with carbonate substrate vanished from Jakarta Bay, among which many edible species)

Van der Meij, S.E.T., Suharsono & B.W. Hoeksema (2010)- Long-term changes in coral assemblages under natural and anthropogenic stress in Jakarta Bay (1920-2005). Marine Pollution Bull. 60, 9, p. 1442-1454.
(Comparison of coral assemblages show about half species recorded in 1920 was found again in 2005. Most prominent declines in nearshore disappearance of Acroporidae, Milleporidae and to lesser extent Poritidae)

Van der Stok, J.P. (1897)- Wind and weather, currents, tides and tidal streams in the East Indian archipelago. Government Printing Office, Batavia, p. 1-209.

Van der Stok, J.P., S.P. Naber, G.F. Tydeman, W.E. Ringer et al. (ed.) (1922)- De zeeen van Nederlandsch Oost Indie. Kon. Nederlands Aardrijkskundig Genootschap, E.J. Brill, Leiden, p. 1-506.
(online at: https://ia600404.us.archive.org/2/items/dezeenvanneder00koni/dezeenvanneder00koni.pdf)
('The seas of Netherlands East Indies'. With chapter on geology and coral reefs by Molengraaff, p. 272-357)

Van Sebille, E., J. Sprintall, F.U. Schwarzkopf, A. Sen Gupta, A. Santoso, M.H. England, A. Biastoch & C.W. Boning (2014)- Pacific-to-Indian Ocean connectivity: Tasman leakage, Indonesian Throughflow, and the role of ENSO. J. Geophysical Research, Oceans, 119, 2, p. 1365-1382.
(Circulation model)

Van Tuijn, J. (1932)- Over een recente daling van den zeespiegel in Nederlandsch Oost-Indie. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 49, p. 89-99.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001678001:pdf)
('On a recent drop in sea level in Netherlands East Indies'. Many coastlines in W Indonesia show evidence of recent sea level drop of 5-10m (raised coral reefs, etc.). With map of distribution)

Van Weering, T.C.E., D. Kusnida, S. Tjokrosapoetro, S. Lubis & P. Kridoharto (1989)- Slumping, sliding and the occurrence of acoustic voids in recent and subrecent sediments of the Savu Forearc Basin, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 415-430.
(High resolution seismic and acoustic profiles from Snellius-II Expedition in Savu Basin show widespread recent acoustic voids (transparent 'bright spots') that probably formed from local expulsion of pore-waters, caused by sediment mass movements down uplifted ridge between Sumba and Savu/Roti)

Verschell, M.A., J.C. Kindle & J.J. OôBrien (1995)- Effects of Indo-Pacific throughflow on the upper tropical Pacific and Indian Ocean. J. Geophysical Research, Atmospheres, 100, C9, p. 18409-18420.
(Throughflow oceanography models)

Verstappen, H.Th. (1960)- Some observations on karst development in the Malay Archipelago. J. Tropical Geography 14, p. 1-10.
(On limestone karst development with examples from Java S Mountains, C. Sumatra, Halmahera)

Verstappen, H.Th. (1975)- On palaeoclimates and landform development in Malesia. In: G.J. Bartstra & W.A. Casparie (eds.) Modern Quaternary Research in Southeast Asia, A.A. Balkema, Rotterdam, 1, p. 3-35.
(Climate changes in Quaternary lead to alternating humid and more arid periods, also in tropics. Chemical weathering dominates in interglacial equatorial rainforest conditions, like in Holocene. During glacial periods more pronounced seasonality and physical desintegration of rocks becomes more important. Pleistocene lowered sea level probably did not cause incision of valleys on shelf as rivers have very low gradient. Etc.)

Verstappen, H.Th. (1982)- Quaternary climatic changes and natural environment in SE Asia. Geo Journal 4, 1, p. 45-54.
(Lower rainfall and longer dry season characterised SE Asia during Quaternary Glacials. This had important effect on vegetation and landform development. Low Glacial sea levels thought not to have caused river incision; deposition of coarse-textured materials more characteristic. Incision mainly tied to Interglacial and Holocene humic tropical conditions when vegetation interfered with non-concentrated surface wash)

Verstappen, H.Th. (1993)- Geomorphologie volcanique et attenuation des desastres naturels. Les volcans de l'Indonesie, quelques exemples. Bull. Assoc. Geographes francais 70, 4, p. 367-376.
(online at: https://www.persee.fr/docAsPDF/bagf_0004-5322_1993_num_70_4_1704.pdf)
('Volcanic geomorphology and natural disaster reduction- the volcanoes of Indonesia, some examples'. French version of Verstappen 1994)

Verstappen, H.Th. (1994)- The volcanoes of Indonesia and natural disaster reduction. Indonesian J. Geography 26, 68, p. 27-35.
(online at: http://i-lib.ugm.ac.id/jurnal/detail.php?dataId=8432)
(Indonesian volcanic landforms: strato volcanoes, calderas and 'volcano-tectonic' depressions' associated with ignimbrite/ welded tuff plateaus (associated with deep-seated faults). Important role for geomorphological survey and use of aerospace technology in volcanic hazard zoning)

Verstappen, H.Th. (1998)- The effect of climatic change on southeast Asian geomorphology. J. Quaternary Science 12, 5, p. 413-418.
(Quaternary climatic changes in SE Asia four types of fluctuations: temperature, precipitation, wind patterns and sea-level)

Verstappen, H.Th. (2000)- Outline of the geomorphology of Indonesia. lnt. Inst. Aerospace Survey and Earth Sciences (ITC), Enschede, Publ. 79, p. 1-212.
(Review of geomorphology research in Indonesia, including geologic framework, climatic factors affecting landforms, volcanic landforms, karst terranes, lowlands, coastal geomorphology and coral reefs)

Visser, K., R. Thunell & M.A. Goni (2004)- Glacial-interglacial organic carbon record from the Makassar Strait, Indonesia: implications for regional changes in continental vegetation. Quaternary Science Reviews 23, p. 17-27.
(Climate in W Pacific Warm Pool and other equatorial regions was colder by 3-4°C during glacial periods. Makassar Strait sediment core suggests vegetation on Borneo and surrounding islands did not change from tropical rainforest during last two Late Pleistocene glacial periods, supporting hypothesis that winter monsoon strengthened in glacial periods, allowing Indonesia to maintain high rainfall despite cooler conditions)

Visser, K., R. Thunell & L. Stott (2003)- Magnitude and timing of temperature change in the Indo-Pacific warm pool during deglaciation. Nature 421, 6919, p. 152-155.
(Oxygen isotopes and Mg/Ca ratios of Globigerinoides ruber shells from Makassar strait in Indo-Pacific warm poolyielde estimates of sea surface temperatures and ice volume. Sea surface T increased by 3.5-4.0 °C during last two glacial-interglacial transitions, synchronous with global increase in atmospheric CO2 and Antarctic warming, but T increase ~2000-3000 years before N Hemisphere ice sheets melted. Tropical Pacific region plays important role in driving glacial-interglacial cycles)

Vranes, K., A.L. Gordon & A. Field (2002)- The heat transport of the Indonesian Throughflow and implications for the Indian Ocean heat budget. Deep Sea Research II, 49, p. 1391-1410.

Vranes, K. & A.L. Gordon (2005)- Comparison of Indonesian throughflow transport observations, Makassar Strait to Eastern Indian Ocean. Geophysical Research Letters 32, 10, L10606, p. 1-5.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2004GL022158)

Wajsowicz, R.C., A.L. Gordon, A. Ffield & R.D. Susanto (2003)- Estimating transport in Makassar Strait, Deep Sea Research, Part II, 50, p. 2163-2181.

Walsh, J.P. & C.A. Nittrouer (2003)- Contrasting styles of off-shelf sediment accumulation in New Guinea. Marine Geology 196, 3-4, p. 105-125.
(Study of modern 'highstand' off-shelf sedimentation in PNG Gulf of Papua and Sepik margin. Gulf of Papua receives >3x10-8 tons of sediment annually from rivers. Most accumulates on shelf, <5% deposited in Pandora Trough. Sepik margin different: Sepik River discharges ~1x10 -8 tons of sediment annually, and submarine canyon extends to river mouth. 90% of river material regularly produces gravity-driven flows in canyon)

Walsh, J.P. & C.A. Nittrouer (2004)- Mangrove-bank sedimentation in a mesotidal environment with large sediment supply, Gulf of Papua. Marine Geology 208, p. 225-248.
(Extensive mangrove forests are associated with major river systems. Indo-Pacific region numerous large rivers that discharge onto broad continental shelves, with common mangroves along these coastlines. Gulf of Papua >3350 km2 of mangrove forests, majority associated with Fly, Kikori and Purari River deltas. Sediment trapping in W Gulf of Papua mangroves estimated to be 2-14% of total sediment load)

Walsh, J.P., C.A. Nittrouer, C.M. Palinkas, A.S. Ogston, R.W. Sternberg & G.J. Brunskill (2004)- Clinoform mechanics in the Gulf of Papua, New Guinea. Continental Shelf Res. 24, 19, p. 2487-2510.
(Largest islands of Indo-Pacific Archipelago account for 20-25% of global sediment discharge to oceans, >50% of this supplied to wide (>150 km) continental shelves. These conditions create large-scale clinoforms- sigmoidal-shaped deposits on continental shelf. ~20% of sediment supplied to Gulf of Papua accumulates on clinoforms, <5% escapes to adjacent slope, 75% trapped on inner-topset region (<20 m depth) and within flood/ delta plains)

Wang, P. (1999)- Response of Western Pacific marginal seas to glacial cycles: paleoceanographic and sedimentological features. Marine Geology 127, p. 5-39.
(On Late Quaternary in five NE Pacific marginal seas, from Bering Sea to Banda Sea. During glacial cycles reorganization of sea water circulation in basins. Decrease of sea area and sea surface temperature in marginal seas lead enhanced aridity of inland China during glaciation)

Wang, P., L. Wang, Y. Bian & Z. Jian (1995)- Late Quaternary paleoceanography of the South China Sea: surface circulation and carbonate cycles. Marine Geology 127, p. 145-165.

Waworuntu, J.M. (1999)- Water mass transformations and throughflow variability in the Indonesian seas. Ph.D. Thesis University of Miami, Coral Gables, p. 1-98.

Waworuntu, J.M., R.A. Fine, D.B Olson & A.L. Gordon (2000)- Recipe for Banda Sea water. J. Marine Res. 58, p. 547-569.
(Water from W Pacific flows through Indonesian Seas following different pathways and is modified by various processes to form uniquely isohaline (34.6) Banda Sea Water)

Waworuntu, J.M., S.L. Garzoli & D.B. Olson (2001)- Dynamics of Makassar Strait. J. Marine Res. 59, p. 313-325.
(online at: www.aoml.noaa.gov/phod/docs/garzoli_jmr_2001.pdf)
(Throughflow in Makassar Strait requires at least 3-layer description: upper 200 m water mass characterized by the salinity maximum of North Pacific SubtropicalWater; water in layer 2 is North Pacific Intermediate Water salinity minimum (~300m); bottom layer ~1600m)

Weber, M. (1902)- Siboga expeditie- Introduction et description de lôexpedition. Uitkomsten op zoologisch, botanisch, oceanographisch en geologisch gebied, verzameld in Nederlandsch Oost-Indie 1899-1900, Mon. 1, Brill, Leiden, p. 1-152.

('Introduction and description of the Siboga expedition 1899-1900'. First of many volumes on results of the zoological, botanical, oceanographic and geological studies in E Indonesia waters and islands by members of the Siboga Expedition. Geological results reported by Wichmann 1925)

Webster, P.J.& N.A. Streten (1978)- Late Quaternary ice age climates of tropical Australasia: interpretations and reconstructions. Quaternary Research 10, 3, p. 279-309.

Wei, J., M.T. Li, P. Malanotte-Rizzoli, A.L. Gordon & D.X. Wang (2016)- Opposite variability of Indonesian Throughflow and South China Sea Throughflow in the Sulawesi Sea. J. Physical Oceanography 46, p. 3165-3180.
(online at: https://journals.ametsoc.org/doi/pdf/10.1175/JPO-D-16-0132.1)

Wetzel, A. (1983)- Biogenic structures in modern slope to deep-sea sediments in the Sulu Sea Basin (Philippines). Palaeogeogr. Palaeoclim. Palaeoecology 42, p. 285-304.
(On biogenic structures and depth zonation in 23 cores taken by RV Valdivia from 1000- 5000m water depth, Sulu Sea. Slope- rise sediments down to 3800m almost totally bioturbated, with 8 types of traces: common Helminthopsis, Planolites, Thalassinoides, less common Chondrites, Scolicia, Skolithos, Trichichnus and Zoophycos. Abyssal plain deposits below 4400m less bioturbated (20% or less of sediment burrowed). Increase of trace diversity by small traces, dominated by Muensteria, 'mycellia' and Phycosiphon. Traces typical of many turbidite sequences ('graphoglyptids') absent)

Wetzel, A. (2002)-Modern *Nereites* in the South China Sea- ecological association with redox conditions in the sediment. Palaios 17, p. 507-515.
(Nereites trace fossil ichnofabrics in box cores from >4000m water depths in central S China Sea. Appear to be restricted to oxygenated sediments above redox boundary)

Whiffin, T. (2002)- Plant biogeography of the SE Asian-Australian region. In: P. Kershaw et al. (eds.) Bridging Wallace's Line: the environmental and cultural history and dynamics of the SE Asian- Australian region, Advances in Geology 34, Catena Verlag, p. 61-82.
(Review of present-day floral provinces of SE Asia)

Whittaker, R.J., K. Richards, H. Wiriadinata & J.R. Flenley (1984)- Krakatau 1883 to 1983: a biogeographical assessment. Progress in Physical Geography 8, 1, p. 61-81.

Whitten, T., J. Whitten, C. Goettsch, J. Supriatna & R.A. Mittermeier (1999)- Sundaland. In: R.A. Mittermeier et al. (eds.) Biodiversity hotspots of the world, Cemex, Prado Norte, Mexico, p.

Whitten, T., J. Whitten, C. Goettsch, J. Supriatna & R.A. Mittermeier (1999)- Wallacea. In: R.A. Mittermeier et al. (eds.) Biodiversity hotspots of the world, Cemex, Prado Norte, Mexico, p.

Wicaksono, S.A., J.M. Russell, A. Holbourn & W. Kuhnt (2017)- Hydrological and vegetation shifts in the Wallacean region of central Indonesia since the Last Glacial Maximum. Quaternary Science Reviews 157, p. 152-163.
(Study of vegetation, rainfall and changes in atmospheric circulation during past 26,000 years in C Indonesia from terrestrial plant biomarkers in sediment cores in Mandar Bay, off W Sulawesi. Enriched leaf wax δ13C isotope values during LGM, together with other regional vegetation records, document grassland expansion, implying regionally dry and possibly more seasonal glacial climate. Inundation of Sunda Shelf (in particular opening of Java Sea and Karimata Strait between 9.4- 11.1 ka provided new moisture sources)

Wijffels, S.E., G. Meyers & J.S. Godfrey (2008)- A 20-yr average of the Indonesian Throughflow: regional currents and the interbasin exchange. J. Physical Oceanography 38, p. 1965-1978.
(online at: https://journals.ametsoc.org/doi/pdf/10.1175/2008JPO3987.1)

Wong, P.P. (2005)- The coastal environment of Southeast Asia. In: A. Gupta (ed.) The physical geography of Southeast Asia, Oxford University Press, p. 177-192.

Woodroffe, C.D. (1993)- Late Quaternary evolution of coastal and lowland riverine plains of Southeast Asia and northern Australia: an overview. Sedimentary Geology 83, p. 163-175.
(Introduction and overview of special issue of Sedimentary Geology)

Woodroffe, C.D. (2000)- Deltaic and estuarine environments and their Late Quaternary dynamics on the Sunda and Sahul shelves. J. Asian Earth Sci. 18, 4, p. 393-413.
(online at: https://eurekamag.com/pdf/003/003399322.pdf)
(Deltaic and estuarine environments of Sunda shelf receive large volumes of sediment and had diverse and productive vegetation before clearing. Three periods of change: long-term response of deltaic- estuarine plains to postglacial sea-level rise, Holocene patterns of coastal progradation and distributary migration under relatively stable sea level and impact of human modifications)

Woodroffe, C.D. (2005)- Southeast Asian deltas. In: A. Gupta (ed.) The physical geography of Southeast Asia, Oxford University Press, p. 219-236.
(Brief review of delta processes and Irrawaddy, Mekong, Mahakam, Rajang-Barang, etc. deltas of SE Asia)

Woodruff, D.S. (2010)- Biogeography and conservation in Southeast Asia: How 2.7 million years of repeated environmental fluctuations affect todayҫs patterns and the future of the remaining refugial-phase biodiversity. Biodiversity and Conservation 19, p. 919-941.
(SE Asia geography today typical of only 2% of last million years; 90% of time land area was 1.5-2.0x larger as mean sea levels were 62m lower, climates were cooler, and extensive forests and savanna covered emerged Sunda plains. Land areas varied as sea levels fluctuated up to 50m with each of ~50 Pleistocene glacial cycles, and forests expanded and contracted with oscillations in land area and seasonality)

Woodson, A.L., E. Leorri, S.J. Culver, D. J. Mallinson, P.R. Parham, R.C. Thunell, V.R. Vijayan & S. Curtis (2017)- Sea-surface temperatures for the last 7200 years from the eastern Sunda Shelf, South China Sea: climatic inferences from planktonic foraminiferal Mg/Ca ratios. Quaternary Science Reviews 165, p. 13-24.
(Temperature record in two cores from Holocene incised valley fills on Sunda Shelf off Sarawak)

Wurster, C.M., M.I. Bird, I.D. Bull, F. Creed, C. Bryant, J.A.J. Dungait & V. Paze (2010)- Forest contraction in north equatorial Southeast Asia during the Last Glacial Period. Proc. National Academy Sciences USA 107, 35, p. 15508-15511.
(online at: www.pnas.org/content/early/2010/07/22/1005507107.full.pdf)
(Distribution of vegetation in SE Asia during Last Glacial Maximum (23-19 ka) still debated. Carbon isotopes of ancient cave guano profiles suggest substantial forest contraction during LGM on peninsular Malaysia and Palawan (and replaced by open savanna conditions), while rainforest was maintained in N Borneo)

Wyrtki, K. (1958)- The water exchange between the Pacific and the Indian Oceans in relation to upwelling processes. Oceanography 16, p. 61-65.

Wyrtki, K. (1961)- Physical oceanography of the southeast Asian waters. Scient. Reports of marine investigations of the South China Sea and the Gulf of Thailand, NAGA Rept. 2, Scripps Inst. Oceanography, University of California Press, San Diego, p. 1-195.
(Classic review of oceanography of Indonesian waters. With maps of seasonal surface currents, salinity, oxygen, temperature, tidal types and amplitudes, etc.)

Wyrtki, K. (1962)- The upwelling in the region between Java and Australia during the south-east monsoon. Australian J. Marine Freshwater Res. 13, p. 217-225.
(online at: www.publish.csiro.au.ezproxy.lib.monash.edu.au/?act=view_file&file_id=MF9620217.pdf)

(During SE monsoon season main upwelling area is along coast of Java and Sumbawa, not along NW Australian shelf. Region characterized by high inorganic phosphate at bottom of the euphotic layer and high plankton biomass. Transparency of water in upwelling area is low, indicating high suspended matter)

Wyrtki, K. (1987)- Indonesian throughflow and the associated pressure gradient. J. Geophysical Research 92, p. 12941-12946.
(Flow of water from W Pacific to E Indian Ocean through Indonesian archipelago governed by strong pressure gradient. Average sea level difference 16 cm and most of pressure gradient contained in upper 200m. Annual maximum during SE monsoon in July- August and minimum in January-February)

Xu, Y., L. Wang, X. Yin, X. Ye, D. Li, S. Liu, X. Shi, R.A. Troa, R. Zuraida, E.Triarso & M. Hendrizan (2017)- The influence of the Sunda Strait opening on paleoenvironmental changes in the eastern Indian Ocean. J. Asian Earth Sci. 146, p. 402-411.
(With E Holocene sea level rise warm and low-salinity sea water from Java Sea was transported into E Indian Ocean after opening of Sunda Strait. Core CJ01-185 (1538m water depth) in E Indian Ocean off Sunda Strait sediments derived mainy from Java Island. Sedimentation rate increased from last glacial period to Holocene. Additional terrigenous nutrients from Java Sea induced paleoproductivity with higher TOC and TN concentrations after opening of Sunda Strait)

Yudhicara, A. Ibrahim, V. Asvaliantina, W. Kongko & W. Pranowo (2012)- Sedimentological properties of the 2010 Mentawai tsunami deposit. Bull. Marine Geol. 27, 2, p. 55-65.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/45/46)
(Thickness of 2010 Mentawai tsunami deposits on Sipora and Pagai islands off W Sumatra 1.5-22 cm. Generally composed of fine-coarse sand, in irregular contact with underlying soil. Commonly multiple layers: run up at bottom and back wash at top. Fining upward, parallel lamination and soil clasts observed. Fossils generally rare, but include shallow marine foraminifera and abundant sponge spicules)

Yudhicara, Y. Zaim, Y. Rizal, Aswan, R. Triyono, U. Setiyono & D. Hartanto (2013)- Characteristics of paleotsunami sediments, a case study in Cilacap and Pangandaran coastal areas, Jawa, Indonesia. Indonesian J. Geology 8, 4, p. 163-175.
(online at: http://oaji.net/articles/2014/1150-1408504454.pdf)
(In Pangandaran, S Java, two possible tsunami deposits on top of soil horizons: 5-6 cm layer of coarse sand at top as 2006 tsunami deposit and 5-10 cm sand layer at bottom as paleotsunami. Sands contain (Miocene?) planktonic and shallow marine foraminifera)

Xu, J. (2014)- Change of Indonesian Throughflow outflow in response to East Asian Monsoon and ENSO activities since the Last Glacial. Science China: Earth Sciences 57, p. 791-801.

Xue, Z. (2010)- A source-to-sink study of the Mekong River Delta: hydrology, delta evolution, and sediment transport modeling. Ph.D. Thesis North Carolina State University, p. 1-190.

Xue, Z., J.P. Liu, D. DeMaster, L.V. Nguyen & T.K.O. Ta (2010)- Late Holocene evolution of the Mekong subaqueous delta, Southern Vietnam. Marine Geology 269, p. 46-60.
(High-resolution seismic and coring revealed low gradient, subaqueous paleo-delta system, up to 20m thick, surrounding modern Mekong RiverDelta, formed around 3000 BP)

Zakaria, A.S. (1975)- The geomorphology of Kelantan Delta (Malaysia). Catena 2, p. 337-349.

Zhang, P., R. Zuraida, J. Xu, & C. Yang (2016)- Stable carbon and oxygen isotopes of four planktonic foraminiferal species from core-top sediments of the Indonesian Throughflow region and their significance. Acta Oceanologica Sinica 35, 10, p. 63-76.
(Horizontal and vertical distributions of δ18O and δ13C investigated in Globigerinoides ruber, Gs sacculifer, Pulleniatina obliquiloculata and Neogloboquadrina dutertrei, from 62 core-top samples from Indonesian Throughflow region. In Makassar Strait depleted δ18O and δ13C linked to freshwater input. In Bali Sea

depleted δ18O result of freshwater input, while depleted δ13C more likely due to Java-Sumatra upwelling. G. ruber and G. sacculifer calcify within mixed-layer, respectively at 0-50 m and 20-75 m water depth, and P. obliquiloculata and N. dutertrei within upper thermocline at 75-125 m water depth)

Zuvela-Aloise, M. (2005)- Modelling of the Indonesian Throughflow on glacial-interglacial time-scales. Doct. Thesis Christian-Albrechts Universitat Kiel, p. 1-185.
(online at: http://d-nb.info/980884292/34)
(Model used to simulate circulation through the Indonesian Gateways. Lowering of glacial sea level of 120m not sufficient to severely block flow within Makassar Strait as main passage of Throughflow. Reduction in sill depth and absence of low buoyancy surface waters due to exposure of shelf area led to intensification of surface flow within Makassar Strait)

I.5. SE Asia Carbonates, Coral Reefs

Akbar, M., B. Vissapragada, A.H. Alghamdi, D. Allen, M. Herron et al. (2001)- A snapshot of carbonate reservoir evaluation. Oilfield Review, Schlumberger, Winter 2000/2001, p. 20-41.
(online at: www.slb.com/~/media/Files/resources/oilfield_review/ors00/win00/p20_41.ashx)
(Reservoir evaluation paper with example of M Miocene buildup in Sibolga basin, off NW Sumatra, with unsuccessful 1997 well due to lack of internal seals and late top seal preventing capture of early biogenic gas)

Alcock, A. (1902)- Report on the deep-sea Madreporaria of the Siboga Expedition. Siboga Expeditie Monograph 16a, Brill, Leiden, p. 1-51.
(online at: www.archive.org/details/sibogaexpeditie07sibo)
(Descriptions of 75 species of modern, mainly solitary deep-sea corals from East Indonesia, collected during Siboga Expedition 1899-1900, incl. Caryophyllia, Dendrophyllia, Coenopsammia, etc)

Ashton, P.R. (1981)- Estimating potential reserves in Southeast Asian Neogene reefs. In: Assessment of undiscovered oil and gas, UN ESCAP CCOP Techn. Bull. 10, p. 244-259.

Azmy, K., E. Edinger, J. Lundberg & W. Diegor (2010)- Sea level and paleotemperature records from a mid-Holocene reef on the North coast of Java, Indonesia. Int. J. Earth Sciences (Geol. Rundschau) 99, p. 231-244.
(Mid-Holocene fossil fringing reefs at Point Teluk Awur, near Jepara, N coast of C Java, contains two horizons of Porites lobata microatolls. Age of corals in lower horizon, 80 cm above sea level, ~7000 yr BP, upper horizon at 1.5m, ~6960 ± 60 yr BP, matching transgressive phase of regional sea-level curves)

Bak, R.P.M. & G.D.E. Hovel (1989)- Ecological variables, including physiognomic structural attributes, and classification of Indonesian coral reefs. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 23, p. 95-106.

Bal, A.A., R. Bray & R. Sigit (2012)- Hydrothermally enhanced fractured reservoirs- a new play? Petroleum Geoscience Conf. Exhib. PCGE 2012, Kuala Lumpur 2012, 3p. *(Extended Abstract)*
(online at: http://geology.um.edu.my/gsmpublic/PGCE2012/)
(With exception of Nang Nuan (Gulf of Thailand karst buried hill) and some references to fractured granites in Vietnam, hydrothermally altered hydrocarbon reservoirs largely unreported in SE Asia. Hydrothermal fluids may create higher porosities than expected, not necessarily associated with unconformities)

Bassi, D., J.H. Nebelsick, A. Checconi, J. Hohenegger & Y. Iryu (2009)- Present-day and fossil rhodolith pavements compared: their potential for analysing shallow-water carbonate deposits. Sedimentary Geology 214, p. 74-84.
(Review of rhodoliths (algal nodules consisting predominantly of coralline algae) and sediments formed by these unattached coralline algae, called rhodolith pavements. Includes study of Recent 'rhodolith pavement' off Sesoko-jima (S Japan), at depths of 50-70 m on submarine terrace)

Beauvais, L., M.C. Bernet-Rollande & A. Maurin (1985)- Reinterpretation of Pretertiary classical reefs from Indo-Pacific Jurassic examples. In: C. Gabrie & M. Harmelin (eds.) Proc. Fifth Int. Coral Reef Congress, Tahiti 1985, 6, Misc. Paper (B), p. 581-586.
(Jurassic carbonate mounds in W Thailand (M-U Jurassic, Mae Sot basin), C Sumatra (U Jurassic, Padang-Tembesi River) and Philippines (M Jurassic, Mindoro, U Jurassic Calamian Isl.) not 'reefs' like present day reefs. Corals typically float in lime mud matrix and are mainly digitate or lamellar, to cope with muddy conditions. Calcareous sponges also common. Main rock-building organisms are Bacinellid- Lithocodium-stromatolite assemblage, as encrusters over exotic grains or as single builder. Jurassic corals, sponges etc, have no major rock building potential)

Beauvais, L., H. Fontaine & A. Maurin (1987)- A review of recent data on mud-mounds discoveries in Asia. Oil and Gas Geol. 1987, 12, p. 373-376.
(Many of Mesozoic carbonates in SE Asia are probably microbial mud mounds: Jurassic of Sumatra, Thailand, Burma, Philippines, Sarawak-Kalimantan)

Bellwood, D.R., T.P. Hughes, S.R. Connolly & J. Tanner (2005)- Environmental and geometric constraints on Indo-Pacific coral reef biodiversity. Ecology Letters 8, 6, p. 643-651.
(Discussion of coral species richness patterns in Indo-Australian archipelago coral reef biodiversity 'hotspot')

Bernecker, M. (2005)- Late Triassic reefs from the Northwest and South Tethys: distribution, setting, and biotic composition. Facies 51, p. 442-453.
(Ladinian and Carnian increasing expansion of reefs. Optimum reef diversity and frequency in Norian, as sponge and coral reefs associated with development of carbonate platforms. Not much on SE Asia)

Betzler, C. (1997)- Ecological control on geometries of carbonate platforms: Miocene/Pliocene shallow-water microfaunas and carbonate biofacies from the Queensland Plateau (NE Australia). Facies 37, p. 147-166.
(Miocene and Pliocene of ODP Leg 133 sites record biofacies evolution prior and during the partial drowning of Queensland Plateau carbonate platform. M Miocene depositional geometry is carbonate bank with a well-defined rim and flank. Late Miocene- E Pliocene carbonate ramps, rich in large benthic forams. Reconstruction of Tortonian- Messinian relative sea level curve shows rise punctuated by four falls. Lepidocyclina (N.) rutteni described from Australian faunal province for first time)

Betzler, C., T.C. Brachert & D. Kroon (1995)- Role of climate for partial drowning of the Queensland Plateau carbonate platform (northeastern Australia). Marine Geology 123, p. 11-32.
(Late Miocene- E Pliocene partial drowning of Queensland Plateau carbonate platform off NE Australia. Modern plateau mosaic of pinnacle reefs and larger reefs representing relicts of E-M Miocene buildups. Late Miocene rich in larger forams Lepidocyclina and Cycloclypeus show Pliocene partial drowning of platform preceded by 4 Myr of neritic carbonate deposition without any reefs. Low surface water temperatures (17°-19°C) major factor which suppressed reef growth during Late Miocene- E Pliocene)

Betzler, C. & G.C.H. Chaproniere (1993)- Paleogene and Neogene larger foraminifers from the Queensland Plateau: biostratigraphy and environmental significance. In: J.A. McKenzie, P.J. Davies et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 133, p. 51-66.
(Leg 133 Queensland Plateau ODP site sites with Eocene (Nummulites, Discocyclina) and Late Oligocene- M Miocene larger foram facies)

Boekschoten, G.J., M. Borel Best, A. Oosterbaan & F.M. Molenkamp (1989)- Past corals and recent reefs in Indonesia. In: Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 23, 2, p. 117-122.
(Snellius-II Expedition collections of Lower Pliocene corals near Salayer and Quaternary reefs on Ambon and Sumba and compared with Pliocene of Nias. Absence of Acropora and Montipora from Quaternary coral faunae (common in Pliocene and modern reefs) may reflect disturbance by Pleistocene sea level fluctuations)

Boekschoten, G.J., M. B. Best and K.S. Putra (2000)- Balinese reefs in historical context. In: K.S.Moosa et al. (eds.) Proc. 9th Int. Coral Reef Symposium, Bali 2000, 1, p. 321-324.
(online at: www.reefbase.org/resource_center/publication/pub_14767.aspx)
(Oldest reefs of Bali developed on top of Neogene pillow lava flows, but barely preserved. Parts of early and late Pleistocene reefs on Bukit peninsula. Holocene post-glacial reefs developed along limestone cliffs and denuded volcanic hardnecks; on lava outflows; and on residual boulder coasts)

Borel Best, M. & G.S. Boekschoten (1989)- Comparative qualitative studies on coral species composition in various reef sites in the eastern Indonesian Archipelago. In: J.H. Choat et al. (eds.) Proc. 6th Int. Coral Reef Symposium, Townsville, 3, p. 197-204.
(350 species of living corals in E Indonesia)

Bosence, D. (2005)- A genetic classification of carbonate platforms based on their basinal and tectonic setting in the Cenozoic. Sedimentary Geology 175, p. 49-72.
(Eight types of carbonate platform recognized, based on basinal and tectonic setting: Fault-Block, Salt Diapir, Subsiding Margin, Offshore Bank, Volcanic Pedestal, Thrust-Top, Delta-Top and Foreland Margin platforms)

Bourrouilh-Le Jan, F.G. (1979)- Les plate-formes carbonatees de haute energie a rhodolithes et la crise climatique du passage Mio-Pliocene dans le domaine Pacifique. Bull. Centre Rech. Exploration-Production Elf-Aquitaine 3, 2, p. 489-495.
('The high energy carbonate platforms with rhodoliths and the climatic crisis of the Mio-Pliocene transition in the Pacific area'. Large M and U Miocene carbonate platforms built on volcanic remains in W and SW Pacific. In rhodolith facies, without corals, probably related to colder climate interval. Warming around Mio-Pliocene boundary allowed resettlement of corals)

Bourrouilh-Le Jan, F.G. & L.C. Hottinger (1988)- Occurrence of rhodolites in the tropical Pacific- a consequence of Mid-Miocene paleo-oceanographic change. Sedimentary Geology 60, p. 355-358.
(Rhodolites over wide areas of tropical Pacific dated as M Miocene. They are preceded in E Miocene and succeeded in Late Miocene by hermatypic coral deposits. Possible causes of facies change: sea-level rise drowning reefs, drop of winter surface water temperature and increase in fertility of surface waters inhibiting compensatory growth of hermatypic corals until sea-level fall restored original conditions of deposition)

Braithwaite, C.J.R. & L.F. Montaggione (2009)- The Great Barrier Reef: a 700 000 year diagenetic history. Sedimentology 56, p. 1591-1622.
(Variety of carbonate cements identified in deep borehoe through Ribbon Reef 5, off NE Australia)

Bromfield K. (2010)- Evolutionary dynamics of Indo-Pacific reef corals throughout the Neogene. Ph.D. Thesis, University of Queensland, p. 1-269. *(Unpublished)*
(Study of 155 species of M Miocene- E Pleistocene reef coral communities from Indonesia (Salayar, S Sulawesi), PNG (New Britain) and Fiji. Coral communities vary with global sea level and time. 41.8% of species in M Miocene in New Britain now extinct. Study supports previously proposed models of E Pliocene turnover event in Scleractinia in Indo-Pacific)

Bromfield, K. & J.M. Pandolfi (2011)- Regional patterns of evolutionary turnover in Neogene coral reefs from the central Indo-West Pacific Ocean. Evolut. Ecology, May 2011, p. 1-17.
(Neogene origination and extinction patterns from Indonesia (Salayar Island; 5.8-1.4 Ma), New Britain and Fiji. Two faunal turnover events(1) increase in Scleractinia diversity during M Miocene (17-14 Ma), coinciding with large-scale sea level fluctuations and M Miocene collision event, possibly facilitated by habitat fragmentation associated with tectonism and sea level fall (2) lowering of diversity throughout Late Miocene-Pliocene (7-3 Ma), followed by pulse of extinction at Pliocene-Pleistocene boundary (~2.6 Ma))

Brouwer, H.A. & G.A.F. Molengraaff (1919)- On reef caps. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 21, 2, p. 816-826.
(Many islands in E Indonesia covered with Plio-Pleistocene fringing reefs, on some islands elevated recently up to 1300m above s.l. Highest reef caps are not necessarily oldest if uplift not uniform)

Brouwer, H.A. (1926)- The origin of coral reefs and reef caps with special reference to mountain building within the Netherlands East Indies. Proc. 2nd Pan-Pacific Science Congress, Australia 1923, p. 1164-1167.

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(Lower Miocene pinnacle reef complexes at Nido fields in S China Sea, NW of Palawan. Relief ~150-200 m)

Bubb, N.N. & W.G. Hatlelid (1976)- Recognition of carbonate build-ups on seismic sections. Proc. Indon. Petroleum Assoc. (IPA) Carbonate Seminar, Jakarta, p. 103-109.

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(Development of New Caledonia barrier reef result of interplay between margin subsidence and sea-level changes. Major W shelf-margin building appears to have started during MIS 11 (400 ka) from shallow-water carbonate platform deposits older than 780 ka. Climatic conditions likely not optimal before late Quaternary, resulting in luxuriant reef expansion only in last 400,000 yrs)

Camoin, G.F., M. Colonna, L.F. Montaggioni, J. Casanova, G. Faure & B.A. Thomassin (1997)- Holocene sea-level changes and reef development in the southwestern Indian Ocean. Coral Reefs 16, p. 247-259.

Camoin, G.F. & P.J. Davies (eds.) (1998)- Reefs and carbonate platforms in the Pacific and Indian Oceans. Int. Assoc. Sedimentologists (IAS), Spec. Publ. 25, Blackwell Science, p. 1-336.

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(Diagenetic dolomite present in Paleozoic, Triassic, Paleogene and Neogene carbonates in SE Asia. Pre-Tertiary carbonates form part of economic basement; most not considered to form economic prospects. Manusela Lst of Seram viewed as E-M Jurassic (should be Late Triassic?; JTvG), Tampur Lst of N Sumatra viewed as Eocene (should be Permian?; JTvG))

Carozzi, A.V., M.V. Reyes & V.P. Ocampo (1976)- Microfacies and microfossils of the Miocene reefs carbonates of the Philippines. Philippine Oil Development Company, Manila, Spec. Publ. 1, p. 1-80.
(40 photomicrographs of carbonate microfacies, illustrating model of Miocene reef sedimentation)

Chalabi, A. (2012)- Remote sensing analysis of Recent carbonate platforms, East of Sabah: potential analogues for Miocene carbonate platforms of the South China Sea. J. Geologi Indonesia 7, 3, p. 123-135.
(online at: http://jgi.bgl.esdm.go.id/index.php/JGI/article/view/29/21)

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(Halimeda important component of many reefal limestones (but probably more susceptible to diagenetic decay than Lithothamnion, corals or foraminifera))

Collins, L.B. (2002)- Tertiary foundations and Quaternary evolution of coral reef systems of Australia's North West Shelf. In: M. Keep & S. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basin Symposium, Petroleum Expl. Soc. Australia (PESA), Perth, p. 129-152.
(NW Shelf is modern tropical ramp, underlain by Cretaceous-Tertiary carbonates. Late Tertiary-Quaternary, fringing to isolated coral reefs rise from deep-ramp settings. Scott Reef is isolated reef formed mainly during Last Interglacial (~125 ka). Other reefs that apparently grew to sea level are now 30m below present sea level, indicating significant subsidence in Late Quaternary. Contemporary reefs grew during Holocene in accommodation space provided by subsidence and are up to 35m thick. Rowley Shoals emergent annular reefs rise from depths of 200-400 m. Possible spatial association between reef systems and hydrocarbon seeps)

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(Description of reefs along W margin of Australia. Latitudinal and climatic gradient from macrotidal tropical in N to microtidal-temperate in S)

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(online at: www.rswa.org.au/publications/Journal/94(2)/Collinsetal.pp.239-250.pdf)

(Scott Reef is small carbonate platform located in distal ramp setting on Australia NW Shelf. Rising from depths of 400-700 m. Composed of of two large isolated coral reefs. Present-day reef morphology developed mainly in Holocene. Developed over Late Triassic anticline; area probably above sea level from Permian- Late Jurassic)

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(online at: www-odp.tamu.edu/publications/194_SR/VOLUME/CHAPTERS/005.PDF)
(Facies study of 663m thick Miocene carbonate succession penetrated by two ODP wells on S Marion Plateau)

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(Study of growth rates of Porites coral from growth bands at Kaledupa island, Tukang Besi, SE Sulawesi. Growth rates of Quaternary species from up to 400m thick uplifted reef terrace slightly lower, but comparable to modern coral (~10-15 mm/yr))

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(Study of petrophysical properties of Miocene platform carbonates of Marion Plateau, off NE Australia)

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(Holocene bioherms of accumulations of green alga Halimeda cover large areas of outer shelf in 30-50m depths in N Great Barrier Reef, behind shelf edge reefs (see also Marshall and Davies 1988))

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Davies, P.J., P.A. Symonds, D.A. Feary & C.J. Pigram (1989)- The evolution of the carbonate platforms of Northeast Australia. In: P.D. Crevello et al. (eds.) Controls on carbonate platform and basin development, SEPM Spec. Publ. 44, p. 233-258.
(Carbonate platforms of NE Australia (Great Barrier Reef, Queensland, Marion and Eastern Plateaus S of PNG) contain record complex interactions over past 60 My. Size, shape, and location of carbonate platforms determined by continental rifting. N-ward plate movement controlled distribution of climate facies in Great Barrier Reef sequence. Rising and high sea-level periods favored increased carbonate deposition, falling low sea-levels restricted carbonate deposition. Oceanographic factors affected platform evolution, e. g., inhibition of reef development by high oceanic-phosphate levels during E-M Miocene. Development of foreland basin on N edge of NE Australian region initially caused dramatic expansion of carbonate facies, but ultimately terminated carbonate deposition as result of uplift and inundation by clastic detritus)

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(Sangkarang (=Spermonde) platform large archipelago of reefs off SW Sulawesi, probably on submerged Pleistocene abrasion platform. Subsurface probably Eocene- Oligocene deep marine sediments and Oligo-Miocene shelfal carbonates and volcanics, similar to adjacent S Sulawesi)

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(1883 Krakatoa eruption destroyed marine life temporarily in 100 km radius, by huge amounts of tephra covering sea surface and seafloor. Followed by rapid re-colonization of coral reefs in <50 years , with 66 coral genera)

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DeVantier, L.M. & E. Turak (2009)- Coral reefs of Brunei Darussalam. Fisheries Department, Ministry of industry and primary resources, Brunei Darussalam, 99p.

Braga, J.C. (2011)- Fossil coralline algae. In: D. Hopley (ed.) Encyclopedia of modern coral reefs; structure form and process, Springer Verlag, Dordrecht, p. 423-426.
(Depth zonation of coralline algae in Quaternary Pacific reefs three zones: (1) Shallow coral reef (0-5/20m): coralline algae encrusting corals (Hydrolithon, Neogoniolithon); (2) Intermediate fore-reef slope (15/20-50/60m): coralline algae as rhodoliths (Mesophyllum, Lithophyllum); (3) Deep fore-reef slope (50/60- 120m): coralline algae as nodules in carbonate sands or crusts on hard substrates, frequently intergrown with encrusting foraminifera (Lithothamnium, Mesophyllum, Sporolithon, Peyssonnellia))

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(Review of tectonic controls of carbonate platforms, with examples from Miocene-recent offshore Vietnam)

Dorobek, S.L. (2008)- Carbonate-platform facies in volcanic-arc settings: characteristics and controls on deposition and stratigraphic development. In: A.E. Draut et al. (eds.) Formation and applications of the sedimentary record in arc collision zones, Geol. Soc. America (GSA), Spec. Paper 436, p. 55-90.

Droxler, A.W. & S.J. Jorry (2013)- Deglacial origin of barrier reefs along low-latitude mixed siliciclastic and carbonate continental shelf edges. Annual Review Marine Science 5, p. 165-190.
(Modern coral barrier reefs extend along edges of some low-latitude siliciclastic shelves for 10's-1000's of km (Great Barrier Reef, NE Australia). Onset of rapid sea-level rise during early deglaciations was opportune time

for coralgal communities establishment on top of maximum lowstand siliciclastic coastal deposits (beach ridges, lowstand shelf-edge deltas). Most modern barrier reefs relatively thin (~120m), late-Quaternary deposits, dating from mid Brunhes (~400 ky?)- Recent, composed of 4-5 stacked coralgal units, separated by exposure horizons (reflecting 100,000-year glacial-interglacial cycles) and covering older nonreefal, often siliciclastic deposits. Includes examples from Gulf of Papua)

Eberli, G.P., F.S. Anselmetti, A.R. Isern & H. Delius (2010)- Timing of changes in sea-level and currents along Miocene platforms on the Marion Plateau. In: W.A. Morgan, A.D. George et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 219-242.
(N and S Marion Platforms off NE Australia studied by ODP 194 wells and seismic. Built by cool, subtropical faunal assemblages and asymmetric geometry. Four megasequences subdivided into 14 sequences. E-M Miocene sequences are prograding and aggrading sequences. From late M Miocene, mounded geometries in basinal area where large drift deposits accumulated. Two most prominent sequences boundaries are drowning unconformities, at 11.1 Ma (N) and ~7 Ma (S Marion Platform). Timing of many Neogene sequence boundaries coincides with boundaries on Queensland Plateau (ODP Leg 133) and along Bahamas Transect (ODP Leg 166), suggesting global synchroneity of Neogene 3^{rd} order sea-level changes)

Edinger, E.N. (1998)- Effects of land-based pollution on Indonesian coral reefs; biodiversity, growth rates, bioerosion, and applications to the fossil record. Ph.D. Thesis, McMaster University. Hamilton, p. 1-297.
(Pollution damage measured in surveys of 8 Java Sea reefs and 8 reefs in Ambon and Sulawesi. Reefs subject to land-based pollution 30-60% less diverse at 3-10m depth. Polluted reefs dominated by massive and submassive corals, and have almost no Acropora corals. Unpolluted reefs dominated by Acropora at 3m and by branching or foliose corals at 10m)

Edinger, E.N., J. Kolasa & M.J. Risk (2000)- Biogeographic variation in coral species diversity on coral reefs in three regions of Indonesia. Diversity and Distribution 6, p. 113-127.
(Coral species diversity along transects from 14 reefs in Ambon S Sulawesi and Java Sea. Sites relatively unaffected by land-based pollution in E Indonesia 20% more diverse than Java Sea. Despite fact that Java Sea was exposed during Pleistocene lowstands, and was recolonized only within last 10 000 years, coral species diversity and assemblage composition on Java Sea reefs similar to open ocean reefs in E Indonesia)

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(Analyses of porosity and permeability in two Miocene carbonate platforms cored by ODP Leg 194, seaward of Great Barrier Reef, at N Marion Platform mostly preserved as limestone) and S Marion Platform (mostly dolomitized))

Ehrenberg, S.N., G.P. Eberli & G. Baechle (2006)- Porosity-permeability relationships in Miocene carbonate platforms and slopes seaward of the Great Barrier Reef, Australia (ODP Leg 194, Marion Plateau). Sedimentology 53, p. 1289-1318.
(Porosity-permeability analyses of Early- Late Miocene platform and deep water carbonates cored on Marion Plateau. Platforms experienced widely varying calcite cementation, dolomitization and dissolution but little evidence of meteoric diagenesis, suggesting subaerial exposure played little role in porosity-permeability evolution. Permeability controlled by grain size and calcite cement content in grainstones and shelter pores and vugs in mud-rich samples. Dolomitization reduces permeability variation. 'Windward' (current-facing) settings overall higher permeability (less muddy depositional facies, greater cementation, and lesser grain dissolution))

Ehrenberg, S.N., J.M. McArthur & M.F. Thirlwall (2006)- Growth, demise and dolomitization of Miocene carbonate platforms on the Marion Plateau, Offshore NE Australia. J. Sedimentary Res. 76, p. 91-116.
(Sr-isotope stratigraphy used to determine timing of depositional events and dolomitization in two Miocene carbonate platforms cored by ODP Leg 194, seaward of Great Barrier Reef. Initial transgression of Marion Plateau volcanic basement E Oligocene (29-31 Ma). Main growth of carbonate platforms in Miocene (23-7

Ma), with five depositional sequences. Both platform-demise events (10.7 and 6.9 Ma) coincide with falls in global sea level combined with decreasing water temperature)

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(online at: www.biodiversitylibrary.org/item/123958page/545/mode/1up)
('Coral reefs and earth movements, with a letter from W.M. Davis'. On relations between patterns of coral reef growth and uplift- subsidence trends. Tested on Indonesia examples)

Escher, B.G. (1920)- Atollen in den Nederlandsch-Oost-Indischen Archipel. De riffen in de groep der Toekang Besi-eilanden. Mededelingen Encyclopedisch Bureau, Batavia, 22, 18p.
('Atolls in the Netherlands East Indies Archipelago: the reefs in the Tukang Besi Group', SE Sulawesi'. Some of modern Tukang Besi reefs true atolls, up to 48km long, some small barrier reefs around islands up to 274m high. Reefs arranged in four NW-SE trending rows, possibly controlled by underlying structure)

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Fairbridge, R.W. (1973)- Geomorphology of the reef islands. In: W. Manser (ed.) New Guinea barrier reefs. University of Papua New Guinea, Geol. Dept., Port Moresby, Occ. Paper 19, p. 129-146.

Feary, D.A., P.J. Davies, C.J. Pigram & P.A. Symonds (1991)- Climatic evolution and control on carbonate deposition in northeast Australia. Palaeogeogr. Palaeoclim. Palaeoecology 89, p. 341-361.
(Oxygen isotope data from DSDP holes in SW Pacific used to compile paleotemperature curve for Cenozoic of offshore NE Australia (Great Barrier Reef area): subtropical in Paleo-Eocene and Miocene, temperate in Oligocene, tropical in Pliocene- Recent. Reflects interaction between paleoclimate and N-ward motion of Australian plate)

Feary, D.A., P.A. Symonds, P.J. Davies, G.J. Pigram & R.D. Jarrard (1993)- Geometry of Pleistocene facies on the Great Barrier Reef outer shelf and upper slope seismic stratigraphy of Sites 819, 820 and 821. In: J.A. McKenzie et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 133, College Station, p. 327-343.
(online at: www-odp.tamu.edu/publications/133_SR/VOLUME/CHAPTERS/sr133_24.pdf)

Flamand, B., G. Cabioch, C. Payri & B. Pelletier (2008)- Nature and biological composition of the New Caledonian outer barrier reef slopes. Marine Geology 250, p. 157-179.
(Grande Terre island of New Caledonia enclosed by one of longest barrier reefs in world. Forereef slopes from 40- 320m depth with 7 sedimentary facies. From upper reef slopes to ~90m thick coralline algal crusts dominant. Three groups: (C), shallowest, mainly mastophorids (Hydrolithon, Lithoporella, Neogoniolithon) and Lithophyllum); (B) Lithophyllum spp, Mesophyllum and Peyssonnelia from 15-40m; (A) rich in Mesophyllum, Peyssonnelia, Sporolithon on deep reef slopes up to 90m. Below ~90m encrusting foraminifera acervulinids progressively replace coralline algal crusts)

Flugel, E. (1981)- Paleoecology and facies of Upper Triassic reefs in the northern Calcareous Alps. In: D.F. Toomey (ed.) European fossil reef models, Soc. Sedimentary Geology (SEPM) Spec. Publ. 30, p. 291-359.

Flugel, E. (1988)- *Halimeda*: paleontological record and palaeoenvironmental significance. Coral Reefs 6, p. 123-130.
(Halimediform algae in carbonate rocks since U Triassic. Some 30 species described, in four 'genera'. Recent Halimeda in lagoonal and reefal environments. Reinvestigation of Boueina limestones from Norian-Rhaetian lagoonal carbonates of W Thailand indicates important role of alga (up to 60% Boueina marondei n. sp.) in sediment accumulation since Late Triassic)

Flugel, E. (1982)- Evolution of Triassic reefs: current concepts and problems. Facies 6, p. 297-327.
(Norian and Rhaetian reefs known from many parts of the Tethys, incl. Seram, Timor in E Indonesia)

Flugel, E. (2002)- Triassic reef patterns. In: W. Kiessling et al. (eds.) Phanerozoic reef patterns, Soc. Sedimentary Geology (SEPM) Spec. Publ. 72, p. 391-463.
(Includes summaries of known Triassic reefal carbonates in Timor (various localities with Norian reef sponges and corals), Sulawesi, C-E Seram (up to 150m thick sponge-coral-hydrozoan limestone; Wilckens 1937), Papua New Guinea. (Triassic limestone development in Indonesia appears to follow trends across Tethys: first reef optimum in earliest Carnian (sponge-dominated), decrease in LateCarnian, second reef optimum in Late Norian- Rhaetian (sponge-coral and coral dominated); JTvG)

Flugel, E. & B. Senowbari-Daryan (2001)- Triassic reefs of the Tethys. In: G.D. Stanley (ed.) The history and sedimentology of ancient reef systems, Topics in Geobiology, Kluwer, New York, 17, p. 217-249.
(Evolution of Triassic reefs started with ~12 Myr global crisis of metazoan reef ecosystem after Permian-Triassic mass extinction), followed by recovery during M Triassic. Reef systems differentiated during U Triassic but were severely affected by global crisis at Triassic-Jurassic boundary)

Friedman, G.M. (1983)- Reefs and porosity: examples from the Indonesian Archipelago. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 6, p. 35-40.
(Most porosity in Tertiary reefal carbonates in Indonesia involves post-depositional diagenetic changes)

Friedman, G.M. (1988)- Case histories of coexisting reefs and terrigenous sediments: the Gulf of Eilat (Red Sea), Java Sea, and Neogene basin of the Negev, Israel. In: L.J. Royle & H.H. Roberts (eds.) Carbonate clastic transitions, Elsevier Developments in Sedimentology 42, p. 77-97.

Fulthorpe, C.S. & S.O. Schlanger (1989)- Paleo-oceanographic and tectonic settings of Early Miocene reefs and associated carbonates of offshore Southeast Asia. American Assoc. Petrol. Geol. (AAPG) Bull. 73, 6, p. 729-756.
(Late Oligocene- early M Miocene widespread carbonates/reefs in SE Asia, related to rising eustatic sea level and expansion of coral-algal facies belt N to Japan and S to New Zealand. Examples mainly from Philippines)

Gallagher, S.J., M.W. Wallace, P.W. Hoiles & J.M. Southwood (2014)- Seismic and stratigraphic evidence for reef expansion and onset of aridity on the North West Shelf of Australia during the Pleistocene. Marine Petroleum Geol. 57, p. 470-481.
(Previously unknown series of drowned fossil reefs in NW Australia shelf described. Reefs formed around 0.5 Ma with oldest ooids in Indian Ocean. Reef expansion partly due to increased Leeuwin Current intensity. Tropical facies expanded with onset of aridification of Australia after 0.6 Ma)

Gerth, H. (1925)- Die Bedeutung der Tertiaeren Riffkorallenfauna des malaysischen Archipels fur die Entwicklung der lebenden Rifffauna im Indopazifischen und Atlantischen Gebiet. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 173-196.
('The significance of the Tertiary reef coral fauna of the Malay Archipelago (=Indonesia) for the development of the living reef fauna in the Indo-Pacific and Atlantic area'. On global distributions of Paleogene- Recent reef corals)

Gerth, H. (1930)- The evolution of reef corals during the Cenozoic period. Proc. 4th Pacific Science Congress, Java 1929, 2A, p. 333-350.
(Modern reef corals two distinct provinces, Indo-Pacific and Atlantic, with higher diversity in Indo-Pacific. Known genera, more than on modern reefs. In Paleogene-Miocene reef corals more widely distributed (up to ~50°N) than today (~32°N). No figures)

Goldberg, W.M. (2013)- The biology of reefs and reef organisms. The University of Chicago Press, p. 1-401.
(Modern textbook on Recent carbonate reefs and their organism. Modern reefs clear, warm, low-nutrient waters and are not found far outside 30° from Equator. With review of reef-building organism through time since Precambrian)

Greenlee, S.M. & P.J. Lehmann (1993)- Stratigraphic framework of productive carbonate buildups. In: R.G. Loucks et al. (eds.) Carbonate sequence stratigraphy: recent developments and applications, AAPG Mem. 57, p. 43-62.

Gutteridge, P., J. Garland, B. Vincent & S. Kettle (2011)- Southeast Asian carbonate systems and reservoir development: an up-to-date synthesis. Cambridge Carbonates Ltd., p. 1-600. *(Unpublished report*
(Selected parts online at: www.cambridgecarbonates.com/assets/se-asian-carbonate-systems-and-reservoir-development-report---sample.pdf)
(Major review of existing and future hydrocarbon potential of Tertiary carbonate systems of SE Asia, with chapters on N and S Sumatra, Java, offshore Vietnam/ S China, Sarawak/ Philippines/ Natuna Sea, E Kalimantan, S Sulawesi/ S Makassar Basin, E Sulawesi, W Papua, Papua New Guinea)

Halfar, J. & M. Mutti (2005)- Global dominance of coralline red-algal facies: a response to Miocene oceanographic events. Geology 33. 6, p. 481-484.
(Global rhodalgal facies peak abundances in Burdigalian-E Tortonian (16-11 Ma). Dominance of red algae over coral reefs triggered by Burdigalian global increase in productivity (higher C- isotope values). Rhodalgal lithofacies expanded further in M Miocene when strengthened thermal gradients associated with establishment of E Antarctic Ice Sheet led to enhanced upwelling, while increased weathering rates introduced land-derived nutrients into oceans. Cooler temperatures following E-M Miocene climatic optimum contributed to sustain dominance of red algae)

Hallock, P. & L. Pomar (2008)- Cenozoic photic reef and carbonate ramp habitats: a new look using paleoceanographic evidence. Proc. 11th Int. Coral Reef Symposium, Fort Lauderdale 2008, 5p.

Hallock, P. & L. Pomar (2012)- Cenozoic evolution of carbonate shelf and ramp habitats: insights from paleoceanography. AAPG Ann. Conv. Exhib., Long Beach 2012, Search and Discovery Art. 50663, p. 1-42. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/50663hallock/ndx_hallock.pdf)
(On relationships between carbonate deposition and Greenhouse vs Icehouse conditions. Large Benthic Forams assemblages most diverse when deeper waters were warmest, with high extinction rates during cooling (increase of surface to thermocline gradients). Aragonite production by corals more widespread during ice-house conditions)

Hantoro, W.S. (1994)- Batugamping terumbu koral Kwarter terangkat di Timor. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 192-207.
('Uplifted Quaternary coral reef limestones of Timor'. Uplifted marine coral reef limestone terraces across much of Timor, up to 1200m a.s.l.. Unconformable on older rocks. In Kupang area 8 Late Pleistocene terraces up to ~120m elevation, suggesting uplift rate of W tip of Timor 0.35-0.45 mm/yr)

Hantoro, W.S., N. Nganro, S. Shofiyah, I. Narulita & J. Sofjan (1997)- Recent climate variation signals from corals in Timor, Indonesia. Quaternary Int. 37, p. 81-87.

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(online at: https://ia801401.us.archive.org/24/items/advancesinmarine80hill/advancesinmarine80hill.pdf)
(Halimeda algae important contributor to tropical reefal limestones since Cretaceous (Jurassic if Boueina included in Halimeda group))

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Hoeksema, B.W. & K.S. Putra (2000)- The reef coral fauna of Bali in the center of marine diversity. In: M.K. Moosa et al. (eds.) Proc. 9th Int. Coral Reef Symp., Bali 2000, 1, p. 173-178.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.612.2947&rep=rep1&type=pdf)
(Bali coral reefs richest in Tulamben- Amed area (E Bali; mainly volcanic sand with limestone outcrops). Islands Nusa Lembongan and Nusa Penida (Lombo Straits, in SE; uplifted limestone) with special fauna elements due to cold upwelling and strong currents. At Sanur and Nusa Dua species previously known only from Pacific. Coral fauna of Bali resembles most fauna of species-rich E Indonesian areas)

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(Reefs across S China Sea with 571 known species of reef corals)

Iryu, Y. (1997)- Pleistocene fore-reef rhodoliths from the Ryukyu Islands, southwestern Japan. In: H.A. Lessios and I.G. Macintyre (eds.) Proc. 8th Int. Coral Reef Symposium, Panama, 1, p. 749-754.
(Well-rounded rhodoliths 1-8 cm consist of multiple species of nongeliculatecoralline algae and encrusting foraminifer Acervulina inhaerens, together forming concentric internal structure. Thought to have formed in deep fore reef to shelf, at 50-150m depth. Often associated with Cycloclypeus- Operculina foram assemblage)

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(Late Oligocene- Late Miocene carbonate in 433m deep borehole on Kita-daito-jima)

Iryu, Y. & S. Matsuda (1988)- Depth distribution. abundance and species assemblages of nonarticulated coralline algae in the Ryukyu Islands, southwestern Japan. In: J.H. Choat et al. (eds.) Proc. 6th Int. Coral Reef Symposium, Townsville 1988, 3, p. 101-106.
(Distribution of 8 non-articulated coralline algal species in upper 30m of slope of patch reef off Yonehara, Ishigaki-jima: Porolithon onkodes and Lithophyllum insipidum most abundant at depth of 1m, but absent below 20m. Spongites sp. A most common at 15m depth. Neogoniolithon conicum distributed throughout)

Iryu, Y., T. Nakamori, S. Matsuda & O. Abe (1995)- Distribution of marine organisms and its geological significance in the modern reef complex of the Ryukyu Islands. Sedimentary Geology 99, p. 243-258.
(Compositions of coral and coralline algal assemblages change with increasing depth. Hermatypic corals common down to 50m. Coralline algae Hydrolithon onkodes limited to upper 10m. Algal nodules with encrusting foram Acervulina inhaerens (rhodoliths) most abundant constituent on island shelf, commonly with Cycloclypeus carpenteri (50-150m). In Ryukus negligible Halimeda; probably two types of shelves in tropical-subtropical regions: nutrient-rich Halimeda-dominant and nutrient-poor rhodolith-dominant)

Iryu, Y., T. Nakamori & T. Yamada (1998)- Pleistocene reef complex deposits in the Central Ryukus, south-western Japan. In: G.F. Camoin & P.J. Davies (eds.) Reefs and carbonate platforms in the Pacific and Indian Oceans, Int. Assoc. Sedimentologists (IAS), Spec. Publ. 25, p. 197-213.
(Pleistocene carbonates of Ryuku Group with extensive rhodoliths in distal parts of reef complex. Four facies: (1) coral (reef- reef slope; 0-50m), (2) rhodolith (insular shelf 50-150m), (3) Cycloclypeus-Operculina (associated with rhodoliths; 50-150m) and (4) poorly sorted detrital limestones (insular shelf, >50m))

Isern, A., J.A. McKenzie & D.R. Muller (1993)- Paleoceanographic changes and reef growth off the northeastern Australian margin: stable isotope data from Leg 133, Sites 811 and 817 and Leg 21 Site 209. Proc. Proc. Ocean Drilling Program (ODP), Scient. Results, 133, p. 263-280.
(online at: www-odp.tamu.edu/publications/133_SR/VOLUME/CHAPTERS/sr133_19.pdf)

(Oxygen isotopes from Holes 811A, 817A indicate extensive reef growth on Queensland Plateau in M Miocene before 12 Ma, signifying surface-water T of 20°C or more. Decrease in reefal detritus in Late Miocene (10.0-5.2 Ma) corresponds with isotopic data from planktonic foraminifera suggesting cooler surface waters (16°-19°C). This may have contributed to demise of reefs on Queensland Plateau. Surface waters remained cool until M Pleistocene (1.2- 0.5 Ma), when surface-water T increased to 25 °C and Great Barrier Reef initiated)

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(Marion Plateua off NE Australia large drowned carbomate platform, composed of of cool, subtropical organisms, such as red algae, bryozoans, and larger foraminifera. Coralline algae notably absent. Onlapped by deep water prograding drift deposits)

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(online at: http://espace.library.uq.edu.au/eserv/UQ:312024/Dept_Geology_Papers_VIII_3_p1_85.pdf)

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(Includes examples of overpressured fields in Arun and NSO fields, N Sumatra, NW Java, E Java, etc.)

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(On relative control of paleoceanography, eustasy, and temperature on evolution of Marion Plateau (NE Australia) carbonates. Several carbonate platforms started in E Miocene, composed mainly of heterozoans. Carbon isotope record revealed cycles of 409 Kyr (eccentricity) and 1800 Kyr (long-term eustatic change))

Johnson, K.G., W. Renema, B.R. Rosen & N. Santodomingo (2015)- Old data for old questions: what can the historical collections really tell us about the Neogene origins of reef-coral diversity in the Coral Triangle? Palaios 30, 1, p. 94-108.
(Updated stratigraphy and revised taxonomic determinations for important historical collections of Cenozoic fossil corals from Indonesia in Leiden museum reveal Pliocene and Paleogene sampling gaps. E Miocene increase in richness followed by plateau of relatively high richness. Observed patterns of taxonomic turnover highly correlated with sample size. Taxonomic revision reduced number of genera and species from 133 and 404 to 115 and 321)

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(SE Asia fossil coral collections at Naturalis Museum, Leiden, contain 271 species from 210 localities. Late Oligocene- Early Miocene interval of increased diversification, coinciding with expansion in coral reef development. No intervals of accelerated extinction seen in Neogene)

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(Deposition of suspended sediment measured with sediment traps in shallow waters colonized by Thallasia seagrass at Pannikiang Island, SW Sulawesi. Sediment deposition higher in vegetated areas than in unvegetated areas, suggesting sediment deposition promoted by dense seagrass)

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(Model of E-M Triassic carbonate platform deposition on S China block. E Triassic low relief bank with cyanobacterial limestones in platform interior and oolites along margins. M Triassic higher relief platform margins composed of Tubiphytes boundstone, with cyclic tidal flats formed ine platform interior)

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(Includes brief discussions of Jurassic carbonates of W Thailand, Sumatra and Philippines. Early- Middle Jurassic reefs absent in SE Asia, except small Lithiotis bivalve mounds on Timor, due to end-Triassic extinction event, etc.. Minor Late Jurassic reefs in Sumatra and Bau Limestone of Sarawak- NW Kalimantan border area)

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(On effects of siliciclastic and volcaniclastic sediment influx on carbonate producing organisms, using samples from Miocene Wonosari Fm of S Java, Miocene Batu Putih Lst of E Borneo, and Eocene of NE Spain. Larger foraminifera and coralline algae greatest tolerance to siliciclastic sediment influx. Platy corals also in clay-dominated horizons. Branching and massive corals least tolerant to large quantities of clastics)

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(Sedimentology and early alteration of isolated fringing reef system of Kaledupa-Hoga in Tukang Besi Archipelago, off SE Sulawesi)

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(Extended Abstract. Mega-Platform 1.2-km- thick Miocene carbonate platform in N part of Luconia province. Study of isotopic composition of diagenetic cement. Meteoric calcite cement relatively low oxygen isotopic ratios due to addition of lighter meteoric-derived 16O. Carbonate precipitated directly from seawater exhibits 87Sr/86Sr ratio of sea water at time of precipitation. Later diagenetic carbonates incorporate 87Sr released during dissolution and recrystallization, inheriting 87Sr/86Sr ratios of formation waters from which they crystallised, typically with Sr ratios greater than contemporaneous seawater)

Tomascik, T., A.J. Mah, A. Nontiji & M. Moosa (1997)- Geological history of reefs. In: The ecology of the Indonesian Seas, Part I, Chapter 5, The ecology of Indonesia 7, Periplus Ed., Singapore, p. 145-206.

Tomascik, T., A.J. Mah, A. Nontiji & M. Moosa (1997)- Fringing reefs, patch reefs, barrier reefs, atolls, coral cays. In: The ecology of the Indonesian Seas II, The ecology of Indonesia series 7, Chapters 13-17, Periplus Ed., Singapore, p. 643-827.

Tomascik, T., R. van Woesik & A.J. Mah (1996)- Rapid colonisation of a recent lava flow following a volcanic eruption, Banda Islands, Indonesia. Coral Reefs 15, p. 169-175.
(Five years after the 1988 eruption of Gunung Api volcano, Banda Islands, lava flows supported diverse coral community (124 species) with high coral cover and with some colonies measuring over 90 cm in diameter)

Tsuji, Y. (1993)- Tide influenced high energy environments and rhodolith-associated carbonate deposition on the outer shelf and slope off the Miyako Islands, southern Ryukyu Island Arc, Japan. Marine Geology 113, p. 255-271.

Umbgrove, J.H.F. (1928)- Een eeuw theorieen over het ontstaan van koraalriffen. Natuurkundig Tijdschrift Nederlandsch-Indie 88, p. 141-183.
('A century of theories on the origin of coral reefs')

Umbgrove, J.H.F. (1928)- De koraalriffen in de Baai van Batavia. Dienst Mijnbouw Nederlandsch-Indie, Wetenschappelijke Mededeelingen 7, p. 1-66.
('The coral reefs in the Bay of Jakarta'. 63 recent species. Reef islands started on muddy bottom, sank into substrate after growth)

Umbgrove, J.H.F. (1929)- De koraalriffen der Duizend Eilanden. Dienst Mijnbouw Nederlandsch-Indie, Wetenschappelijke Mededeelingen 12, p. 3-47.
('The coral reefs of the Thousand Island's (Pulau Seribu, W Java Sea))

Umbgrove, J.H.F. (1930)- The end of Sluiterôs coral reef at Krakatoa. Leidsche Geol. Mededelingen 3, p. 261-264.
(online at: www.repository.naturalis.nl/document/549489)
(Rapid re-colonization of Krakatoa remnants (NW Rakata) by corals (mainly branching types) after 1883 eruption, as observed by Sluiter (1890). Forty years later covered by pumice deposits eroded from exposed Rakata walls)

Umbgrove, J.H.F. (1930)- De koraalriffen van den Spermonde Archipel (Zuid-Celebes). Leidsche Geol. Mededelingen 3, 5, p. 227-247.
(online at: http://www.repository.naturalis.nl/document/549271)

('The coral reefs of the Spermonde Archipelago, S Sulawesi'. Early survey of modern reefs off SW tip of Sulawesi. Adjacent coastal plain is bordered by Maros Mountains, composed of Late Eocene and Miocene limestones)

Umbgrove, J.H.F. (1930)- The influence of the monsoons on the geomorphology of coral islands. Proc. 4th Pacific Science Congress, Java 1929, IIA, p. 49-64.

Umbgrove, J.H.F. (1931)- De koraalriffen van Emmahaven (W Sumatra). Leidsche Geol. Mededelingen 4, p. 9-24.
(online at: www.repository.naturalis.nl/document/549644)
('The coral reefs of Port Emma, West Sumatra'. On modern coral reefs in bay near Padang)

Umbgrove, J.H.F. (1939)- De atollen en barriere-riffen der Togian eilanden. Leidsche Geol. Mededelingen 11, 1, p. 139-187.
(online at: www.repository.naturalis.nl/document/549574)
('The atolls and barrier reefs of the Togian Islands'. Study of modern atolls and reefs in Tomini Gulf, N Sulawesi, with reconnaissance geology observations on Togian Islands. Oldest rocks are sediments, intruded by young volcanics (but no recent activity). Raised reef terraces younger than Tf/Miocene)

Umbgrove, J.H.F. (1939)- Madreporaria from the Bay of Batavia. Zoologische Mededelingen 22, 1, p. 1-64.
(online at: www.repository.naturalis.nl/document/149596)

Umbgrove, J.H.F. (1939)- Madreporia from the Togian reefs (Gulf of Tomini, North Celebes). Zoologische Mededelingen 22, 10, p. 265-308.
(online at: www.repository.naturalis.nl/document/149424)
(Descriptions of modern corals from steep barrier reefs, atolls and fringing reefs of Togian Islands. In setting rel. sheltered from monsoons, therefore lacking shingle ramparts and sand cays)

Umbgrove, J.H.F. (1946)- Evolution of reef corals in the East Indies since Miocene time. American Assoc. Petrol. Geol. (AAPG) Bull. 30, p. 23-31.
(Percentage-of-living-species figures useful for stratigraphic dating and correlation)

Umbgrove, J.H.F. (1947)- Coral reefs of the East Indies. Geol. Soc. America (GSA) Bull. 58, 8, p. 729-778.
(Review of investigations on coral reefs in Indonesia in 15 years before WWII. Every atoll and barrier reef studied shows evidence of subsidence. Extreme thickness of some reefs, as demonstrated by their steep submarine slopes, cannot be explained by glacial control only. Prevailing wind and wave action are important influence on upper structure of reefs. Additional examples of currents as factors of morphological importance)

Umbgrove, J.H.F. & J. Verweij (1929)- The coral reefs in the Bay of Batavia. Proc. Fourth Pacific Science Congress, Java 1929, Excursion Guide A2, p. 5-30.

Utami, D.A. & A.R. Hakim (2018)- Carbonate sedimentology of Seribu Islands patch reef complex: a literature review. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012013, p. 1-6.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012013/pdf)

Van der Horst, C.J. (1921)- Madreporaria Fungida. Siboga Expeditie Monograph 16b, Brill, Leiden, p. 1-46.
(First of series of papers on Recent corals of Indonesia, collected during Siboga Expedition)

Van der Horst, C.J. (1921)- Madreporaria of the Siboga Expedition, Part 2. Madreporaria Fungida. Siboga Expeditie Monograph 16b, Brill, Leiden, p. 53-98.
(Second of series of monographs on Recent corals of Indonesia, collected during Siboga Expedition (Part 1 by Alcock (1902), part 4 by H. Boschma)

Van der Horst, C.J. (1922)- The Madreporaria of the Siboga Expedition. Part 3: Eupsammidae. Siboga Expeditie Monograph 16c, Brill, Leiden, p. 99-127.
(online at: https://ia600404.us.archive.org/25/items/sibogaexpeditie92sibo/sibogaexpeditie92sibo.pdf)
(Third of series of monographs on Recent corals of Indonesia, collected during Siboga Expedition

Van der Meij, S.E.T., Suharsono & B.W. Hoeksema (2010)- Long-term changes in coral assemblages under natural and anthropogenic stress in Jakarta Bay (1920-2005). Marine Pollution Bull. 60, 9, p. 1442-1454
(Coral reefs in Jakarta Bay have been under long-term natural and anthropogenic stress. Coral species diversity and composition of reefs changed considerably between 1920 and 2005. About half number of species recorded in 1920 was found again in 2005)

Veron, J., M. Stafford-Smith, L. DeVantier & E. Turak (2015)- Overview of distribution patterns of zooxanthellate Scleractinia. Frontiers Marine Science 1, 81, p. 1-19.
(online at: http://journal.frontiersin.org/article/10.3389/fmars.2014.00081/full)
(Global study of present-day geographic distributions of corals. Birds Head- Sulu Sea region is global center of peak coral diversity))

Verstappen, H.Th. (1953)- Oude en nieuwe onderzoekingen over de koraaleilanden in de baai van Djakarta. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 70, 4, p. 472-478.
('Early and recent investigations on the coral islands in the Bay of Jakarta'. Results of 1950-1951 investigations compared with studies by Sluiter 1890 and Umbgrove 1928. Coral islands only in W part of bay. Islands probably older than 3000 years, as suggested by Umbgrove, and controlled by underlying structure. Shape and growth patterns of island largely controlled by dominant wind patterns)

Verstappen, H.Th. (1954)- The influence of climatic changes on the formation of coral islands. American J. Science 252, 7, p. 428-435.
(Comparison of modern small patch reefs in Jakarta Bay from 1875, 1927, 1935 and 1950. Shingle ramparts of coarse material originate on weather side of reefs and varied through time: in 1875 mainly on NW sides of islands (period of dominant W-monsoon), in 1927 in N, NE and E (period of dominant E-monsoon), in 1939 and 1950 most on W sides (period of dominant W-monsoon))

Verweij, J. (1930)- Depth of coral reefs and penetration of light. With notes on oxygen consumption of corals. Proc. 4th Pacific Science Congress, Java 1929, 2A, p. 277-299.
(Oxygen content of water in lagoon of one of islands in Bay of Jakarta rises during day and falls at night, suggesting production of oxygen by algae during day and significant consumption by reef at night. Lower depth limit of reef corals controlled by depth of light penetration (corals depend on zooxanthellid algae for food), This is usually around 40m, but may be reduced in areas of clay-silt sediment supply, like Bay of Jakarta)

Verweij, J. (1930)- Coral reef studies. Treubia 12, p. 305-366.
(online at: http://e-journal.biologi.lipi.go.id/index.php/treubia/article/view/1894/1780)
(Mainly zoological studies of Indonesian coral reefs)

Verweij, J. (1931)- Coral reef studies II. The depth of coral reefs in relation to their oxygen consumption and the penetration of light in the water. Treubia 13, 2, p. 169-198.
(online at: http://e-journal.biologi.lipi.go.id/index.php/treubia/article/view/1933/1816)
(Observations on Onrust island coral reef in W Bay of Batavia. Close correlation between amount of suspended silt (light penetration) and lower depth limit of growth of reef corals)

Verweij, J. (1931)- Coral reef studies III. Geomorphological notes on the coral reefs of Batavia Bay. Treubia 13, 2, p. 199-215.
(online at: e-journal.biologi.lipi.go.id/index.php/treubia/article/download/1934/1817)
(Observation on coral islands Dapur, Damar Besar (edam) and Pulau Ayer (Hoorn) in Bay of Jakarta, after initial work of Umbgrove. Not much coral growth below ~10-15m, due to silt content of bay water)

Waheed, Z. , H.G.J. van Mil, M.A.S. Hussein, R. Jumin, B.G. Ahad & B.W. Hoeksema (2015)- Coral reefs at the northernmost tip of Borneo: an assessment of scleractinian species richness patterns and benthic reef assemblages. PLoS ONE 10, 12, e0146006, p. 1-25.
(online at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0146006)
(Coral reefs around Kudat and Bengkoka peninsulas of N Sabah)

Wahlmann, G.P. (2002)- Upper Carboniferous- Lower Permian (Bashkirian- Kungurian) mounds and reefs. In: W. Kiessling et al. (eds.) Phanerozoic reef patterns, Soc. Sedimentary Geology (SEPM) Spec. Publ. 72, p. 271-338.
(Includes mention of Timor Permian (Sakmarian) Tubiphytes (= Shamovella) grainstones)

Wallace, C.C. (1997)- The Indo-Pacific center of coral diversity re-examined at species level. In: Proc. 8th Int. Coral Reef Symposium, Panama, 1, p. 365-370.
(On distribution pattern of Acropora coral species in Indonesia)

Wallace, C.C. (1999)- The Togian Islands: coral reefs with a unique coral fauna and an hypothesized Tethys Sea signature. Coral Reefs 18, p. 162.
(Acropora coral fauna of Togian Islands, N Sulawesi, high diversity and includes relict Tethys Sea elements (conclusion re-assessed in Wallace 2001: more likely remnant Pacific fauna))

Wallace, C.C. (2001)- Wallace's line and marine organisms: the distribution of staghorn corals (*Acropora*) in Indonesia. In: I. Metcalfe (ed.) Faunal and floral migrations and evolution in SE Asia-Australasia, Balkema, p. 168-178.
(Distribution patterns of 89 species of Acropora staghorn coral, which has highest diversity in Wallacea region (but is not center of origin). In Indonesian Archipelago overlap of Indian Ocean species (diminishing E-ward) and Pacific Ocean species (diminishing W-wards), with stronger Pacific influence)

Wallace, C.C., G. Paulay, B.W. Hoeksema, D.R. Bellwood et al. (2000)- Nature and origins of unique high diversity reef faunas in the Bay of Tomini, Central Sulawesi: The ultimate "center of diversity"? Proc. 9th Int. Coral Reef Symp., Bali 2000, 1, p. 185-192.

Watanabe, T., M.K. Gagan, T. Correge, W.S. Hantoro, H. Scott-Gagan, J. Cowley, G.E. Mortimer & M.T. McCulloch (2002)- Palaeoclimate reconstruction using *Diploastrea* and *Porites* corals from Alor in Eastern Indonesia. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 645-.
(Alor in Banda Sea is in core of Indo-Pacific warm Pool. 18O isotopes of coral growth stages used to monitor inter-annual climate changes. El Nino events in last 30 years clearly reflected by increased 18O)

Webster, J.M., J.C. Braga, D.A. Clague, C. Gallup, J.R. Hein, D.C. Potts, W. Renema, R. Riding et al. (2009)- Coral reef evolution on rapidly subsiding margins. Global Planetary Change 66, p. 129-148.
(Series of submerged coral reefs in Huon Gulf (PNG) and around Hawaii. Rapid subsidence (2-6 m/ka over last 500 ka), combined with eustatic sea-level changes, responsible for repeated drowning and backstepping of coral reefs. Reef drowning characterized by distinct biological and sedimentary sequence. In short term, rate and amplitude of eustatic sea-level changes control initiation, growth, drowning or sub-aerial exposure, subsequent reinitiation, and final drowning. Over longer time scales (>100-500 ka) tectonic subsidence and basement substrate morphology influence reef morphology and backstepping geometries)

Webster, J.M., L. Wallace, E. Silver, B. Applegate, D. Potts, J.C. Braga & C. Gallup (2004)- Drowned carbonate platforms in the Huon Gulf, Papua New Guinea. Geochem. Geophys. Geosystems 5, 11, Q11008, p. 1-31.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2004GC000726/pdf)
(W Huon Gulf actively subsiding foreland basin with 14 drowned carbonate platforms and many pinnacles/ banks, increasing in age (~20-450 kyr) and depth (0.1-2.5 km) NE to Ramu- Markham Trench. Superimposed on downward flexing of platforms toward trench is tilting of deep platforms to NW and shallow platforms to SE. This may reflect encroaching thrust load from NW (Finisterre Range). Over shorter time scales (~100 kyr)

eustatic sea level changes critical in controlling initiation, growth, drowning of platforms. Tectonic subsidence and basement morphology influence backstepping geometry and tilting of platforms over longer timescales)

Webster, J.M., L. Wallace, E. Silver, D. Potts, J.C. Braga, W. Renema, K. Coleman-Riker & C. Gallup (2004)- Coralgal composition of drowned carbonate platforms in the Huon Gulf, Papua New Guinea: implications for lowstand reef development and drowning. Marine Geology 204, p. 59-89.
(Coral, algae, larger forams facies models and development of Pleistocene carbonate platforms, Huon Gulf. Facies from shallow to deep: 1. coral reef lst (reef flat-upper reef slope <20m; with Calcarina), 2. coralline algal- foraminiferal nodule limestone, 3. Halimeda limestone (deep fore-reef slope ~20-60m; with Amphistegina, Heterostegina, Operculina), 4. Coralline algal- foraminiferal crust limestone (deeper fore-reef slope ~60-90m; with Amphistegina, Cycloclypeus, Heterostegina operculinoides, Operculina) and 5. Planktonic foraminifera limestone (with Amphistegina, Cycloclypeus, Heterostegina))

Weidlich, O. (2002)- Middle and Late Permian reefs- distributional patterns and reservoir potential. In: W. Kiessling et al. (eds.) Phanerozoic reef patterns, Soc. Sedimentary Geology (SEPM) Spec. Publ. 72, p. 339-390.
(Includes SE Asia info: prolific Permian rugose coral faunas found in mainland SE Asia, Sumatra and Timor)

Whitehouse, F.W. (1973)- Coral reefs of the New Guinea Region. In: O.A. Jones & R. Endean (eds.) Biology and geology of coral reefs, 1, Academic Press, New York, p. 169-186.

Wichmann, C.E.A. (1912)- On the so-called atolls of the East-Indian Archipelago. Proc. Kon. Akademie Wetenschappen, Amsterdam, 14, p. 698-711.
(online at: www.dwc.knaw.nl/DL/publications/PU00013229.pdf)
(Review of distribution of modern coral reefs in Indonesia. Most are fringing reefs and patch reefs. True atolls or barrier reefs are virtually absent)

Wienberg, C., H. Westphal, E. Kwoll & D. Hebbeln (2010)- An isolated carbonate knoll in the Timor Sea (Sahul Shelf, NW Australia): facies zonation and sediment composition. Facies 56, 2, p. 179-193.
(Facies and biota description of Pee Shoal in Timor Sea. Steep and flat-topped knoll. Facies zonation: (A) scarce sponges, hydrozoans and crinoids (320-210m water depth); (B) hardground outcrops (step-like banks, vertical cliffs) colonized by octocorals and sponges (210-75m); (C) summit region (75-21m) slopes merge gently into flat-topped summit, colonized by massive and encrusting corals and octocoral Heliopora. Sediments from summit dominated by Halimeda)

Wijsman-Best, M.B. (1977)- Coral research in the Indonesian Archipelago, the past, the present and the future. Marine Research in Indonesia 17, p. 1-14.

Wilson, M.E.J. (2002)- Cenozoic carbonates in Southeast Asia: implications for equatorial carbonate development. Sedimentary Geology 147, p. 295-428.
(Comprehensive review of Tertiary carbonates in SE Asia)

Wilson, M.E.J. (2008)- Reservoir quality of Cenozoic carbonate buildups and coral reef terraces. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-155, 8p.
(On ongoing research on modern carbonates of Wakatobi area, Tukang Besi Islands, SE of Buton/Sulawesi. Archipelago includes large atolls, smaller buildups and 4 main islands with modern rimmed shelves or fringing reefs. On islands >10 Pliocene- Quaternary coral reef terraces, uplifted to ~300m)

Wilson, M.E.J. (2008)- Global and regional influences on equatorial shallow-marine carbonates during the Cenozoic. Palaeogeogr. Palaeoclim. Palaeoecology 255, p. 262-274.
(online at: http://searg.rhul.ac.uk/pubs/wilson_2008%20Equatorial%20shallow-marine%20carbonates.pdf)
(Marked change from larger foram to coral-dominated carbonate producers around Oligo-Miocene boundary. Early Miocene acme of coral development in SE Asia)

Wilson, M.E.J. (2011)- SE Asian carbonates: tools for evaluating environmental and climatic change in the equatorial tropics over the last 50 million years. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 347-369.
(online at: http://searg.rhul.ac.uk/pubs/wilson_2011%20SE%20Asian%20carbonates.pdf)
(Review of shallow water carbonate environmental and climatic changes through last 50 My in SE Asia)

Wilson, M.E.J. (2012)- Equatorial carbonates: an Earth systems approach. In: Carbonate platforms: archives of past global change, Sedimentology 59, 1, p. 1-31.

Wilson, M.E.J. (2015)- Oligo-Miocene variability in carbonate producers and platforms of the Coral Triangle biodiversity hotspot; habitat mosaics and marine biodiversity. Palaios 30, 1, p. 150-168.
(Mainly review of Tertiary carbonates of Kutai Basin of E Kalimantan)

Wilson, M.E.J. & R. Hall (2010)- Tectonic influences on SE Asian carbonate systems and their reservoir development. In: W.A. Morgan, W.A. George et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 13-40.
(online at: http://searg.rhul.ac.uk/pubs/wilson_hall_2010%20Australasian%20carbonates.pdf)
(Tectonics control location of SE Asian Cenozoic carbonate deposits. 70% of 250 shallow marine carbonate formations in SE Asia initiated as attached features, 90% of economic hydrocarbon discoveries developed over antecedent topography, of which >75% isolated platforms. Economic reservoirs mainly in backarc and rift-margin settings (40% each). Demise of many platforms influenced by tectonic subsidence, often in combination with eustatic sea-level rise and environmental perturbations. Fractures enhance reservoir quality or may cause compartmentalization of reservoirs through formation of fault gouge or fault leakage)

Wilson, M.E.J. & S.W. Lokier (2002)- Siliciclastic and volcaniclastic influences on equatorial carbonates: insights from the Neogene of Indonesia. Sedimentology 49, p. 583-601.
(Despite significant clastic influence, Neogene carbonates developed adjacent to major deltas or volcanic arcs, and are comparable with modern mixed carbonate-clastic deposits in region. Regional carbonate development in areas of high clastic input influenced by antecedent highs, changes in amounts or rates of clastic input, delta lobe switching or variations in volcanic activity, energy regimes and relative sea-level change. With examples from patch reef complexes in Miocene deposits of proto-Mahakam and Wonosari Platform, Java S Mountains)

Wilson, M.E.J. & B.R. Rosen (1998)- Implications of paucity of corals in the Paleogene of SE Asia: plate tectonics or center of origin? In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 165-195.
(Corals generally rare in SE Asian Eocene- Oligocene carbonates; instead dominated by larger forams and coralline algae)

Wilson, M.E.J. & A. Vecsei (2005)- The apparent paradox of abundant foramol facies in low latitudes: their environmental significance and effect on platform development. Earth-Science Reviews 69, p. 133-168.
(Locally common larger foram-rich carbonates at tropical latitudes)

Wizemann, A., T. Mann, A. Klicpera & H. Westphal (2015)- Microstructural analyses of sedimentary *Halimeda* segments from the Spermonde Archipelago (SW Sulawesi, Indonesia): a new indicator for sediment transport in tropical reef islands? Facies 61, 2, p. 1-18.

Yamano, H., G. Cabioch, B. Pelletier, C. Chevillon, H. Tachikawa et al. (2015)- Modern carbonate sedimentary facies on the outer shelf and slope around New Caledonia. Island Arc 24, p. 4-15.
(Encrusted grains facies (rhodoliths, macroids) generally distributed at depths of 75-200m and associated with Cycloclypeus carpenteri. Ahermatypic coral facies on cone-like mounds at depths of 240-520 m)

Yamano, H., H. Kayanne, F. Matsuda & Y. Tsuji (2002)- Lagoonal facies, ages, and sedimentation in three atolls in the Pacific. Marine Geology 185, 3-4, p. 233-247.

(Lagoons in atolls of Palau and Marshall islands 3 facies: Calcarina, Calcarina-Heterostegina and Heterostegina facies, based on presence/ absence of larger forams Calcarina (reef flat) and Heterostegina (deep lagoon). Calcarina facies allochthonous reef-derived materials, Heterostegina facies mainly in situ lagoonal materials)

Yamano, H., T. Miyajima & I. Koike (2000)- Importance of foraminifera for the formation and maintenance of a coral sand cay: Green Island, Australia. Coral Reefs 19, p. 51-58.
(Green Island Reef (Great Barrier Reef, Australia) sand cay major constituents benthic foraminifera (mainly Amphistegina lessonii, Baculogypsina sphaerulata, and Calcarina hispida), calcareous algae (Halimeda and coralline algae), hermatypic corals, and molluscs. Benthic foraminifera ~30% of total sediment)

II. SUMATRA- SUNDA SHELF

II.1. Sumatra - General, Onshore geology, Volcanism, Minerals

Abdurrachman, M., M.E. Suparka, C.I. Abdullah, S. Piadhy & M. Latuconsina (2008)- Pre-Tertiary basement petrography: Suban Barat-1, South Sumatra. In: Sumatra stratigraphy workshop, Duri (Riau) 2005, Indon. Assoc. Geol. (IAGI), p. 115-125.
(Suban 1910 shallow gas discovery, 180km NW of Palembang. W Suban 1 well drilled 479m of hydrothermally altered granite- from 2771-3006m, and mainly granodiorite with some spilitic basalt and marble between 3010-3250m)

Abidin, H.Z. (2008)- Pb-Zn-Ag deposits at Tanjung Balit, Limapuluh Kota Regency, West Sumatera. J. Sumber Daya Geologi 18, 4, p. 253-263.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/247/227)
(Epithermal Pb-Zn-Ag mineralization in district Limapuluh Kota, NNE of Padang, in metasediments of Tapanuli Gp/ Kuantan Fm (Permian). Veins up to 5m thick. Main ores sphalerite, chalcopyrite, pyrite, silver)

Abidin, H.Z. (2010)- Characteristics of the Arai Granite associated with the iron ore and Zn-Cu-Pb deposits in Musi Rawas Regency, South Sumatera. J. Sumber Daya Geologi 20, 3, p. 133-146.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/167/162)
(Cretaceous Arai Granite near Jangkat Village (SW of Jambi, S Sumatra), part of 'Rawas cluster' of mineralization. Intruded into Peneta and Rawas Fms. (or Kuantan/ Kluet Fm?). Tectonically part of 'Cathaysian' W Sumatra Block. I-type granite associated with skarn-like Zn-Cu-Pb limestone replacement. Chemistry suggest Volcanic Arc or syn-collisional tectonic environment)

Abidin, H.Z. & B.H. Harahap (2007)- Indikasi mineralisasi epitermal emas bersulfi da rendah, di Wilayah Kecamatan Bonjol, Kabupaten Pasaman, Sumatera Barat. J. Geologi Indonesia 2, 1, p. 55-67.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/184)
(Bonjol gold prospect, Pasaman District, N of Padang, W Sumatra, several ore bodies in E Miocene age (9.3-11.9 Ma; should be Late Miocene?;JTvG) altered rhyolitic volcanics of Gunung Amas Fm. Gold deposit probably of low sulphidation epithermal type)

Abidin, H.Z. & B.H. Harahap (2007)- Prospek emas Bonjol bersulfida rendah di Wilayah Kecamatan Bonjol, Kabupaten Pasaman, Sumatera Barat. J. Teknologi Mineral Batubara 15, 42, p. 1-9.
(Bonjol gold prospect paper, similar to above)

Abidin, H.Z. & T. Suwarti (2005)- Petrology and gochemistry of the Neogene granite in the Kerinci Regency Region, Jambi. Majalah Geologi Indonesia (IAGI) 20, 3, p. 155-164.
(Reprinted in 'Metalogeni Sundaland I (2014), p. 15-24. Mio-Pliocene Sungau Penuh granite pluton in Barisan Range, age 3.6- 13.9 Ma. S-type and transitional/ I-type granite, derived from island arc. Mineralization potential)

Abidin, H.Z. & Suyono (2004)- Indication of mineral deposit in the Kerinci Regency Region, Jambi. Majalah Geologi Indonesia (IAGI) 19, 3, p. 173-185.
(Reprinted in 'Metalogeni Sundaland I (2014), p. 3-13. Sulfide alteration in Hulu Simpang Fm volcanics ('Old Andesite') in Barisan Range W of Sungeipenuh, S Sumatra. Tied to granite with 3.6- 13.9 Ma fission track ages)

Abidin, H.Z. &.H. Utoyo (2014)- Mineralization of the selected base metal deposits in the Barisan Range, Sumatera, Indonesia (case study at Lokop, Dairi, Latong, Tanjung Balit and Tuboh). Indonesian Mining J. 17, 3, p. 122-133.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/316/199)
(Three types of base metal occurrences along Barisan Range: (1) skarn (e.g. Lokop, Latong, Tuboh) (2) sedimentary exhalative (sedex) (Dairi; in Kluet Fm) and (3) hydrothermal (Tanjung Balit; in Silungkang Fm)

Acocella, V., O. Bellier, L. Sandri, M. Sebrier & S. Pramumijoyo (2018)- Weak tectono-magmatic relationships along an obliquely convergent plate boundary, Sumatra, Indonesia. Frontiers Earth Sci. 6, 3, p. 1-20.
(online at: https://www.frontiersin.org/articles/10.3389/feart.2018.00003/full)
(Sumatra volcanic arc 48 active volcanoes; 46% within 10 km from dextral Great Sumatra Fault, which carries most horizontal displacement on overriding plate. Half of these show possible structural relation to GSF. Data suggest limited tectonic control of GSF on arc volcanism)

Adinegoro, U. & P. Hartoyo (1974)- Paleogeography of North East Sumatra. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 45-61.
(Broad Oligo-Miocene paleogeographic map of N Sumatra onshore, E of Barisan Range, between Tamiang River to N and Toba-Asahan River to S. Eo-Oligocene sediments in NE Sumatra basin 5000-7000m thick. With discussion of N Sumatra geology and stratigraphy

Adiwidjaja, P. & G.L. de Coster (1973)- Pre-Tertiary paleotopography and related sedimentation in South Sumatra. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 89-103.

Advokaat, E., M.L.M. Bongers, A. Rudyawan, M.K. Boudagher-Fadel, C.G. Langereis & D. van Hinsbergen (2018)- Early Cretaceous origin of the Woyla Arc (Sumatra, Indonesia) on the Australian plate. Earth Planetary Sci. Letters 498, p. 348-361.
(online at: https://www.sciencedirect.com/science/article/pii/S0012821X18300463)
(Original version in EPSL 487, p. 151-164, but retracted) (Intra-oceanic Woyla Arc formed above W-dipping subduction zone in E Cretaceous and accreted to W Sundaland in Mid-Cretaceous. Oceanic plate that existed between Woyla Arc and Sundaland now lost to subduction. Paleomagnetic results indicate Woyla Arc formed at equatorial latitudes, presumably on edge of Australian plate. Accretion of Woyla Arc to W Sundaland margin diachronous. Continuing convergence of Australia- Eurasia accommodated by subduction polarity reversal behind Woyla Arc, possibly recorded by Cretaceous ophiolites in Indo-Burman Ranges and Andaman-Nicobar Islands. Biostrat from limestones in Woyla Gp: N Sumatra Lamno and Raba Lst Late Jurassic- E Cretaceous, C Sumatra massive Indarung/Lubuk Peraku Lst Aptian- E Albian)

Advokaat, E., M. Bongers, D. van Hinsbergen, A. Rudyawan & E. Marshal (2017)- Paleomagnetic tests for tectonic reconstructions of the Late Jurassic- Early Cretaceous Woyla Group, Sumatra. EGU General Assembly 2017, Geophysical Research Abstracts 19, EGU2017-4720, 1p. *(Abstract only)*
(Woyla Arc exposed in W Sumatra mainly basaltic- andesitic volcanics, dykes, volcaniclastics and limestones with volcanic debris, interpreted as fringing reefs. Interpreted as remnants of E Cretaceous intra-oceanic arc. New preliminary paleomagnetic data from U Jurassic- Lower Cretaceous limestones suggest Woyla Arc formed near equatorial latitudes, precluding origin from Gondwana, and more likely intra-oceanic arc formed above SW dipping subduction zone in E Cretaceous, thrusted over W Sumatra margin in M Cretaceous)

Aernout, W.A.J. (1927)- Enkele nieuwere gegevens over de ertsafzettingen van Salida. De Mijningenieur 8, p. 73-76.
('Some newer data on the ore deposits of Salida'. W Sumatra gold-silver mine)

Aernout, W.A.J. (1927)- De ertsmijn Lebong Donok. De Mijningenieur 8, p. 162-177.
('The ore mine Lebong Donok'. Gold-silver mine in Barisan Mts of SW Sumatra)

Aldiss, D.T. & S.A. Ghazali (1984)- The regional geology and evolution of the Toba volcanotectonic depression, Indonesia. Quart. J. Geol. Soc., London, 141, 3, p. 487-500.
(Sumatra Late Quaternary Toba volcano-tectonic depression largest resurgent cauldron and one of largest ignimbrite fields (Toba Tuffs: 3000 km3 of acid tuffs over 20,000 km2). Greater part of Toba Tuffs single ignimbrite cooling unit, formed ~100,000 years ago. Toba depression formed after lithification of Toba Tuffs by collapse along regional faults. Resurgent uplift raised lake sediments in depression by 500 m. Eruption of Toba Tuffs and post-ignimbrite volcanism on line of W marginal fault of depression. This marginal fault once extended N offshore into zone of Miocene back-arc rifting)

Aldiss, D.T., R. Whandoyo, S.A. Ghazali & Kusyono (1983)- The geology of the Sidikalang and part of the Sinabang quadrangles (0618), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 41p.
(North Sumatra map sheet with Lake Toba caldera. W of Lake Toba common Permian Tapanuli Gp (Kluet Fm metasediments, Alat Fm limestone intruded by large Sibolga Complex granites, E of Lake E Permian Bohorok Fm. Widespread cover of Toba Tuffs)

Alloway, B.V., A. Pribadi, J.A. Westgate, M. Bird, L.K. Fifield, A. Hogg & I. Smith (2004)- Correspondence between glass-FT and 14C ages of silicic pyroclastic flow deposits sourced from Maninjau caldera, west-central Sumatra. Earth Planetary Sci. Letters 227, p. 121-133.
(Concordant ages of 52±3 ka derived from glass-FT and 14C techniques for latest silicic eruptive activity at Maninjau caldera)

Amin, T.C., Kusnama, E. Rustandi & S. Gafoer (1993)- Geological map of the Manna and Enggano Sheets (0910, 0911), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of part of W coastal area of S Sumatra around Manna- Bintunan, and offshore Enggano Island (folded Miocene clastics). Manna area oldest rock Late Oligocene- E Miocene Hulusimpang andesitic volcanics, interfingering with latest Oligocene- M Miocene marine Seblat Fm clastics. NW-SE trending belt of rel. small and closely spaced Middle Miocene granites. Incl. fission track age of granite near Tanjungsakti of 9.5 ± 0.6 Ma)

Amin, T.C., Sidarto, S. Santosa & W. Gunawan (1994)- Geology of the Kotaagung Quadrangle, Sumatra. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet of SW corner of Sumatra, around Semangko Bay. In NE corner Late Paleozoic Gunungkasih meta-sediment complex, overlain by M Cretaceous Menanga Fmclastics with some limestone, chert and basalt (equivalent of Lingsing Fm of Gumai Mts?). Intruded by Late Cretaceous Padean and Curug granite intrusions (K-Ar ages 79-85 Ma; McCourt and Cobbing 1993) (part of Lampung High?))

Amiruddin (2011)- Tectonic rifting of Upper Paleozoic- Mesozoic intra-cratonic basins in the southeastern Gondwanaland and its economic aspects; with reference to the geology of North Sumatra and West Australia. J. Sumber Daya Geologi 21, 5, p. 249-255.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/151/147)
(Lower Permian fluvio-marine glacial sediments of Bohorok Fm in Bohorok- Mentulu Basin of N Sumatra probably originally located in SE part of Gondwanaland. Occurrence of ultrapotassic Late Permian?- Triassic A-type Sibolga granite (radiometric ages 257, 217 Ma) may suggest rifting episode. Paleomag data from Nishimura & Suparka (1997) suggest paleolatitudes of ~47S?, possibly closest to NW Australian margin in Permian- Triassic)

Andi Mangga, S. (2000)- Amalgamasi mintakat pegungan Tigapuluh dengen mintakat Kuantan- Pegunungan Duabelas, Sumatra Bagian Selatan. J. Geologi Sumberdaya Mineral 10, 105, p. 12-18.
(‘Amalgamation between the Tigapuluh Mts zone with the Kuantan- Duabelas Mts zone, S Sumatra’. S Sumatra four amalgamated terrranes, separated by sutures: (1) Tigapuluh Mts, (2), Kuantan- Duabelas Mts, (3) Gumai-Garba and (4) Gunungkasih- Tanjungkarang. Kuantan- Duabelas Mts separated from Eurasia continent in pre-Triassic (Permian), drifted from N to S and collided with Gondwana-derived Tigapuluh Mts Terrane in Triassic, forming Proto-Sundaland. Paleomag position for N part Tigapuluh Mts = 41°S)

Andi Mangga, S. (2001)- Karakteristik dan genesa mintakat Gunungkasih- Tanjungkarang dan mintakat Gumai-Garba di daerah Lampung, Sumatera. J. Geologi Sumberdaya Mineral 11, 115, p. 2-8.
('Characteristics and genesis of the Gunungkasih- Tandjungkarang zone and Gumai-Garba zone in Lampung area, Sumatra'. Two terranes in S Sumatra of different origin: Tanjungkarang-Gunungkasih of Lampung High Paleozoic metamorphics (schist, amphibolite, quartzite, gneiss, etc.), probably tectonized in E Jurassic time and intruded by Cretaceous I-type granites. Gumai-Garba terrane collided with Sundaland in Late Jurassic-Cretaceous)

Andi Mangga, S., Amiruddin, T. Suwarti, S. Gafoer & Sidarto (1993)- Geological map of the Tanjungkarang Quadrangle (1110), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(SE Sumatra map sheet. With outcrops of old rocks of Lampung High at N end of Lampung Bay, SE corner of Sumatra. With Paleozoic? Gunung Kasih complex metamorphics (schist, gneiss, amphibolite schist, quartzite, marble, migmatitie), mid-Cretaceous Menanga Fm sediments with thin limestones with Orbitolina, interbedded with basalts and arc volcanics. Associated amphibolite schist 125-108 Ma. Intruded by large mid-upper Cretaceous Sulan granite (111, 113 Ma) and farther North Seputih granodiorite, others)

Andi Mangga, S., Sukardi & Sidarto (1993)- Geological map of the Tulung Selapan Quadrangle (1112), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(SE Sumatra map sheet of SE part of S Sumatra Basin, SE of Palembang. Mainly coastal plain swamp. In NW two small outcrops of light-colored ?Jurassic Bukit Batu biotite granite (with quartz-cassiterite veins; Crow and Van Leeuwen 2005; related to 'Main Range' Triassic- E Jurassic tin granites?; Gasparon and Varne 1995))

Andi Mangga, S., K. Sutisna & Suminto (1996)- Karakteristik batuan klastika Formasi Peneta dan kaitannya dengan indikasi minyak dan gas bumi. J. Geologi Sumberdaya Mineral 6, 52, p. 1-11.
('Characteristics of the Peneta Fm clastics and its relation to oil and gas indications'. Late Jurassic- Early Cretaceous clastics with limestone intercalations at NW side of Jambi/ S Sumatra basin.Mainly fine-grained in E, coarse in W. Q-F-L diagrams suggest sandstone derived from 'recycled orogen' and quartzose orogens. Vitrinite reflectivity rel. high (Ro typically between 1.2- 1.7%), i.e. in gas window)

Andi Mangga, S., Suminto, Suyoko & K. Sutisna (1996)- Lingkungan tektonik formasi Mengkarang di daerah Dusunbaru, Jambi. J. Geologi Sumberdaya Mineral 6, 60, p. 16-20.
('Tectonic setting of the Mengkarang Fm in the Dusunbaru area, Jambi'. Permian Mengkarang Fm sediments near Duabelas Mts with warm water fauna and Cathaysian flora, part of Kuantan- Duabelas Mts Terrane. In Late Carboniferous Bohorok- Tigapuluh Mts Terrane separated from Gondwana and moved N-ward, colliding with Kuantan- Tigapuluh (Duabelas?) Terrane in Triassic (evidenced by NW-SE trending strike slip fault contact). E Permian subduction activity in SW Sumatra produced tholeitic and basalto-andesitic volcanics in island arc setting known as Palepat Fm, changing to sedimentary facies of Mengkarang Fm in backarc basin. Q-F-L diagrams of Mengkarang Fm sandstones collected along Merangin River show dominant quartz %, with 'recycled orogen' and 'craton interior' provenance (contradicts volcanic arc setting?; JTvG))

Andi Mangga, S., S. Santosa & B. Hermanto (1993)- Geological map of the Jambi Quadrangle (1014), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of NE part of Jambi Basin, E of Jambi town. Many young surface anticlines, with oldest exposed rocks in core M-L Miocene Air Benakat Fm)

Andi Mangga, S.A. & Suyono (2007)- Perkembangan tektonik dan petrogenesis batuan ranitan Kapur hingga Tersier di daerah Lampung. In: Geologi Indonesia: dinamika dan produknya, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 33, 1, p. 69-82.
(Cretaceous- Tertiary granitoids exposed in Lampung, especially SE side of Barisan Mts. I and S type granites, volcanic arc granites and syn-collisional granites and volcanic rocks related to subduction)

Andrews, M. (2013)- The exploration, discovery and development of the Way Linggo epithermal gold-silver mine in Southern Sumatra. Proc. Symposium East Asia: Geology, exploration technologies and mines, Bali, Australian Inst. Geoscientists p. 3-4. *(Abstract only)*
(Way Linggo gold-silver mine in S Sumatra producing since 2010. At N end of Semangka Graben, a pull-apart basin with Trans Sumatra Fault in W and Semangka Fault in E. Low sulphidation epithermal vein system in porphyritic dacite host)

Anonymous (1918)- Mijnbouwkundig-geologisch onderzoek in Bengkoelen en Palembang, I. Rawas verslag. Verslagen Mededelingen Indische Delfstoffen en hare toepassingen, Dienst Mijnwezen Nederlandsch Oost-Indie, Bandung, 3, p. 1-62.

('Mining- geological investigations in Bengkulu and Palembang, Rawas and Palembang'. Surveys of iron, gold, silver occurrences in Barisan Mountains of S Sumatra in 1905-1915: Bt. Rajah, Soengei Toeboh, etc., from work by Moerman, Tobler, etc. Common remnants of native alluvial gold diggings in Rawas drainage)

Anonymous (1918)- Mijnbouwkundig-geologisch onderzoek in Palembang en Bengkoelen, II. Benkoelen verslag. Verslagen Mededelingen Indische Delfstoffen en hare toepassingen, Dienst Mijnwezen Nederlandsch Oost-Indie, Bandung, 4, p. 1-62.
('Mining- geological investigations in Palembang and Bengkulu, II. Bengkulu report')

Anonymous (1921)- Uitkomsten van mijnbouwkundig-geologische verkenningen in Kerintji (Residentie Djambi). Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnbouw in Nederl. Oost-Indie, 13, p. 1-24.
('Results of geological-mining reconnaissance in Korinci (Jambi Residency)'. Brief review of geology (mainly summary of Tobler 1910: folded Permian sedments overlain by Tertiary sediments and Quaternary volcanic deposits) and of gold-silver occurrences in Barisan Mts of SW Sumatra. With 1:200,000 scale geologic map of Jambi part of Barisan Mts, Rawas 'Slate Mountains', Lake Korinci area, etc.))

Aribowo, S. (2018)- The geometry of pull-apart basins in the southern part of Sumatran strike-slip fault zone. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012002, p. 1-5.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012002/pdf)
(On two lake-forming pull-apart basins between overstepping segments of Great Sumatra Fault zone in S Sumatra; Ranau and Suoh)

Aribowo, S., Munasri, M.M. Mukti, H. Permana & N. Supriatna (2016)- Geologi struktur pada daerah subduksi purba di Komplek Gunungkasih, Provinsi Lampung. In: R. Delinom et al. (eds.) Pros. Geotek Expo 2016, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. 363-371.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2017/10/05/prosiding-2016/)
('Structural geology of ancient subduction zone in the Gunungkasih Complex, Lampung Province')

Arsadi, E.M., S. Nishimura, Suwijanto & J. Nishida (1989)- Preliminary report on magnetotelluric (MT) survey crossing the Semangko fault zone in Sumatra. Geologi Indonesia (IAGI) 12, 1, p. 215-226.

Aspden, J.A., W. Kartawa, D.T.Aldiss, A. Djunuddin, D. Diatma, M.C.G. Clarke, R. Whandoyo & H. Harahap (1982)- Geologic map of the Padangsidempuan and Sibolga Quadrangles (0717), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet at Sumatra W coast near Sibolga. Rel. widespread Late Paleozoic)

Aspden, J.A., B. Stephenson & N.R. Cameron (1982)- Tectonic map of northern Sumatra (1:500,000). Directorate of Overseas Surveys, Inst. Geological Sciences, Keyworth, p. *(Unpublished)*

Aulia, K., R. Soeripto, D. Sudradjat & S.P. Silaban (1990)- Geo-traverse across Central Sumatra- Post Convention field trip, 1990. Indon. Petroleum Assoc. (IPA), p. 1-32.
(Pakanbaru to Padang fieldtrip guidebook, via Ombilin Basin)

Bachri, S., S. Andi Mangga, H. Panggabean, D.A. Agustiyanto & B. Hermanto (2004)- Genesis kompleks Sekampung, daerah Tanjungkarang, Lampung dengan penekanan data struktur lipatan dan nilai kemagnetan. J. Sumber Daya Geologi, 14, 2 (146), p. 93-101.
('Genesis of the Sekampung complex, Tanjung Karang area, Lampung, with emphasis on fold structures and the value of magnetism'. Pretertiary Way Sekampung complex of Lampung, S-most Sumatra, with isoclinally foliated metamorphic rocks (originally thin-bedded sediments) and I-type granitoids with high magnetic susceptibility)

Bachtiar, A., P.T. Setyobudi, S. Asyiah, A. Suleiman & P.A. Suandhi (2014)- Sedimentology and petrography of selected North Sumatra Pre-Tertiary formations: anticipating new petroleum systems in Western Indonesia. Proc. 3rd Int. Conf. Geological and Environmental Sciences, IPCBEE 73, Singapore, p. 35-39. *(Extended Abstract)*
(online at: www.ipcbee.com/vol73/008-ICGES2014-B0004.pdf)
(Paleozoic- Mesozoic stratigraphy of N Sumatra mainly part of East Sumatra (Sibumasu) Terrane. Divided into Carboniferous- E Permian Tapanuli Gp (Alas Fm, Kluet Fm, Bohorok Fm) and Permian- Triassic Peusangan Gp (Pangururan Bryozoa Bed, Batumilmil Fm, Kaloi Fm, Kualu Fm). Deposited in deep marine (Triassic Sibaganding Lst with radiolarian limestone); shallow marine (Permian Batumilmil- Kaloi Fm limestone); moraine glacier and till (Bohorok pebbly mudstone); and shallow water (Kualu Mudstone with Halobia charlyana, Pangururan Bryozoa Bed). Source rock potential in Batumilmil and Kualu Mudstone)

Bachtiar, A., J.B. Unir, A. Bunyamin, H.I. Darmawan, F.H. Darmawan, F.H. Korah et al. (2014)- The Pre-Tertiary petroleum system in North Sumatra Basin: an integrated study from onshore North Sumatra outcrops and subsurface data from offshore West Glagah Kambuna. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-175, 31p.
(On potential Pre-Tertiary 'basement' play in W Glagah Kambuna Block, offshore N Sumatra Basin, N of Medan. Basement of W Glagah Kambuna area probably mainly Permian-Triassic, similar to outcrops in W, which consist of Permian Tapanuli Gp and Batumilmil crinoidal Lst, and Triassic Kaloi Lst and Kualu Fm claystone (with Norian bivalve Halobia charlyana), which outcrop to W (all part of Sibumasu Block). (with some unusual K-Ar radiometric age dates of sedimentary rocks?; JTvG)

Barber, A.J. (2000)- The origin of the Woyla Terranes in Sumatra and the Late Mesozoic evolution of the Sundaland margin. J. Asian Earth Sci. 18, 6, p. 713-738.
(Jurassic-Cretaceous Woyla Gp of N Sumatra includes fragments of volcanic arcs and imbricated oceanic assemblage. Arc rocks intruded by granitic batholith and separated from original margin of Sundaland by oceanic assemblage. Arc assemblage underlain by continental basement. Quartzose sediments correlated with units in Paleozoic basement. Continental sliver separated from margin of Sundaland in Late Jurassic-Early Cretaceous in extensional strike-slip faulting regime, producing short-lived marginal basin. Separated Sikuleh and Natal microcontinents. In mid-Cretaceous extension followed by compression, crushing continental fragments back against Sundaland, with destroyed marginal basin now represented by imbricated oceanic assemblage. Volcanic assemblage and intrusive granites in Natal area part of Eocene-Oligocene volcanic arc. Radiolarian chert in Woyla Gp of Natal and Padang areas show it is part of Triassic- M Cretaceous ocean basin. Sikuleh microcontinent may be allochthonous and may have originated on N margin of Gondwana)

Barber, A.J. & M.J. Crow (2003)- An evaluation of plate tectonic models for the development of Sumatra. Gondwana Research 6, 1, p. 1-28.
(Greater part of Sumatra considered to form part of Sibumasu Block, which accreted to Indochina Block in Triassic. S part of Sibumasu divided into Malacca and Mergui microplates by Mutus Assemblage, which represents another suture. Permo-Carboniferous in N Sumatra with tilloids links Sumatra to Sibumasu Block in N. Permo-Carboniferous in C Sumatra contains Cathaysian Jambi flora and fauna related to Indochina Block and is associated with E Permian volcanic arc, which probably formed at margin of Cathaysian Block and was emplaced in present position by strike-slip faulting. Woyla Group is Jurassic- E Cretaceous oceanic volcanic arc, which was thrust over W margin of Sumatra in mid-Cretaceous)

Barber, A.J. & M.J. Crow (2005)- Pre-Tertiary stratigraphy. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 4, p. 24-53.
(Carboniferous- Cretaceous rocks widely exposed in Barisan Mts in W part of Sumatra. Rocks are variably metamorphosed and were termed the 'Barisan-Schiefer' and 'Old-Slates Formation' in C Sumatra, and 'Crystalline Schists' in Lampung area. Locally these rocks contain E Carboniferous and Permian fossils. Carboniferous- E Permian Tapanuli Gp clastics include 'glacial' unbedded pebbly mudstones)

Barber, A.J. & M.J. Crow (2005)- Structure and structural history. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 13, p. 175-233.

Barber, A.J. & M.J. Crow (2008)- The origin and emplacement of the West Burma- West Sumatra ribbon-continent. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 18-21.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/001.pdf)
(Combined W Burma-W Sumatra ribbon-continent has Cathaysian E Permian fauna and flora similar to S China and Vietnam. Became separated in M-L Permian from E margin of Cathaysia as thin continental sliver by formation of backarc basin. By M Triassic had moved along transcurrent fault system around Indochina into present position W of Sibumasu. In Miocene two blocks were separated by formation of Andaman Sea)

Barber, A.J. & M.J. Crow (2009)- The structure of Sumatra and its implications for the tectonic assembly of Southeast Asia and the destruction of Paleotethys. Island Arc 18, 1, p. 8-20.
(From E to W Malay Peninsula and Sumatra 3 continental blocks: (1) E Malaya with Cathaysian Permian fauna and flora; (2) Sibumasu (W Malay Peninsula and E Sumatra) with glaciogenic Late Carboniferous-Early Permian; (3) W Sumatra, also Cathaysian. Woyla nappe is intra-oceanic arc, thrust over W Sumatra block in M Cretaceous. Age of Sibumasu- East Malaya collision and destruction of Paleotethys Triassic? W Sumatra block derived from Cathaysia and emplaced against Sibumasu W margin by dextral transcurrent faulting. E Malaya block is part of Indochina block. W Burma block is extension of W Sumatra block, from which it separated by formation of Andaman Sea in Miocene. Woyla nappe correlated with Mawgyi nappe of Myanmar)

Barber, A.J., M.J. Crow & M.E.M de Smet (2005)- Tectonic evolution. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 14, p. 234-259.
(Review of crustal blocks of Sumatra and proposed models of assembly)

Barber, A.J., M.J. Crow & J.S. Milsom (eds.) (2005)- Sumatra: geology, resources and tectonic evolution. Geol. Soc., London, Mem. 31, p. 1-290.
(Major overview of Sumatra geology and mineral occurrences)

Barton, M.D., C. Kieft, E.A.J. Burke & I.S. Oen (1978)- Uytenbogaardtite, a new silver-gold sulfide. Canadian Mineralogist 16, p. 651-657.
(New mineral uytenbogaardtite (Ag3AuS2) from hydrothermally-altered Tertiary andesitic rocks of Tambang Sawah, Bengkulu District, W Sumatra)

Bassoulet, J.P. (1989)- New micropaleontological data on some Upper Jurassic- Lower Cretaceous limestones of Sumatra. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. TP 19, Bangkok, p. 227-241.
(Latest Jurassic- basal Cretaceous limestones with Pseudocyclammina lituus from N Sumatra (Tapaktuan, Raba Lamno) and S Sumatra (Tembesi Basin). Also Early Cretaceous limestone with primitive orbitolinids from Gumai Mts, S Sumatra. All representative of 'Woyla Terranes'?; JTvG))

Baumberger, E. (1922)- Uber die Valanginienfauna von Pobungo auf Sumatra. Eclogae Geol. Helvetiae 16, 5, p. 581-582
(online at: www.e-periodica.ch/digbib/view?pid=egh-001:1920-1922:16598)
('On the Valanginian fauna from Pobungo on Sumatra' (Jambi Basin). Brief report on Lower Cretaceous (Valanginian) fossils from thick shales in Barisan Mts, collected by Tobler in Jambi area. Mainly small ammonites, like Neocomites neocomiensis and N. pseudo-pexiptychus/platycostatus, Kilianella, etc., and Nucula and Arca-like bivalves. Typical Early Cretaceous 'Mediterranean' fauna. See also Baumberger 1925)

Baumberger, E. (1925)- Die Kreidefossilien von Dusun Pobungo, Batu Kapur-Menkadai und Sungi Pobungo (Djambi, Sumatra). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 17-47.
(Lower Cretaceous fossils collected by Tobler in 1907 from 3 Jambi localities. Dark folded shales with ammonites (Neocomites neocomiensis, N. teschensis, Thurmannites spp.), bivalves (Cardita, Amussium, Nucula, Arca) and gastropods (Nerinea) of Valanginian age in Dusun Pobungo and Batu Kapur show open marine facies with European 'alpine' and Himalayan (Spiti) affinities. Breccious calcareous sandstones with Nerinea in Sungi Pobungo also similar to European Valanginian species ('Himalayan Province' of Uhlig 1911))

Beaudouin, T., O. Bellier & M. Sebrier (1995)- Segmentation et alea sismique sur la grande faille de Sumatra (Indonesie). Comptes Rendus Academie Sciences, Paris 321, 409-416.
('Segmentation and seismic hazard along the Great Sumatran Fault, Indonesia')

Beauvais, L. (1983)- Jurassic Cnidaria from the Philippines and Sumatra. CCOP Techn. Bull. 16, p. 39-76.
(Brief descriptions of poorly preserved Upper Jurassic coral and stromatoporoids fauna from Indarung, E of Padang, W Sumatra, incl. Cladocoropsis (placed in Lovcenipora by Renz 1926, but different), Actinostroma, etc. (also described by Yancey and Alif (1977). Coral- stromatoporoid (Cladocoropsis) faunas related to those described from Japan and Tethys Also M and U Jurassic corals from reefal limestones in Philippines)

Beauvais, L. (1985)- Donnees nouvelles sur les calcaires órecifauxô du Jurassique superieur de Sumatra. Mem. Soc. Geologique France, n.s., 147, p. 21-27.
('New data on the 'reefal' limestones of the Upper Jurassic of Sumatra')

Beauvais, L. (1989)- Upper Jurassic Madreporia and calcisponges of Sumatra. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. 19, Bangkok, p. 243-297.
(Taxonomic descriptions of diverse Upper Jurassic coral and calcisponge assemblages from N Sumatra, C Sumatra (Tembesi River) and Gumai Mts (S Sumatra). Incl. occurrences of Late Jurassic Tethyan reefal sponge Cladocoropsis mirabilis Felix 1907 from Gumai Mts., Jambi, Aceh))

Beauvais, L., M.C. Bernet-Rolande & A.F. Maurin (1985)- Re-interpretation of pre-Tertiary classical reefs from Indo-Pacific Jurassic examples. In: Proc. 5th Int. Coral Reef Symposium, Tahiti, 6, p. 581-586.
(M-U Jurassic carbonates of Thailand, Sumatra and Philippines not classic reefs, but mud mounds. Corals and calcareous sponges (Cladocoropsis) present, but often in mud matrix and main rock-building organisms are algae of Baccinellid- Lithocodium- stromatolite consortium. C Sumatra, Tembesi River mounds assembled in clusters at different bathymetric levels)

Beauvais, L., M.C. Bernet-Rolande & A.F. Maurin (1989)- Microfacies analysis of the Triassic limestone of Sibaganding. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. 19, Bangkok, p. 195-204.
(Massive Triassic reefal limestones at Sibaganding, N of Prapat, Lake Toba area, N Sumatra with branching corals, calcisponges (Cladocoropsis?) and stromatolites in carbonate mud matrix; see also Vachard 1989)

Beauvais, L., M.C. Bernet-Rolande & A.F. Maurin (1989)- Microfacies analysis of the Upper Jurassic limestones of Sumatra. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. 19, Bangkok, p. 299-309.
(Upper Jurassic limestones of Sumatra with common corals but are not true reefs. Most species thin, in sediments with high mud content)

Beauvais, L., P. Blanc, M.C. Bernett-Rollande & A.F. Maurin (1988)- Sedimentology of Upper Jurassic deposits in the Tembesi River area, Central Sumatra. Bull. Geol. Soc. Malaysia 22, p. 45-64.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1988003.pdf)
(Tembesi River area interbedded black limestone with U Jurassic corals and black shales-sandstones. 'Tethyan' corals in limestones indicate Kimmeridgian in Padang area, and Tithonian age in Jambi area. With Stylosmilia

corallina and Cladocoropsis mirabilis. U Jurassic corals of Sumatra do not build true reefs, but form mud-mounds, probably due to terrigenous sediments coming from nearby continent)

Beauvais, L., H. Fontaine, S. Gafoer & J.R. Geyssant (1989)- The Cretaceous. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments. CCOP Techn. Publ. 19, Bangkok, p. 313-319.
(Cretaceous rel. common on Sumatra, especially S Sumatra. Lower Cretaceous limestones hard to distinguish from Upper Jurassic. Upper Cretaceous may be absent. Two areas with E Cretaceous Orbitolina in S Sumatra)

Beauvais, L., H. Fontaine, Suharsono & D. Vachard (1984)- The Pretertiary palaeontology of the Sarolangun sheet, 1:250,000, South Sumatra. CCOP Newsletter, p.

Beck, M.E. (1983)- On the mechanism of tectonic transport in zones of oblique subduction. Tectonophysics 93, p. 1-11.
(Sumatra oblique subduction created strike-slip fault that traverses magmatic arc)

Beddoe-Stephens, B., J.A. Aspden & T.J. Shepherd (1983)- Glass inclusions and melt compositions of the Toba Tuffs, Northern Sumatra. Contrib. Mineralogy Petrology 83, p. 278-287.
(Glass (melt) inclusions in quartz and feldspar phenocrysts in Toba Tuff ignimbrites all highly evolved, rhyolitic compositions, identical to glass forming matrix of rocks. Ignimbritic magmas at Toba erupted from ~3-4 kms depth and represent silicic cap to batholithic body consolidating beneath Toba caldera)

Beddoe-Stephens, B., T.J. Shepherd, J.F.W. Bowles & M. Brook (1987)- Gold mineralization and skarn development near Muara Sipongi, West Sumatra, Indonesia. Economic Geology 82, 7, p. 1732-1749.
(Gold-mineralized skarns along Sumatra Fault Zone near Muara Sipongi, W Sumatra, mined in Pagaran Siayu mine before WW II. Hosted in Permo-Triassic limestones and andesitic volcanics, into which Late Jurassic I-type diorites and granodiorites intruded in volcanic arc-related environment. Rb-Sr dating of emplacement of Muara Sipongi batholith 158 ±23 Ma)

Bellier, O., H. Bellon, M. Sebrier, Sutanto & R. Maury (1999)- K/Ar age of the Ranau tuffs: implications for the Ranau caldera emplacement and slip-partitioning in Sumatra (Indonesia). Tectonophysics 312, p. 347-359.
(Great Sumatran dextral Fault follows approximately magmatic arc, where major calderas are installed. Ranau caldera tuff sample yielded K-Ar ages of 0.55±0.15 Ma for separated feldspars, which places major Ranau caldera collapse between 0.7- 0.4 Ma)

Bellier, O. & M. Sebrier (1994)- Relationship between tectonism and volcanism along the Great Sumatran Fault zone deduced by SPOT image analyses. Tectonophysics 233, p. 215-231.
(Satellite images provide evidence for numerous stepovers, pull-apart grabens and volcanic structures along NW-trending right-lateral Great Sumatran Fault Zone. Geometry of strike-slip fault evolves through time. Huge volcanic calderas in large releasing stepover fault zones and bounding faults of rectangular pull-apart basins are analogous to circular ring faults of calderas. Toba caldera elongated parallel to present trace of Great Sumatran Fault and associated with wide pull-apart basin not active at present)

Bellier, O. & M. Sebrier (1995)- Is the slip rate variation on the Great Sumatran Fault accommodated by fore-arc stretching? Geophysical Research Letters 22, p. 1969-1972.
(Along Great Sumatran Fault zone, which is associated with oblique convergent Sunda subduction system, a N-ward increase of slip rate, from <10mm/yr near Sunda Strait to ~20mm/yr near Lake Toba to >40mm/yr in Andaman Sea. Transpressional back-arc deformation accommodates part of slip rate variation while no significant fore-arc stretching is observed. Oblique convergence may be accommodated by deformation of 500 km wide zone, from fore-arc toe back-arc domains)

Bellier O., M. Sebrier & S. Pramumijoyo (1991)- La grande faille de Sumatra: geometrie, cinematique et quantite de deplacement mises en evidence par l'imagerie satellitaire.Comptes Rendus Academie Sciences, Paris, 312, 2, p. 1219-1226.

('The Great Sumatra fault zone: kinematics and amount of displacement as shown by satellite imagery'. Satellite image analysis of S-most part of fault zone suggests right-lateral strike slip motion at ~6 ± 4 mm/yr (close to 40mm/ year near Andaman Sea?))

Bellier, O., M. Sebrier, S. Pramumijoyo, T. Beaudouin, H. Harjono, I. Bahar & O. Forni (1997)- Paleoseismicity and seismic hazard along the Great Sumatran Fault (Indonesia). J. Geodynamics 24, p. 169-183.
(Great Sumatran Fault is 1650km-long dextral strike-slip fault zone which accommodates part of oblique convergence of subduction between Indo-Australian and Eurasian plates. Segmentation map shows 18 major fault segments (45-200 km long). Historical seismicity 17 earthquakes since 1835. N-ward increase of segment lengths, which parallels GSF slip-rate increase. Seismic gap of 300 km between 3-5°N)

Bellon, H., R.C. Maury, Sutanto, R. Soeria-Atmadja, J. Cotton & M. Polve (2004)- 65 m.y.-long magmatic activity in Sumatra (Indonesia), from Paleocene to Present. Bull. Soc. Geologique France 175, 1, p. 61-72.
(NW-SE volcanic arc location closely follows Great Sumatran Fault Zone (GSFZ). K-Ar ages show magmatic activity from Paleocene (~63 Ma) until Present. Spatial distribution increased at ~20 Ma, possibly connected to development of GSFZ. Position of Plio-Quaternary magmatic rocks shifted away from trench by few 10's of km relative to Paleogene- Miocene arcs, consistent with Cenozoic tectonic erosion of Sundaland margin. Samples display typical subduction-related signatures, but no clear geochemical trends. Lack of regular variations reflects complex igneous petrogenesis where contribution of Sundaland continental crust overprinted those of mantle wedge and subducted slab)

Bennett, J.D. (1978)- The structure and metamorphism of Sumatra North of latitude 38°N. In: Proc. Second Symposium Integrated Geological Survey North Sumatra, 1977, Directorat Min. Resources, Bandung, Indonesia, 3, 1, p. 5-19.

Bennett, J.D., D. McC Bridge, N.R. Cameron, A. Djunuddin, S.A. Ghazali, D.H. Jeffrey, W. Kartawa et al. (1981)- The geology of the Calang Quadrangle, Sumatra (1:250,000). Geol. Res. Dev. Centre (GRDC), Bandung, 15p.
(NW Sumatra sheet, mainly occupied by Late? Cretaceous Sikuleh Batholith, surrounded by Woyla Group, incl. Tangse serpentinite)

Bennett, J.D., D. McC Bridge, N.R. Cameron, A. Djunuddin, S.A. Ghazali, D.H. Jeffery et al. (1981)- Geologic map of the Banda Aceh Quadrangle, Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(With Tangse serpentinite and Indrapura Complex melange. Incl. Woyla Group with thick Late Jurassic- E Cretaceous Lamno Lst with Pseudocyclammina lituus above similar age Bentaro Volcanics magmatic arc basalts, unconformably overlain by Oligocene and younger Tangla Fm clastics, etc.)

Berman, A.E. (2005)- Northern Sumatra earthquake: 40 years of ignoring plate tectonics. First Break 23, 3, p. 77-85.

Bonhomme, M., J. Philibert & Y. Vialette (1960)- Table des ages apparents determines en 1959 par la methode au plombe-alpha et par la methode au strontium. Travaux Lab. Geol. Min. Fac. Sciences Clermont-Ferrand, Serie documentation, 2, p.
('Table of apparent ages determined in 1959 by the Lead-alpha method and by the Strontium method'. Early radiometric age dating results, including for Lassi biotite granite of C Sumatra: zircon 99 Ma, Rb-Sr 135± 55 and 112± 25 Ma. Latter number believed to be most reliable (= mid-Cretaceous; Klompe 1962))

Booi, M.(2017)- Innovation and stasis: gymnosperms from the early Permian Jambi flora. Ph.D. Thesis Leiden University, p. 1-220.
(parts online at: https://openaccess.leidenuniv.nl/handle/1887/57351)
(E Permian (296 Ma) 'Cathaysian' Jambi Flora from outcrops near Bangko in Sumatra characterized by plant groups known from classic coal swamp floras, as well as newly emerging groups that would play important role in vegetations of Permian era. Latter group with ecology generally drier than swamp flora species. Quantitative morphologic analysis of early gymnosperm woods suggests no individual species can be discerned)

Booi, M., I.M. van Waveren & J.H.A. van Konijnenburg-van Cittert (2009)- *Comia* and *Rhachiphyllum* from the early Permian of Sumatra, Indonesia. Review Palaeobotany Palynology 156, p. 418-435.
(E Permian flora from Mengkarang Fm of Jambi with Comia, Rhachiphyllum, Supaia-like material and Autunia fructification, corroborating peltasperm affinity. Material shows strong relationships with N China and even Angaran region, but no Gondwanan elements, suggesting migration zone running from N China Block to W Sumatra- W Myanmar terrane)

Booi, M., I.M. van Waveren & J.H.A. van Konijnenburg-van Cittert (2009)- The Jambi gigantopterids and their place in gigantopterid classification. Botanical J. Linnean Soc. 161, 3, p. 302-328.
(online at: https://academic.oup.com/botlinnean/article/161/3/302/2418339)
(Two gigantopterid species/genera from E Permian Mengkarang Fm of Jambi, originally described by Jongmans & Gothan 1935 as Gigantopteris bosschana (reclassified to Gothanopteris by Koidzumi 1936) and G. mengkarangensis (reclassified to Palaeogoniopteris by Koidzumi 1936). Similar to other gigantopterids, but not directly related. Possible scenario for evolution of gigantopterid leaf morphology)

Booi, M., I.M. van Waveren & J.H.A. van Konijnenburg-van Cittert (2014)- Wood anatomical variability in Early Permian ‚araucarioids‛. Int. Assoc. Wood Anatomists (IAWA) J. 35, 3, p. 307-331.
(E Permian from Merangin River with rel. common gymnosperm wood (one trunk 2.4m high), also some angiosperm woods (Dipterocarpaceae). Some are upright tree trunks up to 3.4m tall in encased in pyroclastic deposits Anatomical analysis of araucarioid wood from E Permian Mengkarang Fm of Jambi, Sumatra, Indonesia. Many species of Araucarioxylon described in literature, but woods from Mengkareng Fm form contiguous micromorphological unit in which no individual species can be distinguished)

Booi, M., I.M. van Waveren, J.H.A. van Konijnenburg-van Cittert & P.L. de Boer (2008)- New material of *Macralethopteris* from the Early Permian Jambi flora (Middle Sumatra, Indonesia) and its palaeoecological implications. Review Palaeobotany Palynology 152, p. 101-112.
(New material of E Permian Jambi flora. Comparison with related Cathaysian and Euramerican species show isolated occurrence of alethopterid genus Macralethopteris in Cathaysian region)

Boomgaart, L. (1941)- Rapport van de mijnbouwkundige en geologische onderzoekingen op de Boelangi-concessies (S.W.K.). Archives Bureau of Mines, Bandung, p. . *(Unpublished)*
('Report of mining and geological investigations of the Bulangi concessions', West Sumatra)

Boomgaart, L. (1943)- Localities of copper ore in Sumatra. Archives Bureau of Mines, Bandung, p. . *(Unpublished)*

Boomgaart, L. (1947)- Oude mijnwerken op Sumatra‛s westkust. Geologie en Mijnbouw 9, 5, p. 75-77.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0TDhWaXE3RmprYXc/view)
('Old mine workings on Sumatra's West coast'. Numerous indications of small-scale native gold mining operations near Sapat (Moeara Laboeh, Solok area), Barisan Mts of W Sumatra. In older literature called 'area of 1300 mines', worked before 1840)

Boomgaart, L. (1948)- Tectonics and ore deposits of Mangani (Sumatra). Geologie en Mijnbouw 10, 11, p. 293-298.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0bDRJVnhGMkVyWG8/view)
(Critical discussion of De Haan (1933) monograph on Mangani ore deposits in Barisan Mts and new map of ore-bearing veins)

Bora, D.K., K. Borah & A. Goyal (2016)- Crustal shear-wave velocity structure beneath Sumatra from receiver function modeling. J. Asian Earth Sci. 121, p. 127-138.
(Shear velocity structure model of crust of Sumatra region. Large variations of sediment thicknesses (3-7 km). Crustal thickness beneath Sumatra mostly between 27-35 km, except beneath Nias island (19 km))

Bowles, J.F.W. (1984)- The distinctive low-silver gold of Indonesia and Malaysia. In: R.P. Foster (ed.) The geology, geochemistry and genesis of gold deposits, Geol. Soc. Zimbabwe, Spec. Publ. 1, p. 249-260.

Bowles, J.F.W., N. Cameron, B. Beddoe-Stephens & R.D. Young (1984)- Alluvial gold, platinum, osmium-iridium, copper-tin and copper-zinc alloys from Sumatra- their composition and genesis. Trans. Inst. Mining Metallurgy, London, 93, p. B23-B30.

Bowles, J.F.W., B. Beddoe-Stephens, M.C.G.Clarke, A. Djunuddin, S.A. Ghazali & Miswar (1985)- Precious metal mining prospects in northern Sumatra. In: Proc. Asian Mining '85 Conf., London, Inst. Mining Metallurgy, p. 173-184.

Bronto, S., P. Asmoro, G. Hartono & S. Sulistiyono (2012)- Gunung api purba di daerah Bakauheni- Pulau Sangiang, Selat Sunda, Kabupaten Lampung Selatan. J. Geologi Sumberdaya Mineral 22, 1, p. 3-14.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/102/94)
('Paleovolcanoes in the Bakauheni area- Sangiang Island, Sunda Strait, South Lampung Regency'. Three paleovocanoes in N Sunda Straits, along planned Sunda Strait bridge route between Merak- Bakauheni)

Brouwer, H.A. (1915)- Erosieverschijnselen in puimsteentuffen der Padangsche Bovenlanden. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 32, p. 338-345.
(online at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015078113514;view=1up;seq=378)
('Erosional features in pumice tuffs of the Padang Highlands'. On formation of canyons in soft pumice formations near Fort De Kock, etc.)

Brouwer, H.A. (1915)- Uber einen Granitkontakthof in Mittelsumatra. Geol. Rundschau 5, p. 551-554.
(online at: https://www.digizeitschriften.de/dms/img/?PID=GDZPPN000452483)
('About a granite contact zone in Central Sumatra'. Hornfels contactmetamorphism rich in biotite at contact between granite and adjacent shales, between Rakan and Lubuk Bandhara))

Brouwer, H.A. (1915)- On the granitic area of Rokan (Middle Sumatra) and on contact-phenomena in the surrounding schists. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 17, 3, p. 1190-1202.
(online at: www.dwc.knaw.nl/DL/publications/PU00012756.pdf)

Brouwer, H.A. (1915)- Bijdrage tot de geologie van Boven Kampar- en Rokan streken (Midden Sumatra). Jaarboek Mijnwezen 42 (1913), Verhandelingen, p. 130-170.
('Contribution to the geology of the Upper Kampar and Rokan areas (C Sumatra)'. Early review of C Sumatra surface geology, incl. unfossiliferous Pretertiary micaschists, schistose claystones and sandy quartzites and granites and poorly dated Tertiary sediments, incl ?Eocene quartz sandstones with coal. Also undated conglomeratic rocks with clasts of quartz/quartzite and common radiolarian cherts, reminescent of rocks on Malay Peninsula. With brief report on Neogene mollusc from Padang Highlands by Tesch))

Brouwer, H.A. (1915)- Pneumatolytic hornfels from the hill countries of Siak (Sumatra). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 18, 1, p. 584-591.
(online at: www.dwc.knaw.nl/DL/publications/PU00012536.pdf)
(Contact-metamorphic hornfelsels near contact with tourmaline-bearing granites (without biotite?) in hill countries of Siak with common tourmaline. Also alluvial tin ores in area)

Brouwer, H.A. (1916)- On the post-Carboniferous age of granites of the highlands of Padang. Proc. Kon. Akademie Wetenschappen, Amsterdam, 18, 2, p. 1513-1520.
(online at: www.dwc.knaw.nl/DL/publications/PU00012618.pdf)
(Contact metamorphism of Carboniferous (should be E Permian) fusulinid limestone around granites demonstrates younger age of granites of Padang Highlands)

Bucking, H. (1904)- Zur Geologie von Nord und Ost-Sumatra. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 8, p. 1-101.

(online at: www.repository.naturalis.nl/document/552376)
('On the geology of North and East Sumatra'. Geological observations during 1898 visit to N Sumatra. With contribution by Tornquist on 'probably Carboniferous-age' coral (Lophophyllum vermiforme n. sp., Zaphrentis?) and brachiopod Martinia glabra from red limestones along Besitang River (=Permian?; 1904? JTvG))

Budiharto, R. (1985)- Effects of the Indian Ocean plate convergent to the Central and South Sumatra Basin during Tertiary. Proc. Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p.

Burhan, G., W. Gunawan & Y. Noya (1993)- Geologic map of the Menggala Quadrangle (1111), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet in SE corner of Sumatra. Mainly coastal plain, with oldest rocks M-L Miocene Muaraenim Fm)

Burton, P.W & T.R. Hall (2014)- Segmentation of the Sumatran fault. Geophysical Research Letters 41, 12, p. 4149-4158.
(Segmentation of Sumatran fault zone reconstructed from earthquakes. Fault has 16 earthquake clusters, with segment lengths from 22- 196 km. Eight great central segments, distributed symmetrically about Lake Maninjau, dominate e hazard, which is less in far north because segments are shorter)

Cameron, N.R. (1981)- The geological framework of Northern Sumatra. Berita Direkt. Geologi, Geosurvey Newsletter 4, p. 37-39.

Cameron, N.R. (1981)- The regional tectonic setting of Sumatra. In: Proc. Second Symposium Integrated geological survey of northern Sumatra, Bandung, Bull. Directorate Mineral Resources Indonesia, 1981, 3B, p. 137-150.

Cameron, N.R., J.A. Aspden, D.McC. Bridge, A. Djunuddin, S.A. Ghazali, H. Harahap et al. (1982)- Geologic map of the Medan Quadrangle (0619), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet in N Sumatra, with in SW partly metamorphosed Permo-Carboniferous clastics and oolitic limestones of Kluet, Bohorok and Alas Fms of Tapanuli Gp. In E flanked by folded Tertiary basin with Telaga Said oilfield)

Cameron, N.R., J.A. Aspden, Miswar & H.H. Syah (1981)- Geologic map of the Tebingtinggi Quadrangle (0719), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet at E coast of Central Sumatra. All Quaternary volcanics and alluvium)

Cameron, N.R., J.D. Bennett, D.McC. Bridge, M.C.G.Clarke, A. Djunuddin, S.A. Ghazali et al. (1982)- The geology of the Tapaktuan Quadrangle (0519), Sumatra, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 19p. + map
(N Sumatra sheet S of Takengon sheet, with complex Barisan Mts geology. Widespread metamorphic Permian Kluet and Alas Fms, intruded by Permian Sibubung and other intrusives. Flanked in W by folded Late Jurassic-E Cretaceous Tapaktuan basaltic volcanics with calcilutite limestone member)

Cameron, N.R., J.D. Bennett, D.McC. Bridge, M.C.G.Clarke, A. Djunuddin, S.A. Ghazali et al. (1983)- The geology of the Takengon Quadrangle (0520), Sumatra, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 26p. + map
(NW Sumatra map sheet with complex Barisan Mts geology, with Late Permian- Triassic metamorphics with Tawar Fm reefal limestones, Late Permian Situtup Fm volcanics, Permian Kluet Fm, occurrences of Woyla Group with basalts, serpentinite, red chert and Late Jurassic reefal Sise Lst with Pseudocyclammina, Montlivaltia, Myriopora, etc., etc)

Cameron, N. R., M.C.G. Clarke, D.T. Aldiss, J.A. Aspden & A. Djunuddin (1980)- The geological evolution of Northern Sumatra. Proc. 9th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 149-187.

(Three pre-Tertiary and one Tertiary- Recent volcano-sedimentary sequences, separated by unconformities. Late Paleozoic Tapanuli Gp primarily clastic, probably Permian glaciomarine. Two deformation periods. Metamorphism prior to deposition of Peusangan Gp Late Permian volcanic arc assemblage (E-dipping subduction) and M-L Triassic back-arc succession. Late Mesozoic Woyla Gp volcanic arc rocks and dismembered ophiolite with back-arc basin cover sequence. Late Cretaceous basin closure and Tertiary low angle plate convergence resulted in deformation of Woyla Group ophiolite. Since at least Late Eocene N Sumatra volcanic arc activity, with sedimentation in fore-arc. Last event, contemporary with start of Andaman Sea sea-floor spreading, led to rise of Barisan Mts in Pleistocene and growth of Sumatran Fault System. Serpentinites from Woyla Group ophiolite emplaced from latest Miocene)

Cameron, N.R. & A. Djunuddin (1980)- The occurrence and structural evolution of a dismembered late Mesozoic ophiolite in N. Sumatra, Indonesia. Geologi Indonesia (J. Indon. Assoc. Geologists IAGI) 7, 1, p. 8-16.

Cameron, N.R., A. Djunuddin, S.A. Ghazali, H. Harahap, W. Keats, W. Kartawa, Miswar, H. Ngabito et al. (1981)- Geologic map of the Langsa Quadrangle, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet at NE coast of N Sumatra. Mainly Cenozoic basin with late folding, with oilfields in anticlines. At W margin Barisan Mts front with Oligocene sediments over Permian granodiorite and Permo-Triassic Sembuang and Kaloi Limestones, E Permian Bohorok Fm low metamorphic 'pebbly mudstones' and Kluet Fm metasediments with Serbajadi Batholith, etc. Kaloi Lst with Permian trilobites Phillipsia, Neoproetus indicus; (Tesch 1916). Barber et al. 2005, p. 43: Massive limestones in Woyla Group W and SW of Banda Aceh, interpreted as fringing reefs of volcanic islands. With corals (Actinastraea, Stylosmilia), algae (Clypeina, Permocalculus, Thaumatoporella parvovesiculifera, Boueina) and foraminifera (Pseudocyclammina lituus), indicating Late Jurassic- E Cretaceous age. Also E Oligocene (?) Tampur Limestone outcrops)

Cameron, N.R., S.A. Ghazali & S.J. Thompson (1982)- Geologic map of the Bengkalis Quadrangle (0917), Sumatra, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Quaternary deposits of Coastal plain of C Sumatra Basin and part of Karimun Besr Island with Permian and Triassic granite intrusives and Mesozoic (Rhaetian- Jurassic? Bintang Fm clastics and conglomerates

Cameron, N.R., S.A. Ghazali & S.J. Thompson (1982)- Geologic map of the Siaksriindrapura and Tandjung Pinang Quadrangles (0916-1016), Sumatra, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of Central Sumatra basin coastal plain, with oil fields Beruk, Zamrud, Merbau, etc., and Pulau Kundur islands group in Malacca Straits (mainly granite))

Cameron, N.R., W. Kartawa & S.J.Thompson (1982)- Geologic map of the Dumai and Bagansiapiapi Quadrangles (0817), Sumatra, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of part of C Sumatra Basin, with Duri, Petani and many other oilfields. Oldest rocks Oligocene Pematang Fm in core of anticline)

Caron, M.H. (1917)- Korte mededeelingen over Indische delfstoffen. Het zilver-gouderts voorkomen van Ajer Gedang Ilir, afdeeling Lebong der residentie Benkoelen, Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 44 (1915), Verhandelingen 2, p. 55-69.
('The silver-gold occurrence of Ayer Gedang Ilir, Lebong, Benggkulu' Three gold-silver-bearing veins in propylitised volcanic breccia, 9 km N of Rejang Lebong mine)

Carthaus, E. (1902)- Uber Goldlagerstatten in Niederlandisch Indien, nebst Beobachtungen uber den Aufbau des Gebirges im Flussgebiet des oberen Gadis (Sumatra). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, ser. 2, 19, p. 581-586.
('On gold deposits in the Netherlands Indies, with observations on the structures of the mountains in the Upper Gadis drainage area, Sumatra')

Chambers, M.J.G. & A. Sobur (1975)- The rates and processes of recent coastal accretion in the province of South Sumatra, a preliminary study. In: Wiryosujono & A. Sudradjat (eds.) Proc. 2nd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 165-174.
(Palembang had open sea access 700 years ago, now 70km inland, suggesting coastal accretion of ~100m/ yr)

Chesner, C.A. (1998)- The Toba Tuffs and caldera complex, Sumatra, Indonesia: insights into magma bodies and eruptions. Ph.D. Thesis Michigan Technological University, p. 1-428.
(Since 1.2 Ma, a magma chamber of batholithic proportions developed under the 100x30 km Toba Caldera Complex. Four eruptions from vents within present collapse structure document growth of laterally continuous magma body which eventually erupted 2800 km2 Youngest Toba Tuff at 75 ka)

Chesner, C.A. (1998)- Petrogenesis of the Toba Tuffs, Sumatra, Indonesia. J. Petrology 39, p. 397-438.
(online at: http://petrology.oxfordjournals.org/content/39/3/397.full.pdf+html)
(In last 1-2 my, at least 3400 km3 of magma erupted in four ash flow tuff units from Toba Caldera Complex. Fourth eruption at 74 ka was largest, producing 2800 km3 of magma and caldera of 100 x 30 km. First phase dacite, successive eruptions rhyodacite-rhyolite with up to 40% crystals of quartz, sanidine, plagioclase, biotite and amphibole. Much of crystallization of quartz-bearing tuffs between 700-760°C at depths of 10 km. Dense welding of all units except top of youngest unit, and thick rhyodacitic magma in collapsing calderas)

Chesner, C.A. (2012)- The Toba caldera complex. Quaternary Int. 258, p. 5-18.
(online at: http://pages.mtu.edu/~raman/VBigIdeas/Supereruptions_files/Toba%20QI.pdf)
(Review of Toba Caldera, N Sumatra. During past 1.3 My Toba erupted intermediate lavas, followed by intermediate pyroclastics. Three quartz-bearing silicic tuffs, followed by intermediate to silicic lavas. Apparent migration of activity to W. Oldest Toba Tuff with 40Ar/39Ar age of 840 ka (Diehl et al., 1987). Middle Toba Tuff ~500ka age? Youngest Toba Toff age 74 ka)

Chesner, C.A. & A.D. Ettlinger (1989)- Composition of volcanic allanite from the Toba Tuffs, Sumatra, Indonesia. American Mineralogist 74, p. 750-758.
(Toba Tuffs with common accessory allanite (monoclinic member of epidote group), which is rare or absent in most volcanic rocks. Allanite compositions vary with magma composition and temperature)

Chesner, C.A. & J.F. Luhr (2010)- A melt inclusion study of the Toba Tuffs, Sumatra, Indonesia. J. Volcanology Geothermal Res. 197, p. 259-278.
(Quartz-rich Pleistocene Toba Tuff with melt inclusions indicating that parental melts were high-silica rhyolites, with 74.5- 77% SiO2)

Chesner, C.A. & W.I. Rose (1991)- Stratigraphy of the Toba tuffs and the evolution of the Toba caldera complex, Sumatra, Indonesia. Bull. Volcanology 53, p. 343-356.
(During past 1.2 Ma magma chamber of batholithic proportions developed under 100 x 30 km Toba Caldera Complex, N Sumatra. Four eruptions occurred within present collapse structure, which formed from eruption of Youngest Toba Tuff (YTT) at 74 ka. Calderas of three older tuffs obscured by collapse and resurgence resulting from YTT eruption. Samosir Island composed of thick YTT caldera fill, whereas Uluan Block consists mainly of Oldest Toba Tuff (OTT). Toba eruptions document growth of laterally continuous magma body)

Chesner, C.A., W.I. Rose, A. Deino, R. Drake & J.A. Westgate (1991)- Eruptive history of Earth's largest Quaternary caldera (Toba, Indonesia) clarified. Geology 19, 3, p. 200-203.
(Two youngest Toba tuffs dated as ~73 and 501 Ma. Timing of youngest and largest eruption coincident with early Wisconsin glacial advance)

Clarke, M.C.G. & B. Beddoe-Stephens (1987)- Geochemistry, mineralogy and plate tectonic setting of a Late Cretaceous Sn-W granite from Sumatra, Indonesia. Mineralogical Magazine 51, 3, p. 371-387.
(online at: www.minersoc.org/pages/Archive-MM/Volume_51/51-361-371.pdf)
(Hatapang granite in N Sumatra S-type two-mica granite with Sn and W mineralization. Rb-Sr and biotite K-Ar ages of 80 Ma, emplaced in Tapanuli Gp Carboniferous-Triassic greywackes with diamictites. Identification of

Cretaceous Sn-W granite in N Sumatra provides link with economically important Late Cretaceous Sn-W granites in Thailand and Burma)

Clarke, M.C.G., S.A. Ghazali, H. Harahap, Kusyono & B. Stephenson (1982)- Geologic map of the Pematangsiantar Quadrangle (0718), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of sheet between N and C Sumatra basins, E of Laka Toba. In Barisan Mts below Toba volcanic cover mainly Permian conglomeratic Bohorok Fm and finer Tapanuli Gp, intruded by Permo-Triassic? (or Cretaceous?) Hatapang and other granites. With remnants of Miocene- Pliocene sediments)

Clarke, M.C.G., W. Kartawa, A. Djunuddin, E. Suganda & M. Bagdja (1982)- Geologic map of the Pakanbaru Quadrangle (0816), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(C Sumatra map sheet. Most of map Cenozoic C Sumatra basin around Pakanbaru, with Minas Field. Oldest rocks in Barisan Mts Permo-Carboniferous Kuantan and Bohorok Fms with Triassic granite intrusives. Overlain by Miocene Sihapas and Telisa Fms))

Cobbing, E.J. (2005)- Granites. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 5, p. 54-62.
(Sumatra many granite units within batholiths such as Lassi, Bungo and Garba, as well as numerous isolated plutons. Carboniferous-Permian and Late Triassic-E Jurassic cycles of syn-post collisional granites, peaking at 220-200 Ma, with tin granites. Younger plutonism associated with arc volcanism, broad age range: 203-5 Ma)

Costa, A., V.C. Smith, G. Macedonio & N.E. Matthews (2014)- The magnitude and impact of the Youngest Toba Tuff super-eruption. Frontiers Earth Sci. 2014, 2, 16, p. 1-8.
(online at: http://journal.frontiersin.org/article/10.3389/feart.2014.00016/full)
(Model of ash distribution and volume of Youngest Toba Tuff, erupted 75,000 years ago. Eruption dispersed ~8600 km3 of ash (= ~3800 km3 dense rock equivalent/ DRE), covering ~40 million km2 with >5 mm of ash. Total volume (incl. 1500 km3 DRE pyroclastic density current deposits on Sumatra) was ~5300 km3 DRE)

Crippa, G., L. Angiolini, I. Van Waveren, M.J. Crow, F. Hasibuan, M.H. Stephenson & K. Ueno (2014)- Brachiopods, fusulines and palynomorphs of the Mengkarang Formation (Early Permian, Sumatra) and their palaeobiogeographical significance. J. Asian Earth Sci. 79, p. 206-223.
(Brachiopods, fusulines and palynomorphs from Lower Permian Mengkarang Fm, Jambi, part of W Sumatra Block Volcanic Arc deposits. Brachiopods 6 genera (mainly Stereochia aff. S. irianensis, and Neochonetes carboniferus, also Marginifera, Reticulatia, etc.), mainly anti-tropical taxa (but here grouped with warm water taxa rather than with cold water taxa from Gondwanan-Perigondwanan region). Fusulinids at one level at Teluk Gedang (poor assemblage of 6 species, mainly Pseudofusulina rutschi Thompson, also Eostaffella, Schubertella, Pseudoschwagerina cf. afghanensis, P. meranginensis, Eoparafusulina ?haydeni), rel. poor assemblage of widespread genera but of tropical Tethyan affinity due to common occurrence large schwagerinids. Most likely age Sakmarian, but E Artinskian age cannot be excluded. Palynomorphs dominated by Laevigatosporites spp., Florinites florini and Convolutispora sp., different from coeval assemblages of Gondwanan region, but affinity with Cathaysian province as represented in N China, etc.)

Crispin, S., J. Hertrijana & P. Albert (2015)- Exploration success at the Martabe gold mine, Indonesia. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 567-572. *(Extended Abstract)*
(Large Martabe gold mine SE of Sibolga near W coast of N Sumatra province, producing since mid-2012. Martabe deposit cluster of 6 high-sulfidation epithermal deposits in ~8 x 1.5 km N-S corridor. Limited geology)

Crow, M.J. (2005)- Pre-Tertiary volcanic rocks. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 6, p. 63-85.
(Long range of volcanic activity in Sumatra, mainly arc volcanics: Carboniferous, Permian (W Sumatra belt), Triassic, Jurassic-Late Cretaceous (oceanic volcanic arc in Woyla terrane, associated with limestones). Most widespread E-M Permian and Late Jurassic- Early Cretaceous)

Crow, M.J. (2005)- Tertiary volcanicity. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 8, p. 98-119.
(Well-defined Paleocene- E Eocene 'Kikim Volcanics' (65-50 Ma) in S Sumatra, Late M Eocene along W coast, 50-46 Ma non-volcanic interval, Late Eocene- E Oligocene volcanic episode (~37-30 Ma), Late E- M Miocene arc volcanics along W coast and high K- shoshonitic intrusions in C Sumatra back arc basin, Late Miocene-Pliocene (6-1.6 Ma; mainly in Sumatra, contemporaneous with back-arc inversion at ~5 Ma?) (for Sumatra Quaternary volcanism see Gasparon 2005))

Crow, M.J., C.C. Johnson, W.J. McCourt & Harmanto (1993)- The simplified geology and known metalliferous mineral occurrences, Padang Quadrangle, Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 49-B, p. 1-18.
(Brief review of W Sumatra Padang map sheet geology and metallic mineral occurrences (Au-Ag, Cu, Pb-Zn). With old gold-silver mines Mangani, Balimbing, Pamicikan, Pagadis, etc., in epithermal quartz veins, associated with Plio-Pleistocene andesitic volcanics and young extensional faults. Also Pb-Zn anomalies at Salodako NNE of Padang near skarn associated with Tertiary granite)

Crow, M.J., C.C. Johnson, W.J. McCourt & Harmanto (1993)- The simplified geology and known metalliferous mineral occurrences, Solok Quadrangle Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 50-B, p. 1-19.
(Summary of SW Sumatra Solok quad geology and metallic mineral occurrences (Cu, Au, Ag, Fe). Gold-silver in quartz veins hosted in Oligo-Miocene volcanics, copper mineralization in hydrothermal veins (Timbulan) and limestone skarns and alluvial gold deposits in Bengkalis area)

Crow, M.J., C.C. Johnson, W.J. McCourt & Harmanto (1993)- The simplified geology and known metalliferous mineral occurrences, Painan Quadrangle, Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 52-B, p. 1-30.
(Painan Sheet of W Sumatra with basement of Carboniferous? and Permo-Triassic metasediments (with Permian arc volcanism, deep marine Triassic), Late Triassic- Jurassic granitoids, late Jurassic- E Cretaceous metalimestones and clastics (Woyla Gp), also serpentinite bodies. Unconformably overlain by Oligocene and younger sediments and volcanics. With listing of metallic mineral occurrences)

Crow, M.J., C.C. Johnson, W.J. McCourt & Harmanto (1993)- The simplified geology and known metalliferous mineral occurrences, Sungaipenuh and Ketaun Quadrangles, Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 54-B, p. 1-17.
(SW Sumatra map sheets, with active Lebong Tandai gold-silver mine in mineralized breccia in Ketaun Quad. Oldest rock is extreme NE corner: M Permian volcanics of Palepat Fm, intruded by laterst Triassic- E Jurassic Tantan Granite. M-L Jurassic flysch-type Asai Fm and shallow marine Late Jurassic- E Cretaceous Peneta Fm (part of Woyla Gp foreland to island arc). With listing of metallic mineral occurrences (Cu, Pb, Zn, Au, Ag))

Crow, M.J., C.C. Johnson, W.J. McCourt & Harmanto (1994)- The simplified geology and known metalliferous mineral occurrences, Bengkulu Quadrangle Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 57-B, p. 1-19.
(Map sheet dominated by Tertiary- Recent volcanic products of Barisan Range. In SE corner Gumai Mts with remnants of Late Mesozoic subduction Complex, similar to Woyla Gp in N Sumatra. With many former mines of Lebong Mining District, active between ~1906-1941. Etc. With listing of metallic mineral occurrences (Au, Ag, Pb, Zn, Cu))

Crow, M.J., C.C. Johnson, W.J. McCourt & Harmanto (1994)- The simplified geology and known metalliferous mineral occurrences, Manna Quadrangle (0911), Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 59-B, p. 1-19.
(SW Sumatra map sheet dominated by Tertiary- Recent volcanic products of Barisan Arc and flanking Bengkulu forearc basin. With listing of metallic mineral occurrences (Au, Pb- Zn, Ag, Cu), mainly around Tanjungsakti of Sumatra Fault Zone)

Crow, M.J., W.J. McCourt & Harmanto (1994)- The simplified geology and known metalliferous mineral occurrences, Rengat Quadrangle, southern Sumatra (0915). Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 51-B, p. 1-22.
(SE Sumatra map sheet with oldest exposed rocks metasediments and NW-SE striking low metamorphic Permo-Carboniferous Tigapuluh Gp meta-clastics and limestones (probaby correlative to glacial or debris flow Bohorok Fm of N Sumatra). Intruded by porphyritic granitoids with K-Ar ages from ~198-128 Ma (most whole rock radiometric ages too young; granites may be slightly younger (earliest Jurassic) continuation of Late Triassic (~220 Ma) Main Range-equivalent S-type granites of Malay Peninsula). Three deformation phases. Many small alluvial Sn, W(cassiterite) occurrences near granites of Tigapuluh Mts in S, Au occurrences in W. Also primary cassiterite veins in greisen at Sungei Isahan granite))

Crow, M.J., W.J. McCourt & Harmanto (1994)- The simplified geology and known metalliferous mineral occurrences, Muarabungo and Jambi Quadrangles Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 53-B, p. 1-19.
(Oldest rocks exposed in Tigapuluh Mts: NW-SE striking low metamorphic Permo-Carboniferous Tigapuluh Gp meta-clastics and limestones, intruded by Late Triassic- E-M Jurassic granitoids (K-Ar mineral ages ~198, 180 Ma). With Permian pebbly mudstones, probaby correlative to glacial Bohorok Fm of N Sumatra. Etc. With listing of metallic mineral (Sn, Au) deposits (rel. common alluvial cassiterite, but non-economic))

Crow, M.J., W.J. McCourt, C.C. Johnson & Harmanto (1994)- The simplified geology and known metalliferous mineral occurrences, Baturaja Quadrangle, Southern Sumatra. Direct. Mineral Resources, Bandung/ British Geol. Survey, Spec. Publ. 60-B, p. 1-19.
(Oldest rocks exposed in Baturaja Sheet in Garba Mts and are ?Carboniferous- Mesozoic metasediments. Mesozoic of Garba Mts includes highly tectonized late Jurassic- E Cretaceous radiolarian cherts, associated with metavolcanics, melange and ultrabasic rocks; can be correlated with Lingsing series of Gumai Mts and oceanic sequences of Woyla Gp. Granitoids along E side of Barisan Range of M-L Cretaceous age (115-80 Ma), postdating accretion of Woyla Gp. With listing of metallic (Au, Ag, Sn) mineral deposits)

Crow, M.J. & T.M. van Leeuwen (2005)- Metallic mineral deposits. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 12, p. 147-174.
(Review of Paleozoic- Neogene mineral deposits of Sumatra: Paleozoic lead-zinc, Late Triassic- E Jurassic tin granites, Late Cretaceous tin, gold, Mio-Pliocene arc magmatism with copper, molybdenum, silver, gold)

Crow, M.J. & I.M. Van Waveren (2010)- A preliminary account of the Karing Volcanic Complex in the Permian West Sumatra Volcanic Arc. In: C.P. Lee et al. (eds.) 6th Symp. Int. Geol. Correl. Progr. Project 516 (IGCP516), Geological anatomy of East and South Asia, Kuala Lumpur 2010, p. 36 *(Abstract only)*
(Karing Volcanic Complex, host of E Permian Cathaysian 'Jambi Flora', is eroded remnant of subaerial volcanic complex on margin of Permian W Sumatra volcanic arc. Mineralogy of complex entirely volcanic provenance, with no 'continental' mineral components. Olivine basalts and dacitic pyroclastics may support E-M Permian oceanic island arc within W Sumatra Block)

Crow, M.J., I.M. Van Waveren & S.K. Donovan (2008)- Tobler's oyster and the age of the Tabir Formation, Jambi Province, Central Sumatra. Geological Journal 44, 1, p. 117-121.
(Tabir Fm of Jambi long considered to be Upper Jurassic, based on small molluscs collected by Tobler and assigned to Ostrea by Frech. These are not oysters and other fauna/flora show Tabir Fm is Late Permian)

Crow, M.J., I.M. Van Waveren & F. Hasibuan (2015)- Two Hg-Au occurrences in the West Sumatra Permian volcanic-plutonic arc West of Bangko in Sumatra, Indonesia. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 573-578. *(Presentation)*
(online at: http://www.pacrim2015.ausimm.com.au/Media/PACRIM2015/presentations/Day%202/1415%20-%20Au-Hg%20Sumatra_PACRIM.pdf)

(Two Hg-Au occurrences W of Bangko in W Sumatra Permian Volcanic Plutonic Arc: (1) Melipun Hg-Au occurrence, exploited in 1970's, with mineralisation in hydrothermally altered cupola of buried intrusion; (2) Salak Hg-Au occurrence in outcrop of Asselian Dusunbaru pluton/ volcanic center, likely within caldera in which (Triassic?) hydrothermal mineralisation developed. Both formed late in history of volcanic arc, probably Triassic- E Jurassic)

Crow, M.J., I.M. Van Waveren & F. Hasibuan (2019)- The geochemistry, tectonic and palaeogeographic setting of the Karing Volcanic Complex and the Dusunbaru pluton, an Early Permian volcanic - plutonic centre in Sumatra, Indonesia. J. Asian Earth Sci. 169, p. 257-283.
(online at: https://www.sciencedirect.com/science/article/pii/S1367912018303407)
(E Permian Karing Volcanic Complex and Dusunbaru Pluton comprise volcanic-plutonic centre in Volcanic-Plutonic Arc on W margin of Kluet-Kuantan basin of West Sumatra Block. Karing Volcanics mainly intermediate tuffs interfingering with volcaniclastics and sediments of Mengkarang Fm. Eight cycles of tuffs overlain by volcaniclastics and sediments in Merangin river section. Zircon CA-IDTMS dates from tuffs bracket volcanic activity over 630 kyrs within Asselian (296.77- 296.14 Ma). Dusunbaru pluton composed of gabbroids, granitoids with subordinate metabasalt and tuff xenoliths. Metabasalts and Gabbroids derived from N-MORB lithospheric mantle, granitoids reacted with lower crust. Chemistry of the Dusunbaru Pluton typical of continent margin volcanic-plutonic arcs. Late hydrothermal event event during which Dusunbaru Pluton was faulted against Karing Volcanic Complex attributed to collision of Woyla oceanic terrains with Sumatra in late-mid Cretaceous. West Sumatra Volcanic Arc and Kluet-Kuantan Basin resembles Sukhothai Volcanic Arc in Indochina Block. West Sumatra Block originally was appendage to Indochina Block at paleolatitude 5-15° S)

Dahlius, A.Zardi, A. Purba & H. Wibowo (2007)- Geology and alteration-mineralization characteristics of Timbaan epithermal gold deposit in South Solok, West Sumatra, Indonesia. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali, p. 1339-1346.

Da Silva Carvalho, H., Purwoko, Siswoyo, M. Thamrin & V. Vacquier (1980)- Terrestrial heat flow in the Tertiary basin of Central Sumatra. Tectonophysics 69, p. 163-188.
(Heat flow in C Sumatra basin of calculated from 92 wells. Average T gradient 3.7 °F/ 100' (= 67.6°C/km) and average heat flow 3.27 ± 0.93 HFU, twice world average. Gradient and heat flow vary inversely with depth. Heat flow in N Sumatra basin, S Sumatra Basin, Sunda Strait and W Java is 2.5 HFU, while in Java E of 110°E it drops to 1.9 HFU)

Davies, P.R. (1989)- Tectonics of North Sumatra. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 207-227.
(*Tertiary structural evolution of N Sumatra basin described as consequence of position along trailing edge of Sunda Plate. Oblique convergence during Eocene- E Oligocene caused N-propagating dextral overstepping wrench faults along W edge of plate. Counterclockwise rotating Sunda microplate, starting in Late Oligocene. E-M Miocene uplift, followed by rapid subsidence. Second phase of CCW rotation in late M Miocene. LateM Miocene regional compression with Barisan Mts uplift and regressive sedimentation across N Sumatra basin*)

De Groot, P.F. (1946)- Goud in Atjeh. Jaarboek Mijnbouwkundige Vereeniging te Delft 1941-1946, p. 178-190.
(online at: http://lib.tudelft.nl/mscans/mscans0428)
('Gold in Aceh'. Summary of lecture by former manager of Marsman's Algemeene Exploratie Mij. Mainly on Geudong concession in Meulaboh bason at W coast of Aceh. Around 1940- 1941 alluvial gold was dredged from low-terrace deposits in Woyla River. Pre-Recent Aceh rivers were much larger and formed larger valleys and alluvial terraces than today. Many traces of historic gold mining in terrace deposits in Aceh, but reportedly not by Acehnese or Chinese people. Marsman shallow core hole exploration data destroyed during Japanese invasion. With geologic map reportedly more accurate than Zwierzycki (1922) map)

De Haan, W. (1918)- Herinneringen aan mijnbouwkundig exploratiewerk in het Zuiden der Residentie Tapanoeli (een bijdrage tot de geschiedenis van de Nederlandsch-Indischen mijnbouw). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Mijnbouwkundig Ser. 1, p. 229-296.

('Memories of mining exploration work in S of Tapanuli Residency (a contribution to the history of Netherlands Indies mining)'. Report on 1910-1913 survey work for 'Midden Sumatra Exploratie Maatschappij' in W Sumatra. Account of personal and historic prospecting work on ore deposits in late 1800's- early 1900's)

De Haan, W. (1929)- De Mangani breccia. De Mijningenieur 10, 3, p. 62-65.

De Haan, W. (1935)- Gesteeenten van Sumatraŝ Westkust. De Ingenieur in Nederlandsch-Indie (IV), 3, 10, p. 88-97.
('Rocks of Sumatra's West coast'. Descriptions of igneous and metamorphic rocks from W Sumatra: Salida, Fort de Kock, Soeliki, Mangani. No maps or figures)

De Haan, W. (1942)- Over de stratigraphie en tektoniek van het Mangani gebied (Sumatra's Westkust). Geologie en Mijnbouw 4, 2, p. 21-31.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0OXNPRVdRWFNfaUU/view)
('On the stratigraphy and tectonics of the Mangani area, West coast of Sumatra')

De Haan, W. (1942)- Hydrothermale veranderingen te Mangani. Geologie en Mijnbouw 4, 9-10, p. 65-77.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0M2J4MHJoQVhiZ1E/view)
('Hydrothermal alterations at Mangani'. Mangani volcanics in Mangani gold mine in Barisan Mts of Sumatra probably part of 'Old Andesites'. Multiple phases of hydrothemal alteration in gabbro, basalt, andesites and dacites. No figures)

De Haan, W. (1943)- Over de goud-zilververhouding in the jonge edelmetaalformatie op Sumatra. Geologie en Mijnbouw 5, 5-6, p. 33-47.
(online at: https://drive.google.com/file/d/1igqddPxVjZzDN8aWW_der3FAZe6UxZ7M/view)
('On the gold-silver ratio in the young precious metals formation on Sumatra'. Highly variable gold-silver ratios in young precious metal deposits of Barisan Mts of Sumatra (But generally much more silver). Formed probably in Late Miocene. Silver-rich veins appear to be from higher parts of igneous systems and generally associated with granodiorites, gold-rich veins from deeper parts and and more granitic compositions)

De Haan, W. (1943)- Gissingen omtrent de geologische gesteldheid in de omgeving van het Singkarak meer. Geologie en Mijnbouw 5, 11-12, p. 86-89.
(online at: https://drive.google.com/file/d/1O4CV_zUaki3dQOBEe8iaNPEyrDoJK8DV/view)
('Speculations on the geology of the area of Singkarak Lake'. Mainly descriptions of granitoid rocks in Delft collection, collected by Verbeek around Lake Singkarak, W Sumatra. No figures)

De Haan, W. (1948)- The Mangani vein system. Geologie en Mijnbouw 10, 11, p. 298-300.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0bDRJVnhGMkVyWG8/view)
On mineralization at Mangani gold mine district, C Sumatra. Presents alternative interpretation of tectonics of Mangani gold-silver region to that of Boomgaart (1948))

De Haan, W. (1948)- Raadselachtige ertsvondsten ter Sumatra's westkust (Pagadis). Geologie en Mijnbouw 10, 12, p. 325-327.
(online at: https://drive.google.com/file/d/1udDmKuje2-QNnT1aVuwwItPV_lYZOGCd/view)
('Mysterious ore discoveries at Sumatra's West coast'. Occurrence of silver and gold float of enigmatic origin at Pagadis, W coast of Sumatra, in 1910)

De Haan, W. (1949)- Bevat Sumatra porphyry coppers? Geologie en Mijnbouw 11, 5, p. 162-164.
(online at: https://drive.google.com/file/d/1v14MEpc91FtsXSyltIFg0O2l2MjkSkZ7/view)
('Does Sumatra contain porphyry coppers?'. Possible presence of copper porphyries at depth near Soelit Ajer, E of Lake Singkarak. Region with granite intruded into Triassic sediments, probably during Cretaceous. Copper ores disseminated in granite and intruded sediments of no economic significance. No figures)

De Haan, W. (1950)- De ertsafzettingen bij Moeara Sipongi (Tapanoeli, Sumatra). Geologie en Mijnbouw 12, 2, p. 61-67.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0dk9TUHlaUEs2dk0/view)
('The ore deposits near Moeara Sipongi (Tapanuli, Sumatra)'. Gold-bearing mineralization in limestones and sandstones)

De Haan, W. (1954)- De Tertiaire ertsgangtektoniek op Sumatra. Geologie en Mijnbouw 16, 1, p. 1-7.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0aXROSlVpbXN0a1U/view)
('The Tertiary ore vein tectonics of Sumatra'. Directions of mineralized joint systems in Sumatra usually N-NE trending and steeply E-dipping, suggesting pressure normal to axis of Sumatra (N50° E))

De Haan, W. (1956)- Dekblad of autochtoon in het Ombilin gebied (Sumatra). Geologie en Mijnbouw 18, 6, p. 199.
('Nappes or autochthonous in the Ombilin region, C Sumatra'. Brief commentary on Osberger (1955) paper on postulated nappe structure of Java. No figures or new info)

De Haan, W., C. Schouten & P.M. Matthijsen (1933)- Monografie van de ertsafzettingen te Mangani (Sumatra) op de concessies der Mijnbouw-Maatschappij "Aequator". Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Mijnbouwkundig Ser. 3, p. 1-212.
('Monograph on the ore deposits at Mangani (Sumatra) on the concessions of the Aequator mining company'. Detailed descriptions of geology, rocks, mineralization and mine development of Mangani mine, West Sumatra, 185km from Padang (first discovered in 1907). Associated with M Miocene or younger Mangani andesitic-basaltic volcanics. Multiple mineralization events. Gold in veins in steeply folded Miocene shales, related to Plio-Pleistocene volcanism (?))

De Jongh, C.A. (1918)- Verslag over het tinertsonderzoek in de V Kota en aangrenzende streken gedurende de jaren 1911-1916. Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen, 1, p. 312-358.
('Account of the tin ore investigation in the V Kota and adjacent regions during the years 1911-1916'. Survey for alluvial tin ores in C Sumatra by Irs. A.J. Gouka, C.A. de Jongh, H.A. Brouwer and H. Von Steiger. Numerous small occurences of tin in river terraces, some mined by locals. Some potentially exploitable deposits in Siak uplands not far from Bangkinang. Tin probably derived from granite in Soeligi Mountains)

De Meyier, J.E. (1911)- De goud- en zilvermijn Salida ter Sumatras Westkust. Indische Gids 33, p. 28-67.
('The gold and silver mine Salida at Sumatra's west coast'.)

De Neve, G.A. (1949)- *Mizzia* in Palaeozoische gesteenten uit de omgeving van Palembang. Chronica Naturae, Batavia, 106, 9, p. 224-225.
(M Permian dasyclad calcareous algae Mizzia velebitana Pia in grey-black limestone from two localities at Bukit Pendopo, S Sumatra, collected by Keil in 1931. Associated with fusulinids Fusulina and Neoschwagerina. (also known from Guguk Bulat, Padang Highlands (Pia 1935, Fontaine 1983))

De Neve, G.A. (1961)- Mesozoic orogenies in the island of Sumatra and their ore deposits. Proc. 9th Pacific Science Congress, Bangkok 1957, Geology and Geophysics 12, p. 116. *(Brief abstract only)*
(Two two main periods of orogenesis tied to economic ore-deposits in Sumatra: (1) cassiterite, gold, wolframite and bauxite deposits in Upper Jurassic tectonic unit, called Malayan orogen by Westerveld; (2) Cretaceous tectonic unit in Sumatra with iron ore and gold-silver deposits of the so-called Sumatran orogen)

De Neve, G.A. (1961)- Correlation of fusulinid rocks from southern Sumatra, Bangka, and Borneo, with similar rocks from Malaya, Thailand and Burma. Proc. 9th Pacific Science Congress, Bangkok 1957, Geology and Geophysics 12, p. 249. *(Abstract only)*
(Four occurrences of U Paleozoic rocks with fusulinids in Indonesia: (1) U Paleozoic pebbles with Fusulina spp. in Lower Tertiary conglomerate in Kutai, E Kalimantan (Tan Sin Hok 1930); (2) Permo-Carboniferous Fusulinidae in limestones, marbles and combustible shales from W Borneo found by Krekeler (1932, 1933); (3) Two localities of limestone with Neoschwagerina and Fusulina spp. in Palembang area, S Sumatra, (3a) E of

Bukit Pendopo, discovered by Keil and (3b) 18 km W of Palembang, in Sekaju area pebbles with fusulinids in Old Neogene conglomerate by Van Tuijn (1931) and (4) silicified limestones and fine crystalline quartzites with fusulinids of Sungailiat area near Aerduren, Bangka island collected by de Roever)

De Neve, G.A. (1983)- Quaternary volcanism and other phenomena attributed to volcanicity in the Aceh region North Sumatra. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 67-90.

De Neve, G.A. (1984)- Pleistocene- Holocene volcanism of Aceh (North Sumatra). Berita Geologi 16, 18, p. 150-158.

De Neve, G.A. (1993)- Preliminary outline of the inventory on the old workings and recent mining for gold and/or other precious metals in the Aceh North and West Sumatra Provinces. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 926-936.
(Listing of old mining sites and prospects in Sumatra N of Equator. Not much detail. Alluvial gold mined in Sumatra for centuries)

De Roever, W.P. (1966)- Dacitic ignimbrites with upwards increasing compactness near Sibolangit (NE Sumatra, Indonesia) and their peculiar hydrology. Bull. Volcanologique 29, 1, p. 105-112.
(Water springs between Medan and Brastagi from level about half way up in massive, 150-200m thick layer of ignimbrite or ash-flow tuff of Quaternary age, here called Sibolangit Tuff. Ignimbritic biotite-hypersthene-hornblende dacite vitrophyre- tuff, very hard in upper part, with gradual transition to rather loose at base)

Detourbet, C. (1995)- Analyse des relations entre la Grande Faille de Sumatra (Indonesie) et les structures compressives del lôarriere arc. Ph.D. Thesis, Universite de Paris 11-Paris Sud, Orsay, p. *(Unpublished)*
('Analysis of the relations between the Great Sumatra Great Fault and the compressiional structures of the back arc'. Total young shortening in C Sumatra basin ~14 km since M Miocene, representing 4% of initial width of basin. Compressional movements in back-arc accommodate only small portion of oblique convergence in Sumatra)

Detourbet, C., O. Bellier & M. Sebrier (1993)- La caldera volcanique de Toba et le systeme de faille de Sumatra (Indonesia) vue par SPOT. Comptes Rendus Academie Sciences, Paris, Ser II, 316, p. 1439-1445.
('The volcanic caldera of Toba and the Sumatra fault system viewed by SPOT')

Dieckmann, W. (1918)- Praetertiaire goudafzettingen en de hieruit voortgekomen stroomgoudbeddingen in het gebied tussen de rivieren Rawas (Residentie Palembang) en Tabir (Residentie Djambi). Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen 1, p. 78-135.
('Pre-tertiary gold deposits and the alluvial gold deposits in the area between the Rawas and Tabir rivers', S Sumatra. Gold in veins in Paleozoic metamorphic rocks associated with Pretertiary granodiorite intrusions and in alluvial deposits of most rivers in area)

Diehl, J.F., T.C. Onstott, C.A. Chesner & M.D. Knight (1987)- No short reversals of Brunhes Age recorded in the Toba Tuffs, North Sumatra, Indonesia. Geophysical Research Letters 14, 7, p. 753-756.
(Paleomagnetic and 40Ar/39Ar data indicate two tuffs at Siguragura, N Sumatra: (1) reversely magnetized earliest tuff of Toba caldera, of Matuyama age (0.84 Ma) and (2) normally magnetized Young Toba Tuff of late Brunhes age. No reversely magnetized tuffs of late Brunhes age present, as suggested by previous investigators. Dating of oldest Toba Tephra to 834 ± 10 ka (also 200m thick Middle Toba Tuff, normally magnetized))

Djumhana, D. (1995)- Petrogenesa batuan granit daerah Toba dan sekitarnya. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 16, p. 80-100.
('Petrogenesis of granites of the Toba area and its surroundings')

Donovan, S.K., I.M. van Waveren & R.W. Portell (2013)- Island slopes and jumbled shell beds. J. Geol. Soc., London, 170, 3, p. 527-534.

(Examples of fossil shell beds of different ages and locations, supposedly representing deeper marine facies around islands. Incl. example of basal interval of Permian Mengkarang Fm of Sumatra, which represents deep-water facies at base of volcanic arc section. Nektonic cephalopods overlie possibly turbiditic, redeposited vitric tuff with broken brachiopod shells and diverse association of terrestrial pollen. Overlain by marine shales with brachiopod Stereochia semireticulata)

Druif, J.H. (1933)- De bodem van Deli. I. Inleiding tot de geologie van Deli. Mededeelingen Deli Proefstation Medan, ser. 2, 75, p. 1-158.
('The soil of Deli. 1. Introduction to the geology of Deli'. Part 1 of 3-volume series on soils of NE Sumatra)

Druif, J.H. (1934)- De bodem van Deli. II. Mineralogische onderzoekingen van de bodem van Deli. Bulletin Deli Proefstation Medan 32, p. 1-195.
('The soil of Deli. II. Mineralogical investigations of the soil of Deli'. Part 2 of 3-volume series)

Druif, J.H. (1935)- Over gesteenten van Poeloe Berhala (Straat van Malakka, Sumatra Oostkust). Proc. Kon. Akademie Wetenschappen, Amsterdam 38, 6, p. 639-650.
(online at: www.dwc.knaw.nl/DL/publications/PU00016745.pdf)
('On rocks from Pulau Berhala (Malacca Straits, Sumatra East coast)'. Island 90 km E of Belawan Deli mainly composed of granites, also aplite-pegmatite, gneiss, mica schists, hornfels. Gneiss and mica schist highly deformed, strike NE-SW, dipping ~35-40° to NW)

Druif, J.H. (1938)- De bodem van Deli (Slot). De Deli gronden en hun eigenschappen. Buitenzorgsche Drukkerij, p. 1-140.
('The soil of Deli (Final). The soils of Deli and their characteristics'. Part 3 of 3-volume series)

Duquesnoy, T., O. Bellier, M. Sebrier, M. Kasser, C. Vigny, F. Ego, I. Baha, E. Putranto & I. Effendi (1999)- Etude geodesique d'un segment sismique de la Grande Faille de Sumatra (Indonesie). Bull. Soc. Geologique France 170, 1, p. 25-30.
('Geodetic study of a seismic segment of the Great Sumatra fault'. Deformation around central part of Great Sumatran Fault determined by geodetic surveys 1991-1994. About 90 mm displacement of far field points. Fault segment is locked. Slip rate calculated from far field points (27.5 mm/yr) similar with geologically determined long term slip rate (23 mm/yr))

Durham, J.W. (1940)- Oeloe Aer fault zone, Sumatra. American Assoc. Petrol. Geol. (AAPG) Bull. 24, 2, p. 359-363.
(One of earliest observations of right-lateral stream offsets along Medan-Padang segment of Great Sumatra Fault zone)

Durham, J.W. (1940)- Triassic fossils near Rantauprapat. De Ingenieur in Nederlandsch-Indie 1940, 3, p. 41-42.
(At Sungei Bila and Aek Pamengka W and NW of Rantauprapat, N-C Sumatra, four localities with casts of Triassic bivalve Halobia in red-brown W-dipping series of sandstones, silts and shales. To W Triassic overlain by non-marine Paleogene quartz sandstones and conglomerates, with material derived from underlying sediments. Occurrences of Halobia probably in same formation as locality noted by Volz (1899) on Soengei Koeala to NW and other places)

Eklund, O. (1933)- Guldsilverbergsbruket i vastra Sumatra. Teknisk Tidskrift Bergsvetenskap 1933, 1, p. 1-5.
(online at: http://runeberg.org/tektid/1933b/0003.html)
(In Swedish; 'Gold-silver mines in West Sumatra'. Brief review of geology and mineralization at W Sumatra gold mines Mangani, Simau, etc. With follow-up on mining practices and reserves in 1933-2 issue, p. 12-16)

Elber, R. (1938)- Geologie des Kustengebietes von Benkoelen zwischen Seblat (NW) und Bintoehan (SE) (Westkueste von Sumatra). BPM Report, p. 1-24.
(Unpublished BPM report on geology of W Sumatra coastal region near Bengkulu between Seblat in NW and Bintuhan in SE)

Elbert, J. (1909)- Magnet- und Roteisenerzvorkommen in Sud-Sumatra. Zeitschrift Praktische Geologie 17, p. 509-513.
('Magnetite and hematite occurrences in S Sumatra'. Occurrence of iron ores in mica schist formation of Lampung. Most of Lampong area composed of mica schists (more than mapped by Verbeek), mostly covered by laterite. Main strike of schist WNW-ESE, dips up to 75°. Locally significant magnetite ore bodies in schist (= banded iron ore formation of Subandrio & Tabir 2006?; JTvG). Intrusions of red granites with some gold-silver mineralization. No figures)

Erb, F. (1905)- Beitrage zur Geologie und Morphologie der sudlichen Westkuste von Sumatra. Zeitschrift Gesellschaft Erdkunde zu Berlin 4, p. 251-284.
('Contributions to the geology and morphology of the southern West coast of Sumatra'. Mainly summary of observations on coastal geomorphology of Bengkulu province)

Faridsyah, W.A., R. Yustiawan, N. Muhamad, U. Sukanta & A. Wibowo (2015)- Basement rocks of the Malacca Strait coastal plain, Central Sumatra Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-087, 11p.
(On Pre-Tertiary basement rocks in Malacca Straits PSC. Late Triassic melange/suture zone between Sibumasu and Indochina terranes believed to propagate S across coastal plain of C Sumatra Basin where Malacca Straits PSC is located. Wells in PSC penetrated quartzite, meta-siliciclastics and black shale-limestone facies. Basement cores from Kurau field fractured and recrystallized limestone and claystone with K-Ar age of 275 Ma (late E Permian), and correlated to Gua Musang Fm in Central Belt of Malay Peninsula)

Fauzi, R.M., R. McCaffrey, D. Wark, P.Y. Prih Haryadi & Sunarjo (1996)- Lateral variation in slab orientation beneath Toba caldera, northern Sumatra. Geophysical Research Letters 23, p. 443-446.
(Investigator Fracture zone subducts beneath Toba caldera, suggesting possible relationship to volcanism. High rate of seismicity along subducted Investigator Fracture Zone uncommon at subducted fracture zones)

Fediaevsky, A. & Sujatmiko (1975)- Existence d'une episode climatique aride a la base du Tertiaire de Sumatra. Proc. 9th Int. Sedimentology Congress, Nice 1975, 1, p. 79-85.
('Existence of a dry climate period at the base of the Tertiary of Sumatra'. Faceted sand-blasted pebbles from basal Tertiary conglomerate near Murobungo, Barisan mountain front, C Sumatra, below Talang Akar Fm white quartz-rich sandstones)

Fennema, R. (1876)- Sumatra's Westkust. Verslag No. 8. Onderzoek naar het voorkomen van kwikerts bij den berg Sombong in de nabijheid van Sibelaoe, zoomede aan de riviertjes Tapir en Gade-Talang, Sumatra's Westkust. Jaarboek Mijnwezen Nederlandsch Oost-Indie 5 (1876), 1, p. 35-70.
('Investigation of the occurrence of mercury ore near Sombong mountain, near Sibelaoe, as well as in creeks Tapir and Gade-Talang, Sumatra west Coast'. Area of steeply dipping slates and massive limestones with (Permian) brachiopods, intruded by porphyry granite and veins, W of Sibelabu and along Tapir River, Tanah Datar district, S Padang Highlands. Alluvial cinnabar associated with magnetite, from veins in slate)

Fennema, R. (1887)- Topographische en geologische beschrijving van het Noordelijk gedeelte van het Gouvernement Sumatra's Westkust. Jaarboek Mijnwezen Nederlandsch Oost-Indie 16 (1887), Wetenschappelijk Gedeelte, p. 129-252.
('Topographic and geologic description of the northern part of the Sumatra West Coast province'. Geologic description of W Sumatra from Tapanuli Bay in NW to Fort de Kock (Bukittinggi) in SE. With 1:500,000 geologic map, 11 cross sections. Oldest rocks 'old slate-quartzite' formation. Overlain by unfossiliferous steeply dipping shales and limestones, probably of Carboniferous age (now assigned to Permian; JTvG). Intruded by granites and diabase. Unconformably overlain by rel. gently dipping Eocene/ Old Tertiary with quartz sandstones and thin coal beds. Late Tertiary volcanics. Minor occurrences of gold, copper, lead)

Fernandez-Blanco, D., M. Philippon & C. von Hagke (2016)- Structure and kinematics of the Sumatran Fault system in North Sumatra (Indonesia). Tectonophysics 693, B, p. 453-464.

(online at: www.ged.rwth-aachen.de/files/publications/publication_2733.pdf)
(Study of northern sector of Sumatran Fault System at northernmost tip of Sumatra and islands to NW. Fault bifurcates into two fault strands and two independent kinematic regimes evolve: E branch is classic Riedel system, W branch features fold-thrust belt, accommodating ~20% of shortening of system in study area)

Fliegel, G. (1898)- Die Verbreitung des marinen Obercarbon in Sud- und Ostasien. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 50, p. 385-408.
(online at: https://www.biodiversitylibrary.org/item/150471page/435/mode/1up)
('The distribution of marine Upper Carboniferous in South and East Asia'. Old review of fossiliferous 'Upper Carboniferous (= E-M Permian) limestones near Padang, W Sumatra, and localities in China. Similarities with age-equivalent faunas of European Russia and Mediterranean)

Fliegel, G. (1901)- Uber Oberkarbonische Faunen aus Ost und Sudasien. I. Oberkarbonische Fauna von Padang. Palaeontographica 48, 2-3, p. 91-136.
(online at: http://archive.org/details/palaeontographic48cass)
('On Upper Carboniferous faunas from East and South Asia, 1. Upper Carboniferous of Padang'. Redescription of 59 Permian fossil species from dark limestones in Padang Highlands, collected by Verbeek, donated to Breslau University, and first described by Roemer (1880). Incl. fusulinids (Fusulina granum-avenae, Mollerina/ Schwagerina verbeeki), corals, brachiopods (Dalmanella, Orthothetes, Productus, Spirifer, Spirigera, etc.), bivalves (Aviculopecten verbeeki), gastropods (Bellerophon spp.), cephalopods (Orthoceras, etc.), nautiloids (Pleuronautilus sumatrensis), trilobites (Phillipsia). (Now regarded as mainly M Permian age; JTvG))

Fontaine, H. (1983)- Some Permian corals from the Highlands of Padang, Sumatra, Indonesia. Publ. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 4, p. 1-31.
(M Permian reefal limestone from Guguk Bulat and Silungkang areas E of Singkarak lake, C Sumatra. Coral faunas include Sinophyllum, Pavastehphyllum, Thomasiphyllum, Ipciphyllum fliegeli (Lange), I. subelegans, I. laosense, Wentzelophyllum, Wentzelloides frechi, etc.. Similar to those from mainland SE Asia. Associated with rich fusulinid fauna, small foram Hemigordius sp. and algae Mizzia velebitana, Permocalculus)

Fontaine, H. (1986)- Microfacies of a few Permian limestones of Sumatra, Peninsular Malaysia and Thailand. United Nations CCOP Techn. Bull. 18, p. 148-157.
(Incl. photomicrographs of Permian foram-algal grainstones-packstones and oolitic limestone from Jambi Province)

Fontaine, H. (1986)- Discovery of Lower Permian corals in Sumatra. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 183-191.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986015.pdf)
(First E Permian corals from Sumatra, in Jambi Province, W of Bangko, in tributaries of Merangin River with 'Jambi Flora'. Pulau Apat, Muara Liso, Batu Gajah, Batu Impi localities with Protomichelinia (in Thailand mainly 'Artinskian'; Fontaine et al. 1994), Kepingophyllum, Chusenophyllum? and Polythecalis. Associated with M-L Asselian Pseudoschwagerina zone fusulinids. Lower Permian sediments well developed in upper Mesumai River area and represent forested volcanic arc surrounded by shallow sea)

Fontaine, H. (1989)- Lower Carboniferous corals. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Paper 19, Bangkok, p. 41-44.
(Corals present but not prolific in Lower Carboniferous limestones of N and C Sumatra. Mainly solitary Rugosa (Zaphrentites) and compound Rugosa (Siphodendron). No massive Rugosa found)

Fontaine, H. (1989)- Lower Permian corals of Sumatra. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Paper 19, Bangkok, p. 95-98.
(Two species of colonial rugose coral (Kepingophyllum sp.) and large colonies of tabulate coral (Protomichelinia) from Lower Permian Batu Gajah and Batu Impi localities, Mesumai River, Jambi Province)

Fontaine, H. (1989)- Middle Permian corals of Sumatra. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Paper 19, Bangkok, p. 149-165.
(M Permian corals from three localities: some Tabulata (Sinopora asiatica) and abundant Tetracoralliia. Guguk Bulat rich and massive tetracorallia colonies (mainly Ipciphyllum spp., and Wentzelloides (called Lonsdaleia by Volz 1904 and Lange 1925)), and is reefal facies)

Fontaine, H. (1990)- Guguk Bulat, a very famous Permian limestone locality of Sumatra, Indonesia. In: H. Fontaine (ed.) Ten years of CCOP Research on the Pre-Tertiary of East Asia, CCOP Techn. Publ., 20, p. 43-54.
(Reprint of Fontaine (1982) paper in CCOP Newsletter. Classic locality 3.5 km NE of Singkarak Lake in Padang Highlands of ~150m thick grey, bedded M Permian limestone rich in corals (including massive tetracorallia of Waagenophyllidae family), tubular sponges, algae and occasional fusulinids (type locality of Sumatrina, also Verbeekina). Faunas many similarities with M Permian rocks on SE Asia mainland. Limestone not metamorphosed, but some local recrystallization near ?Triassic granite intrusions)

Fontaine, H., M.S. Asiah & S.H. Sanatul (1992)- Pre-Tertiary limestones found at the bottom of wells drilled in Malacca Straits. CCOP Newsletter 17, 4, p. 12-17.
(Four wells: Singa Besar-1 gas-bearing basal carbonate ('Melaka carbonate' fractured limestone and dolomite = 'Tampur Fm' of North Sumatra basin?) contains Middle Permian age fossils, including foram genus Shanita at depth 2630'- 2740' (generally associated with 'Sibumasu'/ Cimmerian terranes: JTvG))

Fontaine, H. & S. Gafoer (eds.) (1989)- The pre-Tertiary fossils of Sumatra and their environments. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Techn. Publ. TP 19, Bangkok, p. 1-356.
(Extensive collectionof papers on Carboniferous- Cretaceous fossils of Sumatra. Main localities: Aceh area, Tapaktuan, Sungai Alas, Rantauprapat, Sibaganding near Lake Toba, Sawahlunto, Agam River, Kuantan Go)

Fontaine, H. & S. Gafoer (1989)- Pre-Carboniferous rocks. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. TP 19, Bangkok, p. 15-17.
(Pre-Carboniferous ages postulated for low-metamorphic sediments wells in C Sumatra and for metamorphics in Lampung, S Sumatra (possibly Archean; Umbgrove 1938))

Fontaine, H. & S. Gafoer (1989)- The Carboniferous. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. TP 19, Bangkok, p. 19-29.
(Carboniferous rel. widespread in N Sumatra and correlates with Carboniferous of western Malay Peninsula. Kuantan Fm shows affinities with Carboniferous of eastern Malay Peninsula. N Sumatra Bohorok Fm contains pebbly mudstones, of possible glacial origin. Lower Carboniferous limestones with cosmopolitan foram faunas)

Fontaine, H. & S. Gafoer (1989)- The Lower Permian. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. TP 19, Bangkok, p. 47-51.
(Lower Permian of Merangin River area W of Bangko, Jambi Province, well known since 1930's for its Cathaysian 'Jambi Flora' in Mengkarang Fm. This E Permian flora and fauna similarities with C Europe; nothing similar in Australia. Limestones with fusulinids, incl. Monodiexodina wanneri in Padang Higlands (Hahn & Weber 1981))

Fontaine, H. & S. Gafoer (1989)- The Middle Permian. In: H. Fontaine & S. Gafoer (eds.) The pre-Tertiary fossils of Sumatra and their environments, Papers 22nd Sess. CCOP, Guangzhou 1985, Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Techn. Publ. TP 19, Bangkok, p. 99-112.
(Review of M Permian fossil localities of Sumatra. Mainly limestones, many with fusulinids, some associated with volcanics: Padang Highlands (Guguk Bulat, Silungkang, Tanjung Alai), Jambi Province (Sungei Luati, Batang Tabir, Sg. Kibul, Sg. Palepat), Bukit Pendopo (Palembang), near Lubuksikaping (Muara Sipongi) and N Sumatra near Takengon (Situtup Lst))

Fontaine, H. & S. Gafoer (1989)- Upper Permian- Lower Triassic. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. TP 19, Bangkok, p. 167.

(Upper Permian not established with certainty on Sumatra. Lower Triassic also absent or rare)

Fontaine, H. & S. Gafoer (1989)- Triassic. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. 19, Bangkok, p. 169-177.
(Middle-Late Triassic sediments known from N Sumatra since 1899, when Volz described 6 species of Daonella and Halobia. Triassic also present in Padang Highlands, Lake Toba area (Sibaganding Limestone), Bangka and Belitung (Norian), etc. Deep water Mutus assemblage in oil wells in Pakanbaru area, C Sumatra)

Fontaine, H. & S. Gafoer (1989)- The Jurassic. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. 19, Bangkok, p. 207-225.
(Overview of Jurassic localities in N, C and S Sumatra.Almost 30 formations identified. Mainly shallow marine shelf deposits)

Fontaine, H., S. Gafoer & Suharsono (1990)- Well-dated horizons of the pre-Tertiary of Sumatra. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 55-58.
(Reprint of Fontaine et al. (1988) paper in CCOP Newslett. 13, 2, p. 26-30. Table of occurrences of fossiliferous Lower Carboniferous, Permian, Triassic, Jurassic and Cretaceous outcrops on Sumatra)

Fontaine, H. & D. Vachard (1981)- A note on the discovery of Lower Carboniferous (Middle Visean) in Central Sumatra. CCOP Newslett. 8, 1, p. 14-18.
(Lower Carboniferous limestones with M Visean foraminifera in Agam River, E of Bukit Tinggi along road to Payakumbuh. Lower Carboniferous limestones rel. poor in fossils and darker than associated Permian fusulinid limestone. No regional metamorphism, just local contact metamorphism around igneous intrusions)

Fontaine, H. & D. Vachard (1990)- A note on the discovery of Lower Carboniferous (Middle Visean) in Central Sumatra. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 35-41.
(Reprint of Fontaine and Vachard (1981))

Fontaine, H. & D. Vachard (1984)- New palaeontological data on the Upper Paleozoic of Sumatra. Mem. Soc. Geologique France, n.s., 147, p. 49-54.
(Lower Carboniferous corals in Padang Highlands may be considered part of Chinese province. Early Permian volcanics, clastics and limestone with fusulinids in Jambi Province, with no evidence of glaciations)

Fontaine, H. & D. Vachard (1986)- Study of Permian samples collected from Sumatra. CCOP Techn. Bull. 18, p. 112-116.
(Brief review of five Permian limestone localities in Jambi Province, one Asselian, others Murgabian in age)

Force, E.R., S. Djaswadi & T. Van Leeuwen (1984)- Contributions to the geology of mineral deposits: A. Exploration for porphyry metal deposits based on rutile distribution- a test in Sumatra. U.S. Geol. Survey (USGS) Bull. 1558 A, p. A1-A9.
(online at: http://pubs.usgs.gov/bul/1558a-b/report.pdf)
(Rutile in thick soil at Tangse porphyry-copper prospect, along Sumatra Fault Zone in Aceh reflects distribution of quartz-sericite and biotite-chlorite zones of hydrothermal alteration at depth)

Frech, F. & O.E. Meyer (1922)- Mitteljurassische Bivalven von Sungi Temalang im Schieferbarissan (Residentschaft Djambi). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, 5. p. 223-229.
('Middle Jurassic bivalves from Sungei Temalang, Jambi, in the 'Schieferbarisan'. Small bivalve fauna of probable M Jurassic age collected by Tobler in isoclinally folded phyllitic rocks in tributary of Limun River in S part of Jambi Residency. With Astarte, spp., Opis and Cypricardia. Ammonites-belemnites absent)

Frijling, H. (1928)- Geologisch-mijnbouwkundig onderzoek in den omtrek van de Asahan- and Koealoe rivieren (Toba landen, Oost Sumatra). Jaarboek Mijnwezen Nederlandsch-Indie 54 (1925), Verhandelingen 2, p. 153-173.
('Geological-mining investigation in the vicinity of the Asahan and Kualu rivers, Toba Lands, E Sumatra'. Primarily investigation of folded Triassic limestones, unconformably overlain by Eocene conglomerates and coaly beds)

Furqan, R.A. (2014)- The geology of Pinang-Pinang Au-Cu±Mo skarn, Aceh, Indonesia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 291-299.
(Pinang-Pinang gold-copper±molybdenum project ~20km SE of Tapaktuan on SW coast of Aceh consists of two skarn deposits,~3km apart. Granitoids and limestones present but no ages discussed)

Gafoer, S. (2002)- Stratigrafi dan karakter mintakat Pra-Tersier di Sumatra bagian selatan. J. Geologi Sumberdaya Mineral 12, 121, p. 2-24.
('Stratigraphy and character of the Pre-Tertiary zone in South Sumatra'. Four basement terranes in S Sumatra: (1) MTB Tigapuluh- Bohorok (Permo-Carboniferous, incl. glaciomarine deposits, with Late Triassic- E Jurassic granites; paleolatitude 41°S, 115° CW rotation) (=Sibumasu); (2) MKD-Kuantan- Duabelas (Carboniferous- Cretaceous sediments and low-grade metamorphics, from N latitudes; 30°N paleolatitude for E Permian Mengkareng Fm with 'Jambi flora'; ~90° CW rotation; with Late Permian, Late Triassic- E Jurassic and Cretaceous granites); (3) MGk-Gunungkasih (pre-Carboniferous? high metamorphic rocks, also with Late Permian, Late Triassic- E Jurassic and Cretaceous granite, from low-latitude S Hemisphere (19°N/ 339°CW rotation for Pre-Carboniferous in Table4?; JTvG)= Malacca microcontinent of Pulunggono and Cameron 1984); (4) MGW- Garba-Woyla Terrane (latest docked; Jurassic- E Cretaceous oceanic and accretionary zone rock types with ultramafics). Raub-Bentong suture interpreted to run through N Bangka)

Gafoer, S. & T.C. Amin (1993)- Tinjauan kembali geologi Pra-Tersier daerah Garba, Sumatera Selatan. Bull. Geol. Res. Dev. Centre 16, p. 17-26.
(New geologic observations in the pre-Tertiary area of Garba, S Sumatra. Oldest rocks are low-grade metamorphics of possible Carboniferous age. Tectonically juxtaposed against Late Jurassic- E Cretaceous volcanic rocks and chert of possible oceanic affinity in E Cretaceous (melange complex of Barremian- Aptian age 125-120 Ma). Both rock types intruded by Late Cretaceous granites; 116-80 Ma)

Gafoer S., T.C. Amin & R. Pardede (1992)- Geological map of the Bengkulu Quadrangle (0912), Sumatra, 1: 250,000, 2nd Ed., Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map sheet of SW Sumatra NE of Bengkulu, with folded Oligo-Miocene clastics in Bengkulu forearc area, young volcanics only in Barisan Mountains and SW part of S Sumatra (Palembang) Basin in NE. In SE corner Gumai Mts anticlinorium with Late Jurassic- E Cretaceous interfingering Saling Fm andesitic-basaltic lavas and Lingsing Fm bathyal clastics (=oceanic; Barber et al. 2005), both unconformably overlain by Sepingtiang Fm reefal limestones (with Orbitolina?) and calcarenites, unconformably overlain by ?Paleo-Eocene Kikim Tuffs)

Gafoer S., T.C. Amin & R. Pardede (1993)- Geological map of the Baturaja Quadrangle, Sumatra. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of SE part of S Sumatra Basin, with folded Late Oligocene- Miocene sediments, incl. E Miocene limestone outcrops at Baturaja town and around Garba Mts. Pre-Tertiary rocks in Garba Mts Anticlinorium look like Cretaceous accretionary complex with Late Paleozoic/ E Carboniferous? Tarap Fm meta-sediments, Late Jurassic- E Cretaceous Garba Fm with radiolarian cherts and basalts interbedded with chert and occasional serpentinite, with NW-SE foliation, mid-Cretaceous melange complex (mixed boulders in scaly clay), intruded by M-L Cretaceous Garba Granite (~115, 80 Ma ages; Saefudin 2000), unconformably overlain by Tertiary sediments (incl. Paleogene quartz sandstone of Cawang Fm, Kikim volcanic breccia and tuffs)

Gafoer, S., G. Burhan & J. Purnomo (1986)- The geology of the Palembang Quadrangle, Sumatra (Quadrangle 1013), 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 18p. + map.

(Also 2nd Edition 1995. Map sheet of folded Miocene- Pleistocene sediments of South Sumatra Basin NW of Palembang. Large NW-SE trending anticlines (Babat, Keluang, Tamiang, Berau-Bentayan, etc.))

Gafoer, S., T. Cobrie & J. Purnomo (1986)- The geology of the Lahat Quadrangle, Sumatra (Quadrangle 1012), 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 25p. + map.
(Map sheet mainly of SW part of S Sumatra (Palembang) Basin. With large Pendopo- Limau and Benuang-Prabumulih anticlines, all with old oil fields. Series of smaller anticlines in Muara Enim- Lahat area in SW with outcrops of coal-bearing M-L Miocene sediments, intruded by Quaternary volcanic necks (Bukit Serelo, etc.))

Gafoer, S. & K.D. Kusumah (2002)- Cekungan batubara Paleogen daerah Pangkalan Kotabaru dan sekitarnya, Sumatra Barat-Riau. J. Geologi Sumberdaya Mineral 12, 129, p. 2-22.
('Paleogene coal basins in the area of Pangkalan Kotabaru and surroundings, Sumatra West Riau'. W margin of C Sumatra rift basin near Barisan Mts front with outcrops of up to 8m? thick M-L Eocene coals in Pematang Fm (age supported by Florschuetzia trilobata, Gemmatricolporites pilatus a.o.))

Gafoer, S., K.D. Kusumah & N. Suryono (2001)- Kegiatan tektonik Tersier: hubunannya dengan pembentukan cekungan dan akumulasi batubara di sub-cekungan Jambi bagian Barat. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 26, p. 73-97.
('Relations between Tertiary tectonics and coal deposits in W Jambi sub-basin, S Sumatra')

Gafoer, S. & M.M. Purbo-Hadiwidjoyo (1986)- The geology of Southern Sumatra and its bearing on the occurrence of mineral deposits. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 12, p. 15-30.
(Oldest rocks in S Sumatra locally metamorphosed Carboniferous and Permian sediments. Silurian- Devonian granites known from two wells. Also Permian volcanics, unconformably overlain by Triassic clastics. Late Triassic tin-granites on Bangka-Belitung. Flysch-type U Jurassic- Lw Cretaceous. M-Late Cretaceous granites and Kikim Tuffs. Widespread Late Oligocene- earliest Miocene 'Old Andesite' along Barisan Range)

Gasparon, M. (1993)- Origin and evolution of mafic volcanics of Sumatra (Indonesia): their mantle sources, and the role of subducted oceanic sediments and crustal contamination. Ph.D. Thesis, University of Tasmania, p. 1-395.
(online at: http://eprints.utas.edu.au/19511/1/whole_GasparonMassimo1994_thesis.pdf)
(Sediments, or fluids derived from sediments subducted along Sunda Trench, affect chemistry of Quaternary arc volcanics in some sectors of Sunda arc, whereas isotopic signature of other sectors mainly reflects composition of mantle source. Two groups of ganitoids identified in Sumatra: (1) Arc-related granitoids along calcalkaline trend of arc rocks, with Sr, Nd, and Pb isotope systematics similar to those of Indian Ocean basalts (including basalts from S Sumatra);(2) E of Semangko fault, granitoids and pyroclastic rocks mainly of 'S-type', with high 87Sr/86Sr values, similar to C Granitoid Province of SE Asia. Therefore, Semangko fault and Quaternary arc may define SE margin of Sibumasu terrane. No systematic variations in geochemical and isotopic composition from N to S Sumatra observed in two groups of granitoids. Sr, Nd, and Pb isotopes suggest pre-Mesozoic continental crust present in Sumatra and W Java, but absent from E Java- Lombok)

Gasparon, M. (2005)- Quaternary volcanicity. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra: geology, resources and tectonic evolution, Geol. Soc. London, Mem. 31, Chapter 9, p. 120-130.
(Quaternary volcanics of Sumatra rel. rich in young silicic volcanic rocks, associated with major caldera-forming events)

Gasparon, M. & R. Varne (1995)- Sumatran granitoids and their relationship to Southeast Asian terranes. Tectonophysics 251, p. 277-299.
(Three subparallel Late Paleozoic- Mesozoic granitoid provinces in SE Asia: (1) East (E peninsular Malaysia); (2) Central (NW Thailand to W Peninsular Malaysia and 'Tin Islands', Indonesia) and (3) West (W Thailand-Burma). Compositions of Sumatran granitoids suggest (1) granitoids in E/ NE Sumatra (incl. 'Tin Islands', Bukit Batu near Palembang, Hatapang pluton, Lake Toba area and possibly Sijunjung pluton in C Sumatra), all have high Sr-87/86 values and other S-type similarities, and can be related to 'Sibumasu terrane'/ Central Granitoid Province;(2) granitoids W of Semangko fault and in basement of Quaternary volcanics low initial Sr-

87/Sr-86 values and I-type characteristics, similar to young arc volcanics and may represent young post-Gondwanan Sumatran arc lithosphere; (3) Granitoids comparable to W Province not known in Sumatra, and (4) granitoids similar to E Province are rare. Semangko fault and Sunda Strait may mark SW- and SE-most limits of Sibumasu terrane. Boundary between Central and E Granite Provinces may run through 'Tin Islands')

Geinitz, H.B. (1876)- Zur Geologie von Sumatra. I. Zur Geologie von Sumatra's Westkuste. Palaeontographica 22, p. 399-414.
(online at: https://www.biodiversitylibrary.org/item/103416page/7/mode/1up)
('On the geology of Sumatra'. Brief description of rocks collected by Verbeek from Ombilin area, W Sumatra. Incl. descriptions of grey limestone with globular fusulinids (incl. Fusulina verbeeki n.sp.), crinoids, brachiopods, etc.. Also 50m thick Eocene coral limestone. With companion paper by Von der Marck (1876) on Tertiary fossil fish from region, p. 405-414)

Geinitz, H.B. (1878)- Zur Geologie von Sumatra's Westkuste. Jaarboek Mijnwezen Nederlandsch-Indie 7 (1878), 1, p. 127-137.
('On the geology of Sumatra'. Reprint of Geinitz (1876))

Genrich, J.F., Y. Bock, R. McCaffrey, L. Prawirodirdjo, C.W. Stevens, S.S.O. Puntodewo, C. Subarya & S. Wdowinski (2000)- Distribution of slip at the northern Sumatran fault system. J. Geophysical Research 105, B12, p. 28327-28342.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2000JB900158/epdf)
(Sumatran fault in N Sumatra (1°S- 3°N) GPS-derived slip rates increase slightly N-ward from 23 mm/yr at 0.8°S to 26 mm/yr at 2.7°N. Banda Aceh embayment is extruded to NW at 5 mm/yr. N part of back arc basin is part of rigid Sunda Shelf, while N forearc is subjected to extension nearly parallel to arc)

Geyr, E. (1921)- Beitrage zur Petrographie von Sud-Sumatra. Lampong Distrikte und angrenzende Gebiete. Dissertation Munster University, p. 1-. *(Unpublished*
('Contributions to the petrography of South Sumatra: Lampung Districts and adjacent areas. Petrographic descriptions of igneous rocks from Lampung and Bengkulu, collected by Elbert in 1908. Quartz porphyry, liparite, basalts, etc.)

Gibbons, A., J.M. Whittaker & P. Muller (2010)- Revisiting the magnetic anomalies along the West Australian margin identifies a new continental fragment that accreted to Sumatra during the Early Eocene. American Geophys. Union (AGU), Fall Meeting 2010, Poster Abstract T13C-2223. *(Abstract only)*
(Reconstruction of abyssal plains along W Australian margin reveals that, apart from Greater India and Argoland, a third continental block (Gascoyneland) rifted from Australia since Jurassic. From 132 Ma (Hauterivian; E Cretaceous) it formed stretched continental crust of Exmouth Plateau, then oceanic crust of Gascoyne and Cuvier abyssal plains. At 115 Ma (= late Aptian) Gascoyneland began moving N while Greater India continued West. Gascoyneland would have reached W Sumatra at ~60 Ma. Woyla Group, consisting of Sikuleh, Natal and Bengkulu terranes, along W coast of Sumatra, identified as oceanic arc, which accreted in Jurassic-E Cretaceous after formation of short-lived, narrow marginal sea and may overlie continental crust due to presence of Sikuleh granitoid batholith. Gascoyneland now probably buried beneath Woyla Terrane)

Graha, D.S. (1992)- Percontohan untuk penarikhan metoda kalium-argon batuan daerah Danau Toba dan sekitarnya, Sumatera Utara. J. Geologi Sumberdaya Mineral 2, 11, p. 2-8.
('Sampling for study of potassium-argon method in rocks from Lake Toba area and surroundings, N Sumatra')

Graha, D.S. & T. Hardjono (1990)- Biotit sebagai petunjuk umur granit di Aceh selatan. J. Geologi Sumberdaya Mineral 2, 5, p. 2-5.
('Biotite as age indicator of granite in southern Aceh'. K-Ar age of biotite from west coast of W Sumatra, S Aceh (Tapaktuan map sheet; Woyla Terranes?). Wide spread of ages: Susoh 98.2 Ma, Kila 130 Ma and Samadua 51.3 Ma)

Graha, D.S., T. Hardjono, I. Rustami, A. Sonjaya, P. Kawoco & Herwinsyah (1998)- Perioda pengendapan Tuf Toba, Sumatera Utara, berdasarkan hasil penarikhan. J. Geologi Sumberdaya Mineral 8, 76, p. 11-17.
('Periods of Toba Tuff deposition, based on the results of withdrawal' (?). Thick Quaternary Toba Tuff deposits consist of andesitic lava in lower part and alternating pyroclastic flows, ignimbrites and welded tuffs in upper part). Five phases: (1) Dacite tuff (1.2 Ma), (2) Older Toba Tuff (0.84-0.71 Ma), (3) Middle Toba Tuff (0.50-0.39 Ma, (4) Younger Toba Tuff (0.10- 0.05 Ma) and (5) Post- Younger Toba Tuff (0.031-0.017 Ma))

Graha, D.S., S. Permanadewi & D.A. Siregar (1990)- Penarikhan Kalium Argon dan radiokarbon di daerah Propinsi Bengkulu. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2, p. 42-49.
('K-Ar and radiocarbon analyses in the area of the Bengkulu province'. K-Ar age of plagioclase of Gunung Muncung diorite ~4.76 Ma (Pliocene). Also young C14 ages for Quaternary alluvium around Bengkulu city)

Grand Pre, C.A., B.P. Horton, H.M. Kelsey, C.M. Rubin, A.D. Hawkes, M.R. Daryono, G. Rosenberg & S.J. Culver (2012)- Stratigraphic evidence for an early Holocene earthquake in Aceh, Indonesia. Quaternary Science Reviews 54, p. 142-151.
(Holocene stratigraphy of coastal plain of NW Aceh 6 m of sediment with three regionally consistent buried soils above pre-Holocene bedrock or sediment. Rapid change in relative sea-level caused by coseismic subsidence during E Holocene megathrust earthquake suggested by mangrove soil overlain by thin tsunami sand with abraded foraminifera of both offshore and onshore environments. Tsunami sand age ~7000 yrs BP)

Grey, D.W.J. (1935)- Notes on the Balimbing Mine, West Coast of Sumatra. Trans. Inst. Mining Metallurgy 45, p. 221-281.
(Overview of ore bodies and operations at rel. small Balimbing gold mine in Barisan Mts, 2km E of Bonjol village, 60km from Fort de Kock and 8km WSW of now depleted Mangani mine. Young gold-silver hydrothermal mineralization, mainly along two N10°E-striking faults. Surrounding rocks isoclinally folded Permo-Carboniferous slates and sandstones, Eocene 'Brani-conglomerate', Early Miocene bituminous shales with Lepidocyclina, Miogypsina, etc., overlain by younger Balimbing- Mangani volcanic rocks)

Grutterink, J.A. (1925)- Truscottiet. In: R.D.M. Verbeek Memorial volume, Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8, p. 197-200.
(Description and analysis of rare mineral truscottite from Lebong Donok Au-Ag mine, Bengkulu, Sumatra, first described by Hovig (1914). Spheroidal aggregates of Ca-zeolite, closely related to gyrolite (see also MacKay and Taylor (1954); mineral since then also found in Japan, Hawaii, Yellowstone; JTvG))

Gunawan, W., A. Kadir, S. Sukmono, M.T. Zen, L. Hendrajaya & D. Santoso (1996)- Gravity evidence for the thinning of the crust around the North Sumatra area. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 81-91.
(Major structural discontinuity around N Sumatra, tied to split in descending oceanic plate along continuation of Investigator Ridge Transform. Discontinuity reflected by a change of Sumatra Fault segment's geometrical fractal dimension, volcanic line offset and major changes to strike of Batee fault and Batee trench. Area around discontinuity characterized by very low gravity anomaly closure (up to -96 mgal) with higher anomaly in center, indicating low density body of mantle material intruded by higher density igneous material in center)

Gunderson, R.P., P.F. Dobson, W.D. Sharp, R. Pudjianto & A. Hasibuan (1995)- Geology and thermal features of the Sarulla Contract Block, North Sumatra, Indonesia. Proc. World Geothermal Congress 1995, Florence, 2, p. 687-692.
(online at: www.geothermal-energy.org/pdf/IGAstandard/WGC/1995/2-Gunderson.pdf)
(Exploration for geothermal energy in Sarulla area of W Sumatra, along active Sumatra Fault System. No active volcanoes in contract area, but extensive Quaternary andesite-rhyolite lavas and dacite-rhyolite ash flow tuffs (dated between 1.8- 0.12 Ma). Hydrothermal features clustered in four groups: Namora-I-Langit, Silangkitang, Donotasik, and Sibualbuali; each associated with Quaternary volcanic eruptive center)

Gunderson, R., N. Ganefianto, K. Riedel, L. Sirad-Azwar & S. Suleiman (2000)- Exploration results in the Sarulla Block, North Sumatra, Indonesia. Proc. World Geothermal Congress 2000, Kyushu- Tohoku, Japan, p. 1183-1188.
(online at: www.geothermal-energy.org/pdf/IGAstandard/WGC/2000/R0892.PDF)
(Geothermal exploration in Sarulla Block discovered three new geothermal systems in Quaternary andesitic and rhyolitic volcanics along Great Sumatra Fault Zone in W Sumatra)

Gutzwiller, E. (1914)- Petrografische beschrijving der eruptiefgesteenten van het Goemai-gebergte. Jaarboek Mijnwezen Nederlandsch Oost-Indie 41 (1912), Verhandelingen, p. 50-86.
(Petrographic descriptions of igneous rocks from Gumai Mountains, collected by Tobler: Pre-Tertiary granites, porphyrites, diabase, tuffs and Young Tertiary liparite, dacite, andesite, basalt)

Hahn, L. & H.S. Weber (1979)- Zur Methodik der Uranprospektion in tropischen Regenwald-Gebieten am Beispiel Sumatras. Zeitschrift Deutschen Geol. Gesellschaft 130, 2, p. 405-420.
('On the methodology of uranium prospecting in tropical rain forests areas in the example of Sumatra'. On regional uranium reconnaissance survey in Sumatra in 1976-1978)

Hahn, L. & H.S. Weber (1981)- Geological map of West Central Sumatra 1:250,000- with explanatory notes. Geol. Jahrbuch B47, p. 5-19.
(Geologic map of W Central Sumatra, compiled during 1976-1978 Indonesian- German Uranium Exploration Project. Mainly Barisan Mountains NE of Padang, including Ombilin Basin. Permian Limestones with fusulinids (at Batang Siputar with 'antitropical' Monodiexodina wanneri). Triassic clastics with Halobia and also Triassic limestones. Unconformably overlain by Oligocene lacustrine deposits rich in fish fossils and Oligo-Miocene quartz sandstones. Permian- Recent volcanics and Permian-Tertiary granitic massifs)

Hahn, L. & H.S. Weber (1981)- The structure system of West Central Sumatra. Geol. Jahrbuch B47, p. 21-39.
(Central Barisan Mts area four prominent NW-SE trending fault zones, main one is Central Barisan dextral strike-slip fault zone. Intimate relationship between tectonic and volcanic history. Major tectonic events M Cretaceous, M Miocene and Plio-Pleistocene)

Haile, N.S. (1978)- A comment on stratigraphical relationships in the Indarung Area, Padang District, West Sumatra. Bull. Geol. Soc. Malaysia 10, p. 93-95.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1978007.pdf)
(Critical discussion of Yancey and Alif (1977). Inclusion of deep water radiolarian cherts with shallow-marine limestones in single formation deemed inappropriate. Cherts less extensive than shown by Yancey and Alif (no chert was seen as outcrops ~0.5 km E of Ngalau Quarry. Some rocks at Ngalau Quarry not chert, but weathered stratified rock)

Haile, N.S. (1979)- Palaeomagnetic evidence for rotation and northward drift of Sumatra. J. Geol. Soc., London, 136, p. 541-546.
(?Permian, U Triassic, Lower Cretaceous, and Lower Tertiary rocks from 25 sites in N and C Sumatra. Results indicate 12° N-ward drift since Late Triassic, with 40° clockwise rotation. Remaining localities less reliable, but confirm low paleolatitudes (within 26° of present latitude) and clockwise rotation since Permian. Clockwise rotation of Sumatra contrasts with anti-clockwise rotation of W Borneo, Malay Peninsula and SW Sulawesi and suggests Sumatra not coupled to 'Sundaland' until mid-Tertiary).

Hakim, A.S. (2003)- Cebakan Sedex Zn-Pb di daerah Pagar Gunung, Kabupaten Kotanopan, Kabupaten Madina, Sumatera Utara. Bul. Geologi, ITB, 35, 3, p. 117-131.
(Zn-Pb sedimentary-exhalative deposits in the Pagar Gunung area, Kotanopan and Madina regencies, North Sumatra')

Hakim, A.Y.A., M.N. Heriawan, T. Indriati, D.B. Darma & M. Sanjaya (2013)- Mineralogical observation of Fe-skarn deposit in Lhoong Prospect, Nanggroe Aceh Darussalam, Indonesia. Int. Symposium on Earth Science and Technology 2013, Fukuoka, p. 274-279.

(Fe-Cu skarn deposit at contact of Miocene? Geunteut granodiorite and E Cretaceous Raba and Lamno Limestones associated with Bentaro Volcanics in Barisan Mts of N Sumatra (= probably part of Woyla arc terranes; see also Susanto and Suparka 2012))

Hall, A. & S.J. Moss (1997)- The occurrence of laumontite in volcanic and volcaniclastic rocks from southern Sumatra. J. Southeast Asian Earth Sci. 15, 1, p. 55-59.
(Laumontite in Tertiary and Quaternary volcanics of Gumai Mts product of hydrothermal alteration rather than weathering or metamorphism)

Hamid, D., S. Ardiansyah & B. Safrihadi (2014)- Discovery, exploration history and geology of the Upper Tengkereng porphyry gold and copper deposit, Gayo Lues, Aceh. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 219-244.
(Upper Tengkereng Au-Cu-(Mo) porphyry deposit in Gayo Lues regency, C Aceh. One of six porphyries in Tengkereng - Ise Ise mineralization belt, associated with Late Pliocene (~2.0 Ma) age intrusive complexes in M Jurassic? volcanics and limestones of the Woyla Gp)

Hamidsyah, H. & M.C.G. Clarke (1982)- Discovery of primary tungsten and tin mineralisation in North Sumatra, Indonesia. In: J.V. Hepworth & Y.H. Zhang (eds.) Symposium on Tungsten geology, Jiangxi, China, ESCAP/RMRDC (UN), p. 49-58.
(Tin and Tungsten mineralization associated with Late Cretaceous (~80 Ma) Hatapang granite, N Sumatra)

Handarbeni, A., D.K. Dewi & I. SidiqIvaniahu (2012)- Epithermal gold deposit in Tambang Sawah Area, Lebong District, Bengkulu Province. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-M-13, p.

Handini, E., N.I. Setiawan, S. Husein, P.C. Adi & Hendarsyah (2017)- Petrologi batuan alas cekungan (Basement) Pra-Tersier di Pegunungan Garba, Sumatera Selatan. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 2p.
('Petrology of basement rocks (Basement) Pre-Tertiary in Garba Mountains, South Sumatra'. Brief report on basement rocks in Garba Mts: (1) metamorphics dominated by phyllites (Carboniferous- E Permian Tarap Fm?);(2) andesites- gabbro (E Cretaceous); (3) polymict breccia of clay matrix with chert, marble blocks; (4) youngest unit Garba granite, with new K-Ar date of 91.3 ± 1.9 Ma. Garba Mts part of Jurassic- Cretaceous Saling volcanic arc, in E Cretaceous collision zone between Woyla and W Sumatra terranes?)

Hanzawa, S. (1947)- Note on some species of *Pseudocyclammina* from Sumatra. Japan J. Geol. Geography 20, 2-4, p. 5-8.
(Fontaine et al. 1983: Upper Jurassic or Lower Cretaceous Pseudocyclammina from Gumai Mountains and in deep well in Kikim oilfield near Gumai Mts. Including P. lamellifera, P. cyclamminoides, P. bemmeleni)

Harahap, B.H. (2006)- Petrology of the Upper Miocene volcanic rocks on the western Barisan Mountain Ranges, Lubuk Sikaping region, West Sumatera. Buletin Geologi (ITB) 38, 3, p. 81-108.
(see also Harahap 2011)

Harahap, B.H. (2007)- Petrologi batuan magmatis Neogen daerah Pangkalan Kotabaru Limapuluh kota, Sumatera Barat. J. Sumber Daya Geologi 17, 4, p. 207-217.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/290/261)
('Petrology of Neogene magmatic rocks in Pangkalan Kotabaru region, W Sumatra'. Andesites- dacites NNE of Padang are related to subduction)

Harahap, B.H. (2010)- Ciri geokimia batuan vulkaniklastika di daerah Tanjung Balit, Sumatra Barat: suatu indikasi kegiatan magma pada Eosen. J. Geologi Indonesia 5, 2, p. 75-91.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/266)

('Geochemical characteristics of volcanoclastic rocks in the Tunjung Balit area, W Sumatra: some indications of magmatic activity in the Eocene'. Chemistry of ?Eocene red mudstones overlying Permian Kuantan Fm in Barisan Mts suggests altered volcanoclastic origin)

Harahap, B.H. (2011)- Petrology and geochemistry of the Upper Miocene volcanics on the western part of the Barisan Mountain Ranges, Lubuk Sikapeng region, West Sumatra. J. Sumber Daya Geologi 21, 1, p. 9-21.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/131/128)
(Andesitic and basaltic lavas are main product of U Miocene volcanism in Lubuk Sikaping region. Associated with base metals and gold, mined in colonial period at Bonjol, Mangani, etc.. Resemble arc setting, with involvement of subducted sediment. Lava from Lubuk Sikaping is product of Maninjau eruption in Late Miocene, overlain by Pleistocene deposits of Maninjau Crater)

Harahap, B.H. (2011)- Magma genesis in Kabanjahe region continental margin arc of Sumatra. J. Geologi Indonesia 6, 2, p. 105-127.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/307)
(Volcanic rocks in Kabanjahe area, N Sumatra Province, are products of old Toba Caldera, Sibayak Volcano, and Sipiso-piso Volcano. Rhyolitic tuff most common, also basalt, andesite, dacitic, rhyolite. Rocks originated from magma of continental origin formed at subduction zone environment)

Harahap, B.H. & Z.A. Abidin (2006)- Petrology of lava from Maninjau Lake, West Sumatera. J. Sumber Daya Geologi (GRDC, Bandung) 16, 6 (156), p. 359-370.
(Pleistocene (~0.8 Ma) subaerial volcanics from Maninjau Crater/ caldera, 60km NW of Padang, mainly porphyric andesite and some rhyolite. Lavas distributed over 20 km, ignimbrite tuffs over 100 km. Belong to high-K calc-alkaline arc volcanics. Oldest rocks in area Carboniferous Kuantan Fm phyllite-limestone, under Permian- Jurassic. Barisan Range uplift began in late M Miocene, peaking at Mio-Pliocene boundary)

Harahap, B.H. & Z.A. Abidin (2012)- Karakteristik inklusi fluida dalam mineralisasi emas di daerah Lumban Julu, Tobasa, Sumatra Utara. J. Sumber Daya Geologi 22, 3, p. 155-168.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/117/108)
('Characteristics of fluid inclusions in gold mineralization in the Lumban Julu area, Tobasa, North Sumatra'. Quartz veins in Lumban Julu area with Ag-Au-Cu-Pb-Zn mineralization. Fluid inclusions in quartz consist of liquid and vapor. Two systems of mineral deposition in area: (1) associated with high-T with mesothermal system at ~1600m depth and (2) associated with ephythermal system at ~550m depth)

Harahap, B.H., H.Z. Abidin, W. Gunawan & R. Yuniarni (2015)- Genesis of Pb-Zn-Cu-Ag deposits within Permian-Carboniferous carbonate rocks in Madina Regency, North Sumatra. Indonesian J. Geoscience 2, 3, p. 167-184.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/209/200)
(Latong River outcrops near Siabu in W Sumatra between Sibolga and Natal. Folded Permian-Carboniferous Tapanuli Gp (Kluet/ Kuantan Fms) low-grade metasediments with limestone interbeds with galena-sphalerite-marcasite mineralization. Mineralization origin probably tied to sedimentary processes rather than igneous activity. Also older (Carboniferous; 333 Ma) and younger (E Cretaceous; 119Ma) hornblende and biotite granite intrusives in area)

Harahap, B.H. & Harmanto (1987)- Tin mineralization in Pegunungan Tigapuluh, Central Sumatra. Indonesia. In: W. Gocht (ed.) Proc. Seminar on Importance of primary tin mining in Southeast Asia, Bandung 1986, Intertechnik 28, Aachen, p. 111-124.
(Cassiterite- arsenopyrite mineralization in 70-100cm quartz veins in marginal greisen zone of Sungei Isahan granite, Tigapuluh Mts, E C Sumatra. Up to 7.5 kg/m3 cassiterite in stream sediment (see also Schwartz 1987))

Hardjawidjaksana, K. (1996)- Geochemistry and magnetic susceptibility of Toba ash layer in Indian Ocean (preliminary results of Barat cruise 1994). In: S.Y. Kim et al. (eds.) Proc. 32nd Ann. Sess. Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Tsukuba 1995, p. 219-229.
(On distribution of ash from large Toba eruption of 75,000 years BP, N Sumatra)

Hariawan, M.N. & T. Mulya (2017)- Spatial relations between gold, associated metals and lithologies at the Miwah acid-sulfate (high sulfidation) epithermal deposit, Aceh, North Sumatra, Indonesia. Proc. 14th SGA Biennial Meeting- Mineral resources to discover, Quebec 2017, 4, p.1353-1356.

Harlan, J.B., M.L. Jones, B. Sutopo & T. Hoschke (2005)- Discovery and characterization of the Martabe epithermal gold deposits, North Sumatra, Indonesia. In: H.N. Rhoden et al. (eds.) Proc. Window to the world Symposium, Geol. Soc. Nevada, Reno, p. 917-942.
(Newmont Martabe District high sulphidation epithermal gold deposits 1997 discoveries E of Sibolga. Near strand of Sumatra Fault Zone. See also Sutopo et al. 2003, 2013)

Harris, L. (1989)- Conjugate faulting associated with orthogonal subduction in Indonesia: structural constraints for the timing of the rotation of Sumatra. SGTSG Conference, Kangaroo Island 1989, Geol. Soc. Australia, Abstracts 24, p. 59-60. *(Abstract only)*

Hartmann, E. (1917)- Over de geologie van de Lampongsche Distrikten en het zuidelijk deel der residentie Palembang, Zuid Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 44 (1915), Verhandelingen 2, p. 90-132.
('On the geology of the Lampung Districts and the southern part of the Palembang Residency, S Sumatra' Results of 1915 reconnaissance. Pretertiary metamorphics and granites, overlain by folded 'Eocene' quartz sandstones with coal, Oligocene Baturaja Limestone (few 100m thick; should be E Miocene age; JTvG), 500m or more marine Telisa/ Gumai clays, tuffs and limestones, 1000m of Miocene-Pliocene L-M Palembang clays-sandstones (rel. little coal in this area) and 500m Upper Palembang Fm quartz-rich tuffs. Overlain by unfolded Quaternary conglomerates and volcanics)

Hartmann, E. (1921)- Geologisch rapport over het kolenvoorkomen in de mijnconcessies 'Soekamarinda' en 'Boenian' en het tusschen deze beide gelegen kolenveld 'Ajer Serillo', gelegen in de onderafdeeling Lematang Oeloe, Residentie Palembang. Jaarboek Mijnwezen Nederlandsch Oost-Indie 47 (1918), Verhandelingen 2, p. 108-140.
(Detailed study of Middle Palembang Fm coals in 3 mining concessions in Lematang Ulu area, Palembang Residency, S Sumatra. Interseting 'progressive superposition' model, suggesting back-stepping/ transgressive stacking of Middle Palembang Fm coal beds)

Hartono, U. (2002)- Permian magmatism in Sumatra: their tectonic setting and magmatic source. J. Geologi Sumberdaya Mineral 12, 129, p. 33-46.
(Permian magmatism in W Sumatra demonstrated by volcanic rocks in Barisan Mts in Palepat and Silungkang areas (= Kuantan-Duabelas Mts Block= Mergui Plate). Tectonic setting debated, Volcanic rocks vary from low-K, medium-K to high-K affinities and consist of basalt, andesite and rhyolite. Low MgO and Ti02, enriched in large ion lithophile elements, light Rare Earth Elements (LREE), etc, indicate subduction zone environment. Magma source peridotitic upper mantle. Origin of rhyolite still unknown; characteristics no relationship to andesite)

Hartono, U., A. Achdan & S. Andi Mangga (1998)- Fractionation process evidences on the Palepat volcanic magmatism in Southern Sumatra. J. Geologi Sumberdaya Mineral, 8, 79, p. 2-9.
(Permian Palepat and Silungkang Fm volcanics are oldest rocks exposed along E flank Barisan Mts in S Sumatra. Three groups: (1) low-K basalt, basaltic andesite and low-medium-K andesites (subduction magmatism); (2) high-K andesite and rhyolite and (3) Low Na andesite and rhyolite (origins of 2 and 3 still unclear, but not co-magmatic with Group 1) (Suparka and Asikin 1981: not result of subduction))

Hartono, U., S. Andi Mangga & A. Achdan (1996)- Geochemical results of the Permian Palepat and Silungkang volcanics, southern Sumatra. J. Geologi Sumberdaya Mineral, 5, 56, p. 18-24.
(Permian Palepat and Silungkang volcanics from SW Sumatra (Kuantan- Duabelas Mts Zone= Mergui Plate of Pulunggono and Cameron, 1984). Predominantly andesitic and basaltic in composition, with minor rhyolites. Previously interpreted as products of melting of continental crust (Suparka & Asikin, 1981), but geochemistry

more typical of subduction-related magmatism, with high Al2O3 and low MgO and Ti02 concentrations. Silungkang volcanics characterised by FeO enrichment typical of tholeiite, Palepat rocks evolved from tholeiitic basalts to calc-alkaline andesites (no localities information or justification of age assigment; JTvG))

Hasibuan, F. (1993)- *Posidonia* dari Sumatera Barat. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1061-1074.
('Posidonia from West Sumatra'. Two varieties of Triassic (Carnian?) marine mollusc Posidonia cf. kedahensis Kobayashi (A and B) from shaly horizon below M-L Triassic Sawahlunto Limestone in two localities NE of Padang, W Sumatra: S of Sawahlunto (E of Lake Singgkarak) and Sulit Air/ Mt Si Karikir (NE of Lake Singkarak). Associated with ammonite Trachyceras (Protrachyceras). Overlain by limestone with mollusc Paleocardita spp.))

Hasibuan, F. (2007)- A study on paleoflora (Permian) of Jambi, South Sumatera. In: Geologi Indonesia: dinamika dan produknya, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 33, 2, p. 135-147.
(Revisit of Mengkarang Fm along Merangin River, W of Bangko, W Jambi, by multi-disciplinary team in 2003. Mengkarang Fm 400m thick, basal basalt overlain by fluviatile system, with marine limestone beds ands shale interbeds containing fusulinids, crinoids, ammonites, and brachiopods. Two plant associations of Jambi Early Permian paleoflora, suggesting one new local and one probable S Cathaysian affinity paleofloral domain)

Hasibuan, F., S. Andi Mangga & Suyoko (2000)- *Stereochia semireticulatus* (Martin) dari Formasi Mengkarang, Jambi, Sumatra. Geol. Res. Dev. Centre, Seri Paleontologi 10, Bandung, p. 59-69.
(Permian brachiopods from Jambi series along Mengkarang River, SW of Bangko, C Sumatra. All belong to Stereochia semireticulatus (Martin), called Productus semireticulatus by Woodward (1879) (reclassified as Stereochia aff. S. irianensis by Crippa et al. 2014) (Sterochia believed to range from Sakmarian- Kungurian; Grant 1976; also known from Bitauni, Timor (Broili 1916) as Productus semireticulatus; JTvG))

Hastuti, E.W.D. (2017)- Geochemical study of pyroclastic rocks in Maninjau Lake, West Sumatra. In: 2nd Int. Conf. Transdisciplinary research on environmental problems in Southeast Asia (TREPSEA), Bandung 2016, IOP Conf. Series, Earth Environm. Science, 71, 012034, p. 1-9.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/71/1/012034/pdf)
(Pleistocene- Holocene pyroclastic deposits in Maninjau area in Barisan Mts range in composition from high-K rhyolite to calc-alkaline andesite)

Hayes, G.P., M. Bernardino, F. Dannemann, G. Smoczyk, R. Briggs et al. (2013)- Seismicity of the Earth 1900-2012, Sumatra and vicinity. U.S. Geol. Survey (USGS) Open File Report 2010-1083-L, 1p.
(online at: http://pubs.usgs.gov/of/2010/1083/l/pdf/OF10-1083_L-508.pdf)

Heesterman, L.J.H. (1984)- Geology and mineralisation of the Mangani Area, West Sumatra, Indonesia. Ph.D. Thesis University of London, p. 1-418.
(online at: https://kclpure.kcl.ac.uk/portal/files/2932475/542393.pdf)
(Mangani gold mine area in E, inactive part of dextral Sumatra Fault Zone, near Bukittinggi. Several new mineralised areas discovered, incl. unexposed lead/zinc mineralisation)

Hehuwat, F. (1977)- The CCOP/ IDOE Sumatra Transect: a summary of activities. Proc. 14th Sess. CCOP, Manila 1977, p. 399-406.

Hertrijana, J., P. Hehuwat, M.L. Jones & B. Harlan (2005)- Martabe high sulphidation gold deposits, North Sumatra. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI), Jakarta, Spec. Issue, p. 59-73.
(PT Newmont Martabe gold district at NW coast of Sumatra, 30 km E of Sibolga. Epithermal high-sulphidation gold mineralization associated with Late Tertiary (Pliocene?) dacite-andesite dome and diatreme complex, W of Sumatra Fault Zone. Epithermal alteration dated as 2.1-3.3 Ma. Basement rocks in area Carboniferous-Permian Tapanuli Gp meta-clastics, intruded by Late Triassic Nagodang Granite (Ar/Ar age 209 Ma), which may be related to 'Jurassic' Sibolga Granite Complex 30km to NW)

Hinz, K. (1980)- Malacca Strait survey 1979. Proc. 17th Sess. CCOP, Bangkok 1980, p. 212-215.

Hirschi, H. (1910)- Geographisch-geologische Skizze vom Nordrand von Sumatra. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 27, p. 741-763.
(online at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015078113365;view=1up;seq=119)
(Early geographic-geological survey of N Sumatra coastal region. Barisan Mts with Permian-Carboniferous rocks, serpentinites and diabase, overlain by folded Tertiary sediments and young volcanics. With 1:800,000 sketch map)

Hirschi, H. (1915)- Geologische Reiseskizze durch das Aquatoriale Sumatra. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 32, p. 476-508.
('Geological travels through Equatorial Sumatra')

Hochstein M.P. & S. Sudarman (1993)- Geothermal resources of Sumatra. Geothermics 22, 3, p. 181-200.

Hogenraad, G.B. (1915)- Een en ander over de mijn ñSalidaò. Technisch Studenten Tijdschrift, Delft, 6, 1, p. 1-12.
(online at: http://lib.tudelft.nl/mscans/mscans1847)
(Review of the Salida gold-silver mine, 70km S of Padang, W Sumatra (see also Hoogenraad 1934))

Holis, Z. & B. Sapiie (2012)- Fractured Basement reservoirs characterization in Central Sumatera Basin, Kotopanjang Area, Riau, Western Indonesia: an outcrop analog study. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 50735, p. 1-4. *(Poster Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/50735holis/ndx_holis.pdf)
(On fracture characterization of basement outcrops (Carboniferous- E Permian Bohorok Fm pebbly mudstone))

Holthausen, E. (1925)- Beitrag zur Kenntnis der Petrographie des Gebietes des Toba-Sees in Nordsumatra. Inaug. Dissertation, Wilhelms Universitat, Munster, p. 1-44.
('Contribution to the knowledge of the petrography of the Lake Toba area in North Sumatra'. Brief petrographic descriptions of rocks collected by Siccama in 1923 along E bank of Lake Toba, mainly from volcanic massif of Prapat: diorites, porphyrites, liparite, andesite, tuff and contactmetamorphic rocks. No maps or figures)

Hoogenraad, G.B. (1934)- De Salida Mijn. De Ingenieur in Nederlandsch-Indie,1, 4, p. IV.3-IV.13.
('The Salida mine'. Authors name misspelled, should be Hogenraad, former mine administrator. Review of operations of Salida gold-silver mine of W Sumatra, 80km S of Padang. First exploited with mixed success by East Indies Company (VOC) in 1669-1735 with miners from Hungary and slaves from Madagascar, then from 1912-1928 by Salida Mining company. Two main ore veins hosted by Oligo-Miocene volcanics and sediments. Peak production in 1917: 427 kg gold, 8633 kg silver)

Hovig, P. (1914)- De goudertsen van de Lebongstreek (Benkoelen). Jaarboek Mijnwezen Nederlandsch Oost-Indie 41 (1912), Verhandelingen, p. 87-276.
('The gold ores of the Lebong area (Bengkulu)'. With detail maps of the 8 principal gold mines. Includes first description of truscottite (Ca-zeolite) from Lebong Donok mine in Bengkulu district. Official name Hövig)

Hovig, P. (1917)- Contactmetamorphe ijzerertsafzettingen in Nederlandsch-Indie. Natuurkundig Tijdschrift Nederlandsch-Indie 77, 3, p. 71-103.
(online at: http://archive.org/details/mobot31753002490198)
('Contact-metamorphic iron ore deposits in Netherlands Indies'. On epithermal iron ore deposits, mainly at contact zones of Salo-Talimbanga, 12km NW of Rante Pao (C Sulawesi), Bukit Rajah at border of Jambi and Palembang provinces (S Sumatra), Lampung, etc.). No maps or figures)

Hovig, P. (1919)- Mijnbouw maatschappij Redjang-Lebong: Rapport uitgebracht over het geologisch onderzoek van het concessie-terrein "Lebong Donok". Ruygrok & Co., Batavia, 76p.

(Report of minerals survey of Lebong Donok terrain near Rejang Lebong gold mine, N of Bengkulu, W Sumatra)

Hu, P., L. Cao, H. Zhang, Q. Yang, Tampubolon Armin & X. Cheng (2019)- Late Miocene adakites associated with the Tangse porphyry Cu-Mo deposit within the Sunda arc, north Sumatra, Indonesia. Ore Geology Reviews 111, 102983, p.
(Quartz diorite porphyry from the Tangse porphyry Cu-Mo deposit in Sumatra emplacement age of 8.7 Ma, is adakite with calc-alkaline affinities. Adakite mainly generated by partial melting of subducted oceanic slab)

Huchon, P. & X. Le Pichon (1984)- Sunda Strait and central Sumatra fault. Geology 12, p. 668-672.
(Right-lateral Central Sumatra fault accommodates oblique subduction and terminates in SE at extensional zone of Sunda Strait)

Huguenin, O.F.U.J. (1854)- Mijnbouwkundig onderzoek der kopererts en in de Residentie Padangsche Bovenlanden. Natuurkundig Tijdschrift Nederlandsch-Indie 6, p. 223-254.
('Mining investigation of the copper ores in the Padang Highlands'. Old report on survey of relatively widespread copper mineralization in Batipo- Kotta's area of Barisan Range (Timboelon, etc.). No maps)

Hundeshagen, L. (1904)- The occurrence of platinum in wollastinite on the island of Sumatra, Netherlands East Indies. Trans. Inst. Mining Metallurgy 13, p. 550-552.
(Singenggu River locality 35 miles from Sibolga, N Sumatra. Occurrence of traces of platinum and gold in wollastonite in limestone lens altered at granodiorite intrusion (skarn) (no peridotites noticed in area))

Hundeshagen, L. (1905)- Coal and gold in Sumatra. Engineering Mining J., March 1905, p. 533- .

Hurukawa, N., B.R. Wulandari & M. Kasahara (2014)- Earthquake history of the Sumatran Fault, Indonesia, since 1892, derived from relocation of large earthquakes. Bull. Seismological Soc. America 104, 4, p. 1750-1762.
(Many shallow right-lateral strike-slip fault earthquakes along Sumatran fault zone. Hypocenter relocations of 27 large earthquakes (M ≥6:0) from 1921-2012 and identification of fault planes of 6 earthquakes of M ≥7:0 s)

Hutchison, C.S. (1989)- Chemical variation of biotite and hornblende in some Malaysian and Sumatran granitoids. Bull. Geol. Soc. Malaysia 24, p. 101-119.
(online at: www.gsm.org.my/products/702001-101309-PDF.pdf)
(Eastern Belt granitoids of Malay Peninsula commonly contain hornblende and biotite. Hornblendes and co-existing biotites equilibrium partitioning of Fe/Mg proving magmatic origin. Aluminium in amphiboles prove epizonal emplacement for E Belt granitoids and even higher sub-volcanic environment for SE province. Known occurrences of amphibole in Main Range are few. Sibolga granite from N Sumatra Permo-Triassic ages (Rb-Sr 247± 24 Ma, most K-Ar ages 215 Ma, Late Triassic) S-type granite, but no known tin association. Hornblende of Sumatran plutons suggest shallow emplacements with crystallization pressures < ~2.4 kb)

Imtihanah (2000)- Isotopic dating of igneous sequences of the Sumatra Fault System. M.Sc. Thesis, London University, p. 1-150. *(Unpublished)*

Imtihanah (2004)- 40Ar/39Ar geochronology of rocks affected by the Sumateran fault system (SFS) collected from West-Central Sumatra. J. Sumber Daya Geologi 14, 3 (147), p. 16-31.
(Ar/Ar dating of 3 granitoid plutons near Sumatra Fault zone: 1) Sulit Air biotite-hornblende granodiorite, SE of Ombilin, intruding folded Permian limestones: 193-192 Ma (E Jurassic) (K-Ar ages by McCourt and Cobbing, 1993) (200-180 Ma and 150-140 Ma), (2) Lassi granite-granodiorite, E of Solok: 56-54.8 Ma (E Eocene) (previous K-Ar ages ~57-53 Ma); and (3) Lolo biotite-hornblende granodiorite (mainly 9-5.6 Ma; one biotite granite sample ~15 Ma) (previous K-Ar ages ~11-5 Ma))

Imtihanah (2005)- A petrographic study of igneous rocks from western part of Central Sumatra and their suitability for 40Ar/39Ar dating (a preliminary study). J. Sumber Daya Geologi 15, 1 (148), p. 26-37.

(Petrography of granites along Sumatra Fault Zone, from Ombilin (muscovite granodiorite, E of Lake Singkarak), Sulit Air (hornblende granodiorite; intruded into folded Permian limestones), Lassi Pluton, Lolo Pluton (biotite-hornblende granodiorite) and Sungaipenuh areas)

Imtihanah (2005)- Rb/Sr geochronology and geochemistry of granitoid rocks from Western part of Central Sumatra. J. Sumber Daya Geologi 15, 2 (149), p. 103-117.
(Radiometric ages of three western C Sumatra granitoid plutons: (1) Sulit Air (~192 Ma; E Jurassic; previous analyses 202 Ma and 200-180 Ma); (2) Lassi (55-52.2 Ma; Eocene)(= much younger than 122 Ma of Katili 1973, but in line with 52-57 Ma ages in McCourt & Cobbing 1993; JTvG) and (3) Lolo (K-Ar and Rb-Srages 15.1- 5.8 Ma; M-L Miocene). All calk-alkaline and with Sr isotopes suggesting similar source)

Indrajat, B., I. Bruce, H. Hardian, S. Prabowo & M.M. Sinaga (2009)- The geology and mineralization of the sedex and MVT deposits of the Dairi District, North Sumatra, Indonesia. Geologi Ekonomi Indonesia, 6, 1, p. 22-36.
(Sedimentary exhalative style mineralisation in Permo-Carboniferous Tapanuli Gp of Sopokomil dome of Dairi Regency)

Irwansyah, Panuju, D. Kurniadi & Y. Helmi (2017)- Paleogene bioevents in the Pematang Group, Central Sumatera Basin, Rokan Block Area, Riau. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(M Eocene- Oligocene palynology of Pematang Gp of C Sumatra. Pematang Gp not older than Proxapertites operculatus zone to not younger than Meyeripollis naharkotensis subzone)

Iskandar, E.A.P., I.M. van Waveren & J.H.A. van Konijnenburg-van Cittert (2006)- Pecopterids from the Lower Permian of Jambi Sumatra. Trans. Royal Soc. Scotland, p.

Ivey, J.H. (1904)- Notes on the Redjang-Lebong mine, Sumatra. Trans. Inst. Mining Metallurgy 12, p. 340-347.

Jansen, P.J. (1903)- Verslag ener geologisch- mijnbouwkundige verkenning der Atjeh-Vallei gedurende het jaar 1902. Jaarboek Mijnwezen Nederlandsch-Indie 32 (1903), p. 179-184.
('Report of a geological-mining reconnaissance in the year 1902'. Brief report on geologic reconnaissance in valley of Aceh River, N Sumatra. All Tertiary sediments with some limestones, but no coal beds. With 1:200,000 color geologic map and cross-sections)

Jansen, P.J., B.B. Lindberg & H. Wolvekamp (1922)- Ertsonderzoekingen in Atjeh en onderhoorigheden, samengesteld naar de verslagen van mijningenieurs P.J. Jansen, B.B. Lindberg en H. Wolvekamp. Jaarboek Mijnwezen Nederlandsch-Indie 48 (1919), Verhandelingen 1, p. 130-162.
(Ore investigations in Atjeh and dependencies composed after the reports of mining engineers P.J. Jansen (1900-1901), B.B. Lindberg (1916-1917) and H. Wolvekamp (1917-1919. Brief review of contact-metamorphic iron ore and Tertiary-alluvial gold occurrences in Aceh, particularly the West coast. Conclusion: no commercial deposits encountered)

Jaxybulatov, K., N.M. Shapiro, I. Koulakov, A. Mordret, M. Landes & C. Sens-Schonfelder (2014)- A large magmatic sill complex beneath the Toba caldera. Science 346, 6209, p. 617-619.
(Size and level of maturity of large volcanic reservoir estimated from radial seismic anisotropy (ambient-noise tomography) below Toba caldera, N Sumatra. Many partially molten sills present in the crust below 7 km)

Jobson, D.H., C.A. Boulter & R.P. Foster (1994)- Structural controls and genesis of epithermal gold-bearing breccias at the Lebong Tandai Mine, western Sumatra, Indonesia. J. Geochemical Exploration 50, p. 409-428.
(Lebong Tandai Neogene low-sulphidation, volcanic-hosted epithermal gold deposit in foothills of Barisan Mts)

Johari, S. (1988)- Geochemistry and tin mineralisation in northern Sumatra, Indonesia. In: C.S. Hutchison (ed.) Geology of tin deposits in Asia and the Pacific, Selected papers from Int. Symp. Geology of tin deposits, Nanning, China, 1984, Springer Verlag, Heidelberg, p. 541-556.

(Two areas in N Sumatra identified with cassiterite tin mineralization: Mabundar-Kutacane and Hatapang Rantau Prapat (SE of Lake Toba; K-Ar age ~76-78 Ma). Both areas are underlain by Carboniferous-Permian sediments, intruded by Late Cretaceous granites. Hatapang pluton mainly coarse-grained porphyritic biotite granites, of 'S' or ilmenite-type. They resemble 'Western Belt' granites in Phuket Cretaceous? tin granite zone of Thailand)

Johnson, C.C., W.J. McCourt & Suganda (1993)- A report on the geochemistry of stream sediment samples and simplified geology of the Palembang Quadrangle (1033). Direct. Mineral Resources/ British Geol. Survey, Bandung, Spec. Publ. 56-A, p. 1-32.
(No known metalliferous occurrences in Palembang Quadrangle, S Sumatra)

Jones, S.C. (2007)- The Toba supervolcanic eruption: tephra-fall deposits in India and paleoanthropological implications. In: M.D. Petraglia & B. Allchin (eds.) The evolution and history of human populations in South Asia, Springer, p. 173-200.
(Youngest Toba Tuff (74 ka) occurrences documented in river valleys throughout Indian subcontinent, ranging in thickness from 0.2-6m (probably thickened due to reworking and redeposition). May have caused mass human extiction. Fossil evidence suggests human colonization of India took place soon after Toba event)

Jongmans, W.J. (1937)- The flora of the upper Carboniferous of Djambi (Sumatra, Netherl. India) and its possible bearing on the paleogeography of the Carboniferous. Compte Rendu 2nd Int. Congress on Carboniferous Stratigraphy and Geology, Heerlen 1935, 1, p. 345-362.
(Abbreviated, English version of Jongmans and Gothan (1925) monograph on new material of E Permian Jambi flora)

Jongmans, W.J. & W. Gothan (1925)- Beitrage zur Kenntnis der Flora des Oberkarbons von Sumatra. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 279-303.
('Contributions to the knowledge of the flora of the Upper Carboniferous of Sumatra'. First report on classic Early Permian 'Jambi flora' of W Sumatra: 80 species, incl. 14 Pecopteris spp., Taenopteris, Sphenophyllum, etc. Interpreted here as Upper Carboniferous age (but Posthumus (1927) and subsequent workers all assigned it to Early Permian) and of 'European' affinity, with no relations to Gondwana flora. See also Jongmans & Gothan (1935) and papers by Booi. Van Waveren, etc.)

Jongmans, W.J. & W. Gothan (1935)- Die Ergebnisse der palaobotanischen Djambi-Expedition 1925. 2. Die palaeobotanischen Ergebnisse. Jaarboek Mijnwezen Nederlandsch-Indie (1930), 59, Verhandelingen 2, p. 71-201.
('The results of the 1925 paleobotanic Jambi expedition, 2. The paleobotanic results'. Additional Permian plant fossils of 'Jambi Flora', collected by 1925 Djambi Expedition, led by Zwierzycki and Posthumus. Two plant-bearing horizons in thick tuff-sandstone-shale series, ~100 and 250m above lowest fossil-rich limestone bed (= 'Productus Limestone' of Tobler?). Age of plant fossils here still regarded as 'Upper Carboniferous' instead of more likely E Permian age. Presence of typical low-latitude 'Cathaysian' species including Sphenopteris, Pecopteris, Taeniopteris, Gigantopteris, etc.; no Gondwana elements (NB: Asama et al. (1975) argued only limited % of Cathaysian species in Jambi flora. Two species described here as Gigantopteris not true Cathaysian Gigantopteris; see also Zwierzycki 1935, Van Waveren et al. 2007; JTvG)

Jongmans, W.J. & W. Gothan (1935)- Permo- karbonische Flora auf Sumatra, Niederl. Indien. Acta Pontificiae Academiae Scientiarum Novi Lyncaei (Vatican) 88, 2, p. 54-63.

Justesen, P.Th. (1920)- De Goenoeng Merapi in de Padangse Bovenlanden. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 37, p. 181-194.
('Mount Merapi in the Padang Highlands')

Kadir, W.G.A., S. Sukmono, M.T. Zen, L. Hendrajaya & D. Santoso (1996)- Gravity evidence for the thinning of the crust around the North Sumatra area. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 81-91.
(Structural discontinuity around N Sumatra effect of split in descending oceanic plate along continuation of Investigator Ridge Transform Fault. Discontinuity reflected by sharp change of Sumatra Fault, volcanic line offset and major changes to strike of Batee fault and Batee trench. Area around discontinuity low gravity anomaly with higher anomaly in center, indicating low density body of mantle material intruded by higher density igneous material in center. Gravity model pattern reflects thinning of crust beneath N Sumatra due to regional tensional stresses of mantle depth at ~20 km depth)

Kanao, N. et al. (1971)- Summary report on the survey of Sumatra, Block No. 5. Japanese Overseas Mineral Development Company Ltd., Bull. N.I.G.M. 2, p. 29-31.
(Wayzer et al. 1991: K/Ar date of W Sumatra Manunggul Granite batholith 87.0 Ma (Late Cretaceous))

Kastowo, G.W. Leo, S. Gafoer & T.C. Amin (1996)- Geological map of the Padang Quadrangle (0715), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung
(2nd ed. of 1973 map. Geologic map of W coast of Sumatra, N of Padang.With Quaternary Maninjau crater lake and Merapi volcano. Old rocks in NE corner Permo-Carboniferous metamorphics (equivalent of phyllite Mb of Kuantan Fm) and E-M Permian carbonates N of Padang with fusulinids (Neoschwagerina, Verbeekina, Chusenella) (Limestone Mb of Kuantan Fm), associated with minor serpentinite in fault zone. Cretaceous granite SE of Singkarak dated as 112± 24 Ma by Katili, 1962)

Katili, J.A. (1960)- Geological investigations in the Lassi granite mass (Central Sumatra). Doct. Thesis Inst. Teknologi Bandung (ITB), p. 1-127. *(Unpublished)*

Katili, J.A. (1962)- On the age of the granitic rocks in relation to the structural features of Sumatra. In: G.A. MacDonald & H. Kuno (eds.) The crust of the Pacific Basin. American Geophys. Union (AGU) Mon. 6, p. 116-121.
Most granites of Sumatra post-Triassic and pre-Tertiary in age, but some granites in S Sumatra of Cretaceous age. In C Sumatra only one definite unconformity between Triassic and Tertiary deposits. No accurate age of folding can be established from field data. Radiometric age of Lassi granites in C Sumatra 112 ± 24 Ma, mid-Cretaceous= tied to folding?)

Katili, J.A. (1964)- On the Sumatran nappe hypothesis. Rept. 22nd. Session Int. Geological Congress, New Delhi 1964, Sect. 4, p. 134-147.
(Argues against nappe structures of Sumatra basement, as proposed by Tobler)

Katili, J.A. (1968)- Permian volcanism and its relation to the tectonic development of Sumatra. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 1, 1, p. 3-13.
(online at: http://jrisetgeotam.com/index.php/NIGM/article/view/3-13/156)
(Also reprinted in in "Geotectonics of Indonesia- a modern view', Bandung 1980. (Extensive Permian volcanics SE of Lake Singkarak. Named Silungkang Fm, ~1000m thick, mainly flows of hornblende and augite andesites (= 'diabase' of Verbeek 1883), with calcareous member of thin-bedded limestone-shale in tuffs with Upper Permian fusulinids Doliolina lepida, Pseudofusulina padangensis, Neoschwagerina multiseptata and Fusulinella lantenoisi. Local contact metamorphism around mid-Cretaceous Lassi granites, simultaneous with main folding phase of region)

Katili, J.A. (1969)- Permian volcanism and its relation to the tectonic development of Sumatra. Bull. Volcanologique 33, 2, p. 530-540.
(Same paper as above. Permian volcanics cover extensive area SE of Lake Singkarak, C Sumatra. In Permian C Sumatra was elongated marine with thick sequence of bathyal and neritic sediments. Volcanic products mainly flows of hornblende and augite andesites with their tuffs. Main phase of folding at ~120 Ma, accompanied by emplacement of granitic rocks. Uplift in younger Cretaceous time, followed by erosion. 'Unusual andesitic character of geosynclinal volcanism')

Katili, J.A. (1969)- Large transcurrent faults in Southeast Asia, with special reference to Indonesia. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 2, 3, p. 1-20.
(Large wrench fault systems in Indonesia include the 1650km long NW-SE trending dextral Great Sumatra Fault zone (= Semangko Fault of Van Bemmelen), sinistral Palu-Koro Fault ('Fossa Sarasina') of Sulawesi, sinistral Sorong Fault Zone of West Papua)

Katili, J.A. (1970)- Additional evidence of transcurrent faulting in Sumatera and Sulawesi. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 3, 3, p. 15-28.
(Additional observations on dextral Great Sumatra Fault Zone and sinistral Palu-Koro Fault of Sulawesi)

Katili, J.A. (1970)- Large transcurrent faults in Southeast Asia, with special reference to Indonesia. Geol. Rundschau 59, 2, p. 581-600.
(Same as Katili 1969)

Katili, J.A. (1970)- Naplet structures and transcurrent faults in Sumatra. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 3, 1, p. 11-28.
(Disputes major nappe structure of Sumatra Pre-Tertiary, as proposed by Tobler 1917, etc. Djambi nappe is small overthrust (naplet) along minor transcurrent fault associated with Great Sumatran Fault zone)

Katili, J.A. (1973)- Geochronology of West Indonesia and its implication on plate tectonics. Tectonophysics 19, p. 195-212.
(Radiometric age dates from Sumatra, Java, Natuna, etc.)

Katili, J.A. (1974)- Sumatra. In: A.M. Spencer (ed.) Mesozoic-Cenozoic orogenic belts, Geol. Soc., London, Spec. Publ. 4, p. 317-331.
(Brief review of Sumatra geology. Oldest known rock are of Permo-Carboniferous age, deposited in elongated marine basin, in which thick sequence of bathyal and neritic sediments was deposited. Pelitic sediments dominated, but also volcanic activity, at first mainly tuffs, but later also andesitic lavas, which alternated with thin limestone and shale. Triassic dominantly shale and sandstone in M. Triassic, mainly limestone and marl in U Triassic. In Gumai Mts. volcanic activity continued till E Cretaceous, when volcanic breccias andesitic lava flows formed in alternation with limestones. Main phase of folding in M Cretaceous, when all pre-Tertiary pelitic rocks deformed into isoclinal folds, accompanied by emplacement of granitic and granodioritic rocks. Uplift in younger Cretaceous. Old Andesites in Oligo-Miocene, etc.)

Katili, J.A. & F. Hehuwat (1967)- On the occurrence of large transcurrent faults in Sumatra, Indonesia. J. Geoscience Osaka City University 10, 1, p. 5-17.
(Several geologic features suggesting 20-25km right-lateral slip along Sumatra fault zone)

Katili, J.A. & Kamal (1961)- Laporan sementara mengenai geologi daerah Ombilin pesisir utara Danau Singkarak. Proc. Inst. Teknologi Bandung 1, 1, p. 5-23.
(online at: http://journal.itb.ac.id/index.php?li=article_detail&id=836)
('Interim report on the geology of the Ombilin area N of Lake Singkarak'. Thick (~1000m) Permian volcanic Silungkang Fm, with M-U Permian fusulinid limestone intercalations near top and overlain by 375m thick Triassic limestone, overlain by Oligo-Miocene clastics. Permian fusulinids identified by P. Marks as Doliolina lepida, Pseudofusulina padangensis, Neoschwagerina multiseptata, Fusulinella lantenoisi. Triassic limestones with Myophoria verbeeki, Cardita, etc. Silungkang Fm correlated wtth similar sedimentary-volcanic series with fusulinids of Gk. Gie Si Top Top and Lake Air Tawar in N Sumatra. No Pre-Permian granites at Guguk Bulat: arkosic rocks there part of Tertiary quartz sandstone formation, resulting from weathering of granite of possible Cretaceous age (area also surveyed by Verbeek (1883), Volz (1904), Musper (1930), etc.))

Kato, M., D. Sundari, T.C. Amin, D. Kosasih, S.L. Tobing et al. (1999)- A note on the reconfirmation of Lower Carboniferous age of the Agam River limestone of the Kuantan Formation, West Sumatra. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 9, p. 53-61.

(Corals in massive oolitic Kuantan Fm limestone in Agam River in Padang Highlands E of Bukittingi include corals Michelina, Cyathaxonia, Clisiophyllum and algae Koninckopora. Confirm E Carboniferous (Visean) age (see also Metcalfe 1983, Fontaine and Gafoer 1989)

Kavalieris, I., D.J. Turvey & L.J.L. Heesterman (1987)- The geology and mineralization of the Mangani Mine, Sumatra, Indonesia. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 221-225.
(Historically important but small Mangani gold-silver mine was discovered in 1907, exploited between 1912-1931 and 1940-1941. Located along splay of NW-SE trending Sumatran Fault System. Mineralization young low sulfur type epithermal system, hosted by Tertiary andesite)

Keats, W., N.R. Cameron, A. Djunuddin, S.A. Ghazali, H. Harahap, W. Kartawa, H. Ngabito, N.M.S. Rock & R. Whandoyo (1981)- The geology of the Lhokseumawe Quadrangle (0521), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Basal Late Permian- Triassic Uneun Unit slate and meta-limestones, overlain by Eocene- Pliocene sediments)

Kemmerling, G.L.L. (1921)- Vulkanen en vulkanische verschijnselen in de Residentien Sumatraȏs Westkust (noordelijke deel) en Tapanoeli. Dienst Mijnwezen Nederlandsch Oost-Indie, Vulkanologische Meded. 1, p. 1-93.
('Volcanoes and volcanic features in the Residencies West Coast (N part) and Tapanuli'. Descriptions of volcanic features and rocks of active volcanoes in Lake Maninjau area, G. Tandikat, G. Merapi, G. Sorik Merapi, G. Talamau)

Kertapati, E.K. (1984)- Penelitian seismotektonik Teluk Lampung dan sekitarnya. Proc. 13th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 65-96.
('Investigation of seismotectonics of Lampung Bay and surroundings')

Kieft, C. & I.S. Oen (1973)- Ore minerals in the Telluride-bearing gold-silver ores of Salida, Indonesia, with special referenc to the distribution of Selenium. Mineralium Deposita 8, 4, p. 312-320.
(Epithermal gold-silver deposits of old Salida mine, N of Painan, SW Sumatra, were exploited in 1669-1735 and 1914-1928. Ores hosted in two quartz veins in Miocene andesites. With carbonate and sulfidic diffusion bands in quartz incrustations. Earliest or inner zone with concentrations of Zn, Cu, Fe, S (sphalerite, chalcopyrite, pyrite); intermediate zone with concentrations of Pb, Au, Ag, S, Te, Se (galena and Au-Ag-tellurides in Te-bearing parageneses; galena, electrum and acanthite in Te-free parageneses); and zone of As-bearing minerals (tennantite, enargite or luzonite, arsenpolybasite)

Kieft, C. & I.S. Oen (1977)- Ore mineral parageneses in Mn-Sn-Ag-Au-Se-bearing veins of Mangani, Sumatra, Indonesia. In: B. Bogdanov et al. (eds.) Problems of ore deposition, Proc. 4th Symp. Int. Assoc. Genesis of Ore Deposits (IAGOD) 2, Varna 1974, Publ. House Bulgarian Acad. Sci., Sofia, 2, p. 295-302.
(Incl. unusual occurence of tin (as stannite))

Kimpe, W.F.M. (1944)- De eruptiva van het Siboemboen-gebergte en hun contactgesteenten (Padangsche Bovenlanden, Sumatra). Doct. Thesis University of Amsterdam, p. 1-141.
(The volcanic rocks of the Sibumbum Mountains and their contact rocks (Padang Highlands, Sumatra)'. Descriptions of igneous rocks collected by Brouwer in 1913 from area E of Lake Singkarak and W of Ombilin River. Mainly granodiorite massif, with low-metamorphic older sedimentary rocks (unfossiliferous, thermally altered Late Paleozoic?- E Mesozoic marbles, hornfels) and Tertiary clastics)

Klein, W.C. (1916)- On a trilobite fauna of presumably Devonian age in the Dutch East Indies near Kaloee, Tamiang District, S.E. Atjeh. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 18, 2, p. 1632-1636.
(online at: www.dwc.knaw.nl/DL/publications/PU00012632.pdf)
(English version of 'Een vermoedelijk Devonische trilobietenfauna in Nederlandsch-Indie nabij Kaloee (afdeeling Tamiang, Z.O. Atjeh'. Discovery of presumably Devonian limestones with trilobites W of Kaloee on Simpang Kiri River, SE Aceh, in 190m thick, weakly folded limestone-shale succession. Trilobite probably of

genus Proetus. Associated with brachiopods, corals and crinoids. No map or illustrations. Trilobite subsequently determined to be Permian in age by Tesch, 1916)

Klein, W.C. (1917)- Voorloopige mededeeling over de geologie van den oostoever van het Tobameer in N.-Sumatra. Natuurkundig Tijdschrift Nederlandsch-Indie 77, 3, p. 206-216.
(online at: http://archive.org/details/mobot31753002490198)
('Preliminary communication on the geology of the eastern shore of Lake Toba, N Sumatra'. Two amphibole-biotite granite massifs intruded into highly folded Paleozoic limestones and slates, overlain by little- folded ?Eocene quartz sandstones, liparite tuffs and andesite intrusives. Old lake terraces up to 250m above present lake level. No maps or figures)

Klein, W.C. (1918)- De Oostoever van het Toba-meer in Noord-Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen 1, p. 136-187.
('The eastern banks of Lake Toba in North Sumatra'. Geologic description of poorly known eastern shores of Lake Toba, with 1:200,000 geologic map)

Klompe, Th.H.F. (1954)- On the supposed Upper Paleozoic unconformity in North Sumatra. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 111, p. 151-165.
(No obvious Paleozoic- Mesozoic unconformity along NE shore lake Toba, but folded Upper Triassic shales-limestones unconformably overlain directly by Paleogene conglomerates, E Miocene marine shale, etc.)

Klompe, Th.H.F. (1955)- On the supposed Upper Paleozoic unconformity in North Sumatra. Leidsche Geol. Mededelingen 20, p. 120-134.
(online at: www.repository.naturalis.nl/document/549364)
(Same paper as above. No indications for occurrence of Variscian phase of diastrophism in area of N Sumatra, etc., until we reach E part of Malaya Peninsula (vague indications for stronger movements) and E Thailand (sufficient evidence for Saalian phase of Variscian orogeny)

Knight, M.D., G.P.L. Walker, B.B. Ellwood & J.F. Diehl (1986)- Stratigraphy, paleomagnetism, and magnetic fabric of the Toba tuffs: constraints on the sources and eruptive styles. J. Geophysical Research 91, B10, p. 10355-10382.
(Toba depression in N Sumatra is complex of overlapping calderas resulting from 3 major eruptions. Welded tuffs of Samosir and Uluan different magnetic polarities, so at least two different ignimbrites present. First ignimbrite eruption at 0.84 Ma produced >400 m densely welded unit with reversed polarity. Second ignimbrite normally magnetized. At ~0.075 Ma last and largest ignimbrite eruption from calderas in N and S parts of Toba depression, with ignimbrite mostly non-welded and normally magnetized)

Kobayashi, T. & K. Masatani (1968)- Upper Triassic *Halobia* (Pelecypoda) from North Sumatra with a note on the *Halobia* facies in Indonesia. Japanese J. Geology Geography 39, 2-4, p. 113-123.
(Halobia thin-shelled deeper marine bivalves known from N Sumatra since Volz (1899). Two new localities of Halobia shale: (1) Prapat, Lake Toba area 'Kualu clay-slate' with ?lower Carnian bivalves Halobia tobaensis n.sp. and H. kwaluana Volz; (2) Simaimai tributary of Belumai River in Deli county S of Medan: probably Norian-age Halobia simaimaiensis n.sp. (advanced form of H. norica). Carnian-Norian four zones based on Halobia species. In Lake Singkarak region also Norian with Myophoria (Costatoria) myophoria, similar to Singapore assemblages)

Koesoemadinata, R.P. & S. Sastrawiharjo (1988)- Uranium prospects in Tertiary sediments in the Sibolga area, North Sumatera. In: Proc. Conf. Uranium deposits in Asia and the Pacific; geology and exploration, Jakarta 1985, Int. Atomic Energy Agency (IAEA), Vienna, IAEA-TC-543/9, p. 121-140.
(Small 'Wyoming-type' uranium anomalies in Paleogene Sibolga Fm sediments, adjacent to Triassic granites (206-257 Ma; with 20-50 ppm uranium), Sibolga area, N Sumatra. Sibolga Granite age 201-216 Ma; Late Triassic))

Koolhoven, W.C.B. & W.A.J. Aernout (1928)- De afzettingen van Simau (Res. Benkoelen). De Mijningenieur 9, p. 150-163 and p. 177-187.
('The deposits of Simau, Residency of Bengkulu'. On gold-silver deposits in Simau (= Lebong Tandai) mine area, SW Sumatra. These mines were in production by 'Mijnbouw Maatschappij Simau' from 1910-1941 and connected to outside world only by 30km narrow guage rail line)

Koulakov, I., E. Kasatkina, N. Shapiro, C. Jaupart, A. Vasilevsky, S. El Khrepy, N. Al-Arifi & S. Smirnov (2016)- The feeder system of the Toba supervolcano from the slab to the shallow reservoir. Nature Communications 7, 12228, p. 1-12.
(online at: www.nature.com/ncomms/2016/160719/ncomms12228/pdf/ncomms12228.pdf)
(Toba Caldera site of several recent, large explosive eruptions, including world's largest Pleistocene eruption 74,000 years ago. Major cause may be subduction of fluid-rich Investigator Fracture Zone under continental crust of Sumatra and possible tear of slab. Seismic tomography model shows multi-level plumbing system. Large amounts of volatiles originate in subducting slab at of ~150 km depth, migrate up and cause melting in mantle wedge. Volatile-rich basic magmas accumulate at base of crust in a ~50,000 km3 reservoir. Overheated volatiles continue ascending through crust, cause melting of upper crust rocks, leading to shallow crustal reservoir responsible for supereruptions)

Koulakov, I., T. Yudistira, B.G. Luhr & Wandono (2009)- P, S velocity and VP/VS ratio beneath the Toba caldera complex (Northern Sumatra) from local earthquake tomography. Geophysical J. Int. 177, 3, p. 1121-1139.
(online at: https://academic.oup.com/gji/article/177/3/1121/625322)
(Local seismicity data beneath Lake Toba caldera and other volcanoes suggest negative P- and S-velocity anomalies of 18% in uppermost layer, 10-12% in lower crust and ~7% in uppermost mantle. At depth of 5 km beneath active volcanoes, small patterns (7-15 km size) with high VP/VS ratio that might be magma chambers with partially molten material. In mantle wedge vertical anomaly with low P and S velocities and high VP/VS ratio that link cluster of events at 120-140 km depth with Toba caldera, possibly image of ascending fluids/ melts released from subducted slab)

Kristanto, A.S. (1991)- Structural analysis of the Sumatran Fault Zone around the Semangka Bay. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 354-375.
(Fault movements along Semangka segment of right-lateral Sumatra fault in Lampung intermittently active in at least 3 periods: (1) E-M Miocene NNE-SSW compression, creating Tabuan island, (2) Late Miocene? NE-SW extension creating Semangka Bay pull-apart structure; (3) E Pliocene (~5 Ma) WNW-ESE extension)

Krumbeck, L. (1914)- Obere Trias von Sumatra (Die Padang-Schichten von West-Sumatra nebst Anhang). Palaeontographica Suppl. IV, Beitrage Geologie Niederlandisch-Indien II, 3, p. 195-266.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('Upper Triassic of Sumatra (The Padang Beds of West Sumatra)'. With review of geologic setting of Triassic beds E of Lake Singkarak in Padang Highlands by Verbeek (Triassic overlies Permocarboniferous granites, clastics and fusulinid limestones, described by Volz 1904, and overlain by Eocene sandstones of Ombilin Basin). Stratigraphy- paleontology of >210m thick U Triassic Padang beds from two main localities, Lurah Tambang and Bukit Kandung/Katialo. Poorly fossiliferous clastics with four layers of dark, marly fossiliferous, bituminous platy limestones, rich in thick-walled bivalves that look related to Carnian North Alpine 'Cardita facies': 38 species, incl. Pecten (Aequipecten) verbeeki, Myophoria myophoria, Cardita globiformis, Cassianella verbeeki n.sp., Gervilleia bouei, Pinna blanfordi, Halobia sumatrana n.sp., etc.. Most similar to fauna from Napeng Beds of Upper Myanmar as described by Healy (1908). (Also similar to Jurong Fauna of Singapore; Kobayashi & Tamura 1968) (Some species described earlier by Boettger 1881, but erroneously assigned E Eocene age; JTvG) (Absence of Misolia, despite same age as Fogi Beds of Buru?; JTvG))

Kugler, H. (1921)- Geologie des Sangir-Batangharigebietes (Mittel-Sumatra). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, 4, p. 135-201.
('Geology of the Sangir- Batang Hari area (Central Sumatra)'. (also as Dissertation Universitat Basel). Geology of S part of Padang Highlands, N of Korinci volcano. Literature compilation and descriptions of rocks

collected by Tobler in 1909. Metamorphic rocks of 'Schieferbarisan'. In Vorbarisan 'old diabase' with Permian fusulinid-crinoid limestones, Late Triassic limestones with molluscs Cardita aff. globiformis, Nucula, Gervilleia and Loxonema, granites, , peridotites, etc.. With 1:200,000 geologic compilation map)

Kuntz, J. (1936)- Rapport over een onderzoek van de goudmijnen der Mijnbouw Maatschappij Redjang Lebong. In: Rapporten betreffende geologische onderzoekingen in opdracht van de Directie der Mijnbouw Maatschappij Redjang-Lebong, Batavia, p. 23-36.
('Report on an evaluation of the gold mines of the Redjang Lebong mining company'. Lebong Donok ore body is Au-Ag bearing quartz vein, >20m thick, at contact between dacite body and Miocene shales and sands, dipping ~75°NE. Lebong Simpang mine 30km SSE of Lebong Donok, with two near-vertical, NNE-SSW trending main ore bodies)

Kuntz, J. (1937)- Das Problem Redjang Lebong. Zeitschrift Praktische Geologie 45, p. 167-171.
('The Rejang Lebong problem'. On structure and mineralization of Rejang Lebong gold deposit, Bengkulu District, W Sumatra)

Kurnio, H. (2019)- Geochemical characteristics of Sunda volcanic arc in Sumatra and Andaman. Indonesian J. Geoscience 6, 1, p. 1-16.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/410/274)
(Geochemical characteristics of volcanics of Weh Island (Aceh), Tabuan (Semangko Bay) and Andaman Islands).

Kurnio, H., U. Schwarz-Schampera & M. Wiedicke (2008)- Structural geological control on the mineralization on Tabuan Island, Semangko Bay, South Sumatera, Indonesia. Bull. Marine Geol. 23, 1, p. 18-25.
(online at: http://isjd.lipi.go.id/admin/jurnal/231081825.pdf)
(Basaltic-andesitic volcanics of Late Oligocene- earliest Miocene Hulusimpang Fm distributed in broad zone along Semangko Fault zone and are hosts for several epithermal-style gold deposits. Mineralization on Tabuan island in Semangko Bay, SE Sumatra, with moderate enrichments in Au, Ag, Zn, Pb, Cu, As, Sb, Ba, and Mn. Normal faults and margins of grabens may have acted as fluid channelling structures)

Kusnama (2005)- Stratigrafi daerah Toba-Samosir, Sumatera Utara. J. Sumber Daya Geologi 15, 2 (149), p. 31-48.
('Stratigraphy of the Toba-Samosir area, N Sumatra'. Area in Barisan magmatic arc and Sumatera back arc. Paleozoic Tapanuli Group with Pangururan Fm slate, marble, and mudstone and glacial Late Carb.- E Permian Bohorok Fm conglomeratic sandstone with schist, quartzite, granitic rocks, marble and quartz fragments, ~600m thick. Unconformably overlain by Triassic Sibaganding Fm bioclastic limestone (~750m?) and Late Triassic Kualu Fm clastics with Halobia and andesitic clasts (~500m). Tertiary consists of Oligo-Miocene Parapat Fm clastics, M-L Miocene Haranggaol Fm welded tuff and pyroclastics and Plio-Pleistocene Simbolon and Takur-Takur Fm. Pyroclastic and lava rocks (incl. 'Toba Tuffs') are youngest rock units (Paleozoic- Mesozoic typical 'Sibumasu' succession; JTvG))

Kusnama & S. Andi Mangga (2007)- Perkembangan geologi dan tektonik Pretersier pada mintakat Kuantan Pegunungan Dua Belas dan mintakat Gumai-Garba, Sumatera Bagian Selatan. J. Sumber Daya Geologi 17, 6 (162), p. 370-384.
('Geological and tectonic development of the Pre-Tertiary in the Kuantan Duabelas Mountains zone and the Gumai-Garba zone, S Sumatra'. Kuantan-Duabelas Mts terrane Carboniferous-Triassic metamorphics intruded by Permian and E Jurassic granitoids. Presence of E-M Permian Cathaysian fusulinids and floras. Gumai-Garba terrane is Jurassic-Cretaceous melange intruded by late Cretaceous granitoids)

Kusnama, R. Pardede, S. Andi Mangga & Sidarto (1992)- Geologic map of the Sungaipenuh and Ketaun sheets, Sumatra, 1: 250.000, 2nd Edition. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet of West coast of C Sumatra, S of Kerinci Lake.Mainly Tertiary- Quaternary volcanics and granodiorites. In NE corner thick Jurassic Asai Fm flysch-type metasediments with Nagan hornblende

granodiorite (E Eocene~51-55 Ma). At NE-most corner, across Sumatra Fault Zone? Permian Palepat Fm andesitic lavas and tuffs intruded by Tantan Granodiorite (Late Triassic- E Jurassic?))

Kusnanto, B. & S. Hughes (2014)- Geology and mineralization of Beutong copper deposit, Nagan Raya, Aceh. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 245-269.
(Beutong porphyry copper deposit ~60 km NE of Meulaboh, Aceh. Two mineralized Cu-Mo-Au porphyry centers in E Pliocene (~4.2 – 4.6 Ma) Beutong Intrusive Complex, into Jurassic-Cretaceous Woyla Gp, which includes NW-SE-trending dismembered ophiolite slivers. Overprinted by high sulphidation epithermal event)

Lange, E. (1925)- Eine mittelpermische Fauna von Guguk Bulat (Padanger Oberland, Sumatra). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 7, 3, p. 213-295.
('A Middle Permian fauna from Guguk-Bulat, Padang Highlands, Sumatra'. Famous M Permian reefal limestone locality in Padang Highlands near Lake Singkarak, first decribed as Carboniferous by Volz 1904. Re-sampled by Tobler in 1909. Bivalves, cephalopods and trilobitese absent. Mainly description of 79 species of foraminifera (incl. 18 fusulinid species of Fusulinella, Verbeekina, Doliolina, Neoschwagerina), colonial corals (incl. massive Waagenophyllidae, Lonsdaleia) and 8 brachiopod species (= part of 'Cathaysian' West Sumatra block of Barber et al. (2005); JTvG))

Laumonier, Y. (1997)- The vegetation and physiography of Sumatra. Geobotany 22, Kluwer, p. 1-227.
(Overview of present-day geomorphology and vegetation of Sumatra)

Lawless, J.V., P.J. White, I. Bogie & M.J. Andrews (1995)- Tectonic features of Sumatra and New Zealand in relation to active and fossil hydrothermal systems: a comparison. In: Proc. PACRIM' 95 Conf., Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 311-316.

Lee, M.Y., C.H. Chen, K.Y. Wei, Y. Iizuka & S. Carey (2004)- First Toba supereruption revival. Geology 32, 1, p. 61-64.
(Oldest Toba tuff in S China Sea sediments, 2500 km away from source. Tephra deposits below Brunhes-Matuyama geomagnetic boundary (778 ka) and above Australasian microtektite layer (793 ka). Calibration to oxygen isotope stratigraphy (between stages 20 and 19) suggests M Pleistocene Toba eruption occurred during deglaciation at 788 ± 2.2 ka, in good agreement with 40Ar/39Ar date of 800 ± 20 ka for Toba tephra (layer D) at ODP Site 758, but younger than commonly cited Ar/Ar age of 840 ± 30 ka. Eruption expelled at least 800-1000 km3 dense-rock-equivalent of rhyolitic magma)

Leinz, V. (1933)- Petrographische Untersuchungen der Sedimente des Toba-Sees (Nord-Sumatra). Archiv fur Hydrobiologie, Suppl. Band, 12, p. 635-669.
('Petrographic investigations of the sediments of Lake Toba, N Sumatra'. Sub-Recent lacustrine sands from around Lake Toba composed mainly of quartz, volcanic glass, sanidine, plagioclase, biotite and hornblende)

Leo, G.W., C.E. Hedge & R.F. Marvin (1980)- Geochemistry, strontium isotope data, and potassium-argon ages of the andesite-rhyolite association in the Padang area, West Sumatra. J. Volcanology Geothermal Res. 7, p. 139-156.
(Quaternary volcanoes in Padang area, W coast Sumatra. Maninjau caldera andesite compositions 55-61% SiO2. K-Ar whole-rock age determinations range from 0.27- 0.83 Ma. Rel. high high 87Sr/86Sr ratios may reflect crustal source for andesites)

Liu, S., I. Suardi, D. Yang, S. Wei & P. Tong (2018)- Teleseismic traveltime tomography of Northern Sumatra. Geophysical Research Letters 45, 24, p. 13231-13239.
(Similar to Liu et al. 2019)

Liu, S., I. Suardi, M. Zheng, D. Yang, X. Huang & P. Tong (2019)- Slab morphology beneath Northern Sumatra revealed by regional and teleseismic traveltime tomography. J. Geophysical Research, Solid Earth, 124, 10, p. 10544-10564.

(P and S wave tomography show Indo-Australian oceanic plate penetrates downward beneath N Sumatra to ~400 km at N tip of Sumatra to ~800 km around S boundary of study area. Significant slab folding or bending not found. P wave tomography shows low-velocity anomalies beneath Sumatra in lower crust and uppermost mantle. Aso slab tear at ~120-km depth, considered to be related to eruption of Toba supervolcano)

Lohr, R. (1922)- Beitrage zur Petrographie von Sud-Sumatra (West Palembang). Dissertation Munster University, p. 1-65. *(Unpublished)*
('Contributions to the petrography of S Sumatra (W Palembang)'. Descriptions of rocks collected by BPM geologist H.M.E. Schurmann)

Loth, J.E. (1926)- Eenige nieuwe gezichtspunten in verband met het ontstaan der stroomgoudafzettingen in Indragiri en het aangrenzend Zuid-Pelalawan. Handelingen 4e Nederl.-Indie Natuurwetenschappelijk Congres 1926, p. 430- .
('Some new views on the origin of placer gold deposits in Indragiri and bordering South Pelawan')

Loth, J.E. (1937)- Beschouwingen over oorsprong en vorming van de alluviale goud afzettingen in de afdeelingen Bengkalis en Indragiri. De Ingenieur 52, 38, Mijnbouw, p. M29-M36.
(online at: https://resolver.kb.nl/resolve?urn=dts:2980093:mpeg21:pdf)
(Observations on the origin and formation of the alluvial gold deposits in the Departments Bengkalis and Indragiri'. On alluvial gold deposits in Central Sumatra. No figures)

Lubis, H., T. Situmorang, A.M. Harsono & S. Digdowiroko (2000)- Sedex: a new type explortion target for lead and zinc in Indonesia. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 121-140.
(Review of sedimentary-exhalative lead-zinc deposits. With example from Sopokomil in Permo-Carboniferous Tapanuli Gp in N Sumatra, with up to 8m thick massive sulphides over ~3km)

Lubis, S., S. Hartosukorahardjo, R. Prawirsasra & M. Widjajanegara (1985)- Shallow seismic reflection survey in Cantu waters, Lampung Bay, South Sumatra. Proc. 21st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), 2, p. 33-39.
(Boomer profiles show system of young N-S normal faults in Lampung Bay)

Lyu, X.M., L. Yang, R.H. Wang, W.H. Guo, Q.F. Han & Z.C. Li (2016)- A case study on multiple stratigraphic reservoirs related with weathered granite buried-hill. In: 78th EAGE Conf. Exh., Vienna 2016, Tu P5 01, 5p.
(Betara gas field complex in granite buried-hill at N margin of S Sumatra basin, with gas column height 280 m and area of 80 km2. Basement lithology phyllite, granite and metaquartzite. Reservoir facies in 40-50m thick granitic weathered rind (porosity 12-21%), leached fracture zones in granite and in onlapping/ overlying Eocene -Oligocene alluvial fans. Three groups of faults: NNW trending reactivated basement faults, NE normal faults and NW reverse faults)

MacKay, A.L. & H.F.W. Taylor (1954)- Truscottite. Mineralogical Magazine 30, p. 450-457.
(Mineralogical study of truscottite, a mineral of Ca-zeolite-group, first discovered at Lebong Donok mine, Bengkulu, Sumatra, by Hovig (1914))

Mannhardt, F.G. (1921)- Verslag over de resultaten van geologisch- mijnbouwkundig onderzoek der Tandjoeng kolenvelden (Res. Palembang). Jaarboek Mijnwezen Nederlandsch-Indie 47 (1918), Verhandelingen 2, p. 67-107.
(Investigation of Tanjung coal fields (including Bukit Asam), 13 km S of Muara Enim, S Sumatra. Coal beds in 700-800m thick M Palembang Fm. Coal grade locally improved by andesite intrusives)

Mark, D.F., M. Petraglia, V.C. Smith, L.E. Morgan, D.N. Barfod, B.S. Ellis, N.J. Pearce, J.N. Pal & R. Korisettar (2013)- A high-precision 40Ar/39Ar age for the Young Toba Tuff and dating of ultra-distal tephra: forcing of Quaternary climate and implications for hominin occupation of India. Quaternary Geochronology 21, p. 90-103.

(New inverse isochron 40Ar/39Ar age for youngest Toba super-eruption: 75.0 ± 0.9 ka. See also comments of Haslam 2013)

Mark, D.F., P.R. Renne, R. Dymock, V.C. Smith, J.I. Simon, L.E. Morgan, R.A. Staff & B.S. Ellis (2017)- High-precision 40Ar/39Ar dating of Pleistocene tuffs and temporal anchoring of the Matuyama-Brunhes boundary. Quaternary Geochronology 39, p. 1-23.
(online at: www.sciencedirect.com/science/article/pii/S1871101417300055)
(New 40Ar/39Ar ages for tuffs from Toba volcano on Sumatra in core from ODP Site 758 in Indian Ocean. Tephra layers geochemically correlated to Young Toba Tuff (Ash A; 73.7 ± 0.3 ka) and Middle Toba Tuff (502 ± 0.7 ka). Ash units D (785.6 ± 0.7 ka) and E (792.4 ± 0.5) (tentatively correlated to 'Old Toba Tuff'). Ages and depth model used here to estimate ages for Matuyama-Brunhes boundary (~784 ka) and Australasian tektites layer (peak 8 cm below Ash D; ~786 ± 2 ka))

Maryanto, S. (1993)- Petrogenesis sabak di sekitar tepi barat Danau Toba, Sumatera Utara. J. Geologi Sumberdaya Mineral 3, 26, p. 14-20.
('Petrogenesis of slate around the western edge of Lake Toba, N Sumatra'. Metamorphic rocks of Permo-Carboniferous Kluet Fm at W side of Lake Toba (slates and metagreywacke) represent dynamic and low burial, greenschist facies metamorphism of greywacke and shales)

Maryono, A., D.H. Natawidjaja, T.M. van Leeuwen, R.L. Harrison & B. Santoso (2014)- Sumatra, an emerging world-class magmatic gold belt. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 89-101.
(Sumatra has become an emerging world-class magmatic gold belt. Island contains known endowment of 27.2M ounces of gold, 151M ounces of silver and 9.2 Billion pounds of copper from 32 deposits and prospects. Prime gold sources from high-sulfidation epithermal deposits (41.3%), with largest deposit being Martabe. Two distinct metallogenic systems, Aceh-Toba (Au-Cu+Mo) high sulfidation epithermal and porphyryProvince in N Sumatra and Barisan (Au-Ag) low sulfidation epithermal province in C and S Sumatra along with Lubuk Sikaping and W Jambi clusters of Au-Cu-base metals reflect distinctive tectonic and geologic histories.Main gold mineralization across island from 1 to 4 Ma)

Masturyono, R. McCaffrey, D.A. Wark, S.W. Roecker, Fauzi, G. Ibrahim & Sukhyar (2001)- Distribution of magma beneath Toba caldera, North Sumatra, Indonesia, constrained by 3-dimensional P-wave velocities, seismicity, and gravity data. Geochem. Geophys. Geosystems 2, 4, p. 1-24.
(online at: http://www.web.pdx.edu/~mccaf/pubs/mastur_toba_ggg_2001.pdf)
(P wave velocity structure under 30 x 100 km large Toba caldera from local earthquakes used to map distribution of magma within this subduction-related volcanic system)

Matthews, N.E., V. C. Smith, A. Costa, A.J. Durant, D.M. Pyle & N.J.G. Pearce (2012)- Ultra-distal tephra deposits from super-eruptions: examples from Toba, Indonesia and Taupo Volcanic Zone, New Zealand. Quaternary Int. 258, p. 54-79.
(The ~74 ka Youngest Toba Tuff eruption deposited ash over Bay of Bengal and Indian subcontinent to W)

Mattinson, P.G. (1987)- Structural controls and alteration assemblages at the Lebong Tandai Mine, Sumatra: implications for the genesis of epithermal silver-gold mineralisation. M.Sc. Thesis, University of Western Australia, Perth, p. 1-285. *(Unpublished)*

Matysova, P., M. Booi, M.C. Crow, F. Hasibuan, A.P. Perdono, I.M. Van Waveren & S.K. Donovan (2018)- Burial and preservation of a fossil forest on an early Permian (Asselian) volcano (Merangin River, Sumatra, Indonesia). Geological J., 53, 5, p. 2352-2370.
(E Permian (Asselian) Mengkarang Fm of W Jambi Province preserves abundant evidence of E Permian forest, which grew at foot of active volcano, where pyroclastic flows often made way and destroyed vegetation and where epiclastic reworked pyroclastics rapidly entombed vegetation. In situ Agathoxylon close enough to volcanic slope to be buried rapidly, but shallow enough to avoid recrystallization)

McCarroll, R.J., I.T. Graham, R. Fountain, K. Privat & J. Woodhead (2014)- The Ojolali region, Sumatra, Indonesia: epithermal gold-silver mineralisation within the Sunda Arc. Gondwana Research 26, p. 218-240.
(Ojolali region in Lampung, S Sumatra, two main epithermal gold-silver deposits: (1) Tambang intermediate-sulfidation deposit along fault in siltstone and (2) Bukit Jambi high-level, low-sulfidation Au-Ag deposit in andesitic tuffs. Mineralisation hosted in window of Miocene intermediate-mafic volcanics)

McCarthy, A.J. (1997)- The evolution of the transcurrent Sumatran fault system, Indonesia. Ph.D. Thesis, University London, p. 1-387. *(Unpublished)*

McCarthy, A.J. & C.F. Elders (1997)- Cenozoic deformation in Sumatra: oblique subduction and the development of the Sumatran fault system. In: A.J. Fraser & S.J. Matthews (eds.) Petroleum Geology of SE Asia. Geol. Soc., London, Spec. Publ. 126, p. 355-363.
(Sumatra pre-Tertiary history of accretion was followed byPaleogene basin formation. Strong mid-Miocene inversion event recorded in onshore part of forearc basin in S Sumatra, same time as inception of seafloor spreading in Andaman Sea and probable inception of major strike-slip movement along the SFS, possibly following clockwise rotation of Sumatra towards it present NW-SE trend. SFS complex deformation history including polyphase reactivation of fault surfaces and contemporaneous strike-slip and orthogonal compression or extension. New estimate of ~150 km offset of Mesozoic units across SFS in C Sumatra proposed. Several basins formed along SFS in Quaternary)

McCarthy, A.J., B. Jasin & N.S. Haile (2001)- Middle Jurassic radiolarian chert, Indarung, Padang District, and its implications for the tectonic evolution of western Sumatra, Indonesia. J. Asian Earth Sci. 19, 1-2, p. 31-44.
(Radiolaria chert in Indarung Area, 10km E of Padang of Aalenian (lower M Jurassic) age. Beds dipping steeply to to SW. Lubuk Peraku Lst dated as U Jurassic- E Cretaceous based on occurrence of Lovcenipora (= Cladocoropsis?; JTvG). Interbedded with volcanics and limestone conglomerate/breccias, Interpreted as carbonate cap on seamount. Limestone overlain by Golok crystal tuffs (K/Ar age of ~105 ± 3 Ma/ Albian, but suspect?). M Jurassic Ngalau bedded chert probably faulted into younger limestone during Cretaceous ENE-directed compression. Radiolarian assemblage Aalenian or E Bajocian Transhsuum hisuikyoense Zone (= part of oceanic assemblage of Woyla Group: M- Late Cretaceous SW dipping accretionary prism with M Jurassic seafloor oceanic material and Late Jurassic volcanic seamount; JTvG)

McCloskey, J., D. Lange, F. Tilmann, S.S. Nalbant, A.F. Bell, D.H. Natawidjaja & A. Rietbrock (2010)- The September 2009 Padang earthquake. Nature Geoscience 3, February, p. 70-72.
(Mw= 7.6 earthquake of 30 September 2009 with epicenter WNW of Padang at depth of 80-90 km, within lower part of Wadati-Benioff zone. Did not rupture Sunda megathrust or relax stress on Mentawai segment)

McCourt, W.J. & E.J. Cobbing (1993)- The geochemistry, geochronology and tectonic setting of granitoid rocks from southern Sumatra, western Indonesia. South Sumatra Geol. Mineral Exploration Project (SSGMPE) Report 9, Geol. Res. Dev. Centre (GRDC), Bandung, p. *(Unpublished)*
(Includes Eocene (52-57 Ma) ages for Lassi granite/ diorite, 53-55 Ma and 129-169 Ma for Bungo batholith, 79-85 Ma for Padean granite, 111-113 Ma for Sulan pluton, 82-117 Ma for Garba Pluton, 138-149 Ma and 192 Ma for Sulit Air granite, etc. (Barber et al. 2005))

McCourt, W.J., M.J. Crow, E.J. Cobbing & T.C. Amin (1996)- Mesozoic and Cenozoic plutonic evolution of SE Asia: evidence from Sumatra, Indonesia. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 321-335.
(Barisan Mts of S Sumatra four periods of plutonic activity: Miocene-Pliocene (20-5 Ma), E Eocene (60-50 Ma), Mid-Late Cretaceous (117-80 Ma) and Jurassic-E Cretaceous (203-130 Ma). Also plutonic activity in Permian (287-256 Ma) and suggestions of magmatism in Late Triassic- E Jurassic (220-190 Ma) and M Jurassic-E Cretaceous (170-130 Ma). Ages from E Sumatra indicate Triassic- E Jurassic (240-195 Ma) tin-belt magmatism of Peninsular Malaysia Main Range extends into area. Plutonic suites in NW-SE trending belts. Breaks in plutonic activity correspond to changes in approach angle and/or rate of subduction, and in some instances relate to periods of collision and accretion of allochthonous material. At least two such events: early

M Cretaceous collision and accretion of oceanic Woyla terranes, and latest Cretaceous possible collision of continental sliver/block, the W Sumatra terrane to Sundaland margin)

Metcalfe, I. (1983)- Conodont faunas, age and correlation of the Alas Formation (Carboniferous), Sumatra. Geol. Magazine 120, 6, p. 737-746.
(Conodonts Spathognathodus campbelli, S. scitulus, Synprioniodina microdenta and Gnathodus girtyi rhodesi from NW Sumatra Alas Fm shelfal limestones suggest Late Visean (E Carboniferous) age, making it oldest dated formation on Sumatra. Previously single solitary coral identified as Allotropiophyllum sinense Grabau thought to indicate E Permian age. Brachiopods from same locality identified as Cleiothyridina and Marginalia or Inflatia, suggesting probable Visean age)

Metcalfe, I. (1986)- Conodont biostratigraphic studies in Sumatra: preliminary results. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 243-247.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b13.pdf)
(Samples from Sumatra Late Paleozoic- Triassic limestones analyzed for conodonts. Lower Carboniferous (Late Visean) with Gnathodus girtyi rhodesi, etc. in Alas Fm of Alas Valley and near near Bukittinggi. Prapat, Lake Toba limestones with Late Carnian Neogondolella polygnathiformis conodont zone. M and U Triassic conodonts from dark limestones of six other localities, some of which (e.g. Sungei Kalue Lst) were previously considered to be Permo-Carboniferous)

Metcalfe, I. (1989)- Triassic conodonts of Sumatra. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. 19, Bangkok, p. 191-194.
(Six limestone localities in N Sumatra Lake Toba area with Late Triassic (Carnian) conodonts)

Metcalfe, I. (1989)- Carboniferous conodonts. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Publ. 19, Bangkok, p. 45-46.
(Two limestone localities with E Carboniferous conodonts: Alas Fm in Alas Valley (N Sumatra; Late Visean, Metcalfe 1983) and Agam River (C Sumatra near Bukittingi; M-L Visean)

Metcalfe, I., T. Koike, M.B. Rafek & N.S. Haile (1979)- Triassic conodonts from Sumatra. Paleontology 22, 3, p. 737-746.
(online at: http://cdn.palass.org/publications/palaeontology/volume_22/pdf/vol22_part3_pp737-746.pdf)
(Late Carnian conodonts from limestones of N Sumatra (3 km N of Prapat, Lake Toba, overlying Halobia-Daonella shale. Contains Metapolygnathus polygnathiformis, M. nodosa and Epigondolella primitia. Also probably Late Triassic conodonts from limestones from C Sumatra Padang Highlands, Silungkang- Sawahlunto area)

Meyer, O.E. (1922)- Brachiopoden des Perm und Untercarbon der Residentschaft Djambi (Sumatra). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, 5, p. 203-221.
('Brachiopods form the Permian and Late Carboniferous from the Jambi Residency'. 15 species of brachiopods, collected by Tobler from 6 localities in Jambi area. At Sungei Selajau with Dalmanella, Chonetes, Productus, Spiriferina, Spirigera, etc.. Most species described also known from Timor. Productus sumatrensis believed to signify Late Permian age? (Little or no locality or stratigraphic information. Tobler 1922 also mentions fusulinids Verbeekina, Sumatrina from here. Fontaine & Gafoer 1989 assign to late Early- M Permian Silungkang/ Palepat Fm))

Michel, G.W., M. Becker, C. Reigber, R. Tibi, Y.Q. Yu & S.Y. Zhu (2001)- Regional GPS data confirm high strain accumulation prior to the 2000 June 4 Mw=7.8 earthquake at southeast Sumatra. Geophysical J. Int. 146, p. 571-582.

Middleton, T.W. (2003)- The Dairi zinc-lead project, North Sumatra, Indonesia, Discovery to feasability. Bull. Australian Inst. Geoscientists 39, p. 73-82.

(Sediment hosted, massive sulphidic, zinc-lead mineralisation in core of Sopokomil Dome, Dairi Regency, N Sumatra, in laminated carbonaceous shale and dolomitic siltstones of Permo-Carboniferous Tapanuli Group. First of its kind in Indonesia)

Milch, L. (1899)- Ueber Gesteine von der Battak-Hochflache (Central Sumatra). Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 51, p. 62-74.
(online at: https://www.biodiversitylibrary.org/item/148115page/76/mode/1up)
('On rocks from the Batak Highlands (Central Sumatra)'. Petrography of volcanic-igneous and metamorphic rocks of the Batak Highlands, collected by W. Volz (liparite, dacite, andesites, tuff, granite-gneiss, biotite-gneiss))

Milsom, J. (2005)- Seismology and neotectonics. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra-geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, p. 7-15.
(Present-day tectonic processes of Sumatra controlled by three major fault systems: (1) subduction thrust in Sunda Trench (water depths of >6000 m in S but <5000m in N. Change, of more than 45°, in . trend of trench between 96°E and 97°E ('Nias Elbow') may have been initiated by subduction of 2 km high Investigator Ridge; (2) onland dextral Sumatran Fault runs from Banda Aceh to the Sunda Strait (19 segments; possibly 150km displacement); (3) Mentawai Fault at outer margin of forearc basin. Etc.)

Milsom, J. (2016)- The separated twins: Sumatra and Myanmar in a dynamic world. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 42. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(For much of geological history Sumatra and Myanmar occupied adjacent positions at active southern margin of Asian continent. Impact of India on margin rotated them by different amounts and opened gap that is now Andaman Sea. Continuity between Sumatra forearc and Rakhine Yoma via Andaman-Nicobar ridge. Elements of subduction-related tectonics can still be observed in Myanmar despite its present orientation. In Sumatra significant hydrocarbons are produced only N and E of volcanic line; in Myanmar only to its W)

Milsom, J. & A. Walker (2005)- The gravity field. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra-geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 3, p. 16-23.
(Gravity map of Sumatra: onshore Bouguer, offshore free gravity. Fundamental differences between SE and NW Sumatra; junction between these may reflect post-amalgamation processes, but may also be unrecognized basement suture)

Miyamoto, H. (1943)- The mineral resources of Sumatra. J. Geography, Tokyo, 55, 2, p. 62-83.
(online at: www.jstage.jst.go.jp/article/jgeography1889/55/2/55_2_62/_pdf)
(In Japanese; mainly literature review)

Moerman, C. (1916)- Verslag van een geologisch-mijnbouwkundigen verkenningstocht in een gedeelte der residentien Benkoelen en Palembang (Zuid-Sumatra). Jaarboek Mijnwezen Nederlandsch Oost-Indie 44 (1915), Verhandelingen 1, p. 33-198.
('Report of a geological-mining reconnaissance survey in parts of the residencies of Bengkulu and Palembang (S Sumatra)'. Traveled 6450 km in 576 field days in 1909-1911. With 4 maps at 1:200,000 scale. Reports granites, Jurassic phyllites and diabase tuffs, Eocene sst-shales, Miocene marls, Quaternary volcanics, etc.)

Moore, D. E. (1997)- Mineralogical and microstructural investigations of core samples from the vicinity of the Great Sumatran Fault, Indonesia. U.S. Geol. Survey (USGS) Open-File Report 97-694, p. 1-112.
(online at: http://pubs.usgs.gov/of/1997/0694/report.pdf)
(Summary of petrographic investigations of core samples from geothermal wells drilled by Unocal near Great Sumatran fault zone.)

Monecke, K., W. Finger, D. Klarer, W. Kongko, B.G. McAdoo, A.L. Moore & S.U. Sudrajat (2008)- A 1,000-year sediment record of tsunami recurrence in northern Sumatra. Nature 455, p. 1232-1234.

(2004 tsunami in N Aceh deposited sand sheet up to 1.8 km inland on marshy beach ridge plain. Sediment cores from coastal marshes with two older similar extensive sand sheets, deposited soon after AD 1290-1400 and AD 780-990, probably from earlier tsunamis. Additional sand sheet of limited extent may correlate with smaller tsunami of AD 1907)

Moore, D.E., S. Hickman, D.A. Lockner & P.F. Dobson (2001)- Hydrothermal minerals and microstructures in the Silangkitang geothermal field along the Great Sumatran fault zone, Sumatra, Indonesia. Geol. Soc. America (GSA) Bull. 113, 9, p. 1179-1192.
(Core samples of silicic tuff from geothermal wells along Great Sumatran fault zone near Silangkitang, N Sumatra, suggest enhanced hydrothermal circulation adjacent to fault)

Muchsin, A.M., C.C. Johnson, M.J. Crow, A. Djumsari & Sumartono (1997)- Atlas geokimia daerah Sumatera bagian selatan. Regional Geochemical Atlas series of Indonesia 2, Direct. Mineral Resources (Bandung) and British Geol. Survey, p. 1-63.
('Geochemical atlas of Southern Sumatra'. Distributions of 15 metals/elements (Ag, As, Co, Cr, Cu, Fe, K, Li, Mn, Ni, Pb, Sn, W, Mo, Zn) in 13,187 stream sediments from Sumatra S of Equator. Identified clusters of increased Au, Sn-W and base metals)

Muksin, U., K. Bauer & C. Haberland (2013)- Seismic Vp and Vp/Vs structure of the geothermal area around Tarutung (North Sumatra, Indonesia) derived from local earthquake tomography. J. Volcanology Geothermal Res. 260, p. 27-42.

Mulja, T., M. Collins, H.H. Wong, R. Rizal, T. Brown & M. Zainuddin (2003)- An integrated mineral exploration programme in the Takengon tenement, Aceh magmatic arc, north Sumatra. Geochemistry Exploration, Environment Analysis, 3, 4, p. 321-335.
(Discovery of gold and base metals in 1996-1998 in Takengon tenement of Aceh magmatic arc, N Sumatra. NNW-SSE and NNE-SSW trending fault zones related to mineralization.)

Mulyaningsih, S. (2014)- Vulkanisme Pratersier batuan gunung api Kelompok Woyla di Kecamatan Beutong dan Darul Makmue, Kabupaten Nagan Raya, Provinsi Nangroe Aceh Darussalam. Majalah Geol. Indonesia 29, 3, p. 183-198.
(Pre-Tertiary volcanism of the volcanic rocks of the Woyla Group in the Beutong and Darul Makmue sub-regency, Nagan Raya Regency, Nanggroe Aceh Darussalam'. Woyla Gp with intermediate volcanic rocks, metamorphic rocks and granodiorite intrusions. Metamorphic rocks thought to be alterations of volcanism)

Muksin (2010)- Understanding the seismic structure beneath Sumatra and its surrounding regions. M. Phil. Thesis Australian National University (ANU), p. 1-145.
(online at: https://openresearch-repository.anu.edu.au/handle/1885/150636)
(Seismic tomography models of Sumatra region)

Muksin, U., K. Bauer, M. Muzli, T. Ryberg, I. Nurdin, M. Masturiyono & M. Weber (2019)- AcehSeis project provides insights into the detailed seismicity distribution and relation to fault structures in Central Aceh, Northern Sumatra. J. Asian Earth Sci. 171, p. 20-27.
(Network of 30 short-period seismic stations in 2014 recorded 1790 local earthquake events in 10 months in Central Aceh, N. Sumatra. Seismicity distribution correlates with active segments of Great Sumatra Fault and its main secondary faults)

Muksin, U., C. Haberland, K. Bauer & M. Weber (2013)- Three-dimensional upper crustal structure of the geothermal system in Tarutung (North Sumatra, Indonesia) revealed by seismic attenuation tomography. Geophysical J. Int. 195, p. 2037-2049.
(Geothermal potential in Tarutung controlled by Sumatra Fault system and young arc volcanism. Spatial distribution of seismic attenuation was used to map subsurface temperature anomalies and fluid distribution. In SW of Tarutung Basin high attenuation zone associated with Martimbang volcano. In Sarulla region anomaly along graben near Hopong caldera)

Muksin, U., C. Haberland, M. Nukman, K. Bauer & M. Weber (2014)- Detailed fault structure of the Tarutung pull-apart basin in Sumatra, Indonesia, derived from local earthquake data. J. Asian Earth Sci. 96, p. 123-131.
(Tarutung pull-apart basin in N central segment of dextral strike-slip Sumatran Fault System. Earthquake lineations reflect extensional duplex fault system and negative flower structure within basin. Focal mechanisms of events at edge of basin dominantly strike-slip type representing dextral strike-slip Sumatran Fault System. N-S striking normal fault events along extensional zones correlate with maximum principal stress direction which is direction of Indo-Australian plate motion)

Mulya, R.C. & D. Hendrawan (2014)- The Anjing Hitam underground zinc lead deposit, North Sumatra. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 309-317.
(Anjing Hitam deposit large shale-hosted Zn-Pb system within Late Carboniferous or E Permian Tapanuli Gp in N Sumatra. Includes black shale-hosted massive sulfide Zn-Pb mineralisation, Zn mineralisation in veins, breccias, polymetallic Zn-Pb-Cu- Ag vein mineralisation and secondary Zn-Pb mineralisation Same as Dairi project of earlier authors)

Munasri, M.M. Mukti, H. Permana & A.M. Putra (2015)- Jejak subduksi Mesozoikum di Komplek Garba, Sumatra bagian Selatan berdasarkan fosil radiolaria dan data geokimia. In: H. Harjono et al. (eds.) Pros. Pemaparan Hasil Penelitian Geoteknologi 2015, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. 63-72.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/04/Prosiding-2015.pdf
('Traces of Mesozoic subduction in the Garba Complex, S Sumatra, from radiolarian fossils and geochemical analysis'. In S Sumatra trace of Mesozoic subduction complex(es) exposed in Gumai, Garba and Gunung Kasih (Lampung). In SE Garba Mts subduction complex rocks from continental margin and from oceanic plates. Presence of island arc basalts and radiolaria of possible Triassic age)

Munasri & A.M. Putra (2019)- First evidence of Middle to Late Triassic radiolarians in the Garba mountains, South Sumatra, Indonesia. Island Arc 28, 3, 13p.
(M-L Triassic (Ladinian-Carnian) radiolaria in cherts of Situlanglang Member of Garba Fm, S Sumatra, which is generally regarded as of Late Jur assic- E Cretaceous age. With Annulotriassocampe sulovensis, Triassocampe postdeweveri, Spongotortilispinus tortilis, etc. May indicate deposition after collision of Sibumasu and East Malaya blocks. SitulanglangMember proposed to be contemporaneous with M-U Triassic Kualu and Tuhur Fms in N and C Sumatra)

Muraoka, H., M. Takahashi, H. Sundhoro, S. Dwipa, Y. Soeda, M. Momita & K. Shimada (2010)- Geothermal systems constrained by the Sumatran Fault and its pull-apart basins in Sumatra, Western Indonesia. Proc. World Geothermal Congress 2010, Bali, 8p.
(online at: http://b-dig.iie.org.mx/BibDig/P10-0464/pdf/1248.pdf)
(Two types of geothermal systems in Sumatra (1) on the slope of volcanic edifices and (2) in pull-apart basins along the Sumatran strike-slip fault zone. Thirteen pull-apart basins identified)

Musper, K.A.F.R. (1928)- Indragiri en Pelalawan. Uitkomsten van het mijnbouwkundig- geologisch onderzoek in de jaren 1922-1926. Jaarboek Mijnwezen Nederlandsch Oost-Indie 56 (1927), Verhandelingen 1, p. 1-245.
(Report on 1922-1926 geological-mining investigations in Indragiri and Pelalawan. Extensive geological descriptions and maps based on 5-year mapping program with 3 geologists in SW part of Central Sumatra basin and adjacent Barisan Range. With 1:25,000 scaledetail maps of anticlines (some later drilled by NKPM/Stanvac and contain Lirik- Japura, etc. oilfields; JTvG))

Musper, K.A.F.R. (1928)- Geologische waarnemingen in de Padangsche Bovenlanden, I. Over een voorkomen van Trias in de omgeving van Sawahloento. De Mijningenieur 9, 7, p. 124-127.
('Geological observations in the Padang Highlands, I. On an occurrence of Triassic in the area of Sawahlunto'. Sawahlunto at SW side of Tertiary Ombilin Basin. Pretertiary limestones SW of Sawahlunto originally believed to be Permian fusulinid-bearing limestones by Verbeek, but fusulinids are present only in reworked limestone clasts in basal Tertiary conglomerates. In-situ limestone series at least 500m thick, thin-bedded, and locally

rich in Triassic bivalve molluscs: Myophoria verbeeki, M. myophoria, Cardita globiformis, Gonodon sphaerioides, Anatina and possible Gervilleia (fauna described by Boettger 1881 and Krumbeck 1914) (limestones overlie Permian 'Silungkang Fm' diabase-shale series?; JTvG))

Musper, K.A.F.R. (1929)- Geologische waarnemingen in de Padangsche Bovenlanden, II. Het Si Karikir-gebergte. De Mijningenieur 10, 5, p. 112-118.
('Geological observations in the Padang Highlands, II. The Si Karikir Mountains'. Mountain chain between Ombilin River and Lake Singkarak composed of intensely folded, grey Upper Triassic limestone, similar to described in 1928 in Sawahlunto area. Limestone at least 750m thick, locally rich in molluscs (Cardita, Myophoria myophoria, Gervilleia, possible Gonodon sphaerioides; no Halobia), rare corals and ammonoids (Trachyceras, Cyrtopleurites, Drepanites). Limestones conformable over 'Kiezel en mergel schiefers' of Verbeek. Intruded by younger granodiorite of Mesozoic age, because erosional products present in E Tertiary)

Musper, K.A.F.R. (1930)- Beknopt verslag over uitkomsten van nieuwe geologische onderzoekingen in de Padangsche bovenlanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 58 (1929), Verhandelingen, p. 265-331.
('Brief report on the results of new geological investigations in the Padang Highlands. Fieldwork in 1927-1928, in area E of Lake Singkarak and surrounding Tertiary Ombilin Basin with its Eocene fish locality. Presence of folded limestones of (1) M Permian (Guguk Bulat and E of Lake Singkarak: fusulinid limestones interbedded with porphyrite/tuffs; see also Lange 1925), (2) Carboniferous (N of Moeko Moeko; with Paleozoic tabulate corals) and (3) >500m thick (Late?) Triassic (S of Sawah Loento; rich in Triassic bivalves Cardita, Myophoria, Gonodon) and ammonoid Trachyceras. Also Mesozoic granites and Tertiary sediments including basal Miocene/ Te limestones)

Musper, K.A.F.R. (1933)- Geologische kaart van Sumatra 1:200 000. Toelichting bij Blad 15 (Praboemoelih). Dienst Mijnbouw Nederlandsch-Indie, Bandung, 41p. + map.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/813160)
('Geologic map of Sumatra 1:200,000, Explanatory Notes of Sheet 15 (Prabumulih)')

Musper, K.A.F.R. (1934)- Nieuwe fossielresten en de ouderdom der kalksteenen in het Pretertiair van het Goemai Gebergte. De Ingenieur in Nederlandsch-Indie (IV) 1, 8, p. 134-142.
('New fossils and the age of the limestones in the Pre-Tertiary of the Gumai Mountains'. Limestones from folded Saling series interbedded with basic andesitic volcanics in Saling River, S Sumatra, contain Orbitolina, Loftusia and nerineid gastropods, suggesting E-M Cretaceous age. Earlier determination of Triassic age based on Lovcenipora wrong (Yabe 1943 suggested Late Jurassic age; JTvG). Also new species of gastropod Nerinea palembangensis)

Musper, K.A.F.R. (1934)- Een bezoek aan de grot Soeroeman Besar in het Goemaigebergte (Palembang, Zuid-Sumatra). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 51, 4, p. 521-531.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001682001:pdf)
('A visit to the Suruman Besar cave in the Gumai Mountains, S Sumatra'. Extensive cave systems in 12km WNW-ESE strip of Cretaceous limestones. Soeroeman Besar cave with >425m subterranean river. Little geology information)

Musper, K.A.F.R. (1937)- Geologische kaart van Sumatra 1:200,000. Toelichting bij Blad 16 (Lahat). Dienst Mijnbouw Nederlandsch-Indie, Bandung, 110p.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/817291)
(Map sheet Lahat, S Sumatra, from Gumai Mts in SW, Pasumah Highlands in South, Muara Enim in E, across South Palembang basin. With extensive explanatory notes)

Nainggolan, D.A. (2007)- Tinjauan analisis gaya berat terhadap bentukan struktur bawah permukaan di Lembar Medan, Sumatera Utara. J. Sumber Daya Geologi 17, 4 (160), p. 243-256.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/293/264)
(A review of gravity analysis on the formation of subsurface structures in the Medan Sheet, North Sumatra'))

Nainggolan, M.J.H., E.S. Siregar, B.P. Sitanggang & G. Sinaga (2012)- Fasies and paleo-environment of Permian Mengkarang Formation and its implication to potensial of coal. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-38, 5p.
(Permian flora and fauna in intact positions in Mengkarang coal bearing formation in Jambi Province. Fossil flora includes Lepidodendracreae shaped stems and leaves of tree or branched fork-shape Sphenophyllaceae. Coal organic facies suggest deposition in swamp zone, in area surrounded by active volcanoes)

Nakano, M., H. Kumagai, S. Toda, R. Ando, T. Yamashina, H. Inoue & Sunarjo (2010)- Source model of an earthquake doublet that occurred in a pull-apart basin along the Sumatran fault, Indonesia. Geophysical J. Int. 181, p. 141-153.
(2007 earthquake doublet along Sumatran Fault Zone near Padang Panjang, C Sumatra. Focal mechanisms indicate right-lateral strike-slip faults, consistent with geometry of Sumatran fault. Both nucleated below N end of Lake Singkarak, which is pull-apart basin between Sumani and Sianok segments of Sumatran fault system)

Nash, J.M.W. (1929)- Radiolarienhoudende gesteenten van Sumatra. De Mijningenieur 10, 11, p. 249-255.
('Radiolarian-bearing rocks from Sumatra'. Many new localities with radiolarians in S Sumatra, but no age-diagnostic species identified. Listing of radiolarian-bearing rocks encountered across Sumatra:7 in S Palembang area (Muara Dua Massif= Garba Mts?), 1 in S Bengkulu, 1 near Singkarak Lake in W Sumatra (in Permian- Triassic transition beds),12 localities in Lampung Districts on middle peninsula of S Sumatra (some associated with E Cretaceous Orbitolina; in Ratai Bay red deep sea clay). No true radiolarites anywhere, but all interpreted as deep marine deposits (No ages given; probably ranging from Permian- Cretaceous; JTvG))

Nash, J.M.W. (1930)- De Trias ten zuiden van Sawah Loento. De Mijningenieur 11, 8, p. 159-164.
('The Triassic South of Sawahlunto'. In area S of Sawahlunto intensely folded Upper Triassic marls and limestone with bivalves Myophoria, Gervilleia, etc., mainly dipping to N-NE, unconformably overlain by Eocene and younger quartz sandstones. Triassic sediments intruded by augite-microdiorite porphyry in Jurassic or Cretaceous, during or after folding)

Natawidjaja, D.H. (2002)- Neotectonics of the Sumatran Fault and paleogeodesy of the Sumatran subduction zone. Ph.D. Thesis California Institute of Technology, Pasadena, p. 1-289.
(online at: http://thesis.library.caltech.edu/1939/)
(Australian-Indian plate is subducting under Sumatran plate boundary at ~60 mm/yr. Oblique convergence partitioned into trench-parallel slip, accommodated largely by Sumatran fault zone and trench-perpendicular slip, accommodated by subduction zone. Sumatran fault zone highly segmented. Largest geomorphic offsets along fault zone ~20 km, and may represent total offset across fault. Location of Sumatran fault and active volcanic arc highly correlated with shape and character of underlying subducting oceanic lithosphere. Coral microatolls in W Sumatra used to document evidence for deformation)

Natawidjaja, D.H. (2014)- The Sumatran Fault Zone: neotectonics, magmatism, and metal resources. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 59-87.
(Extensive review of 1900km-long, trench-parallel Sumatran fault zone. SFZ highly segmented, with 18 major segments. Many volcanoes, geothermal activities and metal resources near breaks between segments and also on and around major fault traces. Maximum offsets of rivers and folds along fault ~20-25 km. Measured fault slip rates 10- 27 mm/year, suggesting presently active SFZ may only about 1-3 Myrs old, which correlates with ages of most of major gold mineralizations between 1-3 Ma)

Natawidjaja, D.H. (2018)- Updating active fault maps and slip rates along the Sumatran Fault Zone, Indonesia. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012001, p. 1-11.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012001/pdf)

(Latest geological and GPS studies suggest slip rates along Sumatran Fault Zone ~15 mm/yr. Total amount of extension in the Sunda-strait marine grabens ~18.7 km, almost identical with largest geomorphic offset along SFZ. Sumatran fore-arc moving N along SFZ like rigid block instead of being stretched)

Natawidjaja, D.H. (2018)- Major bifurcations, slip rates, and a creeping segment of Sumatran Fault Zone in Tarutung-Sarulla-Sipirok-Padangsidempuan, Central Sumatra, Indonesia. Indonesian J. Geoscience 5, 2, p. 137-160.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/451/264)
(Study of active Tarutung-Sarulla-Sipirok-Padangsidempuan fault. Slip rates at Sianok to Renun segments ~14 mm/year. In bifurcation zone partitioned into ~9.3 mm/yr on Toru and ~4- 5 mm/yr on Angkola segment)

Natawidjaja, D.H., K. Bradley, M.R. Daryono, S. Aribowo & J. Herrin (2017)- Late Quaternary eruption of the Ranau Caldera and new geological slip rates of the Sumatran Fault Zone in Southern Sumatra, Indonesia. Geoscience Letters (AOGS) 4, 21, p. 1-15.
(online at: https://geoscienceletters.springeropen.com/articles/10.1186/s40562-017-0087-2)
(Paleosols buried under Ranau Tuff constrain large caldera-forming eruption to ~33,830-33,450 yrs BP. In N Sumatra lateral displacement of river channels incised into Ranau Tuff show right-lateral channel offsets of ~350 ± 50m (minimum slip rate 10.4 ± 1.5 mm/yr). S of Suoh pull-apart depression. In SW Sumatra West Semangko segment offsets Semangko River by 230 ± 60m, (slip rate of 6.8 ± 1.8 mm/yr))

Natawidjaja, D.H., L. Handayani & C. Widiwijayantani (1994)- Proses subduksi miring pengaruhnya terhadap variasi slip-rate sesar Sumatra serta deformasi pada busur depan: pendekatan model kuantitatif tektonik dan elemen hingga. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 413-432.
(The oblique subduction process and its effects on slip-rate variation of the Sumatra fault and deformation of the forearc: quantitative tectonic model and finite element approach')

Natawidjaja, D.H. & W. Triyoso (2007)- The Sumatran fault zone- from source to hazard. J. Earthquake and Tsunami 1, 1, p. 21-47.
(Substantial portion of Sumatran oblique convergence accommodated by Sumatran fault. 1900 km-long active strike-slip fault, 20 major segments, ranging from ~60- 200 km. Slip rates along fault increase NW-ward, from ~5 mm/yr around Sunda Strait to 27 mm/yr around Toba Lake)

Neeb, E.A. (1902)- Verslag omtrent het onderzoek naar tinertsafzettingen in een gedeelte van Midden- Sumatra, omvattende de landschappen V. Kota, III. Kota Kampar, IV. Kota di Moedik, VII. Kota Kampar di Ilir, Rokan Kiri, IV. Kota, Koento, Ramba, Daloe-Daloe, Kapenoean en aangrenzende streken. Jaarboek Mijnwezen Nederlandsch Oost-Indie 31 (1902), p. 113-145.
('Report on the investigation of tin ore deposits in a part of C Sumatra, in the areas of Kota, Kota Kampar, etc.'. Oldest rocks slates and quartzites ('probably Silurian or Devonian', but no fossils), locally with crystalline limestone (Permian?). Concludes that, despite some local exploitation, there are no commercial tin deposits left in this part of C Sumatra. With two 1:100,000 scale geologic maps of Upper Kampar, Rokan Kiri rivers areas)

Ninkovich, D. (1976)- Late Cenozoic clockwise rotation of Sumatra. Earth Planetary Sci. Letters 29, p. 269-275.
(Clockwise rotation of Sumatra of ~20° about axis near Sunda Strait inferred from: (1) Sumatra volcanic arc at angle of 20° with volcanic arc farther E; (2) Benioff zone maximum depth of 600 km E of Sunda Strait, but decreases to 200 km NW along Sumatra island; (3) age of volcanic activity younging to NW (?). Increase in sea-floor spreading rate since 10 Ma pushed N Sumatra and Malaya NE for ~500 km along system of presently inactive faults, causing CW of Sumatra and Malaya. When this rotation ceased underthrusting of N Sumatra begin, producing shallow and short Benioff zone and delayed volcanic activity)

Ninkovich, D., N.J. Shackleton, A.A. Abdel-Monem, J.D. Obradovich & G. Izett (1978)- K-Ar age of the Pleistocene eruption of Toba, North Sumatra. Nature 276, p. 574-577.

(Late Pleistocene eruption of Toba is largest explosive eruption documented from Quaternary. K–Ar dating of the uppermost Toba Tuff (welded tuff along Asahan River) gives age of ~75,000 yr. Similar in composition to widepread ash layer in Indian Ocean deep sea cores and 1.5m thick ash bed at Tampan, W Malay Peninsula)

Ninkovich, D., R.S.J. Sparks & M.T. Ledbetter (1978)- The exceptional magnitude and intensity of the Toba eruption, Sumatra: an example of the use of deep-sea tephra layers as a geological tool. Bull. Volcanology 41, 3, p. 286-298.
(Eruption of Toba, N Sumatra at 75,000 yr BP, is largest magnitude Quaternary eruption. Produced largest-known caldera (100 x 30 km), surrounded by rhyolitic ignimbrite covering area of >20,000 km2. Associated deep-sea tephra layer found in piston cores in NE Indian Ocean covering minimum area of 5 M km2. Volume of ignimbrite and distal tephra fall deposit of Toba eruption at least 1000 km3 of dense rhyolitic magma. Eruption estimated to last 9-14 days)

Nishimura, S., E. Abe, J. Nishida, T. Yokoyama, A. Dharma, P. Hehanussa & F. Hehuwat (1984)- A gravity and volcanostratigraphic interpretation of the Lake Toba region, North Sumatra, Indonesia. Tectonophysics 109, p. 253-261, 265-272.

Nishimura, S., S. Sasajima, K. Hirooka, K.H. Thio & F. Hehuwat (1978)- Radiometric ages of volcanic products in Sunda Arc. CCOP/ SEATAR Workshop on the Sumatra Transect, Parapat, p.

Nocker, H. (1919)- Beitrage zur Petrographie von Sud-Sumatra (Lampong Distrikte). Inaugural Dissertation, Wilhelms Universitat, Munster, p. 1-53.
('Contributions to the petrography of South Sumatra (Lampong Districts)'. Petrographic descriptions of igneous (granite, gabbro, diorite), volcanic (andesite, liparite, dacite) and metamorphic rocks (gneiss, amphibolite, muscovite schist, quartzite) collected by Elbert around Lampung Bay. No pictures; poor locality descriptions)

Nugroho, B., H. Mustapha, A. Prasetya, J. Boast, M. Kaur, R.W.C. Nusantara, S. Dewawisesa & H. Utomo (2015)- Aruah Island's geology, northeastern edge of Central Sumatra Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-056, 17p.
(Fieldwork on Aruah Islands in Malacca Straits, 80km N of Bagiansiapiapi, C Sumatra. Steeply dipping meta-quartzites and meta-conglomerate, inferred to be of Paleozoic age, with regional dip ~60° to E, and N-S oriented fractures. Unconformably overlain by Miocene? Sihapas Fm? quartz sandstones. Islands believed to be part of Mutus Assemblage terrane and structurally on trend with Minas, Duri, Bagansiapiapi and Perak Highs. Similar meta-quartzite in Malacca Straits CSB A-1 well (90 km SE of Aruah) had spores indicating Devonian-E Carboniferous age)

Nukman, M. & M.P. Hochstein (2019)- The Sipoholon Geothermal Field and adjacent geothermal systems along the North-Central Sumatra Fault Belt, Indonesia: Reviews on geochemistry, tectonics, and natural heat loss. J. Asian Earth Sci. 170, p. 316-328.
(Sipoholon system in Tarutung Basin one of five geothermal systems associated with ~100 km stretch of Sumatra Fault System (SFS) in N-C Sumatra)

Oppenoorth, W.F.F. & J. Zwierzycki (1918)- Geomorfologische en tektonische waarnemingen als bijdrage tot verklaring van de landschapsvormen van Noord Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen 1, p. 276-311.
('Geomorphological and tectonic observations as a contribution to the explanation of the landforms of North Sumatra')

Osberger, R. (1954)- Die Geologie des Sibumbungebirges nebst Beschreibung der hier und in benachbarten Gebieten liegenden Ertzvorkommen (Mittel-Sumatra). Sitzungsberichte Osterreich. Akademie Wissenschaften, Math.-Naturwiss. Kl., 1, 163, 9-10, p. 689-723.
(online at: https://www.zobodat.at/pdf/SBAWW_163_0689-0723.pdf)
('The geology of the Sibumbun Mountains with description of associated and nearby ore occurrences (Central Sumatra)'. Summary of geology and copper and iron mineralizations associated with Carboniferous- Triassic

intrusives in area NE of Singkarak Lake, Padang province. At least 1400m thick Carboniferous-Permian-Triassic series, followed by non-deposition from Late Triassic to end-Mesozoic. Intruded by various intrusive rocks, from dacite to gabbro to granodiorite)

Osberger, R. (1955)- Uber Deckenbau und andere geologische Probleme im Pratertiair Sumatras. Neues Jahrbuch Geol. Palaont., Monatshefte 1955, 8, p. 321-341.
('On nappe structures and other geological problems in the Pre-Tertiary of Sumatra'. Assumes existence of nappe structure in Padang Highlands and Toba area of N Sumatra. Main thrusting was to NE and took place in post-Turonian Cretaceous time. Folding at depth in Tertiary responsible for movement to SW. Neither rock facies nor structural evidence supports view that root zone of nappes is in Riau islands or Malaya)

Osberger, R. (1956)- On the nappe structure and other geological problems in the Pre-Tertiary of Sumatra. 20th Sess. Int. Geological Congress, Mexico, 5, p. 411-420.
(Similar to paper above. Previous investigators showed nappe structures Jambi province, C Sumatra. Present studies confirmed existence of nappe in Padang highlands and probable existence of post-Turonian(?) 'Toba nappe' in E part of N Sumatra. Lithofacies studies indicate Permo-Carboniferous continent E of Malaya and Sumatra. Main thrusting was to NE in Cretaceous)

Ozawa, Y. (1929)- A new occurrence of *Schwagerina princeps* in Sumatra. Eclogae Geol. Helvetiae 22, p. 51-52.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1929:22::8&subp=hires)
(Short paper on fusulinids in Productus limestone of Teluk Gedang on Merangin River, below plant beds with Pecopteris ('Jambi Flora'; JTvG) of Garing River. Some already described by Lange (1925). Schwagerina princeps, Neoschwagerina craticulifera Fusulina japonica not reported from Sumatra before. (Schwagerina princeps from this locality re-described as Pseudoschwagerina meranginensis n.sp. by Thompson (1936))

Page, B.G.N. (1981)- Late Palaeozoic pebbly mudstones in Sumatra. In: M.J. Hambrey & W.B. Harland (eds.) Earth's pre-Pleistocene glacial record, Cambridge University Press, p. 337. *(Brief abstract only)*
(Pebbly mudstones dated as Carboniferous- E Permian found in Sumatra along Barisan Mountain Range. In places they are interbedded with limestones and calcareous siltstones. Glacial origin less likely than submarine mass-flow deposit along continental margin)

Page, B.G.N., J.D. Bennett, N.R. Cameron, D.M. Bridge, D.H. Jeffrey et al. (1979)- A review of the main structural and magmatic features of northern Sumatra. J. Geol. Soc., London, 136, 5, p. 569-579.
(Three main periods of Cenozoic volcanism in N Sumatra: E Oligocene, Oligo-Miocene and Miocene- Recent. Large transcurrent movements on SFS indicated by (a) regional slivers of oceanic crust trapped at leading junction of W continental plate as it moved NW against main mass of island; (b) paleomagnetic evidence showing E Sumatra as part of Malaya block and in equatorial position since Cretaceous, while paleolatitude of NW tip of Sumatra (W of SFS), was farther S; (c) juxtaposition of Li-rich and Li-poor geochemical provinces along SFS. Sumatran magmatic arc commenced at least in Mesozoic. Offset of current arc to E at Lake Toba ascribed to change in angle of Benioff Zone, divided by split in descending plate coincident with prolongation of Investigator transform fault)

Page, B.G.N. & R.D. Young (1981)- Anomalous geochemical patterns from northern Sumatra: their assessment in terms of mineral exploration and regional geology. J. Geochemical Exploration 15, p. 325-365.
(Stream sediment geochemical survey in Sumatra N of 4°N. Linear high-copper zone along axial Barisan Mts, derived from ophiolites and copper-rich calc-alkaline intrusives. High chromium over ophiolites. High lead E of linear copper zone and along oil and gas basins of E coast strip. High tin values W of copper-rich intrusives. Pattern does not conform to classic zonation of mineral deposits across simple subduction system. High Lithium values E Sumatran Fault System and virtually absent W of it)

Pardede, R. & K. Brata (1984)- Geologic map of the Sungaipenuh and Ketaun Quadrangles, Sumatra (Quadrangle 0812 and 0813), 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(see also 2nd Edition, Kusnama et al. 1995)

Patton, J.R., C. Goldfinger, A.E. Morey, K. Ikehara, C. Romsos, J. Stoner, Y. Djadjadihardja, Udrekh, S. Ardhyastuti, E. Zulkarnaen Gaffar & A. Vizcaino (2015)- A 6600 year earthquake history in the region of the 2004 Sumatra-Andaman subduction zone earthquake. Geosphere 11, 6, p. 2067-2129.
(Paleoseismic history from offshore 144 deep-sea sediment cores in trench and lower slope piggyback basins of Sumatra accretionary prism. Include very young surface turbidites along N Sumatra margin, probablyemplaced in the past few decades in 2004 and 2005 earthquake rupture zones, with no overlying hemipelagic sediment)

Peng, H.U., Z. Zhu & W. Xiang (2014)- The lithogeochemical characteristics and tectonic setting research of Sulit skarn-type copper deposit in Sumatra Island, Indonesia. Acta Geologica Sinica 88, 2, p. 875. *(Abstract only)*
(Sulit copper deposit associated with E Jurassic low-SiO2 Sulit Diorite, with tholeitic geochemistry. May be related to intrusion of magma from extensional settings after late Indosinian period)

Permana, H., Munasri, S. Aribowo & M.M. Mukti (2016)- Petrologi batuan dasar Kompleks Gunungkasih, Tanjungkarang, Lampung Selatan. In: R. Delinom et al. (eds.) Pros. Geotek Expo 2016, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. 623-636.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2017/10/05/prosiding-2016/)
('Petrology of basement rocks of the Gunungkasih Complex, Tanjungkarang, South Lampung'. Pretertiary Gunungkasih complex rocks in Lampung greenschist-facies metamorphics (derived from volcanic arc or oceanic crust rocks; Sikuleh-Sekampung arc?). Basement rocks of Ratai Bay mica schist, chlorite schist and quartzite (meta-sediments; part of Woyla Accretionary Complex?))

Permana, R., B. Sutopo, Y.P. Simanjuntak, R. Pitaloka & E. Sukmawan (2014)- High sulfidation epithermal Au-Cu and porphyry Cu-Au mineralization in Bujang prospect, Batangasai, Jambi Province, Indonesia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 281-290.

Petersen, M.D., J. Dewey, S. Hartzell, C. Mueller, S. Harmsen, A.D. Frankel & K. Rukstales (2004)- Probabilistic seismic hazard analysis for Sumatra, Indonesia, and across the Southern Malaysian Peninsula. Tectonophysics 390, p. 141-158.
(Ground motion hazard models for Sumatra and Malay Peninsula by USGS)

Philippi, H. (1917)- De beteekenis en de toekomst van den mijnbouw in Zuid-Sumatra. In: Eerste Zuid-Sumatra Conferentie, Zuid-Sumatra Landbouw en Nijverheids Vereeniging, p. 1-57.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:100001437:pdf)
('The significance and future of mining in South Sumatra'. Brief review of gold, coal, iron, etc. occurrences and mining regulations. No figures)

Philippi, H. (1917)- Morphologische en geologische aantekeningen bij de kaart van Zuid-Sumatra, 1. Het Ranau Meer. Jaarverslag Topographische Dienst Nederl. Indie 1916, p, 182-207.
('Morphological and geological notes with the map of South Sumatra, 1. Ranau Lake')

Philippi, H. (1918)- Morphologische en geologische aantekeningen bij de kaart van Zuid-Sumatra, 2. Kolenterreinen in Benkoelen. Meded. Encyclopedisch Bureau (Batavia) 18, p. 1-86.
('Morphological and geological notes with the map of South Sumatra, 2. Coal terrains in Bengkulu'. Notes on coal occurrences in Bengkulu area, made during topographic survey. Coal in Bengkulu surveyed earlier by Van Dijk (1875), Verbeek (1881) and Moerman (1915). Coal in two horizons, both folded/ faulted: 'Old Miocene' (rel. good quality; locally improved by thermal metamorphism by common young igneous intrusions) and 'Young Miocene' (low grade, poor quality, water content 15-19%), separated by 'Middle Miocene' interval rich in tuffs (Sekajoen Tuffs, Balai Tuffs, Kaboe andesites-breccias). Age control of formations poor)

Philippi, H. (1923)- Contributions a la geologie de la partie meridionale de Sumatra: gisements de fer dans les districts des Lampongs. Thesis Universite de Geneve Fac. Sciences, 720, p. 1-42.

('Contributions to the geology of the southern part of Sumatra; iron-bearing beds in the Lampung District.' Rel. little detailed description of iron-bearing rocks near Sukadana/ Telukbetung)

Philippi, H. (1925)- Beschrijving van ijzerertsafzettingen op de hellingen van den Radjabasa (Lampongsche Districten). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 393-403.
('Description of iron ore deposits on the slopes of the Rajabasa (Lampong Districts)'. Non-commercial iron ore on N slope Rajabasa volcano, S Sumatra)

Poedjoprajitno, S. (2007)- Morfotektonik dan reaktivitas sesar Sumatera di Padangpanjang, Sumatera Barat. J. Sumber Daya Geologi 17, 3, p. 187-204.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/289/260)
('Morphotectonics and Sumatran fault reactivation in Padangpanjang, West Sumatra'. Remote sensing study)

Poedjoprajitno, S. (2008)- Morfostratigrafi tuf ignimbrit Maninjau di Ngarai Sianok, Dusun Belakang Balok-Bukittinggi, Sumatera Barat. J. Sumber Daya Geologi 18, 3, p. 171-184.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/264/244)
('Morphostratigraphy of the Maninjau ignimbrite tuff in Sianok Gorge, Belakang Balok village, Bukittinggi, West Sumatera'. Ignimbrite plateau of Sianok Valley produced by two periods of Maninjau volcanic eruptions, separated by fluvio-volcanic sands and conglomerates. Pyroclastic deposits faulted, forming terrace morphology. Sianok Valley formed by reactivation of basement faults)

Posavec, M., D. Taylor, T. van Leeuwen & A. Spector (1973)- Tectonic controls of volcanism and complex movements along the Sumatran fault system. In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 43-60.
(online at: www.gsm.org.my/products/702001-101354-PDF.pdf)
(Rio Tinto work along Sumatra fault zone. Igneous activity along E-W alignments suggested by magnetic lineaments. Active volcanic centers spaced at 75-100 km along active fault zone. Total horizontal offset along fault ~130 km since inception of present volcanic cycle)

Posthumus, O. (1927)- Some remarks concerning the Palaeozoic flora of Djambi, Sumatra. Proc. Kon. Nederl. Akademie Wetenschappen Amsterdam 30, 6, p. 628-634.
(online at: www.dwc.knaw.nl/DL/publications/PU00015487.pdf)
(English version of 1926 Dutch paper. Carboniferous or Permian fossil plants from Jambi show most resemblance to Gigantoperis flora of E Asia, not Gondwana Glossopteris fauna. Also first author to suggest 'Jambi Flora' is of E Permian age, not Carboniferous as initially suggested by Jongmans (1925, 1935))

Pramumijoyo, S. (1991)- Neotectonique et sismotectonique de la terminaison meridionale de la Grande Faille de Sumatra et du Detroit de la Sonde (Indonesie). Doct. Thesis, Universite Paris XI, Orsay, p. 1-230. *(Unpublished)*
('Neotectonics and seismotectonics at the southern end of the Great Sumatra Fault and Sunda Straits')

Prasetyono, B., H. Irdhan, P. Ibnu, M. Farmer & D. den Boer (2014)- Review of geology and mineral resources at the Tembang Deposit, Sumatra, Indonesia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 271-279.
(Tembang low-sulphidation epithermal Au-Ag vein system in Barisan Mts, 130km NNE of Bengkulu, S Sumatra. Hosted in volcanics of E Miocene Hulusimpang Fm ('Old andesites') and M Miocene andesitic intrusions. Age of mineralization assumed to be similar to known epithermal Au-Ag deposits in S Sumatra and W Java. Near Rawas open pit mine, operational from 1997-2000)

Prasojo, O.A., F.M.H. Sihombing, R. Syahputra & T.H.W. Kristyanto (2018)- Paleogeographical significance of benthic foraminifera from the Mengkarang Formation (early Permian, Sumatera). Proc. 3rd Int. Symposium on Current Progress in Mathematics and Sciences 2017 (ISCPMS2017), AIP Conf. Proc. 2023, 020191, p. 1-5.
(online at: https://aip.scitation.org/doi/pdf/10.1063/1.5064188)

(Curious paper on (impossible) occurrence of Neogene-Recent benthic foraminifera Ammonia, Cibicides, Elphidium in Permian Mengkarang Fm sediments? No sample locality information)

Prawirodirdjo, L.M. (2000)- A geodetic study of Sumatra and the Indonesia region: kinematics and crustal deformation from GPS and triangulation. Ph.D. Thesis University of California, San Diego, p. 1-150. *(Unpublished)*
(Analysis of geodetic GPS data collected in Indonesia from 1959 to 1994 suggests three large blocks: (1) Sunda Shelf, with low velocities to ESE, (2) S Banda Arc- E New Guinea, moving NE and NNE, (3) Birds Head region of W Papua, with high velocity to NW and WNW. NE Sulawesi is fourth, smaller block)

Prawirodirdjo, L., Y. Bock, J.F. Genrich, S.S.O. Puntodewo, J. Rais, C. Subarya & S. Sutisna (2000)- One century of tectonic deformation along the Sumatran fault from triangulation and Global Positioning System surveys. J. Geophysical Research 105, p. 28343-28361.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2000JB900150/pdf)
(Analysis combining historical triangulation and recent GPS measurements in W and N Sumatra reveals detailed slip history along central part of Sumatran fault. Sumatra fault arc-parallel slip rates 23-24mm/yr)

Pribadi, A., E. Mulyadi & I. Pratomo (2007)- Mekanisme erupsi ignimbrit kaldera Maninjau, Sumatera Barat. J. Geologi Indonesia 2, 1, p. 31-41.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/182)
('Mechanism of ignimbrite eruption of Maninjau caldera, West Sumatra'. Maninjau is collapse caldera, formed by major eruption around 70-80 ka, scattering 220-250 km3 of pyroclastic material up to >75 km from center of eruption. Two types of rocks: pyroclastic surge deposits and air-fall deposits)

Priyomarsono, S. & A. Sumarsono (1993)- Tektonik geologi daerah pegunungan Tigapuluh dan daerah sekitarnya, cekungan Sumatra selatan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 103-111.
('Tectonics and geology of the Tigapuluh Mountains and surrounding area, S Sumatra Basin')

Pudjowalujo, H. (1990)- Cenozoic tectonics of North Sumatra with particular reference to the Sumatran fault system. In: Proc. Pacific Rim Congress 90, Gold Coast 1990, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, 3, p. 209-215.

Pulunggono, A. & N.R. Cameron (1984)- Sumatran microplates, their characteristics and their role in the evolution of Central and South Sumatra basins. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 121-143.
(Milestone paper on Sumatra Pre-Tertiary mosaic of basement terranes. Mergui, Malacca and East Malaya continental microplates joined in Late Triassic to form Sundaland, followed by Late Cretaceous accretion of W coast Woyla volcanic arc terrain(s). Suture zone between Mergui and Malacca microplates, named Mutus assemblage, major zone of weakness during formation of Tertiary C and S Sumatra basins. It is a zone of high heat flow and underlies ~95% of two basin's oil production. Young Tertiary structures in this zone are related to wrenching in N and S, and to compressional reactivation of cross cutting WNW-ESE faults formed during Cretaceous accretion of Woyla Terrains)

Pulunggono, A., A. Suparman, A. Assegaf & T. Purwanto (1990)- Geologi daerah Garba dan sekitarnya, Sumatra Selatan. Universitas Trisakti, Jakarta, 56 p. *(Unpublished)*

Purbo-Hadiwidjoyo, M.M., M.L. Sjachrudin & S. Suparka (1979)- The volcano-tectonic history of the Maninjau caldera, western Sumatra, Indonesia. In: W.J.M. van der Linden (ed.) Fixism, mobilism or relativism: Van Bemmelenȏs search for harmony, Geologie en Mijnbouw 58, 2, p. 193-200.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0T3BxRWpTaFRPUlU/view)
(Mt. Maninjau 15km W of Bukittinggi, W Sumatra, three stages: pre-volcanic edifice stage, pre-caldera stage (number of strato-volcanoes forming N-S oriented Maninjau volcanic complex) and caldera-formation stage. Caldera-formation stage preceded by the ejection of ~220-250 km3 of pumiceous tuff, followed by collapse of

the top part of volcano, and radial failure of W flank. Two eruptions of acid magma: (1) unwelded and (2) welded tuff. Since then obvious volcanic activity ceased)

Purucker, M. & T. Ishihara (2005)- Magnetic images of the Sumatra region crust. EOS Transactions American Geophys. Union (AGU) 86, 10, p. 101-102.
(Magnetic images near Great Sumatra earthquake. Along fault rupture magnetic crustal thicknesses increase to E and NE. Island arc and subducting slab are magnetic, and subducting slab is diving into mantle at steep angle, increasing magnetic thickness. Between Singapore and S coast Borneo, a previously unrecognized first-order feature parallels active subduction zone. Like present subduction zone, it is characterized by 2-3 fold increase in magnetic thickness in NE direction, probably reflecting past history of subduction in region)

Putra, A.F. & S. Husein (2016)- Pull-apart basins of Sumatra fault: previous works and current perspectives. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 42-60.
(online at: https://repository.ugm.ac.id/273463/)
(Sumatran Fault zone 1900 km long NW-SE trending transcurrent fault. 19 segments from Aceh to Sunda Strait with stepoves with pull-apart basin. CCW rotation of Sundaland in M Miocene triggered activation of fault in right-handed kinematics, facilitated by pre-existing basement grain (obduction of Woyla nappe))

Putra, A.F., S. Husein & P. Ariyanto (2018)- Thrust wedge orogeny in North Sumatra Basin: mountain front structures and subsurface evidences. Proc. PIT (Annual Meeting) Ikatan Ahli Geologi Indonesia (IAGI), Pekanbaru 2018, 5p.
(Plio-Pleistocene uplift of Sundaland led to thrust wedge orogeny in N Sumatra Basin. Compressive structures in mountain front and continue to subsurface foreland. Thrust wedge developed in Pre-Tertiary stratigraphy and generated NW-SE thrusts along Barisan Mountain Front. Thrust wedge orogeny initiated since E Pliocene and transpressive deformation since Late Pliocene to Recent. Foreland setting developed in N Sumatra Basin, updating previous knowledge of strike-slip dominated basin inversion)

Putra, A.M. & Munasri (2016)- Characteristics of Radiolaria and its bearing rocks in the Garba mountains, South Sumatra. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 576-578.
(Massive chert of Situlanglang Mb of Garba Fm in Garba Mts with poor-moderate preserved radiolaria, low diversity and abundance. Presence of Triassocampe suggests Triassic age (older than supposed Jurassic-Cretaceous age of Woyla Group)

Putra, P.S. & E. Yulianto (2017)- Karakteristik endapan tsunami Krakatau 1883 di daerah Tarahan, Lampung. J. Riset Geologi Pertambangan (LIPI) 27, 1, p. 83-95.
(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/301/pdf)
('Characteristics of the 1883 Krakatau tsunami deposits in the Tarahan area, Lampung'. Tsunami deposit of 1883 Krakatau volcano eruption off Lampung Bay is f-c sand layer (10-30cm thick?) with pumice and volcanic ash. Shallow marine benthic foraminifera and molluscs show tsunami waves erode sea floor sediments down to 30-40m depth. Four fining upward patterns indicate at least four tsunami waves inundated study area.

Qiu, Z., X. Han, X. Jin, Y. Wang, & J. Zhu (2014)- Tephra records from abyssal sediments off western Sumatra in recent 135 ka: evidence from Core IR-GC1. Acta Oceanol. Sinica 33, 12, p. 75-80.
(Three volcanic ash layers in deep-sea Core IR-GC1 from NE Indian Ocean, adjacent to W Indonesian arc, ~1000km W of Lake Toba. Tephra dominated by glass shards with minor plagioclase, biotite, and hornblende. Layer A correlated to youngest Toba tuff (~76–80 ka), Layer B with older eruption of Toba caldera (~98-100 ka), Layer C (>135 ka) different composition and originated from another volcanic eruption event)

Rampino, M.R. & S.H. Ambrose (1992)- Volcanic winter in the Garden of Eden: the Toba supereruption and the late Pleistocene human population crash. Geol. Soc. America (GSA), Spec. Paper 345, p. 71-82.

Rampino, M.R. & S. Self (1992)- Volcanic winter and accelerated glaciation following the Toba super-eruption. Nature 359, 6390, p. 50-52.
(Eruption of Toba in Sumatra 73,500 years ago largest known explosive volcanic event in Late Quaternary. Model calculations of climatic effects of volcanic cloud suggest it may have produced 'volcanic winter', followed by few years surface-temperature decreases of 3-5 °C. Eruption during Stage 5a-4 transition of oxygen isotope record may have accelerated shift to glacial conditions that was already underway)

Rampino, M.R. & S. Self (1993)- Climate- volcanism feedback and the Toba eruption of ~74000 years ago. Quaternary Research 40, p. 269-280.
(Toba eruption (~74,000 yrs ago) during δ18O Stage 5a-4 transition period of rapid ice growth and falling global sea level, which may have been a factor in creating stresses that triggered volcanic event. Stratospheric dust and sulfuric acid aerosol clouds may have created brief cooling ('volcanic winter'), with N Hemisphere surface T decreases of ~3°-5°C. Summer T decreases of >10°C at high N latitudes adjacent to regions already covered by snow may have increased snow/ sea-ice extent, accelerating cooling already in progress)

Ratman, N. & G.P. Robinson (1999)- Umur batuan sedimen meta dan batugamping Mesozoikum di daerah Tembesi, Jambi, Sumatera Bagian Selatan. J. Geologi Sumberdaya Mineral 9, 89, p. 2-9.
('Age of Mesozoic metasediments and limestones in the Tembesi area, S Sumatra'. Middle? Jurassic- U Cretaceous 'flysch-type' accretionary wedge sediments of M Jurassic Asai Fm (but with Late Jurassic nannofossils?) and Late Jurassic- Cretaceous Rawas Fm, with some serpentinites W of Jambi and SW of Bangko (= Woyla Terrane of Pulunggono & Cameron 1984, Schieferbarisan of Tobler 1922). ?Unconformably overlain by Mersip Fm limestone Mb with Maastrichtian nannofossils (Watznaueria spp, etc.). Arai Granite with K-Ar age 141 Ma (earliest Cretaceous))

Reid, M.R. & J.A. Vazquez (2017)- Fitful and protracted magma assembly leading to a giant eruption, Youngest Toba Tuff, Indonesia. Geochem. Geophys. Geosystems 18, 1, p. 156-177.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2016GC006641/epdf)
(Eruption of 74 ka Youngest Toba Tuff of N Sumatra produced 2800 km3 of ignimbrite and coignimbrite ashfall. Relatively many zircons nucleated before earlier eruption at 501 ka, but most zircons yielded interior dates 100-300 ka thereafter. Zircon growth likely episodic over protracted time intervals of >100- >500 ka. Repeated magma recharge may have contributed to development of compositional zoning in YTT, but perturbations to magma reservoir over >400 ka did not lead to eruption until 74 ka)

Retgers, J.W. (1895)- Liparieten van Toba, Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 24 (1895), Wetenschappelijk Gedeelte, p. 99-107.
(‘Liparites from Toba, North Sumatra’. Brief petrographic descriptions of Toba Tuffs)

Rivai, T.A., K. Yonezu, Syafrizal & K. Watanabe (2017)- Dairi Zn-Pb±Ag deposit, North Sumatra, Indonesia: preliminary study on host rock petrology and ore mineralogy. Proc. Int. Forum for Green Asia 2017, Kyushu University, P23, p. 61-66.
(online at: http://www.tj.kyushu-u.ac.jp/leading/pdf/06-2017Seminar-Proceedings_P23.pdf)
(Dairi sediment-hosted Zn-Pb±Ag deposit along E limb of Sopokomil dome, ~290km SW of Medan. Orebodies hosted by metasediments of Kluet Fm of Sibumasu Block. Minerals sphalerite, galena, chalcopyrite, arsenopyrite, etc.)

Robock, A., C.M. Ammann, L. Oman, D. Shindell, S. Levis & G. Stenchikov (2009)- Did the Toba volcanic eruption of ~74k BP produce widespread glaciation? J. Geophysical Research 114, D10107, p. 1-9.
(online at: https://pubs.giss.nasa.gov/docs/2009/2009_Robock_ro09900j.pdf)
(Climate simulation model of 'volcanic winter' following supervolcano eruption of size of Toba suggests devastating consequences for humanity and global ecosystems)

Rock, N.M.S., D.T. Aldiss, J.A. Aspden, M.C.G. Clarke, A. Djunuddin, W. Kartawa, Miswar, S.J. Thompson & R. Whandoyo (1983)- Geologic map of the Lubuksikaping Quadrangle (0716), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

(Map sheet of W side of C Sumatra near Natal. Oldest rocks in Barisan Mts Permo-Carboniferous Kuantan Fm, incl. meta-limestones and meta-volcanics, and Permian Silungkang Fm basic meta-volcanic, sandstones, tuffs and limestone member, intruded by Permo-Triassic and younger granites. In W juxtaposed against Woyla Gp, incl. melange, argillites, schist, meta-limestones, etc.)

Rock, N.M.S., H.H. Syah, A.E. Davis, D. Hutchison, M.T. Styles & R. Lena (1982)- Permian to Recent volcanism in northern Sumatra, Indonesia: a preliminary study of its distribution, chemistry and peculiarities. Bull. Volcanologique 45, 2, p. 127-152.
(Sumatra has been volcanic arc above NE-dipping subduction zone since Late Permian. Main volcanic episodes N of Equator: (1) Late Permian Peusangan Gp porphyritic basic lavas interstratified with limestones and phyllites; (2) Late Mesozoic Woyla Gp volcanic rocks widely distributed along and W of Sumatra Fault System, include ophiolite-related spilites, andesites and basalts; (3) Paleogene volcanic rocks include altered basalt pile in NW, intruded by E Miocene (19 Ma) dioritic stock; and basic lavas in SW; (4)Miocene volcanic rocks widely distributed along W coast; (5) Quaternary volcanism irregular and anomalous relative to S Sumatra and Java-Bali. Depths to subduction zone below calc-alkaline volcanoes in Java/Bali 160-210 km, but little >100 km in N Sumatra, possibly because Sumatra underlain by continental crust and more akin to destructive continental margins than typical island-arcs such as E Java or Bali)

Roemer, F. (1880)- Kurzer Bericht uber Kohlenkalkversteinerungen von Sumatra und Timor. Lethaea Geognostica, I, 1880, 5, p. 75- .
('Brief note on Carboniferous fossils from the West coast of Sumatra and Timor'. Incl. first description of Permian fusulinid Schwagerina verbeeki)

Roemer, F. (1880)- Uber eine Kohlenkalk-fauna der Westkuste von Sumatra. Palaeontographica 27, 3, p. 5-11.
(online at: http://archive.org/details/palaeontographic27cass)
('On a 'coal-limestone' (=Carboniferous) fauna from the West coast of Sumatra'. Includes description of new species Fusulina granum-avenae, Productus sumatransis, Phillipsia sumatransis, etc. Same as Roemer 1881, below (same faunas redescribed by G. Fliegel 1901))

Roemer, F. (1881)- Uber eine Kohlenkalk-fauna der Westkuste von Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 10 (1881), 1, p. 289-305.
('On a 'coal-limestone' (=Carboniferous) fauna from the West coast of Sumatra'. First description of dark grey, limestone from Padang Highlands, W Sumatra, with striking resemblance to Upper Carboniferous 'Kohlenkalk' of NW Europe. Contains fusulinids (Fusulina granum-avenae n.sp., Schwagerina verbeeki= Verbeekina verbeeki), brachiopods (incl. Productus sumatrensis n.sp.= Stereochia sumatrensis), crinoids, nautiloids, gastropods and trilobite (incl. Phillipsia sumatrensis n.sp.= Pseudophillipsia) (From Silungkang Fm; Age now commonly accepted as M Permian; JTvG))

Rolker, C.M. (1891)- The alluvial tin deposits of Siak, Sumatra. Trans. American Inst. Mining Engineers 20, New York, p. 50-84.
(Old review of alluvial tin mining operations in headwaters of Siak (and Rokan and Kampar) rivers near Pakanbaru, in east part of C Sumatra. Worked mainly by Chinese contract miners (tin deposits known to VOC agents since 1670's; Barnard 2013))

Rose, W.I. & C.A. Chesner (1987)- Dispersal of ash in the great Toba eruption, 75 ka. Geology 15, p. 913-917.
(Pleistocene Toba eruption of 75 ka left caldera of 100x30km, with caldera ash fill >600m. It produced minimum of 2800 km3 of magma, >800 km3 deposited as ash fall, covering area of 4 million km2. Extensive rhyolite ash horizon in deep sea cores of Bay of Bengal, possibly also in India (3100 km away))

Rose, W.I. & C.A. Chesner (1990)- Worldwide dispersal of ash and gases from earth's largest known eruption: Toba, Sumatra, 75 ka. Palaeogeogr. Palaeoclim. Palaeoecology 89, 3, p. 269-275.
(Eruption of Youngest Toba Tuff at ~75 ka in N Sumatra produced >2800 km3 of dense rock equivalent rhyolite magma. Much of volume preserved as non-welded outflow sheet covering 20,000-30,000 km2 and thick, welded

intra-caldera tuff. At least 800 km3 of Toba ash deposited in ash blanket over Indian Ocean and S Asia. Masses of ash and gases released nearly two orders of magnitude higher than any known historic eruption)

Rosidi, H.M.D, S. Tjokrosaputro, B. Pendowo, S. Gafoer & Suharsono (1996)- Geologic map of the Painan and northeastern part of the Muarasiberut Quadrangles (0714-0814), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(2nd edition of 1975 map. W part of C Sumatra, cut by Sumatra Fault zone and with Kerinci Volcano (3800m). Most of area underlain by Permian 'Barisan Fm' phyllites and metagreywacke with slaty cleavage and chert, with limestone intercalations with fusulinid foraminifera (Schwagerina). Intruded by Jurassic, Cretaceous and Miocene granites. Along NE part of Barisan Mts 1100m thick non-metamorphic Permian Palepat Fm, volcanoclastics, mainly composed of andesitic lavas and tuffs, with less basalt and rhyolite, and with shales and thin limestones with brachiopods and fusulinids (and famous E Permian 'Jambi Flora'), all overlying large (Jurassic??) granite body. Tabir Fm conglomeratic sandstones with Ostrea and reworked Paleozoic andesitic clast assigned to Jurassic (But is Late Permian; Crow et al. 2008). Jurassic Siguntur Fm with limestone member with stromatoporoids Cretaceous Siulak Fm clastics and andesitic-dacitic tuffs with limestone member with Loftusia and hydrocoralline fossils. Unconformably overlain by Oligocene- Miocene sediments of northern S Sumatra (Jambi) basin.)

Rutten, L.M.R. (1927)- Sumatra, Chapters 24-31. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 343-497.
(1927 review of geology of Sumatra in Rutten's classic lecture series)

Ruttner, F. (1935)- Kieselgur und andere lakustrische Sedimente im Tobagebiet. Ein Beitrag zur Geschichte des Tobasees in Nordsumatra. Archiv Hydrobiologie, Suppl. vol. 13, Tropische Binnengewasser 5, p. 399-461.
('Diatomite and other lacustrine sediments in the Toba area; a contribution to the history of Lake Toba in North Sumatra'. Quaternary lake sediments and diatoms in Lake Toba area up to 1360m, i.e. 500m above current lake level(See also Van der Marel 1947, Verstappen 1993))

Ryberg, T., U. Muksin & K. Bauer (2016)- Ambient seismic noise tomography reveals a hidden caldera and its relation to the Tarutung pull-apart basin at the Sumatran Fault Zone, Indonesia. J. Volcanology Geothermal Res. 321, p. 73-84.
(Tomography velocity model shows strong velocity decrease off Great Sumatran Fault Zone, at NE margin of the young Tarutung pull-apart basin, coinciding with caldera-like morphological feature interpreted as hidden volcanic caldera)

Saefudin, I., S. Permanadewi, T. Hardjono & S.D. Graha (1991)- Penarikhan jekak belah batuan granitik di daerah Tangse, Aceh. J. Geologi Sumberdaya Mineral 1, 1, p. 3-6.
('Fission track ages of granite rocks in the Tangse area, Aceh'. Fisssion track dating of granite- granodiorite samples gives Late Miocene ages, from 5.8-10.2 Ma. Previous K-Ar ages 42 Ma (E Eocene))

Saefudin, I. (2000)- Kecepatan pangangkatan dan pendinginan pluton granit Bukit Garba, Baturaja, Sumatera Selatan. J. Geologi Sumberdaya Mineral 10, 101, p. 10-15.
('Rate of removal and cooling of the Bukit Garba granite pluton, Baturaja, South Sumatra'. Fission track dating of zircon from Garba Mts granite gave ages of 84.3 ± 4.1 Ma and 79.5 ± 3.5 Ma; apatite FT ages ~63.5- 34 Ma. K-Ar dating of biotite 113 and 116 Ma. Uplift rate of Garba granite body 0.03-0.04 mm/yr, possibly caused by tectonic activities at 116-80 Ma and 60-30 Ma)

Saing, S. et al. (2015)- Magmatic hydrothermal system at the southeastern Martabe high-sulfidation epithermal deposit, North Sumatra, Indonesia. Proc. 5th Asia Africa Mineral Resources Conf., Quezon City, p. 15-20.

Saing, S., R. Takahashi & A. Imai (2016)- Fluid inclusion and stable isotope study at the southeastern Martabe deposit: Purnama, Barani and Horas ore bodies, North Sumatra, Indonesia. Resource Geology 66, 2, p. 127-148.

(Martabe Au-Ag deposit in N Sumatra is high sulfidation epithermal deposit, hosted by Neogene sandstone, siltstone, volcanic breccia, and andesite to basaltic andesite of Angkola Fm. Deposit consists of six ore bodies, controlled by N-S and NW-SE trending faults. Barani and Horas ore bodies SE of Purnama ore body.

Salisbury, M.J. (2012)- Convergent margin magmatism in the Central Andes and its near antipodes in Western Indonesia: spatiotemporal and geochemical considerations. Ph.D. Thesis, Oregon State University, p. 1-131.
(online at: http://ir.library.oregonstate.edu/..)
(Incl. chapter on marine tephra deposits in deep sea sediment cores from Sunda trench near Sumatra, which reveal evidence for seven large (minimum volume 0.6-6.3 km3), previously undocumented, explosive eruptions in region over last ~110,000 years, presumably from mainland Sumatra. Composition varies with age:rhyolitic Group 3 tephras oldest (~30 – 110 ka), and Group 1 and 2 andesites-rhyodacites within last 14 ka. (see also paper below))

Salisbury, M.J., J.R. Patton, A.J.R. Kent, C. Goldfinger, Y. Djadjadihardja & U. Hanifa (2012)- Deep-sea ash layers reveal evidence for large, late Pleistocene and Holocene explosive activity from Sumatra, Indonesia. J. Volcanology Geothermal Res. 231-232, p. 61-71.
(Tephra ash layers in deep-sea sediment cores from Sunda trench area off Sumatra reveal evidence for five previously undocumented, large explosive eruptions over last ~31,000 years, presumably from Sumatra)

Sandberg, C.G.S. (1913)- Bijdragen tot de kennis van de geologische gesteldheid van de residentie Benkoelen (Sumatra) en van de propylitiseering en mineraliseering van jong-vulkanische gesteenten. Handelingen XIV Nederlandsch Natuur- Geneeskundig Congres, Delft 1913, Kleinenburg, Haarlem, p. 524-537.
('Contributions to the knowledge of the geological conditions of the Residency Bengkulu (Sumatra) and of the propylitization and mineralization of young-volcanic rocks'. Bengkulu province of W Sumatra contains granite, gneiss and other crystalline schists, partly covered by young volcanics, with associated propylitization of rocks and gold mineralization)

Sandberg, C.G.S. (1913)- De Redjang-Lebong goudmijn (Residentie Benkoelen, Zuid Sumatra). Populair-wetenschappelijke verhandeling. Tjeenk Willink, Haarlem, p. 1-40.
(online at: http://leesmuseum.bibliotheekarnhem.nl/Books/mp-pdf-bestanden/LM01778.pdf)
('The Rejang lebong gold mine (Bengkulu Residency, South Sumatra,apopular-scientific review'. Privately published brochure for shareholders on geology and management of Sumatra gold mine)

Santoso, D., M.E. Suparka, S. Sudarman & S. Suari (1995)- The geothermal fields in central part of the Sumatra fault Zone as derived from geophysical data. In: Proc. World Geothermal Congress, 4, p. 1363-1366.
(online at: www.geothermal-energy.org/pdf/IGAstandard/WGC/1995/2-Santoso.pdf)
(Geothermal systems in Central Part of Great Sumatra Fault Zone are graben-type geothermal systems, closely related to Quaternary volcanism)

Santoso & U.M. Lumbanbatu (2007)- Morfogenesis daerah Danau kaldera Maninjau, Sumatera Barat. J. Sumber Daya Geologi 17, 2, p. 105-115.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/282/253)
('Morphogenesis of the Laka Maninjau caldera, West Sumatra'. Two volcanic centers in Maninjau Lake)

Saragih, R.D. & K.S. Brotopuspito (2018)- Delineation of the Sumatra Fault in the Central Part of West Sumatra based on gravity method. Journal of Physics, Conf. Series 1011, 012024, 5p.
(online at: http://iopscience.iop.org/article/10.1088/1742-6596/1011/1/012024/pdf)

Sasajima, S, Y. Otofuji, K. Hirooka, Suparka, Suwijanto & F. Hehuwat (1978)- Paleomagnetic studies on Sumatra Island: on the possibility of Sumatra being part of Gondwanaland. In: M. Kono (ed.) Rock magnetism and Paleogeophysics, Japan, 5, p. 104-110. *(online at: http://peach.center.ous.ac.jp/rprep/Rock%20Magnetism%20and%20Paleogeophysics%20vol5%201978.pdf)*
(Summary of paleomagnetic work. Samples from 53 sites across Sumatra, ranging in age from Permian-Pleistocene. Triassic data believed to be reliable, and show paleogeographic position of Sumatra at 38°S and

100°E, suggesting Sumatra area was part of Gondwanaland (N India) in Triassic. Between Triassic and E Tertiary Sumatra rotated 62° CW, presumably during breakup from Gondwanaland or during N-ward drift)

Sato, K. (1991)- K-Ar ages of granitoids in Central Sumatra, Indonesia. Bull. Geol. Survey Japan 42, p. 111-181.
(online at: www.gsj.jp/Pub/Bull/vol_42/42-03_01.pdf)
(K-Ar ages of 3 granitoid plutons in Barisan Mts, C Sumatra. Tourmaline-bearing biotite granite N of Sijunjung dated at 247 Ma, which may tie to Early Triassic granites of East Belt of Malay Peninsula. Two Late Cretaceous-Paleocene granodiorite-tonalites near Sumatran Fault zone: Lassi pluton E of Solok (56 Ma) and Padangpanjang pluton S of Bukittinggi (64 Ma). Petrography different from Late Cretaceous Hatapang pluton in N Sumatra (with tin-tungsten mineralization and 78-81 Ma age))

Satyana, A.H., R. Hutagalung & U. Latifah (2013)- Supererupsi Toba 74,000 years ago: catastrophe geology and mass extinction. Proc. HAGI-IAGI Field Joint Convention, Medan 2013, 12p.
('The Toba super-eruption 74,000 years ago: geological catastrophe and mass extinction')

Schmidt, C. (1901)- Observations geologiques a Sumatra et a Borneo. Bull. Soc. Geologique France IV, 1, p. 260-267.
('Geological observations on Sumatra and Borneo'. Summary description of Sumatra and Borneo geology, with cross sections through Bangka and S Sumatra)

Schouten, C. (1928)- Mineragrafisch onderzoek van goudertsen van Lebong Bahroe en Tandaiberg (Mijnbouwmaatschappij Simau, Sumatra). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Mijnbouwkundig Ser. 2, 4, p. 161-233.
(Minerographic study of gold ores from Lebong Baru and Tandaiberg (Mining company Simau, Sumatra)'. Miscroscopic study of gold, silver and copper minerals from hydrothermal veins associated with andesites from Lebong Baru and Lebong Tandai, complex, NE of Bengkulu, C Sumatra)

Schurmann, H.M.E. (1929)- Ofiolieten en abyssieten in Noord Sumatra. De Mijningenieur 10, 11, p. 235-237.
('Ophiolites and abyssal rocks in North Sumatra'. In Barisan Mts area between Tangse and Geumpang, Central Aceh, serpentinites and gabbro can be followed over >25km. Associated with deep water red siliceous shales and radiolarites, also limestones with possible Lovcenipora, suggesting Late Triassic age (younger?). Possibly similar to rocks from Pahang area, Malay Peninsula (= Woyla Group; JTvG))

Schurmann, H.M.E. (1930)- Geologische notities uit de Batak landen, Noord Sumatra. De Mijningenieur 11, 10, p. 197-200.
('Geologic notes from the Batak territories, North Sumatra'. Paleogene outcrops in several areas. Pre-Eocene rocks in Wilhelmina mountains)

Schwartz, M.O. & Surjono (1990)- Sungai Isahan- a new primary tin occurrence in Sumatra. Bull. Geol. Soc. Malaysia 26, p. 181-188.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990013.pdf)
(New primary tin occurrence at Sg Isahan, near S termination of Bengkalis Trough at Tigapuluh Mts, C Sumatra. Cassiterite mineralization in hydrothermally altered fine-grained muscovite granite. K/Ar radiometric age (193, 197 Ma= earliest Jurassic). Tectonic position suggests correlation with Main Range of Peninsular Malaysia (230-200 Ma))

Setiawan, I. (2017)- Geology and REE geochemistry in granitoids at western part of North Sumatra, Indonesia. Dr. Engin. Thesis Akita University, Fukuoka, p. 1-208.
(online at: https://air.repo.nii.ac.jp/?action=repository_uri&item_id=3061&file_id...2)
(Geological, geochemical and isotopic study on granitoids at Sibolga, Panyabungan, Muarasipongi and Kotanopan, western N Sumatra. Metaluminous and I-type granitoids of Sibolga produced by Paleo-Tethys subduction under amalgamated W Sumatra- E Malaya- Indochina blocks in E Permian, followed possibly by tectonic translation which resulted in peraluminous, ilmenite-series and A-type granitoids in Sibuluhan

Sihaporas, Sibolga Julu, Sarudik and Tarutung. Peraluminous, ilmenite-series and S-type granitoids at Panyabungan, and I-type granitoids from Muara Sipongi and Kotanopan formed due to E Triassic- E Jurassic subduction of Meso-Tethys beneath amalgamated W Sumatra and Sibumasu blocks)

Setiawan, I., R. Takahashi & A. Imai (2017)- Petrochemistry of granitoids in Sibolga and its surrounding areas, North Sumatra, Indonesia. In: 5th Asia Africa Mineral Resources Conf., Quezon City, Philippines 2015, Resource Geology 67, 3, p. 254-278.
(Granitoids in Sibolga area, N Sumatra, with characteristics of A- and I-type ilmenite series. REE enriched in syenites from Sibolga Julu, Sarudik, Tarutung and Sibuluhan Sihaporas: highly-differentiated granitoids formed within plate settings. In contrast, the ΣREE content of hornblende-bearing granitoids formed in volcanic arc settings is low)

Setijadji, L.D. (2009)- Overview of the metallogeny of Sumatera. Indonesian Soc. Econ. Geol. (MGEI) Bull. 1, p.

Shell Mijnbouw (1978)- Geological map of the South Sumatra coal province, 1:250,000.
(Unpublished but frequently quoted geologic map of S Sumatra)

Sidarto & S. Andi Mangga (2001)- Struktur geologi daerah Tanjungkarang dan sekitarnya, Sumatera dan hubungannya dengan terjadinya mineralisasi di Gunung Ranggal. J. Geologi Sumberdaya Mineral 11, 118, p. 2-18.
('The geological structure of the Tanjung Karang area and surroundings, area, Sumatra and their relation to the mineralization at Mt Ranggal'. Area at SE tip of Sumatra with several NW-SE right-lateral faul zones. Pretertiary rocks amalgamation of 4 terranes. M Miocene mineralization at G. Ranggal controlled by diorite/rhyolite intrusions at stepover of Branti and Panjang dextral faults)

Sieh, K. & D. Natawidjaja (2000)- Neotectonics of the Sumatran fault, Indonesia. J. Geophysical Research, Solid Earth 105, B12, p. 28295-28326.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2000JB900120)
1900km long Sumatran Fault accommodates much of right-lateral component of oblique convergence between Eurasian- Indian/ Australian plates. Fault zone highly segmented: 19 subaerial segments identified. Proximity of Sumatra fault zone and volcanic arc suggestive of relationship, possibly following zone of lithosphere weakened by magmatism. However, most trench-parallel strike-slip faults in oblique subduction settings worldwide not coincident with their volcanic arc, so Sumatra fault location through arc may be coincidence)

Sieh, K., D.H. Natawidjaja, A.J. Meltzner, C.C. Shen, H. Cheng et al. (2008)- Earthquake supercycles inferred from sea-level changes recorded in the corals of West Sumatra. Science 322, p. 1674-1678.

Silitonga, P.H. & D. Kastowo (1975)- Geologic map of the Solok Quadrangle (0815), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(see also 2nd Ed., 1995. NE part of map is SW part of C Sumatra Basin, with unconformably onlapping Miocene sediments over widespread Permo-Carboniferous Kuantan Fm phyllites, quartzites, limestones, overlain by Triassic? metasediments of Tuhur Fm, intruded by Triassic granites. Singkarak crater lake in W. (Small outcrops of E Miocene limestones in Barisan Mts front W of Petai probably much older; JTvG pers. observation in 1986))

Silvestri, A. (1925)- Sur quelques foraminiferes et pseudoforaminiferes de Sumatra. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 449-458.
('On some foraminifera and pseudoforaminifera from Sumatra'. Foraminifera from Late Jurassic or Early Cretaceous limestones from Sungi Tuo (Korinci, Jambi) with Choffatella cyclamminoides n.sp. (= Pseudocyclammina; Yabe and Hanzawa, 1926) and Gumai Mts Saling series with Lacazina (= Loftusia))

Silvestri, A. (1932)- Revisione di foraminiferi preterziarii del Sud-Ouest di Sumatra. Rivista Italiana Paleont. Stratigr. 38, p. 75-107.

('Revision of Pre-Tertiary foraminifera from SW Sumatra'. Early Cretaceous foraminifera from SW Sumatra described by Silvestri (1925) as Choffatella should be assigned to Pseudocyclammina Yabe and Hanzawa 1926 and Lacazina lamellifera is Loftusia)

Simanjuntak, T.O., T. Budhitrina, Surono, S. Gafoer & T.C. Amin (1994)- Geological map of the Muara Bungo Quadrangle (0914), Sumatera, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Most of map sheet is northern S Sumatra (Jambi) Basin, with folded Tertiary sediments with oil-gas fields. Pretertiary outcrops in N (southern Tigapuluh Mts) and S (Duabelas Mts), both cored by Permo-Carboniferous Tigapuluh Gp metamorphics and intruded by relatively small 'Jurassic' granites (but K-Ar dates of 180 and 159 Ma may be reset ages of older granites; Pulunggono & Cameron 1984))

Situmorang, B. & B. Yulihanto (2007)- Formation of pull-apart basin along transcurrent fault: lesson from Sumatera. In: Geologi Indonesia: dinamika dan produknya, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 33, 1, p. 29-48.
(Two prominent NW-SE transcurrent fault zones in Sumatra: (1) Sumatra FZ parallel to axis of Barisan Mountains; (2) Mentawai FZ along E slope of fore-arc ridge. N of Nias. MFZ and SFZ are linked by Batee Fault. Transtensional basins in back-arc (N, C, S Sumatra, Ombilin) and fore-arc (Singkel, Pini in NW, Bose, Sipora grabens in Mentawai area and Pagarjati, Kedurang in Bengkulu to SE).

Smith, V.C., N.J.G. Pearce, N.E. Matthews, J.A. Westgate, M.D. Petraglia et al. (2011)- Geochemical fingerprinting of the widespread Toba tephra using biotite compositions. Quaternary Int. 246, p. 97-104.
(Three major tuff eruptions at Toba caldera, N Sumatra: 790 ka- Older Toba Tuff, 500 ka- Middle Toba Tuff, and 74 ka- Younger Toba Tuff. Ash dispersed from India to Malaysia to Indonesia. Composition of biotite can be used to fingerprint deposits of Younger Toba Tuff, which has lower FeO/MgO than older eruptions)

Sobari, I., A. Manurung & N. Buyung (1992)- Bouguer anomaly map of the Bengkulu Quadrangle, Sumatera. Geol. Res. Dev. Centre (GRDC), Bandung.

Soeria-Atmadja, R. & D. Noeradi (2005)- Distribution of Early Tertiary volcanic rocks in South Sumatra and West Java. The Island Arc 14, 4, p. 679-686.
(Three phases of Tertiary- Quaternary volcanism (1) Early Tertiary (43-33 Ma) flows of island arc tholeiites; (2) tholeiitic pillow basalt at beginning of Late Miocene (11 Ma); (3) Pliocene-Quaternary medium-K calc-alkaline magmatism. Paleogene volcanic rocks wider distribution than recognized. Early investigators assumed continuation from S Sumatra- Java to S Kalimantan, but E Tertiary volcanics can be traced from Java S coast East as far as Flores)

Song, S.R., C.H. Chen, M.Y. Lee, T.F. Yang, Y. Iizuka & K.Y. Wei (2000)- Newly discovered eastern dispersal of the youngest Toba Tuff. Marine Geology 167, p. 303-312.
(Volcanic glass shards with minor biotite and hornblende in Late Pleistocene of deep-sea core of S China Sea identified as eruptive products of Youngest Toba Tuff, N Sumatra, Indonesia. Tephra layer between marine oxygen isotopic event 5.1 (79.3 ka) and event 4.22 (64.1 ka), with interpolated age of 74.0 ka, consistent with previous radiometric dating (73-75 ka). Shows 1500km NE-ward dispersal of coarse Toba glass shards)

Spaulding, M.B. (1899)- De erts-afzettingen bij Salida, afdeeling Painan, Gouvernement Sumatra's Westkust. Den Haag, p.
('The ore deposits near Salida, Painan District')

Stankiewicz, J., T. Ryberg, C. Haberland, Fauzi & D. Natawidjaja (2010)- Lake Toba volcano magma chamber imaged by ambient seismic noise tomography. Geophysical Research Letters 37, L17306, 5p.
(Ambient noise tomography used to image low-velocity body representing magma chamber under Quaternary Lake Toba caldera. Chamber complex 3-D geometry, with at least two separate sub-chambers. Deep low velocity body below 7 km depth SW of lake possibly another magma chamber. Sumatra Fault marks velocity contrast, but only down to 5 km)

Stauffer, P.H., S. Nishimura & B.C. Batchelor (1980)- Volcanic ash in Malaya from catastrophic eruption of Toba, Sumatra, 30,000 years ago. In: S. Nishimura (ed.) Physical geology of Indonesian island arcs, Kyoto University, p. 156-164.

Stegmann, H. (1909)- Die jungen Ergussgesteine der Bataklander (Sumatra). Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 27, p. 399-459.
('The young volcanic rocks of the Batak Lands (Sumatra'. Petrographic descriptions of samples collected by W. Volz from Lake Toba area. From Greifswald University Inaugural-Dissertation)

Stephenson, B., S.A. Ghazali & H. Widjaja (1982)- Regional Geochemical Atlas Series of Indonesia, 1. Northern Sumatra. Direktorat Sumber Daya Mineral, Bandung, p. .

Storey, M., R.G. Roberts & M Saidin (2012)- Astronomically calibrated 40Ar/39Ar age for the Toba supereruption and global synchronization of late Quaternary records. Proc. National Academy Sciences USA 109, 46, p. 18684-18688.
(online at: www.pnas.org/content/109/46/18684.full.pdf)
(Toba supereruption in N Sumatra largest Quaternary terrestrial volcanic event, with ash and sulfate aerosol deposits in both hemispheres. Astronomically calibrated 40Ar/39Ar age of 73.88 ± 0.32 ka for sanidine crystals from up to 5m thick Toba ash deposits in Lenggong Valley, Malaysia, 6 km from archeological site with stone artifacts buried by ash. If made by Homo sapiens, age indicates modern humans reached SE Asia by ~74 ka. Timing of eruption tied to peak in sulfate concentration in Greenland ice cores in middle of cold interval between Dansgaard-Oeschger events 20 and 19. Peak followed by ~10 °C drop in Greenland surface temperature over ~150 yr, revealing possible climatic impact of eruption)

Subandrio, A.S. (1993)- Zur Petrologie, Geochemie und Uranmineralization des Granitkomplexes von Sibolga in Nord Sumatra, Indonesien. Thesis (Diplom Arbeit), RWTH Aachen, p. 1-148. *(Unpublished)*
('On the petrology, geochemistry and uranium mineralization of the Sibolga granite complex,in North Sumatra')

Subandrio, A.S. (1997)- Uranium and Molybdenum mineralization associated with A-type Sibolga granitoid, North Sumatra Indonesia, In: Proc. Mineral Exploration Technology in Indonesia, Directorat Technol. Mineral Res. Dev. (BPPT), p.
(Late Permian- Triassic granite with Mo enrichment)

Subandrio, A.S. (2006)- The possibility Archean- Proterozoic sedimentary rocks in Indonesian island arc related to controversial discovery of banded iron formation (BIF) in Tanggumas, Lampung. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, p. 1-20.
(Banded Iron ore Formation deposits generally associated with old craton or shield of Archaen- Proterozoic age. First discovery of thin 'BIF-like' outcrops in Tanggamus area of Lampung, SE Sumatra, presumably in Permian magmatic arc deposits. Characterized by intercalation of laminations meta-quartzite and iron oxide. Two different kinds of iron formation recognized)

Subandrio, A.S. (2007)- Indonesian Banded Iron Formation (BIF): a controversial in age and tectonic setting of BIF formation in Tanggamus area- Lampung, South Sumatra. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, JCB2007-024, p. 1-12.
(Banded Iron Formation mineralization in Tanggamus area, Lampung, presumably associated with Permian-Cretaceous magmatism. Classified on Algoma type iron formation, rel. small, and associated with submarine rift hydrothermalism. Oldest rock units in S Sumatra Permian (286-248 Ma))

Subandrio, A.S. (2009)- Mineralization associated with Pre-Tertiary magmatism of Western Belt Sumatra. Geologi Ekonomi Indonesia 1, p. 37-57.

Subandrio, A.S. (2012)- Evolusi magmatik granitoid Tipe-A da metalogenesis bijih Molibdenum dan Uranium di kompleks granitoid Sibolga- Sumatra Utara. Doct. Thesis Padjadjaran University (UNPAD), Bandung, p. 1-230. *(Unpublished)*

('Magmatic evolution and metallogenesis of molybdenum and uranium ore in the Sibolga Type A granitoid complex, North Sumatra'. Late Paleozoic- E Mesozoic granites in SE Asia, incl. Bangka and Belitung islands marked generally by S-type granitoid emplacement with regional tin mineralization. Sibolga Granitoid Complex of N Sumatra shows different, A-type granitoid. Biotite granites most common. Sibolga granitoid intruded into Kluet Fm. K/Ar ages of ~219 Ma and 211 Ma by Rb/Sr on biotite (Late Triassic). A-type granitoid of Sibolga probably associated with anorogenic or rift related environment. Molybdenum anomalies imply magmas derived by partial melting of Late-Paleozoic lower-crustal rocks)

Subandrio, A.S., R. Gatzweiler & G. Friedrich (2007)- Relationship between magnetite- ilmenite series and porphyry copper-tin metallogenic province of Sumatra Island- with special aspects of Sibolga and Bangka granitoid complex. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, JCB2007-027, p. 147-155.
(Sibolga granitoid plutons in area of 50x50 km along W coast of N Sumatra, intruded into Kluet Fm. Radiometric ages 257±24 Ma (K/Ar, biotite; late Permian) and 217.4±4.4 Ma (Rb/Sr, biotite; Triassic). Mainly A-type biotite granites. Most Sibolga igneous rocks in Magnetite-Series, different from SE-Asia/ Bangka tin granites, which fall in I & S-type, Ilmenite-Series)

Subandrio, A.S. & R. Soeria-Atmadja (1995)- Petrologic and geochemical aspects of Uranium distribution in the Sibolga granitoid complex, North Sumatra, Indonesia.In: Proc. 8th Reg. Congress Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA ô95), Manila, 19p.

Subandrio, A.S., A. Sudradjat, M.F. Rosana & I. Syafri (2010)- Uranium mineralisation hosted by albite-rich granitoid rocks of Sibolga- North Sumatra. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-266, 15p.
(On uranium mineralisation in albite-rich granitoids of Permo-Carboniferous crystalline- metasedimentary Tapanuli Group)

Subandrio, A.S. & M.E. Suparka (1994)- Petrological and geochemical characteristics of A-type Sibolga granitoid rock, North Sumatra, Indonesia. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 334-354.
(Triassic Sibolga granitoid plutons along W coast of Sumatra, intruded into Permo-Carboniferous metasediments of Kluet Fm. A-type granitoid. Geochemistry transitional between late and non-orogenic)

Subandrio, A.S. & K.N. Tabri (2006)- Indonesian Banded Iron Formation (BIF): a new controversial discovery of BIF deposit associated with island arc system in Tanggamus Area- Lampung, South Sumatra. Jurnal Geoaplika 1, 1, p. 55-70.
(online at: http://fosi.iagi.or.id/bsarchives/geoaplika_55_70_2006.pdf)
(Banded Iron Formation deposits generally associated with sedimentary or meta-sedimentary rift basins in Archaean- Precambrian cratons. Late Paleozoic 'BIF-like' meta-sedimentary rocks outcrop at Tanggamus, Lampung, over narrow, >50 km belt along depositional strike, slightly parallel to main direction of Sumatra)

Subandrio, A.S., K. Zaw, C.K. Lai & A. Salam (2013)- New discoveries in the mineralization associated with Pre-Tertiary magmatism in the Sumatra Western Belt, Indonesia. Proc. 10th Ann. Mtg. Asia Oceania Geosciences Soc. (AOGS), Brisbane, 1p. *(Abstract only)*
(On Sumatra 3 types of mineralization associated with Pre-Tertiary rocks, widely exposed in Barisan Range: (1) U-Mo-Cu-Pb mineralization in Permo-Triassic Sibolga Granitoid Complex of Sumatra; a composite pluton with geochemical affinities to magnetite series, within-plate granitoids and Cu-Mo porphyry host intrusive (2) Massive Pb-Zn sulfides in Permo-Carboniferous sediments in Dairi district, N Sumatra; (3) Banded Iron Formation at Subullussallam, Aceh and Tanggamus, S Sumatra, characterized by alternating silicate and magnetite-hematite layers. Affected by regional metamorphism and possibly of Paleozoic to E Mesozoic age)

Sukarna, D., S. Andi Mangga & N. Suwarna (2000)- Batuan granitan Jura-Kapur Sumatra bagian selatan: ciri geokimika dan kaitannya dengan evolusi tektonika. J. Geologi Sumberdaya Mineral 10, 100, p. 15-26.

('Jurassic- Cretaceous granitic rocks of South Sumatra and their relationship to the tectonic evolution'. Granitoid rocks of Jurassic- E Cretaceous age (170-110 Ma) at W side of S Sumatra include, from NW to SE: Sulitair granitoid (200-180 and 150-140 Ma), Bungo batholith near Muara Bungo (169-129 Ma), Garba plutonics (117-115 and 86-82 Ma) and Sulan plutonics (Lampung; 113-111 Ma). I-type granites- diorites, formed in magmatic arc. Relatively wide range of ages)

Sumotarto, U. (1985)- Tambang emas rakyat di Kabupaten Rejang Lebong-Bengkulu. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 233-251.
('Native people's gold mines in the Rejang Lebong- Bengkulu district')

Sun, J. & T.C. Pan (1995)- Seismic characteristics of Sumatra and its relevance to Peninsular Malaysia and Singapore. J. Southeast Asian Earth Sci. 12, 1-2, p. 105-111.
(Earthquake risking; little or no geology)

Suparka (1983)- Posisi tektonik batuan kegunungapian Musala, Sibolga, Sumatra Utara. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 233-242.
('Tectonic position of the Musala volcanic rocks, Sibolga, N Sumatra'. Musala volcanic rocks in coastal area of Sibolga consists of basalt and andesite. Similar rocks common along W coast of Sumatra. Also gabbro intrusive rocks, diorite and micro-granite. Intrusive rocks and volcanics of Eocene-Oligocene to Miocene age and consists of calc-alkaline, high-K calc-alkaline and shoshonite of island arc/ continental margin type)

Suparka, S. (1984)- Posisi tektonik batuan kegunungapian Musala, Sibolga, Sumatra Utara. J. Riset Geologi Pertambangan (LIPI) 5, 2, p. 37-50.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.5-No.2-2.pdf)
('Tectonic position of Musala volcanic rocks, Sibolga, North Sumatra'. Musala and adjacent islands, just offshore NW Sumatra, with Eocene- Oligocene-Miocene basalt-andesite, similar to rocks along W coast of Sumatra. Radiometric ages 43 ±3 Ma and 17.2 ± 5Ma. Calkalkaline, high K calkalkaline and shoshonitic types, typical of island arc/ continental margin volcanism. Probably formed closer to trench than usual, result of trench-ridge triple junction displacement)

Suparka (1984)- Posisi tektonik batuan kegunungapian Musala, Sibolga, Sumatra Utara. J. Riset Geologi Pertambangan (LIPI) 5, 2, p. 37-50.
('Tectonic position of the Musali volcanic rocks, Sibolga, N Sumatra'. Same paper as Suparka 1983)

Suparka (1995)- Tectonic development of Sibolga fore arc, North Sumatra. Doct. Thesis, Institut Teknologi Bandung ITB), p. *(Unpublished)*

Suparka, S. & Sukendar Asikin (1981)- Pemikiran perkembangan tektonik Pra-Tersier di Sumatra Bagian Tengah. J. Riset Geologi Pertambangan (LIPI) 4, 1, p. 1-13.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.4-No.1-2-.pdf)
('Thoughts on the tectonic development of the Pre-Tertiary of Central Sumatra'. Late Paleozoic- Triassic clastic sedimentation. E-M Permian andesitic volcanics not believed to be result of subduction, but of melting of continental crust in relatively shallow basin during breakup of Pangea continent. End Triassic characterized by granitic intrusions, folding, metamorphism and erosion. Later sedimentation in shallow environments. Includes M Jurassic 'Gumai Melange', reversal of direction subduction at end Mesozoic, etc.)

Suparman, A., A. Asseggaf & A. Haryo S. (1991)- Garba Mtn.- South Sumatra. Indon. Petroleum Assoc. (IPA), Post Convention Field Trip, p. 1-40.
(Fieldtrip guidebook with brief descriptions of geologic localities in and around Garba Mountains)

Suprapto S.J. (2008)- Geokimia regional Pulau Sumatera: conto endapan sungai aktif fraksi -80 Mesh. Bul. Sumber Daya Geologi 3, 3, p. 2-13.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/519)

('Regional geochemistry of Sumatra Island: active stream sediment samples of -80 mesh fraction'. Distributions of 15 metal elements(Ag, As, Co, Cr, Cu, Fe, K, Li, Mn, Ni, Pb, Sn, W, Mo, Zn) in stream sediments samples across Sumatra (summary of Stephenson et al, 1982 and Muchsin et al. 1997 reports?))

Surjono & S. Ichihara (1984)- The tin-tungsten occurrences in the Hatapang area, North Sumatra, Indonesia. Report Int. Symposium on the geology of tin deposits, Nanning, China, 1984, ESCAP Regional Mineral Resources Development Centre, p. 87. *(Abstract only)*

Surono, N. Suwarna & S. Andi-Mangga (1999)- Batulumpur kerakalan pada Formasi Mentulu, Pegunungan Tigapuluh, Sumatera. J. Geologi Sumberdaya Mineral 9, 98, p. 2-7.
('Pebbly mudstone of the Mentulu Formation, Tigapuluh Mountains, Sumatra'. Permo- Carboniferous pebbly mudstone is dominant rock in Mentulu Fm near Tigapuluh Mts. Pebbles are slate, quartzite, quartz, mica schist, silicified rock and granite. Matrix rock alternating sandstone-siltstone-shale. Deposited in glacial conditions. Paleolatitude 41°S)

Susanto, A. & E. Suparka (2012)- Hydrothermal alteration and mineralization of porphyry-skarn deposits in the Geunteut area, Nanggroe Aceh Darussalam, Indonesia. Bull. Geol. Soc. Malaysia 58, p. 15-21.
(online at: /www.gsm.org.my/products/702001-100356-PDF.pdf)
(Geunteut area 55 km S of Banda Aceh, NW Sumatra, with porphyry-skarn deposits related to M Miocene Geunteut granodiorite (14.3 Ma), intruded into Late Jurassic- E Cretaceous Woyla terrane Bentaro volcanics and Lamno Limestones. Five hydrothermal alteration zones (biotite-orthoclase-actinolite, epidote-chlorite-actinolite, garnet clinopyroxene-tremolite, quartz-sericite and chlorite-calcite-clinoptilolite), suggesting formation temperatures between 120-360°C. Porphyry-skarn deposits two episodes of mineralization: early hypogene mineralization (magnetite, ilmenite, chalcopyrite, pyrite) and late supergene enrichment)

Sutanto (1997)- Evolution temporelle du magmatisme dʽarc insulaire: geochronologie, petrologie et geochimie des magmatismes mesozoiques et cenozoiques de Sumatra (Indonesie). Doct. Thesis, Universite de Bretagne Occidentale, Brest, p. 1-212. *(Unpublished)*
('Evolution through time of island arc magmatism: petrology and geochemistry of Mesozoic and Cenozoic magmas of Sumatra (Indonesia)'. 175 new K-Ar ages. Eight episodes of volcanism-magmatism identified: (1) Triassic- E Jurassic (215-180 Ma) and (2) Late Jurassic (~165-150 Ma) intruded into Permo-Carboniferous packages in center of island. (3) Significant volcano-plutonic arc in Early Cretaceous (Valanginien-Aptian), (4) (5) Late Cretaceous (Albian- Campanian), (6) Paleocene- Lower Eocene, (7) M-U Eocene; (8) Oligocene- E Miocene and Late Miocene- Recent)

Sutanto (2005)- Palaeogene volcanic activities in Sumatera. Majalah Geologi Indonesia (IAGI) 20, p. 51-60.

Sutanto, R. Soeria Atmadja, R.C. Maury & H. Bellon (1998)- Origin of high-K Paleogene volcanics from the Natal Region, Sumatera; a response to subducted fracture zone. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 3 (Geodin., Magmat. Volkanologi), p. 37-43.
(Incl. K/Ar radiometric ages of basalt dikes and lava from Woyla Group at Aceh ~50-58 Ma and basalts-andesites from Natal ~37- 63 Ma)

Sutopo, B. (2013)- The Martabe Au-Ag high sulfidation epithermal deposits, Sumatra: implications for ore genesis and exploration. Ph.D. Thesis University of Tasmania, p. 1-332.
(online at: http://eprints.utas.edu.au/17607/2/Whole-Sutopo-_thesis.pdf)
(Study of largest recent gold discovery on NW coast of Sumatra SE of Sibolga. Contains four high-sulfidation epithermal gold-silver deposits (Purnama, Baskara, Kejora and Gerhana) and one low-sulfidation epithermal gold-silver deposit (Pelangi). Located in Sunda magmatic arc within and adjacent to Late Tertiary porphyritic dacite and andesite dome and diatreme complex near splays of Sumatra Fault System. Magmatic/ hydrothermal system active from 3.8-2.1 Ma)

Sutopo, B., M.L. Jones & B.K. Levet (2003)- The Martabe gold discovery: a high-sulphidation epithermal gold-silver deposit, North Sumatra, Indonesia. In: Proc. New generation gold conference (NewGenGold 2003), Case histories of discovery, Perth, Gold Mining J., p. 147-158.
(Rel. recent epithermal high-sulphidation gold discovery in NW Sumatra, now Newmont-operated largest gold producer in Sumatra)

Suwarna, N. (2000)- Tataan geologi Sumatra bagian selatan. In: N. Suwarna et al. (eds.) Evolusi tektonik Pratersier Sumatera bagian Selatan, Geol. Res. Dev. Centre, Spec. Publ., p. 15-28.
('Data on the geology of S Sumatra')

Suwarna, N. (2006)- Permian Mengkarang coal facies and environment, based on organic petrology study. J. Geologi Indonesia 1, 1, p. 1-8.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20060101.pdf)
(Analysis of E-M Permian Mengkarang coal from Mengkarang-Merangin, Bangko Area, C Sumatera. Mengkarang coal measures up to 1000m thick, with Cathaysian flora, brachiopods and fusulinids, and intruded by Triassic- Jurassic granite. Dominant maceral vitrinite, less inertinite. Coals formed in wet zone of mire (limnic-telmatic to telmatic wet forest))

Suwarna, N., S. Andi Mangga, N. Surono, T.O. Simundjuntak & H. Panggabean (eds.) (2000)- Evolusi tektonik Pra-Tersier Sumatera bagian selatan. Pusat Penelitian dan Pengembangan Geologi, Bandung, p.
('The Pre-Tertiary tectonic evolution of the southern part of Sumatra')

Suwarna, N., T. Buditrishna, S. Santosa & S. Andi Mangga (1994)- Geologic map of Rengat Quadrangle (0915), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Most of map sheet is S part of C Sumatra basin, with Lirik Trend/ Japura Anticline. In S N part of Tigapuluh Mts, dominated by Permo-Carboniferous meta-sediments and meta-tuffs of Tigapuluh Group, intruded by Late Triassic- E Jurassic Akar and other granites. Unconformably overlain by Oligo-Miocene of Kelasa, Lakat, Tualang, Gumai and Air Benakat Fms.)

Suwarna, N. & H. Hermianto (2010)- Mesozoic sediment characteristics in the Asai- Rawas region of the Southern Sumatra. Proc. IGCP 507 Project Symp. Paleoclimates in Asia during the Cretaceous, Yogyakarta 2010, 2p. *(Abstract only)*
(Jurassic-Cretaceous of Asai- Garba Terrane in S Sumatra (= Woyla or W Sumatra Terrane?; JTvG) two facies domains: shallow marine Asai (M Jurassic), Mersip (Late J) and Peneta (Late J- early K) Fms and deep marine facies Rawas Fm (Late J- Early K). All thermally mature. Paleomagnetic work suggests paleolatitudes of 30°-32°S and counterclockwise rotation)

Suwarna, N., H. Panggabean & R. Heryanto (2001)- Oil shale study in the Kiliranjao Sub-basin, Central Sumatera. Proc. Ann. Conv. Indon. Assoc. Geol. (IAGI) and GEOSEA 10, Yogyakarta, p.
(SW part of C Sumatra basin)

Suwarna, N., Suharsono, Amiruddin & Hermanto (1998)- Geological map of the Bangko Quadrangle, Sumatera (Quad. 0913), 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Suwarna, N., Suharsono, S. Gafoer, T.C. Amin, Kusnama & B. Hermanto (1992)- Geologic map of the Sarolangun Quadrangle (0913), Sumatera, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of NW side of S Sumatra (Jambi) Basin with folded Mio-Pliocene sediments and adjacent Barisan Mountains W of Tembesi River. Oldest rocks in NW corner W of Bangko with E Permian Mengkareng Fm clastics with minor limestone and coal (and 'Jambi Flora'; JTvG), associated with Permian Palepat Fm andesitic volcanics, intruded (?) by Arai Granite. Permian complex juxtaposed along NW-SE trending thrust fault zone with 'Woyla Group' of Jurassic Asai Fm and Late Jurassic-Cretaceous Peneta Fm clastics (with limestones with Cladocoropsis miriabilis = Late Jurassic hydrozoan; JTvG). Rawas Fm intruded by several Late? Cretaceous Arai biotite and hornblende granite bodies)

Suwarna, N., Suharsono & K. Sutisna (1999)- Stratigraphy, sedimentology and provenance analysis of the Jurassic-Cretaceous Asai-Rawas Group, Southern Sumatera. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 36-39.
(Thick (>2000m?), deformed Jurassic Cretaceous sediments at E flank of Barisan Range, at S Sumatra (Jambi) Basin margin, intruded by Cretaceous Arai- Angai granite. M-L Jurassic Asai Fm marine 'flysch-type' meta-sandstones and phyllite with minor limestone, rel. quartz rich, of continental provenance. Overlying Late Jurassic- E Cretaceous more variable, of recycled orogen and arc provenance. Paleomagnetic study suggests paleolatitude of 32°S. To N in tectonic? contact with Permian Mengkareng Gp)

Suwarna, N. & Suminto (1999)- Sedimentology and hydrocarbon potential of the Permian Mengkarang Formation, Southern Sumatera. Proc. Southeast Asian Coal Geology, Bandung.

Suwarna, N., Surono, S.A. Mangga, Suyoko, Sumito, A. Achdan, H. Wahyono, N. Suryono, T.O. Simundjuntak & T. Suwarti (2000)- Mintak Kuantan- Duabelas. In: Suwarna et al. (eds.) Evolusi tektonic Pra-Tersier Sumatera bagian Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ., p. 47-81.

Suwarti, T., S. Andi Mangga & Amiruddin (1985)- Ciri-ciri batuan granitoid daerah Tanjungbintang Lampung Selatan. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 141-148.
('Characteristics of granitoids in the Tanjungbintang area, South Lampung', S Sumatra')

Suyoko (1996)- Penelitian sedimentologi dan paleontologi formasi Mengkarang di daerah Dusunbaru, Kabupaten Bangko, Jambi. In: Evolusi tektonik Pratertier Sumatera bagian selatan. Proyek kajian dan informasi geologi tematik Pusat Penelitian dan Pengembangan Geologi, 32p.
('Sedimentology and paleontology of Mengkareng Fm in the Dusunbaru area, Bangko District, Jambi'. Incl. Early Permian brachiopods interpreted to signify Sakmarian age)

Syarif, M.N., M.R. Pahlevi & A.S. Annas (2015)- Basement reservoir play concept and its potential in Western Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p.
(Brief review of concept of basement hydrocarbon reservoirs, with examples from Sumatra)

Syafrie, I., E.T. Yuningsih & H. Matsueda (2015)- Geochemistry study of granitoid basement rock in Jambi Sub basin, South Sumatera, Indonesia, based on JSB-3, JSB-4 and JSB-6 wells data. In: ICG 2015, 2nd Int. Conf. and 1st Joint Conf. Faculty of Geology Universitas Padjaran and University of Malaysia Sabah, p. 305-311.
(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2016/02/Geochemistry-study-of-Granitoid-Basement-Rock-in-Jambi-Sub-Basin.pdf)
(Mesozoic? granitoid basement in Jambi sub basin is intermediate-acid, calc-alkaline, medium- high K, metalluminous (subduction at active continental margin). Granitoid basement rock of JSB-4 and JSB-6 shows magnetite series and I type (late orogenic). Mesozoic granitoid probably extension of Thailand and Burma granite province (see also Yuningsih 2006))

Tan Sin Hok (1933)- Notiz uber das Basalskelett von "*Verbeekina*". Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 25, p. 57-65.
('Note on the basal skeleton of Verbeekina'. Permian fusulinids from Padang Highlands, W Sumatra, thought by Verbeek 1876 to lack 'parachomata', distinguishing it from Doliolina, so new genus Verbeekina was created by Von Staff (1909). However, new material from Guguk Bulat type locality near Lake Singkarak shows this feature in later stages, so species belong in Doliolina (NB: Verbeekina still commonly used genus name; JTvG))

Tan Sin Hok (1933)- Uber *Leptodus* (*Lyttonia* auctorum) cf. *tenuis* (Waagen) vom Padanger Oberland (Mittel Sumatra). Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 25, p. 66-70.
(Permian brachiopod Leptodus collected by Musper from Padang Highlands, C Sumatra, confirms presence of rocks of younger Permian in Sumatra. Other Leptodus in Indonesia only known from Timor)

Tasrif, A. (1985)- Kompleks melange di daerah Siguntur, Sumatera Utara. J. Riset Geologi Pertambangan (LIPI) 6, 1, p. 1-6.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.6-No.1-2-3-2.pdf)
('Melange complex in the Siguntur area, North Sumatra'. Siguntur melange composed of blocks of various sizes, including slate, phyllite, mica schist, greywacke, chert and basalt in metasediment and silt-clay matrix)

Taverne, N.J.M. (1924)- Bijdrage tot de geologie van de Gajo-Lesten en aangrenzende gebieden. Jaarboek Mijnwezen Nederlandsch Oost-Indie, 50 (1921), Verhandelingen 1, p. 162-186.
('Contribution to the geology of the Gajo-Lesten and adjacent regions', Aceh, N Sumatra. Followed by petrographic rock descriptions of Taverne samples by W.F. Gisolf, p. 187-268)

Teguh, F. & Agus H.P. (2011)- Jabung block basement- their characteristics and their economic potential. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-002, 10p.
(On hydrocarbon potential of fractured Pre-Tertiary basement rocks in Jambi sub-basin, S Sumatra. Assumed to be part of 'Malacca Microplate', with SW part of block possibly Mutus Assemblage. With E Jurassic granite (K/Ar age ~180 Ma) in middle and W of block, limestone in N and S (post-Mutus Kluang Lst?), and low-grade metamorphics)

Terpstra, H. (1932)- The joint systems in the vicinity of the Salida Mine (West coast of Sumatra). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 35, p. 891-897.
(online at: www.dwc.knaw.nl/DL/publications/PU00016298.pdf)
(Four groups of orientation of quartz veins in Salida mine area: N30°E, N40°W, N10°E, N90°E)

Tesch, P. (1916)- Permische trilobieten van Atjeh. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap Ser. 2, 33, p. 610-611.
('Permian trilobites from Aceh'. Two species of trilobite casts in dark red, tuffaceous marly rock, associated with corals, crinoids, brachiopods and gastropods. Previously reported by Klein 1916 and believed to be of Devonian age. Species very similar those described form Permian in Timor)

Thamrin, M., Siswoyo & Prayitno (1981)- Heat flow in the Tertiary Basin of North Sumatra. Proc. 17th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, 58, Paper 25, p. 394-408.

Thamrin, M., Siswoyo, S. Sandjojo, Prayitno & S. Indra (1980)- Heat flow in the Tertiary basin of South Sumatra, Indonesia. Proc. 16th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bandung 1979, p. 250-271.
(Heat flow of S Sumatra basin determined from 358 wells in 54 oil fields. Average heatflow 2.58 Mcal/cm sec. Centre of basin rel. cool with <3 HFU, NE and SW flanks >3 HFU)

'T Hoen, C.W.A. (1931)- Mededeeling over een vondst van diamanten in de Siaboe Rivier, ten zuiden van Bangkinang (Midden-Sumatra). De Mijningenieur 12, 10, p. 176-178.
('Communication on a discovery of diamonds in the Siabu River, S of Bangkinang (C Sumatra)'. About 150 small diamonds found during exploration for tin ore, SW of Pakanbaru. Bedrock is Tertiary clay-shales and granite. Diamonds were found in parts of kaksa richest in tin ore)

Thompson, M.L. (1936)- The fusulinid genus *Verbeekina*. J. Paleontology 10, 3, p. 193-201.
(Genus Verbeekina includes 5 species and two varieties. Description of Verbeekina verbeeki (Geinitz) from Padang Highlands, W. Sumatra)

Thompson, M.L. (1936)- Lower Permian fusulinids from Sumatra. J. Paleontology 10, 7, p. 587-592.
(Two new species of Early Permian fusulinids, Schwagerina rutschi and Pseudoschwagerina meranginensis, from dark grey, ~100' thick 'Productus limestone' of Telok Gedang, C Sumatra (Merangin, Jambi). Interpreted age Early Permian. Overlain by Soengi Garing plant beds with famous 'Jambi Flora', studied by Jongmans &

Gothan, etc. P. meranginensis looks like fusulinids of the Schwagerina princeps group. See also Ueno et al (2006) and Ueno in Crippa et al 2014))

Tien, Nguyen D. (1986)- Foraminifera and algae from the Permian of Guguk Bulat and Silungkang, Sumatra. In: H. Fontaine (ed.) The Permian of Southeast Asia, Appendix 3, United Nations CCOP Techn. Bull. 18, p. 138-147.
(Illustrations of foraminifera from two Permian limestone localities from Padang Highlands, C Sumatra. Guguk Bulat reefal limestone with corals and diverse fusulinids (Colania, Pseudodoliolina, Sumatrina, Schwagerina, Verbeekina), small benthic foram assemblages (incl. Hemigordius) and algae (incl. Mizzia, Permocalculus). Fauna from this locality first described by Lange (1925). Silungkang locality with common Tubiphytes)

Tien, Nguyen D. (1989)- Lower Permian foraminifera. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Papers 19, Bangkok, p. 71-93.
(Rel. rich Lower Permian foram assemblages of fusulinids, smaller benthic forams (incl. Hemigordius)and algae (incl. Permocalculus) from W Jambi province. Mesumai River localities with fusulinids Boultonia willsi, B. cheni, Schubertella kingi, Fusulinella cf. utahensis, Schwagerina sp., Pseudoschwagerina cf. meranginensis, Rugosofusulina rutschi and Parafusulina n. spp., suggesting Late Asselian age (near locality of famous 'Jambi flora; see also Ueno et al. 2006 who restudied Batu Impi locality and prefers Artinskian- Kungurian age; JTvG))

Tien, Nguyen D. (1989)- Middle Permian foraminifera. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Papers 19, Bangkok, p. 113-148.
(Review of M Permian foraminifera from four areas on Sumatra, incl. rich basal Murghabian fusulinid assemblage with Neoschwagerina cf. simplex Cancellina, Neofusulinella, etc., at Bukit Pendopo outcrop, S Sumatra. At Guguk Bulat fusulinids Verbeekina verbeeki, Colania douvillei, Pseudodoliolina, Pseudofusilina padangensis, Sumatrina annae, etc. and algae Mizzia velebitana, Permocalculus spp.)

Tiltman, C.J. (1990)- A structural model for North Sumatra. Lemigas Scientific Contr. 14, 1, Spec. Issue, p. 24-44.
(Geological evolution of N Sumatra controlled by strike slip tectonics trough most of Tertiary. Extensional and transtensional regimes during Paleogene opened rift basins between major wrench faults. Extensional faults inverted by phase of post- M Miocene compression and transpression. Plio-Pleistocene strike slip faulting caused major dextral wrench fauling along NW-SE and N-S fault trends. Structural blocks root down to depths of ~10 km and are bounded by listric faults that shallow out to basal decollement at this depth. Deformation at decollement horizon corresponds to brittle/ductile transition in upper crust)

Tissot van Patot, A. (1920)- Aanteekeningen uit de Bataklanden. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, 2, p. 37-52.
('Notes from the Batak Lands'. Notes on volcanoes between Lake Toba and W coast of N Sumatra)

Tjia, H.D. (1970)- Nature of displacements along the Semangko fault zone, Sumatra. J. Tropical Geography, Singapore, 30, p. 63-67.
(One of first papers to recognize Central Sumatra fault zone as major left-lateral wrench fault)

Tjia, H.D. (1976)- Radiometric ages of ignimbrites of Toba, Sumatra. Warta Geologi 2, 2, p. 33-34.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1976002.pdf)
(At least four ignimbrite banks, intercalated with less competent volcanic beds, present in Lake Toba area, with total thickness of ignimbrites ~500m. Radiometric age of (youngest?) ignimbrite 72 ± 12 ka, biotite from oldest level 1.9 ±0.4 Ma))

Tjia, H.D. (1977)- Late Cenozoic clockwise rotation of Sumatra- comments. Earth Planetary Sci. Letters 34, p. 450-451.

(Critique of Ninkovich (1976) paper. Oldest Toba Tuffs in N Sumatra dated at 1.9 ± 0.4 Ma, older than 70 ka obtained by Ninkovich (is still younger than E Miocene onset of volcanism in S Sumatra, therefore does not change by much the Ninkovich (1976) argument for older onset of volcanism in S; JTvG)

Tjia, H.D. (1977)- Tectonic depressions along the transcurrent Sumatra fault zone. Geologi Indonesia 4, 1, p. 13-27.
(Depressions along Sumatra fault zone tied to dextral strike slip movement. About 25 km horizontal displacement since Late Miocene. Offset of Jurassic outcrops suggest total displacement may be 180 km. Fault zone at least 18 segments, mainly en echelon arrangement)

Tjia, H.D. (1989)- Tectonic history of the Bentong- Bengkalis suture. Geologi Indonesia 12, 1 (Katili Volume), p. 89-111.
(Bentong suture in Peninsular Malaysia continues into Bengkalis depression of Sumatra until it abuts against Tigapuluh Mts. Suture separates Gondwana terrane in W from Cathaysian terrane in E)

Tjia, H.D. & K. Kusnaeny (1976)- An Early Quaternary age of an ignimbrite layer, Lake Toba, Sumatra. Sains Malaysiana 5, 1, p. 67-70.
(K-Ar date of biotite in ignimbrite collected at lake level at Tuktuk Siadong, Samosir Peninsula, Toba, dated the as 1.9 ± 0.4 Ma)

Tjia, H.D. & M. Posavec (1972)- The Sumatra fault zone between Padangoenjang and Muaralabuh. Sains Malaysiana 1, 1, p. 77-105.
(Study of complex fault displacements along right-lateral Sumatra Fault zone. Jurassic-Triassic outcrops suggest dextral offset between 190-270 km)

Tobler, A. (1904)- Einige Notizen zur Geologie von Sudsumatra. Verhandlungen Naturforschenden Gesellschaft Basel 15, 3, p. 272-292.
(online at: https://www.biodiversitylibrary.org/item/100720page/282/mode/1up)
('Some notes on the geology of South Sumatra'. Early, brief review of S Sumatra geology-stratigraphy (S part of Palembang basin and Barisan Range). With small map)

Tobler, A. (1906)- Topographische und geologische Beschreibung der Petroleumgebiete bei Moeara Enim (Sud-Sumatra). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 23, 2, p. 199-315.
('Topographic and geologic descriptions of the petroleum areas near Muara Enim, S Sumatra'. Extensive report on geology of southern part of S Sumatra basin. With geologic maps, cross-sections, etc.)

Tobler, A. (1906)- Zur Geologie von Sumatra. Petermanns Geogr. Mitteilungen 52, p. 88-91.
('On the geology of Sumatra'. Brief review of papers on pioneering geological investigations of Sumatra by Prof. W. Volz from Breslau: Volz (1899; on 1897-1898 travels E coast and Batak lands) and Volz (1904; 1899-1901 travels to Padang Highlands). Reports presence of Precambrian metamorphics, Upper Carboniferous (should be Permian) fusulinid limestones, unconformably (and associated with basic volcanics) overlain by Upper Triassic clastics with Daonella. Post-Triassic folding followed by Jurassic-Cretaceous hiatus and deposition of Tertiary clastics, limestone, coal and ?Pleistocene- Recent volcanics)

Tobler, A. (1907)- Uber das Vorkommen von Kreide- und Carbonschichten in Sudwest-Djambi (Sumatra). Centralblatt Mineralogie Geologie Palaont. 16, p. 484-489.
('On the occurrence of Cretaceous and Carboniferous beds in SW Jambi, Sumatra'. Preliminary note on Tobler's Sumatra surveys. Batu Kapur locality on Limoen river steeply dipping dark limestones and claystones with Lower Cretaceous Hoplites ammonites, possibly underlain by Carboniferous and unconformably overlain by Miocene U Palembang beds. Similar Cretaceous outcrops with ammonites near Poboengo village. (Macrofossils described by Baumberger (1925). In Merangin River area Permian limestones with fusulinids))

Tobler, A. (1908)- Mededeeling over de eerste ontdekking van jurassische gesteenten (leigesteenten met belemnitiden en pentacrinitiden) in Boven-Djambi (Sumatra). Verslag Mijnwezen, 1e kwartaal 1908, p. 18- .

('Note on the first discovery of Jurassic rocks (shales with belemnitids and pentacrinids) in Upper Jambi (Sumatra)')

Tobler, A. (1912)- Voorlopige mededeeling over de geologie der Residentie Djambi. Jaarboek Mijnwezen Nederlandsch Oost-Indie 39 (1910), Verhandelingen, p. 1-29.
('Provisional note on the geology of the Jambi Residency'. Brief overview of Jambi work; subsequently reported in greater detail by Tobler in 1918, 1922. First paper to suggest the nappe structure in West Sumatra, elaborated in more detail in 1917 (fusulinid limestone reported from Muara Labu in Korinci not Permian fusulinids but Jurassic-Cretaceous Loftusia; Kugler 1921))

Tobler, A. (1914)- Geologie van het Goemai gebergte (Res. Palembang, Zuid Sumatra). Jaarboek Mijnwezen Nederlandsch Oost-Indie 41 (1912), Verhandelingen, p. 6-49.
('Geology of the Gumai Mountains, Palembang Residency, S Sumatra'. Old, but excellent description of geology of Gumai Mountains at SW margin of S Sumatra basin)

Tobler, A. (1917)- Uber Deckenbau im Gebiet von Djambi. Verhandlungen Naturforschenden Gesellschaft Basel 28, 2, p. 123-147.
(online at: https://www.biodiversitylibrary.org/item/100699page/379/mode/1up)
('On the nappe structures in the Jambi area, Sumatra'. Classic paper on presence of large nappe structures in Pre-Tertiary of Sumatra, with relatively little deformed 'Hoch-Barisan' and 'Vor-Barisan' (Permian volcanics and sediments) thrusted over autochthonous 'Schiefer-Barisan' (isoclinally folded Lower Jurassic- Lower Cretaceous flysch-type metasediments). Interpretation accepted by Zwierzycki 1930, Van Bemmelen 1949, etc., but challenged by subsequent authors (Klompe et al. 1957, Katili 1970, etc. With descriptions of Paleozoic-Mesozoic geology of 'Schist-Barisan', Duabelas and Tigapluh Mts, Vorbarisan ('Pre-Barisan';incl. Merangin Permian; with Permian limestones) and 'High-Barisan'. With map and cross-section)

Tobler, A. (1922)- Djambi verslag. Uitkomsten van het geologisch- mijnbouwkundig onderzoek in de residentie Djambi 1906-1912. Jaarboek Mijnwezen Nederlandsch-Indie 48 (1919), Verhandelingen III, p. 1-585 + Atlas volume
(Text online at: https://resolver.kb.nl/resolve?urn=MMKB21:040833000:pdf)
(Plates 5-9 online at: www.delpher.nl/nl/boeken/....)
(Extensive report on geological survey of Jambi province, including parts of the Barisan, Pre-Barisan and 'Schiefer Barisan' Mts., Duabelas Mts, Tigapuluh Mts and sedimentary basins in-between. Petroleum geology previously described in Tobler (1918). Cross-sections show large thrust sheets of 'normal' Permian- Mesozoic sediments over highly folded metamorphic Mesozoic and older rocks ('Schieferbarisan'). Permian limestones in Jambi and Padang Highlands with fusulinid foraminifera and associated with volcanics ('Diabase-formation'). Upper Miocene coals autochthonous and widespread, but thinner (~3-4m) than in Muara Enim area to S, and thinning in N direction. With 1:200,000 scale geologic map on 4 sheets)

Tobler, A. (1923)- Unsere palaeontologische Kenntniss von Sumatra. Eclogae Geol. Helvetiae 18, 2, p. 313-342.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1923-1924:18::756&subp=hires)
('Our paleontological knowledge of Sumatra'. Review of localities with Carboniferous- Neogene macrofossils across Sumatra)

Tobler, A. (1925)- Mesozoikum und Tertiar des Gumaigebirges. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 521-535.
('Mesozoic and Tertiary of the Gumai Mts', S Sumatra. Anticlinorium with core of Pre-Tertiary metamorphics, tuffs, diabase and ?Triassic and U Cretaceous limestones. Unconformably overlain by ?Eocene quartz sandstones with fossil wood. Miocene Gumai marine shales, locally with reefal limestone (Baturaja Fm) at base; much thicker in East (1500m) than in West (300m). Capped by Mio-Pliocene Palembang Beds)

Toh, E.C. (1979)- Rio Tinto's placer gold work in Sumatera. In: A. Prijono, C. Long and R. Sweatman (eds.) The Indonesian mining industry, its present and future, Proc. First Indonesian Mining Symposium, Jakarta 1977, Indonesian Mining Assoc., Jakarta, p. 356-386.
(On gold placer exploration in in drainage basins of major E-flowing rivers of C Sumatra, Rawas-Tembesi, Batang Hari and Indragiri- Singingi. No commercially viable gold deposits found)

Tornquist, A. (1901)- Ueber mesozoische Stromotoporiden. Sitzungsberichte Kon. Preuss. Akad. Wissenschaften Berlin 47, 9p.
('On Mesozoic stromatoporids'. Includes description of Neostroma sumatrensis n.gen., n.sp. from float in Sekoendoer Besar River, tributary of the Besirtan in Langkat, E Sumatra (=Actinacis sumatrensis; Late Cretaceous)

Traverso, S. (1896)- Rocce vulcaniche e metamorfiche dell'altepiano di Toba nell'Isola di Sumatra. Annali Museo Civico Storia Naturale di Genova (2) 16, p. 303-326.
(Volcanic and metamorphic rocks from the Toba highlands on Sumatra island'. Descriptions of rocks collected by Modigliani)

Truscott, S.J. (1911)- Bericht uber das Kinandam Riff Padang'sche Bovenlanden West Sumatra. Published?
('Report on the Kinandam ore deposit' Gold-silver vein near the old Salida mine, West Sumatra)

Truscott, S.J. (1912)- Gold and silver in Sumatra. The Mining Magazine 6, 5, p. 355-364.
(online at: www.archive.org/details/miningmagazine06londuoft)
(Brief review of gold mining activities and geology of Sumatra prior to 1912)

Ubaghs, J.G.H. (1941)- The geology of Benkoelen and the oil possibilities. Indonesia Geol. Survey, Bandung, Open File Report A41-2, p. 1-35. *(Unpublished survey report)*

Ubaghs, J.G.H. (1941)- De geologie van de Lampongsche districten. Indonesia Geol. Survey, Bandung, Open File Report, p. 1-24. *(Unpublished)*
('The geology of the Lampung districts')

Ueno, K., S. Nishikawa, I.M.van Waveren, M. Booi, F. Hasibuan, Suyoko, E.P.A. Iskandar et al. (2007)- Early Permian fusuline faunas from Jambi, Sumatra, Indonesia: faunal characteristics and palaeobiogeographic implications. 16th Int. Congress Carboniferous and Permian, Nanjing, J. of Stratigraphy 31, Suppl. 1, p. 138-139. *(Abstract only)*
(Fusulinids in Telok Gadang limestone bed at base of Mengkarang Fm (below E Permian 'Jambi flora'). Samples collected in 2004 contain Pseudoschwagerina meranginensis, Pseudofusulina rutschi, and others. Comparison with N Afghanistan study by Leven (1971) suggest Sakmarian age (Late Asselian age proposed by Vachard, 1989). Younger 21m-thick, dark gray, fusulinid limestone in Palepat Fm at Batu Impi (18 km W of Bangko) with Minojapanella, Toriyamaia, Praeskinnerella, Chalaroschwagerina, Paraschwagerina, etc., indicating Yakhtashian or Bolorian (= ~Artinskian- Kungurian) age, most probably Yakhtashian due to absence of Brevaxina and Misellina)

Ueno, K., S. Nishikawa, I.M.van Waveren, F. Hasibuan, Suyoko, P.L. de Boer, D.S. Chaney et al. (2006)- Early Permian fusuline faunas of the Mengkarang and Palepat Formations in the West Sumatra Block, Indonesia: their faunal characteristics, age and geotectonic implications. In: Proc. 2nd Int. Symp. Geological anatomy of East and South Asia, paleogeography and paleoenvironment in Eastern Tethys (IGCP 516), Quezon City, p. 98-102. *(Extended Abstract)*
(Rel. high diversity E Permian fusulinid assemblages in Bangko area of Jambi (W Sumatra Block), associated with famous 'Jambi flora'. Mengkarang Fm ~360m thick paralic clastics with intercalations of shallow marine limestone and thin coal seams. In lower part ~5m thick dark grey limestone at Telok Gedang on Merangin River, ~17 km SW of Bangko with Pseudoschwagerina and Pseudofusulina? suggesting Asselian age (N.B.: same genera as E coast of Peninsular Thailand= Sibumasu; Ingavat-Helmcke 1993?). Overlying Palepat Fm >200m arc volcanics with limestone interbeds with fusulinids (first described by Thompson 1938, Tien 1989).

Restudy of Batu Impi locality shows Minojapanella, Schubertella, Toriyamaia, Praeskinnerella, Chalaroschwagerina? and Paraschwagerina?, suggesting Artinskian- Kungurian age and Cathaysian/ Tethyan paleobiogeographic affinity (similar to E Malay Peninsula Terengganu Lst fauna described by Fontaine et al. 1998?; also similar age as basal Ratburi Lst in Sibumasu Block of Thailand?; JTvG))

Umbgrove, J.H.F. (1926)- Neogene en Pleistoceene koralen van Sumatra. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 4, 32, p. 25-55.
('Neogene and Pleistocene corals from Sumatra'. Descriptions of Miocene-Pleistocene corals from N Aceh, collected by 'Mijnbouw' and from other N Sumatra localities collected by Tobler)

Umbgrove, J.H.F. (1928)- Een *Zaphrentis* van Kota Tengah (Padangsche Bovenlanden). Jaarboek Mijnwezen Nederlandsch-Indie 56 (1927), Verhandelingen 1, p. 246-247.
('A Zaphrentis from Kota Tengah (Padang Highlands)'. Carboniferous or Permian solitary corals Zaphrentis and Caninia? from limestone collected by Zwierzycki near Kota Tengah, Lisun-Kwantan-Lalo Mts., W Sumatra)

Umbgrove, J.H.F. (1929)- *Lepidocyclina transiens*, spec. nov. van Sumatra. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 9, p. 109-113.
(New species of Lepidocyclina from marly limestone in Ayer Laje, a few km S of Bataraja, S Palembang, S Sumatra. Embryon advanced nephrolepidine to trybliolepidine. Probably Upper Tf, Middle-Late Miocene age)

Umbgrove, J.H.F. (1931)- The Sibajak volcano (N.E. Sumatra). Zeitschrift Vulkanologie 13, p. 237-244.
(Brief description of crater area of Sibajak volcano, N Sumatra)

Umri, N.H. & Indrawardana (2014)- Basement reservoir opportunity in Central Sumatra Basin. Proc. 38th Ann. Conv., Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-057, 20p.
(Pre-Tertiary Basement play underexplored in C Sumatra Basin, despite success at Beruk NE field. C Sumatra basin underlain by metasedimentary rocks of Permo-Carboniferous age in Kuala and Mergui Terranes in W and Triassic Jurassic Mutus terrane argillite and Paleozoic Malacca Terrane quartzite/ granite in E of C Sumatra Basin)

Untung, M., N. Buyung, E. Kertapati, Undang & C.R. Allen (1985)- Rupture along the Great Sumatran fault, Indonesia, during the earthquakes of 1926 and 1943. Bull. Seismological Soc. America 76, p. 313-317.
(1943 earthquake at least 2-3 m lateral displacement along 60 km segment)

Utoyo, H. (1996)- Pentarikhan K-Ar daerah Bukit Kayumambang, Pegunungan Tigapuluh, Riau. In: Sampurno et al. (eds.) Pros. Seminar Nasional Geoteknologi III, Puslitbang Geoteknologi (LIPI), Bandung, p. 601-610.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/04/07/prosiding-1996/)
('K-Ar analyses from the Bukit Kayumambang Hill, Tigapuluh Mountains, Riau'. Kayumambang Hill granite with K-Ar age of ~124 ± 5 Ma (E Aptian), Mentulu Fm phyllite (contact-metamorphic?) ~116 ±2 Ma)

Vachard, D. (1989)- Microfossils and microfacies of the Lower Carboniferous limestones. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Papers 19, p. 31-40.
(Rel. rich Lower Carboniferous foraminifera assemblage from C Sumatra limestones. At least 3 biozones)

Vachard, D. (1989)- A rich algal microflora from the Lower Permian of Jambi Province. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Papers 19, p. 59-69.
(Microfauna of grainstone sample from Mengkareng Fm of Pulau Apat, W of Bangko, Jambi (same general area, but ~10km N of 'Jambi Flora' localities). Limestone rich in algae (incl. Tubiphytes, Mizzia velebitana, Permocalculus, etc.), oncolites, foraminifera (incl. fusulinids Boultonia willsi, Darvasites, Mesoschubertella giraudi, Schubertella kingi, Rugofusulina, etc.) and small volcanic clasts. Warm climate assemblage and probably Late Asselian age. Calcareous algae strong Tethyan affinities)

Vachard, D. (1989)- Triassic micro-organisms from the Sibaganding Limestone. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments, CCOP Techn. Papers 19, p. 179-189.

(Illustrations of U Ladinian- Lower Carnian algae (Thaumotoporella parvovesiculifera, Globochaete) and rich foraminifera fauna (lituolids, Endothyra, Duotaxis, Aulotortus) from reefal limestones with corals, oncoliths, etc., off Lake Toba. Resembles microfauna from Kodiang Lst of NW Malay Peninsula and Namyua Gp in E Burma, but different from U Triassic of Seram)

Vacquier, V. & P.T. Taylor (1966)- Geothermal and magnetic survey off the coast of Sumatra. 1. Presentation of data. Bull. Earthquake Res. Inst. (Tokyo University) 44, p. 531-540.
(online at: http://repository.dl.itc.u-tokyo.ac.jp/dspace/bitstream/2261/12265/1/ji0442007.pdf)
(Band of high heat flow in front of deep sea trench off Sumatra. Magnetic anomalies trend mostly E-W; do not follow curve of Indonesian island arc)

Van Beek, C.G.G. (1982)- Een geomorfologische bodemkundige studie van het Gunung Leuser Nationale Park, Noord Sumatra, Indonesia. Ph.D. Thesis, University of Utrecht, p. 1-187. *(Unpublished)*
(online at: http://library.wur.nl/isric/fulltext/isricu_i00006134_001.pdf)
('A geomorphological soil science study of the Gunung Leuser National Park, north Sumatra')
(Gunung Leuser in N Sumatra >3400m high. Leuser Mt not a volcano, but part of uplifted Barisan range, with rocks composed of Late Paleozoic- E Mesozoic and E Tertiary sediments. Traces of Pleistocene glacial deposits in highest parts of area)

Van Bemmelen, R.W. (1930)- The origin of Lake Toba. Proc. Fourth Pacific Science Congress, Java 1929, IIA, p. 115-124.
(Lake Toba in N Sumatra largest lake in Indonesia, 87x 31 km. Formed as large collapse crater, in which younger acidic volcanoes developed)

Van Bemmelen, R.W. (1931)- Het Boekit Mapas- Pematang Semoet vulkanisme (Zuid-Sumatra). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 9, p. 57-76.
('The Bukit Mapas- Pematang Semut volcanism (South Sumatra)'. Different types of volcanism in two nearby young volcanic centers in S Sumatra: Bukit Mapas basic andesite and basalt flows, Pg. Semoet acid tuffs)

Van Bemmelen, R.W. (1932)- Geologische waarnemingen in de Gajo landen (N-Sumatra). Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Verhandelingen 3, p. 71-94.
('Geological observations in the Gajo lands (North Sumatra). Geological survey in 'conjunction with road building project in, Aceh, in N Sumatra sector of Barisan Mts (area also described by Volz, 1912). Common thick, isoclinally folded, mainly S-dipping, dynamometamorphic Pretertiary rocks, including 'Phyllite Group (with intercalations of Jurassic? limestones with demosponge Myriopora and coral Montlivaultia; also some serpentinite and basalt), overlain by Late Mesozoic 'Greywacke Group' (with phyllite, granite detritus). Unconformably overlain by Paleogene clastics in irregular basins among Barisan Range, with 3 members, from top to bottom: Black marine claystone, Mica-sandstone (metamorphic and igneous detritus) and Quartz-sandstone (with limestone intercalations with reticulate Nummulites = E Oligocene). Some Neogene sediments at margin of eastern coastal plain, including E Miocene (Te5) reefal limestones)

Van Bemmelen, R.W. (1932)- Geologische kaart van Sumatra 1:200,000. Toelichting bij Blad 10 (Batoeradja). Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-45.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/817612)
(‘Geologic map of Sumatra 1:200k; Sheet 10- Baturaja’. Unfossiliferous Pretertiary in Garba Mountains composed of Lower Garba Fm volcanics, meta-sediments and granite and Upper Garba Fm deep marine radiolarian-bearing sediments. Overlain by Tertiary 'Old Andesites', then Baturaja Fm coaly sediments, overlain by up to 300m thick E Miocene limestone with Spiroclypeus, Eulepidina and Miogypsina (upper Te), well exposed around Garba Mountains and Baturaja. Overlain by 500m Telisa Fm and 600m Lower Palembang Fm)

Van Bemmelen, R.W. (1933)- Geologische kaart van Sumatra 1:200,000. Toelichting bij Blad 6 (Kroei). Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-61.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/816147)

('Geologic map of Sumatra 1:200k, Sheet 6- Krui'. SW Sumatra map sheet, mainly Barisan Range Quaternary volcanics with Danau Ranau lake in NW. With small window of ?Cretaceous metamorphics overlain by Miocene Baturaja limestone and Telisa shale (Sapatuhu Ridge in NW))

Van Bemmelen, R.W. (1934)- De tektonische structuur van Zuid-Sumatra (in verband met de aardbeving van 25 Juni 1933). Natuurkundig Tijdschrift Nederlandsch-Indie 94, 1, p. 7-14.
('The tectonic structure of South Sumatra, in connection with the earthquake of 25 June 1933'. With block diagram)

Van Bemmelen, R.W. (1939)- The volcano-tectonic origin of Lake Toba (North Sumatra). De Ingenieur in Nederlandsch-Indie (IV) 6, 9, p. 126-140.
(Another review on the origin of Lake Toba caldera)

Van Bemmelen, R.W. (1949)- Sumatra. In: The geology of Indonesia, Government Printing Office, Nijhoff, The Hague, 1, p. 659-707.

Van Bemmelen, R.W. & P. Esenwein (1932)- De liparitische eruptie van den bazaltischen Tanggamoes-vulkaan. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 22, p. 33-62.
('The liparitic eruption of the basaltic Tanggamus volcano', S Sumatra. Tanggamus on Semangka Bay, S Sumatra, first example in Indonesia of basaltic volcano with eruption of light-colored, acid, 'plagio-liparite' magma with well-developed quartz phenocrysts)

Van Bemmelen, R.W. & J. Zwierzycki (1936)- Het Paleogeen van Sumatra. De Ingenieur in Nederlandsch-Indie (IV) 3, 9, p. 160-161.
('The Paleogene of Sumatra'. Critical discussion of Sumatra chapter of Badings (1936) review paper)

Van der Kaars, S., M.A.J. Williams, F. Bassinot, F. Guichard & E. Moreno (2011)- The influence of the 73 ka Toba super-eruption on the ecosystems of northern Sumatra as recorded in marine core BAR94-25. Quaternary Int. 258, p. 45-53.
(The 73 ka Toba super-eruption had instantaneous and devastating effect on pine forests of N Sumatra. Evidence for impact on regional climatic conditions remains inconclusive)

Van der Marel, H.W. (1941)- Onderzoek omtrent het voorkomen van de mineralen orthiet en zirkoon in de liparietgronden van Sumatra's Oostkust. De Ingenieur in Nederlandsch-Indie (IV) 8, 4, p. 33-38.
('Investigation of the occurrence of orthite and zircon in the liparite areas of Sumatra's E coast'. Acid volcanic liparite tuffs of Sumatra East coast, probably of Lake Toba origin, always with minerals orthite and zircon)

Van der Marel, H.W. (1947)- Diatomeenaardeafzettingen in de omgeving van het Tobameer. De Ingenieur, 1947, 48, p. 1-7.
('Diatomaceous deposits in the surroundings of Lake Toba'. Extended, Dutch version of Van der Marel (1947))

Van der Marel, H.W. (1947)- Diatomaceous deposits at Lake Toba. J. Sedimentary Petrology 17, 3, p. 129-134.
(Description of Early Quaternary fresh-water diatomaceous deposits around Toba caldera lake, N Sumatra, Now at 150m above lake level and formed when lake level was up to 450m above present lake level. Layers up to 75-100 cm thick. Some diatomites mainly composed of mainly of Synedra rumpens, others mainly Denticula spp., Melosira, Cyclotella, Pinnularia, etc.)

Van der Marel, H.W. (1948)- Het Tobameer. Geologie en Mijnbouw 10, 4, p. 80-89.
(online at: https://drive.google.com/file/d/1e3QPgTZ5dRXvcgv-zmst58gsCiuaXzTe/view)
('Lake Toba' Review of Late Paleozoic- Quaternary geology of Lake Toba area, with focus on Quaternary Toba liparitic tuffs and diatomaceous earth deposits)

Van der Marel, H.W. (1948)- Volcanic glass, allanite and zircon as characteristic minerals of the Toba rhyolite at Sumatra's East coast. J. Sedimentary Petrology 18, p. 24-29.

(Widespread young rhyolitic tuff from Toba eruption characterized by common volcanic glass, allanite and zircon)

Van der Vlerk, I.M. & J.H.L. Wennekers (1929)- Einige foraminiferenfuhrende Kalksteine aus Sud-Palembang (Sumatra). Eclogae Geol. Helvetiae 22, 2, p. 166-172.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1929:22204)
('Some foraminifera-bearing limestones from South Palembang (S Sumatra)'. Larger foraminifera from Early Miocene (lower Tf) Baturaja limestones between Batu Raja and Muara Dua, with Lepidocyclina (N.) spp., Lepidocyclina (Eulepidina), Spiroclypeus spp., Miogypsina dehaarti)

Van Dijk, P. (1860)- Inleiding tot de geologie van Sumatra's Westkust. Natuurkundig Tijdschrift Nederlandsch-Indie, Batavia, 22, p. 145-180.
(online at: www.biodiversitylibrary.org/item/48386page/168/mode/1up)
('Introduction to the geology of Sumatra's West coast')

Van Eek, D. (1937)- Foraminifera from the Telisa and Lower Palembang beds of South Sumatra. De Ingenieur in Nederlandsch-Indie (IV), 4, 4, p. 47-55.
(E-M Miocene Lepidocyclinids and Miogypsina from 4 localities on Gedongratoe map, Lampong Districts, collected by Van Tuijn. Telisa Fm E-M Miocene (Te5- Tf2) assemblages A (with Lepidocyclina (N) besaiensis n.sp., Miogypsina borneensis) and B (with Miogypsina indonesiensis, M borneensis, Lepidocyclina (T.) martini). Lower Palembang Fm localities C and D M Miocene zone Tf3(?) with Miogypsina indonesiensis and Lepidocyclina pilifera. Little or no stratigraphic info)

Van Es, L.J.C. (1930)- Over eenige nieuwe vondsten van graniet en Trias in the Beneden-Rokan en Midden-Siak streken en hare beteekenis voor de tektoniek van Midden Oost-Sumatra. De Mijningenieur 8, p. 164-167.
('On some new discoveries of granite and Triassic in the Lower Rokan and middle Siak regions, and their significance for the tectonics of C Sumatra'. Low hills of Pre-Tertiary granite and quartz sandstone at both sides of Lower Rokan River, E Central Sumatra, represent southern continuation of geology of Belitung-Bangka and W Malay Peninsula)

Van Leeuwen, T.M. (2014)- A brief history of mineral exploration and mining in Sumatra. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 35-57.
(Review of gold-silver mining activity in Sumatra from 1669 re-opening of ancient silver-rich Salido gold mine in W Sumatra by the Dutch East Indies Company (VOC) to recent new developments of small-medium size epithermal Au-Ag deposits. During Dutch colonial era 16 Au-Ag deposits were exploited, mostly for short periods, with only Lebong Donok and Lebong Tandai mines profitable. Majority of porphyry Cu-Au, epithermal Au-Ag and sediment-hosted Au deposits are associated with Sumatra Fault Zone and volcanic arc. Time of mineralizations probably mainly Pliocene)

Van Leeuwen, T.M., R.P. Taylor & J. Hutagalung (1987)- The geology of the Tangse porphyry copper-molybdenum prospect, Aceh, Indonesia. Economic Geology 82, 1, p. 27-42.
(Copper-molybdenum deposit at Tangse, Aceh, N Sumatra, hosted by multiphase quartz diorite intrusions, termed Tangse stock, emplaced along segment of transcurrent Sumatera fault system. Intrusive rocks belong to normal K calc-alkaline suite. Low initial strontium isotope ratios prohibit significant involvement of sialic crustal component in magma genesis. M-L Miocene K-Ar ages for intrusion-cooling (13.1 Ma) and hydrothermal alteration-mineralization (9.0 Ma). Three intrusive phases, the older porphyries forming bulk of Tangse stock)

Van Lier, R.J. (1915)- De edelmetaalafzettingen in Benkoelen. Technisch Studenten Tijdschrift, Delft, 6, 5, p. 85-90.
(online at: http://lib.tudelft.nl/mscans/mscans1851)
('The precious metal deposits in Bengkulu'. Mainly summary of Hovig 1912 paper on gold in Lebong area)

Van Lohuizen, H.J. (1924)- Verslag over het onderzoek van het Landschap Langkat (Oostkust van Sumatra). Jaarboek Mijnwezen Nederlandsch Oost-Indie, 50 (1921), Verhandelingen 1, p. 56-94.
('Report on the survey of the Langkat region, East coast of Sumatra'. Early geological survey of part of N Sumatra basin in Aceh, the 'petroleum terane Langkat', around Pangkalan Brandan- Binjai. With two 1:100,000 geologic maps, showing Telaga Said and other surface anticlines, oil seeps, etc. Pretertiary rocks at basin margin are probably Permo-Carboniferous-age sediments, generally steeply dipping to NE. Pretertiary unconformably overlain by thick, folded Tertiary sediments)

Van Raalten, C.H. (1932)- Geologische kaart van Sumatra 1:200,000. Toelichting bij Blad 7 (Bintoehan). Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-34.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/816842)
('Geologic map of Sumatra 1:200,000, sheet 7 Bintuhan'. Oldest rocks 'Old Andesites', overlain by Miocene marine Telisa Fm. Upper Telisa Fm with Middle Miocene (Tf) Katacycloclypeus annulatus and Lepidocyclina radiata. Overlain by U Palembang Fm acid tuffs. Includes presence of river terrace up to 40 m altitude along A. Loeas river)

Van Schelle, C.J. (1876)- Sumatra's Westkust. Verslag No. 7. Over het voorkomen van looderts aan de rivier Talang, distrikt Alahan Panjang, Sumatra Westkust. Jaarboek Mijnwezen Nederlandsch Oost-Indie 5 (1876), 1, p. 15-33.
('On the occurrence of lead ore along Sungei Talang (Talang River), Alahan Panjang district, Sumatra West coast'. First report on geology of S part of Padang Highlands, with pockets of galena in fractures in limestone. Formerly gold mining area, with primary gold mainly near contacts of quartz veins and slaty rocks. With 1:5000 map)

Van Steenis, C.G.G.J. (1938)- Exploratie in de Gajo Landen (Algemeene resultaten van de 1937 Losir Expeditie). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 55, 5, p. 728-801.
('Exploration in the Gajo Lands; general results of 1937 Losir expedition' Mainly botanic expedition to Losir Mountain area, Barisan Range, N Sumatra)

Van Tongeren, W. (1935)- Chemische analyses van gesteenten van Poeloe Berhala. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 38, 6, p. 634-639.
(online at: www.dwc.knaw.nl/DL/publications/PU00016744.pdf)
('Chemical analyses of rocks from Poeloe Berhala', Malacca Straits. Rocks collected by Druif: granite, gneiss (very high quartz), aplite-pegmatite and lime-silica hornfels. No tin detected)

Van Tongeren, W. (1936)- Mineralogical and chemical composition of the syenite-granite from Boekit Batoe near Palembang, Sumatra, Neth. East Indies. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 39, 5, p. 670-673.
(online at: www.dwc.knaw.nl/DL/publications/PU00016908.pdf)
(Bukit Batu hill 60 km E of Palembang. Ridge 50 km long, 15 km wide in E Sumatra coastal swamp, and is E-ward continuation of Palembang anticline. Mainly composed of Late Miocene Lower Palembang Fm claystones. Highest hills formed by syenite, quartz-syenitic and granitic rocks, comparable in composition to other 'tin granites' and rel. rich in Rare Earth Elements. Batholithic rocks outcrop ~5 km2 (Gasparon & Varne 1995: = Jurassic? quartz syenite))

Van Tuijn, J. (1931)- Geologische kaart van Sumatra 1:200.000. Toelichting bij blad 4 (Soekadana). Dienst Mijnbouw Nederlandsch-Indie, Bandung, 20p.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/815466)
('Geological map of Sumatra 1:200,000, 4 (Sukadana sheet)'. Crystalline schists massif in W, with gneiss and quartz-mica schist. Overlain by young acid tuffs and Quaternary fluvial deposits. Large olivine-bearing Sukadana plateau basalt complex in SE of map sheet (ages around 1.0 Ma; Gasparon 2005))

Van Tuijn, J. (1934)- Geologische kaart van Sumatra 1:200.000. Toelichting bij blad 8 (Menggala). Dienst Mijnbouw Nederlandsch-Indie, Bandung, 24p.

(map online at: https://digitalcollections.universiteitleiden.nl/view/item/812709)
('Geological map of Sumatra 1: 200,000, 8 (Menggala Sheet)'. Coastal area of SE Sumatra, much of it coastal swamp. Slightly folded Late Miocene-Pliocene Middle Palembang lignite-bearing tuffaceous sandstones and lignite-free Upper Palembang Fm)

Van Tuijn, J. (1937)- Geologische kaart van Sumatra 1:200.000. Toelichting bij blad 9 (Gedongratoe). Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-37.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/813284)
('Geological map of Sumatra 1: 200,000, 9 (Gedongratu Sheet)'. Map sheet in SE Sumatra on Lampung Plateau, between sheet 8 (Menggala) in E and 10 (Baturaja) in W. Most outcrops are of Upper Palembang Fm. Oldest rocks are 'Old Andesites', overlain by marine Telisa Fm sediments with Miogypsina borneensis and M. indonesiensis (Younger than E Miocene Baturaja Limestone fauna). Lower Palembang Fm also with Miogypsina indonesiensis)

Van Tuijn, J. (1937)- Geologische kaart van Sumatra 1:200.000. Toelichting bij blad 13 (Wiralaga). Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-28.
(maponline at: https://digitalcollections.universiteitleiden.nl/view/item/814599)
(Geological map of Sumatra, Wiralaga sheet SE of Palembang. Mainly coastal plain, with low hills up to 25m elevation, composed of weakly folded, unfossiliferous (M-Late Miocene?) 'Middle Palembang Fm' tuffaceous deposits and lignites, surrounded by swamps area with near-recent sediments)

Van Valkenburg, S. (1922)- Geomorphologische beschouwingen over de Padangsche Bovenlanden. Jaarboek Topographischen dienst 1921, Batavia, p. 1-30.
('Geomorphologic observations on the Padang Highlands'. Geomorphologic description of W Sumatra highlands. Most of area underlain by folded Late Paleozoic- Mesozoic clastic sediments and limestones, intruded by Pretertiary granites and intruded/ overlain by Quaternary volcanics)

Van Waveren, I.M. (2019)- A morphometric analysis of *Tobleria bicuspis*, a *Voltziales* seed cone from the Early Permian Jambi palaeoflora, Sumatra (Indonesia). PhytoKeys 119, p. 67-95.
(online at: https://phytokeys.pensoft.net/article/29555/)
(Tobleria bicuspis Jongmans and Gothan is coniferophyte seed cone from E Permian Jambi flora, W Sumatra. Tobleria regarded as having a voltzian Voltziales affinity, but ~16-26 Myr older than other such cones (e.g. Euramerican Lebowskia))

Van Waveren, I.M., M. Booi, M.J. Crow, F. Hasibuan, J.H.A. van Konijnenburg-van Cittert, A.P. Perdono & S.K. Donovan (2018)- Depositional settings and changing composition of the Jambi palaeoflora within the Mengkarang Formation (Sumatra, Indonesia). Geological Journal 53, 6, p. 2969-2990.
(Merangin River section in W Sumatra exposes Lower Permian (late Asselian) Mengkarang Fm. Section ~400m thick, composed of 8 fining-upward of volcanic tuffs and volcaniclastic sedimentary rocks, incl. pyroclastic flows, overlain by their reworked alluvial products. Base of section marine, with common brachiopods. Zircon dating indicates duration of ~630,000 years (296.77 ± 0.04 near base to 296.14 ± 0.09 Ma near top). Change in paleobotanical composition from dominated by Cordaites, ferns or club mosses, to seed fern-dominant. Similar paleofloral trends observed in other areas of Paleotethys)

Van Waveren, I.M., M. Booi, J.H.A. van Konijnenburg van Cittert (2006)- Paleogeographic and ecologic aspects of the Early Permian flora of Sumatra (Indonesia). In: Galtier Conference, A life of ferns and gymnosperms, Montpellier April 2006, p. 29.
(Early Permian Jambi paleoflora is tropical wet flora, best matched to S Cathaysian floras, in accordance with reconstructions that place W Sumatra Terrane in contact with Indochina and S Cathaysia blocks)

Van Waveren, I.M., M. Booi, J.H.A. van Konijnenburg van Cittert, M.J. Crow & S.K. Donovan (2019)- Climate-driven biodiversity fluctuations on a volcanic slope from the low latitudes of the Paleotethys (early Permian, West Sumatra). 6th Int. Congress Agora Paleobotanica, Lille 2019, 1p. *(Abstract only)*

(Asselian Mengkarang Fm in Merangin section, W Sumatra, series of volcanic accretion wedges at foot of volcanic slope. Palaeoflora varies from tropical wet taxa (Cordaites and ferns) to mesic-xeric (seedferns). Paleofloral transition across 14 consecutive lahars shows gradual increase in ratios of gymnosperms (Macralethopteris hallei, Sphenopteris sp., Dicranophyllum molle, Tobleria bicuspis and gigantopterids). Highest ratio of gymnosperms interpreted as glacial maximum)

Van Waveren, I.M., F. Hasibuan, Suyoko, Makmur, P.L. de Boer, D. Chaney, K. Ueno, M. Booi et al. (2005)- Taphonomy, paleoecology and paleobotany and sedimentology of the Mengkarang Formation (Early Permian, Jambi, Sumatra, Indonesia). In: S.G. Lucas & K.E. Zeigler (eds.) The non-marine Permian, New Mexico Museum Natural History and Science, Bull. 30, p. 333-341.
(Mengkarang Fm W of Bangko is 360m thick Asselian-Sakmarian regressive sequence with 'Jambi Flora'. Floodplain deposits of meandering system follow marine and deltaic deposits. Bottom of section intrusive Triassic or Jurassic granite. Braided river deposits in upper part, followed by alluvial fan conglomerates. Both delta and braided river systems hold tree trunks and tree roots. Jambi Flora is North Cathaysian flora)

Van Waveren, I.M., E.A.P. Iskandar, M. Booi & J.H.A. van Konijnenburg-van Cittert (2007)- Composition and palaeogeographic position of the Early Permian Jambi flora from Sumatra. Scripta Geologica 135, p. 1-28.
(Online at: www.repository.naturalis.nl/document/144475)
(E Permian Jambi flora from Mengkareng Fm on W Sumatra Block first described by Posthumus (1927) and Jongmans & Gothan (1935). Revision of flora results in fewer taxa (60; 18 of which 'endemic'). Brachiopods and fusulinids indicate E Permian age (Asselian-Sakmarian?). Five groups of Pecopteris-type ferns. Paleogoniopteris and Gothanopteris considered to be primitive 'Cathaysian' gigantopterids. Posthumus (1927) reported presence of Walchia conifer, but this is Lepidodendrales. Comparisons with E Asian Permian floras of Cathaysian realm indicate Jambi paleoflora greatest similarity with (M Permian) Lower Shihhotse beds in N China, a relatively xeric Cathaysian flora, possibly indicative of relatively high latitude in S Hemisphere)

Vazquez, J.A. & M.R. Reid (2004)- Probing the accumulation history of the voluminous Toba magma. Science 305, 5686, p. 991-994.
(Age and compositional zonation in allanite crystals from Youngest Toba Tuff retain record of 150,000 years of magma storage and evolution. Subvolcanic magma relatively homogeneous for ~110,000 years. In 35,000 years before eruption diversity of melts increased as system grew in size before erupting 75,000 years ago)

Veldkamp, J. (1957)- Mechanism of shallow and intermediate earthquakes in Sumatra. Verhandelingen Kon. Nederl. Geol.-Mijnbouwkundig Gen., Geol. Serie 18 (Gedenkboek Vening Meinesz), p. 295-303.
(Mechanism of shallow earthquakes in Sumatra region points to widely variable stress systems)

Verbeek, R.D.M. (1875)- De fossielen in de kolenkalksteen van Sumatra's westkust. Jaarboek Mijnwezen Nederlandsch Oost-Indie 4 (1875), 2, p. 186-189.
('The fossils of the coal-limestone of Sumatra's west coast'. Kolenkalk ('coal-limestone') is Dutch term for Carboniferous limestone that underlies coal measures in NW Europe (and look like Permian limestones from Sumatra). Fusulinid limestones from Padang Highlands with brachiopods (Productus semireticulatus, Euomphalus, Spirifer, Streptorhynchus), trilobites (Phillipsia) and crinoids. No illustrations. (Fossils initially believed to be of Carboniferous age, but subsequently shown to be of E-M Permian age; JTvG))

Verbeek, R.D.M. (1875)- On the geology of Central Sumatra. Geol. Magazine, new ser., decade 2, 11, p. 477-486.
(Introduction to series of papers by Gunther, Rupert Jones, Woodward and Brady on Sumatra fossils collected by Verbeek in 1873-1874 in Padang Highlands of W Sumatra and Nias island. Oldest rocks in Padang Highlands are granites, overlain by Carboniferous or Permian with clay slate in lower and fusulinid limestone in upper part, intruded by probably younger quartz porphyries. Unconformably overlain by Tertiary sedments with basal breccias and marl-slates with Eocene fish and plant fossils (highly variable thickness), overlain by sandstones with clays and coals, (300-500m; with Ombilin coalfield), then marls (500m) and limestones rich in Orbitoides (120m). Finally middle-late Tertiary trachytic and andesitic volcanic series. With small map and two cross-sections)

Verbeek, R.D.M. (1876)- Geologische beschrijving van het Siboemboem Gebergte. Jaarboek Mijnwezen Nederlandsch Oost-Indie 5 (1876), 2, p. 51-79.
('Sumatra's West coast- Report 6. Geologic description of the Sibumbum Mountains')

Verbeek, R.D.M. (1877)- The geology of Sumatra. Geol. Magazine 4, 10, p. 443-444.
(Brief follow-up of Verbeek (1875), mainly description of colored geological panorama of Ombilin coal complex. Panorama shows three coal mines (Parambahan, Sigalut and Sungei Durian) in Eocene clastics formation, Carboniferous-Permian limestones with Fusulina verbeeki, quartz porphyry of Mount Toenkar, etc.)

Verbeek, R.D.M. (1877)- Geologische beschrijving van de landstreek tussen Siboga en Sipirok, Residentie Tapanoeli, Sumatra's Westkust. Jaarboek Mijnwezen Nederlandsch Oost-Indie 6 (1877), 1, p. 21-37.
('Geologic description of the area between Siboga and Sipirok, Residency Tapanuli, W Sumatra')

Verbeek, R.D.M. (1877)- Yzererts bij den Goenoeng Bessie, in de nabijheid van Fort van der Capellen. Jaarboek Mijnwezen Nederlandsch Oost-Indie 6 (1877), 1, p. 39-44.
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Verbeek, R.D.M. (1878)- Voorlopig verslag over een geologische verkenningstocht door de Lampongse Districten en een deel van Palembang in 1877. Jaarboek Mijnwezen Nederlandsch Oost-Indie 7 (1878), 1, p. 185-200.
('Preliminary report on a geological reconnaissance trip through Bengkulu and Palembang in 1876')

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(online at: http://olivirv.myspecies.info/sites/olivirv.myspecies.info/files/Palaeontographica%20-%20Cassel%20_%20Theodor%20Fischer.pdf)
('Geologic notes on the islands of the Netherland-Indies Archipelago in general and on the fossiliferous beds of Sumatra in particular'. Part 1 of 2)

Verbeek, R.D. (1880)- De zilver- en goudmijnen van de Salida op Sumatra's Westkust. Algemeen Dagblad van Nederlandsch Indie, 16, 19 and 20 March 1880, Batavia, p. 1-20.
(online at: https://books.google.com/books/about/De_Zilver_en_Goudmijnen_van_Salida_op_Su.h....)
('The silver and gold mines of the Salida on Sumatra's west coast'. Reprint from March 1880 newspaper. Gold mined at Salida mined since 1660's. Recommendation by R.D. Verbeek (not R.D.M. Verbeek to re-open Salida mines (which eventually happened in 1917; HvG))

Verbeek, R.D.M. (1881)- Geologische aanteekeningen over de eilanden van de Nederlandsch-Indischen Archipel in het algemeen en over de fossielhoudende lagen van Sumatra in het bijzonder. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde, 21, p. 1-27.
('Geologic notes on the islands of the Netherland-Indies Archipelago and on the fossiliferous beds of Sumatra in particular'. Dutch version of Verbeek (1880). Brief review of literature describing Paleozoic, Eocene and Miocene fossil localities. With cross-section and rock descriptions of Padang Highlands, S Sumatra, Nias, SE Kalimantan and W Java)

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(maps online at: https://digitalcollections.universiteitleiden.nl/view/item/57095)
('Topographic and geological description of South Sumatra, containing the districts Bengkulu, Palembang and Lampong Districts'. Early description of geology of South Sumatra, including Krakatoa before 1883 eruption)

Verbeek, R.D.M. (1882)- Geologische Notizen uber die Inseln des Niederlandisch-Indischen Archipels im Allgemeinen, und uber die fossilfuhrenden Schichten Sumatra's im Besonderen. Palaeontographica, Suppl 3, 10-11, p. 3-16.
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(Text online at: http://books.google.com/books/...)
(Maps online at: https://digitalcollections.universiteitleiden.nl/view/item/56306)
('Topographic and geological description of a part of Sumatra's West coast'. With atlas with 19 maps, 7 cross sections, etc.)

Verbeek, R.D.M. (1914)- Die Lagerungsverhaltnisse der Trias-Schichten im Padangsche Hochlande. Palaeontographica, Suppl. IV, p. 199-202.
('Stratigraphic relations of the Triassic beds in the Padang Highlands', W Sumatra. Discussion of probable Late Triassic age of dark claystones, sandstones and thin platy limestones E and NE of Lake Singkarak. Wanner noted similarities of this 'Padang fauna' with Upper Norian Nucula marl of Misool. Faunas subsequently described as Carnian by Krumbeck (1914). Triassic unconformably overlain by Eocene sands-conglomerates)

Verstappen, H.Th. (1955)- Geomorphic notes on Kerintji (Central Sumatra). Indonesian J. Natural Science 3, p. 166-177.
(Brief geomorphologic description of Kerinci valley, a longitudinal graben along Great Sumatran fault zone (Sungeipenuh area). At SW end evidence of former crater lake, with several terrace levels in tuff deposits)

Verstappen, H.Th. (1961)- Some óvolcano-tectonicô depressions of Sumatra: their origin and mode of development. Proc. Kon. Nederl. Akademie Wetenschappen, B64, 3, p. 428-443.
(Lakes Kerinci, Singkarak and Toba represent volcanic features formed in pre-existing graben structures, not volcano-tectonic collapse features as proposed by Van Bemmelen)

Verstappen, H.Th. (1973)- A geomorphological reconnaissance of Sumatra and adjacent islands. Wolters-Noordhoff, Groningen, p. 1-182.
(Relief of Sumatra Barisan mountain range strongly influenced by fault movements accompanied by volcanism, especially along Median Graben or Semangko fault zone which extends over length of island. Etc.)

Verstappen, H.Th. (1975)- The effect of Quaternary tectonics and climates on erosion and sedimentation in Sumatra. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 49-53.
(Drier climate in glacial times reduced vegetation from rainforest to tree-savannah with more physical weathering. During interglacials tropical-humid climate, dense rainforests, more confined river systems and more chemical weathering)

Veth, P.J. (1881)- Midden-Sumatra. Reizen en onderzoekingen der Sumatra-expeditie, uitgerust door het Aardrijkskundig Genootschap, 1877-1879. Brill, Leiden, 4 vols.
(Vol. 2, without plates, online at: http://bhl.ala.org.au/bibliography/46719/summary)
('Central Sumatra- travels and investigations of the Sumatra-expedition by the Geographical Society'. Report of early geographic expedition to C Sumatra; with minimal geological observations)

Vinassa de Regny, P. (1925)- Sur lôage des calcaires du Barissan et des Monts Gumai a Sumatra. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 405-414.

('On the age of the limestones of the Barisan and Gumai Mountains in Sumatra'. Mesozoic limestones collected by Tobler in Barisan Mts, Jambi and Gumai Mts, S Sumatra. Part of Gumai Mts limestones determined as Triassic based on Lovcenipora (but Musper (1934) found good Orbitolina indicating E-M Cretaceous age; JTvG))

Volz, W. (1899)- Beitrage zur geologischen Kenntnis von Nord-Sumatra. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 51, p. 1-61.
(online at: https://www.biodiversitylibrary.org/item/148115page/15/mode/1up)
('Contributions to the geological knowledge of North Sumatra'. Extensive review. Oldest rocks rel. widespread schist- quartzite formation, intruded by pre-Late Carboniferous granites. Unconformably overlain by grey, massive 'Upper Carboniferous' fossiliferous limestones (with brachiopods, fusulinids) and shales (now generally viewed as mainly Permian; JTvG), cut by slightly younger diabase. Overlain by 600-800m thick, folded marine U Triassic near Lake Toba with molluscs Daonella (Carnian D. cassiana, D. styriaca, D sumatrensis n.sp.) and Halobia (H. battakensis, h. mengalemensis, H. kwaluana n.sp.). Overlain with hiatus by Eocene with coals, and younger rocks.Incl. Batak Highlands and Lake Toba (Also as Thesis Breslau University, 1899) (with Appendix by L. Milch on petrography of volcanic and igneous rocks of the Batak Highlands))

Volz, W. (1904)- Zur Geologie von Sumatra. Beobachtungen und Studien. Geol. Palaeont. Abhandlungen, Jena, N.F. 6, 2, 112, p. 87-194.
(online at: http://openlibrary.org/works/OL1123202W/Zur_geologie_von_Sumatra)
('On the geology of Sumatra; observations and studies'. Early description of geology, Paleozoic-Tertiary stratigraphy, Ombilin coal field, young volcanoes, etc., of W Sumatra Padang Highlands)

Volz, W. (1904)- Zur Geologie von Sumatra. Beobachtungen und Studien, Anhang II, Einige neue Foraminiferen und Korallen sowie Hydrokorallen aus dem Obercarbon Sumatras. Geol. Palaeont. Abhandlungen, Jena, N.F. 6, 2, 112, p. 177-194.
(Appendix II in Volz (1904): 'Some new foraminifera and corals as well as hydrocorals from the Upper Carboniferous of Sumatra'. Descriptions of Permian-age fossils from limestones of Padang Highlands, incl. smaller foraminifera Bigenerina spp. and new fusulinid foram genus/species Sumatrina annae from Bukit Bessi, NE of Lake Singkarak. Also new colonial coral species Lonsdaleia frechi and L. fennemai and stromatoporid Myriopora)

Volz, W. (1907)- Die Battak-Lander in Zentral Sumatra. Zeitschrift Gesellschaft Erdkunde Berlin 1907, p. 662-693.
('The Batak lands in Central Sumatra'. Mainly early geographic descriptions)

Volz, W. (1907)- Vorlaufiger Bericht uber eine Forschungsreise zur Untersuchung des Gebirgsbaus und der Vulkane von Sumatra in den Jahren 1904-1906. Sitzungsberichte Kon. Preuss. Akademie Wissenschaften, Phys.-Math. Cl., 6, p. 127-140.
('Preliminary report on a research trip to investigate the mountain building and volcanoes of Sumatra in the years 1904-1906'. No maps or figures)

Volz, W. (1908)- Kartographische Ergebnisse meiner Reisen durch die Karo- und Pakpak-Bataklander (Nord-Sumatra). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 25, p. 1345-1382.
('Cartographic results of my travels through the Karo- and Pakpak-Batak Lands (North Sumatra)')

Volz, W. (1909)- Jungpliozanes Trockenklima in Sumatra und die Landverbindung mit dem asiatischen Kontinent. Gaea 1909, 7-8, 16p.
('Late Pliocene dry climate of Sumatra and the land connection with the Asian continent)

Volz, W. (1909)- Die geomorphologische Stellung Sumatras. Geogr. Zeitschrift 151, p. 1-12.
('The geomorphological position of Sumatra'. Brief review of geology of Sumatra. With 5 regional cross-sections NW of Lake Toba area))

Volz, W. (1909)- Nord Sumatra. Bericht uber eine im Auftrage der Humboldt-stiftung der Koniglich Preussischen Akademie der Wissenschaften zu Berlin in den Jahren 1904-1906 ausgefuhrte Forschungsreise, Band 1, Die Bataklander. Dietrich Reimer, Berlin, p. 1-385.
(online at: http://openlibrary.org/books/OL22888050M/Nord-Sumatra)
('North Sumatra. Report on a research trip in 1904-1906 commisioned by the Royal Prussian Academy of Sciences in Berlin, vol. 1, The Batak lands'. First of two books by German geographer Volz, traveling 6000km on foot, describing geography, geology and people of North Sumatra. First to document that N Sumatra rocks are dominated by metamorphic rocks, folded Paleozoic sediments, granites and 'old Tertiary' volcanics)

Volz, W. (1912)- Nord Sumatra. Bericht uber eine im Auftrage der Humboldt-stiftung der Koniglich Preussischen Akademie der Wissenschaften zu Berlin in den Jahren 1904-1906 ausgefuhrte Forschungsreise, Band II, Die Gajolander. Dietrich Reimer, Berlin, p. 1-428.
(online at: http://archive.org/details/nordsumatraberic01volzuoft)
('North Sumatra. Report on a research trip in 1904-1906 commisioned by the Royal Prussian Academy of Sciences in Berlin, vol. 2, The Gajo lands'. Second of two books by German geographer Volz, describing geography, geology and people of Aceh, N Sumatra)

Volz, W. (1913)- Oberer Jura in West-Sumatra. Centralblatt Mineralogie Geologie Palaont. 24, p. 753-758.
(online at: https://babel.hathitrust.org/cgi/pt?id=uc1.b4291846;view=1up;seq=779)
(‘Upper Jurassic in West Sumatra’. Stromotoparoid Myriopora verbeeki from limestones in Padang Highlands (SE of Merapi volcano) looks identical to Stromatopora japonica Yabe from U Jurassic Torinosu Lst in Japan (Yabe 1914 does not agree; re-assigned to demosponge Myoporina by Hudson 1956))

Volz, W. (1914)- Sud-China und Nord-Sumatra. Zur Charakterisierung des Zerrungs-Phanomens in Sudostasien. Mitteilungen Ferdinand von Richthofen-Tages 1913, Dietrich Reimer, Berlin, p. 29-54.
(Old paper on structural geology of Sumatra and comparison with South China)

Von der Marck, W. (1876)- Fossile Fische von Sumatra. Palaeontographica 22, 7, p. 405-414.
(online at: http://archive.org/details/palaeontographic22cass)
('Fossil fish from Sumatra'. First paper on fresh water fish fossils from bituminous shale in Ombilin Basin, W Sumatra, collected by Verbeek. Four new species, incl. Sardinioides amblyostoma, Brachyspondylus indicus, Protosyngnathus sumatrensis, etc. (fauna described in more detail by Sanders (1934). vdM assigned fish U Cretaceous age, but Eocene age of lacustrine shale now commonly accepted; JTvG))

Von der Marck, W. (1878)- Fossile Fische von Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 7 (1878), 1, p. 138-155.
('Fossil fish from Sumatra'. Reprint of Von der Marck (1876))

Von Schwartzenberg, T. (1989)- The Air Laya coal deposit- South Sumatra. Braunkohle 38, p. 307-315.

Von Steiger, H. (1922)- Resultaten van geologisch-mijnbouwkundige verkenningen in een gedeelte van Midden Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 1, p. 87-200.
('Results of geological-mining reconnaissance of Central Sumatra'. Geological reconnaissance in upper reaches of Kampar, Siak and Rokan Rivers. With 4 sheets of 1:200,000 scale map and cross-sections)

Vozenin-Serra, C. (1980)- Sur une nouvelle Dipterocarpacee du Tertiaire de Sumatra: *Shoreoxylon rangatense* n. sp.. Comptes Rendus 105th Conf. Nat. Societe Savantes, Caen, Sciences, p. 225-231.
('On a new dipterocarp from the Tertiary of Sumatra: Shoreoxylon rangatense n. sp.'. Description of new fossil wood species, collected S of Peranap, W of Rengat, C Sumatra (= Tigapuluh Mts))

Vozenin-Serra, C. (1985)- Bois homoxyles du Permien inferieur de Sumatra: implications paleogeographiques. Actes 110th Congres Nat. Societe Savantes, sect. Sciences, 5, p. 55-63.

('Homoxyle' wood from the Lower Permian of Sumatra: paleogeographic implications'. 'Jambi Flora' woods include Dadoxylon roviengense Vozenin and D. saxonium. Both lack growth rings, suggesting tropical or subtropical regime)

Vozenin-Serra, C. (1986)- Two gymnospermous woods from the Lower Permian of Jambi, Sumatra. In: H. Fontaine (ed.) The Permian of Southeast Asia, CCOP Tech. Bull. 18, Bangkok, p. 168-171.
(Lower Permian fossil wood abundant at Telok Gedang, left bank of Merangin River. Tropical species assigned to Dadoxylon, not related to Gondwanan woods)

Vozenin-Serra, C. (1989)- Lower Permian continental flora of Sumatra. In: H. Fontaine & S. Gafoer (eds.) The Pre-Tertiary fossils of Sumatra and their environments. CCOP Techn. Publ. 19, Bangkok, p. 53-57.
(Mainly summary of Jongmans and Gothan (1925) work. Famous Lower Permian Jambi flora probably Upper Asselian, possibly Sakmarian age and corresponds to oldest stage and southernmost occurrence of Cathaysian flora. Cordaites and coniferous wood fragments show no annual growth rings)

Wajzer, M.R. (1986)- Geology and tectonic evolution of the Woyla Group, Natal Area, N. Sumatra. Ph.D. Thesis University of London, p. 1-802. *(Unpublished)*

Wajzer, M.R., A.J. Barber, S. Hidayat & Suharsono (1991)- Accretion, collision and strike-slip faulting: the Woyla Group as a key to the tectonic evolution of North Sumatra. J. Southeast Asian Earth Sci. 6, p. 447-461.
(Woyla Group re-interpreted as part of accretionary complex formed from ocean floor materials of Triassic- E Cretaceous age, incorporating collided seamounts, plateaux and volcanic arc fragments accumulated during subduction of major ocean (Tethys III) prior to India's collision with Asia. Time of accretion mid-Cretaceous. Langsat volcanics at W end dated as Late Oligocene, demonstrating they are unrelated to rest of complex and emplaced along strike-slip faults prior to M Miocene)

Wardhani, R., E. Wiwik & A. Idrus (2017)- Granitoid petrology, geochemistry and occurrences of hydrothermal mineralization in Mehanggin area, Muaradua district, South Sumatra Province, Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(Lower Cretaceous(?) granitoid in Garba Mts near Mehanggin, Muaradua area, S Sumatra, classified as S-type, high-K, calk-alkaline (island arc or active continental margin))

Weller, O., D. Lange, F. Tilmann, D. Natawidjaja, A. Rietbrock, R. Collings & L. Gregory (2012)- The structure of the Sumatran Fault revealed by local seismicity. Geophysical Research Letters 39, 1, L01306, p. 1-7.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2011GL050440/epdf)
(Combination of Sunda megathrust and strike-slip Sumatran Fault example of slip-partitioning. Superimposed on Sumatra Fault are geometrical irregularities that disrupt local strain field. Seismic evidence for duplex system between two main fault branches in C Sumatra)

Westaway, R., S. Mishra, S. Deo & D.R. Bridgland (2011)- Methods for determination of the age of Pleistocene tephra, derived from eruption of Toba, in central India. J. Earth System Science 120, 3, p. 503-530.
(online at: www.ias.ac.in/article/fulltext/jess/120/03/0503-0530)
(Tephra from Pleistocene eruption of 'supervolcano' Toba, N Sumatra, occurs at many localities in India. Discrimination between products of eruption A (~75ka) and eruption D (~790 ka) of Toba is difficult. Average Ar-Ar apparent age for samples from eruption D is 799 ± 24 ka)

Westerveld, J. (1931)- Geologische kaart van Sumatra 1:200 000. Toelichting bij Blad 5 (Kotaboemi). Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-28.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/813245)
(Kotabumi map sheet, S Sumatra. Map sheet in Barisan Mountains, almost all volcanic rocks)

Westerveld, J. (1933)- Geologische kaart van Sumatra 1:200 000. Toelichting bij Blad 3 (Bengkoenat). Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-44.

(map online at: https://digitalcollections.universiteitleiden.nl/view/item/813291)
(Bengkunat map sheet, SW coastal area of Sumatra. Oldest rocks are 'Old Andesite' volcanics (Oligocene-E Miocene ?). Overlain by 700m or more folded 'Old Neogene' interbedded claystones, tuffs, thin coal lenses and limestones with Eulepidina and Miogypsina (=Te5, basal Miocene Baturaja equivalent; JTvG). 'Young Neogene' rel. undeformed and with common molluscs. Also large granite intrusion and young volcanics)

Westerveld, J. (1941)- De tektonische bouw van Zuid Sumatra. Handelingen 28e Nederlandsch Natuur-Geneeskundig Congres, Utrecht, Afd. 4, p. 264-267.
('The tectonic structure of South Sumatra')

Westerveld, J. (1941)- Three geological sections across South Sumatra. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 44, 9, p. 1131-1139.
(online at: www.dwc.knaw.nl/DL/publications/PU00017672.pdf)
(Three SW-NE coast-to-coast regional geological cross-sections across S Sumatra)

Westerveld, J. (1942)- Welded rhyolithic tuffs or 'ignimbrites' in the Pasoemah region, West Palembang, South Sumatra. Leidsche Geol. Mededelingen 13, 1, p. 202-217.
(online at: www.repository.naturalis.nl/document/549396)
(In Pasumah region of Barisan Range in S Sumatra widespread young welded tuffs ('ignimbrites'; >50m thick over >800km2), overlain by andesitic tuffs and agglomerates from young volcanoes (Dempo, Semendo Highland, Isau-Isau)

Westerveld, J. (1947)- On the origin of the acid volcanic rocks around Lake Toba, North Sumatra. A further contribution to the knowledge of welded rhyolite-tuffs deposited along the Sumatran longitudinal fault-trough system. Verhandelingen Kon. Nederl. Akademie Wetenschappen, Amsterdam, Sect. 2, 43, 1, p. 1-52.
(online at: www.dwc.knaw.nl/DL/publications/PU00011879.pdf)
(Overview of geology of Lake Toba region, N Sumatra, particularly young rhyolitic volcanic tuffs)

Westerveld, J. (1952)- Quaternary volcanism on Sumatra. Geol. Soc. America (GSA) Bull. 63, p. 561-594.
(Extensive sheets of acid pumice tuffs in initial stages of Sumatra Quaternary volcanism, followed by cones of andesitic volcanism)

Westerveld, J. (1953)- Eruptions of acid pumice tuffs and related phenomena along the Great Sumatran fault-trough system. Proc. 7th Pacific Science Congress, New Zealand 1949, 2, Geology, p. 411-438.

Westerveld, J. & W. Uytenbogaardt (1948)- Eenige mineragrafische notities betreffende het erts van de mijn Salida, S.W.K.. Verhandelingen Nederl. Geologisch Mijnbouwkundig Genootschap, Mijnbouwkundig Ser, 4, p. 59-69.
('Some mineragraphic notes on the ore of the Salida mine, Sumatra's West Coast'. Descriptions of ore minerals in Salida gold-silver mine in Painan District, 80 km from Padang. Initially exploited by Dutch East Indies Company between 1669-1735. Last exploitation period 1914-1928. Ore veins in E Miocene andesitic volcanics)

Westgate, J.A., N.J.G. Pearce, E. Gatti & H. Achyuthan (2014)- Distinction between the Youngest Toba Tuff and Oldest Toba Tuff from northern Sumatra based on the area density of spontaneous fission tracks in their glass shards. Quaternary Research 82, 2, p. 388-393.
(Area density of spontaneous fission tracks in glass shards of Toba tephra is reliable way to distinguish between the Youngest Toba Tuff and Oldest Toba Tuff)

Westgate, J.A., N.J.G. Pearce, W.T. Perkins, S.J. Preece, C.A. Chesner & R.F. Muhammad (2013)- Tephrochronology of the Toba tuffs: four primary glass populations define the 75-ka Youngest Toba Tuff, northern Sumatra, Indonesia. J. Quaternary Science 28, 8, p. 772-776.
(Four primary glass populations in Youngest Toba Tuff, which was deposited during supereruption in N Sumatra at 75 ka. Multiple glass populations easily distinguish YTT from homogeneous glass population of Middle Toba Tuff (~500 ka), as represented by basal vitrophyre, and Oldest Toba Tuff (~800 ka))

Wheeler, R.S. (1999)- Alteration and epithermal zeolite-bearing quartz vein mineralisation at the Way Linggo Au-Ag deposit, southwest Sumatra, Indonesia. M.Sc Thesis, University of Auckland, p. *(Unpublished)*

Wheeler, R.S., P.R.L. Brown & K.A. Rodgers (2001)- Iron-rich and iron-poor prehnites from the Way Linggo epithermal Au-Ag deposit, southwest Sumatra, and the Heber geothermal field, California. Mineralogical Magazine 65, 3, p. 397-406.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1026.3514&rep=rep1&type=pdf)
(WayLinggo low sulphidation epithermal deposit of S Sumatra series of zeolite-bearing quartz veins emplaced along NW-NNW trending subsidiarystructures of Sumatra Fault Zone, in Miocene andesitic- dacitic pyroclastic rocks, intruded by porphyritic dacitic stock and minor andesite dykes. Prehnites formed below 220°C)

Whitten, A.J., S.J. Damanik, J. Anwar & N. Hisyam (1987)- The ecology of Sumatra. Gadjah Mada University Press, Yogyakarta, p. 1-583. *(also in 'The Ecology of Indonesia' Series, 1, Periplus Editions (HK), 2000, 478p.)*

Wichmann, C.E.A. (1904)- Triasschichten (?) von der Ostgrenze der Residentzschaft Tapanuli auf Sumatra. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 56, Briefl. Mitteil., p. 61-62.
(online at: https://www.biodiversitylibrary.org/item/150453page/587/mode/1up)
('Triassic beds at the eastern boundary of the Residency Tapanuli on Sumatra'. Brief note on possible occurrece of Triassic sediments based on reports of marls with possible Monotis salinarius by S. Traverso from 1838/ 1896)

Wichmann, C.E.A. (1904)- Uber die Vulkane von Nord-Sumatra. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 56, 3, p. 227-239.
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('On the volcanoes of North Sumatra'. Brief review of young volcanoes and activity from Batak Highlands in NW to SE. No maps)

Widi, B.N. & Sukaesih (2016)- Mineralisasi besi tipe skarn di daerah Bukit Gadang Lange, Desa Tarung Tarung, Kecamatan Rao, Kabupaten Pasaman, Provinsi Sumatera Barat. Bul. Sumber Daya Geologi 11, 3, p. 144-156.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
('Skarn-type iron mineralization in Bukit Gadang Lange, Tarung Tarung Village, Rao Sub-district, Pasaman District, West Sumatra'. Magnetite-hematite associated with garnet in contact zone between Tertiary granodiorite intrusion and Permian Silungkang Fm marble/limestone at Bukit Gadang Lange, Barisan Mts.)

Wikarno, D.A.D. Suyatna & S. Sukardi (1988)- Granitoids of Sumatra and the tin islands. In: C.S. Hutchison (ed.) Geology of tin deposits in Asia and the Pacific, Selected papers from Int. Symp. Geology of tin deposits, Nanning, China, 1984, Springer Verlag, Berlin, p. 571-589.
(Review of Sumatra granitoids (see also Cobbing in Barber et al. 2005). Granitoids common along axis of Sumatra island along Great Fault Zone, also in other parts like Tin Islands. Consist of plutons and batholiths up to several 100km length. Most granite bodies elongated in NW-SE direction parallel to length of island. Ages of many granites Late Triassic, also Permian and Cretaceous ages. Most tin fields associated with Ilmenite series/S-type granite. K-Ar ages Bangka- Belitung granites mainly ~210-220 Ma))

Wilcox, R.E., T.P. Harding & D.R. Seeley (1973)- Basic wrench tectonics. American Assoc. Petrol. Geol. (AAPG) Bull. 57, 1, p. 74-96.
(Includes example of Great Sumatran (Barisan) right lateral strike slip fault zone. Interpreted backarc anticlines as associated en-echelon folds (but deemed unrelated by Mount and Suppe, 1992))

Williams, M. (2012)- The ~73 ka Toba super-eruption and its impact: history of a debate. Quaternary Int. 258, p. 19-29.

(Toba volcano in N Sumatra located at intersection of two major tectonic lineaments. Caldera considered the largest Quaternary caldera on earth. Most recent explosive eruption at ~73 ka was order of magnitude larger than Tambora in 1815. Extent of the impact remains unclear)

Williams, M.A.J., S.H. Ambrose, S. van der Kaars, C. Ruehlemann, U. Chattopadhyaya, J. Pal & P.R. Chauhan (2009)- Environmental impact of the 73 ka Toba super-eruption in South Asia. Palaeogeogr. Palaeoclim. Palaeoecology 284, p. 295-314.
(Eruption of Toba volcano in N Sumatra at 73 ka was largest explosive eruption of past 2 My and caused cooling and deforestation in S Asia. Analysis of pollen from core in Bay of Bengal with stratified Toba ash suggest eruption was followed by cooling and prolonged desiccation, reflected in decline in tree cover in India and adjacent region. Carbon isotopic composition of soil carbonates above and below ash in three sites across C India show that C3 forest was replaced by wooded to open C4 grassland)

Williamson A. & G.J. Fleming (1995)- Miwah prospect high sulphidation Au-Cu mineralisation, northern Sumatra, Indonesia. In: J.L. Mauk & J.D. St George (eds.) Proc. PACRIM Congress 1995, Auckland, Australasian Inst. of Mining and Metallurgy (AusIMM), Carlton, Publ. 9, p. 637-642.
(Miwah prospect within Pliocene volcanic rocks between NW trending segment of Sumatra Fault, and N-trending Samalanga-Sipopok Fault to E)

Wing Easton, N. (1889)- Geologisch onderzoek van den omtrek der Brandewijnsbaai. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1889, Wetenschappelijk Gedeelte, p. 5-23.
('Geological investigations around Padang Bay', W Sumatra)

Wing Easton, N. (1894)- Het voorkomen van Bismuth op het schiereiland Samosir (Toba-Meer). Jaarboek Mijnwezen Nederlandsch Oost-Indie 23 (1894), Technisch Admin. Ged., p. 84-93.
('The occurrence of bismuth on Samosir Peninsula (Lake Toba)'. Small round spheres up to 125 grams of native bismuth in tuffaceous sandstone formation. Periodically exploited by local Batak population for manufacturing bullets. Possibly related to melting of older material during formation of older liparite deposit)

Wing Easton, N. (1894)- Een geologische verkenning in de Toba-landen. Jaarboek Mijnwezen Nederlandsch Oost-Indie 23 (1894), Wetenschappelijk Gedeelte, p. 99-164.
('A geological reconnaissance in the Toba lands', First geological description of geology of Lake Toba area, N Sumatra (?). Widespread young, very acid volcanics ('quartz-trachyte'); no young andesitic volcanism. At S side of lake also old slates with some quartzite, Carboniferous? shales and dolomitic limestones, etc.)

Wing Easton, N. (1895)- Eenige nadere opmerkingen aangaande de geologie van het Toba-Meer en omgeving. Jaarboek Mijnwezen Nederlandsch Oost-Indie 24 (1895), Wetenschappelijk Gedeelte, p. 149-157.
('Additional comments on the geology of Lake Toba and surroundings', N Sumatra. Follow-up of Wing Easton (1994 report on area. Notices lithological similaries between ?Mesozoic slates, quartzites of Lake Tobe region with those from western Kalimantan. Suggests Lake Toba is not a collapsed crater, but a collapsed fault block (commonly accepted to be a volcanic caldera; JTvG))

Wing Easton, N. (1896)- Der Toba-See, Ein Beitrag zur Geologie von Nord-Sumatra. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 48, 3, p. 435-467.
(online at: https://www.biodiversitylibrary.org/item/177217page/447/mode/1up)
('Lake Toba, a contribution to the geology of North Sumatra'. Early geologic description of Lake Toba area, N Sumatra (German summary of Dutch-language papers by Wing Easton 1894, 1895))

Wing Easton, N. (1912)- ñRedjang-Lebong": een kritisch-mijnbouwkundige studie. Vereeniging ter behartiging der belangen van houders van aandeelen in de N.V. Mijnbouw maatschappij "Redjang Lebongò, Amsterdam, 32p.
('A critical mining study of Rejang Lebong'. Silver-gold mine in West Sumatra)

Wing Easton, N. (1926)- Die wichtigsten Edelmetall-Lagerstatten Sumatras. Archiv Lagerstattenforschung (Preussischen Geol. Landesanstalt, Berlin) 35, p. 1-53.
('The most important precious metal deposits of Sumatra'. Overview of principal gold-silver occurrences of W Sumatra: Lebong Donok, Lebong Sulit (Kataun), Lebok Tandai (Simau), Karang Suluh, Lebok Husin (Kandis), Tambang Sawah, Gedang Ilir, Lebok Simpang, Sungei Pagu (Puding), Tambang Salida, Mangani, Roemput, Pait, Belimbing)

Wing Easton, N. (1936)- Een nog onbekende oude publikatie over de Salida Mijn. De Ingenieur in Nederlandsch-Indie (IV) 3, 4, p. 74-77.
('An as yet unknown publication on the Salida mine'. Report and translation of brief 1686 report by Hermannus Nicolaas Grimm, written in Latin, on gold-rich samples from the Salida mine in Sumatra, operated by Dutch East Indies Company in late 1600's)

Wong, H., I. Taylor, M. Purwanto & H. Setyawan (2011)- Geology and discovery history of the Miwah gold deposit, Aceh, Sumatra, Indonesia. In: Proc. NewGenGold 2011 Conf., Case histories of discovery, Perth, p. 191-199.
(Miwah high sulphidation epithermal gold system in Aceh)

Xu, J.H., Z. Zhang, C. Wu, Q. Shu, C. Zheng, X. Li & Z. Jin (2019)- Mineralogy, fluid inclusions, and S-Pb isotope geochemistry study of the Tuboh Pb-Zn-Ag polymetallic deposit, Lubuklinggau, Sumatra, Indonesia. Ore Geology Reviews 112, 103032, p.
(Tuboh typical skarn-type Pb-Zn-Ag polymetallic deposit in Lubuklinggau, Sumatra. Ore bodies in contact zone between Eocene Jangkat quartz monzonite and Jurassic- Lower Cretaceous Rawas Fm limestone)

Yabe, H. (1946)- On some fossils from the Saling Limestone of the Goemai Mts., Palembang, Sumatra- I. Proc. Japan Academy 22, 6, p. 200-203.
(online at: www.jstage.jst.go.jp/article/pjab1945/22/5-7/22_5-7_200/_pdf)
(1943 examination in Bandung of thin sections of Saling Lst (in ?Cretaceous-age Saling volcanic series of Gumai Mts) show common so-called Lovcenipora timorica clavata Vinassa, which is same as Cladocoropsis mirabilis from U Jurassic Torinosu Lst of SW Japan. Also stromatoporoid Myriophorella. Saling series older than mid-Cretaceous Lingsing series quartz sst, shale and Orbitolina limestone (but relative age of formations reverse of that suggested by Musper?; part of 'Woyla Group' Jurassic-E Cretaceous arc terrane; JTvG))

Yabe, H. (1946)- On some fossils from the Saling Limestone of the Goemai Mts., Palembang, Sumatra- II. Proc. Japan Academy 22, 8, p. 259-264.
(Loftusia bemmeleni Silvestri from Saling Lst, S Sumatra, more likely Pseudocyclammina. 'Corals' described from here as Lovcenipora vinassai same as Late Jurassic hydrozoan Cladocoropsis miriabilis from Japan)

Yancey, T.E. & S.A. Alif (1977)- Upper Mesozoic strata near Padang, West Sumatra. Bull. Geol. Soc. Malaysia 8, p. 61-74.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977003.pdf)
(U Jurassic- Lw Cretaceous Indarung Fm limestones and clastics exposed near Indarung, few km E of Padang. Massive carbonates ~200m thick, with stromatoporoids Actostroma and Lovcenipora near base and bedded cherts (Ngalau Mb) near top. Indarung Fm used to determine ~200km of offset along Sumatra fault zone. (N.B.: cherts subsequently dated as Aalenian, basal M Jurassic, by McCarthy et al. 2001 (part of Woyla Terranes; Barber 2000) (NB: Lovcenipora reported here probably Late Jurassic Cladocoropsis, also in Gumai Mts; JTvG))

Yokoyama, T., A. Dharma & P. Hehanussa (1989)- Radiometric ages and paleomagnetism of the Sigura-Gura Formation, upper part of the 'Toba Tuffs' in Sumatra, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 72, p. 161-175.
(K-Ar and fission-track dating of Sigura-Gura Fm (upper part of Toba Tuffs. K-Ar age: 0.96 Ma, fission-track ages 1.11Ma, 0.87 and 0.86 Ma. (4) Paleomagnetic polarity of Sigura-gura Fm is reversed. Fission-track ages of Younger Toba Tuffs 0.62 Ma)

Yokoyama, T. & P.E. Hehanussa (1981)- The age of "Old Toba Tuff" and some problems on the geohistory of Lake Toba, Sumatra, Indonesia. In: Palaeolimnology of Lake Biwa, Japan, Pleistocene, 9, p. 117-186.

Yokoyama, T., S. Nishimura, E. Abe, Y. Otofuji, T. Ikeda, S. Suparka & A. Dharma (1980)- Volcano-, magneto- and chronostratigraphy and the geologic structure of Danau Toba, Sumatra, Indonesia. In: S. Nishimura (ed.) Physical geology of Indonesian island arcs, Kyoto University, p. 122-143.

Young, R.D. & S. Johari (1978)- The Tangse copper-molybdenum prospect, Indonesia. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Mineral Resources SE Asia, Asian Inst. Technology, Bangkok, p. 377-386.

Yulihanto, B., B. Situmorang, A. Nurdjajadi & B. Sain (1995)- Structural analysis of the onshore Bengkulu basin and its implications for future hydrocarbon exploration activity. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 85-96.

Yuningsih, E.T. (2006)- Mineralogi granitoid Bukit Pagias, Cekungan Ombilin, Sumatera Barat. Bull. Scientific Contr. (UNPAD) 4, 1, p. 67-77.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8116/3692)
('Mineralogy of the Bukit Pagias granitoid, Ombilin Basin, West Sumatra'. Petrography of (Jurassic?) granite)

Yuningsih, E.T. (2006)- Analisis kimia batuan basemen granitoid de sub cekungan Jambi, Sumatera Selatan berdasarkan data dari sumur JSB-3, JSB-4 and JSB-6. Bull. Scientific Contr. (UNPAD) 4, 2, p. 106-117.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8120/3696)
('Chemical analysis of granitoid basement rock of the Jambi sub basin, South Sumatra, based on data from wells JSB-3, JSB-4 and JSB-6'. Pre-Tertiary granitoid basement rocks in wells JSB-3 (~1990m) intermediate-acid magma, calc-alkaline, medium-high K, metalluminous (subduction at active continental margin). Granitoids at JSB-4 (2654m) and JSB-6 (2342m) magnetite series and I type, probably extension of Thailand-Burma granite province)

Zen, M.T. (1970)- Origin of Lake Singkarak in the Padang Highlands (Central Sumatra). Inst. Teknologi Bandung (ITB) J. Science 5, 1, p. 1-8.
(online at: http://journals.itb.ac.id/index.php/jmfs/article/view/9736/3711)
Lake Singkarak in Padang Highlands previously interpreted as volcanic caldera, but Singkarak Trough is fault-bounded depression, and part of Sumatra Rift zone, stretching for 1650km from Sumatra's N tip to Semangko valley in SE, and already identified by Westerveld (1952), Katili (1967), etc.)

Zen, M.T. (1971)- Structural origin of Lake Singkarak in Central Sumatra. Bull. Volcanologique 35, 2, p. 453-461.
(Lake Singkarak neither volcanic ruin nor volcano-tectonic depression, but part of 1650 km graben zone along Sumatra's Semangko Fault zone. Lake results from damming process by volcanic material produced by Marapi-Singgalang-Tandikat volcanoes in N and from Talang volcano in S)

Zen, M.T. (1972)- The origin of several pyroclastic plateaux in the Padang Highlands (Central Sumatra). Proc. Inst. Tekn. Bandung (ITB) 6, 3, p. 81-88.
(online at: http://journal.itb.ac.id/index.php?li=article_detail&id=602)
(Several pyroclastic plateaux known in Padang Highlands. Westerveld (1952) suggested rhyolitic volcanics are sheet- like fissure eruptions/ ignimbrites. However, pyroclastic, plateau of Bukit Tinggi may be result of airborn tuff deposition from giant eruption of Maninjau volcano before caldera formation (exposure neither layered nor welded))

Zen, M.T. (1983)- Krakatau and the tectonic importance of Sunda Strait. Bull. Jurusan Geol. (ITB), 12, p. 9-22.

Zen, M.T. (1989)- Seismicity of the Sumatra fault zones. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 197-205.

(Earthquakes in W Sumatra either shallow and related to oblique subduction of Indian-Australian plate, or related to right-lateral Sumatra Fault)

Zhang, X., S.L. Chung, Y.M. Lai, A.A. Ghani, S. Murtadha, H.Y. Lee & C.C. Hsu (2018)- Detrital zircons dismember Sibumasu in East Gondwana. J. Geophysical Research, Solid Earth 123, 7, p. 6098-6110.
(Detrital zircon isotopic data from Sumatra. Scarcity of E Neoproterozoic (~970 Ma) zircons in West Sumatra (from Triassic and younger rocks), suggests no direct connection between W Sumatra and Cathaysia. Detrital zircons from E Sumatra (Permian Bohorok Fm) with age profiles similar to Lhasa, W Burma and W Australia. Zircon age patterns from Sibusima (= Sibumasu without East Sumatra) resemble S Qiangtang and Tethyan and High Himalaya terranes, most likely derived from N India. Requires disaggregation of Sibumasu, with East Sumatra and West Burma occupying position outboard Lhasa along NW Australian margin and Sibusima on N Greater Indian margin (NB: more important observation: Precambrian- Paleozoic zircon age profiles of supposed East and West Sumatra 'blocks' very similar and possibly single tectonic block?; HvG))

Zulkarnain, I. (2005)- Geochemical signatures of volcanic rocks related to gold mineralization: a case of volcanic rocks in Pasaman Area, West Sumatra, Indonesia. J. Riset Geologi Pertambangan (LIPI), 15, 1, p. 27-40.

Zulkarnain, I. (2007)- Variasi geokimia batuan volkanik daerah Bengkulu di sabuk pegunungan Bukit Barisan, Sumatera dan implikasi tektoniknya, Jurnal Teknologi Mineral (ITB) 14, 2, p. 89-102.
(‘Geochemical variation of volcanic rocks in the Bengkulu area in the Barisan mountain belt and tectonic implications’. Bengkulu volcanics derived from two sources. Magma “one” in E area indicates young (<30 Ma) and hot subducted slab involved in subduction, producing adakite-like volcanics. Geochemical character reflects backarc-side of volcanic arc)

Zulkarnain, I. (2007)- Geochemical character of Hulusimpang Formation volcanics around Kota Agung area, and their genetic implication. Jurnal Teknologi Mineral (ITB) 14, 3, p. 156-167.
(Hulusimpang Fm Oligocene- E Miocene volcanics mainly in S Sumatera Bengkulu and Lampung Provinces and associated with gold mineralization. Around Kota Agung bimodal medium-K calc-alkaline magmas of basalt and dacite. Absence of andesitic rocks indicates change from basaltic to dacitic caused by contamination processes instead of fractional crystallization or magmatic differentiation. REE diagrams suggest Hulusimpang Fm rocks derived from same magma source, similar to backarc 'magma one' of Bengkulu; Zulkarnain 2007)

Zulkarnain, I. (2008)- Petrogenesis batuan vulkanik daerah tambang emas Lebong Tandai, Provinsi Bengkulu, berdasarkan karakter geokimianya. J. Geologi Indonesia 3, 2, p. 57-73.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/220)
('Petrogenesis of volcanic rocks in the Lebong Tandai gold mine, Bengkulu Province, based on geochemical character'. Lebong Tandai in N Bengkulu known as gold mine since Dutch time. Hulusimpang Fm volcanics dominated by andesites with minor dacite and basalt, transitional between calc-alkaline and tholeiite. Derived from adakitic source. Magma activity since >30 Ma in back-arc environment. Gold mineralization corresponded with observation from Phillippine that adakitic rocks contain higher gold concentration than calc-alkaline rocks)

Zulkarnain, I. (2009)- Geochemical signature of Mesozoic volcanic and granitic rocks in Madina Regency area, North Sumatra, Indonesia, and its tectonic implication. J. Geologi Indonesia 4, 2, p. 117-131.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/246)
(Permian-Triassic basalts, Triassic-Jurassic granitic rocks, and Miocene andesite from Madina Regency area, W Sumatra Block. Three different geological settings proposed for W Sumatra Permian Plutonic-Volcanic Belt (1) island-arc, (2) subduction related continental margin arc and (3) continental break-up. Permian-Triassic Silungkang Fm basalts from Kotanopan and Muara Sipongi in Madina Regency low-K rocks of tholeiitic affinities, indicative of volcanism in back-arc marginal basin tectonic setting. Mesozoic granitic rocks and Miocene andesite reflect active continental margin)

Zulkarnain, I. (2011)- Geochemical evidence of island-arc origin for Sumatra Island; a new perspective based on volcanic rocks in Lampung Province, Indonesia. J. Geologi Indonesia 6, 4, p. 213-225.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/317)
(Volcanic rock chemistry from (young?) Lampung volcanics suggest suggests volcanics from W are from island-arc fragment and E part belongs to Eurasia continental margin. Collision zone between Sumatra island-arc fragments with Eurasia continental margin probably located along Sumatra Fault System)

Zulkarnain, I. (2012)- New geochemical data of island-arc origin for Sumatera: the Bengkulu case. J. Riset Geologi Pertambangan (LIPI) 22, 1, p. 11-23.
(online at: www.geotek.lipi.go.id/riset/index.php/jurnal/article/viewFile/45/5)
(Sumatra generally viewed as margin of Eurasia continental plate, where Indian oceanic plate is subducting beneath continental material. Subduction system produced magmatic rocks on Sumatera since Cretaceous. Chemical analyses of volcanic rocks from Bengkulu Province show island-arc signature in W and Active Continental Margin signatures in E, similar to results from Lampung area by Zulkarnain (2011). Sumatra continental margin probably ends along E side of Sumatera Fault Zone (ages of volcanic rocks not clearly described; JTvG))

Zulkarnain, I. (2014)- Geochemical evidence of island-arc origin in volcanic rocks of Central Sumatra. J. Riset Geologi Pertambangan (LIPI) 24, 1, p. 23-41.
(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/79/pdf_20)
(Geochemical signatures of trace elements in Pliocene- Recent volcanics in Painan and Muara Labuh in W Central Sumatera confirmed pattern of two volcanic belts (separated by Sumatra Fault Zone?): (1) island-arc tectonic environment in W (Painan; not part of continental margin of Eurasia) and (2) island-arc and continental tectonic environments in E (Solok; more common acidic rocks), similar to pattern found before in Lampung and Bengkulu areas of S Sumatra. Also evidence for third tectonic environment, reflecting back-arc tectonic setting)

Zulkarnain, I. (2016)- Sumatra is not a homogeneous segment of Gondwana derived continental blocks: a new sight based on geochemical signatures of Pasaman Volcanic in West Sumatra. J. Riset Geologi Pertambangan (LIPI) 26, 1, p. 1-13.
(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/271/pdf_84)
(Geochemical signatures of Miocene? Pasaman calk-alkaline volcanics from W Sumatra shows rocks derived from two different tectonic settings: active continental margin (10) and oceanic arc (5). Supports previous results in Lampung, Bengkulu and C Sumatra (but not clearly tied to geographic distribution/ terranes?; JTvG))

Zulkarnain, I., S. Indarto, Sudarsono & I. Setiawan (2005)- Geochemical signatures of volcanic rocks related to gold mineralization; a case of volcanic rocks in Pasaman area, West Sumatera, Indonesia. J. Riset Geologi Pertambangan (LIPI) 16, 1, p. 27-40.
(Gold deposits always associated with volcanics, but not all volcanics gold-bearing. Gold-bearing volcanics can be characterized with trace elements (<10 ppm Ytrium, depleted HREE, etc.))

Zwierzycki, J. (1915)- Voorlopig onderzoek van fossielen afkomstig van eenige vindplaatsen op Sumatra, A. Kroe, B. Lipai bij Bangkinang. Jaarboek Mijnwezen Nederlandsch Oost-Indie 42 (1913), Verhandelingen 2, p. 101-129.
('Preliminary investigation of fossils from some localities on Sumatra. A. Kroe, B. Lipai near Bangkinang'. Brief report on Tertiary macrofossils from near Kroe, Bengkulu (Late? Miocene crustaceans, gastropods, bivalves, corals) and Lipai, Sumatra West coast (Pliocene gastropods, bivalves, corals). No illustrations)

Zwierzycki, J. (1918)- Geologische beschrijving van het eiland Poeloe We, onderafdeeling We der afdeeling Groot Atjeh. Jaarboek Mijnwezen Nederlandsch Oost-Indie 48 (1916), Verhandelingen 2, p. 1-10.
('Geological description of the island Pulau We, Greater Aceh'. Island off NW tip of Sumatra, composed of young andesitic volcanics only)

Zwierzycki, J. (1920)- Toba-Lake, a touristical and geological sketch. Sluyters Monthly- East Indian Magazine, Batavia, 1, 6, p. 130- .

Zwierzycki, J. (1922)- Geologische overzichtskaart van den Nederlandsch Oost Indischen Archipel, schaal 1: 1000,000- Toelichting bij blad 1 (Noord Sumatra). Jaarboek Mijnwezen Nederlandsch Oost-Indie 48 (1919), Verhandelingen 1, p. 11-71.
(map inline at: https://digitalcollections.universiteitleiden.nl/view/item/813689)
('Geological overview map of the Netherlands Indies Archipelago, scale 1:1 million- Explanatory notes of Sheet 1 (North Sumatra)'. Part of series of 1: 1 million countrywide geological overview maps (series never completed; JTvG))

Zwierzycki, J. (1922)- Geologische overzichtskaart van den Nederlandsch Oost Indischen Archipel, schaal 1: 1000,000- Toelichting bij blad VII (Tapanoeli, Sumatraŝs Oostkust, Sumatraŝs westkust). Jaarboek Mijnwezen Nederlandsch Oost-Indie 48 (1919), Verhandelingen 1, p. 72-192.
('Geological overview map of the Netherlands Indies Archipelago, scale 1:1 million- Explanatory notes of Sheet VII: Tapanuli, Sumatra's East coast, Sumatra's West coast')

Zwierzycki, J. (with W.J. Twiss) (1922)- Verslag over een geologische verkenning van het Jong-Tertiaire gebied van Noordwest Atjeh in de onderafdeeling Groot-Atjeh (Terrrein ñAtjeh IIIò). Jaarboek Mijnwezen Nederlandsch Oost-Indie 48 (1919), Verhandelingen 1, p. 230-249.
('Report on a geological reconnaissance of the Late Tertiary area of NW Aceh'. Permo-Carboniferous and Jurassic unconformably overlain by Paleogene sands and Neogene clastics and limestones. With 1:100,000 scale map)

Zwierzycki, J. (1930)- Geologische overzichtskaart van den Nederlandsch Oost Indischen Archipel, schaal 1: 1000,000- Toelichting bij blad VIII (Midden Sumatra, Bangka en de Riauw eilanden). Jaarboek Mijnwezen Nederlandsch Oost-Indie 58 (1929), Verhandelingen, p. 73-157.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/814947)
('Geological overview map of the Netherlands Indies Archipelago, scale 1:1 million- VIII, Central Sumatra, Banka and Riau islands'. With review of C Sumatra geology and classic SW-NE cross-section. Incl. observation that volcanic facies of Permo-Carboniferous (which contains E Permian 'Jambi Flora' and brachiopod-fusulinid limestones and interpreted as part of nappe thrust sheet) contains granite pebbles and common granitic quartz detritus and transgressed over older granite basement (this appears to contradict the recent interpretation of a West Sumatra Permian volcanic arc system by M. Crow et al. (op.div))

Zwierzycki, J. (1931)- Geologische kaart van Sumatra 1:200.000. Toelichting bij blad 1 (Teloekbetoeng). Dienst Mijnbouw Nederlandsch-Indie, 30p.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/813667)
('Geological Map of Sumatra, 1:200,000, sheet 1- Telukbetung'. Map sheet SE tip of Sumatra. Crystalline schists, presumably pre-Carboniferous, intruded by granites, presumably Pre-Cretaceous, locally overlain by folded Cretaceous clastics with mid-Cretaceous Orbitolina in adjacent map sheet. Tertiary- Quaternary rocks exclusively volcanics)

Zwierzycki, J. (1932)- Geologische kaart van Sumatera, schaal 1:200 000. Toelichting bij Blad 2 (Kotaagoeng). Dienst Mijnbouw Nederlandsch-Indie, 30p.
('Geological Map of Sumatra, 1:200,000, sheet 2- Kota Agung'. Map sheet S tip of Sumatra. Isoclinally folded crystalline schists in NE, presumably pre-Carboniferous, locally overlain by folded marine Cretaceous shales (strike NW-SE), sandstone, radiolarian cherts and limestone with mid-Cretaceous Orbitolina. Mid Tertiary 'Old Andesites' and older formations overlain by transgressive Neogene clastics and reefal limestones)

Zwierzycki, J. (1933)- Kopalnia zlota i srebra Redjang Lebong na Sumatrze. Przeglad Gorniczo-hutinizy 25, Katowice, p. 189-208.
('The gold- and silver mine Redjang Lebong in Sumatra'. In Polish, in journal of Polish mine-and metallurgical engineers. See also Zwierzycki 1936)

Zwierzycki, J. (1935)- Die Ergebnisse der palaobotanischen Djambi-Expedition 1925. 1. Die geologischen Ergebnisse. Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Verhandelingen 2, p. 1-70.
('The results of the paleobotanical Jambi expedition 1925, 1. The geological results'. Companion paper of Jongmans and Gothan 1935 on 'Jambi flora'. Expedition to sample E Permian'Pecopteris flora' plant fossils West of Bangko, Jambi Province, C Sumatra. Two large granite massifs: Nalo- Airbatoe (older than U Carboniferous; part of large nappe) and Nagan (intruded in isoclinally folded Triassic-Jurassic slates). Paleozoic Vorbarisan thrusted over Mesozoic, probably from E. Plant fossils in >1750m thick volcanics-rich series of Karing Beds (dacite tuffs, etc.), with five thin limestone beds, all with similar fusulinid forams (related to Fusulina alpina Schellwien according to Gerth) and two main plant horizons. Karing Beds overlain by coarse volcanoclastics (see also Van Waveren et al. 2007, Crippa et al. 2014))

Zwierzycki, J. (1936)- De geologie van de goudertsafzetting Redjang Lebong en de kansen van verdere exploratie. In: M. Muller, J. Kuntz & J. Zwierzycki, Rapporten betreffende geologische onderzoekingen in opdracht van de Directie der Mijnbouw Maatschappij Redjang-Lebong, Batavia, p. 37-58.
('The geology of the gold-ore deposit Rejang Lebong and potential of further exploration'. Geologic setting of Rejang Lebong gold-silver mine. Mildly deformed E Miocene marine Telisa Fm Globigerina marls-claystones intruded by three dacite bodies (Donok, Bunut, Gambut), followed by basic augite-andesite intrusives. Breccias and gold mineralization associated with Donok dacite and major Lebong fault zone, which also caused Lebong Depression. Zeolite group mineral truscottite found only in Rejang Lebong area. Ore deposits nearly depleted and mine expected to be closed within months)

Zwierzycki, J. & O. Posthumus (1926)- De paleobotanische Djambi-expeditie (1925). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 43, 2, p. 203-216.
('The paleo-botanic Jambi expedition (1925)'. First report of expedition to famous Jambi Early Permian flora localities on the Merangin River, ~75km W of Sarolangun, C Sumatra (initially discovered by Tobler). (Mainly travel- logistics report; for more extensive geologic report see Zwierzycki 1935))

Zwierzycki, J. & R.W. van Bemmelen (1936)- Het Paleogeen van Sumatra. De Ingenieur in Nederlandsch-Indie IV, 3, 9, p. 160-161.
('The Paleogene of Sumatra'. Critical review of Sumatra chapter of Badings (1936) compilation of Paleogene deposits of Indonesia)

II.2. Sumatra - Cenozoic Basins, Stratigraphy, Hydrocarbons, Coal

Abdullah, M. & C.F. Jordan (1987)- The geology of the Arun Field Miocene reef complex. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 65-96.
(Arun gas field 1971 discovery in N Sumatra. Area 18.5 x 5 km. Lower- Middle Miocene carbonate buildup on Arun High with 1080' of gas column)

Abdullah, M. & C.F. Jordan (1988)- The geology of the Arun field Miocene reef complex. Proc. Offshore South East Asia Conf., Singapore 1988, SEAPEX Proc. 8, p. 203-220.
(Similar to paper above)

Achiat, R., J. Guttormsen & R. Waworuntu (2009)- Complex geomodeling: Dayung Field a fractured Pre-Tertiary reservoir in the Southern Sumatra Basin, Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-148, 15p.
(Dayung Field 1991 fractured basement gas field on W flank of C Palembang sub-Basin (Corridor Block), S Sumatera. Mainly Permian meta-carbonate (Leko Fm), intruded by Jurassic (175-205 Ma) granitic complex. Sourced from onlapping Paleogene sediments)

Adhiperdana, B.G. (2010)- A preliminary account of the framework grain composition and provenance of Lower Tertiary sandstone outcropped in the Ombilin Basin, Central Sumatra. Bull. Scientific Contr. (UNPAD) 8, 3, p. 141-157.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8252/3800)

Adi, P.C., A.S. Ningrum & A. Darmawan (2017)- Exploration potential of Late Upper Miocene limestone reservoir in Muara Enim Deep, South Palembang Sub-Basin field. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(Discussion of shifting of Baturaja limestone buildup development towards SE margin of Muara Enim Deep/ Kuang High during Early Miocene (not Upper Miocene suggested in title; see also Pannetier 1994; JTvG))

Adibrata, B.W.H., Y. Hirosiadi, E. Septama & A. Rachmanto (2004)- From non-economic into producing field, a case study in Ketaling Barat field, Indonesia. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 166-171.
(Field 5 km E of Jambi discovered in 1959 by NIAM in E Miocene Baturaja carbonate, but low flow rates and high water cut, so deemed uneconomic. Reappraised in 2001 by well KTB 4, flowing 3600 BOPD)

Adji, E.F., F. Asrul, M.A. Arham & B. Wisnubroto (2014)- Reservoir modeling of carbonate on Fika Field: the challenge to capture the complexity of rock and oil types. Indonesian J. Geoscience 1, 2, p. 83-97.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/181/178)
(Reservoir model of Medco 'Fika field' (not real name?) in S Sumatra. Field with 38 wells in E Miocene Baturaja Fm carbonate platform. Thin oil column below gas gap)

Adlan, F. (2006)- Potensi hidrokarbon prospek dalam pada lapangan-lapangan tua di sub-cekungan Palembang bagian Selatan. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, 7p.
('Hydrocarbon prospects in old fields in S part of Palembang sub-basin'. Ten old oil fields on Pendopo-Limau anticlinorium with 1340 MMBO oil and 3 TCF gas in place. Additional prospects remaining in this trend)

Agus, A. Subandrio, S. Widada, Feriyanto, S. Rakimi & Wibisono (2005)- Carbonate development on the ñTNò field in the Lematang Trough, South Sumatra basin. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, 13p.
(TN 1997 gas discovery in Baturaja Fm carbonate buildup on local high in Lematang Trough at ~12,000' depth, and tested 30.7 MMSCFD from 250' gross interval. Reef complex elongated, NNE-SSE trending, area 18.8 km2 and relief ~600'. Carbonate porosity average 6.8-9.6%, moldic/ vuggy and intercrystalline, microfracture type porosity in several areas with permeability between 0.32-1.7 mD)

Agustin, M.V., M.I. Novian, A. Darmawan & T. Agung (2017)- Sekuen stratigrafi sub-cekungan Palembang Selatan berdasarkan data pemboran pada sumur 'SSB'. Kabupaten Musi Waras, Provinsi Sumatera Selatan. Proc. 10th Seminar Nasional Kebumian, Dept. Teknik Geologi, Universitas Gadjah Mada (UGM), Yogyakarta, PSP-12, p. 921-934.
(online at: https://repository.ugm.ac.id/274230/1/PSP-12.pdf)
('Sequence stratigraphy of the South Palembang sub-basin stratigraphy based on drilling data of well 'SSB', Musi Waras District, South Sumatra Province'. Four sequences identified in Talang Akar- Air Benakat Fms interval (Early Miocene) in unspecified well 'SSB' in Pertamina block, S Sumatra)

Aimar, A., K.W. Nugroho, K.B. Catim, B.F. Harry & H. Suryanto (2016)- Parit Minyak Field Kisaran Block PSC: strategic approaches to develop a geologically complex, low permeability and remotefield in the Central Sumatera Basin. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-4-E, 14p.
(On development of Parit Minyak field in Barumun sub-basin in NW part of onshore C Sumatera Basin. Oil discovered by Chevron in 2006 in low-permeability sands of fluvial-lacustrine Pematang Fm rift section)

Akuanbantin, H. & D. Ardiputra (1976)- Geology of East Benakat oil field, South Sumatra. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 59-68.
(East Benakat first drilled in 1930, tested minor oil in Talang Akar Fm in NW-SE trending anticline. Renewewed interest and development decision after Pertamina drilled E Benakat 3 in 1973)

Alamsyah, M.N., B.W. Handono & A. Syafriya (2016)- 3D seismic reservoir characterization and delineation in carbonate reservoir. AAPG/SEG Int. Conf. Exhibition, Melbourne 2015, Search and Discovery Art. 41760, 14p.
(online at: www.searchanddiscovery.com/documents/2016/41760alamsyah/ndx_alamsyah.pdf)
(Seismic reservoir delineation in E Miocene Baturaja carbonate in 2004 West Betara gas field discovery, N part of S Sumatra basin (Jambi))

Alamsyah, M.N., S. Marmosuwito, W. Sutjiningsih, L.P. Marpaung & S. Sukmono (2008)- Seismic reservoir characterization of Indonesia's Southwest Betara Field. The Leading Edge 27, 12, p. 1598-1607.
(SW Betara Field 2005 PetroChina discovery in Talang Akar Fm of Jabung Block, S Sumatra)

Alamsyah, M.N., A. Wasono Aji, Sihman M., B. Wisnu H. et al. (2006)- Reservoir characterization study to determine thin sand reservoirs using AVO Inversion and spectral decomposition analysis, 3D onshore seismic data of Ripah Field. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc., 06-RC-04, 6p.
(Identification of Late Oligocene Talang Akar Fm NNE trending deltaic channel sands in 2000 Ripah field, Jabung Basin, S Sumatra)

Alaydrus, J., S. Nurida & H. Mohede (2018)- Optimizing well placement strategy in a giant fractured basement gas reservoir through integrated subsurface analysis. A case study of the Suban Field. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-110-G, 23p.
(Suban gas field in Corridor Block, S Sumatra, world-class fractured reservoir with commingled production from fractured Tertiary (carbonate and sandstone) and Carboniferous- Cretaceous igneous and meta-sedimentary basement rocks. Fractures flow hydrocarbon down to 250-450m TVD below top basement. New wells to be placed: (a) high on fractured structure; (b) close to faults; (c) where brittle reservoir facies exist)

Alexander, W.L. & M.R. Nellia (1993)- 3D Seismic facies analysis of a reefal buildup: NSO' A' Field, offshore North Sumatra. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 137-168.
(NSO-A1 1972 gas discovery in M Miocene reefal carbonates. Three facies identified on 3D seismic and wells: reef, near-reef, inter-reef. Near-reef and inter-reef areas better reservoir properties than reef core. Reef facies with zones of vuggy porosity correlatable to lost circulation. Dolomite only in reef facies)

Alfian & P. Manik (1993)- Penyebaran dan proses pembentukkan CO2 serta kaitannya dengan nilai kekonomian prospek di Cekungan Sumatera Utara. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 803-813.

('Distribution and process of CO2 formation and its relation with the economic value of prospects in the North Sumatera Basin'. Gases in wells from the N Sumatra basin locally high in CO2 (1-80%). CO2 probably originated from thermal breakdown of carbonate rocks, both in Pretertiary basement and Eocene(?) Tampur Fm dolomites). With map of CO2% distribution)

Alford, M.E., L.L. Cargile & M.B. Siagan (1975)- Development of the Arun gas field. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 173-187.

Almon, W.R. & W.C. Dawson (2000)- Paleosols as top seals for nonmarine petroleum systems, Central Sumatra Basin, Indonesia. AAPG Int. Conf. Bali 2000, AAPG Bull. 84, 9 (*Abstract*)
(Paleosols in nonmarine- marginal marine facies in C Sumatra Basin densely compacted, cemented, partially recrystallized clay matrix. Porosity 1.5 -9.7%, perm. 0.2 -0.007 md. Paleosols good seals capable of retaining columns up to 4600' oil and 5900' gas, varying with API gravity, T, and fluid density. Sealing capacity correlates with clay content and position in soil zone. Hydrocarbons can leak across paleosol horizons along faults or where breached by fluvial-tidal channels. Thick paleosol at 25.5 Ma sequence boundary appears to focus migration toward E margin of basin)

Amier, R.I. (1991)- Coals, source rocks and hydrocarbons in the South Palembang sub-basin, south Sumatra, Indonesia. M.Sc. Thesis University of Wollongong, p. 1-161.
(online at: http://ro.uow.edu.au/theses/2828)
(S Palembang Sub-basin in S part of S Sumatra Basin, with coals in Muara Enim, Talang Akar and Lahat Fms. Main workable coal measures in Muara Enim Fm. Vitrinite reflectance data indicate onset of oil generation below 1500 m. Crude oils high pristane-phytane ratios and with bicadinane-type resin and oleanane, indicating land-derived organic matter. Biomarkers and thermal maturity suggest Talang Akar Fm is most likely oil source rock)

Amijaya, D.H. (2005)- Paleoenvironmental, paleoecological and thermal metamorphism implications on the organic petrography and organic geochemistry of Tertiary Tanjung Enim coal, South Sumatra Basin, Indonesia. Ph.D. Thesis Rheinisch-Westfalischen Technischen Hochschule, Aachen, p. 1-170.
(online at:http://darwin.bth.rwth-aachen.de/opus/volltexte/2005/1266/pdf/Amijaya_Donatus.pdf)
(Organic petrography and organic geochemistry study of Miocene Muara Enim Fm coals in Tanjung Enim area, South Sumatra. Low rank coals (VR 0.35-0.46%), locally thermally metamorphosed to meta-anthracite (VR up to 5.2%))

Amijaya, H. (2006)- Reappraisal of kerogen typing on low rank coal from South Sumatra basin, Indonesia. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-011, 6p.
(Low rank coals from Tanjung Enim area, S Sumatra, mean huminite reflectance 0.35-0.46%. Dominated by huminite (34-95%), less liptinite (4- 61%) and inertinite (0.2-44%). Lowest Hydrogen Index (HI) values of 171 mg HC/g TOC; sample with high liptinite HI of 507 mg HC/g TOC. Kerogen type mainly type III)

Amijaya, H. & R. Littke (2005)- Microfacies and depositional environment of Tertiary Tanjung Enim low rank coal, South Sumatra Basin, Indonesia. Int. J. Coal Geology 61, p. 197-221.
(Tanjung Enim area, South Sumatra, low rank M-L Miocene coals of Muara Enim Fm. Sequence of maceral assemblages represents change of topogenous to ombrogenous peat and development of a raised peat bog)

Amijaya, H. & R. Littke (2006)- Properties of thermally metamorphosed coal from Tanjung Enim area, South Sumatra Basin, Indonesia with special reference to the coalification path of macerals. Int. J. Coal Geology 66, p. 271-295.
(Tanjung Enim Tertiary age coals thermally metamorphosed by heat from andesitic intrusion. Original coal rank subbituminous- high volatile bituminous, thermally metamorphosed coals medium volatile bituminous-meta-anthracite. Contact metamorphism T= 700-750°C in most metamorphosed coal)

Amijaya, H., J. Schwarzbauer & R. Littke (2006)- Organic geochemistry of the Lower Suban coal seam, South Sumatra Basin, Indonesia: palaeoecological and thermal metamorphism implications. Organic Geochem. 37, p. 261-279.

Amin, T.C. & S. Gafoer (1986)- Hubungan antara Cekungan Bengkulu dengan Sumatera Selatan pada awal Tersier. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta 1985, p. 49-60.
('Relationship between the Bengkulu Basin and S Sumatra in the Tertiary'. Sea connection between S Sumatra and Bengkulu basins located N of Manna, and cut off in M Miocene by uplifting Barisan Range)

Amir, V., R. Achdiat, M. Meirita & J. Guttormsen (2011)- Facies architecture and depositional relationship of Baturaja carbonates in Letang, Rawa, and Tengah fields, Corridor Block, South Sumatra. Proc. 35th Ann. Conv. Indon. Petroleum Assoc., IPA11-G-090, p. 1-14.
(Letang, Rawa and Tengah eqarly 1990's gas discoveries in Corridor Block E Miocene Baturaja Fm carbonate buildups. Two main carbonate facies, muddy platform facies and coral-algal reefal buildup facies. Build-up facies commonly developed above paleo-highs. Most porosity secondary vuggy and mouldic in leached coral-algal framework. Carbonate platforms separated by deep NW-SE intra-platform channels. Karstification effect related episodes predominantly developed in upper interval)

Amlan, M.H, Hendar S.M., Yarmanto & I.A. Muswar (2006)- Influence of strike-slip fault in structural deformation of Asih and Asih North fields, Central Sumatra basin. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, PITIAGI2006-048, 10p.
(Asih and Asih North two structural oil fields along N-S strike slip fault, about 30 km from Minas Field. Remapping of Bekasap and Menggala Fm with 3D seismic. Left-stepping en echelon folds and faults represent flower structure formed by NNW-SSE movement along older weak zone or 'suture' after SW-NE compression)

Anderson, B.L., J. Bon & H.E. Wahono (1993)- Reassessment of the Miocene stratigraphy, paleogeography and petroleum geochemistry of the Langsa Block in the offshore North Sumatra Basin. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 169-189.
(Langsa Block Miocene series of multicycles related to tectonic phases. Each multicycle several cycles: 4 in B, 5 in C. Multicycle A not penetrated, but interpreted on seismic. Paleogeographic reconstructions basis for interpretation of source rock distribution. Two source rock types: (1) algal, probably lacustrine (initial A-Multicycle) and (2) mixed marine algal/terrestrial (later A-Multicycle). Younger source rocks (B and C-Multicycles) also identified but no oils typed to these. Oil generation started at beginning of Miocene in deepest grabens and still continues on graben margin. Gas generation started in Late Miocene in most basinal areas)

Anggara, F., D.H. Amijaya, A. Harijoko, T.N. Tambaria, A.A. Sahri & Z.A.N. Asa (2018)- Rare earth element and yttrium content of coal in the Banko coalfield, South Sumatra Basin, Indonesia: contributions from tonstein layers. Int. J. Coal Geology 196, p. 159-172.
(Banko coalfield near Tanjungenim in S Sumatra. with tonsteins of volcanic origin. Highest REY concentration in sample below silicic tonstein layer)

Anggarini, K.S. & D.S. Djohor (2014)- Studi karakteristik batubara sebagai batuan waduk dan batuan induk pada sistem gas metana batubara di daerah Kabupaten Muara Enim, Propinsi Sumatera Selatan. Bull. Ilmiah Mineral dan Energi (MINDAGI; Trisakti) 7, 1, p. 85-97.
('Study of the characteristics of coal as reservoir and source rock in the coal methane gas system in the area of Muara Enim, S Sumatra'. Study of coal quality, maturity and coalbed methane potential of four main seams in Miocene Muara Enim Fm in Rambutan area)

Anggayana, K., T. Indriati, Syafrizal & Y.B. Adian (1998)- Kandungan abu dan sulfur batubara Air Laya Tanjung Enim yang berasal dari type highmoor pada lingkungan Pengendapan Payau. Jurnal Teknologi Mineral 5, 3, p.
(Air Laya Coal, Tanjung Enim, S Sumatra, formed in ombrogenic moor, while Muara Enim coaly formation was deposited in brackish environment. Depositional environment reflected in sulfur content of roof and underlying sediments. Air Laya A-1 and A-2 seams sulfur <1% and ash contents increases from upper to lower

part (~1 to 4%). B-1 seam sulfur <1%, ash contents are 4 2-9.9%. Sulfur in B-2 and C seams post- depositional pyrite as cavity fill and framboidal forms)

Anggayana, K., A.H. Widayat & S. Widodo (2014)- Depositional environment of the Sangkarewang oil shale, Ombilin Basin, Indonesia. J. Engineering Technol. Sci. (ITB) 46, 4, p. 420-435.
(online at: http://journals.itb.ac.id/index.php/jets/article/view/354/549)
(Organic matter in samples from 56m long core of E Oligocene lacustrine Sangkarewang oil shale abundant lamalginite (30%) and minor vitrinite and resinite, suggesting aquatic depositional environment with minor terrestrial influence. Organic matter dominated by pristane, phytane, and n-alkanes. Oil shale likely deposited in anoxic lake environment as suggested by framboidal pyrite (6%) and total organic matter of ~4.9%.)

Anggoro, S., I. Arif, Y. Iswanto, W.F. Mallett & B. Subiyanto (2009)- Finding by-passed oil in a mature field by reprocessing and reinterpreting existing 3D seismic; a case study of Petapahan Field, Sumatera, Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-177, p.
(Petapahan Field 1971 discovery in C Sumatera Basin, with peak production over 48,000 BOPD in 1973. Re-opening sand intervals that had been closed and infill drilling raised production from 3100 to 4900 BOPD)

Angraini, B. & T. Yonathan S (2011)- Sequence stratigraphy and facies analysis of Muara Enim Formation, to predict prospecting areas in TAC Pertamina- Pilona Petro Tanjung Lontar. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-157, 11p.
(On Late Miocene fluvio-deltaic Muara Enim Fm, SW part of South Palembang Basin. Barisan Mts main clastic sediment source for M Miocene Air Benakat Fm and younger sediments; Sunda Craton is main clastic source for E Miocene Gumai Fm and older rocks)

Anonymous (1919)- De Lematang kolenvelden (met nadere beschrijving van het Boekit-Asem kolenveld). Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnbouw in Nederl. Oost-Indie, 10, p. 1-30.
('The Lematang coal fields (with more detailed description of the Bukit Asam coal field)'. Most likely author Tromp. Early publication describing low grade M-L Miocene Middle Palembang Fm coals, improved to higher grades around young andesite intrusions. Mining of Bukit Asam coal started in 1916, by Netherlands Indies government. Four main coals/ coal intervals, from old to young: Merapi (8-10m), Petai (5-8m), Soeban (7-10m) and Mangoes (14-22m), interbedded with tuff, sandstones and claystones)

Aprilian, S., K. Kurnely & K. Novian (2003)- Rejuvenation of matured oil fields in South Sumatra, Indonesia. In: SPE Asia Pacific Oil and Gas Conf. Exhib., Jakarta 2003, 6p.
(Pertamina operates 55 mature oil fields in S Sumatra in 2 areas, Pendopo and Prabumulih. Rejuvenation projects resulted in 45.6 MMBO of additional oil reserves in 12 fields)

Argakoesoemah, R.M.I. & D.A. Firmansyah (2011)- Half-day visit to Solok-Sawahlunto area, Ombilin Basin: a short observation on non-marine depositional sequences. Berita Sedimentologi 20, p. 12-17.
(online at: www.iagi.or.id/fosi/files/2011/01/BS20-Sumatra1.pdf)
(Outcrop photos of Eocene- Oligocene fluvial clastics of Ombilin Basin)

Argakoesoemah, R.M.I. & A. Kamal (2004)- Ancient Talang Akar deepwater sediments in South Sumatra Basin: a new exploration play. In: R.A. Noble et al. (eds.) Proc. Int. Conf. Deepwater and frontier exploration in Asia & Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 251-267.
(Two potential areas of Talang Akar Fm deepwater play in S Sumatra: C Palembang Sub-basin in W, and Benakat Gully in E. Expected reservoir sandstone wide range of rock properties and compositions. Tuffaceous content in C Palembang sub-basin may be derived from volcaniclastics in Musi Platform and Mambang High. Source rocks mature- overmature Lemat and Talang Akar Fm shales. Sources entered oil window in middle E Miocene and began generating gas in M Miocene. Trap mainly stratigraphic with Late Miocene- Plio-Pleistocene structures. Intraformational deep marine shales provide vertical seal)

Argakoesoemah, R.M.I., M. Rahardja, S. Winardhi, R. Tarigan, T.F. Maksum & A. Aimar (2005)- Telisa shallow marine sandstone as an emerging exploration target in Palembang High, South Sumatra Basin. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 101-120.
(Lowstand sands in Telisa shale Fm potential hydrocarbon target, but generally poor reservoir quality)

Arham, M.A., Y. Akbar, E.F. Adji & R. Oentoe (2012)- Calcareous siltstone as new hydrocarbon potential on Musi Platform, South Sumatra Basin Proc. 37th Ann. Conv. Indon. Assoc. Geophys. (HAGI), Palembang, PITHAGI2012-196, 5p.
(E Miocene calcareous siltstone in Lower Telisa Fm above Baturaja Fm provides additional potential for oil and gas in Seka and Geka fields, Musi Platform, S Sumatra Basin)

Arham, M.A., A. Juniarti & E.F. Adji (2010)- Effect of carbonate facies changes on hydrocarbon accumulation and distribution in "F" Field, South Sumatra. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-283, 10p.
(Baturaja Limestone reservoir characterization model of Medco 'F' Field, 3 km E of Soka field, S Sumatra Extension Block. Ten oil producing wells, with average production of ~400 BOD. Some wells tight reservoirs)

Ariani, S., A. Y. Sihombing, I.M. Gunawan, A. Setiawan, P. Adam & A. Tarmusi (2010)- Facies and sandstone distribution pattern of ñMò sandstone reservoir in Air Benakat Formation, Sungai Gelam Field, Jambi Subbasin. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-167, 12p.
(M Miocene reservoir sand in lower Air Benakat Fm in Sungei Gelam field interpreted as tidal deposits)

Ariyanto, P. & F. Kusdiantoro (2014)- Secondary hydrocarbon migration and entrapment evaluation in Lematang Area, South Sumatra. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-337, 17p.

Ariyanto, P. & I.Y. Syarifuddin (2018)- New insights into the structural devlopment of the Block A area, North Sumatra basin: constraints from subsidence analysis and palinspatic reconstruction. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-587-G, 22p.
(Southern N Sumatra basin in E-M Miocene not just post-rift subsidence, but flexural basin (foredeep) in front of Barisan Mts thrust front after ~16-14 Ma)

Arnold, C.W. (1992)- A classical reservoir study of the Petani Field- approach to analyzing an older complex reservoir. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 487-515.
(Caltex Petani field reservoir study)

Aryanto, N.C.D. (2015)- Penentuan sistem petroleum di subcekungan Palembang Selatan dan Utara, Cekungan Sumatra Selatan berdasarkan analisis geokimia dan pemodelan cekungan. Ph.D. Dissertation Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('Determination of the petroleum system in S and N Palembang subbasins, South Sumatra Basin, based on geochemistry analysis and basin modeling')

Ascaria, A., D.R. Herrero, R. Mesquita, A. Kajatmo, V.O. Maria, W. Hidayat et al. (2019)- Extended carbonate play revealed by high quality new 3D data, deep water offshore North Sumatra Basin. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2019, 8p.

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(online at: www.iagi.or.id/fosi/bs20-sumatra.html. Restoration of seismic cross-section of Langkat area. Oligocene rifting followed by Miocene quiescence and Plio-Pleistocene 'Barisan' inversion. Detachment depth calculated at ~5000ms in time, extension factor 0.2, compression 0.63)

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(Tampur Fm recrystallized limestones and dolomites believed to be part of widespread Eocene carbonate/ dolomite platform covering pre-rift sediments in N Sumatra Basin, and part of Sibumasu Terrane. New 75 m

thick mature, lagoonal? mudstone source rock with TOC 0.8-2.1% in Tampur Fm in Benggala-1 well, which penetrated 200m of Tampur Fm. Kerogen mixed oxic terrestrial plant facies and algal marine. Pre-Tertiary Batumilmil Fm. Limestone at Gua Batukatak with K-Ar age of 241 ± 7 Ma (E-M Triassic). Good secondary porosity and permeability in Tampur dolomite (NB: No data to support Eocene age of Tampur Fm?; JTvG))

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(N Sumatra Block A exposures of E-dipping late E Miocene Peutu Limestone, 30-75m thick, in foothills of Barisan Mts, forming N-S ridge over 25 km. Clean skeletal limestones formerly called 'Orbitoid Limestone' rich in larger foraminifera (Lepidocyclina) and argillaceous limestones interbedded with shale. Overlain by 2000-3000m thick M-U Miocene Baong Shale (formerly called 'Grensklei'). Regional uplift of Barisan Mts resulted in up to ~500m thick turbidite sands of M Baong (N13) and also younger Fms, derived from West)

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(Structural analysis of 3D seismic dataset of N Menggala field, C Sumatra, unraveling deformation patterns over past 30 Ma. Anticlinal trap formed by inversion of S Balam half-graben along N-S-trending S Balam Border Fault. Three episodes of deformation: (F1) Eo-Oligocene (45-28 Ma) transtensional rift formation, linked to SE-directed extrusion of Asia; (F2) Late Oligocene- E Miocene (~28-21 Ma) wrench tectonics, right-lateral transpression and transtension; (F3) Late Pliocene (3.8 Ma)- Recent compression)

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('The molluscs of the Lower Tertiary beds (The bivalves of the Lower Eocene beds of Sumatra, The bivalves of the Sumatran crab marls; the bivalves of the Sumatran orbitoid limestone; the bivalves of the Lower Miocene beds of Kamoemoe River, etc.).' Series of chapters on Eocene- Miocene molluscs from various localities of Sumatra, collected by Verbeek)

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(Description of foraminifera collected by Verbeek 1873-1874. Including Eocene Nummulites and Discocyclina from Nias island. Also first description of Paleozoic foraminifera in Indonesia: U Carboniferous or Permian fusulinids named Fusulina princeps (= Verbeekina verbeeki) from Guguk Bulat Padang Highlands)

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(Petroleum system in N Sumatra basin discovered reserves 15 TCF of gas and 1.0 Bbbl of condensate and natural gas liquids. Oligocene Bampo Fm principal source of hydrocarbons Miocene Peutu Fm potential secondary source. Timing of peak migration 12-4 Ma. Trapping efficiency of 3.6% calculated for entire system Much higher trapping efficiency (40-70% range) characterizes Arun gas field)

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Budiyono, B., B. Denk, Suprihatin & M. Yunus (1993)- Geological contribution to the enhanced oil recovery project at Kenali Asam Field. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 937-949.
(Kenali Asam field 7 km SW of Jambi biggest field in Jambi sub-basin, discovered by NIAM in 1931. NNW-SSE trending anticline with 245 wells, 16 hydrocarbon-productive zones (mainly oil, one gas zone), in sandstones of Miocene Air Benakat and Gumai Fms. Waterflood injection since 1992)

Bunn, G., Chanh Cao Minh, J. Roestenburg & M. Wittmann (1989)- Indonesia's Jene Field; a reservoir simulation case study. Oilfield Review (Schlumberger) 1, 2, p. 4-14.
(online at: www.slb.com/~/media/Files/resources/oilfield_review/ors89/jul89/1_jene_field.pdf)
(Jene field produced from E Miocene Batu Raja Fm reefal buildup since 1986. Reef growth in several shoaling-upward cycles terminating in subaerial exposures, with each cycle producing buildups a few km long and elongated NW-SE parallel to paleo shoreline). Rapid pressure decline necessitated reservoir modeling and water injection program))

Bunyamin, A., T.K. Usman, B. Sutedjo, M. Latuconsina & M.F. Ma'ruf (2006)- Distribusi reservoir lapangan S Blok Japura (Lirik) pada sekuan M. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-040, 8p.
(On reservoir distribution in 'M sequence' (main Lirik Sand) of the 'S field', Japura Block, Lirik Trend, C Sumatra. Of limited use due to lack of detail and disguised location names)

Burckhardt, R. (1906)- Uber die sechs in den untern und mittlern Palembangschichten gefundenen Selachierzahne. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 23, 2, p. 241-243.
('About the six Selachier teeth found in the Lower and Middle Palembang Beds'. Appendix 5 in Tobler (1906) Muara Enim area paper. Brief note on M-L Miocene shark teeth collected by Tobler, provisionally assigned to genera Carcharias, Lamna and Oxyrhina)

Burnaman, M.D., R.B. Helm & C.R. Beeman (1985)- Discovery of the Cunda Gas field, Bee Block, North Sumatra: an integrated geologic/seismic case history. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 453-495.
(Cunda field 1984 gas discovery NW of Arun, N Sumatra, in Lower Miocene Peutu (Arun) limestone. Cunda-A2a discovery well encountered 336' of gas bearing limestone)

Butterworth, P.J. (1995)- Lowstands and highstands in the lacustrine brown shale of Central Sumatra: field examples from the Teso block. Proc. 24th Ann. Conv. Indon. Petroleum Assoc., p. 577. *(Abstract only)*
(Two distinct lacustrine basin-fill sequences in Pematang Fm brown shale in Teso area, C Sumatra)

Cai, S., Y. Tang, X. Zhang & G. Hong (2014)- Fine description of delta front sand body in Miocene Intra-Gumai Formation of J Block in the Southern Sumatra Basin. J. Oil and Gas Technology 2014, 12, p. 47-50.
(Eocene to Miocene strata in J Block of S Sumatra Basin divided into six sequences. Intra-Gumai Fm deltaic sands in highstand systems tract of SQ4. In the highstand system tract of SQ4,. Etc.)

Cameron, N.R. (1983)- The stratigraphy of the Sihapas Formation in the North West of the Central Sumatra Basin. Proc. 12th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 43-65.
(Sihapas Fm mainly product of Duri-Bekasap delta system from river draining into NE of basin from Sundaland. Second and thicker Barisan-derived depocentre in W of basin, related to rapid uplift and erosion of basement rocks W of Toru-Asik Wrench Fault ahead of magma which initiated E Miocene volcanic arc. Five units recognised)

Candra, A. (2013)- Potential evaluation of Coalbed Methane based on the grade and quantity of coal in the Mangus Seam, Muaraenim Formation, Nibung Region, South Sumatra Basin. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-SG-051, p. 1-8.
(Mangus coal seam of Miocene Muaraenim Fm in S Sumatra is 13.6m thick, categorized as subbituminous class A-B, and low coalbed methane production potential)

Carnell, A., C. Atkinson & P. Butterworth (2013)- A field trip to the syn-rift petroleum system of Central Sumatera. Berita Sedimentologi 27, p. 18-20.
(online at: www.iagi.or.id/fosi/files/2013/08/BS27-Sumatera_Final.pdf)
(Fieldtrip to C Sumatra Ombilin Basin. Karbindo Coal Mine with exposure of Eocene coal and Brown Shale is exposed, Harau canyon with outcrops of syn-rift fluvial sandstones, etc.)

Carnell, A.J.H., P.J. Butterworth, B. Hamid, A.R.L. Livsey, J. Barton & C. Bates (1998)- The Brown Shale of Central Sumatra: a detailed appraisal of a shallow lacustrine source rock. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 51-70.
(Outcrop study in Karbindo coal mine, Kiliran sub-basin, W Sumatra. From base up: 25 m thick paleosol, 18m black vitreous coal (gas prone source rock), in upper part with brown algal rich coal and freshwater carbonates, interpreted as ephemeral lake deposits. Overlain by 90m Brown Shale facies assemblage of seasonally laminated paper shales, grey shales, red weathering shales, turbidites and gastropod coquinas. Brown Shale excellent algal-rich, oil prone source rock (TOC 2.5- 8.9%, HI up to 743). Interpretation is shallow lake deposition, different from previous deep lacustrine basin interpretations)

Carrillat, A., D. Bora, A. Dubois, F. Kusdiantoro, S. Yudho, E. Wibowo, M. Musri et al. (2013)- Integrated regional interpretation and new insight on petroleum system of South Sumatra Basin, Indonesia. In: SPE Asia Pacific Oil & Gas Conf. Exh. (APOGCE), Jakarta 2013, SPE 165848, p. 1-8.
(Structural restorations show S Sumatra basin rifting until ~23 Ma, with main depocenters in Benakat Gully, Limau Graben, C Palembang and Lematang Depression followed by sagging until 14.6 Ma. Compressive inversion event from 5 Ma to present day. Onset of oil expulsion from ~10-15 Ma from Lemat and Talangakar Fms and 5 Ma from Telisa Fm. Baturaja Fm. reservoirs close to depressions are filled; charge risk away from kitchen areas. Most hydrocarbons generated between sedimentation of Lower Palembang Fm and inversion time (10-5 Ma); subsequent inversion likely re-migrated hydrocarbons in Talangakar and Baturaja reservoirs)

Caughey, C., T.C. Cavanagh, J.N.J. Dyer, A. Kohar et al. (eds.) (1994)- Seismic Atlas of Indonesian Oil & Gas Fields. I: Sumatra. Indonesian Petroleum Association (IPA), Jakarta, p.

Caughey, C.A. & S. Sofyan (eds.) (1994)- Geology of the petroliferous North Sumatra Basin. Indon. Petroleum Assoc. (IPA), Post Convention Field Trip, October 1994, p. 1-129.

Caughey, C.A. & T. Wahyudi (1993)- Gas reservoirs in the Lower Miocene Peutu Formation, Aceh Timur, Sumatra. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 191-218.
(Peutu Fm outcrops along Barisan Mts foothills vary from thin planktonic shaly beds to 75 m thick skeletal carbonates. Units dip E beneath coastal plain where gas-bearing carbonate buildups reach 300-500 m. Vuggy porosity in foram grainstones and coral boundstones. Platform facies thinner (50m), tight limestone, sandstone, and shale. Widespread gas-prone reservoirs in Peutu Lst. Exploration success depends on (1) field size: presence of buildups critical for commercial accumulations and (2) gas composition: Peutu reservoirs contain H_2S (generally manageable) and CO_2 (6- 82%). CO_2 from thermal decomposition of carbonates, highest where Peutu deeply buried and unconformably on Tampur dolomite or pre-Tertiary basement)

Chacko, S. (1989)- Porosity identification using amplitude variations with offset: examples from south Sumatra. Geophysics 54, 8, p. 942-951.
(AVO seismic modeling used to distinguish between porous and tight facies in E Miocene Baturaja Limestone)

Chalik, M., B. Pujasmadi, M. Fauzi & M. Bazed (2004)- Sumpal Field, South Sumatra- case history of the delineation and production of a fractured basement reservoir. In: R.A. Noble et al. (eds.) Proc. Int. Conf. Deepwater and frontier exploration in Asia & Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 199-224.
(1994 Corridor Block Sumpal Field dry gas discovery in thin Oligocene sandstones and pre-Tertiary fractured granites and metasedimentary rocks. Structure NW-SE trending anticline with fault to NE. Hydrocarbons generated from Lemat and Talang Akar shales. Brief overview of Pre-Tertiary stratigraphy of S Sumatra.)

Christ, H. (1906)- Uber ein Farnkraut der Obern Palembangschichten von Soengi Tjaban (Sud-Sumatra). In: A. Tobler, Topographische und geologische Beschreibung der Petroleumgebiete bei Moeara Enim (Sud-Sumatra), Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 23, p. 314-315.
(Brief communication on presence of well-preserved leaves of fern plant fossil Meniscium proliferum from Late Miocene-Pliocene Upper Palembang Fm tuffs at Sungi Tjaban in Minyak Itam oilfield. No figures)

Christensen, A.N., C. Jones, L.B. Kocijan, H. Booth, S. Rouxel & B. Kunjan (2018)- Airborne gravity gradiometer survey over the Pelarang Anticline, onshore Kutai Basin, Indonesia. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, p. 1-6. *(Extended Abstract)*
(online at: www.publish.csiro.au/ex/pdf/ASEG2018abT7_3B)
(Pelarang Anticline part of NNE-SSW-trending Samarinda Anticlinorium in detached fold-thrust belt of onshore Kutai basin. Detachment fold, ~30km long, with steeply dipping flanks. Airborne gravity shows anticline associated with strong positive gravity anomaly, possibly from ~2000m high, high-pressured shale core. Two commercial hydrocarbon accumulations, Sambutan and Mutiara)

Clure, J. (1991)- Spreading centres and their effect on oil generation in the Sunda Region. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 37-49.
(High-T spreading centre subducted beneath Sumatra, making cool area warmer. Indian Ocean crustal thickness thickens away from spreading centres, affecting Sunda Craton thermal regimes as spreading centres collided with craton. Wharton Ridge paleo-spreading centre collided with Sumatran subduction zone and created ridge/trench triple junction. Collision of Sunda Craton and W Sumatran spreading centre results in parts of trench with thinner crust and certain locations to be hotter. Outer arc basins usually considered non-prospective due to low thermal gradients caused by extra thickness of crust, but areas where spreading centre collides will only be slightly greater than one plate thick and warmer, increasing petroleum potential)

Clure, J. (2005)- Fuel resources: oil and gas. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, p. 131-141.

Clure, J. & N. Fiptiani (2002)- Hydrocarbon exploration in the Merang Triangle, South Sumatra Basin. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 803-824.
(Merang Triangle, S of Jambi, limited exploration. Talang Akar Fm production in Gelam Field in Baturaja carbonates and further stratigraphic potential highlighted. Plio-Pleistocene Sembilang High structural uplift resulted in erosion of thousands of feet. Uplift associated with regional tilt to SE, causing possible re-migration. Recent faulting broke up carbonate complex and off-reef platform facies now structurally higher than original reef crest, which resulted in earlier drilling missing build-up)

Collins, J.F. & R. Barton (1994)- Arun gas field and LNG plant, geology of the petroliferous North Sumatra Basin. AAPG, Pre-Conference Field Trip, p. 47-62.

Collins, J.F., A.S. Kristano, J. Bon & C.A. Caughey (1996)- Sequence stratigraphic framework of Oligocene and Miocene carbonates, North Sumatra Basin, Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 267-279.
(N Sumatra Basin Late Eocene - E Miocene early rift, E Miocene N6- N8 sag. Rifting produced N-S trending subsidence with coarse clastics (Bruksah Fm) in rifts prior to P22, followed by widespread marine shales (Bampo Fm) from P22 to N4. Foraminiferal mounds accumulated on ramps and crests of some rifts, with transgressions in P22 and N4. Marine Belumai Fm late rift (N4-N6) sands from craton filled grabens. Unconformity developed above early syn-rift sediments. Sag-phase subsidence accompanied by carbonate deposition (Peutu Fm) associated with flooding events at N7 and N8. On S structures transgressive platforms (N7) overlain by coral reefs or equivalent deep-water carbonates (N8). On craton, carbonate mounds and buildups overlie thick marine sandstones. Between these areas deep-water limestones and marls)

Courteney, S., P. Cockcroft, R. Lorentz & R. Miller (eds.) (1990)- Introduction. Indonesia Oil and Gas Fields Atlas, 1, North Sumatra and Natuna, Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-11, A1-A3.

(Overview of N Sumatra oil-gas fields. First discovery by Zijlker in 1885 at Telaga Said (cum. production 8.4 MMBO). Additional oil discoveries at Darat (1899), Perlak (1900), Serang Jaya (1926), Pulau Panjang (1928), Rantau (1929), Gebang (1936) and Palu Tabuhan (1937), all producing from Miocene Keutapang and Baong sands. Rantau field produced >200 MMB oil, over half of production from Keutapang- Baong play. Additional small oil fields developed in 1960's- 70's by Asamera and Pertarnina, all smaller than Rantau or Perlak. Arun giant gas field in E Miocene carbonate discovered in 1968)

Courteney, S., P. Cockcroft, R. Lorentz, R. Miller et al. (eds.) (1990)- Introduction. Indonesia Oil and Gas Fields Atlas, 3, South Sumatra, Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-9, A1-A2

Courteney, S., P. Cockcroft, R. Lorentz, R. Miller et al. (eds.) (1991)- Introduction. Indonesia, Oil and Gas Fields Atlas, 2, Central Sumatra, Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-15, A1-A4

Crawley, M. & D. Ginger (1998)- Depth prediction ahead of the bit: a case study from the Singa-1 discovery well, South Sumatra: Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 251-264.
(Singa-1 Batu Raja Fm carbonate buildup prospect in Lematang PSC, S Palembang sub-basin at 3026 ms (~12,000'), >3000' deeper than previously drilled Batu Raja targets. Pre-drill depth estimates from seismic stacking velocities not accurate enough for picking casing points, so look-ahead VSP and SWD (seismic-while-drilling) employed during drilling to predict top reservoir)

Crostella, A. (1983)- Malacca Strait wrench fault controlled Lalang and Mengkapan oil fields. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 6, p. 24-34.
(Two oil fields discovered in 1980-1981 in anticlinal structures along same N-trending left-lateral wrench fault, reservoired in Early Miocene Sihapas Group sandstones)

Dahlan, Y.I., F. Utama, D. Yudhatama, Y. Yunus & E.M.I. Kusumah (2017)- New perspectives in regaining additional hydrocarbon from near-field prospects. A study case: Irin cluster. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(On Irin cluster of small E Miocene Baturaja Lst buildup prospects on Musi Platform, S Sumatra basin. Irin 1 (2013) gas-bearing with 400' of limestone reservoir with up to 28% porosity. Baturaja carbonates six stages of development: oldest in SM-1 well in W part, youngest stage in SE part of Musi platform)

Dahlan, Y.I. & Y. Yunus (2016)- Future exploration in Musi area, South Sumatra: looking for new oil in an old area. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 30-TS-16, p. 1-9.
(S Sumatra mature basin, with only very small prospects remaining. In Musi Platform area clusters of small E Miocene Baturaja carbonate prospects still offer potential)

Darmadi, Y., A. Harahap, R. Achdiat, M. Ginanjar & J. Hughes (2013)- Reservoir characterization of fractured basement using seismic attributes, Dayung Field case study, South Sumatra, Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-155, p. 1-12.
(3D seismic mapping of fault and fracture network in Dayung Field, Corridor Block, S Sumatra, which produced gas since 1998 from fractured and weathered Pre-Tertiary basement. Basement lithologies Permian carbonate, intruded by Jurassic granites)

Darmawan, A. & I.F. Sjamsuddin (2012)- Benakat Gulley sebagai sebuah half graben (synrift system) dan implikasinya terhadap play eksplorasi. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-09, p.
('Benakat Gulley as a half-graben (synrift system) and its implications for exploration play'. Benakat Gulley is NW-trending Paleogene half graben, with faulted W margin and flexure margin in E. Rift structural and stratigraphic plays proven in old fields (Kampung Minyak, Suban Jeriji, Batu Keras). W of half graben fault are carbonate and fractured basement plays. Within depocenter are sandstone lenses in Plio-Pleistocene inversion structures, on E side include onlapping Talang Akar Fm onto basement and platform and reefal carbonate)

Darmono, F.X. (1994)- Geological aspects of horizontal wells in Petani Field, Central Sumatra. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 1160-1183.
(Petani field 1964 discovery in NW-SE trending anticline W of Duri in C Sumatra basin. Produced >293 MBO from earliest Miocene Sihapas Fm 'Menggala 3900' sand'. Start of horizontal drilling program in top of sand)

Darwis, A, S.E. Saputra & Drianto S. (2007)- Exploring in mature basins in Sumatra (Sumatera) Island, Indonesia: a historical review to challenge new idea. Abstract AAPG Ann. Conv., Long Beach 2007, 3p.
(online at: www.searchanddiscovery.net/documents/2007/07114darwis/images/darwis.pdf)
(Sumatra first discovery in 1885 Still active exploration area, particularly S Sumatra. Three producing, 3 non-producing basins)

Daulay, B. & H. Nursarya (1996)- Petrografi batubara: aplikasinya terhadap lingkungan pengendapan di daerah Bengkulu. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 531-541.
('Coal petrography: its application towards depositional environments in the Bengkulu area')

Daulay, B. & B. Santoso (2008)- Characteristics of selected Sumateran Tertiary coals regarding their petrographic analysis. Indonesian Mining J. 11, 1, p. 1-18.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/599/461)
(Type and rank variation of Ombilin and Bukit Asam Tertiary coals assessed in 170 samples. Coals dominated by vitrinite, common liptinite and rare inertinite and mineral matter. Ombilin coals not affected by contact alteration vitrinite reflectances 0.53-0.83%, Bukit Asam coals not affected by contact alteration 0.30-0.57%. Higher vitrinite reflectance of some coals result of the local igneous intrusions in both areas (also in 36th Ann. Conv. IAGI, 2007, p. 464-470))

Davies, P.R. (1984)- Tertiary structural evolution and related hydrocarbon occurrences, North Sumatra Basin. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 19-49.
(N Sumatra along trailing edge of counterclockwise (CCW) rotating 'Sunda Microplate' in Tertiary. Eocene-Lower Oligocene high-angle convergence between Sunda and Indian-Australian Plates generated N-propagating, dextral, overstepping wrench faults along W edge of microplate. Late Oligocene CCW rotation of Sunda Microplate result of rifting in Thai and Malay basins. N Sumatra basin developed in Late Oligocene- E Miocene as horst and graben structures between reactivated dextral wrench faults along W edge of microplate. E-M Miocene uplift reactivated earlier rifted structures of N Sumatra basin, causing widespread erosion, followed by subsidence and first marine deposits. Second phase of Sunda CCW rotation in late M Miocene, continuing to present day, caused by emplacement of oceanic crust in Andaman Sea. Renewed convergence since late M Miocene at less acute angle, causing compression, inception of subduction complex along W edge Sumatra, uplift of Barisan Mountains, and regressive sedimentation across N Sumatra basin. Evolution of N, C and S Sumatran basins essentially identical)

Davis, R.C., W.O. Ardjakusumah & I.S. Soemantri (1998)- Kinetic modeling of the Pematang-Sihapas(!) petroleum system, Malacca Strait PSC, Central Sumatra. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 35-50.
(Principal and probably only source rock for Malacca PSC oil is Paleogene Pematang Group lacustrine Brown Shale Mb., mature in Bengkalis Graben. Modeling indicates discovery farthest from Bengkalis kitchen likely sourced by long distance migration (~25 km), as local sub-basin (Rangsang Trough) is immature. Other sub-basin (Padang Trough) highly mature due to very high geothermal gradient. Heating event responsible for petroleum expulsion extremely recent in C Sumatra Basin)

Dawson, W.C., W.R. Almon, J.B. Sangree & CALTEX Sequence Stratigraphy Team (2005)- Petroleum system and Miocene sequence stratigraphy: Central Sumatra Basin, Indonesia. In: P. Post et al. (eds.) Petroleum systems of divergent continental margin basins, Proc. 25th Gulf Coast Section SEPM (GCSSEPM) Foundation Annual Bob F. Perkins Research Conf., p. 987-1015.
(C Sumatra basin most prolific petroleum system in SE Asia. Oil sourced from Pematang Gp lacustrine Brown Shale in basal rift sequence, migrated vertically until thick paleosol horizon (25.5 Ma SB), then migrated to E margin of basin charging giant Minas and Duri fields. Erosional truncation (incised valley development) of

paleosols and faults provided windows for migration into overlying Miocene Sihapas Gp sandstone reservoirs. Incision common at 25.5, 22, 21, and 17.5 Ma sequence boundaries. Oil accumulated preferentially in basal transgressive sandstones. ~80% of recoverable oil in lower 21 Ma sequence (Bekasap Fm estuarine sst). Marine sandstones in 16.5 and 15.5Ma sequences, but fine-grained and low permeability. Regional top seal for Sihapas reservoirs is Telisa Gp shales of maximum Miocene transgression. Small oil accumulations in underlying Pematang Gp alluvial-fluvial- lacustrine sandstones poor reservoir and sealed by paleosols)

Dawson, W.C. & T.H. Tankersley (1997)- Incised valley sandstone reservoirs: Kotabatak Field, Central Sumatra basin, Indonesia- case example. In: K.W. Shanley & B.F. Perkins (eds.) Shallow marine and non-marine reservoirs, Proc. 18th Gulf Coast Section SEPM (GCSSEPM) Foundation Annual Bob F. Perkins Research Conf., Houston, p. 81-91.

De Beaufort, L.F. (1925)- Het voorkomen van een osteoglosside visch in het Tertiair van Sumatra. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 49-52.
('The occurrence of an osteoglossid fish in the Tertiary of Sumatra'. Discussion of Eocene fresh water bone- fish in C Sumatra, collected by Verbeek and Tobler. Fauna described in more detail by Sanders 1934)

De Bruijn Kops, G.F. (1853)- Tocht naar de Reteh Rivier ter onderzoeking van steenkolenlagen. Natuurkundig Tijdschrift Nederlandsch-Indie 4, p. 611-626.
('Trip to the Reteh River to investigate coal beds'. Mainly travel log of trip in 1849 to Reteh River (between Jambi and Indragiri rivers) Sumatra E coast, where, after 5 days sailing from Kota Baru, up to 4' thick coals exposed in river bank)

De Choudens-Sanchez, V. & S. Danudjaja (2013)- Impact of depositional facies on the spatial distribution of reservoir quality in the Batu Raja carbonates of the Corridor Block, South Sumatra. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-105, p. 1-12.
(Porosity in E Miocene Batu Raja Fm carbonates of S Sumatra primarily controlled by facies-related primary porosity, locally enhanced by enhanced by secondary porosity, developed in phreatic environment as result of periodic sub aerial exposure. Batu Raja carbonates in study area developed in three major isolated platforms)

De Coster, G.L. (1974)- The geology of the Central and South Sumatra basins. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 77-110.
(Overview of C and S Sumatra Tertiary basins structure, stratigraphy, paleogeography by Stanvac geologist)

De Greve, W.H. (1871)- Het Ombilin-kolenveld in de Padangsche Bovenlanden en het transportstelsel op Sumatra's Westkust. Landsdrukkerij, Batavia, p. 1-155. *(Expanded Edition printed in Batavia, 1907)*
(online at: https://resolver.kb.nl/resolve?urn=MMUBL07:000002091:pdf)
('The Ombilin coalfield in the Padang Highlands and the transportation system of the Sumatra West coast'. Summary of 1870 report by mining engineer de Greve, who is credited with discovery of Ombilin coalfield near Sawahlunto, with additional documents, with W.A. Henny. Recommends railway to East coast of Sumatra)

Deibert, D.H. (1961)- Geophysical exploration in Sumatra. Contrib. Dept. Geology Inst. Technology Bandung 43, 9p
(Brief Caltex paper on C Sumatra seismic acquisition)

Den Berger, L.G. (1923)- Fossile houtsoorten uit het Tertiair van Zuid-Sumatra. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 7, 2, p. 143-148.
('Fossil wood species from the Tertiary of South Sumatra'. Brief comments on identifications of Krausel (1922))

De Smet, M.E.M. & A.J. Barber (2005)- Tertiary stratigraphy. In: A.J. Barber, M.J. Crow & J.S. Milsom (eds.) Sumatra- geology, resources and tectonic evolution, Geol. Soc., London, Mem. 31, chapter 7, p. 86-97.
(During Late Cretaceous all of Sumatran basement exposed to erosion. In Eocene parts covered by shallow seas with platform carbonates. Widespread Late Eocene- E Oligocene rift basins, separated by mainly N-S

trending horsts, coinciding with collision of India with S margin of Asian continent. Latest Oligocene onset of regional sediment source areas and broad depositional areas, sourced from N later also from Barisan Mts. From M Miocene onwards uplift of Barisan Mts and forearc island areas, coinciding with early inversion of basin sediments and onset of activity of Sumatran Fault System)

Direzza, A., S.S. Surjono & E. Widianto (2011)- Analisis stratigrafi seismik endapan syn-rift area Lembak, cekungan Sumatera Selatan: preliminary study for underexplored area. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-190, 8p.
('Seismic stratigraphic analysis of syn-rift deposits in the Lembak area, South Sumatra basin'. Alluvial-fluvial-lacustrine facies interpreted from seismic in half-graben in SE part S Sumatra basin)

Djamaoeddin, A. (2003)- Sedimentology, sequence stratigraphy and reservoir geology of Bangko and upper Menggala (lower Miocene) sandstones, Petani Field, Central Sumatra Basin, Indonesia. M.Sc. Thesis University of Colorado, p. 1-226. *(Unpublished)*
(Study of sequence stratigraphy and facies distribution of E Miocene Bangko and U Menggala Fms in Petani field, C Sumatra. Nine lithofacies. Four facies associations interpreted from facies analysis of cores (1) tidal estuarine channel, (2) tidal estuarine bar, (3) tidal flat and (4) shallow marine shelf or prodelta. Deposited within overall transgressive tide-dominated estuarine system. Third-order sequence boundaries at bases of Menggala 3860' and Bangko 3680' sands)

Djamil, H. (1988)- Reservoir description of the Arun limestone in the Arun OBS-2 (A64) well. Proc. 17th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 87-97.
(Giant Arun gas field discovered in 1971, in N coast of Aceh. Reservoir Miocene NNW-SSE trending reefal limestone buildup in Arun/ Cunda High, 18.5 x 5km in size, thickness up to 1200'. 12 subunits, with best porosity (av. 17.6%) and permeability (av. 75mD) in lagoonal Unit 6 and reefal Unit 8. Reef thickest and most reefal facies in South (windward side?))

Du, Naizheng (1988)- On some silicified woods from the Quaternary of Indonesia. Proc. Kon. Nederl. Akademie Wetenschappen B 91, p. 339-361.
(Two specimens of silicified wood from Quaternary of S Sumatra identified as being similar to modern plants Shorea negrosensis (Dipterocarpaceae) and Lagerstroemia colletti (Lythraceae) and named as new species Shoreoxylon sumatraense and Lagerstroemioxylon benkoelense)

Dufour, J. (1957)- On regional migration and alteration of petroleum in South Sumatra. Geologie en Mijnbouw 19, 5, p. 172-181.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0NkY0QU1ZX3NIT2s/view)
(Well-developed E Miocene basinal shale facies most likely source rock in S Sumatra Basin. Two oil groups: (1) paraffin base; restricted to Lower Miocene sandstone at E margin of basin, bordering Sundaland; (2) light paraffin base oil, mainly in younger Neogene in center of basin. Difference in composition related to migration in different periods)

Dwiyanti, R., J. Prosser & R. Sosrohadisewoyo (2001)- Integrated lithofacies characterization within carbonates of the Baturaja Formation, Soka Field, using borehole image data and conventional cores. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 643-663.
(Soka oil field recent Medco discovery in central part of Musi Platform, S Sumatra, an area known for gas production from E Miocene Baturaja Fm limestone buildups. Soka 1 170' of gas column. Field on S rim of NE-SW trending Pre-Tertiary high (Bungur High), composed of metavolcanics. Within limestone reservoir several upward shoaling successions; highly variable reservoir quality)

Edwards, T. (2000)- Life in old oil fields: Arahan-Banjarsi Fields, South Sumatra. SEAPEX Press 3, 5, p. 12-17.

Ekaninggarani, F. & K. Aprianto (2011)- Define clastic stratigraphic play on 2D seismic data with field analogy and geological concept. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-154, 11p.

(On stratigraphic plays in S Sumatra basin. Ibul Field in Talangakar Fm distributary channel sand is proven stratigraphic trap with reserves of 25 MMBOE. Kalidua area N of Ibul Field may have similar traps potential)

England, T.D.J., G. Hollomon, W. Ramadan, C. Tiranda, J. Sykora & G. Begg (2015)- Drilling the unconventional giant in the Sumatran Deep. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2015, Singapore, 3.3, p. 1-4. *(Extended Abstract + Presentation)*
(Significant tight oil and gas potential in Eocene-Oligocene syn-rift source rocks in petroleum basins of Sumatra)

Eubank, R.T. & A.C. Makki (1981)- Structural geology of the Central Sumatra back-arc basin. Proc. 10th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 153-194.
(Key paper on C Sumatra back-arc basin and hydrocarbons by Caltex. Newly described type of fold, Sunda fold. Basin with very high T gradient of 3.38°F/ 100'. Kerumutan Line separates Pre-Tertiary oceanic Mutus Assemblage of deep water chert, clastics and thin limestones and basalts in SW (possibly equivalent to M-L Triassic Kuala Fm of Malay Peninsula) from quartzitic continental crust in NE. Greywacke terrane SW of Mutus (Bohorok Fm). Seven wells in coastal plain with M Miocene basalt/ gabbro intrusives (~17-12 Ma))

Everwijn, R. (1860)- Onderzoek naar kolen in de Residentie Palembang. Natuurkundig Tijdschrift Nederlandsch-Indie 21, p. 81-88.
('Investigation into coals in the residence Palembang'. Early 'Mijnwezen' survey of Miocene coal near Bali Bukit and Lematang River near Lahat, S Sumatra. Deemed to be poor quality lignite, less valuable than Borneo coals. Also oil seeps S of Bali-Bukit)

Everwijn, R. (1867)- Verslag van een onderzoekingsreis in het rijk van Siak. Natuurkundig Tijdschrift Nederlandsch-Indie 29, p. 289-358. *(also in Jaarboek Mijnwezen Nederl. Oost Indie 1874, 1, p. 83-155)*
(online at: www.biodiversitylibrary.org/item/48369page/823/mode/1up)
('Report on a reconnaissance trip in the state of Siak', Sumatra. Mainly travel history of journey into Siak River area of Central Sumatra basin, upstream of Pakanbaru. Incl. mention of small tin mining operations near Kotah-renah, along Pingier and Lauw creeks and tributaries. Tin associated with granite outcrops)

Everwijn, R. (1873)- Onderzoek van Sumatra kolen en vergelijking van deze met andere koolsoorten. Jaarboek Mijnwezen Nederlandsch Oost-Indie 2 (1873), 1, p. 203-219.
('Investigation of Sumatra coals and comparison with other coal types')

Everwijn, R. (1876)- Het voorkomen van aardolie in het rijkje Perlak. Sumatra's Oost. Jaarboek Mijnwezen Nederlandsch Oost-Indie 5 (1876), 1, p. 186-187.
('The occurrence of oil in Perlak, Sumatra East coast'. Brief report on oil seep, with continuous gas bubbles one hour from Rantau Panjang, E coast of Aceh, N Sumatra, from which locals collect ~146 liters/ day and used for lamp oil)

Everwijn, R. (1876)- Over nieuwe vindplaatsen van kolen in de assistent-residentie Bengkoelen. Jaarboek Mijnwezen Nederlandsch Oost-Indie 5 (1876), 2, p. 223-241.
('On new localities of coal in the Bengkulu province')

Everwijn, R. (1879)- Onderzoek naar kolen in de Residentie Palembang. Jaarboek Mijnwezen Nederlandsch Oost-Indie 8 (1879), 2, p. 163-171.
(Reprint of Everwijn (1860))

Fahmi, M. (2010)- Sequence stratigraphy of shallow-water deposits in the Sihapas Group, Northwest Central Sumatra Basin. AAPG Hedberg Conference, Jakarta 2009, Search and Discovery Art. 50254, 6p.
(online at: www.searchanddiscovery.com/documents/2010/50254fahmi/ndx_fahmi.pdf)
(Extended Abstract. Five transgressive-regressive sequences identified in shallow-water Sihapas FM in NW part of C Sumatra Basin. Depositional environments from fluvial to offshore marine/shelf. SW-ward prograding sandy delta front/shoreface-belts)

Fardiansyah, I., E. Finaldhi, S. Graha, M.I.S. Harris & A. Susianto (2017)- Early Miocene paleogeography of Central Sumatra Basin: impact on reservoir quality and distribution of the Upper Sihapas Group, Rokan Block. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-577-G, 19p.
(Updated E Miocene (17.5-22 Ma) depositional models of Bekasap and Bangko, Duri, Lower Telisa Fms in C Sumatra Basin. U Sihapas Gp deposited during marine transgression. Sediment source mainly Malayan Shield to NE, resulting in NE to SW depositional trend. Two major feeder systems controlled sedimentation in C Sumatra Basin, resulting in two major deltas in m-u Early Miocene (best reservoir quality))

Fatchur, M. & M. Irfani (1991)- Perkembangan ñbarrier barò pada batupasir Formasi Keutapang bawah daerah Aru, cekungan Sumatera Utara. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 206-230.
('Barrier bar' environment for the Lower Keutapang Fm sandstone, Aru area, N Sumatra basin')

Fathan, H.U., S.M. Tarigan, E. Sutriyono & A. Tarigan (2017)- The Neogene depositional history of Lemau and Bintunan Formations in Bengkulu Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(Facies study of Miocene- Pliocene clastic deposits in N Bengkulu Basin)

Fatimah (2009)- Mineralogy and organic petrology of oil shales in the Sangkarewang Formation, Ombilin Basin, West Sumatra, Indonesia. Masters Thesis University of New South Wales, p. 1-150.
(online at: http://unsworks.unsw.edu.au/fapi/datastream/unsworks:8782/SOURCE02?view=true)
(Oil shale deposits in Paleocene-Eocene Sangkarewang Fm of Ombilin Basin)

Fatimah (2016)- Studi awal potensi batubara Muaraenim untuk dikonversi menjadi bahan bakar cair berdasarkan karakter batubara. Bul. Sumber Daya Geologi 11, 3, p. 158-172.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
('Preliminary study of Muaraenim coal liquefaction potential based on coal characteristics'. Muara Enim coal of S Sumatra good potential to be converted into liquid fuel)

Fatimah & C.R. Ward (2009)- Mineralogy and organic petrology of oil shales in the Sangkarewang Formation, Ombilin Basin, West Sumatra, Indonesia. Int. J. Coal Geology 77, p. 424-435.
(Significant oil shale deposits in Late Eocene- E Oligocene lacustrine shales of Sangkarewang Fm, intercalated with thin laminated calcareous sandstones. Organic matter in oil shales dominated by liptinite, particularly alginate (mainly lamalginite) and sporinite. Dominance of lamalginite in liptinite suggests material is lamosite. Vitrinite reflectance 0.37- 0.55%, lower than overlying Sawahlunto Fm coal (0.68%). Algal abundance associated with carbonate deposition)

Fennema, R. (1885)- Verslag van het onderzoek van het kolenterrein rondom den Boekit Soenoer, in de Ommelanden van Bengkoelen. Jaarboek Mijnwezen Nederlandsch Oost-Indie 14 (1885), Technisch Admin. Ged., p. 5-66.
('Report on the coal terrains around Bukit Sunur in the Bengkulu region'. Early evaluation of Miocene coal deposits in Bukit Sunur area, ENE of Bengkulu town, W Sumatra. With 1:20,000 geologic map and 2 geologic cross-sections. Oldest rocks in area andesites and rhyolites, overlain by Miocene deposits largely derived from these volcanics and with many outcrops of up to 4.5m thick coal seams. Also post-Miocene andesite intrusives and sills (e.g. Bulit Kandis). Coal seams mainly in E part of area. Mining of coal here deemed uneconomic)

Fennema, R. (1890)- Rapport over het voorkomen van petroleum in Beneden-Langkat, Oostkust van Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie, 1890, Technisch Admin. Ged. 2, p. 10-91.
('Report on the occurrence of petroleum in the lower Langkat, E coast of Sumatra'. Indies government survey with some drilling in 1886 led to founding of the 'Koninklijke Maatschappij tot exploitatie van petroleum-bronnen in Nederlands Indie', which later became part of 'Royal Dutch/ Shell')

Ferdyanto, G., E. Sunardi & Ismawan (2003)- Analysis of sequence stratigraphy, Lemat Formation to Gumai Formation, GN Field, South Sumatra Basin. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-13.
(Basic paper; few specifics; no field location, not real field name ?)

Feriyanto, F. Kamil, Y. Kusnandar & Y. Yanto (2005)- Successful identification of thin carbonate on paleo-basement high: special case in Palembang High, South Sumatra Basin. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 91-100.
(On seismic recognition of thin Baturaja Fm buildups on Palembang High, S Sumatra)

Finaldhi, E., I. Fardiansyah, E.H. Sihombing, R. Waren, F. Fitris, H. Semimbar, S. Graha, A.F. Talib & W.R. Paksi (2016)- Reservoir potential of axial fluvial delta vs alluvial fan delta in syn-rift lacustrine: a modern study in Lake Singkarak, Sumatra. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-176-G, 22p.
(Lake Singkarak Sumpur axial fluvial delta and Malalo alluvial fan delta systems analog for Paleogene syn-rift lacustrine reservoir rocks in W Indonesian basins)

Finger, K.L. & W.S. Drugg (1992)- Microfossils as indicators of deltaic subenvironments, Minas Field, Central Sumatra. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 225-237.
(Depositional environments of E Miocene Bekasap Fm interpreted as fluvial delta plain to distal delta front or prodelta. Biotic distributions controlled primarily by salinity and pH gradients. Association of large coastal foraminifera with minute deeper water forms implies shoreward transport of latter and supports concept of tide-dominated Bekasap delta)

Firmansyah, D.A., A. Rifai, S. Yudho, A. Kamal & R.M.I. Argakoesoemah (2007)- Exploring shallow prospects in Iliran Basement High, South Sumatra Basin. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-141, 10p.
(Hydrocarbon exploration in Iliran High region since early 1900s, when heavy oil was produced from shallow wells around asphalt, oil and gas seeps. Down flank discoveries W Iliran and S Tabuan in 1980s. Iliran High remained high since Late Oligocene and focal point for hydrocarbon migration since Late Miocene. Plio-Pleistocene tectonics resulted in tilting to SW. Three exploration plays: crest-structure, down-flank, and fractured basement. Prospects all <2500', and seal highest risk)

Fitriana, B.S., M.F. Mustofa & H.J. Sutrisno (2017)- BDA-1 well: fractured play discovery in the southern part of South Sumatra Basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-358-G, 12p.
(Bandar Agung (BDA)-1 exploration well drilled in 2014 in W of Ogan Komering block, S Palembang sub-basin, S Sumatra Basin, tested thermogenic gas (3.4 MMSCFD) and condensate (73.3 BCPD of 54.7° API) from fractured basement. Well penetrated >100m of fractured basalt with minor granodiorite and marble, underlain by ~25m of non-fractured phyllite. Basement part of Mutus Assemblage)

Fitrianto, T., H.N. Saputra, B. Syam & A.H. Purwanto (2012)- The origin, distribution and prediction of CO2 in South Sumatra, a case study: Jabung Block and surrounding area. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-025, p. 1-10.
(Several gas discoveries in S Sumatra Jabung, South Jambi and Corridor Blocks contain 40-90% CO2 or more. Carbon isotopes in Jabung area suggest origin of CO2 mainly from inorganic mantle degassing, with minor contribution from thermal breakdown of kerogen and carbonate)

Fletcher, G. & Yarmanto (1993)- Post-Convention fieldtrip 1993- Ombilin Basin, West Sumatra. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-71.
(Outcrop geology of Tertiary intra-montane Ombilin Basin in Barisan Mountains of W Sumatra)

Ford, C. (1985)- Tales from the files: an historical perspective of oil exploration in Sumatra. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 401-403.

Fuse, A., K. Tsukada, W. Kato, H. Honda, A. Sulaeman, S. Troyer, L. Wamsteeker, M. Abdullah, R.C. Davies & P. Lunt (1996)- Hydrocarbon kitchen and migration assessment of North Aceh Offshore Basin, North Sumatra, Indonesia from views of sequence stratigraphy and organic geochemistry. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 15-28.
(Hydrocarbon generation and migration pathways evaluated for the deep-water N Aceh Offshore Basin. Best source-rock is the transgressive marine Bampo mudstone (P21 to N4), which is primarily gas-prone. Migration pathway map defined three migration fairways from the North Lho Sukon Deep to its peripheries)

Galushkin, Y.I. & A. Mardianza (2014)- Change in the degree of catagenesis and hydrocarbon generation in the sedimentary rocks of the South Sumatra Basin, Indonesia. Geochemistry Int. 52, 8, p. 643-653.
(Oligocene- Recent 2D burial and thermal history modeling of Limau Graben wells Pandan 81, Petanang 1, Tepus 1,2, Gambir 1, Lembak 8. Suggests significant cooling of basement for last 15-20 Ma and significant heating of basin lithosphere in last 2-5 Ma. Talang Akar Fm oil-generating, probably except for upper horizons in shallowest portions of graben (Lembak 8). Oil generation peaked in last 5-10 Ma)

Gandapradana, M.T., K. Meninta & S.M. Gomaa (2014)- Shale in Telisa Formation, Central Sumatera Basin as a prospective shale gas resource based on geochemical data analysis. In: Second EAGE/SPE/AAPG Shale Gas Workshop in the Middle East, Dubai, 4p. *(Extended Abstract)*
(E-M Miocene Telisa Fm in C Sumatra basin 400-870' thck, TOC range 3.1- 14.8%, considered to be area with good-excellent gas generation potential. Organic matter categorized as oil/gas prone-type II kerogen, dominated by alginite and liptinite)

Gani, R.M.G. & Y. Firmansyah (2017)- Analisis skema pengendapan Formasi Pematang di sub-cekungan Aman Utara, cekungan Sumatera Tengah sebagai batuan induk. Bull. Scientific Contr. (UNPAD) 15, 1, p. 9-15.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/11773/pdf)
('Analysis of the deposition of the Pematang Formation in the North Aman sub-basin, Central Sumatra basin as the source rock'. Brown Shale Fm and Lower Red Bed Formation of Pematang Gp good source rock potential)

Ginger, D. & K. Fielding (2005)- The petroleum systems and future potential of the South Sumatra basin. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 67-89.
(S Sumatra Basin mixed terrigenous, volcaniclastic and carbonate fill. Five main plays: Pre-Tertiary fractured basement, Oligocene-E Miocene (Lower Talang Akar Fm) fluvio-deltaic sandstones, E Miocene (Batu Raja Fm) carbonates and E Miocene (Gumai Fm) and M Miocene (Air Benakat Fm) shallow marine sandstones. Oligocene- E Miocene age lacustrine and deltaic source rocks. Pinch-out of Oligocene and Miocene regional seals limit prospectivity on E side of basin. Cumulative oil production >2 BBO, original gas reserves 22 TCF, with <6 TCF produced. Undiscovered 6-10 TCF of gas and 0.2- 0.5 MMB oil in proven plays)

Gluyas J. & N. Oxtoby (1995)- Diagenesis: a short (2 million year) story- Miocene sandstones of Central Sumatra, Indonesia. J. Sedimentary Res. A65, p. 513-521.
(Cementation of Miocene Sihapas Fm sands different in two adjacent oilfields: shallow Melibur Field (300 m) uncemented, deeper Kurau Field (1430 m) has common quartz and illite cement, reducing porosity from 30 to 20%. Cementation believed to have taken place in last 2 My. Conclusion disputed by Wilkinson et al. 1998)

Gough, A. (2015)- Understanding the poorly-exposed Lahat and Lemat Formations of the South Sumatran Basin using an outcrop analogue study. Asia Petrol. Geoscience Conf. Exhib. (APGCE), Kuala Lumpur, 25827, 5p. *(Extended Abstract)*
(Cutler Gp of Paradox Basin, U.S.A., can be used as analogue to poorly exposed Eocene- Oligocene Lahat and Lemat Fms of S Sumatra. No data on Sumatra formations)

Gramberg, J.S.G. (1865)- Over aardolie van Palembang. Natuurkundig Tijdschrift voor Nederlandsch Indie 28, 6, 3, p. 467-471.
('On petroleum of Palembang'. First description by ship surgeon Gramberg from Palembang of three oil seeps near Karang Raja along Lematang river, S of Muara Enim, S Sumatra (no maps))

Gramberg, J.S.G. (1869)- De petroleum-bronnen van Palembang. De Economist 18, 1, p. 1-16.
('The petroleum seeps of Palembang'. Popular review of oil- gas seeps near Karang Radja, Muara Enim, in Lematang Ilir area of Palembang Residency, emanating from coal-bearing sediments. With recommendations for exploitation. No map)

Graves, R.R. & A.A. Weegar (1973)- Geology of the Arun Gas Field, North Sumatra. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 23-51.
(Arun gas-condensate field 225 km NW of Medan in large N-S trending, E-M Miocene reefal carbonate buildup. Depth to crest ~9400' subsea. Arun Limestone thickness ~200' offreef to maximum 1100-1200' at buildup.)

Gsell, R. (1930)- Geologische Untersuchungen in der Umgebung von Batoeradja. BPM Report, p. *(Unpublished)*
('Geological investigations in the Baruraja region', S Sumatra)

Gumert, W.R., V. Gratero & F. Fanani (2003)- The Central Sumatra airborne gravity and magnetic survey; an example of the usefulness of an aerogravity survey and the application of geologically constrained gravity interpretation. Proc. 32nd Ann. Conv. Indon. Assoc. Geol. (IAGI) and 28th Ann. Conv. HAGI, Jakarta, 13p.
(Results of airborne gravity- magnetic survey and modeling over Kondur Petroleum Malacca Strait Block. Study confirms N-S and NW-SE oriented Tertiary basins, connected by major strike slip faults. Basins bound by normal faults, small rift basins with small inversions in central parts)

Gunther, A. (1876)- Contributions to our knowledge of the fish-fauna of the Tertiary deposits of the Highlands of Padang, Sumatra. Geol. Magazine, Decade 2, 3, p. 433-440.
(First description of Eocene or younger fresh-water fish fauna of Ombilin Basin, Padang Highlands. Collected by Verbeek in 1874. Nine genera, including new species Auliscops sumatranus, Pseudeutropius verbeekii, Bagarius gigas, etc. With 5 plates. See also Von der Marck 1876, Rutimeyer 1880, Sanders 1934, Musper 1935)

Gunther, A. (1878)- Contributions to our knowledge of the fish-fauna of the Tertiary deposits of the Highlands of Padang, Sumatra. Jaarboek Mijnwezen Nederlandsch Oost-Indie 7 (1878), 1, p. 171-184.
(Reprint of Gunther (1876))

Guntur, A., S. Hastuti, B. Situmorang & B. Yulihanto (1993)- Studi fasies dan batuan asal formasi Sawahtambang cekungan Ombilin, Sumatra Barat. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1028-1043.
('Study of facies and source rocks of the Sawahtambang Fm, Ombilin Basin, W Sumatra'. Late Oligocene Sawahtambang Fm lithics rich, of 'Recycled Orogen'-type provenance)

Guntur, A., R.S. Himawan & B. Situmorang (1992)- Pembentukan dan evolusi terban Paleogen Talawi Cekungan Obilin, Sumatera Barat. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 565-584.
('The formation and evolution of the Paleogene Talawi Graben, Ombilin Basin, West Sumatra'. Formation of Talawi graben in W Ombilin basin controlled by dextral strike-slip of NW-SE Sitangkai and Silungkang faults. Strike-slip system active since Cretaceous)

Gutomo, A. & M.B. Satyawan (1995)- Development concept of Rantau Field based on 3-D seismic data. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 583. *(Abstract only)*
(Mature Pertamina Rantau field (originally discovered by BPM in 1929) NW-SE trending anticline in Tamiang Deep, N Sumatra. 53 productive layers between 200-1400m depth in deltaic sands of Seureula and Keutapang Fms. 550 wells drilled. Remaining reserves based on 3D seismic study estimated 324 MMBO)

Guttormsen, J. (2010)- Naturally fractured basement reservoirs: using South Sumatra to characterize the challenges of exploring and exploiting fracture basement reservoirs. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-183, 15p.

(Data from S Sumatra fracture basement reservoirs of Suban, Sumpal, and Dayung gas fields. Fractured reservoirs include granite, Permian meta-limestone (Leko), quartzites and pelitic rocks (phyllites and schists). In S Sumatra metasediments dominant reservoir lithology, but better test rates in granites and meta-carbonates)

Guttormsen, J., R. Achiat, R. Indrawan & R. Waworuntu (2009)- Phyllitic fractured reservoirs of Southern Sumatra. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-149, p. 257-272.
(Major accumulations of hydrocarbons in fractured metasedimentary reservoirs in S Sumatra Basin. Basement composed of Permian- Cretaceous sediments, intruded by felsic magmas)

Haanstra, U. & E. Spiker (1932)- Uber jungneogene Molluskenfaunen aus den Residenzen Benkoelen und Palembang, S.W. Sumatra. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 35, 10, p. 1313-1324.
(online at: www.dwc.knaw.nl/DL/publications/PU00016359.pdf)
('On Late Neogene mollusc faunas from the Bengkulu and Palembang Residencies, SW Sumatra'. Molluscs from Bengkulu area collected by Erb in 1902 along coast between Bengkulu and Krue (72 species, 36% Recent, suggesting Late Neogene age), and from Lower Palembang Fm at Talang Akar anticline N of Talang Abab, Palembang Province (50 species, 26% Recent, suggesting Miocene age))

Habrianta, L., G. Matthew, F. Fakhrurozi, D. Auliansyah & I.P. Andhika (2018)- A semi-regional play analysis of the Ombilin basin to understand the tectono-stratigrapic framework and identification of potential exploration opportunities. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-482-G, 22p.
(Review of Ombilin intermontane rift basin (half-graben) in W Sumatra)

Hada, F.S, M., M. Rizki A. Rahmat, C. Wibowo, D.H. Amijaya & A.A. Aspari (2015)- Parasequence concepts, problems and solutions in CBM exploration using seismic data case study: Muara Enim Formation, South Sumatra Basin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-099, 10p.
(Seismic study of coal distribution in Late Miocene- Pliocene Muara Enim Fm in Suban Block of C Palembang Basin, S Sumatra. Six coal seams identified in five zones (parasequences). Thickest seam named D1 is 17.2 m thick. Overall upward-increase in sand-shale ratio)

Hadi, T. & B. Simbolon (1976)- The carbonate rocks of the Batu Raja Formation in its type locality, Batu Raja, South Sumatra. Proc. Carbonate Seminar, Jakarta 1976, Indon. Petroleum Assoc. (IPA), Spec. Vol., p. 67-78.
(Baturaja Fm in Baturaja area of S Sumatra bedded limestones in lower, massive limestones in upper part. Texture of limestones varies from boundstone to wackestone and wacke-packstone, suggesting depositional environments from open shoal reef, fore reef, transition to open basin to open littoral back reef)

Hadiana, M. (2014)- Mekanisme rifting Paleogen Cekungan Sumatra Tengah. Ph.D. Thesis Inst. Teknologi Bandung (ITB), p.
('Paleogene rifting mechanism of the Central Sumatra Basin'. C Sumatra Basin Paleogene rifting result of dextral strike slip, mainly controlled by pre-existing basement faults. Modeling suggest synrift extension of 7.5% at end of Lower Red Bed Fm deposition, 13% for Brown Shale Fm and 15% for Upper Red Bed Fm)

Hadiyanto (1992)- Organic petrology and geochemistry of the Tertiary formations at Meulaboh area, West Aceh Basin, Sumatera, Indonesia. Ph.D. Thesis, University of Wollongong, Australia, p. 1-219.
(online at: http://ro.uow.edu.au/theses/1397/)
(Onshore Meulaboh forearc basin with thick succession of Oligocene-Pliocene coal-bearing sediments. Coal and clastic rocks potential source rocks but mostly immature and have not produced significant liquid hydrocarbons. Late Oligocene- E Miocene Tangla Fm shales and M Miocene Kueh Fm best source rocks. Oligocene coal and possibly Miocene coal good hydrocarbon generation potential. Onshore vitrinite reflectance gradients greater than offshore, so oil window predicted to be shallower onshore)

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(W Central Sumatra (Ombilin basin area) Tertiary composed of Oligocene Breccia-marl formation, Oligo-Miocene Quartz sst Fm and Mio-Pliocene Telisa and Palembang Fms. Bituminous marl at base Breccia-Marl Fm with abundant freshwater fish fauna)

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(Extended Abstract. N Sumatra N-S trending basin formed during Late Oligocene- E Miocene rifting. Second extension phase affected Late Miocene and Pliocene, coincident with Pliocene folding. Topaz Anticline growth began in Late Miocene. Main phase of fold activity Late Pliocene to Early Pleistocene).

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(Bireun High is N-S trending horst block in in Lhokseumawe Block, offshore N Sumatra Basin (formerly called Peusangan High, Western High, etc.). Presence of E Miocene Peutu Fm carbonates initially proven by Mobil Peusangan wells and more recently by Tately 2012 exploration well Jayarani JR-1 (with 3' of gas pay in 150' thick tight carbonate reservoir, rich in planktonic foraminifera suggestive of deeper water facies))

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(Rambutan oil field shows structural inversion of graben into anticlinal structure)

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(online at: http://aip.scitation.org/doi/pdf/10.1063/1.4991271)
(Eocene M Pematang Brown Shale TOC from 0.15-2.71%, classified as poor-very good. Maturity level: vitrinite reflectance Ro = 0.58)

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(online at: http://iopscience.iop.org/article/10.1088/1755-1315/62/1/012023/pdf)
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(70% of Indonesian oil production came from S and C Sumatra basins, mainly from Late Oligocene- E Miocene Talang Akar/ Sihapas sandstones. Most oils sourced from Paleogene rift basins and trapped in structures formed during Plio-Pleistocene orogeny, other traps drape over paleotopographic highs)

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('Tectonic control on the develoment of the Ombilin Tertiary economic basin, West Sumatra'. Ombilin intermontane basin in Barisan Mts is pull-apart basin due to dextral movement of Silungkang and Takung Faults since Paleocene, 60 km long and 30 km wide. Two subbasins, Talawi and Sinamar. Five tectonic phases)

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('Hydrocarbon potential of the Bengkulu basin'. Presence of hydrocarbons in Bengkulu Basin suggested by oil seeps. Source rock may be carbonaceous clays of Seblat and Lemau Fms. Possible reservoir rocks Seblat and Lemau Fm sandstones and Seblat Fm limestones. Possible claystone seals in Seblat and Lemau Fms)

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('Hydrocarbon source rock potential in the Tigapuluh Mts, C Sumatra'. Source rocks S of C Sumatra Basin margin fine grained clastics in Late Eocene Kelesa and Oligocene Lakat Fms. Kelesa Fm TOC 2.3-9.6%, Lakat Fm TOC 0.7-3.5%, Thermal maturation of Kelesa Fm late immature- early mature, kerogen types I and II, Lakat Fm late immature, kerogen types I, II, and III)

Heryanto, R. & H. Panggabean (2006)- The Tertiary source rock potential of the Bengkulu Basin. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-PG-26, 4p.
(Bengkulu forearc basin in SW Sumatra intiated in Eocene-Oligocene with deposition of Lahat equivalent Fm, unconformably overlain by Oligo Miocene Hulusimpang Fm volcanics, E-M Miocene Seblat Fm siliciclastics and carbonates, M-L Miocene Lemau Fm, etc. Geochemical analysis of outcrop, well samples and oil seeps identified organic matter of terrestrial origin. Best potential source rocks in Lemau Fm, although these are immature and oil seeps were derived from a mature source rock)

Heryanto, R., N. Suwarna, & H. Panggabean (2001)- The Lakat Formation in the Northeastern flank of the Tigapuluh Mountains and its possibilities as a source rock. Proc. 30th Ann. Conv. Indon. Assoc. Geol. (IAGI) and 10th GEOSEA Reg. Congress, Yogyakarta, p.

Heryanto, R., N. Suwarna & H. Panggabean (2004)- Hydrocarbon source rock potential of the Eocene-Oligocene Keruh Formation in the Southwestern margin of the Central Sumatra basin. J. Sumber Daya Geologi 14, 3 (147), p. 118-133.
(Eo-Oligocene lacustrine shale of Keruh Fm exposed in Kuantan-Singingi area at SW margin of C Sumatra basin. Equivalent of Pematang Fm in other parts of C Sumatra basin and Kelesa Fm of Tigapuluh Mts. Excellent oil source potential. Late Eocene palynolomorphs, incl. Palmaepollenites kuchensis, Florschuetzia trilobata, Meyeripollis naharkotensis, etc. Vitrinite refectance 0.23-0.66%)

Heryanto, R. & Suyoko (2007)- Karakteristik batubara di Cekungan Bengkulu. J. Geologi Indonesia 2, 4, p. 247-259.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20070405.pdf)
('Characteristics of coal in the Bengkulu Basin'. M-Upper Miocene Lemau Fm coal seams in Ketaun area 1-2m thick, in Bengkulu area 1-3.5m, in Seluma area up to 4.5m. Vitrinite reflectance generally 0.4 to 0.5%, but up to 1.12% near andesitic sill intrusions. Deposited in delta plain environments)

Hestu S.N., Joan C.T., F. Asrul, E. Wijayati, S. Pujiastuti & T. Iswachyono (2010)- Tight carbonate platform: a new opportunity reservoir in Musi Platform a case study of Naya F4 well. Proc. 39th Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-172, 7p.
(On oil-bearing, but tight platform carbonate in 2008 Naya F4 well at NE flank of 'Naya field' buildup, SW Sumatra basin (probably not real field name; map looks like Soka field; JTvG))

Hickman, R.G., P.F. Dobson, M. van Gerven, B.D. Sagala & R.P. Gunderson (2004)- Tectonic and stratigraphic evolution of the Sarulla graben geothermal area, North Sumatra, Indonesia. J. Asian Earth Sci. 23, p. 435-448.
(Sarulla graben Plio-Pleistocene basin along Sumatra fault, where fault coincides with volcanic arc. Offset of 0.27 Ma rhyodacite dome by strand of Sumatra fault indicates ~9 mm/y slip, lower than previous estimates of ~25-30 mm/y for Holocene slip on Sumatra fault determined from stream offsets. Discrepancy may be due to (1) difference between Holocene and late Quaternary rates and (2) additional slip on other faults. Sarulla area volcanic centers: Sibualbuali stratovolcano (~0.7- 0.3 Ma), Hopong caldera (~1.5 Ma), and Namora-I-Langit dacitic dome field (0.8- 0.1 Ma). These generated majority of tuffs and tuffaceous sediments of Sarulla graben. Geothermal systems linked to faults and volcanoes)

Hidayatillah, A.S., R.A. Tampubolon, T. Ozza, M.T. Arifin, R.M.A. Prasetio, T.A. Furqan & H. Darman (2017)- North Sumatra Basin: a new perspective in tectonic settings and Paleogene sedimentation. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-719-G, 18p.

(Literature, etc. compilation of N Sumatra basin)

Hinton, L.B., W.S. Atmadja & P.S. Suwito (1987)- Peusangan C1 reef interpretation with top reef transparent to seismic. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 339-362.
(Peusangan-XF structure, offshore N Sumatra, ~70 km NW of Arun gas field, is carbonate buildup of E-M Miocene Peutu Fm on paleotopographic Western High. C1 well with ~670' limestone, High amplitude seismic reflector previously interpreted as top carbonate buildup corresponds to lower, tight limestone interval, while top of upper ~400' of porous limestone produces only very weak seismic reflection (largely transparent))

Hirschi, H. (1916)- Kontaktmetamorphe Tertiarkohlen in Sud-Sumatra, sudlich Muara Enim, Residenz Palembang. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 33, p. 569-577.
('Contact-metamorphic Tertiary coals in S Sumatra, S of Muara Enim, Palembang Residency'. As already described by Tobler (1906) Miocene Middle Palembang Fm lignites altered into high- grade coal by young andesite intrusions at several localities, including Bukit Asam, Bukit Gendi and Ayer Milang. M Palembang coals associated with common tuffs with quartz crystals, typically unfossiliferous except for plants)

Hoehn, M.H., I Arif, C. Welch, F.H. Sidi, D. Rubyanto, R. van Eykenhof et al. (2005)- Combined geostatistical inversion and simultaneous AVA inversion: extending the life of a mature area, Kotabatak Field, Central Sumatra Basin, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 25-38.
(Kotabatak Field in C Sumatra 1952 discovery; produced >250 MMBO since 1971. Dense well control, but still surprises with reservoir distribution in Bekasap Fm sands. Inversion helped map reservoirs)

Holis, Z., D.A. Firmansyah, W. Romodhon, M.K. Kamaludin & S. Damayanti (2014)- Structural evolution and its implication to heavy oil potential in Iliran High, South Sumatera Basin, Western Indonesia. In: 76th EAGE Conference & Exhibition 2014, Amsterdam, Tu G104 06, 5p. *(Extended Abstract)*
(Iliran High in S Sumatra is young uplift along Late Miocene-Pleistocene NW-SE trending strike slip fault. Uplift caused biodegradation of early light oil accumulations, changing it to heavy oils)

Holis, Z., B. Sapiie, I.N. Suta, M.K. Utama & M. Hadiana (2010)- Fault characteristic and palinspastic reconstructions of the Jabung Field, South Sumatera Basin. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-066, 20p.
(Reconstruction of faults around Jabung Field, Jambi Basin, N flank S Sumatra Basin. Area dominated by NW-SE and NE-SW trending basement structures. S Sumatra Basin formed as pull-apart basin related to NW-SE trending dextral strike-slip faults. Early extensional faults formed syn-rift deposits, followed by inversion structures and cross-cut by latter extensional structurs, all formed during continuous strike-slip deformation. since Paleogene. Maximum extension in NW-SE direction and shortening in NNE-SSW direction)

Holleman, W. (1931)- Beschrijving van de afbouwmethode voor ontginning der 8m dikke C-laag der Ombilin steenkolenmijnen. De Mijningenieur 12, 8, p. 126-146.
('Description of the mining method for exploitation of the 8m thick C layer of the Ombilin coal mines')

Hong, K.C., R.L. Schmidt & A.A. Reed (1990)- Steamflood potential of light oil in deltaic deposits of Central Sumatra. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 155-178.
(Channel sands attractive steamflood target because fining-up bedding character places lower permeabilities at top, which retard steam gravity override and result in good vertical sweep. Bar sands, with coarsening-up character accentuates steam gravity override, and not attractive. With Sihapas Gp paleogeography map)

Hooze, J.A. (1892)- Verslag over de inrichting en het materieel eener kolenmijn te Sawah Loento, ter ontginning van het Soengaei Doerianveld der Oembilienkolen op Sumatra. só-Gravenhage, p. 1-77.
('Report on the design and equipment for the exploitation of the Sungai Durian field of the Ombilin coals on Sumatra'. Three coal beds in Eocene that can be mined over >4km, with thicknesses of 2m (upper), 2m (middle) and 6-7m (lower seam). Reserves sufficient for a century of production)

Hopper, R.H. (1976)- The discovery of Indonesia's Minas oilfield. In: Oil- lifestream of progress, Caltex Petroleum Corporation, p. 1-11.
(Caltex Minas field, N of Pekanbaru, C Sumatra, largest oil field in Indonesia. Discovery well drilled in 1944 by Japanese occupation army on site selected and prepared by Caltex in 1942. Large domal structure identified by shallow corehole drilling and seismic. Waxy low-sulfur crude, producing since 1952)

Houpt, J.R. & C.C. Kersting (1978)- Arun Reef, ôBô Block, North Sumatra. Proc. Indon. Petroleum Assoc. (IPA) Carbonate Seminar, Jakarta 1976, p. 42-60.
(Description of large Arun gas-condensate field in large reefal buildup of late Early- early M Miocene (Lower Tf) carbonate, N Sumatra. Area of reef complex 6 x 20 km, NNW-SSE trending, thickness up to 1200'. Entire reef complex recrystallized and diagenetically altered. Porosity mainly moldic and vugular)

Hovig, P. (1917)- De beteekenis der Zuid-Sumatrasche antiklinalen. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 2, 5, p. 233-242.
(online at: https://ia601301.us.archive.org/1/items/verhandelingenva2191geol/verhandelingenva2191geol.pdf)
('The significance of the South Sumatra anticlines'. Early discussion of relation between types of anticlines and oil occurrences in Jambi and Palembang sub-basins)

Howells, C.G. (1997)- Tertiary sedimentology and stratigraphy of the Ombilin intramontane basin, West Sumatra. Ph.D. Thesis University of London, p. *(Unpublished)*

Howells, C.G. (1997)- Tertiary response to oblique subduction and indentation in Sumatra, Indonesia - new ideas for hydrocarbon exploration. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia. Geol. Soc. London, Spec. Publ. 126, p. 365-374.
(Sumatra Tertiary basins evolution related to oblique subduction and indentation from Indo-Australian and Eurasian plates collision. Rift-sag geometry with plate-margin parallel sag basins over N-S-oriented grabens. Grabens control lacustrine source-rock distribution. Ombilin Basin three-fold evolution. Eocene sedimentation controlled by normal faults, not strike-slip, suggesting genetic relationship with N-S-oriented early Tertiary of N, C and S Sumatra Basins not local pull-apart related to Sumatra Fault Zone. Oligocene sedimentation dominated by fluvial deposition at time of active volcanism and strike-slip faulting, indicating modification of initial basin style by strike slip along Sumatra Fault Zone. E Miocene dominated by marine deposits and thermal subsidence. Uplift to present intramontane setting and differentiation from C and S Sumatra Basins in M Miocene or later. Similar genetic origin to C and S Sumatra Basins is suggested)

Hudya, F.D., A. Aimar, T. Afandi, D. Setiawan & R.S.W. Handayani (2008)- Recovery optimization strategy for thin oil column reservoir with large gas cap: case study of Gunung Kembang Field. Proc. SPE Asia Pacific Oil & Gas Conf., Perth 2008, 7p.
(Exploitation of thin (25'-40') oil rim below thick gas cap in Gunung Kembang field challenging. Horizontal oil wells in upper oil rim near gas oil contact best strategy for depletion of oil rim. Oil recovery expected to rise to ~8% while gas is being delivered)

Humphreys, B., S.J. Kemp, G.K. Lott, Bermanto, D.A. Dharmayanti & I. Samsori (1994)- Origin of grain-coating chlorite by smectite transformation: an example from Miocene sandstones, North Sumatra back-arc basin, Indonesia. Clay Minerals 29, 4, p. 681-692.
(Grain-coating chlorite cements common in late M and U Miocene sandstones of Keutapang Fm, derived from granitic, metasedimentary and extrusive volcanic lithologies at W flanks of N Sumatra back-arc basin. Cements originated as smectite-rich cement rims whose initial precipitation was related to breakdown of volcanic detritus in sediments after burial, facilitated by high geothermal gradient in back-arc basin)

Husein, S., D.H. Barianto, M.I. Novian, Akmaluddin, M.R. Wicaksono & Hendarsyah (2018)- Fluviovolcanic sedimentation of Kikim- Lahat Formation: understanding Paleogene stratigraphy of South Sumatra Basin. Proc. FOSI-IAS-SEPM Regional Seminar, Yogyakarta, Poster Presentation 6p.
(Eocene-Oligocene Kikim- Lahat Fms exposed in Garba and GumaiMts, overlain by Late Oligocene Talangakar Fm. Four Paleogene lithostratigraphic units, deposited in braided streams- deltaic environments in

lower slope of volcanic islands, with more distal facies on slope of Gumai Volcano. E-M Eocene andesites and sandstones-shales interbeds of Kikim Fm, with K-Ar age of andesites ~52 Ma. Late Eocene member quartz sandstones and conglomerates known as Cawang Mb. Early Oligocene in Garba Mts andesitic lavas and pyroclastics and tuffaceous sandstones and polymictic conglomerates in Gumai Mts (Lahat Fm))

Hutapea, O.M. (1976)- Depositional environments and their control of oil accumulation in the Abab field, South Sumatra. J. Assoc. Indon. Geol. (IAGI) 3, 1, p. 37-43.

Hutapea, O.M. (1978)- Pengembangan lapangan Benakat: suatu perangkap stratigrafi. Geologi Indonesia (J. Indon. Assoc. Geol. (IAGI) 5, 1, p. 45-57.
('Development of the Benakat field; some stratigraphic traps'. S Sumatra)

Hutapea, O.M. (1981)- Pewatasan lapisan waduk Formasi Tualang, di Merbau, Riau. Proc. 10th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 222-229.
('Traps in the Tualang Fm at Merbau, Riau')

Hutapea, O.M. (1981)- The prolific Talang Akar Formation in Raja Field South Sumatra. Proc. 10th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 251-267.
(S Sumatra Raja field 1940 discovery in Late Oligocene- E Miocene deltaic- shallow marine Talang Akar Sst)

Hutapea, O. (1998)- The Semoga- Kaji discoveries: large stratigraphic Batu Raja oil fields in South Sumatra. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 313-326.
(Semoga, Kaji and Sembada first E Miocene Baturaja carbonates discoveries on Palembang High and with stratigraphic trapping components. In Rimau Block only Talang Akar Fm had been productive. Good quality reef-related carbonate reservoir. Hydrocarbons from Talang Akar and Lemat Fm lacustrine shales, trapped by combination structural- stratigraphic controls, after initial migration into paleo-traps, then remigrating into present traps. Telisa shales acts as top seal, facies change of Baturaja carbonates acts as lateral seal)

Hutapea, O. (2002)- What makes Kaji-Semoga field so big? In: F.H. Sidi & A. Setiawan (eds.) Proc. Giant field and new exploration concepts seminar, Indon. Assoc. Geol. (IAGI), Jakarta 2002, p. 1-5.
(Extended Abstract. Small 1996 discoveries in E Miocene Baturaja Fm limestones at Semoga 1, Kaji 1 and Sembada 1 wells proved to be part of single large oil pool with recoverable reserves of ~200 MMBO. Oil below structural spill points, demonstrating stratigraphic control on hydrocarbon accumulation)

Hwang, R.J., T. Heidrick, B. Mertani, Qivayanti & M. Li (2000)- Correlation and migration studies of North Central Sumatra oils. Organic Geochem. 33, 12, p. 1361-1379.
(Tertiary lacustrine shale, Brown Shale, long recognized as main source rock for C Sumatra basin oils. Biomarker and carbon isotopic data from producing fields indicate oils quite similar geochemically. Five genetic groups distinguished based on abundance of algal marker botryococcane, relative to pristane and C29 n-paraffin, which can be tied to subtle differences in source facies. With map of kitchens and migration routes)

Ibrahim, M.I. & D. Widhiyatna (2017)- Karakteristik rekahan batubara pada eksplorasi Gas Metana Batubara di Cekungan Ombilin, Provinsi Sumatera Barat. Bul. Sumber Daya Geologi 12, 1, p. 39-53.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
('Characteristic of coal fractures for Coalbed Methane gas exploration in the Ombilin Basin, W Sumatra'. Cleat distribution in five Eocene coal seams in 451m deep CBM well. Deeper coal seam lower permeability)

Idenburg, A.G.A. (1937)- Systematische grondkaarteering van Zuid Sumatra. Doct. Thesis Landbouwhogeschool Wageningen, p. 1-168.
(online at: https://edepot.wur.nl/173449)
(‘Systematic soil mapping of South Sumatra’. With 1:500,000 map by Szemian and Idenburg)

Indah, M.S., M. Natsir, F. Suwidiyanto, Suwarto, F. Bahesti & D. Kadar (2017)- Paleoenvironment dan evaluasi lateral distribusi perangkap stratigrafi reservoir batupasir Baoung dan batupasir Belumai pada korelasi fosil

absolut integrasi 2D seismik regional, Cekungan Sumatera Utara. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
('Paleoenvironment and evaluation of lateral distribution of stratigraphic traps of Baong and Belumai sandstone reservoirs by fossil correlation integrated with regional 2D seismic, North Sumatra Basin'. Bio-sequence stratigraphic correlation study of M Miocene sandstones in N Sumatra basin)

Indarto, S., Sudaryanto & E. Soebowo (1994)- Kualitas batubara ditinjau dari kondisi geologi dan analisis proksimat di wilayah Bengkulu, Sumatra. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), 2, p. 1076-1085.
('Coal quality reviewed from geological conditions and proximity analysis in the Bengkulu region, Sumatra'. Rel. common Miocene coal deposits in Bengkulu area, with thickness of 0.25- 8.5m. Sebayar and Napal Putih fields subbituminous grade. Basalt-andesite intrusions increased grade of surrounding coals at Bukit Kandis and Air Kemumu (Bukit Sunur) deposits to High volatile bituminous C)

Indranadi, V.B., L. Sitohang & Wibisono (2011)- Unconformity-bounded stratigraphic units of the Central Sumatra basin: implication for basin history and petroleum system in Bengkalis Trough. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-442, 17p.
(Three main unconformity bounded units in Late Eocene- Pliocene of C Sumatra: (1) Kelesa Synthem: Late Eocene-Oligocene synrift sequence, equivalent to Lower Red Beds, Brown Shale, Upper Red Beds; (2) Sihapas Synthem: Late Oligocene- M Miocene post-rift, equivalent with Lakat, Tualang and Telisa Fms. Terminated by structural inversion of Binio Event in M Miocene and Barisan Mts uplift at 13 Ma; (3) Petani Synthem: M Miocene- Recent inverted basin sequence, equivalent to Binio and Korinci Fms. Binio Event local unconformity. Minas Event is youngest deformation in Plio-Pleistocene (~5 Ma))

Iqbal, M., N. Suwarna, I. Syafri & Winantris (2014)- Eo-Oligocene oil shales of the Talawi, Lubuktaruk, and Kiliranjao Areas, West Sumatra: are they potential source rocks? Indonesian J. Geoscience 1, 3, p. 135-149.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/198/182)
(Ombilin and Kiliranjao basins of W Sumatra with Eo-Oligocene lacustrine-brackish oil shales in sediments of Sangkarewang and Kiliran Fms, overlain by Sawahlunto coal measures. Kiliran Fm with freshwater molluscs Paludina, Brotia, and Thiara and Botryococcus algae. TOC 1.1- 8.1%. Maceral composition of oil shales dominated by exinite group, mainly Pediastrum-lamalginite with less Botryococcus-telalginite, liptodetrinite, sporinite, cutinite, resinite and bituminite)

Irwansyah, G. Rahmat, I. Prayitno & A. Badai (2019)- Biostratigraphy review of the Talang Akar and Gumai Formations in the North Jambi sub basin. Lemigas Scientific Contributions Oil and Gas 42, 3, p. 103-110.
(Biostratigraph of Talang Akar and Gumai Fms in outcrop section along Tiga Puluh Mountains, N Jambi Sub Basin. Talang Akar Fm witin foram zone N4 (with Globigerinoides primordius and palynolomorph Meyeripollis naharkotensis). Gumai Fm zone N8)

Irzon, R. & S. Maryanto (2016)- Geokimia batugamping Formasi Gumai dan Formasi Baturaja di wilayah Muaradua, Ogan Komring Ulu Selatan, Provinsi Sumatera Selatan. J. Geologi Sumberdaya Mineral 17, 3, p. 125-138.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/11/4)
('Geochemistry of limestones from the Gumai and Baturaja Formations in the Muaradua area, south Ogan Komering Ulu, South Sumatra')

Irzon, R., I. Syafri, I. Agustiany, A. Prabowo, P. Sendjaja & J. Hutabarat (2019)- Petrology and geochemistry of the volcanic arc Tarusan Pluton in comparison to Lolo Pluton, West Sumatra. J. Geologi Sumberdaya Mineral 20, 4, p. 199-210.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/471/416)
(Tertiary Tarusan and Lolo granitoid plutons at W coast of Sumatra both of I-type calc-alkaline series character (volcanic arc granitoid)).

Iskandar, E. (1994)- Thermometamorphose im Bukit Asam Kohlenrevier, Sudsumatra, Indonesien. Inaugural-Dissertation, Universitat Koln, p. 1-120.

('Thermal metamorphism in the Bukit Asam coal deposit, S Sumatra'. Thermal influence on Miocene coal seams up to few 100m away from E Pleistocene igneous intrusion. Coal rank increases from 0.4 Rm% (sub-bituminous) in uninfluenced area to 2.5 Rm% (semi-anthracite/anthracite) near contact))

Jacobs, S.T. (1986)- Bentayan Field: unique method of heavy oil production, South Sumatra. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 65-76.
(S Sumatra Corridor Block Bentayan Field discovered by BPM in 1932 in Talang Akar Sst. Undeveloped until 1985 due to heavy crude properties (22° API, pour point 115°F). Downhole blending with low pour point crude allows production of refinery ready product)

Jackson, A. (1961)- Oil exploration- a brief review with illustrations from South Sumatra. Contrib. Dept. Geology Inst. Technology Bandung 40, 9p.
(Brief Shell paper on S Sumatra oil exploration)

Janele, P.T., T.H. Tankersley, G.H. Schmit, B.C. Wibowo, A. Rahardja H. & W.C. Dawson (2000)- Stochastic modeling at Kotabatak Field, Central Sumatra Basin. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), 19p.
(Kotabatak oil field modeling. NE-SW trending estuarine channels in Bekasap Fm reservoirs)

Jenkins, O.P. (1930)- Test-pit exploration in Coastal Plain of Sumatra. American Assoc. Petrol. Geol. (AAPG) Bull. 14, 11, p. 1439-1444.
(Mapping of structures in Late Tertiary shales-sandstones of SE Sumatra required digging of systematically located pits below lateritic weathering surface. Very little geology)

Jenkins, S.D., Hendar S.M. & E. J. Kodl (1994)- Integrated analysis of Petani gas sands in selected fields, Central Sumatra. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 373-385.
(Seismic anomalies used to identify M-L Miocene Petani gas sands and allow areal mapping beyond the areas of well control. Anomalies integrated with structure maps, sand isopach maps, facies maps and log gas indications enable quick evaluation of small, shallow gas plays)

Johansen, S.J. & A. Djamaoeddin (2003)- Sequence stratigraphy of Bangko Field, Sihapas Group (Miocene), Central Sumatra Basin, Indonesia. AAPG Ann. Convention, Salt Lake City, AAPG Search and Discovery Art. 90013, 1p. *(Abstract only)*

Johansen, S. & H. Semimbar (2010)- Sand-rich tide-dominated deltaic systems of the Lower Miocene, Central Sumatran Basin, Indonesia. AAPG Hedberg Conference, Jakarta 2009, Extended Abstract, 8p.
(online at: www.searchanddiscovery.net/documents/2010/50255johansen/ndx_johansen.pdf)
(C Sumatran Basin >100 oil-gas fields, mainly in E Miocene Sihapas Group sand-rich, tide-dominated deltaic systems and updip fluvial equivalents. Preserved depositional systems tracts extend from updip fluvio-tidal channels into delta-front inclined tidal-marine sands and muds, then into delta front deposits interbedded with marine mudstones, sandy foram grainstones and cross-bedded glauconitic sands. Overall trend transgressive and capped by marine shales)

Jordan, C.F. & M. Abdullah (1988)- Lithofacies analysis of the Arun reservoir, North Sumatra. In: A.J. Lomando & P.M. Harris (eds.) Giant oil and gas fields, a core workshop, Soc. Econ. Paleont. Mineral. (SEPM) Core Workshop 12, p. 89-117.
(Arun gas-condensate field in N Sumatra, producing from 1100' thick E-M Miocene reefal carbonate buildup. Four facies associated with patch reef complexes. All facies in communication through microporous limestone. Diagenetic reactions creating porosity far outweigh depositional controls on porosity distribution)

Jordan, C.F. & M. Abdullah (1992)- Arun Field- Indonesia North Sumatra Basin. AAPG Treatise Petroleum Geology, Stratigraphic Traps III, p. 1-39.
(Arun largest gas field in N Sumatra basin, with initial dry gas in place of >16 TCF. Reservoir E-M Miocene reefal buildup limestone)

Julikah, Sriwijaya, J.S. Hadimuljono, R. Ginanjar, A.B. Wicaksono, Jakson A. & M. Syaifudin (2016)- Shale oil and shale gas potential of Talang Akar and Lemat/ Lahat Formations in the Jambi sub-basin. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 20-TS-16, p. 1-19.
(On unconventional oil and gas potential of Late Eocene- E Miocene shales of Jambi Basin, S Sumatra)

Julikah, Sriwidjaya, Jonathan S. & Panuju (2015)- Hydrocarbon shale potential in Talang Akar and Lahat Formations on South and Central Palembang sub basin. Scientific Contr. Oil and Gas, Lemigas, Jakarta, 38, 3, p. 213-223.
(online at: www.lemigas.esdm.go.id/publikasi/read/scientific/1/)
(S Sumatra basin with potential of shale hydrocarbons in Talang Akar and Lemat/Lahat Fms. Generally early maturity of oil (Ro = 0.6%) at ~2000m depth, oil formation (Ro 0.7-0.9%) between 2200 -3100m and formation of gas (Ro values 0.9-1.2%) at 3100-3500m. P50 assessment of non-conventional oil-gas resources up to 4200 MMBOE)

Kadar, D., R. Preece & J.C. Phelps (2008)- Neogene planktonic foraminiferal biostratigraphy of Central Sumatra Basin, Indonesia. In: Sumatra stratigraphy workshop, Duri (Riau) 2005, Indon. Assoc. Geol. (IAGI), p. 5-51.
(Well-documented study of six Late Oligocene- M Miocene planktonic foram zones in C Sumatra subsurface. Early M Miocene hiatus in Minas and other fields, called Duri event, spans zone N10)

Kalan, T., R.J. Maxwell & J.H. Calvett (1984)- Ramba and Tanjung Laban oil discoveries, Corridor Block, South Sumatra. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 365-384.
(Two oil discoveries in E Miocene Baturaja Limestone reservoirs. Ramba 1 with 57m reefal limestone, average porosity 19%, Tanjung Laban 1 has 63m limestone, 18m oil pay)

Kamal, A. (2000)- Hydrocarbon potential in the Pasemah Block, a frontier area in South Sumatra. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 49-63.
(Pasemeh Block is small intra-montane basin near Pageralam in Barisan Mts, behind Gumai Mts. Miocene stratigraphy with Talang Akar quartz sandstones and Baturaja Lst suggests it was western extension of S Sumatra basin. Surface oil and gas seeps and thermogenic hydrocarbons (incl. high-CO2 gas) in first exploration well Ruas-1 suggest working petroleum system in Muara Dua area in SE of block. Quality of seismic data poor, due to presence of young near-surface volcanics)

Kamal, A., R.M.I. Argakoesoemah & Solichin (2008)- A proposed basin-scale lithostratigraphy for South Sumatra Basin. In: Sumatra stratigraphy workshop, Duri (Riau) 2005, Indon. Assoc. Geol. (IAGI), p. 85-97.
(Description of Eocene- Pliocene stratigraphy of S Sumatra basin)

Kamili, Z.A. & A.M. Naim (1973)- Stratigraphy of Lower and Middle Miocene sediments in North Sumatra Basin. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 53-72.
(Discussion of stratigraphy and facies of E Miocene of NE Sumatra basin)

Kamili, Z.A., A. Wahab, J. Kingston, Z. Achmad, S. Sosromihardjo & C.U. Crausaz (1976)- Contribution to the Pre-Baong stratigraphy of North Sumatra. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 91-108.

Kasim, S.A. & J. Armstrong (2015)- Oil-oil correlation of the South Sumatra Basin reservoirs. J. Petroleum Gas Engineering 6, 5, p. 54-61.
(online at: www.academicjournals.org/journal/JPGE/article-full-text-pdf/E2428FD53192)
(4 groups of oil in S Sumatra Basin: (1) marine/lacustrine (low pristane/phytane), (2) terrestrially derived (high pristane/phytane ratio), (3) lacustrine oils with bimodal distribution of n-alkanes and (4) biodegraded oils. Oils distributed randomly and sourced from terrestrial TalangAkar and lacustrine Lemat/Lahat formations)

Katz, B.J. (1995)- Stratigraphic and lateral variations of source rock attributes of the Pematang Formation, Central Sumatra. Bull. Geol. Soc. Malaysia 37, p. 13-31.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a02.pdf)
(Pematang Fm of Central S basin primary or only source for 10+ billion barrels of recoverable oil. Lacustrine unit, restricted to Paleogene half-grabens. Stratigraphic controls on organic facies within Pematang. Increase in level of organic enrichment and oil-proneness toward top of unit)

Katz, B.J. & W.C. Dawson (1997)- Pematang-Sihapas petroleum system of Central Sumatra. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), p. 685-698.
(Lacustrine Pematang Group Brown Shale Fm generated 60 GB oil. E Miocene Sihapas sandstones principal reservoirs. Giant fields (Minas, Duri) principally along E margins of sub-basins. Smaller fields with Pematang nonmarine reservoirs in deeper troughs. Pematang Group in series of grabens, with basal fluvial/alluvial unit (Lower Red Bed), medial lacustrine unit (Brown Shale), upper fluvial/alluvial unit (Upper Red Bed). Pematang disconformably overlain by Menggala Fm with quartzose- subarkosic sandstones with average porosity >20% and permeability of 1500 mD. Many oil fields associated with paleohighs, drag folds, and post mid-Miocene inversion. Hydrocarbon generation initiated in Miocene and continues currently in parts of basin)

Katz, B.J., W.C. Dawson, C. Atallah, B. Gunardi et al. (1998)- Anatomy of a lacustrine source- the Brown Shale of Central Sumatra, Indonesia. AAPG Ann. Mtg., Salt Lake City 1998 *(Abstract)*
(Brown Shale Fm of Pematang Group lacustrine source rock, with oil-prone facies in more rapidly subsiding sub-basins and more distal settings. Oil-prone facies in upper portion of sequence. Multiple oil sub-families, reflecting environmental variations (water depth, salinity, etc.) and relative proportion of allochthonous organic matter. Oil sub-families geographically restricted, and associated with distinct sub-basin)

Katz, B.J. & B. Mertani (1989)- Central Sumatra- a geochemical paradox. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 403-425.
(Geochemical data from C Sumatra crude oils (Incl. biomarker, C-isotopic composition), suggest 4 distinct crude oil families, each with distinct source. However, source rock data indicate only one effective oil source rock:Paleogene Pematang Brown Shale. Facies variations hin Brown Shale may explain observed differences)

Keats, W. (1981)- Cainozoic sedimentation in Sumatra north of 3°N. In: Proc. Second Symp. Integrated geological survey of northern Sumatra. Laporan Simposium Direktorat Sumber Daya Mineral, Direct. Min. Res., Bandung, 3A, p. 87-101.
(Cenozoic stratigraphy of N and E parts of N Sumatra well established, from oil and gas exploration activities. Modified formation names proposed. Depositional model postulates presence off NW of Sumatra, of a chain of non-volcanic outer arc islands between 35/32 Ma- 18/17 Ma, similar to present Nias-Mentawai islands. E-M Miocene uplift of Asahan Arch and volcanism, mid-Miocene orogeny linked to initial opening of Andaman Sea, Late Miocene- Quaternary volcanism, and latest Plio-Pleistocene orogenic pulse)

Keil, K.F.G. (1931)- Over het ontstaan van karakteristieke kalk concreties in de Telisa-lagen aan den oostrand van het Goemai-gebergte. De Mijningenieur 12, p. 193-198.
('On the origin of characteristic calcareous concretions in the Telisa beds at the E margin of the Gumai Mountains'. Septarian nodules in E Miocene marine Telisa Fm, S Sumatra, formed by physical-chemical processes)

Kelley, P.A., B. Mertani & H.H. Williams (1995)- Brown Shale Formation: Paleogene lacustrine source rocks of Central Sumatra. In: B.J. Katz (ed.) Petroleum source rocks, Springer-Verlag, Berlin, p. 283-308.
(Review of geochemistry of M-L Eocene? organic-rich lacustrine Brown Shale Fm of Paleogene Pematang Gp. Brown Shale with fresh-water gastropods and algae. Hydrocarbon generation and expulsion from Brown Shale and Coal Zone Fms in Balam, Aman and Kiri Troughs began at ~10 Ma, followed by wet gas and condensate at ~5 Ma (earlier in Rangau and deeper Aman Troughs). Asymmetry of rift troughs drives dominant lateral migration of oil-gas towards gentle hinge margin. Minor vertical migration related to faults and fractures)

Kesumajana, A.H.P. (2009)- Pengaruh mekanisme pembentukan Cekungan tersier terhadap sejarah temperatur dan pembentukan hidrokarbon di Cekungan Sumatra Selatan. Dokt. Dissertation Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('The influence of the formation mechanism of a Tertiary Basin and temperature history and the formation of hydrocarbons in the South Sumatra Basin'. S Sumatra basin categorized as hot basin, with average of heat flow value of 108 mWm-2. Start of rifting phase in Late Oligocene (30-25 Ma) re-activating three patterns of old basement faults. Thermal modeling along 3 sections. Thermal model and gravity models indicate Moho depth at 15.6 - 19.5 km (thin crust). Heat flow increased at 15-5 Ma, with average of 117 mW/m2, corresponding with onset of Bukit Barisan volcanic activity. Early mature oil generation reached at 25.2 Ma, end of gas generation at 16 Ma. Top Oil window at 1433m depth)

Kesumajana, A.H.P., D. Noeradi, B. Sapiie & A. Priono (2010)- The role of hydrocarbon maturation modeling, a case study: South Sumatra Basin. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-147, 4p.
(Summary of thermal modeling study in S Sumatra basin from hydrocarbon maturity data. Five phases: (1) increase in heat flow during rift phase (30.5- 25 Ma), (2) decrease during sag phase (25- 20 Ma), (3) increase again due to magmatic activity (20- 10 Ma), (4) decline after cessation of magmatism (10- 1.6 Ma) and (5) final increase with final magmatic activity (1.6- 0 Ma).

Khiram, S.U., A.B. Samudra & A. Budianto (2013)- Biogenic gas exploration in Karangringin area, South Sumatra Basin, Indonesia. Proc. Joint Conv. Indon. Assoc. Geoph. (HAGI) - Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0196, 5p.
(Karangringin area with shallow gas occurrences in Late Miocene Muara Enim Fm in wells Sagu 1, Siarak 1, etc.. Main gas reservoir 7-30' thick sand layer at 935-1310' below sea level. Carbon isotopic composition of gas (δ13C) -60.38‰ for methane and for C2 -32.28 and -35.13‰, suggesting biogenic origin)

Khiram, S.U., A.B. Samudra & A. Budianto (2014)- Biogenic gas exploration in Karangringin Area, South Sumatra Basin, Indonesia. Majalah Geologi Indonesia (IAGI) 29, 1, p. 85-99.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/841)
(Same as Khiram et al. 2013)

Kingston, J. (1978)- Oil and gas generation, migration and accumulation in the North Sumatra Basin. Proc. 7th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 75-104.
(Early geochemical study of hydrocarbon generation-migration of N Sumatra Basin. Adequate source rock believed to be confined to deeper basinal areas at level of Lower Miocene shales (today most models assume Eocene lacustrine and Oligocene coaly sources; same paper as Kingston (1978) below)

Kingston, J. (1978)- Oil and gas generation, migration and accumulation in the North Sumatra Basin. SEAPEX Proc. 4, Singapore 1977/78, p. 158-182.
(N Sumatra Tertiary source rocks are deep in basin and older than lower Middle Miocene; same as Kingston (1978))

Kirby, G.A., R.J. Morley, B. Humphreys, C.J. Matchette-Downes, M.J. Sarginson, G.K. Lott et al. (1993)- A re-evaluation of the regional geology and hydrocarbon prospectivity of the onshore central North Sumatra basin. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 243-264.
(BGS/ LEMIGAS study of onshore central N Sumatra Basin. Results indicate possibility of hydrocarbons in stratigraphic traps and closures in Miocene sediments and Paleogene half-grabens which are believed to have been source kitchens. Marine mudstones poor source potential for gas only. Source rocks probably lacustrine, very mature, located in Paleogene half grabens. Oil generation began at ~11 Ma in deepest of half-grabens)

Kirby, G.A., B. Situmorang & B. Setiardja (1989)- Seismic stratigraphy of the Baong and Keutapang Formations, North Sumatra Basin. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 289-301.

(Seismic stratigraphy of M-L Miocene sandstones in Pertamina Unit I area, N Sumatra. Dominantly deltaic sequences of Keutapang Fm in S and marine Upper Baong Shale to N. Three phases of delta progradation. Clastic source directions mainly from SSW and SW, from rising Barisan Mountains. Besitang River Sst in NE from continental source in East)

Kjellgren, G.M. & H. Sugiharto (1989)- Oil geochemistry: a clue to the hydrocarbon history and prospectivity of the southeastern North Sumatra Basin, Indonesia. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 363-384.
(Oils from onshore and offshore N Sumatra basin two separate phases. Oldest severely biodegraded and probably expelled from syn-rift E Oligocene Bampo Fm. Widespread post-rift Late Oligocene- M Miocene Lower Baong/Belumai Fm is source for second and final oil phase)

Koesoemadinata, R.P. & T. Matasak (1981)- Stratigraphy and sedimentation: Ombilin Basin, Central Sumatra (West Sumatra Province). Proc. 10th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 217-249.
(Ombilin basin asymmetric intermontane basin, folded in E part. Carboniferous Limestones (Kuantan Fm), Permian volcanics (Silungkang Fm) and Triassic sediments, intruded by granites. Paleocene Sangkarewang Fm lacustrine shales with fish fossils, interfingering with Brani Fm alluvial fan conglomerates. In NW these units overlain by probably Eocene coal bearing Sawahlunto Fm. Paleogene ~2600m thick, overlain by Ombilin Fm marine clay-marls (Lower Miocene), unconformably overlain by Ranau Fm Quaternary tuffs)

Koning, T. (1985)- Petroleum geology of the Ombilin intermontane basin, West Sumatra. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 117-137.
(Sinamar No. 1 first oil exploration well in Tertiary intermontane basin in Indonesia. Ombilin Basin rel. small (~1500 km2), but up to 4600m of M Eocene -E Miocene sediments with significant depositional hiatuses. Massive debris flows and extensive alluvial fan deposits on basin margins and large Eocene lake in center. Uplift and erosion since M Miocene reduced Ombilin Basin to present area. Located in Sumatra magmatic arc, but temperature gradients cooler than Sumatra back-arc basins. Eocene lacustrine shales and Oligocene marine shales likely source rocks for hydrocarbons tested in Sinamar 1 and oil seeps along basin margins)

Koning, T. (1992)- Oil production from Pre-Tertiary basement rocks in Indonesia: examples from Sumatra and Kalimantan. AAPG Ann. Mtg. Calgary 1992 *(Abstract)*
(Beruk NE (1976) field in C Sumatra produces from pre-Tertiary basement. Beruk NE 1 tested 1680 BOD and ~2 MBO produced from metaquartzites, weathered argillites and granite. Radiometric ages E Permian- E Cretaceous. Unusual production problems due to reservoir variability, four separate oil-water contacts, and possible unrecognized water-bearing fracture systems. Tanjung field in Barito basin, S Kalimantan (1938), produced 21 MBO from Pre-Tertiary volcanics, pyroclastics and metamorphosed sandstones and claystones, locally weathered and fractured. Both fields faulted anticlines, and oil source rocks adjacent Tertiary shales)

Koning, T. & K. Aulia (2000)- Exploration in the Ombilin intermontane basin, West Sumatra. AAPG Int. Conf. Bali 2000. *(Abstract only)*
(Caltex 1984 Sinamar-1 first well in intermontane Ombilin Basin in Barisan Mts., with noncommercial oil and gas. Apache 1994 South Sinamar-1 was 1140m dry hole. Despite small area (1500 km2), up to 4600m of Tertiary sediments. Basin initially Early Tertiary intermontane trough with debris flows and alluvial fans on margins and Eocene lake in center. Uplift-erosion since M Miocene reduced original basin extent. Although in present-day magmatic arc and partially covered by volcanics, T gradients lower than Sumatra back-arc basins. Eocene lacustrine shales likely source for hydrocarbons in Sinamar-1 and two oil seeps along basin margin)

Koning, T. & F.X. Darmono (1984)- The geology of the Beruk Northeast Field, Central Sumatra; oil production from Pre-Tertiary basement rocks. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 385-406.
(Beruk NE oil field in C Sumatra discovered in 1976. Tested 1680 BOPD from Pre-Tertiary fractured metaquartzites, weathered argillites, and weathered granite. Radiometric ages mainly Jurassic- E Cretaceous. Bohorok Fm pebbly mudstone in nearby Cucut 1 well contains E-M Carboniferous flora and granitic clast with Rb-Sr age of 348±10 Ma (Visean, E Carboniferous))

Koswara, R., N. Suwarna & I. Syafri (2014)- Karakteristik dan lingkungan pengendapan batubara Formasi Muaraenim berdasarkan petrologi organik di daerah Darmo, Lawang Kidul, Sumatra Selatan. Majalah Geol. Indonesia 29, 3, p. 161-182.
('Characteristics and depositional environment of Muaraenim Formation coal based on organic petrology at Darmo area, Lawang Kidul, South Sumatra'. Petrography of Late Miocene Muara Enim Fm coal in Banko Tenga coalfield, S Sumatra basin. Mainly vitrinite, followed by inertinite and exinite. Vitrinite reflectance ~0.40-0.45% (sub-bituminous B-C rank). Depositional environment lower delta plain)

Krausel, R. (1922)- Fossile Holzer aus dem Tertiar von Sud-Sumatra. Beitr. Geol. Palaont. Sumatra 4, Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, 5, p. 231-287.
('Fossil wood from the Tertiary of South Sumatra'. Descriptions of Miocene silicified woods collected by Tobler. Up to 10m long silicified tree trunks in tuffaceous Upper Miocene Lower Palembang Fm. Some name changes suggested by Den Berger (1923))

Krausel, R. (1929)- Fossile Pflanzen aus dem Tertiar von Sud-Sumatra. Beitr. Geol. Pal. Sumatra 11, Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 9, 1, p. 1-44.
('Fossil plants from the Tertiary of South Sumatra'. Description of plants collected by Tobler from M and U Palembang Fms. Late Miocene S Sumatra forests not much different from present-day. No locality maps, stratigraphy)

Kristian, J., A.B. Samudra, O.A. Prayoga & R.A. Tampubolon (2019)- Sedimentological characteristic of Talang Akar Formation on Jambi sub-basin and its implication to tectonic setting, South Sumatra Basin. Lemigas Scientific Contributions Oil and Gas 42, 2, p. 67-74.
(online at: http://journal.lemigas.esdm.go.id/ojs/index.php/SCOG/article/view/322)

Kurnely, K., B. Tamtono, S. Aprilian & I. Doria (2003)- A preliminary study of development of Coalbed Methane (CBM) in South Sumatra. SPE Asia Pacific Oil and Gas Conf., Jakarta 2003, 6p.
(South Sumatra onshore basin assesed potential Coal Bed Methane gas 120 TCF. Not much detail)

Kurniawan, R., A. Nazamzi, D.V. Kusuma & D. Morgan (2015)- Promising small structure discoveries in mature basins: a case study in the South Aman Trough, Central Sumatra Basin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-056, 15p.
(Recent discoveries in poorly explored Oligocene Pematang Gp sandstone reservoirs in small structures within main depocenter area of S Aman Trough, C Sumatra Basin).

Kusdiantoro, F., D.H. Amijaya & J. Setyowiyoto (2018)- Basin modeling for genesis and migration pattern determination of oil and gas in Musi and surrounding area, South Sumatra Basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-69-G, 12p.
(Petroleum system modeling suggests expulsion in Benakat subbasin started at 13 Ma while in Pigi subbasin it started from 9.5 Ma. Four migration patterns in Musi High, three charged from Benakat and one charged from Pigi subbasin. Saung Naga subbasin on Musi Platform still immature until present day)

Kusnama (2002)- The significance of sedimentary rocks of the Bengkulu Basin in the development of the fore arc basin, Sumatra. J. Geologi Sumberdaya Mineral 12, 128, p. 2-13.
(Bengkulu Basin of SW Sumatra up to 3000m thick Tertiary section. Oldest exposed unit E-M Miocene marine turbiditic clastics)

Kusnama (2004)- Tertiary succession of the Gedongharta Region and its relation to the tectonics of South Sumatra. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 31, p. 14-23.

Kusnama, S. Andi Mangga & D. Sukarna (1993)- Tertiary stratigraphy and tectonic evolution of southern Sumatra. In: G.H. Teh (ed.) Proc. Symposium on the Tectonic framework and energy resources of the western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 143-152.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1993011.pdf)

Kusnama & H. Panggabean (2009)- Karakteristik batubara dan batuan sedimen pembawanya, Formasi Talangakar, di daerah Lampung Tengah. J. Geologi Indonesia 4, 2, p. 133-144.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/viewFile/75/75)
('Characteristics of coal-bearing Talang Akar Fm in the C Lampung area', SW margin S Sumatra Basin. Conglomerates and quartz sst in lower part; shale, claystone, siltstone and coal in upper part. Coal bearing unit believed to be fluvial- paralic Talang Akar Fm coaly section overlain by E-M Miocene limestone and intruded by M-L Miocene granodiorite. Basement is Gunungkasih metamorphics and Cretaceous granite)

Kusumahbrata, Y. & N. Suwarna (2003)- Characteristics of the Keruh Formation oil shale: its implication to oil shale resource assessment. In: Proc. Kolokium Energi dan Sumber Daya Mineral 2003, Puslitbang Teknologi Mineral dan Batubara, Bandung, p. 353-377.
(Eo-Oligocene organic shale in Keruh Fm along Keruh River, NW of Petai, Riau Province, SW margin of C Sumatra Basin)

Laing, J.E. & B.P. Atmodipurwo (1992)- The Dalam Sandstone deeper EOR potential in the Duri Field, Sumatra, Indonesia. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 91-112.
(Duri field in C Sumatra ~7 billion barrels oil-in-place, mostly heavy oil and only 7.5% recoverable by primary production methods. Caltex steam injection project since 1985. Evaluation of E Miocene Dalam Sst deltaic/ tidal flat reservoir interval in Bekasap Fm, Sihapas Gp)

Laing, J.E., B.P. Atmodipurow & A. Rauf (1995)- Structural evolution of the Pematang reservoirs, Kelabu Jingga Gas Fields, Sumatra. In: G.H. Teh (ed.) Southeast Asian Basins: oil and gas for the 21st century, Proc. AAPG-GSM Int. Conf. 1994, Bull. Geol. Soc. Malaysia 37, p. 55-75.
(online at: http://www.gsm.org.my/products/702001-100962-PDF.pdf)
(Kelabu and Jingga gas fields in Kiri Trough, C Sumatra Basin, producing from Eo-Oligocene fluvial-lacustrine Pematang Gp. Deposition in transtensional pull-apart grabens and shallow extensional rifts during regional tectonism associated with major plate reorganization in Pacific and Indian Oceans. Syngenetic listric faults and associated 'rollover' folds formed during rifting. Neogene, oblique convergence of Indian Ocean plate resulted in regional dextral-wrenching event in C Sumatra Basin, overprinting older extensional faulting)

Lambrecht, K. (1931)- *Protoplotus beauforti* n.g. n.sp., ein Schlangenhalsvogel aus dem Tertiar von W. Sumatra. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 17, p. 15-24.
(Long-necked bird skeleton from ?Eocene fish-rich lacustrine clays in Ombilin basin, collected by Musper in 1927. Oldest known member of Anhingidae water-bird family. With common gastroliths (= stomach stones))

Larasati, D., E.A. Subroto, H.N. Saputra & B. Syam (2013)- Source rock distribution at Jabung Block, Jambi sub-basin, South Sumatra Basin, based on well correlation. Proc. Joint Conv. 38th Indon. Assoc. Geoph. (HAGI) - 42nd Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0147, 10p.
(Source rock geochemistry on samples from wells NE Betara 1 and 5, N Geragai 2, Ripah 1 and 2.Best source potential in Late Oligocene Lower Talang Akar Fm)

Larasati, D., E.A. Subroto, H.N. Saputra & B. Syam (2013)- Geochemical characterization and oil-source rock correlation in Jabung Block, Jambi Sub-Basin, South Sumatra Basin. Proc. Joint Conv. 38th Indon. Assoc. Geoph. (HAGI) - 42nd Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0148, 12p.
(Upper and Lower Talang Akar Fms in Jabung Block (Jambi sub-basin) have oil-gas source rock potential with fair-very good organic material, reached oil maturity stage and with good geochemical correlation with oils. Rocks and oil samples contain mixture of algae and land plants, deposited in suboxic environments)

Leach, P.E. & S.K. Kartono (1990)- Pematang Bow Field, Central Sumatra: a case study of 3-D seismic as an effective reservoir management tool. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 209-224.

Lee, R.A. (1982)- Petroleum geology of the Malacca Strait contract area (Central Sumatra Basin). Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 243-263.

Lelono, E.B. (2004)- Paleogene sediment in South Sumatera - where has it gone. Lemigas Scientific Contr. 2004, 3, p. 29-37.

Lelono, E.B. (2009)- Pollen record of Early/ Middle Miocene boundary in the South Sumatra Basin. Lemigas Scientific Contr. 32, 2, p. 71-81.
(Early- Middle Miocene boundary (= boundaries of foram zones N8/ N9 and calcareous nannoplankton zones NN4/ NN5) in S Sumatra characterized by lowering of sea level (decrease in foraminiferal and calcareous nannoplankton assemblages) and climate change from wet during zone N8 to seasonal/dry climate around N8/ N9 boundary. Gradual changes to wetter climate through zone N9)

Lelono, E.B., C.A. Setyaningsih & L. Nugrahaningsih (2014)- Paleogene palynology of the Central Sumatera Basin. Lemigas Scientific Contr. Oil and Gas, Jakarta, 37, 2, p. 105-116.
(online at: www.lemigas.esdm.go.id/publikasi/read/scientific/1/)
(Pollen assemblage of Paleogene sediments in C Sumatra Basin less rich than in C Java, SE Kalimantan, S Sulawesi. Occurrences of spore Cicatricosisporites dorogensis and pollen Palmaepollenites kutchensis and Meyeripollis naharkotensis suggest most likely Oligocene age for Brown Shale and Upper Red Beds. Surprising absence of lacustrine fresh water algae Pediastrum and Bosedenia))

LEMIGAS and British Geological Survey (1993)- The North Sumatra Basin- Hydrocarbon potential of the PERTAMINA UEP-I area. 2 vols. *(Unpublished)*

LeRoy, L.W. (1939)- Some small foraminifera, ostracoda and otoliths from the Neogene ("Miocene") of the Rokan-Tapanoeli area, Central Sumatra. Natuurkundig Tijdschrift Nederlandsch-Indie 99, 6, p. 215-296.
(*Descriptions of 95 species of Miocene small benthic foraminifera and six species of ostracoda from Telisa and Palembang formations along E front of Barisan mountains)*

LeRoy, L.W. (1941)- Small foraminifera from the Late Tertiary of the Netherlands East Indies. 2. Small foraminifera from the Late Tertiary of Siberoet Island, off the West coast of Sumatra. Quarterly Colorado School of Mines 36, 1, p. 63-105.
(128 species of smaller Late Tertiary foraminifera mainly from W coast of Siberut, collected by NPPM geologists. Deep marine microfaunas, comparable to faunas from E Kalimantan)

LeRoy, L.W. (1944)- Miocene foraminifera from Sumatra and Java, Netherlands East Indies. 1. Miocene foraminifera of Central Sumatra, Netherlands East Indies. Quarterly Colorado School of Mines 39, 3, p. 1-69.
(Descriptions of 183 species of Miocene small benthic foraminifera from Telisa and L-M Palembang formations along E front of Barisan mountains. Little or no stratigraphic or locations information)

LeRoy, L.W. (1952)- *Orbulina universa* dôOrbigny in Central Sumatra. J. Paleontology 26, 4, p. 576-584.
(Lowest occurrence of planktonic foram Orbulina within Telisa Fm of C Sumatra good basal Middle Miocene marker horizon. With chart of foraminifera distribution in Telisa- M Palembang formations in Kasikan section, Barisan mountain front)

Liew Kit Kong (1995)- Structural patterns within the Tertiary basement of the Strait of Malacca. Bull. Geol. Soc. Malaysia 38, p. 109-126.
(online at: www.gsm.org.my/products/702001-100921-PDF.pdf)
(Basement of Strait of Malacca slopes gently to SW. With N-trending grabens in Malaysian waters, continuing into Sumatra, with depths of 900- 4000m. Four groups of grabens: (1) Bengkalis Trough related, (2) Pematang-Balam Trough related, (3) Asahan Arch-Kepulauan Aruah Nose related and (4) Tamiang-Yang Besar High related grabens. Grabens initiated in E Oligocene by right lateral shearing in NW-SE direction)

Lin, Y.N., K. Sieh & J. Stock (2010)- Submarine landslides along the Malacca Strait- Mergui Basin shelf margin: insights from sequence-stratigraphic analysis. J. Geophysical Research 115, B12102, p. 1-13.
(Seismic profiles over Pleistocene shelf margin of Malacca Strait-Mergui Basin NE of N Sumatra show three sediment packages interpreted as submarine landslides, aged 20-30 ka, 342-364 ka and 435-480 ka. Events occurred near times of sea-level lowstands, implying that high sediment influx during glacial periods is essential for basin-margin submarine landsliding)

Liro, L.M., W.C. Dawson & Yarmanto (1977)- Alluvial fan/ fan delta sequence stratigraphy in a structurally segmented rift basin: Sidingin Field, North Aman Trough, Central Sumatra Basin, Indonesia. In: K.W. Shanley & B.F. Perkins (eds.) Shallow marine and non-marine reservoirs, Gulf Coast Sect. SEPM, 18th Annual Bob F. Perkins Research Conf., Houston 1997, p. 171-181.
(Sidingin Field 1989 discovery at N end Aman Trough, C Sumatra. Reservoir rocks fluvial sands, interpreted to be part of alluvial fan- fan delta complex)

Lismawaty, K. Simanjuntak & A. Bachtiar (2010)- Studi provenance batupasir Formasi Sihapas daerah Gunung Tua- Sumatera Utara. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-083, 15p.
('Provenance study of Sihapas Fm sandstone, Gunung Tua area, North Sumatra')

Longley, I.M., R. Barraclough, M.A. Bridden & S. Brown (1990)- Pematang lacustrine petroleum source rocks from the Malacca Strait PSC, Central Sumatra, Indonesia. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 279-299.
(Wells on margins of Bengkalis Trough encountered Eocene-Oligocene Pematang Group lacustrine mudstones ('Brown Shale') in shallow, immature sub-basin. Oil-source correlation suggests similar lacustrine sediments in Bengkalis Trough main source of oil in area. Relative 'deep' and 'shallow' lake and marginal lake sediments encountered, with characteristic palyno- and organo- facies. Anomalous low velocity and density of Brown Shale causes distinct seismic response, which can be used to map distribution of source rock)

Longman, M.W., R.J. Maxwell, A.D.M. Mason & L.R. Beddoes (1987)- Characteristics of a Miocene intrabank channel in Batu Raja Limestone, Ramba field, South Sumatra, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 71, p. 1261-1273.
(Ramba Field produces from Lower Miocene reefal limestone buildup. Channel facies between buildups rel. tight and may act as lateral seal)

Longman, M.W., C.T. Siemers & T. Siwindono (1992)- Characteristics of low-relief carbonate mudbank reservoir rocks, Baturaja Formation (Lower Miocene), Air Serdang and Mandala Fields, South Sumatra Basin, Indonesia. In: Carbonate rocks and reservoirs of Indonesia, a core workshop, Indon. Petroleum Assoc., p. 9.1-9.11.
(Air Serdang and Mandala fields reservoirs skeletal packstones in Lower Miocene Baturaja Fm at ~1500m. Reservoir rocks common fragments of branching corals with molluscs, and benthonic foraminifers in micritic and locally quite porous matrix, deposited in carbonate mudbanks draped over basement paleohigh during E Miocene marine transgression. Low-relief channels separate carbonate mudbanks)

Lott, G.K. & Sundoro (1990)- The sedimentology of hydrocarbon reservoir rocks in Indonesia, a case study from the North Sumatra Basin. Lemigas Scientific Contr. 14, 1, Special Issue, p. 1-23.
(Marine glauconitic sandstones of Besitang River Sand Member with spectacular chlorite cements . Dominant framework grains monocrystalline quartz, feldspars and igneous and metasedimentary lithic fragments)

Lunt, P. (2019)- Partitioned transtensional Cenozoic stratigraphic development of North Sumatra. Marine Petroleum Geol. 106, p. 1-16.
(North Sumatra developed in dynamic transtensional tectonic setting, not in back-arc setting. New definitions of formation terms based on sequence stratigraphic model (NS10 to NS50 Megasequences). Stratigraphic position and extent of source rock for Arun, NSO A, NSO J and S Lho Sukon gas -condensate fields still not known)

MacGillavry, H.J. (1941)- The stratigraphy of the Baturadja region, Residency Palembang. Geological Survey Indonesia, Unpublished Report, p.
(Probably a translation of a 1930s Stanvac internal report)

MacGregor, D.S. & A.S. MacKenzie (1986)- Quantification of oil generation and migration in the Malacca Strait region Central Sumatra. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 3053-320.
(Oils in fields of Hudbay Malacca Strait PSC believed to be sourced mainly from intraformational coals in Sihapas Fm. Significant oil expulsion starts at ~125°-130° C with most expulsion at ~130-140°C)

Madon, M.B. & M.B.Ahmad (1999)- Basins in the Straits of Melaka. In: The petroleum geology and resources of Malaysia, Chapter 10, Petronas, Kuala Lumpur, p. 235-250.
(Straits of Melaka NE part of North and Central Sumatra basins and basement. N-S trending series of highs and small Oligocene- Miocene rift basins. No petroleum discoveries, but underexplored. Main risks valid traps and maturity of source rocks in grabens)

Maliki, M.A. & S. Soenarwi (1991)- South Lho Sukon-D1 discovery, North Sumatra. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 235-254.

Manaf, N.A. & N. Mujahidin (1993)- Evaluasi migrasi hidrokarbon di sub cekungan Jambi berdasar pemelajaran biomarker dan sejarah tektoniknya. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 736-746.
('Evaluation of hydrocarbon migration in the Jambi sub-basin, based on biomarker learnings and tectonic history'. N part of S Sumatra basin. Positive correlation between Talang Akar Fm source rocks and oils in Air Benakat Fm)

Mandre, D. (2000)- Coal geology of the Bengkulu Block. In: Proc. Southeast Coal Geology Conference, Directorate General of Geology and Mineral Res. Indonesia, Bandung, p.

Mangold, K.M., Erlina & E.B. Hamzah (1992)- Critical aspects of 3-D seismic surveys for field development in Central Sumatra. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 257-286.

Mangunkusumo, R.I. (1982)- Infill drilling in old fields. In: SPE Offshore South East Asia Conf, Singapore 1982, 16p.
(On infill drilling program by Stanvac in Raja and Abab old oil fields, onshore S Sumatra, to identify and recover remaining oil not drained by existing wells. Original development on 80-acre spacing did not define all hydrocarbon bearing zones nor establish all drainage points in complex Talang Akar sandstone reservoirs)

Manik, P. & Soedaldjo (1984)- Prediction of abnormal pressure based on seismic data. A case study of exploratory well drilling in Pertamina UEP I and UEP II work areas. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 507-532.

Mann, P. (2012)- Comparison of structural styles and giant hydrocarbon occurrences within four active strike-slip regions: California, Southern Caribbean, Sumatra, and East China. In: D. Gao (ed.) Tectonics and sedimentation: implications for petroleum systems, American Assoc. Petrol. Geol. (AAPG) Mem. 100, p. 43-94.
(Includes chapter on Sumatra and Gulf of Thailand, Malay and Natuna basins. Sumatra strike-slip system is trench-linked strike-slip fault accommodating strike-slip component of oblique subduction zone, which probably nucleated on weak zones in crust formed by heated and thinned crust of volcanic arc)

Manuyama, J.M.B., Nazirman & Haryoto (2004)- Characterization of reservoir carbonate and hydrocarbon potential Baturaja Formation on Nova structure, South Sumatra. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 172-180.

(Nova field in Baturaja Limestone in SW part S Sumatra basin discovered in 1998. 31 wells drilled, but 8 wells unsuccessful and 3 wells with poor flow, all due to poor reservoir quality. High porosites in reefal buildup, rel. low in platform facies)

Maridhona, H., Gumelar, M. Ricardo & Miftahurochman (2014)- New gas discovery in the Early Miocene carbonate, North Sumatra Basin, Indonesia Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-077, 10p.
(MDC-1 exploration well in onshore N Sumatra Block A discovered gas in late 2012 in E Miocene carbonate. Well ~25 MMCF gas/day)

Marpaung, L.P., B.J. Katz & M.H. Amlan (2010)- Brown shale characterization in Kiri Trough, Central Sumatra Basin. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-058, 12p.
(C Sumatra basin prolific hydrocarbons, with most oil sourced from Oligocene lacustrine shales-coal of Brown Shale Fm. Brown Shale in Kiri Trough TOC 0.7-13% for shales, mainly type III kerogen from higher plant material (pristane/phytane ratio >3). Kiri Trough Brown Shale deposited in more paludal setting than lacustrine Brown Shale of other troughs in C Sumatra. This facies of Brown Shale typically generates gas)

Marpaung, L.P., K.A. Maryunani, I.N. Suta & C. Irawan (2007)- Quantitative biostratigraphy of Jabung Block, South Sumatra Basin: a probablilistic approach for biozonation and correlation. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 317-331.
(Probabilistic analysis of Oligocene- lower Middle Miocene in ten S Sumatra wells enabled higher precision of correlation and biozonation. Palynology, foram and nannofossil micropaleontology gave 52 biostrat events, 11 of which proved reliable. An eight-biozone scheme is proposed)

Marpaung, L.P., D.H. Mulyono, A.H. Satyana, & E.A. Subroto (2005)- Oil family characterization of Jabung area, Jambi sub-basin. Proc. Joint 34th Ann. Conv. Indon. Assoc. Geol. (IAGI), 30th Indon. Assoc. Geoph. (HAGI), Surabaya, JCS2005-G087, p. 164-172.
(Oils of Jabung area mainly sourced from higher terrestrial-land plants. Shales and coals of Talang Akar are main source rocks of oils)

Marpaung, L.P., I.N. Suta & A.H. Satyana (2006)- Gumai shales of Jabung area: potential source rocks in Jambi sub-basin and their contributions to the new petroleum system. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-013, 12p.
(E-M Miocene marine Gumai shales in Jambi Basin, C Sumatra, generally low TOC, dominated by Type II and III kerogen and thermally immature to early mature. However, some oils in Jabung area show close correlation to Gumai shales, showing that shales generated oils)

Marpaung, L.P., I.N. Suta, A.H. Satyana & J.A. Paju (2008)- Gas geochemistry of Betara Complex, Jabung Area, South Sumatra Basin: genetic characterization and habitat of natural gases. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 569-580.
(Jabung area in Jambi sub-basin, N part of S Sumatra Basin, with oil and gas production since 1997 after 1995 discoveries of N Geragai and Makmur Fields, 1997 NE Betara and subsequent discoveries. Gas geochemistry shows wet thermogenic gases. Locally high CO2 gas in Lower Talang Akar Fm from thermal destruction of carbonate. Sources and reservoirs of gas encompass almost whole of Oligocene to Miocene sediments)

Martadinata, A.H. (1982)- Batupasir Beta endapatan "point bar" di ladang Dewa, Sumatera Selatan. Proc. 11th Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 81-93.
('Beta sand point bar deposits in the Dewa field, South Sumatra'. Dewa field in S Sumatra basin with 41 wells since 1971. Oil from upper Talang Akar Fm, mainly from Beta sand (76%), a NE-SW trending channel system)

Martadinata, A.H. (1999)- Gas potential of the Musi Platform, South Sumatra. In: C.A. Caughey & J.V.C. Howes (eds.) Proc. Conf. Gas habitats of SE Asia and Australasia, Jakarta 1998, Indon. Petroleum Assoc. (IPA), p. 145-151

(First field on Musi Platform in 1939 (BPM Kikim-1) discovered gas in Baturaja limestone, the main producing reservoir on platform. Over next 60 years, 20 additional wells discovered hydrocarbons: only two were oil; remainder found gas. Five types of carbonate build-up in Baturaja Fm. Exspan 1997 Soka-1 on flank of Bungur basement high substantial gas in Baturaja reefal limestone)

Martadinata, A.H. & J.H. Wright (1984)- Development of Ibul stratigraphic play, South Sumatra Basin, by integration of geologic and seismic data. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 51-62.

Martin, K. (1881)- Jungtertiare Ablagerungen im Padangschen Hochlande auf Sumatra, nach der Sammlung Hornerȏs. Sammlungen Geol. Reichs-Museums Leiden, E.J. Brill, Ser. 1, 1, p. 84-101.
(online at: www.repository.naturalis.nl/document/552440)
('Young Tertairy deposits in the Padang Highlands on Sumatra, from the collection of Horner'. Probably Miocene-age from Tanjung Ampalo, Padang Highlands, W Sumatra. 19 mollusc species, mainly bivalves)

Martin, K. (1882)- Jungtertiare Ablagerungen im Padangschen Hochlande auf Sumatra, nach der Sammlung Hornerȏs. Jaarboek Mijnwezen Nederlandsch Oost-Indie 11 (1882), Wetenschappelijk Gedeelte, p. 157-179.
(Same paper as Martin (1881) above)

Martin, K. (1928)- Mollusken aus dem Neogen von Atjeh in Sumatra. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 10, p. 1-36.
(Descriptions of Neogene molluscs from Aceh, N Sumatra, collected by 'Dienst Mijnwezen'. Indo-Pacific fauna)

Martin, K. (1928)- Concerning the Tertiary of Atcheen. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 31, 3, p. 300.
(online at: www.dwc.knaw.nl/DL/publications/PU00015579.pdf)
(One-page communication summarizing work on molluscs from ~3000m thick Pliocene deposits of N Aceh. Department of Mines collected >6000 molluscs, belonging to 347 different species. Typical Indo-Pacific fauna)

Martin, K. (1929)- Ein neues Argonautiden Geschlecht von Sumatra. Leidsche Geol. Mededelingen 3, p. 221-226.
(online at: www.repository.naturalis.nl/document/549561)
('A new Argonautid genus from Sumatra'. New octopod nautiloid shell, described as Kapal batavus, from clay nodule 500m below top of M-L Miocene Lower Palembang Beds of Pangadang, 25 km W of Sekayu, S Sumatra)

Ma'ruf, M.F., A. Arsyad, G. Crouzet, S. Handoko & F. Langitan (1996)- Improved reservoir geology model using seismic 3D and well data, a case study, Rantau Field, Indonesia. In: SPE Asia Pacific Oil and Gas Conference, Adelaide 1996, 12p.
(Reservoir geology model for part of Rantau oil field, N Sumatra. Discovered by BPM in 1929, 550 oil wells and recoverable reserves ~300 MMBO, most if which has been produced)

Maryanto, S. (2001)- Stratigrafi cekungan Tersier Bengkulu: kaitannya dengan keterdapatan batubara. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 26, p. 53-71.
('Stratigraphy of the Bengkulu Basin and links with coal'. Late Miocene- Pliocene Simpangaur Fm important coal formation. Coalification due to Pliocene (~3.5 Ma) dacite intrusions. Coal seams 30 cm- 7m thick)

Maryanto, S. (2002)- Stratigrafi formasi pembawa batubara Paleogen di Linggapura, Padangratu, Lampung. J. Geologi Sumberdaya Mineral 12, 126, p. 37-67.
('Stratigraphy of the Paleogene lower coal formation in Linggapura, Padangratu, Lampung', S Sumatra'. ~510m thick series of Oligocene- E Miocene Talangakar Fm fluvial clastics with coal at Penandingan River near Padangratu. Overlying Cretaceous granite and overlain by marine Miocene Baturaja Fm)

Maryanto, S. (2005)- Sedimentology batuan karbonat Tersier, Formasi Baturaja, di lintasan Air Napalan, Baturaja, Sumatra Selatan. J. Sumber Daya Geologi 15, 1 (148), p. 83-101.

('Sedimentology of Tertiary Baturaja Fm carbonate at the Air Napalan section, S Sumatra'. 220m thick section of E Miocene Baturaja Fm at Napalan River, NNE of Muaradua. Restricted carbonate platform at W side of S Sumatra basin. Lagoonal facies grading upward into reeal buildup)

Maryanto, S. (2007)- Petrografi dan proses diagenesis batugamping Baturaja di lintasan Air Saka, OKU Selatan, Sumatra Selatan. J. Sumber Daya Geologi 17, 1 (157), p. 13-31.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/276/247)
('Petrography and diagenetic processes of the Baturaja Fm limestone at the Air Saka section, S Sumatra'. E Miocene Baturaja Fm 247m thick in Air Saka section. Several diagenetic processes)

Maryanto, S. (2008)- Hubungan antar komponen mikrofasies lereng terumbu dan cekungan lokal terumbu belakang batugamping bioklastika Formasi Baturaja di daerah sekitar Muaradua, Sumatera Selatan. J. Sumber Daya Geologi 18, 2, p. 107-120.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/242/221)
('The relationship between the components of the reef slope and local basin microfacies of bioclastic limestones of the Baturaja Formation in the area around Muaradua, S Sumatra')

Maryanto, S. (2010)- Hubungan antar komponen mikrofasies lereng terumbu dan cekungan lokal belakang terumbu pada batugamping bioklastika Formasi Baturaja di daerah sekitar Muaradua, Sumatera Selatan. Bull. Scientific Contr. (UNPAD) 8, 1, p. 1-14.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8240/3788)
(Same paper as Maryanto (2008) on microfacies of E Miocene Baturaja Lst in Muaradua area, S Sumatra)

Maryanto, S. (2014)- Limestone microfacies of Baturaja Formation along Air Rambangnia Traverse, South OKU, South Sumatra. Indonesian J. Geoscience 1, 1, p. 21-34.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/173/173)
(~160m thick Late Oligocene- E Miocene reefal Baturaja Lst outcrop section NE of Muaradua, Garba Mts, S Sumatra, overlying Kikim Fm volcanic breccia and sandstone. With 4 facies types)

Maryanto, S. (2014)- Mikrofasies dan diagenesis batugamping Formasi Baturaja di lintasan Air Kiti, Oku, Sumatra Selatan. J. Geologi Sumberdaya Mineral 15, 2, p. 89-103.
('Microfacies and diagenesis of limestone of the Baturaja Fm in the Air Kiti section, Oku, South Sumatra'. Various reefal facies in ~150m thick limestone of E Miocene Baturaja Fm limestone in river section ~25km S of Baturaja town)

Matasak, T. & R. Kendarsi (1980)- Geologi endapan batubara di Bukit Asam, Sumatra Selatan. Bul. Dept. Geologi Inst. Teknologi Bandung (ITB) 1, p. 11-33.
(‘Geology of coal deposits at Bukit Asam, S Sumatra')

Matchette-Downes, C.J., A.E. Fallick, Karmajaya & S. Rowland (1994)- A maturity and paleoenvironmental assessment of condensates and oils from the North Sumatra Basin, Indonesia. In: A.C. Scott & A.J. Fleet (eds.) Coal and coal-bearing strata as oil-prone source rocks?, Geol. Soc., London, Spec. Publ. 77, p. 139-148.
(Five light oils-condensates from wells in N Sumatra Basin. Source facies dominantly lacustrine with subordinate ombrogenous raised peat bog paleoenvironments. Oils and condensates mature to extremely mature. Some oils mixtures of different maturities and discrete terrestrial sources)

Maulana, E., A. Sudarsana & S. Situmeang (1999)- Characterization of a fluvial oil reservoir in the Lemat Sandstone (Oligocene), Puyuh Field, South Sumatra Basin. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 83-104.
(Puyuh Field produces oil from thick Lemat Sst in four-way dip closure. Basal Lemat deposits reddish brown shale unconformably over pre-Tertiary metasediment and volcanics. Reservoir sands thin updip and shale out before reaching Bertak and Kubu. Nested fluvial channels in N-S trending depocenter on W flank of field. Updip pinchout of deeper sand forms separate stratigraphic trap. High net-to-gross (50-80%) and excellent

reservoir quality (av. perm. 300 md, 19% porosity). Sands mainly quartz with some lithics and feldspar. Clay content 8-15%. Oil lacustrine origin, 28° API gravity and requires blending with lighter oil for transportation)

Mazumder, S., I.B. Sosrowidjojo & A. Ficarra (2010)- The Late Miocene Coalbed Methane system in the South Sumatra Basin of Indonesia. In: SPE Asia Pacific Oil and Gas Conf., Brisbane 2010, SPE 133488, 29p.
(Review of S Sumatra coalbed methane (CBM) potential. Basin ranked high, but well testing still in early stages. Coal seams in Late Miocene Muara Enim Fm >3500 ft of paralic clastics, with 10-15 thick coal seams. Coals thickest and most numerous in SW half of basin (Lematang Depression, C Palembang sub-basin). Coals eroded over anticlines. Coals sub-bituminous rank (VRr = 0.35-0.46%) and composed of huminite (34-95%), liptinite (4-23%) and inertinite (0.2- 44%). Moisture content 4-21%)

McArthur, A.C. & R.G. Helm (1982)- Miocene carbonate buildups, offshore North Sumatra. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 127-146.
(Seismic mapping revealed >70 E-M Miocene Belumai Fm carbonate buildups in Mobil North Sumatra offshore area (NSO). Four oil and four gas discoveries from 12 wildcats. First gas discovery NSB-A1 in 1972. Most buildups are pinnacle-like reefs, with up to 1100' of relief and 3000 acres of areal closure, located on basement highs. Gas up to 1.5% H2S and 31% C02. High gravity, low pour point oil in NSB-L1 well)

Meckel, L.D. (2013)- Exploring a 19th century basin in the 21st century: seeing the North Sumatra Basin with new eyes. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 10464, p.
(online at: www.searchanddiscovery.com/documents/2013/10464meckel/ndx_meckel.pdf)
(Argues that 'mature' North Sumatra Basin still has significant hydrocarbon exploration potential)

Meckel, L.D. (2013)- Late syn-rift turbidite systems in the North Sumatra Basin. Berita Sedimentologi 27, p. 15-17.
(online at: www.iagi.or.id/fosi/files/2013/08/BS27-Sumatera_Final.pdf)
(Offshore N Sumatra Basin gas play in Miocene Bampo Fm turbidite systems)

Meckel, L., M. Gidding, M. Banukarso, D. Sim, A. Setoputri, A. Abimanyu, M. Sompie, N. Citajaya & M. Gunarto (2012)- Hydrocarbon systems of the offshore North Sumatra Basin, Indonesia. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-012, p. 1-11.
(Offshore North Sumatra Basin considered under-explored, with 130 offshore exploration wells drilled through 2011. At least 5 plays, syn-rift Oligocene clastics (Parapat Fmn), Oligocene-Miocene carbonate build-ups (Tampur and Peutu Fms), and Miocene-Pliocene turbidites (Bampo, Baong, Keutapang, and Seurula Fms))

Mertosono, S. (1975)- Geology of Pungut and Tandun oil fields, Central Sumatra Basin. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 156-179.
(Pungut and Tandun oil fields in Riau Province, C Sumatra, ~65 km NW of Pekanbaru, with oil in structural closures in Lower Miocene sandstone reservoirs. Fields different structural styles and may be separated by right-lateral fault. Broken-up by complex system of faults, creating blocks with different oil-water contacts)

Mertosono, S. & G.A.S. Nayoan (1974)- The Tertiary basinal area of Central Sumatra. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 63-76.

Miftah, A. & D. Hernadi (1993)- Tinjauan geologi pada perencanaan EOR dalam upaya meningkatkan perolehan minyak sekunder di struktur Kuala Simpang Barat, Lapangan Rantau. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 781-792.
('Geological review for EOR planning in an effort to increase secondary oil recovery in the Kuala Simpang Barat structure, Rantau Field'. On secondary oil recovery in M-L Miocene clastics in Rantau field, N Sumatra. With facies map of Lower Keutupang Sst)

Mijnwezen personnel (W.F.F. Oppenoorth, J. Zwierzycki, G.A. Hogenraad et al.) (1918)- Verslag over het onderzoek der Tertiaire petroleumterreinen in de onderafdeelingen Bireuen, Lho Seumawe en in een gedeelte

van Lho Soekon, ter Noordkust van Atjeh (Terrein 'Atjeh I'). Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen 1, p. 208-275.
('Report on investigation of the Tertiary petroleum terranes in the sub-districts Bireuen, Llho Seumawe and part of Lho Soekon, N coast of Aceh (Aceh I)', N Sumatra. Overview of stratigraphy, descriptions and maps of 19 anticlinal structures, oil seeps, etc. from 1913-1917 mapping program. (Map XIV suggests likely principal authors W.F.F. Oppenoorth, J. Zwierzycki and G.A. Hogenraad; JTvG))

Mitchel, R.G., B. Subiyanto & I. Arif (2006)- High-density 3D seismic for better reservoir development in CSB, Sumatra. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-047, p.

Moestopo H.S., E. Jacobs, H. Nur, M. Reinhold, Y. Pramudyo & K. Purwanto (2007)- Utilize geosteering in horizontal wells to maximize value in mature fields, Central Sumatra, Indonesia. In: Soc. Petrol. Engineers (SPE) Asia Pacific Oil and Gas Conf. Exhib., Jakarta, 11p.
(Horizontal wells drilled by Chevron in C Sumatra Basin, mainly in Bekasap and Menggala sandstone reservoirs of 1960's Petani and Bekasap oil fields)

Morley, R.J. (1982)- A palaeoecological interpretation of a 10,000 year pollen record from Danau Padang, Central Sumatra, Indonesia. J. Biogeography 9, p. 151-190.

Morton, A.C., B. Humphreys, D.A. Dharmayanti & Sundoro (1994)- Palaeogeographic implications of the heavy mineral distribution in Miocene sandstones of the North Sumatra Basin. J. Southeast Asian Earth Sci. 10, 3-4, p. 177-190.
(Heavy minerals record changes in provenance in N Sumatra Basin. E Miocene Belumai Mb (Peutu Fm) sandstones derived from granitic terrain in E or SE. Uplift of Barisan Mts in early M Miocene led to introduction of sand from W or SW (Keutapang Fm), from metamorphosed pelitic rocks intruded by granites. Contemporaneous intermediate- acidic volcanic rocks also involved. Chrome spinel abundant in Lower Keutapang but rare in Upper Keutapang Mb, indicating ultramafic rocks important component of Barisan Mountain source in M Miocene, but insignificant by Late Miocene)

Moss, S.J. & A. Carter (1996)- Thermal histories of Tertiary sediments in western Central Sumatra, Indonesia. J. Southeast Asian Earth Sci. 14, 5, p. 351-371.
(AFT and OM data suggest Tertiary sediments exposed in Ombilin Basin have low-medium thermal maturities (Ro-average 0.39–0.50%). This suggests outcrops studied were not part of main Paleogene-Neogene graben system that was subsequently inverted, but likely represent marginal, rift shoulder sedimentation)

Moss, S.J. & C.G. Howells (1996)- An anomalously large liquefaction structure, Oligocene, Ombilin Basin, West Sumatra, Indonesia. J. Southeast Asian Earth Sci. 14, 1-2, p. 71-78.

Moulds, P.J. (1989)- Development of the Bengkalis Depression, Central Sumatra and its subsequent deformation- a model for other Sumatra grabens? Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 217-245.
(Bengkalis Depression N-S Paleogene graben complex: chain of interconnected lozenge-shaped depressions with several side grabens. Formed by extension, with complexities related to basement inhomogeneities. Neogene-Recent compression caused uplift, erosion and destruction of graben and its fill, progressively from S. Compression and tectonic overprinting of earlier extension produced major basement block uplift, normal fault rejuvenation and strike-slip faulting. Interplay of lines of basement weakness with structural grain and compression have produced variety of features: en echelon folds, chains of anticlines and Sunda Folds)

Mount, V. & J. Suppe (1992)- Present-day stress orientations adjacent to active strike-slip faults: California and Sumatra. J. Geophysical Research, Solid Earth, 97, B8, p. 11995-12013.
(Present-day stress directions from well bore breakouts near crustal-scale strike-slip faults (San Andreas in California and Great Sumatran fault in Sumatra) indicate maximum horizontal stress direction (SH) at high angle (70°-90°) to both faults. Young deformation from C and S Sumatra, as determined from borehole

breakouts in Stanvac wells, is compressional, indicating decoupling of strike-slip and compressional components of deformation within broadly transpressive zones)

Mucharam, L., W. Nugroho & K. Wibisono (2012)- Improve oil recovery for heavy oil by chemical treatment implementation as an alternative, case study Bentayan Field. In: SPE EOR Conference at Oil and Gas West Asia, Muscat, Oman, Soc. Petrol. Engineers (SPE), 1, SPE 154763, p. 570-576.
(Bentayan field in NE part of S Sumatra basin discovered in 1932. Heavy, paraffinic oil in U Talang Akar Fm fluvial sandstones. Oil gravity of 17°API and viscosity of 82.2 cp at reservoir temperature lead to low recovery factor (14%). Chemical treatment implemented to reduce viscosity of oil)

Muhartanto, A. & E. Iskandar (2006)- Penentuan peta sebaran potensi GMB (sweet spot area) di daerah Bukit Asam, Sumatra Selatan. Bull. Ilmiah Mineral dan Energi (MINDAGI; Trisakti) 10, 1, p. 27-54.
(online at: www.journal.trisakti.ac.id/index.php/MINDAGI/article/view/115/110)
('Determination of potential coalbed methane sweet spot areas in the area of Bukit Asam, South Sumatra'. Determination sweet spot areas, based on: (1) depth range of economic coal bed methane (250- 1000 m); (2) thick coal layers (>5m); and (3) vitrinite reflectance between 0.3- 0.4%. CBM can be economically explored with minimum thickness of 86m)

Mujito, S. Hadipandoyo & J.B. Rachmat (1990)- Middle Baong Sandstone turbidite play, North Sumatra Basin, Indonesia. In: CCOP/WRGA Play modelling exercise 1989-1990, CCOP Techn. Publ. 23, p. 17-38.
(Description and hydrocarbon assessment of M-L Miocene Middle Baong Sst deepwater sand play, N Sumatra)

Mujito, S. Hadipandoyo & T.H. Sunarsono (1990)- Hydrocarbon resources assesment in the North Sumatra Basin. Lemigas Scientific Contr. 14, 1, Spec. Issue, p. 68-86.
(same as Mujito et al. 1990, below)

Mujito, S. Hadipandoyo & T.H. Sunarsono (1990)- Hydrocarbon resources assesment in the North Sumatra Basin. United Nations CCOP Techn. Bull. 21, p. 97-116.
(Lemigas assessment of undiscovered oil and gas in four plays in N Sumatra basin. Keutapang Wedge Top Play ranked highest, with undiscovered oil ranging from 0.37- 504 MMBO)

Mukherjee, A.N. (1935)- Ein Beitrag zur Kenntnis der pliocanen Braunkohle des Tandjoeng Kohlenfeldes Palembang, Sud-Sumatra. Dissertation Sachsischen Bergakademie Freiburg, p. 1-30.
('A contribution to the knowledge of the Pliocene lignites of the Tanjung coalfield, Palembang, S Sumatra'. Early Pliocene Middle Palembang Fm lignites at Bukit Asam locally altered into coal- anthracite by heat from andesite intrusion. Coals composed of wood (incl. palm), cork, amber, leaves and cuticles, fungi, pyite. Good thin section photos)

Muksin, N., D. Yusmen, R. Waren, A. Werdaya & D. Djuhaeni (2012)- Regional depositional environment model of Muara Enim Formation and its significant implication for CBM prospectivity in South Sumatra Basin, Indonesia. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 80272, p. 1-9.
(online at: www.searchanddiscovery.com/documents/2012/80272muksin/ndx_muksin.pdf)
(Late Miocene Muara Enim Fm of S Sumatra widespread coals, deposited on tide dominated coastal plain. With CBM potental)

Mulhadiono (1976)- Depositional study of the Lower Keutupang sandstone in the Aru area, North Sumatra. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 115-132.
(U Miocene Lower Keutupang sands in coastal and shallow marine facies. Sourced from SE (Barisan Mts))

Mulhadiono & S. Asikin (1989)- The pull-apart basin offshore Bengkulu promises attractive exploration ventures. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral and hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 271-289.
(Bengkulu offshore forearc basin Oligo-Miocene pull-apart feature that may be attractive for exploration. Nine wells by Marathon and Aminoil, mostly away from kitchen areas. Oil and gas shows in wells, and seeps around

Bengkulu town. Early and Late or M Miocene carbonates. Oligocene volcanics 'basement'. Traditionally thought to be 'cold' basin, but wells suggest normal T gradients?)

Mulhadiono, P. Hartoyo & P.A. Soedaljo (1978)- The Middle Baong Sandstone Unit as one of the most productive units in the Aru area, North Sumatra. Proc. 7th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 107-132.
(M Miocene (N13-N14) sandstone in middle part of Baong Fm oil-bearing at Tabuhan Barat, Telaga Said, Darat oil Fields, and also at new Besitang discovery)

Mulhadiono, R.P. Koesoemadinata & Rusnandar (1982)- Besitang River sand as the first turbidite reservoir in Indonesia. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 265-298.
(Productive M Miocene (zone N14) Besitang River sands in M Baong Fm, Aru area, N Sumatra, are turbidites within marine shale sequence. Fluid properties and production performance encourage further potential in structural and stratigraphic traps)

Mulhadiono & Marinoadi (1977)- Notes on hydrocarbon trapping mechanism in the Aru area, North Sumatra. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 95-115.
(N Sumatra Lower Baong and Pre-Baong are best source rocks. Vertical migration important in trapping of hydrocarbon in Aru area)

Mulhadiono & J.A. Sutomo (1984)- Determination of economic basement of rock formation in exploring the Langkat-Medan area, North Sumatra Basin. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 75-108.
(In N Sumatra basin favourable reservoirs in E Miocene Belumai Fm, but Pre-Belumai rocks, especially "Basal Sandstone" strongly affected by diagnesis, have very low porosity, and should be considered "economic basement". 'Basal Sandstone' belongs to Permo-Triassic-Jurassic Kualu Fm)

Mulyana, B. (2005)- Tektonostratigrafi Cekungan Ombilin Sumatera Barat. Bull. Scientific Contr. (UNPAD) 3, 2, p. 92-102.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/7455/3416) (without figures)
('Tectonostratigraphy of the Ombilin basin, West Sumatra'. Ombilin Basin intramontane basin in Barisan Mts. Basement two parts: Mergui terrane (with Permian Silungkang Fm limestone) and Woyla terrane. Early Paleogene Ombilin Basin rifting in transtensional setting along Sitangkai and Silungkang faults)

Mulyana, B. & R.M.G. Gani (2015)- Litostratigrafi Cekungan Ombilin dalam kerangka tectono-sedimentation rift basin. Bull. Scientific Contr. (UNPAD) 13, 2, p. 93-99.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8393/3903)
('Lithostratigraphy of the Ombilin Basin in a framework of tectono sedimentation in rift basin'. Paleo-Eocene Brani and Sangkarewang Fms and Oligocene Sawahlunto and Sawahtambang Fms deposited in terrestrial to transition zone during syn-rift phase. E-M Miocene Ombilin and Late Miocene Ranau Fms, dominated by volcanic deposits, formed in post-rift phase with marine influence)

Mundt, P.A. (1983)- Miocene reefs, offshore North Sumatra. In: Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 6, p. 1-9.
(Mobil exploration and appraisal program for Miocene pinnacle reefs in NSB area off N Sumatra. Up to 70 reefs mapped in area of 1800 km2 on Malacca Shelf. Twelve wells resulted in 8 discoveries. Gas reserves 2 TCF in four fields. Gas contains 1-15% H_2S and 28-31% CO_2)

Murphy, J. (1993)- The sedimentology of the Early Miocene, Lower Sihapas Sandstone reservoirs in the Kurau Field, Malacca Strait PSC, Central Sumatra Basin, Indonesia. In: C.D. Atkinson et al. (eds.) Clastic rocks and reservoirs of Indonesia: a core workshop, Indon. Petroleum Assoc. (IPA), p. 37-57.
(Well MSBG-1 Early Miocene Lower Sihapas fluviodeltaic sands. Cored complete single parasequence exhibiting a 110' thick progradational cycle from delta front through tidal flat to distributary channel deposits

capped by channel abandonment facies. Sediments deposited in tide- dominated delta, with repeated stacking of reservoir units. This is discovery well of Kurau Field with >150 MBO in place)

Murray, A.M., Y. Zaim, Y. Rizal, Y. Aswan, G.F. Gunnel & R.L. Ciochon (2015)- A fossil gourami (Teleostei, Anabantoidei) from probable Eocene deposits of the Ombilin Basin, Sumatra, Indonesia. J. Vertebrate Paleontology 35, 2, e906444, p. 1-11.
(New fish fossil material from freshwater deposits of Eocene(?) Sangkarewang Fm, Datarmasiang-Tanahsirah Main Quarry, Talawi, Ombilin Basin, W Sumatra. Includes new small anabantoid fish, here named Ombilinichthys yamini n.gen., n.sp.. Closely related to Osphronemus)

Murray, A.M. (2019)- Redescription of *Barbus megacephalus* Gunther, 1876 and *Thynnichthys amblyostoma* von der Marck, 1876 (Cypriniformes: Cyprinidae) from probable Eocene deposits of Southeast Asia, and an assessment of their taxonomic positions. J. Systematic Palaeontology 17, 17, p. 1213-1235.
(Two fossil cyprinid fishes from Eocene of Ombilin Basin, Sumatra, first described in 1876 as new species in extant genera. Barbus megacephalus Gunther and Thynnichthys amblyostoma von der Marck re-described and placed in new genus (Sundabarbus megacephalus, Padangia amblyostoma))

Musgrove, F.W. & A.C. Sunaryo (1998)- Compression or strike slip along the North Sumatra mountain front: controls on fracture permeability. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-15.
(Production rates at Pase A field controlled by tectonically induced fractures in tight limestone reservoir. Area may have had transpressive deformation associated with oblique plate collision nearby. Much support for dominantly compressional tectonic model, little evidence for strike slip after reservoir was deposited)

Musper, K.A.F.R. (1935)- Die fischfuhrende Breccien- und Mergelschieferabteilung des Tertiars der Padanger Hochlande (Mittel-Sumatra). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 11, 2, p. 145-188.
('The fish-bearing breccia and marl-shale series of the Padang Highlands (C Sumatra)'. Detailed description of area containing Paleogene lacustrine marly shales with famous fresh-water fish fossils near Talawi village on Ombilin River)

Musper, K.A.F.R. (1936)- Einige Bemerkungen zur fossilen Fischfauna von Padang (Sumatra). De Ingenieur in Nederlandsch-Indie (IV) 3, 4, p. 70-74.
('Some remarks on the fossil fish fauna from Padang (Sumatra)'. Critique of Sanders (1934) monograph of Eocene fresh or brackish water fish fauna)

Musper, K.A.F.R. (1938)- Fundorte und stratigraphisches Lager neuer Aufsammlungen Tertiarer Landpflanzen- besonders Kiezelholzreste auf Sumatra und Java. De Ingenieur in Nederlandsch-Indie (IV) 5, 12, p. 169-181.
(Localities and stratigraphic position of new collections of Tertiary land lants- particularly silicified wood remains on Sumatra and Java'. 2020 samples of Tertiary plants and wood from C Sumatra (Padang Highlands, Indragiri), S Sumatra (SW of Palembang) and W Java)

Musper, K.A.F.R. (1939)- Kritische Betrachtungen uber Herkunft und genaueres Alter der aus dem Tertiar Niederlandisch-Indiens beschriebenen Holzer. Natuurkundig Tijdschrift Nederlandsch-Indie 99, 1, p. 1-21.
(online at: http://62.41.28.253/cgi-bin/...)
('Critical notes on the origin and precise ages of Tertiary wood fossils described from Netherlands Indies'. On locations (S Sumatra, Java) and ages (mainly Miocene) of 30 petrified wood species)

Musu, J.T., B. Widarsono, A. Ruswandi, H. Sutantog & H. Purba (2015)- Determination of shale gas potential of North Sumatra Basin: an integration of geology, geochemistry, petrophysics and geophysics analysis. Scientific Contr. Oil and Gas, Lemigas, Jakarta, 38, 3, p. 193-212.
(online at: www.lemigas.esdm.go.id/publikasi/read/scientific/1/)
(In N Sumatra basin potential for shale play with gas sweet spots in Bampo, Belumai and Baong Fms. Total shale gas resource estimated at 48.4 TCF gas)

Nabasir, A., Andriyani S., Hendar S.M., Haruji M.P. & Subagio (1999)- Integrated study of the Telisa shaly sand in the Bangko Field, Central Sumatera Basin. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 59-77.
(E Miocene Telisa Fm shale in Bangko Field contains minor shaly sand oil reservoir. Typically thinly laminated, low permeability. Productivity can be improved by hydraulic fracturing)

Napitupulu, H. & W.S. Sadirsan (2000)- The origin of light oil and condensates in the Musi Block- South Sumatra Basin. AAPG Ann. Mtg. New Orleans 2000, p. *(Abstract only)*
(S Sumatra Basin oil, biomarker, carbon isotope analyses show hydrocarbons mainly from Talang Akar- Lahat Fms terrestrial source rock. Light oil and condensate formed by evaporative fractionation. Oil formed and trapped in lower formation, then light fraction migrated into overlying limestone reservoir. This process responsible for hydrocarbons in Musi and Klingi fields, located in basement high area 20 km W of kitchen)

Nasution, F. & S. Nalendra (2017)- Characterization of coal quality based on ash content from M2 coal-seam group, Muara Enim Formation, South Sumatra Basin. J. Geoscience Engineering Environm. Technol. (JGEET) 2, 3, p. 203-209.
(Discussion of M-L Miocene coals of M2 horizon (Petai, Suban and Mangus coals) in Muara Enim Fm of Bukit Kendi coalfield, S Sumatra. Average ash content of Seam C 6%, Seam B 5%, and Seam A2 3.8%)

Natasia, N., I. Syafri, M.K. Alfadli & K. Arfiansyah (2016)- Stratigraphy seismic and sedimentation development of Middle Baong Sand, Aru Field, North Sumatera Basin. J. Geoscience Engineering Environm. Technol. (JGEET) 1, 1, p. 51-58.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/7/299)
(Three sequences in M Miocene Baong deep marine sands in N Sumatra basin. Clastic deposits interpreted to come from S-SW, from Barisan Mts that started uplift at this time)

Natasia, N., I. Syafri, M.K. Alfadli & K. Arfiansyah (2017)- Analisis fasies reservoir A Formasi Menggala di lapangan Barumun Tengah, Cekungan Sumatra Tengah. Bull. Scientific Contr. (UNPAD) 15, 2, p. 139-149.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/13387/pdf)
('Facies analysis of the Menggala Formation A reservoir in the Central Barumun field, Central Sumatra Basin'. Tidal flat and lagoonal facies in E Miocene sandstones in BT-1 and BT-3 wells in NW-most part of Central Sumatra basin (Tonga PSC?))

Natsir, M., T. Nasiruddin & N. Hasani (2010)- Rejuvenation of Niru: an integrated subsurface re-interpretation. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-103, 8p.
(S Sumatra Niru field 1949 BPM discovery on flank Limau anticlinorium. Peak production of 6000 BOPD reached in 1958. 2006 step-out drilling found additional reservoir on flank, significantly increasing production)

Nayoan, G.A.S., D. Arpandi & M. Sumawa (1984)- Geological notes on hydrocarbon occurrences in the carbonate rocks of the Belumai Formation, North Sumatra, Indonesia. In: The hydrocarbon occurrence in carbonate rocks, Proc. Joint ASCOPE/CCOP workshop, Surabaya 1982, ASCOPE, Jakarta, p. 383-405.

Nazar, M.A.A. & J. Setyowiyoto (2013)- The sand-rich tide dominated delta model of Bangko Formation in "AB" area using high-resolution sequence stratigraphy and ichnofacies analysis. J. Teknik Geologi (UGM) 1, 2, 14p.
(online at: lib.geologi.ugm.ac.id/ojs/index.php/geo/article/download/34/31)
(Model for E Miocene Bangko Fm deltaic deposition from logs and core of 134 wells in "DR" field (= probably Duri; JTvG), C Sumatra basin. Tide-dominated delta, with main sediment source from Sundaland in NE. With ichnofacies model)

Nelson, H.F., M. Abdullah, C.F. Jordan & A.J. Jenik (1982)- Petrography of the Arun gas field, Aceh Province, Indonesia. In: Joint ASCOPE/CCOP Workshop on hydrocarbon occurrences in carbonates, Surabaya 1982, 38p.

Nicholson, R.A. & S. Soekapradja (1990)- Organic geochemical studies in the North Sumatra Basin. Lemigas Scientific Contr. 14, 1, Spec. Publ., p. 45-67.
(Any one of several Tertiary sediment formations in N Sumatra basin may be responsible for sourcing of hydrocarbon reserves)

Ningrum, N.S. & B. Santoso (2009)- Petrographic study on genesis of selected inertinite-rich coals from the Jambi subbasin. Indonesian Mining J. 12, 3, p. 111-117.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/553/415)
(Coals of fluvio-deltaic Late Oligocene Talangakar Fm in Jambi Subbasin both rich in vitrinite (56-77%) and inertinite (17-36%). Vitrinite content associated with bright lithotype deposited in wet-swampy area; inertinite associated with dull lithotype from dry-swampy area. Vitrinite reflectance 0.45-0.47% (subbituminous). Low-medium sulphur (most Sumatra coals <5% inertinite and >80% vitrinite))

Noeradi, D., Djuhaeni & B. Simanjuntak (2005)- Rift play in Ombilin Basin outcrop, West Sumatera. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 39-52.
(Ombilin Basin Eo-Oligocene half-graben in Barisan Mts. Two wells drilled in 1983 (Sinamar-1, TD 3020m) and 1994 (S Sinamar 1), both on inversion structures and with hydrocarbon shows in cuttings. Abundant Paleogene reservoir potential, but reservoir quality questionable)

Norman, T., M. Willuweit, D. Hernadi & E. Rukmono (2006)- Example of applied stochastic modeling in a mature field, a case study in Zamrud Field, Central Sumatra, Indonesia. In: 68th EAGE Ann. Conf. Exh., Vienna, P342, 5p. *(Extended Abstract)*
(3D model of E Miocene clastic reservoirs in Zamrud field 90 km E of Pekanbaru, in SE part of C Sumatra Basin. Discovered in 1975, production began in 1982)

Nugraha, R., B. Abrar & D. Hernadi (2007)- Pemodelan geologi untuk pengembangan lapangan Beruk North, Blok Coastal plains, Pekanbaru. Proc. Simp. Nas. IATMI, UPN ôVeteranö, Yogyakarta 2007, TS-02, 11p.
(online at: http://elib.iatmi.or.id/uploads/IATMI_2007-TS-02_Reza_Satria_Nugraha,_BOB_PT.pdf)
(3-D geological model of 1985 North Beruk Field, Coastal Plains Block, Central Sumatra)

Nugroho, S.B., Y. Hartono & R.N. Ardianto (2010)- Integrated geology, geophysics and petrophysics data to describe lateral and vertical reservoir heterogeneity to optimize field development plan Limau Field, South Sumatra Basin, Indonesia. In: Proc. SPE Int. Oil and Gas Conf. Exhibition in China, Beijing 2010, 22p.
(Integrated 3D model of E Miocene Talang Akar Fm sandstone reservoirs of Limau oil field, Prabumulih, S Sumatra Basin, discovered by BPM in 1951 and still producing. Original oil in place 823 MMBO, cumulative production 265.4 MMBO))

Nugroho, S.B. & U.B. Santoso (1999)- Using the resistivity and GR log to guide slimhole drilling on 415 m horizontal section of 3 to 5 m thick oil rim between gas cap and water zone within the Baturaja Limestone; an example from Musi-28 Well, Prabumulih, South Sumatera. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 147-158.

Nukman, M. & I. Moeck (2013)- Structural controls on a geothermal system in the Tarutung Basin, north Central Sumatra. J. Asian Earth Sci. 74, p. 86-96.
(Fault pattern in Tarutung Basin generated by compressional stress at high angle to right-lateral Sumatra Fault system. NW-SE striking normal faults possibly related negative flower structures and NNW-SSE to NNE-SSW oriented dilative Riedel shears are preferential fluid pathways. ENE-WSW striking faults act as barriers)

Nur'aini, S., S. Martodjojo, F.W. Musgrove & J. Bon (2000)- Deep-water basin floor fans of the Lower Baong Formation, a new exploration objective, offshore North Sumatera. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 177-184
(Good quality M Miocene sands penetrated on Malaka Shelf in Transgressive System Tract (TST) sheet sands, and will only be trapped structurally. Thick deep-water basin floor fans interpreted past shelf-slope break

potential large stratigraphic traps. Prospective stratigraphic traps ideally located next to Lho Sukon Deep kitchen, which sourced most of N Sumatra gas. Primary risk is updip seal of stratigraphic traps)

Nur'aini, S., S. Martodjojo, F.W. Musgrove & J. Bon (2001)- Revisiting the Middle Baong sand: basin floor fan or slope fan in origin? Berita Sedimentologi 15, p. 6-9.
(Late M Miocene (N11-N12, NN5) Middle Baong Sand interpreted as basin floor fan. First turbiditic reservoir in Indonesia)

Nur Hasjim, Panuju, Buskamal & Purwatinah (1994)- Biostratigrafi dan korelasi zonasi nannoplankton terhadap zonasi foraminifera besar, Cekungan Sumatera Selatan. Proc. Diskusi Ilmiah VIII, PPPTMGB Lemigas. p. 1-8.
('Biostratigraphy and correlation of the nannoplankton zonation to the larger foraminifera zonation in the South Sumatra Basin')

Nuryadin, H., F. Kamil, A. Kamal & R.M.I. Argakoesoemah (2006)- A challenge and future potential of basal clastic play in Paleo-Basement high, Musi Platform, South Sumatra Basin. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-PG-23, p. 1-5.
(Musi Platform traditional objective Baturaja carbonates. Most exploration wells drilled basement. Some have thin Basal Clastics unit, possibly equivalent to U Talang Akar Fm. Hydrocarbon potential of basal clastic play shown by tests in Soka F-2, Kembar-1 and Fariz-3. Reservoir quality variable. Play mostly combination stratigraphy- structure)

Oetary N., R. Waren, E. Finaldhi, M.I.S. Haris & D. Nugroho (2016)- Reservoir prospectivity of synrift lacustrine system in Central Sumatra Basin. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-394-SG, 12p.
(Seismic facies and well log study of lacustrine- fan delta facies of U Pematang Fm in N Aman Trough)

Oksuanandi, R., Y.F. Yeni, I.M. Gunawan, R. Bramantyo, C.K.L. Nainggolan & A.A. Raihan (2015)- Facies distribution and reservoir characterization of the 2060'SD, Bekasap Formation, Sabak Field, Central Sumatra Basin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-197, 13p.
(Sands in E Miocene Bekasap Fm in Sabak Field NE-SW trending tide-dominated estuarine channel deposits)

Oostingh, C.H. (1941)- Over de Tertiaire molluskenfauna van Palembang. De Ingenieur Nederl.-Indie (IV), 8, 3, p. 21-29.
(‘On the Tertiary mollusc fauna from Palembang’. Three faunasof bivalves and gastropods distinguished: Lower Telisa (21 species), basal Lower Palembang and typical Lower Palembang (52 species))

OôShea, N.E., A. Bettis, Y. Zaim, Y. Rizal, A. Aswan, G.F. Gunnell, J.P. Zonneveld, R.L. Ciochon (2015)- Paleoenvironmental conditions in the late Paleogene, Sumatra, Indonesia. J. Asian Earth Sci. 111, p. 384-394.
(Open pit mine in Ombilin basin, Barisan Mts, C Sumatra, with stratified paleosol sequence in latest Eocene or Oligocene providing record of paleoenvironmental conditions in fluvial-estuarine setting. Tropical, highly productive lowland forest)

Oppenoorth, W.F. (1918)- Foraminiferen van de Noordkust van Atjeh. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 2, p. 249-258.
(‘Foraminifera from the North coast of Aceh’. At several localities limestone at base of Neogene, rich in Lepidocyclina (Nephrolepidina) spp., also Miogypsina, Cycloclypeus. Associated Lepidocyclina (Eulepidina) may be Trybliolepidina. Interbedded with marls with Orbulina universa (Age assumed to be E Miocene/ Aquitanian, looks more like Middle Miocene; JTvG))

Panggabean, H. (2005)- Characterization of micro-cleats on coal seams of the Muaraenin Formation using Scanning Electron Microscope (SEM). Indonesian Mining J. 8, 2, p. 23-39.
(see also Permana and Panggabean 2011)

Panggabean, H. & R. Heryanto (2009)- An appraisal for the petroleum source rocks on oil seep and rock samples of the Tertiary Seblat and Lemau Formations, Bengkulu Basin. J. Geologi Indonesia 4, 1, p. 43-55.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20090105.pdf)
(Bengkulu Basin Eocene-Oligocene fore-arc basin. Oldest 'Lahat-equivalent' formation unconformably overlain by Oligocene-Miocene Hulusimpang Fm volcanic rocks, then by siliciclastics and minor carbonates of E-M Miocene Seblat Fm. Geochemistry on selected outcrop samples and Padangcapo village oil seep indicates potential source rocks may occurred in Lahat- equivalent Seblat, and Lemau Fms)

Panggabean, H., S.A. Mangga & I.S. Suwardi (2007)- Atlas cekungan sedimen Indonesia- Cekungan Sumatera Selatan. Pusat Survei Geologi, Bandung, p. 1-128.
('Atlas of sedimentary basins of Indonesia- South Sumatra Basin')

Panggabean, H. & L.D. Santy (2012)- Sejarah penimbunan cekungan Sumatera Selatan dan implikasinya terhadap waktu generasi hidrokarbon. J. Sumber Daya Geologi 22, 4, p. 225-235.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/122/116)
('Burial history of the South Sumatra basins and its implications for the time of hydrocarbon generation'. S Sumatra Basin four subbasins, Jambi and C, N and S Palembang sub-basins. Eocene- Quaternary sediment fill 2100-3500m thick, with maximum burial depths 2900- 5200 m. Lowest depth oil generation of Lahat Fm 1560m in C Palembang Subbasin, while deepest in Talangakar Fm 2700m in Jambi Subbasin and 2800m in S Palembang Subbasin. Timing of hydrocarbon generation 20.3 Ma (E Miocene)- 3.4 Ma (Pliocene))

Panguriseng, M.J., E. Nurjadi, W.S. Sadirsan, B.W.H. Adibrata & D. Priambodo (2011)- Determination of turbidite "lobe" distribution and geometry in Middle Baong sand, North Sumatra Basin: artificial neural network approach of multi-attribute analysis. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-389, 12p.
(In Indonesian. M Miocene Middle Baong Sand prolific reservoir in N Sumatra Basin. Deep marine sand, with lateral discontinuity major issue. Artificial Neural Network method of seismic multi-attribute analysis used for reservoir characterization and geometry analysis)

Panjaitan, S. (2006)- Struktur dan geometri cekungan oil shale di daerah Taluk, Riau, berdasarkan metode gaya berat. J. Sumber Daya Geologi 16, 2 (152), p. 75-93.
('Structure and geometry of the oil shale basin in the area of Taluk, Riau, based on the gravity method')

Pannetier, W. (1994)- Diachronism of drowning event on Baturaja limestone in the Tertiary Palembang sub-basin, South Sumatra, Indonesia. J. Southeast Asian Earth Sci. 10, 3-4, p. 143-157.
(Oligocene-E Miocene transgression in Lahat and Talang Akar formations from W to E. Deposition of Baturaja carbonate (earliest Miocene; ~N4-N5) on tectonic uplifts interpreted as lowstand system tract. Drowning of carbonate platform by Gumai shales in later E Miocene diachronous. Carbonate drowning coincides with renewed volcanic and tectonic activities and cooling)

Paramita, D. & R. Santoso (2011)- Sequence stratigraphy and facies distribution analyses to define reservoir lateral distribution in Meruap Field, Jambi. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-154, 12p.
(Meruap Field in Jambi Sub-basin, discovered in 1974. Main oil reservoir is sand of M Miocene Air Benakat Fm. Total oil produced 10.3 MMBO. Sequence stratigraphy study suggests five sequence boundaries. Sands deposited in deposited in tide- dominated delta, with three depositional facies: tidal channel, tidal sand bar, and tidal sand flat, with depositional trend oriented SW-NE)

Pathak, P., Y. Fidra, A. Yan, H. Avida, Z. Kahar, M. Agnew & D. Hidayat (2004)- The Arun gas field in Indonesia: resource management of a mature field. In: SPE Asia Pacific Conf. Integrated modelling for asset management, Kuala Lumpur 2004, SPE 87042, p. 1-22.
(History of giant Arun gas-condensate field in Aceh, N Sumatra. Discovered in 1971, producing since 1977. Reservoir NNW-SSE trending elongate E-M Miocene limestone reef buildup, with av. thickness 495' (max.

1000'), porosity 16.1%. Initial in-place gas 16.8 TCF gas, 840 MB Condensate, ultimate gas recovery expected to be 94%.

Patra, D.H., D. Noeradi & E. Subroto (2012)- Tectonic evolution at Musi High and its influence to Gumai formation as an active source rock at Sopa Field, South Sumatera Basin. Extended abstract AAPG Int. Conf. Exhib, Milan, 2011, AAPG Search and Discovery Art. 20125, p. 1-16.
(Shale from Eo-Oligocene Lahat and Talang Akar Fms widely accepted as source rocks in Palembang sub-basin of S Sumatra Basin. Sopa Field on Musi Platform paleohigh, where Lahat and Talang Akar Fms not well developed and closest paleo-deep >20 km away. E Miocene Gumai Fm may be regional seal and active source rock)

Permana, A.K. (2008)- Coal characteristics of Sarolangun- Pauh region: implication for coalbed methane potential. J. Sumber Daya Geologi 18, 6, p. 351-360.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/255/235)
(Muara Enim Fm coal in Sarolangun- Pauh region, Jambi Provice, S Sumatra, prospective for CBM. Coal mainly vitrinite with rare inertinite, minor exinite and mineral matter. Open microcleats dominate over closed microcleats. Coalbed methane content expected to be low- moderate)

Permana, A.K. & H. Panggabean (2011)- Depositional environment of the Sarolangun coals, South Sumatra basin. J. Sumber Daya Geologi 21, 4, p. 225-235.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/149/145)
(Late Miocene Muara Enim Fm in Sarolangun area, W part of S Sumatra Basin, with relatively thin (<1.5m) coal beds. Coal mainly vitrinite (telovitrinite and detrovitrinite), with rare inertinite and minor liptinite and mineral matter. Palynological studies show abundant pollen from mangroves that grew in fresh water environment (Palmaepollenites kutchensis, Florschuetzia trilobata, Acrostichum aureum, Verrucatosporites usmensis). Coal deposition in upper delta plain and fluvial environments (wet forest swamp))

Permana, A.K. & H. Panggabean (2011)- Cleat characteristics in Tertiary coal of the Muaraenim Formation, Bangko area, South Sumatra Basin: implications for coalbed gas potential. J. Sumber Daya Geologi 21, 5, p. 265-274.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/153/150)
(Sub-bituminous coal seams in Miocene Muara Enim Fm from Bangko area, 25 km SE of Tanjung Enim, S Sumatra, with well-developed cleat system. Coal dominated by vitrinite (72-89%), with minor inertinite (3.6%), liptinite (1.8-3.8%) and mineral matter (2.4-14.4%). Vitrinite reflectivity 0.44%)

Permana, B.R., Y. Darmadi, I. Rahmawan & T. Siagian (2018)- Revealing hydrocarbon potential in a tight sand reservoir: a case study of the Baturaja sands in Sumpan Field, South Sumatra basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-318-G, 21p.
(Sumpal Field is large gas field in Corridor block, currently producing from fractured pre-Tertiary crystalline basement rocks. E Miocene silty sandstone (Baturaja Fm/ Lower Telisa equivalent) present in many wells and contains light oil. Thickness 7-18m, but low permeability and requires fracking)

Permana, B.R., Y. Darmadi, I.B. Sinaga, D. Kusmawan & A. Saripudin (2016)- The origin of oil in the Telisa Formation, Suban Baru Field, and the next exploration path. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 23-TS-16, p. 1-17.
(Oil discovered in Suban 3 and Suban Baru wells in sandstones in marine upper Telisa Fm (late E Miocene) in Suban Baru Field, Corridor Block of C Palembang sub-basin of S Sumatra. Variable reservoir quality. Oils sourced from mixed terrestrial-marine facies, probably from source rock below Telisa Fm, although Telisa Fm may be mature in deeper parts of S Sumatra Basin)

Pertamina BPPKA (M. Abdullah et al.) (1996)- Petroleum geology of Indonesian basins, I: North Sumatra Basin. Petroleum geology of Indonesian basins: principles, methods, and application, Jakarta, p. 1-.

Pertamina BPPKA (B. Mertani et al.) (1996)- Petroleum geology of Indonesian basins, II: Central Sumatra Basin. Petroleum geology of Indonesian basins: principles, methods, and application, Jakarta, p. 157-192.

Pertamina BPPKA (C. Caughey et al.) (1996)- Petroleum geology of Indonesian basins, X: South Sumatra Basin. Petroleum geology of Indonesian basins: principles, methods, and application, Jakarta, p. 1-

Peter, C.K. & Z. Achmad (1976)- The petrography and depositional environment of Belumai Formation Limestone in the Bohorok area, North Sumatra. In: Proc. Int. Carbonate Seminar, Jakarta 1976, Indon. Petroleum Assoc. (IPA), Spec. Vol., p. 61-66.
(E Miocene Belumai Fm Limestone Mb shallow open marine shelf conglomerates and limestones accumulated on local topographic high, overlain by deeper shelf limestones. No reefal facies limestones seen in area)

Pethe, S. (2013)- Subsurface analysis of Sundaland basins: source rocks, structural trends and the distribution of oil fields. M.Sc. Thesis Ball State University, Indiana, p. 1-79.
(online at: http://cardinalscholar.bsu.edu/handle/123456789/197811)
(Test of 'W. Ade Rule', stating that "95% of all commercial oil fields in the Sumatra region occur within 17 km of seismically mappable structural grabens in the producing basins". Graben mapping suggests in S Sumatra Basin 78% of oil fields located within 17 km margin from grabens. For Sunda/Asri basin number is 100%, for Ardjuna basin 92%)

Poerwanto, J.H., C.F. Sugembong, J.M. Bagzis & A.D. Martinez (1995)- Application of hydraulic fracturing technologies to the shallow Telisa Formation. SPE Asia Pacific Oil Gas Conf., Kuala Lumpur 1995, p. 277-284.
(On fracturing treatments in shallow (600'), high permeability (10-100 mD) laminated sandstone reservoir in E Miocene Telisa Fm, South Balam Field, 50 km NW of Duri, C Sumatra)

Pradana, A.Y., M. Imron, I. Kuswinda & B. Sapiie (2013)- Sealing and non-sealing faults of North Prospect area in Jambi Merang Block, Jambi sub Basin- South Sumatera. Proc. Joint Conv. 38th Indon. Assoc. Geoph. (HAGI) - 42nd Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0048, 21p.
(Fault Seal analysis in Jambi Merang Block, in N part of Jambi sub basin. Most faults do not have significant throw and are generally sealing faults. With well correlations and seismic lines across wells E Ketaling 1, Muara Sabak 1 and Merang 1)

Pradana, A.Y., Y. Indriyanto, A.W. Johanes & A.M. Adiwiarta (2017)- Facies, diagenesis, and depositional setting of carbonate build-up in the Merang High, Jambi sub-basin, Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(Miocene Baturaja Fm carbonate reservoir in Sungai Kenawang and Pulau Gading fields of Jambi Basin (buildups on NE-SW trending Merang and Ketaling Highs))

Pramudyo, Y.B., S.M. Hendar, H. Nur, M.R. Reinhold & G.W. Jacobs (2007)- An integrated study of low permeability reservoir in the Bekasap Field, Central Sumatra Basin, Indonesia. In: Soc. Petrol. Engineers (SPE) Asia Pacific Oil and Gas Conf. Exhib., Jakarta, 5p.
(On study of E Miocene Bekasap and Menggala Fms sandstones in mature Bekasap field (1955; 107 producing wells). Model delineates trends of estuarine, sand ridge and margin facies that reflect paleogeography. Thirty one horizontal wells drilled in field, predicted to improve ultimate recovery from 14% to 28%)

Pranyoto, U., B. Setiardja & E. Sjahbuddin (1990)- Pembentukan, migrasi dan terperangkapnya hidrokarbon di daerah Rantau, Aru dan Langkat-Medan, Cekungan Sumatra Utara. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 175-200.
('Formation, migration and trapping of hydrocarbons in the Rantau- Aru and Langkat-Medan areas, N Sumatra basin'. Mapping of source horizons (Baong, Belumai Fm), maturation and kitchen areas in N Sumatra basin)

Praptono, S.H., R. Dwiputro, I.M. Longley & R.W. Ward (1991)- Kurau: an example of the low-relief structural play in the Malacca Strait PSC, Sumatra, Indonesia. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 299-318.

(Kurau field two separate low relief anticlinal structures on E margin of Bengkalis Trough. Traps formed by drape over structures formed in Late Oligocene. These structures, cored by basement and Pematang Group rocks, remained largely unaffected by Late Miocene- Pliocene tectonism. This later tectonism produced many high-relief structures which were focus for early exploration. Stacked oil pools, with >150 MMBO in-place, largest in PSC. Discovered late in exploration history of area due to relatively subtle nature of trap)

Prasetyo, H., E. Suparka & D. Noeradi Darussalam (2009)- Characterization of low-permeability reservoir rock using petrography and depositional studies- case study: optimizing production from low-permeability Bekasap sandstones in Central Sumatra, Indonesia. AAPG Int. Conf. Exh., Rio de Janeiro 2009, Search and Discovery Art. 40513, 13p. *(Extended Abstract)*
(E Miocene Bekasap Fm sandstone reservoirs in C Sumatra basin deposited in estuarine, tide-dominated delta system. Overall fining-upward: lower part m- grained, conglomeratic, cross-bedded and massive sandstones, with permeability up to 1900 mD, upper part f-vf-grained, bioturbated sandstone with permeability from 10's-200 mD. In general, reservoir quality more controlled by depositional environment than diagenetic processes. At depth both permeability and porosity reductions significantly controlled by cementation)

Pratiwi, F.I., V.B. Indranadi & B. Toha (2011)- Sequence stratigraphy for facies modeling of Upper Lakat and Tualang Formation: implication for Late Oligocene to Early Miocene paleogeography of southern Bengkalis Trough. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-225, 12p.
(Sequence stratigraphy of Late Oligocene-E Miocene fluvial- tidal channel reservoir intervals in field 'X' (= probably Stanvac Kayuara field; JTvG), at S end Bengkalis Trough, C Sumatra Basin. Sands quartz-rich and derived from N-NE part of Bengkalis, from Malacca Terrane basement high)

Premonowati (2011)- Outcrops conservation of Tanjung Baru or Lower Talang Akar Formation, Baturaja city of Palembang area- South Sumatra Basin: how important? Berita Sedimentologi 20, p. 7-11.
(online at: www.iagi.or.id/fosi/bs20-sumatra.html)
Proposal to conserve quarry in Late Oligocene or basal Miocene fluvial conglomeratic quartz sst of Gritsand Mb of Lower Talang Akar Fm E of Baturaja, with proposal to rename into Tanjung Baru Fm. With overview of outcrop stratigraphy of this part of S Sumatra basin)

Primadi, I. (2013)- Economic vs fractured basement: a case study from North Sumatra Basin. Berita Sedimentologi 27, p. 21-25.
(online at: www.iagi.or.id/fosi/files/2013/08/BS27-Sumatera_Final.pdf)
(North Sumatra 'Basement' may include fractured carbonates with hydrocarbon reservoir potential. Carbonates (dolomites and fractured limestones at base of Cenozoic clastic rift section often assigned to Eocene Tampur Formation (but faunas on which this age is based have never been documented. Analogous limestone in Malacca Straits contain Permian foraminifera; JTvG))

Priwastono, D., A. Kohar, J. Layundra & D. Wanengpati (2005)- The seismic characteristics of the Langsa ñLò carbonate build-up, the first offshore oil production in Nanggroe Aceh Darussalam Province. Proc. 30th Ann. Conv. Indon. Petroleum Assoc., IPA05-G-171, 10p.
(L oil field discovered in 1980 by Mobil in Malacca Straits. Reservoir Early Miocene Malacca Fm carbonate buildup with av. porosities 6.4- 10.7%)

Pujasmadi, B., H. Alley & Shofiyuddin (2002)- Suban gas field, South Sumatra- example of a fractured basement reservoir. In: F.H. Sidi & A. Setiawan (eds.) Proc. Seminar Giant field and new exploration concepts, Indon. Assoc. Geol. (IAGI), Jakarta 2002, p. 25-44.
(Suban gas field 1998 discovery 165km WNW of Palembang. >1000m gas column between 1800-3300m, straddling E Miocene Baturaja Fm reefal limestone (33% of reserves), Oligocene Talang Akar Fm sandstones and Eocene- Oligocene Lemat Fm conglomerates (19%) and fractured basement composed of M Jurassic andesites, E Cretaceous granitoids and Permo-Carboniferous marine metasediments (48% of reserves))

Pujobroto, A. (1997)- Organic petrology and geochemistry of Bukit Asam coal, South Sumatra, Indonesia, Ph.D. Thesis, School of Geosciences, University of Wollongong, p. 1-397.

(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=2975&context=theses)
(Petrography and organic properties of M-L Miocene Palembang Fm coal at Bukit Asam, S Sumatra Basin. Bukit Asam coal dominated by vitrinite (88-91%) with minor liptinite (4.2- 5.0%), inertinite (4.1-5.5%) and mineral matter (mainly clay, quartz and minor pyrite. Vitrinite mainly detrovitrinite with significant telovitrinite and minor gelinite. Coal rank from sub-bituminous (Rv 0.35-0.5%) to semi-anthracite (Rv max. 2%) near andesitic igneous intrusions)

Pujobroto, A. & C. Hutton (2000)- Influence of andesitic intrusions on Bukit Asam coal, South Sumatra Basin Indonesia. Proc. Southeast Coal Geology Conference, Directorate General of Geology and Mineral Resources of Indonesia, Bandung, p. 81-84.

Pulunggono, A. (1969)- Basement configuration in the South Palembang basinal area: its signficance to depositional conditions and oil-trappping. In: Fourth ECAFE Symp. Development of petroleum resources Asia and Far East, Canberra 1969, 16p.

Pulunggono, A. (1986)- Tertiary structural features related to extensional and compressive tectonics in the Palembang Basin, South Sumatra. Proc.15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 187-213.
(Tertiary basin history. Extensional phase in Late Oligocene- E Miocene, coinciding with standstill of Indian oceanic plate subduction below Sundaland. Oblique compression of N-ward converging Indian Ocean plate solely accomodated by NW-SE trending proto-Barisan by lateral movements. The early M Miocene onset of compression connected to renewed subduction. Diastrophism in Palembang Basin mainly confined to narrow N-S zone with highest heatflow and most fields)

Pulunggono, A., C.I. Abdullah, D. Noeradi, E. Suparka, Djuhaeni & L. Samuel (1999)- Sumatran megashears; Their crucial role in (Tertiary) sedimentary basin development. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 29-34.
(N-S, WNW-ESE and NW-SE major faults dominate basinal framework of Sumatra basins. N-S and WNW-ESE trending major faults 'old megashears' linked to Mesozoic basement configuration. Late Eocene NW-SE extension probably under rollback conditions of subducting Indian Ocean plate. M-L Miocene and younger inversion/compression NNE-SSW directed.)

Pulunggono, A., A. Haryo S. & C.G. Kosuma (1992)- Pre-Tertiary and Tertiary fault systems as a framework of the South Sumatra Basin; a study of SAR-maps. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 339-360.
(S Sumatra dominant trends WNW-ESE, N-S, NW-SE and ± N30°E. Distribution of Jurassic and Cretaceous granites important to explain geological evolution of Sundaland. Paleogene initiation of S Sumatra back-arc basin by way of subsiding 'block-areas'along WNW-ESE (Lematang) and N-S trending strike-slip faults of Pre-Tertiary origin, rejuvenated as normal faults. Neogene compressive tectonics marked S Sumatran back-arc basin development a.o. inducing inversion along WNW-ESE faults. NW-SE (Barisan or Semangko) trend offsets WNW-ESE trend and active strike-slip fault zone at crestal parts of Barisan Mountain Range)

Purnama, A.B., S. Salinita, Sudirman, Y.A. Sendjaja & B. Muljana (2018)- Penentuan lingkungan pengendapan lapisan batubara D, Formasi Muara Enim, Blok Suban Burung, Cekungan Sumatera Selatan. J. Teknologi Mineral dan Batubara 14, 1, p. 1-18.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/minerba/article/view/182/533)
('Interpretation of depositional environment of coal seam D, Muara Enim Formation, Suban Burung Block, South Sumatera Basin'. M-L Miocene coal seam D of Muara Enim Fm dominated by vitrinite (~71%), inertinite (17.6%), liptinite (5.9%) and 6.4% mineral matter. Vitrinite reflectance Rvmax 0.25-0.38%, corresponding to lignite-subbituminous rank. Deposited in a limnic depositional environment)

Purwaningsih, M.E.M., B. Mujihardi, L. Prasetya, W.A. Suseno & Y. Sutadiwirya (2006)- Structural evolution of the Jambi Sub-Basin: a rotated strike-slip mechanism. Proc. Jakarta 2006 Int. Geosc. Conf., Indon. Petroleum Assoc (IPA)., Jakarta06-OT-60, 6p. *(Extended Abstract)*

(Structural evolution of Jambi sub-basin three orders. Jambi sub-basin block rotation of 45° clockwise relative to Great Sumatra strike slip fault)

Purwanti, Y., A. Bachtiar & A. Balfas (2003)- Petrophysics and organic geochemistry of basement section in Malacca Strait area. Proc. 32nd Ann. Conv. IAGI and 28th Ann. Conv. HAGI, Jakarta, 6p.
(Basement in N-S trending Bengkalis Trough in Malacca Strait mainly meta-sediments and limestone in N, quartzite and mudstone in S. Hydrocarbon shows in some parts. TOC of basement shales from 0.11- 1.43%, Ro from 1.12- 4.33% (overmature). N area more mature than S. Tectonic uplift of block 2300' to 3850')

Puspoputro, B. (1984)- Tinjauan atas hasil penyelidikan transiel di daerah kerja Pertamina. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 127-134.
('An overview of results of a transect study of Pertamina exploration block')

Pustantra, F.Y., Sardjito & Y. Surtiati (2017)- Stratigraphic trap exploration on Paleogene deposit in Puspa area, East Jambi. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 8p.
(On potential for stratigraphic traps in Paleogene rift section of Puspa area in NE part of NE-SW trending Tempino-Kenali Asam Deep/ rift, NE part of Jambi Basin. Six sequences in M Eocene - Late Oligocene rift fill: early synrift (P10-P17; fluvial- lacustrine) and late synrift (P17-N4; fluvio-deltaic). Sediment source from NE)

Putra, D.D. (1999)- Analysis of the possible reserve in Eq. Baturaja Limestone by applying the Bungin Batu geological model; a case study on the West of East Ketaling Structure, Jambi. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 99-114.
(Discussion of oil distribution in Bungin Batu and Ketaling fields in Jambi sub-basin, S Sumatra)

Putrohari, R.D. (1992)- MSDC-1: a gas discovery in the Malacca Strait PSC, Sumatra, Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 201-223.
(MSDC-1 gas well on E margin of Bengkalis Trough, in pre-Sihapas objective. Structure Upper Oligocene inversion anticline. DC structure low relief hydrocarbon column exceeds mapped structural closure. Proposed geological model shows trapping mechanism partly stratigraphically controlled)

Raguwanti, R., A. Sukotjo & B.W.H. Adibrata (2005)- Innovative approach using geostatistical inversion for carbonate reservoir characterization in Sopa Field, South Sumatra, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 61-66.
(Geostatistical inversion of thin carbonate reservoir of Baturaja Fm in Sopa Field, South Sumatra)

Rahmat, G. (2017)- Quantitative biostratigraphy at Air Benakat Formation and sequence stratigraphy analysis in Tempino Field Jambi Subbasin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 9p.
(Air Benakat Fm at Tempino Field, Jambi Basin, ~500m thick. Age from late E- M Miocene (NN4-NN6 or N7-N11?; ~18-12 Ma?). Four sequences)

Rahmat, G., Julikah, A. Kholiq & Sriwijaya (2016)- Paleogeography maps based on sequence stratigraphy analysis in Jambi sub-basin and implication to shale hydrocarbon play distributions. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 614-634.
(Jambi subbasin nine sequences from E Eocene- M Miocene. Paleogeography maps for sequences 1-4 (Lemat-Gumai Fms. Based on richness, maturation, facies and amount of shale highest shale hydrocarbon potential in Sequence 3 (U Talang Akar- lower Baturaja Fm (also as p. 706-726 in same volume))

Rahmat, J. & S. Oemar (1998)- Exploration opportunities in the Bengkulu frontier basin, West Sumatra, offshore Indonesia. In: J.L. Rau (ed.) Proc. 33rd Sess. Co-ord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Shanghai 1996, 2, Techn. Reports, p. 114-127.
(Hydrocarbon potential potential of Bengkulu fore-arc basin proven by presence of Oligocene or E Miocene brown shales with good TOC, onshore oil seeps and offshore oil shows in wells. Potential reservoirs Baturaja and Parigi Fm equivalent carbonate buildups and E Miocene Talang Akar Fm equivalent sandstones. Temperature gradients in wells 2.8- 4.0 °C/ 100m)

Rajagukguk, Y.M. & S. Nalendra (2018)- Macerals analysis seam M2 Muaraenim Formation: implication toward coal facies and coal rank in Kendi Hill, South Sumatra. J. Geoscience Engineering Environm. Technol. (JGEET) 3, 2, p. 94-102.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/670/1041)
(Kendi Hill composed of andesite that intruded Late Miocene- Pliocene Muaraenim Fm in Pleistocene. M2 coal seams 0.45-14 m thick, dominated by vitrinite, then liptinite, inertinite and pyrite (1.6-6.6 %). Vitrinite reflectance 0.37-0.48% (higher in N, near intrusion). Macerals suggest coal deposition in limnic (lower delta plain)- wet forest swamp (upper delta plain))

Raras, H.R., S. Husein, M.I. Novian & R. Hidayat (2018)- Analisis fasies fluvial pada Formasi Kikim Anggota cawang di Jalur Sungai Menghalus, Sumatra Selatan. Proc. 10th Seminar Nas. Kebumian, Yogyakarta, p. 765-778.
(online at: https://repository.ugm.ac.id/274210/1/OSP-06.pdf)
('Analysis of fluvial facies analysis in the Kikim Fm Cawang Member in the Menghalus River section, South Sumatra'. 500m thick section of Kikim Fm fluvial deposits with 11 facies associations)

Rashid, H., I.B. Sosrowidjojo & F.X. Widiarto (1998)- Musi Platform and Palembang High: a new look at the petroleum system. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 265-276.
(Musi Platform and Palembang High in S Sumatra important exploration targets. Source rocks Lahat/ Lemat Fm Paleogene lacustrine shales and fluvio-deltaic to marginal marine Talang Akar shales- coals. Three oil groups: marine, lacustrine, deltaic. Palembang High oils fluvial-deltaic, probably mix of two oils from S and N Palembang High. Marine carbonate oil in condensate from Pre-Tertiary Basement fracture in Musi Platform)

Ratiwi, A.P. & Akmaluddin (2017)- Biostratigrafi nannofossil gampingan pada sumur 'SSB' sub-cekungan Palembang Selatan, Cekungan Sumatera Selatan. Proc. 10th Seminar Nasional Kebumian, Dept. Teknik Geologi, Universitas Gadjah Mada (UGM), Yogyakarta, PSP-01, p. 793-805.
('Calcareous nannofossil biostratigraphy of well 'SSB', South Palembang sub-basin, S Sumatra'. Nannofossils study of (unspecified) well, from Lahat to Air Benakat Formations. Five zones, from Sphenolithus ciperoensis (NP 25) to Reticulofenestra minuta (NN5). Age of Lahat Fm NP25-NN1 (25.2-24.3 Ma), Talang Akar Fm NN1-early NN2 (24.3-23.9 Ma), Baturaja Fm NN2-NN4 (23.9-17.6 Ma), Gumai Fm NN4-early NN5 (17.6-14.9 Ma), and Air Benakat Fm NN5 (14.9-14.8 Ma) or younger. Age of Lahat Fm younger than generally assumed Eocene (see also Agustin et al. 2017 for sequence strat interpretation of same well)

Reaves, C.M. (1996)- Variations in sour gas concentrations in the NSB 'A' Field, Offshore North Sumatra. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 453-464.
(NSB 'A' field gas H_2S content <0.5% to >5%. CO_2 also variable. Variations in sour gas concentrations controlled by production of gas from formation water)

Reaves, C.M. & A. Sulaeman (1994)- Empirical models for predicting CO_2 concentrations in North Sumatra. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 33-43.
(Up to 95% CO_2 in N Sumatra gases, primarily from inorganic sources. Empirical models developed which utilize reservoir lithology, temperature and pressure to calculate CO_2 concentrations. Principal mechanism controlling CO_2 in clastic reservoirs is interaction of silicate transformations and carbonate dissolution. Carbonate reservoirs exposed to significant up dip fluid flow will possess CO_2 concentrations representative of base or entry point of regional flow system)

Redfern, J. (1998)- The deep gas potential of the Batu Raja Formation in South Sumatra. a case history: the Singa gas discovery. Warta Geologi 24, 6, p. 309. *(Abstract only)*.
(Singa 1 gas discovery in E Miocene Baturaja Limestone in Lematang Trough at ~12,000' depth with 258' gross gas reservoir interval)

Redfern, J., P. Ebdale & S. Oesman (1998)- The deep gas potential of the Batu Raja Formation in South Sumatra. A case history : the Singa gas discovery. In: Offshore South East Asia Conf. (OSEA98), Singapore, SEAPEX, p. 123. *(Abstract only)*
(Singa 1 (1997) well tested Batu Raja reefal limestone buildup, deep in Lematang Trough (~12,000'), ~3000' deeper than any wells previously drilled in area. Tested gas at 30.7 MMSCFD from 258' gross interval)

Reksalegora, S.W. & P. Riadini (2013)- Critical parameters in basin modeling of Bungamas PSC, South Sumatra Basin. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-109, p. 1-15.
(Bungamas PSC in SW margin of the S Sumatra Basin (W edge of S Palembang Sub-basin). Plio-Pleistocene compression resulted in formation of WNW-ESE trending folds Hydrocarbon generation model shows hydrocarbons in Bungamas PSC were generated mostly from kitchen in E half of block from Talang Akar and Gumai source rocks. Source rock started expelling hydrocarbon since M Miocene)

Renaud, G.P.A. (1885)- Onderzoek naar steenkolen ter westkust van Atjeh. Jaarboek Mijnwezen Nederlandsch-Indie 14 (1885), Wetenschappelijk Gedeelte, p. 131-157.
('Investigation of coal at the West coast of Aceh'. Brief survey of coal deposits near Taloq Penjupian in area of Tampat Tuan mountain, at rugged W coast of Aceh, N Sumatra. Claystone with two up to 60cm thick coal bed, dipping 35° and steeper. Associated with dense recrystallized limestones without clear fossils. Coals not deemed suitable for commercial exploitation. With 1:10,000 scale map)

Renaud, G.P.A. (1890)- Verslag van een onderzoek naar petroleum in Langkat. Jaarboek Mijnwezen Nederlandsch-Indie 19 (1890), Technisch Admin. Ged. 2, p. 1-9.
('Report of an investigation of petroleum in Langkat', N Sumatra)

Riadhy, S., A. Ascaria, D. Martono, A. Sukotjo et al. (2000)- Carbonate play concept in Sopa and surrounding areas: an alternative model for hydrocarbon occurrence, Musi Platform, South Sumatra Basin. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 145-157.
(Reefal facies in carbonate plays usually good reservoir, but in Musi Platform Sopa carbonate complex platform and reefal facies relatively tight with mainly isolated biomoldic porosity without fractures. In contrast, prograding carbonate clastic facies 15-25% chalky porosity and 300-2000 mD permeability)

Riadhy, S. & A. Gutomo (1993)- Notes: "Basal Sandstone", existence and hydrocarbon potential in the North Sumatra Basin, a case study in Batang Sarangan, Langkat and Gebang Areas. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 265-284.
(Prospectivity of Eocene-Oligocene 'Basal Sandstone' alluvial and fluvial deposits in lows. Two kinds: syn-rift (Batang Sarangan Type) and post-rift deposits (Langkat-Gebang Type)).

Riadhy, S., C. Ismi & S. Iriani (1998)- North Sumatra's Middle Miocene reservoir prediction and characterization using sequence stratigraphy, 2D seismic inversion and 3D seismic data. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 239-250.
(Lower and Middle Baong sandstones M Miocene age. Lower Baong sourced from Malacca Platform in N, interpreted as highstand- shelf margin-system tract, prograding S. Shift in sediment supply to S (Barisan) and drop of sea level drop resulted in deposition of M Baong lowstand unit in S of area. Differences of two sand members clearly defined from seismic model, sand provenance and well correlation. Prograding shelf margin is less attractive exploration target due to thinner sand thickness in poor quality reservoirs. Lowstand produced medium thickness, good quality sand reservoirs)

Riadhy, S., Medianto B.S. & S. Fajari (1996)- Aplikasi stratigrafi sekuen pada Formasi Belumai- Peutau- Aru-Langkat, Cekungan Sumatra Utara. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 275-293.
('Application of sequence stratigraphy on the Belumai- Peutau- Aru- Langkat Fms, N Sumatra basin')

Riadhy, S. & A. Sulaeman (1995)- The Baong reservoir distribution prediction using sequence stratigraphy analysis: a regional study in North Sumatra Basin. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 581. *(Abstract only)*

(M Miocene Baong Fm with lower Baong shale (zones N8-N11 in age, overlain by M Miocene (N11) sandstone viewed as lowstand sand sourced mainly from Malacca Platform with minor contributions from Asahan Arch. Second package of sandstones, sourced from Malacca platform and prograded from that direction, interpreted as highstand to shelf margin systems tract. Shift in sediment supply from N (Malacca) to S (Barisan) during M Miocene zone N13, suggesting emergence of landmass to S. Prograding highstand sands following flooding event in zone N13, but less attractive exploration target due to poor quality and rel. thin sands)

Rich, P.V. & H.R. Marino-Hadiwardoyo (1977)- *Protoplotus beauforti*: the world's oldest member of the bird family Anhingidae. Geosurvey Newsletter 9, Direktorat Geologi, Bandung, p. .
(On water bird originally described by Lambert (1931) from Eocene lacustrine deposits of Ombilin Basin)

Richmond, W.C., H. Dwidjojuwono, A. Tastari & B. Toha (2002)- Reservoir compartmentalization: an integrated evaluation of supermature Minas oil field, Central Sumatra. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 137-156.
(Minas oil field produced >4 BBO since early 1950's. NW-SE trending anticline. Main producing reservoirs, originally thought to be regionally continuous fluvial/deltaic sands, commonly compartmentalized due to complex stratigraphic-structural setting, with post-depositional diagenesis. Detailed depositional framework built using 1430 wells. Sequence stratigraphic framework of E Miocene Bekasap Fm reservoir 11 regionally correlatable flooding surfaces and five sequence boundaries in overall regressive-transgressive package)

Robinson, K.M. & A. Kamal (1988)- Hydrocarbon generation, migration and entrapment in the Kampar Block, Central Sumatra. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 211-256.
(Kampar Block 3 oil types. Majority of oils in fields along Merbau and Lirik Trends plus Pekan and Binio Fields, sourced from deep lacustrine, non-marine algal Kelesa shales. Panduk and N Merbau probably sourced from lake edge, mainly terrestrial/minor algal Kelesa shales. Parum Field probably sourced from Kelesa or, Lakat coals and coaly shales. Generation of oils over narrow maturity range of Ro = 0.55- 0.64%. Lacustrine Kelesa shale source rock in deepest parts of S Bengkalis half graben. Lateral extent mapped by paleogeography of pre-29 mybp sequence. Source rock mature and in main to late phase of oil generation. Onset of major oil generation in Plio-Pleistocene, probably due to increase in heat flow. Distribution of oil fields fault controlled. Migration distance small (2-10 km). Quantification of oil charge to prospects/Fields along Lirik and Merbau Trends indicate Kelesa source can easily account for oil found in Block to date)

Rodriguez Maiz, N.D. (2012)- Source rock facies characterization from organic geochemistry in the Central Sumatra Basin, Indonesia. M.Sc Thesis University of Oklahoma, Norman, p. 1-106.
(Geochemical composition of 32 oil samples in C Sumatra Basin from Aman, Balam, Tanjung Medan, Kiri and Bengkalis Troughs. Oils derived from Eocene-Oligocene lacustrine Brown Shale Fm. Molecular and carbon isotopic composition reveal five source rock facies: (1) deep lacustrine; (2) shallow lacustrine; (3) saline lacustrine; (4) coal; (5) mixed coal/ lacustrine shale. Deep stratified lakes developed in Aman and Bengkalis Troughs. Oils in Kiri graben mainly from shallow lacustrine facies, oils S of Aman and Kiri grabens more saline lacustrine facies. Oils from coal and mixed coal/lacustrine shale facies restricted to N part of C Sumatra Basin. Oils in Aman Trough suggest paleoproductivity and paleoclimatic changes during source rock deposition, possibly associated with Eocene-Oligocene paleoclimatic transition)

Rodriguez, N.D. & R.P. Philp (2012)- Productivity and paleoclimatic controls on source rock character in the Aman Trough, north central Sumatra, Indonesia. Organic Geochem. 45, p. 18-28.
(C Sumatra Basin oil sourced from Brown Shale Fm of Pematang Gp. Oils in Aman Trough variable molecular and isotopic compositions, reflecting lateral facies variations in source rock. Source rock deposited in fresh to brackish water stratified lake with CO2 limiting conditions. Isotopic data indicate changes in paleoclimatic conditions, possibly associated with Eocene-Oligocene paleoclimatic transition)

Rodriguez, N.D. & R.P. Philp (2015)- Source rock facies distribution predicted from oil geochemistry in the Central Sumatra Basin, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 99, 11, p. 2005-2022.
(Composition of n-alkanes in 30 oil samples from C Sumatra Basin analyzed to determine facies variations in Eo-Oligocene Brown Shale Fm source rocks. Biomarkers indicate algal and terrigenous organic matter,

primarily under oxic or sub-oxic depositional conditions. Five source facies: deep lacustrine (dominant in Aman and Bengkalis Troughs), shallow lacustrine and lacustrine saline (S Aman and Kiri Troughs) to coal and mixed coal and lacustrine shale (N part of basin, in Tanjung Medan and N of Balam grabens))

Roezin, S. (1974)- The discovery and development of Petapahan oil field, Central Sumatra. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 111-127.
(Petapahan 1971 oil discovery 60 km W of Pekanbaru in Lower Miocene Sihapas Group sandstone reservoirs. Young NW-SE trending anticline)

Romodhon, W., Luqman, E. Nadeak, D.J. Ramos, S. Radiansyah, S. Mulyani & A. Zakiyuddin (2014)- Heavy oil resource assessment through static models: a case study of TB-TL structure, Iliran High, South Sumatra, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-212, 19p.
(Shallow heavy oil accumulations on Iliran High/ Palembang High in two formations: Lower Telisa Fm (?; depth 50-200') and Talangakar Fm (175-400') (in well-known area of surface oil seeps; not much geologic detail, no resource estimates; see also Firmansyah et al 2007).

Rory, R. (1990)- Geology of the South Lho Sukon 'A' Field, North Sumatra, Indonesia. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-40.
(South Lho Sukon 'A' 1972 gas discovery,~35 km SE of Arun. Reservoir E-M Miocene Peutu Fm reefal buildup, overlain by M Miocene Baong shales. Overlying rocks mildly folded and faulted during Barisan orogeny in Plio-Pleistocene. As at Arun, reservoir limestones deposited in reef, near-reef and "lagoonal" environments in E- M Miocene. Average porosity 8-15%)

Rozalli, M., A. Putra, A. Bachtiar, P.A. Suandhi, W. Utomo & A. Budiman (2012)- New insights into the petroleum geology of the Mountain Front area, Central Sumatra Basin. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-178, p. 1-15.
(Mountain front area on S margin of Central Sumatra Basin no proven petroleum system)

Rozeboom, J.J. (1961)- Paleontologic methods of correlation in Central Sumatra. Publ. Council Sci., 2, Contrib. Dept. Geology Inst. Technology Bandung (ITB) 46, p. 199-209.
(Brief Caltex paper on Central Sumatra basin stratigraphy and micropaleontology)

Rudd, R.A., S. Tulot & D. Siahaan (2013)- Rejuvenating play based exploration concept in South Sumatra Basin. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-068, p. 1-14.
(S Sumatra Basin reserves ~23% of total conventional hydrocarbon reserves in Indonesia. Produced ~2500 MMB Oil and 9.5 Tcf of gas. Three major plays U Oligocene- Lw Miocene Talang Akar fluvio-deltaic clastics, Lower Miocene Batu Raja carbonates and Pre-Tertiary Basement plays (70% of total reserves).Underexplored minor plays: Eocene Lahat syn-rift clastics, Miocene Gumai shallow marine clastics and Late Miocene Air Benakat transitional to marine clastics)

Rusli, B., M.A. Arham, E. Wijayanti & A. Ridlo (2010)- Acceleration of thin oil rim development of Fariz Field. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-E-029, 7p.
(Small S Sumatra Fariz Field 2004 Medco discovery 3 km E of Soka. with 250' gas cap, surrounded by 80' oil rim in Baturaja limestone and Talang Akar Fm conglomerate)

Rustanto, B. & E. Hartono (1991)- Sekuen pengendapan dan òsystems tractsò Formasi Belumai daerah Aru-Langkat, cekungan Sumatra Utara. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 237-260.
('Sequence stratigraphy of the Belumai Fm in the Aru-Langkat area, N Sumatra basin'. E Miocene (N5-N8) Belumai Fm around Medan with 3 depositional sequences and 8 systems tracts. With interpretations for wells A1, C1, E1, F1, G5, J1, L-A1, M1A, P-A1, R-1A, well-log cross-sections and paleogeographic maps)

Rutimeyer, L. (1874)- Bemerkungen zu den fossilen Fischen aus Sumatra. Abhandlungen Schweizerischen Palaont. Gesellschaft 1, p. 20-26.

(online at: https://ia601306.us.archive.org/34/items/abhandlungenders1187schw/abhandlungenders1187schw.pdf)
('Remarks on fossil fishes from Sumatra'. Description of fish fossils from Eocene lacustrine deposits of Ombilin Basin, collected by Verbeek in 1874. Three species, including Smerdis (herring family). (In same volume with Heer 1874 paper on associated plants; Fish fauna re-described by Musper and Brongersma-Sanders 1934)

Ryacudu, R. (2005)- Studi endapan syn-rift Paleogen di cekungan Sumatra Selatan. Doct. Thesis, Dept. Geological Engineering, Institut Teknologi Bandung (ITB), p. *(Unpublished)*
('Study of Paleogene syn-rift deposits in the South Sumatra basin')

Ryacudu, R. (2008)- Neogene tinjauan stratigrafi Paleogen Cekungan Sumatra Selatan. In: Sumatra stratigraphy workshop, Duri (Riau) 2005, Indon. Assoc. Geol. (IAGI), p. 99-114.
(Stratigraphic nomenclature of Paleogene in S Sumatra basin. Classified as pre-rift (Pre-Tertiary and Kikim Fm), syn-rift (Benakat and Lemat Fms of Lahat Group) and post-rift (Tanjungbaru and Talang Akar Fms.)

Ryacudu, R., R. Djaafar & A. Gutomo (1992)- Wrench faulting and its implication for hydrocarbon accumulation in the Kuala Simpang Area- North Sumatra Basin. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 93-116.
(On effect of Neogene wrench faulting to hydrocarbon accumulation in Kuala Simpang area, N Sumatra basin)

Ryacudu, R. & E. Sjahbudin (1994)- Tampur Formation, the forgotten objective in North Sumatra basin ? Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 160-179.
(Tampur Fm Late Eocene shelf carbonate on Tampur Platform. W margin of shelf marked by N-S Lokop-Kutacane Fault zone. E of fault zone, reefal buildups on shelf edge. Dolomitisation may have resulted in reservoir rocks. Formed on basin highs, adjacent to shale-rich troughs. Shales mature since Miocene. Significant gas from Tampur Fm under Peutu carbonates at Alur Siwah, Peulalu and from beneath Malacca Limestone Mb reefs offshore. Strong gas shows also in Sembilan-A1 well in Aru onshore area (NB: Tampur Fm carbonates at base of Malaysian Malacca Straits well of M-L Permian age; Fontaine et al. 1992; JTvG)

Safrizal, R. (2000)- Thermal history of the South Palembang Sub-basin. Ph.D. Thesis University of Tulsa, p. 1-309.
(Slowing of convergence rate in E Tertiary created S Sumatra back-arc basin. Increasing convergence rates between Indo-Australian plate and Sunda microplate since M Miocene created basin inversion with strike-slip component and increased heat flow over past 5 My. S Sumatra basin average heatflow of ~2.6 HFU (5.3°C/100m) higher than global average (1.5 HFU) and higher than W Pacific back-arc basins. Increasing heatflow in short period suggested by Apatite Fission Track Annealing and vitrinite reflectance data)

Sagita, R., Q.S. Chandra, M. Chalik, R. Achdiat, R. Waworntu & J. Guttormsen (2008)- Reservoir characterization of complex basement- Dayung. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-208, 12p.
(Dayung Field 1991 gas discovery in Corridor Block, S Sumatra, with 11 wells drilled, and with >600 m gas column in fractured Lower Tertiary and basement reservoirs. Basement is Permian Leko Limestone intruded by Jurassic (~170- 205 Ma Ar ages) granitic complex. Also influenced by violent hydrothermal event intruding granite and dated at 17 Ma)

Saifuddin, F., M. Soeryowibowo, I.N. Suta & B. Chandra. (2001)- Acoustic impedence as a tool to identify reservoir targets: a case study of the NE Betara-11 horizontal well, Jabung Block, South Sumatra. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 135-152.
(NE Betara field is largest field in Devon Jabung Block, S Sumatra, with oil and gas in Lower Talang Akar Fm sandstones, deposited in fluvial- estuarine environment. Reservoir distribution varies across field. Acoustic impedance from 3D seismic effective tool for identifying reservoir targets)

Saito, K., S. Tono & Z.A. Kamili (1985)- Sand body correlation in deltaic setting, East Ketaling Field. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 499-515.

(Correlation of deltaic sand bodies in M Miocene Air Benakat Fm of E Ketaling field, Jambi Basin, S Sumatra)

Samudra A.B.S., J. Jaenudin, Y.A.M. Mizani & Y.S. Surtiati (2014)- Strike-slip fault system characterization and its implication to hydrocarbon entrapment in the Puja High, South Sumatra. In: 76th EAGE Conference and Exhibition 2014, p.
(Puja-1 gas-condensate well drilled by Pertamina in 2009 on local high in Tempino-Kenali Asam Deep, Jambi subbasin, S Sumatra Basin, Indonesia. Structure controlled by SE and NW dipping normal faults, developed in transtensional rift setting and affecting synrift clastic sedimentation)

Samudra A.B.S., S. Sugiri & M.W. Wahyudin (2014)- Fractured basement characterization and its relation to production zone potential in Southern Sumatra Basin, Indonesia. In: EAGE 6th Int. Conf. and Exhibition- Geosciences, Saint Petersburg, Tu BC 06, 5p. *(Extended Abstract)*
(AXL-1 in S Sumatra Basin tested 320 BOPD oil in 2009 in Pre-Tertiary quartzite. Oil and gas 204 m below top Pretertiary basement, associated with faults of dominant NE-SW strike)

Sanders, M. (1934)- Die fossilen Fische der Alttertiaren Susswasser Ablagerungen aus Mittel-Sumatra. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 11, 1, p. 1-144. *(also Thesis University of Amsterdam, 142p.)*
('The fossil fishes from Early Tertiary fresh water deposits from Central Sumatra'. Description of well-preserved Eocene fresh-water fish fossils from bituminous marly shales from S. Sipang, Ombilin basin, Padang Highlands. First discovered by Verbeek in 1874, with further collections by Musper in 1927. Includes 7 species of cyprinid fish, mainly extant species. With Musperia n.gen. Associated with plant fossils described by Heer 1874 and water bird Protoplotus described by Lambrecht 1931)

Santoso, B. & B. Daulay (2005)- Vitrinite reflectance variation of Ombilin coal according to its petrographic analysis. Indonesian Mining J. 8, 1, p. 9-20.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/207/123)
(Ombilin coals from W Sumatra dominated by vitrinite and rare exinite, inertinite and mineral matter. Coals thermally affected igneous intrusions with vitrinite reflectances 3.4- 4.7% (anthracite); thermally unaffected coal 0.55- 0.77% (sub-bituminous to high volatile bituminous). Thermally affected coals higher apparent vitrinite, as exinite cannot be distinguished from vitrinite here)

Santoso, B. & B. Daulay (2006)- Coalification trend in South Sumatera basin. Indonesian Mining J. 9, 3, p. 9-21.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/637/498 (bad link?))
(Bukit Asam coals in S Sumatera Basin influenced by intrusions of andesite bodies and stratigraphic aspect. Thermally affected coals have vitrinite reflectances 0.69% (high volatile bituminous)- 2.60% (anthracite); coals not affected between 0.30% (brown coal) and 0.53% (sub-bituminous))

Santoso, B. & B. Daulay (2007)- Comparative petrography of Ombilin and Bayah coals related to their origin. Indonesian Mining J. 10, 3, p. 1-12.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/608/470)
(Comparison of Eocene coals of Ombilin (W Sumatra) and Bayah (SW Java). Bayah with higher mineral matter; Ombilin higher vitrinite and liptinite contents, higher vitrinite reflectance and rank (sub-bituminous to anthracite). Thermally unaffected coals from both coalfields <90 % vitrinite. Variable vitrinite reflectances, due to igneous intrusions)

Santoso, D., W.G.A. Kadir & S. Alawiyah (2000)- Delineation of reservoir boundary using AVO analysis. Exploration Geophysics (J. Australian Soc. Expl. Geophysicists) 31, 2, p. 409-412.
(N Sumatra Basin M Miocene Keutapang Fm sandstones- shale deposited in coastal environment, 500-1300 m thick. Top of porous sandstone reservoir zone is AVO anomaly, so can be used for delineation of reservoir)

Santoso, D., S. Sukmono & H. Setyadi (1994)- The characteristics of Neogene sediments and structure in Siberuang area (Central Sumatra Indonesia) based on gravity data. Bull. Geol. Soc. Malaysia 37, p. 471-478.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a32.pdf)
(Neogene sediments in outcrop of Kampar Kanan intramontane basin of Barisan Mts foothills near Siberuang area, C Sumatra, consists of Sihapas (N4?-N7), Telisa (N7-N10) and Petani (N13-N19) Fms)

Santy, L.B. (2001)- Structural evolution of the North Bengkalis Trough, Malacca Straits, Central Sumatra Basin and its implication in creating traps for hydrocarbon accumulation. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 739-747.
(N Bengkalis Trough in Malacca Straits PSC. Exploration targets footwall traps of Padang Fault. Structural reconstruction shows four periods: (1) extension (Pematang time, Eocene-Oligocene?), creating N-S trending half graben in which Pematang Brown Shale source rock was deposited; (2) First compression (Menggala-Sihapas time, U Oligocene -E Miocene) NW- SE dextral strike-slip fault zone. Structural growth continued until Lower Sihapas time (3) Tectonic quiescence (Telisa time, E-M Miocene); (4) Second compression (M Miocene-Pliocene)

Saputra, H.N. & B. Sapiie (2005)- Analogue study of basement fractured reservoirs in Kotopanjang Area, Central Sumatra. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 53-60.

Sapiie, B., D. Aprianyah, E.Y. Tureno & N.A. Manaf (2017)- A new approach in exploring a basement-fractured reservoir in the Sumatra back-arc basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-260-G, 13p.
(Review of 3D fracture modeling in Pretertiary basement rocks of Sumatra, incl. outcrop fracture study in Ombilin Basin)

Sapiie, B., F. Yulian, J. Chandra, A.H. Satyana, D. Dharmayanti, A.H. Rustam & I. Deighton (2015)- Geology and tectonic evolution of fore-arc basins: implications of future hydrocarbon potential in the Western Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-177, 14p.
(Fore-arc basins in Indonesia mostly underexplored. Mainly discussion of Sumatra -Bengkulu sub-basin, with Eocene- Oligocene pull-apart basin formation, Late Miocene- Recent minor compression, etc.)

Sardjito, E.F., Djumlati & S. Hansen (1991)- Hydrocarbon prospect of Pre Tertiary basement in Kuang Area, South Sumatra. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 255-277.
(Kuang area ~40 km S of Prabumulih, well known oil and gas producing area. Hydrocarbons structurally trapped in Baturaja and Talang Akar Fms. ASD-1 well proved hydrocarbons also in Pre-Tertiary fractured granodiorite and quartzite basement)

Sarjono, S. & Sardjito (1989)- Hydrocarbon source rock identification in the South Palembang Sub-basin. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 424-467.
(In S Palembang sub-basin Oligocene syn-rift Lahat Fm contains mature source rocks, thought to generate gas in Gunung Kemala area. Talangakar and Baturaja Fms contain mature source rocks rich in Type I and II sapropel kerogen. E Miocene Gumai Fm with mature humic Type III kerogen. Air Benakat and Muara Enim Fms are immature. First migration of hydrocarbons in Palembang sub-Basin in M Miocene, at end of Gumai Fm time. Early trapped hydrocarbons were redistributed into new traps after Plio-Pleistocene orogeny)

Sartono, S. & H. Murwanto (1990)- Kompleks melange di Sumatera Selatan, Indonesia. Proc. 17th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta 1988, p. 65. *(Abstract only)*
('Melange complex in S Sumatra'. Late Cretaceous chaotic melange rock complexes in S Sumatra, with phyllite matrix and schist and gneiss blocs. No details)

Sartono, S. & R. Sinuraya (1985)- Kelompok Tapanuli di Sumatra Utara. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 193-204.
('The Tapanuli Group of North Sumatra'. Alas, Kluet and Bohorok members of Carboniferous- E Permian Tapanuli Group are gravitational slumps (olistostromes), deposited in suture zone)

Satrio, B. & Soejanto (1994)- Asih Field discovery: detailed structural reevalution along a wrench fault system in the Central Sumatra Basin, an exploration opportunity in a mature area. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 1039-1049.
(Asih 1 well (1993) oil discovery in 17 zones in Sihapas Gp and Pematang Fm sandstones at SE side of Aman Trough, C Sumatra basin, NW of Minas field. In low relief fault structure along N-S right-lateral wrench fault)

Sayentika, Syafruddin & B. Sapiie (2003)- Eocene-Middle Miocene structural reconstruction of the Duri Anticline, Central Sumatra Basin, Indonesia. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-11.
(At least four structural events in C Sumatra Basin: Pre-Tertiary basement development, Eocene-Oligocene rifting, M Miocene strike-slip and M Miocene-Recent compression. Duri Anticline reconstruction using flattened seismic lines)

Schenk, C.J., T.R. Klett, M.E. Tennyson, T.J. Mercier, M.E. Brownfield, J.K. Pitman et al. (2016)- Assessment of Coalbed Gas resources of the Central and South Sumatra Basin Provinces, Indonesia. U.S. Geol. Survey, Fact Sheet 2016-3089, 2p.
(online at: https://pubs.usgs.gov/fs/2016/3089/fs20163089.pdf)
(Undiscovered total coalbed gas resource of C and S Sumatra basins is most likely 20 TCF of gas (8 in C, 12 in S Sumatra; F95-F5 range 4.8- 42 TCF). Measurements indicated coals undersaturated with gas. Presence of liptinite led to hydrogen indices as high as 300 mg/g, suggesting coals may be able to produce liquids)

Schultz, R.A., K.A. Soofi, P.H. Hennings, X. Tong & D.T. Sandwell (2014)- Using InSAR to detect active deformation associated with faults in Suban Field, South Sumatra Basin, Indonesia. The Leading Edge 33, 8, p. 882-888.
(Suban field in S Sumatra with fractured carbonate/crystalline basment gas reservoir. Reservoir-scale right-oblique reverse faults and folds trapped hydrocarbons Satellite data show areas of active localized subsidence and horizontal movements above main right-oblique fault zone in SW part of Suban field)

Schurmann, H.M.E. (1922)- Over de Neogene synclinaal van Zuid Sumatra en het ontstaan van bruinkool. De Mijningenieur 3, 5, p. 67-70 and De Mijningenieur 3, 6, p. 77-81.
(online at: https://babel.hathitrust.org/cgi/pt?id=coo.31924081565537;view=1up;seq=283)
('On the Neogene syncline of South Sumatra and the development of lignites'. In S Sumatra basin (Jambi-Palembang) thicker Late Miocene- Pliocene (M Palembang Fm ~650m thick with 90m coal in 11 horizons) coals than in W Java or C and N Sumatra. Sumatra coals viewed as swamp formations, deposited in areas similar to present-day Palembang, Barito and Mahakam swamp region. Some coals and associated tuffs (e.g. liparitic Mangus Tuff) can be recognized over several 1000 km2))

Schurmann, H.M.E. (1923)- Uber die Neogene Geosynclinale von Sud-Sumatra und das Erstehen der Braunkohle. Geol. Rundschau 14, 3, p. 239-252.
(online at: https://www.digizeitschriften.de/dms/img/?PID=GDZPPN000458651)
('On the Neogene syncline of S Sumatra and the development of lignite'. German presentation summary of 1922 Dutch paper. Does not believe in presence of nappes in Indonesia (Sumatra, Timor, Seram))

Sefein, K.J., T.X. Nguyen & R.P. Philp (2017)- Organic geochemical and paleoenvironmental characterization of the Brown Shale Formation, Kiliran sub-basin, Central Sumatra Basin, Indonesia. Organic Geochem. 112, p. 137-157.
(Late Eocene syn-rift lacustrine Brown Shale Fm of Pematang Group sampled in Karbindo coal mine in Kiliran graben on W side of C Sumatra basin. Organic matter primarily from lacustrine organisms with minor terrestrial plant input. 4-Methylsterane concentrations and n-alkane distributions indicate non-marine dinoflagellates and Botryococcus braunii likely significant parts of local biosphere.)

Setiadi, D.J., Hendarmawan, E. Sunardi, E.A. Sentani & J. Hutabarat (2017)- Miocene planktonic foraminiferal biozonation for South Sumatra Basin, Indonesia. J. Geol. Sciences Applied Geology (UNPAD) 2, 3, p. 89-99.
(online at: http://jurnal.unpad.ac.id/gsag/article/view/15615/7344)

(General discussion of standard planktonic foram zonation (nothing on how applied to S Sumatra; HvG))

Setiadi, I., B. Setyanta & B.S. Widijono (2010)- Delineasi cekungan sedimen Sumatra Selatan berdasarkan analisis data. J. Sumber Daya Geologi 20, 2, p. 93-106.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/322)
(Delineation of 10 sub-basins in S Sumatra basin, using gravity data. 2D modeling suggests basement in S Sumatra is metamorphic rock)

Setiawan, A., S. Rakimi, R. Wisnu Y., R. Siregar, M.R. Anwar, Hendarman & A. Sodli (2013)- Fractured Basement plays in Southern Bentu Block, Central Sumatera. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-047, p. 1-13.
(On potential of fractured basement play in S Bentu area, C Sumatra basin. Part of Mutus basement terrane)

Setiawan, A., R. Siregar, D. Arief, S. Rakimi, A. Sodli, R. Wisnu Y & Hendarman (2014)- Integration of seismic attribute and sedimentation concept for paleogeographic and sand distribution modeling in Seng-Segat Field, Bentu Block, Central Sumatra Basin. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-205, 14p.
(Seng-Segat Field in Bentu area Block in S Bengkalis Trough, C Sumatra. Bentu area known for biogenic gas production from Late Miocene- E Pliocene Binio Fm. Sand distribution maps for B-5 and B-6 primary gas reservoirs in Seng-Segat Field area (600-2500' depth), deposited in transitional coastal environment)

Setiawan, H., P.S. Widiantoro, Hendarman & M. Primaryanta (2012)- Success story with low resistivity sand in an exploration block, western edge of Central Sumatran Basin. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-095, p. 1-8.
(Three exploration wells at W edge C Sumatra Basin tested 3000 BOPD of 44°API oil in E Miocene Lower Sihapas Fm sandstones. Low resistivity (6-8 Ohm m). Resistivity of Sihapas oil sands lower than older U Pematang water sands, probably result of clay minerals in dispersed and laminated shale)

Setiawan, H., S. Yusmananto, I.M. Gunawan & Hendarman (2013)- Sedimentology and diagenesis of estuarine deposits Sihapas Formation, Western Central Sumatran Basin, Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-027, p. 1-11.

Setyaningsih, C.A. (2013)- Palynological study of the Pematang Formation of the Aman Trough, Central Sumatra Basin. Lemigas Scientific Contr. Oil and Gas 36, 3, p. 131-144.

Setyaningsih, C.A., E.B. Lelono & Firdaus (2015)- Palynological study of the Jambi sub-basin, South Sumatra. Lemigas Scientific Contr. Oil and Gas 38, 1, p. 1-12.
(online at: www.lemigas.esdm.go.id/publikasi/read/scientific/1/)
(Outcrop samples from Talang Akar and younger formations at Merangin River, Muara Jernih and Mengupeh areas show E-M Miocene ages. Top M Miocene age identified by pollen Florschuetzia levipoli and F. meridionalis, whilst base of E Miocene marked by appearance of nannoplankton Sphenolithus compactus)

Setyobudi, E.B. (1982)- Batupasir Binio; lapisan pengandung gas dangkal di lapangan minyak Merbau (Riau). Proc. 11th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 145-154.
('Binio sandstone, a shallow gas reservoir in the Merbau oil field'. M-L Miocene gas sands above Telisa Fm in C Sumatra basin)

Setyobudi, E.B. & Solichin (1996)- Study of oil migration and remigration in the Southern Kampar Block, Central Sumatra. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-14.
(Small Paleogene Binio sub-graben between Lirik and Binio Fields likely source kitchen for Binio, Pekan and Lirik Trend Fields. Sub-graben part of larger Bengkalis Trough. Major oil generation between ~10-8 Ma, when Binio- Lirik Trend structures not yet formed. Hydrocarbons filled nearby paleo-structures, until Plio-Pleistocene inversion tectonics caused spillage to present-day traps. Remaining exploration potential in subtle folds in migration and remigration pathways)

Setyobudi, P.T., W.H. Bambang, A. Banu, W.N. Krisputranto, N. Hadi & B. Sudaryo (2011)- Karakteristik dan sebaran lateral reservoir batuan dasar granitis dari data sumur pemboran dan seismik 3-D pada lapangan PT, subcekungan Jambi, Cekungan Sumatra Selatan. Majalah Geologi Indonesia (IAGI) 26, 2, p. 113-130.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/767)
('Characteristics and lateral distribution of granitic Basement reservoir from well and 3-D seismic data, in PT Field, Jambi sub-basin, S Sumatra Basin'. Fractured and weathered granite of Late Eocene(?) age have hydrocarbon reservoir potential. Core porosities 11.8% - 20.7%, permeability 1.2- 46 mD. Best oil DST in fractured granite in PTD-2 well is 1044 BPOD, best oil/ gas DST's in PT-2 928 BPOD and 0.712 MMCFGPD. Granite wash lower neutron porosity (16-18 npu), flowing oil at 23.8 BOD at WPT-2)

Setyobudi, P.T. & B.W. Handono (2012)- Petrografi dan karakteristik reservoir granit Eosen pada sub-cekungan Jambi, cekungan Sumatra Selatan. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-14, 5p.
(Petrography and characteristics of Eocene granite reservoir (34.30 ± 0.9 Ma) in Jambi Basin (N part of S Sumatra basin). Main minerals quartz 21-32%, K-feldspar 18- 41% and plagioclase 0-19%, biotite 0-6%, etc.. Dissolution and fracture porosity 1.2-19% and horizontal permeability 0.001-122 mD)

Setyowiyoto, J. (1998)- Sedimentology of the Lower Sihapas Formation identified on conventional core data, Bengkalis Trough. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 146-158.
(Core from U Oligocene- Lower Miocene Lower Sihapas Fm in MSA wells, Bengkalis Trough, Malacca Straits/C Sumatra. Six shallow marine and shoreline lithofacies)

Shaw, J.H., S.C. Hook & E.P. Sitohanh (1997)- Extensional fault-bend folding and synrift deposition: an example from the Central Sumatra Basin, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 81, 3, p. 367-379.
(Geometry and structural history of Paleogene half-grabens in C Sumatra)

Siemers, C.T. & R.A. Lorentz (1992)- Sedimentological/petrological analysis of reservoir units within the fluvial/estuarine/marine depositional complex of the Talang Akar Formation (Oligocene), Bentayan Field, South Sumatra, Indonesia. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Abstract only)*
(Bantayan field NW trending anticlinal structure on NE flank of S Sumatra basin.1932 discovery in upper Talang Akar sandstones. Up to 12 potentially productive sandstone units. Six main fluvial- shallow marine reservoir intervals, of variable quality. Stacked fluvial channel braidplain deposits are only ones with good reservoir potential; channel-fills tend to merge into well-connected braidplain type reservoir system)

Sijabat, H., T. Usman, Aliftama, H. Indrajaya, D. Susanti, M. Wahyudin & Sugiri (2016)- Petroleum geochemistry of Pre-Tertiary sediment, North Sumatra Basin. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 439-442.
(Geochemistry of five outcrop samples of shale near Kutacane, along Alas River, Aceh. With Jurassic-Cretaceous nannoplankton, but mapped as Paleozoic on Medan geologic map). TOC 0.29-0.57%, vitrinite reflectance 2.1-2.4% (overmature), gas prone source)

Siregar, B.S.A., Y.A. Nagarani, S.H. Sinaga & K.P. Laya (2008)- Paleogeographic and paleoenvironment reconstruction of Tertiary Leman coal-bearing formation, Bengkulu Basin. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 399-409.
(M Miocene coal-bearing Lemau Fm in Bengkulu Fore-Arc Basin. Lower Lemau Fm sapropelic coals (durite dominated) forming lenses and thin beds in massive claystone. Upper Lemau Fm humic coals with thicker seams (>2m and significant lateral extent; dominated by vitrites and klarites; marshes on coastal plain). Paleogeographic reconstruction shows rapid shoreline progradation)

Sitinjak, T.Y., R.A. Tampubolon, A. Pratama, W.P. Nusantara, A. Muis & H. Setiani (2020)- A new insight of Talang Akar Formation in the Ridho Field, North Palembang Sub-basin, Indonesia: an integrated approach. Berita Sedimentologi 45, p. 19-38.
(online at: https://www.iagi.or.id/fosi/files/2020/05/FOSI_BeritaSedimentologi_BS45-May_2020.pdf)
(Talang Akar Fm in Ridho field (discovered in 2009) in N Palembang Basin characterized by fining-up sequences of sandstones and shales overlain by coal layer. Underlying Lemat Fm blocky m-c conglomeratic sandstones. Presence of pollen Meyeripollis naharkotensis and Florschuetzia trilobata in TAF suggest Late Oligocene age. Increase of marine influence towards top TAF)

Sitompul, N., Rudiyanto, A. Wirawan & Y. Zaim (1992)- Effects of sea level drops during Late Early Miocene to the reservoirs in South Palembang sub Basin, South Sumatra, Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 309-324.
(Late Early Miocene sea level drops form sequence boundaries in late N6 and late N7. SB in Late N6 in Lower Talang Akar Fm, forming thick sand bodies which could be reservoirs. Late N7 sea level drop produced secondary porosity for carbonate reservoirs)

Situmeang & P.R. Davies (1986)- A geochemical study of Asameraꞌs Block ꞌAꞌ Production Sharing Contract, North Sumatra Basin. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 321-340.
(N Sumatra Block "A" with 11 commercial oil fields, which produced over 100 MBO, and one non-commercial gas field at Alur Siwah. In E part of block kerogen characterized by abundant land-derived organic material, while marine sapropelic organic matter increases to W, suggesting influx of land- derived organic matter from eastern land mass in area of Malacca Straits. Oils from Keutapang and Seureula Fm reservoirs of six different fields typically non-waxy, paraffinic, with 49-59°API gravities. Oils have common origin, probably fine grained marine sediments of M-L Miocene Baong Fm)

Situmeang, S.P., C.W. Zeliff & R.A. Lorents (1992)- Characterization of low relief carbonate banks, Baturaja Formation, Ramba A and B pools, South Sumatra, Indonesia. In: C.T. Siemers et al. (eds.) Carbonate rocks and reservoirs of Indonesia: a core workshop. Indonesian Petroleum Assoc. (IPA), Jakarta, p. 8.1-8.10.
(Ramba Field produced 60 MBO oi1 1982-1992 from A and B pools, separated by paleochannel. Best reservoir rocks coral-rich packstones- wackestones, with 16-18% porosity)

Situmorang, B. & B. Yulihanto (1985)- The role of strike slip faulting in structural development of the North Sumatra Basin. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 21-38.
(N Sumatra Basin development controlled by strike slip faulting. Several major N-S trending strike slip faults mainly with dextral movements formed in present back-arc region and arranged in en echelon pattern. Since then and until M Miocene, basin characterized by normal faulting. This episode corresponds to change in Indian Ocean spreading direction from N-S in E Paleogene to NE-SW. Convergence highly oblique in Late Miocene, producing compressive deformation and uplift. Compressional structures continuously affected sedimentary cover in Plio-Pleistocene due to strike slip faulting along Sumatran Fault system)

Situmorang, B., B. Yulihanto, A. Guntur, R. Himawan & G. J. Jacob (1991)- Structural development of the Ombilin basin, West Sumatra. Proc. 20st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-15.

Situmorang, B., B. Yulihanto, S. Sofyan, J. F. Collins, R. Barton et al. (1994)- Geology of the petroliferous North Sumatra Basin. Indon. Petroleum Assoc. Post Convention Field Trip, October 1994, p. 1-127.
(Guidebook of 4-day fieldtrip to outcrops and oilfields of N Sumatra, traverse across NE Aceh, Arun gas field and Lake Toba area)

Sjahbuddin, E. & R. Djaafar (1993)- Hydrocarbon source rock characteristics and the implications for hydrocarbon maturation in the North Sumatra Basin. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 509-532.
(Crude oils from Rantau, Aru and Langkat-Medan blocks very light condensates from source in reducing environment. Some difference in level of maturity)

Skeels, D.D. & G.W. Cooper (1985)- North Sumatra, including centenary visit to Telaga Said Field. Guidebook 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Post Convention Fieldtrip, p. 1-10, 27-108.

Smit Sibinga, G.L. (1932)- The Tertiary virgations on Java and Sumatra, their relation and origin. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 35, 4, p. 584-593.
(online at: www.dwc.knaw.nl/DL/publications/PU00016261.pdf
(On young anticlinal trends of Sumatra and Java. On Sumatra remarkable divergence of Barisan fold axes to E and disappearing under Neogene basins, causing narrowing of Barisan Mts from N to S. Similar trend on Java, but less pronounced)

Smit Sibinga, G.L. (1949)- Pleistocene eustasy and glacial chronology in Java and Sumatra. Verhandelingen Nederl. Geologisch-Mijnbouwkundig Genootschap, Geol. Serie 15, p. 1-31.
(On the effect of Pleistocene sea level fluctuations on shorelines on Java, river terraces on Sumatra, etc.)

Smit Sibinga, G.L. (1951)- On the origin and age of the peneplain of Palembang (Sumatra). Geologie en Mijnbouw 13, 1, p. 1-11.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0N1JjaTJKSVFYSW8/view)
(On drainage system, fluvial terraces, etc., in SE Sumatra. High fluvial terrace tied to eustatic sea level rise during last interglacial ingression)

Smit Sibinga, G.L. (1952)- Interference of glacial eustasy with crustal movements and rhytmic sedimentation in Java and Sumatra. Geologie en Mijnbouw 14, 6, p. 220-226.
(https://drive.google.com/file/d/0B7j8bPm9Cse0S2czQkxZN3B5cE0/view)
(Review of Smit Sibinga earlier work after critique of Rutten (1952))

Soebandrio S., D. (1985)- Penggunaan data perconto batu inti untuk membantu penafsiran lingkungan pengendapan. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 149-167.
('The use of core sampling data to help interpret depositional environments'. Core description of deltaic deposits in Tabuan- South Tabuan fields wells, S Sumatra basin)

Soeparjadi, R.A. (1982)- Geology of the Arun gas field. In: Offshore South East Asia Conference, Singapore 1982, Proc. Southeast Asia Petrol. Expl. Soc. (SEAPEX) 6, p. 1163-1171.
(Same as Soeparjadi (1983) paper below)

Soeparjadi, R.A. (1983)- Geology of the Arun Gas Field. J. Petroleum Technology 35, 6, p. 1163-1172.
(Arun gas field discovered in 1971 in Mobil Bee Block in Aceh, N Sumatra, W of Lho Sukon, 225 km NW of Medan. Condensate-rich gas in E-M Miocene reefal carbonates, locally >305m thick. Carbonates on large N-S trending paleotopographic high. Trap mainly stratigraphic, porous reef facies capped by M-U Miocene Lower Baong Fm shales. Structure size ~18.5x 5.0 km. Abnormally high P (7100 psig= 49 MPa) and T (178° C) at 10,000'. Pay thickness averages ~152m. In place reserves 16.2 TCF)

Soeryowibowo, M., T.L. Heidrick & E.G. Frost (1999)- Structural development of the Eo-Oligocene Tapung half-graben, Central Sumatra, Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 127-143.
(Tapung half-graben of C Sumatra 25 km x 8 km. SW of giant Minas Field and viewed as S terminus of N-S-trending Aman rift system. En echelon array of NNW-SSE striking border faults. Detachment of border fault <6.5 km, consistent with thickness of syn-depositional section (max. 1500 m) and β factor <12%. Development of Tapung half-graben similar to other C Sumatra half-grabens, with oblique extension commencing in Late Eocene and ceasing by Late Oligocene)

Somantri, M. (2000)- Distribution of gamma-ray values and sulphur contents in relation with depositional environment of the coals in Bayunglincir coal area, South Sumatera. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 155-176.

Sosromihardjo, S.P.C. (1988)- Structural analysis of the North Sumatra Basin- with emphasis on Synthetic Aperture Radar data. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 187-209.

Sosrowidjojo, I.B. (1996)- Bicadinanes and related compounds as maturity indicators for oils and sediments. Organic Geochem. 24, p. 43-55.
(S Sumatra oils abundant oleananes, high pristane/phytane ratio, bicadinanes and other terpenoids of higher-plant origin. Abundance of biomarkers of terrestrial origin suggest deltaic or nearshore source rock facies)

Sosrowidjojo, I.B. (2006)- Coalbed methane potential in the South Palembang Basin. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), 06-CH-05, 5p.

Sosrowidjojo, I.B. (2007)- Ongoing Coalbed Methane (CBM) development in the South Sumatra Basin. Lemigas Scientific Contr. 29, 3, p. 15-24.

Sosrowidjojo, I.B. (2013)- Coal geochemistry of the unconventional Muara Enim coalbed reservoir, South Sumatra Basin: a case study from the Rambutan field. Indonesian Mining J. 16, 2, p. 71-78.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/425/290)
(Muaraenim coalbeds in Rambutan Field, S Sumatra, high vitrinitic coal (up to 83% huminite), making it target for CBM development. High sub-bituminous rank (Ro<0.5%), high moisture content (up to 21%). Minerals <5%, mostly iron sulfide. Cleat fillings dominated by kaolinite. Rambutan wells 3 main coal seams with thickness ~9-14m, between depths ~480-950m, Ro 0.3- <0.5%. Apparent high degree of undersaturation)

Sosrowidjojo, I.B., R. Alexander & R.I. Kagi (1994)- The biomarker composition of some crude oils from Sumatra. Organic Geochem. 21, p. 303-312.
(Crude oils from N, C and S Sumatra basins analysed for biomarkers. Three types: (1) N Sumatra marine carbonate depositional setting (2) C Sumatra waxy crudes from brackish- lacustrine, and (3) light oil from N Sumatra and two oils from S Sumatra from deltaic/ nearshore depositional setting)

Sosrowidjojo, I.B & F.X. Widiarto (1997)- Temuan baru minyak bumi marin karbonat di Cekungan Sumatera Selatan: suatu kajian awal eksplorasi minyak bumi di sistem karbonat. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, Hydrocarbons, p. 50-57.
('New findings of marine carbonate oil in the South Sumatran Basin: an initial assessment of petroleum exploration in carbonate systems'. Condensate sample from BK-1 well, Bungur High, Musi Platform, strong resemblance to oils generated from marine carbonate source rock, incl. 30 norhopanes biomarker)

Sosrowidjojo, I.B. & A. Saghafi (2009)- Development of the first coal seam gas exploration program in Indonesia: reservoir properties of the Muaraenim Formation, South Sumatra. Int. J. Coal Geology 79, p. 145-156.
(Late Miocene Muaraenim Fm thick, low rank coals (lignite to sub-bituminous) in twelve named horizons. Believed most prospective for CBM production in Indonesia. Five exploration wells in Rambutan Gas field to ~1000m depth. Five major coal seams between 450-1000 m. Coals vitrinite-rich (>75%). Gas contents in samples up to 5.8m3/t, mainly methane (CH4 80-93%, CO2 6 -19%). Gas released into production well richer in CH4 (94-98%). Suitable gas recovery parameters for three of five coal seams with total thickness of >30 m)

Sosrowidjojo, I.B., B. Setiardja, Zakaria, P.G. Kralert, R. Alexander & R.I. Kagi (1994)- A new geochemical method for assessing the maturity of petroleum: application to the South Sumatra Basin. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 439-455.
(Assessing maturity of petroleum and source rocks using vitrinite reflectance and conventional biomarker data can be problematic when source rocks subjected to rapid heating and contain abundant land plant remains or when crude oil has been biodegraded. New maturity indicator based upon reactions of cadalene proposed)

Stephenson, B., S.A. Ghazali & H. Widjaja (1982)- Regional geochemical atlas series, 1. Northern Sumatera. Overseas Division, Inst. Geol. Sciences, UK, and Directorate Mineral Resources, Bandung, p. 1-80. *(Unpublished)*

Streiff, A. (1877)- Over petroleum van de afdeeling Lematang Ilir, Res. Palembang. Natuurkundig Tijdschrift Nederlandsch-Indie 37, p. 238-240.
('On petroleum of the Lematang Ilir department, Palembang residency'. Brief, early description of two S Sumatra oil seeps (Minyak Linggi) in area subsequently explored by 'Muara Enim Petroleum Co' which became part of Royal Dutch/ Shell)

Suandhi, P.A., M. Rozalli, W. Utomo, A. Budiman & A. Bachtiar (2012)- Paleogene sediment character of Mountain Front Central Sumatera Basin. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-30, 9p.
(Paleogene sediments of Barisan Mountain Front of C Sumatra Basin 240-900m thick fluvial-deltaic syn-rift sediments and ranging in age from M Eocene- Late Oligocene. Volcanism in area suggested by volcanic material as lithic material and bentonite layers)

Suandhi, P.A., M. Rozalli, W. Utomo, A. Budiman & A. Bachtiar (2013)- Paleogene sediment character of Mountain Front Central Sumatra Basin. J. Geologi Indonesia 8, 3, p. 143-149.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/164/164)
(Same paper as Suandhi et al. (2012) above)

Subastedjo, M.T. & Sukarsono (1983)- Penyelidikan geologi untuk perencanaan tambang batubara dengan contoh kasus perencanaan tambang batubara Muara Tiga, Bukit Asam Sumatra Selatan. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 209-213.
('Geological investigation for coal mine planning, with example of Muara Tiga mine, Bukit Asam, S Sumatra')

Subiyanto (2003)- Pola penyebaran kualitas batubara dan rencana pemboran eksplorasi di daerah Bukit Kendi, Tanjung Enim, Sumatera Selatan. J. Geologi Sumberdaya Mineral 13, 140, p. 30-60.
('Pattern of coal quality distrubution and exploration drilling plan in the Bukit Kendi area, Tanjung Enim, South Sumatra'. Muara Enim Fm Late Miocene- Pliocene coal in Bukut Kendi area, 12 km S of Bukit Asam coal mines. Folded in NW-SE anticlines. Coal rank increased by basaltic andesite intrusions)

Subiyanto & H. Panggabean (2003)- Batuan terobosan dan pengaruhnya terhadap pematang batubara di daerah Bukit Kendi, Tanjung Enim, Sumatra Selatan. J. Geologi Sumberdaya Mineral 13, 134, p. 18-50.
('Intrusive rocks and and their influence on coal seams in the Bukit Kendi area, Tanjung Enim, S Sumatra'. Mining concession 12 km S of Bukit Asam with coal seams A, B, C and Gantung 1-12 in Late Miocene- Pliocene Muara Enim Fm. Coal-bearing formation intruded by sill of basaltic pyroxene andesite of ~1000°C.)

Subiyanto & H. Panggabean (2004)- Karakteristik pematangan dan peningkatan mutu batubara di daerah Bukit Asam, Muara Enim, Sumatera selatan. J. Sumber Daya Geologi 14, 1, 1, p. 37-54.
(On the enhancement of Muara Enim Fm coal quality by igneous intrusions in Bukit Asam area, S Sumatra)

Subiyantoro, G. (1998)- The application of sequence stratigraphy as a guidance for reactivating observation well to be producer well in Minas field, PT Caltex Pacific Indonesia. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 91-105.
(Sequence stratigraphic interpretations and correlatios in reservoir interval of Minas Field, C Sumatra)

Subroto, E.A., R. Alexander, U. Pranyoto & R.I. Kagi (1992)- The use of 30-norhopanes series, a. novel carbonate biomarker in source rock to crude oil correlation in the North Sumatra Basin, Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 145-163.
(N Sumatra oils two groups: shaly and coaly, with distinct biomarker distributions. 30-norhopanes carbonate biomarkers proposed recently. Three types of source rocks in N Sumatra Basin: shale, carbonaceous shale and calcareous shale. Recognition of three source types can only be observed using hopane distribution. Crude oil of coaly shale type not found during this study)

Sudarsana, A. & E. Maulana (2000)- Factors affecting productivity in a shallow shoreface sandstone reservoir: a case study from the Rebonjaro Field, South Sumatra Basin. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 55-69.
(Oil productivity of very shallow A sand near top of M Miocene Lower Palembang Fm in 1929 field is better in cross-bedded facies than in bioturbated facies)

Sudewo, B., A.R Suhendan & S. Chacko (1987)- Physical properties of carbonate reservoirs in South Sumatra. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 363-383.
(Early Miocene Baturaja Lst in S Sumatra Basin significant oil- gas accumulation. Porosity varies widely between tight platform facies and porous reefal facies. Seismic data may provide indirect evidence of porosity. Increasing trend of acoustic impedance with depth correlated with decrease in porosity, indicative of compaction of limestones)

Sufiati, E. & Purnamaningsih (1994)- Kandungan flora diatomae Formasi Samosir di Pulau Samosir, Sumatera Utara. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 15, p. 101-117.
('Composition of diatomaceous flora in the Samosir Formation, Samosir Island, North Sumatra')

Suhendan, A.R. (1984)- Middle Neogene depositional environments in Rambutan area, South Sumatra. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta,1, p. 63-73.
(Miocene of Rambutan area, SW part of S Sumatra basin. Rambutan field oil in M Miocene Lower Palembang Fm clastics)

Sukanta, U., M.M. Djamaludin, H, Semimbar, Yarmanto, B.S. Simanjuntak, G. Subiyantoro, Mulyadi & Pujiarko (2002)- Depositional environment and paleogeography of Miocene siliciclastic-rich outcrops in the northwest corner of the Central Sumatra basin. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 701-710.
(Sand-rich outcrops of Miocene age outcrop in NW corner of C Sumatra basin. Few 100m thick, correlated to Sihapas Group. No figures? and no supporting biostrat control?)

Sukanta, U., Yarmanto, D. Kadar, H. Semimbar & D.A. Firminsyah (2008)- Current interpretation of regional stratigraphy of Late Oligocene- Miocene Sihapas Group in the Central Sumatra Basin. In: Sumatra stratigraphy workshop, Duri (Riau) 2005, Indon. Assoc. Geol. (IAGI), p. 81-82. *(Abstract only)*
(Summary of sequence stratigraphic study of C Sumatra Late Oligocene- E Miocene Sihapas Group. Five lithostratigraphic units (old to young: Menggala, Bangko, Bekasap, Duri and Telisa Fms). Seven basin-wide sequence boundaries (SB 25.5, 22, 21, 17.5, 16.5, 15.5 and 13.8 Ma), bounding six 3rd order sequences. Younger sands mainly developed in N, NE and E of basin and Telisa shale best developed to W and SW, suggesting sand sourced dominantly from N and NE, from Thailand-Malaysian Highs)

Sukanta, U., Yarmanto, A. Susianto & H. Semimbar (2008)- Syn-rift stratigraphy and sedimentation of Eocene-Oligocene Pematang Group, Central Sumatra Basin. In: Sumatra stratigraphy workshop, Duri (Riau) 2005, Indon. Assoc. Geol. (IAGI), p. 65-79.
(C Sumatra Eocene-Oligocene synrift continental deposits known as Pematang Group. Three units: Lower Red Bed (alluvial fan- fan delta; up to 1000m thick in Dalam depocenter), Brown Shale (up to 600m thick; lacustrine shales, also coal beds) and Upper Red Bed (braided stream, flood plain with paleosols. Pematang Group generally poor quality reservoirs. No documentation of ages))

Sukardjo (1989)- Tertiary depositional environments with emphasis on Sawahlunto coal distribution and quality in Waringin-Sugar area of the Ombilin Basin, West Sumatra, Indonesia. Thesis, University of Wollongong, p. 1-69. *(Unpublished)*

Suklis, J., A. Ames & E. Michael (2004)- CO2 in South Sumatra- observations and prediction. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia and Australasia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 269-278.

(Large quantities of gas found in S Sumatra since early 1990's. Along with hydrocarbon gas, high % of CO2. CO2 data suggest mixing from organic and inorganic CO2 sources. Higher concentrations consistent with reservoir temperatures and isotope values expected from carbonate dissociation or magmatic sources. No simple model for high CO2 (>40%) gases in low T reservoirs)

Sukmono, S. (2007)- Application of multi-attribute analysis in mapping lithology and porosity in the Pematang-Sihapas groups of Central Sumatra Basin, Indonesia. The Leading Edge 26, p. 126-131.
(On sand body prediction from seismic attributes in Eo-Oligocene of C Sumatra basin)

Sukmono, S., D. Noeradi, F. Fitris, Tafsillison, W.C. Richmond, Seffibudianti & Pujiyono (2003)- Integrated seismic multi-attribute analysis for complex fluvio-deltaic reservoir properties mapping, Minas Field, Central Sumatra. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-23.
(Minas field 1942 discovery, reservoirs complex fluvio-deltaic depositional system. 3D seismic used to differentiate sands from shales Five main oil-producing reservoirs. Few specific conclusions)

Sukmono, Sigit, M.T. Zen, L. Hendrajaya, W.G.A. Kadir, D. Santoso & J. Dubois (1997)- Fractal pattern of the Sumatra Fault seismicity and its possible application to earthquake prediction. Bull. Seismol. Soc. America 87, 6, p. 1685-1690.
(Similar to Sukmono et al. 1995, 1996)

Sukmono, Sigit, M.T. Zen, W.G.A. Kadir, L. Hendrajaya & D. Santoso (1995)- Geometry and fractal characteristics of the Sumatra active fault. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 201-214.
(NW-SE trending Sumatra Fault zone 1650km long and composed of 11 segments. Six fractal discontinuities from changes of fractal dimensions and gravity anomaly patterns. Variations suggest Sumatra mainland not rigid, but segmented into several blocks. N-S to NNE-SSW-oriented discontinuities correspond to major structural breaks in Sumatra fore-arc. Segmentation may also explain discrepancy between displacement and velocity of Andaman Sea opening, Sumatra fault motion and Sunda Strait opening)

Sukmono, Sigit, M.T. Zen, W.G.A. Kadir, L. Hendrajaya, D. Santoso & J. Dubois (1996)- Fractal geometry of the Sumatra active fault system and its geodynamical implications. J. Geodynamics 22, 1-2, p. 1-9.
(Similar to Sukmono et al. (1995))

Sukodri, K. & H. Hatuwe (1982)- Evaluasi kandungan minyak: batasan parameter petrofisika dalam formasi Keutapang dan Baong, Sumatra Utara. Geologi Indonesia (IAGI) 9, 2, p. 58-70.

Sulistyo, A., K. Kelsch, V. Noguera, T. Heidrick, M. Djamaludin, A. Linawati et al. (1999)- Integrated reservoir characterization of the Kulin Field- Central Sumatra. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 105-125.
(Kulin oil field 1970 discovery 135 km NW of Pekanbaru. Original oil in place (OOIP) ~500 MBO, but low recovery (13% after 25 years of production) due to high oil viscosity (20° API) and heterogeneous reservoir. Main reservoir in E Miocene deltaic Duri Fm. Detailed reservoir model lead to better understanding of complex compartmentalization of stratigraphy)

Sulitra, M.D. (1989)- The recognition and mapping of tight zones in the Arun reservoir, Sumatra: a synergistic effort. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 91-120.

Sumardi, D. & Hertono R.P. (1990)- Kajian komposisi abu dan unsur kimia batubara Ombilin serta lingkungan geokimia pembentukan batubara. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 242-263.
('Study of Ombilin coal ash composition and chemical factors with geochemical environment of coal formation')

Sumotarto, U. (2014)- Structural and stratigraphic hydrocarbon traps in Bandar Jaya field, South Sumatra. Bull. Ilmiah Mineral dan Energi (MINDAGI; Trisakti) 7, 1, p. 1-8.

(Six hydrocarbon exploration wells in Bandar Jaya, Lampung, SE-most Sumatra, but no discoveries. Examples of seismic lines in area of generally shallow basement (< 1 sec TWT), with rel. small, N-S trending half-grabens with up to ~2000m of Tertiary sediment. No maps (author probably means Bandar Jaya area, not field; JTvG))

Sunardi, E. (2015)- The lithofacies association of Brown Shales in Kiliran Jao subbasin, West Sumatra Indonesia. Indonesian J. Geoscience 2, 2, p. 77-90.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/211/193)
(Lithology and sequences of Brown Shale Unit of Eo-Oligocene Pematang Gp at Karbindo Coal Mine, Kiliran Jao Subbasin, Ombilin Basin. Lower part consists of coal and evaporitic limestone facies, deposited in marginal lacustrine area. In upper part shales and sandstones deposited in shallow to deep lacustrine environments. High content of reworked organic matter, common turbiditic structures, gastropod, and bivalves)

Sunaryo, A.C. (1994)- NSO ñAò Field: a new geological model, incorporating results of an integrated study of 3D seismic analysis and geologic well data. In: 10th Offshore SE Asia Conf., Singapore 1994, p. 223-237.
(Mobil NSO A 1972 offshore N Sumatra gas discovery in M Miocene Malacca Limestone carbonate buildup Carbonate total thickness ~950'; 415' gas column in discovery well)

Sunaryo, A.C. & A.H. Djamil (1990)- Development of Arun East flank, onshore North Sumatra. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 517-546.

Sunaryo, A.C., R. Widjanarko, F.W. Musgrove, R. Kristanto & D.G. Ward (1998)- Development of the South Lho Sukon reef fields by horizontal wells. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 17-33.
(South Lho Sukon A and D field produce gas from M Miocene Peutu Lst buildups. Reefal carbonates caused permeability substantial lateral variation, indicating preservation of original reef fabrics)

Suryanto, U. & N. Said (1991)- The Sihapas porosity and hydrocarbon distribution pattern in the Pematang and Bekasap Fields, Central Sumatera. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 40-58.
(Porosity/ permeability trends in E Miocene Sihapas Fm deltaic sandstone reservoirs in Pematang (1959) and Bekasap (1955) fields W of Duri)

Suryanto, U. & W.A. Wycherly (1984)- A high resolution seismic stratigraphy study, Central Sumatra Basin Indonesia. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 281-300.
(Caltex seismic stratigraphy study of Duri sands near Bangko field, Bima 1 well)

Susanto, E., H. Priadi & P. Pathak (2008)- NSO gas field simulation and production optimization. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-E-124, 18p.
(Reservoir model of 1972 NSO gas discovery, 100km off N Sumatra. Producing since 1999. 415' gas column in E-M Miocene Malacca Lst reefal buildup. Area ~7 x 10km, OGIP 2.7 TCF gas. NSO gas ~32.5% CO_2 and 1.5% H_2S)

Suseno, P.H., Zakaria, N. Mujahidin & E.A. Subroto (1992)- Contribution of Lahat Formation as hydrocarbon source rock in South Palembang Area, South Sumatera, Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 325-337.
(Lahat or Lemat Fm mainly coarse volcanic rocks, but in some areas also claystone/ shale, like Benakat Shale. Such sediments organic-rich and in oil window. Mixed Type II- III kerogens may yield oil and gas. Biomarkers suggest Lahat and Talang Akar source rocks are identical)

Susianto, A., E.S. Utoro & S. Grahia (2006)- Oligocene- Early Miocene paleogeography models South Balam Trough, Central Sumatra Basin. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-053, 16p.
(S Balam Trough one of most prolific petroleum systems in C Sumatra Basin. Paleogeographic maps made for three chronostratigraphic intervals. In Oligocene syn-rift time half grabens created with lake deposits in center (Pematang Brown Shale), bordered by fan deltas. Late Oligocene map of early post-rift phase illustrates

Pematang Upper Red Bed formation deposition. In late post-rift Early Miocene more shallow marine influence, with fluvial and deltaic deposition (Menggala Fm))

Susilawati, R. (2004)- Minerals and inorganic matter in coals of the Bukit Asam coalfield, South Sumatra Basin, Indonesia. M.Sc. Thesis, University of New South Wales, Australia, p. 1-224. *(Unpublished)*

Susilawati, R. & C.R. Ward (2006)- Metamorphism of mineral matter in coal from the Bukit Asam deposit, South Sumatra, Indonesia. Int. J. Coal Geology 68, p. 171-195.
(Miocene coal of Bukit Asam in S Sumatra mostly sub-bituminous, consistent with regional burial. Effects of Plio-Pleistocene igneous intrusions produced coal with vitrinite reflectance up to 4.17% (anthracite). Unmetamorphosed coals contain well-ordered kaolinite and quartz. Heat-affected coals, with Rv >1.0%, dominated by interstratified illite/smectite, poorly crystallized kaolinite and paragonite)

Susilo, A., B.S. Widjiono & B. Setyanta (1999)- Gravity expression on the North end of the Bengkalis Trough. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 40-42.
(N-S trending Bengkalis Trough in C Sumatra Basin 20-30km wide and 100km long. With low positive gravity anomalies, suggestive of deeper basement/ thicker sediment, flanked by higher gravity values)

Susilowati, T. & Suyoto (2009)- Model fasies karbonat Formasi Baturaja, lapangan Danendra, Cekungan Sumatra Selatan. J. Ilmiah Magister Teknik Geologi (UPN) 2, 1, 12p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/179/141)
('Carbonate facies model of the Baturaja Formation, Danendra Field, S Sumatra Basin'. Baturaja Fm oil-gas bearing E Miocene isolated reefal builups. In 'Danedra Field' (not real name; JTvG) on Musi Platform five cycles. Moldic and vuggy porosity formed by dissolution in vadose environment)

Suta, I.N. (2003)- Reservoir characterization of Lower Talang Akar sandstones, Northeast Betara (NEB) Field, Jabung Sub-Basin, South Sumatra, Indonesia. M.Sc. Thesis, University of Oklahoma, p. 1-74. *(Unpublished)*

Suta, I.N. (2016)- Jabung Block exploration through time: discoveries and challenges. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 46-TS-16, p. 1-10.
(Exploration history of Jabung Block in Jambi subbasin of S Sumatra basin. CO2 content of gas major challenge)

Suta, I.N. & B.T. Utomo (2006)- An example of integrated characterization for reservoir development and exploration: Northeast Betara field, Jabung Subbasin, South Sumatra, Indonesia. In: R.M. Slatt (ed.) Handbook of petroleum exploration and production, Elsevier, 6, Chapter 12, p. 423-472.
(NE Betara Field in Jambi (N) part of South Sumatra basin is 1995 discovery, downdip of 1971 Betara-1 well. Fault-bounded sandstone reservoirs in Oligocene Talang Akar Fm. Reservoirs lower braided river facies and upper meandering river facies, separated by areally extensive floodplain/marine shale. Better reservoir quality in meandering river sandstones)

Suta, I.N., B.T. Utomo, R.M. Slatt & M. Burnett (2006)- Integrated characterization for development of the Northeast Betara Field, South Sumatra Basin, Indonesia. In: R.M.Slatt et al. (eds.) Proc. 26th Ann. GCSSEPM Foundation Bob F. Perkins Research Conf., Reservoir characterization: integrating technology and business practices, p. 271-317.
(NE Betara Field in N part of S Sumatra basin is 1995 discovery, downdip of Betara-1. Fault-bounded reservoir in Oligocene Talang Akar Fm. Reservoir lower braided river facies and upper meandering river facies, separated by extensive floodplain/marine shale. Better reservoir quality in meandering river sandstones)

Suta, I.N. & Lu Xiaoguang (2005)- Complex stratigraphic and structural evolution of the Jabung Subbasin and its hydrocarbon accumulation: case study from Lower Talang Akar reservoir, South Sumatra basin, Indonesia. Proc. Int. Petrol. Techn. (IPT) Conf., Doha 2005, IPTC 10094, 9p.

(Combined stratigraphic and young inversion structural traps in Oligocene Lower Talang Akar Fm of Betara field complex in N part of S Sumatra basin)

Sutarwan, A.H. (1995)- Petrographical and chemical properties of coals from the Southern Peranap deposit Central Sumatra Basin, Indonesia. M.Sc. Thesis University of Wollongong, p. 1-280.
(online at: http://ro.uow.edu.au/theses/2833/)
(S Peranap coalfield in C Sumatra Basin, with 8 coal seams in Late Miocene-Pliocene Korinci Fm. Vitrinite is dominant (91%., mostly telovitrinite 43% and detrovitrinite 40%; minor gelovitrinite). Coals of brown coal rank with mean maximum vitrinite reflectances (Rmax) of 0.28-0.30%. Coals developed from ombrogenous mires in fluvial floodplain environment. Hydrogen-rich, low sulfur and nitrogen)

Sutiana, F.X. Widiarto, I. Siregar & S.M. Ulibasa (1994)- Analisis biomarker beberapa perconto Formasi Sangkarewang dan Formasi Sawahlunto di cekungan Ombilin. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 1097-1106.
('Biomarker analysis of some samples of the Sangkarewang and Sawahlunto Formations in the Ombilin basin')

Sutriyono, E., E.W.D. Hastuti & B.K. Susilo (2016)- Geochemical assessment of Late Paleogene synrift source rocks in the South Sumatra Basin. Int. J. Geomate (Japan) 11, 23, p. 2208-2215.
(online at: http://geomatejournal.com/sites/default/files/articles/2208-2215-1141-Sutriono-July-2016.pdf)
(Geochemistry of outcropping shales in U Oligocene Talang Akar Fm at Lengkayap and Napalan rivers, Garba Mts, S Sumatra basin.Low-moderate TOC's. Vitrinite reflectance indicates immature- early mature for oil)

Suwardi, S. & R. Koswara (2012)- Muara Enim coal characteristics based on petrographic study; selected sites in Darmo area, Tanjung Enim. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-04, 1p. *(Abstract only)*
(Coals of Mio-Pliocene Muaraenim Fm in PTBA coalfield, Tanjung Enim area, S Sumatra, mainly consist of vitrinite (telocollinite, desmocollinite, corpocollinite), less inertinite (semifusinite, sclerotinite, inertodetrinite) and minor exinite (sporinite, cutinite, resinite, suberinite, and alginate). Vitrinite reflectance 0.43-0.45% (sub-bituminous). Also minor clay minerals, pyrite, and carbonate. Coal deposited in wet forest swamp zone influenced by anoxic zone and marine incursion).

Suwarna, N. (2004)- Relation of organic facies to paleoenvironmental deposition; case study in the 'Papanbetupang-Kasiro coal measures', South Sumatra. J. Sumber Daya Geologi, 14, 2 (146), p. 61-74.
(Organic petrography of Oligo-Miocene coals in fluvial-lacustrine intra-montane basins of C Sumatra.)

Suwarna, N. (2004)- Sulphide mineral (pyrite) as a paleoenvironmental indicator of the Eo-Oligocene Keruh coal in the Kuansing Regency, Riau Province. J. Sumber Daya Geologi, 14, 2 (146), p. 84-92.
(Eo-Oligocene coal of in 300m thick Keruh coal measures along E flank of Barisan Range, 45km WNW of Taluk Kuantan and W of Petai in N Kuansing subbasin at SW margin of C Sumatra Basin. Four regressive cycles preceding coal accumulation, each starting with marine and brackish conditions, overlying Permo-Carboniferous Kuantan Fm metamorphics and meta-limestone. With 1.4-21.6% pyrite; highest values associated with marine incursions.)

Suwarna, N. (2004)- Maceral composition and rank of Kasiro coals: implications for hydrocarbon generation. J. Sumber Daya Geologi 14, 2 (146), p. 114-126.
(On Early Miocene Kasiro coals from Kasiro-Sarolangun area of S Sumatra with vitrinite-A reflectance 0.75-0.95% (vitrinite-B slightly lower), suggesting maturation level in oil window)

Suwarna, N. (2006)- Source-rock organic geochemistry and petrography of the Eo-Oligocene Kasiro Formation, in the intramountain Papanbetupang Basin, Southern Sumatera. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-PG-25, 3p. *(Abstract only)*
(Papanbetupang Sub-basin in Asai-Rawas region of Jambi and S Sumatera Provinces. Meta-sediments of E-M Jurassic Asai Fm and Jurassic-Cretaceous Peneta Fm and Jurassic Mersip limestone form basement. Coals

and organic rich mudstones/oil shales of Eo-Oligocene Kasiro Fm good to excellent source potential. Oil shale-bearing formations deposited in WNW- ESE grabens or half-grabens)

Suwarna, N., M. Iqbal, H. Hermiyanto & R. Koswara (2015)- Organic petrographic and geochemical characteristics of Eo- Oligocene Kasiro shales, Southern Sumatra, Indonesia. In: Hydrocarbons in the tropics: on the edge, Abstracts 32nd Ann. Mtg. Soc. Organic Petrology, Yogyakarta 2015, p. 132-133. *(Abstract)*
(Late Eocene- E Oligocene lacustrine oil shales of Kasiro Fm from Sekeladi Village, Jambi, with high TOC (0.72- 16.1%) and kerogen mainly Type II. Good-excellent oil potential. Thermal maturity late immature- early mature; some samples mature- post mature (Rv 0.22- 0.63%, mainly 0.41%))

Suwarna, N. & Y. Kusumahbrata (2010)- Macroscopic, microscopic, and paleo-depositional features of selected coals in Arahan, Banjarsari, Subanjeriji, and South Banko Regions, South Sumatra. J. Geologi Indonesia 5, 4, p. 269-290.
(online at: http://oaji.net/articles/2014/1150-1408412693.pdf)
(Coal petrography of samples from Mio-Pliocene Muaraenim Fm of Lematang Depression, Muara Enim, S Palembang sub-basin. Nine named coal horizons. Dominant maceral group vitrinite (69- 97.4%), less inertinite (0.4- 22%), exinite (0.4- 18%). Vitrinite reflectance low- moderate (0.34- 0.59%). Coals deposited in lower delta plain)

Suwarna, N., Y. Kusumahbrata & H. Panggabean (2004)- Shale-gas potential of Tertiary oil shale-bearing Formation in Central Sumatera. J. Sumber Daya Geologi 14, 2 (146), p. 102-113.
(Highest possibilty of shale-gas generation in Eo-Oligocene Keruh (Kuansing sub-basin, Late Eocene), Kiliran and Sangkarewang(Ombilin Basin), Lakat (Tigapuluh Mts; M-L Oligocene) and Kelesa Formations, in C Sumatra region)

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(Eo-Oligocene coal in Keruh Fm, 60km W of Taluk and W of Petai, Riau Province, SW corner of C Sumatra Basin)

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(Coal exploration in Mampun Pandan area in Jambi sub-basin, S Sumatra, close to W edge of Tigapuluh Mts. Late Oligocene- E Miocene Talang Akar-equivalent rocks with four coal seams in Claystone-coal unit, 4.5-11m thick, and two 4m thick seams in underlying Conglomeratic Sst unit. High Volatile Bituminous A-C grade)

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(Review of N Sumatra basin. Major subsidence during Paleogene rifting and M Miocene- Recent syn-tectonic episodes, separated by period of tectonic quiescence in E-M Miocene. Very high rate of subsidence (N9-N11), likely related to activation of Barisan Mts uplift, with active thrusting along Barisan front)

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(Supat Field in Corridor Block discovered in 1984 (Asamera), producing since 1988. Rel. thin latest Oligocene-earliest Miocene 'K-Limestone' at top of Talang Akar Fm along basin margin. Low-porosity sandy limestone with oil shows)

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Szemian, J.M.J. (1933)- Die Systematische Bodenkartierung von Sumatra. Soil Research, 3, p. 202-221.
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(Kuang area distribution of Talang Akar reservoirs controlled by basement highs, and stratigraphic traps form as onlaps along flanks of highs. Lower Talang Akar productive in Beringin Field; Upper Talang Akar produces in Air Serdang Field)

Tangkalalo, D. & M.F. Ma'ruf (1993)- Eksploitasi hidrokarbon pada endapan turbid lapisan BRS struktur PTB lapangan Pangkalan Susu. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 794-802.
('Hydrocarbon exploitation in bedded turbidite deposits, BRS structure, Pangkalan Susu field', N Sumatra. Besitang River sand in M Miocene Middle Baong Fm turbiditic deposits)

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(Pulau Panjang field in Aru region of N Sumatra basin 1928 BPM discovery on NW-SE trending anticline. 65 wells drilled between 1928-1941. Production from Late Miocene Keutapang Fm deltaic sandstones. Re-evalution of old shut-in oil wells suggests varying degrees of depletion of reservoirs. Recompletion can result in economically viable production)

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('Preliminary study of coal prospects in the Benuang field, S Sumatra'. Four main seams in coalfield on NW-SE trending Benuang anticline NE of Muara Enim)

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(Reserves study of Pangkal field in Palembang High area, S Sumatra basin, NE of Kaji Semoga field (= Medco Langkap field). Discovered in 1987; 35 wells drilled; current production 1400 BOPD from 14 wells. Reservoir Talang Akar Fm stacked fluvial channel sandstones with 15-21% porosity. OOIP of field is 24 MMBO, EUR 7 MMBO, cumulative oil production 5 MMBO)

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('Investigation of the Tertiary petroleum terrains of the East coast of Aceh (terrain Aceh II), N Sumatra'. Incl. presence of 'Tampoer Limestone' along Tampur River, at base of Tertiary section and probably of Pretertiary age))

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(In Chinese with English summary. Study of effect of synsedimentary faults on deposition in Ripah oilfield in back-arc basin of S Sumatra. Synsedimentary faults characterized by episodic activity and displayed in echelon in map view. Target beds in area dominated by delta plain subfacies)

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(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/547)
('Potential oil content in tight bitumen, Padanglawas area, West Sumatra'. Oil shale deposit in synclinal structure of U Telisa Fm (M Miocene), at W side of C Sumatra Basin. Oil shale with TOC 3.1- 14.8%. Classified as sapropelic oil shale, with dominant component alginite. Deposited in lacustrine environment)

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('Characteristics of oil shale samples of Sangkawerang Fm in the Sawahlunto area, W Sumatra, based on organic geochemistry'. Organic content in Sangkarewang Fm oil shale 0.11-5.1%. Derived from algae and higher plants, deposited in lake environment. Kerogen Type II and Type III, early mature)

Tobing, R.L. (2016)- Kematangan termal dan estimasi kandungan minyak endapan serpih Formasi Sinamar di daerah Dusun Panjang, Provinsi Jambi. Bul. Sumber Daya Geologi 11, 2, p. 93-101.
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('Thermal maturity and estimation of shale oil content of the Sinamar Fm in the Dusun Panjang area, Jambi Province'. Oligocene Sinamar Fm shales ~10- >25m thick in outcrop in W part of Jambi basin. Organic content up to 17% , dominated by Types I and II kerogen. Liptinite and vitrinite up to 10%, inertinite up to 0.49%. Immature to overmature. May produce 5- 90 liter oil/ ton shale, giving oil resource of ~69,535,298 barrels(!))

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('Brief description of the petroleum terrains in the SE part of the Jambi Residency, Sumatra'. Detailed mapping of surface anticlines. Numerous oil-gas seeps)

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('Brief description of the petroleum areas of Central, NW and North Lower Jambi', C. Sumatra. Not-so-brief overview of stratigraphy and descriptions of 26 anticlinal structures. With 1:200k scale geologic map and 1:25,000 scale maps of 20 anticlinal structures)

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('The Lematang coal fields'. Popular magazine article on S Sumatra Miocene coals)

Tromp, H. (1919)- De wetenschappelijke en technisch-economische beteekenis der Lematang-kolenvelden, I. De Ingenieur 34, Nr. 40, p. 721-734, Nr. 41, p. 747-752 and Nr. 43, p. 767-774.
(online at: https://resolver.kb.nl/resolve?urn=dts:2981058:mpeg21:pdf)
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(online at: https://resolver.kb.nl/resolve?urn=dts:2981059:mpeg21:pdf)

('The scientific and technical-economic significance of the Lematang coalfields'. Part 2: physical and chemical properties. Lematang coals low in ash (1-2%), low water content (1-2%), high caloric value (6000-7000, up to 8500 calories), resistant to weathering, etc.)

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('The scientific and technical-economic significance of the Lematang coalfields'. Part 3: Exploration and exploitation of the Boekit-Asem field)

Utomo, W., D. Hendro H.N., K. Simanjutak, A. Krisyunianto & A. Bachtiar (2011)- Characteristic of Pematang facies at Rantauberangin and surrounding area, Riau Province. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-466, 10p.
(Late Eocene- Oligocene Pematang Fm in C Sumatra may contain reservoir rocks. Five Pematang facies identified: braided channel, meandering channel, paleosol- braided river, gravity flow (low energy), and debris flow-alluvial fan (high energy) facies. Braided channel facies good reservoir quality, debris flow facies poor. Deposition in semi-enclosed valleys bounded by normal fault creating alluvial fans, some of which poured into deep lakes, with braided and meandering rivers in other end of valley)

Utoyo, H. (2007)- K/Ar dating of Bukit Asam and Bukit Kendu intrusions related to age of maturity and increasing of coal quality in Tanjung Enim area, South Sumatera. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, JCB2007-112, p. 704-713.
(Coal in Muara Enim Fm in Tanjung Enim District, S Sumatera, increases in maturity and quality towards Bukit Asam and Bukit Kendi intrusions. K/Ar analysis shows Bukit Asam age is 0.92 ± 0.26 Ma and Bukit Kendi is 1.15 ± 0.29 Ma. Increase in maturity and quality of coal took place in last 1.15 Myrs. Bukit Serilo probably younger)

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('Intrusive rocks in the Bukit Kendi area, South Sumatra, related to maturation and improved quality of coal'. Intrusives of Bukit Kendi and Bukit Cepadang and associated sills in Tanjung Enim area generated hydrothermal temperatures of ~230°C, causing local improved thermal maturation of Late Miocene- Pliocene Muara Enim Fm coals)

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(online at: www.biodiversitylibrary.org/item/48386page/203/mode/1up)
('Exploitable coal beds in the surroundings of Bengkulu'. Early survey of Miocene coals at Bukit Sunur, Duson Baru, etc., in Bengkulu area, SW Sumatra. Quality of coal comparable to SE Kalimantan coal and some localities attractive for exploitation)

Van Dijk, P. (1864)- Bijdragen tot de geologische en mineralogische kennis van Ned. Indie, XXVI. Zwartkolen in en nabij de Baai van Tapanoeli. Natuurkundig Tijdschrift Nederlandsch-Indie 26, 1, p. 41-63.
('Black coal in and near the Bay of Tapanuli', Sumatra. Same paper as Van Dijk 1875. With two maps)

Van Dijk, P. (1864)- Bijdragen tot de geologische en mineralogische kennis van Ned. Indie, XXVII. Koperaders in de Padangsche Bovenlanden. Natuurkundig Tijdschrift Nederlandsch-Indie 27, p. 87-109.
('Copper veins in the Padang Highlands'. Investigations in the canyon of Paningahan (low-Cu in veins in chlorite shale) and in the ore district of the Sibumbun-Djanten (multiple veins with malachite, etc.)

Van Dijk, P. (1864)- Bruinkool van Ketaoen in Moko-Moko, Benkoelen. Natuurkundig Tijdschrift voor Nederlandsch Indie 27, p. 259-264.
(online at: www.biodiversitylibrary.org/item/48499page/793/mode/thumb

('Lignite of Ketaun in Moko-Moko, Bengkulu', SW Sumatra. With small sketch map)

Van Dijk, P. (1875)- Ontginbare kolenlagen in de ommelanden van Benkoelen. Jaarboek Mijnwezen Nederlandsch Oost-Indie 4 (1875), 2, Verhandelingen, p. 97-120.
('Exploitable coal beds in the surroundings of Bengkulu'. Same paper as Van Dijk 1860)

Van Dijk, P. (1875)- Zwartkolen in en nabij de Baai van Tapanoeli. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1875, 2, p. 121-157.
('Black coal in and near the Bay of Tapanuli', Sumatra. Same paper as Van Dijk 1864)

Van Gorsel, J.T. (1988)- Geological fieldtrip to South Sumatra and Bengkulu, October 28-31, 1988. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-42.
(Guidebook for geology along E-W transect of S Sumatra, from Palembang to Bengkulu)

Van Hettinga Tromp, H. (1931)- Bezitten de Ombilinmijnen een oudere koollaag dan de C. laag. De Mijningenieur 12, 1, p. 1-4.
('Is there an older coal layer than the C layer in the Ombilin mines?'. Possiblility of an older, 4th coal horizon ('D') in Ombilin coal field)

Van Heurn, F.C. (1923)- Studien betreffende den bodem van Sumatra's Oostkust, zijn uiterlijk en zijn ontstaan. J.H. de Bussy, Amsterdam, p. 1-121.
('Studies on the soil of Sumatra's East coast, its appearance and origin'. With discussion of geologic context of soils of NE Sumatra. With simple map showing boundary between 'high-red soils' and 'low-white soils')

Van Schelle, C.J. (1876)- Mededeeling over het voorkomen van aardolie bij het dorp Kollok, Padangsche Bovenlanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 5 (1876), 1, p. 188-189.
('Note on the petroleum occurrence near the village of Kollok, Padang Highlands'. Early report of small oil seep along footpath from Kollok to Telaweh, near Soengei Doerian coal field in Ombilin Basin, W Sumatra)

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(Coal in Ombilin basin mined in Sawahlunto area since 1891. Basin fill ~4600 m of M Eocene- E Miocene sediments. Fan-delta sediments below oldest M Eocene seam, seam itself and sediments overlying C seam investigated along W margin. Ombilin Basin is graben-like 'pull-apart' basin. Debris flows and fan-delta formation around margin of basin, with lake sediments in basin centre. Peat accumulation influenced by underlying fan-delta lobe geometry. In interlobe areas thick sequences of low ash peat accumulated, while central lobe areas high ash coal or carbonaceous shale formed)

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(Calcite locally common in Ombilin basin lacustrine Sangkarewang oil shale (8.4%). Variation of calcite % related to primary productivity/ precipitation. As lake developed, primary productivity decreased (more negative d13C values))

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(Oil shale samples from Late Eocene syn-rift Brown Shale and Sangkarewang Fms in Kiliran and Ombilin Basins. Organic matter of Kiliran Basin mainly lamalginite and telalginite (originated from lacustrine Botryococcus braunii). Vitrinite reflectance averaging 0.29%. Organic matter in Sangkarewang oil shale dominated by lamalginite, with vitrinite reflectance values ~0.37%. Oil shales immature. TOC ~5.6% and 5.0% for Kiliran and Ombilin shales, respectively)

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(C Sumatra prolific oil attributed to graben sequences with thick organic-rich lacustrine shales, overlying marine sag sequence with excellent reservoirs, development of early structures and high heat flows. Geothermal gradient, average 3.38°F/100'. Distribution of oilfields largely fault controlled. Oil migrated vertically out of Eocene-Oligocene Pematang lacustrine shales and laterally up flanks of graben, generally in E direction, filling Miocene Sihapas Fm reservoirs. Hydrocarbos also in rift-fill sequence. Migration distance up to 20km. Differences in oils reflect different depositional and environmental histories of lake systems)

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(Most of oil and gas in C Sumatra Basin Generated from organic-rich lacustrine shales of Eo-Oligocene Pematang Gp. Oils paraffin-based, with 4-30% wax. Large freshwater lake systems developed in structurally controlled rift basins. Palynology indicates mainly freshwater conditions (with common Pediastrum), but also occurrences of slightly saline conditions or occasional marine incursions)

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(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.902.8446&rep=rep1&type=pdf)
(E Miocene Sihapas Group in Minas field, C Sumatra, composed of succession of 10s of m thick, erosionally based, tide-influenced sandstone intervals interbedded with marine shale intervals. Past interpretations suggested reservoir sandstone intervals are incised-valley deposits. New interpretation suggests tide-influenced shorelines. Five major reservoir intervals over low-grade metamorphic basement. Two older intervals multiple upward-coarsening tide-influenced regressive shoreline successions capped by thin marine shelf transgressive sandstone and shale. Upper three reservoir intervals 4th-order regressive shoreline deposits variably reworked by tidal currents, together comprising 3rd-order forward-stepping sequence set)

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Wisnu, A. & Nazirman (1997)- Statistik "Direct Hydrocarbon indicator" terhadap keberadaan hidrokarbon di blok Raja, Sumatera Selatan. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, Hidrokarbon, p. 71-88.
('Statistics of "Direct HC indicators" on the presence of hydrocarbons in the Raja block, South Sumatra'. Positive correlation between seismic DHI's and oil-gas discoveries (Air Hitam, Abab, Tempirai, etc.))

Wisnugroho, P.H. (2014)- Coal deposits in Tanjung Enim coal field, Bukit Asam, South Sumatera Province. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 451-459.

Wongsosantiko, A. (1976)- Lower Miocene Duri Formation sands, Central Sumatra Basin. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 63-76.
(E Miocene Duri Fm sand reservoirs productive in 12 fields in C Sumatra. Deltaic sands, derived from North)

Xie, C., H. Ma, H. Liang, D. Li, X. Qi & B. Xian (2007)- Alluvial fan facies and their distribution in the Lower Talang Akar Formation, Northeast Betara Oilfield, Indonesia. Petroleum Sci. 4, 2, p. 18-28.
(Lower Talang Akar Fm in NE Betara Oilfield, Jabung Block, S Sumatra, in alluvial fan facies. Bed F coarse grained, poorly sorted and low quality. Conglomerates characterized by low gamma-ray, low resistance, high density and poor physical reservoir properties)

Yanto, Y. & T. Febriwan (2008)- AVO-inversion for reservoir characterization of Baturaja carbonate, Gunung Kembang Field, South Sumatra basin. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc., IPA08-G-047, 11p.
(Gunung Kembang gas-oil field in E Miocene Baturaja Fm carbonates in anticlinorium with max. reservoir thickness 80m, gas cap 40m, underlain by 8-12m oil column. AVO inversion used to map oil distribution.)

Yarmanto (2010)- Perkembangan batupasir pada sekuen Telisa Cekungan Sumatra Tengah. Ph.D. Thesis Inst. Teknologi Bandung (ITB), p. 1- *(Unpublished)*
('Development of sandstones in the Telisa sequence in the Central Sumatra Basin')

Yarmanto & K. Aulia (1989)- Seismic expression of wrench tectonics in the Central Sumatra Basin. Geol.Indonesia (IAGI) 12, 1 (Katili Volume), p. 145-175.
(Tertiary wrench faulting dominant in C Sumatra basin. Main deformation phases Pre-Tertiary, Eo-Oligocene and Plio-Pleistocene. Plio-Pleistocene deformation NW-SE, older structures trend mostly N-S)

Yarmanto, T.L. Heidrick, Indrawardana & B.L. Strong (1995)- Tertiary tectonostratigraphic development of the Balam depocenter, Central Sumatra basin, Indonesia. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 33-45.
(Three major Tertiary tectonic- stratigraphic episodes in Balam Depocenter. Eocene (?)- Oligocene rifting (F1, ±45-25.5 Ma) created N-NNW-trending half-grabens. Balam depocenter compartmentalized. Rift margin faults N-S (Manggala) or NNW-SSE (Jakun and Balam) and dip E-ENE at low-angles. ENE-trending Antara-Nella Accommodation Zone (ANAZ) subdivides Balam Depocenter into shallow N and deep central sections. Regional base Miocene unconformity marks beginning of F2 tectonism (25.5-13.8 Ma). It cuts across basement platforms and F1 inversion structures and grades laterally into sag disconformities above F1 graben thicks. Isopach-lithofacies suggest N-S incised braided stream system. Final structuring (F3, 13.8 Ma- Recent) linked to widespread inversion of faults and folds. Giant Bangko and Balam S fields results of F3 structural episode)

Yarmanto, I. Muswar, D. Kadar & S. Johansen (2006)- Re-appraisal of shallow marine reservoirs in the Central Sumatra basin, sixty-five years after first hydrocarbon discovery. Proc. Jakarta 2006 Int. Geosc. Conf. Exh., Indon. Petroleum Assoc. (IPA), Jakarta, PG-07, 3p. *(Abstract only)*
(Sihapas Group 5 major sequences; little or no supporting data)

Yarmanto, D. Noeradi & Hendar (2010)- Telisa deposition model in the Central Sumatra Basin. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-204, 11p.
(On depositional environment and paleogeography of Early Miocene marine shale-dominated Telisa Fm, C Sumatra)

Yeni, Y.F. (2011)- Perkembangan sedimentasi Formasi Brani, Formasi Sawahlunto dan Formasi Ombilin ditinjay dari provenance dar komposisi batupasir cekungan Ombilin. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-070, 21p.

(On composition and provenance of sandstones of Brani, Sawahlunto and Ombilin Fms in Ombilin Basin, W Sumatra)

Yeni, Y.F., R. Wulandari, F. Ruzi, A. Azlin, A. Regina, R. Bramantyo, M.H. Thamrin & Raihan (2017)- Fractured and weathered basement reservoirs in Beruk High, Central Sumatra Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(Beruk High part of Coastal Plain Pekanbaru Block in C Sumatra basin. Part of Sibumasu- E Sumatra Block. Oil produced from Permian- E Cretaceous fractured-weathered basement of Beruk High, with open fractures trending NW- SE. Lithologies: quartzite (E Permian K-Ar age: 276 Ma,), granites (Jurassic K-Ar ages: 203, 179, 150 Ma, hornfels (116 ± 6 Ma))

Younita, N. & B. Simandjuntak. (2002)- Indikasi endapan estuaria pada Area II lapangan minyak Duri, Cekungan Sumatera Tengah. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 224-245.
('Indications of estuarine deposits in Area II of the Duri oilfield, C Sumatra Basin')

Youens, S. (1986)- Porosity determination from seismic data in the Rawa area, Corridor Block PSC. CCOP Tech. Publ. 17, p. 143-155.

Yulihanto, B. & B. Situmorang (1991)- Structural inversion and its influence on depositional processes in the Aru Area North Sumatra Basin, Indonesia. In: R.P. Aribert-Christ (ed.) Proc. First Offshore Australia Conference, Melbourne 1991, III, p. 25-42.

Yulihanto, B. & B. Situmorang (2002)- Tertiary inversion tectonics in the North Sumatra basin, Indonesia. J. Geologi Sumberdaya Mineral 12, 130, p. 28-48.
(Structure of N Sumatra controlled by dextral motions along NW-SE and N-S trending fault systems. N-S faults associated with isolated Paleogene transtensional graben formation. Late M Miocene structural event caused inversion along NW-SE and N-S trending faults, causing shallowing of W part of basin and migration of depocenter to E, also uplift of Barisan Mountains. Since M Miocene sediments mainly sourced from Barisan Mts. Latest inversions during 'Plio-Pleistocene orogeny')

Yuningsih, E.T. (2007)- Studi provenance batupasir formasi-formasi di Cekungan Ombilin, Sumatra Barat. Bull. Scientific Contr. (UNPAD) 5, 1, p. 33-41.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8132/3705)
(Sandstone provenance studies of formations in the Ombilin Basin, West Sumatra'. Q-F-L triangle diagrams suggest provenance of quartz-rich (Eocene) Brani Fm is from continental block. (Oligocene) Sawahlunto and Sawahtambang Fms same or 'recycled orogen'. (Miocene) Sangkarewang and Ombilin Fms are 'transitional magmatic arc'. Etc.)

Yunus, M., B. Denk & Suprihatin (1993)- Geological contributions to the enhanced oil recovery project at the Kenali Asam Field. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 793-793.

Yustiawan, R., B.A. Pramudhita, A. Prakoso, Y.A. Nagarani & H. Yusuf (2013)- Pematang Brown shale as potensial reservoir for the future Malaca Strait. Proc. Joint Conv. 38th Indon. Assoc. Geoph. (HAGI) - 42nd Indon. Assoc. Geol. (IAGI), Medan, p.

Yuwono, R.W., B.S. Fitriana, P.S. Kirana, S. Djaelani & B.A. Sjafwan (2010)- Bentu & Korinci Baru block: proven and potential shallow biogenic gas in Central Sumatra Basin. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-226, 16p.
(Bentu and Korinci Baru PSC in C Sumatra contain biogenic gas fields with up to 350 BCF of biogenic gas. Formerly considered drilling hazard in search for deeper oil, now producing. Main gas sands in Late Miocene-Pliocene Binio Fm coastal deposits, in NW-SE anticlines. Reservoirs 600'-2000' below sea level, 7-25' thick, and excellent porosity. Seismic data shows strong amplitude anomalies, but some bright spots are coals or thin stacked water sands. Biogenic gas origin demonstrated by carbon isotope d13C values of -62 to -66 ‰.)

Yuwono, R.W., B.S. Fitriana, P.S. Kirana, S. Djaelani & B.A. Sjafwan (2011)- Biogenic gas exploration and development in Bentu PSC. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-108. 17p.
(Same paper as above and also published in AAPG Singapore 2012 Int. Conv.)

Yuwono, R.W., R. Siregar, A. Kurniawan, T. Prabowo, S. Djaelani & Y. Gautama (2012)- Development of marginal Bentu gas field in Central Sumatra Basin. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GG-03, 13p.
(Biogenic gas reservoir in Bentu Field 40-50' sand in Late Miocene - Pliocene Binio Fm. 2P reserve is only 14 BCF, but proximity to power plant justifies development Binio Fm deposited in coastal environment. Gas trapped in NW-SE anticline related to reverse fault)

Zaim, Y., G.F. Gunnell, R.L. Ciochon, Y. Rizal, Aswan & N. O'Shea (2014)- Paleogene vertebrates from Tanahsirah, Talawi- Ombilin Basin, West Sumatra: a preliminary field result. Buletin Geologi (ITB) 41, 3, p. 175-184.
(Paleogene Sangkarewang/Sawahlunto Fms initially known only for fish fossils. Subsequent finds of crocodiles, turtles, small mammal bones and teeth (first Paleogene mammal finds in oceanic SE Asia), and bird trackways)

Zaim, Y., L. Habrianta, C.I. Abdullah, Aswan, Y. Rizal, N.I. Basuki & F. E. Sitorus (2012)- Depositional history and petroleum potential of Ombilin Basin, West Sumatra- Indonesia, based on surface geological data. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 10449, p. 1-9.
(online at: www.searchanddiscovery.com/documents/2012/10449zaim/ndx_zaim.pdf)
(Ombilin Basin Eocene- M Oligocene initial rifting with deposition of Brani and Sangkarewang Fms in alluvial fan and lacustrine environment (with freshwater fish fossils). In Oligocene syn-rift changed from lake to fluvial Sawahlunto Fm and Sawahtambang Fm in Late Oligocene. E Miocene post-rift Ombilin Fm change to marine environment. Etc.)

Zaim, Y., Y. Rizal, G.F. Gunnell, T.A. Stidham & R.L. Ciochon (2011)- First evidence of Miocene avian tracks from Sumatra. Berita Sedimentologi 20, p. 5-6.
(online at: www.iagi.or.id/fosi/files/2011/01/BS20-Sumatra1.pdf)
(Ombilin Basin E Miocene intertidal beach sediments of Sawahlunto Fm with tracks of two different types of shorebirds. Represent first discovery of bird footprint fossils in Indonesia)

Zainetti, F., G.A. Cole & A. Anuar (2015)- Fresh insights into the oil families of the South Sumatra Basin. Asia Petroleum Geoscience Conf. Exhib. (APGCE), Kuala Lumpur, 5p. *(Extended Abstract)*
(Geochemical analyses of 44 oils in S Sumatra Basin. New biomarker interpretation method helps define three main oil families:(1) more algal-dominated; (2) mixed terrigenous with subordinate algal contribution, and (3) typical humic sourced family. All potential source rocks are syn-rift to sag in origin)

Zajuli, M.H.H. & H. Panggabean (2013)- Depositional environment of fine-grained sedimentary rocks of the Sinamar Formation, Muara Bungo, Jambi. J. Geologi Indonesia 8, 1, p. 25-38.
(online at: http://jgi.bgl.esdm.go.id/index.php/JGI/article/view/45/34)
(Lacustrine Oligocene Sinamar Fm at NW side of S Sumatra Basin consists of clastics with coal-seams. Dominant maceral groups exinite (alginite (3.4-18%), and resinite (1.6-5.6%)) and vitrinite (tellocolinite 0.4-0.6%, desmocollinite 0.4%, vitrodetrinite 8.4-16.6%). Organic material of shales derived from higher plants and algae, especially Botryococcus species)

Zajuli, M.H.H. & H. Panggabean (2014)- Hydrocarbon source rock potential of the Sinamar Formation, Muara Bungo, Jambi. Indonesian J. Geoscience 1, 1, p. 53-64.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/175/175)
(Oligocene Sinamar Fm good-excellent oil source rock, with up to 11% TOC and mainly Type I kerogen. Simamar village outcrop section ~42m thick brown-black shale, with coal and sandstone near base. Immature-early mature in outcrop)

Zajuli, M.H.H., H. Panggabean, Hendarmawan & I. Syafri (2015)- Dinamika kehadiran material organik pada lapisan serpih Formasi Kelesa di daerah Kuburan Panjang, Cekungan Sumatera Tengah, Riau. J. Geologi Sumberdaya Mineral 16, 4, p. 171-181.
('Dynamics of organic material presence Kelesa Fm shale in the Kuburan Panjang region, C Sumatra Basin'. Eocene-Oligocene Kelesa Fm shale in Kuburan Panjang area, Sumai sub-basin (SW of Rengat), good potential source rocks with TOC 1.2- 7.2%. Vitrinite 0.2-5%, eksinite 0.6-4.7%. Pyrite 0.2-16%. Increase in organic material from bottom to top)

Zajuli, M.H.H., H. Panggabean, Hendarmawan & I. Syafri (2017)- Hubungan kelompok maseral liptinit dan vitrinit dengan tipe kerogen batuan sumber hidrokarbon pada serpih Formasi Kelesa bagian atas, Kuburan Panjang, Riau. J. Geologi Sumberdaya Mineral 18, 1, p. 13-23.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/101/126)
('Relationship between liptinite and vitrinite maceral groups with kerogen type of hydrocarbon source rock of upper Kelesa shale formation in Kuburan Panjang, Riau')

Zamiel, F., M. Irfani & K.N. Syafrin (1991)- Perkembangan "barrier bar" pada batupasir Formasi Keutupang bawah daerah Pulau Sembilan, Aru, Sumatra Utara. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 206-230.
('Development of a 'barrier bar' in sandstones of the Lower Keutupang Formation in the Pulau Sembilan area, Aru, North Sumatra'. NW-SE trending 'barrier bar' sandbody in Late Miocene of N Sumatra)

Zeliff, C.W. & D. Bastian (2000)- New play in a mature basin: prospecting for gas. AAPG Int. Conf and Exhib., Bali 2000, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, 1p. *(Abstract only)*
(Dayung-1 1991 wildcat well, S Sumatra tested gas in fractured pre-Tertiary granite wash and granite. Since Dayung, Gulf discovered 8 gas fields where basement rocks represent primary reservoir)

Zeliff, C.W., S.W. Trollope & E. Maulana (1985)- Exploration cycles in the Corridor Block, South Sumatra. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 379-400.
(Corridor area in S Sumatra several cycles of petroleum exploration. Exploration by BPM (Shell) in early 1890's, resulted in several small, shallow oil fields. Second cycle concentrating on deep Talang Akar prospects through 1930's terminated by World War II. Low level of activity post WW II through late 1960's. Modern exploration cycle initiated by Stanvac in 1971 and Asamera after 1980, with Tanjung Laban and Ramba fields discoveries in 1982).

Ziegler, K.G.J. (1921)- Verslag over de resultaten van geologisch- mijnbouwkundig onderzoek van het Kendi-Ringin kolenveld (Res. Palembang). Jaarboek Mijnwezen Nederlandsch-Indie 47 (1918), Verhandelingen 2, p. 141-189.
('Report on the results of geological-mining investigation of the Kendi-Ringin coal field (Res. Palembang)'. Coal field with 12 coalbeds in Miocene Middle Palembang Fm. Coal grade improved by andesite intrusives)

Ziegler, K.G.J. (1922)- Verslag over het onderzoek der asfalt-terreinen by Tandjoeng Laoet (Res. Palembang). Jaarboek Mijnwezen Nederlandsch-Indie 49 (1920), Verhandelingen 1, p. 33-69.
('Report of investigation of asphalt deposits near Tanjung Laut (Res. Palembang)'. Six surface asphalt deposits 50 km WNW of Palembang, S Sumatra, which are large, degraded oil seeps in outcropping ?Pliocene clastics)

Zonneveld, J. P., Y. Zaim, Y. Rizal, R.L. Ciochon, E.A. Bettis, Aswan & G.F. Gunnell (2011)- Oligocene shorebird footprints, Kandi, Ombilin Basin, Sumatra. Ichnos 18, 4, p. 221-227.
(Two types of bird footprints in intertidal sand flat fine sandstone of Oligocene Sawahlunto Fm in outcrop near Kandi Ombilin Mine. Referable to ichnogenus Aquatilavipes and similar to small modern shorebirds)

Zonneveld, J.P., Y. Zaim, Y. Rizal, R.L. Ciochon, E.A. Bettis, Aswan & G.F. Gunnell (2012)- Ichnological constraints on the depositional environment of the Sawahlunto Formation, Kandi, northwest Ombilin Basin, west Sumatra, Indonesia. J. Asian Earth Sci. 45, 2, p. 106-113.

(Low diversity trace fossil assemblage from Oligocene Sawahlunto Fm near Kandi, NW Ombilin Basin, W Sumatra. Traces and mud-draped and bidirectional ripples imply tidally-influenced marine setting. Bird footprints (Aquatilavipes) imply periodic subaerial exposure)

Zulmi, I., A. Inabuy & R. Wisnu Y. (2016)- A hidden gas potential of alluvial fan deposits in Gebang Block, North Sumatra. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 544-548.
(Up to 300m thick Eo-Oligocene alluvial fan sandstones identified in Anggor and Secanggang Fields and Gebang Block wells in N Sumatra basin. Gas tested in Anggor and GB-04 wells. Risk of overpressure)

II.3. Sumatra - Offshore Forearc and islands

Abercrombie, R., M. Antolik & G. Ekstrom (2003)- The June 2000 Mw 7.9 earthquakes south of Sumatra: deformation in the India-Australia Plate. J. Geophysical Research 108, B1, 2081, 16p.
(June 2000 earthquakes S of Sumatra below Indian Ocean predominantly left-lateral strike-slip on vertical N-S trending faults, probably reactivated fracture zones. Earthquakes consistent with recent models of distributed deformation in India-Australia composite plate. Occurrence of Enggano earthquake implies stress field within Indian plate continues to depth of 50km in subducting slab)

Ammon, C.J., Chen Ji, H.K. Thio, D. Robinson, S. Ni, V. Hjorleifsdottir, H. Kanamori, T. Lay et al. (2005)- Rupture process of the 2004 Sumatra-Andaman earthquake. Science 308, p. 1133-1139.

Andi Mangga, S., G. Burhan, Sukardi & E. Suryanila (1994)- Geologic map of the Siberut Sheet (0614-0714), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet of Siberut Island in Sumatra forearc/ accretionary prism. SW half of island mainly highly folded Late Miocene- Pliocene Sagulubek Fm. M-L Miocene? Tarikan Melange complex at base of thrust sheets, with blocks of Late Oligocene- E Miocene limestone in sheared tuffaeous claystone. NW part of island mainly strongly folded Late Miocene- Pliocene deep water tuffaceous sediments of Saibi Fm. Structure mainly NW-SE trending, NE dipping thrust faults)

Andi Mangga, S., S. Gafoer & N. Suwarna (1987)- Hubungan geologi antara Kepulauan Mentawai dan dataran Sumatra bagian Selatan. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.
('Geological relationships between the Mentawai islands and S Sumatra'.)

Andi Mangga, S., Kusnama & Suryono (2006)- Stratigraphy and tectonic development of Mentawai islands West Sumatera, based on plate tectonic theory. J. Sumber Daya Geologi 16, 3 (153), p. 136-143.
(Mentawai Islands off W Sumatra non-volcanic outer arc, related to subduction of IndianOcean. Pre-Oligocene ophiolite and melange complexes uplifted and overlain unconformably by Miocene and younger Mentawai Gp marine ponded basin sediments. Melange with ultramafic ophiolite fragments. Ophiolite overlain by M-L Eocene radiolarian cherts. Mentawai melange formed by mud diapirism, with blocks of serpentinite, basalt, Late Eocene Pellatispira- Nummulites limestone, etc., and N8 E-M Miocene planktonics in matrix (= Oyo Complex of Nias))

Anugrahadi, A., H.S. Koesnadi, Y. Surachman & D. Muljawan (2004)- Geological condition of the convergent margin system off West Java and Southern Sumatra. In: R.A. Noble et al. (eds.) Proc. Int. Conf. Deepwater and frontier exploration in Asia & Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 279-285.
(Short paper based on BGR 1999 seismic and bathymetry data; not much data)

Ardhyastuti, S., Y. Haryadi & T. Wiguna (2017)- Mapping of gas seepage zone in the fore arc basin Sumatra Region. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(Description of active gas seep on seafloor in Simeulue- Siberut forearc basin: seismic expression, carbonate hardground cementation of seafloor. Seep vent fauna of white crabs, mytilid bivalves, Vestimentifera polychaete tube worms, etc.)

Aribowo, S., L. Handayani, N.D. Hananto, K.L. Gaol, Syuhada & T. Anggono (2014)- Deformasi kompleks di Pulau Simeulue, Sumatra: interaksi antara struktur dan diapirisma. J. Riset Geologi Pertambangan (LIPI) 24, 2, p. 131-144.
(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/89/pdf_4)
('Complex deformation in Simeuleu Island, Sumatra: interplay between structure and diapyrism'. Simeulue in accretionary complex off NW Sumatra. Deformation generally NE-dipping reverse and thrust faults verging towards trench. NNE blocks tend to be higher than SSW blocks. Out-of-sequence 'backthrusts' present, possibly correlated to mud diapirism)

Aribowo, S., L. Handayani & N.D. Hananto (2015)- Origin of the uplifted Simeulue forearc high island. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-219, 4p.
(UpliftedMio-Pliocene sediments intruded by diapiric melange in Simeulue Island may not be a part of accretionary complex, but may be forearc basin sediments that originated from Sumatra. Uplift may be related to NW trending Late Pliocene- Pleistocene compressional structures of W Andaman- Mentawai Fault zones)

Arisbaya, I., M.M. Mukti, L. Handayani, H. Permana, M. Schnabel & K. Jaxybulatov (2015)- Tinggian Tabuan-Panaitan jejak sesar Sumatra di Selat Sunda berdasarkan analisis data geofisika. In: H. Harjono et al. (eds.) Pros. Pemaparan Hasil Penelitian Geoteknologi 2015, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. I33-I39.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/04/Prosiding-2015.pdf)
('The Tabuan- Panaitan Ridge, trace of the Sumatran fault in Sunda Strait, based on geophysical data analysis'. Semangko pull-apart basin in Sunda Straits two sub-basins separated by NW-SE to N-S trending Tabuan-Panaitan Ridge, part of main Sumatra Fault zone in Sunda Strait. With likely magmatic intrusion activity)

Arisbaya, I., M.M. Mukti & H. Permana (2016)- Seismic evidence of the southeastern segment of the Sumatran Fault Zone in Sunda Strait and Southern Java. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 378-383.
(Bathymetry data and local seismicity in Sunda Strait suggest existence of extension segment of Sumatran Fault Zone S of Ujung Kulon towards Sunda Trench, and is active fault)

Balakina, L. & A. Moskvina (2012)- Andaman-Sumatra island arc: 1. Spatiotemporal manifestations and focal mechanisms of the earthquakes. Izvestiya, Physics of the Solid Earth 48, 2, p. 117-154.

Baroux, E., J.P. Avouac, O. Bellier & M. Sebrier (1998)- Slip-partitioning and fore-arc deformation at the Sunda Trench. Terra Nova 10, p. 139-144.
(Oblique subduction at Sunda Trench causes transpressive deformation of plate leading edge. Right-lateral Great Sumatran Fault absorbs significant fraction of trench-parallel shear. Obliquity of convergence increases N-ward along Sumatra Trench, up to ~30°. Slip partitioning nearly complete along N segment of Sumatra Trench, where Great Sumatra Fault probably accommodates most trench parallel shear. Along S segment, where obliquity <20°, slip-partitioning not complete as indicated by oblique thrusting at subduction)

Beaudry, D. (1983)- Depositional history and structural evolution of a sedimentary basin in a modern forearc setting, western Sunda Arc, Indonesia. Ph.D. Thesis University of California, San Diego, p. 1-168. *(Unpublished)*
(Seismic-stratigraphic interpretation of forearc basin of W Sumatra. Late Oligocene unconformity with subaerial erosion)

Beaudry, D. & G. Moore (1981)- Seismic-stratigraphic framework of the forearc basin off central Sumatra, Sunda Arc. Earth Planetary Sci. Letters 54, p. 17-28.
(Forearc basin W of C Sumatra SE of Nias six seismic-stratigraphic sequences. Paleogene prograding slope deposits onlapped by younger Paleogene(?) trough deposits. Uplift associated with rejuvenation of subduction in Late Oligocene led to erosion of shelf and formation of regional unconformity. E Miocene progradation. Buried reef zone near shelf edge. Erosional unconformity on shelf and slope in Late Miocene/E Pliocene time. Late Pliocene flexure at W boundary of basin, displacing outer-arc ridge upward. Over 1 km of Pliocene-Recent wedge in deep western portion of basin landward of outer-arc ridge. Up to 800 m of shallow-water limestone on shelf since M-Pliocene)

Beaudry, D. & G. Moore (1985)- Seismic stratigraphy and Cenozoic evolution of West Sumatra forearc basin. American Assoc. Petrol. Geol. (AAPG) Bull. 69, p. 742-759.
(W Sumatra forearc 3 tectonic cycles: Paleogene orogeny, Neogene subsidence, Late Tertiary tectonism. Superimposed are 3 transgressive-regressive cycles. Paleogene and older metasedimentary and metamorphic rocks comprise basement beneath landward (inner) margin of forearc basin. Basement rocks and lower Tertiary sedimentary rocks deformed and eroded ~25-30 Ma. Continental shelf exposed to erosion, and basin deposits restricted offshore, coincident with Oligocene lowstand. Paleogene orogeny prior to erosional event

that cut angular unconformity on shelf. Neogene characterized by subsidence and near-continuous sedimentation. Latest Oligocene basal transgression culminated in M Miocene. Alternating limestones and shales comprise two 2nd-order cycles superimposed on overall transgression. Pliocene regressive sequence due to influx of siliciclastics from Sumatra. Shelf-slope break prograded basinward nearly 10 km)

Berglar, K. (2010)- The forearc off Sumatra: basin evolution and strike-slip tectonics. Doct. Thesis Gottfried Wilhelm Leibniz Universitat, Hannover, p. 1-131.

Berglar, K., C. Gaedicke, D. Franke, S. Ladage, F. Klingelhoefer & Y.S. Djajadihardja (2010)- Structural evolution and strike-slip tectonics off north-western Sumatra. Tectonophysics 480, p. 119-132.
(manuscript online at: http://archimer.ifremer.fr/doc/00000/11149/7818.pdf)
(Model for interaction between strike-slip faulting and forearc basin evolution off NW Sumatra between 2°N and 7°N. In Simeulue- and Aceh forearc basins strike-slip faulting controlled forearc basin evolution since Late Miocene. The Mentawai Fault Zone N of Simeulue Island and probably connected to Sumatran Fault Zone until end Miocene. Simeulue Basin two major Neogene unconformities, documenting differences in subsidence evolution along N Sumatran margin linked to subduction processes and strike-slip deformation)

Berglar, K., C. Gaedicke, S. Ladage & H. Thole (2017)- The Mentawai forearc sliver off Sumatra: a model for a strike-slip duplex at a regional scale. Tectonophysics 710-711, p. 225-231.
(At Sumatran oblique convergent margin Mentawai and Sumatran Fault right-lateral fault zones accommodate most of trench- parallel component of strain and bound Mentawai forearc sliver that extends from Sunda Strait to Nicobar Islands. Set of wrench faults obliquely connect two major fault zones, separating at least four horses of regional strike-slip duplex forming forearc sliver, each comprising individual basin in forearc. Duplex formation started in M-L Miocene SW of Sunda Strait, then propagated N-wards over 2000 km until E Pliocene)

Berglar, K., C. Gaedicke, R. Lutz, D. Franke & Y.S. Djajadihardja (2008)- Neogene subsidence and stratigraphy of the Simeulue forearc basin, Northwest Sumatra. Marine Geology 253, p. 1-13.
(Simeulue forearc basin Neogene sedimentary fill up to 5s TWT. Three stages of subsidence evolution after formation of regional basal Neogene unconformity. E-M Miocene stage marked by subsidence in half grabens along W border of basin. Late Miocene/Pliocene change to steadily subsiding trench-parallel trough. Present setup of forearc region under influence of strike-slip faults due to oblique subduction active at least since this time as evidenced by wrench faulting. At end of this stage subsidence expanded significantly E-ward, drowning large carbonate platform that evolved in the then shallows and E parts of basin. Central part of Simeulue basin presently subject to inversion, probably related to reactivation of E-M Miocene half grabens)

Brennan, P.A. & J.H. Shaw (2005)- Wedge structure, Nias Basin, Sumatra, Indonesia. In: J.H. Shaw et al. (eds.) Seismic interpretation of contractional fault-related folds; an AAPG seismic atlas, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 53, p. 141-143.
(Complex inversion structure on seismic in Nias basin between Nias Island and SW Sumatra. Miocene and younger sediments deposited over basement composed of earlier Tertiary subduction complex. Basin underwent E-M Miocene extension, followed by compression in Late Miocene, Pliocene and Pleistocene)

Bradley, K., Y. Qin, H. Carton, N. Hananto, F. Villanueva Robles, F. Leclerc, Wei Shengji, P. Tapponier et al. (2019)- Stratigraphic control of frontal decollement level and structural vergence and implications for tsunamigenic earthquake Hazard in Sumatra, Indonesia. Geochem. Geophys. Geosystems 20, 3, p. 1646-1664.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2018GC008025)
(Propagation of fault rupture to seafloor likely cause of enhanced tsunami generation during megathrust earthquakes. New seismic profiles and swath bathymetry reveal significant and systematic lateral variations in stratigraphic level of frontal Sunda megathrust and vergence of frontal ramp faults. Where ramp faults are uniformly seaward vergent, décollement on top of pelagic sediments. Where ramp faults bivergent décollement within the subducting clastic sequence above transparent distal fan muds. Where ramp faults uniformly landward vergent décollement directly on top of oceanic crust of subducting Investigator Fracture Zone)

Briggs, R.W., K. Sieh, W.H. Amidon, J. Galetzka, D. Prayudi, I. Suprihanto, N. Sastra, B. Suwargadi, D. Natawidjaja & T.G. Farr (2008)- Persistent elastic behavior above a megathrust rupture patch: Nias island, West Sumatra. J. Geophysical Research 113, B12406, p. 1-28.
(Fore-arc deformation quantified using fossil reefs. Elevated coral reef flats and chenier plains show outer arc island of Nias experienced slow long-term uplift and subsidence during Holocene, but island rose up to 2.9 m during Mw 8.7 Sunda megathrust rupture in 2005. Average uplift rates since mid-Holocene 1.5- 0.2 mm/yr, highest on E coast of Nias, where coseismic uplift was nearly zero in 2005)

Briggs, R.W., K. Sieh, A.J. Meltzner, D. Natawidjaja, J. Galetzka, B. Suwargadi et al. (2006)- Deformation and slip along the Sunda megathrust in the great 2005 Nias-Simeulue earthquake. Science 311, 5769, p. 1897-1901.
(Seismic rupture produced deformation above a 400-kilometer strip of Sunda megathrust, off N Sumatra. Trench-parallel belts of uplift up to 3m on outer-arc islands above rupture and 1 subsidence farther from trench. More than 11m of fault slip under islands)

Budhitrisna, T. (1989)- Melange di Pulau Pagai dan Pulau Sipora, Kepulauan Mentawai. Bull. Geol. Res. Dev. Centre 13, p. 1-8.
('Melange of Pagai and Sipora islands, Melawai Islands'. Islands off W Sumatra with basal melange of sheared rocks with clasts of ophiolite, pelagic sediments, metamorphics, etc., overlain by Miocene-Pliocene sediments)

Budhitrisna, T. & S. Andi Manggal (1990)- Geological map of the Pagai and Sipora Quadrangle (0712-0713), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map of W Sumatra forearc/ accretionary prism islands Sipura and N and S Pagai)

Bunting, T., S. Singh, M. Bayly & P. Christie (2008)- Seismic imaging of the fault that caused the great Indian Ocean earthquake of 26 December 2004, and the resulting catastrophic tsunami. The Leading Edge, Oct. 2008, p. 1272-1281.
(Deep seismic image over area of 2004 tsunami earthquake)

Carton, H., S.C. Singh, N.D. Hananto, J. Martin, Y.S. Djajadihardja, Udrekh, D. Franke & C.Gaedicke (2014)- Deep seismic reflection images of the Wharton Basin oceanic crust and uppermost mantle offshore Northern Sumatra: relation with active and past deformation. J. Geophysical Research, Solid Earth, 119, p. 32-51.
(Deep seismic reflection images in Wharton Basin offshore N Sumatra. Profile subparallel to Sumatran trench shows strike-slip deformation over two fracture zones of extinct Wharton Spreading Center. Western fracture associated with a wide region of strong basement topography, difference in crustal thickness of ~1.5 km, and age offset of 9 Ma)

Chauhan, A.P.S, S.C. Singh, N.D. Hananto, H. Carton, F. Klingelhoefer, J.X. Dessa et al. (2009)- Seismic imaging of forearc backthrusts at northern Sumatra subduction zone. Geophysical J. Int. 179, 3, p. 1772-1780.
(online at: http://gji.oxfordjournals.org/content/179/3/1772.full.pdf+html)
(Seismic image of N Sumatran forearc, near 2004 earthquake epicentre shows active back thrusts at seaward edge of Aceh forearc basin. Seaward dipping backstop buttress imaged. Uplifting along backthrust branches may explain presence of forearc islands along Sumatran margin)

Chlieh, M., J.P. Avouac, K. Sieh, D.H. Natawidjaja & J. Galetzka (2008)- Heterogeneous coupling of the Sumatran megathrust constrained by geodetic and paleogeodetic measurements. J. Geophysical Research 113, B05305, 31p.
(Heterogeneous pattern of coupling in Sunda subduction zone. Near equator, megathrust is locked over narrow width of only a few tens of km. In contrast, locked fault zone is up to about 175 km wide in areas where great interplate earthquakes have occurred in past)

Collings, R., D. Lange, A. Rietbrock, F. Tilmann, D. Natawidjaja, B. Suwargadi, M. Miller & J. Saul (2012)- Structure and seismogenic properties of the Mentawai segment of the Sumatra subduction zone revealed by local earthquake traveltime tomography. J. Geophysical Research 117, 1, B01312, p. 1-23.

(Seismicity distribution in S section of Mentawai segment of Sumatra subduction zone reveals significant activity along subduction interface and within two clusters in overriding plate either side of forearc basin. Downgoing slab of hydrated oceanic crust can be traced to ~50 km depth. Above slab, shallow continental Moho of less than 30 km depth can be inferred. Outer arc islands consist of fluid saturated sediments)

Collings, R., A. Rietbrock, D. Lange, F. Tilmann, S. Nippress & D. Natawidjaja (2013)- Seismic anisotropy in the Sumatra subduction zone. J. Geophysical Research, Solid Earth, 118, 10, p. 5372-5390.
(Seismic anisotropy from observations of shear wave splitting from temporary seismic networks deployed between 2007- 2009. Measurements from fore-arc islands exhibit trench-parallel fast directions, in Sumatran Fault region predominant fast direction fault/trench parallel, in back-arc region trench perpendicular)

Cook, B.J., T.J. Henstock, L.C. McNeill & J.M. Bull (2014)- Controls on spatial and temporal evolution of prism faulting and relationships to plate boundary slip offshore north-central Sumatra. J. Geophysical Research, Solid Earth, 119, 7, p. 5594-5612.
(Across- and along-strike variations in morphology and structure of N-C Sumatran forearc (~1.5°S- 1°N) broadly coincident with subducting plate topography. Two major fault structures divide prism into three strike-parallel belts that can be characterized by the relative fault slip rates along major and minor fault structures)

Darman, H. (2011)- Seismic expression of some geological features of Andaman- offshore West Sumatra subduction zone. Berita Sedimentologi 20, p. 18-21.
(online at: www.iagi.or.id/fosi/bs20-sumatra.html. Seismic examples of accretionary prism and forearc basins off NW Sumatra and Andaman Sea)

Deighton, I, M.M. Mukti, S. Singh, T. Travis, A. Hardwick & K. Hernon (2014)- Nias basin, NW Sumatra- new insights into forearc structure and hydrocarbon prospectivity from long-offset 2D seismic data. Proc. 38th Ann. Conv. Indon. Petroleum Assoc., Jakarta, IPA14-G-299, 21p.
(Nias Basin in Sumatran Forearc between Nias island and Sumatran mainland. Mainly oriented N-S, in ~500m water, shallower than larger basins to NW (750-1000m), and SE (~1500m). Most fold and thrust structures can be related to Mentawai segment to SE. Change in direction along Nias segment resulted in increased uplift of Paleogene forearc sediments exposed on Nias Island. Thick sediments (4.5 sec TWT sub seabed) with half-graben/syn-rift character beneath main forearc package, interpreted as Paleogene. Thickest syn-rift section in SE. Even with low geothermal gradients observed in wells, bottom half of Paleogene mature for hydrocarbon expulsion. Reefal prospects updip from Paleogene kitchen on E margin of basin)

Delescluse, M., N. Chamot-Rooke, R. Cattin, L. Fleitout, O. Trubienko & C. Vigny (2012)- April 2012 intra-oceanic seismicity off Sumatra boosted by the Banda-Aceh megathrust. Nature 490, p. 240-244.
(Two large intra-oceanic earthquakes in NE Indian Ocean on 11 April 2012 largest strike-slip events in historical times. Triggered large aftershocks worldwide. Along fossil fabric of extinct Wharton basin and part of intraplate deformation between India and Australia that followed Aceh 2004 and Nias 2005 megathrust earthquakes. Australian plate, driven by slab-pull forces at the Sunda trench, is detaching from Indian plate, which is subjected to resisting forces at Himalayan front)

Delisle, G. & M. Zeibig (2007)- Marine heat flow measurements in hard ground offshore Sumatra. EOS Trans. American Geophys. Union (AGU) 88, 4, p. 38-39.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2007EO040004/epdf)
(Hydrocarbon potential of fore arc basins between Siberut, Nias, Simeulue islands and Sumatra investigated in 2006 by BGR with marine-geophysical and marine-geological techniques. Average in situ thermal conductivities of 0.97 watts per meter per Kelvin) at 6 'soft ground' stations lower than average (1.23 watts per meter per Kelvin) at the 10 'hard-ground' stations)

DeShon, H., E. Engdahl, C. Thurber & M. Brudzinski (2005)- Constraining the boundary between the Sunda and Andaman subduction systems: evidence from the 2002 Mw 7.3 Northern Sumatra earthquake and aftershock relocations of the 2004 and 2005 great earthquakes. Geophysical Research Letters 32, L24307, 5p.
(online at: http://igpphome.ucsd.edu/~shearer/Files/Sumatra_Papers/deshon_grl05.pdf)

(2004 Mw 9.0 Sumatra-Andaman earthquake initiated along Andaman subduction zone. Earthquakes history suggests S extent of stable Andaman microplate is ~50-100 km NW of previously reported)

Deonath, A. & B. Mukhopadhyay (2013)- A panoptic view of western margin of Sundaland: causes of seismic vulnerability of Sumatra. J. Geol. Soc. India 81, 5, p. 637-646.
(W margin of Sundaland affected by Burmese-Andaman-Sunda Arc. Downgoing oceanic plate more strongly coupled to overlying plate where it is youngest (~ 40 Ma), has highest temperature and is topographically most elevated with highest seismic activity. Increase in convergence rate and presence of youngest oceanic crust appear to be main controlling factors underpinning tectonics and surge of recent seismic activity in Sumatra)

Dessa, J.X., F. Klingelhoefer, D. Graindorge, C. Andre, H. Permana et al. (2009)- Megathrust earthquakes can nucleate in the forearc mantle; evidence from the 2004 Sumatra event. Geology 37, 7, p. 659-662.
(Seismogenic zone along subduction thrusts generally does not extend to forearc mantle below crust of upper plate. Great 2004 Sumatra-Andaman earthquake propagated downdip along interface between forearc mantle and subducting plate and nucleated along reportedly aseismic part of the interplate contact)

Diament, M., H. Harjono, K. Karta, C. Deplus, D. Dahrin, M.T. Zen et al. (1992)- Mentawai fault zone off Sumatra: a new key to the geodynamics of Indonesia. Geology 20, p. 259-262.
(Oblique subduction in Sumatra region gave rise to Sumatra Fault Zone. New data show second ~600km long Mentawai strike-slip zone in fore-arc E of Mentawai islands, creating Sumatra sliver plate)

Djajadihardja, Y.S., A.H. Satyana, Won Soh, C. Gaedicke, T. Eko, Sasaki, R. Riza & S. Neben (2002)- Offshore southeastern extension of the Sumatran dextral fault: a new discovery in Indonesian marine geology and implications on the tectonics of the Sunda Strait- Southwest Java waters. Proc. 31st Ann. Conf. Indon. Assoc. Geol. (IAGI), Surabaya, 1p. *(Abstract only)*
(Sumatran Fault generally assumed to end in Sunda Strait area around Semangko Bay. However, recent new data shows extension of Sumatran Fault zone running SE as far as 400 km from Semangko Bay. Newly discovered extended Sumatran Fault stops ~30 km N of the Java Trench in SW Java waters)

Djamal, B., W. Gunawan, T.O. Simandjuntak & N. Ratman (1994)- Geological map of the Nias sheet, Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Nias island in W Sumatra accretionary prism, with core of Melange Complex with blocks of peridotite, gabbro, serpentinite, basalt, schist, etc., unconformably overlain by 2-3km thick, folded marine late E Miocene and younger Lelematua Fm (formerly Nias Fm) clastics and tuffs and coal, overlain by M Miocene- E Pliocene Gomo Fm)

Dobson, P.B., T. Rahardjo, C.A. Atallah, F.I. Frasse, T.D. Specht, A.S. Djamil, Marhadi, R.E. Netherwood & P.J.M. Montaggioni (1998)- Biogenic gas exploration in Miocene carbonate, West Sumatra, Indonesia. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 349. *(Poster Abstract)*
(Nias PSC offshore W Sumatra fore-arc basin primary exploration play was M Miocene Isolated Reefs. Low geothermal gradient favors biogenic gas generation and entrapment. Biogenic gas in Miocene pinnacle reefs in 5 of 6 wells. Ibusuma 1 dry hole failed due to poor timing between vertical gas generation and entrapment. Analogous nearby Union Oil Suma 1 and Singkel 1 discoveries likely lateral migration component. Miocene carbonate porosity >23% log, 13.4-39.6% SWC, and 16-70 mD permeability)

Douville, H. (1912)- Les foraminiferes de lôîle de Nias. Sammlungen Geol. Reichs-Museums Leiden, 1, 8, 5, p. 253-278.
(online at: www.repository.naturalis.nl/document/552435)
('The foraminifera from Nias Island'. Descriptions of Tertiary larger foraminifera from Nias from samples collected by Schroder and Verbeek. Includes Middle Eocene Nummulites bagelensis, N. pengaronensis, N. kelatensis, Discocyclina (here called Orthophragmina), Assilina granulosa and Assilina javana (from Oyo Melange?; JTvG), also Early Miocene Lepidocyclina spp. (Eulepidina and Nepholepidina) (from Nias Beds?; JTvG). With 3 plates. No stratigraphy, no maps (but locality map in Van der Veen 1913))

Endharto, Mac & Sukido (1994)- Geological map of the Sinabang (0518) sheet, Sumatera, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geology of Simeulue and Banyak Islands in forearc accretionary prism off W Sumatra. Core of island Oligo-Miocene Kuala Makmur melange, with blocks of gabbro (up to 250m), basalt, metasediments. Unconformably overlain by E Miocene Lasikin Mb polymict conglomerate. Overlying Miocene Sigulai Fm marls with 400m thick E-M Miocene Sibogo reefal limstone mMb with Miogypsina and Spiroclypeus))

Endharto, Mac (1996)- Neogene geology of the outer-arc ridge: with a special reference of Simeuleu island, West of Sumatra. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 3, p. 470-487.

Engdahl, E.R., A. Villasenor, H.R. DeShon & C.H. Thurber (2007)- Teleseismic relocation and assessment of seismicity (1918-2005) in the region of the 2004 Mw 9.0 Sumatra-Andaman and 2005 Mw 8.6 Nias Island great earthquakes Bull. Seismol. Soc. America 97, 1A, p. S43ï S61.
(Seismicity in Sumatra-Andaman Islands region results from subduction of Indian and Australian oceanic plates beneath Eurasian plate (Andaman microplate, Sunda subplate. Oceanic plates vary in age from 60 Ma off Sumatra to 90 Ma along N Andaman Trench)

Farida, W.N., Y. B. Muslih, B.R. Irwansyah, T. Supratama, B. Novrian & D. Mindasari (2016)- Cenozoic Sumatra accretionary prisms: a new geological perspective and implications for hydrocarbon exploration. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 18-TS-16, p. 1-17.
(Literature review of Sumatra accretionary prism. High-risk frontier exporation area)

Feng, L., E.M. Hill, P. Banerjee, I. Hermawan, L.L.H. Tsang, D.H. Natawidjaja, B.W. Suwargadi & K. Sieh (2015)- A unified GPS-based earthquake catalog for the Sumatran plate boundary between 2002 and 2013. J. Geophysical Research, Solid Earth, 2015, 120, 5, p. 3566-3598.

Feng, L., E.M. Hill, P. Elosegui, Q. Qiu, I. Hermawan, P. Banerjee & K. Sieh (2015)- Hunt for slow slip events along the Sumatran subduction zone in a decade of continuous GPS data. J. Geophysical Research, Solid Earth, 120, 12, p. 8623-8632.

Franke, D., M. Schnabel, S. Ladage, D.R. Tappin, S. Neben, Y.S. Djajadihardja, C. Muller, H. Kopp & C. Gaedicke (2008)- The great Sumatra-Andaman earthquakes-imaging the boundary between the ruptures of the great 2004 and 2005 earthquakes. Earth Planetary Sci. Letters 269, p. 118-130.
(Ridge on subducting Indo-Australian oceanic crust may exert control on margin segmentation. Ridge masked by sediment; most likely trend NNE–SSW. Interpreted as fracture zone on subducting oceanic plate)

Frankowicz, E. (2011)- Tectono-stratigraphic evolution of the Simeulue forearc basin, NW Sumatra. Berita Sedimentologi 20, p. 22-24.
(Brief review of Simeulue basin in NW Sumatra forearc area. Underlain by Jurassic-Cretaceous Woyla terrane, which accreted to Sundaland in late M Cretaceous, after which all of Sumatra subaerially eroded (no Late Cretaceous-Early Paleogene sediments). Early/Mid Paleogene extension in forearc area lead to formation of grabens; oldest oldest rocks penetrated by wells are Upper Eocene- Lower Oligocene dolomitic limestones, calcareous mudstones and pyritic shales. Late Oligocene uplift and erosion of forearc resulted in Top Paleogene unconformity, followed by E Miocene marine transgression. E-M Miocene carbonates overlain by Late Miocene Pliocene clastics derived from Barisan Mts)

Frederik, M.C.G. (2016)- Morphology and structure of the accretionary prism offshore North Sumatra, Indonesia and offshore Kodiak Island, USA: a comparison to seek a link between prism formation and hazard potential. Ph.D. Thesis University of Texas at Austin, p. 1-136.
(online at: https://repositories.lib.utexas.edu/handle/2152/45947)
(Incl. study of accretionary prism offshore N Sumatra between 1-7°N. Steep outer slope (5-12°), plateau ~100-120 km wide, and steep inner slope adjacent to Aceh Basin. Predominantly landward vergence from deformation front for ~70 km landward. Prism toe region prominent mass failures. Etc.)

Frederik, M.C.G., S.P.S. Gulick, J.A. Austin, N.L.B. Bangs & Udrekh (2015)- What 2-D multichannel seismic and multibeam bathymetric data tell us about the North Sumatra wedge structure and coseismic response. Tectonics 34, 9, p. 1910-1926.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2014TC003614/epdf)
(Bathymetric and seismic surveys across accretionary prism off NW Sumatra. Accretionary wedge in study area up to~180 km wide, narrowing to 125km to S, near Simeulue island. Seafloor depths ~4.5 km near Sunda Trench to <1 km on fore-arc high near fore-arc basin. Wedge consists of steep outer slope (5-12°), plateau ~100-120 km wide with anticlinal folds spaced 2-15km apart, and steep inner slope adjacent to Aceh forearc Basin. Mainly landward-vergent folds at trench side, mainly seaward vergent folds at landward side)

Ghosal, D., S.C. Singh, A.P.S. Chauhan & N.D. Hananto (2012)- New insights on the offshore extension of the Great Sumatran fault, NW Sumatra, from marine geophysical studies. Geochem. Geophys. Geosystems 13, 11, Q0AF06, p. 1-18.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2012GC004122/epdf)
(High-res bathymetry shows NW offshore extension of Great Sumatra FZ near Banda Aceh into young SW transpressional Breueh and NE transtensional Weh basins, with Sumatran volcanic arc passing through Weh basin)

Ghosal, D., S.C Singh & J. Martin (2014)- Shallow subsurface morphotectonics of the NW Sumatra subduction system using an integrated seismic imaging technique. Geophysical J. Int. 198, 3, p. 1818-1831.
(Improved seismic imaging of accretionary wedge complex in NW Sumatra forearc)

Graindorge, D., F. Klingelhoefer, J.C. Sibuet, L. McNeill, T.J. Henstock, S. Dean, M.A. Gutscher, J.X. Dessa, H Permana et al. (2008)- Impact of lower plate structure on upper plate deformation at the NW Sumatran convergent margin from seafloor morphology. Earth Planetary Sci. Letters 275, p. 201-210.
(Multibeam bathymetric data in region of 26 Dec. 2004 earthquake providing seafloor images of NW Sumatra forearc. Greatest slope gradients in frontal 30 km of forearc, at toe of accretionary wedge. N-S oriented lineaments on incoming oceanic plate, etc.)

Guntoro, A. & Y.S. Djajadiharja (2005)- Tectonic scenario of the Sumatra fore-arc basin in relation to the formation of petroleum systems. In: Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (GEOINDO 2005), Khon Kaen, Thailand, p. 28-30.

Hall, D.M., B.A. Duff, M.C. Courbe, B.W. Seubert, M. Siahaan & A.D. Wirabudi (1993)- The southern fore-arc zone of Sumatra: Cainozoic basin forming tectonism and hydrocarbon potential. Proc. 22nd. Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 319-344.
(Bengkulu PSC localized basins with four megasequences: (1) Paleogene syn-rift in NE-trending half grabens; (2) Major unconformity, then Late Paleogene- E Miocene in local pull-apart basins on underlying graben; (3) Unconformity, then M - Late Miocene open marine deposition in unified forearc basin; (4) regressive Pliocene-Recent syn-orogenic megasequence, from main Barisan Mts uplift. Basin inversion intensity increases from offshore to mountain belt. Fore-arc tectonically heterogeneous with potential for localised Paleogene and early Neogene basins and hydrocarbons. Wells indicate mature source and migrated hydrocarbons, and contradict assumption that heat flow in fore-arc areas is insufficient to allow expulsion and migration of hydrocarbons)

Hananto, N.D., S.C. Singh, M. Mukti & I. Deighton (2012)- Neotectonics of North Sumatra Forearc. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-100, p. 1-13.
(Strain of oblique subduction at NW Sumatra forearc partitioned into two major directions, perpendicular (fold and thrust system in accretionary wedge) and parallel to trench (Sumatra Fault Zone on Sumatra mainland) Residual strain created two major structural features in forearc: 1) W-Andaman Faults (strike-slip faults/deep rooted backthrust between accretionary wedge sediments and continental crust. 2) Strike slip fault close to Sumatra platform. Deformation along forearc basin mainly compressional)

Handayani, L. & H. Harjono (2008)- Perkembangan tektonik daerah busur muka Selat Sunda dan hubungannya dengan zona sesar Sumatera. J. Riset Geologi Pertambangan (LIPI) 18, 2, p. 31-40.
('The tectonic development of the Sunda Strait forearc area and its relationship to the Sumatran Fault Zone'. Sunda Strait forearc interpreted as ongoing separation of area as Sumatra forearc plate moved NW, bounded by Sumatra Fault. Sumatra Fault can be viewed to extend across fore arc to trench as several graben systems)

Hanus, V., A. Spicak & J. Vanek (1996)- Sumatran segment of the Indonesian subduction zone: morphology of the Wadati-Benioff zone and seismotectonic pattern of the continental wedge. J. Southeast Asian Earth Sci. 13, 1, p. 39-60.
(Earthquake foci in Sumatra either in recent Benioff zone or in continental wedge. Intermediate-depth aseismic gap in Wadati-Benioff zone associated with young calc-alkaline volcanism. Subduction process was correlated with stratigraphy and geology. Duration of present cycle of subduction ~6-8 Ma. Oligocene volcanism and deep earthquakes point to Tertiary subduction zone underlying present slab. Seismotectonic pattern of continental wedge described by 11 seismically active fracture zones)

Harbury, N.A. & H.J. Kallagher (1991)- The Sunda outer-arc ridge, North Sumatra, Indonesia. J. Southeast Asian Earth Sci. 6, 3-4, p. 463-476.
(Revised stratigraphy and Tertiary evolution of Nias and Simeulue islands in outer part of forearc. Oligocene and Eocene increase in subduction rate led to basin inversion and uplift of outer arc ridge. Deposits include melanges (?Eocene-Oligocene) and Neogene initially (E Miocene) deposited in deep water. Stable convergence rates through M Miocene, with deposition dominated by shallow water clastics and carbonates deposited on well-developed shelf and shelf-break. In Late Miocene, outer shelf limestones. Plio-Pleistocene clastics with volcanic detritus from rapidly eroding Sumatra volcanic arc)

Harbury, N.A., B. Situmorang, Sarjono D., J. Milsom, F.T. Banner & M.G. Audley-Charles (1989)- Tectonic inversions in the Sunda forearc. In: Proc. 24th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok 1987, 2, p. 116- 122.
(Simeulue island in N Sumatra forearc two compressional and two extensional phases since end of Eocene. Forearc emerged as island in Late Oligocene- E Miocene, exposing imbricated ophiolite and melange. Fringing reefs developed in E-M Miocene. Mio-Pliocene turbidites (extension) followed by re-emergence after strong Late Pliocene- Early Quaternary folding)

Hariadi, N. & R.A. Soeparjadi (1975)- Exploration of the Mentawai Block, West Sumatra. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 55-65.
(Post-mortem of unsuccessful exploration of Mentawai Block, offshore W Sumatra fore arc, by Jenney group 1969-1974. Two wells drilled in 1972 Mentawai A 1 and C1 with minor methane shows. Two onshore stratigraphic wells drilled in 1974 without hydrocarbon indicatons: Bengkulu X-1 and X2. One active onshore oil seep identified SE of Bengkulu town))

Harmon, N., T. Henstock, F. Tilmann, A. Rietbrock & P. Barton (2012)- Shear velocity structure across the Sumatran forearc-arc. Geophysical J. Int. 189, 3, p. 1306-1314.
(online at: https://academic.oup.com/gji/article/189/3/1306/609255)
(Velocity model across part of W Sumatra forearc region. Progression in shear velocity across forearc to arc associated with thickening of accretionary prism and development of arc crust. Downgoing Indian Plate low seismic velocities, consistent with 14-24 % serpentinization of oceanic crust and upper mantle adjacent to Investigator fracture zone. Rapidly increasing sediment thickness in accretionary wedge of 6-15 km)

Henstock, T.J., L.C. McNeill, J.M. Bull, B.J. Cook, S.P.S. Gulick, J.A. Austin, H. Permana & Y.S. Djajadihardja (2016)- Downgoing plate topography stopped rupture in the A.D. 2005 Sumatra earthquake. Geology 44, 1, p. 71-74.
(online at: http://geology.gsapubs.org/content/44/1/71.full.pdf+html)
(Isolated 3 km basement high off Nias is close to termination of slip of 2005 earthquake. It probably originated at Wharton fossil spreading ridge and may locally strengthen plate boundary, stopping rupture propagation)

Henstock, T.J., L.C. McNeill & D.R.Tappin (2006)- Seafloor morphology of the Sumatran subduction zone; surface rupture during megathrust earthquakes? Geology 34, 6, p. 485-488.
(High-resolution multibeam bathymetry data from Sumatran subduction zone)

Heyde, I., M. Block, Y.S. Djajadihardja, J.P. Hutagaol, H. Lelgemann, H.A. Roeser & B. Schreckenberger (2001)- Gravimetric measurements and their interpretation on the active convergence zone between the East Eurasian and Indo-Australian plates along Indonesia. In: Proc. CCOP 37th Ann. Sess. Bangkok 2000, 2, Techn. Repts., p. 12-26.
(Free air gravity anomaly maps of forearc of SW Sumatra- W Java and Sunda Straits and comparison with satellite gravity. Marine gravity data higher resolution than satellite data)

Hippchen, S. & R.D. Hyndman (2008)- Thermal and structural models of the Sumatra subduction zone: implications for the megathrust seismogenic zone. J. Geophysical Research 113, B12103, p. 1-12.
(Sumatra updip seismogenic limit is thermally controlled, but downdip limit is governed by the intersection of downgoing plate with fore-arc Moho)

Howles, A.C. (1984)- Structural and stratigraphic interpretation of the Bengkulu shelf, southwest Sumatra. M.Sc. Thesis University South Carolina, p. 1-94.

Howles, A.C. (1986)- Structural and stratigraphic evolution of the southwest Sumatran Bengkulu shelf. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 215-243.
(Paleogene basin with >10,000' sediment under Bengkulu shelf interpreted as continuation of S Sumatran graben system. Mid-Oligocene unconformity truncates basement high and signifies possible change in tectonic configuration of region. Switch of rapid subsidence from E side of basement high to W side with initiation of Sumatran forearc. Right-lateral slip along Sumatran fault began in M Miocene. Restoring ~150 km offset along Sumatran fault causes graben to line up with S Sumatra Benakat Gully. Neogene transgressive cycle began with deposition of E Miocene Baturaja carbonates. M Miocene Parigi carbonate between fine clastics and younger deltaic regressive sequence. Erosion of Barisan Mountains generated Plio-Pleistocene deltaic/slope deposits which prograde onto E flank of Sumatran forearc basin)

Huot, G. & S.C. Singh (2018)- Seismic evidence for fluid/gas beneath the Mentawai fore-arc basin, Central Sumatra. J. Geophysical Research, Solid Earth 123, 2, p. 957-976.
(Since 2004 three Mw > 8.0 earthquakes offshore Sumatra, rupturing megathrust and possibly also backthrusts that bound Andaman Islands to Mentawai Islands toward forearc basins. Tomography and waveform inversion in region of 2007 Mw 8.4 Bengkulu earthquake show low-velocity anomaly above backthrust, probably caused by small amount of gas (2-13%) or 17-40% of fluids. Fluids may originate locally from dewatering of sediments from accretionary wedge or forearc basin or of deeper origin)

Hupers, A., M.E. Torres, S. Owari, L.C. McNeill, B. Dugan, T.J. Henstock, K.L. Milliken, K.E. Petronotis, J. Backman et al. (2017)- Release of mineral-bound water prior to subduction tied to shallow seismogenic slip off Sumatra. Science 356, 6340, p. 841-844.

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(online at: www.repository.naturalis.nl/document/552383)
('On Tertiary and Quaternary deposits of Nias Island'. Mainly descriptions of 51 species of gastropods and bivalve molluscs. With 5 plates, but no locality maps. Larger foraminifera from same samples studied by Douville (1912))

Izart, A., B.M. Kemal & J.A. Malod (1994)- Seismic stratigraphy and subsidence evolution of the northwest Sumatra fore-arc basin. Marine Geology 122, 1-2, p. 109-124.
(New seismic in Sumatra margin fore-arc. Area of oblique subduction with two large strike-slip faults parallel to subduction trench: onshore Sumatra fault and offshore Mentawai fault, separating accretionary prism from fore-arc basin. Widespread truncation at Top Paleogene reflects uplift and erosion event. Followed by Miocene

subsidence, evidenced by two transgressive-regressive shelf sequences. In Pliocene-Quaternary fore-arc basin segmented into several sub-basins (Aceh, Simeulue and Nias basins) by compressional zones or strike-slip faults. Subsidence rate increased, producing sequence 3 for Pliocene, and 4 for Quaternary. Local variations in sediment thickness indicate tectonics prevail over eustacy)

Kallagher, H.J. (1989)- The structural and stratigraphic evolution of the Sunda Forearc basin, North Sumatra. Ph.D. Thesis University of London, p. 1-387. *(Unpublished)*

Kallagher, H.J. (1990)- K-Ar dating of selected igneous samples from the Sibolga Basin, Meulaboh and Semeulue Island, Western Sumatra. Lemigas Scientific Contr. 14, 1, Spec. Issue, p. 99-111.
(Biotite from granodiorite in Seumayam Complex in Barisan Mts K-Ar age of ~98.6 Ma; biotites from Meuko River granodiorite ~56.2 and 53.2 Ma, compatible with Cretaceous- E Paleogene granitic activity recorded elsewhere in N Sumatra. Gabbro from E Simeulue ophiolite 35.4± 3.6 and 40.1 ± 2.7 Ma (Late Eocene), possibly representing formation as part of Indian Ocean floor. Basaltic- andesitic volcanics from Barisan Mts on E margin of Sibolga Basin 16- 9 Ma (M-L Miocene). Start of volcanic activity in M Miocene coincided with uplift of Barisan Mts along E margin of Sibolga Basin (E- M Miocene sediments only minor evidence of contemporaneous volcanic activity))

Karig, D.E. (1980)- Material transport within accretionary prisms and the "knocker" problem. J. Geology 88, 1, p. 27-39.
(On presence of high-pressure metamorphic rocks as blocks (knockers) and thrust sheets within non-metamorphic rocks in accretionary complexes. Using analog of modern Sumatra trench system, where deformation is concentrated near base of trench slope, whereas blueschist formation is assumed to occur much deeper. Mixing of incompatible lithologies in subduction complexes might better be explained by strike-slip faulting along trends sub-parallel to arc)

Karig, D.E., M.K. Lawrence, G.F. Moore & J.R. Curray (1980)- Structural framework of the fore-arc basin, NW Sumatra. J. Geol. Soc. London 137, p. 77-91.
(Sumatra fore-arc basin subsiding trough between rising subduction complex and elevated continental core. Up to 4 km of Miocene-Recent on E flank of basin over unconformity cut across Paleogene continental margin that was uplifted and disrupted in Late Oligocene. Large step-like offsets of paleo-shelf edge attributed to right-lateral strike-slip faults, splaying across fore-arc from Sumatra Fault Zone. Offsets up to 100 km+, producing marginal re-entrants that became sites of turbidite-filled basins behind growing Neogene accretionary prism. Larger re-entrants may be floored with oceanic crust. Seaward flank of fore-arc basin migrated W during Neogene subduction. By late M Miocene, trench slope break was near sea level and formed shelf edge high. Thrusting and folding related to subduction probably decreased gradually upslope until LatePliocene, when large flexures and E-directed reverse faults developed)

Karig, D.E., G.F. Moore, J.R. Curray & M.B. Lawrence (1980)- Morphology and shallow structure of the lower trench slope off Nias Island, Sunda Arc. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands-1, American Geophys. Union (AGU), Geophys. Monograph 23, p. 179-208.
(In Sunda Arc subduction system 90% of shortening due to plate convergence occurs in distal accretionary prism, within 25 km of trench. Deformation in slope basins decreases rapidly upward as age decreases)

Karig, D.E., S. Suparka, G.F. Moore & P.E. Hehunassa (1978)- Structure and Cenozoic evolution of the Sunda Arc in the Central Sumatra region. UN ESCAP, CCOP Techn. Bull. 12, p. 43-86.
(Same paper as Karig et al. 1978 below)

Karig, D.E., S. Suparka, G.F. Moore & P.E. Hehunassa (1978)- Structure and Cenozoic evolution of the Sunda Arc in the Central Sumatra region. In: J.S. Watkins et al. (eds.) Geological and geophysical investigations of continental margins, American Assoc. Petrol. Geol. (AAPG), Mem. 29, p. 223-237.
(W Sumatra margin reflects effects of subduction and right-lateral slip. Nias consists of mid-Tertiary melange and less deformed younger beds. Forearc basin at least 4km sediment. Unconformity around Paleogene-

Miocene boundary. Inner shelf and coastal mountains common Oligocene andesitic intrusives and volcanics (farther W than younger and older volcanic centers). Major uplift of Barisan Mts in Late Miocene- Pliocene)

Karta, K., Zuki & Isnawati (1998)- Geodynamics of the north Sumatra fore arc as caused by oblique subduction: results of the Sumenta expedition of R.V. Baruna Jaya III. In: J.L. Rau (ed.) Proc. 34th Sess. Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Taejon, Korea 1997, 2, Techn. Repts., p. 172-185.

Khan, P.K. & P.P. Chakraborty (2009)- Bearing of plate geometry and rheology on shallow-focus mega-thrust seismicity with special reference to 26 December 2004 Sumatra event. J. Asian Earth Sci. 34, p. 480-491.

Kieckhefer, R.M., G.F. Moore, F.J. Emmel & W. Sugiarta (1981)- Crustal structure of the Sunda forearc region west of central Sumatra from gravity data. J. Geophysical Research 86, p. 7003-7012.
(Gravity modeling of transect S of Nias. Free-air anomalies -100 mGal low 10-20 km landward of trench axis and +80 mGal high over outer arc ridge but also large anomalies unrelated to topography. An 80 mGal rise may be near-surface body of high-density material (oceanic crust?). This slab may be exposed on SW coast of Nias, where ultramafic bodies were mapped. A -30 mGal free-air low over forearc basin modeled best if pre-Miocene melange or continental crust underlies basin)

Kieckhefer, R.M., G.G. Shor, J.R. Curray, W. Sugiarta & F. Hehuwat (1980)- Seismic refraction studies of the Sunda trench and forearc basin. J. Geophysical Research 85, B2, p. 863-889.
(Six refraction lines around Nias Island, NW Sumatra, parallel to structure)

Kissling, E.A. (1948)- Enkele stratigrafische mededelingen over de eilanden voor de Z.W. kust van Sumatra. Geologie en Mijnbouw 10, 5, p. 118. *(Abstract only)*
('Some stratigraphic notes on the islands off the SW coast of Sumatra'. Summary of lecture on Mentawai islands (Nias, etc.), which show remarkably similar Tertiary stratigraphy over ~1200km. Common Miocene basic extrusives. In central islands Miocene isoclinally folded at end-Miocene, i.e. earlier than Sumatra)

Klingelhoefer, F., M.A. Gutscher, S. Ladage, J.X. Dessa, D.F. Graindorge, A. Camille, H. Permana, T. Yudistira & A. Chauhan (2010)- Limits of the seismogenic zone in the epicentral region of the 26 December 2004 great Sumatra-Andaman earthquake: Results from seismic refraction and wide-angle reflection surveys and thermal modeling. J. Geophysical Research 115, B1, B01304, p. 1-23.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2009JB006569/epdf)
(2004 Sumatra earthquake initiated at ~ 30km depth and ruptured 1300km of Indo-Australian- Sunda plate boundary. Seismic velocity model from tomography and forward modeling shows deep structure of earthquake source region. 4-5km of sediments on oceanic crust at trench. Crystalline backstop 120 km from trench axis, below fore-arc basin. Shallow continental Moho (22 km depth), 170 km from trench. Seismogenic zone begins 5-30 km from trench. Deeper part of rupture along contact between mantle wedge and downgoing plate)

Kopp, H. (2001)- Crustal structure along the central Sunda Margin, Indonesia. Dissertation Christian-Albrechts Universitat, Kiel, p. 1-138.
(online at: http://macau.uni-kiel.de/receive/dissertation_diss_00000439)
(Seismic and gravity study of 5600 km long forearc margin of Sumatra- Java. Subduction zone significant variation of trench curvature resulting in areas of normal and of oblique subduction. Frontal part of prism experiencing active accretion between deformation front and active backstop structure, which separates accretionary domain from outer high. Velocities under outer high fairly low, suggesting sedimentary origin. Forearc basin undeformed. Significant change of Moho depth under forearc basin: shallow Moho under Java forearc domain, crust under Sumatra forearc off Sumatra is more continental)

Kopp, H., E.R. Flueh, D. Klaeschen, J. Bialas & C. Reichert (2001)- Crustal structure of the central Sunda margin at the onset of oblique subduction. Geophysical J. Int. 147, 2, p. 449-474.
(online at: http://gji.oxfordjournals.org/content/147/2/449.full.pdf+html)

(Data off S Sumatra and Sunda Strait show lateral increase in dip of subducted plate from 5° to 7° below outer high off Sumatra to Sunda Strait. Downgoing slab traced to >30 km depth. Backstop structure underlying trench slope break defines landward termination of accretionary prism. Velocities of outer high moderate, suggest sediments. Reduced reflectivity beneath rugged top basement supports high degree of deformation and compaction. Several km of sediment in forearc, with distinct basin recognized off S Sumatra but not off Sunda Strait. Bathymetric elevation of Java shelf in S Sunda Strait corresponds to increased basement high velocities and is connected to Sunda Strait transtensional basin. Velocity-depth model indicates continental-type crust under forearc basin off S Sumatra, whereas lower velocities found beneath Sunda Strait forearc)

Kopp, H., R. Weinrebe, S. Ladage, U. Barckhausen, D. Klaeschen, E.R. Flueh, C. Gaedicke, Y. Djajadihardja et al. (2008)- Lower slope morphology of the Sumatra trench system. Basin Research 20, p. 519-529.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006EO170001/pdf)
(Lower plate fabric extensively modulates upper plate morphology and morphotectonic segmentation of Sumatra trench system is linked to subduction of reactivated fracture zones and aseismic ridges of Wharton Basin. In general, increasing intensity of mass-wasting processes, from S to N, correlates with oversteepening of lower slope, probably in response to alternating phases of frontal accretion and sediment underthrusting)

Ladage, S., C. Gaedicke, U. Barckhausen, I. Heyde, W. Weinrebe, E.R. Flueh et al. (2006)- Bathymetric survey images structure off Sumatra. EOS Transactions American Geophys. Union (AGU) 87, 17, p. 165.
(Fault rupture models and aftershock activities of 2004 and 2005 earthquakes postulate strong structural segmentation of the Sumatra fore arc. Bathymetric images reveal multitude of morphological features)

Lange, D., F. Tilmann, T. Henstock, A. Rietbrock, D. Natawidjaja & H. Kopp (2018)- Structure of the Central Sumatran subduction zone revealed by local earthquake travel time tomography using amphibious data. Solid Earth Discussions, p. 1-24.
(online at: https://www.solid-earth-discuss.net/se-2017-128/se-2017-128.pdf)
(Tomographic model of C Sumatra subduction zone suggests thinned continental crust below basin E of forearc islands (Nias, Pulau Batu, Siberut) at ~180 km from trench. Reduced vp velocities beneath forearc region between Mentawai Islands and Sumatra mainland possibly reflect reduced thickness of overriding crust)

Lange, D., F. Tilmann, A. Rietbrock, R. Collings, D.H. Natawidjaja, B.W. Suwargadi et al. (2010)- The fine structure of the subducted Investigator Fracture Zone in Western Sumatra as seen by local seismicity. Earth Planetary Sci. Letters 298, p. 47-56.
(Earthquake data from dense local seismic network along segment of Sumatra forearc margin where Investigator Fracture Zone is subducted below Sunda plate. Well-defined linear streak of seismicity extending from 80- 200 km depth along prolongation of Investigator FZ sub-ridges. More intermediate depth seismicity to SE related to subducted rough oceanic seafloor)

Lasitha, S. (2007)- Geodynamics of the Andaman Sumatra Java Trench Arc system based on gravity and seismotectonic study. Doct. Thesis, Cochin University of Science and Technology, p. 1-191.
(online at: http://dyuthi.cusat.ac.in/xmlui/handle/purl/2993)
(Study of variation in subduction zone geometry along and across Sunda arc and fault patterns within subducting plate)

Lasitha, S., M. Radhakrishna & T. D. Sanu (2006)- Seismically active deformation in the Sumatra-Java trench-arc region: geodynamic implications. Current Science 90, 5, p. 690-696.
(Crustal deformation rates for Sumatra-Java arc region highlight (1) large variations in dextral shear motion along the Sumatran Fault Zone (SFZ); (2) dominantly compression offshore Sumatra fore-arc and (3) dominance of compression in W part of offshore Java fore-arc, gradually changing to extension to E. Deformation pattern off Sumatra indicates Mentawai fault partly accommodates oblique subduction motion)

Lawver, L.A. & P.T. Taylor (1987)- Heat flow off Sumatra. In E.N. Shor & C.L. Ebrahimi (eds.) Marine geophysics: a Navy symposium, p. 67-76.

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Lestari, R.A., L. Fauzielly, Winantris & Yudhicara (2014)- Indikasi endapan tsunami berdasarkan subfosil di rawa daerah Simeulue, Sumatera Utara. Bull. Scientific Contr. (UNPAD) 12, 3, p. 163-170.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8377/3893)
('Indications of tsunami deposits by subfossils in the swamp of the Simeulue area'. Presumed tsunami deposit with mixed marine foraminifera from middle (Elphidium, Pararotalia) and outer neritic (Heterolepa subhaidingeri) environments)

Lin, J.Y., X. Le Pichon, C. Rangin, J.C.Sibuet & T. Maury (2009)- Spatial aftershock distribution of the 26th December 2004 great Sumatra-Andaman earthquake in the northern Sumatra area. Geochem. Geophys. Geosystems 10, 5, Q05006, p. 1-15.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2009GC002454/epdf)

Lin, J.Y., C.L. Lo, W.N. Wu, J.C. Sibuet, S.K. Hsu & Y.Y. Wen (2015)- Crustal thickening and extension induced by the Great Sumatra-Andaman earthquake of 26 December 2004: revealed by the seismic moment tensor element Mrr. Marine Geophysical Res. 36, 2, p. 187-195.
(Epicenter of 2004 mainshock near area where accumulated 'radial seismic moment' (Mrr) was highest during inter-seismic period. Negative accumulated Mrr at 40-100 km depth suggest down-dip extension caused by slab pull effect)

Lin, J.Y., J.C. Sibuet, S.K. Hsu & W.N. Wu (2014)- Could a Sumatra-like megathrust earthquake occur in the south Ryukyu subduction zone? Earth Planets and Space 2014, 66:49, p. 1-8.
(online at: www.gep.ncu.edu.tw/upload/focus/21/2014_Jing-Yi_Lin_EPS.pdf)
(Comparison of geological- geophysical environments of Himalaya-Sumatra and Taiwan-Ryukyu collision-subduction systems. Both areas highly oblique convergence and similar tectonic stress regimes. Intersections of oceanic fracture zones with subduction systems show trench-parallel high free-air gravity anomalies in fore-arcs and epicenters of large earthquakes at boundary between positive and negative gravity anomalies)

Ling, H.Y. & M.A. Samuel (1998)- Siliceous microfossils from Nias Island: their significance for the Tertiary paleoceanography of the northeast Indian Ocean. J. Asian Earth Sci. 16, 4, p. 407-417.
(M Eocene radiolarians in red chert from ophiolitic basement of SW Nias constrains oldest age of emplacement of ophiolitic basement. Low-latitude assemblage with Dictyoprora amphora, Lithochytris vespertilio, Podocyrtis and Theocotylissa ficus. (Similar to M Eocene radiolarians in ophiolitic melange of S Andaman (Ling and Srinivasan 1993) and nearby DSDP Site 216). Also sample with lateM Miocene radiolaria in diatomite from Lahewa subbasin with rel. cool water diatoms (signifying upwelling?))

Liu, C.S., G.G. Shor & J.R. Curray (1991)- Velocity structure and nature of the forearc basin off West Sumatra from expanding spread experiments. Acta Oceanographica Taiwanica 27, p. 21-39.

Lutz, R., K. Berglar, C. Gaedicke & D. Franke (2007)- Petroleum systems modelling in the Simeulue forearc basin off Sumatra. AAPG Hedberg Conference, The Hague, p. *(Abstract only)*
(Simeulue forearc basin off N Sumatra explored by Union Oil from 1968-1978. Three wells with gas in carbonate reservoirs but none commercial. New 2D seismic by BGR (2006) shows 25 carbonate buildups, most in >1000 m water depth, showing backstepping geometry. Source rocks in area not confirmed by drilling)

Lutz, R., C. Gaedicke, K. Berglar, D. Franke, S. Schloemer & Y.S. Djajadihardja (2010)- Petroleum systems of the Simeulue fore-arc Basin off Sumatra, Indonesia. AAPG Int. Conf. Exhib., Rio de Janeiro, Brazil 2009, 7p.
(online at: www.searchanddiscovery.net/documents/2010/10230lutz/ndx_lutz.pdf)
(Expanded Abstract; short version of paper below)

Lutz, R., C. Gaedicke, K. Berglar, S. Schloemer, D. Franke & Y.S. Djajadihardja (2009)- Petroleum systems of the Simeulue fore-arc basin, offshore Sumatra, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 95, 9, p. 1589-1616.
(Fore-arc basins generally not considered as important petroleum provinces because of low heat flow. Simeulue fore-arc basin off N Sumatra bright spots on seismic above potential carbonate platform reservoirs, with AVO/AVA analyses indicating presence of gas. Petroleum system modeling of assumed source rocks in Eocene and E-M Miocene reveals hydrocarbon generation is possible in main depocenters of C and S Simeulue Basin and may be more prolific than previously thought)

Malod, J.A., B.M. Kemal, M.O. Beslier, C. Deplus, M. Diament et al. (1993)- Deformations du bassin d'avant-arc au Nord-Ouest de Sumatra: une reponse a la subduction oblique. Comptes Rendus Academie Sciences, Paris 316, p. 791-797.
('Deformation of the fore-arc basin NW of Sumatra; a response to oblique subduction'. NW Sumatra example of oblique convergence, expressed by two major strike-slip fault zones: Sumatra and Mentawai faults. Mentawai fault zone continues N-ward, and fore-arc basin segmented by strike-slip or compressional features)

Malod, J. & B.M. Kemal (1996)- The Sumatra margin: oblique subduction and lateral displacement of the accretionary prism. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of SE Asia, Geol. Soc., London, Spec. Publ. 106, p. 19-28.
(Oblique convergence in Sumatra forearc partitioned into trench- perpendicular convergence and strike-slip parallel to trench. Strike-slip along two major faults, Sumatra and Mentawai FZ. Mentawai fault attenuated at N end, terminates in accretionary prism. It is relayed and connected to Sumatra fault. Pattern can be explained with two sliver plates, Mentawai and Aceh, on top of which forearc basin developed. Accretionary prism moving NW along Mentawai fault. No extension within Mentawai plate, suggesting uniform motion along Sumatra fault S of 3°N. Strike-slip along Mentawai fault explained by better coupling between subducting slab and upper plate beneath accretionary prism compared to forearc)

Matson, R.G. & G.F. Moore (1992)- Structural influences on Neogene subsidence in the Central Sumatra fore-arc basin. In: J.S. Watkins et al. (eds.) Geology and geophysics of continental margins, American Assoc. Petrol. Geol. (AAPG), Mem. 53, p. 157-181.
(C Sumatra fore-arc Singkel and Pini subbasins with 11 Neogene sequences. In Miocene- E Pliocene both subbasins subsided independently. Initial subsidence of Singkel Basin from lateral translation of structural block between Batee and Singkel faults. Regional basin subsidence from deflection of descending oceanic plate, created when material was added to and/or redistributed in accretionary wedge. Structural influences on fore-arc basin subsidence: (1) location of continental margin; (2) presence of strike-slip faults traversing fore arc; and (3) local and regional deformation within accretionary wedge)

McCaffrey, R. (1991)- Slip-vectors and stretching of the Sumatra fore arc. Geology 19, p. 881-884.
(Thrust earthquakes at Java trench SW of Sumatra suggest Sumatra fore arc translated to NW by oblique plate convergence. NW motion of forearc rel. to SE Asia increases from zero at Sunda Strait to 45-60 mm/yr in NW Sumatra)

McCaffrey, R. (1992)- Oblique plate convergence, slip vectors, and forearc deformation. J. Geophysical Research, Solid Earth, 97, B6, p. 8905-8915.
(On oblique plate convergence, with examples from Sumatra forearc. Thrust earthquakes suggest partial decoupling, where component of arc-parallel motion of leading edge of upper plate results in less oblique thrusting at trench)

McCaffrey, R. (1996)- Estimates of modern arc-parallel strain rates in fore arcs. Geology 24, 1, p. 27-30.
(Arc-parallel extension strain observed in fore arcs of Sumatra, etc. subduction zones. Fore arcs deform even where convergence is perpendicular to curved margins, demonstrating that head-on subduction can produce 3-dimensional strain field)

McCaffrey, R. (2009)- The tectonic framework of the Sumatran subduction zone. Annual Review Earth Planetary Sci. 37, p. 345-366.
(online at: http://www.web.pdx.edu/~mccaf/pubs/mccaffrey_areps_2009.pdf)
(Well-illustrated overview of Sumatra subduction zone and earthquakes)

McCaffrey, R., P.C. Zwick, Y. Bock, L. Prawirodirdjo, J.F. Genrich, C.W. Stevens, S.S.O. Puntodewo & C. Surabaya (2000)- Strain partitioning during oblique plate convergence in northern Sumatra: geodetic and seismologic constraints and numerical modeling. J. Geophysical Research 105, B12, p. 28363-28376.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1999JB900362/pdf)
(GPS measurements along subduction zone of N Sumatra (2°S- 3°N) reveal oblique convergence strain partitioned between trench-normal contraction in forearc and trench-parallel shear strain in few tens of km of Sumatran fault. Volcanic arc can help partitioning by localizing margin-parallel shear strain in upper plate if weaker than its surroundings. Highest coupling on plate boundary beneath and seaward of forearc islands, consistent with rupture zones large earthquakes there)

McNeill, L.C., B. Dugan, J. Backman, K.T. Pickering, H.F.A. Pouderoux, T.J. Henstock, K.E. Petronotis, A. Carter, F. Chemale, K.L. Milliken, S. Kutterolf, H. Mukoyoshi et al. (2017)- Understanding Himalayan erosion and the significance of the Nicobar Fan. Earth Planetary Sci. Letters 475, 1 p. 134-142.
(online at: https://www.sciencedirect.com/science/article/pii/S0012821X17303977)
(First sampling of full sedimentary section of Bengal-Nicobar Fan W of N Sumatra by IODP Expedition 362. Sources for Nicobar Fan mainly Himalayan-derived Ganges-Brahmaputra and Indo-Burman Ranges/W Burma, with minor contributions from Sunda forearc and arc and Ninetyeast Ridge. Bengal-Nicobar Fan clearly developing before Late Miocene, but distinct increase in sediment accumulation rate at ~9.5 Ma suggests restructuring of sediment routing in submarine fan system, coinciding with inversion of E Himalayan Shillong Plateau and encroachment of W-propagating Indo-Burmese wedge)

McNeill, L.C. & T.J. Henstock (2014)- Forearc structure and morphology along the Sumatra-Andaman subduction zone. Tectonics 33, 2, p. 112-134.
(Sunda subduction margin characterized by major changes in accretionary prism and forearc morphology and structure along its 5000km length. In Sumatra-Andaman section (1) narrow and steep prism between Burma and Andamans; (2) broad prism with gentle slope in Andamans, Nicobars, and N Sumatra; (3) steep and narrow in C Sumatra; and (4) wider and less steep offshore S Sumatra, decreasing in width to W Java. Prism width ~90-180km, average surface slope ~1-3°, with inverse correlation between width and slope. Along-strike changes in morphology linked to input sediment thickness)

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Milsom, J., S.B.S. Dipowirjo & J. Sipahutar (1990)- Gravity surveys in the North Sumatra forearc. United Nations CCOP Techn. Bull. 21, p. 85-96.
(Land gravity surveys on N Sumatra forearc Nias, Simeulue, Banyak and Butu islands. Regions of high gravity fields and strong gradients associated with presence of mafic and ultramafic rocks)

Milsom, J., S. Dipowirjo, B. Sain & J. Sipahutar (1990)- Gravity surveys in the North Sumatra forearc. Lemigas Scientific Contr. Petrol. Sci. Techn. 14, 1, Spec. Issue, p. 112-122.
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Milsom, J., B. Sain & J. Sipahutar (1995)- Basin Formation in the Nias area of the Sumatra forearc, western Indonesia. In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. 1994, Southeast Asian basins: oil and gas for the 21st century. Bull. Geol. Soc. Malaysia 37, p. 285-299.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a19.pdf)
(Some of the modern structural highs that transect forearc basin of W Sumatra have been positive elements for considerable periods, but Singkel Basin near Banyak Islands overlies deep depression. Formation of this basin may be related to partitioning of strike-slip motion between main Sumatra fault system and Mentawai Fault)

Misawa, A., K. Hirata, L. Seeberd, K. Arai, Y. Nakamura, R. Rahardiawan, Udrekh, T. Fujiwara et al. (2014)- Geological structure of the offshore Sumatra forearc region estimated from high-resolution MCS reflection survey. Earth Planetary Sci. Letters 386, p. 41-51.
(High-resolution seismic around Sunda Trench, trench slope and forearc high regions off NW Sumatra. Trench-parallel anticlinal ridges from trench slope region to forearc high region. Two kinds of vergence systems in forearc: (1) landward vergence dominant in lower trench slope region, (2) seaward vergence dominant in forearc high region. Small piggyback or slope basins between anticlinal ridges. Deformation in uppermost part of these basins suggests 'recent' deformation)

Moeremans, R., S.C. Singh, M. Mukti, J. McArdle & K. Johansen (2014)- Seismic images of structural variations along the deformation front of the Andaman-Sumatra subduction zone: implications for rupture propagation and tsunamigenesis. Earth Planetary Sci. Letters 386, p. 75-85.
(Seven deep seismic reflection profiles across 3000 km-long subduction system from Andaman to S Sumatra. Frontal zone is characterized by thrusts, showing N-ward transition from dominantly seaward vergence of frontal thrusts to dominantly landward vergence of frontal thrusts. Accretionary wedge poor reflections, due to faulting. Oceanic crust highly disturbed by faults and topographic relief along most of margin)

Moore, G.F. (1978)- Structural geology and sedimentology of Nias Island. Indonesia: a study of subduction zone tectonics and sedimentation. Ph.D. Thesis, Cornell University, p. 1-142. *(Unpublished)*
(Study of mid-Tertiary subduction complex exposed on Nias Island, W. Sumatra. Comprises tectonic melanges and slope basin sediments)

Moore, G.F. (1979)- Petrography of subduction zone sandstones from Nias Island, Indonesia. J. Sedimentary Petrology 49, p. 71-84.
(Rocks on Nias two tectonostratigraphic units: (1) deformed late Oligocene-E Miocene trench deposits (tectonic melange) and (2) Miocene-Pliocene trench slope deposits. Sandstone rich in quartz and lithic fragments. Quartzose nature of Nias sediments indicates provenance from Sumatra W coast exposures of E Tertiary quartz-rich sediments and Paleozoic/Mesozoic metamorphic and plutonic rocks. Much lower contents of volcanic lithic grains than most arc-derived sandstones may be due to nonvolcanic source terrane on W coast)

Moore, G.F., H.G. Billman, P.E. Hehanussa & D.E. Karig (1980)- Sedimentology and paleobathymetry of Neogene trench-slope deposits, Nias Island, Indonesia. J. Geology 88, p. 161-180.
(Nias Island Neogene consists of Miocene trench-slope marls, sandstones, and conglomerates of Nias beds that overlie Oyo melange. Lithofacies and sedimentary sequences similar to ancient submarine fan environments. Oldest Nias beds contain very poor fauna or no calcareous microfossils at all, indicating deposition below CCD. Lower Miocene assemblages indicative of depths >2000m. Middle bathyal (500-2000 m) benthic species in U Miocene strata. Nias beds overlain by Pliocene shelf deposits and Pleistocene coral cap. Lower Miocene strata uplifted 4000 m in ~20 Myrs. Basin sediments folded and faulted penecontemporaneous with sedimentation. Dominant source for Nias beds was arc terrane of mainland Sumatra)

Moore, G.F. & J.R. Curray (1980)- Structure of the Sunda Trench lower slope off Sumatra from multichannel seismic reflection data. J. Marine Geophysical Res. 4, p. 319-340.
(Seismic profiles across Sunda Trench slope off C Sumatra reveal details of subduction zone structure. Oceanic crust not involved in deformation at toe of slope, and it can be observed dipping landward ~25 km under toe of accretionary prism. Middle portion of trench slope underlain by deformed accreted strata. Slope basins in 375-1500m water depths. Seaward flank of one large slope basin recently uplifted, indicated by shallow landward-dipping reflectors. Also arlier periods of uplift indicated by numerous angular unconformities in basin strata)

Moore, G.F., J.R. Curray & F.J. Emmel (1982)- Sedimentation in the Sunda trench and forearc region. In: J.K. Leggett (ed.) Trench-forearc geology, Geol. Soc. London, Spec. Publ. 10, p. 245-258.
(Much of Sumatra fore-arc trench sediment as far as W Sunda Straits is quartzose Himalayan detritus. Nearly all sediment derived from arc terranes of Java and Sumatra in Neogene trapped in forearc basin. Hemipelagic sedimentation dominates on lower inner trench slope (calcareous microfossils and volcanic ash)

Moore, G.F., J.R. Curray, D.G. Moore & D.E. Karig (1980)- Variations in geologic structure along the Sunda fore arc, Northeastern Indian Ocean. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian Seas and Islands- I. American Geophys. Union (AGU), Geophys. Monograph 23, p. 145-160.
(On Sunda fore arc from Birma to Sumba. Differences in styles due to oblique versus perpendicular subduction and thickness of sediments entering trench, mainly from Bengal Fan. Sumatran Fault System apparently connected to spreading centers in Andaman Sea. Part of Sumatra SW of Sumatra Fault zone moves NW with 'Burma Plate')

Moore, G.F. & D.E. Karig (1976)- Development of sedimentary basins on the lower trench slope. Geology 4, p. 693-697.
(Discussion of accretionary prisms where oceanic plate with thick cover of sediments is subducted. Accreted sediments form ridges behind which younger sediments are ponded in small (2-10 km wide) deepwater basins. Including examples from Nias Island off W Sumatra)

Moore, G.F. & D.E. Karig (1980)- Structural geology of Nias Island, Indonesia: implications for subduction zone tectonics. American J. Science 280, p. 193-223.
(Nias Island exposes mid-Tertiary subduction complex. Lowest complex (Oyo) strongly sheared melanges, overlain by deformed Neogene (Nias beds))

Mosher, D.C., J.A. Austin, D. Fisher & S.P.S. Gulick (2008)- Deformation of the northern Sumatra accretionary prism from high-resolution seismic reflection profiles and ROV observations. Marine Geology 252, p. 89-99.
(Multibeam bathymetry over 2004 earthquake site suggests 2004 tsunami not triggered by single zone of offset, but series of small faults across broad frontal accretionary wedge)

Mukhopadhyay, B. & S. Dasgupta (2014)- Genesis of a new slab tear fault in the Indo-Australian plate, offshore northern Sumatra, Indian Ocean. J. Geol. Soc. India 83, 5, p. 493-500.
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(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/04/Prosiding-2015.pdf)
('Structures, evolution and tectonics of the forearc region in the western Sundaland active margin')

Mukti, M.M. (2017)- Deformation in the Andaman- Northern Sumatra forearc revisited: implication for tectonic reconstruction of the western Sundaland margin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 3p.

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(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/954/pdf)
(On Semangko pull apart basin, transtensional pull-apart basin at step over between Semangko to Ujung Kulon segments of Sumatra Fault zone. Rhomboidal shape with dual depocenters and structural high in center)

Mukti, M.M., S. Singh, I. Arisbaya, I. Deighton, L. Handayani, H. Permana & M. Schnabel (2015)- Geodinamika daerah busur muka Selat Sunda berdasarkan data seismik refleksi. In: H. Harjono et al. (eds.) Pros. Pemaparan Hasil Penelitian Geoteknologi 2015, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. I25-I31.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/04/Prosiding-2015.pdf)
('Geodynamics of Sunda Strait forearc area based on seismic reflection data'. Sunda Strait transition zone between Java frontal subduction and Sumatra oblique convergence. Disappearance of forearc basin off

Sumatra and presence of horsts and grabens. Young faults formed in sediments formerly part of forearc. Horsts and grabens not only related to pull-apart system, but also connected to volcanic-magmatic activities)

Mukti, M.M., S.C. Singh, N.D. Hananto, D. Ghosal & I. Deighton (2011)- Structural style and evolution of the Sumatran forearc basins. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-082, p. 1-7.
(Crust beneath Sumatra fore arc basin thin (~20 km), thickens towards mainland. NE-SW extensional structures with probably Late Eocene- E Oligocene syn-rift sediments. Late Oligocene- E Miocene post-rift sediments in grabens and slopes. Grabens exhibit transtensional structures. Inversion of structures related to transpressional strike-slip fault zone, followed by M-L Miocene marked subsidence, overprinting older depocenters)

Mukti, M.M., S.C. Singh, R. Moeremans, N.D. Hananto, H. Permana & I. Deighton (2012)- Neotectonics of the southern Sumatran forearc. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-074, p. 1-10.
(Mentawai forearc interpreted as products of compression of accretionary wedge and forearc basin sediments. Compressional phases since Late Miocene)

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(online at: http://onlinelibrary.wiley.com/doi/10.1029/2012GC004199/pdf)
(New deep seismic and bathymetry data over Mentawai Fault Zone, along boundary between accretionary wedge and proposed continental backstop. Arcuate ridges on seafloor are landward-vergent imbricated backthrusts at back side of accretionary wedge and backthrusts deforming forearc basin sediments. Backthrusts may have initiated in E-M Miocene, with slide and back-rotation of forearc thrusts. Higher-angle backthrusts initiated in Late Miocene, continuing to form fold-thrust belt to E in Pliocene. Folds and thrusts disturbed by diapirs and mud volcanoes)

Mukti, M.M. & Suwijanto (2016)- On the update of structural map of Sumatra, from on land to offshore observations: implication for the tectonic reconstruction. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 375-377.
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(online at: http://jurnal.unpad.ac.id/bsc/article/view/8123/3699)
('Extension tectonics of Sunda Straits'. Sunda Straits pull-apart basin at SE termination of Great Sumatra Fault Zone, with main opening in Pliocene- Recent. Clearly expressed by bathymetry. Associated with magmatism, with N20°E-trending, S-ward younging volcanic line from Sukadana in N (1.2 Ma) to Krakatau (1 Ma) and Panjaitan(0.5 Ma) in S)

Nainggolan, D.A. & T. Padmawijaya (2003)- Studi geodinamika lajur akresi daerah Siberut dari data gayaberat. J. Geologi Sumberdaya Mineral 13, 143, p. 24-37.
('Study of geodynamics of the accretionary prism in the Siberut area from gravity data'. Subduction melange in center and west of Siberut Island identified by high Bouguer anomaly. Bouguer gravity decreases to E, reflecting W part of Sumatra forearc basin with sediment thickness of 500-1500m)

Nas, D.S. & J.B. Supandjono (1995)- Geological map of the Telo sheet (0615), Sumatra, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of Telo Island, NW of Siberut in Sumatra forearc/ accretionary prism. Oldest rocks Late Oligocene- earliest Miocene Tanahbala Melange with schist, phyllite, serpentinite, dunite and ultrabasic boudins embedded in metamorphic rocks (same as Melange Gp of Nias). Overlain by M-L Miocene sandstones and marls of Sipika and Hiligeho Fms, and Late Miocene- E Pliocene Gunungbala Lst with Cycloclypeus)

Natawidjaja, D.H., K. Sieh, M. Chlieh, J. Galetzka, B.W. Suwargadi, H. Cheng, R.L. Edwards, J.P. Avouac & S.N. Ward (2006)- Source parameters of the great Sumatran megathrust earthquakes of 1797 and 1833 inferred from coral microatolls. J. Geophysical Research 111, B06403, 37p.
(Large uplifts and tilts on Sumatran outer arc islands between 0.5°- 3.3°S during great historical earthquakes in 1797 and 1833)

Natawidjaja, D.H., K. Sieh, J. Galetzka, B.W. Suwargadi, H. Cheng, R.L. Edwards & M. Chlieh (2007)- Interseismic deformation above the Sunda megathrust recorded in coral microatolls of the Mentawai islands, west Sumatra, J. Geophysical Research 112, B02404, 27p.
(Geomorphology and stratigraphy of modern coral microatolls show outer arc Mentawai islands of W Sumatra subsiding over past several decades. Same islands rose up to 3m during giant megathrust earthquakes of 1797 and 1833. Current subsidence may reflect strain that will lead to future large earthquakes)

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Noda, A. & A. Miyakawa (2017)- Deposition and deformation of modern accretionary type forearc basins: linking basin formation and accretionary wedge growth. In: Y. Itoh (ed.) Evolutionary models of convergent margins: origin of their diversity, Intech, Japan, Chapter 1, p. 3-27.
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(Includes brief review of Sumatra- Java forearc basins, classified as doubly-vergent 'two-wedge' accretionary-type forearc basins)

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(In Aceh basin frequency of turbidite mud decreased as sea level rose during Pleistocene- Holocene deglaciation. Terrigenous organic carbon content high at end of Last Glacial period, but during deglaciation most organic carbon of marine origin. In Sunda trench Holocene turbidites consisted of remobilized slope sediments from two sources: (1) old Bengal/Nicobar fan with thermally matured organic fragments, whereas those derived from trench slope contained little terrigenous carbon)

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(Interpretation of structural deformation in Sumatra forearc NW Simeuleu from new bathymetry map. General elongated major NW-SE thrust fault complex, with N-S, NNE-SSW, WNW-ESE or ENE-WSW and E-W structural lineaments)

Permana, H., K. Hirata, T. Fujiwara, Udrekh, E.Z. Gaffar, M. Kawano & Y.S. Djajadihardja (2011)- Fault pattern and active deformation of outer arc ridge of northwest of Simeulue Island, Aceh, Indonesia. Bull. Marine Geol. 26, 1, p. 41-49.
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(Seismic tomography studies of mantle, using new teleseismic data from aftershock sequences of 2004, 2005, and 2007 earthquakes)

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(New data from 2004-2005 Sumatra-Andaman earthquake sequences allows improved detail of P-wave velocity structure beneath Sumatra and adjacent regions. Below N Sumatra slab is folded at depth. Fold plays major role in segmentation of Sumatra megathrust and may impede rupture propagation in region. N of Sumatra, significant slab material in mantle transition zone imaged for first time)

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(Increased ray coverage following 2004 and 2005 earthquakes allowed improved imaging of slab geometry in upper-mantle and transition zone regions along Sumatra, Andaman and Burma subduction zones)

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Philibosian, B., K. Sieh, J.P. Avouac, D.H. Natawidjaja, H.W. Chiang, C.C. Wu, H. Perfettini, C.C. Shen, M.R. Daryono & B.W. Suwargadi (2014)- Rupture and variable coupling behavior of the Mentawai segment of the Sunda megathrust during the supercycle culmination of 1797 to 1833. J. Geophysical Research, Solid Earth, 119, 9, p. 7258-7287.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2014JB011200/epdf)
(Periods of subduction strain accumulation under Mentawai Islands referred to as 'supercycles' because each culminates in partial ruptures of megathrust. Fnale of previous supercycle comprised two giant earthquakes in 1797 and 1833. 2007 earthquakes released only fraction of moment released during previous rupture sequence. Major earthquakes generally do not involve rupture of entire Mentawai segment, but may significantly change state of coupling on megathrust for decades to follow, influencing subsequent ruptures)

Philibosian, B., K. Sieh, J.P. Avouac, D.H. Natawidjaja, H.W. Chiang, C.C. Wu, C.C. Shen, M.R. Daryono et al. (2017)- Earthquake supercycles on the Mentawai segment of the Sunda megathrust in the seventeenth century and earlier. J. Geophysical Research, Solid Earth, 122, 1, p. 1-35.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2016JB013560/epdf)
(At least five discrete uplift events identified at raised coral reef sites around Siberut, Sipora, Pagai islands in about 1597, 1613, 1631, 1658, and 1703, likely corresponding to large megathrust ruptures)

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(online at: http://onlinelibrary.wiley.com/doi/10.1029/2011JB009075/epdf)
(Coral record at Pulau Pasir implies large rupture of megathrust between trench and islands at ~ 1314 AD. Elevations of four older microatolls at Bulasat suggest at least two other shallow megathrust ruptures before the AD 1314 event)

Prawirodirdjo, L., Y. Bock, R. McCaffrey, J. Genrich, E. Calais, C. Stevens, O. Puntodewo, C. Subarya et al. (1997)- Geodetic observations of interseismic strain segmentation at the Sumatra subduction zone. Geophysical Research Letters 24, 21, p. 2601-2604.
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('Nias Island, a polyphased tectonic belt along the inner edge of the Sunda trench (Mentawai Archipelago)'. Nias Island classically regarded as emergent accretionary wedge. Complex belt affected by polyphase tectonics in Eocene and M Miocene. Sediments shelf clastics and limestone. Nias Melange extremely thin mylonites and olistostromic scaly clay at several decollement levels. Reactivation of Eocene Tethys suture zone within crustal blocks of Sunda margin alternative hypothesis for structure of Mentawai Islands)

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(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdfdirect/10.1029/2018GC007787)

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(Seven deep-sea turbidite layers identified in Indian Ocean core off Sumatra, corresponding to events that occurred at 128-130, 105-107, 98-100, 86-87, 50-53, 37-41 and 20-29 ka. Possible triggering mechanisms for turbidite events include tsunamis, earthquakes, volcanic eruptions and sea-level changes)

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(1970's Union Oil exploration of Sibolga forearc basin discovered gas in six localities, five in carbonate reservoirs. Moderately deformed Neogene 1000'-15,000' thick over folded Paleogene sediments and volcanics. Miocene carbonates primarily beneath present-day shelf on E side of basin. Oldest unit in North is M Miocene, possibly E Miocene shelf limestone with reefs, overlain by deepwater clay-mudstone-siltstone, then U Miocene shelf carbonate-clastics with reefs. In S carbonate deposition late M Miocene- Late Miocene, with fewer reefs than to N. Methane gas in U Miocene in Keudepasi 1 and Singkel 1 wells, both in reefal deposits)

Salman, R., E.M. Hill, L. Feng, E.O. Lindsey, D.M. Veedu, S. Barbot, P. Banerjee, I. Hermawan & D.H. Natawidjaja (2017)- Piecemeal rupture of the Mentawai patch, Sumatra: the 2008 Mw 7.2 North Pagai earthquake sequence. J. Geophysical Research, Solid Earth, 122, 11, p. 9404-9419.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2017JB014341/epdf)

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a07.pdf)
(Discussion of cross-section across Niasin Sumatra forearc. Basement ophiolite complex, containing pelagic red chert with M Eocene radiolaria. Initial basin sedimentation in Oligocene, below CCD depth. Nias subject to Oligocene-Early Miocene extension with development of half grabens dropping down to SW. Two phases of uplift/deformation: W areas inverted in E Miocene and whole island subject to Pliocene tectonism. 'Melanges' described by earlier authors diapiric in origin; composed mainly of Oligocene- Lower Miocene sedimentary material, intruding all younger formations)

Samuel, M.A. & N.A. Harbury (1996)- The Mentawai fault zone and deformation of the Sumatran forearc in the Nias area. In: R. Hall and D. Blundell (eds.) Tectonic Evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 337-351.
(Sumatran Forearc not behaving as rigid plate and rate of slip increases along right-lateral Sumatran Fault System from SE to NW. Two hypotheses to explain pattern of decoupling: (1) arc-parallel stretching; (2) major right-lateral strike slip zone, parallel to Sumatran Fault System (Mentawai fault zone). Mentawai fault zone S of Nias can be explained as inversion of originally extensional structures and mud diapirism. Strike-slip motion is of limited importance along 600 km long Mentawai fault zone)

Samuel, M.A., N.A. Harbury, A. Bakri, F.T. Banner & L. Hartono (1997)- A new stratigraphy for the islands of the Sumatran Forearc, Indonesia. J. Southeast Asian Earth Sci. 15, 4-5, p. 339-380.
(Nias area heterogeneous Pre-Oligocene basement includes ophiolitic complexes, possibly also continental material. Oyo Fm indicates initial deposition in newly formed extensional sub-basins was deep marine, below CCD. Major E Miocene unconformity as result of period of basin inversion. E and M Miocene phases of differential uplift and subsidence ceased by Late Miocene. Massive influx of Himalayan-derived Bengal Fan sediments reached Sunda Trench in Sumatra area in late M Miocene. Pliocene unconformity represents initiation of major phase of deformation that continues to present day)

Samuel, M.A., N.A. Harbury, M.E. Jones & S. J. Matthews (1995)- Inversion-controlled of an outer-arc ridge: Nias Island, offshore Sumatra. In: J.H. & P.G. Buchanan (eds.) Basin Inversion, Geol. Soc. London, Spec. Publ. 88, p. 473-492.
(Three main sub-basins on Nias. Late Paleogene-Neogene sedimentation controlled by extensional faults. Two inversion phases: (1) E Miocene, in W, (2) initiated in Pliocene, in all sub-basins. Latest Pliocene-Pleistocene rocks unconformably overlie Miocene. Uplift and deformation controlled by reactivation of extensional faults and oblique-slip movements on transecting faults. Diapiric melanges developed during inversion. Uplift of sub-basins on Nias inversion of original major extensional faults rather than thrust-slices in accretionary prism. Nias not part of accretionary complex; accretionary prism SW of Nias)

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(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/169/165)
('Delineation of the Simeulue fore-arc basin based on gravity anomaly data'. Simeulue basin, offshore NW Sumatra, maximum length 418 km, in N and S bounded by topographic highs)

Schippers, A., G. Koweker, C. Hoft & B.M.A. Teichert (2010)- Quantification of microbial communities in three forearc sediment basins off Sumatra. Geomicrobiology J. 27, 2, p. 170-182.

Schluter, H.U., C. Gaedicke, H.A. Roeser, B. Schreckenberger, H. Meyer, C. Reichert, Y. Djajadihardja & A. Prexl (2002)- Tectonic features of the Sumatra-Java forearc of Indonesia. Tectonics 21, 5, 1047, p. 11/1-11/15.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2001TC901048)
(Sunda Arc off S. Sumatra-E Java two accretionary wedges: inner wedge I Late Oligocene tectonic flakes and Neogene-Recent outer wedge II. Wedge I forms outer arc high and backstop for outer wedge II. Missing outer arc high of S Sunda Strait explained by Neogene transtension due to clockwise rotation of Sumatra and arc-

parallel strike-slip movements. Rotation created pull-apart basins along W Sunda Strait (Semangka Graben) and transpression and inversion on E Sunda Strait in Krakatau Basin. Sumatra FZ probably attached to Java Cimandiri-Pelabuhan Ratu strike-slip fault prior to Sumatra rotation)

Seeber, L., C. Mueller, T. Fujiwara, K. Arai, W. Soh, Y.S. Djajadihardja & M.S. Cormier (2007)- Accretion, mass wasting and partitioned strain over the 26 Dec 2004 Mw9.2 rupture offshore Aceh, northern Sumatra. Earth Planetary Sci. Letters 263, 1-2, p. 16-31.
(Bathymetric, and seismic survey over frontal active part of accretionary prism along Aceh segment where 26 December 2006 mega-earthquake and tsunami were triggered)

Setyanta, B. (2015)- Model kerak daerah busur muka di Pulau Siberut dan perairan di sekitarnya berdasarkan analisis anomali gayaberat. J. Geologi Sumberdaya Mineral 16, 2, p. 55-65.
(online at: http://kiosk.geology.esdm.go.id/artikel/pdf/model-kerak-daerah-busur-muka-di-pulau-siberut...)
('Model of the crust in the forearc area of Siberut Island and surrounding waters based on gravity anomaly'. Gravity profile in W Sumatra forearc from SW of Siberut to NE of Padang suggests trenches and accreted islands underlain by oceanic crust, volcanic arc areas underlain by transitional crust or andesitic crust)

Shamim, P. K. Khan & S.P. Mohanty (2019)- Stress reconstruction and lithosphere dynamics along the Sumatra subduction margin. J. Asian Earth Sci. 170, p. 174-187.
(Gravity modeling and stress reconstructions over Sumatra subduction margin between Indian-Australian and Asian plates)

Shulgin, A., H. Kopp, D. Klaeschen, C. Papenberg, F. Tilmann, E.R. Flueh, D. Franke, U. Barckhausen, A. Krabbenhoeft & Y. Djajadihardja (2013)- Subduction system variability across the segment boundary of the 2004/2005 Sumatra megathrust earthquakes. Earth Planetary Sci. Letters 365, 1, p. 108-119.
(On structural variations across rupture segment boundary between 2004 and 2005 earthquakes at Sumatra subduction zone off Simeulue Island. Structure of subduction system N and S of segment boundary attributed to subduction of 96°E fracture zone, which separates areas of different thickness of oceanic crust, decrease in amount of sediment in trench and variations in morphology and volume of accretionary prism)

Sibuet, J.C., C. Rangin, X. Le Pichon, S.C. Singh, A. Cattaneo, D. Graindorge, F. Klingelhoefer, J.Y. Lin, J. Malod et al. (2007)- 26th December 2004 Great Sumatra-Andaman earthquake: seismogenic zone and active splay faults. Earth Planetary Sci. Letters 263, p. 88-103.
(Landward and seaward-verging trench-parallel thrust faults mapped in wedge between N Sumatra and Indian-Indonesian boundary. Spatial aftershocks distribution of 26th December 2004 earthquake shows post-seismic motion partitioned along two thrust faults, the Lower and Median Thrust Faults)

Siegert, M., M. Kruger, B. Teichert, M. Wiedicke & A. Schippers (2011)- Anaerobic oxidation of methane at a marine methane seep in a forearc sediment basin off Sumatra, Indian Ocean. Frontiers Microbiology 2, 249, p. 1-16.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3245565/pdf/fmicb-02-00249.pdf)
(Cold methane seep in forearc basin off Sumatra, with methane-seep adapted microbial community)

Sieh, K. (2012)- The Sunda megathrust: past, present and future. J. Earthquake and Tsunami, 1, 1, p. 1-22.
(online at: http://www.tectonics.caltech.edu/sumatra/downloads/papers/Snu.pdf)
('Sunda Megathrust' is name for 1600km long seismogenic subduction zone off Myanmar-Andaman- Sumatra-Java, which runs from deep trench on ocean floor under continental margins. Slippage events in 2004 and 2005 caused major earthquakes and tsunamis)

Simoes, M., J. Avouac, R. Cattin & P. Henry (2004)- The Sumatra subduction zone: a case for a locked fault zone extending into the mantle. J. Geophysical Research 109, B10, B10402, p. 1-16.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2003JB002958/epdf)
Subduction interface locked between large interplate earthquakes (locked fault zone, LFZ), postulated to not extend into mantle because serpentinization of mantle wedge favors aseismic sliding. Uplift rates from coral

growth and GPS indicate LFZ extends ~132 km from trench, to 35-57 km depth. LFZ extends below forearc Moho, estimated at ~30 km depth, 110 km from trench, probably into mantle)

Singh, S.C., H. Carton, P. Tapponnier, N.D. Hananto, A.P.S. Chauhan, D. Hartoyo, M. Bayly, S. Moeljopranoto et al. (2008)- Seismic evidence for broken oceanic crust in the 2004 Sumatra earthquake epicentral region. Nature Geoscience 1, p. 777-781.
(Sumatra 2004 earthquake caused by sudden slip along plate interface between subducting Indo-Australian plate and overriding Sunda plate. Seismic section of focal region reveals subducting crust and oceanic Moho are broken and displaced by landward-dipping thrust ramps, suggesting megathrust now lies in oceanic mantle. Active thrust faults at front of accretionary wedgeconsistent with thrust aftershocks on steeply dipping planes. Brittle failure of mantle rocks accounts for initiation of exceptionally large earthquake)

Singh, S.C., A.P.S. Chauhan, A.J. Calvert, N. Hananto, D. Ghosal, A. Rai & H. Carton (2012)- Seismic evidence of bending and unbending of subducting oceanic crust and the presence of mantle megathrust in the 2004 Great Sumatra earthquake rupture zone. Earth Planetary Sci. Letters 321-322, p. 166-176.
(Deep seismic reflection and refraction data image top of subducting oceanic crust down to 60 km depth in 2004 great Sumatra-Andaman earthquake rupture zone. Top of the downgoing plate does not dip gently into subduction zone but displays staircase geometry with three 5-15 km vertical steps, spaced ~50 km apart)

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(Seismic images of backthrusts in the 2004 and 2007 great earthquake ruptured zones in the Sumatra forearc are brighter than those in regions where subduction zone is still locked. Enhanced reflectivity may be due to increase of fluid contents along reactivated backthrusts during or soon after great earthquakes)

Singh, S.C., N.D. Hananto, A.P.S. Chauhan, H. Permana, M. Denolle, A. Hendriyana & D. Natawidjaja (2010)- Evidence of active backthrusting at the NE margin of Mentawai Islands, SW Sumatra. Geophysical J. Int. 180, 2, p. 703-714.
(online at: https://academic.oup.com/gji/article/180/2/703/2101866)
(Onshore Great Sumatra Fault takes up significant part of strike-slip motion of oblique subduction of Indo-Australian plate beneath Sunda plate, but offshoreMentawai Fault characterized by active SW dipping backthrusts)

Singh, S.C., N. Hananto, M. Mukti, H. Permana, Y. Djajadihardja & H. Harjono (2011)- Seismic images of the megathrust rupture during the 25th October 2010 Pagai earthquake, SW Sumatra: frontal rupture and large tsunami. Geophysical Research Letters 38, L16313, p. 1-6.

Singh, S.C., N.D. Hananto, M. Mukti, D.P. Robinson, S. Das, A. Chauhan, H. Carton, B. Gratacos, S. Midnet, Y. Djajadihardja & H. Harjono (2011)- Aseismic zone and earthquake segmentation associated with a deep subducted seamount in Sumatra. Nature Geoscience 4, p. 308-311.
(Imaging of subducted seamount 3-4 km high and 40 km wide at 30-40 km below Sumatra forearc mantle. Seamount remained intact despite >160 km of subduction, and no seismic activity above or below seamount. Coupling between seamount and overriding plate appears weak and aseismic. Subduction of such a topographic feature could lead to segmentation of subduction zone)

Situmorang, B., N.A. Harbury & M.G. Audley-Charles (1987)- Tectonic inversions in the Sunda Forearc: evidence from Simeulue. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 57-63.
(Cenozoic history of Simeulue, NW of Nias, includes Oligo-Miocene erosional unconformity. Repeated tectonic inversions may be related in part to transpression and transtension stresses generated by strike-slip motion interacting with sinuosities in trench and Sumatran fault system)

Situmorang, B. & Soepatono (1975)- Results of petroleum exploration in the interdeep basin off West Sumatra Indonesia. Proc. 12th Sess. CCOP, p. 255-262.

Situmorang, B., S. Wijaya, M. Husen & B. Yulihanto (1990)- Analisis struktur geologi Pulau Nias. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 27-41.
('Analysis of the structure of Nias island'. Nias island with highly deformed Oyo Complex (mainly NE dipping imbricates of Eocene- Oligocene accretionary complex?), overlain by E- L Miocene Nias Beds)

Specht, T.D., T. Rahardjo, F.I. Frasse & P.B. Dobson (2000)- A comprehensive evaluation of the exploration potential of the Offshore Sibolga Area, West Coast Sumatra Island, Indonesia. AAPG Int. Conf. Exhib., Bali 2000. *(Abstract only)*
(Caltex Sibolga PSC in Mentawai Forearc Basin acquired in 1996. Water depths from onshore to >2000'; sediments up to ~20,000' thick. Bordered by outer arc and Mesozoic-Paleozoic core and volcanic arc of Sumatra. Basin began to subside around 17 Ma and received nearly continuous Neogene sedimentation. Regional right-lateral strike-slip faults produced differences in structural and stratigraphic evolution between sub basins. Shallow burial depths limit size of biogenic accumulations and low heatflow suggests only limited thermogenic petroleum system)

Stevens, S.H. & G.F. Moore (1985)- Deformational and sedimentary processes in trench slope basins of the western Sunda Arc, Indonesia. Marine Geology 69, 1-2, p. 93-112.
(Structure and stratigraphy of trench slope basins W of Nias Island)

Stockmal G.S. (1983)- Modeling of large-scale accretionary wedge deformation. J. Geophysical Research 88, B10, p. 8271-8287.
(Physical modeling of accretionary wedge deformation, loosely based on C Sumatra forearc)

Subagio & B.S. Widijono (2001)- Model gayaberat, struktur kerak, dan implikasinya terhadap kestabilan lahan di Pulau Nias. J. Geologi Sumberdaya Mineral 11, 120, p. 2-13.
('Gravity model, crustal structureand the implications for the stability of land on the island of Nias'. Gravity model suggests basement at W coast and in C Nias consist of continental accreted granite blocks; Basement in offshore forearc basin continental granitic crust)

Surabaya, C., M. Chlieh, L. Prawirodirdjo, J.P. Avouac, Y. Bock, K. Sieh et al. (2006)- Plate-boundary deformation associated with the great Sumatra-Andaman earthquake. Nature 440, 2, p. 46-51.
(2004 earthquake magnitude >9.0 ruptured Sunda subduction megathrust over >1500km, with >20m of slip off N Sumatra)

Syaefudin (1998)- Studi sekuen stratigrafi sedimen berumur Miosen cekungan muka busur Nias, Sumatera Utara. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 106-122.
('Sequence stratigraphic study of Miocene-age sediments in the Nias fore-arc basin, N Sumatra'. Sequence strat interpretation of Panjang 1 well, in forearc between Nias and Sumatra islands)

Tan Sin Hok (1936)- Bemerkungen uber die Cycloclypeen von Sipoera (Mentawai-Inseln). Geologie en Mijnbouw 15, 7, p. 57-58.
(online at: https://drive.google.com/file/d/1xXrzCscsLSc1mHYjqEKiAgunLMfS1uKT/view)
('Remarks on Cycloclypeus from Sipura, Mentawai Islands'. Brief critique of Tappenbeck (1936) interpretations of Cycloclypeus from Mentawai islands. Tappenbeck's Cycloclypeus koolhoveni probably Heterostegina or Spiroclypeus. Other spp may also be misidentified. No figures)

Tappenbeck, D. (1936)- Uber Tertiare Foraminiferengesteine von Sipoera (Mentawei-Inseln). Proc. Kon. Nederl. Akademie Wetenschappen Amsterdam 39, 5, p. 661-670.
(online at: www.dwc.knaw.nl/DL/publications/PU00016907.pdf)
('On Tertiary foraminifera rocks from Sipura (Mentawai Islands)', W Sumatra. Larger foraminifera in M Eocene black limestone (zone Ta with Assilina, Nummulites), Early Miocene (zone Te with Spiroclypeus, Miogypsina, Nephrolepidina spp.) and Late Miocene (Tf with Pliolepidina and Cycloclypeus cf. guembelianus) marl and limestones (see also commentary by Tan Sin Hok (1936))

Tappin, D.R., L.C. McNeil, T. Henstock & D. Mosher (2007)- Mass wasting processes; offshore Sumatra. In: V. Lykousis (ed.) Submarine mass movements and their consequences, 3rd Int. Symp., Advances in Natural and Technological Hazards Research 27, Springer, p. 327-336.
(online at: www.noc.soton.ac.uk/gg/sumatra/documents/tappin_etal_sumatra_mass_wasting_2007.pdf)
(Mapping of convergent margin offshore Sumatra using swath bathymetry, seismic and seabed photography reveals common seabed failures, but mainly small-scale blocky debris avalanches and sediment flows. Large landslides usually form in areas of high sediment input. Off Sumatra most sediment derived from oceanic plate, and little sediment entering system from adjacent land areas. Input from oceanic source limited due to diversion of sediment entering subduction system, attributed to Ninetyeast Ridge- Sunda Trench collision at ~1.5 Ma)

Terpstra, H. (1932)- Voorloopige mededeeling over een geologischen verkenningstocht op de eilanden Siberoet en Sipoera (Mentawi-eilanden, Sumatra's Westkust). De Mijningenieur 13, 2, p. 16-20.
('Preliminary note on a geological reconnaissance trip on the islands of Siberut and Sipura (Mentawai Islands, Sumatra W coast)'. On Siberut island no Pre-tertiary rocks. On Sipura island schists and amphibolites, and Tertiary similar to Siberut. Between Tertiary rocks serpentinized basic volcanics and dikes of andesite and basalt)

Tjia, H.D. & T. Boentaran (1969)- A morpho-structural study of Nias. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 2, 2, p. 21-28.
(Study of topographic maps suggests four anticlinal zones. Also at least 4 terrace levels up to 100m elevation)

Tsukada, K., A. Fuse, W. Kato, H. Honda, M. Abdullah, L. Wamsteeker, A. Sulaeman & J. Bon (1996)- Sequence stratigraphy of North Aceh Offshore Basin, North Sumatra, Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 29-41.
(Main results of stratigraphic prospecting: (1) 30 Ma P21 SB marks sudden break from non-marine to bathyal. A downlap or onlap surface of P22 SB represents favorable combination of porous sandstone and top-sealing compact deep-water mudstone. P21 and P22 SBs overlap on seismic sections because of thin sedimentary separation;(2) SBs of N11-N14 should be markers that identify exploration target in Baong sst. N14 Baong lowstand fan identified as stratigraphic prospect)

Van der Veen, A.L.W.E. (1913)- Bijdrage tot de geologie van Nias. Sammlungen Reichs-Museums Leiden Ser. 1, 9, p. 225-243.
(online at: www.repository.naturalis.nl/document/552442 and www.repository.naturalis.nl/document/552443)
('Contribution to the geology of Nias'. Petrography of samples from Nias island, off W Sumatra, collected by Schroder. Includes ultrabasic rocks (gabbro, sepentinite, basalt), metamorphics (garnet mica schist), sandstones, Eocene foram breccia and Miocene limestone (see also Douville 1912). With sample location map)

Velbel, M.A. (1985)- Mineralogically mature sandstones in accretionary prisms. J. Sedimentary Res. 55, p. 685-690.
(Mid-Tertiary quartz-rich sandstones from Nias Island accretionary prism mineralogically more mature than expected in this tectonic setting. Provenance petrogenetically may be unrelated to arc-trench system)

Verbeek, R.D.M. (1874)- Eerste verslag over een onderzoek naar kolen op het eiland Nias. Jaarboek Mijnwezen Nederlandsch Oost-Indie 3 (1874), 1, p. 157-163.
('First report on a survey for coal on the island of Nias', W Sumatra'. Five coal occurrences on Nias deemed uneconomic. One 1m thick lignite bed, others much thinner)

Verbeek, R.D.M. (1876)- Sumatra's Westkust. Verslag No. 5. Geologische beschrijving van het eiland Nias. Jaarboek Mijnwezen Nederlandsch Oost-Indie 5 (1876), 1, p. 3-13.
('Geological description of Nias Island, NW Sumatra'. Early, brief report on geology of Nias, with 1:100,000 scale geologic map of NE Nias. Mainly composed of marly Miocene sediments, dipping 20-80°, overlain by near-horizontal , ~50m thick Pliocene? reefal limestones)

Vigny, C., W.J.F. Simons, S. Abu, R. Bamphenyu, C. Satirapod, N. Choosakul, C. Subarya et al. (2005)- Insight into the 2004 Sumatra-Andaman earthquake from GPS measurements in Southeast Asia. Nature 436, p. 201-206.
(Data from 60 GPS sites in SE Asia show rupture plane of 2004 Sumatra-Andaman earthquake must have been at least 1000 km long. Small but significant co-seismic jumps detected more than 3000km from epicenter)

Vita-Finzi, C. (1995)- Pulses of emergence in the Outer-Arc Ridge of the Sunda Arc. J. Coastal Research, Spec. Issue 17, p. 279-281.
(Islands of Nias and Simeulue part of the outer-arc ridge of Sunda Arc, thought to represent top of melange wedge of a mid-Tertiary subduction zone. Radiocarbon ages of Holocene sea-level suggest phases of (uplift) activity during 6,300-4,700, 3,300-1,600 and 600-0 yr BP separated by periods of quiescence)

Vita-Finzi, C. (2008)- Neotectonics and the 2004 and 2005 earthquake sequences at Sumatra. Marine Geology 248, p. 47-52.
(Deformation of outer-arc islands Nias and Simeulue associated with 2004 and 2005 earthquakes generally ascribed to stress release on interface between Indian and Eurasian plates at Java trench. Shallow seismicity and Holocene deformation of islands suggest also activity on imbricate faults in sediment prism behind trench)

Vita-Finzi, C. & B. Situmorang (1989)- Holocene coastal deformation in Simeulue and Nias, Indonesia. Marine Geology 89, p. 153-161.
(Islands W of Sumatra with common Late Quaternary elevated coral reefs and abandoned intertidal platforms. Localities sampled at 0.5-3.5 m above normal high tide with ages from <300 yrs to ~5800 yrs B.P. Average uplift rates are 0.3-1.0 mm/yr. Uplifts probably episodic and seismic in origin)

Wang, X., K.E. Bradley, S. Wei &, W. Wu (2018)- Active backstop faults in the Mentawai region of Sumatra, Indonesia, revealed by teleseismic broadband waveform modeling. Earth Planetary Sci. Letters 483, p. 29-38
(online at: www.sciencedirect.com/science/article/pii/S0012821X17306933)
(Fault plane solutions of 2005 and 2009 earthquakes in Mentawai offshore area suggest 'back-thrust' sequences occurred on steeply landward-dipping fault. Interpreted as 'unsticking' of Sumatran accretionary wedge along backstop fault that separates accreted material from stronger Sunda forearc lithosphere, or as reactivation of pre-Miocene normal fault under forearc basin)

Wirasantosa, S., H. Harjono & S. Suparka (1994)- Geoscientific surveys of the Sumatra margin. In: J.L. Rau (ed.) Proc. 29th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, Bangkok, 2, p. 147-150.
(Brief discussion of marine cruises and profiles in the S part of the offshore Sumatra forearc)

Wissema, G.G. (1947)- Young Tertiary and Quaternary Gastropoda from the Island of Nias (Malay Archipelago). Doct. Thesis University of Leiden, p. 7-212. *(Unpublished)*

Woodward, H. (1879)- Notes on a collection of fossil shells, etc., from Sumatra (obtained by M. Verbeek, Director of the Geological Survey of the West Coast, Sumatra). Geol. Magazine 6, 9, p. 385-393.
(First of four short papers describing fossils collected by Verbeek in C Sumatra. Including descriptions of four Permian brachiopods from Sibelau, Padang Highlands (Spirifera glabra, Productus undatus, P. semireticulatus, P. costatus) and molluscs from Mio-Pliocene of Nias Island, W Sumatra)

Woodward, H. (1879)- Further notes on a collection of fossil shells, etc., from Sumatra (obtained by M. Verbeek, Director of the Geological Survey of the West Coast, Sumatra), Part II. Geol. Magazine 6, 10, p. 441-444.
(Descriptions of Mio-Pliocene molluscs (Cyrena, Pecten) and solitary corals from Nias island, W Sumatra)

Woodward, H. (1879)- Further notes on a collection of fossil shells, etc., from Sumatra (obtained by M. Verbeek, Director of the Geological Survey of the West Coast, Sumatra), Part III. Geol. Magazine 6, 11, p. 492-500.

(Additional descriptions of Mio-Pliocene molluscs from Nias island, including Oliva pseudoaustralis n.sp.)

Woodward, H. (1879)- Further notes on a collection of fossil shells, etc., from Sumatra (obtained by M. Verbeek, Director of the Geological Survey of the West Coast, Sumatra), Part IV. Geol. Magazine 6, 12, p. 535-549.
(Additional descriptions of Mio-Pliocene molluscs from Nias island, all gastropods, including Pleurotoma, Phos, Cerithium, Turbo, Melania, Strombus sumatranus n.sp.)

Yulihanto, B. & B. Situmorang (1998)- Petroleum system of the Mentawai Bengkulu forearc basin, West Sumatra, Indonesia. Australian Petrol. Explor. Assoc. (APEA) J. 38, p. 891-892. *(Abstract only)*
(Mentawai-Bengkulu Forearc Basin two phases of development. Bengkulu Sub-basin NE-SW Paleocene graben, followed by N-S Late Oligocene-E Miocene graben system. Mentawai Sub-basin N-S Late Oligocene- E Miocene graben system only. Bengkulu Basin Eocene lacustrine sediments poorly documented. Onshore Late Oligocene- E Miocene prospective petroleum source rocks. High pristane/ phytane ratio and alkanes from waxy material of terrestrial plants. Potential reservoir rocks in Eocene and Late Oligocene-E Miocene fluvial-alluvial clastics, Oligo-Miocene carbonate facies and shallow marine sandstones. Other potential reservoirs early M Miocene reefal carbonates in Mentawai Sub-basin. Regional seal U Miocene-Pliocene marine shales)

Yulihanto, B. & B. Situmorang (2002)- Structural inversion and its influence on depositional processes in the Aru area, North Sumatra basin, Indonesia. Proc. First Offshore Australia Conf., p. III25- III42.
(Two asymmetrical grabens in area, Pagarjati Graben in NW, Kedurang Graben in SE, separated by N-S trending Masmambang High. Two rift phases: NE-SW Paleogene grabens, overprinted by N-S Oligo-Miocene grabens, related to dextral motions along Sumatra Fault System. First transtensional episode in Oligo-Miocene (fluvial- shallow marine Seblat Fm sst, conglomerates, tuffaceous shales and limestones). Rejuvenation of extensional faults in M-L Miocene (Lemau Fm sst, claystones, coals). Basin subsidence continued during Late Miocene-Pliocene (littoral Simpangaur Fm). Shallow marine Plio-Pleistocene Bintunan Fm deposited during Barisan orogeny basin uplift and volcanic activity. Exploration potential in Pagarjati and Kedurang Grabens in Seblat Fm sands and M Miocene limestones and potential source rocks in organically rich Lemau Fm. If Paleogene basin initiation model is accepted, may be potential for lacustrine source rocks)

Yulihanto, B., S. Sofyan, S. Widjaja, A. Nurdjajadi & S. Hastuti (1996)- Bengkulu forearc basin (South Sumatra). Post-Convention field trip, October 1996, Indon. Petroleum Assoc. (IPA), 68p.

Yulihanto, B. & I.B. Sosrowijoyo (1996)- Constraints on the new exploration strategies in the future for the Bengkulu forearc basin, Indonesia. In: 11th Offshore SE Asia Conf. Exhib. (OSEA96), Singapore 1996, p. 169-176.
(W Sumatra Bengkulu forearc basin exploration mainly targeting Miocene carbonate buildups and E Miocene basal sandstones. Prior to M Miocene Barisan Range uplift Bengkulu basin was comnnected to S Sumatran basin. Future exploration may be concentrated in Paleo-Eocene and Oligo-Miocene grabens)

Yulihanto, B. & B. Wiyanto (1999)- Hydrocarbon potential of the Mentawai forearc basin, West Sumatra. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 24p.
(Series of N-S trending Paleogene grabens, partly inverted in M-L Miocene, with various potential hydrocarbon plays)

Zachariasen, J., K. Sieh, F.W. Taylor, R.L. Edwards & W.S. Hantoro (1999)- Submergence and uplift associated with the giant 1833 Sumatran subduction earthquake: evidence from coral microatolls. J. Geophysical Research 104, B1, p. 895-919.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1998JB900050/epdf)
(Giant Sumatran subduction earthquake of 1833 large emergence event in fossil coral microatolls on reefs of outer-arc ridge. Emergence increased trenchward from ~1 to 2 m. Pattern consistent with ~13 m of slip on subduction interface. Also rapid submergence in decades prior to earthquake, increasing trenchward)

Zachariasen, J., K. Sieh, F.W. Taylor & W.S. Hantoro (2000)- Modern vertical deformation above the Sumatran subduction zone: paleogeodetic insights from coral microatolls. Bull. Seismological Soc. America 90, 4, p. 897-913.
(online at: www.tectonics.caltech.edu/sumatra/downloads/papers/P00b.pdf)
(Stratigraphic analysis of seven coral microatolls (5 outer-arc islands, 2 from mainland coast), indicate Mentawai Islands submerging at 4-10 mm/yr over last 4-5 decades, while Sumatra mainland has remained relatively stable. Presence of fossil microatolls up to several 1000 years old in intertidal zone indicates little permanent vertical deformation over that time)

Zen, M.T. (1993)- Deformation de l'avant-arc en reponse a une subduction a convergence oblique. Exemple de Sumatra. Doct. Thesis, Universite Paris VII, Institut de Physique du Globe, ORSTOM Ed. 130, p. 1-252.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_6/TDM/41116.pdf)
('Deformation of the fore-arc in response to oblique convergence- example of Sumatra'. Oblique plate convergence across trench at Sumatra accommodated through partioning of slip into nearly orthogonal subduction along main subduction thrust zone and trench-parallel translation of forearc slivers along strike slip faults. Sumatra fault zone does not transmit all arc parallel displacement, so forearc sliver must be deformed. Seismic data of forearc shows Mentawai fault zone along ocean-continent boundary, with similar behavior to Sumatra FZ since 15 Ma. Bengkulu forearc basin developed on continental substratum)

II.4. Sunda Shelf (incl. 'Tin islands', Singkep, Karimata)

Abidin, H.Z. (2001)- A NW-SE trending zone of primary tin mineralization in North Bangka: geology, distribution and origin. Indonesian Mining J. 7, 1, p. 1-12.

Abidin, H.Z. (2001)- Penagan tin deposits, Bangka island. J. Geologi Sumberdaya Mineral 11, 117, p. 17-31.
(Primary tin deposit NE of Penagan, W side of Bangka Island, in quartz-cassiterite veins in E Triassic Tanjung Genting Fm quartz sst-siltstone, intruded by Late Triassic- E Jurassic Klabat Granite. Also with quartz-wolframite veins)

Abidin, H.Z. (2002)- Stratiform tin deposit at Sambung Giri, Bangka, Indonesia. J. Geologi Sumberdaya Mineral 12, 126, p. 2-12.
(Quartz veins from granitic intrusions with and without cassiterite in E Triassic Tanjung Genting Fm micaceous sandstones in NE Bangka)

Abidin, H.Z. (2004)- A NW-SE trending zone of primary tin mineralization in North Bangka, Indonesia: geology, distribution and origin. Majalah Geologi Indonesia (IAGI) 19, 3, p. 173-185.
(Same as Abidin 2001. Reprinted in Metalogeni Sundaland Vol. I (2014), p. 161-174. A 17x2 km NW-SE trending belt in NE Bangka with several primary tin deposits: Air Jangkang, Merawang, Sambung Giri and Pemali. Mineralization at contact with Late Triassic- E Jurassic Klabat granites and Permo-Triassic Pemali Fm meta-sediment, or in sediment bedding planes. Greisen mineralization common within granite. Granite emplacement ages peak in 213-217 Ma. Ore minerals mainly cassiterite, also wolframite, monazite, magnetite, chalcopyrite, sphalerite galena and REE elements)

Abidin, H.Z., Baharuddin & Surawardi (1999)- Toboali alluvial tin deposit: geology, depositional processes and material source. Indonesia Mining J. 5, 3, p. 1-12.
(Reprinted in Metallogeni Indonesia I, p. 137-150. Indonesian tin belt continuation of Main Range S-type granite from Thailand- Malaysia. Toboali area of S Bangka with alluvial tin deposits (onshore and adjacent offshore) derived from Toboali biotite granites. Late Miocene- E Pliocene thick lateritic weathering during warm climate, followed by erosion during Late Pliocene- M Pleistocene))

Abidin, H.Z. & B.H. Harahap (2005)- Petrologi granit pluton dari daerah Tenggara Palau Bangka. J. Sumber Daya Geologi 15, 1 (148), p. 102-110.
('Petrology of a granite pluton from the SE area of Bangka Island'. Late Triassic- E Jurassic Klabat granite of SE Bangka closely associated with tin formation. Intrudes Permo-Carboniferous Pemali Complex metasediments and and Triassic- Jurassic Tanjung Genting Fm clastic sediments. 72-74% SiO2, transitional alkaline-calk-alkaline and between syn-collisional, arc volcanic and within-plate granite. Mixed magma sources, 4 samples I-type and one S-type granite)

Abidin, H.Z. & S. Permanadewi (2003)- Greisen tin deposit in the Old Merawang mine, Bangka. Majalah Geologi Indonesia (IAGI) 18, 3, p. 175-184.
(Reprinted in Metalogeni Sundaland Vol. I (2014), p. 195-203. Old Merawang mine operated since 1950's. At contact coarse biotite granite and Triassic Tanjung Genting Fm clastic sediments. Cassiterite mineralization as as greisen, veins and dissemination)

Abidin, H.Z. & E. Rusmana (2004)- Wolframite associated with tin deposit in Bangka: prospect and origin. Majalah Geologi Indonesia (IAGI) 19, 1, p. 39-48.
(Reprinted in Metalogeni Sundaland Vol. I (2014), p. 205-215)
(Wolframite/ tungsten is most common mineral associated with tin deposits all over Bangka. Traditionally viewed as uneconomic, but may have value. Genetic origin similar to tin. Most common as late hydrothermal deposit in cracks and fractures of quartz veins in Triassic Tanjung Genting Fm sandstones)

Adam, J.W.H. (1932)- Kaksa genese. De Mijningenieur 13, 12, p. 217-221.

('Genesis of kaksa' = genesis of alluvial placer tin ore deposits on Bangka. Clear link between tin-bearing non-marine basal alluvial 'kaksa' sediments and erosion of primary ore veins in and around granites)

Adam, J.W.H. (1933)- Kaksa genese (slot). De Mijningenieur 14, 5, p. 81-87.
('Genesis of kaksa (final)'. Continuation of Adam (1932) paper)

Adam, J.W.H. (1960)- On the geology of the primary tin ore deposits in the sedimentary formation of Billiton, Indonesia. Geologie en Mijnbouw 39, 10, p. 405-426.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0X2p0TmhuZEVycnc/view)
(Billiton Island part of belt of tin mineralization from Burma, Malaya into Java Sea. Primary cassiterite lodes studied in Klappa Kampit mine (down to 300m below sea level). Mineralization in folded Permo-Carboniferous sediments, near Mesozoic granite intrusives. Most important cassiterite deposits are bedding-plane lodes at contact of shale and sandstone or radiolarite. Magnetite common in many lodes)

Aernout, W.A.J. (1922)- Verslag over eene geologisch-mijnbouwkundige verkenning der Karimata-eilanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 1, p. 305-320.
(Reconnaissance geological-mining investigation of Karimata group of 50 islands off SW Kalimantan. Mainly Lower Cretaceous granites and volcanics. Minor contact-metamorphic Triassic-Jurassic sediments (hornfels, quartzite). Regarded as western continuation of Schwaner Mountains (also related to Bangka-Billiton tin islands?; JTvG). U Cretaceous- Lower Tertiary sediments probably absent. With 1:200,000 scale map)

Akkeringa, J.E. (1872)- Rapport van het Distrikt Blinjoe, eiland Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1 (1872), p. 41-148.
('Report on the Blinyu District, Bangka island')

Akkeringa, J.E. (1873)- Verslag van een onderzoek naar tinaders op het eiland Billiton. Jaarboek Mijnwezen Nederlandsch Oost-Indie 2 (1873), 2, p. 3-72.
('Report on an investigation of tin ore veins on the island of Belitung'. Report of 1859 survey by Mijnwezen mining engineer into feasibility of tin exploitation on Belitung. Already ongoing exploitation of alluvial tin deposits. English miners had worked at Brang, probably in weathered tin-bearing veins, but had departed. Identified tin-bearing vein at Tadjouw mountain. No geology)

Akkersdijk, M.E. (1932)- Enkele geologische gegevens betreffende het Pemali-tinertsvoorkomen op het eiland Banka. De Mijningenieur 13, p. 6-10.
('Some geologic data on the Pemali tin ore occurrence on the island of Bangka'. Cassiterite in veins in ?Triassic phyllitic claystones, 100-200m from large Belinloe- Soengeilat granite massif)

Aleva, G.J.J. (1956)- The grain size distribution of quartz in granitic rocks of Billiton, Indonesia. Geologie en Mijnbouw 18, 6, p. 177-187.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0M3VVc2Z5VlpZZVU/view)
(Chemical nature of weathering of granites in Billiton causes complete alteration of feldspar and Fe-Mg minerals, leaving residu of quartz and some accessory minerals. Lognormal size distribution of quartz in Billiton granite)

Aleva, G.J.J. (1960)- The plutonic rocks from Billiton. Geologie en Mijnbouw 39, 10, p. 427-436.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0X2p0TmhuZEVycnc/view)

Aleva, G.J.J. (1973)- Aspects of the historical and physical geology of the Sunda Shelf, essential to the exploration of submarine tin placers. Geologie en Mijnbouw 52, 2, p. 78-91.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0SGRic1l6TklZUTQ/view)
(Sunda shelf is drowned continuation of Bangka- Belitung land areas. Thin tin-bearing Quaternary sediment cover with three sedimentary cycles, etc.).

Aleva, G.J.J. (1985)- Indonesian fluvial cassiterite placers and their genetic environment. J. Geol. Soc., London 142, p. 815-836.
(On tin placer deposits in alluvial valley systems near Belitung and Singkep island. 95% of mineable cassiterite directly on weathered bedrock)

Aleva, G.J.J., E.H. Bon, J.J. Nossin & W.J. Sluiter (1973)- A contribution to the geology of part of the Indonesian tin belt: the area between Singkep and Bangka islands and around the Karimata islands. In: B.K. Tan (ed.) Proc. Reg. Conf. the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 257-271.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973017.pdf)
(also in Bull. Nat. Inst. Geology and Mining, Bandung, 4, 1, p. 1-22 (1972))
(Acoustic surveys and core holes between Singkep and Bangka and around Karimata islands. Basement covered by unconsolidated sub-horizontal sands with peat interbeds, probably Late Tertiary age. Followed by sediment-filled gullies, incised into older sediments, also with peat, also Late Tertiary. Near-horizontal planation surface at 20-30m below sea level, overlain by young marine sediments)

Aleva, G.J.J., L. J. Fick & G. L. Krol (1973)- Some remarks on the environmental influence on secondary tin deposits. In: N.H. Fisher (ed.) Metallic provinces and mineral deposits in the Southwest Pacific, Bureau Mineral Res. Geol. Geophysics, Bull. 141, p. 163-172.
(online at: www.ga.gov.au/corporate_data/108/Bull_141.pdf)
(Five genetically different types of tin placer deposits in SE Asian tin belt. Common factors include deep chemical weathering, selective removal of lightweight material, and adequate catchment areas or traps. Mainly on Bangka- Billiton cassiterite placers ('left-behind deposits'), also W Thailand, Malaysia, Tudjuh archipelago)

Andi Mangga, S. & B. Djamal (1994)- Geological map of the North Bangka Sheet (1114), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(N Bangka Island oldest rocks Permian Pemali Fm metamorphics, unconformably overlain by folded Tanjunggenting Fm meta-sandstones and claystone with lenses of limestone. Intruded by Late Triassic Klabat granite (217 ± 5 Ma). Unconformably overlain by Plio-Pleistocene and Holocene clastics)

Archbold, N.W. (1983)- A Permian nautiloid from Belitung, Indonesia. Publ. Geol. Res. Dev. Center, Bandung, Seri Paleontologi 4, p. 32-36.
(Fragment of straight nautiloid Neorthoceras at Kelapa Kampit, NE Belitung, suggests E-M Permian age for part of NE Belitung Island 'basement' complex. Only other occurrence of Neorthoceras in Indonesia is Bitauni, Timor. With summary of other Permian macrofossil occurrences on Belitung)

Aryanto, N.C.D. & U. Kamiludin (2016)- The content of placer heavy mineral and characteristics of REE at Toboali coast and its surrounding area, Bangka Belitung Province. Bull. Marine Geol. 31, 1, p. 45-54.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/318/273)
(Bangka Island and surrounding areas major tin producer (cassiterite), but also heavy mineral placers (magnetite, ilmenite, zircon, apatite, monazite) and potential REE producer (La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, etc.). Tectonic environment of Toboali granitoid of S Bangka continental magmatic arc)

Aryanto, N.C.D. & U. Kamiludin (2016)- Heavy mineral placers and REE potential at the Bangka coasts and its surroundings. In: Proc. 52nd Annual Session Coord. Comm. Geoscience Programmes E and SE Asia (CCOP), Bangkok, p. 175-184.
(online at: www.ccop.or.th/download/as/52as2.pdf)
(Presence of REE minerals in beach sand and tin mining tailings in S Bangka island. Bangka granites subdivided in Klabat batholith in N (10 plutons; S-type,Late Triassic- M Jurassic; comparable to Main granite belt of Malay Peninsula) and Bebulu batholith in S (5 plutons; S and IS-types))

Aryanto, N.C.D., Nasrun, A.H. Sianipar & L. Sarmili (2005)- Granit Kelumpang sebagai granit Tipe-I di pantai Balok, Belitung. J. Geologi Kelautan 3, 1, p. 19-27.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/121/111)

('I-type Kelumpan Granite at Balok beach, Belitung'. In Bangka- Beliting region biotite-granites associated with cassiterite; no cassiterite mineralisation in hornblende granites. Kelumpang granite of SE Belitung hornblende granite, rich in K-feldspar megacrystic minerals, of I-type, and no cassiterite. Age E Jurassic?)

Aryanto, N.C.D., N. Sukmana & P. Rahardjo (2001)- Specific heavy minerals study on the South Bangka island: a statistical approach. Proc. CCOP 37th Ann. Sess. Bangkok 2000, 2, Techn. Repts., p. 65-70.

Aryanto, N.C.D., J. Widodo & P. Rahardjo (2003)- Keterkaitan unsur tanah jarang terhadap mineral berat ilmenit dan rutil perairan Pantai Gundi, Bangka Barat. J. Geol. Kelautan 1, 2, p. 13-18.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/95/85)
(The relationship between Rare Earth Elements and heavy minerals ilmenite and rutile in waters off Gundi Beach, West Bangka'. Niobium (Nb) and Tantalum (Ta) occur in association with ilmenite (FeTiO2) and rutile (TiO2) in near-coastal sands off SW Bangka)

Baartmans, J.A., H. Boissevain, J. van Galen, P.H. Kuenen, T. Raven, G.L. Smit Sibinga, J. Weeda & J.I.S. Zonneveld (1947)- De morfologie van de Java- en Soenda Zee. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap II, 64, p. 442-465 and p. 555-576.
('The morphology of the Java and Sunda Sea'. Collection of chapters on Java Sea morphology and morphological history)

Baharuddin & Sidarto (1995)- Geologic map of the Belitung Sheet (1212, 1213, 1312, 1313), Sumatra. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map of Belitung (= Billiton) Island, SE of Bangka. Similar geology with folded, low-metamorphic Permo-Carboniferous clastics: (1) Kelapakampit Fm flysch-type deposits with rare Permian fossils, incl. ammonite Agathiceras sundaicum, Fusulina and Schwagerina and Gigantopteris, interfingering with: (2) Tajam Fm quartz sandstones and (3) Siantu Fm basalts and volcanic breccias. Intruded by Tanjungpandan S-type biotite-hornblende granite in NW, locally rich in primary cassiterite (Late Triassic; 215 Ma Rb-Sr age; Schwartz and Surjono 1990) and I-type Baginda adamellite in S (Jurassic?;160-208 Ma; Priem et al. 1975))

Batchelor, B.C. (1979)- Geological characteristics of certain coastal and offshore placers as essential guides for tin exploration in Sundaland, Southeast Asia. In: C.H. Yeap (ed.) Proc. Int. Symp. Geology of tin deposits, Kuala Lumpur 1978, Bull. Geol. Soc. Malaysia 11, p. 283-313.
(online at: www.gsm.org.my/products/702001-101221-PDF.pdf)
(Over 95% of tin production in Malaysia and Indonesia from 'alluvial' placers. Discontinuously rising late Cenozoic eustatic sea-levels and accompanying climate changes main controls on Sundaland sedimentation. Late Cenozoic subdivided into Sundaland regiolith (Late Miocene- E Pliocene), Older sedimentary cover (Pliocene- E Pleistocene) and Young Alluvium (Late Pleistocene- Holocene))

Batchelor, B.C. (1979)- Discontinuously rising late Cainozoic eustatic sea-levels, with special reference to Sundaland, Southeast Asia. Geologie en Mijnbouw 58, 1, p. 1-20.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0c2VPc282N1Q3YVE/view)
(M Miocene- Recent se level cyclicity. Late Cenozoic global eustatic sea-level rise, of greater magnitude and opposite trend to previous schemes, indicated by studies in Sundaland area. Abrupt sea-level drop in late M Miocene (~N14/N15; ~14-12 Ma?) to ~1000 m below present, correlated with emergent Sundaland continent. Increased land area resulted in more seasonal semi-arid climates. Sea levels have since risen discontinuously since Late Miocene (~11 Ma) at ~10cm/ 1000 yrs, with maximum transgression in late Quaternary. Pleistocene Sundaland coastlines changed little before M. Once since then seas rose above shelf-break causing major coast line shifts, dramatically affecting sedimentation and climates)

Batchelor, B.C. (1983)- Sundaland tin placer genesis and Late Cenozoic coastal and offshore stratigraphy in Western Malaysia and Indonesia. Ph.D. Thesis, University of Malaya, Kuala Lumpur, 2 vols., 598p.
(Unpublished)

Batchelor, D.A.F. (2015)- Conceptual exploration for tin, gold and diamond placer deposits in ớSundalandô (Indonesia and Malaysia) by understanding the Late Cainozoic stratigraphic context. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 499-506. *(Extended Abstract)*
(W Indonesia- Peninsular Malaysia long known for Pleistocene placer deposits of tin, diamonds and gold. Systematic variation in stratigraphic position of placers: cassiterite mainly in Old Alluvium (Late Pliocene- Lw Pleistocene; equivalent of U Dahor Fm in Kalimantan); gold richer in gravelly younger deposits. Reworked diamonds in SE Kalimantan/ Martapura area mainly in Late Pleistocene and younger 'Young Alluvium' that fills incised V-shaped valleys. New potential tin areas in W Kalimantan near Ketapang)

Beck, R. (1898) Die Zinnerzlagerstatten von Banka und Billiton. Zeitschrift Praktische Geol. 1898, p. 121-127.
('The tin ore deposits of Bangka and Belitung'. Mainly digest of Verbeek 1897 report)

Bellwood, P. (1990)- From Late Pleistocene to Early Holocene in Sundaland. In: C. Gamble & O. Soffer (eds.) The world at 18 000 BP, 2, Low latitudes, p. 255-263.

Ben-Avraham, Z. (1973)- Structural framework of the Sunda Shelf and vicinity. Ph.D. Thesis Massachusets Inst. Technology/ Woods Hole Oceanographic Inst., p. 1-269.
(On geology of W Indonesia Sunda Shelf, largely based on Woods Hole OI shallow geophysical surveys over southern Sunda Shelf (Java Sea) and compilation of onshore data)

Ben-Avraham, Z. & K.O. Emery (1973)- Structural framework of Sunda Shelf. American Assoc. Petrol. Geol. (AAPG) Bull. 57, p. 2323-2366.
(Sunda Shelf divided into three major areas: N Sunda Shelf basinal area, Singapore Platform and Java Sea basinal area. Geophysical studies around Natuna Islands suggest region is underlain by relatively thin continental crust (~21 km thick. Natuna Ridge interpreted as Mesozoic subduction zone. During E-M Cretaceous Malay Peninsula was part of Eurasia and Borneo was next to mainland China and Hainan)

Bird, M.I., W.C. Pang & K. Lambeck (2006)- The age and origin of the Straits of Singapore. Palaeogeogr. Palaeoclim. Palaeoecology 241, p. 531-538.
(Straits of Singapore marine connection between Indian Ocean and South China Sea through the Straits may not have existed until last interglacial period (oxygen isotope stage 5e) and probably did not act as significant barrier to migration from mainland Asia to emergent areas of Sunda Shelf for most of Quaternary)

Bodenhausen, J.W.A. (1954)- The mineral assemblage of some residual monazite- and xenotime-rich cassiterite deposits of Banka (Indonesia). Proc. Kon. Nederl. Akademie Wetenschappen B57, 3, p. 322-328.
(Heavy minerals in young sands of Muntok District, NW Bangka, composed of 30-60% cassiterite, 19-22% monazite, 11-31% ilmenite, 1-5% xenotime)

Bon, E.H. (1979)- Exploration techniques employed at the Pulau Tujuh tin discovery. In: A. Prijono, C. Long and R. Sweatman (eds.) The Indonesian mining industry, its present and future, Proc. First Indonesian Mining Symposium, Jakarta 1977, Indon. Mining Assoc. (IMA), Jakarta, p. 147-183.

Bon, E.H. (1979)- Exploration techniques employed in the Pulau Tujuh tin discovery. Trans. Inst. Mining Metallurgy (Sect. A, Min.), 88, p. 13-22.
(Similar to Bon (1979) above)

Bothe, A.C. (1924)- Enkele opmerkingen over stroomtinertsvorming op het eiland Bintan. De Mijningenieur 5, 9, p. 146-151.
('Some remarks on the formation of alluvial tin ore on Bintan island'. With geologic map of South Bintan 1:150,000. Bintan) mainly composed of granites, intruded into unfossiliferous, poorly exposed, steeply dipping (N80°W, dip 70° to SW) 'clay-shales' and sandstones. Alluvial tin ore present, but not very rich)

Bothe, A.C.D. (1925)- Het voorkomen van tinerts in den Riau archipel en op de eilanden van Poelau Toedjoeh (Anambas en Natuna eilanden). Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnbouw Nederlandsch-Indie, 18, p. 1-42.
('The occurrence of tin ore in the Riau Archipelago and the Anambas and Natuna islands'. Survey for tin deposits outside tradional tin islands Bangka- Belitung. Widespread indications of cassiterite ore, but no large deposits. Includes presence of U Triassic Halobia-bearing shales. With maps of islands of Karimon, Kundur, Bintan, Lingga, Batam and Anambas- Natuna. Geology described in more detail in Bothe 1928)

Bothe, A.C.D. (1928)- Geologische verkenningen in den Riouw-Lingga archipel en de eilandengroep der Poelau Toedjoeh (Anambas en Natoena eilanden). Jaarboek Mijnwezen Nederlandsch-Indie 54 (1925), Verhandelingen 2, p. 101-152.
('Geological reconnaissance in the Riau-Lingga Archipelago and Anambas and Natuna islands')

Cahyono, N. (1998)- Sea level controls during the deposition of placer deposits in Cupat offshore, northern Bangka, Indonesia. Proc. 33rd Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), 2, p. 221-230.
(Cupat offshore data shows potential for tin placer deposits. Materials supplied from Kelabat tin granite, reworked by wave and tidal currents. Morphology of granite and schist basement in area with small basins which filled with Quaternary deposits)

Cissarz, A. & F. Baum (1960)- Vorkommen und Mineralinhalt der Zinnerzlagerstatten von Bangka (Indonesien). Geol. Jahrbuch 77, p. 541-580.
('Occurrence and mineral content of tin ore deposits of Bangka, Indonesia'. Primary tin mineralization associated with Young Cimmerian granites in Triassic sediments)

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('Report on the Pangkal-Pinang District, Bangka Island')

Dach, R. (1863)- Ueber das Vorkommen und den Abbau von Zinnerz auf der Insel Karimon. Berg Huttenmann. Zeitung, Freiberg, 22, 40, p. 337-338.
('On the occurrence and exploitation of tin on Karimon Island'. Geology of Karimon island. in Malacca Straits linkis tin regions of Malay Peninsula and Bangka-Belitung. Mainly medium grained granite, also greisen dikes, Placer tin in alluvial deposits in southern plains. Small quantities of tin mined by natives and some Chinese miners)

De Groot, C. (1852)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, III. Eiland Blitong (Biliton). Natuurkundig Tijdschrift Nederlandsch-Indie 3, 2, p. 133-159.
(online at: http://62.41.28.253/cgi-bin/)
('Contributions to the geological and mineralogical knowledge of the Netherlands Indies, III. The island Belitung (Biliton'. On trip to Belitung in June- August 1851 with Loudon. First record tin ore in alluvial deposits on Belitung, near Tanjung Pandan, confirmation of additional occurrences in Cicurup valley, opening of test mine, etc. Alluvial tin derived from granite hills. Historic iron ore exploitation, etc. With simple map)

De Groot, C. (1887)- Herinneringen aan Blitong, historisch, lithologisch, mineralogisch, geographisch, geologisch en mijnbouwkundig. H.L. Smits, The Hague, p. 1-549.
(online at: http://books.google.com/books/)
('Memories of Belitung, historic, lithologic, mineralogic, geologic and mining'. One of earliest reports on geology and tin mining on Billiton/ Belitung island by mining engineer C. de Groot)

De Jongh, D. (1883)- Over het voorkomen van goud en tinerts op en langs de oostkust van het district Merawang, Eiland Banka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 12, p. 161-175.
('On the occurrence of gold and tin ore along the East coast of the Merawang District, Bangka Island')

De Jongh, D. (1884)- Over het voorkomen van tinertsaders op het eiland Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 13, Tech. Admin. Ged., p. 306-317.
('On the occurrence of tin ore veins on the island of Bangka'. Small tin-bearing veins in granite probably present, but profitable exploitation deemed unlikely. No figures)

De Neve, G.A. & W.P. de Roever (1947)- Upper Triassic fossiliferous limestones in the island of Bangka. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 50, 10, p. 1312-1314.
(online at: www.dwc.knaw.nl/DL/publications/PU00018447.pdf)
(Upper Triassic fractured, low metamorphic limestones in Loemoet tin mine, SE of Klabat Bay. Folded with phyllites and fine-crystalline quartzites. First documentation of poorly preserved Norian corals (Montlivaltia molukkana), calcareous sponges (Peronidella moluccana) and crinoids (Entrochus spec., Encrinus). No illustrations (Montlivaltia molukkana also known from U Triassic of Seram, Timor; JTvG))

De Roever, W.P. (1950)- Over een door oplossing van kalksteen gevormde depressive in het kongoppervlak op Banka, waarin een grote hoeveelheid tinerts is geaccumuleerd (mijn 7 der Sectie Belinju). De Ingenieur in Indonesia, IV, 2, 3, p. 6-16.
('On a depression in the kong surface of Bangka formed by dissolution of limestone, in which large quantity of tin ore accumulated (mine 7 of Belinju sector)'. Limestone blocks in highly folded phyllites, striking mainly in WNW-ESE direction)

De Roever, W.P. (1951)- Some additional data on the stratigraphy of Bangka. Geologie en Mijnbouw 13, 10, p. 339-342.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0b3JMaG1QbGgzSVk/view)
(New fossil finds on Bangka Island include: Upper Triassic in limestone bed in dynamo-metamorphic clastics and volcanics in Lumut tin mine (coral Montlivaultia molukkana Wanner, sponges Peronidella moluccana Wilckens and crinoids). Also white silicified limestone interbedded in phyllite-sandstone series with Permian fusulinid foraminifera in old tin mine 17 at at Airduren, NE Bangka. Pebbles of radiolarian chert in (Triassic?) conglomerate. Permian of Banka and Billiton may be compared to U Paleozoic of S Malaya Peninsula)

De Vente, C.P. (1983)- Report on geochemical and geophysical investigations at Tebrong and Sembulu: two low-grade vein swarm-type Sn deposits on Belitung, Indonesia. SE Asia Tin Research Development Centre (SEATRAD), Ipoh, Report Invest. 23, p. 1-79. *(Unpublished)*

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(In Pleistocene a great river, here named Molengraaff River, flowed N between Malay Peninsula and Borneo, with its headwaters in Sumatra. Evidenced by distribution of similar fresh- water fish species in E Sumatra and W Kalimantan and configuration and sediments of drowned valley. Sea level was lowered by 240-300' during last glaciation)

Dirk, M.H.J. (2004)- Granit Menumbing, Pulau Bangka. J. Sumber Daya Geologi 14, 1 (145), p. 84-91.
('The Menumbing granite, Bangka Island'. Menumbing granite of W Bangka porphyritic monzogranite with biotite-muscovite)

Dirk, M.H.J. (2004)- Petrologi dan geokimia unsur utama granit berasosiasi timah dari Pulau Kundur & Pulau Karimun. J. Sumber Daya Geologi 14, 2 (146), p. 3-12.
(also numbered as Vol. 1, No. 2. ' Petrology and geochemistry of the main elements of tin granites of Kundur and Karimun Islands'. Common outcrops of M-U Triassic? tin-associated granites on Kundur and Karimun islands. Monzogranite with porphyritic textures. Silica oversaturated, calk-alkaline, crystallized at <22km)

Dirk, M.H.J. (2004)- Lingkungan tektonik dan skenario pembentukan batuan granitik Menumbing Pulau Bangka, Pulau Karimun, Pulau Kundur dan pulau Bintan, berdasarkan kandungan unsure jejak. J. Sumber Daya Geologi 14, 2 (146), p. 13-25.

('Tectonic overview and formation scenario of Menumbing granitic rocks from the islands Bangka, Karimun, Kundur and Bintan'. tin granites from Bangka, Karimun, Kundur are within plate/ syn-collisional granites with latest Triassic K-Ar (~200- 211± 10 Ma) ages. Bintan Island granitoids Volcanic Arc granites of Late Triassic (~222-230 Ma) age)

Dirk, M.H.J. (2013)- Perbedaan genesa magma antara 'tin bearing granitoid rocks' dari jalur Kepulauan timah Indonesia dan 'Tin barren granitoid rocks' dari Pulau Bintan. J. Sumber Daya Geologi 23, 2, p. 81-92.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/92/86)
('Differences in magma genesis between tin bearing granitoid rocks of Indonesia's tin islands and tin barren granitoid rocks of Bintan Island'. Tin-bearing granitoids from Menumbing- Bangka, Karimun and Kundur islands are latest Triassic (~211±10- 200±4 Ma) syn-collisional porphyritic monzogranites of calc-alkaline affinity, formed by melting of greywacke source material during collision of continental margins. Tin-barren granitoids from Bintan island NE of Tin Belt older (M-U Triassic; ~230-222 Ma) pre-collisional monzogranites and granodiorites of calc-alkaline affinity, formed above E-dipping subduction zone)

Dirk, M.H.J. & U. Hartono (2003)- Kondisi yang memungkinkan mineralisasi timah pada batuan granitik: suatu analisis kasus pada batuan granitik dari Menumbing Pulau Bangka, Karimun dan Kundur. J. Geologi Sumberdaya Mineral 13, 144, p. 19-29.
('Conditions favorable for tin mineralization in granitic rocks: an analysis granitic rocks of Bangka, Karimun and Kundur islands'. Granitic rocks of Menumbing-Bangka, Karimun and Kundur Sn-mineralized. SiO2 content >70%. Biotite more stable than hornblende)

Djumhana, D. (1995)- Beberapa aspek petrologi batuan granitik di daerah bagian barat P. Bangka. In: Kolokium hasil pemetaan dan penelitian Puslitbang Geologi 1992/1993, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 16, p. 101-118.
('Some aspects of the petrology of granitic rocks of western Bangka Island')

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(New radiometric ages of granite from Billiton collected by Schurmann: Rb-Sr of biotite 200 Ma, Rb-Sr of K-feldspar 205 Ma. Ages of related Singkep granite from Th and Pb isotopes: ~220 Ma for monazites, 205 Ma for xenotimes and 195 Ma for zircon. Late Triassic- earliest Jurassic age spread may indicate long and complex history of crystallization)

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(Late Pleistocene alluvial-delta and slope fan complex at NW end of Malacca Straits/ Andaman Sea, deposited during lowered sea level, fed by confluent Sumatran and Malayan rivers. Younger prograding layers probably of mid-Wisconsin (Wurm) age (~40- 20 ka; deeper foresets may be early Illinoian glacial stage (Riss, ~150ka))

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('The volcanic, sedimentary and contact-metamorphic rocks of the Karimata islands'. Located between Belitung and W Kalimantan and considered to be western geological continuation of Kalimantan Schwaner Mountains. Common ?Triassc-Jurassic? igneous (incl. granites, gabbro, diabase) and contact-metamorphic rocks. Relatively minor ?Triassic- Jurassic? unfossiliferous sediments (Priem et al. 1975 dated Karimata granites as ~74-78 Ma (Campanian) and may be related to similar age granites in W Sarawak (Hutchison 1983))

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('Report of a survey of tin ore on some islands in the Riau residency'. Reconnaissance survey to islands Bintang, Karimun, Kundur, Singkep, etc., in late 1863- early 1864, continuing work of J.E. Akkeringa who died during fieldwork. Similar geology of granites and older metamorphic rocks. Singkep most promising for tin production, from Quaternary alluvial deposits. Some mining already ongoing for 80-100 years by Chinese miners, by agreement with Sultan of Lingga. Some tin on Karimun but unlikely commercial)

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('Report of a survey of tin veins in the Djebus District, Bangka island')

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(online at: www.dwc.knaw.nl/DL/publications/PU00017687.pdf)
(Brief review of Kundur island geology, probably continuation of Malay Peninsula geology: granitic batholiths intruded into pre-Carboniferous schists/ amphibolites and lateritized ?Triassic sediments (red quartz-rich conglomerates, quartzites, limonite-rocks), causing contact-metamorphism. Petrography of rocks collected by Roggeveen during tin survey in 1930: amphibolites (metamorphosed gabbro), quartzites, greisens, granites, quartz veins with cassiterite and wolframite, etc.)

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(Reconstruction of sealevel curve of last 10,000 yrs from C14 dating of peat horizons in cores from Malacca Strait and in coastal areas of Malay Peninsula. Sealevel rose from ~ -65m at ~10 ka to 0 around 7 ka. Sea level indicators for Holocene highstand time between 5000-4000 BP at +2.5 to +5.8m above present mean sea level)

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(Granite of Bukit Limau, Karimun Besar Island, Riau'. Granite of Bukit Limau, Karimun Besar, Riau Islands, belongs to SE Asian Tin Belt. Leucogranite formed under rel. low T and poor in metallic elements, Age Late Triassic- E Jurassic?)

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('Greisen-formation in the Batu Besi granite massif (Belitung)')

Groothoff, C.T. (1916)- De primaire tinertsafzettingen van Billiton. Thesis Technische Hogeschool Delft (Delft Technical University), p. 1-103.
(online at: https://repository.tudelft.nl/islandora/object/uuid%3Ad4667c70-5478-479f-a20c-af790717453c)
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(online at: https://ia601908.us.archive.org/30/items/verhandelingenva3191geol/verhandelingenva3191geol.pdf)
('Some remarkable rocks from Belitung'. Includes descriptions of granite with primary cassiterite, granite with fluorite, topaze-bearing rocks, tourmaline greisen, etc.)

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(On U-Pb isotopes in cassiterite as dating tool. Includes measurements on cassiterite from ~200 Ma tin deposits of Belitung)

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(Review of former relative sea levels in Malay Peninsula and adjacent marine areas. Well established Holocene level of ~ +6m. Levels down to -100m shown by depths of fluvial alluvium and erosional submarine morphology. No convincing evidence for former levels higher than + 6 m)

Haile, N.S. (1973)- The geomorphology and geology of the northern part of the Sunda shelf and its place in the Sunda mountain system. Pacific Geology 1973, 6, p. 73-89.

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(Geophysical survey W of Singkep, NW of Bangka, to map cassiterite-bearing channels on biotite granite basement surface)

Hanebuth, T.J.J. & K. Stattegger (2003)- The stratigraphic evolution of the Sunda Shelf during the past fifty thousand years. In: F.H. Sidi, D. Nummedal et al. (eds.) Deltas of Southeast Asia and vicinity-sedimentology, stratigraphy and petroleum geology, SEPM Spec. Publ. 76, p. 189-200.
(Sunda shelf exposed during last glaciation, with soil formation and sediment bypass. Analysis of 36 cores from transect in main paleo-valley of North Sunda River on middle Sunda Shelf. Large foresets of delta system extended basinward following sea-level lowering before Last Glacial Maximum. Marshy soil formed after exposure, and sediment bypass dominated during lowstand. Subsequent sea-level rise caused stepwise submergence. Before 13.5 ka drowning restricted mainly to N Sunda River valley. After 13.5 ka flooding of Sunda plain (~70 m below modern sea surface) caused loss of upper course of river system combined with interruption of terrigenous supply)

Hanebuth, T.J.J. & K. Stattegger (2004)- Depositional sequences on a late Pleistocene-Holocene tropical siliciclastic shelf (Sunda Shelf, Southeast Asia). J. Asian Earth Sci. 23, p. 113-126.
(Sunda Shelf tropical siliciclastic shelf with low gradient, extreme width, huge paleo-valley systems, high sediment input due to large catchment area. Four systems tracts during last glacial sea-level fall and subsequent deglacial rise: (a) wide, partly detached deltaic clinoforms indicate forced regression; (b) shoreline deposits and soil formation of lowstand systems tract; (c) backstepping coastline deposits form confined transgressive systems tract and mainly restricted to paleo-valley system; (d) thin marine mud cover as condensed section over whole shelf (base of HST))

Hanebuth, T.J.J., K. Stattegger & A. Bojanowski (2009)- Termination of the Last Glacial Maximum sea-level lowstand: the Sunda-Shelf data revisited. Global Planetary Change 66, p. 76-84.
(Sunda Shelf Late Pleistocene paleo-coastal relict forms indicating older lowstand 5m deeper than sea level during Last Glacial Maximum (LGM; 21-19 ka BP). LGM sea level recalculated to 123m below modern water depth. Deglacial sea level rise started with massive pulse of 10m in ~800 years, starting at ~19.6 ka. Followed by slow sea level rise throughout HS1, shifting shorelines steadily to hinterland. Onset of Meltwater Pulse 1a at 14.5 ka led to flooding of large parts of Paternoster Platform and Sunda Shelf and widened connections from SCS into Sulu Sea/Celebes Sea. After Meltwater Pulse 1b at ~9.5 ka Sunda Shelf fully flooded)

Hanebuth, T.J.J., K. Stattegger & P.M. Grootes (2000)- Rapid flooding of the Sunda Shelf- a late-glacial sea-level record. Science 288, p. 1033-1035.

(Sea level rise after last glacial maximum at ~20 ka derived from siliciclastic shoreline facies. Record generally confirms reconstructions from coral reefs (~ -115m at 20 ka). Rise of sea level during meltwater pulse 1A was 16m in 300 years between 14.6 to 14.3 ka)

Hanebuth, T.J.J., K. Stattegger & Y. Saito (2002)- The stratigraphic architecture of the central Sunda Shelf (SE Asia) recorded by shallow-seismic surveying. Geo-Marine Letters 22, p. 86-94.
(Shallow seismic identified units and surfaces of last three 100 ka Pleistocene sea-level cycles)

Hanebuth, T.J.J., K. Stattegger, A. Schimanski, T. Ludmann & H.K. Wong (2003)- Late Pleistocene forced regressive deposits on the Sunda Shelf (SE Asia). Marine Geology 199, p. 139-157.
(Late Pleistocene regressive deposits on Sunda Shelf three different morphogenic types, including prograding delta wedges of North Sunda River (= Molengraaff River) system at outer shelf and shelf margin. Regressive units separated from their previous highstand shorelines by broad zone of sedimentary bypass)

Hanebuth, T.J.J., H.K. Voris, Y. Yokoyama, Y. Saito & J. Okuno (2011)- Formation and fate of sedimentary depocentres on Southeast Asia's Sunda Shelf over the past sea-level cycle and biogeographic implications. Earth-Science Reviews 104, p. 92-110.
(Review of sedimentary-biogeographic history of tropical Sunda Shelf as end-member of continental shelves of extreme width, enormous sediment supply and high biodiversity in response to rapid sea-level fluctuations)

Hantoro, W.S. (2018)- Sunda epicontinental shelf and Quaternary glacial-interglacial sea level variation and their implications to the regional and global environmental change. In: Global Colloquium on GeoSciences and Engineering 2017, LIPI, Bandung, IOP Conf. Series: Earth and Environmental Sci. 118, 012053, p. 1-12.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012053/pdf)
(Sunda Shelf epicontinental shallow shelf since Pliocene. Sedimentation and erosion cycles follow glacial-interglacial sea level variation cycles that periodically changed area to open land. During eustatic lowstands important river drainage systems from SE Asia in N (Gulf of Thailand) and system from Malay Peninsula, Sumatra, Bangka-Belitung and Kalimantan, named Palaeo Sunda River)

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(Discussion of glacial-nterglacial conditions in Indonesian region. Some maximum glacial periods with sea level ~125m below present sea level, exposing continental platform that was quickly covered by humid lowland tropical forest. Deep pass Indian-Pacific Ocean Gateways remained open. Etc.)

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(Broad Sunda shelf region in Indonesia marked by complex depositional and erosional patterns. In addition to tin, large offshore deposits of detrital heavy minerals zircon and rutile offshore S Kalimantan and Java Sea)

Harsono, R.A.F. (1975)- Pengaruh gerak Kwarter terhadap akumulasi sekunder bijih timah di Bangka. Geologi Indonesia 2, 3, p. 1-9.
(On Quaternary secondary tin accumulations of Bangka island)

Harsono, R. (1987)- General aspects of the granitoids in the Indonesian Tin islands and the surroundings. SEATRAD Bull. VIII, 2, p. 17-27.

Hehuwat, F. (1973)- The significance of zircon and rutile distribution pattern on the Sunda shelf. UN ESCAP Repts. 9th Session CCOP, Bandung 1972, p. 164-171.
(Sunda Shelf locally covered by thin veneer of Quaternary relict and residual sediments. Zircon and rutile derived from metamorphic and igneous rocks. Main concentrations of heavy minerals at S side of Sunda Shelf platform)

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('Records of transgression and regression events of Holocene P. Belitung and the rise in temperature of the Earth surface today'. Around Belitung island Holocene transgression from -65m at 11000 BP to +7.5m at 3700 BP, followed by regression until today. Ancient beach ridges and coral at +5.75m)

Hermes, J.J. & D.R. de Vletter (1942)- Contribution to the petrography of Bintan (Riouw Lingga Archipelago). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 45, 1, p. 82-88.
(online at: www.dwc.knaw.nl/DL/publications/PU00017703.pdf)
(Petrography of rocks collected at Bintan island by Roggeveen in 1930. Bintan dominated by granitic rocks. Sediments two formations: Triassic highly folded phyllites, liparite- dacite-tuffs and quartz schists, intruded by granite and unconformably overlain in S and SW by much less folded clastics with streaks of coal)

Hidayat, S. & H. Moechtar (2009)- Interaksi faktor kendali tektonik, permukaan laut dan perubahan iklim di daerah Teluk Klabat, Kabupaten Bangka Induk, Bangka. J. Sumber Daya Geologi 19, 1, p. 23-36.
('Interaction of tectonic, sea-level and climate change factors in the Klabat Bay area, Bangka Regency, Bangka'. Study of depositional facies/ thickness of Quaternary deposits off N Bangka island)

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(Cherts in folded (Permian or Triassic?) shales-sands of Billiton/ Belitung Island contain poorly preserved radiolaria and siliceous sponge spicules. Beloidea, Sphaeroidea (Cenosphaera, Dorysphaera), Prunoidea (cf. Cenellipsis) and Discoidea (cf. Theodiscus) recognized. Apparent absence of Cyrtoidea indicates probable Paleozoic age of rock. Assemblage contrasts strongly from radiolaria in Danau Fm of C Borneo, where cyrtoidal forms dominate)

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(online at: http://ignca.nic.in/Asi_data/51359.pdf)
('Report delivered to His Excellency Thomas Stamford Raffles Esq. Lieut. Governor of Java etc., in the year 1814, by Thomas Horsfield'. Sect. I, The geographical description of the island, Sect. II Mineralogical description of the island, Sect. III Views of the tin mines of Banka. Early descriptions of geology, botany, people and tin mining operations on Bangka island by American-born naturalist Horsfield. No figures)

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977008.pdf)
(Up to 40cm long crinoid stems in magnetite-cassiterite ore body at Selumar (E Belitung) assigned to Moscovicrinus, believed to be of E Permian age)

Hosking, K.F.G. & T.B.A. Rabelink (1978)- Galena-bearing grains from the Lenggang stanniferous placers, Belitung, Indonesia. Bull. Geol. Soc. Malaysia 10, p. 63-72.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1978005.pdf)

Houtz, R.E. & D.E. Hayes (1984)- Seismic refraction data from Sunda Shelf. American Assoc. Petrol. Geol. (AAPG) Bull. 68, 12, p. 1870-1878.
(Seismic refraction data along 2 Sundaland profiles, one NW of Natuna island, one off N Borneo. Offshore Sarawak Basin underlain by oceanic crust and now covered by 8 km of undisturbed sediment, implying shelf edge advanced about 300 km N-ward over oceanic crust as result of post-Eocene progradation)

Hovig, P. (1920)- Banka, de geologie en de tinertsen. Mededelingen Algemeen Ingenieurs Congres, Batavia 1920, Sect. 5, Mijnbouw en Geologie, Ruygrok, Batavia, p. 1-40.
('Bangka, the geology and the tin ores'. Popular review of Bangka geology. Oldest rocks monotonous, intensely folded, steeply dipping, unfossiliferous sediments (except Triassic? radiolaria) with main strike direction E-W (N90E- N120E), into which granites (24% of outcrop) intruded. Unlike much of Sumatra, Bangka never covered by Tertiary sediment. Tin-bearing valley-fill deposits ('kong') of Quaternary age based on Elephas sumatranus tooth), associated with granite intrusives, with valley floors locally deeper than 30m below sea level)

Hovig, P. (1923)- Over billitonieten, ertslaag en woestijnklimaat. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 7, p. 1-13.
(Discussion of Belitung glass tektites, found on top of bedrock ('kong'), below tin-bearing alluvial deposits. Mainly critique of Wing Easton (1921) suggestion that billitonites formed from colloidal solutions. Many billitonites have fragile small 'tables' on a stem, suggesting limited or no transport)

Huguenin, J.A. (1877)- Rapport van het district Toboali, eiland Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 6 (1877), 1, p. 81-185.
(Early geological- mining survey of S peninsula of Bangka island. With rel. detailed 1:60,000 geologic map)

Hutchison, C.S. (1968)- Invalidity of the Billiton granite, Indonesia, for determining the Jurassic/ Upper Triassic boundary in the Thai-Malayan orogen. Geologie en Mijnbouw 47, 1, p. 56-60.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0cDYwRnRKR3hxalU/view)
(K-Ar age of 180± 5 Ma (Schurmann et al., 1960) for Billiton granite should not be used for setting the age of Triassic-Jurassic boundary. Emplacement of 'tin-belt' granite much more complex than model)

Iijima, A., K. Kimiya & H. Yanagimoto (1973)- Relationship between mineral composition and grain-size distribution in the low-grade bauxite deposit on Bintan Island. In: Third Int. Congress for the Study of bauxites, alumina and aluminum, Nice 1973, p. 55-61.

Ikhsan, N. & A.D. Titisari (2016)- Mineralogi dan geokimia granitoid Bukit Baginda, Pulau Belitung, Indonesia. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 469-484.
(online at: https://repository.ugm.ac.id/273552/)
('Mineralogy and geochemistry of Baginda Hill granitoid, Belitung Island'. Granitoids widespread on Belitung; in NW associated with tin deposits, in SW, at Baginda Hill, extremely low Sn content. Magmatic affinity of granitoid calk-alcaline, high K alkaline/ shoshonitic, I-type metaluminous. Rb versus Y+Nb and Nb versus Y suggest Baginda Hill granitoid is Volcanic Arc Granite, associated with subduction)

Ikuno T., A. Imai, K. Yonezu, K. Sanematsu, L.D. Setijadji et al. (2010)- Concentration and geochemical behavior of REE in hydrothermally altered and weathered granitic rocks in Southern Thailand and Bangka Island, Indonesia. Proc. Int. Symp. Earth Science and Technology, Fukuoka, p. 269-273.

Imai, A., R. Osone, R. Takahashi & S.D. Pratiwi (2015)- Classification and Rare Earth Elements geochemistry of granitoids in Belitung Island, Indonesia. Proc. 5th Asia Africa Mineral Resources Conf., Quezon City, p. 51-54.

Irzon, R. (2015)- Contrasting two facies of Muncung Granite in Lingga Regency using major, trace and Rare Earth Element geochemistry. Indonesian J. Geoscience 2, 1, p. 23-33.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/187/187)
(Two granitic units in Lingga islands group, NW of Bangka: (1) S-type Muncung Granite (Triassic; on S Lingga, Selayar- N Singkep islands) and (2) and I-type Tanjungbuku Granite (Jurassic; S Singkep island). Granitic rocks from Lingga and nearby Selayar Island classified as A facies, others from Singkep Island B facies. Both facies syn-collisional and high-K calc-alkaline granites. Some identical characters with other granitic units in Peninsular Malaysia also detected)

Irzon, R. (2015)- Genesis granit Muncung dari Pulau Lingga berdasarkan data geokimia dan mikroskopis. J. Geologi Sumberdaya Mineral 16, 3, p. 141-149.
(Triassic Muncung Granite on Singkep Island besides Tanjungbuku Granite classified as S-type and in 'Main Range Granite Province' in SE Asia. Strong peraluminous character)

Irzon, R. (2017)- Geochemistry of Late Triassic weak peraluminous A-type Karimun Granite, Karimun Regency, Riau Islands Province. Indonesian J. Geoscience 4, 1, p. 21-37.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/268/229)
(Late Triassic Karimun Granite on Karimun island S of Singapore differs from other felsic intrusive rocks in Malay Peninsula because of A-type affinity, although it is classified as part of Tin Islands)

Irzon, R., H.Z. Abidin, Baharuddin, P. Sendjadja & Kurnia (2017)- Kandungan Rare Earth Elements pada granitoid Merah Muda dari daerah Lagoi dan perbandingan dengan granitoid sejenis lain. J. Geologi Sumberdaya Mineral 18, 3, p. 137-146.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/238/290)
('Rare Earth Element content in pinkish granite of the Lagoi area and its comparison with similar rocks of other regions'. Triassic granite intrusions on Bintan Island part of Main Range Granite belt of SE Asia. Different colours of granite. Granite in Lagoi area of N Bintan (226 ± 8 Ma) pink color, with high REE content (av. 295 ppm)

Isaacs, K.N. (1963)- Interpretation of geophysical profiles between Singapore and Labuan, North Borneo. Geophysics 28, 5, p. 805-811.
(Airborne magnetometer profile and gravity profile from Singapore to Labuan, N Borneo, indicates shallow basement along W half of profile, except for minor sedimentary basins ~50 miles W of Tambelan Islands and in W Borneo. East of Kuching, Sarawak, major basin, with ~10,000' sediment)

Johari, S. (1987)- Relationship between Sn mineralization and geochemical anomalies in non-residual overburden at Tebrong area, Belitung, Indonesia. In: N. Thiramongkol (ed.) Proc. Workshop on Economic geology, tectonics, sedimentary processes and environment of the Quaternary in Southeast Asia, Haid Yai, Thailand 1986, IGCP 218/ Chulalongkorn University, Bangkok, p. 157-172.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1986/5083...)
(Tebrong area of E Belitung underlain by Triassic granite plutons and metasediments with low-grade Sn mineralization in swarms of subvertical quartz-tourmaline-cassiterite veins. Overlain by Quaternary cassiterite 'kaksa' placers)

Johnson, H.D., F.A. Alqahtani, C.A.L. Jackson, M.R.B. Som, D.P. Ghosh & W.K.W. Sulaiman (2010)- Fluvial reservoir analogues in the Malay Basin: analysis of shallow 3D seismic data of Pleistocene rivers on the Sunda Shelf. In: L.J. Wood et al. (eds.) Seismic imaging of depositional and geomorphic systems, Gulf Coast Sect. SEPM, Ann. Perkins Research Conf. 30, Houston, p. 328-329.

Johnson, R.F. & Marjono (1963)- Geology and bauxite deposits of the central Riau Islands, Indonesia. Direktorat Geologi, Bandung, Publikasi Teknik, Seri Geologi Ekonomi 6, p. 1-54.
(Occurrence of bauxite (Al2O3) concretions on several islands of C Riau Archipelago (Lobam, Ngenang), in addition to Bintan occurrences known since 1924. Some laterites residual on granitic rocks, some in marine terraces. Geology mainly summarized from Bothe (1928))

Jones, M.T., B.L. Reed, B.R. Doe & M.A. Lanphere (1977)- Age of tin mineralization and plumbotectonics, Belitung, Indonesia. Economic Geology 72, p. 745-752.
(Primary tin deposits on Belitung related to Late Triassic granites with Rb-Sr isochron age of 213± 5 Ma. K-Ar ages of muscovite from two cassiterite-bearing greisens 195 and 200 Ma, suggesting tin mineralization not simple late-stage event in emplacement of plutons. Lead (galena) isotopes unreliable for age dating, but do suggest Precambrian continental origin of ores)

Jongmans, W.J. (1951)- Fossil plants of the Island of Bintan. Proc. Kon. Nederl. Akademie Wetenschappen, B 54, 2, p. 183-190.
(First description of latest Triassic 'Bintan flora', collected by geologists of Billiton company, from near-horizontal Bintan Fm shales and sands from Tanjung Batu Itam, SW Bintan island, Riau islands . Species identified all cycads, including Ptilophyllum bintanense n.sp., Otozamites gagauensis, Pterophyllum muensteri, P. rosenkrantzi, P. nathorsti, Cycadolepis sp. and Protocupressinoxylon malayense Roggeveen. Interpreted as part of Late Triassic Dictophyllum- Clathropteris flora, similar to flora of Tonkin (N.B.: thought to be comparable to E Cretaceous Gagau flora of E Malay Peninsula by Kon'no (1972) and Rishworth (1974), but considered to be Rhaetian-Liassic by Wade-Murphy and Van Konijnenburg (2008); JTvG)

Junker, H.W. (1936)- Bauxit und Laterit auf Banka. Ein Beitrag zur Kenntnis der Geologie von Banka. De Ingenieur in Nederlandsch-Indie IV, 3, p. 15-23.
('Bauxite and laterite on Bangka; a contribution to the knowledge of the geology of Bangka'. Claims to be first to demonstrate presence of bauxite on Bangka (bauxite produced on nearby Bintan since 1935; JTvG))

Kanayama, S. (1973)- Tin bearing granites and tin placers in Bangka and Billition islands, in Indonesia. Kyoto University, Southeast Asian Studies 11, 3, p. 321-337.
(Online at: http://kyoto-seas.org/pdf/11/3/110302.pdf kyoto-seas)
(In Japanese with English abstract. Tin in Indonesia mainly exploited from placers with cassiterite. Source rocks are tin granites of collision type, which are more common in Europe and USA than in Japan. Economic cassiterite concentrations limited to area within 15 km from edges of granitic mother rocks; largest number of known tin placers ~5-12 km from granites. Surrounding rocks of tin placers mainly (Paleozoic?) steeply dipping clastics, mainly dipping to S?)

Katili, J.A. (1967)- Structure and age of the Indonesian tin belt with special reference to Bangka. Tectonophysics 4, p. 403-418.
(Radiometric ages Billiton-Singkep granites Late Jurassic (Late Triassic according to Priem et al. (1975, 1982); JTvG). Oldest rocks in Bangka fossiliferous Permo-Carboniferous and Triassic; locally metamorphosed. Folding in Bangka probably also Late Jurassic)

Katili, J.A. (1968)- Cross-folding in Bangka, West Indonesia. Contrib. Dept. Geology Inst. Teknologi Bandung 68, p. 61-70.
(Cross-folds in N Bangka result of two orogenic movements: NW-SE trending folds formed in Late Jurassic, superimposed on older NE-SW structures, probably Paleozoic)

Keller, G.H. (1966)- Sediments of the Malacca Strait, Southeast Asia. Ph.D. Thesis University of Illinois, p. 1-109.
(Sediments in Malacca Strait largely derived from adjacent land provinces of Sumatra and Malay Peninsula, with highly variable provenance. Dominant NW current due to movement of water into strait from S China and Java Seas and to lesser extent from Andaman Sea)

Keller, G.H. & A.F. Richards (1967)- Sediments of the Malacca Strait, Southeast Asia. J. Sedimentary Petrology 37, 1, p. 102-127.
(Malacca Strait shallow passage between Malay Peninsula and Sumatra assumed present configuration as after post-glacial rise of sea level which drowned Sunda Shelf. Tidal NW current flow prevails throughout year. Surface salinities and T generally lower than surrounding seas. Bottom sediments mainly muddy sands, with common mud near river mouths and in Andaman Sea. Non-calcareous detrital fraction dominated hy quartz with minor feldspars. Heavy mineral primarily leucoxene, ilmenite, staurolile, biotite and amphiboles. Volcanic ash of andesitic origin in much of area. Many cores penetrate Late Pleistocene surface of indurated silty clay with much peat, with radiocarbon ages of 10,000 years B P., and probable tidal flat or estuarine deposit)

Kieft, C. (1952)- Accessory transparent minerals in tin granites of North Banka, Indonesia. Proc.Kon. Nederl. Akademie Wetenschappen B55, p. 140-149.
(Accessory heavy minerals in Banka tin granites include zircon, orthite, xenotime, monazite and allanite)

Kiel, B.A. (2009)- Three-dimensionality, seismic attributes, and long profile setting of valleys in recent stratigraphy of the Sunda Shelf, Indonesia: M.S. Thesis, University of Texas, Austin, p. 1-85. *(Unpublished)*

Kiel, B.A. & L.J. Wood (2010)- Correlations among seismic attributes and incised valley thicknesses in recent stratigraphy of the Sunda Shelf, Indonesia. In: L.J. Wood, T.T. Simo & N.C. Rosen (eds.) Seismic imaging of depositional and geomorphic systems, Gulf Coast Sect. SEPM (GCSSEPM), Ann. Perkins Research Conf. 30, Houston, p. 23-48.
(3D seismic data set near Gabus Field, W Natuna Basin, image channelized series in upper 500m of Sunda Shelf (Pliocene-Recent U Muda Fm). Ten incised valley features mapped (mainly on methodology; JTvG))

Kiel, B.A. & L.J. Wood (2012)- Seismic attributes correlated with incised valley thickness in recent stratigraphy of the Sunda Shelf, Indonesia. Zeitschrift Geomorphologie 56, 4, p. 507-524.
(3D seismic data volume in highly channelized stratigraphic series in upper 500 ms of Sunda Shelf, offshore Indonesia, was used to map incised valley development)

Ko, U. Ko (1984)- Geology of Pemali primary tin deposit, Bangka Island, Indonesia. Southeast Asia Tin Research and Development (SEATRAD) Centre, Ipoh, p. 1-10.

Ko, U. Ko (1986)- Preliminary synthesis of the geology of Bangka Island, Indonesia. In: G.H. Teh & S. Paramananthan (eds.) In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geol. Min. Energy Res. SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 81-96.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b06.pdf)
(Stratigraphy Bangka 4 main units: (1) U Paleozoic isoclinally folded, imbricated Pemali Gp mudstone-dominated deep marine sediments with bedded radiolarian chert, rare Permian fusulinid limestone; (2) broadly folded shallow marine M-U Triassic marine Tempilang Sst, (3) Lw Tertiary Fan Fm fluvial deposits and (4) U Tertiary- Quaternary Ranggam Gp. Thrusting and granitizaton and uplift in Late Triassic- E Cretaceous, followed by N-S high-angle cross faulting. At Toboali in S Bangka, Permo-Carboniferous with glaciogenic 'pebbly mudstones'?)

Koesoemadinata, R.P. & A. Pulunggono (1975)- Geology of the southern Sunda Shelf in reference to the tectonic framework of Tertiary sedimentary basins of Western Indonesia. J. Indon. Assoc. Geol. (IAGI) 2, 2, p. 1-11.

Kort, M.C. (1920)- Het onderzoek van tinertsafzettingen op Banka. In: Algemeen Ingenieurs Congres, Batavia 1920, sect. 5, Mijnbouw en Geologie, Mededeeling 11, p. 1-32.
('Investigation of tin ore deposits on Bangka'. Old review of exploration methods of alluvial tin deposits on Bangka. No maps)

Krause, P.G. (1898)- Obsidianbomben aus Niederlandisch-Indien. Sammlungen Geol. Reichs-Museums Leiden 5, 5, p. 237-251.
(online at: www.repository.naturalis.nl/document/552416)
('Obsidian bombs from Netherlands Indies'. Early description of black 'glass pebbles' from Belitung (up to 4 cm diameter, 71-75% quartz) and Bungaran (= Natuna Besar; collected by Van Hasselt). Not associated with volcanoes and of possible extraterrestrial origin (In Krause collection up to 4cm long, but Verbeek (1897) described sizes up to 8 x2.5 cm. See also Wing Easton (1921; 'billitonites') and Von Koenigswald (1935; Java tektite occurrences). These are tektites, and part of Australasian strewn field of M Pleistocene SE Asia mainland meteorite impact; JTvG) (also in Jaarboek Mijnwezen 27-1898, p. 17-31))

Krol, G.L. (1960)- Theories on the genesis of the kaksa. Geologie en Mijnbouw 39, 10, p. 437-443.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0UTdoQnkwZjFhTlk/view)
('Kaksa' deposits of Belitung Island are cassiterite-bearing alluvial deposits in valley floors and areas of low relief, resulting from long period of Tertiary denudation and peneplanation of Cretaceous granites, under

humid climatic conditions as residual product of chemical weathering. Eluvial or 'kulit' deposits on hill slopes and watersheds, formed by chemical weathering in place; transportation insignificant. No figures)

Kruizinga, A. (1950)- *Agathiceras sundaicum* Han., a Lower Permian fossil from Timor. Proc. Kon. Akademie Wetenschappen, Amsterdam 53, 7, p. 1056-1063. *(should be* fossil from Billiton*)*
(online at: www.dwc.knaw.nl/DL/publications/PU00018850.pdf)
(First Paleozoic fossil found on Belitung island is small ammonite in lump of cassiterite. Identified as Agathiceras sundaicum, also common in Lower Permian of Timor (Bitauni) and Leti (but 'more likely Lower Middle Permian'; Fontaine 1989, p. 105). New find indicates presence of E-M Permian sediments, subsequently intruded/ metamorphosed by post-Triassic 'tin granites')

Kudrass, H.R. & H.U. Schluter (1994)- Development of cassiterite-bearing sediments and their relation to Late Pleistocene sea-level changes in the Straits of Malacca. Marine Geology 120, p. 175-202.
(Survey of tin-bearing sediments in central parts of Straits of Malacca by seismic profiling and vibrocoring. Placer deposits found in tidal scour channel of Cape Rachado and Pleistocene river valley. Cassiterite derived from local primary mineralization of granite and from long-distance fluvial transport)

Kurnio, H. & N.C.D. Aryanto (2010)- Paleo-channels of Singkawang waters, West Kalimantan, and its relation to the occurrences of sub-bottom gold placers based on strata box seismic record analyses. Bull. Marine Geol. 25, 2, p. 65-76.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/26/26)
(Sunda shelf off W Kalimantan with Pleistocene incised valleys seen on shallow seismic lines may contain gold placer accumulations, derived from Sintang Intrusives)

Kusnama, K., Sutisna, T.C. Amin, S. Koesoemadinata, Sukardi & B. Hermanto (1994)- Geologic map of the Tandjung Pinang Sheet (1016-1016), Sumatra, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of Batam, Bintan etc., islands in Malacca Straits. Oldest rocks highly deformed meta-sediments of Permo-Carboniferous Berakit Fm (=Mersing Schist on Malay Peninsula?), intruded by Triassic Batam (Nongsa) and Bintan (Kawal Pluton) granites. Unconformably overlain by 600m of latest Triassic (Rhaetian) shales and quartz sandstone of Duriangkang Fm with 'Bintan flora' with Pterophyllum bintanense, 500m Jurassic Pulaupanjang Fm redbeds and ~300+500m of Cretaceous redbeds of Pancur and Semarung Fms (Cretaceous mainly on smaller islands of Lingga Archipelago))

Kusnama, K. Sutisna, T.C. Amin & Sidarto (1995)- Geology of the Batam and Bintan area. Geol. Res. Dev. Centre (GRDC), Bandung, Bull. 18, p. 56-67.
(Batam and Bintan islands, S of Singapore. Outcrops of Permo-Carboniferous Berakit Fm metamorphics, intruded by Late Triassic 'tin granites' (~225-230 Ma). Unconformably overlain by latest Triassic fluvial-shallow marine Duriangkang Fm sands-shales with 'Bintan flora' (see also Wade-Murphy et al. 2008), ?Jurassic redbeds, E Cretaceous Pancur Fm and Late Cretaceous Semarung Fm clastics)

Kusnida, D., P. Astjario & B. Nirwana (2008)- Magnetic susceptibilities distribution and its possibly geological significance of submerged Belitung granite. Indonesian Mining J. 11, 2, p. 24-31.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/592/454)
(Marine magnetic anomalies over Belitung waters, where zone of <50 nT total magnetic anomaly interpreted to reflect submerged Belitung granite. Correlation between magnetic susceptibility and type of granites indicated submerged Belitung intrusive is biotite-granite, associated with cassiterite minerals)

Lehmann, B. & Harmanto (1990)- Large scale tin depletion in the Tanjung Pandang tin granite, Belitung Island, Indonesia. Economic Geology 85, 1, p. 99-111.
(M Triassic (~215Ma) Tanjungpandan batholith on Belitung associated with major alluvial tin ore deposits (Plio-Pleistocene paleoplacers). Two rock suites: widespread biotite granite and more restricted quartz syenite. Hydrothermal removal of tin by high-T fluids allowed exceptional degree of redistribution of tin)

Mainguy, M. & L.W. Stach (1968)- Regional geology and petroleum prospects for mineral resources on the northern part of the Sunda Shelf. United Nations ECAFE CCOP Techn. Bull. 1, p. 129-142.

Manus, S.A. (1968)- Bijdrage tot de kennis van de geologische gesteldheid in het Toboali-district (Zuid Bangka, Indonesia); in het bijzonder de petrografie en petrologie van de granietische gesteenten. Doct. Thesis, Rijksuniversiteit Gent, p. 1-246. *(Unpublished)*
('Contribution to the knowledge of the geological situation of the Toboali District (S Bangka), in particular the petrography and petrology of granitic rocks')

Margono, U., R.J.B. Supandjono & E. Partoyo (1995)- Geological map of the South Bangka sheet (1113-1213), Sumatera, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Permo-Carboniferous Pemali Fm metamorphic complex, unconformably overlain by ?E Triassic Tanjung Genting Fm clastics with limestone lenses with Montlivaultia. Uplifted and intruded by Late Triassic Klabat biotite granite (radiometric ages 201-223 Ma). Overlain by U Miocene?-Quaternary clastics)

Martin, K. (1880)- On a post-Tertiary fauna from the stream tin deposits of Blitong (Biliton). Notes from the Leyden Museum 3, p. 17-22.
(online at: www.repository.naturalis.nl/document/552195)
(Well-preserved fossils from stream-tin-deposits of Belitung, collected by C. de Groot. 61 species of gastropods, bivalves, corals, echinoids, etc. Fauna agrees with that of Recent faunas in sea around island of Belitung, sediments therefore very young)

Menten, J.H. (1877)- Verslag van een onderzoek naar tinerts op het eiland Singkep. Jaarboek Mijnwezen Nederlandsch Oost-Indie 6 (1877), 2, Verhandelingen, p. 145-171.
('Report of survey of tin ore on Singkep Island'. Early geological- mining survey of Singkep Island, off NE Sumatra. With rel. detailed 1:75,000 scale map of survey areas. River valley deposits of NE Singkep intensively sampled, but results not encouraging for profitable government exploitation)

Meyer, H.C. (1975)- Mineralogy of the primary tin deposits of Kelapa Kampit, Belitung, Indonesia. Bull. Nat. Inst. Geology and Mining (NIGM) 5, 1, p. 1-12.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/NIGM-5-1.pdf)
(Primary tin mineralization at Kelapa Kampit on NE Belitung cassiterite in hydrothermal veins in steeply dipping, E-W to WNW-ESE trending Permo-Triassic sequence of sand-shale with radiolarian chert. Mineralization related to end-Triassic granite emplacement. Mined since 1908)

Moechtar, H. & S. Hidayat. (2010)- Sedimentologi dan akumulasi kasiterit pada endapan aluvium sepanjang Air Inas hingga laut lepas pantai Tanjung Kubu (Toboali), Bangka Selatan. J. Sumber Daya Geologi 20, 2, p. 59-68.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/162/157)
('Sedimentology and cassiterite accumulation in the alluvium deposit along the Inas River to the open sea at Tanjung Kubu beach (Toboali), South Bangka'. Cassiterite placers between elevation +25 and -7.2m)

Molengraaff, G.A.F & M. Weber (1919)- Het verband tusschen den Plistoceenen ijstijd en het ontstaan der Soenda-zee (Java- en Zuid-Chineesche Zee) en de invloed daarvan op de verspreiding der koraalriffen en op de land-en zoetwater-fauna. Kon. Nederl. Akademie Wetenschappen, Amsterdam, Verslagen Vergadering Wis.- en Natuurk. Afd., 28, p. 497-544.
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:045575000:pdf)
(Early paper explaining origin of continental shelves as drowned coastal peneplains during Pleistocene lowered sea level. Sunda shelf averages 40-50m depth and has remnants of river valleys. Coral reefs relatively rare in Sunda Sea, probably because of rapid drowning. Line of coral islands in S China Sea follows 40 fathoms contour, believed to follow paleo-coastline of Pleistocene Sunda land. Similarly, modern reefs lining Borneo Bank (=Paternoster Platform) near Makassar Straits mark NE margin of Pleistocene Sundaland)

Molengraaff, G.A.F. & M. Weber (1921)- On the relation between the Pleistocene glacial period and the origin of the Sunda Sea (Java- and South China Sea), and its influence on the distribution of coral reefs and on the land- and freshwater fauna. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 23, 1, p. 395-439.
(online at: www.dwc.knaw.nl/DL/publications/PU00014627.pdf)
(English version of above paper)

Ng, S.W.P., M.J. Whitehouse, M.H. Roselee, C. Teschner, S. Murtadha, G.J.H. Oliver, A.A. Ghani & S.C. Chang (2017)- Late Triassic granites from Bangka, Indonesia: a continuation of the Main Range granite province of the South-East Asian Tin Belt. J. Asian Earth Sci. 138, p. 562-587.
(SE Asian Tin Belt tied to arc-related Eastern granite province and collision-related Main Range granite provinces, running across Thailand, Singapore and Indonesia, and separated by Paleo-Tethys sutures. E Province usually granites with biotite ± hornblende; Main Range granites sometimes characterised by biotite ± muscovite. On Indonesian Tin Islands both hornblende-bearing (previously I-type) and hornblende-barren (previously S-type), apparently randomly distributed. Bangka granites geochemically similar to Malaysian Main Range granites, with zircon U-Pb ages of ~225 Ma and ~220 Ma, within time of Main Range magmatism (~226-201 Ma) in Malay Peninsula. This suggests Paleo-Tethyan suture lies E of Bangka island)

Nitiwisastro, M., W. Wibowo & H. Moechtar (1995)- Geological data in relation to the present and future exploration ("case study in Bangka and Belitung"). Proc. Indonesian Mining Assoc. Conf. 1995, Jakarta, 2, 24p.

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(Includes preliminary survey of trace element geochemistry of Triassic-Jurassic granites from Bangka and Belitung)

Osberger, R. (1965)- Uber die Zinnseifen Indonesiens und ihre genetische Gliederung. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 117, 2-3, p. 749-766.
('On the tin deposits of Indonesia and their genetic formation'. On distribution and types of cassiterite-bearing deposits on 'Tin islands' Bangka, Belitung, Singkep; less on Karimun, Kundur)

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('On the geology of Belitung Island')

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(Coarse-grained cassiterite in placers, especially with common monazite and xenotime, suggests proximity to source granites. Most placers in valleys controlled by mineralized faults. Richest placers in lower parts of stream valleys. Most favorable conditions for prospecting are offshore from islands of western tin belt of Karimun, Kundur, Singkep, Bangka and Billiton)

Osberger, R. (1967)- Dating Indonesian cassiterite placers. Mining Magazine 117, 4, p. 260-264.
(Cassiterite placers of Indonesian tin region comprise 'kaksa' placers of Pleistocene- early Holocene age. Pre-Pleistocene placers may have existed, as age of tin-bearing granite is Mesozoic, but only few occurrences of extremely fine-grained cassiterite are known. Age of kaksa and mintjan placers based on age of wood, geologic relationships of placers and occurrence of fossils and artifacts)

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(online at: www.biodiversitylibrary.org/item/118914page/130/mode/1up)
('Geologic notes from Bangka: the geotectonic behaviour of the granite massifs and the Maras Mountains'. Bangka Island in same 'geotectonic line' as Malay Peninsula, with similar geology and tin ores. All high peaks on Bangka are granites, except Maras Mountains, which are composed of sediments. Granites believed to be arranged in 3 NW-SE trending rows)

Posewitz, T. (1885)- Die Zinninseln im Indischen Oceane. 1. Geologie von Banka. Als Anhang: Das Diamantvorkommen in Borneo. Mitteilungen Jahrbuch konigl. Ungarischen Geologischen Anstalt 7, p. 153-182.
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Posewitz, T. (1887)- Die geologischen-montanistischen Verhaltnisse der Insel Billiton (Blitong). Petermanns Geogr. Petrogr. Mitteilungen 33, p. 108-116.
(The geologic-'montanistic(?) relationships of Belitung island'. Early summary of geology of Belitung and history of discovery and mining of tin ores since 1851 (mainly with Chinese contract labor). Geology similar to Bangka: granites and low metamorphic metasediments. Tin ore both in veins and in Quaternary deposits)

Posewitz, T. (1887)- Das Zinnvorkommen auf den Inseln des Riauw-Lingga Archipels. Petermanns Geogr. Petrogr. Mitteilungen 33, 12, p. 366-369.
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(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0WFBITzVsQjFLcGs/view)
(Rb-Sr ages of 4 granites from Bangka average 217±5 Ma and K-Ar age ~214 Ma (= Late Triassic, near Norian- Rhaetian boundary) (Hutchison 1977: similar to ages of granites of Singapore and Johore; Rb-Sr and K-Ar ages suggest similar ages for cooling of Malay Peninsula East Belt of granites). Granite from Karimata Islands Rb-Sr age ~74 Ma; associated amphibolite K-Ar age 78 Ma (= Campanian, Late Cretaceous). Cassiterite mineralisation associated with both U Cretaceous and U Triassic granites, but main tin deposits related to U Triassic plutons)

Priem, H.N.A. & E.H. Bon (1982)- A calibration point in the Late Triassic: the tin granites of Bangka and Belitung, Indonesia. In: G.S. Odin (ed.) Numerical dating in stratigraphy, Wiley, p. 501-507.
(Bangka steeply folded Late Carboniferous- Triassic (incl. Norian limestones) deep-water low-grade metasediments, intruded by Late Triassic- E Jurassic tin granites. These rocks unconformably overlain by weakly folded Bintan Fm molasse series; originally thought to be Late Triassic age based on plants, but more likely Early Cretaceous. Radiometric ages of Bangka and Belitung tin granites almost all in 214-217 Ma range = M Norian, Late Triassic)

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(Climate of C Sundaland during Late Pleistocene Last Glacial Maximum suitable to sustain Dipterocarp rainforest; presence of previously suggested transequatorial savannah corridor at that time unlikely. Dipterocarp species richness lower at LGM, and areas of high species richness mostly off current islands and on emergent Sunda Shelf)

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(Shallow acoustic profiles across paleo-incised valleys in Penyu Basin, S China Sea, formed during several phases of Late Pleistocene regression and subsequent Last Glacial Maximum when sea level was ~123m lower than present-day. Valleys filled during lowstand and subsequent post-glacial marine transgression. Holocene shallow-marine cover (3-10m thick) healed ravinement surface. Average late-Pleistocene surface 53-64m below present-day MSL, with ~16-50m of valley incision)

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(Pahang River paleovalleys in S China Sea formed during regressive phase of last glacial cycle, and submerged and filled during postglacial marine transgression. Valley fills overlain by marine transgressive ravinement surface and 5-10m thick Holocene shallow marine deposits. Low-sinuosity lowstand valley system changed to

high-sinuosity meander belt and eventually into deltaic distributary channel system, before submergence. Average Late Pleistocene surface between 53-64m below sea level, with ~16-50 m of valley incision)

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Renaud, G.P.A. (1884)- Over de Chineesche ontginningswijze van tinerts op het eiland Banka en de eventueele toepassing daarop van Europeesche werktuigen. Jaarboek Mijnwezen Nederlandsch Oost-Indie 13 (1884), Techn. Admin. Ged., p. 5-121.
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('Tectonics of the tin ore quarry area of Klappa-Kampit, NE Belitung'. Steeply dipping (generally to S), isoclinally folded unfossiliferous quartzites and shales, generally striking 90-110°, with veins of tin ore from adjacent granite laccolith)

Roggeveen, P.M. (1932)- Mesozoisches Koniferenholz (*Protocupressinoxylon malayense* n.s.) von der Insel Soegi im Riouw Archipel, Niederlandisch Ost-Indien. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 35, p. 580-584.
(online at: www.dwc.knaw.nl/DL/publications/PU00016260.pdf)
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(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_032.pdf)
(Bangka Island granites show evidence of mixed source of greywacke and amphibolite and formed in syn-collisional tectonic setting. Geochemistry of Bangka granites comparable to Main Range granite of Malay Peninsula, although overlapping fields between Main range and East Malaya- Sukhothai granites. Bangka Island is S-ward continuation of Malaysia Main Range granite province)

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(online at: www.gsm.org.my/products/702001-101716-PDF.pdf)
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Schwartz, M.O., S.S. Rajah, A.K. Askury, P. Putthapiban & S. Djaswadi (1995)- The Southeast Asian tin belt. Earth-Science Reviews 38, p. 95-290.
(SE Asian tin belt, N-S zone, 2800 km long/ 400 km wide, from Myanmar- Thailand to Malay Peninsula and Indonesian Tin Islands Bangka- Belitung. Granitoids grouped geographically into 5 provinces: (1) Main Range Granitoid Province in W Malay Peninsula, S Peninsular Thailand and C Thailand, almost entirely biotite granite (184-230 Ma). Contributed 55% of tin production of SE Asia; (2) N Granitoid Province in N Thailand

(0.1% of tin production), also mainly biotite granite (200-269 Ma); (3) E Granitoid Province of E Peninsular Malaysia- E Thailand (Malaysian part subdivided into E Coast Belt (220-263 Ma), Boundary Range Belt (197-257 Ma) and C Belt (79-219 Ma)). Wide compositional range. Tin deposits only in biotite granite in E Coast Belt (3% of production); (4) W Granitoid Province (22-149 Ma) in N Peninsular and W Thailand and Burma biotite granite (14% of tin production); (5) Granitoids of Indonesian Tin Islands (193-251 Ma) do not permit grouping into above units; most tin deposits associated with Main Range-like plutons)

Schwartz, M.O. & Surjono (1990)- Greisenization and albitization at the Tikus tin-tungsten deposit, Belitung, Indonesia. Economic Geology 85, p. 691-713.
(Tikus primary tin-tungsten deposit on NW Belitung hosted by large Late Triassic Tanjungpandan biotite granite pluton (Rb-Sr age 215±3Ma). Deposition mechanism for cassiterite and wolframite was pH increase and temperature decrease in both greisen and moderately albitized granite)

Schwartz, M.O. & Surjono (1990)- The strata-bound tin deposit Nam Salu, Kelapa Kampit, Indonesia Economic Geology 85, 1, p. 76-98.
(Nam Salu horizon at Kelapa Kampit on Belitung Island is richest strata-bound tin mineralization in SE Asia, in Carboniferous-Permian sediments and volcanics, intruded by Triassic granitoids. Most likely source of Sn-bearing fluids is granitic magmatism)

Schwartz, M.O. & Surjono (1991)- The Pemali tin deposit, Bangka, Indonesia. Mineralium Deposita 26, 1, p. 18-25.
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('Granite types along the east coast of Batam Island and the west coast of Bintan Island, in waters of the Batam Bintan strait'. Granites of Batam and Bintan mainly S-type granites?)

Sharma, C. (2002)- Late Quaternary paleoenvironmental reconstruction of the Sunda Rivers Delta system, Sunda Shelf, south China Sea: timing of drowning and sea-level changes. Ph.D. Thesis, Dalhousie University, Halifax, p. 1-173.
(Late Quaternary paleoenvironmental reconstruction of Sunda Shelf, S China Sea, using foraminifera, radiocarbon chronology, sedimentology and reflection seismic. Sixteen sediment-cores from water depths 71-151m used to reconstruct evolution of Paleo-Sunda Rivers deltas from time when shelf was subaerially exposed during low sea levels to time when delta flooded by post-glacial sea-level rise. Complete flooding of shelf at ~11,000 yrs BP, which led to drowning and reorganization of Sunda Rivers Delta System)

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(Petrographic details of Late Triassic S-type granitoids of Bangka. Bangka granitoids high-level intrusions, with thermal aureoles. Bangka granitoids most like correlative to Main Range granites of Malay Peninsula. Tin mineralization along WNW, NNE and N-S directions, related to Late Triassic deformation. Fold-axis of Paleozoic-Triassic folded meta-sedimentary host rock mainly E-W. Bentong-Raub suture zone of Peninsular Malaysia probably continues into Bangka and perhaps also Belitung (small serpentinitic bodies present))

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(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/182/179)
(Five-stage drowning model of Sunda Shelf after LGM maximum shelf exposure at ~20,500 yrs BP (sea level ~118m below present sea level). Sea level highstand at ~6000-4000 yr BP (~5m above present sea level))

Stattegger, K., W. Kuhnt, H.K. Wong, C. Buhring, C. Haft, T. Hanebuth et al. (1997)- Sequence stratigraphy, Late Pleistocene- Holocene sea level fluctuations and high resolution record of the Post-Pleistocene transgression on the Sunda Shelf. Cruise Report Sonne 115, Sundaflut, Universitat Kiel, Geol.-Palaont. Institut, Reports 86, p. 1-211.

Steinke, S., T.J.J. Hanebuth, C. Vogt & K. Stattegger (2008)- Sea level induced variations in clay mineral composition in the southwestern South China Sea over the past 17,000 yr. Marine Geology 250, p. 199-210.
(Variations in clay mineral composition of Sunda Shelf margin and slope cores over past 17,000 yrs. Deglacial sea level rise principal factor driving changes. Late Glacial high kaolinite reflect higher contribution of clays from soils formed on exposed Sunda Shelf. After coastline retreated close to present-day position in mid-Holocene stronger influence of illite-rich sources (e.g. Borneo))

Steinke, S., M. Kienast & T. Hanebuth (2003)- On the significance of sea-level variations and shelf paleo-morphology in governing sedimentation in the southern South China Sea during the last deglaciation. Marine Geology 201, p. 179-206.
(Quaternary deglacial sedimentation on outer Sunda Shelf, shelf margin and slope controlled by shelf paleo-physiography and changes in sea level and sediment supply. Five sites along transect across outer shelf and continental slope document four intervals of significant depositional changes in last 20 000 years: drowning of lower course of North Sunda (Molengraaff) River (16.5-14.5 ka), rapid rise in sea level with flooding of middle part of paleo-valley at 14.5-14 ka and flooding of surrounding plains of river valley (14-8.5 ka). Coastline reached modern position between ca. 8.5- 6 ka)

Strimple, H.L. & T.E. Yancey (1976)- *Moscovicrinus* preserved in magnetite from Selumar, Belitung Island, Indonesia. J. Paleontology 50, 6, p. 1195-1202.
(Rare, probably Early Permian age crinoid from folded, E-W trending sandstones-shales in Selumar open pit mine on E side of Billiton Island, near margin of magnetite-cassiterite vein. Moscovicrinus hoskingi n.sp.. Also mention Van Overeem (1960) record of fusulinid limestone in wells just off N coast of Beliting. See also Hosking et al. 1977)

Sudibyo, H.T. (1984)- Paleotopografi dan endapan timah sekunder di daerah air Bara, Bangka. Proc. 13th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 439-454.
('Paleogeography and secondary tin deposits in the area of Bara waters, Bangka')

Sujitno, S. (1977)- Some notes of offshore exploration for tin in Indonesia. CCOP Techn. Bull. 11, p. 169-182.
(Indonesian tin belt on islands Riau-Lingga, Singkep, Bangka and Belitung, Karimata are S part of the SE Asian tin belt extending from N Burma- Thailand- W Malaysia. Tin tied to Late Triassic granites, except Karimata, where granite dated as Late Cretaceous (74 Ma))

Sujitno, S. (1977)- A new discovery of offshore tin deposit off the west coast of Kundur Island and problems of exploration. Proc. 14th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), p. 328-340.

Sujitno, S. & M.K. Ginting (1981)- Search for tin offshore in the Riau Islands, Indonesia. In: Proc. 17th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), UNDP, Bangkok, p. 140-156.

Sujitno, S. & P.T. Timah (1977)- Some notes on offshore exploration for tin in Indonesia 1966-1976. In: A. Prijono et al. (eds.) Proc. First Indonesian mining symposium; the Indonesian mining industry, its present and future, Indon. Mining Assoc., Jakarta, p. 124-146.

Sujitno, S., Ronojudo, A. and Muljadi (1981)- The occurrences of complex tin-iron in Belitung, Indonesia. In: A.H.H. Hasbi & H. van Wees (eds.) Complex tin ores and related problems, SE Asia Tin Research Development Centre (SEATRAD), Ipoh, Techn. Publ. 2, p. 107-136.

Sujitno, S. & M. Simatupang (1981)- Review of discoveries of new tin deposits in Indonesia. Proc. 5th World Conf. on Tin, Kuala Lumpur 1981, 44p.

Sun, X., X. Li, Y. Luo & X. Chen (2000)- The vegetation and climate at the last glaciation on the emerged continental shelf of the South China Sea. Palaeogeogr. Palaeoclim. Palaeoecology 160, 3-4, p. 301-316.
(online at: http://users.clas.ufl.edu/krigbaum/6930/Sun_etal_P3_2000.pdf)
(Pollen from hemipelagic sediments from continental slopes of S China Sea show record of vegetation on exposed shelves at Last Glacial Maximum and late Marine Isotope Stage 3. At low sea level stand, Artemisia-dominated grassland covered N continental shelf, tropical lowland rainforest and mangroves grew on S shelf of Sundaland. Sundaland experienced marginally lower temperature but not drier than today)

Surjono & M.C.G. Clarke (1982)- Primary tungsten occurrences in Sumatra and the Indonesian tin islands. In: J.V. Hepworth & Y.H. Zhang (eds.) Proc. Symposium on Tungsten Geology, Jiangxi 1981, UN ESCAP, p. 217-231.
(In NE Bangka discontinuous serpentinites at Pemali Mine (tungsten generally associated with tin; viewed as trace of southern continuation of Triassic Raub-Bentong suture of Malay Peninsula by Pulunggono & Cameron 1984))

Surjono & M.C.G. Clarke (1982)- Primary tungsten occurrences in Sumatra and the Indonesian tin islands. Bul. Direktorat Sumber Daya Mineral, Bandung, 1, 5, p.
(Same paper as Surjono & Clarke (1982) above)

Sutedjo & Sujitno (1979)- Some notes on offshore exploration for tin in Indonesia 1966-1976. In: A. Prijono et al. (eds.) The Indonesian mining industry, its present and future, Proc. First Indonesian Mining Symposium, Jakarta 1977, Indon. Mining Assoc., Jakarta, p. 124-146.

Sutisna, K., G. Burhan & B. Hermanto (1994)- Geologic map of Dabo Quadrangle (1015), Sumatra, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of islands E of C Sumatra Basin, incl. Singkep and S part of Lingga islands. Singkep and Selayar islands with core of Permo-Carboniferous Persing Fm phyllites and Duabelas Fm quartzites, intruded by Triassic and Late Jurassic? granites. Lingga different: folded Jurassic Tanjung Datuk Fm meta-clastics, overlain by Cretaceous sandstones and red shales)

Syamsudin, Z. (1994)- Deep seated alluvial tin exploration in offshore areas of Bangka- Indonesia, status and problems. In: J.L. Rau (ed.) Proc. 29th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, Bangkok, 2, p. 253-261.

Tjia, H.D. (1964)- Topographic lineaments in Riauw and Lingga Archipelagoes, Indonesia. Their structural significance. Proc. 22nd Int. Geological Congress, New Delhi, p.

Tjia, H.D. (1970)- Quaternary shorelines of the Sunda Land, Southeast Asia. Geologie en Mijnbouw 49, 2, p. 135-144.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0cDdVR2QzNkkzbnM/view)
(Sundaland elevated shorelines at +10-12m, 16-18m 30-33m and 50m. Submarine strandlines at -82-90m, -67m, -60m, -50m, -45m, -36m, -30-33m, -28m, -22m, -18m, -13m, -10m and -7m. Sea levels of last 6000 years up to +6m)

Tjia, H.D. (1980)- The Sunda Shelf, Southeast Asia. Zeitschrift Geomorphologie, N.F. 24, 4, p. 405-427.
(During low sea levels of Quaternary Sunda Shelf floor was exposed, and three large and three smaller drainage systems were carved. Radiometrically dated shorelines of northern shelf area indicate that during past 6000 years sea level fluctuated several times above present datum and once reached 4.5m elevation)

Tjia, H. (1996)- Sea-level changes in the tectonically stable Malay-Thai Peninsula. Quaternary Int. 31, p. 95-101.
(Malay-Thai Peninsula area of relative crustal stability. Over 200 Holocene shoreline indicators below and above present sea level have been radiocarbon dated, indicating that before 6 ka sea level rose from >-90 m below present level at initial rates of 15 mm/year, later 6 mm/year. At ~6 ka, rising sea reached +5m above

today's. After 6 ka maximum 6 ka transgression regional sea level subsided through series of fluctuations with amplitudes of 2m and periods of ~2000 years)

Tjia, H.D., S. Asikin & R. Soeria-Atmadja (1968)- Coastal accretion in western Indonesia. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 1, 1, p. 15-45.
(online at: http://www.jrisetgeotam.com/index.php/NIGM/article/viewFile/15-45/157)
(Coastal accretion high near mouths of large streams along Sumatra E coast (60-500m/ year) and Java N coast (55 -214m/year). Elsewhere on same coasts accretion rates ~15-30m/ year. Annual accretion near Padang, Sumatra W coast, less than 10m)

Tjia, H.D., S. Fujii & K. Kigoshi (1977)- Changes of sea-level in the southern China Sea area during Quaternary times. In: Quaternary geology of the Malay-Indonesian coastal and offshore areas, UN ESCAP, CCOP Techn. Publ. 5, p. 11-35.
(Review of shoreline indicators on and around Sunda Shelf (Malay Peninsula, Bangka- Belitung, etc.). Drowned Pleistocene shorelines traced to depths of 82-90m and raised shorelines at elevations up to 50m above sea level)

Tjia, H.D., S. Sujintno, Y. Suklija, R.A.F. Harsono, A. Rachmat, J. Hainim & Djunaedi (1984)- Holocene shorelines in the Indonesian tin islands. Modern Quaternary Research in Southeast Asia 8, Balkema, Rotterdam, p. 103-117.
(On Bangka and Belitung evidence of several marine terraces up to 3m above present-day high-tide level, reflecting eustatic sea level hihs in last 5300 years similar to those affecting Malay Peninsula)

Untung, M. (1967)- Results of a sparker survey for tin ore off Bangka and Belitung islands, Indonesia. United Nations ECAFE, CCOP Reports of 4th Session, Taipeh, p. 61-67.

Usman, E., A. Sudradjat, E.R. Suparka, I. Syafri & D. Muslim (2013)- Studi geokimia granit Bangka dan seismik refleksi resolusi tinggi untuk identifikasi batuan induk dan Sungai Purba di Prairan Kawasan Barat Indonesia. Proc. Joint Conv. 38th Indon. Assoc. Geoph. (HAGI) - 42nd Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0248, 4p.
(Geochemical studies of Bangka granites and high-resolution seismic reflection for host rock identification and ancient rivers in the western Prairan Region, Indonesia'. Granite in Bangka with 70-75% SiO2 and total alkali content 6.0 - 7.5%. Tectonic environment transitional between intra-plate granite and arc-related granite)

Van Baren, F.A. & H. Kiel (1950)- Contribution to the sedimentary petrology of the Sunda Shelf. J. Sedimentary Petrology 20, 4, p. 185-213.
(As sugggested by Molengraaff, Sunda Shelf is drowned peneplain. Abundant quartz in area around Borneo and Malacca, low-quartz sediments N of Java. Heavy minerals in seafloor sediments suggest ten petrological provinces. Along shore Sumatra and Java augites, hypersthenes and hornblendes of probable Tertiary volcanic source. Metamorphic andalusite and staurolite along Borneo coast, epidote and blue-green hornblende prominent in S China Sea area. Epidote, glaucophane, zircon, and rutile common in Meratus-Pulau Laut group, derived from dynamic metamorphic rocks of Bobaris-Meratus Mts. Also picotite from ultrabasic rocks)

Van Bemmelen, R.W. (1940)- De agmatitische graniet van Tandjoeng Binga (NW-Billiton). De Ingenieur in Nederlandsch-Indie (IV) 7, 5, p. 63-66.
('The agmatitic granite of Tanjung Binga (NW Belitung)'. Granite with numerous angular inclusions of dark rocks of kersantite, spessartite, malchite, microdiorite, minette, etc. Irregular structure with streaks of aplitic and pegmatitic varieties) in biotite-hornblende granite. At short distance from agmatitic granite contact-are metamorphic quartzites. Inclusions probably granitisation of ?Triassic diabase and quartzite)

Van Bemmelen, R.W. (1940)- Komen op Bangka pretriadische kristallijne schisten voor? De Ingenieur in Nederlandsch-Indie (IV) 7, 5, p. 67-68.
('Do pre-Triassic crystalline schists occur on Bangka?'. In Loemoet valley, N Bangka, near contact with Belinjoe-granite, gradual transition of Triassic Bangka Fm shales into micaceous schists with abundant

tourmaline. Also seen at Bukit Pemali mine and Mine 40. Schists do not represent older geological cycle, but originated by pneumatolytic metamorphosis of Triassic 'Bangka formation' phyllitic shales)

Van Bemmelen, R.W. (1941)- Origin and mining of bauxite in Netherlands-India. Economic Geology 36, 6, p. 630-640.
(Bauxite of aluminous laterite type, derived from Triassic aphanitic hornfels parent rock (unweathered at ~50m depth) on SE Bintan Island opposite Singapore. Production began in 1935 and now 5-6% of world production)

Van Bemmelen, R.W. (1949)- The Sunda shelf. In: The geology of Indonesia, Government Printing Office, Nijhoff, The Hague, 1, p. 298-325.

Van den Bold, W.A. & J.P. van der Sluys (1942)- On rocks from the isle of Batam (Riouw Archipelago). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 45, 10, p. 1003-1009.
(online at: www.dwc.knaw.nl/DL/publications/PU00017847.pdf)
(Petrographic descriptions of rocks collected by Roggeveen. Mainly post-Triassic granites, Carboniferous-Triassic 'Pahang Volcanic Series' and Upper Triassic 'Central Batam Fm' sandstones-shales)

Van der Wyck, O.H. (1896)- The occurrence of tin ore in the islands of Banca and Billiton. 17th Annual Report Dir. U.S. Geol. Survey 1895-1896, 3, p. 227-242.

Van Diest, P.H. (1865)- Bangka, beschreven in reistogten . C.F. Stemler, Amsterdam, p. 1-101.
(Report on travels and early tin exploration activities on Banka by mining engineer Van Diest)

Van Diest, P.H. (1872)- Inleiding tot de geognostische mijnbouwkundige rapporten der distrikten van Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1872, 1, p. 3-40.
(Introduction to geognostic- mining reports of the districts of Bangka'. Part of series of mining evaluations on Bangka Island)

Van Diest, P.H. (1872)- Rapport van het distrikt Soengei-liat, eiland Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1872, 2, p. 3-71.
(map online at: https://www.europeana.eu/portal/en/record/9200517/ark__12148_btv1b530622818.html)
('Report on the district Sungei-Liat, Bangka island'. Based on 1859-1861 surveys, in first volume of the 'Jaarboek van het Mijnwezen'. With map)

Van Diest, P.H. (1873)- Rapport van het distrikt Merawang, eiland Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 2, 1 (1873), p. 3-104 and 242-243.
('Report on the district Merawang, Bangka island'. Bedrock mainly mainly phyllites and sandstones, overlain by locally tin-bearing alluvial deposits around modern river beds (with numerous mine locations). With 1853-1862 production statistics). Granite in NE corner of island surrounded by ~800m wide zone with tin-bearing quartz veins. With 1:60,000 scale geologic map)

Van Dijk, P. (1879)- Obsidiaan van Billiton. Jaarboek Mijnwezen Nederl.-Oost-Indie 8, 2, p. 225-230.
('Obsidian from Billiton'. First description of Pleistocene glassy tektites, locally common in alluvial tin deposits of Belitung island (subsequently also called 'billitonites'; part of large SE Asian- Australia tektite-strewn field and dated at ~0.7-0.8 Ma; JTvG))

Van Lohuizen, H.J. (1918)- Over de wijze van voorkomen van het tinerts in het district Blinjoe op Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 46 (1917), Verhandelingen 1, p. 192-207.
('On the mode of occurrence of tin ore in the district Blinjoe on Bangka'. Primary tin ore in Bangka formed as 'pneumatolytic' formations in altered bedrocks around granite intrusions and in edges of granite ('greisen'))

Van Overeem, A.J.A. (1960)- The geology of the cassiterite placers of Billiton, Indonesia. Geologie en Mijnbouw 39, 10, p. 444-457.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0X2p0TmhuZEVycnc/view)

(On cassiterite placers on twice dissected old Sundaland peneplain around Beliting island. Includes discussion of basement geology: probably thick series steeply dipping Permo-Carboniferous sediments (strike ~N110°E, mainly dipping to N), with possible turbiditesand chert, intruded by Cretaceous granitoids. In SE of Belitung island Permian plant assemblages provisionally identified by Jongmans as Cathaysian (Gigantopteris) flora. In SE also Lower Permian cassiterized ammonoid Agathiceras sundaicum (Kruizinga 1950). At NW coast of island poorly preserved fusulinids, possibly M Permian Fusulina (Schwagerina))

Van Overeem, A.J.A. (1960)- Geological control of dredging operation on placer deposits, Billiton, Indonesia. Geologie en Mijnbouw 39, 10, p. 458-463.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0X2p0TmhuZEVycnc/view)
(Not much on geology)

Van Raadshoven, B. & J. Swart (1942)- On rocks from Karimon (Riouw Archipelago). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 45, 1, p. 89-96.
(online at: www.dwc.knaw.nl/DL/publications/PU00017704.pdf)
(Karimun island, SW of Singapore. Rocks collected by Roggeveen. Most of island post-Triassic biotite granites. Sediments in NE of island contact-metamorphic slates, quartzites, limestone, etc., possibly of Carboniferous and Triassic age. Basic plutonic rocks and associated metamorphics (metagabbros, diallagites, microfolded hornblende schists identical to schists of Singkep lsland) on small islands Temblas and Merak, off S coast of Karimun.(interpreted to be trace of Raub-Bentong Triassic suture zone by Pulunggono and Cameron 1984)

Van Wees, H. & C.P. de Vente (1984)- The primary tin-magnetite deposit of Gunung Selumar, Belitung Island, Indonesia: interim results of an exploration research study and ore genetic implications. SE Asia Tin Research Development Centre (SEATRAD), Ipoh, Report 22, p. 1-77. *(Unpublished?)*

Van Wessem, A. (1941)- On rocks from the islands of Soegi, Tjombol and Tjitlim, Riouw Archipelago, Netherlands East Indies. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 44, 10, p. 1219-1226.
(online at: www.dwc.knaw.nl/DL/publications/PU00017686.pdf)
(Petrographic descriptions of rocks collected by Roggeveen: schists, radiolarian chert as pebbles in conglomerate, quartzite, sandstones, greywackes, porphyrite, diotite, etc.)

Verbeek, R.D.M. (1897)- Geologische beschrijving van Bangka en Billiton. Jaarboek Mijnwezen Nederlandsch Oost-Indie 26, Wetenschappelijk Gedeelte, p. 1-272.
(Geological description of Bangka and Billiton (Belitung) Islands, E Sumatra, with focus on occurrences of tin. Incl. descriptions of radiolaria of probable Late Paleozoic age from chert by Hinde (p. 223-227) and 'glass pebbles (tektites))

Verbeek, R.D.M. (1897)- Glaskogels van Billiton. Jaarboek Mijnwezen Nederlandsch Oost-Indie 26, Wetenschappelijk Gedeelte, p. 235-272.
('Glass pebbles from Billiton'. Early description of up to 5cm large tektites, locally common on Belitung island in Pleistocene alluvial deposits. Also known from Java, Kalimantan and Australia. Can not be tied to Indonesian volcanoes, so Verbeek assumes extra-terrestrial origin, possibly from volcanoes on moon (now interpreted as part of large SE Asian- Australia tektite-strewn field, dated at ~0.7-08 Ma (see also Krause (1898), Wing Easton (1915, 1921), Von Koenigswald (1935), Chapman (1964), etc.; JTvG))

Von Koenigswald. G.H.R. (1933)- Soenda-plat en poolverplaatsing. De Mijningenieur. 14, 7, p. 124-130.
('The Sunda Shelf and polar wandering'. Sunda shelf between Sumatra, Java and Borneo is drowned alluvial plain now covered by Java Sea. Usually explained as Pleistocene post-glacial sea level rise of ~70-100m, but drowning may also be due subsidence related to change of geoid with shifting of pole in Pleistocene (?))

Wade-Murphy, J. & J.H.A. van Konijnenburg-van Cittert (2008)- A revision of the Late Triassic Bintan flora from the Riau Archipelago (Indonesia). Scripta Geologica 136, p. 73-105.
(Online at: http://dpc.uba.uva.nl/08/nr136/a04)

(Flora from SW Bintan Island, Riau Archipelago, partly described by Jongmans in 1951. Additional taxa identified. Absence of fern and sphenophytes and dominance of diminutive Pterophyllum and Ptilophyllum leaves. Stronger similarities between Bintan and SW Asia than with SE Asia floras. Differences may point to slightly younger age (E-M Jurassic), but unlikely to be Early Cretaceous as suggested by Kon'no 1972)

Wang, X.M., X.J. Sun, P.X. Wang & K. Stattegger (2007)- A high-resolution history of vegetation and climate history on Sunda Shelf since the last glaciation. Science in China Ser., D- Earth Sci., 50, p. 75-80.
(16,500-year high-resolution pollen and spore records from sediments of core 18287 on continental slope of southern S China Sea. Between 16.5-13.9 ka BP low-mountain rainforest dominated. In 13.9-10.2 ka BP lowland rainforest and ferns expanded, indicating warming at last deglaciation and pollen sedimentation rates reduced, implying rise of sea level/ submergence of shelf. After 10.2 ka BP, decreasing fern indicates early Holocene (10.2- ka BP) cold period, while increasing of fern marks rising temperature (7-3.6 ka BP)).

Wang, X.M., X.J. Sun, P.X. Wang & K. Stattegger (2009)- Vegetation on the Sunda Shelf, South China Sea, during the Last Glacial Maximum. Palaeogeogr. Palaeoclim. Palaeoecology 278, p. 88-97.
(online at: http://ocean.tongji.edu.cn/pub/pinxian/eng/2009-04.pdf)
(Pollen from Sonne 1996 cruise sediment cores along paleo-valley of North Sunda River on Sunda Shelf of southern S China Sea. During Last Glacial Maximum (22-16 ka) high percentages of pollen from lowland rain forests and lower montane rainforests, suggesting exposed shelf covered with humid vegetation. Marshy vegetation in valley along N Sunda River. Climate during LGM inferred from vegetation cooler today, but no significant decrease in humidity recorded)

Warburg, O. (1897)- Zwei neu fossile Phanerogamen-Gattungen von der Insel Bangka. Jaarboek Mijnwezen Nederlandsch Oost-Indie 26, p. 229-234.
('Two new phanerogam species from Bangka island'. Fossil Pliocene (?) plant fruit fossils collected by Verbeek in tin quarry 7 of Lumut River, Blinju District. Described by Dr. Warburg from Berlin as Spondiocarpus verbeekii and Monoderosperum bangkanum)

Westerveld, J. (1936)- On the geology of North Banka (Djeboes). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 39, 9, p. 1122-1132.
(online at: www.dwc.knaw.nl/DL/publications/PU00016981.pdf)
(Survey of NW Bangka Island. Oldest rocks thick, monotonous series of presumably Triassic-age, intensely folded dark shales and yellowish sandstones, steeply dipping, NW-SE or WNW-ESE trending. Sandstones mainly composed of undulose (metamorphic) quartz. Presence of radiolaria in shales similar to Triassic rocks in Malaya, etc. With Djeboes granite, part of large (~100 km) intrusive biotite granite mass. W of granite area diabase intrusions in folded Mesozoic clastics (should not be confused with Pahang series of Malay Peninsula))

Westerveld, J. (1936)- The granites of the Malayan tin belt compared with tin granites from other regions. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 39, p. 1199-1209.
(Brief overview, without figures, of tin granites of Sumatra (Banka, Billiton, etc.), Malay Peninsula, Cornwall, Saxony, Bolivia and S Africa)

Westerveld, J. (1937)- The tin ores of Banca, Billiton and Singkep, Malay Archipelago- a discussion. Economic Geology 32, p. 1019-1041.
(Discussion of Wing Easton 1937 paper, arguing that (1) there is one granite instead of two; depth of granitic intrusion and mineralization was deep; some contact-metamorphism is present. Tin mineralization not Pliocene but post-Triassic and probably pre-Cenomanian, etc.)

Westerveld, J. (1941)- Mineralisatie op de tineilanden. Jaarboek Mijnbouwkundige Studenten Delft 1938-1941, p. 187-233.
(online at: https://resolver.kb.nl/resolve?urn=MMAD01:000080001:pdf)
('Mineralization on the tin islands'. Comprehensive review of geology and tin mineralization on Bangka, Billiton and Riau-Lingga Archipelago, from presentation to Delft students in 1939. Tin granites believed to be of Jurassic age, intruded into isoclinally folded but not regionally-metamorphosed Triassic clastic sedimentary

series (derived from granitic rocks; with rare Daonella on Lingga and radiolarian chert). Tin Island granites rel. rich in Rare Earth Elements (Y, La, Ce, Nd). Primary cassiterite mineralization veins in sediments surrounding granite and in greisen zones in granite. Most tin mined from residual cassiterite deposits ('kaksa') in Quaternary valley bottoms above and around tin granite outcrops, both onshore and near-offshore. With maps of residual cassiterite deposits of Bangka and Belitung)

Wichmann, A. (1893)- Obsidianbomben der Zinnseifen der Insel Billiton. Zeitschrift Deutschen Geol. Gesellschaft 1893, p. 518-519.
('Obsidian bombs from the tin-bearing beds of Belitung Island'. Brief comment by Wichmann on glass spheres in tin beds of Belitung, but which are not found in Indonesian volcanoes. Described earlier by Van Dijk 1879 (see also Verbeek 1897, Wing Easton 1921, etc.; these are now known to be part of M Pleistocene Australasian tektite strewn field. JTvG))

Wichmann, A. (1912)- Over rhyolieth van de Pelapis-eilanden. Verslagen Vergadering Wis.-Natuurk. Afd., Kon. Akademie Wetenschappen, Amsterdam, 1912, p. 386-391
(online at: https://archive.org/details/p1verslagvandege21akad)
('On rhyolite of the Pelapis islands', between SW coast of Kalimantan and Karimata islands. Rhyolitic volcanic rock sample collected by Everwijn in 1854 from islands composed of claystones intruded by granitic rocks)

Widana, K.S. (2013)- Petrografi dan geokimia unsur utama granitoid Pulau Bangka kajian awal tektonomagmatisme. Eksplorium 34, 2, p. 75-88.
(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/708/623)
('Petrography and major element geochemistry of Bangka island granitoids: preliminary study of tectonomagmatism'. Bangka Island granitoids ages range from Late Permian- Late Triassic. Petrographic analysis show dominant granitoid type as Alkali feldspar- syeno granite. May have formed on continental arc where subduction and collision are involved. Some granitoids generally I- type peraluminous (Pemali, Koba, Pading, Romodong;'continental arc type). S-type granitoids in S and W Bangka (Toboali, Menumbing) characterized by high K2O and abundant biotite+ muscovite + cordierite (continental collision type))

Widana, K.S. & B. Priadi (2015)- Karakteristik unsur jejak dalam diskriminasi magmatisme granitoid Pulau Bangka. Eksplorium 36, 1, p. 1-16.
(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/2766/pdf)
('Characteristics of trace elements in granitoid magmatism discrimination on Bangka Island'. Klabat granitoids on Bangka Island studied for trace elements. Granitoids in E (Belinyu) and C Bangka display crust-mantle mixing with calc-alkaline affinity, characteristic of I type(='Eastern Province'?). In S and W Bangka granitoids high K calc-alkaline and of S type (= 'Main Range'?))

Widana, K.S., B. Priadi & Y.T. Handayani (2014)- Profil unsur tanah jaring granitoid Klabat di Pulau Bangka dengan analisis aktivasi neutron. Eksplorium 35, 1, p. 1-12.
('Rare Earth Elements profile of Klabat Granitoid in Bangka Island by neutron activation analysis')

Wilhelm, C.H.J. (1928)- De tinertsafzettingen van het eiland Singkep en de genese der alluviale afzettingen. Doct. Thesis, Technical University Delft, Waltman, Delft, p. 1-126.
(online at: http://resolver.tudelft.nl/uuid:578affd6-2c32-4bcc-8198-477e1c41ac54)
('The tin ore deposits of Singkep island (E Sumatra) and the genesis of the alluvial deposits'. Singkep geology mainly granite and mica schist. Alluvial tin ores derived from tin-bearing quartz veins in granite. Tin ore reserves of Singkep less than on Belitung and Bangka)

Willems, H.W.V. (1940)- Fayalite from Seloemar mine, Billiton, Netherlands East Indies. Geologie en Mijnbouw 2, 2, p. 26-29.
(online at: https://drive.google.com/file/d/1di97JSfi0Ew8JM7LMEjCVY21AOlyAMJ_/view)
(Occurrence of fayalite, an iron-chrysotile mineral from Selumar tin mine, E Belitung. Associated with serpentine, magnetite and sulphides)

Wing Easton, N. (1921)- The billitonites (an attempt to unravel the tectite puzzle). Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, sect. 2, 22, 2, p. 1-32.
(On 'billitonites' (tektites; black glass pebbles from meteorite impacts), found at the base of the tin-bearing alluvium of Belitung Island, and first reported by Verbeek (1887) and Krause (1898). Believed to be of extraterrestrial origin by earlier authors (Verbeek, Suess), but Wing Easton noted 89% SiO2 is much too high for meteorites and suggested terrestrial origin as colloidal formations in soil horizons (similar tektites also known from tin-bearing beds of the Malay Peninsula, Bunguran (Natuna), N Borneo, SE Kalimantan, Indochina, Philippines, Australia; JTvG))

Wing Easton, N. (1925)- Billiton- herinneringen. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 125-154.
('Billiton memories'. Geological observations on geology and tin mineralization of Belitung island, made in 1919/1920)

Wing Easton, N. (1933)- De geologische geschiedenis van Billiton en het ontstaan der kaksa. De Mijningenieur 14, 10, p. 165-174.
('The geological history of Belitung and the origin of the 'kaksa'. Partly critique of Adam (1933) papers. Kaksa tin ore is residual product of weathering of granite, not alluvial-fluvial transported. Followed by Adam rebuttal)

Wing Easton, N. (1937)- The tin ores of Banca, Billiton and Singkep, Malay Archipelago, Part I. Economic Geology 32, 1, p. 1-30.
(First overview in English languge of geology and tin mining on Bangka, Belitung and Singkep- part 1. Most of tin produced from secondary placer deposits, but primary mineralization in veins in granite. WE believes there are two groups of granites, one older than folded sediments without tin and one younger (Cretaceous) age with tin mineralizion. Mineralization age believed to be Pliocene. Conclusions disputed by Westerveld 1937)

Wing Easton, N. (1937)- The tin ores of Banca, Billiton and Singkep, Malay Archipelago, part II. Economic Geology 32, 2, p. 154-182.
(Overview in English languge of geology and tin mining on Bangka, Belitung and Singkep- part 2. On ore deposits, mainly on formation and distribution of valley placer deposits called 'kaksa beds' (see also critical discussion by Westerveld 1937))

Wisoko (1981)- Geologi endapan timah primer di Pemali, Bangka. Proc. 10th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 193-203.
('Geology of primary tin deposits in Pemali, Bangka')

Wisoko (1983)- Pengaruh kipas aluvial terhadap penyebaran bijih timah sekunder daerah Mentok Selatan Bangka. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 293-300.
('Influence of alluvial fan deposition on secondary tin ore deposition in the South Mentok area, Bangka')

Wong, H.K., T. Ludmann, C. Haft & A.M. Paulsen (2003)- Quaternary sedimentation in the Molengraaff Paleo-delta, Northern Sunda Shelf (Southern South China Sea). In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology, SEPM Spec. Publ. 76, p. 201-216.
(Seven seismic units in M-L Pleistocene lowstand delta at Sundaland margin, fed by Molengraaff/ North Sunda river during Last Glacial Maximum. Outer Sunda shelf was delta plain of Molengraaff river system during Last Glacial Maximum)

Wu, S.G., H.K. Wong, Y.L. Luo & Z.R. Liang (1999)- Distribution and origin of sediments on the northern Sunda Shelf, South China Sea. Chinese J. Oceanology Limnology 17, p. 28-40.
(77 surface sediment samples and seismic profiles from outer Sunda Shelf analyzed. Seismic shows thick, prograding Pleistocene deltaic sequence near shelf-break and thin Holocene sediment layer on outer shelf. Five sedimentary areas distiguished: modern Mekong sediments, insular shelf area receiving sediments from Borneo

rivers, shelf area near Natuna-Anambas islands, area of relict sediments on outer shelf N of Natuna Islands, and coral reefs and detritus)

Zulfikar, M. & N.C.D. Aryanto (2016)- The study of seafloor tin placer resources of Quaternary sediment in Toboali waters, South Bangka. Bull. Marine Geol. 31, 2, p. 67-76.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/285/275)
(Boomer shallow seismic survey off S coast of Bangka to determine Quaternary sediment thickness (5-20ms))

Zwartkruis, T.C.J. (1962)- Orbicule-bearing blastopsammitic hornfelses from southern Bangka, Indonesia. Ph.D. Thesis University of Amsterdam, p. 1-94. *(Unpublished)*
(Descriptions of contactmetamorphic hornfels, adjacent to tin granites of probable E-M Jurassic-age. Material collected by De Roever in 1947. Orbicular structures probably metamorphosed calcareous concretions in clastic precursor rock. Also first description of 'diamictite' from S Bangka (interpreted as mudflow deposit, possibly same as E Permian glacial 'pebbly mudstone' known from N Sumatra, W Malaysia, peninsular Thailand, etc; U Ko Ko 1986))

Zwierzycki, J. (1920)- Zijn de Indische petroleumterreinen, in het bijzonder die op Sumatra, peneplains of abrasievlakken? De Mijningenieur 1, 2, p. 3-5.
(online at: https://babel.hathitrust.org/cgi/pt?id=coo.31924081565537;view=1up;seq=25)
('Are the Indies petroleum-bearing areas, in particular those on Sumatra, peneplains or abrasion plains?' Landscape of petroleum terrains in N and S Sumatra and Java routinely viewed as peneplains on gently folded Tertiary sediments. Age of folding probably Pleistocene, not leaving much time for peneplanization by complete fluvial erosion cycle; wave abrasion on coastal plains probably faster, and more likely mechanism)

Zwierzycki, J. (1933)- Enkele nieuwere geologische waarnemingen op de tineilanden en op Sumatra betreffende het tinvraagstuk. De Mijningenieur 14, 10, p. 171-176.
('Some newer observations on the tin islands and on Sumatra regarding the tin problem'. Mainly response to Wing Easton (1933). Oldest rocks on Bangka isoclinally folded crystalline schists and non-metamorphic sediments, reminescent of schists of Lampung. (Permian?-)Triassic Pahang Volcanic series of Malay Peninsula probably continues into Batam, Bintan and Lingga, then also to diabase on Bangka and N coast of Belitung (also >1000m thick, isoclinally folded Triassic 'flysch-type' sediments). 'Kaksa' and overlying 'koelit' tin placers all very young, probably Holocene (with rel. young Elephas sumatranus fossils). In some mines four 'kaksa' tin ore horizons (here clearly fluvial?). (Other interesting observation on S Sumatra, p. 173:'Small anticlinal dome on Palembang-anticline 18 km W of Palembang exposes gravel bank of Lower Palembang Fm, containing chunks of Pahang Volcanic Series with Fusulina and vein quartz with cassiterite crystals; at 191m at Bioekoe granite syenite, similar to exposed at Bukit Batu'; JTvG)

II.5. Natuna, Anambas

Adrian, H., L. Andria & A. Sudarsana (2005)- Horizontal well placements using V shale and facies geomodel: an example from Belanak Field, South Natuna Sea, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 145-162.
(Main reservoirs in Belanak Field, S Natuna Sea Block 'B' are U Oligocene Gabus Massive Sand and Gabus Zone-3. Massive Sand gas with thin oil rim, deposited in a fluvial channel environment. Multi-storied channel sands. Porosity ranges similar throughout field, but permeabilities are variable)

Alyadrus, M.A. & R.L. Coates (1990)- Successful marginal feld development, Ikan Pari Field, Natuna Sea. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 345-351.
(Ikan Pari Field, discovered in 1983, 50 miles NE of Udang Field. Developed with four seafloor completions)

Ardhie, M.N. (2004)- An inversion structure and its implication for structural trapping mechanisms: study of Kakap PSC, West Natuna Basin, Indonesia. Masters Thesis, University of Texas at Arlington, p. 1-113. *(Unpublished)*
(W Natuna basin formation Eocene-Oligocene transtension, followed by Miocene- Recent transpression and inversion. In Kakap PSC two rift trends: NW-SE and NE-SW major half-graben and series of smaller half-graben, all associated with Sunda folds and flower structures. Main phase of inversion E-M Miocene (thinning of M-U Arang Fms), second phase in M-L Miocene (base Muda unconformity). Tectonostratigraphy of Kakap PSC four major tectonic events; syn-rift, transitional, inversion and post-inversion)

Arif, F. & C. Kenyon (2017)- Lama play assessment based on reservoir effectiveness using structural evolution modeling in Natuna A Block. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 8p.
(Play assessment of Eo-Oligocene early syn-rift Lama Fm quartz-rich fluvio-lacustrine clastics in Natuna A Block. Due to deep burial, reservoir effectiveness critical risk (especially due to quartz cementation. Two main erosion events: (1) base Miocene (Base Arang shale; ~25 Ma); (2)M Miocene unconformity (~16- 11 Ma). Sweet spots for Lama Play at rift flexural margin)

Bachtel, S.L., R.D. Kissling, D. Martono, S.P. Rahardjanto, P. Dunn & B.A. MacDonald (2004)- Seismic stratigraphic evolution of the Miocene-Pliocene Segitiga platform, East Natuna Sea, Indonesia: the origin, growth, and demise of an isolated carbonate platform. In: G. Eberli et al. (eds.) Seismic imaging of carbonate reservoirs and systems, American Assoc. Petrol. Geol. (AAPG) Mem. 81, p. 309-328.
(High-resolution 2D seismic survey over Segitiga Platform (1400 km2), E Natuna-Sarawak Sea. Terumbu Fm carbonate up to 1800m thick, subdivided into 12 seismic sequences, showing (1) initial isolation; (2) progradation /coalescence; (3) backstepping; (4) terminal drowning. Platform originated as 3 smaller platforms on highs, separated by deep intraplatform seaways. Three platforms merged into composite platform in M-U Miocene. Rapid end Miocene sea level riset caused major backstepping of carbonate margins (and drowning of Natuna field carbonate platform to E) resulting in smaller platform in Lower Pliocene. Rapid subsidence at end of E Pliocene, caused terminal drowning)

Ben-Brahmin, L. et al. (1999)- Characterization of seismic anomalies using converted waves: a case of history from East Natuna Basin. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 295-302.

Bennett, M. (1999)- Intra-Muda shallow gas in Cumi-Cumi PSC, Natuna Sea- a driller's nightmare becomes a geophysicist's dream. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), p. 303-321.
(M Miocene age Intra-Muda Fm. sandstones draped over inversion feature. Strong seismic amplitude anomaly over crest, with 'flatspots' around flanks of structure and gas-charged in Tenggiri 1 and Mako 1 wells)

Bhikuningputra, D. (1986)- Seismic stratigraphic study to evaluate reservoirs and seals of the Natuna area. In: Seismic Stratigraphy I, Proc. Joint ASCOPE/ CCOP Workshop, Jakarta 1986.CCOP Tech. Publ. 17, p. 157-180.

Bothe, A.C. (1928)- Geologische verkenningen in den Riouw-Lingga archipel en de eilandengroep der Poelau Toedjoeh (Anambas- en Natoena-eilanden). Jaarboek Mijnwezen Nederlandsch Oost-Indie 54 (1925), Verhandelingen 2, p. 101-152.
(Geological reconnaissance surveys of Riau Archipelago (common granites), Anambas Islands (mainly granites) and Natuna islands (metamorphic rocks, possibly Jurassic radiolarian chert, serpentinites, granites). At S coast of Natuna Besar (Bunguran) NW-SE and E-W trending siliceous shales with cherts with Late Jurassic- E Cretaceous radiolaria identical to described by Hinde (1900) from Danau Fm of NW Kalimantan (Cenosphaera, Stichocapsa rotunda, Sethocapsa, Dictyomitra). At W coast of Bunguran gabbro and serpentinite)

Budiyono (2002)- Forel field reservoir characterization and field assessment, West Natuna Basin Indonesia. M.Sc. Thesis University of Texas, Austin, p. 1-178. *(Unpublished)*

Burton, D. & L.J. Wood (2010)- Seismic geomorphology and tectonostratigraphic fill of half grabens, West Natuna Basin, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 94, 11, p. 1695-1712.
(Study of Eo-Oligocene synrift architectures of Cenozoic grabens in W Natuna Basin (WNB) from Gabus and Belanak 3D seismic surveys. Five facies: fluvial, deltaic, alluvial fan, shallow lacustrine and deep lacustrine. Synrift stratigraphy shows strong tectonic control. Hydrocarbon in basin restricted to upper synrift- postrift reservoirs in M Miocene inversion anticlines, but synrift may have potential)

Burton, D. & L.J. Wood (2010)- Interpreting the rift stratigraphy and petroleum systems elements of the West Natuna Basin using 3D seismic geomorphology. In: L.J. Wood et al. (eds.) Seismic imaging of depositional and geomorphic systems, Proc. Gulf Coast Sect. SEPM (GCSSEPM) Annual Bob F. Perkins Research Conf. 30, Houston, p. 376-395.
(Seismic geomorphic facies character and stacking suggest three stages of rift development in W Natuna Basin. (1) alluvial fans and red beds filled small, isolated half-grabens; (2) as faults began to merge, subsidence increased, and deep lakes were established; (3) lakes slowly filled and upper synrift is dominated by fluvial deposits. Best remaining exploration targets deltaic reservoirs in lower middle synrift)

Chalik, M. (2001)- Sealing and non-sealing faults along a major wrench trend in the Kakap area, West Natuna Basin. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 757-778.
(Oil traps at KG, KRN and KR oil fields in 3-way dip closures against sealing normal faults, splaying from large wrench zone. Faults seal hydrocarbons where fault throw is >300' or where reservoir is in contact with shale across fault)

Challis, M., R. Adhyaksawan & V. Ball (2006)- Seismic prediction of thin sand intervals for development drilling at North Belut Field, Block B, South Natuna Sea. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-CH-06, 5p.

Cherdasa, J.R., A. Jollands & S. Carmody (2013)- Structural reconstruction and basin modelling lead to a new charge/migration model for the KB Graben, West Natuna Basin, Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-039, p. 1-14.
(KB Graben is NE-SW trending rift basin at E flank of Khorat Platform in N West Natuna Basin. Rifting process started at ~38 Ma and continued to 25 Ma; syn-inversion period started at ~23 Ma. Lack of oil in younger structures may be due to late syn-rift Lama Fm overpresssured shales, which provide regional seal for hydrocarbons generated in syn-rift kitchen)

CoreLaboratories (1999)- The petroleum geology and hydrocarbon potential of East Natuna, Indonesia. Unpublished multi-client study.
(Study/ data base, incorporating 23 wells in East Natuna Basin)

Dajczgewand, D. (2005)- Tectonic evolution and structural styles of deformation of southern Kakap Blocks, West Natuna Basin, Indonesia. In: Proc. 6th Congr. Exploracion y desarrollo de hidrocarburos, Mar del Plata, Argentina, 2005, 12p.

(Structural evolution of Kakap oilfield area, W Natuna basin, based on work done for M.Sc Thesis at University of London. Extension started in Late Eocene, creating E-W trending half-graben with N-dipping normal faults. Second extensional phase began in M Oligocene. Compression started in latest Late Oligocene, initial stage being mild, and was stronger in E. Strongest compression/ tectonic inversion in M Miocene. Muda regional unconformity developed in late M Miocene and early Late Miocene and was subsequently deformed by compression, continuing to recent times)

Daines, S.R. (1985)- Structural history of the West Natuna Basin and the tectonic evolution of the Sunda region. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 39-61.
(Structures in W Natuna Basin formed during two deformation periods: (1) extension from ~38-29 Ma, resulting in graben development in Boundary area; (2) compression, resulting in 2 stages basin inversion, 29-20 Ma left-lateral wrench movement and 15- 10 Ma when most NE-SW oil-bearing anticlines formed. Extensive Jurassic suture, separating Indochina and Sunda, responsible for propagation of Malay-Natuna-Lupar shear zone, and facilitated basin development in area)

Darmadi, Y. (2005)- Three-dimensional fluvial-deltaic sequence stratigraphy Pliocene-Recent Muda Formation, Belida field, West Natuna Basin, Indonesia. M.Sc. Thesis, Texas A&M University, p. 1-72.
(online at: oaktrust.library.tamu.edu/bitstream/.../etd-tamu-2005C-GEOP-Darmadi.pdf)
(Pliocene-Recent Muda interval in W Natuna Basin contains five 3rd-order sequences, with depositional environments confined to shelf and consisting mainly of fluvial elements)

Darmadi, Y., E. Hartadi, B. Pangarso, I. Sihombing & R. Wijayanti (2011)- Reservoir characterization of the Gabus-1 reservoir in North Belut Field: an integration of core, well logs and seismic, Natuna Sea Basin, Indonesia. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-196, 19p.
(N Belut 1974 gas discovery with stacked sand reservoirs across 1700' interval deposited in fluvio-deltaic environments in Oligo-Miocene Udang and Gabus Fms. Gabus 1 interval two major sequences with sharp erosional base and shale on top. NNE-SSW trending incised valley system)

Darmadi, Y, B.J. Willis & S.L. Dorobek (2007)- Three-dimensional seismic architecture of fluvial sequences on the low-gradient Sunda Shelf, Offshore Indonesia. J. Sedimentary Res. 77, p. 225-238.
(Sequence stratigraphy of Belida Field area, W Natuna Basin. Upper Muda Fm Pliocene-Holocene fluvial architecture study from high-resolution seismic. 225m dominantly fluvial section. Five main sequences of episodic channel incision and bypass alternating with periods of floodplain aggradation)

Darman, H. (2017)- Seismic expression of key geological features in the East Natuna Basin. Berita Sedimentologi 38, p. 50-61.
(online at: https://drive.google.com/file/d/0B35lLH-Cki2NV01LNEVCcGl2Z2M/view)
(Examples of regional seismic lines across East Natuna basin rifts and highs with carbonate buildups)

Dash, B.P. (1971)- Preliminary report on seismic refraction survey southeast of Natuna Islands and seismic profiling in the vicinity of the Natuna and Tioman Islands on the Sunda Shelf. United Nations ECAFE, 8th Session CCOP, p. 168-174.

Dash, B.P., C.M. Shepstone, S. Dayal, S. Guru, B.L.A. Hains, G.A. King & G.A. Ricketts (1972)- Seismic investigations on the northern part of the Sunda shelf South and East of Great Natuna Island. United Nations ECAFE CCOP Techn. Bull. 6, p. 179-196.
(Regional shallow seismic survey of 1160km, SE of Great Natuna island, showing basinal and ridge-like features. Khorat- Natuna swell may be linked with mainland Asia and NW Kalimantan)

Dickerman, K.M. (1993)- The utilization of 3D seismic for small fields in the South Natuna Sea Block B. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 659-678.

Dunn, P.A., M.G. Kozar & Budiyono (1996)- Application of geoscience technology in a geologic study of the Natuna gas field, Natuna Sea, offshore Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 117-130.
(Natuna D Alpha gas field in the East Natuna Basin in Miocene reefal buildup with >200TCF gas, but gas has 71% CO2)

Evans, H. (1998)- New life in an old basin, an example from Natuna Sea Block A, West Natuna, Indonesia. In: Offshore South East Asia Conf. 1998 (OSEA98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 141-154.
(Review of exploration history West Natuna Basin and its extension into E Malay Basin)

Eyles, D.R. & J.A. May (1984)- Porosity mapping using seismic interval velocities, Natuna L structure. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 301-316.
(Seismic interval velocities used to produce average porosity map of the gas-bearing carbonate buildup reservoir of 'L-structure' in Natuna D-Alpha Block, S China Sea. Maximum gross gas thickness of L-Structure is 5250', field size ~110 square miles)

Fachmi, M. (2003)- Quantitative seismic geomorphology of Gabus and Belanak fields, West Natuna Basin, Indonesia. M.S. Thesis, University of Texas, Austin, p. 1-74. *(Unpublished)*

Fachmi, M. & L.J. Wood (2005)- Seismic geomorphology: a study from West Natuna Basin, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, IPA05-G-190, p. 163-178.
(Two types of U-M Miocene fluvial/ fluvial-deltaic systems identified on 3D seismic horizon slices from Belanak and Gabus areas in W Natuna basin: meandering river system and distributary channel system)

Fahman, M., Faisal Nur, J.S. Djalal, Subagio & Kasjati (1991)- An overview of the Anoa field development. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 293-313.
(Small Anoa oilfield in West Natuna Sea, at Indonesian SE end of Malay Basin, E of Tapis Trend. Discovered in 1974 (AGIP), producing since 1990 (Amoseas))

Fainstein, R. & J. Meyer (1997)- Structural interpretation of the Natuna Sea, Indonesia. Soc. Exploration Geophysics (SEG) 1997 Conv. Abstract, p. 639-642.
(W Natuna Basin extensional episodes in Eocene and Oligocene, followed by compression/ inversion peaking in Late Miocene, with oil fields in syn-rift clastics and inversion anticlines. East Natuna basin major features are Miocene carbonate buildups)

Fairburn, J.R. (1994)- Conoco Belida Field- directional driling case study. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 315-325.

Franchino, A. (1990)- Notes sur les Iles Natuna. Archipel 39, p. 47-63.
(online at: www.persee.fr/doc/arch_0044-8613_1990_num_39_1_2619)
('Notes on the Natuna islands'. Mainly geographic description with notes and map on geology. Core of island E-W trending high composed of Jurassic- Cretaceous sediments and volcanics of Bunguran Beds, with common red cherts and with gabbros-serpentinites. Late Cretaceous granite intrusions, the largest Mount Ranai (1035m). Overlain by Oligocene Natuna Sandstone)

Franchino, A. & P. Liechti (1983)- Geological notes on the stratigraphy of the island of Natuna, Indonesia. Memorie Scienze Geol., Padova, 36, p. 171-193.
(2/3 of Natuna island with outcrops of Jurassic- Cretaceous Bunguran Beds. Late Cretaceous granite intrusions. Gabbros- peridotites in South, etc.)

Franchino, A. & C. Viotti (1986)- Stratigraphic notes on Middle Miocene-Recent sequence in East Natuna Basin (Indonesia). Memorie Scienze Geol., Padova, 38, p. 111-127.

(M Miocene- Recent stratigraphy of clastic and carbonate sediments and typical foraminifera in Agip oil exploration wells in Natuna Basin. Thick M Miocene- E Pliocene shelf limestone/ reef complex formerly named Terumbu here renamed Ranai Group (>5000' thick?). Ranai Gp subdivided into 3 Formations, Sahi (Tf1-2; M Miocene with Lepidocyclina spp., Miogypsina spp.), Panda (Tf3; Late Miocene, with Lepidocyclina rutteni) and Senua (Tg, latest Miocene, with Alveolinella quoii). Lateral basinal clastic equivalents named Pilong Fm)

Gaynor, J., G. Hepler & M. Thornton (1995)- the importance of reservoir characterization and sedimentology in the Belida Field development. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 361-375.
(On reservoir characterization of 214 MMBO Belida Field. Oil in two major units separated by 200' thick Barat shale: Oligocene Udang Fm fine-grained in lacustrine delta sandstone, and E Miocene Lower Arang Fm m-grained tide dominated marine shelf sandstones)

Ginger, D.C., W.O. Ardjakusumah, R.J. Hedley & J. Pothecary (1993)- Inversion history of the West Natuna Basin: examples from the Cumi-Cumi PSC. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 635-658.
(W Natuna Basin similar to many Sundaland basins with Late Eocene- E Oligocene extension creating complex system of rift basins. From earliest Miocene times basins progressively inverted in right-lateral stress regime. Wrench zones also developed by reactivation of NW-SE faults in earlier rift system. Displacement across faults relatively small, 1-2 km in Cumi-Cumi PSC. Magnitude of graben inversion depends on initial size and orientation of original half graben. Each graben unique inversion history in framework of Miocene inversion)

Grabowski, G.J., R.M. Kick & D.A. Yurewicz (1985)- Carbonate dissolution during late-burial diagenesis of the Terumbu Limestone (Miocene), East Natuna Basin, South China Sea, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 69, 2, p. 258. *(Abstract only)*
(Terumbu Lst reservoir 200 TCF (72% CO_2), 1500m of M-L Miocene platform-reef carbonates with complex diagenetic history. Partial marine cementation and micritization in platform environments during deposition. Freshwater diagenesis below subaerial unconformities within and at top Terumbu. Aragonitic grains leached, pores partially cemented by low-Mg calcite. Pressure solution and cementation during burial to ~3000m left minor porosity. Late burial leaching high-Mg calcite. Ferroan-calcite and dolomite cements line pores and fluorite crystals occlude many pores. Whole-rock isotopes suggest high-T carbonate alteration. CO_2 derived from dissolved Terumbu Lst. Fluoride-bearing hydrothermal fluids from granitic basement selectively dissolved constituents in deeply buried Terumbu)

Granath, J.W., M.G. Dinkelman, J.M. Christ & P.A. Emmet (2012)- Crustal-scale imaging in the Natuna Basin (Indonesia) and its impact on the tectonic history of the Central Sunda Craton. AAPG Int. Conf. & Exh., Singapore 2012, Search and Discovery Art. 90155, 1p. *(Abstract only)*
(online at: www.searchanddiscovery.com/abstracts/html/2012/90155ice/abstracts/gra.htm)
(Well penetrations of basement in Natuna Basins suggest it is composed of Mesozoic forearc and arc-related lithologies. New regional seismic survey compatible with concept that crust is accretionary prism and arc. Crustal thickess 25 km in E, to 35 km in W. W-dipping planar fabric under E Natuna Basin compatible with forearc above W dipping subduction zone. Arcuate to parabolic reflectors under W Natuna Basin may be plutonic bodies of volcanic arc batholiths. Oligo-Miocene extension in E Natuna roots in this fabric. Miocene inversion with (transpressive?) positive flower structures along Cumi Cumi and Kakap wrench zones. Wrench zones correlate in time with late phase of subsidence in neighboring Malay Basin)

Gunarto, M.O., B.P. Istadi & H.R. Siregar (2000)- Sequence stratigraphy study in Northwest Natuna. Proc. 29^{th} Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 103-139.
(11 sequences in Late Eocene- M Miocene between basement and base Muda unconformity (M-L Miocene boundary. Geological history Natuna basin 4 phases: syn-rift (seq. 1-2; Late Eocene- E Oligocene), post-rift (seq. 3-4; Late Oligocene), syn-inversion (seq. 5-10; E-M Miocene), post-inversion (Late Miocene- Recent)

Haile, N.S. (1970)- Radiocarbon dates of Holocene emergence and submergence in the Tambelan and Banguran Islands, Indonesia. Geol. Survey Malaysia Bull. 3, p. 135-137.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1970011.pdf)

(C14 dates from Tridacna clams in Tambelan islands suggest sea level was higher by at least 0.3m at ~5600 BP and 0.4m at ~5270 BP. Wood from peat below tide level in Bunguran (Natuna) islands indicates sea level 0.7m lower at ~6260 BP)

Haile, N.S. (1970)- Notes on the geology of Tambelan, Anambas and Bunguran (Natuna) islands, Sunda shelf, including radiometric age determinations. United Nations ECAFE, CCOP Techn. Bull. 3, p. 55-90.
(Tambelan Islands S of Natuna composed of basic-intermediate igneous rocks and tuffs, intruded by Late Cretaceous (84 Ma) granite. Anambas Islands, SW of Natuna, composed of granite, andesite, etc. Bunguran-Natuna Islands composed of probably Mesozoic folded cherts and metasediments, with three granite intrusions, one dated as 73 Ma. Unconformably overlain by flat-lying Tertiary Natuna sandstone)

Haile, N.S. (1971)- Confirmation of the Late Cretaceous age for granite from the Bunguran and Anambas islands, Sunda shelf, Indonesia. Geol. Soc. Malaysia Newsl. 30, p. 6-8.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1971003.pdf)
(Previously published K/Ar determinations by Bignell indicate Late Cretaceous ages for granites from Tambelan (84 Ma) and Bunguran (Natuna) Islands (73 Ma)). Additional analyses by AGIP gave 75.2 Ma age for same Ranai Intrusion of Bunguran Island and 86.6 Ma age for Batu Garam, Anambas Islands)

Haile, N.S. & J.D. Bignell (1971)- Late Cretaceous age based on K/Ar dates of granitic rock from the Tambelan and Bunguran Islands, Sunda Shelf, Indonesia. Geologie en Mijnbouw 50, 5, p. 687-690.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0ZTQ4cGxXeDFDVlE/view)
(Late Cretaceous K/Ar ages ages for granites (adamellites) from Tambelan (84 Ma) and Bunguran (Natuna) Islands (73 Ma). These ages throw doubt on supposed 'pre-U Triassic' age of acid batholiths in Anambas Zone of Sunda Shelf and its extension into W Borneo)

Hakim, A.S. (2004)- The occurrence of the dismembered ophiolite in the Bunguran islands, Riau Province, Sumatra. J. Sumber Daya Geologi 14, 3 (147), p. 3-15.
(Bunguran (Natuna Besar, Laut, etc.) islands tectonostratigraphy similar to NW Kalimantan. Along W side of island basement composed of Jurassic peridotites, gabbros and basalts (part of Proto-China Sea crust), overlain by siliceous shale chert and amphibolite (Cretaceous Bunguran Fm). Intruded by Cretaceous granites in E and S: Ranai hornblende-biotite granite (71.6 Ma) and Semiun muscovite-biote granite (100 Ma))

Hakim, M.R., M.Y.Y. Naiola, Y.R.A. Simangunsong, K.P. Laya & T.Y.W. Muda (2008)- Hydrocarbon play of West Natuna basin and challenge for new exploration related to structural setting and stratigraphic succession. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-SG-039, 11p.
(W Natuna Basin started to form in Late Eocene by SW-NE trending half-graben rifting within Sunda Platform. M Oligocene- E Miocene tectonic quiescence followed by M Miocene tectonic inversion. Significant inversion in N part of basin, none in main area. Eo-Oligocene lacustrine source rocks. Primary reservoir M-L Oligocene Gabus Sst. Still remaining hydrocarbon potential.

Hakim, A.S. & N. Suryono (1994)- Geological map of the Teluk Butun and Ranai Sheet, Sumatera, Quad 1319-1320, 1:250,000, Geol. Res. Dev. Centre (GRDC), Bandung.
(Natuna Islands surface geology mainly Cretaceous accretionary complex. Oldest rocks in SW part of Bunguran (=Natuna) Besar island Jurassic or E Cretaceoeus peridotites-gabbro-basalt, overlain by widespread E-M Cretaceous Bunguran Fm strongly folded siltstone, tuff and chert (melange sediments?), intruded by Late Cretaceous (100, 72 Ma) granites. Overlain by rel. thin Tertiary clastics)

Hakim, A.S. & N. Suryono (1997)- Geologi Kepulauan Bunguran, Riau. J. Geologi Sumberdaya Mineral 7, 73, p. 17-28.
('Geology of the Bunguran islands, Riau'. Natuna Besar and adjacent islands composed Pre-Tertiary 'Natuna Complex' basement of (1) Jurassic- mafic-ultramafic rocks and amphibolites-schists in SW, (2) Bunguran Fm strongly folded siliceous shales and chert in E, separated by NW-SE trending shear zones. Also (3) Cretaceous granites at Ranai at E side Natuna Besar (K/Ar age 101 Ma) and on Pulau Semiun NW of Natuna Besar (72 Ma). Unconformably overlain by rel. thin (<400m) and flat-lying Oligocene- Miocene Pengadah Fm fluvial

sediments. Sheared zone believed to be continuation of Crocker- Rajang complex in W tip of Sarawak, tectonically close to 'Lupar Zone' of collision between Eurasia and Indian Ocean plate in Jurassic time)

Harahap, B.H. (1994)- Middle to Late Cretaceous age based on K/Ar dating of granitic rocks from the Serasan Islands, South Natuna. J. Geologi Sumberdaya Mineral 4, 31, p. 2-4.
(K/Ar ages of two M-U granitoids from Serasan island S of Natuna Besar island: biotite granodiorite in SW part Serasan (112.3 Ma) and biotite granodiorite of Sedua island, NE of Serasan (69.7 Ma). Part of SW-dipping Cretaceous subduction zone/ volcanic arc that stretches from W Kalimantan to Natuna Besar (with dates of 71, 74 Ma; Haile & Bignell 1971))

Harahap, B.H., S.A. Mangga & U. Hartono (1996)- High Nb content basalts from Midai Island South Natuna: evidence for intraplate volcanism? J. Geologi Sumberdaya Mineral 6, 54, p. 6-11.
(Midai extinct volcano SSW of Bunguran (Natuna Besar) represents youngest volcanism in S China Sea. Plio-Pleistocene basaltic lavas and tuffs. Not subduction-related, but possibly related to rifting of Sundaland continental crust in Natuna area. Classified as continental tholeiite, similar to Matulang and Niut volcanics of Kalimantan, and possibly continuation of same magmatic belt)

Harahap, B.H., S.A. Mangga & S. Wiryosudjono (1995)- Geological map of South Natuna sheet, Quad. 1318, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Harahap, B.H. & S. Wiryosujono (1994)- Geology of the South Natuna sheet. J. Geologi Sumberdaya Mineral 4, 30, p. 15-23.
(Oldest rocks on Natuna islands are Jurassic Seraya Complex ophiolites (peridotites, gabbros, basalts; may correlate to Serabang Ophiolite of W Kalimantan) and Balau Fm Jurassic- Cretaceous turbiditic sequence in E (no fossils, but correlated to Pedawan Fm of W Borneo). Ophiolite and sediments intruded by Late Cretaceous Serasan/ Tebeian granites/ granodiorites (K/Ar ages ~70 and 112 Ma) and volcanics, representing Cretaceous SW-dipping subduction zone, parallel to 'Lupar Line' of N Borneo. Teraya Fm ?Oligo-Miocene and younger fluvial- shallow marine sediments unconformable over Mesozoic. Midai island S of Natuna with Plio-Pleistocene olivine basalts similar to Mt Niut in N Sanggau, W Kalimantan. Pre-Tertiary rocks dip 17-77°, Tertiary rocks 5-12°)

Haribowo, N., S. Carmody & J. Cherdasa (2013)- Active petroleum system in the Penyu Basin: exploration potential syn rift and basement-drape plays. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-041, p. 1-16.
(Penyu Basin, N Natura area, composed of several NE-SW trending Tertiary half grabens. Rifting from M Eocene- E Oligocene controlled deposition of syn-rift Benua/Lama and Belut Fms source rocks. M-L Miocene inversion created ENE-WSW trending anticlines, which proved to be successful hydrocarbon traps in Malay and W Natuna Basins, but 80% failure rate in Penyu Basin)

Hutomo, P. & W.V. Jordan (1985)- Wireline pressures detect fluid contacts, Ikan Pari Field, Natuna Sea. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 543-563.

Ilona, S. (2006)- 3D structural architecture of the KRA Field, West Natuna Basin, Indonesia. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta 06-PG-14 3D, 5p. *(Extended Abstract)*
(KRA Field large structure in W Natuna Basin, formed by NNW-SSE trending Eocene-E Oligocene extension, followed by E-M Miocene compression)

Ilona, S. (2006)- 3D structural architecture and evolution of the West Natuna Basin, Indonesia. AAPG Int. Conf. Exhibition, Perth 2006, 6p. *(Extended abstract)*

Indranadi, V.B., Y. Indra, A. Rifai, A. Saripudin, F. Kamil & R. Waworuntu (2018)- Outcrops in Natuna Island: new insights of reservoir potential and sediment provenance of the East Natuna Basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-319-G, 9p.

('Basement' outcrops on Natuna Islands Jurassic- E Cretaceous ophiolite (peridotite-gabbro- basalt) and (NE-dipping?) ?Cretaceous melange/ subduction complex of Bunguran Fm in SW, with intensely folded deep marine pelagic siltstones, radiolarian cherts and tuffs, and sandstones in scaly clay matrix. In NE and E intruded by Late Cretaceous granodiorites (~71-73 Ma) in Ranai area. Pre-Tertiary overlain by Tertiary fluvial-shallow marine basal conglomerates, stacked sandstones and interbedded siltstone-claystone. Sandstones mostly sub-litharenites, dominated by quartz, chert and metamorphic fragments, of good potential reservoir quality)

Jagger, L.J. & K.R. McClay (2018)- Analogue modelling of inverted domino-style basement fault systems. Basin Research 30, Suppl. 1, p. 363-381.
(Includes previously unpublished figure showing West Natuna M-L Eocene- Oligocene half-grabens, inverted in ?M Miocene time)

Jones, P.A., S.R. Freeman, R. Morgan, N.A. McCabe, V.S. O'Connor & R.J. Knipe (2009)- Seismic interpretation of the frontier NW Natuna Basin for hydrocarbon play evaluation. In: 71st EAGE Conf. Exhib., Amsterdam 2009, 5p. *(Extended Abstract)*
(NW Natuna basin is frontier hydrocarbon exploration area N of main W Natuna Basin. Main graben system initiated at Belut times (~45-35Ma), with deposition of source rocks restricted to deepest parts of graben system Gabus times (~35-26Ma) main period of likely reservoir deposition, also confined to deeper parts of graben, with local extensional and strike-slip fault activity. Barat times (~25Ma) major inversion occurs. Lower Arang times (~23Ma) continued minor inversion, sedimentation widespread, locally restricted around inversion topography. Upper Arang time widespread passive deposition likely with seal lithologies), then switching to widespread transtension. Muda time (<5Ma) quiescent)

Jonklaas, P. (1991)- Integration of depth conversion, seismic inversion and modelling over the Belida Field, South Natuna Sea Block ôBô, Indonesia. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 557-585.
(Belida 1989 oil-gas field in S Natuna Sea with 190 MB oil and 75 GCF of recoverable gas. Structure broad low relief anticline, ~10x5 km with 160' of vertical closure)

Koswara, A. & N. Suryono (2001)- Struktur geologi kepulauan Natuna, Riau Kepulauan, Sumatra. J. Geologi Sumberdaya Mineral 11, 115, p. 17-26.
('Structural geology of the Natuna islands, Riau Islands, Sumatra'. Natuna Islands Pre-Tertiary basement rocks (mafic, ultramafic, chert, granite), overlain by Plateau Sst Fm. Fault orientations N-S (Cretaceous?) and NW-SE (U Cretaceous- M Miocene), parallel to Malay-Natuna shear zone)

Kraft, M.T. & J.B. Sangree (1982)- Seismic stratigraphy in carbonate rocks: depositional history of the Natuna D-Alpha block (L-structure): stage II. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 299-321.
(Natuna D-Alpha Block with thick Terumbu Fm carbonate buildup of L structure, deposited mainly in Late Miocene time (>5000' of carbonates deposited in ~2 Myrs?). Lower Terumbu Units I-III broad carbonate platform, Upper Terumbu reefal buildup. Carbonate complex with 5250' thick gas column, with $C0_2$ *content from 67% in upper zones to 82% near base. Reef facies higher porosity than off-reef facies)*

Krause, P.G. (1898)- Verzeichniss einer Sammlung von Mineralien und Gesteinen aus Bunguran (Gross Natuna) und Sededap im Natuna-Archipel. Sammlungen Geol. Reichs-Museums Leiden Ser. 1, 5, p. 221-236.
(online at: www.repository.naturalis.nl/document/552437)
(also in Jaarboek Mijnwezen Nederlandsch Oost-Indie 1898, Wetenschappelijk Gedeelte, p. 1-16)
('Description of a collection of minerals and rocks from Bunguran (Natuna Besar) and Sededap in the Natuna Archipelago'. Brief descriptions of granite, quartzite, serpentine, etc. No locality information)

Kurniawan, B.A., A.E. Harahap & I.Y. Syukri (2017)- Fundamental work flow for improving static model using seismic data case study: Upper Gabus zones in Kerisi Field. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-682-G, 24p.

(Seismic- geologic study of Late Oligocene Upper and Lower Gabus Fm channelized sandstone reservoirs in 1990 Kerisi oil field in Block B)

Livsey, A., S. Carmody & M. Raharja (2014)- The use of fluid inclusion information to understand hydrocarbon charge history in the Sokang Trough, East Natuna Basin. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-362, 18p.
(Sokang sub-basin underexplored Neogene depocentre in E Natuna Basin. Sokang-1 well drilled on inversion structure in 1973 tested CO2-rich gas from Late Miocene sandstones. Fluid inclusion study showed multiple populations of liquid petroleum in Late Miocene and deeper sandstones of Sokang 1, proving presence of liquid petroleum system and indicating complex hydrocarbon charge history. Contributions from at least three different source rocks suggested by biomarkers and range of API gravities. Inclusions provide evidence of earlier oil accumulation, displaced by late migration of CO2- rich gas)

Manur, H. & J.M. Jacques (2014)- Deformational characteristics of the West Natuna Basin with regards to its remaining exploration potential. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-193, 13p.
(Structural history of W Natuna Basin, in particular temporal variation and magnitude of inversions and effect on spatial distribution of known hydrocarbons. Structural trap styles: (1) Paleogene basement high (KRA field type), (2) Neogene, minor wrench-related (KG, KH), and (3) major inversion structures (KF-Anoa). Initiation of inversion diachronous (~27-18 Ma), with peak inversion from ~21-15 Ma. This resulted in inversion of many of Eocene- E Oligocene E-W trending half grabens and formation of 'Sunda' propagation folds)

Mattes, E.M. (1979)- Udang Field: a new Indonesian development. Proc. 8th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 177-184.
(Conoco Udang field in Natuna Sea discovered in 1974. Reservoir is GabusFm alluvial fan sands. Production start January 1979)

Mattes, E.M. (1981)- Indonesia's Udang field developed. Oil and Gas J. 79, 18, p. 127-132.

May, J.A. & D.R. Eyles (1985)- Well log and seismic character of Tertiary Terumbu carbonate, South China Sea, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 69, 9, p. 1339-1358.
(Large Miocene gas-bearing carbonate complex, called L-structure, in Natuna D-Alpha block, 200 km NE of Natuna Island. Isolated buildup in front of much larger carbonate shelf)

Maynard, K. & I. Murray (2003)- One million years from the Upper Arang Formation, West Natuna Basin, Implications for reservoir distribution and facies variation in fluvial deltaic deposits. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 270-276.
(M Miocene Upper Arang Fm important reservoir in fluvial deltaic deposits, with gas sourced from interbedded coals. Periodic marine flooding events provide intra-formational seals. Series of horizon slices over 1 million year time interval, at ~4800' illustrate major changes in reservoir distribution and facies. Lateral and vertical complexity of these reservoir not resolved by limited well penetrations)

Maynard, K., W. Prabowo, J. Gunawan, C. Ways & R. Brotherton (2003)- Maximising the value of a mature asset, the Belida Field, West Natuna- can a detailed subsurface re-evaluation really add value late in field life? Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 291-305.
(Belida Field 1989 discovery, EUR ~350 MMBO developed in 1992, with peak oil production of 135,000 bopd in 1994 from two fluvial deltaic sandstone reservoirs, E Miocene Lower Arang Fm and Oligocene Udang Fm)

Maynard, K., P. Siregar & L. Andria (2002)- Seismic stratigraphic interpretation of a major 3D, the Gabus Sub-basin, Blocks B and Tobong, West Natuna Sea, Indonesia: getting the geology back into seismic. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 87-104.
(Conoco 2000 large regional 3D survey in Gabus Sub-Basin, W Natuna. Interpretation focused on stratigraphy. Source rock distribution re-interpreted based on seismic facies)

Meirita, M.F. (2003)- Structural and depositional evolution, KH Field, West Natuna Basin, Offshore Indonesia. M.Sc. Thesis Texas A&M University, College Station, p. 1-56.
(online at: http://txspace.tamu.edu/..)
(3D seismic study of KH field. Structure formed by N-S trending Eo-Oligocene rifting, reactivated by E-M Miocene inversion)

Michael, E. & H. Adrian (1996)- The petroleum systems of West Block ôBô PSC, South Natuna Sea, Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 465-479.
(Two petroleum systems in Conoco West Block 'B': (1) coals and coaly shales of Late Oligocene- E Miocene Arang and Gabus Fms and (2) Oligocene lacustrine synrift Belut/Gabus Fms. Synrift organic facies divided into 'deep lacustrine' and 'shallow lacustrine'. Early synrift sections expel as early as 29-19 Ma, shallower; more gas prone synrift sections expel from 26-12 Ma and 23-0 Ma. Coals and coaly shales in Arang and Gabus expulsion below 7500' (0.7% Ro) suggesting charging from 8 Ma- present. Late formed traps (<20 Ma) likely charged from gas prone synrift facies or syn-inversion coals and coaly shales)

Michael, E. & D. Bond (1997)- Integration of 2D modelling, drainage polygon analysis and geochemistry as petroleum systems analysis tools: West Block B PSC, S Natuna Sea. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta, p. 391-401.
(2D modeling of hydrocarbon generation and migration)

Mochammad, F. (2003)- Quantitative seismic geomorphology of Gabus and Belanak Fields, West Natuna Basin, Indonesia. Masters Thesis University of Texas, Austin, p. 1-74.
(Morphology of fluvial and deltaic depositional systems imaged in 3D seismic from W Natuna Basin, Indonesia. Fluvial systems include straight, low-sinuosity, high-sinuosity, anastomosing and braided rivers. No consistency of channel axis. Shore zone represented by prograding strandplain systems. Shelf systems identified from very flat and uniform amplitude map. Channel width ranges from 45- 2174m, meander belt width 243-8750m, meander wavelength 540- 18,450m, radius of curvature 119 to 4635m and sinuosity 1.0 to 3.4)

Mone, A. & S. Samsidi (1993)- A successful gas injection project in the Kakap KF Field: design, implementation and results. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 323-340.

Morley, R.J., H.P. Morley & P. Restrepo-Pace (2003)- Unravelling the tectonically controlled stratigraphy of the West Natuna Basin by means of palaeo-derived Mid-Tertiary climate changes. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 561-584.
(15 climate cycles interpreted from Late Eocene- M Miocene. Arang Fm climate cycles reflect mainly very wet climates, but with cool lowstand phases, and warm climate highstands. Barat, Udang and Gabus cycles characterized by cool and dry lowstands and warm and slightly wetter highstands. Belut Group cycles trend from drier to wetter with little temperature change)

Morley, R.J., P. Salvador, M.I. Challis, W.R. Morris & I.R. Adhyaksawan (2007)- Sequence biostratigraphic evaluation of North Belut Field, West Natuna Basin. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-120, p. 357-375.
(Stratigraphic model of N Belut field reservoir interval from foraminiferal and palynological analysis of Barat, Udang and Gabus Fms. Fourteen biofacies in lacustrine and coastal plain facies. Shales either allocyclic or autocyclic. 15 cycles, capped by allocyclic shale and interpreted as 4th-order sequences, identified through U Gabus and Udang Fms. Packages can be differentiated into 3 groups, thought to reflect 3rd-order sequences)

Mujito, S. Hadipandoyo & Suprijanto (1995)- Hydrocarbon assesment of the carbonate play, East Natuna basin. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Coord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 10-19.
(E Natuna basin considered to form W part of large Sarawak Basin. N-S trending Oligo-Miocene rift-basin. Middle-Late Miocene carbonates with local buildups in N half of E Natuna basin (Terumbu Fm). Risked total resources in carbonate play may be as high as 1196 MT oil and 3110 Gm3 of gas)

Murbini, S. (2000)- Technology challenge for Natuna gas development. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 339-351.

Murti, N.A. & Minarwan (2000)- Natuna. In: H. Darman & F.H. Sidi, F. H. (eds.) An outline of the geology of Indonesia, Indonesian Geologists Association (IAGI), Spec. Publ., p.

Nagura, H., H. Honda & S. Katori (2000)- Tertiary inversion tectonics and petroleum systems in West Natuna Sea Basins, Indonesia. J. Japanese Assoc. Petroleum Technologists 65, 1, p. 91-102.
(online at: www.journalarchive.jst.go.jp/...)
(In Japanese, with English summary. W Natuna Sea Basins inverted Tertiary intra-continental rift-basins on Sunda Shelf. Basin deposits include M-U Eocene lacustrine, Oligocene fluvial-deltaic, E Miocene muddy facies, M Miocene sand-dominant deposits, and Late Miocene-Recent mud-sand deposits. No E-M Miocene carbonates. Four petroleum systems identified: 1A (Belida oil field), 1B (Tembang, Buntal and Bintang Laut gas pools), 2B (Forel oil pool, Belanak oil and gas field) and 2A (Udang oil field))

Navilova, H. & B.A. Kurniawan (2013)- Comparing and contrasting a meandering point bar sequence and barrier island system within the Upper Arang Formation, Belanak Field, West Natuna Basin. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-114, p. 1-17.
(Two distinct depositional systems interpreted from M Miocene Upper Arang Fm gas bearing reservoirs from Belanak Field, Block B, W Natuna Sea. Arang-7 seismic amplitudes look like point bar system, Arang-8 amplitudes interpreted as barrier island system)

Nugraha, R.S., R. Wijayanti & H. Mohede (2012)- Geological concept to geomodel: lessons learned from the Belanak Field Arang-3 development. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-182, p. 1-13.
(Reservoir model of Late to M Miocene Arang-3 secondary gas reservoir in Belanak oil-gas field in Block B, Natuna Sea. Interpreted as NNE-SSW trending lower delta plain distributary channel complex)

Nugraha, R.S., P.S. Wisman & D.A. Ramdani (2014)- Depositional model of Gabus Massive Zone, Kerisi Field, West Natuna Basin, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-075, 15p.
(Late Oligocene- E Miocene Gabus Massive Mb sandstones primary reservoir for several Natuna Sea Block B fields, including 1990 Kerisi oil field. Depositional environment lower delta plain- estuarine distributary system, exposed to autocylic avulsion related floods. Seismic data show SW-NE trending main channel complex ~2 km wide and 40 ms thick with 200-250m wide individual channels inside it. Correlations suggest increased tidal (-marine) influence to SW)

Ozza, T., M. Mazied, F.H. Korah, M. Arisandy, H.I. Darmawan, I W.A. Darma, B.P. Putra & W.N. Farida (2018)- Geochemistry analysis and petroleum system modeling for "X" Block, West Natuna Basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-417-G, 18p.
(Geochemistry and hydrocarbon charge/ entrapment model for "X" Block close to NW tip of West Natuna Basin and with several inverted half-grabens (Anoa, Gajah, Kakap, Kambing) that delivered hydrocarbon charge. Inversion structures started at ~21 Ma; M Miocene erosion up to 1000m. Oil biomarkers indicate (Paleogene) lacustrine source facies. In deep grabens hydrocarbon expulsion started at 37, 31 Ma)

Pangarso, B., J. Guttormsen, P. Schmitz, I. Sihombing & H. Eko (2010)- North Belut Field- complex clastic diagenesis in an inverted paleo-structure. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-184, 16p.
(W Natuna Basin Belut 1974 discovery undeveloped until 2009. Structure originally paleo-tilted fault block, which flooded, filled, then inverted. Hydrocarbon zones in Udang and Gabus Fm fluvial- deltaic clastics. Crest of structure good porosity- permeability sands; downdip portions of field tight due to ferroan cement)

Panjaitan, J.P., B. Siswanto, R.P. Putra, H. Putranto & R. Achdiat (2015)- Comparing overpressure in the West and East Natuna Basins. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-235, 17p.

(Little indication of overpressure in W Natuna Basin while in E Natuna Basin significant overpressure common. Overpressure in E Natuna due to both disequilibrium compaction caused by rapid sedimentation and unloading tied to thermal cracking of hydrocarbons as evidenced by high CO2 and high geothermal gradients)

Panjaitan, J.P., A.B. Nugroho, T. Hamonangan, I. Yuliandri, I. Rahmawan & M. Firdaus (2016)- Case study: horizontal drilling challenge in the thin Gamma 1B Member of the Arang Formation, Belida Field. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-36-E, 15p.
(On horizontal drilling into late E Miocene gas sand in Arang Fm of Belida Field)

Permana, B.R. & M. Firdaus (2014)- Temperature profile and geothermal gradient in Block B West Natuna Basin; case study: the impact on SW calculation for Lower Arang Zone Belut-1 Well. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-076, 10p.
(Prior studies based on nine wells estimated geothermal gradient for W Natuna Basin between 1.9° F/100' and 2.7°F/100' (Aadland and Phoa, 1981). New temperature profiles from many additional wells suggest deep segment of wells has geothermal gradient of 2.38° F/100', in shallower reservoir sections 3.45° F/100')

Permana, B.R., M. Firdaus, R. Wijayanti & L. Hidayat (2015)- ñCoolò shale in the Udang Formation, South Belut Sub-Basin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-033, 15p.
(Low-radioactive shale in Late Oligocene- E Miocene Udang Fm in S Belut sub-basin of W Natuna basin, caused by dominance of low radioactivite minerals like kaolinite or chlorite)

Pertamina BPPKA (D. Natanegara et al.) (1996)- Petroleum geology of Indonesian basins: West Natuna basin. Petroleum geology of Indonesian basins, principles, methods and applications, XIV, p. 1-86.

Phillips, S., L. Little, E. Michael & V. Odell (1997)- Sequence stratigraphy of Tertiary petroleum systems in the West Natuna Basin, Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta, p. 381-389.
(W Natuna Tertiary 3-4 megasequences (Oligocene syn-rift, Late Oligocene- earliest Miocene post-rift, E-M Miocene syn-inversion, Late Miocene-Recent post inversion), subdivided into third-order sequences. Two major Tertiary petroleum systems: syn-rift and syn-inversion. Two source intervals in syn-rift of larger rift half-grabens: (1) early syn-rift open lacustrine, with algal organic matter, and (2) late syn-rift shallow lacustrine/ shoreline, with mixed algal- terrestrial organic matter. Source rocks of syn-inversion coals and coaly shales)

PND- Patra Nusa Data (2006)- Cakalang, Kerapu and Baronang Blocks, Northwest Natuna. Inameta J. 3, p. 28-32.
(online at: www.patranusa.com)
(Overview of geology and prospectivity of W Natuna Basin tender blocks)

Pollock, R.E., J.B. Hayes, K.P. Williams, & R.A. Young (1984)- The petroleum geology of the KH Field, Kakap, Indonesia. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 407-424.
(KH oil-gas field in SW corner of Kakap discovered in 1980 in faulted anticline with four-way dip. Reservoirs fluvial channel sands of Late Oligocene Gabus Formation. Overlying E Miocene Arang Fm sands reservoirs for non-associated gas. Hydrocarbon generation and migration very late (5 Ma), postdating regional unconformity at base Muda Fm. Light, waxy crudes with gravities of 42-47.5° API at 65°F)

Prasetyo, B. (2002)- Source rock evaluation and crude oil characteristics, West Natuna Area, Indonesia. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 825-837.
(W Natuna Basin source rock candidates Keras, Benua and Barat Shales. Only effective source is Benua Shale at P-13 (10,295'-10,895') and P-15 wells (11,138-11,280'). Hydrocarbon generation started at 17.5 Ma and is still occuring in Lower Gabus Fm. Source rock environment shallow lacustrine with terrestrial input)

Prasetyo, E. & D. Ariyono (2013)- Study of sequence stratigraphy in Siput Field and surrounding areas, West Natuna Basin, Indonesia, based on seismic, wireline logs, and cutting data. Proc. Joint Conv. 38th Indon. Assoc. Geoph. (HAGI) - 42nd Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0049, 10p.

(Six depositional sequences identified in Oligocene- E Pliocene from interpretation of 8 wells and seismic data over Siput Field, W Natuna Basin)

Prasetyo, T., S. Danudjaja & Y. Budiningsih (2000)- Reservoir characterization study to improve future field development plans, Tembang Field, West Natuna basin. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 35-54.
(Tembang 1981 discovery, with gas in 13 deltaic sand horizons in E-M Miocene Arang Fm)

Prasetyo, T., S. Danudjaja & Y. Budiningsih (2001)- Application of reservoir characterization to better handle reservoir management plan for Belida shallow gas. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 581-596.
(E-M Miocene Beta-1A zone is shallowest gas reservoir in Oligocene- Miocene clastics reservoirs of 1989 Conoco Belida oil-gas Field. Lower delta plain sandstones with general channel direction trend N to NE)

Pribadi, A. & B. Simbolon (1984)- Penyelidikan atas distribusi overpressure dan salinitas di cekungan sedimentasi Tersier daerah Natuna. Proc. 13th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 463-480.
('Study of distribution of overpressure and salinity in the Tertiary sedimentary basin of the Natuna area')

Rachmad, A.A., Djuhaeni & P. Sumintadireja (2017)- Tektonostratigrafi dan sikuen stratigrafi endapan lisu Blok Duyung, Cekungan Natuna Barat. Bulletin of Geology (ITB) 1, 2, p. 94-106.
(online at: http://buletingeologi.com/index.php/buletin-geologi/article/view/7/3)
('Tectonostratigraphy and sequence stratigraphy of rift deposits, Duyung Block, West Natuna Basin'. Stratigraphy of Lower Gabus Fm LateOligocene fluvial-deltaic-lacustrine syn-rift deposition in Duyung Block, W Natuna Basin. Syn-rift depositional system 3 sequences)

Raharja, M., S. Carmody, J.R. Cherdasa & N. Haribowo (2013)- Dual Paleogene and Neogene petroleum systems in East Natuna Basin: identification of a new exploration play in the South Sokang Area. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-036, p. 1-12.
(Major unconformity previously called 'Top Basement' re-interpreted as E Miocene unconformity and older section interpreted as Paleogene syn- and post-rift deposits, similar to Eocene/Oligocene sediments in W Natuna area. Two Tertiary petroleum systems in Sokang Sub-Basin (E Natuna): Neogene system related to E Natuna M Miocene rifting and Paleogene petroleum system related to W Natuna Basin rifting in Oligocene)

Riadini, P., A.B. Ritonga, F. Arif, Abdurahman & Budiyono (2017)- Structural evolution and hydrocarbon traps mechanism in the West Natuna Basin, Indonesia. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-522-G, 18p.
(W Natuna Basin Late Eocene- E Oligocene rifting, NNE-SSW trending inversion structures around M-Late Miocene boundary (right-lateral transpression), etc.)

Rodriguez, F.H. & B. Peribere (1986)- A proposed solution to the challenge of producing oil reserves from offshore marginal fields in the Natuna Sea of Indonesia. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 79-85.

Rudolph, K.W. & P.J. Lehmann (1989)- Platform evolution and sequence stratigraphy of the Natuna Platform, South China Sea. In: P.D. Crevello, J.L. Wilson et al. (eds.) Controls on carbonate platform and basin development, SEPM Spec. Publ. 44, p. 353-361.
(Seven depositional sequences in Miocene Terumbu Fm carbonates of Natuna Platform. Highest porosity in grain-prone carbonates of late highstand-systems tract on platform crest. Porosity also downdip in onlapping lowstand systems tract. Increased subsidence from M Miocene caused retreat of platform, more on W (low-productivity, shelfward) side. Eustatic sea-level rise in E Pliocene, combined with continued subsidence, drowned platform and ended carbonate sedimentation)

Ryer, T.A., J. Meyer, M. Bagge, N.J. Comrie-Smith & G.Van Mechelen (2000)- Sequence stratigraphy and depositional history, Upper Sandy Member of Gabus Formation (Miocene), Kerisi-Hiu area, West Natuna

Basin, South China Sea, Indonesia. Proc. 14th Ann. Conv. AAPG, New Orleans, Search and Discovery Art. 90914. *(Abstract only)*
(Upper Sandy Member of Gabus Fm in Kerisi-Hiu area includes high-stand deposits of earlier sequence, a sequence boundary with >120' of erosional relief and aggradational, transgressive-phase deposits of later sequence. Delta-front sandstones with gas on Hiu structure and two E-trending incised valleys. Aggradational valley fill sand-rich, overlying unconfined river coastal-plain deposits with lower sand content)

Salvador, P., W.R. Morris, R.J. Morley, M. Gunarto, R. Adhyaksawan & M. Challis (2008)- Managing reservoir uncertainty at the North Belut Field, Offshore Indonesia, Natuna Sea: an integrated analysis of biostratigraphy, core, wireline and seismic data. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-205, 14p.
(Reservoir study of North Belut gas field in Udang and Gabus sands. 1500' section of thin, stacked lacustrine and deltaic sands with significant variation in vertical and lateral reservoir development)

Samodra, H. (1995)- Geological map of the Tarempa and Jemaja Sheet, Riau, Quad 1118-1119, 1:250,000, Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic maps of Anambas archipelago of small islands SW of Natuna Besar. Widespread Cretaceous Anambas Granite (probably Late Cretaceous 73-84 Ma, as at Tambelan and Natuna). Intruded into melange/ oceanic accretionary complex of strongly folded Matak Fm (with NW-SE axes, locally contactmetamorphic Late Jurassic- Cretaceous sediments), associated with gabbro, diabase and basalt intercalated with radiolarian chert. Matak Fm with Late Jurassic- earliest Cretaceous radiolarian chert with Cenosphaera, Sethocapsa, Stichocapsa rotunda Hinde 1900, Dictyomitra, etc. Radiolaria species similar to Danau Fm accretionary complex of Central Kalimantan, as described by Hinde 1900)

Sangree, J.B. (1981)- Use of seismic stratigraphy in carbonate rocks, Natuna D-Alpha Block Example. Proc. 10th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 135-152.
(Natuna D-Alpha 'L' structure large Late Miocene reef complex, with 5250' gas column. Gas 67- 82% CO2. Arang Fm considered source of methane; CO2 believed to be from deep igneous activity. E-M Miocene Arang and Barat-Gabus shale widespread and uniform thickness, suggesting stable nonmarine-shallow marine shelf conditions. Post-Arang normal faulting resulted in rotation and faulting of 'L' structure and Terumbu (U Miocene) carbonate development Further downfaulting in Lt Miocene- E Pliocene resulted in widespread carbonate deposits with local reef development on W shelf area and local buildups on crest of 'L' structure)

Satriawan, R.W., T. Read & H. Baskara (2005)- Applying seismic attribute analysis and inversion techniques to understand the trapping mechanism in the Gajah Abu Abu Field, West Natuna Offshore. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 135- 144.
(Gajah Abu Abu field in W Natuna Basin 1992 discovery in faulted Late Miocene inversion anticline. Significant stratigraphic component in Gajah Abu Abu trap)

Simabrata, H., B.R. Permana, A. Sulistiarso, R. Wijayanti & R.D Waworuntu (2016)- Integrated chronostratigraphic correlation and its dilemma: a case study in West Natuna Basin Block ñBò Arang Formation. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-495-G, 20p.
(Integration of biostratigraphy (palynology) and seismic data of M Miocene section in W Natuna Basin showed only few biostratigraphic ages in agreement with seismic markers)

Subono, S., Siswoyo & A. Firman (1995)- Heat flow in border areas of Indonesia, Malaysia and Vietnam. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 59-75.
(Mainly on heatflow from 46 wells in West and 24 wells in East Natuna basins. Av. T gradient 39.7 °C/km)

Sugihardjo, S.S. Aprilian, A. Yusuf & S Sumardan (2000)- Investigations of the storage efficiency of CO2 in carbonate aquifers. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 79-93.

Suryono, N. (1997)- Analisa struktur P. Laut dan P. Sekatung, Kepulauan Natuna besar. J. Geologi Sumberdaya Mineral 7, 74, p. 2-24.
('Analysis of the structure of the Laut and Sekatung islands, Natuna Besar island group'. Laut and Sekatung Islands ~80km NNE of Natuna Besar. Composed of Jurassic- Cretaceous Bunguran Fm. Intensely deformed, with 5 types of oblique slip fault, of different orientations, but tied to first order WNW-ESE right-lateral fault)

Sutoto, A. (1991)- Reservoir geology of the Belida Field South Natuna Sea, Block B. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 453-478.
(1989 Conoco Belida oil field with 187 MBO and 130 BCF gas. Trap four-way closure, a structural inversion of half-graben during E Miocene (later?; JTvG) regional compression. Age of sediments over Cretaceous granite Oligocene- Holocene. Oil reservoirs Oligocene Udang and E Miocene Lower Arang Sands, gas in E Miocene Arang Fm. Udang Fm sands stacked fluvial channels, Lower Arang sands distributary mouth bars in progadational lacustrine delta. Good vertical and lateral reservoir continuity. Sands ~30% porosity)

Syukri, I.Y., J. Hughes & M. Medianesterian (2014)- A comparison of depth conversion methods in Buntal Gas Field, Block B, Natuna Sea, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-227, 17p.
(On impact of depth conversion methods on volumetric analysis of Buntal gas field, 1990 discovery 30 km E of Belida field, producing since 2003. WSW-ENE trending structure with three primary reservoirs in fluvial-deltaic M Miocene Arang Fm sandstones)

Thamrin, M., Prayitno, S. Tiwar & Solichin (1983)- Heatflow investigation in the Tertiary basins of Natuna Sea. Proc. 19th Sess. CCOP, Tokyo 1982, 2, Techn. Repts., p. 153-166.
(Heatflow data from 29 wells in Indonesian sector of Natuna Sea. Heatflow in W area of Natuna Arch (av. 2.03 HFU, T gradient av. 3.45 °C/100m) higher than in E (av. 1.59 HFU, T gradient av. 3.36 °C/100m))

Tjia, H.D. (1997)- Regional northwest to west-northwest lineaments in the southern part of the South China Sea Basin. Warta Geologi (Newsl. Geol. Soc. Malaysia) 23, 5, p. 297-302.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1997005.pdf)
(Several well-developed NW-WNW striking regional lineaments known from S part of S China Sea Basin and adjacent land areas. In W Sarawak: Lupar Line, Tatau horst-graben, W Balingian Line, Tinjar Line, Upper Baram Line, W Baram Line. In Sabah: Kinabalu Lineament and Balabac Fault. Also ~10 major NE/NNW trending wrench-fault zones across continental margin in SE S China Sea. May tie to regional NW faults in mainland SE Asia, believed to have facilitated extrusion of continental SE Asia)

Usman, E. (2015)- The geochemical characteristic of major element of granitoid of Natuna, Singkep, Bangka and Sibolga. Bull. Marine Geol. 30, 1, p. 45-54.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/74/75)
(Mesozoic granites from Natuna, Bangka and Singkep with SiO2 contents of ~71-75% and classified as acid and calk-alkaline magmas. Sibolga granitoid with SiO2 60- 71% classified as intermediate-acid magma and high K, ultrapotassic island arc granite)

Van Mechelen, G., J. Meyer & R. Gir (1998)- Correlation mapping technique, a powerful tool to minimize risk and to guide future development plans. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 175-196.
(Geophysical study over two gas fields in W Natuna Basin)

Wagimin, N. & E.A. Sentani (2009)- Opportunities (II), East Natuna area. Inameta J. 7, p. 24-27.
(online at: www.patranusa.com)
(Brief overview of E Natuna Basin, in conjunction with tender round offering)

Wirojudo, G.K. (1985)- Geological studies as a risk-reducing factor in exploration ventures with special references to the South China Sea. Energy 10, 3, p. 517-523.

(40 new exploration wells drilled in E and W Natuna basin in 1981-1982. Decisions on exploration ventures involve knowledge of basin geology. Natuna basins area can be used as a model)

Wirojudo, G.K. & A. Wongsosantiko (1985)- Tertiary tectonic evolution and related hydrocarbon potential in the Natuna area. Energy 10, 3/4, p. 433-455.
((In E Oligocene Natuna area included W Natuna and E Natuna Basins, separated by N-S trending Natuna basement Arch. Basin development in W Natuna began in E Oligocene time with rifting and pull-apart forming SW-NE half-grabens filled with nonmarine sediments, possibly driven by extrusion of Malay Peninsula from Asia during early stages of India-Asia collision. In E Natuna Basin no rifting, but Oligocene sediments only thicken regionally E-ward toward basin center. Compressive forces in W Natuna Basin during E Miocene resulting in inversion of normal faults. Simultaneously in E Natuna Basin mainly tensional forces that produced NW-SE right lateral movements coupled with NE-SW trending normal faulting. Hydrocarbon potential of W Natuna Basin enhanced by presence of locally thick Oligocene and Miocene sediments)

Wongkosantiko, A. & P. Prijosoesilo (1995)- Geologic summary of the Natuna Sea. In: Seismic Atlas of Indonesian Oil and Gas Fields, II: Java, Kalimantan, Natuna, Irian Jaya, Indon. Petroleum Assoc. (IPA), Jakarta, 6p.

Wongkosantiko, A. & G.K. Wirojudo (1984)- Tertiary tectonic evolution and related hydrocarbon potential in the Natuna area. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 161-183.
(W and E Natuna Basins separated by N-S trending Natuna basement Arch. W Natuna Basin started in E Oligocene by rifting/ pull-apart, producing SW-NE half-grabens filled with non-marine sediments. Extension in W Natuna little effect on E Natuna Basin, where Oligocene sediments more uniform thickness. Compressive forces started in W Natuna in E Miocene, resulting in inversions of former half grabens)

III. JAVA, MADURA, JAVA SEA

III.1. Java - General, Onshore geology, Forearc

Abdissalam, R., S. Bronto, A. Harijoko & A. Hendratno (2009)- Identifikasi gunung api purba Karangtengah di Pegunungan Selatan, Wonogiri, Jawa Tengah. J. Geologi Indonesia 4, 4, p. 253-267.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20090403.pdf)
('Identification of the Karangtengah ancient volcano in the Southern Mountains, Wonogiri, C Java'. Identification of E Miocene Karangtengah paleovolcano eruptive center, which formed on seafloor, basaltic in composition, and part of volcanic island arc)

Abdul, M., M. Irfan & T. Sopandi (2005)- Between reality and illusion, hidrocarbon hunting in East Java Basin. Proc. Joint Conv. 34th IAGI- 30th HAGI, Surabaya 2005, p. 48-56.

Abdurrokhim (2014)- A prograding slope-shelf succession of the Middle- Late Miocene Jatiluhur Formation: sedimentology and genetic stratigraphy of mixed siliciclastic and carbonate deposits in the Bogor Trough, West Java. Ph.D. Thesis Graduate School of Science, Chiba University, Japan, p. 1-134.
(online at: http://opac.ll.chiba-u.jp/da/curator/900117817/SGB_0019.pdf)
(Sedimentological study of M Miocene Jatiluhur Fm in N Bogor Trough, NE of Bogor. Lower and M Jatiluhur Fm interpreted as M Miocene S-ward prograding slope-shelf system, derived from Sundaland. Late Miocene deposits also suggest additional supply of volcanogenic sediments from volcanic terranes to S. Klapanunggal Limestone in middle part of formation with Katacycloclypeus and coral))

Abdurrokhim (2017)- Stratigrafi sikuen Formasi Jatiluhur di cekungan Bogor, Jawa Barat. Bull. Scientific Contr. (UNPAD) 15, 2, p. 167-172.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/13405/pdf)
('Sequence stratigraphy of the Jatiluhur Formation in the Bogor Basin'. M-L Miocene Jatiluhur Fm clastics and limestones in N part of the Bogor Trough, ~ 20 km NE of Bogor. Overall shallowing upward succession in slope and shelf margin settings, overlain by deeper succession in middle part as response of single relative sea level fall and rise)

Abdurrokhim (2017)- Carbonate reef of the Klapanunggal Formation in the Bogor Trough, West Java. J. Geol. Sciences Applied Geology (UNPAD) 2, 1, p. 33-42.
(online at: http://jurnal.unpad.ac.id/gsag/article/view/13422)
(On Late Miocene shelf-margin carbonate reef up to 240m thick, well exposed in Cibinong area, NE of Bogor, named Klapanunggal Fm. Thick and massive reefal limestone with large foraminifera. Interpreted a S-prograding shelf margin, facing Bogor Trough in S (with picture of Katacycloclypeus annulatus, suggesting Middle Miocene age;HvG))

Abdurrokhim, Y. Firmansyah, N. Natasia & M. Saputra (2017)- Lithofacies of the Halang Formation in the Cijurey River-Majalengka. J. Geol. Sciences Applied Geology (UNPAD) 2, 3, p. 83-87.
(online at: http://jurnal.unpad.ac.id/gsag/article/view/15614/7343)
(450m thick section of M-L Miocene Halang Fm exposed along Cijurey River. Lithofacies interpreted as mass transport deposits (no maps and not much other detail))

Abdurrokhim & Hendarmawan (2014)- Temporal variation in petrographic features of the Miocene Jatiluhur Formation in the Bogor Trough, West Java. Bull. Scientific Contr. (UNPAD) 12, 2, p. 107-117.
(M-L Miocene Jatiluhur Fm in N Bogor Trough NE of Bogor feldspathic arenite, greywacke, limestone, and mixed siliciclastic-carbonate. Derived mainly from continental source in N (Sundaland). Increase in volcanic fragments in Late Miocene suggests also sediment source from contemporaneous volcanic provinces to S)

Abdurrokhim & M. Ito (2013)- The role of slump scars in slope channel initiation: a case study from the Miocene Jatiluhur Formation in the Bogor Trough, West Java. J. Asian Earth Sci. 73, p. 68-86.
(Jatiluhur Fm, part of M-L Miocene (N12-N16) clastic succession in Bogor Trough, W Java, up to 1000m thick in study area, and interpreted as prograding slope-shelf system. Lower part is siliciclastic succession, with

slump deposits and formed in slope and shelf-margin environments. Slump-scars-fill deposits have lenticular geometry, 140-480m wide and 0.4-1.6m thick. Some slump scars formed incipient seabed irregularities that may have played important role in development of slope channels)

Abdurrokhim & Hendarmawan (2015)- Limestone beds development of the Middle-Late Miocene Jatiluhur Formation in the Bogor Trough, West Java. Bull. Scientific Contr. (UNPAD) 13, 2, p. 107-118.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8395/3905)
(Jatiluhur Fm along Cipamingkis River, W Java Middle- Late Miocene (~N12-N16?) mixed limestone- clastics series. Late Miocene Klapanunggal Fm = Parigi Lst in north is reefal limestone buildup, and probably source of carbonate detritus in upper part of Jatiluhur Fm (with Cycloclypeus annulatus))

Abdullah, C.I., N.A. Magetsari & H.S. Purwanto (2003)- Analisis dinamik tegasan purba pada satuan batuan Paleogen- Neogen di daerah Pacitan dan sekitarnya, Provinsi Jawa Timur ditinjau dari studi sesar minor dan kekar tektonik. ITB J. Science and Technology, 35A, 2, p. 111-127.
(Structural analysis of faults in Pacitan area, S coast of East Java. Four trends: NW-SE (~N320°E; E Miocene), N-S, NE-SW (~N045°E; M Miocene), and E-W (N080°E))

Abercrombie, R., M. Antolik, K. Felzer & G. Ekstrom (2001)- The 1994 Java tsunami earthquake: slip over a subducting seamount. J. Geophysical Research 106, B4, p. 6595-6607.
(First recorded large shallow thrust earthquake in South Java subduction zone, dip of 12°, epicenter depth 16km. Normal seismicity near trench low, and dominated by normal faulting earthquakes in subducting plate. Interpreted as slip over subducting seamount, which is locked patch in otherwise decoupled subduction zone)

Abidin, H.Z., H. Andreas, T. Kato, T. Ito, I. Meilano, F. Kimata, D.H. Natawidjaja & H. Harjono (2009)- Crustal deformation studies in Java (Indonesia) using GPS. J. Earthquake and Tsunami 3, 2, p. 77-88.
(GPS surveys in W Java show areas around Cimandiri, Lembang and Baribis fault zones have horizontal displacements of ~1-2 cm/yr. C Java May 2006 Yogyakarta earthquakes caused by sinistral movement of Opak fault with horizontal co-seismic deformation generally <10 cm. Post-seismic horizontal deformation of July 2006 S Java tsunami earthquake in first year after earthquake <5 cm, decreasing after that)

Abidin, H.Z., H. Andreas, I. Meilano, M. Gamal, I. Gumilar & C.I. Abdullah (2009)- Deformasi koseismik dan pascaseismik gempa Yogyakarta 2006 dari hasil Survei GPS. J. Geologi Indonesia 4, 4, p. 275-284.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/259)
(On deformation caused by 2006 Yogyakarta earthquake from GPS data)

Abidin, H.Z. & Baharuddin (2005)- Low sulfidation epithermal gold deposit at Cibaliung Creek, Pengalengan area, West Java. J. Ilmu Kebumian Teknologi Mineral 18, 1, p. 15-20.
(Low sulfidation epithermal gold deposit in Pengalengan District, S of Regency (near Malabar Tea plantation?). Gold in quartz veins hosted in altered 'Old Andesite Volcanics')

Abidin, H.Z., S. Permanadewi & W. Bambang (2004)- Sulphur, carbon and oxygen isotope study of the Pongkor gold deposit, West Java. Majalah Geologi Indonesia (IAGI) 19, 1, p. 1-11.
(Pongkor low sulfidation epithermal gold deposit 80km SW of Jakarta, in Miocene host rocks. Isotopes suggest gold deposit formed due to mixing of magmatic ore fluid with meteoric water)

Abidin, H.Z. & Soetrisno (1992)- Geology of the Pamanukan Quadrangle, Jawa. Quadrangle 1209-6, 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, Indonesia, 7p.

Achdan, A. & S. Bachri (1993)- Geological map of the Blambangan Quadrangle, Jawa, 1707-1, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(SE tip of East Java, with folded Late Oligocene-Miocene volcanics, tuffaceous sandstones and limestone of Batuampar Fm, intruded by Miocene andesites and granodiorites (= 'Old Andesites'; JTvG). Overlain by E Miocene sediments of Jaten Fm, and M Miocene Wuni and Punung Fms and Quaternary volcanics)

Accordi, G., F. Carbone, M. Di Carlo, R. Matteucci, J. Pignatti & A. Russo (2010)- Biostratigraphy of the Jatibungkus olistolith (Central Java). Forams 2010, Int. Symposium on Foraminifera, Bonn. *(Poster Abstract)*
(online at: www.girmm.com/abstracts/Accordi_etal_Jatibunkus_2010.pdf)
(Eocene Karangsambung melange of C Java with exotic blocks, including huge Jatibungkus limestone olistolith. Larger forams (Ranikothalia, Miscellanea, rotaliids and discocyclinids), corals (11 species) and calcareous algae (incl. Distichoplax biserialis) suggest Late Paleocene age (Thanetian; foram zones SBZ3/ SBZ4). Three main depositional environments)

Adeyosfi, M.M., A. Pradana, M. Wahdanadi, A.H. Purwanto, Muhajir & D. Juandi (2018)- Single well to field scale secondary porosity characterization in carbonate reservoir of Tuban Formation. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-224-G, 17p.
(E Miocene carbonates of Tuban Fm in Sukowati Field, NE Java basin, produced oil and gas since 2004. Two carbonate build ups, with different productivity rates. Highest productivity in N of field, with better-developed secondary porosity)

Adhiperdana, B. G. (2018)- Sedimentological study of a fluvial succesion of the Eocene-Oligocene Bayah Formation, West Java: reconstruction of paleohidrological features of an ancient fluvial system using empirical equations developed from modern fluvial systems in the Indonesian islands. Doct. Thesis Chiba University, Japan, p. *(Unpublished)*

Adiwiarta, A.M., R.M Zainal & Y. Hirosiadi (2010)- Kemandung Ridges play concept to increase exploration prospectivity in East Tuban Block: preliminary study. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-207, 6p.
(Seismic reprocessing improves imaging of NE-SW trending basement high named Kemandung Ridge, with potential overlying Ngimbang or Kujung Fm carbonate build-ups, in Tuban Block, NE Java basin)

Adhidjaja, J.I., A.J. Davidoff & I.R. Novianti (2002)- PSDM Enhances reef interpretation in Jatiluhur Block, West Java. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 31-43
(Jatiluhur Block covers Bogor Trough and volcanic centers in S. Poor seismic imaging due to volcanic cover and rugged topography, associated with complicated structures. One target is Batu Raja Limestone, with best reservoir quality in buildup facies and typically developed on basement highs. Pre-stack depth migration (PSDM) improved imaging. One prospect is probable Batu Raja reefal buildup on basement high)

Adinegoro, U. (1973)- Reef limestone in the Sukabumi area. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 109-120.
(Study of Late Oligocene Rajamandala Limestone around Sukabumi, W. Java. Age close to foram zone N4, larger foram zone Lower Te with Heterostegina borneensis, Miogypsinoides spp, Spiroclypeus, etc.)

Adinegoro, U. & Arpandi (1976)- Guide book fieldtrip to Sukabumi and Padalarang area. Indon. Petroleum Assoc. (IPA), Carbonate Seminar, Jakarta, September 1976, p.

Adisaputra, Mimin K. (1989)- Foraminifera of the Miocene Jatiluhur Formation: implications for the Indonesian Letter Classification and the planktic zonation scheme. J. Riset Geologi Pertambangan (LIPI) 9, 1, p. 21-26.
(M Miocene Jatiluhur Fm with larger foraminifera Katacycloclypeus annulatus (Tf1-2) in lower part and Lepidocyclina spp. (incl. L. radiata), in upper part. Planktonics of zone N11-N12, with Glorotalia fohsi and Gr. peripheroronda. Boundary between Tf1-2 and Tf3 lies within N11-N12)

Adisaputra, Mimin K. & Budiman (1995)- Biostratigrafi Formasi Cimandiri, di daerah Jampang Tengah, Sukabumi, berdasarkan foraminifera plangton dan foraminifera besar. J. Geologi Sumberdaya Mineral 5, 45, p. 2-11.
('Biostratigraphy of the Cimandiri Formation in the Central Jampang area, Sukabumi, based on planktonic and larger foraminifera'. Open marine Cimandiri Fm S and SW of Sukabumi, SW Java, ~130m thick and divided into Bojonglopang, Nyalinding and Cimandiri s.s. members. Planktonic foraminifera suggest age mainly M

Miocene (N8 (with Preorbulina glomerosa)- N14). Miogypsina present in N8, Miogypsina cushmani appears at base N9. Top Miogypsina and Base Alveolinella quoyi near base N12, Lepidocyclina rutteni in N14)

Adisaputra, Mimin K. & H. Prasetyo (1998)- Foraminifera from dredged samples in Bali and Flores basins: implications for tectonic environment. In: J.L. Rau (ed.) Proc. 34th Sess. Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Taejon, Korea 1997, 2, Techn. Repts., p. 22-34.
(Early Miocene shallow water limestone samples with Miogypsina-Miogypsinoides dredged from sites D1 and D2 (1500 and 2100m) in Bali-Flores Basin, N of Sumbawa. May be reworked into Pliocene- Pleistocene deep water sediments from nearby uplifted fault blocks. Not much detail on sample positions)

Adisaputra-Sudinta, M.K. & P.J. Coleman (1983)- Correlation between larger benthonic and smaller planktonic foraminifera from the mid-Tertiary Rajamandala Formation, Central West Java. Publ. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 4, p. 37-55.
(Samples from Tagogapu/ Cikamuning part of Rajamandala Limestone in W Java, with both planktonics (zones N2-N4) and larger forams (mainly Te1-4, at top Te5; Late Oligocene- earliest Miocene)

Adisaputra-Sudinta, M.K., R. Smit & E.J. van Vessem (1978)- *Miogypsina cushmani* and *Miogypsina antillea* from Jatirogo (East Java). Bull. Geol. Res. Dev. Centre (GRDC), Bandung, p. 29-47.
(Localities on Jatirogo Quadrangle, NE Java: (1) Miogypsina cushmani in Middle Rembang Beds below Ngrayong-equivalent quartz sands, and (2) Miogypsina antillea in 200m thick 'U Rembang Fm/ Tlatah Limestone Beds', probably equivalent of M Miocene 'Platen Limestone')

Adnan, A., Sukowitono & Supriyanto (1991)- Jatibarang sub basin- a half graben model in the onshore of Northwest Java. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 279-298.
(Jatibarang sub-basin in E part of NW Java Basin with oil-gas in E Oligocene- Late-Miocene reservoirs (Jatibarang, Talang Akar, U Cibulakan and Parigi Fms). Sub-basin formed in E Tertiary with formation of half-graben. Two graben generation stages, each initially filling with clastics, then terminating with carbonate sedimentation. Hydrocarbons controlled by presence of normal faults which provided vertical migration for hydrocarbon sourced from Talang Akar Fm. With seismic lines, x-sections)

Adriansyah, A. & G.A. McMechan (2001)- AVA analysis and interpretation of a carbonate reservoir, Northwest Java basin, Indonesia. Geophysics 66, 3, p. 744-754.
(Seismic amplitude analysis of M Miocene Parigi Fm carbonate reefs in onshore NW Java basin)

Adriansyah, A. & G.A. McMechan (2002)- Analysis and interpretation of seismic data from thin reservoirs. Northwest Java basin, Indonesia. Geophysics 67, 1, p. 14-26.
(Attribute analysis, impedance inversion and full-wavefield modeling of 2-D seismic line over thin gas reservoirs in E-M Miocene U Cibulakan Fm clastics in NW Java Basin suggest reservoirs detectable even when less than tuning thickness)

Afnimar, E. Yulianto & Rasmid (2015)- Geological and tectonic implications obtained from first seismic activity investigation around Lembang fault. Geoscience Lett. 2, 4, DOI 10.1186/s40562-015-0020-5, p. 1-11.
(online at: https://link.springer.com/content/pdf/10.1186%2Fs40562-015-0020-5.pdf)
(Microseismic events around Lembang fault at N side of Bandung suggest this fault is left-lateral fault)

Agnes M., K.A. Maryunani & A.T. Rahardjo (2000)- The characteristics of foraminifera distribution patterns within turbidite sequence of Banyak Formation, Central Java. Buletin Geologi (ITB) 32, 1, p. 1-9.

Agustiyanto, D.A. & S. Santosa (1993)- Geological map of the Situbondo Quadrangle, Jawa, 1708-1, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(NE-most tip of Java, with folded (Late) Miocene- Pliocene sediments, overlain by Quaternary volcanics of Ringgit, Old Ijen, Raung, Baluran, etc.)

Ahdyar, L.O., R.P. Sekti & I.M. Kerscher (2017)- Stratigraphic interpretation of Alas Tua west: a carbonate structure in Cepu Block, East Java. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-738-G, 11p.
(2011 Alas Tua W1 well in E Java Basin discovered gas in ~300m Early Oligocene platform carbonates overlain by ~200m of Late Oligocene deeper water marls)

Ahnaf, J.S., A. Patonah, H. Permana & Ismawan (2018)- Structure and tectonic reconstruction of Bayah Complex Area, Banten. J. Geoscience Engineering Environm. Technol. (JGEET) 3, 2, p. 77-85.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/1554/1045)
(In Bahah area, SW Java, fracture patterns N-S (Sunda trend), E-W (Java trend) and SW-NE (Meratus Trend), formed between E Eocene- Pliocene. Metamorphic rock foliations NW-SE and N-S directions belong to Pre-Tertiary Sumatra Pattern. Three orogenic events between E Oligocene- Pliocene)

Akbar, M.A. & N I. Setiawan (2015)- Petrogenesis batuan beku intrusi di daerah perbukitan Jiwo Barat dan Timur, Kecamatan Bayat, Kabupaten Klaten, Provinsi Jawa Tengah. Pros. Seminar Nasional Kebumian 8, Jurusan Teknik Geologi, Universitas Gadjah Mada, Yogyakarta, p. 675-683.
(online at: https://repository.ugm.ac.id/135503/1/...)
('Petrogenesis of igneous rock intrusions in the West and East Jiwo hills, Bayat District, Klaten, Central Java'. Three types of igneous rocks in Jiwo Hills: olivine gabbro (in SW), micro gabbro(W and E) and diorite (Gunung Pendul in W and Gunung Dowo, Butak and Desa Drajet in W Jiwo))

Akmaluddin (2008)- Age correlation of Oyo Formation based on nannofossils and foraminifera biostratigraphy at Southern Mountains area, Yogyakarta, Indonesia. In: Proc. 6th Int. Workshop on Earth Science and Technology, p. 247-252.

Akmaluddin (2011)- Cenozoic chronostratigraphy and paleoceanography of Southern Mountains, Central Java, Indonesia. Doct. Thesis, Kyushu University, Fukuoka, p. *(Unpublished)*

Akmaluddin & Y. Ardhito (2014)- Biostratigrafi nanofosil Formasi Oyo jalur Gunung Lanang, daerah Bayat-Klaten. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-247, 5p.
('Biostratigraphy of nannofosils in the Oyo Formation along the Gunung Lanang section, Bayat, Klaten area'. Calcareous nannofossils Gn Lanang four zones: NN 7 (Zone Discoaster exilis), NN8 (Catinaster coalitus), NN9 (Discoaster hamatus) and NN10 (Discoaster calcaris), suggesting Oyo Fm is of latest Middle -Late Miocene age, comparable to N13-N16 zone of planktonic foraminifera (= younger than N8-N11 age suggested by foraminifera in Surono et al. 1992 geological map))

Akmaluddin & M.F. Al Hafizh (2017)- Stratigrafi dan biostratigrafi Formasi Sentolo bagian Atas. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
('Stratigraphy and biostratigraphy of the Upper Sentolo Formation'. U Sentolo in section near Kaliagung Village, SW of Sentolo, C Java, 24m thick , mainly calcareous sandstone. Age Late Pliocene (N20-N21))

Akmaluddin, A. Kamei & K. Watanabe (2009)- Preliminary study of high-resolution correlation and calibration of biodatum marine microfossils (foraminifera and nannofossils) using strontium isotope stratigraphy: case study in Southern Mountains, Central Java-Indonesia. In: Proc. Int. Seminar on Geology of the Southern Mountains of Java, Yogyakarta 2009, 1, p. 103-108.

Akmaluddin, A. Kano & K. Watanabe (2009)- Paleoclimate reconstruction based on oxygen isotope composition of foraminifera in Southern Mountains area, Central Java, Indonesia. In: Proc. Int. Seminar on Geology of the Southern Mountains of Java, Yogyakarta 2009, 1, p. 97-102.

Akmaluddin, A. Kano & K. Watanabe (2012)- Paleoceanography of Central Java and closing of Indonesian Seaway reconstruction based on oxygen isotope composition of foraminifera. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-10, p. 17. *(Abstract only)*

(Oxygen isotopes study of planktonic and benthic foraminifera from Ngalang River section, S Mountains, C Java, Indonesia. Low planktonic δ18O values indicate sea surface T in this area higher than other tropical areas during E-M Miocene, probably related to development of W Pacific Warm Pool, which moved to present-day location in W Pacific after ~10Ma, due to closure of Indonesian seaway. Low δ18O values (warming of bottom water) of benthic foraminifera at ~18 Ma and ~12 Ma. Gradual δ18O increase (cooling) in Late Miocene (~12 Ma) in all taxa can be correlated to global cooling and/or closing of Indonesian seaway. Decreasing of carbon δ13C in Late Miocene likely correlates to 'carbonate crash', at ~11-10 Ma)

Akmaluddin, A.R. Perdana, A.N. Fadhillah, Z. Nadirah & A. Hafiz (2017)- Studi awal kelimpahan fosil moluska pada Formasi Sentolo bagian atas. Proc. 10th Seminar Nasional Kebumian, Dept. Teknik Geologi, Universitas Gadjah Mada (UGM), Yogyakarta, PSP-10, p. 895-911.
(online at: https://repository.ugm.ac.id/274228/1/PSP-10.pdf)
('Preliminary study of abundance of fossil molluscs in the upper Sentolo Formation'. Molluscs in Late Pliocene (N20-N21) part of Sentolo Fm NW of Kaliagung village, Kulon Progo, C Java: 10 species of gastropods (incl. Corbicula gerthi, Conus spp., Amnicola, Sulcospira, Cypraea) and 5 species of pelecypoda (incl. Anomia boettgeri, Paphia cheribonensis, Meretrix, Pallium, Anadara). Most species shallow marine and transitional)

Akmaluddin & R.N. Saputra (2014)- Umur Formasi Kebo Butak berdasarkan nanofosil gampingan daerah Bayat, Kab. Klaten, Provinsi Jawa Tengah. Proc. 7th Nat. Seminar Nasional Kebumian, Jurusan Teknik Geologi, Universitas Gadjah Mada, Yogyakarta, M4P-07, p. 874-885.
(online at: https://repository.ugm.ac.id/135168/1/874-885%20M4P-0.pdf)
('Age of the Kebo Butak Formation based on calcareous nannofossils in the Bayat area, Klaten District, C Java'. Kebo Butak Fm of S Mountains of E Miocene age. Tegalrejo-Cermo section with Cyclicargolithus floridanus, Sphenolithus ciperoensis and Dictyococcites bisecta (zone NN1, earliest Miocene) and Discoaster druggii (zone NN2). Basal Karangnongko section with Sphenolithus heteromorphs and S. belemnos (NN4))

Akmaluddin, D.L. Setijadji, K. Watanabe & T. Itaya (2005)- New interpretation on magmatic belts evolution during the Neogene- Quaternary periods as revealed from newly-collected K-Ar ages from Central-East Java, Indonesia. Proc. 34th Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, p. 235-238.
(K-Ar dating shows rock samples from Lawu and Wilis volcanic complex very young (Quaternary). Three volcanic centers of Late Miocene age at transition zone between Quaternary belt and Tertiary Southern Mountains (volcanic centers near Borobudur, Selogiri area, SE of Yogya, and hornblende-rich tuff of ~12 Ma)

Akmaluddin, T. Susilo & W. Rahardjo (2006)- Calcareous nannofossils biostratigraphy of Ngalang River section, Southern Mountain area, Gunung Kidul, Yogyakarta. Proc. 35th Ann. Conv. Indon Geol. Assoc. (IAGI), Pekanbaru 2006, 1p. *(Abstract only)*
(Samples from Miocene Sambipitu and Oyo Fms of Ngalang River section, S Mountains, C Java. Sambipitu Fm shows 5 zones (NN2-NN6; E- M Miocene), Oyo Fm 3 zones (NN8-NN10; M- L Miocene). Results suggest gap between Sambipitu and Oyo Fms. Suggesting younger ages than dated previously)

Akmaluddin, K. Watanabe, A. Kano & W. Rahardjo (2010)- Miocene warm tropical climate: evidence based on oxygen isotope in Central Java, Indonesia. World Academy of Science, Engin. Technology, 71, p. 66-70.
(online at: www.waset.org/journals/waset/v71/v71-11.pdf)
(O and C isotopes records of foraminifera and bulk carbonates from Oyo- Sambipitu Fms, S Mountains, C Java, demonstrate warm sea surface T during Miocene. Decrease of O isotope values at ~14 Ma, tied to M Miocene Optimum. Warming of sea surface T related to development of W Pacific Warm Pool and flow of warm water through Indonesian seaway. Cooling at ~12 Ma, tied to Late Miocene global cooling or due to closing of Indonesian Gateway)

Akmaluddin, K. Watanabe & H. Ohira (2012)- Oligocene-Early Miocene foraminifera, 40Ar/39Ar dating & fission track dating in Southern Mountains, Central Java. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-09, 1p. *(Abstract only)*
(Fission track dating of 3 samples from lower, middle and upper Semilir Fm at Buyutan section yielded ages of 23.2 Ma; near FO Globoquadrina dehiscens, 19.8±1.5 Ma and 19.4 Ma, near Top Globigerina binaiensis)

Akmaluddin, K. Watanabe & W. Rahardjo (2012)- Miocene calcareous nannofossils and foraminifera biostratigraphy, with calibrating the age using 40Ar/39Ar dating in Southern Mountains, Central Java. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-08, 1p. *(Abstract only)*
(Calcareous nannofossil analysis on Miocene Sambipitu and Oyo Fms at Kali Ngalang section. Sambipitu Fm 5 zones (NN2-NN6; E-M Miocene), Oyo Fm 3 zones (NN8-NN10; M-L Miocene). Results indicate gap between Sambipitu and Oyo Fms, with absence of NN7. Foraminifera biostratigraphy of Sambipitu Fm 4 zones (N6-N8a), good agreement with nannofossil biozones, but M Miocene (Oyo Fm) suggest hiatus of N10-N12, inconsistent with nannofossils. 40Ar/39Ar date of 10.0±1.3 Ma of Oyo Fm tuff layers in agreement with biostratigraphic ages (tuff layers 10m above FO Discoaster hamatus (10.7 Ma) and FO Globigerina nepenthes (11.7 Ma), 20m below LO D. hamatus (9.4 Ma))

Alderton, D., R. Harmon, R. Sloane & T. Sudharto (1994)- Fluid inclusion and stable isotope studies at Gunung Limbung Cu/Pb/ Zn deposit, West Java. J. Asian Earth Sci. 10, p. 25-38.
(On base metal mineralization at Gunung Limbung in several steeply-dipping quartz veins, hosted by Miocene monzodiorite stock)

Alderton, D.H.M. & R.T. Sudharto (1987)- Mineralization at Gunung Limbung, West Java: a fluid inclusion and geochemical study. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 5-8.
(Cu-Pb-Zn sulphide mineralization associated with M-U Miocene quartz monzonite stock, 40km W of Bogor)

Alfyan, M.F. & N.I. Setiawan (2014)- Petrogenesis batuan metamorf di daerah perbukitan Jiwo, Kecamatan Bayat, Kabupaten Klaten, Provinsi Jawa Tengah. Pros. Seminar Nasional Kebumian 7, Jurusan Teknik Geologi, Universitas Gadjah Mada, Yogyakarta, 1p. *(Abstract only)*
('Petrogenesis of metamorphic rocks in the Jiwo hills, Bayat, Klaten regency, Java'. Metamorphic rocks in Jiwo Hills mica-albite phyllite, calc-silicate schist, graphite schist, serpentinite, quartzite, marble, albite-mica schist, epidote-glaucophane schist, glaucophane marble with lawsonite, gabbro, garnet-wollastonite skarn and meta-siltstone. Metamorphic protoliths mainly pelitic sediments, but also basaltic-andesitic rocks. Epidote-glaucophane schist, gabbro and serpentinite may indicate Cretaceous subduction process and presence of ocean plate stratigraphy in Jiwo hills)

Alloy, S., B. Kartika & M. Tambunan (1992)- Pemelajaran geologi daerah Malingping, Jawa Barat bagian Selatan. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 463-476.
('Geology study of the Malingping area, Southern West Java'. Brief review of area of W Bayat High- West Malingping Low-Honje High in SW Java. N-S trend of highs-lows)

Alwi, M., J. Hutabarat & A. Mulyo (2016)- Karakteristik exotic block batuan metamorf pada Komplek Melange Luk Ulo. Seminar Nasional Ke III, Fakultas Teknik Geologi Universitas Padjadjaran, Bandung, 11p.
(online at: http://ftgeologi.unpad.ac.id/wp-content/uploads/2018/04/Karakteristik-Exotic-Block-Batuan-Metamorf-Pada-Komplek-Melange.pdf
('Characteristics of exotic blocks of metamorphic rocks in the Luk-Ulo melange complex'. Luk Ulo Melange complex in Karangsambung area is accretion prism complex formed during Cretaceous-Paleocene subduction. Exotic blocks of metamorphic rocks includes serpentinite, phyllite, schist, marble, quartzite, and eclogite)

Alzwar, M., N. Akbar & S. Bachri (1992)- Geological map of the Garut and Pameungpeuk Quadrangle, Jawa, 1208-6 and 1208-3, 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Amiarsa, D.P., D. Noeradi, A.H. Harsolumakso & S. Ubaidillah (2011)- Potensial hydrocarbon reservoir at the Pliocene carbonate sediment, Situbondo Area, East Java. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-SG-020, 8p.
(On Pliocene Pacalan Mb globigerinid limestone exposed on flank of anticline in Situbondo area, S of Madura Straits, E Java)

Amijaya, D.H., N. Adibah & A.Z.A. Ansory (2016)- Lithofacies and sedimentation of organic matter in fine grained rocks of Nanggulan Formation in Kulon Progo, Yogyakarta. J. Applied Geology (UGM) 1, 2, p. 82-88.
(online at: https://journal.ugm.ac.id/jag/article/view/26964/16605)
(Eocene shale at Nanggulan, south C Java, potential shale gas source. Deposited in estuarine to shallow marine environments. Core samples show TOC 0.36-1.0 % for shales and 12.8 % for coaly shales. Estuarine E Eocene higher TOC. Volcanic activity in M Eocene caused lower organic content)

Amijaya, H. & P.A. Pameco (2017)- Geochemistry of natural gas seepages in Boto Area, Bancak, Semarang, Central Java. Indonesian J. Geoscience 4, 2, p. 61-70.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/327/233)
(Gases from surface seeps in W Kendeng zone SE of Semarang and NE of Salatiga thermogenic gases with 53-85% methane, 10-35% N2, etc. Possibly derived from humic (coaly) organic matter))

Amijaya, H., M.I. Novian & E. Iswandi (2011)- Contribution of organic petrography study on organic-rich sediment to the depositional environment determination of Upper Semilir Formation of Southern Mountain in Yogyakarta. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-215, 8p.
(Organic-rich coaly silt-sandstone and thin coal in upper Semilir Fm, interpreted as lagoonal-estuarine facies)

Aminuddin, B.M., T.Y. Nahrowi, P.K. Yohannes & M.G. Rukmiati (1981)- Studi anggota Selorejo, Cekungan Jawa Timur bagian Utara. Proc. 10th Ann. Mtg. Indon. Assoc. Geol. (IAGI), Bandung, p. 144-155.
('Study of the Selorejo Formation, NE Java'. 'Coquina sand' of Late Pliocene (N21) age. Thickness 100-300m in N, 0-50m in S. Gas-bearing in Cepu area (Balun, Tobo), oil-bearing near Surabaya)

Amri, I.U., T. Octaviani & B. Indra (2011)- Hydrocarbon traps modelling in Mojokerto area East Java region, based on gravity data. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-SG-015, 7p.

Andreas, H., H.Z. Abidin, T.P. Sidiq, I. Gumilar, Y. Aoki, A.L. Hakim & P. Sumintadiredja (2017)- Understanding the trigger for the LUSI mud volcano eruption from ground deformation signatures. In: P. Cummins & I. Meilano (eds.) Geohazards in Indonesia: Earth science for disaster risk reduction, Geol. Soc, London, Spec. Publ. 441, p. 199-212.
(online at: http://www.eri.u-tokyo.ac.jp/people/yaoki/2017GSLSP.pdf)
(LUSI mud volcano in Sidoarjo, E Java, started to erupt on 29 May 2006, 200 m from drilling Lapindo oil-gas well, and continues to erupt. Ground deformation data from GPS monitoring do not support triggering of LUSI eruption by reactivation of underlying fault due to Yogyakarta earthquake)

Andreini, J., M.P. Bunds, R.A. Harris, E. Yulianto, D.M. Horns, C. Prasetyadi & P.S. Putra (2016)- Assessment of differential uplift along South Java, Indonesia from terrace elevations mapped with structure from motion photogrammetry. AGU Fall General Assembly 2016, Abstract EP21D-0911, 1p.
(online at: http://adsabs.harvard.edu/abs/2016AGUFMEP21D0911A)
(Four Quaternary marine terraces identified along S coast of Java: T1 0-.05m, T2 2m, T3 17m, T4 22 m, suggest late Quaternary uplift of 0.17 mm/yr)

Andriany, S.S., M.F. Rosana & A. Hardiyono (2016)- Geowisata geopark Ciletuk: geotrek mengelilingi keindahan mega amfiteater Ciletuh. Bull. Scientific Contr. (UNPAD) 14, 1, p. 75-88.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/9796/pdf)
('Geotourism of the Ciletuh geopark: geotrek around the mega beauty of the Ciletuh amphitheater')

Angeles, C.A., S. Prihatmoko & J.S. Walker (2001)- Discovery history of the Cibaliung gold project, Banten, Indonesia. Proc. Indonesian Mining Conf. Exhibition, Jakarta, p. 1B33-IB39.
(High-grade, epithermal gold-silver deposits near Pandeglang, Banten, W Java)

Angeles, C.A., S. Prihatmoko & J.S. Walker (2002)- Geology and alteration-mineralization characteristics of the Cibaliung epithermal gold deposit, Banten, Indonesia. Resource Geology 52, 4, p, 329-339.

(Cibaliung gold project in SW Java, W of Bajah Dome, in Neogene Sunda-Banda arc. Epithermal gold-silver quartz vein mineralization in sub-aqueous basaltic andesite Honje Fm volcanics with intercalated sediments, intruded by andesite-diorite plugs and dykes. Age of mineralization Late Miocene. Hydrothermal system responsible for mineralization may be related to rhyolitic magmatism near volcanic intrusive center during back arc rifting that formed graben or pull-apart basin (see also Harijoko et al. 2004))

Anggun, A. (2012)- Play identification for Paleogene rift sediment in Ngimbang Sub Basin, East Java Basin, Indonesia. In: 74th EAGE Conf. & Exhib., Copenhagen 2012, P054, 5p. *(Extended Abstract)*
(Study is to identify type of play for Eocene- Oligocene rift sediments in Ngimbang Sub Basin, S part of NE Java Basin. At least four types of play: facies change, alluvial fan, basin floor fan and channel fill plays)

Anom, F.D., R.M. Hardito, L. Fahlevi., V. Purnamasi, R.C.A. Rohmana & C. Prasetyadi (2012)- Ichnofacies study of volcaniclastic turbidite Sambipitu Formation based on outcrop data in Ngalang River, Nglipar Area, Kabupaten Gunung Kidul, Yogyakarta: an explanation for the dynamic process of volcaniclastic turbidite Sambipitu Formation in Java Oligo-Miocene volcanic arc. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.

Anonymous (1922)- Jodium. Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnwezen in Nederl. Oost-Indie, 14, p. 1-40.
('Iodine'. Overview of occurrences and production of iodine in Indonesia, mainly from wells in Tertiary basins of East Java, N of volcanic arc)

Anonymous (1924)- Uitkomsten van de mijnbouwkundig-geologische onderzoekingen in the Djampangs (Residentie Preanger Landschappen). Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnbouw Nederl.- Indie, 16, p. 1-28.
('Results of mining-geological surveys in the Jampangs, Priangan Residency'. Unlike conclusions of earlier workers on Java there are potentially commercial gold-siver-copper mineralizations in Jampang area SW of Sukabumi, SW Java, in quartz veins associated with igneous intrusives)

Anonymous (W.F.F. Oppenoorth et al.) (1931)- Verslag naar het onderzoek naar het voorkomen van ertsafzettingen in Zuid-Bantam. Verslagen Mededelingen Indische delfstoffen en hare toepassingen 20, Dienst Mijnbouw Nederlandsch-Indie, G. Kolff, Bandung, p. 1-75.
('Report of investigation of the presence of ore deposits in South Banten'. Thorough report on ore deposits in South Banten (Cikotok, Cipicung, Cihara, Pasirmalang, etc.), based on investigations by Oppenoorth, Koolhoven, Ter Haar, Ter Bruggen and Bothe between 1924-1929. Most Au-Ag bearing quartz veins in S Banten trending N-S or NNW-SSE ('Jampang trend), and found in intrusive andesites and trachytes or at contact with Eocene sediments)

Anonymous (1939)- Delfstoffen op Java, met uitzondering van aardolie, kolen en ertsen. Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnbouw Nederlandsch-Indie, Bandung, 22, p. 1-87.
('Minerals on Java, with exception of oil, coal and metals'. Review of occurrences of gas, barite, phosphate, sulfur, iodine, quartz sand, marble, etc., on Java and Madura)

Anshori, C. (2007)- Petrogenesa basalt Sungai Medana Karangsambung, berdasarkan analisis geokimia. J. Riset Geologi Pertambangan (LIPI) 17, 1, p. 37-50.
(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/viewFile/143/pdf_9)
('Petrogenesis of Medana River basalt, Karangsambung, based on geochemical analysis'. Several basaltic volcanic rocks at Karangsambung melange complex, generally associated with ophiolite and identified as oceanic rocks. However Medana River basalt not associated with gabbro, peridotite or chert. Geochemistry analysis suggest silica-saturated basalt of tholeiitic normal mid oceanic ridge basalt (NMORB))

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(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/272)

('Model of mineralization of Banten opal'. Precious opal at Lebak Regency, W Java, is opal-CT. Associated with Late Pliocene- Pleistocene folding, weathering, and silica leaching from volcanic glass. Host rock is dark grey claystone below polymict conglomerate, >8m deep)

Ansori, C., Isyqi & F.A. Wardhani (2019)- Tipe magmatik batuan beku Formasi Gabon di Tinggian Karangbolong, Kebumen. J. Geologi Sumberdaya Mineral 20, 2, p. 63-74.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/406/394)
('Igneous Rock types in the Gabon Formation in the Karangbolong High, Kebumen'. Karangbolong High in S Mountains of Java dominated by Late Oligocene- E Miocene Gabon Fm volcanics: mainly pyroxene andesite, basaltic andesite and some olivine basalt. To N igneous rocks more acid (calc-alkaline), in S slightly island arc tholeiite. Tectonic position of Gabon Fm in island arc plate margin)

Ansori, A.Z.A. & D.H. Amijaya (2014)- Proses pengendapan dan lingkungan pengendapan serpih Formasi Nanggulan, Kulon Progo, Yogyakarta, berdasarkan data batuan inti. Proc. 7th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 708-720.
(online at: https://repository.ugm.ac.id/135165/1/708-720%20M4O-03.pdf)
(Depositional processes and setting of shales of the Nanggulan Formation, Kulon Progo, Yogyakarta, based on core data'. Depositional environment of Nanggulan Fm upward deepening, from fluvial to tide-dominant estuarine to shallow marine)

Ansori, C., S. Godang, D. Hastria & Isyqi (2019)- Protolith oceanic island arc dari granitoid Tipe M dan I di Karangsambung, Kebumen, Jawa Tengah. J. Geologi Sumberdaya Mineral 20, 4, p. 249-262.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/485
('Oceanic Island Arc protolith of M- and I-type granitoids at the Karangsambung area, Kebumen, C Java' Granitoid rocks in Luk Ulo melange complex formerly considered as either plagiogranite formed from at Mid Ocean-ridge, leucogranite formed from continental collision, or as arc-related granitoid. Karangsambung granitoid is M- and I-type formed depth of ~20-30 km, resulting from differentiation of magma at K-enriched oceanic island)

Ansori, C., Sujatmiko & H. Permana (2000)- Giok Jawa dari wawasan Karangsambung, Kebumen, Jawa Tengah, dan pemanfaatannya. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 157-163.
('Java jade from the Karangsambung area, Kebumen, Central Java, and its utilization'. Boulders of green jade from Lokidang River, Kalitengah and Kebondalem, associated with Luk Ulo melange complex)

Anugrahadi, A., Y. Surachman D., S. Mulyono, E. Triarso, D. Muljawan, S. Hidayat, A. Lesanpura et al. (1999)- Oblique subduction zone in the southern West Java offshore. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 73-82.
(In Indonesian. Some results of BGR SONNE cruise 1998-1999)

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(online at: http://journal.itb.ac.id/index.php?li=article_detail&id=645)
('Foraminifera distribution patterns within sequence stratigraphy; a case study in Blora and surrounding areas'. Age, paleobathymetry and sequences identification at Braholo, Guwo, Ledok and Ngliron River sections of NE Java. Ngrayong Sst Fm generally age N9-N10)

Apotria, T., M.A. Weidmer, D. Walley, A. Derewetzky & D. Millman (2009)- Mass wasting and detrital carbonate deposition, Cepu Block, East Java. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-143, p. 1-9.
(On detrital carbonate aprons around Oligo-Miocene buildups in Cepu Block, as penetrated by Jambaran 2)

Aoki, Y. & T.P. Sidiq (2014)- Ground deformation associated with the eruption of Lumpur Sidoarjo mud volcano, east Java, Indonesia. J. Volcanology Geothermal Res. 278-279, p. 96-102.

(Ground deformation associated with eruption of Lumpur Sidoarjo mud volcano between 2006 and 2011 studied from Synthetic Aperture Radar images. Marked subsidence observed West of, and around vent)

Arai, S. & N. Abe (1996)- Detrital chromian spinels of fore-arc mantle origin in meta-conglomerate from a pre-Tertiary metamorphic complex of Jiwo Hills, Central Java, Indonesia. In: H. Noda & K. Sashida (eds.) Professor H. Igo Commemorative volume on Geology and Paleontology of Japan and Southeast Asia, Gakujyutsu Tosho Insatsu, Tokyo, p. 217-224.
(Pre-Eocene meta-conglomerates from Jiwo Hills with clasts of poorly sorted sandstones and volcanics and common chromian spinel grains derived from mantle peridotites. Conglomerate possibly fill of Marianas-type trench, where peridotites were exposed and sediments and volcanics were supplied from arc)

Arai, S., D.A.D. Sujatna, K. Hardjadinata & N. Niitsuma (1981)- Metamorphic and related rocks from Jiwo hills near Yogyakarta, Java. In: T. Saito (ed.) Micropaleontology, petrology and lithostratigraphy of Cenozoic rocks of the Yogyakarta region, Central Java. Publ. Yamagata University, p. 7-14.

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(Ngrayong Fm regressive-transgressive cycle with coarse sands in lower part, fine clastics and limestones towards top. Five facies: tidally-influenced cross-bedded sandstones, sandy turbidites, contourites, hemipelagic mudstones and carbonates. Cross-bedded sandstones, capped by thin bioclastic carbonates, widely distributed in shelf- upper slope area in N of study area. Contemporaneous turbidites, contourites and hemipelagic slope-basinal mudstones to S. Basement architecture controlled Oligocene-Miocene paleogeography and Ngrayong deposition. Sandy turbidite facies most productive and primary exploration target. Cross-bedded sandstones produced gas in NW, but no hydrocarbons elsewhere Main reason is destruction of traps by exposure and erosion. Deep marine carbonate contourites tested hydrocarbons in Tuban Block and form secondary target)

Ardhana, W., P. Lunt & G.E. Burgon (1993)- The deep marine sand facies of the Ngrayong Formation in the Tuban Block, East Java Sea. Indon. Petroleum Assoc. (IPA) Sandstone Core Workshop, Jakarta 1993, p. 117-175.
(Early M Miocene Ngrayong Fm quartz sands most productive reservoir onshore E Java. Fields near Cepu and outcrops to N and W show thickly bedded, m-grained, cross-bedded sandstones. Three wells drilled further S (Tuban JOB; Ngasin 1, Gondang 1, Grigis Barat 1) silt to fine sand, with some m-grained quartz. Paleontology suggests bathyal facies. Sediments thinly bedded and locally good flow rates. Gondang-1 tested 538 BOPD from 25' sandy pelagic carbonate. Deposition mainly from deep sea currents (contourites). Grigis Barat-1 with features indicative of distal turbidite)

Ardhito, Y. (2013)- Biostratigrafi nannofossil gampingan, lintasan Gunung Temas dan Gunung Lanang Kecamatan Bayat, Kabupaten Klaten, Propinsi Jawa Tengah. S1 Thesis, Universitas Gadjah Mada, p. 1-143.
(Unpublished; see also Akmaluddin and Ardito 2014))
(parts online at: http://etd.repository.ugm.ac.id/...)
('Biostratigraphy of calcareous nannofossils of the Mount Temas and Gunung Lanang sections, Bayat District, Klaten Regency, Central Java'. Oyo Fm at Gunung Lanang section 4 zones (NN7- NN10), Gunung Temas two zones (NN10- NN11) (= Late Miocene). Paleoclimate: overall cooling, with four warming-cooling events)

Ariani, N.P., Akmaluddin & W. Rahardjo (2017)- Paleoclimatic change during Late Miocene based on planktonic foraminifera in the Sentolo Formation- Kulon Progo. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(Planktonic foraminifera assemblages in Late Miocene (N16-N17; ~8.6-6.1 Ma) part of Sentolo Fm in Jurang-Banjarharjo and Kalibawang sections, W Progo Hills, C Java, suggest paleoclimate fluctuations: Zone I warm (>~ 8.6 Ma); zone II cooling around ~7-8.6 Ma (cold peak at ~8 Ma); Zone III warming around ~ 6.1- 7 Ma (warm peak ~7 Ma) and Zone IV re-warmed to cool down at <~ 6.1 Ma. Pattern comparable to observations in Kepek Fm (S Mountains) on, Kerek Fm (Kendeng Zone) and ODP 806 in Pacific Ocean)

Arifin, L., S. Hakim, K. Tamaki, K. Kisimoto, T. Yokokura & Y. Okuda (1987)- Seismic reflection of the Sunda Trench in Western Java. CCOP Techn. Bull. 19, p. 13-23.

Ariyanto, P., A.I. Maulana & A. Suardiputra (2008)- The application of balancing cross-section and sandbox modeling for imbricate thrust system characterization in the Sumedang Area of West Java. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-SG-043, 10p.

Armandita, C., M.M. Mukti & A.H. Satyana (2009)- Intra-arc trans-tension duplex of Majalengka to Banyumas area: prolific petroleum seeps and opportunities in West-Central Java border. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-173, p. 573-588.
(W Central Java poorly explored area with oil seeps)

Armandita, C., B. Raharjo, A.H. Satyana, I. Syafri, M. Hariyadi, E. Nugraha, Wanasherpa, S. Graha & S. Rachmat (2002)- Perkiraan inversi Sesar Baribis serta perannya terhadap proses sedimentasi dan kemungkinan adanya "'reworked source" pada endapan turbidit lowstand setara Talang Akar; studi pendahuluan di daerah Sumedang dan sekitarnya. Buletin Geologi (ITB) 34, 3, p. 205-220.
('Estimated inversion of the Baribis Fault and its role in the sedimentation process and possibility of reworking of source in Talang Akar lowstand turbidite sediments; preliminary study in Sumedang and surrounding areas'. Baribis Fault at N side of Bogor Trough normal fault in Oligocene- Pliocene, inverted to thrust fault in Pleistocene. Normal movement created S-dipping slope with abrupt change from shelf sedimentation in NW Java Basin to turbidite system of Bogor Trough. Reworked organic material from Talang Akar Fm in NW may be source rock for oil-gas in Sumedang region and surrounding Bogor Trough)

Armandita, C., A.H. Satyana, M.M. Mukti & I. Yuliandri (2011)- Trace of the translated subduction in Central Java and its role on the Paleogene basins and petroleum systems development. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-462, p. 1-19.
(NW-SE trending, right-lateral Pamanukan- Cilacap Fault interpreted to have translated SW-NE trending Pre-Tertiary subduction zone and Paleogene shelf edge by ~200 km to S and separates two Neogene deep water basins: Bogor in W and North Serayu in E)

Armia, A. (2017)- The depositional system of epiclastic alluvial fan in Oligocene Jatibarang Formation, North West Java Basin, Indonesia. In: 79th Conf. Exhib. European Assoc. Geosc. Engineers (EAGE), Paris 2017, p.
(Seismic identification of Oligocene and older geometries of alluvial fans with volcanic provenance in Cemara area, NW Java basin)

Arpandi, D. & Sujitno Patmosukismo (1975)- The Cibulakan Formation as one of the most prospective stratigraphic units in the North-West Java basinal area. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 181-207.
(Description of stratigraphy of NE Java Basin. Late Oligocene- M Miocene Cibulakan Fm is first transgressive-regressive sequence, followed by Parigi and Cisubuh Fms as second transgressive-regressive sequence. Lower Cibulakan Fm clastics, M Cibulakan Fm limestone of zones Late Te- Early Tf, with up to 640m thick buildups. Volcanic Jatibarang Fm and Cibulakan Fms are main hydrocarbon targets in basin)

Arsadi, E., S. Suparta & S. Nishimura (1995)- Subsurface structure of Merapi inferred from magnetotelluric, gravimetric and geomagnetic surveys. In: Proc. Merapi Volcano Decade International Workshop, Yogyakarta, Oct. 1995, p. .

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(Onshore NW Java basin traditional plays Miocene carbonate buildups on structural highs and E Oligocene Jatibarang volcanics. Cipunegara Low studied for Talang Akar Fm rift-fill history and potential plays)

Ashari, P. & H. Pandita (2015)- Peralihan lingkungan pengendapan antara Formasi Nglanggran ke Formasi Sambipitu, Kali Ngalang, Dusun Karanganyar, Desa Ngalang, Kecamatan Gedang Sari, Kabupaten Gunung Kidul, Provinsi Daerah Istimewa Yogyakarta. Prosiding Seminar Nasional ReTII ke-10 (STTNAS), Yogyakarta, p. 77-91.
(online at: https://journal.sttnas.ac.id/ReTII/article/view/166/135)
('Environmental transition between Nglanggran Formation to Sambipitu Formation, Ngalang River, Karanganyar Hamlet, Ngalang Village,.. Gunung Kidul District,..'. Transition between two basal Miocene volcanoclastic formations: Nglanggran andesite breccia proximal facies. Overlying Sambipitu Fm more distal with Thalassinoides and Chondrites trace fossils, possibly upper submarine fan facies on flank of volcano; with zone N4- N5 planktonic foraminifera)

Asikin, Sukendar (1974)- Evolusi geologi Jawa Tengah dan sekitarnya ditinjau dari segi tektonik dunia yang baru. Ph.D. Thesis, Bandung Inst. Technology, p. 1-103. *(Unpublished)*
('Geological evolution of Central Java and vicinity in the light of the new global tectonics'. One of first to recognize U Cretaceous- Paleocene Luk Ulo melange complex. Paltinieri et al. 1976:)

Asikin, S., A. Handoyo, H. Busono & S. Gafoer (1992)- Geologic map of Kebumen Quadrangle, Java, 1401-1, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 24p. + map.
(S coastal area of C Java. In NW corner of map part of Karangsambung Anticline and Luk Ulo Cretaceous-Paleogene basement/ melange complex outcrops. Eocene-Oligocene Karangsambung Fm scaly clay, Eocene reefal limestone olistolith, etc.)

Asikin, S., A. Handoyo, B. Prastistho & S. Gafoer (1992)- Geologic map of the Banyumas Quadrangle, Java, 1308-3, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 22p. + map.
(Map sheet with part of Banymas basin, Karangsambung anticline and Kulon Progo 'Old Andesite' volcanic complex)

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(On NW Java basin play types)

Asmoro, P. (2013)- Geologi Gunung Sadahurip, Kabupaten Garut. J. Geologi Sumberdaya Mineral 14, 1, p. 39-49.
('Geology of Mount Sadahurip, Garit District'. 'Sadahurip Pyramid' not man-made structure, but remnant of old volcano, a parasite of G. Talagabodas)

Astadiredja, K.A.S. (1978)- Flysch facies of the Citarum Formation, West Java. Riset Geol. Pertambangan (LIPI) 1, 2, p. 30-35.

Astadiredja, K.A.S., Nurdrajat & F. Muhamadsyah (1993)- Turbidite parasequence set of the Citarum Formation, Rajamandala High, West Java. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1175-1180.
(Citarum Fm overlies Rajamandala Lst, is ~3000m thick and composed of two parasequence sets of submarine fan deposits)

Astuti, B.S. (2015)- Perubahan muka air laut di Cekungan Serayu Utara bagian Barat selama Miosen Tengah hingga Pliosen di daerah Kuningan, Jawa Barat. Prosiding Seminar Nasional ReTII ke-10 (STTNAS), Yogyakarta, p. 35-40.
(online at: https://journal.sttnas.ac.id/ReTII/article/view/160/129)
('Changes in sea level in the western part of the North Serayu Basin during Middle Miocene to Pliocene in the Kuningan area, West Java'. N Serayu basin with oil and gas seeps. In Rambatan, Halang and Pemali Fms turbiditic series three sea level changes during M Miocene- Pliocene: sea level rise in mid N13-N18, sea level drop in mid-N18 -N19 and sea level rise in N19-N20)

Astuti, B.S., V. Isnaniawardhani, Abdurrokhim & A. Sudradjat (2017)- Micro tectonic at North Serayu Basin, Central Java: case study at type locality of Rambatan Formation. In: The 2nd Joint Conf. Utsunomiya University and Universitas Padjadjaran, Japan, p. 233-237.
(online at: https://uuair.lib.utsunomiya-u.ac.jp/dspace/bitstream/10241/10927/1/technical%20session_pro_3.pdf)

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(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/462/283)
(Miocene Rambatan Formation in W part of North Serayu Basin in flysch facies of turbidite sediments deposited in deep marine environment. Deposited during zones N13-N19 as gravity flows and contourites. Increase in sediment supply in mid-N17, sourced from North, followed by change from deep marine channel to deep marine tidal area. In N19 sediments redeposited as turbidites, starting with debris flow in mid-N18).

Astuti, B.S. & H.D. Kusuma (2016)- Tectonic influence on changes in Neogene sediment supply, western part of North Serayu Basin. Int. J. Engineering and Science Applications (UNHAS) 3, 1, p. 61-67.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/278/162)
(W part of N Serayu Basin with thick Neogene sequence of Halang, Pemali and Rambatan Fms turbiditic series. M-L Miocene zones N13-N17 (Rambatan Fm) rel. thin and thickening during middle of N18-N19 (E Pliocene; Base Halang Fm). Followed by decreasing sediment supply during N19-N20)

Astuti, B.S. & A.F. Rizqi (2016)- The potential of Halang Formation as hidrocarbon reservoir. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 598-604.
(U Miocene- Lower Pliocene Halang Fm submarine fan deposits in Serayu Basin good reservoir potential)

Aswan (2004)- Micro and macro molluscan fossils from the Middle Miocene Nyalindung Formation, Sukabumi, West Jawa, Indonesia. Buletin Geologi (ITB) 36, 2, p. 47-72.

Aswan (2006)- Taphonomic significance and sequence stratigraphy of the lower part of Nyalindung Formation (Middle Miocene), Sukabumi. Bull. Dept. Geol. Inst. Teknologi Bandung (ITB) 38, p. 131-144. *(In Indonesian)*

Aswan (2006)- Middle Miocene climate change indicated by molluscan fossil associations and glacio-eustatic fluctuations in lithofacies, Nyalindung Formation, Jawa, Indonesia. Jurnal Teknologi Mineral (ITB) 13, 3, p.
(Sedimentary facies and tidal- shallow marine Nyalindung Fm molluscs from Cijarian River section, Sukabumi, W Java, suggest climate change at ~12 Ma (M Miocene). Increase in water depth corresponds to a marine climatic warming. At least nine cyclic facies changes from gravelly shellbed or sandstone to muddy sandstone. Cool period at ~12 Ma and warm period at ~11.75 Ma related to sea-level changes)

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(online at: http://iopscience.iop.org/article/10.1088/1755-1315/71/1/012031/pdf)
(Re-examination of Preangerian and Odengian Java molluscan stages of Oostingh (1938), in outcrops of W Java. Preangerian stage represented by exposures along Cijarian, Citalahab rivers (M Miocene (N9-N14); Odengian stage in Cijariang river M Miocene- middle Late Miocene (N9-N16). The Nyalindung Fm in Cijarian river also contains Vicarya verneulli, an index fossil that marks global rise in sea level in M Miocene (12 Ma))

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(On Paleogene- Neogene sedimentary facies of C Serayu Basin, C Java, which during M Eocene- Oligocene was part of Bogor Trough/ Bobotsari Low. Low bounded by S Serayu Range high in S. In Neogene volcanic belt moved N to N of Bogor Through. Peak volcanism in Late Miocene- earliest Pliocene (Kumbang volcanics))

Bachri, S. (2011)- Basin development and Neogene deposition history in Bobotsari Low, Purbalingga Regency, Central Java. J. Sumber Daya Geologi 21, 6, p. 285-292.
(Bobotsari Low is part of Bogor Through in Purbalingga area. Bordered in S by high of S Serayu Range. Based on residual gravity map Bobotsari Low represents ENE-WSW trending graben. Paleogene not exposed, but supposed to be deposited, in back-arc basin. End Oligocene inversion formed mountainous area, which was subsequently eroded. E-M Miocene trangression. Paleocurrents indicates S-SE ward transport direction, suggesting fore-arc basin. Late Miocene turn to deep marine environment, with peak volcanic activity as suggested by Kumbang Volcanics. In distal environment turbidites of Penyatan Fm formed. Gradual shallowing to coastal environment (Tapak, Kalibiuk Fms) in N19-N20 (E-M Pliocene).

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('Provenance and basement of the Paleogene formation in the Serayu Basin'. Volcanic detritus and abundant feldspars in most samples from M-L Eocene-Oligocene Worowari Fm suggest main source is from volcanic rock, but also metamorphic slate fragments and quartz-rich rocks. Detrital zircons suggest Late Cretaceous basement age (~68 ± 9 Ma), probably part of Sunda Platform)

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('Sedimentology of the Paleogene Worawari Fm in the North Serayu Mountains'. New name Worawari Fm for M Eocene- Oligocene deep marine turbidites and olistostrome deposits ENE and NW of Banjarnegara, C Java. Turbidites at base with abundant radiolaria and deep water benthic forams (Bathysiphon, Cyclammina), develop into olistostrome of claystone matrix with blocks up to 10s of m, and polymict conglomerates, sandstones and include Nummulites limestones)

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('Stratigraphy and sedimentology of tidal flat deposits at Kali Tulis, Banjarnegara' Merawu Fm in Kali Tulis. Lower part mainly mudstone, interpreted as mud flat, and reportedly with E-M Miocene (N8-N14) planktonic foraminifera (= open marine; do not support mud flat facies interpretation; JTvG). Upper part sand-rich, interpreted as sand flat and with common volcanic rock fragments, suggesting provenance from volcanic arc)

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(Significant hydrate accumulation interpreted from Bottom Simulating Reflector on BGR seismic lines in central Sunda margin (forearc region off SW Java- S Sumatra))

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(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/120/114)
('Indications of adakitic rocks in Pacitan, East Java'. Late Oligocene- E Miocene 'Old Andesites' volcanic and intrusive rocks from Pacitan area in Southern Mountains basaltic-andesite to rhyolite of island arc affinity. Several samples adakite-like, with high Sr and low Y, Yb)

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(online at: https://qir.kyushu-u.ac.jp/dspace/bitstream/2324/14900/1/paper4.pdf)
(Development of NE-SW trending Yogyakarta graben. Two major faults divide area into three parts. Different uplift rates created depressed block between two faults. Foraminifera suggest all blocks in shallow marine environment in zone N9 (~15 Ma). Pliocene uplift after deposition of Kepek and U Sentolo marls, followed by extension since Pleistocene. W part uplifted >590m, central part <120m, E part uplifted above 170-300m)

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(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-2/no-2/jsaag-v2n2p138.pdf)

(Yogyakarta region, C Java, NE-SW-trending central depression bordered by two parallel faults. Based on foraminifera observations, depression and bordering blocks were in same depositional environment (inner neritic) during N9 (M Miocene). Present positions indicate W part uplifted higher than others (>590m), Central part uplifted <120 mm, E part >170-300m)

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(Gunung Pongkor gold-silver deposit in W Java several steeply dipping epithermal quartz-veins, associated with Neogene calc-alkaline volcanism. K/Ar dates of mineralization 8-9 Ma. Production started in 1994)

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999025.pdf)
(Epithermal gold deposit at NE side of Bayah Domain in SW Java. Associated with Plio-Pleistocene intrusion, hosted in Late Oligocene- E Miocene 'Old Andesite' and Cimapag Fm volcanics. Age of mineralization probably same as at Pongkor, where dated as 2.1- 1.5 Ma)

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Basuki, N.I. & S.A. Wiyoga (2012)- Diagenetic pattern in the Citarate carbonate rocks, Cilograng Area, Lebak Regency, Banten Province. J. Geologi Indonesia 7, 3, p. 137-144.
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(E Miocene Citarate Fm in Cilograng, 10 km NW of Pelabuhan Ratu, displays 9 phases of diagenetic events,

Basuki, N.I., S. Prihatmoko & E. Suparka (2012)- Gold mineralization systems in Southern Mountain Range, West Java. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 85-100.

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(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/NIGM-5-1.pdf)
(Widespread evidence of M Miocene deformation and regression across much of Indonesia. Faunal composition and rapid diversification of larger foraminifera (species of Miogypsina, Lepidocyclina) may be response to fast changing environments. In NE Java basin Ngrayong sandstones unconformably overlie Upper Orbitoiden Limestone (OK), a hiatus spanning planktonic foram zones upper N9-lower N11. May also be time of overthrusting of allochthonous terranes of Timor, rise of Barisan Mountains in Sumatra)

Baumann, P. (1982)- Depositional cycles on magmatic and back arcs: an example from Western Indonesia. Revue Inst. Francais Petrole 37, 1, p. 3-17.
(Four main sedimentary cycles on Java-Sumatra-Sunda Shelf, each starting with transgression and each ending with a phase of volcanism and tectonism: (1) M Eocene- E Oligocene, (2) Late Oligocene- E Miocene, (3) E-M Miocene (missing in many places under M Miocene erosional surface, (4) M-Late Miocene, (5) Pliocene-Recent)

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(Listings of M Eocene mollusc assemblages from Nanggulan, W of Yogyakarta, studied earlier by Boettger 1883 and Martin 1914, 1931. Of 74 mollusc species, 16 also found in other Tethys basins, while 35 others have affinities with European Eocene species)

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(online at: https://drive.google.com/file/d/1O4CV_zUaki3dQOBEe8iaNPEyrDoJK8DV/view)
('On Puruninella permodesta (Martin) from the Upper Eocene of Nanggulan, Java'. Brief description of new Eocene gastropod genus from Kali Puru)

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('The species Buccinulum in the Early Miocene of the island Madura'. Descriptions of two new Rembangian (M Miocene?) gastropod species of Buccinulum from Madura in Martin collection: B.madurense and B. teschi)

Behrens, T.H. (1880)- Beitrage zur Petrographie des Indischen Archipels. I. Mikroskopische beschrijving van gabbro en serpentijn, augietandesieten, basalt en tachylyt, benevens tertiaire conglomeraten uit de omgeving der Tjiletoek-baai. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde, 20, p. 1-80.
('Contributions to the petrography of the Indies Archipelago. I. Microscopic descriptions of gabbro, serpentine, augite andesites, basalts, tachylyt and Tertiary conglomerates from the surroundings of Ciletuh Bay'. Petrographic details of rocks in Delft collection, collected by Junghuhn, Van Diest, Jonker and Verbeek. One of first descriptions of rocks from SW Java melange complex)

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(On Miocene-Pleistocene volcanism on Java Sea islands Bawean, Karimunjawa (Late Miocene- Pliocene basalts, 6.5-3.7 Ma; different from subduction-related volcanics; extension-related?) and Java N coast (Lasem (1.6-1.1Ma), Ungaran, Muria). Pleistocene volcanoes (1.6- 0.3 Ma) increasing K2O content away from trench)

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(online at: www.biodiversitylibrary.org/item/121455page/61/mode/1up)
('Investigation of the coal found along the beach of Peucang Bay'. On occurrences of coal at far W point of Ujung Kulon Peninsula, facing Sunda Straits. Several thin layers of lignite in area with common petrified and coalified wood. No figures (see also report on chemical analyses of coals by Croockewit))

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('Contributions to the geological and mineralogical knowledge of the Netherlands Indies, XVI. Investigation of the presence of coal in the terrane on the Ciletuh Bay, SW Java'. One of few reports by African Prince/ mining engineer Akwasi Boachi. Ciletuh Bay partly surrounded by serpentine hills, overlain by sandstone. Although unfossiliferous quartz sandstones present, no outcrops of coal were found (?))

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(online at: www.repository.naturalis.nl/document/552452)
(Eocene and Miocene crab fossils from Java (Priangan, Yogyakarta and Rembang) from collections of Verbeek and Martin. Incl. U Eocene Scylia laevis n.sp. and Martinocarcinus ickeae n.sp. from Kali Puru, Nanggulan, Scyllarus junghuhni n.sp., Myra, Nucia and Calianassa from E Miocene of W Progo, Raninellopsis javana n.sp. from E Miocene of Rembang, Neptunus from Nyalindung, Callianassa frangens n.sp. from Ci Lalang, etc.)

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Miocene Kendeng Basin. Enhanced attenuation also in upper crust near recent volcanoes pointing towards zones of partial melts)

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(Classic study of E Miocene (G. insueta zone) to Pliocene (Gr. menardii zone) planktonic foraminifera, based on continuous core samples from 1934 BPM well Bodjonegoro 1. (Showed validity of then new 'global' E Miocene- Pliocene planktonic foram zonation in Indonesia. Deep water benthic forams from same well described by Boomgaart, 1949; JTvG))

Bolliger, W. & P.A.C. de Ruiter (1975)- Geology of the South Central Java Offshore area. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 75-81.
(1971-1974 Shell work on South Java forearc basin exploration. Two dry wells in Miocene carbonate targets, Borelis 1 and Alveolina 1. Alveolina 1 with E-M Miocene carbonate section. Both wells TD in pre-Miocene volcanic agglomerates and basalt)

Boomgaart, L. (1949)- Smaller foraminifera from Bodjonegoro (Java). Doct. Thesis, University of Utrecht, p. 1-175. *(Unpublished)*
(Classic study of E Miocene- Pliocene smaller benthic foraminifera in continuously cored Bojonegoro 1 well (BPM, 1934), E of Cepu. One of first examples of use of benthic foraminifera for paleobathymetry interpretation. Entire late Early Miocene- Pliocene section is in bathyal facies)

Boomgaart, L. & J. Vroman (1947)- Smaller foraminifera from the marl zone between Sonde and Modjokerto (Java). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 39, 3, p. 419-425.
(online at: www.dwc.knaw.nl/DL/publications/PU00016873.pdf)
(Distribution of benthic foraminifera in samples from Late Pliocene- Pleistocene sediments from eastern Kendeng zone near Mojokerto, E Java. Mainly shallow marine miliolids, rotalids. No location maps, stratigraphy)

Bothe, A.C.D. (1929)- Djiwo Hills and Southern Range. Fourth Pacific Science Congress, Java 1929, Excursion Guide C1, p. 1-14.

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(M Miocene Tf1-Tf2 larger forams from Wonosari Fm in Gunung Sewu area, S Mountains of C Java. See also comments by Renema (2006))

Braga, G. (2001)- Occurrence of Cenozoic bryozoa in Nanggulan and elsewhere in the Indonesian Archipelago. Memorie Scienze Geol., Padova, 53, p. 61-64.

Bronto, S. (2003)- Gunungapi Tersier Jawa Barat: identifikasi dan impliksinya. Majalah Geologi Indonesia (IAGI) 18, 2, p. 111-135.
('West Java Tertiary volcanoes: identification and implications'. W Java ten Oligo-Miocene volcanoes, mostly close to South coast. Fifteen Mio-Pliocene volcanoes in central-northern part, roughly same zone as Quaternary belt. Eocene-Oligocene volcanics more rare and widely scattered)

Bronto, S. (2008)- Tinjauan geologi gunung api Jawa Barat- Banten dan implikasinya. Jurnal Geoaplika 3, 2, p. 47-61.
('Overview of the volcanic geology of Banten, W Java, and its implications'. Most of W Java and Banten areas covered by volcanoes and their products. Six groups: Dano and Cibaliung volcanic complex, Bayah Pongkor, Sukabumi-Southern Mountains, Bogor-Cianjur, Purwakarta and Bandung areas. Ages of volcanoes Paleogene-

Quaternary, indicating superimposed volcanic episodes. Width of volcanic arc in W Java and Banten ~80-100km)

Bronto, S. (2009)- Merapi volcano and the Southern Mountains, Yogyakarta: volcanoclastic rocks for petroleum geologist. Fieldtrip Guidebook, Indon. Petroleum Assoc. (IPA)., p. 1-48.

Bronto, S. (2009)- Fosil gunung api di Pegunungan Selatan Jawa Tengah. In: Proc. Workshop Geologi Pegununungan Selatan, Yogyakarta 2007, Pusat Survei Geologi, Bandung, Spec. Publ. 38, p. 171-194.
('Fossil volcanoes in the Southern Mountains of Central Java'. 24 Oligo-Miocene paleo-volcanic centers identified in W part of S Mountains of C Java. Four groups: Parangtritis- Sudimoro, Baturagung- Bayat, Wonogiri-Wediombo and Karangtengah- Pacitan. General stages of volcanic evolution: (1) Oligocene basaltic pillow lavas in Kebo-Butak and Watupatok Fms; (2) first construction of andesitic cones of Mandalika and Wuni Fms; (3) destruction of composite volcanoes to form calderas and pumice-rich Semilir Fm, and (4) second phase of construction of andesitic cones of E Miocene Nglanggran Fm)

Bronto, S. (2010)- Identifikasi gunung api purba Pendul di Perbukitan Jiwo, Kecamatan Bayat, Kabupaten Klaten-Jawa Tengah. J. Sumber Daya Geologi 20, 1, p. 3-13.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/157/152)
('Identification of the ancient Pendul Volcano in the Jiwo Hills, Bayat, Klaten Regency, C Java'. Gunung Pendul is composed of microgabbro (K-Ar age 32.8 ± 6.6 Ma in Surono 2006). At E flank outcrop of pillow basalt lava flows, probably deposited on ocean floor. In- and extrusives probably remnants of eroded ancient volcano. Ages of volcanism at Pendul volcano in Bayat in particular and in S Mountains into four periods: Paleocene, Late Eocene- E Oligocene, E and M Miocene. S Mountains volcanism may be continuous from Late Eocene-E Miocene)

Bronto, S. (2010)- Geologi gunung api purba. Geological Survey (Badan Geologi), Bandung, p. 1-181.
('Geology of ancient volcanoes'. Also as 2013 second edition. Introductory text on volcano geology based on examples from Indonesia)

Bronto, S., P. Asmoro & M. Efendi (2016)- Gunung api lumpur di daerah Cengklik dan sekitarnya, Kabupaten Boyolali Provinsi Jawa Tengah. Prosiding Seminar Nasional Aplikasi Sains Teknologi,Yogyakarta, (SNAST 2016), Jurnal FTI IST AKPRIND 1, 1, p. 17-27.
(online at: http://journal.akprind.ac.id/index.php/fti/article/view/742/470)
('Mud volcanoes in Cengklik and surrounding areas, Boyolali District, Central Java Province'. In Boyolali district mud volcanoes in E-W zone 20km long/3-5 km wide from Lake Cengklik to Solo River. With andesite basalt skoria in Gununglondo)

Bronto, S., P. Asmoro & M. Efendi (2017)- Gunung api lumpur di daerah Cengklik dan sekitarnya, Kabupaten Boyolali Provinsi Jawa Tengah. J. Geologi Sumberdaya Mineral 18, 3, p. 147-159.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/269/291)
(Same paper as Bronto et al. 2016)

Bronto, S., S. Bijaksana, P. Sanyoto, L.O. Ngkoimani, G. Hartono & S. Mulyaningsih (2005)- Tinjauan volkanisme Paleogene Jawa. Majalah Geologi Indonesia (IAGI) 20, p. 195-204.
('Review of Paleogene volcanism of Java')

Bronto, S., E. Budiadi & G. Hartono (2006)- A new perspective of Java Cenozoic volcanic arcs. Proc. Jakarta 2006 Int. Geosc. Conf., Indon. Petroleum Assoc. (IPA), Jakarta06-OT-09, 4p. *(Extended Abstract)*
(Volcanic arcs of Paleogene, Neogene and Quaternary were superimposed, and among them intra-arc basins developed)

Bronto, S., R. Ciochon, Y. Zaim, R. Larick, A. Wulff, Y. Rizal, S. Carpenter, A. Bettis, Sudijono & Suminto (2004)- Studi petrologi basal sebagai indikasi volkanisme di daerah Grumbulpring, Sangiran- Jawa Tengah. J. Sumber Daya Geologi 14, 2, p. 37-50.

('Petrological study of basalt as an indication of volcanic activity in the Grumbulpring area, Sangiran, C Java'. Young Basalt outcrop S of Sangiran. Possible relation to mud volcano of Sangiran?)

Bronto, S., G. Hartono & B. Astuti (2004)- Hubungan genesa antara batuan beku intrusi dan ekstrusi di Perbukitan Jiwo, Kecamatan Bayat, Klaten, Jawa Tengah. Majalah Geologi Indonesia (IAGI) 19, 3, p. 147-163.
(‘Genetic relationships between intrusive and extrusive rocks, Jiwo Hills, C Java’)

Bronto, S., G. Hartono & S. Mulyaningsih (2008)- Peninjauan kembali Formasi Nglanggran serta implikasinya terhadap mula jadi dan penamaan satuan batuan resmi di Kabupaten Gunungkidul, Yogyakarta. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 269-284.
(Review of Late Oligocene Nglanggran Fm volcanic breccias and agglomerates of S Mountains, C Java)

Bronto, S., G. Hartono & D. Purwanto (1998)- Batuan longsoran gunungapi Tersier di Pegunungan Selatan, studi kasus di Kali Ngalang, Kali Putat dan Jentir, Kab. Gunung Kidul, Yogyakarta. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 3 (Geodin., Magmat. Volkanologi), p. 44-49.
('Tertiary volcanic gravity slide rocks in the S Mountains near Yogyakarta; special study at Ngalang, Putar rivers and Jentir'. E Miocene volcanic rocks in Southern Mountains in volcanic debris avalanche facies)

Bronto, S. & U. Hartono (2006)- Potensi sumber daya geologi di daerah cekungan Bandung dan sekitarnya. J. Geologi Indonesia 1, 1, p. 9-18.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/160)
(On energy and minerals potential of the Bandung basin, W Java)

Bronto, S. & D.Z. Herman (2012)- Geologi Gunung Padang dan sekitarnya, Kapubaten Cianjur- Jawa Barat. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-01, 4p.
('Geology of Gunung Padang and surroundings, Cianjur District, West Java'. Volcanic complex, E Oligocene andesite age (32.3 ± 0.3 Ma). Basal andesite columnar structure, used for megalithic site Punden Beruntak)

Bronto, S., A. Koswara & K. Lumbanbatu (2006)- Stratigrafi gunung api daerah Bandung Selatan, Jawa Barat. J. Geologi Indonesia 1, 2, p. 89-101.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/169)
('Volcanic stratigraphy of the South Bandung region, West Java'. South Bandung mountaineous area, high plain of Pangalengan and Bandung city eleven Pliocene- Quaternary rock units (nine volcanic) over subsurface Miocene volcanic rocks)

Bronto, S. & B.S. Langi (2016)- Geologi Gunung Padang dan sekitarnya, Kabupaten Cianjur- Jawa Barat. J. Geologi Sumberdaya Mineral 17, 1, p. 37-49.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/28/28)
('Geology of Mt Padang and surrounding area, Cianjur District, West Java'). Mt Padang Megalithic site SE of Sukabumi built from local columnar jointed lavas)

Bronto, S., S. Mulyaningsih, G. Hartono & B. Astuti (2008)- Gunung Api purba Watuadeg: sumber erupsi dan posisi stratigrafi. J. Geologi Indonesia 3, 3, p. 117-128.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/225)
(Oligocene? pillow basalt lava flows exposed at Opak River, W of Watuadeg Village, Sleman- Yogyakarta. Small hill ~15m high and 150m away from river to W was eruption source. Lavas overlain by pumice-rich Semilir Fm volcaniclastic rock (Early Miocene), probably unconformable over basaltic pillow lavas)

Bronto, S., S. Mulyaningsih, G. Hartono & B. Astuti (2009)- Waduk Parangjoho dan Songputri: alternatif sumber erupsi Formasi Semilir di daerah Eromoko, Kabupaten Wonogiri, Jawa Tengah. J. Geologi Indonesia 4, 2, p. 79-92.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/243)
(Two alternative eruption centers for pumice-rich acid volcanics of E Miocene Semilir Fm in Eromoko area, S of Wonogiri, S Mountains, SE Java)

Bronto, S., S. Pambudi & G. Hartono (2002)- The genesis of volcanic sandstones associated with basaltic pillow lavas: a case study at the Djiwo Hills, Bayat area (Klaten, Central Java). J. Geologi Sumberdaya Mineral 12, 131, p. 2-16.
(Same as paper below)

Bronto, S., S. Pambudi, G. Hartono & D. Purwanto(2002)- The genesis of volcanic sandstones associated with basaltic pillow lavas: a case study at the Jiwo Hills, Bayat area (Klaten, Central Java). Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 788-806.
(Late Oligocene Kebo-Butak Fm at Baturagung escarpment, Jiwo, S Mountains, >650m thick, composed of volcanic sandstones and calcareous sediments, deposited in submarine fan environment. Associated with pillow basalts and hyaloclastites. Sandstone composed of very angular volcanic glass grains, probably products of nearby submarine volcano. Interbedded deep marine limestone with planktonic foraminifera, incl. Globigerina tripartita, G. binaiensis, Globorotalia kugleri (should be lower N4, latest Oligocene; not N5 as suggested?; JTvG))

Brontodihardjo, A.P.P. (1984)- Batugamping kalkarenit Juwangi dan masalah penggunaannya sebagai Batu Bahan Urugan bendungan Kedung Ombo di Jawa Tengah. Proc. 13th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 161-188.
(On Juwangi calcarenitic limestones near Kedung Ombo, C Java)

Brotopuspito, K.S., R.D. Indriana & M. Nukman (2006)- Sedimentary rock thickness at Kendeng- Rembang zone, Central Java- Indonesia, as constructed based on regional Bouguer gravity anomaly map. Proc. Jakarta 2006 Int. Geosciences Conf. and Exhib., Indon. Petroleum Assoc. (IPA), OT-44, 5p. *(Extended Abstract)*
(Sediment thickness below Kendeng-Rembang zones 11,000- 13,000m, with Kendeng deeper than Rembang)

Brouwer, H.A. (1915)- Geologische overzichtskaart van den Nederlandsch-Indische Archipel, schaal 1:1 000 000. Toelichting bij Blad XVII (Oost Java, Madoera, Bali, Lombok, Soembawa). Jaarboek Mijnwezen Nederlandsch Oost-Indie 44 (1915), Verhandelingen 2, p. 3-54.
(Geological overview map and explanation from E Java to Sumbawa; sheet 17 of 1:1 million map series. All islands on this map Neogene sediments and young volcanics only)

Brouwer, J. (1957)- Stratigraphy of the younger Tertiary in North-East Java and Madura. Bataafse Int. Petroleum Maatschappij (BPM), The Hague, Report EP-37680, p. 1-41. *(Unpublished)*

Budhitrisna, T. (1992)- Geologic map of Salatiga Quadrangle, 1408-6, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Budhitrisna, T. (1987)- Geologic map of Tasikmalaya Quadrangle, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Budiarto R. (1976)- Sunda Strait, a dividing line between Tertiary structural patterns in Sumatra and Java islands. Majalah Geologi Indonesia (IAGI) 3, p. 11-20.

Budiman, I. (1991)- Interpretation of gravity data over Central Jawa, Indonesia. M.Sc. Thesis University of Adelaide, p. 1-139.
(online at: https://digital.library.adelaide.edu.au/dspace/bitstream/2440/110285/2/02whole.pdf)

Budiman, I. (1996)- The causative body of the old Ungaran volcano based on a gravity data model. J. Geologi Sumberdaya Mineral 6, 60, p. 9-15.

Budiman, I. (2000)- Main fault structure of Karangsambung area based on gravity model. Geol. Res. Dev. Centre (GRDC), Bandung, Geoph. Ser. 1, p. 1-6.

(Interpretation of N-S gravity profile of Karangsambung area, C Java. Gravity high interpreted as basement high, possibly Eocene sandstones. No ties to surface geology)

Budisantoso Pendowo (1991)- Geology of the Besuki Quadrangle, Java, Explanatory notes and map. Geol. Res. Dev. Centre (GRDC), Bandung, p.

Budiyani, S., D. Priambodo, B.W. Haksara & P. Sugianto (1991)- Konsep ekplorasi hidrokarbon untuk Formasi Parigi di Cekungan Jawa Barat Utara. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 180-198.
('Hydrocarbon exploration concepts for the Parigi Fm in the NW Java Basin'. M Miocene Parigi limestone gas-bearing reservoir in several fields. Max. thickness 400m. Distribution pattern follows N-S trending basement highs)

Budiyani, S. & A. Mukmen (1994)- Penyebaran Formasi Ngrayong sebagai penghasil hidrokarbon di daerah Gondang dan sekitarnya cekungan Jawa Timur. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 140-154.
('Distribution of Ngrayong Formation as a producer of hydrocarbons in Gondang and surrounding areas of East Java basin. Study of M Miocene Ngrayong Fm sandstone around Gondang-1 well (Pertamina- Trend 1991), NE Java Basin. In submarine fan facies. Gondang 1 tested 779 BOPD and 4.4MMSCF gas/day from Ngrayong Fm. With log cross-sections and examples of seismic mounding)

Buning, F. (1922)- Het voorkomen en de ontginningswijze van natuurasphalt in verband met de asphalt-exploitatie te Cheribon. Indisch Bouwkundig Tijdschrift 25, 18, p. 330-335.
(online at: http://colonialarchitecture.eu/islandora/object/uuid%3A0628d403-571e-487c-80d0-4825dc5742af/datastream/PDF/view)
(On the occurrence and exploitaton of natural asphalt in Kromong Mts, between G. Gedong en G. Pagemitan, near Cirebon, with some chemical- technical analyses. Bitumen content of Cirebon asphalt ~38.5%, melting point 52°C. No geology, no figures.3 Estimated asphalt reserves 1500-2000 tons. See also Mannhardt 1920, Pringgoprawiro et al. 1977)

Burckle, L.H. (1982)- Diatom biostratigraphy of Late Miocene and Pliocene sediments of eastern Java (Indonesia). Marine Micropaleontology 7, p. 363-368.
(Marine diatoms from Late Miocene- Pliocene Njepung section, Kendeng zone, E Java. Foraminifera studied by Saint-Marc & Suminta,1979. Lower part of Globigerina marls in Late Miocene- E Pliocene Thalassiosira convexa zone, middle part M Pliocene Nitzschia jousea zone. Open oceanic environment with strong upwelling suggested by presence of Thalassiosira nitzschioides, especially in lower part of section)

Burgon, G.E. & P. Willumsen (1995)- Indonesian Petroleum Association East Java Fieldtrip October 13-15, 1995. IPA Field trip Guide Book, p. 1-68.
(3-day trip to Sekarkorong, Ngepon, Mudi, Bromo, Kalipanjang)

Burgon, G., P. Lunt & T. Allan (2002)- IPA Fieldtrip to Eastern Java, 2002. Indonesian Petroleum Association, Field trip Guide Book, 33p.
(Semarang-Surabaya route, generally N of most E Java fieldtrips, with stops at Kali Lutut, documenting Early Miocene? uplift event, etc.e)

Burhanudin, B. & Y. Prakarsa (2000)- Remodeling geology of Parigi reservoir at Tugu Barat- a structure, North West Java Basin. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 141-150.

Burhannudinnur, M. (2012)- Komplek mud volcano Kradenan. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-EG50, p. 305-309.
('The Kradenan mud volcano complex'. Java. Probably fed from overpressured Early Miocene Tawun Fm)

Burhannudinnur, M. (2013)- Pengaruh tektonik dan laju sedimentasi dalam pembentukan gunung lumpur (mud volcano) di zona Kendeng dan Rembang Cekungan Java Timur. Ph.D. Thesis (S3), Inst. Teknologi Bandung (ITB), p.
('Tectonics and rate of sedimentation effect in mud volcano generation in the Kendeng and Rembang zones, East Java Basin'. Mud volcanoes are surface expressions of extruing overpressured formations or shale diapirs. E Java mud volcanoes grouped into four models, i.e. Kuwu, Crewek Medang and Lusi. Mud volcanoes caused by contractional tectonic deformation, sedimentation rate (>280m/My), deep burial (>1000m) and dominance of shale (>85%). If mud volcano system is at critical pressure phase, drilling will cause rapid explosion of mud volcano. If mud volcano system is in near critical phase, explosion will start when drill pipe is deepened. Overpressured mud zone has potential for unconventional gas reservoir with high gas storage capacity)

Burhannudinnur, M. (2014)- Pergerakan sedimen bawah permukaan (PSBP) di Jawa Timur. Bull. Ilmiah Mineral dan Energi (MINDAGI; Trisakti) 7, 1, p. 9-34.
('Subsurface sediment movement (PSBP) in East Java'. Review of mud volcanoes, etc., from overpressure)

Burhannudinnur, M., Benyamin & Y. Prakasa (2000)- Remodeling geology of Parigi reservoir at Tugu Barat Field, West Java. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 143-147.
(Tugu Barat A is oil field in onshore NW Java basin, in Parigi reefal limestone reservoir. Initially view as single pool, but composed of multiple reservoir layers with different Gas-Oil and Oil-Water contacts. Porosities 7-44%. Revised oil reserve estimate 11 MBO)

Burhannudinnur, M., D. Noeradi, B. Sapiie & D. Abdassah (2012)- Karakter mud volcano di Jawa Timur. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-EG49, p. 300-304.
('Character of mud volcanoes in East Java'. Mud volcanoes of Randublatung zone, NE Java basin, contain variety of gases: biogenic gas, petroleum gas, dry condensate gas. Mud probably sourced from Tawun Fm)

Cahyo, F.A., I. Fardiansyah, O. Malda & C. Prasetyadi (2011)- 3D modeling of Kerek turbidite sand bodies based on outcrop study in Kedungjati area, Central Java: an analog for sandy Miocene Formation in western Kendeng Zone. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-SG-036, 18p.
(Outcrop study of Late Miocene Kerek Fm calcareous sandstone turbidites in measured sections in Kedungjati area, W Kendeng zone. Depositional environment interpreted as lower submarine fan system. Paleocurrent directions from flute casts suggest main sediment supply from NW (opposite of presumed southern origin of volcanic provenance in Ngawi area?; JTvG))

Cahyo, F.A., O. Malda, I. Fardiansyah & C. Prasetyadi (2013)- Three-dimensional facies modeling of deepwater fan sandbodies: outcrop analog study from the Miocene Kerek Formation, Western Kendeng Zone (North East Java Basin). Berita Sedimentologi 26, p. 19-25.
(online at: www.iagi.or.id/fosi/files/2013/05/BS26-Java.pdf)
(similar to paper above)

Cahyono, A., A. Shirly, F. Syafitra, Premonowati, H. Ibadurrahman & Y.R Sinulingga (2016)- Ngimbang clastics & carbonate Kujung distribution based on paleogeography recontruction. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 432-438.
(Paleogeographic maps of M Eocene Ngimbang Fm clastics source rock and Oligo-Miocene Kujung Fm carbonate reservoir facies in NE Java basin. Ngimbang clastics in series of NE-SW trending grabens)

Cahyono, A.B. & C.F. Burgess (2007)- Cepu 3D seismic- variations in Oligo-Miocene carbonate buildup morphology. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-116, p. 561-567.
(Carbonate build-up morphologies in Cepu Block vary from steep, narrow pinnacles to broad platform deposits. Buildups developed on isolated platform that began to form in E Oligocene. Through Late Oligocene-E Miocene, carbonate deposition ceased over parts of platform while other areas continued to grow, resulting in isolated carbonate buildups, drowning at different times, with morphologies related to underlying extensional faults and subsidence rates. Buildups up to 2 km thick. Thicker buildups drown in E Miocene and are covered by M Miocene clastics of low seal quality. Other areas of Cepu platform drowned in Oligocene.

These carbonates have different morphology, lower reservoir quality and more clay-rich seals and commonly contain large gas columns)

Carlile, J.C., I.L. Price & S. Prihatmoko (2005)- The Cibaliung gold deposit, Banten: discovery to decision to mine. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI) Spec. Issue, Jakarta, p. 45-57.
(Cibaliung low sulphidation epithermal Au-Ag deposit at SW tip of Java. First discovered in 1992, decision to mine in 2004. Miocene-age mineralization (~10 Ma), formed at shallow depths (250-300m), hosted in Neogene volcanics. Site possibly influenced by NW-SE Sumatra Fault system, creating small pul-apart basin (see also Harijoko et al. 2004, 2007)

Carnell, A. (1996)- The Rajamandala limestone of the Sukabumi area of West Java. SPE Indonesia Branch, Field Trip Guide Book, 46p.

Carnell, A. (2000)- The Rajamandala limestone at Sukabumi; can it be considered a field analogue for the Baturaja limestone, Proc. American Assoc. Petrol. Geol. (AAPG) Int. Conf., Bali, p. A13-A14.
(Late Oligocene Rajamandala reefal limestone of W Java outcrops between Cibadak in W and Bandung in E. Deposition interpreted as series of small coral islands, surrounded by foraminiferal/algal dominated shelf sediments. Rajamandala Fm often regarded as analogue for oil-productive Batu Raja Lst of S Sumatra and NW Java, but they are not direct age equivalents (Batu Raja Fm age is of Early Miocene age; JTvG))

Carthaus, E. (1911)- Zur Geologie von Java, insbesondere des Ausgrabungsgebietes. In: M.L. Selenka & M. Blankenhorn, Die *Pithecanthropus*-Schichten auf Java, Geologische Ergebnisse der Trinil-Expedition (1907-1908), Engelmann, Leipzig, p. 1-33.
('On the geology of Java, in particular the excavation area'. Mainly on Plio-Pleistocene deposits around Trinil excavation area of Selenka Expedition, C Java)

Caudri, C.M.B. (1932)- De foraminiferen-fauna van eenige *Cycloclypeus*-houdende gesteenten van Java. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 9, p. 171-204.
('The foraminiferal fauna from some Cycloclypeus-bearing rocks of Java'. Miocene larger forams from Java localities S Kediri, S. Priangan and Purwakarta. Little or no stratigraphy context)

Caudri, C.M.B. (1939)- Lepidocyclinen von Java. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 12, p. 135-257.
('Lepidocyclinids from Java'. Descriptions of 26 Lepidocyclina species from Oligo-Miocene samples from C and W Java and Madura, collected by Gerth. (probably too much 'splitting' of morphotypes; many species names probably synonyms; JTvG))

Caughey, C.A.J., N.J. Dyer, A. Kohar, L. Haryono et al. (eds.) (1995)- Seismic atlas of Indonesian oil and gas fields II: Java, Kalimantan, Natuna, and Irian Jaya. Indon. Petroleum Assoc. (IPA), Jakarta, Seismic Atlas 2, p.

Chan, J.S.L. (2015)- High-sulfidation epithermal Cu-Ag-Au deposit, Kluwih, Eastern Java, Indonesia- alteration and implications for potential porphyry Cu mineralisation. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 213-218.
(Cu-Ag-Au mineralisation at Kluwih prospect in E Java, Indonesia related to high-sulfidation hydrothermal system within dacitic volcanic dome. Mineralisation mainly in steeply dipping quartz-enargite-pyrite veins in porphyritic dacite and breccia of dome and in underlying andesite with zircon U-Pb age of 11.5 Ma. Probability of underlying porphyry copper system. No location info)

Chandra, B.Y., A.T. Rahardjo & Dardji Noeradi (2013)- Sequence stratigraphy of Bayah Formation at Banten area based on Core of DDH-1 Well and DDH-2 well: palynological and palynofacies approach. Proc. Joint Conv. 38th Indon. Assoc. Geoph. (HAGI) - 42nd Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0005, 4p.

(Sequence stratigraphy of Middle-Late Eocene Bayah Fm on Bayah High, Banten Province, SW Java, based on palynology data from cores DDH-1 (242m) and DDH-2 (315m). Seven depositional sequences, with depositional environments varying from fluvial plain to estuarine)

Chandra, B.Y., A.T. Rahardjo & Dardji Noeradi (2014)- Palynofacies analysis of the Eocene Bayah Formation in Bayah High, Banten Block, SW Java. Berita Sedimentologi 29, p. 80-94.
(online at: www.iagi.or.id/fosi)
(Description of palynofacies of Eocene Bayah Formation from cores of wells DDH-1 and DDH-2)

Choiriah, S.U. (1999)- Paleoclimatic interpretation using calcareous nannoplankton, Solo River Ngawi area, Indonesia. Abstract, AAPG Foundation Grants-in-Aid Recipients 1999, American Assoc. Petrol. Geol. (AAPG) Bull. 83, 11, p. 1896 *(Abstract).*
(Late Miocene to M Pleistocene of Kendeng zone shows climate changes in nannoplankton. Twelve alternating warm- cold zones. Kerek Fm Zone 1 and 2 warm zone and cold zone of lower NN12 and NN12-NN13 respectively. Kalibeng Fm: transitional zone 3 (NN13-NN14), Zone 4 warm (NN14-NN15), Zone 5 (cold, NN15), Zone 6 (warm, NN16), Zone 7 (cold zone, NN16), Zone 8 (warm, NN16), Zone 9 (transitional, NN16), and Zone 10 (warm, NN16-NN18). Klitik Fm: zone 11 cold, NN18, zone 12 warm zones, 12a,b, NN19 and NN20, with barren zone between 12a and 12b)

Choiriah, S.U. & R. Kapid (1999)- Nannoplankton biozonation in Bengawan Solo River, Ngawi. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 3, p. 35-45.
(In Indonesian. Nannofossils from samples from Kerek Fm (NN12-NN13; Late Miocene), Kalibeng Fm (NN13-NN18; end Miocene- Early Pliocene) and Sonde/ Klitik Mb (NN19-NN20; E- M Pleistocene) of Solo River section, Kendeng zone, N of Ngawi. Results suggest younger ages than concluded by earlier authors (e.g. Van Gorsel and Troelstra 1981, Theodoridis 1984))

Choiriah, S.U., R. Kapid & H. Pringgoprawiro (2000)- Interpretasi paleotemperatur berdasarkan nannoplankton lintasan S. Bengawan Solo, Ngawi, Jawa Timur. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 47-59.
('Interpretation of paleotemperatures based on nannoplankton in the Solo River section, Ngawi, East Java'. Nannofossil species and diversity from Late Miocene- Pliocene (zones NN11-NN20) in Solo River section in Kendeng Zone, suggest 12 alternating warm-cold zone)

Choiriah, S.U., R. Kapid & W. Rahardjo (2001)- The Pliocene/Pleistocene boundary, based on calcareous nannofossils, and related palaeoclimatic implications, Solo River section, Ngawi region, East Java, Indonesia. J. Nannoplankton Research, London, 23,1, p. 15-19.
(online at: http://ina.tmsoc.org/JNR/online/23/Choiriah%20et%20al.%202001%20JNR%2023-1%20Plio-Q%20Java%20[%C2%A7N2027].pdf)

Choiriah, S.U., C Prasetyadi, R. Kapid & .D.F. Yudiantoro (2020)- Nannofossil distribution and age of Kendeng Zone in Kalibeng river section of Kedungringin, Plandaan Area, Jombang, East Java. Indonesian J. Geoscience 7, 1, p. 15-24.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/365/296)
(Kalibeng River Section abundant nannofossils. Age of Marl Unit of Kalibeng is NN10-NN18 (Me Miocene to Pliocene). Calcareous Sandstone Unit of Sonde is NN19-NN20 (Pliocene-Pleistocene) and Calcareous Claystone Unit of Sonde is NN20-NN21 (Pleistocene)).

Choiriah, S.U., B. Prastistho, R.E.J. Kurniawan & Surono (2006)- Foraminifera besar pada satuan batugamping formasi Wungkal- Gamping daerah Sekarbolo, Jiwo Barat Bayat, Klaten, Jawa Tengah. Proc. 35th Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, 16p.
('Larger foraminifera in the Wungkal- Gamping limestones in the Sekarbolo area, West Jiwo Bayat, Klaten, C Java')

Choiriah, S.U. & B. Triwibowo (2002)- Studi biozonasi nannoplankton daerah Gunung Pendul Formasi Wungkal, Bayat Klaten, Jawa Tengah. In: Sumberdaya Geologi daerah Istimewa Yogyakarta dan Jawa Tengah, Ikatan Ahli Geologi Pengurus Daerah DIY-Jateng, p. 41-53.
('Nannoplankton biozonation of the Wungkal Fm in the Gunung Pendul area, Bayat, Klaten, C Java')

Chotin, P., A. Giret, J.P. Rampnoux, Sumarso & Suminta (1980)- Lôile de Java, un enregistreur des mouvements tectoniques a lôaplomb dôune zone de subduction. C.R. Somm. Soc. Geologique France, 22, 5, p. 175-177.
('Java island, a record of tectonic movements up a subduction zone'. Java fault systems N30°, N70°, N90°, N135° and N165°. Left-lateral strike slip faults at N70° offset Quaternary intra-arc and volcanic chain)

Chotin, P., A. Giret, J.P. Rampnoux, L. Rasplus, Suminta & S. Priyomarsono (1984)- Etude de la fracturation dans lôile de Java, Indonesia. Bull. Soc. Geologique France 26, 6, p. 1325-1333.
('Study of the fracturing on Java island'. Java fault systems determine locations of volcanoes along N 000 and N 045 tension gashes. N 070 strike slip zone marks boundary between western subduction system and eastern collision-subduction Australian system)

Chotin, P., L. Rasplus, J. Rampnoux, Suminta & N. Hasjim (1984)- La sedimentation associee a une structure decrochante majeure dans la partie centrale de l'Ile de Java (Indonesie). Bull. Soc. Geologique France 26, p. 1259-1268.
('The sedimentation associated with a major strike-slip fault in the central part of the island of Java, Indonesia'. N70E strike-slip fault is reactivation of pre-Neogene Sundaland margin)

Clements, B. (2008)- Paleogene to Early Miocene tectonic and stratigraphic evolution of West Java, Indonesia. Ph.D. Thesis Royal Holloway, University of London, p. 1-431. *(Unpublished)*
(Eocene arc S of Java, mostly submerged; rarely did its products reach Java. Arc became emergent during Late Oligocene- E Miocene and volcanic activity probably increased. M Miocene carbonates deposited above arc rocks. Late Miocene resumption of volcanism N of Paleogene arc. Another arc jump since Late Miocene and modern Sunda Arc volcanoes now on deformed Late Miocene arc products. Paleogene quartz sandstones sourced from Sundaland granitic and metamorphic rocks. Zircons from M Eocene record contributions from Cretaceous arc and post collisional volcanic rocks. New structural model for W Java suggests major thrusting in S Java has previously been overlooked. Paleogene and Late Miocene arcs have thrust northwards by >50 km and are now thrust onto shelf sequences that formed on Sundaland continental margin. In C Java eeper structural level is exposed and arcs have been removed by erosion. Age of thrusting Late Miocene or Pliocene)

Clements, B. & R. Hall (2006)- Provenance of Paleogene sediments in West Java, Indonesia. Proc. Jakarta 2006 Int. Geosciences Conf. and Exhib., Indon. Petroleum Assoc. (IPA), 5p.
(Eo-Oligocene quartz-rich sediments in W Java from multiple sources, from North. Much of quartz is from low-grade metamorphics)

Clements, B. & R. Hall (2007)- Cretaceous to Late Miocene stratigraphic and tectonic evolution of West Java. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-037, p. 87-104.
(Cretaceous-Late Miocene paleogeographic maps W Java)

Clements, B. & R. Hall (2008)- U-Pb dating of detrital zircons from West Java show complex Sundaland provenance. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-115, 19p.
(Ages of zircons from M Eocene volcanoclastic Ciletuh Fm indicate Late Cretaceous- E Paleogene local volcanic arc source. M Eocene- Oligocene quartzose formations sourced from Sundaland, with wide zircon age ranges (Proterozoic- Eocene). M Eocene Ciemas Fm zircons mainly Permo-Triassic ages, and derived from Malay Peninsula and Tin Islands granites, Late Eocene Bayah Fm higher contribution of E-M Cretaceous granites from Borneo Schwaner Mts)

Clements, B., R. Hall, H.R. Smyth & M.A. Cottam (2009)- Thrusting of a volcanic arc: a new structural model for Java. Petroleum Geoscience 15, 2, p. 159-174.

(Java apparently simple structure with E-W physiographic zones broadly corresponding to structural zones. Simplicity complicated by structures inherited from Cretaceous subduction, by extension related to development of volcanic arcs, extension related to development of Makassar Straits, Late Cenozoic contraction, and active cross-arc extensional faults. Major thrusting in S Java displaced Early Cenozoic volcanic arc rocks N-wards by 50km or more. C Java displays deepest structural levels of N-directed thrusts, with Cretaceous basement exposed; overthrust arc largely removed by erosion. In W and E Java overthrust volcanic arc still preserved. W Java arc now thrust onto shelf sequences that formed on Sundaland continental margin. In E Java volcanic arc thrust onto thick volcanic/sedimentary sequence formed N of arc in basin due largely to volcanic arc loading)

Clements, B., I. Sevastjanova, R. Hall, E.A. Belousova, W.L. Griffin & N. Pearson (2012)- Detrital zircon U-Pb age and Hf-isotope perspective on sediment provenance and tectonic models in SE Asia. In: E.T. Rasbury et al. (eds.) Mineralogical and geochemical approaches to provenance, Geol. Soc. America (GSA), Spec. Paper 487, p. 37-61.
(online at: http://searg.rhul.ac.uk/pubs/clements_etal_2012%20Sundaland%20zircons.pdf)
(U-Pb age populations of zircons in Paleogene formations in W Java: 80-50 Ma (Late Cretaceous-Paleogene), 145-74 Ma (Cretaceous), 298-202 Ma (Permian-Triassic), 653-480 Ma and 1290-723 Ma. Late Cretaceous and Paleogene zircons derived from two volcanic arcs in Java and W Sulawesi, respectively. Java arc was active before microcontinent collision, and W Sulawesi arc developed later, on newly accreted crust at SE Sundaland margin. Collision age is ~80 Ma. Zircons older than ~80 Ma have continental Sunsambung?)daland provenance. Mid-Cretaceous zircons in U Eocene- Lw Oligocene derived from granites of Schwaner Mts of SW Borneo, Permian-Triassic zircons from granites in SE Asian Tin Belt. Older zircons from allochthonous basement and sedimentary rocks deposited prior to rifting of continental blocks from Gondwana in E Mesozoic)

Condon, W.H., L. Pardyanto &, K.B. Ketner (1975)- Geologic map of the Banjarnegara and Pekalongan Quadrangles, Java. Geol. Res. Dev. Centre Bandung, 5p. *(also 2nd ed. 1996)*
(Map of C Java Dieng Plateau, Sundoro volcano, N Serayu Mts folds and at S border Cretaceous ophiolitic basement and melange outcrops of Lok Ulo)

Cook, P., D. Jayson, S.Y. Ritha, P.J. Nichols, D.W. Ellis & J. Zwaan (2003)- Quantifying geohazards through advanced visualisation and integration in the Terang-Sirasun development, Kangean PSC, Indonesia. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-17.
(Terang-Sirasun reservoir Plio-Pleistocene Paciran Fm Globigerina calcarenites. Development of 1 TCF GIIP complicated by shallow gas in overburden and faults, some with seabed expression. Sirasun fewer faults and little shallow gas but near shelf-slope break, with potential mass flow features. Little geology info)

Cottam, M., R. Hall, L. Cross, B. Clements & W. Spakman (2010)- Neogene subduction beneath Java, Indonesia: slab tearing and changes in magmatism. Geophysical ReseEGU General Assembly 2010, Vienna, p. 12437. *(Abstract only)*
(online at: http://meetingorganizer.copernicus.org/EGU2010/EGU2010-12437.pdf)
(Java island complex history of volcanism and unusual subduction characteristics, consistent with subduction of a hole in downgoing slab. Episode of Late Miocene thrusting at ~7 Ma observed throughout Java linked to N-ward movement of volcanic arc. In E Java gap in seismicity between ~250-500 km and seismic tomography shows hole in slab. Explained by tearing of subducting slab when buoyant oceanic plateau arrived at trench S of E Java at ~8 Ma (Kundu & Gahalaut 2011 suggest slab detachment under E Java between 10-20 Ma))

Courteney, S. (1996)- The future hydrocarbon potential of Western Indonesia. In: C.A. Caughey, D.C. Carter et al. (eds.) Proc. Int. Symp. Sequence Stratigraphy in SE Asia, Jakarta 1995, Indon. Petroleum Assoc. (IPA), p. 397-415.
(Over 3000 exploratory wells drilled in W Indonesia and ~750 discoveries reported. W Indonesia mature province with >300 fields producing in 12 basins. A further 100 fields abandoned or shut-in. Framework based on sequence stratigraphy established for productive basins)

Courteney, S., P.J. Cockroft, R. Miller, R.S.K. Phoa & A.W.R. Wight (1989)- Introduction. Indonesia Oil and Gas Fields Atlas, 4, Java. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1- 13, A1-A4.

Crie, M.L. (1888)- Recherches sur la flore Pliocene de Java. Sammlungen Geol. Reichs-Museum. Leiden, ser. 1, 5, p. 1-21.
(online at: www.repository.naturalis.nl/document/552405)
('Investigations on the Pliocene flora of Java'. Plant fossils from tunnel drilled in volcanic terrains of Gunung Kendang, E of Sukabumi and SW of Cianjur, W Java. With Naucleoxylon spectabile (also in Jaarboek Mijnwezen 17 (1888), p. 49-71))

Croockewit, J.H. (1854)- Scheikundig onderzoek naar kolen afkomstig van de westpunt van Java, nabij de Meeuwenbaai. Natuurkundig Tijdschrift Nederlandsch-Indie 6, p. 85-88, 123-130.
('Chemical investigation of coal from the west point of Java, near Peucang Bay'. Coal sample from SW Java (collected by A. Boachi?) with ~7% ash, 5% sulfur)

Cunningham, M.J.M., M. Muharam, L. Damanik, E. Hermawan & J. Widjaja (2015)- Structural controls on the localisation of low-sulfidation epithermal mineralisation in West Java, Indonesia. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 227-235. *(Extended Abstract)*
(In SW Java low-sulfidation epithermal gold mineralisations in series of extensional and strike-slip faults that cut Miocene-Pliocene calc-alkaline volcanic rocks intruded by shallow-level plutons. Discussion of epithermal mineralisation at Mt Subang, Cianjur region, SW Java)

Dahrin, D. (1993)- Etude bathymetrique et gravimetrique de Detroit de la Sonde et du volcan Krakatau (Indonesie): implications geodynamiques et volcanologiques. Doct. Thesis Universite de Paris VII, p. 1-335.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_6/TDM/42325.pdf)
('Bathymetric and gravimetric study of Sunda Straits and Krakatau volcano (Indonesia): geodynamic and volcanological implications'. Sunda Straits characterized by extensional tectonics ('pull-apart basin'). Krakatau volcano bimodal basalt-dacite volcanics and is different from volcanoes of Java and Sumatra)

Dam, M.A.C. (1994)- The Late Quaternary evolution of the Bandung Basin, West Java, Indonesia. Ph.D. Thesis, Vrije Universiteit, Amsterdam, p. 1-252. *(Unpublished)*

Dam, M.A.C. & P. Suparan (1992)- Geology of the Bandung Basin. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 13, p. 1-77.

Dam, M.A.C., P. Suparan, J.J. Nossin & R.P.G.A. Voskuil (1996)- A chronology for geomorphological developments in the greater Bandung area, West-Java, Indonesia. J. Southeast Asian Earth Sci. 14, p. 101-115.
(Bandung area large intramontane basin surrounded by volcanic highlands, which developed during Middle-Late Quaternary, in particular since 125 kyr B.P. Cataclysmic eruptions of Tangkuban Perahu complex around 105 ka and 50-35 ka caused voluminous sediment inflow in NW basin)

Dames, T.W.G. (1955)- The soils of East Central Java. Contr. General Agricultural Research Station, Bogor, 141, p. 1-155.
(1:250,000 scale map of soils in part of Central Java, from Muria volcano in N to Solo, Yogyakarta, Southern Mountains region in S)

Danes, J.V. (1910)- Die Karstphanomene im Goenoeng Sewoe auf Java. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, ser. 2, 27, p. 247-260.
(online at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015078113373;view=1up;seq=703;size=150)
('The karst phenomena in Gunung Sewu on Java'. Brief summary of early study of famous cone karst of Southern Mountains of C and E Java. No illustrations; published in more detail in 1915)

Danes, J.V. (1915)- Das Karstgebiet Goenoeng Sewoe in Java. Sitzungsberichte Koningl. Boehmische Gesellschaft Wissenschaften in Prag, Math.-Naturwiss. Kl., Prague, p. 1-90.

('The Gunung Sewu karst region of Java'. Classic Southern Mountains karst study around Wonosari, Pacitan, etc. See also review by Hol (1918))

Dardji, Noeradi (1997)- Evolusi cekungan Paleogen di daerah Ciletuh Jawa Barat Selatan. Buletin Geologi (ITB) 27, p. 27-42.
('Evolution of the Paleogene basin in the Ciletuh area, SW Java')

Dardji, N., E.A. Subroto, H.E. Wahono, E. Hermanto & Y. Zaim (2006)- Basin evolution and hydrocarbon potential of Majalengka-Bumiayu transpression basin, Java Island, Indonesia. AAPG 2006 Int. Conf. Exhib., Perth. *(Abstract only)*
(NW-SE zone from Majalengka to Bumiayu characterised by fold belt of Neogene sediments.Zone is between two majors NE-SW lineaments i.e. Cimandiri and N70E fault zones. Both indicate left lateral movement and place Majalengka-Bumiayu folded zone in transpression zone. Stratigraphy complicated, composed of Oligo-Miocene to Pleistocene rocks. Distal turbidite system in lower part, shallowing upward to coarser turbidites and to fluvial-shallow marine clastics in Plio-Pleistocene. At least twelve oil seeps, ten suspected gas seeps and one discovery well in E-M Miocene turbiditic sandstones)

Dardji, N., T. Villemin & J.P. Rampnoux (1994)- Paleostresses and strike-slip movement: the Cimandiri Fault Zone, West Java, Indonesia. J. Southeast Asian Earth Sci. 9, 1-2, p. 3-11.
(Cimandiri FZ sinistral strike-slip zone)

Darman, H. (1996)- Studi provenance batupasir Formasi Halang, kaitannya dengan paleogeografi Miosen daerah Bantarkawung, Brebes, Jawa Tengah. Berita Sedimentologi (Indon. Sedimentologists Forum) 3, p. 4-13.
('Provenance study of Halang Fm sandstones and implications for Miocene paleogeography of the Bantarkawung area, Brebes, C Java'. Late Miocene- E Pliocene Fm sandstones mainly composed of feldpars and volcanic lithics. Quartz <5%. Provence source probably volcanic arc in South of Java)

Darman, H., B. Muljana & J.T. van Gorsel (2013)- Short note: mineral composition of Eocene and Miocene sandstones in Java Island. Berita Sedimentologi 26, p. 33-37.
(online at: www.iagi.or.id/fosi/files/2013/05/BS26-Java.pdf)
(Quartz-rich sandstones common in Eocene across Java and in Miocene of N part of Java Island. Feldspar and volcanic rock fragments more dominant in most other Miocene sandstones. Sandstones from Late Miocene Halang Fm in NW Java dominated by feldspar and volcanic rock fragments)

Darmoyo, A.B. & S.P.C. Sosromihardjo (1999)- The sedimentology of the Plio-Pleistocene volcanoclastic in the Lapindo Brantas block, East Java. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 51-52. *(Extended Abstract)*
(Plio-Pleistocene Pucangan Fm volcanoclastic reservoirs in 1994 Wunut gas discovery, E Java. Sediments derived from volcanic arc in S)

Darmoyo, A.B., S.P.C. Sosromihardjo & B. Satyamurti (2001)- The sedimentology of Pleistocene volcanoclastic in the Lapindo Brantas block, East Java. Majalah Geologi Indonesia (IAGI) 16, 1, p. 15-38.
(Pleistocene volcanoclastics gas-bearing in Wunut field, E Java. Pleistocene overall regressive marine to non-marine sequence prograding to N in E Pleistocene, more to NE and E in Late Pleistocene- Holocene. Five higher order sequences in 1.5 My of Pleistocene- Holocene; tied to Mitchum 1993 cycle chart)

Daryono & H. Pandita (2015)- Identifikasi umur dan lingkungan pengendapan Formasi Kepek di Desa Kepek 2, Kecamatan Kepek, Kabupaten Gunung Kidul. Prosiding Seminar Nasional ReTII ke-10 (STTNAS), Yogyakarta, p. 1-8.
(online at: https://journal.sttnas.ac.id/ReTII/article/view/161/130)
('Determination of age and depositional environment of the Kepek Formation at Kepek village, Gunung Kidul'. Kepek Fm marls overlie Wonosari Lst and are youngest sediments in Southern Mountains of C Java. Relatively

gentle slope (<10°), thickness <200m. With common open marine foraminifera, incl. planktonic species Globoqudrina dehiscens, Globorotalia plesiotumida (indicating zone N17, Late Miocene))

Daryono, M.R., D.H. Natawidjaja, B. Sapiie & P. Cummins (2019)- Earthquake geology of the Lembang Fault, West Java, Indonesia. Tectonophysics 751, p. 180-191.
(Lembang Fault major 29 km long fault in W Java that skirts N edge of Bandung. No historic large earthquakes, but geomorphic evidence of recent activity and sinistral movement of 1.9- 3.5 mm/yr. Fault could produce a Mw 6.5–7.0 earthquake)

Datun, M. (1982)- Penelitian asal pasir Ngrayong, Jawah Tengah. Majalah Geologi Indonesia (IAGI) 9, 2, p. 71-78.
('Investigation of Ngrayong sandstone provenance, Central Java'. Measured sections of 590m thickness in Candi and Todanan areas show M Miocene (N11-N12) Ngrayong sandstones composed of quartz (71-87%), clay minerals (0-11%), glauconite (0-11%), opaque mineral and plagioclase (0-2.2%), biotite (0- 0.2%). Quartz types: metamorphic 64.4%, plutonic 28.3%, reworked sedimentary 7.1% and vein quartz 0.2%. Ngrayong provenance mainly metamorphic and granitic plutonic rocks)

Datun, M., Sukandarrumidi, B. Hermanto & N. Suwarna (1996)- Geological map of the Ngawi Quadrangle, Jawa, 2nd Ed. (Quad. 1508-4), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Kendeng Zone and W Cepu zone folded M Miocene- Pliocene sediments)

Datun, M., B. Toha & Widiasmoro (1985)- Fieldtrip guidebook Sangiran Dome and Southern Mountains, Central Java. Gadjah Mada University, 29p. *(Unpublished)*

Datun, M. & A. Priyantoro (1998)- Pengaruh tekstur dan diagenesa terhadap porositas dan permeabilitas Batupasir Formasi Jatibarang dan Cibulakan di daerah Cirebon Jawa Barat. Teknik Geologi UGM, p.
('Effects of texture and diagenesis on porosity and permeability of sandstones of the Jatibarang and Cibulakan Formations in the Cirebon area')

Davies, R.J. (2018)- The cause of the 2006 Lusi mud volcano (Indonesia): please let's not rewrite history. Marine Petroleum Geology 95, p. 344.
(Commentary of Mauri et al. 2017 paper, which fails to mention gas well drilling as possible trigger of mud volcano eruption)

Davies, R.J., M. Brumm, M. Manga, R. Rubiandini, R. Swarbrick & M. Tingay (2008)- The East Java mud volcano (2006 to present): an earthquake or drilling trigger? Earth Planetary Sci. Letters 272, p. 627-638.
('Lusi' active mud volcano in E Java probably caused by drilling of nearby Banjar Panji-1 exploration well)

Davies, R.J., M. Manga, M. Tingay, S. Lusianga & R. Swarbrick (2010)- Discussion: Sawolo et al. (2009) The LUSI mud volcano controversy: was it caused by drilling? Marine Petroleum Geol. 27, p. 1651-1657.
(online at: http://seismo.berkeley.edu/~manga/daviesetal2010.pdf)
(Disagree with the Sawolo et al. (2009) conclusion that drilling was not cause of E Java Lusi mud volcano)

Davies, R.J., S.A. Mathias, E. Swarbrick & M. Tingay (2011)- Probabilistic longevity estimate for the LUSI mud volcano, East Java. J. Geol. Soc., London, 168, 2, p. 517-523.
(Estimate of duration of LUSI mud volcano in E Java, assuming carbonates at 2500-3500m are water source, with area 100-600 km2, thickness 0.2-1.0 km, porosity 15-25%, initial pressure 13.9-17.6 MPa, and separate, shallower source of mud. Time for flow to decline to <0.1 Ml/day is 26 years. Can continue to flow at lower rates for 1000s of years. Land surface subsidence of ~95-475 m can be expected within 26 year time)

Davies, R.K., D.A. Medwedeff, G.P. O'Donnell et al. (1996)- Regional and reservoir scale analysis of fault systems and structural development of Pagerungan gas Field, East Java Sea, Indonesia. American Assoc. Petrol. Geol. (AAPG) Annual Conv., San Diego, Abstracts, 5, p. A33. *(Abstract only)*

(Pagerungan gas field complexly faulted and folded anticline N of Sakala-Paliat Fault System, offshore Bali. Eocene clastic reservoir affected by two generations of faults: Eocene normal and Neogene compressional)

Davies, R.J., R.E. Swarbrick, R.J. Evans & M. Huuse (2007)- Birth of a mud volcano: East Java, 29 May 2006. GSA Today 17, 2, p. 4-9.
(Mud eruption appears triggered by drilling of overpressured porous and permeable limestones at ~2830m in Banjar Panji 1 exploration well)

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(New long-offset 2D seismic along S Java forearc basin images basement under mid-late Tertiary forearc fill. W sector of offshore S Java Basin heterogeneous basement with no significant internal reflectivity over large areas but some low angle dipping reflector sequences. This and sharp rugose basement interface suggest oceanic or transitional crust. E sector of offshore S Java relatively thin Miocene- younger sediments, underlain by 3+ seconds of block-faulted parallel-bedded sedimentary section, similar in seismic character to Mesozoic from Australian NW Shelf, and possibly fragment of Gondwanaland ('Argo Land'). Underlying basement too deep to image. Two basin sectors separated by a prominent structural high)

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('Characteristics of recent and fossil Dipterocarp species'. With descriptions of fossil wood from West Java, incl. Dryobalanoxylon javanicum, D. tobleri, etc.)

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(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012009/pdf)
(Eocene Lower Ngimbang carbonaceous shales from Kujung-1 and Ngimbang-1 wells in Cepu area. C-13 isotope data suggest transitional/ deltaic source facies in Kujung-1 to marginal marine in Ngimbang-1)

Devi, E.A., F. Rachman, A.H. Satyana, Fahrudin & R. Setyawan (2018)- Geochemistry of Mudi and Sukowati oils, East Java Basin and their correlative source rocks: biomarker and isotopic characterization. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-271-SG, 23p.
(Oils from Kujung Fm reservoirs in Mudi and Sukowati fields, NE Java, from one oil family with deltaic-marginal marine source facies. Oils correlated to Eocene Lower Ngimbang shales. Mixed deltaic (vitrinite macerals type III) and marginal marine (liptinite and alganite macerals type II). Source richness fair- excellent. Top oil window (Ro 0.6) between 1900-2850m depth)

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(Fluid inclusion analysis and geochemical fingerprinting from wells in Cepu Block, E Java, suggests all wells in hydrocarbon fields experienced early charge of waxy, terrestrial oil. Most structures (except Kedung Keris) also experienced later gas charge, displaced oil in many structures moving oil updip to ultimate trap at Banyu Urip. Clastics immediately above carbonates at Banyu Urip not sealing facies; ultimate top seal for Banyu Urip appears to be basal Pliocene Za1 SB)

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marly limestones and (3) narrow band of reef core coral- algal boundstone. Best reservoir in skeletal packstones and wackestones with extensive mouldic and vuggy porosity, and with some fracturing)

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(Sequence stratigraphy of the marine Neogene-Pleistocene in the Cepu region, NE Java)

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('Problems of marine volcanoclastic deposits nomenclature on Java')

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(online at: http://digilib.itb.ac.id/files/disk1/36/jbptitbpp-gdl-grey-2002-dwiharsonu-1775-2002_gl_-1.pdf)
(NE Java Tertiary sediments two transgression-regression (TR) supercycles. Early transgression at P15 (Upper Eocene), and maximum transgression during N19-N20 (Pliocene), with maximum regression at N11 (Middle Miocene). First TR Supercycle P15 to N11 (Upper Eocene-M Miocene). Maximum transgression at N7, marked by middle-neritic marl, part of Tuban Fm. Second TR supercycle N11 - N22 (Pliocene). Maximum transgressive during N19-N20, the biggest transgression in Tertiary, marked by upper-bathyal Mundu Fm marls, or Paciran Fm shelfal limestones. Evolution of sedimentation from Kujung Fm up to Lidah Fm indicated relationship between sediment supply, local tectonic and relative sea-level fluctuation or transgression-regression)

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(Distinctive cidaroid echinoid spines from M Miocene Bulu Fm, 5 km NNW of Sale, along Rembang-Bojonegoro road, E Java. Described as Goniocidaris paraplu n.sp.. Associated with Katacycloclypeus annulatus, Nephrolepidina, Miogypsina, etc.)

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('Some foraminifera from Java'. Eocene larger foraminifera collected by Martin from Kali Poeroe in Nanggulan area, previously studied by Verbeek (1881). With well-preserved Nummulites (N. vredenburgi, N. djokdjokartae (= megaspheric generation of N. vredenburgi), N. pengaronensis) and Orthophragmina (=Discocyclina) (D. javana, D. fritschi n.sp., D. omphalus, D. dispansa, D. decipiens). With 3 plates)

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(Age of Wonosari Lst in eastern Southern Mountains of SE Java early M Miocene, with Flosculinella bontangensis, Miogypsina thecidaeformis, Lepidocyclina (N.), etc. (Lower Tf larger foram stage). Occasional planktonic foraminifera, incl. Orbulina, probably zone N9- basal N10)

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tens of meters thick at ~119,000 years BP and ~31,000 years BP in S part of basin. Several generations of paleolakes in Borobudur basin and Borobudur Temple probably stood by water body. Borobudur temple never buried under volcanic material in historic times)

Goppert, H.R. (1854)- Die Tertiarflora der Insel Java, nach den Entdeckungen des Herrn Fr. Junghuhn beschrieben und erortert in ihrem Verhaltnisse zur Gesammtflora der Tertiarperiode. C.W. Mieling, The Hague, p. 1-169.
(online at: http://books.google.com/books/)
('The Tertiary flora of the island of Java, after discoveries of Mr Fr. Junghuhn, described and placed in context of total flora of the Tertiary period'. First description of Tertiary plant leaves and petrified wood fragments from Java, collected by Junghuhn. Mainly from 3 localities)

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('Hydrocarbon potential of Banyumas sub-basin, S part of C Java'. Banyumas Sub-basin numerous oil and gas seeps. Several wells drilled, but unsuccessful. Source rock identified includes Paleogene of Nanggulan and Late Miocene of Halang Formations. Oil from seeps of fluvio-deltaic kerogen origin)

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(First paper on calcareous nannofossils of ~70m thick section of Wungkal Fm, E side of Gunung Pendul, Bayat area, 20km E of Yogyakarta. Range from Late Eocene/CP 14- Early Oligocene/CP 16c. Eocene-Oligocene boundary recognized by last occurrence of Discoaster saipanensis, Discoaster barbadiensis and Cribrocentrum reticulatum. Subzone CP 16c in upper part of section identified by co-occurrence of Reticulofenestra umbilicus, Cyclicargolithus floridanus and Reticulofenestra bisecta)

Hadiwisastra, S. & H. Kumai (2000)- Biostratigraphy of calcareous nannofossils in the Paleogene chaotic sediments in the Karangsambung area, Central Java, Indonesia. J. Geoscience, Osaka City University, 43, 2, p. 21-31.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DB00010785.pdf)
(Paleogene of Loh Ulo mainly olistostromes with mudstones and scaly clays with exotic blocks. Lower part (Karangsambung Fm) with late M Eocene NP16-NP17 and reworked Upper Cretaceous nannofossils; upper part (Totogan Fm) Oligocene age)

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('Some views on the metamorphic rocks in the Cihara area, Bayah, W Java'. Actinolite chlorite schist, hornblende schist, mica schist exposed N of Cihara granodiorite. Associated rocks are basalt, graywacke and brecciated tuff, black shale, granodiorite and dacite in E-W trending, 750m wide zone of cataclastic rocks, thought to be horizontal fault zone (metamorphic core complex?))

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('Geology and oil and gas possibilities of the Wangon Jeruklegi area, Central Java')

Hakiki, F., F. Musgrove, Y. Xiao & U. Handyastuti (2013)- Understanding Oligo- Miocene carbonate drilling losses causes and achieving zonal isolation. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-193, p. 1-17.
(Losses of drilling mud while drilling Oligo-Miocene carbonates in Banyu Urip Field mostly in tight rock of drowning cap of carbonate reservoir, which is characterized by fractures and hydrothermal leaching, and also in basal 50' of clastic section above top carbonate, which is carbonate-cemented and brittle)

Hakiki, F., F. Musgrove, P. Varnai, A. Ditya & D. Sapardina (2015)- Banyu Urip field development- result of drilling 32 wells. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-228, 15p.
(New development wells at Banyu Urip carbonate platform field, NE Java refined shape of M Miocene Drowning Cap. Excellent pressure connectivity throughout reservoir from carbonate reservoir to overlying clastic section. Average porosity in carbonate platform interior 27%, with low porosity rim of ~8-9% (a gradual diagenetic transition caused by less fresh-water dissolution)

Hakiki, F., R.P. Sekti, T. Simo, S.M. Fullmer & F. Musgrove (2012)- Oligo-Miocene carbonate reservoir quality controls- deposition and diagenesis study of Banyu Urip Field, onshore East Java. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-037, p. 1-13.
(Oligo-Miocene carbonates of Banyu Urip Field almost 1000m aggrading phase composed of repeated 50m thick shallowing-upward cycles. Drowning phase up to 300m thick, dominated by red algae. Early diagenesis associated with exposure to fresh water at sequence boundaries creates cementation and dissolution over 50m cycle. Late burial diagenesis also important, demonstrated by vugular dissolution that cross cuts stylolites)

Hakim, A., C. Idham A. & D. Nugroho (2014)- Analisis umur batugamping Formasi Bojonglopang dan hubungan stratigrafi batugamping Formasi Bojonglopang dengan breksi Formasi Jampang. Buletin Geologi (ITB) 41, 1, p.
('Age analysis of limestone of the Bojonglopang formation and stratigraphic relationship between the Bojonglopang limestone and the Jampang Formation breccia')

Hakim, A.Y.A. & B. Sulistijo (2013)- Integrated exploration method to determine Cu prospect in Seweden District, Blitar, East Java. Procedia Earth and Planet. Sci. 6, p. 64-69.
(On polymetallic mineralization in Seweden district, S Mountains of Java. Presence of sulphides, incl. pyrite, chalcopyrite, galena and sphalerite, also malachite. Not much detail)

Hall, R., B. Clements, H.R. Smyth & M.A. Cottam (2007)- A new interpretation of Javaôs structure. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-035, 23p.
(Paleogene arc volcanoes acted as load which caused flexural basin to develop between Sunda Shelf and S Mountains Arc. Thrusting in S Java displaced Paleogene volcanic arc rocks N by >50 km and eliminated flexural basin in W Java. Amount of thrusting diminishes from W to E Java. Three distinct structural sectors in Java, W, Central and E. C Java displays deepest structural levels of N-directed thrusts, and Cretaceous basement is exposed; overthrust volcanic arc largely removed by erosion. In W and E Java overthrust arc preserved. In W Java arc thrust onto shelf sequences of Sundaland margin. In E Java volcanic arc thrust onto thick volcanic/sedimentary sequence formed N of arc in flexural basin due largely to arc loading. Traps beneath overthrust arc offer new hydrocarbon exploration possibilities, particularly in W Java)

Hamilton, P.J., H. Smyth, R. Hall & P.D. Kinny (2006)- Zircon age constraints on the basement in East Java, Indonesia. Geochimica Cosmichim. Acta 70, 18, Suppl. 1, p. A225 (Goldschmidt Conference Abstract)
(Inherited zircon U-Pb dates in E Java volcaniclastics mixed populations, reflecting recycling from earlier eruptions. Inherited dates peaks at: (1) Cretaceous- restricted to W and NW of E Java, close to Cretaceous basement exposures (2) Cambrian-Archean (500-750 Ma, 900-1250 Ma and 2500-2700 Ma)- confined to S Mountains Arc. Peaks in distribution of dates similar to E Gondwana basement ages and Permo-Triassic-modern sediments from W Australia, suggesting S Mountains volcanoes sampled deep crust of continental Gondwanan origin beneath E Java, different from Cretaceous accretionary basement of W and N Java)

Han, J.K. & S.H. Choi (2011)- Geochemical exploration for metallic mineral resources on the Pacitan District, East Java, Indonesia. Econ. Environm. Geol. (Korean Soc. Econ. Env. Geol.) 44, p. 1-10.
(online at: www.koreascience.or.kr/)
(Pacitan district in S Mountains of E Java, exploration for metallic mineral found anomalous zones in Gempol for Cu; Jompong for Au; Kasihan for Cu-Pb-Zn)

Han, J.K. & S.H. Choi (2012)- Ore geology of skarn ore bodies in the Kasihan Area, East Java, Indonesia. Econ. Environm. Geol. (Korean Soc. Econ. Env. Geol.) 45, p. 1-8.
(online at: http://ocean.kisti.re.kr/downfile/volume/kseeg/JOHGB2/2012/v45n1/JOHGB2_2012_v45n1_1.pdf)
(Copper-zinc-bearing skarns in Kasihan area (Pacitan District, S Mountains, near E and C Java border), in limestone layers of Late Oligocene Arjosari Fm)

Handayani, L (2010)- Thermal structure of subducting slab along the Java Arc and its significance to the volcanoes distribution. ITB J. Mathematical Fundamental Sci. 42 A, 2, p. 127-134.
(online at: http://journals.itb.ac.id/index.php/jmfs/article/view/66/62)
(On thermal modeling of subducting plate below Java and tectonics of overriding plate. Age of subducting lithosphere under Java increases from W to E, from about 90 Ma to 120 Ma. Volcanoes of W Java generally closer to trench (~240 km) than volcanoes of E Java (~290 km), possibly related to differences of thermal structure of subducting plate)

Hanifa, N.R., T. Sagiya, F. Kimata, J. Efendi, H.Z. Abidin & I. Meilan (2014)- Interplate coupling model off the southwestern coast of Java, Indonesia, based on continuous GPS data in 2008-2010. Earth Planetary Sci. Letters 401, p. 159-171.
(Three-year GPS observation on SW Java suggest coastal uplift of uplift of 1.4- 14 mm/yr, and horizontal slip deficits, indicating potential of rupture propagation to shallow part of plate interface and generation of large tsunami)

Hansen, G.D. (1964)- A tektite-fall pattern at Sangiran Dome area in Central Java. Laporan Kongres Ilmu Pengetahuan Nasional Kedua (Proc. 2nd National Scientific Congress), Yogyakarta, October 1962, B, 4, MIPI, Jakarta, p. 432-441.

Hansen, G.D. (1965)- A tektite-fall pattern at Sangiran Dome area in Central Java. Indonesian J. Geography 5, 9, p. 37-45.
(Reprint of Hansen 1964. Tektites found in Sangiran Dome area of C Java generally on flat gravel covered benches at top of Kabuh layers or at base of Notopuro Fm (at "erosional surface separating Kabuh layers and Notopuro breccias'; Von Koenigswald 1935). Local collectors estimate >3000 tektites found since 1936, one as large as mans fist. Intact (whole) specimens found N of Tjomoro river while fragmented specimens S of river)

Hantoro, W.S. (1979)- Turbidit pada Formasi Kerek. J. Riset Geologi Pertambangan (LIPI) 2, 1, p. 22-31.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.2-No.1-2-2-.pdf)
('Turbidites of the Kerek Formation', C Java. Kerek Fm of NE Java Kendeng zone M Miocene turbiditic volcanoclastics, overlain by Late Miocene turbiditic limestones)

Hantoro, W.S. (1980)- Kendali stratigrafi terhadap penyebaran batubara dan serpih bitumen di Karangbolong, Jawa Tengah. J. Riset Geologi Pertambangan (LIPI) 3, 2, p. 27-44.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.3-No.2-2.pdf)
('Stratigraphic control on the distribution of coal and oil shale in Karang Bolong, Central Java'. In Argosari area thin oil shale (45-150cm) at top of Old Andesite Fm, formed in continental environment (originally discovered by Keil, 1932; unpublished). At younger horizon E Miocene coal, at transition from underlying non-marine to overlying marine facies)

Hanzawa, S. (1930)- Note on foraminifera found in the *Lepidocyclina*-limestone from Pabeasan, Java. Sci. Rept. Tohoku University, ser. 2 (Geol.), 14, 1, p. 85-96.
(online at: http://ci.nii.ac.jp/naid/110004624567/en)

(Late Oligocene larger forams collected by Yabe in 1929 from limestone cliff at N foot of Pasir Pabeasan, W of Tagogapu, W Java (Rajamandala Lst). With Lepidocyclina (N), Eulepidina, Heterostegina borneensis, Borelis pygmaea n.sp. (This assemblage, with absence of Spiroclypeus and Miogypsinoides more likely Te1/ Early Chattian?; JTvG))

Haqqi, A.S.F., H. Pratama, A.P. Indra, Abbas & V. Arnoldy (2015)- 3D modeling of Miocene Cinambo turbidite sandstone based on surface data in Cadasngampar Area, Sumedang District, West Java. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-SG-145, 13p.
(E-M Miocene Cinambo Fm submarine fan deposit in Bogor Basin. Paleocurrents mainly NW to SE)

Hardjadinata, K. & I. Saefudin (1994)- Studi batuan volkanik dan plutonik Tersier di daerah Pacitan. J. Geologi Sumberdaya Mineral 4, 34, p. 2-19.
('Study of Tertiary volcanic and plutonic rocks in the Pacitan area', S Mountains, SE Java. Volcanic rocks NE of Pacitan in S Mountains of E Java part of 'Old Andesites' island arc volcanics. Include picrite basalt- andesite in Lower Pacitan Fm, dated as ~30.8 Ma, and Upper Pacitan Fm basalt-andesite-dacite dated as ~17.4 Ma (17.392 ± 1.976 Ma!))

Harijoko, A., Y. Ohbuchi, Y. Motomura, A. Imai & K. Watanabe (2007)- Characteristics of the Cibaliung gold deposit: Miocene low-sulfidation-type epithermal gold deposit in Western Java, Indonesia. Resource Geology 57, 2, p. 114-123.
(M-L Miocene (11.2-10.6 Ma) epithermal gold mineralization in Cibaliung area, SW Java, hosted by M Miocene Honje Fm andesitic- basaltic lavas (11.4 Ma) and covered by Pliocene Cibaliung tuff (4.9 Ma))

Harijoko, A., K. Sanematsu, R.A. Duncan, S. Prihatmoko & K. Watanabe (2004)- Timing of the mineralization and volcanism at Cibaliung Gold Deposit, Western Java, Indonesia. Resource Geology 54, 2, p. 187-195.
(Cibaliung low-sulfidation epithermal gold deposit at ~70 km W of Bayah dome. Gold-bearing quartz veins hosted by Late Miocene Honje Fm basaltic andesite, comparable to gold host rocks at Bayah dome. 40Ar/39Ar dating show mineralization ages from 11.2-10.7 Ma; K-Ar dating shows age of andesite and Cibaliung tuff 11.4±0.8 Ma and 4.9± 0.6 Ma, respectively. Cibaliung deposit is oldest epithermal gold deposit yet discovered in W Java)

Harijoko, A., R. Uruma, H.E. Wibowo, L.D. Setijadji, A. Imai & K. Watanabe (2010)- Long-term volcanic evolution surrounding Dieng geothermal area, Indonesia. In: Proc. World Geothermal Congress 2010, Bali, 6p.
(Dieng Volcanic Complex in C Java on back side of Java Quaternary arc. Large collapse structure with 17 post intra-caldera eruptive centers. Oldest rocks erupted at ~3.6 Ma, youngest 0.07 Ma. Volcanic edifices grouped into 3 stages: pre-caldera (~3 Ma), post-caldera I (~2- 1 Ma) and post-caldera II (<1 Ma). Magmas cyclically evolved from basaltic to dacitic composition)

Harjanto, A. (2008)- Magmatisme dan mineralisasi di daerah Kulonprogo dan sekitarnya. Dokt. Dissertation Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('Magmatism and mineralization in the Kulunprogo area and surroundings', C Java. Volcanic rocks in Kulon Progo part of Oligocene-Miocene (~29.6-22.6 Ma) Sunda magmatic arc. Calk-alcaline series with chemistry of transtisional oceanic island arc and active continental margin. Three stages of alteration-mineralization, with gold, galena, sphalerite, chalcopyrite, molybdenite, etc. mineralizations. Quartz veins NE-SW trending)

Harjanto, A. (2011)- Petrologi dan geokimia batuan volkanik di daerah Kulunprogo dan sekitarnya daerah istimewa Yogyakarta. J. Ilmiah Magister Teknik Geologi (UPN) 4, 1, 27p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/274/237)
('Petrology and geochemistry of volcanic rocks in the area of Kulon Progo and surroundings, Yogyakarta region'. Oligocene-Miocene volcanic rocks in Kulon Progo('Old Andesite Fm') consist of interbedded volcanic breccia, tuff, andesite, dacite and diorite. Compositions basalt, andesite to dacite from low-K to calc-alkaline series. Typical island arc affinities)

Harjanto, A., E. Suparka, S. Asikin & Y.S. Yuwono (2011)- Endapan emas epitermal berumur Neogen daerah Kulon Progo dan sekitarnya, daerah istimewa Yogyakarta. J. Ilmu Kebumian Teknologi Mineral 22, 2, p. 133-143.
(online at: http://eprints.upnyk.ac.id/351/1/Paper%20JIK%20UPN%20Des%202009.pdf)
('Neogene epithermal gold deposits in the Kulon Progo area and surroundings, Yogyakarta special region' In S mountains W of Yogyakarta, C Java, intrusions of Late Oligocene- E Miocene diorite, andesite, and dacite of Kaligesing/Dukuh Fm (K/Ar age ~8.1 Ma??), associated with epithermal quartz veins with gold mineralization)

Harjono, H., D. Dahrin & S. Wirasantosa (1995)- Neogene opening of the Sunda Strait: constraint from gravity data. In: S. Nishimura & R. Tsuchi (eds.) Proc. Oji Seminar on Neogene evolution of Pacific Ocean Gateways, Kyoto, IGCP-355, p. 57-61.

Harjono, H., M. Diament, J. Dubois, M. Larue & M.T. Zen (1991)- Seismicity of the Sunda Strait: evidence for crustal extension and volcanological implications. Tectonics 10, p. 17-30.
(Sunda Strait between Java frontal subduction and Sumatra oblique subduction. Microearthquake survey recorded 300 local events. Crustal earthquakes in the Sunda Strait area occurs in three main areas: (1) beneath the Krakatau complex, (2) in graben in W part of strait; and (3) in diffused zone to S of Sumatra. Sunda Strait is in extensional tectonic regime as result of NW movement of Sumatra sliver plate along Semangko fault zone)

Harjono, H., M. Diament, L. Nouaili & J. Dubois (1989)- Detection of magma bodies beneath Krakatau volcano (Indonesia) from anomalous shear waves. J. Volcanol. Geothermal Res. 39, p. 335-348.
(Seismograms for ray paths under Krakatau complex show diminution of amplitude of S waves. Attenuating body in two zones, probably disconnected: upper zone ~9 km deep, probably reflecting irregular pockets of magma, and lower zone at at least 22 km deep, related to extensional nature of Sunda Strait)

Harjono, H., M. Diament & M. Sabrier (1993)- Correction and addition to "Seismicity of the Sunda Strait; evidence for crustal extension and volcanological implications" by Hery Harjono et al.. Tectonics 12, 3, p. 787-790.
(Corrected Table 3 of Sunda Strait earthquake focal mechanisms in Harjono et al. 1991)

Harley, M.M. & R.J. Morley (1995)- Ultrastructural studies of some fossil and extant palm pollen, and the reconstruction of the biogeographical history of subtribes Iguanurinae and Calaminae. Review Palaeobotany Palynology 85, p. 153-182.
(On palm-like pollen types from M Eocene lignite in lower Nanggulan Fm at Watupuru River, Kalisonggo, Nanggulan, C Java. Two monosulcate forms (Iguanurinae) are compared to fossil form-genus Palmaepollenites kutchensis and Palmaepollenites sp. Third pollen type referred to Dicolpopollis malesianus (Calaminae). Also present in E Java Sea, W Sulawesi and India subcontinent)

Harloff, C.E.A. (1929)- Voorloopige mededeeling over de geologie van het Praetertiair van Loh Oelo in Midden-Java. De Mijningenieur 10, 8, p. 172-177.
('Preliminary note on the geology of the Pre-Tertiary of Luk Ulo in Central Java'. Likely presence of nappe structures with 15km or more displacement. Cretaceous sediments with Orbitolina and radiolarites 'intruded' by dynamo-metamorphically altered gabbrodioritic intrusive, 18km long/ 800m wide, also containing peridotite/ serpentinite. Complex overthrust by two complexes of crystalline schists (with glaucophanite, eclogite, marble, schists, etc.), with mylonitized thrust surfaces. Thrust direction from S to N. Sediment complex isoclinally folded, almost all dipping to South. Likely age of thrusting Late Cretaceous. Cretaceous and igneous-metamorphic complex unconformably overlain by M Eocene and younger sediments)

Harloff, C.E.A. (1929)- Over radiolarienhoudende gesteenten in het Praetertiair van Loh Oelo (Midden Java). De Mijningenieur 10, p. 240-242.
('On radiolarian-bearing rocks in the Pre-Tertiary of Lok Ulo, Central Java'. Chert with radiolarians in deep water limestone)

Harloff, C.E.A. (1929)- Loh Oelo. Fourth Pacific Science Congress, Java 1929, Excursion Guide C1, 18p.

(One of earliest descriptions of classic Lok Ulo area, with oldest rocks on Java: Cretaceous metamorphic basement, Paleo-Eocene accretionary-wedge like sediment, folded Eo-Oligocene sediments, etc.)

Harloff, C.E.A. (1933)- Geologische kaart van Java, Toelichting bij Blad 67 (Bandjarnegara), 1:100 000. Dienst Mijnbouw Nederlandsch-Indie, Bandung, p. 1-47.
('Geological map of Java, 1:100,000; Banjarnegara sheet'. Map sheet covering South Serayu Mountains. With core of Pretertiary rocks of Luk Ulo complex, composed of crystalline schists, phyllites, serpentinite, greywackes, red radiolarites, and two small occurrences of limestones with common mid-Cretaceous Orbitolina. Eocene sandstones with limestone lenses with Nummulites, Discocyclina, Pellatispira, etc., unconformable on crystalline schists, radiolarian chert, etc., with clasts of glaucophane schist and other metamorphics, granite, etc.. Thick Miocene tuffaceous marls with Miogypsina and andesites unconformable on Eocene)

Harloff, C.E.A. & A.J. Pannekoek (1940)- De omgeving van den Boroboedoer. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 57, p. 13-23.
('The surroundings of the Borobudur'. No evidence found for postulated presence of Quaternary lake around Borobudur temple complex)

Harrison, R. (2012)- The geology, alteration and mineralization of the Tumpangpitu porphyry Cu-Au and high-sulfidation epithermal Au-Ag deposit. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 273-278.
(New copper-gold porphyry discovery in East Java)

Harrison, R.L., A. Maryono, M.S. Norris, B.D. Rohrlach, D.R. Cooke, J.M. Thompson, R.A. Creaser & D.S. Thiede (2018)- Geochronology of the Tumpangpitu porphyry Au-Cu-Mo and high-sulfidation epithermal Au-Ag-Cu deposit: evidence for pre- and postmineralization diatremes in the Tujuh Bukit District, Southeast Java, Indonesia. Economic Geology 113, 1, p. 163-192.
(Tumpangpitu porphyry and high-sulfidation epithermal deposit in Tujuh Bukit district, SE Java. Porphyry resource 1.9 billion tonnes @ 0.45% Cu and 0.45 g/t Au, with additional resource in epithermal mineralization. At least 8 discrete intrusions. Tujuh Bukit district floored by Miocene sedimentary and andesitic volcanic rocks. Volcanic-hydrothermal activity at Tujuh Bukit began with formation of weakly altered Tanjung Jahe diatreme complex (U-Pb zircon ages ~8.8- -8.5 Ma). Mineralization preceded by large, equigranular dioritic batholith (~5.8-5.1 Ma). Syn- to late-mineralization porphyries emplaced in E Pliocene (~5.40- 3.9 Ma). High-sulfidation Au-Ag ± Cu lithocap ~4.3 Ma)

Harsolumakso, A.H. (1999)- Diabas di daerah Karangsambung, Luk Ulo, Kebumen, Jawa Tengah: apakah bentuk kelompok batuan basaltik berupa tubuh intrusif? Pros.Seminar Nas. Sumberdaya Geologi, 40 Tahun (Pasca Windu) 1998, Jurusan Teknik Geologi, Universitas Gadjah Mada, Yogyakarta, p. 1-6.
('Diabase in the Karangsambung area, Luk Ulo, Kebumen, Central Java: What formed the basaltic rock group in the form of intrusive bodies?'. Diabase at Karangsambung village exposed as isolated hill surrounded by clay and clay breccias of Karangsambung and Totogan Formations. Late Eocene-Oligocene K/Ar ages (~26-38 Ma, island-arc tholeitic affinity and product of submarine volcanism. Now tectonic slice in SSW verging thrust systems, deformed in Oligo-Miocene)

Harsolumakso, A.H. & D. Noeradi (1996)- Deformasi pada Formasi Karangsambung di daerah Luk Ulo, Kebumen, Jawa Tengah. Buletin Geologi (ITB) 26, 1, p. 45-54.
('Deformation of the Karangsambung Fm in the area of Luk Ulo, Kebumen, C Java'. Eocene Karangsambung Fm overlies Late Cretaceous-Paleocene melange complex. Scaly clay with limestone and conglomerate blocks not olistostrome, but highly folded and thrusted, probably in Oligocene- E Miocene. Folds trend ENE-WSW and indicate SSE vergent thrust system)

Harsolumakso, A.H., D. Noeradi, A. Rudyawan, D. Amiarsa, S. Wicaksono & A.A Nurfarhan (2019)- Geology of the eastern part of the volcanic Kendeng Zone of East Java: stratigraphy, structures and sedimentation review from Besuki and Situbondo areas. J. Geologi Sumberdaya Mineral 20, 3, p. 143-152.

(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/465/405)
(Late Miocene-Pliocene rel. deep marine succession with volcanoclastics in Situbondo area)

Harsolumakso, A.H., C. Prasetyadi, B. Sapiie & M.E. Suparka (2006)- The Luk Ulo-Karangsambung Complex of Central Java, Indonesia: from subduction to collision tectonics. Proc. Persidangan Bersama Geosains UKM-ITB, Langkawi, 6p. *(Extended Abstract)*
(Late Cretaceous-Paleocene Luk Ulo Melange Complex in C Java formed in subduction zone. Shift from NE-SW Cretaceous subduction trend to E-W trend in Oligocene due to collision of micro-continent. Luk Ulo Paleogene three units: (1) metasediments with E Eocene Nummulites; (2) tectonized pebbly mudstones with blocks containing Discocyclina and Asterocyclina; (3) deformed Late Eocene turbidite sandstones and shales (indicating late Eocene- Oligocene deformation during microcontinent collision). These differ from Bayat and Nanggulan areas, with rel. undeformed transgressive Eocene sequence (margin of microcontinent))

Harsolumakso, A.H., B. Sapiie, Z. Tuakia & R.I. Yudha (2016)- Luk Ulo melange complex, Central Java, Indonesia; characteristics, origin and tectonic significance. In: 13th Ann. Mtg. Asia Oceania Geoscience Soc. (AOGS), Beijing 2016, SE21-A030, 1p. *(Poster presentation)*
(Luk Ulo melange is tectonic melange as result of Cretaceous- Paleocene? subduction, and with younger melange resulting from Eo-Oligocene collision event of E Java microcontinent. Blocks of ultramafic rocks, schists, pillow basalts, pelagic sediments, granodiorites, limestones and sandstones in matrix of claystones often with scaly and phyllitic texture suggestive of diagenesis at depths up to 4-8 km)

Harsolumakso, A.H., M.E. Suparka, D. Noeradi, R. Kapid, N.A. Magetsari & C.I. Abdullah (1996)- Status olistostrom di daerah Luk Ulo, Jawa Tengah: suatu tinjauan stratigrafi, umur dan deformasi. Proc. Seminar Nasional Peran Sumberdaya Geologi Dalam PJP II, p. 101-121.
('Status of the olistostrome in the Luk Ulo, C Java: a review of the stratigraphy, age and deformation')

Harsolumakso, A.H., M.E. Suparka, D. Noeradi, R. Kapid, Y. Zaim, N.A. Magetsari & C.I. Abdullah (1996)- Karakteristik struktur melange di daerah Luk Ulo, Jawa Tengah. In: Sampurno et al. (eds.) Pros. Seminar Nasional Geoteknologi III, LIPI, Bandung, p. 422-441.
('Characteristics of melange structure in the Luk Ulo, Central Java'. U Cretaceous- Paleocen melange complex with metamorphic and ultramafic rocks. Common boudinage structures)

Harsolumakso, A.H., M.E. Suparka, Y. Zaim, N. Magetsari, R. Kapid, D. Noeradi, C.I. Abdullah & C. Ansori (1995)- Karakteristik satuan melange dan olistostrom di daerah Karangsambung, Jawa Tengah: suatu tinjauan ulang. In: Y. Kumoro et al. (eds.) Proc. Seminar Sehari Geoteknologi dalam indistrialisasi, Hasil-hasil Penelitian Puslitbang Geoteknologi LIPI, p. 190-215.
('Review of the characteristics of melange and olistostrome units in the Karangsambung area, C Java'. Upper Cretaceous- Paleocene Luk Ulo melange complex, overlain by Eocene Karangsambung Fm and Oligocene Totogan Fms, both with locally common large clasts)

Harsolumakso, A.H., E. Suparka & N.A. Magetsari (1998)- Struktur melange dan asosiasi ofiolit daerah Luk Ulo, Kebumen, Jawa Tengah, serta implikasinya terhadap tektonik jalur pertemuan lempeng. Laporan Penelitian DIK-ITB, 18p. *(Unpublished ITB Research report)*
('Melange structure and ophiolite association of the Luk Ulo area, Kebumen, Central Java, and the implications for tectonic plate subduction'. On Luk Ulo tectonic melange of mafic-ultramafic rocks (ophiolite). Rocks highly deformed, fractured and brecciated, as blocks or boudinage structure in similar rocks or on other rocks)

Harsono Pringgoprawiro (1968)- On the age of the Sentolo Formation based on planktonic foraminifera. Inst. Technology Bandung, Dept. Geol. Contr. 64, p. 5-21.
(Sentolo Fm overlying 'Old Andesites' in W Progo Mts are Burdigalian- Pliocene in age)

Harsono Pringgoprawiro (1983)- Biostratigrafi dan paleogeografi cekungan Java Timur Utara suatu pendekatan baru. Doct. Thesis Inst. Technology Bandung, p. 1-239. *(Unpublished)*
(NE Java basin biostratigraphy and paleogeography)

Harsono Pringgoprawiro & Baharuddin (1980)- Biostratigrafi foraminifera plangton dan beberapa bidang pengenal Kenozoikum akhir dari sumur-sumur Tobo, Cepu, Jawa Timur. Geologi Indonesia (IAGI) 7, 1, p. 21-31.
(Planktonic foraminifera study in shallow wells Tobo 5, 6, 8 near Cepu. Deepest well Tobo 5 penetrated Late Miocene Ledok sands-shales between 412-451 m, overlain by rel. thin (60m?), but complete Pliocene Mundu marl section. Entire section apparently deep water with rich planktonic foram faunas)

Harsono Pringgoprawiro & B. Riyanto (1988)- Formasi Andesite Tua: suatu revisi. Geologi Indonesia 13, 1, p. 1-21.
('Old Andesite Formation- a revision'. Review of Late Oligocene- E Miocene 'Old Andesites' of S Mountains of Java)

Harsono Pringgoprawiro, N. Soeharsono & F.X. Sujanto (1977)- Subsurface Neogene planktonic foraminifera biostratigraphy of North-West Java Basin. Proc. 2nd Working Group Mtg. Biostratigraphic datum-planes of the Pacific Neogene, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 1, p. 125-165.
(Miocene- Pliocene planktonic foram zonation, based on 7 Pertamina wells in NW Java)

Harsono Pringgoprawiro & Sukido (1992)- Geologic map of the Bojonegoro Quadrangle, Jawa (1500-5), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 23p.

Harsono Pringgoprawiro, S. Suwito P. & Roskamil (1977)- The Kromong carbonate rocks and their relationship with the Cibulakan and Parigi Formation. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. 1, p. 221-240.
(Kromong carbonate 20 km W of Cirebon, W Java, at N tip of Kromong complex which consist mostly of andesitic intrusive rocks. Limestone belongs to Miocene Cibulakan and Parigi formations. Age of Upper Cibulakan Fm E-M Miocene Tf 1-2, Parigi limestone is Late Miocene Tf3. Plio-Pleistocene andesitic and dacitic rocks intruded carbonates. Oil and asphalt seeps found along faults in N part of area (N.B. Praptisih et al. (2012) show Parigi Lst is Early-Middle Miocene age (Te5-Tf1-2), not Late Miocene; JTvG)

Harting, A. (1929)- Tagogapoe. A short geological description of the mountain Tagogapoe and Tjitaroem. Fourth Pacific Science Congress, Java 1929, Bandung, Excursion Guide C1, 14p.
('Eocene' quartz sandstones with Nummulites fichteli-intermedia (=Lower Oligocene) overlain by 'Miocene' Lepidocyclina limestone (= Late Oligocene) outcrops in Rajamandala area, W of Bandung)

Hartmann, E. (1920)- Verslag over eene verkenning van de Sadjira antiklinaal en omgeving in Bantam. Jaarboek Mijnwezen Nederlandsch Oost-Indie 47 (1918), Verhandelingen I, p. 141-149.
('Report on a reconnaissance of the Sajira anticline and surroundings, Banten', W Java. Structurally complex area S of Rangkasbitung. Includes mention of thin coal beds in M Palembang Fm, traces of oil in Lower Palembang Fm and nearby gas seeps named Kaboel (96% CO_2; Fennema 1891) and burning gas at Kedjaban)

Hartono & Suharsono (1997)- Geologic map of the Tuban quadrangle, Java. Sheet 1509-3, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Hartono, G. & S. Bronto (2007)- Asal-usul pembentukan Gunung Batur di daerah Wediombo, Gunungkidul, Yogyakarta. J. Geologi Indonesia 2, 3, p. 143-158.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/198)
(Southern Mountains Wediombo 'Old Andesite' lavas and breccias associated with Batur intrusive rock probably remnants of one paleovolcano)

Hartono, G., S. Pambudi, M. Arifai, A. Yusliandi & S. Agung P. (2014)- Vulkanisme dan sebaran sumber daya non hayati di Pegunungan Selatan Yogyakarta dan Wonogiri, Jawa Tengah. Majalah Geologi Indonesia (IAGI) 29, 1, p. 37-47.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/843)

('Volcanism and distribution of non-biologic resources in Southern Mountains of Yogyakarta and Wonogiri, C Java'. S Mountains of C Java consists of Oligocene- E Miocene volcanic rock, with Baturagung Volcano High in W and Gajahmungkur Volcano in E. Paleovolcanic eruption centres at Parangtritis, Imogiri, Pilang, Karangdowo, Patuk, Bayat, Tenong, Panggung, and Wediombo. Non-economic metal and nonmetal deposits)

Hartono, G., A. Sudrajat & I. Syafri (2008)- Gumuk gunung api purba bawah laut di Tawangsari- Jomboran, Sukoharjo- Wonogiri, Jawa Tengah. J. Geologi Indonesia 3, 1, p. 37-48.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/218)
('The Gumuk ancient underwater volcano at Tawangsari-Jomboran, Sukoharjo Wonogiri, C Java'. Description of Oligo-Miocene 'Old Andesite' submarine basaltic breccias and pillow lavas in S Mountains, E of Bayat, grouped in Mandalika Fm (also in IAGI 36th Ann. Conv. 2007, p. 307-320))

Hartono, G. & I. Syafri (2007)- Peranan Merapi untuk mengidentifikasi fosil gunung api padi óFormasi Andesit Tuaô studi kasus di daerah Wonogiri. Geologi Indonesia 33, 2, GRDC Spec. Publ. p. 63-80.
(Merapi modern volcano used as model to interpret Oligo-Miocene 'Old Andesite' volcanic centers and volcanic cycles in the Wonogiri area, Southern Mountains, C Java)

Hartono, H.G. & S. Bronto (2009)- Analisis stratigrafi awal kegiatan gunung api Gajahdangak di daerah Bulu, Sukoharjo; implikasinya terhadap stratigrafi batuan gunung api di Pegunungan Selatan, Jawa Tengah. J. Geologi Indonesia 4, 3, p. 157-165.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20090301.pdf)
('Stratigraphic analysis of early activity of Gajahdangkak volcano in the Bulu area: implications for stratigraphy of volcanic rocks in the Southern Mountains, C Java'. Late Oligocene- E Miocene volcanism in S Mountains generally starts with basaltic pillow lavas, followed by construction of composite volcanoes consisting of basaltic to andesitic lava flows, breccias and tuffs (' Mandalika Fm'), followed by destructive phase with high silica pumice-rich pyroclastic breccias and tuffs (Semilir Fm'). Illustrated by stratigraphy of Gajahdangak Volcano W of Wonogiri)

Hartono, H.G., S. Pambudi, M. Arifai, A. Yusliandi T. & S. Agung P. (2013)- Volkanisme dan sebaran bahan non hayati di Pegunungan Selatan Yogyakarta. Proc. 8th Seminar Nasional, Sekolah Tinggi Teknologi Nasional, Rekayasa Teknologi Industri dan Informasi, p. G24-G31.
('Volcanism and distribution of non-biological materials in the Southern Mountains, Yogyakarta')

Hartono, H.G. & A. Sudradjat (2017)- Nanggulan Formation and its problem as a basement in Kulonprogo Basin, Yogyakarta. Indonesian J. Geoscience 4, 2, p. 71-80.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/373/239)

Hartono, H.G. & A. Sudradjat (2018)- Karakteristik geomorfologi gunung api aktif dan gunung api padam kasus G. Merapi & G. Gajahmungkur, Daerah Istimewa Yogyakarta dan Jawa Tengah. Bull. Scientific Contr. (UNPAD) 16, 2, p. 109-116.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/18383/pdf)
('The geomorphological characteristics of active and dormant volcanoes: case study of Merapi and Gajahmungkur volcanoes, Yoyyakarta Special Province and Central Java'. On volcano morphology and volcanological facies)

Hartono (1960)- *Hantkenina* in the Nanggulan area. Direktorat Geologi Indonesia, Publikasi Teknik, Seri Paleontologi 1, p. 1-8.
(First record from Java of of Late Eocene planktonic foram Hantkenina from shallow corehole along Kali Progo, 6 km N of Nanggulan, W of Yogyakarta. Associated with larger forams Nummulites Discocyclina, Pellatispira)

Hartono, H.M.S. (1965)- The stratigraphic position of the Karren Limestone in the Tuban area, East Java. Bull. Geol. Survey Indonesia 2, 1, p. 27-30.

(Plio- Pleistocene Karren Lst present in Rembang-Madura zone, thickness 120m or more. Dips gently to N and unconformably overlies different Miocene formations, incl. Late Miocene? Mundu Fm Globigerina marls)

Hartono, H.M.S. (1969)- *Globigerina* marls and their planktonic foraminifera from the Eocene of Nanggulan, Central Java. Contr. Cushman Foundation Foraminiferal Research 20, 4, p. 152-159.
(online at: https://cushmanfoundation.allenpress.com/portals/_default/files/pubarchive/CCFFR/20ccffr4.pdf)
(Late Eocene planktonic foraminifera from Globigerina marls above Discocyclina and Axinea layers and below 'Old Andesite' breccias in Nanggulan area, C Java. Including Hantkenina nanggulanensis n.sp., H. alabamensis, Globorotalia centralis, G. ampliapertura, Hastigerina micra, etc.)

Hartono, H.M.S. (1973)- Geologic map of the Tuban Quadrangle, Java, Quad. 12/XIII, scale 1:100,000. Geol. Survey Indonesia, Bandung.

Hartono, T. (2001)- Formasi Kerek: fasies turbidit kipas bawah (lower fan) di daerah Dadapayam, Salatiga-Jawa Tengah. Jurnal Teknologi Mineral (ITB) 8, 3, p.
(Kerek Fm of C Java intermittent calcareous sandstone, claystone and thin marl layers (5-200 cm), deposited in deep marine lower fan turbiditic facies. Presence of Bulimina marginata, B. strata, Dentalina sp., Planulina sp. and Gyroidina soldanii suggest deposition in middle- lower bathyal zone. Age Middle -Upper Miocene (N14-N16), based on presence of Globorotalia siakensis and Gr. acostaensis)

Hartono, T. (1995)- Biostratigrafi daerah Dadapayam, Salatiga- Jawa Tengah. J. Riset Geologi Pertambangan (LIPI) 1, 1, p. 33.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.1-No.1-1995-.pdf)
('Biostratigraphy of the Dadapayam area, Salatiga, Central Java'. Planktonic foraminifera from ~1000m thick Late Miocene turbiditic series NNE of Salatiga, SE of Semarang, composed of Kerek Fm below (zone N15-N16) and more tuffaceous sand-rich Banyak Fm above (N17-N18))

Hartono, U. (ed.) (2012)- Geologi Pegunungan Selatan bagian Timur, Kabupaten Bantul, Gunung Kidul, Klaten dan Wonogiri. Centre for Geological Survey (PSG), Bandung, Spec. Publ., p.
('Geology of the eastern part of the Southern Mountains, districts Bantul, Gunung Kidul and Wonogiri')

Hartono, U., Baharuddin & K. Brata (1992)- Geology of the Madiun Quadrangle, Java, 1508-2. Explanatory notes and map, Geol. Res. Dev. Centre (GRDC), Bandung, 22p.

Hartono, U., H. Panggabean et al. (eds.) (2009)- Prosiding Workshop geologi Pegunungan Selatan 2007. Geol. Survey Inst., Bandung, Spec. Publ. 38, p. 1-233.
(Collection of papers on geology of Southern Mountains, C and E Java, from 2007 Yogyakarta workshop)

Hartono, U., I. Syafri & R. Ardiansyah (2008)- The origin of Cihara granodiorite from South Banten. J. Geologi Indonesia 3, 2, p. 107-116.
(online at: ttps://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/52/52)
(Late Oligocene Cihara Granodiorite N of Bayah, SW Java, originated from magma of continental origin in subduction zone environment. Two possibilities of parental magmas: basaltic/ or andesitic magma of Cikotok Fm or crustal melting magma from subduction process (E Miocene radiometric age; Safudin 1995))

Haryanto, H., E. Yogapurana & A. Kusuma (2016)- Intricate seismic time-frequency analysis in Kujung patch reef, Northeast Java Basin. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-59-G, 9p.
(Attenuation/ spectral decomposition of N Madura Platform seismic to determine fluid composition)

Haryanto, I. (2004)- Tektonik sesar Baribis-Cimandiri. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 60-66.
('Tectonics of the Baribis- Cimandiri Fault'. W Java E-W Baribis fault is Plio-Pleistocene thrust. SW-NE Cimandiri fault older, sinistral strike-slip fault)

Haryanto, I. (2006)- Struktur geologi Paleogen dan Neogen di Jawa Barat. Bull. Scientific Contr. (UNPAD) 4, 1, p. 87-95.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8118/3694)

Haryanto, I. (2013)- Struktur sesar di Pulau Jawa bagian barat berdasarkan hasil interpretasi geologi. Bull. Scientific Contr. (UNPAD) 11, 1, p. 1-10.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8283/3830)
('Fault structure in the western part of Java Island based on the results of geological interpretations'. Brief review of four major fault trends in Tertiary of W Java. E-W trending faults most common and mainly reverse faults, and of late Tertiary age and formed in N-S directed compressional system. Other faults (N-S, NW-SE and NE-SW) formed simultaneously with thrust fold belt structures, generally as strike slip faults or oblique transtensional or transpressional faults)

Haryanto, I., A.H. Harsolumakso & S. Asikin (2002)- Tectonics of Baribis Fault. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 858-869.
(Baribis Fault in W Java continuation of E Java Kendeng zone N-directed thrust fault zone. Older than Plio-Pleistocene tectonics(?))

Haryanto, I., J. Hutabarat, A. Sudrajat, N.N. Ilmi & E. Sunardi (2017)- Tektonik sesar Cimandiri, Provinsi Jawa Barat. Bull. Scientific Contr. (UNPAD) 15, 3, p. 255-274.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/15103/pdf)
('Tectonics of the Cimandiri Fault, West Java'. WSW-ENE trending Cimandiri fault from Pelabuhan Ratu to Jampang to Rajamandala, etc. Formed at end of M Eocene, initially as thrust fault that developed paleo high and uplifted Ciletuh Formation in forearc basin. Evolved into normal fault today)

Haryanto, I., Nurdradjat & I. Saputra (2015)- Identifikasi struktur geologi berdasarkan aspek morfologi, stratigrafi, pola jurus lapisan batuan dan sebaran batuan: studi kasus daerah Bantarujeg- Majalengka, Provinsi Jawa Barat. Bull. Scientific Contr. (UNPAD) 13, 2, p. 140-151.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8400/3908)
('Identification of geological structures based on aspects of morphology, stratigraphy, deformation and distribution of rock layers: a case study in the Bantarujeg- Majalengka area, W Java'. Zone of NNE-directed thrusting N of Bantarujeg (SE of Ciremai volcano))

Haryanto, I., A. Ramadian & F. Helmi (2009)- Tektonik batuan pra-Tersier Jawa Barat Indonesia. Bull. Scientific Contr. (UNPAD) 7, 2, p. 82-90.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8235/3783)
('Tectonics of pre-Tertiary rocks of West Java, Indonesia'. Ciletuh Pre-Tertiary melange oldest rocks outcrop in W Java. Outcrop mechanism in this area due to uplift, thrusting and folding, followed by sliding)

Haryanto, I., E. Sunardi, A. Sudradjat, Abdurrokhim & Jamal (2014)- Plate tectonic and regional structural geology in West Java. In: 1st Int. Conf. Geoscience for Energy, Mineral Resources, and Environment, 10p.
(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2016/11/FULLPAPER_Iyan-POSTER.pdf)
(Two major fault patterns in Java: (1) NE-SW trending, related to Cretaceous subduction activity and (2) E-W trending, associated with Tertiary subduction. NE-SW trending faults caused formation of highs and basins, like Biliton Basin, Bawean Basin, Karimun High, etc; E-W fault pattern caused formation of fore arc basins, volcanic ridges and back arc basins. Tertiary subduction reactivated Cretaceous fault patterns and produced N-S faults, forming highs and lows like Sunda Basin, NW West Java Basin, Tanggerang High, Ujungkulon Basin and High, Bayah High, etc.)

Haryanto, I., E. Sunardi, A. Sudradjat & Suparka (2014)- Hipotesis mengenai sejarah tumbukan lempeng zaman Kapur di Indonesia bagian barat. In Proc. Seminar Nasional Fakultas Teknik Geologi, Geologi untuk meningkatkan kesejahteraan masyarakat, UNPAD, Bandung, p. 47-55.
(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2015/03/HIPOTESIS-MENGENAI-SEJARAH-TUMBUKAN-LEMPENG-ZAMAN-KAPUR.pdf)

('Hypotheses about the history of the Cretaceous plate collision in western Indonesia'. Cretaceous subduction along Java and SE Kalimantan started by double subduction. Eurasian and Australian-origin plates with subduction under both margins were separated by narrow oceanic plate. Late Cretaceous collision produced Ciletuh, Rajamandala, Billiton, Bawean and Meratus highs)

Haryono, E. & M. Day (2004)- Landform differentiation within the Gunung Kidul Kegelkarst, Java, Indonesia. J. Cave and Karst Studies 66, 2, p. 62-69.
(online at: http://eko-haryono.staff.ugm.ac.id/wp-content/v66n2haryono.pdf)
(Gunung Kidul/ Gunung Sewu three karst subtypes: labyrinth-cone, polygonal, and residual cone karst. Labyrinth-cone subtype in central Gunung Kidul karst where hard, thick limestones have undergone intensive deformation. Polygonal karst in western perimeter on hard but thinner limestone beds. Residual cone subtype in weaker and more porous limestones (wackestones or chalks), despite considerable bed thickness)

Hasibuan, F. (2004)- Biostratigrafi Kenozoikum moluska di Jawa, Indonesia. In: Stratigrafi Pulau Jawa, Geol. Res. Dev. Centre Bandung, Spec. Publ. 30, p. 71-86.
('Biostratigraphy of Cenozoic molluscs in Java, Indonesia'. Review of Eocene- Pliocene mollusc biostratigraphy of Java. With extensive reference list)

Hasibuan, F. (2006)- *Ostrea (Turkostrea) doidoiensis* Hasibuan from the Bayah Formation, West Jawa: a new find. J. Sumber Daya Geologi 16, 1 (151), p. 16-29.
(M Eocene oyster species from lower part of Bayah Fm at Cibobos Bay, W of Bayah, Banten, SW Java. In sandstone with shallow marine trace fossils and crab fossils. Species originally described from SW Sulawesi Malawa Fm and may also be present in Nanggulan Fm of C Java (O. jogjacartensis of Martin (1914-1915))

Hastuti, D.E.W., E. Suparka, S. Asikin & A.H. Harsolumakso (2003)- Miocene volcanism related to hydrothermal alteration in Ponorogo, East Java, Indonesia. In: B. Ratanasthien et al. (eds.) Pacific Neogene paleoenvironments and their evolution, 8th Int. Congress on Pacific Neogene Stratigraphy, Chiang Mai, 2003, p. 418-425.

Hastuti, E.D.W. (2017)- The study of ore minerals parageneses in Ponorogo area, East Java. In: Sriwijaya Int. Conf. Engineering, Science and Technology (SICEST 2016), MATEC Web of Conferences 101, 04018, p. 1-6.
(online at: /www.matec-conferences.org/articles/matecconf/pdf/2017/15/matecconf_sicest2017_04018.pdf)
(Mineralisation in Oligocene-E Miocene rocks in Ponorogo District, S Mountains at least two stages: (1) early hypogene processes, with pyrite-sphalerite-chalcopyrite-magnetite-galena; (2) later supergene enrichment with pyrite-sphalerite-covelite-bornite-limonite. Assemblages probably formed at ~100-360°C)

Hayat, D.Z. (2003)- Analisis data gayaberat dalam permodelan struktur geologi bawah permukaan serta kaitannya dengan cebakan hidrokarbon di daerah Subang dan sekitarnya. J. Geologi Sumberdaya Mineral 13, 141, p. 20-31.
('Analysis of gravity data in modeling of subsurface geological structure and its relation to hydrocarbon deposits in Subang and the surrounding area'. Gravity showing up to 2km deep Tertiary basinal areas in Pamanukan-Subang area, N of Bandung, W Java)

Hehuwat, F. & M.S. Siregar (2004)- Nanggulan-Bayat Eocene and Southern Mountains Miocene carbonate sedimentation models from the Yogyakarta area. LIPI Indonesian Inst. Sciences, 2 vols.
(Fieldtrip guidebook Southern Mountains)

Hehuwat, F., Suparka & Suwijanto (1974)- NE-SW lineaments on Java as observed from ERTS-1 images. Tectonophysics 23, p. 425. *(Abstract only)*
(C and E Java NE-SW trending lineaments, few 10 km long. Direction of lineaments corresponds to Meratus trend. Unpaired terraces, linear scars, morphological unconformities, different land-use patterns across lineament, and coastline configurations, strongly suggest fault-origin of lineaments)

Heide, F. (1939)- Uber Tektite von Java. Zentralblatt Mineralogie Geol. Palaont., 1939 A, p. 199-206.

('About tektites from Java')

Heidrick, T.L. & Gayatri I. Marliyani (2006)- Nanggulan tectonostratigraphy. *(Unpublished)*
(Online at: www.michel.web.ugm.ac.id/sedimentology/nanggulan%20by%20gayatri/...)

Hendriyanto, N. & H. Amijaya (2008)- Organic geochemistry, petrography and mineralogy of Wungkal-Gamping mudstone in Bayat Area, Klaten, Central Java. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 630-637.
(Dark grey Eocene Wungkal-Gamping Fm mudstones E of Pendul Hill, Bayat, have 0.16-0.42% TOC, showing no hydrocarbon source potential. Sporinite color orange to red or brown, equivalent of Ro of ~0.65- 1.1% (peak mature- late mature). High maturity may be local due to proximity to Pendul igneous intrusion. Dark grey color of mudstone not caused by organic material but is mainly chlorite)

Hendrizan, M. (2016)- Nutrient level change based on calcareous nannofossil assemblages during Late Miocene in Banyumas Subbasin. Indonesian J. Geoscience 3, 3, p. 173-183.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/332/225)
(Late Miocene of Kali Pasir outcrop section, Banyumas, C Java, with abundant Discoaster (D. brouweri) and large Reticulofenestra in muddy facies of early Late Miocene (NN8-NN10a) representing deep thermocline. Decreasing Discoaster and small Reticulofenestra in turbiditic section of later part of Late Miocene (NN10b-NN11) indicate shallow thermocline/ nutricline. Strong eutrophication in Kali Pasir section probably driven by increased nutrient-rich terrestrial material, related to onset of Indian monsoon in Late Miocene/8-9 Ma)

Hendrizan, M. (2018)- A review of biostratigraphic studies in the olistostrome deposits of Karangsambung Formation. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012011, p. 1-5.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012011/pdf)
(Age of Karangsambung Fm olistostrome deposits in C Java Oligocene, based on calcareous nannofossils from matrix. Older reported ages (M-L Eocene, etc.) probably reworked)

Hendrizan, M., R. Kapid & Djuhaeni (2014)- Biostratigraphy of the Late Miocene Halang Formation in the Loh Pasir succession, Banyumas, Central Java. Berita Sedimentologi 30, p. 32-43.
(online at: www.iagi.or.id/fosi)
(Biostratigraphic study nannofossils from 1.4 km thick outcrop section of Late Miocene Halang Fm at Loh Pasir, C Java. 121 samples with 57 species, divided into five Late Miocene biozones: Discoaster brouweri, D. hamatus, D. bollii, D. prepentaradiatus and D. quinqueramus)

Hendrizan, M., Praptisih & P.S. Putra (2009)- Kajian terbaru lingkungan pengendapan Formasi Batuasih berdasarkan kandungan foraminifera: studi kasus daerah Sukabumi, Propinsi Jawa Barat. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, 12p.
('A recent study on the depositional environment of the Batuasih Formation based on foraminifera content: a case study in the Sukabumi area, West Java Province'. Batuasih marls with E Oligocene planktonic foraminifera. Same as Hendrizan et al. 2012, below))

Hendrizan, M., Praptisih & P.S. Putra (2012)- Depositional environment of the Batuasih Formation on the basis of foraminifera content: a case study in Sukabumi Region, West Java Province, Indonesia. J. Geologi Indonesia 7, 2, p. 101-112.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/403)
(Batuasih Fm overlies (Eocene?) Walat Fm and grades upwards into Late Oligocene Rajamandala Lst. Outcrops in 3 sections W of Sukabumi: Batuasih village, 36m; Cibatu River, 113m; Padaarang, 2.6m. Mainly black shaly claystone, with limestone intercalations in upper part. Foraminifera poorly preserved black benthic and planktonic foraminifera, deposited in shelfal marine environment in E Oligocene (zone P19, with Globoralia opima, Globigerina tripartita, etc.))

Herklots, J.A. (1854)- Fossiles de Java. Description des restes fossiles d'animaux des terrains Tertiaires de l'ile de Java, receuillis des lieux par M. Fr. Junghuhn, docteur-es-sciences, publies par ordre de S.M. le Roi des Pays Bas. E.J. Brill, Leiden, p. 1-24.
(online at: www.archive.org/details/fossilesdejava00herk)
('Description of animal fossils from the Tertiary terrains of Java, collected by Dr F. Junghuhn, published by order of the King of the Netherlands'. Early description of Tertiary echinoid fossils from Java (see also revision of identifications by Martin (1880))

Hetzel, W.H. (1935)- Geologische kaart van Java 1:100.000, Toelichting bij blad 54 (Madjenang). Dienst Mijnbouw Nederlandsch-Indie, p. 1-53.
(Map sheet in E Priangan- Banyumas Regencies of W and C Java (W of Bumiayu sheet). Mainly folded Neogene sediments. M-L Miocene: from old to young: Pemali, Rambatan, Lawak and Halang series (possibly partly facies equivalents). Pemali series Globigerina marls with Lower Tf limestone intercalations (M Miocene Cycloclypeus annulatus). Pliocene: Kumbang series (unfossiliferous andesitic volcanics), Tapak, Kalibiuk and Glagah series. With oldest mammal fossil of Java? (rhinoceros tooth Aceratherium boschi Von Koenigswald 1933, in late Miocene or E Pliocene limestone? Oil seep in Halang series near Tjisenti in NE part of map sheet)

Higasinaka, H., S. Asikin & R. Soebedo (1969)- Geological and geophysical investigations of the Kliripan manganese field, central Java. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 2, 1, p. 25-36.
(online at: http://jrisetgeotam.com/index.php/NIGM/article/view/166/161)
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(Senepo epithermal mineralization prospect in Southern Mts of C Java. Low sulphidation epithermal quartz vein, hosted by Oligo-Miocene andesite. Veins N-S-trending, 1-2m thick, with low Au, Ag, chalcopyrite, sphalerite, galena, hematite, covellite and malachite, etc.. Probably originated at 300-425m paleodepth)

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('Geochemical characteristics of source rocks of the Walat Formation, Sukabumi Regency, West Java'. On hydrocarbon source potential of Late Eocene- E Oligocene Walat Fm. Formation currently in mature stage

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(late Early- early M Miocene Sambipitu Fm volcaniclastic sandstone exposed in Gedangsari area, Gunungkidul, SE of Yogyakarta. Mainly feldspathic litharenites with up to 85% rock fragments (all volcanics), 13-62% feldspars and <6.5% quartz grains (monocrystalline). Matrix 4-28%, composed of silica, carbonate and minor iron oxides. Sourced from 'undissected magmatic arc '(Old Andesite Fm). One thin section also shows planktonic foram and Lepidocyclina)

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(Yogyakarta depression is releasing bend of pull-apart basin, formed as response of sinistral transtensional strike-slip movement along NE-SW Opak-Muria Fault. Fault activity started and controlled basin configuration and facies in M Miocene- Pliocene. S Mountains Zone regional uplift as response of compressional tectonic regime since M Miocene. Peak of this event is in Pliocene (~5 Ma). Yogyakarta earthquake in 2006 shows Opak-Muria Fault still active to present-day)

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('Characterization of Rajamandala Fm carbonate rocks based on larger foraminifera in the Padalarang area, West Java'. Cluster analysis shows larger foram biofacies: (1) open sea shelf: planktonic foraminifera; (2) deep shelf margin: planktonic foraminifera, Cycloclypeus, Operculina, Heterostegina, Amphistegina, Spiroclypeus; (3) foreslope: Lepidocyclina, Miogypsinoides, Pararotalia and Spiroclypeus; (4) organic buildup: coral; (5) open platform: Quinqueloculinids and Austrotrillina, Pararotalia, coral and algae; (6) restricted platform/ lagoon: Quinqueloculinids, Austrotrillina, Borelis)

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(Mount Ijo in S part of Menoreh Mountains, Kulonprogo, SW of Yogyakarta. With both andesite and dacite, probably co-magmatic ('Old Andesites?). Geochemistry shows calc-alkaline volcanic arc setting)

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Kadar, D., D.A. Subandriyo, F. Aziz, Suminto, Baharuddin & S. Musliki (1992)- Excursion Guide Book, Package A: Rembang and Kendeng Zones. Indon. Petroleum Assoc., p.

Kadar, D. & Sudijono (1994)- Geological map of the Rembang Quadrangle, Java, 1:100,000, Quad. 1509-14. Geol. Res. Dev. Centre (GRDC), Bandung, 25p.
(Oldest formation outcropping on Rembang Quad is marine E Miocene Tawun Fm. Grades upward ino late E-M Miocene (N8-N12) Ngrayong Fm quartz sst, overlain by Bulu Fm platy limestone (N13) and further Mio-Pliocene marine sediments)

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(online at: www.iagi.or.id/fosi)
(Planktonic foraminifera from marine Ngimbang, Kujung, Tuban, Selorejo and Lidah Formations in Kuripan-1 well, North C Java range in age from Late Eocene- Pleistocene (upper Zone P17- N22).

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(C Java Lok Ulo Cretaceous accretionary-collision complex with tectonic slabs of dismembered ophiolites, sedimentary rocks, schists and gneisses in black-shale matrix. High-Pressure eclogite and blueschist in thin zone between low-grade schists and serpentinite zone. Eclogites subducted to ~70 km depth at geothermal gradient of ~6 C°/km. Different P-T paths explained by metamorphism in subduction channel. Low geothermal gradient probably due to high rate of subduction of cold oceanic plate)

Kadarusman, A., H. Permana, H.J. Massonne, H. van Roermund, Munasri & B. Priadi (2010)- Contrasting protoliths of Cretaceous metamorphic rocks from the Luk Ulo accretionary wedge complex of Central Java, Indonesia. Proc. 39th Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-121, 9p.
(Metamorphic rocks in C Java Luk-Ulo Early Cretaceous accretionary complex two types of protoliths, with different P-T evolution: (1) 'oceanic plate protolith' metabasites- metapelites, associated with serpentinite, chert, red limestone, some undergone high P metamorphism (blueschist, eclogite), and (2) 'continental crustal protolith' metapelites, calc-silicate rocks and metagranites (gneiss, quartzite, marble). Metamorphics not simply result of oceanic subduction metamorphism along Indo-Australian oceanic plate (Sundaland craton margin), but early involvement of continental crust during collisional event in Karangsambung area)

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(Jatibarang oil field in volcanics of Eocene- E Oligocene age. Volcanics >1124m thick. N-S trending faults)

Kamaruddin, H., H. Sudarman, Hartono & H. Rionanda (2015)- The Pongkor Au-Ag deposit, West-Java, Indonesia: the resources and reserves up-date. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 77-84.
(Late Pliocene Pongkor epithermal low-sulfidation gold-silver deposit on NE flank of Bayah dome in W Java Discovered in 1988, mining operation started in 1992. Current mineable reserves 4.79 Mt at 14.3 g/t Au and 153 g/t Ag. Total metal content of ore reserves ~68,515 kg gold and 732,884 kg silver)

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(online at: http://jgi.bgl.esdm.go.id/index.php/JGI/article/view/32/24)
(Gravity survey in onshore NW Java Basin, which is mostly covered by young volcanics. Gas fields of Jatirangon and Cicauh areas exist on flank of nose structure of Pangkalan-Bekasi High, while oil/gas field of N Cilamaya is on flank of nose structure of Cilamaya-Karawang High)

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('Study of foraminifera and nannofossils in the Pliocene- Pleistocene of exploration wells To.05 and To. 06, NE Java Basin')

Kapid, R. & S.U. Choiriah (2000)- Batas umur Pliosen/Plistosen berdasarkan analisis nanofosil pada lintasan sungai Bengawan Solo daerah Ngawi Jawa Timur. Jurnal Teknologi Mineral (ITB) 7, 1, p. 29-42.
(Quantitative analysis of calcareous nannofossils from Solo River, Ngawi. Pliocene-Pleistocene boundary defined based on top Discoaster s.l. and first appearance of Gephyrocapsa s.l. Same boundary as Van Gorsel and Troelstra (1981) based on appearance of Gr. truncatulinoides. Comparison between this study and palynology analysis indicates same climatic changes at Plio-Pleistocene boundary. Also shoreline displacement of Java Sea toward E since Late Pliocene)

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('Nannoplankton studies in the Karangsambung and Totogan formations, Lok Ulo area, Kebumen, C. Java'. Nannoplankton age from C Java Karangsambung Fm scaly clays Mid - Late Eocene (NP16-NP21), suggesting compressional deformation in C Java continued into this time. Overlying Totogan Fm clay breccia with various blocks with Late Eocene (NP 18-20) to Oligocene- earliest Miocene (NP23-NN2) nannofossils.

Kapid, R. & G.A. Permana (2003)- Calcareous nannofossils and foraminifera as indices of paleoenvironment (case study on Waturanda, Penosogan and Halang Formations in South-Central Java, Indonesia). In: Proc. 8th Int. Congress Pacific Neogene stratigraphy, Chiang Mai 1993, p. .

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(Late Miocene- Early Pliocene in Kali Cilik section, 12 km N of Bojonegoro, E Java. Ledok Fm roughly NN11-lower NN12/ D. quinqueramus zone, Late Miocene, 5-7 Ma. Underlying Wonocolo Fm is NN10/ Late Miocene, overlying Mundu Fm is upper NN12-NN14/ Early Pliocene)

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(W-most Java and Sunda Strait N-S trending half-grabens, with extension phases in Eo-Oligocene, M-L Miocene and Pliocene)

Keil, K.F.G. (1932)- Verslag over het voorkomen van olieschalie met therapeutisch werkzame bestanddelen (ichthyolt) in het Karangbolong Gebergte, Res. Banjoemas (Kedu). Indonesia Geol. Survey Bandung, Open File Report E35-31, p. 1-10.
('Report on the occurrence of oil shale with therapeutic components (ichthyolt) in the Karangbolong Mountains, Banyumas Residency'. Several localities of (Middle?) Miocene, 'lagoonal' fine tuffaceous rocks impregnated with bitumen, between andesite breccias. Previously exploited by Chinese for medicinal purposes)

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('The geology and geomorphology of Cirebon'. Summary of lecture on geology S of Cirebon. No figures; of limited use)

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(online at: http://pubs.usgs.gov/journal/1976/vol4issue5/report.pdf)
(Pre-Eocene of Lokulo area, C Java, sedimentary rocks (clastics, red radiolarian chert, limestone), partly of E Cretaceous age (with Late Aptian-Albian Orbitolina; R.C. Douglass), overthrust by sheared, chaotic melange. Sediments possibly large blocks in melange. Melange with metamorphics (schist with K-Ar age 117 Ma, phyllite with Rb-Sr age 85 Ma, quartzite and marble) and quartz porphyry with fission-track age of 65 Ma, granite, basalt, gabbro, peridotite, pyroxenite, and serpentinite. Both formations unconformably overlain by Eocene conglomerates (with glaucophane schist). Pre-Eocene of Jiwo Hills mainly unfossiliferous metamorphics (schist, gneiss, amphibolite), also serpentinite and radiolarian chert and reworked Cretaceous Orbitolina limestone in Tertiary conglomerate. W Java Ciletuh area Letu River with hilltops of peridotite/ gabbro, etc.)

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(online at: http://file.scirp.org/pdf/OJG_2017051111291575.pdf)

(Study of reservoir characteristics of M Miocene Ngrayong Sandstone from outcrops N of Blora, Rembang zone. Ngrayong single transgressive-regressive cycle, with foreshore and tide-dominated shoreface facies. Sands f-m grained, subangular- poorly rounded, well-sorted, mainly composed of quartz, also orthoclase, plagioclase and micas. Texturally mature. Porosity 26- 40%, permeability 95- 3385 mD. Eight lithofacies)

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('Stratigraphy of foraminifera of the Rotalia group in the NW Java Basin'. Stratigraphic range of 9 species of Rotalia group in Miocene- Pleistocene of CKR-1 well in Ciputat sub-basin, correlated to nannoplankton and planktonic foraminifera zones. Ammonia umbonata NN4-NN5. Asterorotalia yabei NN5-NN10 (N9-N16). Pseudorotalia catilliformis NN12- NN15 (N17-N20). Pseudorotalia (Asanoina) globosa and P. alveiformis NN12- early NN18 (N18- N21). Pseudorotalia indopacifica NN12- lower NN18 (N17- N21). Pseudorotalia schroeteriana angusta NN19- NN22 (N17- lower N22). Pseudorotalia schroeteriana late NN15- NN19 or younger. Cavarotalia annectens top N19- N23)

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('Determination of depositional environment of the Penosogan Formation based on trace fossil analysis in the Kali Jaya section, Karangsambung, Kebumen, Central Java'. Outer neritic- upper bathyal environment of turbiditic clastic series)

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('Description of two limestone caves near Bojonegoro, Java'. Two large caves in Miocene coral-orbitoid limestone ('zone m3' of Verbeek) in NE Java, 23 km apart. Nglirip multiple cave entrances in teak forest, 2.5 km from Nglirip village. Rengel (also called Gua Ngerong) just N of Bojonegoro-Tuban road, is source of subterranean river. River may be fed by water from sawahs of Grabagan, 7.5 km NW of Rengel cave, or from possible absorbtion point 400m E of Manjung, 19 km to WNW of Rengel)

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('The Tertiary section of the Tji Kao valley in the Krawang area, W Java'. BPM survey of thick (>3800m) exposed Tertiary sand-shale section in Ci Kao valley, NW of Bandung. Relatively constant dip of ~40° to S. Sands contain no quartz, all andesite debris. No details on age, faunas)

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(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1923-1924:18::756&subp=hires)
('The Late Tertiary foraminifera fauna from Kabu (Surabaya residency, Java)'. Listing of 107 species of benthic and planktonic foraminifera from foraminiferal marls collected along road Babad-Ngimbamg Kabu-Djombang, E Java. Probably deeper marine faunas, of Late Miocene- E Pliocene age)

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(Geologic map of SW Java coastal area)

Koesoemadinata, R.P. (1963)- The geology and oil possibilities of northern West Java. Contrib. Dept. Geology Inst. Teknologi Bandung (ITB) 53, p. 1-32.

Koesoemadinata, R.P. & D. Hartono (1981)- Stratigrafi dan sedimentasi daerah Bandung, Proc. 10th Ann. Conv. Indonesian Assoc. Geol. (IAGI), Bandung, p. 318-336.
('Stratigraphy and sedimentation of the Bandung area')

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(In Ngimbang-01 well, NE Java, (Eocene) source rock would have matured 34 My ago using heatflow history approaching reality, whereas by using constant heatflow through time, maturity started at 16 Ma)

Koesoemadinata, R.P. & A. Pulunggono (1975)- Geology of the southern Sunda shelf in reference to the tectonic framework of the Tertiary sedimentary basins of western Indonesia: J. Assoc. Indon. Geol. (IAGI) 2, 2, p. 1-11.

Koesoemadinata, R.P. & S. Siregar (1984)- Reef facies model of the Rajamandala Formation, West Java. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-18.
(Rajamandala Fm limestone outcrops along Bandung- Jakarta road, ~600m thick, dips 40-60° to S, ENE-WSW strike, asymmetric folding-thrusting to N. Graded granular facies represent turbidite toe of slope, foraminiferal algal facies are fore-reef; coral-algal bafflestone- boundstones are reef ramparts (quarried as marble). Possible milliolid limestone facies with isolated patch reefs represents lagoonal back reef)

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('Middle- Late Miocene sequence stratigraphy of the Rembang and Kendeng zones, East Java'. Seven sequences distinguished)

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(Short paper describing outcrops SW of Surabaya of Late Pliocene- Pleistocene turbiditic Pucangan Fm sands, associated with 2.9 Ma SB)

Koesoemo, Y.P., N.T. Yuwono & S. Musliki (1996)- Sequence stratigraphy concept applied to the Middle Miocene to Pliocene outcrops in the Northeast Java Basin, Indonesia. In: C.A. Caughey, D.C. Carter et al. (eds.) Proc. Int. Symp. Sequence Strat. Southeast Asia, Jakarta 1995, Indon. Petroleum Assoc., p. 329-344.
(4 main depositional cycles: (1) Ngimbang, Kujung Fms (Eocene-Late Oligocene); (2) Prupuh, Tuban, Tawun and Ngrayong Fms (Late Oligocene-M Miocene); (3) Bulu? Wonocolo, Lcdok and Mundu Fms (M Miocene-Late Pliocene); and (4) Selorejo and Lidah Fms (Late Pliocene-Pleistocene). Little documentation)

Koichiro, S., Y. Watanabe, A. Imai and Y. Motomura (2005)- Alteration and gold mineralization of the Ciurug vein, Pongkor Au-Ag deposit, Indonesia. In: J. Mao & F.P. Bierlein (eds.) Mineral deposit research: meeting the global challenge 2005, Springer, Berlin, p. 995-998.
(Pongkor gold-silver mine ~80 km SW of Jakarta, in high-grade epithermal vein-system, associated with young basaltic-andesitic volcanics. Four stages of mineral vein formation)

Koolhoven, W.C. Benschop (1929)- Geology of Gandoel Hill near Borobudur (Central Java). Fourth Pacific Science Congress Java 1929, Excursion Guide D1, 6p.
(Gandul hill W of Borobudur and S of Borobudur- Salaman road, on N slope of Menoreh Mts. Possible Eocene grey shales with micaceous sandstones and quartz conglomerates, indurated by E Miocene andesite intrusives (4km wide andesite plug). Overlain by andesitic breccias with intercalations of E-M Miocene limestone with Lepidocyclina, Miogypsina, etc.)

Koolhoven W.C.B. (1932)- Over eenige edelmetaal-voorkomens in de omgeving van Poerwakarta (Res. Krawang, West-Java). De Mijningenieur 13, p. 163-167.
('On some precious metal occurrences in the area of Purwakarta (Krawang, W Java))

Koolhoven, W.C.B. (1933)- Beschouwingen omtrent voorkomen, genese, ouderdom en exploratie van goud en edelmetaalhoudende ertsen op Java. De Mijningenieur 14, 1, p. 6-14 (part 2: vol. 14, 2, p. 26-30, part 3: vol. 14, 3, p. 47-51.
(‘Discussion of distribution, genesis, age and exploration of gold and precious metal ores on Java’ In 3 parts. Many historic records of gold on Java. Timing of ore formation in SW and SE Java in M Miocene, in NW Java in Mio-Pliocene or later. Many of precious metal ore occurrences on Sumatra and Java associated with acid liparite/ dacite deposits, but are systematically slightly younger)

Koolhoven, W.C.B. (1933)- Toelichting bij Blad 14 (Bajah). Geological map of Java, 1:100,000, Dienst Mijnbouw Nederlandsch-Indie, p. 1-66.
(Explanatory notes Geological Map of Java 1:100,000, map sheet 14 (Bayah))

Koolhoven, W.C.B. (1933)- Toelichting bij Blad 10 (Malingping), Geologische kaart van Java 1:100,000. Dienst Mijnbouw in Nederlandsch-Indie, Bandung, p.
(Unpublished report E33-73 at Geological Survey, Bandung)
(Explanatory notes Geological Map of Java 1:100,000, map sheet 10 (Malingping')

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(Critical review of the Java chapter of Badings (1936) paper on Paleogene of Indies Archipelago)

Koomans, C.M. (1938)- A tourmaline-zoisite rock from Loh-Oelo, Java. Leidsche Geol. Mededelingen 10, p. 104-109.
(online at: www.repository.naturalis.nl/document/549446)
(Metamorphic rock collected by Harloff from Luk Ulo area, C Java, with tourmaline, muscovite and zoisite (= medium-grade, derived from Ca-rich metasediment?; JTvG))

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(Sunda margin BSR occurrences restricted to areas of upward migration conduits for methane-laden fluids)

Kopp, H. (2011)- The Java convergent margin: structure, seismogenesis and subduction processes. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of the Australia-Asia collision, Geol. Society, London, Spec. Publ. 355, p. 111-137.
(Java S margin characterized by distinct variation in lower to upper plate material transfer and recurring catastrophic tsunamogenic earthquakes, linked to subduction of oceanic basement relief and resulting in varying degrees of fore-arc deformation. Shallow subduction processes governed by sediment supply in trench and nature of oceanic lithosphere. Shallow upper plate crust-mantle transition along Java margin section. Off C Java, high relief oceanic basement features potentially act as asperities or barriers to seismic rupture)

Kopp, H. (2013)- The control of subduction zone structural complexity and geometry on margin segmentation and seismicity. Tectonophysics 589, p. 1-16.
(General paper on subduction zones and seismic activity, with examples from S Java- SW Sumatra forearc)

Kopp, H., E.R. Flueh, C.J. Petersen, W. Weinrebe, A. Wittwer & Meramex Scientists (2006)- The Java margin revisited: evidence for subduction erosion off Java. Earth Planetary Sci. Letters 242, p. 130-142.
(High-resolution bathymetry suggests tectonic erosion of frontal accretionary prism by underthrusting of oceanic basement relief such as seamounts and ridges)

Kopp, H., D. Hindle, D. Klaeschen, O. Oncken, C. Reichert & D. Scholl (2009)- Anatomy of the western Java plate interface from depth-migrated seismic images. Earth Planetary Sci. Letters 288, p. 399-407.
(W Java forearc segmentation into discrete mechanical domains. W Java margins subducting plate interface shows irregular morphological relief of subducted seamounts and thicker than average patches of underthrust sediment)

Kopp, H., D. Klaeschen, E.R. Flueh, J. Bialas & C. Reichert (2002)- Crustal structure of the Java margin from seismic wide-angle and multichannel reflection data. J. Geophysical Research 107, B2, 2034, 24p.
(Seismic data across subduction zone yield used to build cross section of subduction zone, confirmed by supplementary gravity modeling. Sunda accretionary margin has massive accretionary prism, >110 km wide between trench and forearc basin. It is composed of frontal wedge and fossil part behind present backstop structure which constitutes outer high. Moderate seismic velocities indicate sedimentary composition of outer high. Subducting oceanic slab traced down to almost 30 km underneath accretionary prism. Adjacent forearc domain with pronounced basin, possibly underlain by remnant fragments of oceanic crust)

Kopp, H. & N. Kukowski (2003)- Backstop geometry and accretionary mechanics of the Sunda margin. Tectonics 22, 6, doi:10.1029/2002TC001420, p. 1-16.
(Convergent Sunda margin off Indonesia is accretion-dominated subduction zone. New seismic reflection data off SE Sumatra- SW Java allows mapping of backstop regimes. Initially, outer high evolved as material was pushed against static rigid arc framework backstop underlying forearc basin. Increasing lithification of outer high formed dynamic backstop, which controls accretion today. Out-of-sequence thrust marks transition from recent active frontal accretionary prism to outer high. Existence of static and dynamic backstop controls forearc geometry and segmentation of forearc. Mass balance calculations indicate accretionary processes since late Eocene. Accretion is associated with low values of basal friction)

Koswara, M., J. Negre & L. Hendrata (1990)- The integration of geophysical, geological and petrophysical data: a case study in North West Java, Indonesia. In: 8th Offshore South East Asia Conf., Singapore 1990, SE Asia Petroleum Expl. Soc. (SEAPEX) Proc. 9, p. 100-111.
(Evaluation of two onshore NW Java wells ~60km E of Jakarta, drilled in 1988-1989, in >500m thick Late Miocene/Tf3 Parigi Fm carbonate buildups)

Koulakov, I., M. Bohm, G. Asch, B.G. Luehr, A. Manzanares, K.S. Brotopuspito, P. Fauzi et al. (2007)- P- and S-velocity structure of the crust and the upper mantle beneath Central Java from local tomography inversion. J. Geophysical Research B08310, p. 1-19.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2006JB004712)

(Local source tomographic inversion used to obtain 3-D models of crust and mantle wedge beneath C Java. Clearly image of shape of subduction zone. Slab dip increases gradually from near-horizontal to ~70°. Double seismic zone in slab between 80-150 km depth. Low-velocity anomaly in crust, just N of volcanic arc (Merapi-Lawu anomaly; MLA), with 30-36% lower velocities than fore arc at 10 km. This shows probable high content of fluids and partial melts in crust (more likely deep sedimentary basin ?; JTvG). Inclined low-velocity anomaly in upper mantle links cluster of seismicity at 100 km with MLA and may reflect ascending fluids paths)

Koulakov, I., A. Jakovlev & B.G. Luehr (2009)- Anisotropic structure beneath central Java from local earthquake tomography. Geochem. Geophys. Geosystems 10, 2, Q02011, p. 1-31.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2008GC002109)
(New tomographic data from local seismicity. Crust and upper mantle velocity structure beneath C Java strongly anisotropic. Forearc area between S coast and volcanoes heterogeneous, explained by complex block structure of crust. Beneath volcanoes faster velocities in vertical direction, probably channels, dykes. In crust beneath middle part of C Java, N to Merapi and Lawu large slow anomaly with E-W zone of fast velocity, probably caused by regional extension)

Kraeff, A. (1955)- Preliminary report of the quartz sand deposits in the area West of Tuban. Pusat Sumber Daya Geologi, Bandung, p. *(Unpublished Report?)*
(Report of June-July 1957 survey)

Krausel, R. (1923)- Uber einen fossilen Baumstammm von Bolang (Java). Ein Beitrag zur Kenntnis der fossilen flora Niederlandisch-Indiens. Proc. Kon. Akademie Wetenschappen, Amsterdam, 25, p. 9-16.
(Online at: www.dwc.knaw.nl/DL/publications/PU00014846.pdf)
('On a fossil tree trunk from Bolang, Java; a contribution to the knowledge of the fossil flora of Netherlands Indies'. Bolang locality has silicified tree trunks up to 2m long, 60 cm in diameter. Age of deposits uncertain. Specimen from dipterocarp tree family, deemed to be new species named Dipterocarpoxylon javanense (= Dryobalanoxylon javanense according to Den Berger, 1927; JTvG)

Krausel, R. (1926)- Uber einige Fossile Holzer aus Java. Leidsche Geol. Mededelingen 2, 1, p. 1-8.
(online at: www.repository.naturalis.nl/document/549486)
('On some fossil woods from Java'. Petrified wood from Late Tertiary deposits of Bandung and Batavia belongs to Dipterocarpaceae. Naucleoxylon spectabile of Crie (1888) re-assigned to Dipterocarpoxylon (Den Berger 1927 re-assigned to Dryobalanoxylon; JTvG))

Kristanto, A.S., F.D. Erdanto, M. Fadli, D.W. Widiyanto, Y. Nusantara & T. Diharja (2018)- A venture into Early- Middle Miocene clastics: an exploration opportunity in the western part of the East Java Basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-107-G, 14p.
(E-M Miocene shallow-marine clastic play in Tuban (Burdigalian) and Tawun Fms (Langhian) in Alas Dara Kemuning PSC (NW part of Cepu Block), NE Java basin. Coarsening-upward packages. Oil and gas-condensate in recent N-1 well (inversion structure?) and nearby NU-2 and NU-4 wells. Reservoirs moderate-good porosity, low permeability (carbonate cement), except in Ngrayong sands)

Kundanurdoro, P. (2009)- Studi sikuen stratigrafi endapan berumur Oligosen atas- Miosen bawah (P22- N6) Cekungan Jawa Timur Utara di daerah Tuban, Jawa Timur. J. Ilmiah Magister Teknik Geologi (UPN) 2, 2, 14p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/194/156)
('Study of sequence stratigraphy of U Oligocene- Lower Miocene sediments (P22- N6) in NE Java Basin in Tuban area, East Java'. Six sequences distinguished in open marine marls and limestone (calciturbidites?) in four outcrop sections in Rembang zone E of Tuban. Apparently good planktonic foram age control from Top Gr. opima zone (P21) Gr. kugleri to above top Ga binaiensis (N6). Prupuh Lst = upper N4- lower N5)

Kundu, B. & V.K. Gahalaut (2011)- Slab detachment of subducted Indo-Australian plate beneath Sunda arc, Indonesia. J. Earth System Science 120, 2, p. 193-204.
(online at: www.ias.ac.in/jess/apr2011/193.pdf)

(Patterns of seismicity, seismic tomography and geochemistry of arc volcanoes reflect horizontal slab tear in subducted Indo-Australian slab beneath Java segment of Sunda arc (105°E -116°E) at depth of 300-500 km. Interaction of spreading centre with Sunda arc in E Tertiary probably nucleated small horizontal tear on slab and slab detachment process dominated beneath Java arc after 20 Ma (E Miocene) but before 10 Ma (Late Miocene), well before collision of Australian continental mass)

Kupper, H. (1941)- Bijdrage tot de stratigraphie van het Tagogapoe- Gn. Masigit gebied (Noord Priangan, Java). De Ingenieur in Nederlandsch-Indie (IV), 8, 12, p. 105-109.
('Contribution to the stratigraphy of the Tagogapu- Gn Masigit area (N Priangan, Java). Early paper on Late Oligocene- E Miocene Rajamandala Lst W of Bandung)

Kurniasih, A., I. Adha, H. Nugroho & P. Rachwibowo (2018)- Petrogenesis batuan metamorf di perbukitan Jiwo Barat, Bayat, Klaten, Jawa Tengah. J. Geosains dan Teknologi (UNDIP) 1, 1, p. 1-7.
(online at: https://ejournal2.undip.ac.id/index.php/jgt/article/view/2503/1494)
('Petrogenesis of metamorphic rocks in the West Jiwo Hills, Klaten, Central Java')
(Bayah Complex metamorphic rocks low grade greenschist facies, associated with Eocene Nummulites limestones, serpentinite/ gabbro. Schist-phyllite from protolith of continental origin (siltstone, claystone))

Kurniawan, E., A. Bachtiar, C. Irawan & D. Apriadi (2003)- Facies and reservoir characteristics of shallow marine deposit at Cipamingkis River. Proc. 32nd Annual Conv. IAGI and 28th Ann. Conv. HAGI, Jakarta, 23p.
(Detailed sedimentological study of M Miocene Cibulakan Fm outcrops of glauconitic sands and shales along riverbed of Cipamingkis River, SE of Jakarta. Analog of age-equivalent hydrocarbon zones in offshore NW Java Basins. Twelve facies distinguished, interpreted as lower shoreface to offshore environments. Reservoir geometries mainly sheet-like, some patchy, mounded geometry. In Indonesian)

Kurniawan, R.E.J., Surono, B. Prastistho & S. Umiyatun (2006)- Studi nanofosil pada satuan Batulempung, Formasi Wungkal- Gamping, lintusan Watu Prahu, Bayat, Klaten, Jawa Tengah. Proc. 35th Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, 11p.
(‘Nannofossil study of the claystone unit of Wungkal- Gamping Fm, Bayat, C Java’. Watuprahu section at Jiwo Hills SE of Yogyakarta contains Late Eocene nannofossil zones NP18-NP19 (incl. Cribrocentrum reticulatum, Discoaster saipanensis, D. barbadiensis, etc.)

Kurniawan, R., H.I. Sulaeman, R.A. Kristianto, Z. Fanani & C. Prasetyadi (2012)- Analisa struktur dan stratigrafi terhadap keterdapatan rembesan minyak dan gas berdasarkan data permukaan di Formasi Kerek, Wonosegoro, Boyolali, Jawa Tengah. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-13, 5p.
(On structure, stratigraphy and oil and gas seeps and outcrop data of Kerek Formation in W Kendeng zone, Boyolali area, C Java. Many of seeps tied to faults)

Kurnio, H. (2007)- Review of coastal characteristics of iron sand deposits in Cilacap, Central Java. Bull. Marine Geol. 22, 1, p. 35-49.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/4/4)
(Mineable magnetite-bearing iron sand deposits in Cilacap, S coast of C Java. Coastal area successive sandy beach ridges separated by marshy valleys, typical of prograded coasts. Iron sand deposits derived mainly from denudation of Oligocene- E Miocene 'Old Andesite Fm' in hinterland. Serayu River main agent of sediment supply to coast (see also Sarmili et al. 1999))

Kurnio, H. & T. Naibaho (2011)- Pematang Pantai Purba sebagai perangkap gas biogenik di pesisir Indramayu Provinsi Jawa Barat suatu kajian pendahuluan. J. Sumber Daya Geologi 21, 5, p. 275-281.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/154/151)
('Pematang Pantai Purba as a biogenic gas trap on the coast of Indramayu West Java Province a preliminary study'. Biogenic gas seepage at beach sands along N coast of Java near Indramayu)

Kurnio, H., T. Naibaho & M.A. Mustafa (2010)- Karaktertistik Pantai Indramayu dengan keberadaan gas biogenik. J. Sumber Daya Geologi 20, 1, p. 33-40.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/160/155)
('Characteristic of Indramayu Beach with presence of biogenic gas'. Indamayu coast at N coast of W Java with sandy coastal dunes between mangroves. Biogenic gas from mangroves may accumulate in dune sands)

Kusumahbrata, Y. (1994)- Sedimentology and stratigraphy of the Bayah, Walat and Ciletuh Formations, SW Java basin, Indonesia. Ph.D. Thesis University of Wollongong, NSW, p. 1-253.
(online at: http://ro.uow.edu.au/theses/1404/)
(Bayah, Walat and Ciletuh Fms M Eocene quartz-rich sequences in SWJava Basin, in fore-arc region of present Sunda Arc system. Bayah and Walat Fms fluvial- deltaic, Ciletuh Fm submarine fan. Volcanic rock fragments rare in most samples from Bayah and Walat Fms, but relatively common in some samples from Ciletuh Fm. Paleocurrent data of Bayah and Walat Fm suggest sediment mainly derived from NNE. Ciletuh submarine fan mainly E to W paleocurrent directions? Provenance analysis suggest rel. quartz-rich 'recycled orogen' type)

Kusumahbrata, Y. (1994)- Sedimentary petrographic study of the Bayah, Walat and Ciletuh Formations, Southwest Java: its importance for interpreting provenance and petrographic correlation. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 41-54.
(SW Java Eocene-Oligocene sandstones quartz-rich 'recycled orogen' (sub-) litharenites, dominated by various types of quartz and chert, probably derived from mix of metamorphic, granitic, volcanic (rel. rare) and sedimentary rocks. Provenance area to N or NE. Upward decrease in feldspars and volcanics and increase of polycrystalline quartz in some sequences consistent with uncovering of magmatic arc through erosion (NB: little evidence of arc volcanism in these rocks?)

Kusumastuti, A., A.B. Darmoyo, W. Suwarlan & S.P.C. Sosromihardjo (2000)- The Wunut Field: Pleistocene volcaniclastic gas sands in East Java. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 195-215.
(Lapindo 1994 gas discovery in Pleistocene Pucangan Fm volcanoclastics in E Kendeng zone, S of Surabaya. Reservoirs part of NE prograding volcanoclastic wedge from modern arc. 17 gas sands between 500-3000'; most reserves in deepest zone. Porosity 25-35%. Closure formed in Late Pleistocene (gravity-driven detachment related to uplift in volcanic arc?). Gas charge probably leakage from underlying Miocene Porong Reef)

Kusumayudha, S.B. & H. Murwanto (1994)- Penentuan tektonogenesis komplek bancuh Karangsambung berdasarkan analisis kekar gerus. In: Proc. Seminar Geologi dan Geotektonik Pulau Jawa sejak Akhir Mesozoik hingga Kuarter, Geology Department Gadjah Mada University, Yogyakarta, p. 101-120.
(Structural analysis of C Java Karangsambung-Luk Ulo melange and olistostrome complex)

Lassal, O., P. Huchon & H. Harjono (1989)- Extension crustale dans le detroit de la Sonde (Indonesie). donnees de la sismique reflexion (Campagne Krakatau). Comptes Rendus Academie Sciences, Paris, 309, p. 205-212.
('Crustal extension in Sunda Straits (Indonesia), based on seismic reflection data (Krakatau campaign)')

Laufer, F. & A. Kraeff (1951)- Result of investigation by core drilling of the Pliocene limestone near Gresik. Geol. Survey, Bandung, p.
(Evaluation report of limestone near Surabaya. Concludes surveyed limestone deposit sufficient to supply cement plant with 250 thousand tons per year, for 60 years)

Lehmann, H. (1936)- Morphologische Studien auf Java. Geographische Abhandl., Stuttgart, Ser. 3, 9, p. 1-114.
('Geomorphologic studies on Java'. Mainly on Southern Mountains SE of Yogya and NE Java Kendeng-Rembang zones around Cepu. Introduction of term 'cone-karst')

Lehner, P., H. Doust, G. Bakker, P. Allenbach & J. Guenau (1983)- Active margins 3, Java Trench. In: A.W. Bally (ed.) Seismic expression of structural styles- a picture and work atlas, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 15, 3, p. 45-80.

(Two profiles across Java Trench P7 and N508 show subduction of Late Jurassic- E Cretaceous descending Indian Ocean crustt, overlain by imbricated accretionary wedge of sediment. Uppermost portion of basement, probably pillow basalts, structurally deformed and partly imbricated. Thrusts steepening away from trench. Individual imbrications may bend over toward trench in uppermost part, probably triggering submarine slides and turbidity flows. Sediment fill of fore-arc basins Late Oligocene/E Miocene- Recent. Offshore wells in fore-arc basin Oligocene volcaniclastics below base Miocene unconformity. Reefs on unconformity indicates fore-arc basin subsided to present depth after Oligocene orogenic pulse. Neogene transgressive-regressive cycle with basal marine sandstones and limestones. Doming and fracturing of entire island arc region during Oligocene was followed by Miocene regional subsidence and tectonic quiescence. Compressional folding and basin inversion began in Late Miocene and appears to have been continuous into Recent time)

Lelgemann, H., M. A. Gutscher, J. Bialas, E.R. Flueh, W. Weinrebe & C. Reichert (2000)- Transtensional basins in the western Sunda Strait. Geophysical Research Letters 27, p. 3545-3548.
(On crustal structure and evolution of Sunda Strait, based on 1999 seismic survey. Transtensional character of the area shown by faulted blocks of arc basement and active normal faults on both sides of large graben at W entrance to Sunda Strait. Over 6 km of graben fill sediment, associated with substantial crustal thinning. S part of region 50 km from trench and Moho of downgoing plate is at depth of 28 km)

Lelono, E.B. (2000)- Palynological study of the Eocene Nanggulan Formation, Central Java, Indonesia. Ph.D. Thesis, Royal Holloway, University of London, p. 1-457. *(Unpublished)*
(Nanggulan Fm age diagnostic M-L Eocene fauna and palynomorph assemblages. Many palynomorphs affinity with Indian forms, suggesting plant migration into SE Asia following plate collision in E Tertiary. Distribution of similar M Eocene palynomorph assemblages suggests Sundaland extended from Java to SW Sulawesi. Podocarpidites pollen in upper unit indicates cooling, probably equivalent to M-L Eocene boundary event recorded elsewhere. Nanggulan Fm is transgressive sequence)

Lelono, E.B. (2001)- Sea level changes during Middle-Late Eocene in the Nanggulan Formation, Central Java. Lemigas Scientific Contr. 1, p. 8-15.

Lelono, E.B. (2007)- Gondwanan palynomorphs from the Paleogene sediments of East Java?; the evidence of earlier arrival. Proc. Joint Conv. 32nd HAGI, 36th IAGI, and 29th IATMI, Bali, JCB2007-010, p. 40-47.
(Appearance of Gondwanan/ Australian pollen, including Dacrydium and Casuarina, in Late Eocene-Oligocene of wells in N Madura- E Java Sea is unusual, as these are generally first recorded only in E Miocene of NW Java Sea, S Sumatra, C Java, S Sulawesi and Natuna, after collision of Australian plate and Sundaland in latest Oligocene. This may indicate earlier arrival of Gondwanan/ Australian fragment in E Java area than in other areas of Indonesia)

Lelono, E.B. (2012)- Oligocene palynology of onshore West Java. Lemigas Scientific Contr. Oil Gas 35, 2, p. 67-82.
(online at: www.lemigas.esdm.go.id/)
(Palynological studies of Oligocene in (unnamed) onshore wells in Ciputat sub-basin, W Java. Generally poor pollen assemblages. Unlike equivalent beds offshore NW Java, lacustrine elements rare, suggesting absence of lake deposit. Oligocene defined by presence of Oligocene marker Meyeripollis naharkotensis. Depositional environment transition non-marine- shallow marine. Common brackish pollen of Zonocostites ramonae and Spinizonocolpites echinatus indicate mangrove/ back-mangrove environment)

Lelono, E.B. (2016)- Cooling event in the boundary of Middle/Late Eocene of Java. Proc. 5th Int. Conf. Earth Science & Climate Change, Bangkok, J Earth Sci. Climate Change 7, 5, (Suppl.), p. 63. *(Abstract only)*
(Eocene palynomorphs in Nanggulan Fm, C Java: M Eocene abundant and diverse lowland/rain forest elements suggesting warm- wet conditions with Palmaepollenites kutchensis, Retitricolporites equatorialis, Campnosperma sp., Marginipollis concinus and Dicolpopollis malesianus. Late Eocene marked by regular grass pollen and reduction of rainforest elements, indicating development of savanna in cool-dry climate condition (also recorded in Toraja Fm of S Sulawesi and Late Eocene of Makassar Strait. First occurrence of hinterland pollen Podocarpidites spp. marks M-L Eocene boundary)

Lelono, E.B. & R.J. Morley (2011)- Oligocene climate changes of Java. Lemigas Scientific Contr. 34, 3, p. 169-176.
(online at: www.lemigas.esdm.go.id/id/pdf/scientific_contribution/..)
(E Oligocene characterized by common rain forest elements, suggesting everwet rain forest climate at that time. Early part of Late Oligocene much reduced rain forest elements, and presence of regular Gramineae pollen, suggesting more seasonal climate, whereas for latest Late Oligocene rain forest (and peat swamp) elements return in abundance, suggesting very wet rain forest climate)

LEMIGAS/ BEICIP (1974)- Geology of the Kendeng zone (Central and East Java), p. *(Unpublished)*

LeRoy, L.W. (1941)- Small foraminifera from the Late Tertiary of the Netherlands East Indies. 3. Some small foraminifera from the type locality of the Bantamien substage, Bodjong beds, Bantam Residency, West Java. Quarterly Colorado School Mines 36, 1, p. 107-132.
(47 species of mainly shallow marine smaller foraminifera from Bojong Beds, type locality of Bantamian substage in W Java, here considered to be of Late Pliocene, possibly Pleistocene age (Bantamian defined as marine clastics unconformably overlain by thick Pleistocene volcanics by Oostingh (1938) and viewed as E Pleistocene; HvG))

LeRoy, L.W. (1944)- Miocene foraminifera from Sumatra and Java, Netherlands East Indies. 2. Small foraminifera from the Miocene of West Java, Netherlands East Indies. Quarterly Colorado School Mines 39, 3, p. 70-113.
(Descriptions of 107 species of small benthic foraminifera from Miocene marls at Tjijarian bridge, E of Pelabuhan Ratu, W Java)

Li, X.Y., Z.W. Zhang, C.Q. Wu, J.H. Xu & Z.R. Jin (2019)- Geology and geochemistry of Gunung Subang gold deposit, Tanggeung, Cianjur, West Java, Indonesia. Ore Geology Reviews 113, 103060, p.
(Gunung Subang gold deposit near Cianjur, W Java, associated with basalt-andesite rocks of Miocene Koleberes and Bentang Fm. Zircons from volcanic rocks mean U-Pb age of 17.0 ± 0.4 Ma, with some inherited zircons from Precambrian (887-2379 Ma). Ore-forming material related to Miocene- Pliocene volcanic rocks. Gold mainlyt as Au-Ag-telluride minerals. Eepithermal gold deposit related toM Miocene magmatism)

Lokier, S.W. (1999)- Volcaniclastic controls on carbonate sedimentation within the Gunung Sewu area, south area, South Central Java, Indonesia. Proc. 1st FOSI-IAGI Reg. Seminar, Tectonics and sedimentation of Indonesia and 50th Anniversary Memorial of R.W. van Bemmelenȏs Book- The Geology of Indonesia, p. 50 *(Abstract only)*

Lokier, S.W. (1999)- The development of the Miocene Wonosari Formation, South Central Java. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 217-222.
(M Miocene Wonosari/Punung Fm of south C Java active volcanic setting with carbonate development. S of E Miocene island-arc a moderate to high-energy carbonate platform developed. Calcareous algae and larger foraminifera packstone dominate; corals and other biota as tertiary elements. N of carbonate platform deep (~200-400m) fore-arc basin, with volcaniclastic sedimentation from arc in N and carbonates from shallow platform to S. Some interdigitation of sediment types. Periodic inputs of marine volcaniclastics in carbonate environment. Sustained periods of volcaniclastic sedimentation resulted in decrease in species but increased numbers of individuals, attributed to increase in nutrients, lack of competitors and changes in substrate)

Lokier, S.W. (2000)- The Miocene Wonosari Formation, Java, Indonesia: volcaniclastic influences on carbonate platform development. Ph.D. Thesis, University of London, p. 1-648. *(Unpublished)*
(Regional study of Middle Miocene Wonosari Limestone in Southern Mountains of C and E Java)

Longley, I., C. Kenyon, A. Livsey & J. Goodall (2016)- A methodology for future exploration in mature Indonesian basins- why play mapping integrated with well failure analysis matters- an example from the East

Java Basin, Indonesia. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 25-TS-16, p. 1-10.
(E Java Basin in back-arc geological setting onshore and offshore E Java. 380 exploration wells drilled, with ~90 discoveries. Seven main charge cells identified: Muriah, Cepu, Central Deep, N Madura, S Madura, Kangean and Southern Basin. Etc.)

Lorie, J. (1879)- Bijdrage tot de kennis der Javaansche eruptiefgesteenten. Doct. Thesis Rijksuniversiteit Utrecht, Wyt & Zonen, Rotterdam, p. 1-269.
(online at: http://hdl.handle.net/1874/242450)
('Contribution to the knowledge of Javanese volcanic rocks'. First mineralogic-petrographic descriptions of volcanic rocks from 31 volcanoes on Java, collected by Junghuhn and now in Leiden. Mainly hornblende andesites, augite andesites and basalt lavas. No figures (see also Behrens 1880))

Loth, J.E. & J. Zwierzycki (1926)- De kristallijne schisten op Java ouder dan Krijt. De Mijningenieur 7, 2, p. 22-25.
('The crystalline schists on Java are older than Cretaceous'. Mid-Cretaceous limestones with Orbitolina concavata near village of Karang Tengah in Loh Ulo river area, C Java, are not intercalated with serpentinite and chlorite schist as argued by Verbeek & Fennema (1896, p. 352), but are in interbedded marl-limestone series ~20m above 'Cenomanian transgressive conglomerate ' with common quartz pebbles on top of chlorite schist. Beds consistently and steeply S-dipping, probably isoclinally folded. Schists at higher levels and thrusted over Cretaceous sediments (from S to N). (Cretaceous limestones quarried for limestone kilns; not much left?; JTvG))

Lowell, J.D. (1980)- Wrench vs. compressional structures with application to Southeast Asia. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 5, Singapore, p. 63-70.
(Example from NE Java basin oil field structures: look compressional, not wrench-controlled. C. Sumatra Pungut and Tandun oil fields do have indications of wrenching)

Lubis, H., S. Prihatmoko & Y. Herryurianto (2012)- Geology and exploration for low sulfidation epithermal gold-silver mineralization in Kerta, Banten. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 39-72.

Ludwig, O. (1933)- Geologische kaart van Java 1:100,000. Toelichting bij blad 30 (Poerwakarta). Dienst Mijnbouw Nederlandsch-Indie, Batavia. p. 1-45.
('Geological map of Java 1:100,000- Explanatory notes of Sheet 30, Purwakarta')

Ludwig, O. (1934)- Geological map of Java, scale 1:100,000. Explanatory note to Sheet 26 (Sagaranten). Geol. Survey Indonesia.
(Unpublished Sagaranten sheet of 1:100,000 geologic map of Java)

Luehr, B.G., I. Koulakov, W. Rabbel, J. Zschau, A. Ratdomopurbo, K.S. Brotopuspito, P. Fauzi & D.P. Sahara (2013)- Fluid ascent and magma storage beneath Gunung Merapi revealed by multi-scale seismic imaging. J. Volcanology Geothermal Res. 261, p. 7-19.
(3D seismic velocity structure of Merapi volcano provided image of lithosphere and subduction zone beneath C Java. Dip of subducting slab steepens from nearly horizontal (0-150 km from trench), through 45° (150- 250 km), to 70° (>250 km). Active volcanoes of Merapi, Sumbing, and Lawu are located at edge of large low velocity body that extends from upper crust to upper mantle beneath C Java. Detected strong anomaly beneath C Java is unique in size and amplitude. This segment of arc has high magma flux)

Lunt, P. (1991)- The Neogene geological history of East Java, some unusual aspects of stratigraphy. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 26-36.
(NE Java. New interpretation of early M Miocene (N11-N12) Ngrayong Fm quartz sandstones: deep marine deposit, not fluvio-deltaic, based mainly on presence of deep-water foram Cyclammina (but these are also common in age-equivalent beds of Mahakam Delta and probably reworked from uplifted Paleogene of E

Kalimantan; JTvG). Erosional unconformity identified at end-Miocene (Tuban Uplift; base of Ledok Fm and age-equivalent Karren Fm limestones)

Lunt, P. (2000)- A draft review of the Lutut Beds in the type area. AAPG Bali 2000 Int. Conv./ IPA fieldtrip-appendix, 13p.
(Lutut sands in thrust belt SW of Semarang are E Miocene (N6-N7, NN4) immature erosional products of metamorphic basement, radiolarian chert and Eo-Oligocene sediments, apparent product of mid-E Miocene orogenic event. Very different from M Miocene Ngrayong Fm mature quartz sands)

Lunt, P. (2013)- The sedimentary geology of Java. Indon. Petroleum Assoc. (IPA), Jakarta, Spec. Publ., p. 1-340.
(Comprehensive book on Java sedimentary geology Major tectonic events affecting sedimentation: (1) Late Mesozoic accretion of Paternoster microplate. Rembang Line is N edge of accreted 'Woyla Terranes'; (2) Mid-Eocene onset of sedimentation, but no clear backarc basins; (3) Early Oligocene half-graben extension; (4) Late Oligocene- E Miocene' Old Andesite' volcanic arc in S Java, simultaneous with widespread carbonates in N Java; 20/21 Ma marks end of 'Old Andesite' volcanism; (5) 20-12 Ma tectonically quiescent; possible effect of 18 Ma S Central Kalimantan uplift; 15 Ma is max. flood over Sundaland; (6) M Miocene/12 Ma fault inversion/ widespread subsidence phase; (7) Late Miocene/ 8 Ma: inversion of 'Woyla terranes'; main phase Rembang-Madura-Kangean zone uplift; (8) mid-Pliocene-Pleistocene thrusting episodes)

Lunt, P. & G. Burgon (2003)- State of the art or state of decay?- the role of classic geological skills in 21st century exploration. Proc. 2003 SE Asia Petrol. Expl. Soc. (SEAPEX) Exploration Conf., Singapore, 11p.
(Examples of application of classic geology in hydrocarbon exploration on Java. Early Miocene sediments show major tectonic event during quiet sag phase of previous workers. Sag phase Oligo-Miocene carbonates show complex distribution, suggesting local tectonic controls more important than assumed eustatic trends)

Lunt, P., G. Burgon & A. Baky (2009)- The Pemali Formation of Central Java and equivalents: indicators of sedimentation on an active plate margin. J. Asian Earth Sci. 34, p. 100-113.
(C Java clastics sections near Bumiayu with record of intra-Late Miocene/ ~7 Ma tectonic event)

Lunt, P., R. Netherwood & O.F. Huffman (1998)- IPA Field Trip to Central Java, 1998, Indon. Petroleum Assoc. (IPA) Fieldtrip Guidebook, p. 1-63.
(Details on Karangsambung, Baturagung/ Jiwo Hills and Sangiran Dome outcrops)

Lunt, P., D.M. Schiller & T. Kalan (1996)- Indonesian Petroleum Association East Java geological field trip guide book. IPA Field Trip Guidebook, p. 1-57.
(S. Mountains, Kendeng zone and Rembang zone outcrops descriptions)

Lunt, P. & H. Sugiatno (2007)- The Bagelen Beds, Central Java. J. Sumber Daya Geologi 17, 5 (161), p. 336-356.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/312/272)
(Bagelen Beds of C Java ~10 km N of Lok Ulo deep marine clay olistostrome deposit of earliest Oligocene (~32.5 Ma), possibly latest Eocene age. No indication of being tectonized. Probably with blocks of M Eocene (Ta) nummulitid limestone, similar to Lok Ulo. Mix of basement and Eocene boulders in Sangiran Dome possibly from underlying similar E Oligocene olistostrome)

Lunt, P. & H. Sugiatno (2003)- A review of the Eocene and Oligocene in the Nanggulan area, South Central Java, 34p. *(Unpublished)*
(Middle- Late Eocene clastics overlain by 'middle' Oligocene deep marine Tegalsari marls, overlain by Late Oligocene-Early Miocene 'Old Andesites')

Lunt, P. & H. Sugiatno (2007)- A report on fieldwork in the Rajamandala- Citarum area, West Java. Geol. Res. Dev. Centre (GRDC), Bandung, 27p. *(Unpublished Manuscript)*
(Rajamandala Limestone Late Oligocene age. Underlying quartz-rich clastics are Early Oligocene in age)

Lunt, P., H. Sugiatno & T. Allan (2000)- A review of the Lutut Member in the type area, North Central Java. *(Unpublished report)*

Maha, M., B. Rahmad & H. Widiyanto (2007)- Facies dan petrografi batubara Formasi Nanggulan daerah Kalisonggo, Kecamatan Girimulyo, Kabupaten Kulon Progo, Daerah Istimewa Yogyakarta. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 593-616.
('Facies and petrography of Nanggulan formation coal of the Kalisonggo area, Girimulyo Subdistrict, Kulon Progo Regency, Special Region of Yogyakarta'. Coal bed 0.53m thick in M-L Eocene Nanggulan FmW of Yogya. Vitrinite 57-69%, lignite grade (vitrinite Rv max 0.34-0.44%))

Maha, M. & S. Sanyoto (2000)- Biodatum dan zonasi foraminifera bentik kecil serta hubungannya dengan foraminifera planktonik Sumur-95 daerah Cepu, Kab. Blora, Jawa Tengah. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 247-258.
('Datum levels and zonation of smaller benthic forams and their relations with planktonic foraminifera in well 95, Cepu area, C, Java'. Shallow well W of Cepu, TD 340m, penetrating Late Pliocene- Pleistocene Mundu, Selorejo and Lidah Fms. Calcarina calcar restricted to Pleistocene (planktonic foram zones N22-N23), Pseudorotalia indopacifica basal occurrence near base zone N20)

Mahfi, A. (1984)- A paleomagnetic study of Miocene and Eocene rocks from Central Java, Indonesia. M.A. Thesis, University of California, Santa Barbara, p. 1-186. *(Unpublished)*
(Paleomagnetic results from Bayat, Kalissongo and Karang Sambung show mixture of rotated and unrotated sites; Fuller 1999. Paleolatitude determinations: Bayat Eocene limestone -22.9 ± 9 °S, Yogya Oligo-Miocene basalt -11.6 ± 4.3°S, Kulunprogo Oligo-Miocene andesite -8 ± 2 °S))

Malod, J.A., K. Karta, M.O. Beslier & M.T. Zen (1995)- From normal to oblique subduction: tectonic relationships between Java and Sumatra. J. Southeast Asian Earth Sci. 12, 1-2, p. 85-93.
(Oblique subduction beneath Sumatra induces strike-slip faults in Sumatra. Subduction perpendicular to trench SW of Java. Cimandiri FZ of W Java continues out to sea. Sinistral activity on land may be conjugate of dextral strike-slip along NW-SE prolongation of Sumatra strike-slip fault in forearc. Structural transition is S of Pelabuhan Ratu Gulf. To W, oblique subduction induces partitioning into convergent motion and NW strike-slip motion. To E subduction is normal and typical forearc basin develops)

Manaf, N.A. & Yarmanto (2016)- Integrating data sets and applying new approaches is the key to the exploration success in the North West Java area. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 36-TS-16, p. 1-17.
(Review of hydrocarbon plays in onshore and offshore NW Java sub-basins and 125 years of exploration history)

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(online at: www.unsjournals.com/D/D0501/D0501pdf/D050106.pdf)
(Giant silicified dipterocarp tree trunk 28m long from Lower Pliocene near Leuwidalang, Banten, W Java, described as Dryobalanoxylon lunaris)

Mandang, Y.I. & D. Martono (1996)- Keanekaragaman fosil kayu di bagian barat pulau Jawa. Bul. Penelitian Hasil Hutan 14, 5, p. 192-203.
('Fossil wood diversity in the western part of Java Island'. Of 199 wood fossils, 81% belong to family Dipterocarpaceae (Dryobalanops, Alstonia, Calophyllum, Dillenia, etc.))

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(online at: http://onlinelibrary.wiley.com/doi/10.1029/2007EO180009/epdf)

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(‘Report on the occurrence of asphalt and phosphate deposits at the base of the Kromong Mountains, Palimanan District, Residency Cirebon’. Four small asphalt deposits/ oil seeps in Miocene limestone ~20 km W of Cirebon, just SW of Palimanan village, known since Verbeek & Fennema 1896. Associated with hot springs and phosphate around Kromong/ Gunung Gundul andesite-cored anticline. With 1:20,000 scale map. Stratigraphy description see also Harsonon Pringgoprawiro et al (1977))

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('Report on an investigation of the private petroleum exploitation in the residency Cirebon'. Report on 1875 government geologist visit to first (minor) Java oil production W of Cirebon. Minor oil encountered here by Reerink in shallow 'Tjibodas' wells near Madja oil seep)

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(online at: http://ro.uow.edu.au/theses/2647/)
(Gunung Limbung W of Bogor base metal mineralization one of several such deposits in W Java. Area with argillite, tuffaceous sandstone and volcanic breccia-lava, intruded by diorite formed in volcanic arc. Four types of sulphide ores)

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(Epithermal gold mineralization in SW Java hosted by Miocene and Pliocene intrusions and volcanics. Most ore deposits of Bayah Dome related to extensive Pliocene magmatism dated as 5.7- 2.0 Ma. Mineral deposits localised by structural controls, in particular a strike-slip fault reactivated as normal fault. Lead isotopes suggest existence of underlying Precambrian crust in W Java)

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(Study of foraminifera in water well drilled to 255m in 1950 at S side of Jakarta. Mainly barren, non-marine section with 3-4 thin intervals with shallow marine microfauna (Asterorotalia, Pseudorotalia, Elphidium, etc.). Uppermost samples rich in reworked planktonic forams. Age of section latest Pliocene- Pleistocene)

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(Analysis of seismicity and active faulting on Java, particularly Cimandiri and Pasuruan Faults and volcano morphology)

Marliyani, G.I., J.R. Arrowsmith & K.X. Whipple (2016)- Characterization of slow slip rate faults in humid areas: Cimandiri fault zone, Indonesia. J. Geophysical Research, Earth Surface 121, 12, p. 2287-2308.

(Active Cimandiri fault zone in W Java six segments with predominant reverse motion. Segmentation of fault, led to smaller maximum earthquakes)

Marliyani, G.I., J.R. Arrowsmith & H. Helmi (2019)- Evidence for multiple ground rupturing earthquakes in the past 4,000 years along the Pasuruan Fault, East Java, Indonesia: documentation of active normal faulting in the Javan backarc. Tectonics 38, 4, p. 1489-1506.
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(online at: https://link.springer.com/content/pdf/10.1186%2Fs40562-017-0080-9.pdf)
(Ambient Noise Tomography used to image upper crustal structure under E Java- Bali. Main is thickness of sediment cover. Kendeng basin dominated by very low velocities)

Martha, A.A., S. Widiyantoro, P. Cummins, E. Saygin & Masturyono (2016)- Investigation of upper crustal structure beneath eastern Java. Proc. 5th Int. Symposium on Earth hazard and disaster mitigation, AIP Conf. 1730, Bandung, 020011, p. 1-7.
(Ambient Noise Tomography method used to detect structure under E Java. N Rembang zone and most of S Mountains zone areas of high gravity anomaly and high velocity zones. Kendeng zone and most of basin in Rembang zone associated with low velocity zones)

Martin, K. (1879-1880)- Die Tertiarschichten auf Java, nach den Entdeckungen von Fr. Junghuhn, Palaeontologischer Teil (1879-1880). E.J. Brill, Leiden, p. 3-164.
('The Tertiary beds of Java, after the discoveries of Fr. Junghuhn; paleontological part'. First of many Martin publications on Tertiary fossils from Java. With descriptions of many new species, incl. Cycloclypeus annulatus from Citarum valley, W Java. Chapter on corals p. 132-146, mainly from Miocene of Nyalindung area, W Java)

Martin, K. (1880)- Revision of the fossil Echini from the Tertiary strata of Java. Notes from the Leyden Museum 2, p. 73-84.
(online at: www.repository.naturalis.nl/document/551344)
(Brief revisions of 19 species of echinoids originally described by Herklots (1854). Most of these are not new species as proposed by Herklots and many of them are still living today. No figures or locality information)

Martin, K. (1880)- Untersuchungen uber die Organisation von *Cycloclypeus* Carp. und *Orbitoides* D'Orb.. Niederlandisches Archiv fur Zoologie 5, 2, p. 185-206.
('Investigations on the organization of Cycloclypeus and Orbitoides'. Early descriptions of Miocene Java larger foraminifera Cycloclypeus (C. annulatus, C. communis, C. neglectus) and Lepidocyclina (here still called Orbitoides; including new species radiata, carteri, gigantea))

Martin, K. (1881)- Tertiaerversteinerungen vom ostlichen Java, nach Sammlungen Junghuhn's und der Indischen Bergbeambten. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 1, p. 105-130.
(online at: www.repository.naturalis.nl/document/552410)
('Tertiary fossils from East Java, from collections of Junghuhn and Indies mining engineers'. Incl. descriptions of Eocene larger foraminifera Nummulites djokjokartae n.sp. and Discocyclina (Orbitoides dispansa) from Yogyakarta area, echinoids (Pleurechinus javanus, etc.), bivalves, gastropods, etc. With 4 plates)

Martin, K. (1882)- Tertiaerversteinerungen vom ostlichen Java, nach Sammlungen Junghuhn's und der Indischen Bergbeambten. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1882, Wetenschappelijk Gedeelte p. 253-280.
('Tertiary fossils from East Java, etc', Same as Martin (1881) paper above)

Martin, K. (1883)- Nachtrage zu den 'Tertiarschichten auf Java', 1er Nachtrag: Mollusken, nach Sammlungen der Indischen Bergbeambten, Junghuhn's und Reinwardt's. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 1, E.J. Brill, p. 194-270.
(also in Jaarboek Mijnwezen Nederlandsch Oost-Indie 1883, Wetenschappelijk Gedeelte p. 285-358)
(Continuation of 'The Tertiary beds of Java', part 1, molluscs. Descriptions of 71 species)

Martin, K. (1883-1887)- Palaontologische Ergebnisse von Tiefbohrungen auf Java, nebst allgemeineren Studien uber das Tertiar von Java, Timor und einiger anderer Inseln. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 3, p. 1-380.
(online at: www.repository.naturalis.nl/document/552425)
('Paleontological results of deep wells on Java, and more general studies on the Tertiary of Java, Timor and some other islands'. Descriptions of Tertiary fossils from outcrops and from water wells on Java (Grissee (=Gresik?)- NE Java, Batavia, Ngembak- W of Purwodadi), mainly collected by Van Dijk of Geological Survey. Mainly on gastropods and bivalves, also fish teeth, crabs. With 15 plates)

Martin, K. (1883)- Palaontologische Ergebnisse von Tiefbohrungen auf Java, nebst allgemeineren Studien uber das Tertiar von Java, Timor und einiger anderer Inseln- 1. Jaarboek Mijnwezen Nederlandsch Oost-Indie 12 (1883), Wetenschappelijk Gedeelte, p. 371-412.
('Paleontological results of deep wells on Java, and more general studies on the Tertiary of Java, Timor and some other islands'. Part 1 of Martin (1883) paper above)

Martin, K. (1884)- Palaontologische Ergebnisse von Tiefbohrungen auf Java, nebst allgemeineren Studien uber das Tertiar von Java, Timor und einiger anderer Inseln- 2. Jaarboek Mijnwezen Nederlandsch Oost-Indie 13 (1884), Wetenschappelijk Gedeelte, p. 77-216.
('Paleontological results of deep wells on Java, and more general studies on the Tertiary of Java, Timor and some other islands'. Part 2 of Martin (1883) paper above)

Martin, K. (1885)- Palaontologische Ergebnisse von Tiefbohrungen auf Java, nebst allgemeineren Studien uber das Tertiar von Java, Timor und einiger anderer Inseln-3. Jaarboek Mijnwezen Nederlandsch Oost-Indie (1885), Wetenschappelijk Gedeelte, p. 5-108.
('Paleontological results of deep wells on Java, and more general studies on the Tertiary of Java, Timor and some other islands'. Part 3 of Martin (1883) paper above)

Martin, K. (1887)- Palaontologische Ergebnisse von Tiefbohrungen auf Java, nebst allgemeineren Studien uber das Tertiar von Java, Timor und einiger anderer Inseln-4. Jaarboek Mijnwezen Nederlandsch Oost-Indie (1887), Wetenschappelijk Gedeelte 2, p. 253-342.
('Paleontological results of deep wells on Java, and more general studies on the Tertiary of Java, Timor and some other islands'. Part 4 of Martin (1883) paper above)

Martin, K. (1891)- Die Fossilien von Java, auf Grund einer Sammlung von R.D.M. Verbeek und von anderen, Band I, Gasteropoda. Sammlungen Geol. Reichs-Museums Leiden, N.F., 1, 1-2, p. 1-132.
(online at: www.repository.naturalis.nl/document/552454)
(Reprinted in Jaarboek Mijnwezen Nederlandsch Oost-Indie 1896, Wetenschappelijk Gedeelte, p. 43-328)
('The fossils of Java, based on a collection of R.D.M. Verbeek'. First of series of papers by Martin and collaborators on fossils of Java, published between 1891-1922. Volume 1 mainly extensive taxonomic descriptions of Tertiary gastropods. With 20 plates)

Martin, K. (1891)- Die Fossilien von Java, auf Grund einer Sammlung von R.D.M. Verbeek, Mollusken Heft 5-7. Sammlungen Geol. Reichs-Museums Leiden, N.F., 1, 1-2, p. 133-332
(online at:www.repository.naturalis.nl/document/552458)
(Second continuation of Martin (1891) monograph on Tertiary gastropods of Java. Includes 19 species of Turritella, also Purpura, Triton, Acanthina, Ranella, Cassis, Strombus, Potamides, etc.. With 45 plates)

Martin, K. (1891)- Die Foraminiferen fuhrenden Gesteine, Studien uber *Cycloclypeus* und *Orbitoides*. Appendix in Die Fossilien von Java, auf Grund einer Sammlung von R.D.M. Verbeek, Sammlungen Geol. Reichs-Museums Leiden, N.F., 1, p. 1-12.
(online at: www.repository.naturalis.nl/document/552466)
('The foraminifera-bearing rocks- Studies on Cycloclypeus and Orbitoides'. Early summary paper on W, C and E Java larger foraminifera (mainly species of Cycloclypeus))

Martin, K. (1895)- Neues uber das Tertiar von Java und die mesozoischen Schichten von West-Borneo. Sammlungen Geol. Reichs-Museums Leiden, E.J. Brill, ser. 1, 5, 2, p. 23-51.
(online at: www.repository.naturalis.nl/document/552400)
('News on the Tertiary of Java and the Mesozoic beds of West Borneo'. Mainly listings of Tertiary gastropods from various localities of Java. No maps, no illustrations)

Martin, K. (1900)- Die Eintheilung der Versteinerungs-fuhrenden Sedimente von Java. Jaarboek Mijnwezen Nederlandsch Oost-Indie (1900), 108p.
('The classification of the fossiliferous rocks of Java' Overview of fossils and discussion of probable ages of formations from various parts of Java and Madura. Very 'wordy'; no maps, tables or other illustrations)

Martin, K. (1900)- Die Eintheilung der Versteinerungs-fuhrenden Sedimente von Java. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 6, p. 135-244.
(online at: www.repository.naturalis.nl/document/552390)
('The classification of the fossiliferous rocks of Java' Same paper as Martin (1900))

Martin, K. (1907)- Eine Altmiocane Gastropodenfauna von Rembang, nebst Bemerkungen uber den stratigraphischen Wert der Nummuliden. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 8, p. 145-152.
(online at: www.repository.naturalis.nl/document/552421)
('An Early Miocene gastropod fauna from Rembang, with comments on stratigraphic value of nummulitids'. Listing of 40 gastropod species from Sedan and Gunung Butak, Rembang District, NE Java, only 6 species still known from recent faunas. Fauna held for Early Miocene (but associated with Cycloclypeus annulatus, so more likely Middle Miocene age, probably Bulu Limestone; JTvG). No figures)

Martin, K. (1907)- Systematische Ubersicht uber die Gastropoden aus Tertiaren und jungeren Ablagerungen von Java. Neues Jahrbuch Mineral. Geol. Palaontologie 1907, 2, p. 151-162.
('Systematic overview of Tertiary and younger gastropods from Java'. Listing of 648 gastropod species names. No illustrations, ranges, descriptions, etc.)

Martin, K. (1908)- Das Alter der Schichten von Sonde und Trinil auf Java. Verslagen Kon. Nederl. Akademie Wetenschappen Amsterdam, Afd. Wis. Natuurkunde, 17. p. 7-16.
('The age of the Sonde and Trinil beds on Java')

Martin, K. (1909)- Die Fossilien von Java, auf Grund einer Sammlung von R.D.M. Verbeek, Lamellibranchiata. Sammlungen Geol. Reichs-Museums Leiden, N.F., 1, 2, p. 333-386.
(online at: www.repository.naturalis.nl/document/552467)
(Second continuation of Martin (1891) monograph on Java Tertiary fossils:. Tertiary bivalves, incl. Ostrea, Placuna, Pecten, Arca, etc. With 12 plates)

Martin, K. (1911)- Enkele beschouwingen over de geologie van Java. Verslagen Vergadering Kon. Nederl. Akademie Wetenschappen, Amsterdam, Afd. Wis. Natuurkunde, p. 19-23.
('Some considerations on the geology of Java'. Observations from Martin's 1910 travels in Priangan and Yogyakarta area)

Martin, K. (1911)- Vorlaufiger Bericht uber geologische Forschungen auf Java- 1 Teil. Sammlungen Geol. Reichs-Museums Leiden, E.J. Brill, Ser. 1, 9, 1, p. 1-76.
(online at: www.repository.naturalis.nl/document/552384)

('Preliminary report on geological investigations on Java- part 1'. Includes chapters on geology and fossils of Preanger (1: Nyalindung (p. 5-24), 2. Kalksteine von Radjamandala: 'Old Miocene' Rajamandala limestone with Alveolina, Heterostegina many Lepidocyclina (p. 24-29), and Yogyakarta areas (p. 56-76))

Martin, K. (1912)- Vorlaufiger Bericht uber geologische Forschungen auf Java- 2 Teil. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 9, 1, p. 108-200.
(online at: www.repository.naturalis.nl/document/552391)
('Preliminary report on geological investigations on Java- part 2'. Includes chapters on (1) folded Eocene beds of Kali Puru nearNanggulan, with Nummulites, Orthophragmina (= Discocyclina), 108 species of gastropods and molluscs and overlain by andesites;(2) two 'Gunung Gamping' limestone hills, one near Nanggulan with E Miocene Miogypsina and Lepidocyclina and one just W of Yogyakarta, of possible Miocene age, with some gastropods of Eocene affinity;(3) localities in Rembang zone Ngandang- Ngampel, with widespread M Miocene Cycloclypeus annulatus limestones and 72 species of gastropods; (4) Pliocene beds of Candi near Semarang)

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('Further considerations on the geology of Java' Mainly on Eocene- Miocene rocks and fossils around Yogyakarta. No illustrations))

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(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1949:42538)
('The age of the Eocene limestone of Gunung Gamping W of Yogyakarta, Java'. Limestone of Gamping outcrop W of Yogya is Upper, rather than Lower Eocene and represents reef deposit formed at same time as Nanggulan limestones farther W (already identified as Late Eocene Pellatispira limestone by Gerth 1930; JTvG))

Momma, H., K. Ohtsuka, T. Tanaka & T. Ohara (1987)- Deep-towed sonar and camera observations at the Sunda forearc region, south of west Java. CCOP Techn. Bull. 19, p. 89-105.

Morgenroth, P., A.T. Rahardjo & K. Anwar Maruyani (2008)- Dinoflagellate cysts from Miocene outcrops on Java island, Indonesia. Palaeontographica, B 278, 4-6, p. 111-137.
(Dinoflagellate cysts in three Miocene surface sections in West and C Java: Cipimangkis River near Jatiluhur (Late Miocene Cisubuh Fm), Kali Jaya NNE of Kebumen (around E-M Miocene boundary) and Cijarian River along Bogor- Pelabuhan Ratu road (M Miocene Cimandiri Fm). Most samples common dinoflagellate cysts. 29 species, 15 new, from genera Achomosphaera, Dilabidinium, Edwardsiella, Hystrichosphaeropsis, Javadinium, Lejeunecysta, Operculodinium, Spiniferites, etc.)

Morgenroth, P., A.T. Rahardjo & K. Anwar Maruyani (2011)- Dinoflagellate cysts from two Oligocene surface sections on Java island, Indonesia. Palaeontographica, B 284, 4-6, p. 125-157.
(Two Oligocene surface sections studied in W Java, Batuasih Fm near Cibadak and equivalent section near Padalarang, both marine claystones overlain by Rajamandala Fm limestones. Foraminifera and nannoplankton date Batuasih section around Early-Late Oligocene boundary. Dinoflagellate cysts in phosphatic nodules heavily affected by thermal metamorphism. Padalarang section planktonic foraminifera indicative of zones P20-P21, also around Early- Late Oligocene boundary. Dinoflagellate cysts may indicate slightly younger age than Batuasih. Twenty-six dinoflagellate species found, including three new species)

Morina, H., I. Syafri & L. Jurnaliah (2014)- Lingkungan pengendapan satuan batulempung sisipan batupasir pada Formasi Kerek daerah Juwangi dan sekitarnya, berdasarkan karakteristik litologi, analisis struktur sedimen, dan kandungan fosil bentonik. Bull. Scientific Contr. (UNPAD) 12, 3, p. 147-154.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8375/3891)
('Depositional environment of the sandstones-claystones of the Kerek Formation in the Juwangi area and surroundings, based on lithology, structure analysis of sediment and benthic fossil content'. Foraminifera interpreted as outer neritic)

Morley, R.J., E.B. Lelono, L. Nugrahaningsih & Nur Hasjim (2000)- LEMIGAS Tertiary palynology project: aims, progress and preliminary results from the Middle Eocene to Pliocene of Sumatra and Java. Geol. Res. Dev. Centre, Paleontol. Ser. 10, Bandung, p. 27-47.
(Summary of palynology work in Java (Eocene of Nanggulan and Bayah), Sumatra (E Oligocene Pematang Fm, Late Oligocene Talang Akar Fm, E Miocene Gumai Fm, M Miocene Air Benakat Fm)

Moscariello, A., D. do Couto, F. Mondino, J. Booth, M. Lupi & A. Mazzini (2018)- Genesis and evolution of the Watukosek fault system in the Lusi area (East Java). Marine Petroleum Geol. 90, p. 125-137.
(Seismic structural interpretation in area around Lusi mud eruption in E Java. Watukosek fault originated as extensional lineament and evolved into sinistral shear zone in post-Miocene)

Muchsin, N., R. Ryacudu, T.W. Kunto, S. Budiyani, B. Yulihanto et al. (2002)- Miocene hydrocarbon system of the Southern Central Java region. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 58-67.
(E Miocene NW-SE trending grabens in S C Java region, with Miocene unconformable on volcanic arc rocks ('Old Andesites'; Gabon Fm; K-Ar age ~25-26 Ma). M Miocene Kalipucang Fm carbonate platform and time equivalent Pemali Fm shales, overlain by M-L Miocene deepwater Rambatan and Halang Fms. Etc.)

Mudjito, M. Husen & W. Rahardjo & S. Musliki (1993)- Post-convention field trip 1993- Central and East Java. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-39.

Muhaimin, R. & S. Alam (2012)- The tide-influenced fluvial facies architecture analysis of the Walat Formation, Bogor Trough. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-18, 7p.
(Study of outcrop sections of E Oligocene (?) Walat Fm quartz sandstone in Cibadak, W of Sukabumi. Interpreted as multistory high-sinousity fluvial channels in lower coastal-plain, influenced by tides.With Scoyenia and Skolithos ichnofacies. Paleocurrents showing bimodal dispersal pattern (no data; JTvG). Petrographic analysis shows arkosic arenite with quartz 69%, feldspar 21% and rock fragments ~10%)

Muhar, A. (1957)- Micropaleontological examination of samples from the geological survey in Tuban. BPM Report SB1770, 14p. *(Unpublished)*
(English translation of BPM report on NE Java basin stratigraphy and foraminiferal zonation)

Muin, A. (1985)- Contribution a la geologie du basin nord-oriental de lõile de Java, Indonesie: sedimentologie dõun bassin dõarriere arc. Doct. Thesis, Universite de Grenoble, p. 1-335. *(Unpublished)*
(online at: https://tel.archives-ouvertes.fr/tel-00711880/document)
(NE Java backarc basin mobile zones of both great subsidence and lateral displacements, tied to plate motions. Tertiary basin evolution placed in paleogeographic context, characterized by 5 megasequences, each starting with transgressive, ending with regressive phase. Sedimentological studies of turbiditic facies of Kerek Fm in

Kendeng zone and Ngrayong Fm in Rembang zones (Ngepon, Prantakan, Gegunung, etc.). Principal paleocurrent direction of Ngrayong Sst from N to S and NE to SW. M Miocene Kerek Fm derived from mainly volcanic source in S)

Mukti, M.M., C. Armandita, H.B. Maulin & M. Ito (2008)- Turbidites depositional systems of the lower part of Halang Formation, stratal architecture of slope to basin floor succession. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 162-176.
(M-Late Miocene Halang Fm volcanoclastics in W part North Serayu Basin, C Java,350m thick, paleocurrents downslope from W to E- SE)

Mukti, M.M., M. Hendrizan Praptisih & M. S. Siregar (2009)- Carbonate depositional environment in the East Pacitan area. In: L.D. Setijadji et al. (eds.) Proc.Int. Seminar on Geology of Southern Mountains, Int. Conf. Earth Science Technology, Yogyakarta 2009, p. 65-68.
(online at: http://lib.ugm.ac.id/digitasi/upload/2994_MU.121000006-mmmukti.pdf)
(Carbonate sedimentological study of M - Late Miocene Wonosari Fm in E Pacitan, SE Java. Include coral boundstone facies, foraminifera packstone-wackestone, larger foram packstone, coral- larger foram rudstone, and algal-foram packstone facies, representing reef-associated carbonate platform. Back reef-inner shelf environment interpreted to S of Pacitan area)

Mukti, M.M. & M. Ito (2010)- Discovery of outcrop-scale fine-grained sediment waves in the Lower Halang Formation, an upper Miocene submarine-fan succession in West Java. Sedimentary Geology 231, p. 55-62.
(On fine-grained sand waves in muddy overbank deposits of channel deposits in lower Halang Fm turbidite system in Late Miocene Bogor Trough back-arc basin, W Java)

Mukti, M.M., M. Ito & C. Armandita (2009)- Architectural elements of a longitudinal turbidite system: the upper Miocene Halang Formation submarine-fan system in the Bogor Trough. West Jawa. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-168, 14p.
(Lower part of volcanogenic U Miocene Halang Fm S of Kuningan, W Java re-interpreted as longitudinal turbidite system downsloping in E along axis of Bogor Trough)

Mukti, M.M., M.S. Siregar, Praptisih & N. Supriatna (2005)- Carbonate depositional environment and platform morphology of the Wonosari Formation in the area East of Pacitan. J. Riset Geologi Pertambangan (LIPI) 16, 2, p. 29-38.
(M-U Miocene Wonosari Fm carbonates represent reefal or outer shelf facies, with slope environments to the North of the reef zone and back reef- inner shelf environment to S and W)

Mulhadiyono (1973)- Petroleum possibilities of the Banyumas area. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 121-129.
(Pertamina work in S part of C Java with oil seeps and hydrocarbon shows in shallow BPM wells. Stratigraphic column showing oldest rocks Late Oligocene marls, overlain by earliest Miocene Gabon volcanics (= 'Old Andesites'), E-M Miocene Penanjung 'flysch', M Miocene Kalipucang Limestone. No geology map. Most prospective interval deemed to be M-L Miocene turbiditic reservoirs)

Muljana, B. & Darji Noeradi (2009)- Provenance of volcanogenic turbidite in Majalengka, West Java, Indonesia. In: Proc. Int. Symp. Earth Science and Technology, Fukuoka 2009, Kyushu University, p. 253-258.

Muljana, B. & K. Watanabe (2011)- Sandstone composition and provenance of the Cinambo and Halang Formations in Majalengka, West Java, Indonesia. Proc. Int. Symposium on Earth Science and Technology, Fukuoka 2011, Kyushu University, p. 427-428.

Muljana, B. & K. Watanabe (2012)- Modal and sandstone composition of the representative turbidite from the Majalengka Sub-Basin, West Java, Indonesia. J. Geography Geology 4, 1, p. 3-17.
(online at: www.ccsenet.org/journal/index.php/jgg/article/view/14122)

(Majalengka subbasin with ~4 km thick M-L Miocene turbidite-sequence. Sandstones mainly recycled orogen (from developing thrust-fault belts) and magmatic arc provenance from Oligocene magmatic arc at S Mountains. No evidence for source from continental terrain. Quartz mainly from recycled sediment. Lithic fragments mainly andesitic grains)

Muljana, B., K. Watanabe & M.F. Rosana (2011)- Sandstone composition of the turbidite series of the Middle to Late Miocene of Majalengka sub-basin, West Java, Indonesia. Proc. Int. Symposium on Earth Science and Technology, Fukuoka 2011, p. 429-434.

Muljana, B., K. Watanabe & M.F. Rosana (2012)- Source rock potential of the Middle to Late Miocene turbidite in Majalengka sub-basin, West Java, Indonesia: related to magmatism and tectonism. J. Novel Carbon Resource Science (Kyushu University) 6, p. 15-23.
(online at: http://ncrs.cm.kyushu-u.ac.jp/assets/files/JNCRS/JNCRS_Vol6_15-23.pdf)
(Hydrocarbon source potential in M-L Miocene turbiditic series in Majalengka Basindominated by immature to mature gas-prone terrestrial Type III kerogen)

Mulyana, A. (2014)- Studi sekuen stratigrafi Formasi Parigi Lapangan C, Cekungan Jawa Barat Utara, Kabupaten Subang, Jawa Barat. J. Ilmiah Magister Teknik Geologi (UPN) 7, 1, 18p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/271/234)
(Sequence stratigraphy study of the Parigi Formation in Field C, NW Java Basin, Subang Regency, West Java'. M-L Miocene Parigi Fm reefal limestone buildups in NW Java basin with 3 electro-lithofacies)

Mulyaningsih, S. (2016)- Volcanostratigraphic sequences of Kebo-Butak Formation at Bayat geological field complex, Central Java Province and Yogyakarta Special Province, Indonesia. Indonesian J. Geoscience 3, 2, p. 77-94.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/236/207)
(Bayat Complex in C Java with Late Oligocene Kebo-Butak Fm, with basalt, pumice tuff and shale, indicative of volcanic arc complex. Basalt composed of labradorite, olivine, clinopyroxene and volcanic glass. Black pumice and tuff contain clinopyroxene, olivine, and volcanic glass. Feldspathic tuff and pumice tuff are crystal vitric tuffs with more feldspar, quartz and amphibole than glass. Zeolite and chlorite alteration. Two deep submarine paleovolcanoes: Tegalrejo (basaltic) and Baturagung (mainly pyroclastic material))

Mulyawan, R.S. & S. Husein (2014)- Kompleks sesar Trembono sebagai gravitational structures. Proc. 7th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, P4P-01, p. 676-689.
('The Trembono fault complex as gravitational structures'. Trembono fault complex in Gunung Kidul Regency, S Mountains, formed in late Oligocene- E Miocene Kebo-Butak Fm volcanoclastics in extensional regime with NE-SW extension direction. Timing of formation unclear. Possible gravitational structure. See also Nugraha et al. 2016)

Muller, A. & V. Haak (2004)- 3-D modeling of the deep electrical conductivity of Merapi volcano (Central Java): integrating magnetotellurics, induction vectors and the effects of steep topography. J. Volcanology Geothermal Res. 138, 3-4, p. 205-222.

Murwanto, H., Y. Gunnell, S. Suharsono, S. Sutikno & F. Lavigne (2004)- Borobudur monument (Java, Indonesia) stood by a natural lake: chronostratigraphic evidence and historical implications. The Holocene 14, 3, p. 459-463.
(9th century Borobudur Buddhist temple built on promontory extending into of existing lake. Fluctuating life history of lake spanned at least 20,000 years)

Murwanto, H., A. Subandrio, A. Rianto & Suharsono (2000)- Study of the trace of ancient Solo River in the South Wonogiri. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 265-271.
(Canyon crossing S Mountains limestone terrane to Sadeng Bay, SE of Yogya, is ancient course of Solo River. River originates on S slope of Lawu volcano, and was forced to find northern outlet after M Pliocene uplift of Southern Mountains)

Murwanto, H., Sutikno & A. Subandrio (1998)- The ancient lake environment in the Borobudur area, Central Java. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 3 (Geodin., Magmat. Volkanologi), p. 84-93.
(Area surrounding Borobudur hills once formed Quaternary lake environment. With black clays containing plants and pollen fossils of lake community vegetation. Former lake filled by lahar and pyroclastic deposits)

Musgrove, F. & M. Sun (2012)- Developing a large carbonate buildup field- Banyu Urip, Cepu Block. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-035, p. 1-12.
(Banyu Urip Field >1 Billion BBL oil in place. High relief Oligo-Miocene isolated carbonate buildup, rising ~3000' above surrounding carbonate platform. 150' thick cycles of shallow water carbonate, exposed to fresh water leaching to form high quality reservoir rock with average 26% porosity and 100 mD permeability in interior. Edges of platform heavily cemented)

Musgrove, F.W. & M. Sun (2013)- Developing the largest carbonate oil field in SE Asia- Banyu Urip, Cepu Block. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur 2013, O22, 4p. *(Extended Abstract)*
(Short version of paper above)

Muslih, Y.B. & A.F. Putra (2018)- Subsidence mechanisms in offshore South Java and its comparison to onshore geology: extensional and flexural tectonics. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-168-G, 15p.
(Offshore S Java displays extensional structures in fore-arc position, with structures trending mainly NE-SW to ENE-WSW. NE-SW structural trends continue into onshore S Java (unlike N-S faults in N Java))

Musliki, S. (1988)- The Pliocene Selorejo Formation and its hydrocarbon prospect in Cepu, North East Java, Indonesia. M.Sc. Thesis, University of New South Wales, Sydney, p. *(Unpublished)*

Musliki, S. (1989)- Seismic stratigraphy applied to the Northeast Java Basin. Proc. 18th Ann. Conv. Indon. Assoc. Geologists (IAGI), Yogyakarta, p.

Musliki, S. (1990)- The Pliocene Selorejo Formation and its hydrocarbon prospects in Cepu and surrounding areas. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 379. *(Abstract only)*
(Late Pliocene Selorejo Fm distributed in belt of 10km wide, 100km long, from Pati in NW to Dander in SE in NE Java basin. Composed of bedded limestones and foraminiferal sandstones, 0-130m thick. Deposited unconformably over Pliocene Mudu Fm after main Plio-Pleistocene tectonic phase. Gas-bearing in Balun structure near Cepu (age latest Pliocene N21 according to Djuhaini & Martodjojo 1990))

Musliki, S. (1991)- The effect of structural style to the hydrocarbon accumulation in the Northeast Java Basin. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 86-96.
(NE Java basin up to 6000m of Tertiary sediments, in three zone: (1) Rembang anticlinorium in N, (2) Randublatung in middle (gently deformed; most prospective) and (3) Kendeng foldbelt in S (deep basement, detached folds; least prospective for oil-gas, although with oil seeps). All known oil-gas fields in structural traps. All structural traps identified and most of them drilled; future discoveries expected in stratigraphic traps like reefs, facies changes, buried highs, etc. Steep gravity gradient suggest boundary between Randublating and Kendeng zones is fault zone)

Musliki, S. (1992)- Depositional cycles of the Northeast Java Basin and their relation to the hydrocarbon potential. International Symposium on Neogene, Northeast Pacific Area, Bandung, October, p. 19-22.

Musliki, S. (1994)- The Neogene Kalimu, Kalinges and Kanopu Formations in the Northeast Java basin. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 55-66.
(Proposing new formation names for existing Neogene formations of NE Java basin: (1) Kalimu Fm for Late Miocene- Pliocene marls of Kalibeng Fm (Kendeng zone), GL Formation (Randublatung zone) and Mundu Fm

(Rembang zone); (2) Kalinges Fm for Late Pliocene carbonates of Klitik/ Ngepung Mb (Kendeng zone), and Selorejo Fm (Randublatung and Rembang zones); (3) Kanopu Fm for Pleistocene volcanoclastics facies of Pucangan- Kabuh- Notopuro Fms (Kendeng zone) and Trinil Mb (Randublatung and Rembang zones))

Musliki, S. (1996)- Palaeogeographic interpretation based on lithostratigraphic units and relative sea level changes during the Plio-Pleistocene period in the Northeast Java Basin. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symposium on Geology and Environment, Chiang Mai, Thailand, p. 147-158.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1996/)

Musliki, S. (1997)- Possible hydrocarbon accumulation within Eocene coarse clastic reservoir in the Northeast Java Basin. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 22-35.
(Comparison of NE Java with S Sumatra and E Kalimantan suggests Eocene- Oligocene Ngimbang Fm clastics should have hydrocarbon potential. Clastics in exploration wells in NE Java generally poor reservoir quality and no hydrocarbons. Offshore NE Java good quality basal clastics in KE6, JS14-A1, Pagerungan 2, JS5-1 and some had hydrocarbons).

Musliki, S. (1999)- The development of stratigraphic interpretation and its implication to the success of hydrocarbon exploration in the Northeast Java Basin. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 3, p. 131-138.

Musliki, S. (2000)- The effect of Middle Miocene tectonic phase to the paleogeography, sedimentary processes and hydrocarbon prospect in the Northeast Java basin. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 151-159.
(M Miocene N11-N12 Ngrayong Fm sandstone main reservoir in 25 oil fields of NE Java basin. Ngrayong Fm unconformably overlain by different Late Miocene- Pliocene formations, supposedly reflecting end-M Miocene orogeny/ global sea level drop at ~12-13 Ma. Overlying Bulu Lst generally dated as zone N13 or N14. All structural closures probably drilled, but still stratigraphic traps potential)

Musliki, S. & Suratman (1996)- A Late Pliocene shallowing upward carbonate sequence and its reservoir potential, Northeast Java basin. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 43-54.
(Late Pliocene Klitik-Ngepung-Selorejo Fms carbonate facies widely distributed in NE Java, with outcrops mainly in Kendeng- Kembang zones. Late Pliocene carbonates interpreted as shallowing- upward sequence starting in Late Pliocene, ~2.9 Ma. Marls of Kalibeng- Mundu Fm followed by Globigerina Marl, Globigerina Lst, Reefal Limestone, Limestone Debris and Mollusc Limestone facies, covered by Lidah Fm clays. Best reservoirs Globigerina Lst facies: high porosity- permeability, composed of sand- size planktonic foraminifera. Significant gas (Balun field) and oil (Lidah, Kruka, Kuti, Metatu, Bogomiring fields) produced from this facies)

Muthi, A., I Gde Basten, I Gede Made Suasta & N.E.W. Litaay (2013)- Characteristics of alteration and mineralization at Randu Kuning- Wonogiri Project. Majalah Geologi Indonesia (IAGI) 28, 1, p. 15-28.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/717)
(Randu Kuning gold-copper porphyry prospect in Wonogiri/ Selogiri property with sheeted Cu-Au bearing quartz veins. Main lithologies diorites and breccias. Mineralization in quartz veins in and adjacent to microdiorite intrusion tied to large eroded volcanic centre in N-migrating Oligocene- Miocene volcanic arc)

Myaing, Y.Y., A. Idrus & A.D. Titisari (2018)- Fluid inclusion study of the Tumpangpitu high sulfidation epithermal gold deposit in Banyuwangi District, East Java, Indonesia. J. Geoscience Engineering Environm. Technol. (JGEET) 3, 1, p. 8-14.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/download/1039/784)
(Tumpangpitu epithermal Cu-Au-Ag deposit at S coast of SE Java, in area with Late Oligocene- M Miocene low-K calc-alkaline to alkaline andesitic volcanics and volcaniclastics and with low-K intermediate intrusions. Mineralization style high-sulfidation epithermal gold-copper system typically associated with deeper gold-rich porphyry copper system. Paleodepth of mineralization determined from fluid inclusions 650m- 1220m)

Nachrowi, T.Y. & Y.P. Koesoemo (2003)- A geological trip to Cepu area for non-geoscientist personnel. Indon. Petroleum Assoc. Field Trip Guidebook, p. 1-51.
(Very basic write-up of NE Java basin geology)

Nahrowi, Baharuddin & Aminuddin (1979)- Stratigrafi Paleogene muda- Neogen Tua daerah Tuban, Paciran dan Panceng, Jawa Timur. Presentation 8th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 47p.
('Stratigraphy of the late Paleogene- early Neogene in the Tuban, Paciran and Panceng areas, East Java')

Nahrowi, N.Y. & Suratman (1990)- Aspek stratigrafi, sedimentologi dan petrografi endapan turbidit (studi kasus: Formasi Kerek & Anggota Banyak daerah Kedungjati, Jawa Tengah). Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), 1, p. 149-174.
('Aspects of stratigraphy, sedimentology and petrography of turbidite deposits (study of Kerek Formation and Banyak member in the Kedungjati area, C Java')

Naibaho, N.E., A.H. Sasoni, R.R. Putra, T.A.A. Kristiono & I.V. Rumende (2012)- Geological field mapping: to identify a structural pattern in Talagadatar as a thrust fold belt based on surface data and tectonic setting into Sumedang, West Java. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-11, p.
(Fieldwork in Sumedang area at Talagadatar, NE of Bandung, shows six thrusts and four anticlines and synclines, forming fold-thrust system with two periods of activity, Late Miocene- E Pliocene and Late Pliocene-E Pleistocene)

Nainggolan D.A. (2008)- Struktur bawah permukaan daerah Semarang dan sekitarnya dari metode gaya berat dan magnet. J. Sumber Daya Geologi 18, 3, p. 185-202.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/265/245)
(Sub-surface structure of Semarang and surroundings from gravity and magnetic methods'. Semarang area mainly covered by young volcanic rocks. Cipluk oil field, S of Kendal already closed in 1930. Structures in area mainly E-W and N-S directions)

Nainggolan D.A. (2009)- Struktur geologi bawah permukaan daerah Pekalongan dan sekitarnya berdasarkan analisis anomali gaya berat dan magnet. J. Sumber Daya Geologi 19, 2, p. 127-138.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/200/191)
('Sub-surface geological structures of Pekalongan and surrounding areas based on gravity and magnetic anomaly analysis')

Napitupulu, H. (1998)- Organic geochemistry and thermal maturity modeling of hydrocarbon generation in the NW Java Basin, Indonesia. Ph.D. Thesis University of Texas at Dallas, p. 1-250.

Napitupulu, H., L. Ellis & R.M. Mitterer (2000)- Post-generative alteration effects on petroleum in the onshore Northwest Java basin, Indonesia. Organic Geochem. 31, p. 295-315.
(NW Java Basin on-and offshore oils mainly derived from Oligocene fluvial-deltaic Talangakar Fm, with API gravities 17°-53°. In shallow reservoirs heavy biodegraded oils (API <22°). Post-generative alteration processes widespread. Pristane to phytane biomarker ratios affected by evaporative fractionation. Isotope and biomarker data identified two oil families: (1) marine influenced delta front-prodelta settings and (2) from higher plant-rich delta plain- delta front environment)

Napitupulu, H., R.M. Mitterer & J.A. Morelos-Garcia (1997)- Differentiation of oils from the NW Java Basin into three oil types based on biomarker composition. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 667-679.
(Three source rock facies in NW Java Basin based on biomarker composition of oil: (1) deltaic withtypically high concentration of oleanane, etc. (2) probably lacustrine with abundant botryococcane, etc. and (3) two oils with intermediate-high sulfur content suggestive of marine carbonate depositional setting, although high pristane/phytane, etc. conflict with this interpretation; may be mixed with oil from a non-carbonate source)

Naranjo, J.C. (2007)- Tertiary basin initiation and sedimentation; East Java Basin, Indonesia. Masters Thesis, University of Wisconsin, Madison, p. 1-70. *(Unpublished)*
(Majority of proposed E Java Basin formation mechanisms back-arc related, but onshore part of basin appears to be constructed on pre-existing basement structural grain, not tectonic or fault-initiated. Passive basin fill of initial Eocene-Oligocene Ngimbang Fm clastic-dominated sedimentation suggesst pronounced paleo-basement topography. Mounded geometries of shallow-water carbonates, continuing into Kujung time (Oligocene-Miocene), on NE-SW basement highs. Mild initial subsidence during Eocene increases with time)

Naranjo, J.C., J.A. Simo, E. Dragan & A.R. Carroll (2007)- Tertiary basin initiation and sedimentation; East Java Basin, Indonesia. AAPG 2007 Ann. Conv., 1p. *(Abstract only)*
(Seismic isochron mapping shows axis of Eocene-Oligocene E Java basin trended NE-SW. Oligocene-Miocene isochron map shows change to WNW-ESE orientation. Subsidence rates increased at this time, inconsistent with rift origin for earlier basin history. Prolific carbonate accumulations formed in areas with ~500m or less Oligocene-M Miocene subsidence; areas with greater subsidence (up to 900m) became sediment-starved deeps. Major carbonate platform formed in N part of basin. Two SW-trending projections from platform represent buildups formed on paleohighs, corresponding to areas of lesser Eocene-Oligocene subsidence)

Nas, C. (1986)- Geologi endapan batubara daerah Cibobos-Cimandiri, Banten Selatan, Jawa Barat. Thesis Sarjana, Institut Teknologi Bandung, p. 1-238. *(Unpublished)*
('Geology of coal deposits in the Cibobos-Cimandiri area, South Banten, West Java')

Nash, J.M.W. (1931)- Enige voorlopige opmerkingen omtrent de hydrogeologie de Brantasvlakte, Handelingen 6e Nederl.-Indisch Natuurwetenschappelijk Congres, Bandung, Sect. Geologie-geografie, p. 680-689.
('Some preliminary remarks on the hydrogeology of the Brantas plain'. Seven E-W trending anticlines in Brantas River flood plain/ delta in E Java, still growing today. Mud volcanoes may have been active in area during Majapahit empire (see also Satyana 2008))

Natawidjaja, D.H. (1993)- Geological structures of Penosogan area Kebumen, Central Java: the significance of slump structures and extensional faults. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 137-146.
(Microtectonic analysis of Penosogan area, E of Karangsambung. NE-SW directed M Miocene syndepositional slump structures in turbiditic deep-water deposits, post M Miocene extensional structures Latest deformation is N-S compression)

Natawidjaja, D.H. & M.R. Daryono (2016)- Present-day tectonics and earthquake history of Java, Indonesia. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 365-374.
(Java fewer major earthquakes than Sumatra, and focused along many smaller active faults (left-lateral Lembang fault, Cimandiri reverse fault, Baribis reverse fault, Opak fault, Lasem fault and others)

Natawidjaja, D.H., B. Sapiie, A. Pamumpuni, G.I. Marliyani & M.R. Daryono (2017)- Baribis-Kendeng thrust-fold zone of Java, Indonesia: new evidences of active back-arc tectonics and their implications to seismic hazards. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(Geologic studies and earthquake records suggest E-W trending Baribis (W Java) and Kendeng (C-E Java) thrust belts in back-arc zone are connected and still active fold-thrust belt. Connects E to Flores back thrust)

Natori, H. (1978)- Foraminifera from West Jawa. In: M. Untung & Y. Sato (eds.) Gravity and geological studies in Jawa, Indonesia. Indonesia- Japan Joint Research Program on Regional Tectonics of Southeast Asia, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 6, p. 81-89.

Natori, H., D. Kadar, Sudiyono, P. Siregar & F. Hasibuan (1978)- Foraminifera from Central Jawa. In: M. Untung & Y. Sato (eds.) Gravity and geological studies in Jawa, Indonesia. Indonesia- Japan Joint Research Program on Regional Tectonics of Southeast Asia, Geol. Res. Dev. Centre (GRDC) Spec. Publ. 6, p. 89-101.

Nawawi, A., A. Suseno & A. Heriyanto (1996)- East Java Basins. Pertamina BPPKA, Jakarta, p. 1-107.

Nayoan, G.A.S. (1972)- Correlation of the Tertiary lithostratigraphic units in the Java Sea and adjacent areas. Proc. First Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 11-30.
(Brief overview of principal basins of Java Sea from S Sumatra to N Madura/ Barito, with correlation of stratigraphic successions)

Nehlig, P. & E. Marcoux (1992)- Le gisement dôor epithermal de Cirotan (Ouest Java, Indonesie): contraintes microthermometriques. Comptes Rendus Academie Sciences, Paris 315, Ser. II, p. 821-827.
('The epithermal god deposit of Cirotan, W Java; microthermometric constraints'. Microthermometric study of fluid inclusions from Cirotan epithermal gold deposit in Citotok Mining District, SW Java, suggest mineralization under rel. high salinities. Mineralized fractures tied to Pliocene quartz-microdiorite (4.5 Ma), intrusive in rhyolitic ignimbrites dated as 9.5 Ma. Absence of phase separation suggests minimal erosion of 410m since mineralization)

Ngkoimani, L.O., S. Bijaksana & C.I. Abdullah (2006)- Paleomagnetic and geochronological constraints on the Cretaceous- Miocene tectonic evolution of Java. Proc. Jakarta 2006 Int. Geosciences Conf. and Exhib., IPA, SOT-11, 4p. *(Extended Abstract)*
(Paleomagnetic study of area of 'Old Andesites' from Kulon Progo and other sites near near Yogyakarta suggests paleolatitudes of C Java moved from 16-21°S in Cretaceous-Eocene (~76-47 Ma) to between 12-13°S in Oligocene (~30-25 Ma), 10-11° S in Miocene (6-11 Ma), to 7°-8° S today, supporting hypothesis that C and E parts of Java formed microcontinent that collided with Sundaland in Late Cretaceous-Eocene (but: collision should be younger if continued to move N after Eocene?; JTvG))

Ngkoimani, L.O., S. Bijaksana, M. Mahrizal & C.I. Abdullah & T.H. Liong (2005)- Magnetic properties of igneous rocks from Banyuwangi, East Java and their reliability for paleomagnetic study. Indonesian J. Physics 16, 2, p. 33-41.
(online at: http://www.ijphysics.com/index.php/ijp/article/download/120/120)
(Paleomagnetic investigation of two igneous intrusions (no absolute age known) in Gunung Nangkajajar at E tip of Java near Banyuwangi. Paleolatitude of these intrusions was~30° S, well S of present position)

Niethammer, G. (1909)- Die Eruptivgesteine von Loh Oelo auf Java. Inaugural Dissertation, Universitat Basel, Tschermak Mineral. Petrogr. Mitteilungen 28, 3, p. 205-273.
('The volcanic rocks from Lok Ulo on Java'. Petrographic descriptions of Cretaceous and Tertiary volcanic and metamorphic rocks, collected during 3-day visit by Tobler in 1902. Includes discussions of Cretaceous Orbitolina limestone folded within serpentinite, first record of quartzose glaucophane schist, etc.)

Nilsen, T.H. (2002)- Summary report on outcrop geology and general setting of the Banyumas Block, South-Central Java, Indonesia. Report for Coparex Banyumas, Jakarta, 31p. *(Unpublished)*
(Lunt 2007, p. 147: M-L Eocene in Banyumas area rel. deep water facies with slope channel sands and slumped Nummulites limestone blocks)

Ningrum, H.N.R. & Abdurrokhim (2016)- Study of paleoenvironmental changes based on lithofacies and foraminifera analysis in Padalarang Area, West Bandung Regency, West Java Province. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 524-532.
(Summary of Oligocene- M Miocene (bio-)stratigraphy of Padalarang area, W of Bandung. Oldest rocks deep marine M Oligocene (N2) Batuasih Fm shale. Overlain by Late Oligocene (N3-N4)Rajamandala Lst, overlain by E Miocene outer neritic- bathyal clastics (N5-N13), etc. (No references to many earlier papers on this area))

Nishimura, S., H. Harjono & S. Suparka (1992)- The Krakatau islands: the geotectonic setting. GeoJournal 28, 2, p. 87-98.
(Sunda Strait transitional zone between Java frontal and Sumatra oblique subduction modes. W Java and Sumatra geologically continuous. Krakatau at intersection of two graben zones and N-S active, shallow seismic belt (fracture zone with fissure extrusion of alkali basaltic rocks commencing at Sukadana and continuing S as far as Panaitan island through Rajabasa, Sebuku and Krakatau). Paleomagnetic studies suggest Sumatra

rotated CW relative to Java from at least 2.0 Ma to present at 5-10h/ Ma, so opening of Sunda Strait may have started before 2 Ma. W Sumatra has been moving N along Semangko fault and S part Sunda Strait pulled apart. Assuming perpendicular component (58 mm/y) of oblique subduction has not changed, subduction started at 7-10 Ma. Sunda Strait under tensional regime as result of clockwise rotation along continental margin and N-ward movement of Sumatra sliver plate along Semangko fault zone)

Nishimura, S., J. Nishida, T. Yokoyama & F. Hehuwat (1986)- Neotectonics of the Strait of Sunda, Indonesia. J. Asian Earth Sci. 1, p. 81-91.
(Sunda Strait rapidly subsiding trough, with thick U Pliocene- Quaternary clastics from Lampung to Krakatau fracture zone. Krakatau complex at intersection of two graben zones and N-S active seismic belt. Gravity anomalies in (1) N of Ujung Kulon, indicating existence of low gravity caldera, from which Malingping and Banten tufts were ejected 0.1 Ma ago, and (2) area of Kotaagung, where graben structure was observed and ignimbrite eruption occurred at 1 Ma. Paleomagnetic studies suggest Sumatra rotated clockwise relative to Java from 2.0 Ma- present at 5-10°/ My. Difference in strike of Java and Sumatra exceeds 20 °, so rotation of Sumatra and opening of Strait Sunda might have started before 2 Ma)

Nishimura, S., K.H. Thio & F. Hehuwat (1980)- Fission-track ages of the tuffs of the Pucangan and Kabuh Formations and the tektite at Sangiran, Central Java. In: S. Nishimura (ed.) Physical geology of Indonesian island arcs, Kyoto University Press, p. 72-80.

Nishimura, S., K.H. Thio & F. Hehuwat (1980)- Fission-track ages of tephras and tuffs from Bayat and Karansambung, Central Jawa. Physical Geology of Indonesian Island Arcs, Kyoto University, Kyoto, p. 81-87.

Noble, R.A., K.H. Pratomo, K. Nugrahanto, A.M.T. Ibrahim, I. Prasetya et al. (1997)- Petroleum systems of Northwest Java, Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia. Indon. Petroleum Assoc. (IPA), Jakarta, p. 585-600.
(NW Java at least ten active petroleum systems and 150 oil and gas fields. Expected EUR >4 BBOE from ~14 BBOE in-place. Onshore sub-basins Ciputat, Kepuh, Pasir Bungur, Cipunegara/E15 and Jatibarang. Oil and gas originating here migrated through structural high in N direction towards offshore. Offshore petroleum systems S Ardjuna, C Ardjuna, Sunda, Yani/N Seribu Trough and Asri systems. Ten systems characterized in terms of source rock type, migration/ carrier bed system, major reservoir and seal, and style of entrapment)

Noble, R.A., C.H. Wu & C.D. Atkinson (1991)- Petroleum generation and migration from Talang Akar coals and shales offshore N.W. Java, Indonesia. Organic Geochem. 17, 3, p. 363-374.

Noeradi, Dardji (1994)- Contribution a l'etude geologique d'une partie occidentale de l'Ile de Java, Indonesie. Stratigraphie, analyse structurale, et etude quantitative de la subsidence des bassins sedimentaires Tertiaires. Approche de la geodynamique d'une marge continentale active au droit d'une zone de subduction. Doct. Thesis Universite de Chambery, p. 1-253.
(online at: http://edytem.univ-savoie.fr/archives/lgham/dardji/Dardji-Noeradi-these-1994+.pdf)
('Contribution to the geological study of a western part of Java island: stratigraphy, structural analysis and quantitative subsidence modeling, etc.'. Late Cretaceous- Paleocene oblique subduction, with Indo-Australian plate moving N-S. Creation of NE-SW oriented volcanic arc and intra-arc basin with sinistral faults trending N30°-40°E. This marginal basin closes in M Eocene (43 Ma), with ultrabasic basement uplift and block melange deposition of Ciletuh Fm. Closure coincides with start of pivoting of SE Asian continent to SW after India collision. New E-W trending volcanic arc forms in Late Oligocene- E Miocene in S part of island. Volcanism continues until end M Miocene (14 Ma). In NW Java rapid subsidence started in Late Oligocene (23 Ma), with formation of horsts and grabens. In Late Miocene speed of Indo-Australian Plate increases from 4 to 7 cm/yr, causing N-ward movement of volcanic arc axis to present-day position and deformation in Cimandiri-Bayah and NW Java basin. Regional compression N25°-30°E reactivates old N70°-80°E faults. Creation of pull-apart basin in Gulf of Pelabuhan Ratu in Late Miocene (10 Ma) with rapid subsidence)

Noeradi, Dardji, T. Villemin & J.P. Rampnoux (1991)- Cenozoic fault systems and paleostress along the Cimandiri Fault Zone, West Java, Indonesia: In: Proc. Silver Jubilee symposium on the dynamics of subduction and its products, Yogyakarta, September 1991, Indonesian Inst. Sciences (LIPI), p. 245-270.

Noeradi, Dardji, E.A. Subroto, H.E. Wahono, E. Hermanto & Y. Zaim (2006)- Basin evolution and hydrocarbon potential of Majalengka-Bumiayu transpression basin, Java Island, Indonesia. Proc. AAPG Int. Conf. Exhib., Perth., p. *(Abstract only)*

Nolf, D. & S. Bajpai (1992)- Marine Middle Eocene fish otoliths from India and Java. Bull. Inst. Royal Sciences Naturelles Belgique, Sciences de la Terre, 62, p. 195-221.
(online at: www.vliz.be/imisdocs/publications/276754.pdf)
(Two comparable M Eocene marine fish otoliths associations from India and Java. Nine clayey glauconitic sand samples from Nanggulan area, C. Java, with 24 neritic teleost species, dominated by apogonids. New species Apogon townsendoides, Lactarius nonfungus, Percoideorum sciaenoides, etc.. Associated nannofossils upper Zone NP16, E Bartonian age)

Norris, M., B.D. Rohrlach & A. Maryono (2011)- The discovery of the Tujuh Bukit porphyry epithermal copper-gold-silver deposits, East Java, Indonesia. In: Proc. NewGenGold 2011 Conf., Case histories of discovery, Perth, p. 201-211.
(Tujuh Bukit group of telescoped epithermal and porphyry copper-gold-silver deposits in E Java, ~205 km SE of Surabaya. Cluster of deposits, including Tumpangpitu, Candrian, Katak and Gunung Manis in area of ~5 km diameter. Tumpangpitu comprises high sulphidation Cu-Au-Ag epithermal mineralisation that is telescoped onto large underlying Au-rich porphyry Cu-Au-Mo system, associate with young tonalite intrusives)

Nossin, J.J. & C. Voute (1986)- The geomorphology of the Borobudur plain, its archaeology and history (Central Java, Indonesia). Int. Inst. Aerospace Survey and Earth Sciences (ITC) Journal 1986, 4, p. 280-289.
(Borobudur Plain was a lake in second half of Quaternay, with deposits up to 10m thick)

Nossin, J.J. & C. Voute (1986)- Notes on the geomorphology of the Borobudur Plain (central Java, Indonesia) in an archaeological and historical context. In: Proc. 7th Int. Symp. Remote sensing for resources development and environmental management, Enschede 1986, 2, p. 857-863.

Notosiswoyo, S. & S.B. Kusumayuda (1999)- Hydrogeology of the Gunung Sewu karstic area, Central Java, Indonesia: a conceptual model. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 351-358.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999035.pdf)
(Hydrogeologic models for karst terrane of M Miocene Gunung Sewu Gp carbonates, S Mountains, C Java)

Noujaim, A.K. (1976)- Drilling in a high temperature and overpressured area, Sunda Straits, Indonesia. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 211-214.
(1973 Aminoil C-1SX well few km from Krakatau volcano very high temperature. Well TD at TD 9860’ with formation Temp >450° F, after penetrating >8000’ U Pliocene clastics)

Novian, M.I., P.K.D. Setiawan, S. Husein & W. Rahardjo (2009)- Stratigrafi Formasi Semilir bagian atas di Dusun Boyo, Desa Ngalang, Kecamatan Gedang Sari, Kabupaten Gunung Kidul, diy: pertimbangan untuk penamaan anggote Buyutan. In: Proc. Workshop Geologi Pegunungan Selatan, Yogyakarta 2007, Pusat Survei Geologi, Bandung, Spec. Publ. 38, p. 195-208.
('Stratigraphy of the Upper Semilir Formation in Hamlet Boyo, Ngalang Village, District Gedang Sari, Gunung Kidul, with considerations for naming the Buyutan Member'. Semilir Fm dominated by tuffs, volcanic breccias and volcanic sandstones. Measured sectons and facies analysis (mainly deltaic environments) (also in IAGI 36th Ann. Conv. 2007))

Novian, M.I., P.P. Utama & S. Husein (2013)- Penentuan batuan sumber Gununglumpur di sekitar Purwodadi berdasarkan kandungan fosil foraminifera. Pros. Seminar Nasional Kebumian 6, Jurusan Teknik Geologi FT UGM, Yogyakarta, p. 519-534.
('Determination of source rock of the mud mounds near Purwodadi from fossil foraminifera content'. Samples from Kesongo and Crewek 'mud volcanoes' in Randublatung zone of NE Java basin with planktonic foraminifera of zones N18-19, N14/N12 and N7-N9 and E Miocene large foraminifera. Mud volcanoes probably sourced from oldest material, i.e. late E Miocene bathyal marine Tawun Fm, but includes rocks of younger formations (Ngrayong, Wonocolo, Ledok, etc.))

Novita, D. (2012)- Asalmuda jadi batupasir vulkaniklastik Formasi Kebo-Butak daerah Mojosari dan Kalinampu, Bayat Jawa Tengah. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-06, 3p.
('Origin of Kebo Formation volcanoclastic sandstones, Butak Mojosari area and Kalinampu, Bayat, C Java'. Outcrop sections of Eocene at Mojosari and Kalinampu show Kalinampu with rel. high feldspar content and with polycrystalline and volcanic quartz. Mojosari more common volcanic quartz and no or rare feldspar. Interpreted as marine slope deposits)

Novita, D., D.H. Barianto & M.I. Novian (2013)- Biozonasi Formasi Kebo bagian bawah jalur Kalinampu-Sendangrejo, Bayat Jawa Tengah. J. Teknik Geologi (UGM) 2, 1, 5p.
(online at: http://lib.geologi.ugm.ac.id/ojs/index.php/geo/article/view/20)
('Biozonation of the lower part of the Kebo Formation near Kalinampu-Sendangrejo, Bayat, C Java'. Area contains Oligocene Nampurejo pillow lava. Three measured sections with nine facies. Kalinampu-Sendangrejo section 13 M Eocene to E Miocene foraminifera biozones (P11-N5). Sumberan-Mojosari section 7 Late Eocene-Oligocene biozones (P14-N2). Depositional environment bathyal)

Novita, D., D.H. Barianto & M.I. Novian (2014)- Planktonic foraminifera biozonation of the Middle Eocene-Oligocene Kebo Formation, Kalinampu area, Bayat, Klaten, Central Java. Berita Sedimentologi 31, p. 70-81.
(online at: www.iagi.or.id/fosi/files/2014/12/BS31-Biostratigraphy_SEAsia_Part3.pdf)
(Identification of 12 M Eocene (P11)- E Miocene (N5) planktonic foraminifera zones in Kebo Butak Fm of S Mountains of C Java. Depositional environments bathyal marine)

Noya, Y. (1994)- Geology and mineralization of the Cikotok area, West Java, Indonesia. M.Sc. Thesis Curtin University of Technology, Perth, p. 1-219. *(Unpublished)*
(Cikotok gold-silver deposits discovered in 1936 in Bayah Dome of S Banten, ~200 km SW of Jakarta. Total production from 1940-1992 ~7704 kg of gold and 218,853 kg of silver. Pliocene-age mineralization in quartz veins infill brittle fractures, formed at low T, in Oligo-Miocene felsic volcanics('Old Andesite Fm') host rocks. Small andesitc and granodioritic intrusive rocks emplaced in M-L Miocene. Cikotok ore typified by high silver content which occurs as fine-grained argentite and possible as electrum. Ore minerals in large sulphide (chalcopyrite, sphalerite and galena)-bearing quartz veins and in hydrothermal breccias. Three zones. Epithermal origin, with average formation T 245°C. Depth below surface ~200 m at time of formation)

Noya, Y., T.C. Amin & N. Suwarna (1999)- Petrology of gold and silver-bearing volcanic rocks from Cikotok area, West Java. J. Geologi Sumberdaya Mineral 9, 95, p. 16-26.
(Gold-bearing host rocks of Cikotok Gold Mine area, SW Java, in hydrothermally altered andesitic, basaltic and rhyo-dacite lavas of Oligocene- E Miocene 'Old Andesites/ Cikotok Fm, intruded by M Miocene(?) granodiorite and andesitic dykes)

Noya, Y., D. Sukarna & S. Andi Mangga (1994)- The nature of mineralization at the Cikotok area, West Java. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 981-1000.
(Cikotok high-silver/ minor gold mineralization in SW Java large epithermal sulphide-quartz veins and in hydrothermal breccias. Host rocks Oligo-Miocene 'Old Andesite' volcanics. Ag-Au in sulphide minerals sphalerite, galena and chalcopyrite. Formed at 200m below surface (exploited from 1936-2008))

Noya, Y., T. Suwarti, Suharsono & L. Sarmili (1992)- Geology of the Mojokerto Quadrangle, Jawa (1508-6), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 12p. + map.
(Eastern Kendeng and Rembang zones)

Noya, Y., S.A. Wilde, S.A Mangga & D. Sukarna (1999)- A study of fluid inclusions at the Cikotok Gold Mine, West Java. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 307-319.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999030.pdf)
(Cikotok gold-silver deposits of SW Java, ~200 km SW of Jakarta, are Pliocene mineralization hosted in Oligo-Miocene 'Old Andesite' volcanics, forming part of Bayah Dome Complex. Fluid inclusions homogenisation temperatures between 184-306°C, mean 245°C, trapping pressure equivalent to depth of 210m, all typical of low salinity epithermal gold deposits)

Nugraha, A.M.S., A. Ditya, M. Zamzam, Y. Hernawati & B. Sapiie (2009)- Fracture characteristics within carbonate rocks facies and its implication to reservoir characterization, case study Rajamandala Formation, West Java. Proc. 38th Ann. Conv. Exh. Indon. Assoc. Geol. (IAGI), Semarang, 18p.

Nugraha, A.M.S. & R. Hall (2012)- Cenozoic history of the East Java forearc. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-028, p. 1-21.
(E Java forearc stratigraphy 6 tectono-stratigraphic units with 3 major unconformities. Lowest unit with continuous strong reflectors may be Paleogene or Mesozoic and is absent under C and W Java. M Eocene-Lower Oligocene deposited above M Eocene unconformity during extensional phase, followed by U Oligocene-Lw Miocene deposition with arc volcanism. Localized contraction of Lower Miocene and older units prior to termination of arc activity. Extensive carbonate deposition above E-M Miocene unconformity during quiet period with reduced volcanism. Significant subsidence began in Late Miocene. Deformation at S side of forearc after deposition of U Miocene, interpreted to be caused by arrival of buoyant plateau at subduction margin)

Nugraha, A.M.S. & R. Hall (2013)- Cenozoic history of the East Java forearc. Berita Sedimentologi 26, p. 5-40.
(online at: www.iagi.or.id/fosi/files/2013/05/BS26-Java.pdf)
(similar to paper above)

Nugraha, A., F. Pambudi, V.S. Sundari, S. Sugiarto & S. Hussein (2014)- Karakteristik deformasi struktur pada sistem kompleks sesar mendatar Terombo di dusun Sumberan, Kecamatan Ngawen, Kabupaten Gunung Kidul. Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, P4P-01, p. 21-33.
(online at: https://repository.ugm.ac.id/137862/1/DOB-01.pdf)
('Characteristics of structural deformation in the Terombo horizontal fault complex in Sumberan village, Ngawen sub-district, Gunung Kidul regency'. Trembono fault complex NE-SW trending strike-slip faults in Tertiary rocks in S Mountains near Sumberan, deforming Kebo-Butak submarine volcaniclastic rocks)

Nugraha, K., I. Haryanto, Faisal Helmi & M.F. Rosana (2016)- Gravity collapse- structural model of Ciletuh Amphiteatre, West Java, Indonesia. Proc. Asia Oceania Geoscience Conference, p.
(Ciletuh amphitheatre is Pliocene - Pleistocene gravitational failure, forming amphitheatre that now exposes Eocene quartz sandstone unit and Cretaceous melange rock)

Nugrahadi, A., Y. Suracman, S. Mulyono, D. Muljawan, A. Lesanpura, J.P. Hutagaol & Kusnadi (1999)- Oblique subduction zone in the Southern West Java Offshore. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 73-82.

Nugrahanto, K. & M. Hutabarat (1994)- Reservoir characterization in a channel sand utilizing transgressive events: an example from the Talang Akar formation, offshore Northwest Java. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 88-103.
(Reservoir characterizion study of Late Oligocene BZZ-69B sand in upper Talang Akar sandstone in BZZ field, Arjuna Basin (incised valley fill))

Nugrahanto, K. & R.A. Noble (1997)- Structural control on source rock development and thermal maturity in the Ardjuna Basin, offshore northwest Java, Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia & Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 631-653.
(Ardjuna Basin originated during Eocene-Oligocene period of extension. Incorporates major source kitchen for hydrocarbons with at least 2.8 BB Oil and 5 TCF Gas discovered to date. Three sub-basins. S sub-basin thickest sediments (~14,000' in axis), followed by C (~10,000') and N (~9000') sub-basins)

Nugroho, D. (2016)- Evolusi sedimentasi batugamping Oligo-Miosen Formasi Rajamandala di daerah Padalarang, Jawa Barat. Ph.D. Thesis, Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('Evolution of Oligo-Miocene Rajamandala Formation limestone in the Padalarang area, West Java')

Nugroho, D., T. Simo, D. Noeradi, S.M. Fullmer, M.K. Hicks, S.E. Kaczmarek, C. Liu, J.T. Van Gorsel et al. (2009)- Significance of the sedimentology and stratigraphy for the evolution and demise of the Oligocene Rajamandala Limestone, Padalarang, West Java, Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc., IPA09-G-161, p. 11-24.
(Rajamandala Limestone Chattian carbonate platform, prograding to NE, drowned at end-Chattian)

Nurhandoko, B.E.B., S. Widowati, R. Kurniadi, M.R. Abda, A.D. Purnama, R. Martha, Susilowati, E. Fatiah & M.R. Asmarahadi (2016)- Integrated subsurface Temperature modeling: case study of East Java Basin. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-723-G, 9p.
(Subsurface temperatures along N-S profile in E part of East Java basin)

Nur Hasjim (1988)- Le Neogene marin du Nord-Est de Java, Indonesie; etude biostratigraphique (foraminiferes et nannoplancton). Geomedia Mem. 1, p. 1-129.
(‘The marine Neogene of NE Java; biostratigraphic study'. Foraminifera and nannofossils listings from several classic Tertiary outcrop sections in NE Java)

Nursecha, M.A.Q., J. Jyalita & S. Husein (2014)- Tectonic control on hydrocarbon seepages of Sijenggung, North Serayu Basin, Central Java. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-SG-021, 13p.
(N Serayu Basin, N of Karangsambung in C Java has number of hydrocarbon (mainly gas?) seeps. North Serayu Basin back-arc basin with major subsidence in M Miocene- E Pliocene with Halang Fm volcanic arc deposits in Late Miocene, intense N-S compressional folding in (Late?) Pliocene and reactivation of volcanism in Pleistocene. Pekacangan river section with Sijenggung gas seep in deep marine E-M Miocene Rambatan Fm. Multiple thrust faults/ folds with >200% shortening believed to be responsible for hydrocarbon seepage)

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Obermann, A., Karyono, T. Diehl, M. Lupi & A. Mazzini (2018)- Seismicity at Lusi and the adjacent volcanic complex, Java, Indonesia. Marine Petroleum Geol. 90, p. 149-156.
(Ongoing seismic events events in E Java mainly nucleate at 8-13 km depths below Arjuno-Welirang volcanic complex. Practically no seismicity in sedimentary basin hosting Lusi mud eruption. Focal mechanisms indicate mainly sinistral strike-slip faulting SW of Lusi and suggesting Watukosek fault system extends from volcanic complex towards NE of Java)

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(Nannofossils from M Eocene- M Oligocene Nanggulan Fm, E Miocene Sentolo Fm, etc. 'Old Andesites' underlain by mid Oligocene Sphenolithus distentus, overlain by middle E Miocene S. belemnos zone CN2. Upper part of Sentolo Fm may be E Pliocene age)

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(Brown shale clast in Paleogene breccia in Karangsambung with Campanian tropical radiolarians not seen in coeval Campanian assemblages from blocks in Luk-Ulo melange, suggesting juxtaposition of material from different paleolatitudes in Late Cretaceous, but juxtaposed before deposition of Paleogene)

Oktariani, H., Winantris & L. Fauzielly (2018)- Fosil kayu *Dryobalanoxylon* sp. pada Formasi Genteng di Kabupaten Lebak Provinsi Banten dan paleofitogeografinya di Indonesia. Bulletin of Geology (ITB) 2, 1, p. 175-196.
(online at: https://buletingeologi.com/index.php/buletin-geologi/issue/view/4/Paper-5%20vol.%202%20no.%201)
('Fossil wood Dryobalanoxylon sp. in the Genteng Formation in Lebak Regency, Banten, and its paleophytogeography in Indonesia'. E Pliocene fossilized wood of dipterocarp family in Genteng Fm tuff in Sindangsari Village, W Java. Genus known from Miocene- Pleistocene of Sumatra, W Java and Kalimantan)

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(English version of Oktariani et al. 2018)

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(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/459/397)

Oostingh, C.H. (1933)- Neue Mollusken aus dem Pliozan von Java. De Mijningenieur 14, 11, p. 192-197 and 14, 12, p. 212-215.
('New molluscs from the Pliocene of Java'. New bivalve and gastropod species from Cimanceuri area, S of Bantam, collected by Oppenoorth in 1925)

Oostingh, C.H. (1934)- Die Purpurinen aus dem Pliocan des Tjidjoerej in Cheribon, Java. De Ingenieur in Nederlandsch-Indie (IV) 1, 2, p. 28-30.
(On species of Pliocene gastropod genus Thais, incl. T. (Stramonita) martini n.sp. from Bumiayu, W Java)

Oostingh, C.H. (1934)- Aanteekeningen over eenige bivalven uit het Neogeen van Java. De Ingenieur in Nederlandsch-Indie (IV) 1, 4, p. 19-22.
('Notes on some bivalves from the Neogene of Java'. On Mio-Pliocene Metis and Cardilia from various localities on Java)

Oostingh, C.H. (1934)- Die Cardiiden aus dem Cheribonien von Bentasari in Tegal, Java. De Ingenieur in Nederlandsch-Indie (IV), 1, 5, p. 76-78.
('The cardiids from the Cheribonian of Bentasari in Tegal, Java'. Three species of Cardium-type molluscs from Pliocene of Bentarsari basin, C Java, including a Laevicardium described here for first time from Indonesia)

Oostingh, C.H. (1935)- Einige neue Gastropoden aus dem Miocan von Mittel-Bantam (Java). De Ingenieur in Nederlandsch-Indie (IV), 2, 9, p. 79-83.
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Oostingh, G.H. (1935)- Die Mollusken des Pliozaens von Boemiajoe (Java). Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 26, p. 1-247.
('The molluscs from the Pliocene of Bumi Ayu, Java')

Oostingh, C.H. (1938)- Die Mollusken des Pliocaens von Sud-Bantam in Java- part 1. De Ingenieur in Nederlandsch-Indie (IV) 5, 2, p. 17-33.
('The molluscs from the Pliocene of South Bantam, Java'. First of series of 10 papers)

Oostingh, C.H. (1938)- Die Mollusken des Pliocaens von Sud-Bantam in Java, II (1. Fortsetzung). De Ingenieur in Nederlandsch-Indie (IV) 5, 3, p. 35-47.
('Molluscs from the Pliocene of South Bantam, Java'; part 2'. Descriptions of species of gastropod Clathrodrillia group)

Oostingh, C.H. (1938)- Die Mollusken des Pliocaens von Sud-Bantam in Java, III (2. Fortsetzung). De Ingenieur in Nederlandsch-Indie (IV) 5, 4, p. 49-60.
('Molluscs from the Pliocene of South Bantam, Java'; part 3'. Descriptions of species of gastropod family Terebridae)

Oostingh, C.H. (1938)- Die Mollusken des Pliocaens von Sud-Bantam in Java, IV (3. Fortsetzung). De Ingenieur in Nederlandsch-Indie (IV) 5, 7, p. 105-115.
(online at: http://colonialarchitecture.eu/islandora/object/uuid%3A19ac4121-741f-4fa7-9dc5-a6ff5a19e9c8/datastream/PDF/view)
('Molluscs from the Pliocene of South Bantam, Java'; part 4'. Descriptions of species of gastropod families Volutacea, Olividae, Harpidae)

Oostingh, C.H. (1938)- Die Mollusken des Pliocaens von Sud-Bantam in Java, V (4. Fortsetzung). De Ingenieur in Nederlandsch-Indie (IV) 5, 8, p. 119-129.
('Molluscs from the Pliocene of South Bantam, Java'; part 5'. Descriptions of species of gastropod family Marginellidae)

Oostingh, C.H. (1939)- Die Mollusken des Pliocaens von Sud-Bantam in Java, VI. De Ingenieur in Nederlandsch-Indie (IV) 6, 1, p. 7-16.
('Molluscs from the Pliocene of South Bantam, Java'; part 6'. Descriptions of species of gastropod family Mitridae)

Oostingh, C.H. (1939)- Die Mollusken des Pliocaens von Sud-Bantam in Java, VII. De Ingenieur in Nederlandsch-Indie (IV) 6, 4, p. 43-51.
('Molluscs from the Pliocene of South Bantam, Java'; part 7'. Descriptions of species of gastropod group Mitra)

Oostingh, C.H. (1939)- Die Mollusken des Pliocaens von Sud-Bantam in Java- part VIII. De Ingenieur in Nederlandsch-Indie (IV) 6, 8, p. 103-119.
('Molluscs from the Pliocene of South Bantam, Java'; part 8'. Descriptions of species of gastropod family Fasciolariidae, Melongenidae, Buccinidae, etc.)

Oostingh, C.H. (1939)- Die Mollusken des Pliocaens von Sud-Bantam in Java, IX. De Ingenieur in Nederlandsch-Indie (IV) 6, 12, p. 163-187.
('Molluscs from the Pliocene of South Bantam, Java'; part 9'. Descriptions of species of gastropod family Nassariidae, etc.)

Oostingh, C.H. (1939)- Note on the stratigraphical relations between some Pliocene deposits in Java. De Ingenieur in Nederlandsch-Indie (IV), 6, 9, p. 140-141.
(On correlations of Pliocene formations in Cirebon, Bumiayu and Kendeng regions)

Oostingh, C.H. (1940)- Die Mollusken des Pliocaens von Sud-Bantam in Java, X. De Ingenieur in Nederlandsch-Indie (IV) 7, 4, p. 45-60.
('Molluscs from the Pliocene of South Bantam, Java'. Last of series of 10 papers. Descriptions of species of gastropod families Pyrenidae and Muricidae)

Oostingh, C.H. (1941)- Three new species of gastropods from the Pliocene of Semarang (Central Java). De Ingenieur in Nederlandsch-Indie (IV) 8, 7, p. 63-64.
(Siphonalia (Pseudoneptunea) inflata, Terebra (Strioterebrum) hetzeli and Turris (Gemmula) bemmeleni)

Oppenoorth, W.F.F. (1931)- Java kaartering. Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Algemeen Gedeelte, p. 38-48.
('Java mapping program'. With summary of provisional Eocene- Pleistocene stratigraphic subdivision of Java')

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(Overview of geology and fauna of ~200m thick Middle Eocene section of Nanggulan, ~20 km W of Yogyakarta. Three levels: basal quartz sandstone (>80m; marine transgression; Axinea= Glycymeris Beds) with a 1m thick coal bed and layers rich in Nummulites (Djokdjokartae Beds), overlain by marls with Discocyclina and tuffs (Discocyclina Beds), overlain by andesitic sandstone, also with Discocyclina. Eocene intruded and overlain by by E Miocene 'Old Andesites')

Osberger, R. (1954)- Research on fossil corals from Java. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 110, p. 201-207.
(Work on corals from Bandung survey collections from four localities on Java: Geger Tjabe (C Java, SE of Tegal; Pliocene reef), Pamitran (SW of Nyalindung, SW Java; M-U Miocene), Djunggrangan (E Miocene) and Punung (Southern Mountains, C Java, NW of Pacitan; M Miocene)

Osberger, R. (1954)- Jungtertiare Korallen von Java, Teil I. Neues Jahrbuch Geol. Palaont. Abhandl. 100, 1, p. 119-158.
('Late Tertiary corals from Java, part 1')

Osberger, R. (1955)- Jungtertiare Korallen von Java, Teil II. Neues Jahrbuch Geol. Palaont. Abhandl. 101, 1, p. 39-74.
('Late Tertiary corals from Java, part 2'. Descriptions of Indosmilia cf. bantamensis, Scalariogyra escharoides, Coelocoenia spp., Petrophylliella spp., Ceratophyllia javana, etc. from Lower Miocene at Punung, and Anisocoenia crassisepta, Favites virens, Favia speciosa, Orbicella borradailei, Echinopora gracilis, Stylophora spp., Seriatopora ornata, Goniopora affinis Dictyaraea, Madrepora duncani and Alveopora polyacantha from the upper M Miocene near Cimerang)

Osberger, R. (1955)- Beschreibung einiger tertiarer Korallen von Java. Neues Jahrbuch Mineral. Geol. Palaontologie, Monatshefte, 1955, 6, p. 252-256.
('Description of some Tertiary corals of Java')

Osberger, R. & E. von Krauss (1953)- Die Manganerz Lagerstatte Burahol bei Karangnunggal auf Java. In: Skizzen zum Antlitz der Erde, Festschrift Kober, Vienna, p. 336-353.
('The Burahol manganes ore deposits near Karangnunggal on Java'. On manganese oxide ores of Burahol hill near Karangnunggal, S of Tasikmalaya, SW Java, in andesitic breccias and tuffs in sequence of E Miocene deposits. Weathering of basic volcanic rocks supplied manganese, and kaolin beds in beginning stages of laterization provided alkaline environment needed to promote precipitation)

Paltrinieri, F., P. Saint-Marc & B. Situmorang (1976)- Stratigraphic and paleogeographic evolution during Cenozoic time in Western Indonesia. SEAPEX Offshore SE Asia Conf., Singapore 1976, Paper 10, p. 1-29.
(Overview of W Indonesia Cenozoic stratigraphy and paleogeography. In W Indonesia two phases of sedimentation, Eocene- to early M Miocene and late M Miocene- Late Pliocene. Three major orogenic events: early Tertiary, early M Miocene, Plio-Pleistocene)

Paltrinieri, F., S. Sajekti & Suminta (1976)- Biostratigraphy of the Jatibungkus section (Lokulo area) in Central Java. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 195-204.

(Jatibungkus section (Karangsambung Fm) with continuous M Eocene (P 14)- earliest Oligocene (P 17) marine section with planktonic foraminifera. Jatibungkus Mb ~80m thick reefal limestone in middle of section between pF zones P14-P15, and with Late Eocene larger foraminifera Discocyclina and Pellatispira (LBF zone Tb). This is relatively coherent package in overall chaotic olistostrome area. Late Eocene faulting/ uplift event, tied to S-ward shift of subduction zone, caused period of non-deposition, with sedimentation resuming in Late Oligocene (zone N2) clay-breccia formation. Succession almost normal, although probably part of Eocene olistostrome complex)

Pandita, H. (2008)- Lingkungan pengendapan Formasi Sambipitu berdasarkan fosil jejak di Daerah Nglipar, Java. Jurnal Teknologi Mineral (ITB) 15, 2, p. 85-94.
('Depositional environment of the Sambipitu Formation based on trace fossils in the Nglipar Region')

Pandita, H. (2014)- Paleontologi moluska Neogen genus *Turritella* dari Pulau Jawa sebagai dasar penyusunan biozonasi Turritella. Ph.D. Thesis Inst. Teknologi Bandung (ITB), p.
('Neogene molluscan paleontology of the genus Turritella from Java as basis for development of a Turritella biozonation')

Pandita, H. & S. Pambudi (2007)- Study trace fossil at Sambipitu Formation in Nglipar Area. Proc. Joint Conv. 32nd HAGI, 36th IAGI, and 29th IATMI, Bali, JCB2007-014, 9p.
(Study of trace fossils of M Miocene (N12-N13) turbiditic Sambipitu Fm in two sections in Nglipar Area, S Mountains. Common trace fossils, including Chondrites, Rhizocorallium and Thalassinoides. Three facies: Cruziana, Zoophycos and Cruziana-Skolithos facies. Cruziana facies present in Kedungkeris section in E, but not in Ngalang section in W, suggesting deeper paleoenvironment of lower part of Sambipitu Fm in West)

Pandita, H. & Y. Zaim (2009)- Paleoekologi Formasi Pucangan di daerah Kabuh ditinjau dari kandungan fosil moluska. Prosiding 4th Seminar Sekolah Tinggi Teknologi Nasional, Yogyakarta, p. 172-180.
(online at: http://retii.sttnas.ac.id/wp-content/uploads/2015/08/RETII2009.pdf)
('Palaeoecology of the Pucangan Formation in the Kabuh area based on fossil molluscs content'. E Pleistocene deposits of E Kendeng zone, E Java with two paleoecologically significant mollusc assemblages: Corbula-Ostrea (brackish-marine lower delta plain) and Arca- Ostrea (marine lower delta plain))

Pandita, H., Y. Zaim, Aswan & Y. Rizal (2013)- Relationship of biometrical aspect of Turritellidae with geochronological aspect in West Java. Int. J. Geosciences 4, 4, p. 777-784.
(online at: www.scirp.org/journal/PaperInformation.aspx?paperID=33473.U2QRPfldWpA)
(Turritellidae gastropods studied in 5 localities in W Java (type localities of Martin 1919 and Oostingh 1938). Two consistent groups: small size in U Miocene- Lower Pliocene and large shells in Pliocene-Pleistocene)

Pandito, R.H.B., R.M Zainal, I. Rahman & A. Haris (2017)- New perspective for exploration: hydrocarbon potential of Ngimbang Formation- Northeast Java Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(S well tested gas in Late Oligocene limestone in 2013 (In W Tuban block? Not real well name? Should be Lower Kujung Fm?; JTvG)

Panigoro, H. (1981)- Geologi dan asosiasi ofiolit daerah Ciletuh, Kabupaten Sukabumi, Jawa Barat. Thesis, Inst. Teknologi Bandung, p. 1-132. *(Unpublished)*
('Geology and ophiolite association of the Ciletuh area, Sukabumi, West Java')

Panjaitan, J.P. & B.D. Sugihartoko (2007)- Porosity development and diagenetic study at Parigi Formation, Well JPP-14 ñKarina Fieldò North West Java Basin based on wireline log and petrography data. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-SG-020, 6p.
(Characterization of porosity and diagenesis of Parigi Fm carbonate in JPP-14 well, 'Karina Field', onshore NW Java basin)

Panjaitan, S. (2009)- Aplikasi metode gaya berat untuk identifikasi potensi hidrokarbon di dalam cekungan Jakarta dan sekitarnya. J. Sumber Daya Geologi 19, 6, p. 341-350.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/218/208)
('Application of gravity methods for identification of hydrocarbon potential in the Jakarta basin and beyond'.)

Panjaitan, S. (2010)- Prospek migas pada Cekungan Jawa Timur dengan pengamatan metode gayaberat. Bul. Sumber Daya Geologi 5, 3, p. 168-181.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/480)
('Oil and gas prospects in the East Java Basin using gravity data'. Bouguer Anomalies in E Java basin three types: (1). High gravity anomaly formed by limestone high; (2) Medium gravity anomaly formed by sedimentary rock basin and (3) Low gravity anomaly formed by Kendeng Zone)

Panjaitan, S. & N.Astawa (2010)- Studi potensi migas dengan metode gayaberat di lepas pantai utara Jakarta. J. Geologi Kelautan 8, 1, p. 23-35.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/183/173)
('Study of the oil and gas potential off the north coast of Jakarta with gravity methods'. N-S normal faults and E-W reverse faults shown on gravity model)

Pannekoek, A. (1936)- Beitrage zur Kenntnis der Altmiocenen Molluskenfauna von Rembang (Java). Ph.D. Thesis University of Amsterdam, p. 1-80.
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:038802000:pdf)
('Contributions to the knowledge of the Early Miocene mollusc fauna of Rembang (Java)'. Doctorate thesis under Prof. H. Gerth, with descriptions of Early Miocene molluscs, mainly from Sedang oil concession, Rembang zone, NE Java. Little or no stratigraphy)

Pannekoek, A.J. (1938)- De geomorphologie van het West-Progo gebergte. Jaarverslag Topographische Dienst Nederlandsch- Indie 34, p. 1-30.
(‘The geomorphology of the W Progo Mountains', C Java)

Pannekoek, A.J. (1946)- Geomorfologische waarnemingen op het Djampang-Plateau in West Java. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 63, 3, p. 340-367.
(Geomorphology of Jampang Plateau, SW Java. Eocene with quartz sandstones but no volcanics, strongly folded before deposition of widespread Miocene volcanoclastic sediments. Folded E-M Miocene (E Miocene Jampang series andesitic breccias and tuffs and M Miocene Cimandiri series) unconformably overlain by Late Miocene volcanoclastics). Uplift and tilting of Jampang region in M Pleistocene)

Pannekoek, A.J. (1948)- Enige karstterreinen in Indonesie. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 66, p. 209-214.
(‘Some karst terrains in Indonesia’, including Central-East Java Southern Mountains)

Pannekoek, A.J. (1949)- Outline of the geomorphology of Java. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 66, p. 270-326.
(Rel. extensive discussion of geomorphologic zones and features of W, C and E Java)

Panuju & R. Kapid (2007)- Revisi biostratigrafi nanoplangton Miosen Awal bagian bawah (Zona NN1-NN2) di Cekungan Jawa Timur Utara. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, JCB2007-097, p. 617-628.
('Revision of the basal Early Miocene nannoplankton zonation (zones NN1-NN2) in the NE Java Basin'. Basal Miocene zone NN1 zone, characterized by Top Helicosphaera recta at bottom and Base Discoaster druggii at top, can be sudivided into 3 subzones by Top Clausiococcus fenestratus and Top Cyclicargolithus abisectus or Sphenolithus delphix. Zone NN2, characterized by Base Discoaster druggii at base Top Triquetrorhabdulus carinatus at top, can be subdivided by Top Ilselithina fusa (based on Rembang zone outcrop samples?))

Panuju, G. Rahmat, A. Priyantoro, E. Wijaksono & B. Wicaksono (2017)- Analisis sikuenstratigrafi untuk identifikasi kompartmentalisasi reservoir karbonat Formasi Ngimbang Blok Suci, Cekungan Jawa Timur Utara. Lembaran Publikasi Minyak dan Gas Bumi (Lemigas) 51, 3, p. 145-157.
(?online at: http://www.journal.lemigas.esdm.go.id/ojs/index.php/LPMGB/article/view/26/27)
('Sequence stratigraphic analysis for identification of carbonate reservoir compatmentalization of the Ngimbang Formation in the Suci Block, NE Java Basin'. Study of wells and seismic sections indicates Ngimbang carbonate reservoirs deposited in Late Eocene- E Oligocene in inner neritic- upper bathyal environments, shallow in W (KMI-1) to deeper in E (Suci- 2). Three separate units, including Late Eocene carbonate platform facies around Suci-2, Eocene- basal Oligocene carbonate platform facies around KMI-1 and Suci 2 and upper E Oligocene reef facies around Suci 1 well. Gas accumulation only in Suci-1)

Park, R.K. (2003)- A modern carbonate environment and model for hydrocarbon exploration and development: Pulau Seribu Field Trip, May 17-20, 2003. Indon. Petroleum Assoc. (IPA), Jakarta, p.

Park, R.K., A. Matter, P.C. Tonkin (1995)- Porosity evolution in the Batu Raja carbonates of the Sunda Basin - windows of opportunity. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 163-184.
(Much of E Miocene Batu Raja carbonate porosity of meteoric freshwater leaching origin, assssociated with 4th and 5th order cycles of sea level change. Composite LBR facies map Krisna-Yvonne area)

Park, R.K., C.T. Siemers & A.A. Brown (1992)- Holocene carbonate sedimentation, Pulau Seribu, Java Sea- the third dimension. In: C.T. Siemers, M.W. Longman et al. (eds.) Carbonate rocks and reservoirs of Indonesia: a Core workshop. Indon. Petroleum Assoc. (IPA), Jakarta, p. 2-1 to 2-39.
(Shallow core holes on Thousand Islands off Jakarta show ~30m of coral-dominated carbonate, formed mainly between 10,000- 4500 yrs BP. Overall cementation limited. Porosities- permeabilities very high in relatively unaltered Holocene carbonate sediment, especially in coral-rudstone rampart deposits)

Parkinson, C.D., K. Miyazaki, K. Wakita, A.J. Barber & D.A. Carswell (1998)- An overview and tectonic synthesis of the pre-Tertiary very-high-pressure metamorphic and associated rocks of Java, Sulawesi and Kalimantan, Indonesia. The Island Arc 7, 1-2, p. 184-200.
(High-P metamorphic rocks in Cretaceous accretionary complexes of Java, Sulawesi and SE Kalimantan. Predominantly low-intermediate metamorphic grade and 110-120 Ma K-Ar radiometric ages. Metamorphic rocks exhumed from greater depths include eclogite and jadeite-glaucophane-quartz rock in Luk Ulo, C Java. Many metamorphic rocks recrystallized in N-dipping subduction zone at margin of Sundaland craton in E Cretaceous. Exhumation possibly facilitated by collision of Gondwanan continental fragment with Sundaland margin at ~120-115 Ma)

Partakusuma, A. & M. Effendi (1977)- Production of Jatibarang volcanic rock. Proc. First Asean Conference, p. 377-384.

Patmosukismo, S. & I. Yahya (1974)- The basement configuration of the Northwest Java area. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 129-152.
(Onshore NW Java basin basement penetration in wells include granitoids, with K-Ar ages 94 Ma, 65 Ma (Jatibarang) and 58 Ma (Tangerang). Also metamorphic argillite at Pamanukan dated as ~213 Ma (Late Triassic))

Patonah, A. (2011)- Lingkungan tektonik ofiolit komplek melange Ciletuh Jawa Barat berdasarkan pendekatan petrologi. Bull. Scientific Contr. (UNPAD) 9, 3, p. 139-151.
(online at: http://journals.unpad.ac.id/bsc/article/view/8270)
(Petrology/ geochemistry of partly metamorphosed ophiolite sequence in Ciletuh melange complex, SW Java. Composed of serpentinite, hartzburgite, dunite, gabbro and pillow basalt)

Patonah, A., Haryadi & B. Priadi (2009)- Petrology of high pressure metamorphic rocks from Luk Ulo Melange Complex, Karangsambung, Central Java-Indonesia. Bull. Scientific Contr. (UNPAD) 7, 1, p. 1-6.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8228/3776)

(Glaucophane schist from Luk Ulo melange complex at Lamuk. GOA and Kalimuncar with glaucophane, crossite, albite, quartz, rare lawsonite. Formed at 500-580 °C and 4- 14.5 kbar, in lower interval of subduction zone. With some retrograde metamorphism. Radiometric age of mica schist ~85-102 Ma (Suparka 1987))

Patonah, A., F. Helmi, J. Prakoso & T. Widiaputra (2015)- Basement komplek Bayah, Kabupaten Lebak, Propinsi Banten. Bull. Scientific Contr. (UNPAD) 13, 3, p. 182-191.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8405/3912)
('Bayah basement complex, Lebak District, Banten Province'. Metamorphic rocks believed to be basement of Bayah complex in SW Java exposed at reverse fault, together with younger rocks (Eocene Bayah Fm and Oligocene Cihara granodiorite). With foliation, boudinage and crenulation structures. Multiple types of metamorphic rocks (mica schist, amphibolite schist), low-high grade metamorphism and different protoliths, interpreted as result of intermediate pressure metamorphism)

Patonah, A. & H. Permana (2010)- Petrologi amfibolit komplek melange Ciletuh, Sukabumi, Jawa Barat. Bull. Scientific Contr. (UNPAD) 8, 2, p. 69-77.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8245)
(Amphibolite in Ciletuh melange complex associated with serpentinite, harzburgite, dunite, gabro and basalt. Dominated by amphibole, andesine and rare quartz. Formed at P 5-6 kbar, T 640-660°C. Amphibolites result of ophiolite obduction, with retrograde metamorphism to amphibolites epidote during accretion and uplift in Late Oligocene)

Patonah, A. & I. Syafri (2014)- Karakteristik batuan metamorf Bayah di Desa Cigaber, Kabupaten Lebak, Provinsi Banten. Bull. Scientific Contr. (UNPAD) 12, 2, p. 92-98.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8369/pdf)
('Characteristics of Bayah metamorphic rocks in Cigaber village, Lebak, Banten Province'. Metamorphic rocks in Bayah Complex dominated by biotite schist, some actinolite schist, hornblende schist and chlorite schist. Regional metamorphism with retrograde metamorphism, probably during Eocene- Oligocene uplift)

Patriani, E.Y. (2011)- Studi biofasies formasi foraminifera berumur Miosen Tengah pada batuan karbonat di Pegunungan Selatan, daerah Wonosari, D.I.Yogyakarta. M.Sc. Thesis, Inst. Teknologi Bandung (ITB), p. *(Unpublished)*
('Study of foraminifera biofacies in the Middle Miocene carbonate formations in the Southern Mountains, Wonosari area, D.I.Yogyakarta')

Patriani, E.Y., S. Rijani & D. Sundari (2016)- Perubahan biofasies foraminifera pada batugamping di Pantai Baron dan Serpeng, Provinsi D.I. Yogyakarta. J. Geologi Sumberdaya Mineral 17, 2, p. 61-71.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/19/18)
('Foraminifera biofacies change in the limestone at Baron Beach and Serpenge, Yogyakarta Province'. E-M Miocene Wonosari Fm limestones at Baron Beach and Serpeng area of S Mountains. Two groups of carbonate facies: (1) at base basinal, with planktonic foraminifera, (2) overlain by foreslope, with Cycloclypeus, Katacycloclypeus annulatus and Amphistegina. Also Lepidocyclina and Miogypsina)

Pendowo, B. & H. Samodra (1997)- The geology of the Besuki quadrangle, East Java (Quadrangle 1600-3), scale 1: 100,000, 2nd Ed., Geol. Res. Dev. Centre (GRDC), Bandung, 10p.
(Second edition of 1991 map in E Java. Folded Late Miocene- Pliocene sediments with zircon-bearing tuff of 7.3Ma age. Late Pliocene- Recent volcanics. Late Pliocene (2 Ma) leucite-bearing volcanics of G. Ringgit unconformably overlain by Pleistocene volcanics of Ringgit, Argopuro, Old Ijen, etc.)

Perdana, L.A., Amrizal & I.G.B.E. Sucipta (2008)- The P-T path of metamorphic rocks from Karangsambung area, Kebumen, Central Java. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 139-147.
(Lok Ulo Cretaceous tectonic melange complex consists of dismembered ophiolites, sedimentary rocks, and schists and gneisses as tectonic slabs in black-shale matrix. High pressure metamorphism in Karangsambung area produced metamorphic rock between glaucophane blueschist and eclogite, formed at depth of ~35-50 km. Eclogites were subducted to ~70 km depth at geothermal gradient of ~6 C°/km)

Perdana, R., M. Haikal, W.K. Hidajat & Fahrudin (2016)- 3D strike-slip Fault model in Kendeng Zone using data combination of structural geological mapping and analogue sandbox modeling: a case study of the Kedungjati Fault, Grobogan District, Central Java Province. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-288-SG, 17p.
(Structural interpretation of area S of Kedungjati, W Kendeng zone, C Java. E-W trending thrust faults of M Miocene- younger sediments and younger N-S trending dextral strike-slip faults)

Permadi, R. & U.M. Saputra (2014)- Studi palinologi untuk sikuen stratigrafi di lintasan A Formasi Tapak, Cekungan Banyumas. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-279, 5p.
('Palynology study for sequence stratigraphy of track A, Tapak Formation, Banyumas Basin'. Palynology of 166 samples from 3 areas in Banyumas basin, C Java: Kedung Randu, Mount Tugel and Bunkanel. All with Stenochlaeniidites papuanus and within Late Pliocene Dacrycarpidites australiensis- Podocarpus imbricatus palynozone. Depositional environments from back-mangrove to mangrove. Three sequences identified. No samples location map)

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(Sequence stratigraphy study of short cored interval in Cibulakan Fm of well 'M-13', NW Java Basin)

Permana, G.A., M.A. Nurwibowo, R. Kapid & A.H. Harsolumakso (2004)- Paleogeographic evolution of the North-West Kebumen sub-basin, Central Java, Indonesia. In: Int. Symposium Geologic evolution of East and Southeast Asia, Bangkok 2004, p.

Permana, H., E.Z. Gaffar, Sudarsono, H. Nurohman & S. Indarto (2015)- Struktur dan tektonik lereng selatan 'kaldera purba Garut-Bandung', Garut Selatan, Jawa Barat. In: H. Harjono et al. (eds.) Pros. Pemaparan Hasil Penelitian Geoteknologi 2015, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. I51-I62.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/04/Prosiding-2015.pdf)
('Structure and tectonics of the southern slope of the 'Garut-Bandung ancient caldera', South Garut, W Java')

Permana, H., Munasri, M.M. Mukti, A.U. Nurhidayati & S. Aribowo (2018)- The origin of oceanic crust and metabasic rocks protolith, the Luk Ulo melange complex, Indonesia. Proc. Global Colloquium on GeoSciences and Engineering (GCGE2017), Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012004, p. 1-5.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012004/pdf)
(Luk Ulo Paleocene-Eocene melange complex composed of tectonic slices of rocks (serpentinite, gabbro, eclogite, blueschist, amphibolite, granite, chert, etc.) in scaly clay matrix. Metamorphic rocks formed in E Cretaceous (101-125 Ma) at 70-100 km depth and ~6°C/km thermal gradient. Basalt of subducted oceanic crust Cretaceous age (130-81 Ma) comparable to ages of cherts (Early-Late Cretaceous). Metabasic rocks (eclogite, blueschist, amphibolite) possibly originated as part of edge of microcontinent that merged as part of melange during collision with Eurasian margin)

Permana, H., P.S. Putra, A.F. Ismayanto, I. Setiawan, M. Hendrizan & M.M. Mukti (2010)- Perkembangan cekungan antar-busur di daerah Majalengka- Banyumas: sejarah tektonik kompleks di wilayah batas konvergensi. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-232, 8p.
('Intra-arc basin development in the region of Majalengka-Banyumas: complex tectonic history in convergent margin'. Majalengka - Banyumas area M- L Miocene intra-arc basin with E-W and NW-SE structural grains parallel to postulated intra-arc basin, which could be responsible for development of sub-basins and volcanic products through splay or duplex fault or pull apart related to oblique subduction. Middle-Late Miocene submarine-fan complex. Basin now inverted and forms mountain range)

Permana, H., P.S. Putra, A.F. Ismayanto, I. Setiawan, M. Hendrizan & M.M. Mukti (2011)- Perkembangan cekungan antar-busur di daerah Majalengka- Banyumas: sejarah tektonik kompleks di wilayah batas konvergensi. J. Sumber Daya Geologi 21, 2, p. 77-90.

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('Metasedimentary rocks of the Banjarnegara area, Central Java'. Rocks in Luk Ulo melange commonly affected by low grade metamorphism, especially feldspathic and arkosic greywackes)

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Pfeiffer, J.P. & F.C. van Heurn (1928)- Eenige tot dusver niet beschreven fossile houtsoorten van Java: Verslag vergadering Afd. Natuurkunde, Kon. Akademie Wetenschappen, Amsterdam 37, 5, p. 469-475.
('Some previously undescribed fossil wood species from Java'. Silicified wood from Bolang estate, 35km W of Bogor, dominated by Dipterocarpaceae family: Dipterocarpoxylon and Dryobalanoxylon, also Sapindoxylon and Parinarioxylon)

Piccoli, G. (ed.) (2001)- New studies on the Cenozoic fossil fauna of Nanggulan (Java Indonesia). Memorie Scienze Geol., Padova, 53, p. 15-65.
(Collection of ten short papers by Italian students on Middle Eocene stratigraphy and molluscs of Nanggulan section, 20km W of Yogyakarta)

Piccoli, G. & Premonowati (2001)- New studies about molluscs from Eocene of Nanggulan (Java Indonesia). Memorie Scienze Geol., Padova, 53, p. 17-22.
(Nanggulan exceptionally rich Eocene mollusc faunas, known since Verbeek & Fennema 1896. 300m thick mudstone-dominated section, subdivided into Axinea Beds at base, (Nummulites) Djokjokartae Beds in middle and Discocyclina Beds at top, and mainly of Middle Eocene age)

Piccoli, G. & E. Savazzi (1983)- Five shallow benthic faunas from the Upper Eocene (Baron, Priabona, Garoowe, Nanggulan, Takashima). Boll. Soc. Paleontologica Italiana 22, 1-2, p. 31-47.
(Comparison of five shallow marine benthic mollusc faunas from U Eocene of Tethys domain, incl. Nanggulan in C Java. Martin (1914-1931) created many new species names for molluscs from Nanggulan, considering them as endemic, but many are synonyms of S European species of same age. Eocene Nanggulan molluscs equatorial assemblages)

Pireno, G.E. & A. Roniwibowo (2016)- Conventional biogenic gas exploration in the northwestern part of East Java Basin. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc., Jakarta, 26-TS-16, p. 1-13.
(Two recent commercial biogenic gas discoveries in NW part of E Java Basin (Bawean Arch): Lengo (1998) and Mustika (2015). Also in JS15-1/ Kepodang field (1971). Gas reservoir in Miocene Kujung I carbonate platform; sourced from coal and carbonaceous shales of Kujung III Fm in Muriah Trough, <7000' deep and low geothermal gradient. Many wells in area with very high CO2 gas. Lengo-1 biogenic gas 68% methane, 12% CO2 and 20% Nitrogen)

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(Landforms of South Semarang area strongly effected by Quaternary tectonic activity)

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(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/216/206)
('Paleogene- Neogene pollen from the Nanggulan and Karangsambung areas, Central Java'. Study of pollen from Nanggulan area suggest Eocene- Oligocene age. Karangsambung pollen from M Eocene (Karangsambung Fm)- Pliocene age (Halang Fm). Pollen deposited in littoral environments(?))

Polhaupessy, A.A. & Sudijono (1985)- Palynological study of Quaternary formations in the Solo and Madiun areas. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 17, p. 109-117.
(Pollen analyses of Pucangan, Kabuh and Setri Formations. Predominance of Graminae pollen suggest widespread grass-dominated swamp and possibly savannah in all formations, suggesting Late Pliocene-Pleistocene climates more seasonal than today)

Pott, G. (1942)- Summaries of the coal fields of (a) Bajah and Tjimandiri (South Bantam) and (b) Bodjongmanik (Bantam). Report Geological Survey, Bandung, p. *(Unpublished)*

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('The Cenozoic mollusc faunas of Nanggulan and Panggang near Yogyakarta (Java, Indonesia)')

Pozzobon, M. (2001)- Some Eocene molluscs from Nanggulan and a new species of *Cyclina* (Bivalvia) in the Miocene mollusc assemblage from Panggang (Java, Indonesia). Memorie Scienze Geol., Padova, 53, p. 36-40.
(Listings of mollusces from M Eocene of lower Nanggulan Fm at Kalisonggo (14 gastropod species; 21% in common with Tethys) and from Early Miocene 'back-reef' limestones of lower Wonosari Fm at Panggang, 21 km SSW of Yogyakarta (17 gastropod, 14 bivalve species; no Tethyan connections; all Indo-West Pacific))

Prakoso, A., I.F. Firdaus & S. Sutiyono (2010)- Utilizing image log to generate fracture density map in the Pangkah Field, East Java, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-010, 6p.
(Ujung Pangkah Field 1998 oil-gas discovery off NE Java, N of Solo River delta. Reservoir Early Miocene platform margin carbonate reef build-up with complex reservoir properties and common faulting/ fractures. Fracture density decays quickly in about 200' from main faulting zone; prevailing fracture direction NE-SW)

Pramono H., C.H.C. Wu & R.A. Noble (1990)- A new oil kitchen and petroleum bearing subbasin in the Offshore Northwest Java Area. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 253-278.

(North Seribu Trough, offshore NW Java, is hydrocarbon generative center. NST oils differ from established oil families of Ardjuna Subbasin and S Seribu Trough and probably generated from lacustrine facies of Talang Akar Fm in central NST depocenter)

Pramono, W. & H. Amijaya (2008)- Geochemical characteristic of oil seepage in Bantal area, Semarang, Central Java. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 691-704.
(Oil seeps in Bantal area, 35 km SE of Semarang, at W end of Kendeng zone. Geochemical analysis shows n-alkane high in C8-C15 and C25-C28, pristane/phytane ratio >1, etc.. Oil from mixed algal and higher plant kerogens, deposited in lacustrine environment. Oil degraded. Possible source rock is shale below Pelang Fm)

Pramumijoyo, S. & M. Sebrier (1991)- Neogene and Quaternary fault kinematics around the Sunda Strait area, Indonesia. J. Southeast Asian Earth Sci. 6, 2, p. 137-145.
(Sunda Strait transition zone from orthogonal subduction off Java to oblique subduction off Sumatra. Opening of Sunda Strait consequence of right lateral movement of Sumatran Fault System-SFS. Two main kinematics on faults around Sunda Strait area: dextral strike-slip and normal. Strike-slip deformations in Miocene or older rocks, Pliocene and younger formations only normal faulting. Dextral slip on SFS began during M Miocene and normal faulting prevailed in Sunda Strait since 5 Ma, controlling bathymetry of Sunda Strait)

Praptisih (2016)- Karakteristik batuan induk hidrokarbon dan hubungannya dengan rembesan minyak di lapangan minyak Cipluk, Kabupaten Kendal, Provinsi Jawa Tengah. Bul. Sumber Daya Geologi 11, 2, p. 93-101.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
('Characteristics of hydrocarbon source rock and its relation to oil seepage in the Cipluk oil field, Kendal Regency, Central Java province'. Oil from seep S of Sojomerto near abandoned Cipluk oil field, WSW of Semarang, is mature and from estuarine-shallow lacustrine source rocks, with organic material derived from land plants. Does not correlate to nearby gas-prone Kerek and Penyatan Fms)

Praptisih (2016)- Fasies, lingkungan pengendapan dan sifat fisik (kesarangan dan kelulusan) batuan karbonat Formasi Parigi di daerah Pangkalan Karawang, Jawa Barat. J. Geologi Sumberdaya Mineral 17, 4, p. 205-215.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/13/6)
('Facies, depositional environment and physical properties (porosity and permeability) of the Parigi Formation carbonate rocks in area Pangkalan Karawang area, West Java'. Facies and facies distribution of M-L Miocene Parigi Fm limestones in Pangkalan area, NW Java. Porosity up to 25.8%, permeability up to 21.2 mD)

Praptisih (2016)- Fasies batuan karbonat di daerah Bojongmangu Bekasi, Jawa Barat. In: R. Delinom et al. (eds.) Pros. Geotek Expo 2016, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. 255-264.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2017/10/05/prosiding-2016/)
('Facies of carbonate rocks in Bojongmangu area, Bekasi, West Java'. M Miocene Parigi Fm outcrops in Bojongmangu- Bekasi area. With Lepidocyclina (Trybliolepidina) rutteni, and N17 planktonics. Four reef slope facies)

Praptisih (2016)- Studi batuan sedimen Formasi Cinambo di daerah Sumedang, Jawa Barat. In: R. Delinom et al. (eds.) Pros. Geotek Expo 2016, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. 265-276.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2017/10/05/prosiding-2016/)
('Study of sediments of the Cinambo Formation in the Sumedang area, West Java'. Age of Cinambo Fm upper bathyal marine turbiditic series in Sumedang area is M Miocene, based on presence of Globorotalia peripheroacuta, Gr. praefohsi, Gr. fohsi, etc.)

Praptisih (2017)- Geokimia batuan induk hidrokarbon Formasi Cinambo di dearah Sumedang, Jawa Barat. Bul. Sumber Daya Geologi 12, 3, p. 144-153.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/article/view/BSDG_VOL_12_NO_3_2017_1/pdf)

(Geochemistry of the Cinambo Formation hydrocarbon rocks in the Sumedang area, West Java'. 16 samples of claystone from Miocene Cinambo Fm with TOC 0.32-1.5% (low hydrocarbon potential). Organic matter mainly gas-prone Type III kerogen. Biomarkers suggest no correlation with oil seepage in Majalengka area)

Praptisih (2018)- Biomarker characteristics of source rock and oil seepage correlation in Central Java. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012008, p. 1-7.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012008/pdf)
(Oil seepage in different parts of C Java. Biomarkers of rocks and oils suggest oil seepage in Banjarnegara derived from Totogan Fm, Bayat oil derived from Wungkal Fm. Cipluk oil deposited in estuarine facies, therefore not from Kerek Fm. Oils in Kedungjati and Bantal areas not from Kerek and Pelang Fms)

Praptisih & Kamtono (2002)- Fasies turbidite pada Formasi Halang di daerah Cilacap Utara, Jawa Tengah. Buletin Geologi (ITB), 34, 3, Special Ed. (Prof. Soejono Martodjojo volume), p. 133-140.
('Turbidite facies of the Halang Formation in the North Cilacap area, Central Java')

Praptisih & Kamtono (2011)- Fasies turbidit Formasi Halang di daerah Ajibarang, Jawa Tengah. J. Geologi Indonesia 6, 1, p. 13-27.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/299)
('Turbidite Facies of the Halang Fm in the Ajibarang area, C Java'. M Miocene- E Pliocene Halang Fm turbidites N of Cilacap deposited in middle fan setting of submarine fan system. Clastic source from SSW)

Praptisih & Kamtono (2012)- Studi potensi batuan induk Formasi Jatiluhur di daerah Bogor, Jawa Barat. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-03, 5p.
(Study of source rock potential of Miocene Jatiluhur Fm in Bogor area suggest only minor gas potential)

Praptisih & Kamtono (2014)- Carbonate facies and sedimentation of the Klapanunggal Formation in Cibinong, West Java. Indonesian J. Geoscience 1, 3, p. 175-183.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/198/185)
(Miocene Klapanunggal Fm (=Parigi Fm) limestone well exposed in and near Cibinong, W Java. Carbonates in four facies (1) reef front to reef crest boundstone, (2) slope, and back-reef lagoon packstones, (3) reef front rudstone and (4) lower slope limestone breccia. Reef front and slope facies in N-NE, reef crest and back reef lagoon to S-SW)

Praptisih & Kamtono (2016)- Potensi batuan indik hidrokarbon pada Formasi Cinambo di daerah Majalengka, Jawa Barat. J. Geologi Sumberdaya Mineral 17, 1, p. 1-11.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/25/25)
('Hydrocarbon source rock potential of the Cinambo Formation in the Majalengka area, West Java'. Clays of Late Miocene Cinambo Fm S of Majalengka E of Bandung mainly Type III kerogen, oil and gas prone)

Praptisih, Kamtono, P.S. Putra & M. Hendrizan (2009)- Karakteristik batuan sumber (source rock) hidrokarbon pada Formasi Batuasih di daerah Sukabumi, Jawa Barat. J. Geologi Indonesia 4, 3, p. 167-175.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/250)
('Characteristics of hydrocarbon source rocks of the Batuasih Formation in the Sukabumi area, West Java'. Oligocene Batu Asih Fm marine claystone in Sukabumi area poor to fair organic richness and gas prone)

Praptisih, Kamtono & M.S. Siregar (2007)- The hydrocarbon source rock potential of the Rambatan Formation in the Banjarnegara area, S Central Java. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 692-703.
(E-M Miocene Rambatan Fm in N of Banjarnegara, S Central Java, potential for generating small amounts of oil and gas. Area with oil and gas seeps)

Praptisih, Kamtono, M.S. Siregar & E.A. Subroto (2007)- Studi batuan induk pada sub cekungan Serayu Utara, Banjarnegara dan sekitarnya, Jawa Tengah. In: A. Tohari et al. (eds.) Pros. Seminar Geoteknologi Kontribusi ilmu kebumian dalam pembangunan berkelanjutan, Puslitbang Geotekn. (LIPI), Bandung, p. 1-6.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/01/20/prosiding-2007/)
('Study of source rock in the North Serayu sub-basin, Banjarnegara and surroundings, Central Java'. Totogan Fm TOC up to 2.1%, Tmax 405-489°C. Hydrogen Index (HI) 16-86 mg HC/TOC, indicating minor gas potential. Rambatan Fm up to 1.6% TOC, Tmax: 435-458°C and HI 47-163 mg HC/TOC, show minor oil and gas potential. Most organic material land-derived (oleanane, resin))

Praptisih, Kamtono, P. Sulastya & M. Hendrizan (2010)- Studi batuan induk di daerah Padalarang dan sekitarnya, Jawa Barat. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-325, 8p.
('Study of source rocks in the Padalarang area'. Oligocene claystone Member of Rajamandala Fm shows TOC value 0.50- 1.17%, fair- good for hydrocarbons. T max 422- 524°C, indicating one mature sample and 10 immature. Rock Eval analysis shows HI values from 63- 113 mg HC/g)

Praptisih, Kamtono, P. Sulastya & M. Hendrizan (2009)- Batuan induk (source rock) hidrokarbon di sub cekungan Bogor bagian Selatan, Jawa Barat. In: I. Setiawan et al. (eds.) Pros. Pemaparan Hasil Penelitian Geoteknologi 2009, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. 183-192.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/01/20/prosiding-2009/)
('Hydrocarbon source rocks in the southern part of the Bogor Basin, West Java'. Oligocene Batuasih Fm claystones from Gunung Walat area near Sukabumi potential hydrocarbon source rocks. TOC 0.49-1.72%. Level of maturity. between 424- 524° C)

Praptisih & M.S. Siregar (2002)- Petrografi dan fasies batugamping Formasi Wonosari di daerah Bayat, Jawa Tengah. In: Proc. Sumberdaya geologi daerah istimewa Yogyakarta dan Jawa Tengah, Ikatan Ahli Geologi Indonesia (IAGI), Pengda DIY-Jateng, p. 32-40.
('Petrography and limestone facies of the Wonosari Fm in the Bayat area, C Java')

Praptisih & M.S. Siregar (2011)- Fasies carbonat Formasi Campurdarat di daerah Tulungagung, Jawa Timur. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-236, 9p.
('Carbonate facies of the Campurdarat Formation in the Tulungagung area, E Java'. Facies of E-M Miocene limestone in S Mountains. Larger forams Lepidocyclina and Miogypsina suggestive of Zone Te (could be Lower Tf?; JTvG). Interpreted as E Miocene barrier reef system)

Praptisih & M.S. Siregar (2012)- Fasies karbonat Formasi Campurdarat di daerah Tulungagung, Jawa Timur. J. Sumber Daya Geologi 22, 2, p. 65-72.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/107/99)
(Same paper as Praptisih and Siregar (2011) above)

Praptisih, M.S. Siregar, M. Hendrizan & P.S. Putra (2009)- Fasies batuan karbonat di daerah Klapanunggal, Bogor. In: I. Setiawan et al. (eds.) Pros. Pemaparan Hasil Penelitian Geoteknologi 2009, Pusat Penelitian Geoteknologi (LIPI), Bandung, p. 173-181.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/01/20/prosiding-2009/)
('Facies of carbonate rocks in the Klapanunggal area, Bogor'. M? Miocene Parigi Fm reefal limestones commonly called Klapanunggal Fm in Cibinong area. Four facies associations)

Praptisih, S. Siregar & Kamtono (2004)- Studi fasies batugamping di daerah Tasikmalaya dan sekitarnya, Jawa Barat. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 52-59.
(M and Late Miocene reefal limestone in Tasikmalaya area; not much stratigraphic detail)

Praptisih, S. Siregar & Kamtono (2008)- Study fasies batugamping Eosen di daerah Banjarnegara, Jawa Tengah. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 208-211.
('Study of Eocene limestone facies in the Banjarnegara area, C Java'. Late Eocene limestone at Gunung Karang in Wora-Wari area >10m thick olistolith in Oligocene Totogan Fm. Foraminiferal packstone-grainstone and

boundstone facies with Nummulites, Asterocyclina, Discocyclina, Spiroclypeus, Pellatispira, red algae, etc., deposited in fore-reef facies)

Praptisih, M.S. Siregar, Kamtono, M. Hendrizan & P.S. Putra (2012)- Fasies dan lingkungan batuan karbonat Formasi Parigi di daerah Palimanan, Cirebon. J. Riset Geologi Pertambangan (LIPI) 22, 1, p. 33-43.
(online at: www.geotek.lipi.go.id/riset/index.php/jurnal/article/viewFile/44/6)
('Facies and environment of Parigi Fm carbonates in the Palimanan area, Cirebon'. Outcrop of Parigi Fm in the anticlinal structure of Kromong carbonate complex, Palimanan area. Seven facies, including boundstones, foraminiferal packstones, etc. Depositional environment reef and associated facies, with reef front in NE and back reef in SW. Foraminifera believed to indicate Early Miocene age (but faunal list includes mixture of E Miocene (Te5; Spiroclypeus, Miogypsinoides) and M Miocene (Tf1-2; Cycloclypeus annulatus); JTvG)

Praptisih, M.S. Siregar, Kamtono & A. Rachmat (2002)- Studi fasies batugamping Formasi Kalipucang di daerah Kedung Glunggung Karangbolong, Gombong, Jawa Tengah. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 850-857.
('Facies study of limestone of the Kalipucang formation in the Kedung Glunggung area, Karangbolong, Gombong, Central Java'. Lepidocyclina packstone facies in S Mountains of C Java interpreted as foreslope of M Miocene Karangbolong reef system)

Prasetyadi, C. (2007)- Evolusi tektonik Paleogen Jawa Bagian Timur. Doct. Thesis Inst. Teknologi Bandung (ITB), p. 1-323. *(Unpublished)*
('Paleogene tectonic evolution of East Java'. Luk Ulo melange complex of latest Cretaceous- Paleocene age. Luk Ulo Pretertiary structural grain NE-SW or NNE-SSW. K-Ar ages of ophiolite-associated schist 110-125 Ma (block), siliceous shale 90-115 Ma)

Prasetyadi, C. (2008)- Provenan batupasir Eosen Jawa bagian Timur. Proc. 37th Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 80-97.
('Eocene sandstone provenance in East Java'. Eocene sediments in E half of Java at Luk Ulo-Karangsambung, Nanggulan, Bayat and in E Java basin. 37 outcrop samples range from arkosic to arenitic sst, with quartz as dominant component (av. 65% range 35-98%), feldspar 2-27%, lithics 2-45%. Metamorphic rock grains dominate in most samples. Data suggest two different provenance areas: recycled orogen in Karangsambung and craton interior in Nanggulan, Bayat and E Java basin. Karangsambung lies in accretionary basement area, Nanggulan-Bayat in continental basement area (E margin of E Java microcontinent?))

Prasetyadi, C. (2008)- Exploring Jogja geoheritage: the lifetime of an ancient volcanic arc in Java. 10p.
(Fieldtrip guide S of Yogyarta)

Prasetyadi, C., A.H. Harsolumakso, B. Sapiie & J. Setiawan (2002)- Tectonic significance of pre-Tertiary rocks of Jiwo Hill, Bayat and Luk Ulo, Karangsambung areas in Central Java: a comparative review. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 680-700.
(Pretertiary rocks in Karangsambung (Luk Ulo subduction melange) and Bayat areas similar metamorphic rocks and SE-NW (WSW-ENE?) 'Meratus' structural trends. Karangsambung more 'ocean plate stratigraphy', with ultrabasic rocks and mid-Cretaceous pelagic cherts in sheared clay matrix (mainly in N), and with boudinage features sandstone beds in S part. Jiwo/ Bayat area possibly more continental, without 'block-in-matrix' structure, with (undated) Pretertiary phyllites and schists overlain by M Eocene clastics and Nummulites limestones, overlain by 'Old Andesites' (mainly marine) arc volcanics. Karangsambung probably closer to trench than Bayat)

Prasetyadi, C. & M. Maha (2004)- Jiwo Hills, Bayat-Klaten: a possible Eocene-origin paleohigh. Jurnal Ilmu Kebumian Teknologi Mineral (UPN, Yogyakarta) V, 17, 2, p. 61-64.

Prasetyadi, C., M.G. Rachman, S.E. Hapsoro, A. Shirly, A. Gunawan & I. Purwaman (2016)- Seismic-based structural mapping of RMKS fault zone: implication to hydrocarbon accumulation in East Java Basin. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 104-107.

(Rembang-Madura-Kangean-Sakala (RMKS) Fault zone in NE Java and further East is sinistral slip fault which started to develop in M Miocene. E-W trending)

Prasetyadi, C., I. Sudarno, V.B. Indranadi & Surono (2011)- Pola dan genesa struktur geologi Pegunungan Selatan, provinsi daerah Istimewa Yogyakarta dan provinsi Jawa Tengah. J. Sumber Daya Geologi 21, 2, p. 91-107.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/138/135)
('The pattern and genesis of geological structure of the Southern Mountains, provincial areas of Yogyakarta and Central Java province'. S Mountains structures dominated by faults, mainly oriented NE-SW (16) and N-S (14) and mainly sinistral, some reactivated as normal faults. Others oriented NW-SE (3) and E-W (3) and mainly dextral and normal faults)

Prasetyadi, C., E.R. Suparka, A.H. Harsolumakso & B. Sapiie (2005)- Eastern Java basement rock study: preliminary results of recent field study in Karangsambung and Bayat areas. Proc. 34th Conv. Indon. Assoc. Geol. (IAGI), Surabaya, p. 310-321.
(Karangsambung basement mid-Cretaceous- Paleocene subduction complex, characterized by tectonic block-in matrix structure. Melange structural dip mostly to S-SE, opposite of expected for NW-dipping subduction zone, therefore interpreted as overturned. With M Cretaceous limestone blocks with Orbitolina. Melange overlain by Eocene clastics. Bayat basement mostly phyllite and schists of unknown age, unconformably overlain by Eocene and M Miocene sediments)

Prasetyadi, C., E.R. Suparka, A.H. Harsolumakso & B. Sapiie (2006)- An overview of Paleogene stratigraphy of the Karangsambung area, Central Java: discovery of new type of Eocene rock. Proc. Int. Geosci. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta 2006, 06-PG-09, 4p.
(First record of Early Eocene larger forams and M-L Eocene limestone blocks in metamorphosed tectonic melange Larangan area in N part of Luk Ulo melange complex, suggesting Late Eocene (collisional?) deformation after Cretaceous- Paleocene subduction-related deformation. E Eocene metasedimentary unit generally dips to S)

Prasetyadi, C., E.R. Suparka, A.H. Harsolumakso & B. Sapiie (2006)- The occurrence of a newly found Eocene tectonic melange in Karangsambung area, Central Java. Proc. 35th Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, 16p.
(Discovery of M Eocene Asterocyclina-bearing limestone blocks in polymict Larangan Complex at N side of Luk Ulo Melange complex indicates age of tectonic melange not only Cretaceous-Paleocene, but also M-L Eocene. Shifting of NE-SW Cretaceous subduction trend to Oligocene E-W trend due to collision of microcontinent. Two deformation phases prior to onset of 'Old Andesite' subduction-related volcanism: Cretaceous-Paleocene subduction-related and Late Eocene post subduction (collisonal?) deformation)

Prasetyadi, C., E.R. Suparka, A.H. Harsolumakso & B. Sapiie (2006)- The Larangan Complex: a newly found Eocene tectonic melange rock in Karangsambung area, Central Java, Indonesia. Proc. 17th Int. Geological Congress, Fukuoka, 1p. *(Abstract only)*
(Karangsambung melange complex does not only include Cretaceous-Paleocene Luk Ulo Complex, but also Eocene Larangan complex with M Eocene Asterocyclina-bearing limestone in melange)

Prasetyanto, I.W., Widodo & D. Wintolo (1997)- Mineralisasi logam mulia di Kecamatan Selogiri, Kabupaten Wonogiri, Propinsi Jawa Tengah. Proc. 17th Ann. Conf. Indon. Assoc. Geol. (IAGI), Jakarta, p. 865-869.
('Mineralization of precious metals in Selogiri, Wonogiri District, Central Java')

Prasetyo, A., J. Romora S., Yeftamikha, Fransiskus L.B & I.S. Nugroho (2016)- A petrographical review of metamorphic rocks from Ciletuh Complex in West Java and their related metamorphism in Central Indonesia region. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 624-633.
(online at: https://repository.ugm.ac.id/273596/)

(Ciletuh Cretaceous subduction complex in SW Java. Metamorphic rocks in Gunung Badak area consist of Grt-Ms-Qz schist, Ms phyllite, quartzite and serpentinite. In Tegal Pamidangan area Ms-Qz phyllite and slate (greenschist-facies). Protoliths of metamorphic rocks pelitic, ultramafic and quartz-rich rocks. No blueschist or eclogite-facies rocks recognized (but reported by endaang suhaeli et al. 1977). Presence of serpentinite among low-grade metamorphic rocks indicates metamorphic environment associated with oceanic crust/ mantle. Similar to Jiwo Hills, C Java, metamorphics)

Prasetyo, U., Aswan, Y. Zaim & Y. Rizal (2012)- Perubahan lingkungan pengendapan pada beberapa daerah di Pulau Jawa selama Plio-Plistosen berdasarkan kajian paleontologi moluska. Jurnal Teknologi Mineral (ITB) 19, 4, p. 173-180.
('Changes in depositional environment in some areas of Java during the Plio-Pleistocene based on paleontological studies of mollusks'. Three areas studied in W and C Java (in Bogor, N Serayu and Bobotsari Basins), all showing transition from shallow marine facies (with Turritella) in Late Pliocene to marginal marine (with Melanoides, Sulcospira, Tellina, Paphia) and non-marine (no molluscs) in Pleistocene (also as U.P. Wibowo ITB S2 Masters Thesis, 2009))

Pratomo, K.H., A. Sudjai, A. Bachtiar, M. Syaiful, D. Rahayu, P.H. Narendra, A. Krisyunianto & B. Sunarto (2009)- Tuban and Camar troughs (East Java basin) revival: new insight. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PITIAGI2009-189, 4p.
(Tuban and Camar Troughs in Offshore NE Java Basin surrounded by dry holes and generally condemned as lean, shallow and inadequate hydrocarbon kitchens. Recent well post-mortem re-evaluation and remapping of kitchens modifies understanding of petroleum system. Oil shows present in Tuban-1 and other dry holes may also have oil- gas show. Re-mapping of Tuban and Camar kitchen area better understanding of development of Pre-CD lacustrine-fluvial-deltaic source rock in these lows)

Prayitno, W., J.W. Armon & S. Haryono (1992)- The implications of basin modeling for exploration- Sunda Basin case history, offshore southeast Sumatra. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 379-416.

Prawiranegara, D.A.R., F.E. Saputra, F. Raseno, B.H. Utomo, A. Sani & A. Wahid (2016)- Understanding the petroleum system of North Serayu Basin: an integrated approach from geology, geophysics and geochemistry. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-63-SG, 27p.
(Review of N Serayu basin NE of Slamet volcano in C Java. Many oil seeps and all elements of viable petroleum system, but no comercial hydrocarbons. Rambatan and Halang Fms potential reservoirs of magmatic arc provenance. Volcanic gravity tectonics in Pleistocene considerable influence on petroleum play)

Premonowati, I. (1990)- Pliocene mollusca from Kalibiuk and Damar Formations in Semarang area of Central Jawa, Indonesia. Buletin Geologi (ITB) 20, p. 37-49.

Premonowati (1996)- Biostratigrafi dan spesiesasi koral Formasi Rajamandala, Jawa Barat. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 31-51.
('Coral biostratigraphy of the Rajamandala Formation'. Late Oligocene, W Java)

Premonowati (1998)- Identifikasi perubahan terumbu terhadap fluktuasi muka laut Formasi Paciran daerah Jawa Timur Utara. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 37-47.
(On identification of sea level fluctuations in Paciran Fm reefal limestones, Tuban area, NE Java. Reef 1 125m above sealevel today, age ~5.4 Ma. Reef 3 157m a.s.l., age 4.2 Ma. Reef 5 194m a.s.l., age 3.4 Ma. Reef 7 50-12.5m a.s.l., age 0.94-2.1 Ma))

Premonowati (2001)- Geologi Formasi Paciran- daerah pantai utara Jawa Timur. Majalah Geologi Indonesia (IAGI) 16, 1, p. 1-14.
('Geology of the Paciran Formation in the area of the East Java north coast'. Facies study of Paciran Fm reefal limestone along N coast of NE Java shows 5 eustatic cycles. Age here shown as Late Miocene- Holocene)

Premonowati (2005)- Stratigrafi terumbu Formasi Paciran daerah Tuban. Ph.D. Thesis Inst. Teknologi Bandung (ITB), p. 1-291. *(Unpublished)*
('Reef stratigraphy of the Paciran Formation in the Tuban area'. Plio-Pleistocene Paciran carbonate platform formed since 4 Ma (N19). Twelve reefal units, each 25-50m thick. Reefs 1-9 indicate rhytmic rel. sea level changes; Reef 7 is maximum flooding surface, Reefs 9- 12 indicate sea level drop. Reef 1 deposited in Zone N18, Reef 2 at 5 Ma (Zone N19), and Reef 12 (youngest) 6000 years ago in last interglacial. Tectonic uplift caused Paciran Fm outcrops at 335m above sea level now)

Premonowati, R.P. Koesoemadinata, Harsono Pringgoprawiro & W.S. Hantoro (1999)- Ecological stratification in the Holocene reef of Paciran Formation: a case study from Tanjung Kodok, Lamongan, East Java. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 3, p. 57-74.
(In Indonesian. Holocene reef at Tanjung Kodok, at NE Java coast, with 5 periods of buildup)

Premonowati, R.P. Koesoemadinata, Harsono Pringgoprawiro & W.S. Hantoro (2000)- Paciran reef stratigraphy, Tuban area, East Java, based on accumulative induction methods approach. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 61-68.
(Large Paciran reef complex of NE Java 5 phases of growth in Pliocene- Recent, based on terrace morphology, paleosoil distribution, etc.)

Premonowati, R.P. Koesoemadinata, Harsono Pringgoprawiro & W.S. Hantoro (2005)- Stratigrafi terumbu Formasi Paciran daerah Tuban. Jurnal Teknologi Mineral (ITB) 12, 1, p.
(Summary of Premonowati thesis work on Pleistocene Paciran limestone, Tuban area, NE Java)

Premonowati, R.P. Koesoemadinata, Harsono Pringgoprawiro & W.S. Hantoro (2004)- Stratigrafi isotop oksigen dan karbon dari Formasi Paciran Jawa Timur. In: I. Zulkarnain et al. (eds.) Proc. Seminar on Nuclear Geology and Mining Resources, Jakarta 2004, p. 208-219.
('Oxygen and Carbon isotope stratigraphy of Paciran Fm, East Java'. Oxygen and carbon isotopes analyzed from 25 samples of unaltered calcite, to determine paleotemperature fluctuations and to validate sea level changes of Reef 1 to Reef 17 units from 4 Ma- now. Early reef formtion (reef 1 to reef 3 between 4- 2.9 Ma. From reef 4 - Reef 8 (2.6- 1.4 Ma) stagnant temperatures and almost warmer condition. After that drastic rise in paleotemperature)

Premonowati, R.P. Koesoemadinata, H. Pringgoprawiro & W.S. Hantoro (2006)- Model of reef development in response to sea level fluctuation and isotope stratigraphy of Paciran Formation, East Java, Indonesia. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-039, 7p.
(Oxygen and carbon isotope analysis from Paciran limestone Fm to validate sea level changes during Reef 1- Reef 12 formation between 4 Ma- Recent. Reef 1- Reef 3 (4- 2.88 Ma) temperatures warmer, Reef 4 (2.59 Ma)- Reef 8 (1.4 Ma) stagnant temperature and almost warmer. Warmer conditions at reef 8-Reef 10 formation (0.7 Ma). Temperatures fluctuating until Reef 12 (E Holocene))

Premonowati, C. Prasetyadi, S. Rahardjo, J. Sinulingga, Y. Sulistiyana & D. Rukmana (2007)- Subsurface geological models of Semanggi brownfield, Cepu Block, Java. Proc. Simposium Nasional IATMI, UPN ōVeteranö, Yogyakarta 2007, TS01, 6p.
(online at: www.iatmi.or.id/assets/bulletin/pdf/2007/2007-01.pdf)
(Semanggi field 1900 BPM discovery, still producing 250 BOD from M Miocene Wonocolo IIIB (zone N8-N9) and M Miocene (N9) Ngrayong VII-VIII sandstones in anticlinal structure. W block more productive than E. Ten sequences in E-M Miocene U Tawun-Bulu interval. Modeled as transgressive-aggradational shallow marine sheet sands)

Premonowati, C. Prasetyadi, S. Rahardjo, J. Sinulingga, Y. Sulistiyana & D. Rukmana (2007)- Subsurface geological models of Semanggi, Cepu Block, Java. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 714-719.
(Same as Premonowati et al. (2007), above)

Premonowati, B., Prastistho & I.M. Firdaus (2011)- Allostratigraphy of Punung paleoreef based on lithofacies distributions, Jlubang Area, Pacitan region, East Java. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-055, 8p.
(On M Miocene Punung Fm reefal limestone in S Mountains, E Java. Dominated by red algae. Not much detail)

Premonowati, B., Prastistho & I.M. Firdaus (2012)- Allostratigraphy of Punung paleoreef based on lithofacies distributions, Jlubang Area, Pacitan Region-East Java. J. Geologi Indonesia 7, 2, p. 113-122.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/405)
(Same paper as above on Punung/Wonosari Fm reefal limestones in Jlubang area in Pacitan Regency, S Mountains of E Java. Dominated by red algae and seven phases in paleoreef complex)

Premonowati & W.B. Setyawan (1998)- Lingkungan fasies dan diagenesa batugamping Formasi Rajamandala-Jawa Barat. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 125-139.
('Relationship between facies and limestone diagenesis of the Rajamandala Formation, West Java'. Brief review of latest Oligocene Rajamanda carbonate platform (mainly from Koesoemadinata and Siregar 1984). Four lithofacies)

Premonowati & W.B. Setyawan (1999)- Carbonate facies of Pleistocene reef complex from Rembang basin, East Java. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 3, p. 47-56.
(In Indonesian. Four carbonate facies types and five stages of reef development in Pleistocene coral reef limestone at Tanjung Kodok near Paciran at NE Java coast)

Premonowati, Sudarmoyo, Agus W., Joko P., Budi E., Arief N. & Eka P. (2009)- Reservoirs of Zone 12, Zone 15 and Zone 16 of the Upper Cibulakan Formation, South Pamanukan Field, Northwest Java Basin-stratigraphic or structural traps? Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, 13p.
(Late Early Miocene (N7-N8) U Cibulakan Fm in S Pamanukan gas field, onshore NW Java basin, 190m thick, with 3 sandstone reservoir zones 3-9m thick. Possible stratigraphic traps)

Priadi, B. & A.S.S. Mubandi (2005)- The occurrence of plagiogranite in East Java, Indonesia. Proc. Joint Session 30th HAGI- 34th IAGI- 14th PERHAPI Ann. Conv., Surabaya, p.

Priadi, B., A.S.S. Mubandi, M.M. Wibawa, D. Osmon & I. Suroto (2005)- Geochemistry of the Tertiary low potassium volcanics in East Java, Indonesia. Buletin Geologi (ITB) 37, 1, p. 15-28.

Priadi, B. & I.G.B.E. Sucipta (1998)- Tholeitic to alkaline Cenozoic magmatism in East Java Indonesia. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 3 (Geodin., Magmat. Volkanologi), p. 26-36.
(Oldest tholeiitic volcanic rocks in Java (28.3 Ma, Late Oligocene, Pacitan, S Mountains) indicate volcanic arc magmatism. Gradual enrichment in incompatible elements with time to Quaternary)

Priangga Utama, A., Sukandarrumicli & S. Wiyono (2005)- Genesa bentonit di kecamatan Wonosegoro Kabupaten Boyolalai, propinsi Jawa Tengah, dan rekayasa pemanfaatannya sebagai bahan baku produk keramik. Teknosains 18, 1, p.
('The genesis of bentonite at Wonosegoro district, Boyolali Residency, C Java, and its uses as ceramic material.' Bentonite layer in turbiditic clastics series in W Kendeng Zone fold belt, 40 km N of Boyolali, NE Java. Bentonite originated from devitrivication of pyroclastic volcanic glass)

Pribadi, R. (2006)- Structural pattern and fault seal analysis of a potential hydrocarbon trap, East Java basin. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc., Jakarta06-SPG-03, 3p. *(Extended Abstract)*

Prihatmoko (1998)- Prospectivity analysis of Java island for porphyry and epithermal deposits. M. Econ. Geol. Thesis, University of Tasmania, p. 1-73. *(Unpublished)*

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(Two as yet non-commercial mineralization/ alteration systems identified around C Java Southern Mountains, i.e. Selogiri in N and Wediombo at S coast, both hosted by old volcanics and intrusives. Selogiri porphyry system formed at 1-1.5 km deeper than high-sulfidation system of Wediombo, showing N part of Seribu Mts uplifted higher than S part, probably related to development of Quaternary magmatic arc to N)

Priyanto, B., D. Indrajaya, L.P. Siringoringo & V.A. Herliani (2009)- Miocene carbonate mound of Gunung Maindu, Tuban: an analogue model for prospective carbonate mound hydrocarbon reservoirs in the East Java basin, Indonesia. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), PITIAGI2009-047, Semarang, 11p.
(Brief discussion of E-M Miocene up to 300m (?) thick reefal carbonate mound (below Ngrayong Sandstone) at Gunung Maindu (Mahindu), Montong, W of Tuban, E Java. With Lepidocyclina. Not much detail)

Priyanto, B., A. Ramdhani, R. Mardani & V.A. Herliani (2009)- Facies of Ngrayong Sandstone based on outcrop data and petrographic description of the Prantakan River section, Rembang zone, East Java, Indonesia. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PITIAGI2009-046, 1p. *(Abstract only)*
(M Miocene Ngrayong sandstone studied in 50m section at Prantakan River, E Java, represents regional influx of quartz sandstones in region. Multiple coarsening-upward packages. Not much detail)

Priyantoro, A. (1997)- Genesa deposit mangaan daerah Kliripan dan sekitarnya kecamatan kokap kabupaten Kulon Progo DIY. Teknik Geologi UGM, p.
('Genesis of manganese deposits in the Kliripan area, Kulon Progo Regency'. (Kliripan was site of pre WW-II manganese mining operation in early 1900's in S Central Java; JTvG))

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('Paleogene-Neogene tectonic changes are important tectonic events on Java')

Purasongka, N.W., I. Syafri & L. Jurnaliah (2015)- Karakteristik batuan sedimen berdasarkan analisis petrografi pada Formasi Kalibeng Anggota Banyak. Bull. Scientific Contr. (UNPAD) 13, 1, p. 1-15.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8382/3896)
('Characteristics of sedimentary rocks based on petrographic analysis of the Banyak Mb of the Kalibeng Fm'. Petrography of 6 samples from Late Miocene (N16-N17) Banyak Mb of Kalibeng Fm in Kendeng zone from 170m section at Kali Jragung, Semarang District, C Java. Suggest magmatic arc provenance, possibly from Ungaran volcano. No locality map)

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Purnama, Y.S., A. Gunawan, W. Darmawan, R.C. Rohmana, D. Adipradipto, J. Halim, R.N. Julias & B. Rahmanto (2018)- Characters of sedimentology, rock property and geochemistry of the Ngrayong and Tuban Formations in the Pati Trough, onshore North East Java Basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-291-G, 32p.
(P1 (2015) and P2 (2016) wells on Plio-Pleistocene Pakel anticline in Rembang zone, NE Java, with gas-condensate in poorly consolidated late E Miocene Tuban and early M Miocene Ngrayong Fm tidal sandstones. Gas samples from P2 well from mixed of biogenic (40%) and thermogenic sources)

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(11 samples with diatoms in Pucangan Fm of Sangiran. Lower Puncangan Fm warm shallow marine facies, middle part fresh-brackish water, upper part marine with low diatom productivity. Age Early Pleistocene?)

Purnamaningsih Siregar & Harsono Pringgoprawiro (1981)- Stratigraphy and planktonic foraminifera of the Eocene-Oligocene Nanggulan Formation, Central Java. Publ. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 1, p. 9-28.
(Planktonic foram zonation of M Eocene- E Oligocene Nanggulan Fm marine clastic section 20km W of Yogyakarta. With Globorotalia lehneri, G. centralis, G. cerroazulenis, Truncorotaloides rohri, Hantkenina spp., etc.. Overlain by Late Oligocene 'Old Andesite Fm')

Purnomo, E., R. Ryacudu, A. Ascaria & T. Kunto (2004)- Pondok Tengah discovery, Indonesia- a new big fish in mature explored basin. In: 66th EAGE Conf. Exhib., Paris, 4p. *(Extended Abstract)*
(Pondok Tengah 2003 oil discovery in NW Java Basin, 40km E of Jakarta. Hydrocarbon column 205 m thick (175m in Lower Miocene Batu Raju Fm carbonates and 30m in Talang Akar Fm sandstones). Preliminary reserves estimate 233 MBO. Carbonate reservoir N-S tranding low-relief buildup in S part of Rengasdengklok High, bounded to S by Ciputat Low)

Purnomo, E., R. Ryacudu, E. Sunardi, A. Kadarusman et al. (2006)- Petrographic compositional distinction between Jatibarang and Talang Akar Formations, Jatibarang sub-basin, North West Java basin. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, p.

Purnomo, E., R. Ryacudu, E. Sunardi & R.P. Koesoemadinata (2006)- Paleogene sedimentation of the Jatibarang sub-basin and its implication for the deep play petroleum system of the onshore Northwest Java Basin, Indonesia. Proc. Jakarta 2006 Int. Geosciences Conf. and Exhib., Indon. Petroleum Assoc. (IPA), Jakarta06-PG-02, 3p. *(Extended Abstract)*

Purnomo, J. & Purwoko (1994)- Kerangka tektonik dan stratigrafi Pulau Jawa secara regional dan kaitannya dengan potensi hidrokarbon. Proc. Geologi dan Geoteknik Pulau Jawa sejak Akhir Mesozoik hingga Kuarter, Jurusan Teknik Geologi, Gadjah Madah University, Yogyakarta, p. 253-274.
('The regional tectonic and stratigraphic framework of Java Island and its relation to hydrocarbon potential'. Java tectonics three main phases: (1) Eocene-Oligocene extensional rifting; (2) Neogene compressional wrench faulting, with shear faults reactivation of Paleogene normal faults; (3) Plio-Pleistocene compressional thrust-folding, creating E-W oriented aniclines)

Purwaningsih, M.E.M. (2002)- Demise of the Oligo-Miocene reefs of the southern East Java Basin. Drowning events on carbonate isolated platforms. Buletin Geologi (ITB) 34, 3, Spec. Ed. (Prof. Soejono Martodjojo volume), p. 117-132.
(Paleohighs on old structural grain became sites of Oligo-Miocene carbonate buildups in E Java Basin. Carbonates on basement highs of southern isolated platform of E Java Basin show similar stages of deposition. In W East Cepu High, Late Oligocene Kujung carbonate buildups shows depositional stages in SW-NE direction. Seismic stratigraphy of carbonates shows four sequences. Carbonates backstepping on previous stages, forming buildup complex within isolated platform. Generally, buildups grew away from southern marine influence. BD Ridge younger carbonates similar history to E Cepu carbonates. E Miocene carbonate buildups followed ENE- WSW paleohigh in Madura Strait. Four depositional units terminated by drowning indicated by condensed section on top of carbonates. Oligo-Miocene buildups on other isolated platforms of the southern E Java Basin similar histories: transgressive stratal pattern with local tectonic influence. Drowning events caused demise of buildups. These events may mark onset of Neogene inversion tectonic episode in this area)

Purwaningsih, M.E.M., A.H. Satyana, S. Budiyani, D. Noeradi & N.M. Halik (2002)- Evolution of the Late Oligocene Kujung reef complex in the Western East Cepu High, East Java Basin: seismic sequence stratigraphic study. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 655-671.
(Seismic stratigraphy of E Cepu isolated platform identified 4 sequences in Late Oligocene Kujung Fm carbonates. Deposition of upper sequences contemporaneous with tilting of platform to SW, forming NE-ward

backstepping pattern. In mid E Miocene carbonate deposition ended due to clastic sedimentation and more tilting to SW)

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('Stratigraphic study of oil seep and its correlation to petroleum system in Banyumas Basin')

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(NW Java exploration history. Improved seismic processing lead to discovery well MB-3 and success of subsequent drilling)

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(Petrogenesis of amygdaloidal Jatibungkus andesite in connection with the mafic Karangsambung ophiolite' Jatibungkus basaltic-andesitic pillow lavas interpreted as tholeitic magma formed in mid-ocean ridge. Deformed during formation Oligocene-Miocene Totogan Fm)

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(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/01/20/prosiding-2014/)
('Analysis of paleostructure of basaltic-andesitic lava in Kali Mandala and diabas at Gunung Parang'. Faults in U Cretaceous - Paleogene pillow lavas in Luk Ulo melange, Karangsambung, C Java, affected by common NE-SW trending normal faulting; accompanied by M- L Eocene rift phase.)

Putra, P.S. & P. Praptisih (2017)- Re-interpretasi Formasi Kerek di daerah Klantung, Kendal, berdasarkan data stratigrafi dan foraminifera. J. Geologi Sumberdaya Mineral 18, 2, p. 77-88.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/272/280)
(Outcrops around Cipluk oilfield in northern C Java generally viewed as Kerek Fm, but stratigraphic and micropaleontological studies suggest interbedded marls- sandstones are Pliocene- Pleistocene age, upper bathyal turbiditic facies and should be viewed as part of Kalibeng Fm. Incl. Globorotalia tosaensis, Pulleniatina, Gr.crassaformis, Neogloboquadrina humerosa, etc.)

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(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/498/424)
('Olistostrome Source sedimentary rocks relative age of the Karangsambung Formation, Kebumen, Central Java'. Karangsambung Fm in Kebumen is olistostrome deposit composed of floating rock fragments in claystone matrix. With M Eocene planktonic foraminifera (incl. Morozovella spp., Truncatulinoides, etc.). Ages of foraminifera in Karangsambung Fm M Paleocene- Oligocene, and facies deep marine. Deformation younger than Oligocene)

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(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/01/20/prosiding-2007/)
('Study of marine sedimentation and influence of tectonic structure, North Serayu Basin'. Kali Lutut section with five main tectonically-driven facies/cycles in turbiditic Late Miocene (nanno zones CN7- CN9) sediments. With common (reworked?) E Miocene Miogypsina larger forams)

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(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/210/197)
(Baturetno Fm black clay of Baturetno Basin S of Wonogiri (N part of S Mountains), formerly believed to be lake deposit, related to shifting course of Bengawan Solo Purba River and Late Pliocene tectonic tilting in S Java. Floating pebbles of andesite, claystone, coral, limestone in clay best explained as mudflow process)

Putra, P.S. & E. Yulianto (2016)- Sedimentological and micropaleontological characteristics of the Black Clay deposit of the Baturetno Formation, Wonogiri, Central Java. Indonesian J. Geoscience 3, 3, p. 163-171.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/218/217)
(Quaternary Baturetno Fm black clay with freshwater diatoms, but mostly barren of palynomorphs and low TOC. Unlikely to be lacustrine, probably mud-flow deposit. Carbon dating ages ~7000 yrs BP, i.e. much younger than Late Pliocene tilting in S Java)

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(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/04/Prosiding-2015.pdf
('Paleotsunami study at the south coast of Java'. 2-3 paleotsunami sandy layers identified along S coast of SW Java (Lebak) and C Java (Pangandaran). Thickness ~3-10cm)

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Rahardjo, Wartono (1982)- Depositional environment of nummulitic limestones of the Eastern Jiwo Hills, Bayat area, Central Java. Geologi Indonesia (IAGI) 9, 1, p. 36-39.

(Lens-like geometries of Nummulite-Assilina packstones in Bayat area and overlying M Eocene turbiditic clastics suggest these are redeposited blocks in deeper water environment. Pre-Tertiary metamorphics with SW-NE trending foliation)

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('Problems of carbonate stratigraphy, with examples from C Java Southern Mountains')

Rahardjo, W. (2007)- Prelimanary result of foraminiferal biostratigraphy of Southern Mountains Tertiary rocks, Yogyakarta Special Province. In: Proc. Seminar Potensi geologi Pegunungan Selatan dalam pengembangan wilayah, Yogyakarta 2007, p.

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Rahmad, B. & M. Maha (2010)- Endapan batubara Paleogen Formasi Nanggulan Kulon Progo, Yogyakarta: kajian geologi batubara dan fasies batubara. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-202, 20p.
(On Late Eocene coal of Nanggulan Fm exposed in Kali Songgo, E flank of Kulon Progo Dome, W of Yogya. Coal thickness 53 cm. Sediments soft and hardly diagenetically altered. Coal rank is lignite, with average vitrinite reflectance 0.27% -0.37%. Nanggulan Fm coal depositional facies is forest swamp)

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('Vitrinite reflectance and maceral composition of Nanggulan Fm Eocene coal seam, Kalisonggo area, Kulon Progo Regency, Yogyakarta'. Late Eocene coal of Nanggulan Fm deposited in telmatic to forest marsh environment, with slightly dry to wet condition. Vitrinite reflectance 0.27-0.37%, indicating lignite coal rank (demonstrating Eocene W of Yogya never deeply buried; JTvG). Macerals comprise vitrinite texto-ulminite, etc.)

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('Biostratigraphic study and carbonate microfacies analysis of the Wungkal Gamping Formation, Padasan Section, Gunung Gajah, Bayat, C Java'. Middle and Late Eocene limestones with Nummulites, Assilina, Discocyclina, Pellatispira, Tansinhokella, Alveolina, Operculina, Austrotrilina, Ranikothalia, etc.)

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(Kendeng Zone depocenter in E Java and continuing into S Madura Basin with oil seeps and small oil-gas fields. E-M Miocene Kerk Fm sandstones poor reservoir quality (2-10% porosity). Remaining potntial in 'Globigerina sands' in E and S parts of Kendeng zone near Ngawi)

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('Rama Field' (not real name, but probably = Sukowati; JTvG) in NE Java Basin is one of mature oil fields in Oligo-Miocene carbonates of Kujung Fm. Seismic facies analysis showed 5 growth stages: (1) initial Rupelian carbonate aggradation; (2) major sea level drop followed by lowstand deposits in E Chattian; (3) Late Oligocene- E Miocene backstepping carbonates; (4) E Miocene carbonates no longer develop upward, but prograded towards basin; (5) E-M Miocene drowning of platform)

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(Facies and porosity of E-M Miocene Jonggrangan Fm of Kulon Progo area, C Java)

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(E Java zones of high overpressure in: (1) post-Tuban Fm- low overpressure; (2) Tuban Fm- moderate-high overpressure; (3) Kujung Fm carbonate buildups- hydrostatic pressure)

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(Brief review of Central Java geology)

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('Stratigraphy of Eocene rocks in the Jiwo Hills, Central Java'. Eocene Nummulites- Assilina limestones and quartz sandstones on metamorphic basement, grading upward into marls with Eocene (P13-P15) planktonics)

Ratman, N. & H. Samodra (2004)- Stratigrafi dan lingkungan lengendapan batuan karbonat, Gunung Sewi di daerah Wonosari dan sekitarnya. In: Stratigrafi Pulau Jawa, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 30, p. 181-186.
(' Stratigraphy and depositional environment of carbonate rocks, Gunung Sewu, in Wonosari and surrounding area'. Carbonates of Gunung Sewu three formations: Oyo (upper E Miocene-M Miocene), Wonosari (Late Miocene), and Kepek (Late Miocene-Pliocene. N.B: Oyo-Wonosari Fm probably older; JTvG).

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(Modeling of Plio-Pleistocene WNE-ESE trending 'Majalengka fold-thrust belt', involving steep M-L Miocene bathyal sediments in Sumedang area, between Bandung- Cirebon, W Java suggests 30-40% shortening)

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(Very brief, early report on oil seep in stream near villages of Kalian Jattan and Segran, 3 days travel from Purbolingo, Banyumas Residency, C Java)

Reich, S., F.P. Wesselingh & W. Renema (2014)- A highly diverse molluscan seagrass fauna from the early Burdigalian (Early Miocene) of Banjunganti (South-Central Java, Indonesia). Annalen Naturhist. Museums Wien, Ser. A, 116, p. 5-129.

(online at: http://verlag.nhm-wien.ac.at/pdfs/116A_005129_Reich.pdf)
(Study of E Miocene shallow marine mollusc fauna from Jonggrangan Fm near Banyunganti village, Progo Mts., S C Java, in beds transgressive over 'Old Andesite' volcanics. 184 species, including 158 carnivorous and herbivorous gastropods. Age suggested by associated zone Tf1 larger foram fauna ~E Burdigalian; by Sr isotopes ~18.9 Ma. Abundance of gastropods Smaragdia, Bothropoma, Bittiinae points to seagrass environment. Four new gastropod species: Bothropoma mediocarinata, Plesiotrochus hasibuani, Rissoina banyungantiensis and R. reticuspiralis)

Reinhold, T. (1937)- Fossil diatoms of the Neogene of Java and their zonal distribution. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 12, p. 43-132.
(First and most elaborate paper on marine fossil diatoms of Indonesia, from Middle Miocene- Plio/Pleistocene 'Globigerina Marls' and diatomites of C and E Java, by Thomas Reinhold of the Geological Survey of the Netherlands. (Meant to be a pilot study, but was never expanded; JTvG))

Reitsema, T.L. (1930)- Over een voorkomen van daciet aan de zuidkust van Jogjakarta, in het Goenoeng Sewoe kalksteengebied. Natuurkundig Tijdschrift Nederlandsch-Indie 90, p. 259-266.
('On an occurrence of dacite on the S coast of Yogyakarta in the Gunung Sewu limestone area')

Reitsema, T.L. (1930)- Een voorkomen van Nummulieten kalksteen aan den noordrand van het Westelijk grensgebergte, gouv. Djokjakarta. Natuurkundig Tijdschrift Nederlandsch-Indie 90, p. 291-293.
('An occurrence of Nummulites limestone at N edge of the 'Western border mountains', Yogyakarta region'. Dark grey breccious limestone with Nummulites below m1 breccia-layers, near villages Gegerbajing and Plana, between Nanggulan and Purworejo)

Reksalegora, S., E. Hermanto, Y. Kusumanagara & P. Lowre (1996)- Cipamingkis River outcrop: a contribution to the understanding of "Main" reservoir geometry, Upper Cibulakan Formation, offshore Northwest Java. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 401-426.

Reksalegora, S.W., Y. Kusumanegara & P. Lowry (1999)- Cipamingkis River field trip: a visit to an outcrop analog of the "Main" Interval, Upper Cibulakan Formation, Offshore Northwest Java. Indon. Petroleum Assoc. (IPA), Jakarta, Fieldtrip guide book, p. 1-29.

Reminton, C.H. & U. Pranyoto (1985)- A hydrocarbon generation analysis in Northwest Java Basin using Lopatin's method. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 121-141.
(NW Java Basin producing from Jatibarang Volcanics, Talang Akar Fm and Baturaja Fm equivalents, Upper Cibulakan (Zones 16, 15, 14, 12), and Parigi Fm carbonates. Top oil window (TTI 15) in Randegan (E part NW Java Basin) at 1800-2000m, in Cilamaya- Pamanuka -Kandanghaur between 2000-2300m. TTI 16 only in Purwakarta-1 in Jatibarang volcanics. Talang Akar in Gantar- N Cilamaya areas mature in S. Baturaja Fm mature in Purwakarta- Gantar and S-ward. Only S of Purwakarta lower part of U Cibulakan Mb sufficiently mature to generate hydrocarbons. CO2 content believed from dissolving carbonates of Baturaja Fm formed after burial of Talang Akar sediments with high content of carbonaceous materials)

Reuss, A.E. (1867)- Uber fossile Korallen der Insel Java. In: F. Hochstetter, Reise der Osterreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859, Geol. Theil 2, Gerold, Staatsdruckerei, Vienna, p. 165-185.
(online at: www.landesmuseum.at/pdf_frei_remote/MON_GEO_0032_0165-0185.pdf)
('On fossil corals from Java Island'. 17 species of Neogene corals collected by Von Hochstetter during Austrian Novara Expedition 1857-1859. Main locality Gunung Sela in Tji-Lanang valley, Rongga District. Material stored in Natural History Museum in Vienna)

Ridha, M., M. Nurdiansyah, J.S. Zamili, P.T. Triwigati, Y.B. Muslih & W.N. Farida (2018)- Banumeneng calciclastic submarine fan (CSF) as a Late Neogene record in the curvature border of Western Kendeng, Java: new insight for exploration target. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-547-SG, 20p.

(Calciturbidites in Dolok River, Banyumeneng, Demak, in Kerek Fm(?) in W Kendeng zone. With M Miocene planktonic foraminifera and bathyal benthic foraminifera and reworked? Eocene larger foraminifera (Discocyclina, Nummulites, Assilina). Paleocurrent (flute cast) suggest sourced from NNW (Sunda Shelf))

Rifqi, M.A., A.P. Armia, A. Nugraha, M. Fajar & A. Prasetyo (2014)- Seismic facies analysis of turbidite complex in Ngrayong Formation, East Tuban Area, East Java Basin, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-138, 10p.
(M Miocene quartz-rich Ngrayong Fm prolific hydrocarbon reservoir in E Java Basin (>155 MMBO produced from 17 fields). Three main units in Ngrayong Fm, indicating regressive and transgressive phase of depositional cycle. In E Tuban Area Ngrayong Units II-III three cycles of turbidite deposition, each ending with hemipelagic deposition, locally eroded during next turbidite deposition cycle. Seismic facies identified: mounded mass transport complexes, continuous sheet-like deposits and channel-levee features. Sediment provenance from NW)

Rigg, J. (1836)- Sketch of the geology of Jasinga. Verhandelingen Bataviaasch Genootschap 17, p. 120-135.
(Mainly discussion of presence of granite at SW side of Gunung Gede, West Java)

Rinawan, R., J. Sunarja & S. Soeharto (1994)- Ciri mineralisasi emas tipe xenothermal di daerah Cirotan, Jawa Barat. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 981-1000.
('Characteristic of xenothermal-type gold mineralization in Cirotan, West Java'. Cirotan Pliocene Au-Ag deposit in Bayah Dome area, SW Java. Host rocks Eocene- Miocene 'Old Andesites'. Nearby microdiorite intrusion with K/Ar age of 4.5 Ma. Au-Ag mineralization associated with dextral strike-slip fault and dated as Late Pliocene (1.7 ± 0.1 Ma). Also contains rel. high T minerals cassiterite and wolframite))

Riswanty, M.A., A.H. Harsolumakso & Y. Rizal R. (2010)- Geologi dan karakterisasi rekahan pada fasies batugamping Formasi Rajamandala daerah Pasir Aseupan dan sekitarnya, Sukabumi, Jawa Barat. Buletin Geologi 40, 3, p. 105-122.
('Geology and characterization of fractures in limestone facies of the Rajamandala Formation in the Pasir Aseupan area and surroundings, Sukabumi, West Java')

Ritter, O., A. Hoffmann-Rothe, A. Muller, E.M. Arsadi, A. Mahfi, I. Nurnusanto, S. Byrdina & F. Echternacht (1999)- A magnetotelluric profile across Central Java, Indonesia. Geophysical Research Letters 25, 23, p. 4265-4268.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/1998GL900158)
(Magnetotelluric data at 8 sites along N30°E striking profile in C Java. Conductive features: (1) strong 'ocean effect' at S-most site, (2) zone of very high conductivity in C part of profile (volcanic or geothermal activity?), (3) conductor in N (active fault zone?))

Rizal, Y. (2004)- Neogene lithological formations and fossil remains in the Majalengka area (West Jawa, Indonesia). In: Late Neogene and Quaternary biodiversity and evolution, Proc. 18 Int. Senckenberg Conf., Weimar, 3p. *(Extended Abstract)*
(online at: http://www.senckenberg.de/fis/doc/abstracts/94_Rizal.pdf)
(Pliocene marine Kaliwangu Fm (N19) locally overlain by E Pleistocene black clay with freshwater molluscs and vertebrate fossils (cervids, proboscideans and crocodiles). Overlain by Pleistocene fluvial Citalang Fm, also with bone and tooth fragments in conglomerates (= Von Koenigswald 1935 fossil locality))

Rizal, Y., Aswan, Y. Zaim, W.D. Santoso, N. Rochim, Daryono, S.D. Anugrah, Wijayanto, I. Gunawan et al. (2017)- Tsunami evidence in South Coast Java, case study: tsunami deposit along South coast of Cilacap. In: 2nd Int. Conf. Transdisciplinary research on environmental problems in Southeast Asia (TREPSEA), Bandung 2016, IOP Conf. Series, Earth Environm. Science, 71, 012001, p. 1-12.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/71/1/012001/pdf)
(Three paleo-tsunami deposits identifid along Cilacap coast of S Java. dated and tied to earthquakes of 1883, 1982 and 2006. Three more older layers. Paleo-tsunami layer characterized by light sands on top of paleo-soil, with common mud clasts and marine benthic foraminifera)

Rizal, Y., R. Lagona & W.D. Santoso (2017)- Turbidite facies study of Halang Formation on Pangkalan River, Karang Duren- Dermaji village, Banyumas district, Central Java- Indonesia. In: 2nd Int. Conf. Transdisciplinary research on environmental problems in Southeast Asia (TREPSEA), Bandung 2016, IOP Conf. Series, Earth Environm. Science, 71, 012032, p. 1-15.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/71/1/012032/pdf)
(M Miocene- E Pliocene Halang Fm in Pangkalan river, Banyumas Basin, with five turbiditic facies associations: proximal channel, distal levee, frontal splay 1, crevasse splay, and frontal splay 2. Mud rich system. ~400m thick Late Miocene Kumbang Fm andesitic volcanic breccia reflects sediment supply change)

Rizal, Y., Pamungkas G.M. & A. Rudyawan (2016)- Sedimentation of the Cantayan Formation in Sirnasari, Bogor, West Java- Indonesia. Int. J. Engineering Sciences and Research Techn. (IJESRT) 5, 11, p. 349-359.
(online at: www.ijesrt.com/issues%20pdf%20file/Archive-2016/November-2016/46.pdf)
(Sedimentation of E Pliocene part of Cantayan Fm along Cibeet River in Bogor Trough in Sirnasari area, SE of Bandung. Classic turbidite facies)

Robba, E. (1996)- The Rembangian (Middle Miocene) mollusc-fauna of Java, Indonesia: I. Archaeogastropoda. Rivista Italiana Paleont. Strat. 102, 2, p. 267-292.
(online at: https://riviste.unimi.it/index.php/RIPS/article/view/5251/5275)
(Langhian archaeogastropods from Burdigalian- Langhian Tawun Fm/ Rembang Beds in Sedan-Tuban area of Rembang anticlinorium, NE Java. 18 species incl. new taxa Ilanga rebjongensis, Ethalia stefanoi, Pareucbelus pannekoeki and Leptothyra laddi)

Robba, E. (2013)- Tertiary and Quaternary fossil pyramidelloidean gastropods of Indonesia. Scripta Geologica 144, p. 1-191.
(online at: www.repository.naturalis.nl/document/479757)
(Descriptions of pyramidelloidean gastropods collected from Rembang anticlinorium (NE Java; mainly Langhian Tawun Fm) and review of collections of Naturalis Biodiversity Center, Leiden. Rembangian (M Miocene) assemblage 89 species, four formerly described (Leucotina speciosa, Megastomia regina, Exesilla, 52 are proposed as new; most undescribed species. Neogene fauna composed almost entirely of extinct species. Most Neogene species endemic to Indonesian Archipelago)

Roberts, K., R.J. Davies, S. Stewart & M. Tingay (2011)- Structural controls on mud volcano vent distributions: examples from Azerbaijan and Lusi, East Java. J. Geol. Soc., London, 168, 4, p. 1013-1030.
(Vent distributions in Azerbaijan mud volcanoes used to propose what controls distribution of 169 vents at Lusi mud volcano, E Java. Initial eruptions along NE-SW trend, parallel to Watukosek fault, changing to eruptions that follow E-W trends, subparallel to regional fold axes)

Robertson Research-Pertamina (1986)- East Java and Java Sea basinal area, stratigraphy, petroleum geochemistry and petroleum geology. Multi-client Study, 4 vols. p. *(Unpublished)*

Robertson Utama Indonesia, PT (2002)- East Java and East Java Sea- a petroleum systems evaluation. Multi-client Study, vol. 1: Text, 95p., vol. 2: Appendices, Vols. 3-6: Enclosures. *(Unpublished)*
(Comprehensive overview of NE Java basin stratigraphy and petroleum geology. With paleogeographic maps Eocene (Ngimbang) to Pliocene (GL marls))

Rohadi, S., S. Widiyantoro, A.D. Nugraha & Masturyono (2013)- Tomographic imaging of P- and S-wave velocity structure beneath Central Java, Indonesia: joint inversion of the MERAMEX and MCGA earthquake data. Int. J. Tomography Simulation 24, 3, p.
(Tomographic inversions from combined local and regional earthquake events. Low velocity anomaly at Lawu-Merapi zone. Strong low velocity anomaly zone between Cilacap and Banyumas, probably reflecting large dome of sediment. Low velocity anomaly also in Kebumen, coinciding with extensional oceanic basin toward land. Merapi's magma source comes from S of Merapi. High velocity anomaly pattern beneath W part of C Java may represent subducted Indo-Australian plate)

Rohmana, R.C., F.P. Dewi, S. Wibowo, A. Novadhani & I. Fardiansyah (2013)- Quartz-rich sandy facies behind the Miocene volcanic activity in South East Java: insight from sandstone characteristics within Jaten Formation. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-SG-031, p. 1-9.
(M Miocene sandstones of Jaten Fm in C Java Southern Mountains quartz-rich, but mainly bipyramidal volcanic quartz)

Rohrlach, B. (2011)- The geology of the Tujuh Bukit copper-gold project, East Java, Indonesia. Sydney Minerals Exploration Discussion Group (SMEDG), Presentation 16 June 2011, 53p.
(online at: https://www.smedg.org.au/Rohrlach_Tujuh_Bukit_Copper_Gold.pdf)
(SE-most Java Cu-Au prospects in Bukit Tujuh District, explored since 2007. Main prospects Tumpangpitu Cu-Au-Mo porphyry system and overlying cap of Tumpangpitu Au-Ag oxide System)

Rolando, A. (2001)- The new species *Terebellum olympiae* n.sp. (Gastropoda, Seraphidae) from the Middle Eocene mollusc assemblage of Nanggulan (Yogyakarta province, Java, Indonesia). Memorie Scienze Geol., Padova, 53, p. 41-44.
(Listing of 44 mollusc species, one new, from water well outcrop near Watumarah, 4 km W of Nanggulan, in upper part of Nanggulan Fm. Age late M Eocene, planktonic foram zones P13-P14)

Rosana, M.F. & H. Matsueda (2002)- Cikidang hydrothermal gold deposit in Western Java, Indonesia. Resource Geology 52, 4, p. 341-352.
(Cikidang gold deposit discovered in 1991 in Bayah dome gold district (also Pongkor, Cikotok mines). Gold in low-sulfidation quartz-adularia-sericite(-calcite) vein deposits. Host rocks Miocene lapilli tuff and breccia)

Romario, I.F.B., D. Mindasari, R.E. Suprapto & M.A. Yusuf (2015)- Oligo-Miocene tectonic of Java and the implication for flexural basin of Southern Mountain in affecting depositional system in Kerek Formation. Proc. Joint Convention HAGI-IAGI-IAFMI-IATMI, Balikpapan 2015, 6p.
(Study of M-L Miocene Kerek Fm in Kendeng back-arc basin, C Java. Marine clastics of 'dissected arc' provenance type (reflecting uplift of Southern Mountains volcanic arc))

Romario, I.F.B., R.E. Suprapto, D. Pambudi, R. Chandra, I.H. Pratama, M.I. Fauzan, R.J. Pratama & R. Rachman (2016)- Studi paleogeografi Neogen batas cekungan Kendeng- Serayu Utara: tantangan dan implikasi pada konsep eksplorasi minyak dan gas bumi di tinggian Semarang regional Jawa Tengah bagian utara. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 115-126.
(online at: https://repository.ugm.ac.id/273481/)
('Neogene paleogeographic study of the limits of Kendeng-Serayu basin: challenges and implications for oil and gas exploration concepts at the Semarang regional high, north Central Java'. N-S trending Semarang High at W side of Kendeng zone surrounded by oil seeps and possibly migration focus)

Rosana, M.F., S. Prihatmoko & T. Setiabudi (2014)- Low-sulfidation epithermal Au mineralization in Western Java and Southern Sumatra. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 109-128.
(W Java and S Sumatera split up by Sunda Strait, but geologically similar, in particular volcanic and magmatic events. Three groups of magmatic-volcanic events: Eocene-Early Miocene, Mio-Pliocene and Quaternary, all ranging from basaltic andesite with acidic-intermediate intrusives. Low sulfidation epithermal vein systems grouped into 'low base metal' (Cibaliung, Kerta, Gunung Pongkor, Cikidang, Putih Doh, Kedondong) and 'high base metal' (Cirotan, Ojolali), plus 'high silver' (Way Linggo). Mineralization ages Late Miocene- Pliocene, and all hosted in Mio-Pliocene magmatic-volcanic group)

Rosana, M.F., I. Syafri, U. Mardiana & N. Sulaksana (2006)- Petrology of Pre-Tertiary melange complex of Gunung Badak, Sukabumi, West Java. In: Proc. Geosains dalam Pembangunan Ekonomi & Kesejahteraan Serantau, Langkawi 2006, 5p. *(online at: http://resources.unpad.ac.id/unpad-content/uploads/publikasi_dosen/1D%20Persidangan%20Geosience%20UKM%20-ITB.pdf)*

(Gunung Badak melange in Ciletuh Bay, SW Java, with ophiolite (peridotite, serpentinite, gabbro, pillow basalt), metamorphics (quartzite, phyllite, schist) and sediments (greywacke, Nummulites lst, black shale, red clay, polymict breccias), overlain by Eocene Ciletuh Fm clastics. Rocks tectonically mixed as result of subduction. Peridotites in small outcrops in N and C part of Gunung Badak, locally serpentinized. Gabbros as dikes with porphyric textures, mostly of hyperstene, labradorite. Pillow basalt-spilitic lavas outcrop in N part. Phyllite, schist and quartzite as fragments of polymict breccias in N flank of Gunung Badak. Sedimentary rocks composed of greywacke in Mandra island, limestone and polymict breccias in Manuk, Kunti islands. Ciletuh Fm provenance from N part of Java, probably granitic Sundaland basement)

Rosana, M.F., E.T. Yuningsih, K.D. Saragih, R. Ikhram & N. Ardiansyah (2015)- Petrologi batuan ofiolit daerah Sodongparat, Kawasan Ciletuh, Sukabumi. Bull. Scientific Contr. (UNPAD) 13, 3, p. 221-230.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8409/3916)
('Petrology of ophiolite rocks in the Sodongparat area, Ciletuh Region, Sukabumi'. Pretertiary ophiolite in Ciletuh area, SW Java, assemblage of basalt, gabbro and ultramafics, associated with sedimentary-volcanic and metamorphic rocks. Ophiolite sequence incomplete, and emplacement can be equated with 'Cordilleran' ophiolite. Tectonic environmental of gabbro Island Arc Tholeiite (IAT) and Mid-Ocean Ridge, while basalt is Mid-Ocean Ridge Basalt (MORB). Some retrograde metamorphism)

Rothpletz, W. (1943)- Geological map of Nanggulan area, 1:10,000. Geological Survey, Bandung, File E43, p.
(Unpublished map)

Rothpletz, W. (1956)- Gunung Gamping sebelah barat Jogjakarta. Pusat Djawatan Geologi, Bandung, p. 1-5.
('Mount Gamping west of Yogyakarta'. Brief description of Eocene-Miocene limestone outcrop 4 km W of Yogya. Initially viewed as Miocene limestone by Junghuhn, but Eocene foraminifera identified by Gerth (1929))

Roza, S.E.V., L. Jurnaliah & Abdurrokhim (2016)- Biostratigraphy correlation of Jatiluhur, Kalapanunggal, and Subang Formation in northern part of Bogor Through. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 424-427.
(Summary of biostratigraphy work on M-L Miocene (N13-N17) of Cipamingkis and Cileungsi sections. Klapanunggal Lst of uppermost Jatiluhur Fm with Lepidocyclina spp., Katacycloclypeus annulatus and Flosculinella (equivalent of plankton zones N14-N16?))

Rudolph, M.L., L. Karlstrom & M. Manga (2011)- A prediction of the longevity of the Lusi mud eruption, Indonesia. Earth Planetary Sci. Letters 308, p. 124-130.

Rudolph, M.L., M. Manga, M. Tingay & R.J. Davies (2015)- Influence of seismicity on the Lusi mud eruption. Geophysical Research Letters 42, 18, p. 7436-7443.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2015GL065310/epdf)
(Modeling of propagation of seismic waves beneath Lusi mud eruption (E Java) suggests no significant amplification of incident seismic energy in U Kalibeng Fm (source of erupting solids). Hypothesis that Lusi mud eruption was triggered by clay liquefaction after earthquake unlikely. Also other constraints favor nearby drilling activity as trigger of mud eruption)

Rudolph, M.L., M. Shirzaei, M. Manga & Y. Fukushima (2013)- Evolution and future of the Lusi mud eruption inferred from ground deformation. Geophysical Research Letters 40, 6, p. 1089-1092.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/grl.50189/epdf)
(Ground deformation around Lusi mud volcano, E Java, decaying exponentially. Discharge predicted to decrease to 10% of present rate in 5 years)

Rusmana, E., K. Suwitodirdjo & Suharsono (1991)- The geology of the Serang quadrangle, Jawa (Quadr. 1109-6, 1110-3), 1: 100, 000. Geol. Res. Dev. Centre (GRDC), Bandung, 19p.

Rutten, L. (1914)- Studien uber Foraminiferen aus Ost-Asien, 7. Zwei Fundstellen von *Lepidocyclina* aus Java. Sammlungen Geol. Reichs-Museums Leiden (1), 9, p. 322-324.

(online at: www.repository.naturalis.nl/document/552393)
('Two localities with Lepidocyclina on Java'. W Java limestone belt between Cibadak- Sukabumi- Tagogapu (=Rajamandala Limestone; JTvG) characterized by large Lepidocyclina. Rutten not sure if earliest Miocene or Oligocene)

Rutten, L. (1916)- Vier dwarsprofielen door de Tertiaire mergelzone tusschen Soerabaja en Ngawi. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 3 (Molengraaff-volume), p. 149-152.
(online at: https://ia601908.us.archive.org/30/items/verhandelingenva3191geol/verhandelingenva3191geol.pdf)
('Four cross-sections through the Tertiary marl zone between Surabaya and Ngawi' (Kendeng zone))

Rutten, L. (1918)- On the rate of denudation in Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 20, 2, p. 838-848.
(online at: www.dwc.knaw.nl/DL/publications/PU00012275.pdf)
(English version of Rutten (1917) 'Over denudatiesnelheid op Java'. Large amounts of annual sediment discharge in modern rivers suggesting very high denudation rates on Java (~0.5-2.0 mm/year))

Rutten, L. (1918)- 'Old Andesites' and 'brecciated Miocene' to the East of Buitenzorg (Java). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 20, 1, p. 597-608.
(online at: www.dwc.knaw.nl/DL/publications/PU00012250.pdf)
(Survey E of Bogor suggests Verbeek & Fennema 1896 assertion of presence of 'Old Andesites' in that area is incorrect; only rel. young volcanics and Miocene sediments without volcanic content are found)

Rutten, L.M.R. (1925)- Over de richting der Tertiaire gebergtevormende bewegingen op Java. Kon. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde, 34, 1, p. 65-78.
('On the direction of Tertiary mountain building movements on Java'. See Rutten 1925 English version below)

Rutten, L.M.R. (1925)- On the direction of the Tertiary mountain-building movements in the Island of Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 28, 2, p. 191-203.
(online at: www.dwc.knaw.nl/DL/publications/PU00015144.pdf)
(English version of paper above. Vergence of thrusting not clear in W Java, but, unlike observations of Van Es and Ziegler, obvious N-directed folding in Kendeng zone, E Java)

Rutten, L.M.R. (1925)- On the origin of the material of the Neogene rocks in Java. Proc. Kon. Akademie Wetenschappen, Amsterdam, 29, 1, p. 15-33.
(online at: www.dwc.knaw.nl/DL/publications/PU00015249.pdf)
(Older Tertiary (~M Miocene and older) sands on Java mostly quartz-rich and from from northerly, continental source. Late Tertiary- Quaternary more common volcanoclastics from South)

Rutten, L.M.R. (1927)- Chapters 5-9 on the geology of Java. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 54-143.
(Review of geology of Java in Rutten's classic lecture series)

Rutten, M.G. (1952)- Geosynclinal subsidence versus glacially controlled movements in Java and Sumatra. Geologie en Mijnbouw 14, 6, p. 211-220.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0S2czQkxZN3B5cE0/view)
(Critical discussion of Smit Sibinga (1949) paper on influence of glacial eustatic movements on E Java and SE Sumatra Plio-Pleistocene stratigraphy. Rutten sees no such influence)

Ryacudu, R. & A. Bachtiar (1999)- The status of the OO-Brebes fault system, and its implication to hydrocarbon exploration in the Eastern Part of North West Java Basin. Proc. 27th Ann. Conv. Indon. Petroleum Assoc., p. 1-12.
(E part NW Java basin little exploration success. It is delineated by N-S bounding fault N of Cirebon, W-facing normal fault, which is splay of NW-SE trending OO fault, and E-facing Cirebon fault onshore. Hydrocarbon

accumulations (OO, X, Jatibarang, Cemara Fields) adjacent to this boundary. Most hydrocarbons in Paleogene clastic reservoirs. Paleogene deposits good reservoir quality and potential source rock from deltaic- lacustrine Talang Akar and upper Jatibarang Fms. Unsuccessful exploration in E part of NW Java Basin ('E Carbonate Shelf') due to lack of these deposits. N-S trending faults act as releasing double-bend structure of NW-SE right-stepping strike-slip fault system (OO and Brebes Faults), generated by Miocene N-S compressive stress and thought to be extensional regime of Cretaceous- Oligocene Meratus System, rejuvenated in Miocene)

Ryacudu, R., E. Purnomo, E. Sunardi, B.G. Adhiperdana & V. Isnainiwardhani (2006)- Vertical petrographic variation of mixed intrabasinal and extrabasinal detritus Klantung well, North Central Java Basin. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, p.

Ryacudu, R., E. Purnomo, E. Sunardi, A. Kadarusman, J. Hutabarat, Nurdrajat & B.G. Adhiperdana (2006)- Petrographic compositional distinction between Jatibarang and Talang Akar Formation, Jatibarang sub-basin, Northwest Java. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, 8p.
(Petrographic description of core samples from Eocene-Oligocene volcanoclastic Jatibarang Fm in four wells)

Sadjati, O., A.H.P. Kesumajana & R.P. Koesoemadinata (1999)- Penggunaan paleoheatflow dalam penentuan sejarah kematangan batuan induk, studi kasus sumur Ngimbang-01, Cekungan Jawa Timur Utara, Indonesia. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 115-120.
('The use of paleo heatflow to define source rock maturation; a case study at Ngimbang-01 well, NE Java Basin'. In area of Ngimbang 1 well source rock may have matured at 34 Ma, using realistic variable heat flow model, whereas constant present-day heat flow predicts onset of maturity at 16 Ma)

Saefudin, I. (1994)- Pentarikhan jejak belah terhadap batuan terobosan dasit dan andesit daerah Pacitan, Jawa timur. J. Geologi Sumberdaya Mineral 4, 38, p. 18-25.
('Fission track dating of dacite and andesite intrusive rocks of the Pacitan area, East Java'. Absolute age of altered hornblende dacite at Tegalombo ~25km NE of Paciran: 30.8 ± 2.9 Ma (Late Oligocene). Fresh andesites at Mt Guling and Menteron E of Pacitan ~19.5 and 17.3 Ma (E Miocene))

Saefudin, I., S. Permanadewi & A.Sutarsih (1995)- Umur mutlak granodiorit, Cihara, Lebak, Jawa Barat. J. Geologi Sumberdaya Mineral 5, 41, p. 2-8.
('Absolute age of the Cihara granodiorite, Lebak, W Java'. Fission-track dating of zircon from granodiorite in Bayah area, SW Java, suggests E Miocene age (~21-23 Ma). K/Ar analysis of one sample 22.4 Ma ± 0.4 Ma)

Saerina, A.N., I.F. Romario & H. Nugroho (2016)- Central Java hydrocarbon potential: North Serayu petroleum system from source to trap based on geology, geochemistry, and geophysics analysis. Int. Petrol. Techn. Conf. Bangkok 2016, IPTC-18654-MS, p. 1-7.
(N Serayu Basin in C Java with oil seeps at Karangkobar, Majalengka, Suruh, Klantung, Sodjomerto, etc. Outcrop stratigraphy in Banjarnegara, geochemical analysis of rock samples of Totogan-Worawari Fms and oil samples in Klantung and Karangkobar, Cipluk Field, etc.)

Safitri, D. & F. Hendrasto (1998)- Planktic foraminifera biostratigraphy of the Penosogan, Sempor and Rawakele Formations of the Kebumen Area, Central Java Indonesia. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p. 179. *(Abstract only)*

Said, Salatun & Windiastuti (2009)- Analisis fasies dan lingkungan pengendapan Formasi Tuban, Jawa Timur Utara. J. Ilmiah Magister Teknik Geologi (UPN) 2, 2, 14p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/188/150)
('Facies analysis and depositional environment of the Tuban Formation, NE Java'. Brief descriptions of E Miocene carbonate (Sr ages ~20.2- 15.2 Ma) in PetroChina wells ANC 1-3 (real name Sukowati?; JTvG). Five major lithofacies facies. Environments lagoon, back reef, reef, and fore reef. With log correlation figure)

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(online at: http://jfr.geoscienceworld.org/content/9/2/106.full.pdf)
(Planktonic foram biostratigraphic study of Late Miocene- Pliocene Globigerina Marls Fm of Ngepung section, ENE of Ngawi, Kendeng zone, E Java. Marls with sandy and tuffaceous intercalations, 640m thick, with abundant planktonic foraminifera. Correlation with Bodjonegoro sequence relatively easy)

Saito T. (ed.) (1981)- Micropaleontology, petrology and lithostratigraphy of Cenozoic rocks of the Yogyakarta region, Central Java. Spec. Publ. Dept. Earth Sci, Yamagata University, Japan, p. 1-61.
(Collection of papers reporting on fieldwork around Yogyakarta. Measured sections and micropaleontologic content at Pereng (E-M Miocene; N8-N12), Niten (E Miocene, N7), Djurang (M Miocene, N14-N15), Kalisonggo/ Nanggulan (Eocene), Oyo River (E-M Miocene, N4-N10) and and Bayat (Eocene))

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(Carbonate clasts from Lusi feeder conduit brecciated and mobilized to surface were buried possibly as deep as ~3.8 km. Since deeper carbonate samples erupted in 2006 belong to typically not overpressured Kujung Fm, an additional overpressure may be generated from deeper units (Ngimbang Fm) (dating mainly by Sr-isotopes)).

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(MT survey supports presence of three Kujung Fm carbonate build-ups in area of Kawengan oilfield and Banyuasin area, C Java)

Samodra, H. (2016)- Batupasir kuarsa Wediwutah: asal kuarsa dan informasi keragaman geologi Formasi Wonosari, Kabupaten Gunung Kidul. J. Geologi Sumberdaya Mineral 17, 2, p. 73-84.
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('The Wediwutah quartz sandstone: quartz provenance and information of geodiversity of the Wonosari Formation, Gunung Kidul Regency'. Quartz sst in basal part of Wonosari Fm Wediwutah area of S Mountains. Fission-track ages of zircon in quartz sandstones of Wediwutah 12.6 ± 1.2 Ma and from Gombang 24.3 ± 2.9 Ma. Possibly derived from different sources, i.e. Oyo Fm tuffs and Semilir Fm)

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Samodra, H. & K. Sutisna (1997)- Geologic map of the Klaten (Bayat), sheet Jawa, scale 1:50.000. Geol. Res. Dev. Centre (GRDC), Bandung.

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(Review of S Mountains geology, C Java. Widespread Late Oligocene- E Miocene volcanics (Nglanggran volcanic arc in W, Mandalika arc in E, with more submarine volcanism), with Manda. Eocene-Miocene rocks in S Mountains only slightly folded;in W (Bayat) segment general dips of 15-30° to S; faulting more common. Two continental fragments posulated in S Mountains, Bayat (with pre-Eocene schists and phyllites) and Mandalika)

Sampurno & Samodra (1991)- Geological map of the Ponorogo Quadrangle, Jawa (1508-1), 1: 100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 19p.

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('Quantitative analysis of Pliocene foraminifera of the Ledok area, C Java')

Samuel, L. & M. Yohannes (1986)- Direction of current, Ledok Formation, Cepu area. Proc. 14th Ann. Conv. Indon. Assoc. Geologists (IAGI), Yogyakarta, p. .

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(Maturation studies for several E Java wells. In Ngimbang 1 at ~2500m sudden increase in vitrinite and spore color, suggesting normal fault within Eocene Lower Ngimbang Fm, between Kujung High and Ngimbang low)

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(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/530/394)
(Paleogene coal deposits in three fields in Banten, SW Java: (1) Bayah coals in Eocene Bayah Fm mainly vitrinite and subordinate inertinite; sub-bituminous A to high volatile bituminous A (Ro 0.60-0.79%); (2) Cihideung coals in Bayah Fm sub-bituminous A to medium volatile bituminous (Ro 0.53-1.23%), and (3) Cimandiri coals in Oligocene Cijengkol Fm sub-bituminous A and high volatile bituminous A (Ro 0.6- 0.83%). Most coals high pyrite contents, mainly in Bayah coals (2-13%), indicating marine influence during deposition)

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(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/594/456)
(Petrography of rel. thin Late Miocene coals in Bojongmanik Fm of W Java. Six seams, 0.2- 1.0m thick, one seam in Bojongmanik 1.5- 2.2m thick. Grade lignite- subbituminous)

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(Seismic imaging and reservoir interpetation of M Miocene Parigi Fm carbonate buildups in NW Java Basin)

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('Gravity, magnetic and geological interpretation of Luh Ulo melange complex, Central Java'. Cretaceous-Paleocene melange Complex in Karangsambung area, ~20 km N of Kebumen, C Java, can be divided into two units: Jatisamit Melange and Seboro Melange, differing by more abundant exotic bloks in Jatisamit Melang. Blocks of sedimentary rocks, metamorphic rocks and ophiolite members such as pillow lava, gabbro and serpentinite, all embedded in sheared clay matrix. Overlain by Eocene olistostromes and younger sediments. Ophiolite Complex found in same area interpreted to be from mid-oceanic ridge of Cenomanian age)

Santoso, D. & M.E. Suparka (2001)- Geological interpretation of the melange Complex, Luh Ulo, Central Java based on gravity and magnetic data. In: Selected papers on the geodynamics of the Indonesian regions, Jurnal Geofisika, Spec. Edition, Indon. Assoc. Geophysicists (HAGI), p. 1-399.

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(online at: http://iopscience.iop.org/article/10.1088/1755-1315/62/1/012038/pdf)
(Gravity measurements show low density structure beneath dormant Mt. Pandan volcano in E Java. May be interpreted as subsurface magma body, and suggest possibility of magmatic activity below Mt. Pandan)

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(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/77/pdf_21)
(In Rembang zone of NE Java Basin peaks in abundance of nannofossil species Calcidiscus leptoporus and Helicosphaera carteri used to infer rel. hyposaline conditions in Late Miocene Ledok and Late Pliocene-E Pleistocene Selorejo Fms)

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Santy, L.D., A. Koesworo, R. Fakhruddin, R. Setiawan & D. Irawan (2009)- Ichnologi dan sedimentologi untuk pemodelan facies sedimentasi pada Formasi Sambipitu-Oyo, Pegunungan Selatan, Yogyakarta. In: Proc. Workshop Geologi Pegunungan Selatan, Yogyakarta 2007, Pusat Survei Geologi, Bandung, Spec. Publ. 38, p. 209-233.
('Ichnology and sedimentology for sediment facies modeling in the Sambipitu-Oyo Formations, Southern Mountains, Yogyakarta'. Sandstones of E-M Miocene Sambipitu and Oyo Fms in Southern Mountains SE of Yogyakarta with locally common trace fossils, incl. Skolithos, Planolites, Chondrites, Thalassinoides, Subphyllochorda and Scolicia. Eight facies associations in Ngalang River, from tidal, shoreface to 'lobe' facies)

Sapardina, D., R. Sekti, F. Musgrove & N. Stephens (2013)- Tight rinds in SE Asia Oligo-Miocene isolated carbonate platforms. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-195, p.
(Wells drilled near edge of Oligo-Miocene isolated carbonate platforms in Cepu Block, E Java basin, have low porosity (~8% compared to 20-35% in Platform Interior in most fields). Tight zones ~400' wide, on oceanward and landward edges, and caused by combination of depositional and diagenetic processes, primarily lack of leaching that makes Platform Interior good reservoir. Similar to Malampaya field, Philippines)

Sapei, T., A.H. Suganda, K.A.S. Astadiredja & Suharsono (1992)- Geology of the Jember Quadrangle, Jawa, 1607-6 and 1607-3, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, p. 1-9.

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Sapiie, B., R. Anshory, S. Susilo & Putri (2007)- Relationship between fracture distribution and carbonate facies in the Rajamandala limestone of West Java region. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 8p.
(Fracture characteristics strongly dependent on carbonate facies. Stylolites more common in boundstone facies than in wacke- and packstones. Fracture density also higher in boundstone facies. Fracture density also controlled locally by presence of faults and folds)

Sapiie, B., I. Gunawan, A. Herlambang, M. Rismawaty, A. Rifiyanto, S. Rahardjo, A. Samudra & P.R. Putra (2017)- Problems in conducting fault seal analysis in carbonate reservoir. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-263-G, 8p.
(Fault Seal Analysis study in Rajamandala limestone near Bandung. Faults in carbonates generally leaking)

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(Fracture distribution and characteristics in Late Oligocene Rajamandala Limestone outcrops dependent on carbonate facies)

Sapiie, B., A. Pamumpuni, I.J. Saputra, E. Lanin, A.M. Surya Nugraha, W. Kurniawan, L.A. Perdana, M.A. Riswanty, A. Herlambang & T. Simo (2011)- Structural characterization of the Rajamandala Limestone. In: B. Sapiie & T. Simo, The stratigraphy and structure of the Oligocene (Chattian) Rajamandala Limestone, Bandung, Western Java, Indonesia, a technical field trip for geoscientists, Indon. Petroleum Assoc. Field Trip, 8p.

Sapiie, B., D. Noeradi, A. M. Suryanugraha, W. Kurniawan, T. Simo & D. Nugroho (2010)- Palinspatic reconstructions of Rajamandala carbonate complex as implication of paleogeography in the Western Java, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-057 3D, 12p.
(Rajamandala Carbonate Complex N-verging, ENE-WSW trending thrust-fault system, with~50% shortening. Rajamandala platform carbonate complex developed on NNE-SSW regional basement high, with Cimandiri fault acting as shelf edge. Youngest Plio-Pleistocene deformation parallel to pre-existing structure, suggesting basement- involved deformation)

Sapiie, B., A. Shirly & A. Badai (2006)- Fault zone characterization and fault seal analysis in the Gunung Walat area, West Java. Proc. 35th Ann. Conv. Indon. Geol. Assoc. (PIT IAGI), Pekanbaru 2006, p.

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(online at: https://repository.ugm.ac.id/135460/)
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Saputra, S.E., A. Amir, A.H. Satyana & N.A. Ascaria (2005)- Sedimentology of the Wonosari carbonates, Southern Yogyakarta: outcrop study and petroleum implications. Proc. Joint Conv. 30th HAGI and 34th Ann. Conv. Indon. Assoc. Geol. IAGI, Surabaya 2005, p.

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(online at: https://repository.ugm.ac.id/273555/)
(Study of the petrology and geochemistry of metamorphic rocks of the Muncar River, Seboro Village, Sadang District, Kebumen, C. Java'. Metamorphic rocks from Muncar River in Lok Ulo complex low P to high P facies (increasing to N?): greenschist, amphibolite, glaucophane blueschist and eclogite. Reflect orogenic metamorphism in subduction environment. Tourmaline-bearing facies probably derived from MORB basalt, eclogite phengite from oceanic intra-plate basalt (OIB). Also presence of serpentinite, marble)

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(East Cepu High NE-SW trending Paleogene paleo-high, with several oil-gas fields in Oligo-Miocene carbonate build-ups. Hydrocarbons from Paleogene Ngimbang Fm source rocks, but from different environments. Hydrocarbons in SE from fluvio-deltaic deposits, in NW from deltaic-shelf deposits)

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(online at: https://jurnal.ugm.ac.id/jag/article/view/6671/5219)
(Late Oligocene pillow basalts at Kenanga River, 5 km SE of Watupatok. Porphyritic- aphyric texture, vesicular-amygdaloidal, with plagioclase and pyroxene phenocrysts in volcanic glass matrix. Geochemical indicates tholeiitic island arc basalt)

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('Intra-Miocene orogeny in Indonesia')

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Sartono, S. & H. Murwanto (1987)- Olistostrome sebagai dasar batuan di Jawa. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.
('Olistostrome as basal rock in Java')

Sasongko, W., F.H.M. Mahendra, F. Buha D & M.R. Legi H (2016)- Kajian tatanan tektonik, asal batuan dan iklim purba pada batupasir Formasi Nanggulan berdasarkan analisis petrografi. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 530-545.
(online at: https://repository.ugm.ac.id/273761/1/C-11.pdf)
('Study of tectonic setting, provenance and paleoclimate of the Nanggulan Formation sandstone based on petrographic analysis'. Petrography of Eocene Nanggulan Fm sst of Kulon Progo Dome, C Java, suggests changes in provenance from lower sands from continental block (granitic rock of E Java microcontinent) followed by recycled orogen (low-grade metamorphics; folding-uplift of E Java microcontinent) to undissected magmatic arc in upper Nanggulan Fm (onset of magmatic arc activity). Climate humid-subhumid)

Sastramihardja, T. (1991)- Pola struktur dan periode deformasi daerah Cihara, Banten Selatan- Jawa Barat. J. Riset Geologi Pertambangan (LIPI) 10, 1, p. 42-52.
('Structural pattern and deformation periods of the Cihara area, South Banten, West Java'. SW Java 3 deformation periods: (1) Pretertiary compression with axis of N355°E, (2) Oligo-Miocene compression with N5°E axis and (3) M Miocene NE-SW compression with dextral strike-slip faulting))

Sato, T., Rendy, D. Syavitri, E. Widianto, D. Priambodo, M. Burhannudinnur & A. Prasetyo (2016)- Unconformities detected by high-resolution calcareous nannofossil biostratigraphy and its effect on petroleum system in Northeast Java Basin. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 461-466.
(Calcareous nannofossil biostratigraphy of NE Java basin well DDR (Dander)-1, interval 110- 2241m (= shale above Ngimbang Lst). Age E Miocene- latest E Pliocene (NN3-NN15). Four unconformities: (1) 1100m (10.54-10.79 Ma); (2) 720m (9.56- 9.67 Ma); (3) 560m (8.52- 8.76 Ma); and (4) 380m (4.0- 7.17Ma). Sedimentation rates 20-40cm/ 1000 years with unconformities. Unconformities correlated to global climatic events such as Asian monsoons intensification (8 -10Ma) and Messinian salinity crisis (5.5Ma) and may be related to global eustacy changes)

Satyana, A.H. (1989)- Studi petrotektonik kerabat ofiolit pada kompleks melange Gunung Badak, Ciletuh, Kecamatan Ciemas, Kabupaten Sukabumi, Jawa Barat. Thesis Jurusan Geologi, Padjadjaran University, Bandung, p. *(Unpublished)*
(Petrotectonic study of ophiolite members of the Gunung Badak melange complex, Ciletuh, Ciemas District, Sukabumi, West Java')

Satyana, A.H. (2002)- Oligo-Miocene reefs: East Java's giant fields. In: F.H. Sidi & A. Setiawan (eds.) Proc. Giant Field and New exploration concepts seminar, Indon. Assoc. Geol. (IAGI), Jakarta 2002, p. 45-62.
(On recent discovery of two giant fields in Oligocene- Early Miocene Kujung- Prupuh carbonates in E Java Basin: Bukit Tua-Jenggolo (Gulf/ConocoPhillips, 2001; land-attached platform) and Banyu Urip (ExxonMobil Cepu, 2001; isolated buildup)

Satyana, A.H. (2003)- Deep-water sedimentation of Java: hydrocarbon opportunities and resistance. Indon. Petroleum Assoc. (IPA) Newsl., October 2003, p. 8-13.
(Hydrocarbon play potential in deep marine Tertiary basinal areas of Java (Bogor Basin, Serayu, Kendeng, East Java basins)

Satyana, A.H. (2005)- Structural indentation of Central Java: a regional wrench segmentation. Proc. Joint Conv. 34th Ann. Conv. Indon. Assoc. Geol. (IAGI) and 30th Ann. Conv.HAGI, Surabaya, p. 193-204.
(Indentation of coastlines of N and S Central Java caused by two major Paleogene wrench faults with opposing trends and slips which terminate in southern C Java near Nusa Kambangan: (1) Muria-Kebumen Fault, left-lateral, trending SW-NE (Meratus trend); and (2) Pamanukan-Cilacap Fault, right-lateral, trending NW-SE (Sumatran trend). Maximum uplift of Cilacap-Kebumen exposed basement rocks in Luk Ulo area. S of maximum uplift region submergence of Southern Mountains across southern C Java)

Satyana, A.H. (2005)- Oligo-Miocene carbonates of Java, Indonesia: tectono-volcanic setting and petroleum implications. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 217-249.
(Java Oligo-Miocene carbonates widely distributed, during time of "Old-Andesite" volcanism. Two trends: (1) North (Cepu-Surabaya-Madura, North Central Java and Ciputat-Jatibarang areas), comprising Kujung, Tuban, Baturaja and M Cibulakan formations and (2) South (Gunung Kidul- Banyumas- Jampang- Bayah-Sukabumi-Rajamandala). N Trend carbonates in back-arc setting, 75-150 km from contemporaneous volcanic arc in S Java. S Trend reefs on ridges in Bayah-Sukabumi-Padalarang areas not contemporaneous with volcanism. Volcanic quiescence across Java from 18- 12 Ma, when sea transgressed many areas in SE Asia, causing abundant reefal carbonates deposition along S Trend. N Trend carbonates prolific petroleum reservoirs. S Trend no hydrocarbons, but inadequately explored)

Satyana, A.H. (2006)- New insight on tectonic of Central Java, Indonesia and its petroleum implications. Abstract AAPG Int. Conf., Perth 2006. *(Extended Abstract)*
(C Java conspicuous indentation of coastlines compared to W and E Java. Two major Paleogene strike-slip faults with opposing trends and slips responsible for indentation: (1) SW-NE Muria-Kebumen Fault, left-lateral, and (2) NW-SE Pamanukan-Cilacap Fault, right-lateral. Faults caused indentations of N and S coastlines, subsidence of North C Java, uplift of Serayu Range and exposure of pre-Tertiary Luk Ulo melange complex, disappearance of S Mountains in southern C Java due to subsidence, and N-ward shift of Quaternary volcanic arc in C Java)

Satyana, A.H. (2007)- Central Java, Indonesia- a ñTerra Incognitaò in petroleum exploration: new considerations on the tectonic evolution and petroleum implications. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-085, p. 1-22.
(Two major Paleogene strike-slip faults with opposing trends and slips responsible for indentation of Java coastline: (1) SW-NE trending Muria-Kebumen Fault, left-lateral and (2) NW-SE, right-lateral Pamanukan-Cilacap Fault. Faults caused: uplift of Serayu Range and exposure of Luk Ulo melange, subsidence of N part of C Java and indentation of northern coastline, subsidence of S Mountains in southern C Java and indentation of S coastline, and N-ward shifting of Quaternary volcanic arc in C Java. Presence of two opposite regional strike-slip faults crossing each other in southern C Java has configured petroleum geology of C Java)

Satyana, A.H. (2009)- Disappearance of the Javaôs Southern Mountains in Kebumen and Lumajang depressions: tectonic collapses and indentations by Javaôs transverse major fault zones. In: International Conference on Javaôs Southern Mountains, Yogyakarta 2009, Gadjah Mada University, 8p.
(Two 'gaps' in Java Southern Mountains: (1) Kebumen Depression in C Java and (2) Lumajang Depression in SE Java. Two sets of fault zones, trending transversal to Java Island responsible for collapse of S Mountains in these areas)

Satyana, A.H. (2014)- Subvolcanic hydrocarbon prospectivity of Java: opportunities and challenges. Proc. 39th Ann. Conv. Indon. Assoc. Geoph. (HAGI), Solo, 4p.

(Presence of oil and gas seeps in volcanic areas of Java show presence of active petroleum systems under volcanic covers. This hydrocarbon prospectivity of Java Island so far unexplored. Focus areas for this target suggested here is at border between W Java- C Java, and subsided northern C Java)

Satyana, A.H. (2015)- Subvolcanic hydrocarbon prospectivity of Java: opportunities and challenges. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-105, 15p.
(Expanded version of Satyana (2014). Common oil and gas seeps in volcanic areas of Java show presence of active petroleum systems underneath volcanic cover, but so far unexplored. Areas with prospectivity: Banten Block, Majalengka-Banyumas area and N Serayu area. Seismic imaging and reservoir quality issues)

Satyana, A.H. (2016)- The emergence of Pre-Cenozoic petroleum system in East Java Basin: constraints from new data and interpretation of tectonic reconstruction, deep seismic, and geochemistry. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-573-G, 30p.
(Geochemistry of Sepanjang oil in Eocene reservoir from Kangean area in Java Sea and general East Java oils suggest possible presence of marine Lower Cretaceous-sourced oil, based on low oleanane and sterane content. Deep seismic lines in East Java Sea and South Java forearc suggest possibility of Pre-Eocene section in Australia-derived microcontinent(s) (But: proven oil source rocks on Australian NW Shelf older than Cretaceous, and without any oleanane?; JTvG)

Satyana, A.H. & C. Armandita (2004)- Deepwater plays of Java, Indonesia: regional evaluation on opportunities and risks. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia and Australasia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 293-319.
(Review of Mio-Pliocene deepwater sedimentation in Bogor, North Serayu and Kendeng Zones, across middle of Java. Depressions formed by isostatic subsidence compensating for uplifted volcanic arcs located to S. In Plio-Pleistocene time trough/basins significantly uplifted and deformed, and currently form fold and thrust belts. Deepwater plays viable in Java. Oil seeps and oil fields in N Serayu Trough in turbiditic volcaniclastic sandstones. Oil fields in E Java have reservoirs of Ngrayong sands considered as deepwater deposits on slope of Rembang Zone. Fields in Pliocene-Pleistocene volcaniclastic turbidites of E Kendeng Zone also show prospectivity of deepwater plays in Java. With Ngrayong Fm paleogeography)

Satyana, A.H., C. Armandita, B. Raharjo & I. Syafri (2002)- New observations on the evolution of the Bogor Basin, West Java: opportunities for turbidite hydrocarbon play. Buletin Geologi (ITB), Spec. Ed. (Prof. Soejono Martodjojo volume), 34, 3, p. 101-116.
(Outcrop studies in Sumedang area suggest Bogor Basin also received sediments from N (e.g. upper M Miocene Cinambo, Lower Pliocene Subang and Bantarujeg Fms) not just from S, as suggested by Martodjojo (1984). Most sands deposited in ponded basins on slope area and as submarine fans on basin floor)

Satyana, A.H. & Asnidar (2008)- Mud diapirs and mud volcanoes in depressions of Java to Madura: origins, natures and implications to petroleum system. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-139, 20p.
(Numerous mud diapirs and mud volcanoes in Bogor-North Serayu-Kendeng-Madura Strait Zone, an axial depression with rapid deposition of Mio-Pleistocene sediments and subsequently compressed. Oil and gas seeps and producing oil and gas fields in same zone)

Satyana, A.H., E. Biantoro & A. Luthfi (2003)- Gas habitat of the East Java Basin, Indonesia- meets the future demand. Abstract 65th EAGE Conf. & Exhibition, Stavanger 2003, 4p. *(Extended Abstract)*
(E Java basin basin rich in gas. Thermogenic gas in two trends: (1) Cepu- Kangean High (in Oligo-Miocene carbonates on Cepu High, Eo-Oligocene Ngimbang carbonate at Suci, Eocene clastics at Pagerunganand W Kangean) and (2) N Madura Platform (Kucung and Rancak carbonate reservoirs at KE, Bukit Tua, Jenggolo, Payang). Gases from Cepu High high-CO2 gas due to thermal degradation of carbonates. Biogenic gases in two trends: (1) Surabaya- Madura Strait (Wunut, Oyong, Maleo, MDA, Terang-Sirasun-Batur-Kubu), and (2) Muriah- Bawean (Kepodang Field). Reservoirs M Miocene Tawun to E Pliocene Mundu sands and carbonates)

Satyana, A.H. & A. Darwis (2001)- Recent significant discoveries within Oligo-Miocene carbonates of the East Java Basin: integrating the petroleum geology. Proc. 30th Ann. Conv. Indon. Assoc. Geol. (IAGI) and GEOSEA 10th Reg. Congress, Yogyakarta, p. 37-41.
(NE Java basin paper describing Oligo-Miocene deposition of carbonate buildups on ENE-WSW trending highs (W Cepu, E Cepu, Porong-BD platform), formed during Eocene rifting, followed by M Miocene and younger inversion)

Satyana, A.H. & M. Djumlati (2003)- Oligo-Miocene carbonates of the East Java Basin, Indonesia: facies definition leading to recent significant discoveries. AAPG Int. Conf., Barcelona, Spain, Ext. abstract, 5p.
(Brief but good overview of Oligo-Miocene carbonates distribution of East Java basin, showing isolated platforms on WSW-ENE trending faulted basement highs, formed during Paleogene rifting. Tectonic inversion started in mid-Miocene and peaked in Pleistocene time)

Satyana, A.H., E. Erwanto & C. Prasetyadi (2004)- Rembang-Madura-Kangean-Sakala (RMKS) Fault zone, East Java Basin: the origin and nature of a geologic border. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 23p.
(Major E-W left-lateral wrench zone, forming deformed zone 15-40 km wide and 675 km long from Rembang in W through Madura and Kangean Islands to Sakala offshore in E. Fault Zone at hinge or shelf edge between stable E Sunda Shelf (Paternoster-Kangean micro-continent) in N and deep-water area with different basement lithology in S. Initiation of fault zone in late E Miocene in Sakala area, M Miocene in Rembang area. Flower structures on seismic sections, showing basement-involved, deeply-rooted vertical master faults with upward diverging splays with reverse separations. In map view, these splays are mapped as fold and fault belts trending W-E and WNW-ESE. Extensional component of wrench zone subsided Paleogene rifted blocks like Central Deep and formed normal faults. Tectonic inversion observed. Shale diapirism common S of fault zone in thick shale sequences deposited rapidly to S of RMKS FZ)

Satyana, A.H. & M.E.M. Purwaningsih (2002)- Geochemistry and habitats of oil and gas in the East Java Basin regional evaluation and new observations. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 68-102.
(Geochemical data from ~100 wells and seeps. Most oils from terrestrial- marginal marine facies. Offshore oils more terrestrial than onshore. Ngimbang, Lower Kujung and Lower Tuban shales sources of oils and thermogenic gases. Biogenic gases from Neogene Tawun- Lidah shales. High CO2 associated with thermal degradation of Paleogene Kujung carbonates)

Satyana, A.H. & M.E.M. Purwaningsih (2002)- Lekukan struktur Jawa Tengah: suatu segmentasi sesar mendatar. In: Proc. Conf. Sumberdaya geologi daerah istimewa Yogyakarta dan Jawa Tengah, IAGI Central Java section, Yogyakarta, p. 55-66.
(Indentation of C Java structure by wrench faults. Two wrench zones representing Paleogene tectonic elements of major shears in W Indonesia (NE-SW Sumatran Trend and SW-NE Meratus Trend) meet in C Java)

Satyana, A.H. & M.E.M. Purwaningsih (2003)- Geochemistry of the East Java Basin: new observations on oil grouping, genetic gas types and trends of hydrocarbon habitats. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 585-607.
(Similar to 2002 paper. Biogenic gas in M Miocene-Pliocene reservoirs in Terang-Sirasun, Oyong, Maleo (Madura straits), Kepodang (Java sea) Wonolelo seep in W Cepu, etc. High CO2 gas (30-80%) in two areas: Cepu High, offshore Java Sea)

Satyana, A.H. & M.E.M. Purwaningsih (2003)- Oligo-Miocene carbonates of Java: tectonic setting and effects of volcanism. Proc. 32nd Ann. Conv. Indon. Assoc. Geol. (IAGI) and 28th Ann. Conv. HAGI, Jakarta, 27p.
(Java Late Oligocene-Early Miocene widespread platform and reefal carbonates. Period also noted for 'Old Andesite' volcanism along S part of Java. Two trends: (1) N Trend, including Cepu-Surabaya-Madura, N Central Java, and Ciputat-Jatibarang areas consists of carbonates of Kujung, Prupuh, Tuban, Poleng, M Cibulakan and Baturaja and (2) S Trend, with Gunung Kidul- Banyumas- Jampang- Bayah- Sukabumi-Rajamandala areas. N Trend developed in back-arc setting, 75-150 km away from Oligo-Miocene volcanic arc

in S Java. No volcanic material found in these carbonates. S Trend in intra-arc setting. No reefal carbonates in G. Kidul-Banyumas-Jampang areas. Rajamandala reefs developed prior to E Miocene Jampang volcanism. Volcanic quiescence in Java from 18-12 Ma (M Miocene) resulted in significant reefal carbonates development along S Mountains of Java, like Wonosari/Punung in Gunung Kidul, Jonggrangan in Kulon Progo, Karangbolong/Kalipucang in Banyumas, and Bojonglopang in Jampang areas)

Sawolo, N., E. Sutriono, B.P. Istadi & A.B. Darmoyo (2009)- The LUSI mud volcano triggering controversy: was it caused by drilling? Marine Petroleum Geol. 26, 9, p. 1766-1784.
(online at: http://seismo.berkeley.edu/~manga/sawolo2009.pdf)
(Study suggesting LUSI mud volcano is naturally occurring mud volcano in area prone to mud volcanism. Conclusion disputed by Davies et al. (2010) and Tingay (2009, 2016))

Sawolo, N., E. Sutriono, B.P. Istadi & A.B. Darmoyo (2010)- Was LUSI caused by drilling?- Authors reply to discussion. Marine Petroleum Geol. 27, 10, p. 1658-1675.
(Reply to Davies et al. (2010) discussion, who argued LUSI mud volcano was triggered by drilling)

Saygin, E., P.R. Cummins, A. Cipta, R. Hawkins, R. Pandhu, J. Murjaya, Masturyono, M. Irsyam, S. Widiyantoro & B.L.N. Kennett (2016)- Imaging architecture of the Jakarta Basin, Indonesia, with transdimensional inversion of seismic noise. Geophysical J. Int. 204, 2, p. 918-931.
(Shear wave velocity model of Jakarta Basin from seismic noise shows low-velocity basin under most of N Jakarta down to ~1-1.5 km)

Scheibener, E. & T.L. Reitsema (1931)- Een voorkomen van kwartszandsteen, daciet en contactmetamorphe gesteenten in het heuvelterrein nabij Godean, gouvernement Jogjakarta. Natuurkundig Tijdschrift Nederlandsch-Indie 91, 2, p. 196-202.
(online at: http://62.41.28.253/cgi-bin/)
('An occurrence of quartz sandstone, dacite and contact metamorphic rocks in small hills near Godean, Yogyakarta area'. Locality of G. Pare, NW of Godean, W of Yogya. Quartz described as polycrystalline, with undulose extinction (= metamorphic quartz?; possibly Eocene sandstone with intrusive younger andesitic volcanics; JTvG))

Scheidecker, W.R. & D.A. Taiclet (1976)- Arjuna B structure: a case history. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 95-114.
(Second offshore oil discovery in Indonesia, in 1968. Upper Cibulakan Fm and 'Main' and 'Massive' sand reservoirs improve in quality away from crest of structure)

Schilder, F.A. (1937)- Neogene Cypraeacea aus Ost- Java (Mollusca, Gastropoda). De Ingenieur in Nederlandsch-Indie (IV), 4, 11, p. 195-210.
('Neogene Cypraeacea from East Java'. Descriptions of marine cowrie shells from Miocene of Lodan anticline, Pliocene of Solo River and E Pleistocene of Mojokerto region, collected during mapping by Bandung Geological survey)

Schilder, F.A. (1939)- Uber einige fossile Cypraeacea aus dem Sunda-Archipel. Neues Jahrbuch Mineral. Geol. Palaontologie 81, 3, p. 494-500.
('On some fossil Cypraea from the Sunda Archipelago'. Gastropods)

Schilder, F.A. (1941)- The marine mollusca of the Kendeng beds (East Java). Gastropoda, Part 3 (Families Eratoidae, Cypraeidae, and Amphiperaidae). Leidsche Geol. Mededelingen 12, p. 171-194.
(online at: www.repository.naturalis.nl/document/549360)
(Part of series of papers on Kendeng Beds marine molluscs by Van Regteren Altena 1938-1950 and Schilder. Gastropods from Upper Kalibeng and Pucangan Fms includes Zoila kendengensis, Volva surajensis n.sp., etc.)

Schiller, D.M., R.A. Garrard & L. Prasetyo (1991)- Eocene submarine fan sedimentation in Southwest Java. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 125-181.

(Outcrops of M- L Eocene Ciletuh Fm f-vc sandstones and sandy conglomerates, interpreted as sand-dominated submarine fan complex. Two lithofacies: (1) composed of mostly quartz (58-84%) and variety of lithic fragments; (2) less pervasive volcanic facies, composed almost entirely of volcaniclastic sediments. Mesozoic granitic continental crust and Late Cretaceous subduction complex areas to N interpreted to have supplied majority of quartz and lithic fragments, while possible Eocene local volcanic arc is believed to have sourced volcanics. Reservoir quality of quartzose sst poor due to compaction and carbonate cementation).

Schiller, D.M., B.W. Seubert, S. Musliki & M. Abdullah (1994)- The reservoir potential of Globigerinid sands in Indonesia. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 189-212.
(Porous limestones composed of sand-sized planktonic forams in outcrops and wells with variable reservoir quality and thickness.Up to 30-45% primary porosity, 100-1000 md perm and 30-40m thick. Two types: foram sand "drifts" deposited by bottom currents and foram "turbidites" deposited as submarine channel-fills and fans. "Foram drift" facies more common and best reservoir characteristics. Foram drift deposits in E Java-Madura Strait mostly latest Early Pliocene. Facies development related to tectonic event, partly coinciding with 3.8 Ma global sea level lowstand. Similar globigerinid-rich facies in Late Pliocene Selorejo Fm of C and E Java. E Pliocene drift facies widespread from E-most-C Java to Bali Sea, Late Pliocene examples appear restricted to Rembang Zone of NE Java)

Schipper, J. & C.W. Drooger (1974)- Miogypsinidae from East Java and Madura. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B77, 1, p. 1-14.
(Three E-M Miocene miogypsinid species assemblages from same samples studied for lepidocyclinids and planktonics by Van der Vlerk and Postuma (1967): rel. long-lived M. globulina (N5-N7?), M. cushmani (~N8?) and M. antillea (Gr. peripheroronda zone; N9))

Schlumberger, C. (1900)- Note sur deux especes de *Lepidocyclina* des Indes Neerlandaises. Sammlungen Geol. Reichs-Museums Leiden ser. 1, 6, 1, p. 128-134.
(online at: www.repository.naturalis.nl/document/552395)
('Note on two species of Lepidocyclina from the Netherlands Indies'. Lepidocyclina insulae natalis (probably E Miocene Eulepidina; JTvG) from Ngembak well, E Java, and stellate Lepidocyclina martini from Miocene of Madura, collected by Verbeek)

Schluter, H.U., C. Gaedicke, H.A. Roeser, B. Schreckenberger, H. Meyer, C. Reichert, Y. Djajadihardja & A. Prexl (2002)- Tectonic features of the southern Sumatra-Java forearc of Indonesia. Tectonics 21, 5, 1047, p. 11/1-11/15.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2001TC901048)
(Seismic suggests two units in accretionary wedge off SW Sumatra- SW Java: Paleogene inner wedge and Neogene- Recent outer wedge. Transtensional pull-apart basins along W Sunda Strait, etc.)

Schmid, F. & H.W. Walther (1962)- Ein neuer Fundpunkt von Pliozan auf dem Gunung Sadeng bei Puger (Ost-Java) und seine Bedeutung fur das Alter der Manganvererzung. Geol. Jahrbuch 80, p. 247-276.
('A new Pliocene locality at Gunung Sadeng near Puger (E. Java) and its significance for the age of the manganese mineralization')

Schmid, F. & H.W. Walther (1962)- Uber ein neues Pliozan-Vorkommen auf dem Gunung Sadeng bei Puger (Ost-Java). Paleontol. Zeitschrift 36, Suppl. 1, p. 216-217.
('On a new occurrence of Pliocene on the Gunung Sadeng near Puger (E Java)'. Pliocene in S Mountains of SE Java N of Puger village, SE Java, are E Miocene Old Andesites overlain by M Miocene marls and Wonosari reefal limestones, locally with metasomatic manganese mineralization. At 80m above sea level karstified limestone overlain by thin conglomerates and sands with clasts of manganese impregnated limestone and well-preserved, probably Pliocene-age shallow marine mollusc fauna)

Schuppli, H. (1932)- Kort verslag over de geologische situatie van het Zuid-Rembangsche heuvelland. Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Verhandelingen 3, p. 95-121.

('Brief report on the geological situation of the South Rembang hill country'. Early report on Mio-Pleistocene stratigraphy and structure of Kendeng zone by BPM geologist. With analyses of foraminifera and molluscs by Van der Vlerk and Martin)

Schuster, J. (1911)- Die Flora der Trinil-Schichten. In: M.L. Selenka & M. Blanckenhorn (eds.) Die *Pithecanthropus*-Schichten auf Java, Geologische und palaontologische Ergebnisse der Trinil-Expedition (1907-1908), Engelmann, Leipzig, p. 235-257.
('The flora of the Trinil Beds'. Central Java Pleistocene plant fossils from Trinil area 52 species, with 21 species no longer present on Java, but known from other parts of SE Asia, often at altitudes of 700-1500m. Lowland tropical species appear to be absent. All suggesting climate cooler than today (possibly ~6-7°C less)). (Flenley 1979, Van Zeist 1984: presence of leaves with entire margins and drip-tips suggest everwet conditions, not monsoonal with pronounced dry season like C-E Java today))

Schuster, J. (1911)- Monographie der fossilen Flora der *Pithecanthropus*-Schichten. Abhandl. Kon. Bayerischen Akademie Wissenschaften, Munchen, Math.-phys. Kl. 25, 6, p. 1-64.
(online at: http://bhl.ala.org.au/bibliography/7643/summary)
('Monograph of the fossil flora of the Pithecanthropus beds'. Same paper as above)

Schweitzer, C.E, R.M. Feldmann & C. Bonadio (2009)- A new family of brachyuran (Crustacea, Decapoda, Goneplacoidea) from the Eocene of Java, Indonesia. Scripta Geologica 138, p. 1-10.
(online at: www.scriptageologica.nl/cgi/t/text/get-pdf?c=scripta;idno=09138a01)
(New family to accommodate fossil crab Martinocarcinus ickeae Boehm 1922 from Late Eocene of Kali Puru, Nanggulan, C. Java)

Scolari, F. (1999)- Middle Eocene molluscs from the eastern and western Tethys; a discussion on shared taxa. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symp. on Shallow Tethys (ST), Chiang Mai, 5, p. 403-414.
(Eocene fossil molluscs from Nanggulan, C Java. Two Tethyan molluscs species recorded for first time from Nanggulan. Looks like typical Tethyan fauna)

Scolari, F. (2001)- The new species *Sundabittium shutoi* from the Middle Eocene of Nanggulan (Java, Indonesia). Memorie Scienze Geol., Padova, 53, p. 45-48.
(New gastropod species from M Eocene lower Nanggulan Fm('Axinea Beds'))

Sebayang, R. (2011)- Play baru, daerah lama, perspektif baru: identifikasi batugamping N11-N14 pada sub cekungan Ngimbang menggunakan data seismik 2D. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-097, 16p.
('New play, old area, new perspective: identification of N11-N14 limestone in the Ngimbang sub-basin from 2D seismic data'. Interpretation of M Miocene reefal buildups on 2D seismic in E Java basin, E of Cepu block, possible equivalents of Bulu Limestone and limestones in Tapen 1 well between 1475-1760m)

Sebayang, R.I., D. Priambodo, A. Prasetyo & D. Noeradi (2014)- Middle Miocene reefal limestone as a new exploration play in Ngimbang sub basin, East Java, Indonesia- a case study. In: EAGE 6th Int. Conf. and Exhibition- Geosciences, Saint Petersburg, Tu P 12, 5p. *(Extended Abstract)*
(P-1 Well, 30 Km NW of Ngimbang Sub Basin, East Java Basin testing 488 and 744 BOPD from DST in M Miocene reefal limestone in July 2012. Seismic shows presence of reefal limestone reflection patterns at M Miocene (N11-N14) level. Facies map was also made to give a picture of the N11-N14 paleogeography. Growth of Mid Miocene reefal limestone in area related to Miocene uplift event in area of earlier deep marine facies)

Sebrier, M., S. Pramumijoyo & O. Bellier (1993)- Miocene to Recent kinematic evolution around the Sunda Strait and southern end of the great Sumatra Fault: microtectonic approach. 10th Ann. French Indonesian Cooperation in Oceanography, Jakarta, p. 37-40.

Sekti, R.P., F. Hakiki, A.N. Derewetzky, C.J. Strohmenger, S.M. Fullmer, T. Simo, B. Sapiie & D. Nugroho (2011)- Facies analysis and sequence stratigraphy of Tertiary subsurface (Cepu Block) and surface

(Rajamandala Limestone) carbonates of Java, Indonesia. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-063, p. 1-15.
(Cepu Block late M Eocene- E Miocene subsurface carbonate buildups and associated deeper water calciturbidites and debrites similar range of environments as outcrops of Late Oligocene Rajamandala Lst)

Sembodo (1973)- Notes on formation evaluation in the Jatibarang volcanic reservoir. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 131-147.
(Log analysis of Eocene Jatibarang volcanic oil-gas reservoir rocks, NW Java)

Sendjaja, P., A. Kusnida, E. Partoyo, Baharuddin, A. Hikmat et al. (2015)- Atlas geokimia Jawa bagian barat. Pusat Survei Geologi, Bandung, p. 1-41.
('Geochemical Atlas of West Java'. Distribution maps of 30 elements in stream samples from W Java: Ag, Al, As, Ba, Ca, Ce, Cl, Co, Cr, Cu, Fe, Hg, etc.)

Setiadi, D.J. (2001)- Fluvial facies of the Citalang Formation (Pliocene-Early Pleistocene), West Java, Indonesia. J. Geosciences, Osaka City University, 44, p. 189-199.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DB00010811.pdf)
(Pliocene- E Pleistocene Citalang Fm of N Sumedang ~1000m of fluvial deposits, one of thickest non-marine deposits on Java. Twelve facies in four sections. Overall environment interpreted as braided streams)

Setiadi, I. (2017)- Basement configuration and delineation of Banyumas Subbasin based on gravity data analysis. J. Geologi Sumberdaya Mineral 18, 2, p. 67-76.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/237/279)
(Gravity data from Banyumas Basin, C Java, suggest six sub-basins with depocenter of 5.5 km, SE-NW strike-slip fault and E-W trending basement highs)

Setiadi, I. & A.W. Pratama (2018)- Pola struktur dan konfigurasi geologi bawah permukaan Cekungan Jawa Barat Utara berdasarkan analisis gayaberat. J. Geologi Sumberdaya Mineral 19, 2, p. 59-72.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/345/339)
('Structural pattern and subsurface geological configuration of the North West Java Basin based on gravity analysis'. Gravity analysis suggests average basement depth in NW Java basin is 3.3 km and five subbasins: Bekasi, Rengasdengklok, Cikampek, Subang and Majalengka subbasins)

Setiawan, D., M.N. Juliansyah & I.W. Ardana Darma (2014)- Stratigraphic- structural framework, play types and play fairway and underexplored play in East Java Basin. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-309, 12p.
(Review of geology and Cenozoic hydrocarbon plays in offshore E Java Basin in and around Pangkah PSC)

Setiawan, D., F.D. Maryanto, D. K. Wikanswasti & A.I. Wardhana (2015)- Tuban Sandstone; an overlooked reservoir. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-039, 9p.
(In offshore NE Java basin E Miocene Tuban Fm shale usually seal for Oligocene- E Miocene Kujung Fm carbonate reservoirs, but more sandy Tuban facies present in E (Ronggolawe 1 well). Tuban marine sandstone reservoirs may have been overlooked in other areas like Pangkah. Tuban Sst prograded to S)

Setiawan, H. (2011)- Characteristic of turbidite deposits of Halang Formation based on outcrops and thin Section petrography description in Cisanggarung River, Kuningan, West Java. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-SG-005, 8p.
(Descriptions of outcrops and thin sections of M Miocene- E Pliocene Halang Fm upper bathyal turbidites along Cisanggarung River, S of Cirebon/ Kuningan. Formation comprises tuffaceous sandstone, conglomerate, marl and claystone, with andesite breccia in lower part. Low quartz, high feldspar suggest mainly volcanic arc provenance. Paleocurrent direction from N 280°-300°E (or SW?))

Setiawan, L.O.B. (2015)- Future exploration play concept in Western Kendeng fold thrust belt: based on comprehensive stratigraphic and geochemical analyses of outcropped Miocene Kerek and Pelang Formation and oil seeps. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-SG-094, p.

Setiawan, N.I., M.I. Novian & M.I.K. Aminuddin (2015)- Petrologi, geokimia dan umur batuan granitoid di Komplek Luk-Ulo, Karangsambung, Kebumen, Jawa Tengah. Proc. 8th Seminar Nasional Kebumian, Universitas Gadjah Mada, Yogyakarta, p. 865-880.
('Petrology, geochemistry and age of granitoid rocks in the Luk-Ulo Complex, Karangsambung, Kebumen, Central Java'. Granitoid blocks along upstream Luk-Ulo River four groups, all calk-alkaline, metaluminous types. Zircon ages of granite with graphic texture and hornblende granite all latest Cretaceous (~66-70 Ma); foliated granodiorite and garnet granite / granodiorite with zircon melting ages ~100-120 Ma, with inherited zircons as old as 437± 13 Ma. Cordilleran-type granitoids of Karangsambung normal volcanic arc products, with possibility of post-tectonic collisional granite from partial melting of continental crust)

Setiawan, N.I., Y. Osanai & C. Prasetyadi (2013)- A preliminary view and importance of metamorphic geology from Jiwo Hills in Central Java. In: Proc. 6th Seminar Nasional Kebumian, Dept. Teknik Geologi, Universitas Gadjah Mada, Yogyakarta 2013, BPS02, p. 11-23.
(online at: https://repository.ugm.ac.id/135116/1/11-23%20BPS02.pdf)
(Jiwo Hills E of Yogyakarta with low-grade metamorphic rocks (phyllite, mica schist, calc-silicate schist, marble) with NE-SW foliation trend. Rare epidote-glaucophane schist outcrops near serpentinite exposure in W of complex. Several carbonate rocks converted to garnet-wollastonite skarn under contact metamorphism at diabase intrusion. Epidote-glaucophane schist mainly glaucophane, epidote, quartz, phengite, titanite, and hematite. Presence of blueschist facies confirms Jiwo Hills is one of high-P metamorphic terranes together with Luk Ulo (C Java), Meratus (S Kalimantan) and Bantimala (S Sulawesi). Serpentinites may have facilitated exhumation of blueschist in Jiwo Hills)

Setiawan, N.I., Y.S. Yuwono & E. Sucipta (2011)- The genesis of Tertiary "Dakah Volcanic" in Karangsambung, Kebumen, Central Java. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-105, p. 105-121.
(Late Eocene- E Oligocene island arc tholeiite volcanics in melange sediments of Karangsambung and Totogan Fm)

Setiawan, T. (2012)- Petrologi batuan dasar daerah Rengasdengklok, Jawa Barat dan implikasi tektoniknya serta potensi reservoir hidrokarbon. Ph.D. Thesis, Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('Petrology of basement in the Rengasdengklok area, West Java and implications for tectonics and hydrocarbon reservoirs potential'. NW Java basin N-S trending horsts and grabens. Basement penetrations show fracture porosity and hydrocarbon shows. Pondok Makmur Field in NE Ciputat Basin with basal dolomitic limestone that is fractured and of Eocene- Late Oligocene age)

Setiawati, Y.D., M.I. Novian & D.H. Barianto (2013)- Studi fasies Formasi Wungkal-Gamping Jalur Gunung Gajah, Desa Gunung Gajah, Kecamatan Bayat, Kabupaten Klaten, Provinsi Jawa Tengah. In: Proc. 6th Seminar Nasional Kebumian, Teknik Geologi Universitas Gadjah Mada, Yogyakarta 2013, BPS07, p. 71-80.
(online at: https://repository.ugm.ac.id/135199/1/71-81%20BPS07.pdf)
('Facies study of the Wungkal-Gamping Formation at Desa Gunung Gajah, Bayat District, C Java'. Eocene Wungkal-Gamping Fm at Gunung Gajah village in Bayat area, Southern Mountains, with nine facies types. Deposition begins in E Eocene (P8) to M Eocene (P13). Erosional unconformity between E Eocene (P8) and M Eocene (P10). Lower part of Wungkal-Gamping Fm is debris flow, followed by suspension currents, and traction currents influenced by tides and waves of sea water. Deepening at P10 then shallowing at P11, early P12 deepening, then shallowing until P13)

Setijadji, L.D. (2005)- Geoinformation of island arc magmatism and associated earth resources: a case study of Java Island, Sunda Arc, Indonesia. Ph.D. Thesis, Kyushu University, Fukuoka, Japan, p. 1-201.
(Java arc volcanism well-defined volcanic belts since Oligocene. Arcs experienced CCW rotation during Cenozoic with W-most Java as rotational pole. Backarc magmatism since latest Miocene- Recent in C and E

Java. W Java subducted oceanic crust old (Cretaceous) and cold, avoiding partial slab melting. In C and E Java subducted slab younger (<50 Ma) and warm enough to melt, resulting in adakitic igneous rocks. Backarc magmatism after detachment of subducted slab between 270-500 km depth. Deeper mantle is upwelling through slab window, producing backarc magmas characterized by low 87Sr/86Sr and 143Nd/144Nd values (mantle array). More than 90% of metallic mineral deposits within Tertiary volcanic arc centers)

Setijadji, L.D. (2010)- Segmented volcanic arc and its association with geothermal fields in Java Island, Indonesia. Proc. World Geothermal Congress 2010, Bali 2010, p. 1-12.
(online at: www.geothermal-energy.org/pdf/IGAstandard/WGC/2010/1275.pdf)
(Java has largest geothermal resources in Indonesia, but not uniformly distributed along island. Bigger prospects concentrated in few locations and can be related to geologic segmentation of Quaternary volcanoes. Major geothermal fields associated with magmas of Late Pleistocene ages (~0.5-0.2 Ma))

Setijadji, L.D, A. Harijoko, A. Imai, K. Watanabe, Y. Kohno & R. Uruma (2007)- Migration of subduction in Central Java, Indonesia., Proc. 5th Int. Workshop Earth Science and Technology, Fukuoka, p. 377-384.

Setijadji, L.D, A. Imai, T. Itaya & K. Watanabe (2007)- Geology of metallic deposits in Java island (Indonesia) with a special reference to the island arc magmatism. Proc. Int. Workshop Earth Resources Technology, Fukuoka, p. 33-36.

Setijadji, L.D, A. Imai & K. Watanabe (2007)- Characteristics of mineralized volcanic centers in Javanese Sunda Island Arc, Indonesia. American Geoph. Union, Spring Meeting 2007, Abstract V23B-08, 1p.
(online at: http://adsabs.harvard.edu/abs/2007AGUSM.V23B..08S)
(Distinct volcanic belts related to Java trench subduction only since Oligocene. Metallic deposits in porphyry, high-sulfidation and low-sulfidation epithermal systems, all tied to subaerial volcanism and subvolcanic plutonism. Some volcanigenic massive sulfides deposits show mineralization in submarine environment. Most mineral deposits related to volcanic centers of Tertiary arcs; no mineralization associated with backarc magmatism. Major metallic deposits tied to deep, old crustal structures (strike-slip faults) . Existing mines in (1) young (U Miocene- Pliocene) epithermal gold deposits in SW Java; (2) Oligocene-Miocene porphyry Cu-Au deposits, mainly in E Java and probably related to partial melting of subducted slab)

Setijadji, L.D., S. Kajino, Y. Kohno, D.H. Barianto et al. (2005)- Reconstruction of Cenozoic volcanic centers in Java Island (Indonesia): a key for understanding the geodynamic of subduction zone. Proc. 3rd Int. Workshop on Earth Science and Technology, Fukuoka 2005, p. 433-443.

Setijadji, L.D., S. Kajino, A. Imai & K. Watanabe (2006)- Cenozoic island arc magmatism in Java Island (Sunda Arc, Indonesia): clues on relationships between geodynamics of volcanic centers and ore mineralization. Resource Geology 56, 3, p. 267-292.
(online at: https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1751-3928.2006.tb00284.x)
(Java island multiple events of Cenozoic arc magmatism. Crustal compositions, subducted slabs and tectonics determined spatial-geochemical evolution of magmatism and metallogeny. Backarc-ward migrations of volcanic centers through Tertiary. Post-Miocene-Pliocene roll-back effects of retreating slab, slab detachment, and backarc magmatism in C Java. Increasing K-contents of magmas towards backarc-side and in younger magmas. Oceanic nature of crust and likely presence of hot slab subducting under E Java created adakitic magmas. Deep-seated crustal faults focused locations of overlapping volcanic centers and metalliferous fluids into few major gold districts. Porphyry deposits mostly in Lower Tertiary volcanic centers in E Java; high-grade, low-sulfidation epithermal gold deposits in U Miocene-Pliocene volcanic centers)

Setijadji, L.D. & A. Maryono (2012)- Geology and arc magmatism of the eastern Sunda magmatic arc, Indonesia. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 1-22.

Setijadji, L.D. & K. Watanabe (2009)- Updated age data of volcanic centers in the Southern Mountains of Central-East Java Island, Indonesia. In: Proc. Int. Seminar Geology of the Southern Mountains of Java, Yogyakarta 2009, 1, p. 125-132.
(online at: http://lib.ugm.ac.id/digitasi/upload/3005_MU.121000017-ldsetijadi.pdf)
(Volcanic centres around Yogyakarta span ~30 Myrs, becoming younger to N: (1) Oldest group Late Oligocene age in S Mountains (~30-24 Ma; Kulon Progo South, Parangtritis, Bayat); (2) late Early- M Miocene cluster (~20-10 Ma; Selogiri, Semin, Wediombo, Menoreh/ Borobudur, Ponorogo) and (3) modern arc volcanoes of last ~2 My. Six Oligocene-Miocene volcanic centers form backbone of S Mountains)

Setijadi, R., A. Widagdo & S.W.A. Suedy (2011)- Metode bioprediksi perubahaniklim menggunakan fosil polen dan spora pada kala Pliosen di daerah Banyumas. Dinamika Rekayasa 7, 1, p. 14-16.
(online at: http://download.portalgaruda.org/)
('Climate change bioprediction method using fossil pollen and spores of Pliocene age in Banyumas'. Pollen and spores in Tapak Fm of indicate Podocarpus imbricatus zone age (Late Pliocene; with Podocarpus imbricatus and Stenochlaenidites papuanus) and 3 hot-cold-hot climate change events)

Setyanta, B. (1999)- Stratigrafi kompleks Gunung Wayang, Pathuk, Yogyakarta, dan hubungannya dengan stratigrafi cekungan Pegunungan Selatan. J. Geologi Sumberdaya Mineral 9, 89, p. 23-30.
(Stratigraphy of the Gunung Wayang complex, Pathuk, Yogyakarta, and relation with stratigraphy of the Southern Mountains'. On E Miocene Gn Wayang volcanic breccia unit between Semilir and Nglanggran Fms))

Setydji, B., I. Murata, J. Kahar, S. Suparka & T. Tanaka (1997)- Analysis of GPS measurement in West-Java, Indonesia. Ann. Disaster Prevent. Res. Inst., Kyoto University, 40, B-1, p. 27-33.
(GPS measurements along Cimandiri and Lembang fault zones, W Java, suggest N part Cimandiri FZ moved to NE and area under NE-SW directed compression)

Setyowati, T.P. & D.H. Amijaya (2016)- Hubungan kekerabatan minyak bumi daerah Wonosegoro dan sekitarnya, Boyolali, Jawa Tengah, berdasarkan data biomarker. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 93-102.
(online at: https://repository.ugm.ac.id/137866/)
('Oil characteristics in Wonosegoro and surrounding areas, Boyolali, Central Java, based on biomarker data'. Biomarkers from oil seeps in Kerek Fm in W Kendeng Zone near Wonosegoro (Gunungsari, Repaking and Kemusu villages). Oils ºAPI 15.8, 29.8, and 18.8, and biodegraded. Probable source rock Ngimbang Fm)

Setyowiyoto, J., M. Datun & S. Winardi (2007)- Geologi dan tinjauan petroleum system daerah Bancak, Kabupaten Semarang berdasarkan manifestasi permukaan. Media Teknik (UGM) 29, 1, p. 15-26.
(Geology and review of petroleum system of the Banjak area, Semarang District, C Java. Oil and thermogenic gas seeps near Bata in W Kendeng zone SSE of Semarang, NE of Salatiga)

Setyowiyoto, J., B.E.B. Nurhandoko, A. Samsuri, B. Widjanarko & Thurissina (2007)- Influence of porosity and facies of Baturaja carbonate to the seismic wave velocity: case study of Tambun Field West Java. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-102, 16p.
(Strong relationship between seismic velocity and lithology facies)

Setyowiyoto, J. & S.S. Surjono (2003)- Analisis sedimentologi dan fasies pengendapan Formasi Kerek di daerah Biren dan Kerek, Kabupaten Ngawi, Jawa Timur. Media Teknik (UGM) 25, 4, p. 12-17.
(online at: http://i-lib.ugm.ac.id/jurnal/detail.php?dataId=3349)
('Analysis of sedimentology and facies of the Kerek Formation between Biren and Kerek, Ngawi, East Java'. Good outcrops along Solo River. Measured section of 250m of SW dipping Kerek Fm sandstone-claystone turbiditic series. Banyuurip and Sentul Members deposited in middle-outer fan environment; age M- U Miocene (N13-N17). Sediments sourced from N (quartzose material) and southern mountains (andesite and tuff clasts))

Seubert, B.W. & F. Sulistianingsih (2008)- A proposed new model for the tectonic evolution of South Java, Indonesia. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-034, p. 1-22.

(New model for tectonic evolution of Java, suggesting several continental fragments, separated by individual subduction zones, docked onto Java and underlie S Mountains. Old Andesites are arc-volcanic product of older subduction phase which predates present-day subduction, and formed above S-dipping subduction zone)

Sharaf, E.F. (2004)- Stratigraphy and sedimentology of Oligocene- Miocene mixed carbonate and siliciclastic strata, East Java basin, Indonesia. Ph.D. Thesis, University of Wisconsin, Madison, p. 1-220. *(Unpublished)*
(Oligocene-Miocene strata of E Java mixed carbonate and siliciclastic sediments. Multiple stages of isolated carbonate mound growth surrounded by deeper marine off-mound sediments or by shallow-marine siliciclastics.Three main intervals: Kujung (~28--22 Ma; carbonate mound and off-mound), Tuban (~22-15 Ma; mixed carbonate-siliciclastic) and Ngrayong (Serravallian,~15--12 Ma; siliciclastic progradion of tidally influenced deltas grading into turbidites, basinal shale, mudstone and chalk)

Sharaf, E.F., M.K. Boudagher-Fadel, J.A. Simo & A.R. Carroll (2006)- Biostratigraphy and strontium isotope dating of Oligocene-Miocene strata, East Java, Indonesia. Stratigraphy 2, 3, p. 239-257.
(Oligocene-M Miocene in E Java grouped into three stratigraphic intervals, Kujung, Tuban and Ngrayong Fms. Larger foraminifera and planktonic foraminifera overlap in occurrence in many localities. Biostratigraphic ranges of larger benthic and planktonic foraminifera tied to the ages from Strontium isotope dating)

Sharaf, E.F., M.K. Boudagher-Fadel, J.A. Simo & A.R. Carroll (2014)- A revision of the biostratigraphy and strontium isotope dating of Oligocene-Miocene outcrops in East Java, Indonesia. Berita Sedimentologi 30, p. 44-58.
(online at: www.iagi.or.id/fosi)
(Updated version of Sharaf et al. (2006, 2006) papers on NE Java basin Miocene biostratigraphy)

Sharaf, E., J.A. Simo, A.R. Carroll & M. Shields (2005)- Stratigraphic evolution of Oligocene-Miocene carbonates and siliciclastics, East Java basin, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 89, p. 799-819.
(Multiple stages of carbonate mound growth in E Java Oligo-Miocene. Three phases (1) Kujung (mound carbonates), (2) Tuban (mixed carbonate-siliciclastic), and (3) Ngrayong (siliciclastic). Kujung unit (~28-22 Ma) limited to few outcrops. At base shallow-marine carbonates that grade laterally into deep-marine calcareous mudstone- chalk (lower Kujung). Lower Kujung sediments covered by chalk and marls. Tuban (~22-15 Ma) shallow-marine mixed carbonate and siliciclastics and marine shale and chalk. At least six cycles of deltaic deposition with episodes of carbonate mound growth. Ngrayong unit (~15-12 Ma) period of regional siliciclastic influx and progradation of tide-influenced deltas and grades into turbidites, basinal shale, mudstone, and chalk. Ngrayong beds truncated by Serravallian-Tortonian Bulu carbonates)

Shields, M.L. (2005)- The evolution of the East Java Basin, Indonesia. Ph.D. Thesis, University of Wisconsin, Madison, p. 1-402. *(Unpublished)*
(E Java Basin originated in Eocene on continental crust, developing NE-SW trending paleo-highs at inception. Paleo-highs separated at wavelength of 80-100 km. Geohistory profiles and low heat flows in wells point to basin origin by lithospheric flexure of continental crust, not rifting. Stratigraphy mainly shelfal carbonates with influx of quartz sandstone in Miocene. Quartzose source from N of basin in Borneo, associated with exposed granites. Only Pliocene-Recent sediments (<5 Ma) sourced from volcanic centers to S. Basin development four stages (1) crustal buckling, starting in M Eocene with sediments in lows on folded continental crust; (2) flexural deepening, starting in Late Oligocene with gradual subsidence until E Miocene; (3) foreland inversion, starting in M Miocene, until M Pliocene; (4) arc convergence in U Pliocene with N-ward vergence of Sunda magmatic arc. During Pleistocene N- verging thrusts on S side of basin initiated reversal of basin symmetry)

Shingo, Y., A. Imai, R. Takahashi, K. Watanabe, A. Harijoko, I.W. Warmada, A. Idrus & P. Phoumephone (2010)- Condition of gold ore formation at Trenggalek Prospects, East Java, Indonesia. Proc. Int. Symposium on Earth Science and Technology, Fukuoka 2020, Japan, p. 411-414.

Shirzaei, M., M.L. Rudolph & M. Manga (2015)- Deep and shallow sources for the Lusi mud eruption revealed by surface deformation. Geophysical Research Letters 42, 10.1002/2015GL06457, 8p.

(Inverse modeling of surface deformation at Lusi mud eruption in E Java suggests volume changes occur in two regions beneath Lusi, at 0.3-2.0 km and at 3.5-4.75 km. Shallow mud source supply ~2-3 times larger than deep source, but additional fluids ascend from >4 km)

Shulgin, A., H. Kopp, C. Muller, L. Planert, E. Lueschen, E.R.Flueh & Y. Djajadihardja (2011)- Structural architecture of oceanic plateau subduction offshore Eastern Java and the potential implications for geohazards. Geophysical J. Int. 184, 1, p. 12-28.
(online at: http://gji.oxfordjournals.org/content/184/1/12.full.pdf+html)
(Offshore S of E Java in early stage of Roo Rise oceanic plateau subduction. Oceanic plateau crust 12-18 km thick and area of ~100,000 km2. Upper oceanic crust high degree of fracturing. Forearc crust thickness 14 km, with sharp increase to 33 km towards Java. Two possible models: either accumulation of Roo Rise crustal fragments above backstop or uplift of backstop caused by basal accumulation of crustal fragments)

Shuto, T. (1974)- Notes on Indonesian Tertiary and Quaternary Gastropods mainly described by the Late Professor K. Martin I. Turritellidae and Mathildidae In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 135-160.
(Taxonomic revisions of many of the new gastropod species described by K.Martin (~1880-1922), mainly Miocene- Pliocene turritellids from Java. With range chart, but no information on localities)

Shuto, T. (1978)- Notes on Indonesian Tertiary and Quaternary gastropods mainly described by the late Professor K. Martin, II. Potamididae and Cerithiidae. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 113-160.
(Second part of taxonomic revisions study of many of the new gastropod species described by K. Martin from Java. Incl. Sundabittium n.gen. for gastropod Cerithium fritschi from Eocene of Nanggulan)

Shuto, T. (1980)- A note on the Eocene turrids of the Nangulan Formation, Java. In: H. Igo & H. Noda (eds.) Prof. Sahuro Kanno Memorial, Vol. 1, p. 25-52.

Sidarto (2008)- Dinamika sesar Citarik. J. Sumber Daya Geologi 18, 3, p. 167-180.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/262/242)
('Dynamics of the Citarik Fault'. NNE-SSW trending fault across W Java, through Pelabuhan Ratu- Bogor-Bekasi. Active since M Miocene, initially transtensional, but left-lateral strike slip fault since Plio-Pleistocene)

Sidarto (2009)- Geologi Pegunungan Selatan di daerah Gunungkidul dan sekitarnya ditafsir pada cita alos. In: Proc. Workshop Geologi Pegunungan Selatan, Yogyakarta 2007, Pusat Survei Geologi, Bandung, Spec. Publ. 38, p. 1-18.
('Geology of the Southern Mountains in the Gunungkidul area and surroundings with Alos remote sensing data'. Brief review of geology/ structure of western S Mountains area)

Sidarto & M.J. Morwood (2004)- Solo River terrace mapping in the Kendeng Hills area: use of Landsat imagery and digital elevation model overlays. J. Sumber Daya Geologi 14, 3 (147), p. 196-207.
(Sartono 1976 distinguished 6 Quaternary terraces up to 96m elevation along Solo River N of Ngawi. In this study 11 terraces of point bar deposits identified, combined in four groups. Oldest terrace Sembungan, 20m above river base. Ngandong terrace, famous for hominid fossils, 16m above river base)

Sidarto, T., Suwarti & D. Sudana (1993)- Geological map of the Banyuwangi Quadrangle, Jawa, 1704-4, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(E-most coastal area of Java, with folded Late Oligocene- early M Miocene tuffaceous sediments of Batuampar Fm, overlain by M Miocene Punung Lst, intruded by M Miocene andesites. Overlain by Pleistocene and younger volcanics)

Siemers, C.T., J.A. Deckelman, A.A. Brown & E.R. West (1993)- Characteristics of the fractured Ngimbang carbonate (Eocene), West Kangean-2 well, Kangean PSC, East Java Sea, Indonesia. In: C.T. Siemers et al.

(eds.) Carbonate rocks and reservoirs of Indonesia, Core Workshop Notes, Indon. Petroleum Assoc., Jakarta, p. 10.1- 10.40.
(Gas in tight, fractured M-U Eocene W of Kangean Island. Mud-dominated platform facies, average matrix porosity 2%)

Siemers, C.T., L.C. Kleinhans & R. Young (1992)- Indonesian Petroleum Association 1992 SW Java Field Trip/ Core Workshop. IPA Field Trip Guidebook, p. 1-116.
(Fieldtrip to SW Java Eocene at Gunung Walat, Bayah. With overviews of sedimentary structures, depositional environments and core from Widuri/ NW Java and Bentayan/ S Sumatra wells)

Siesser, W.G., D.W. Orchiston & T. Djubiantono (1984)- Micropalaeontological investigation of Late Pliocene marine sediments at Sangiran, Central Java. Alcheringa 8, 2, p. 87-99.
(Upper Kalibeng Fm and marine intercalations of Lower Pucangan Fm at Sangiran contain >30 calcareous nannoplankton taxa, indicating Late Pliocene age for both. Upper Kalibeng Fm assigned to Zone NN16 (3.25- 2.3 Ma), Lower Pucangan Fm within zones NN16- NN18 (3.25- 1.65 Ma) (but may contain common reworked nannos). Assemblages also include reworked Late Miocene Discoaster quinqueramus)

Silitonga, P.H. (1973)- Geologic map of the Bandung Quadrangle, Java. Quad. 9/XIII-F, scale 1:100,000. Geol. Survey Indonesia, Bandung.

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('Geomagnetic anomaly; relation to the mineralized zones in the Malingping area, Bayah and surroundings, Lebak Regency, Banten Province'. Three groups of magnetic anomalies. Low anomaly tied to intrusion of acid magmatic rocks at 500-2000m depth, similar to Cihara granodiorite intrusion, and important for Au and Ag mineralization in Cikotok and Cirotan areas)

Simandjuntak, T. (2004)- New insight on the prehistoric chronology of Gunung Sewu, Java, Indonesia. In: Modern Quaternary Research in SE Asia 18, p. 9-30.
(Gunung Sewu ('Thousand Mountains' more accurately 40,000 hills) karsted Miocene limestone area underwent uplift in M Pleistocene)

Simandjuntak, T.O. (1995)- Back-arc thrusting and Neogene orogeny in Java, Indonesia. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 242-260.
(Late Neogene long, S-dipping thrust zone in back arc of Java, called Baribis Thrust in W Java and Kendeng Thrust in E Java. In W terminates at S end of Sumatra fault system in Sunda Strait, in E continues across Madura Straits to Flores Sea. Part of 'Sunda Orogeny'. also causing plutonic intrusions and uplift of S Java and Nusatenggara)

Simandjuntak, T.O. (1979)- Sediment gravity flow deposits in Pangandaran-Cilicap region, South-West Java and their bearing on the tectonic development of southwestern Indonesia. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 2, p. 21-54.
(Sedimentology of Oligocene-Lower Miocene Jampang Fm near S Coast of C-W Java. Gravity flows rich in volcanic arc material. Lower part of succession derived from S or SW, upper part from N or NW. Similar deposits in Late Miocene- E Pliocene Halang Fm)

Simandjuntak, T.O. (2004)- Tectonostratigraphy of Jawa. In: Proc. Workshop Stratigrafi Pulau Jawa, Bandung 2003, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 30, p. 21-36.

(Six tectonostratigraphic zones: Basement (J-K metamorphics 213-125 Ma and Cretaceous- Eocene granites 87-52 Ma), Paleogene volcanics, Paleogene shelf, Neogene volcanics and inter-arc, Neogene fore-arc and Neogene back-arc)

Simo, J.A., A. Ruf, T. Hughes, K. Steffen, A. Gombos et al. (2006)- Seismic and outcrop carbonate platform geometries and facies: Oligocene-Miocene, Java, Indonesia. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-INT-12, 5p.
(Seismic imaging of two intervals of isolated carbonate platform and mound development N of Madura: E Miocene, Kujung Fm and Late Miocene, Wonocolo Fm)

Simo, T., D. Nugroho, J.T. van Gorsel, F. Hakiki, R.P. Sekti, C.J. Strohmenger, D. Noeradi & B. Sapiie (2011)- Sedimentology and sequence stratigraphy of the Rajamandala Limestone. In: B. Sapiie & T. Simo, The stratigraphy and structure of the Oligocene (Chattian) Rajamandala Limestone, Bandung, Western Java, Indonesia, a technical field trip for geoscientists, Indon. Petroleum Assoc. (IPA) Field Trip, 15p.

Simo, T., R. Sekti, F. Hakiki, M. Sun, R.D. Myers & S. Fullmer (2012)- Reservoir characterization and simulation of an Oligocene-Miocene isolated carbonate platform; Banyu Urip, East Java basin, Indonesia. AAPG Geoscience Technology Workshop, Bali 2012, Search and Discovery Art. 20159, p. 1-31.
(online at: www.searchanddiscovery.com/documents/2012/20159simo/ndx_simo.pdf)
(In Cepu area, NE Java, widespread carbonate deposition in Late Eocene- E Oligocene, followed by M and end-Rupelian erosion/ exposure. After M-Oligocene unconformity increasing accommodation forced carbonate factory to backstep to small areas over pre-existing highs, followed by Chattian-Burdigalian aggradational phase. Change from carbonate to siliciclastic deposition during Burdigalian-Langhian transition. Banyu Urip carbonate reservoir is steep-flanked carbonate buildup with ~3300' of relief. Common fractures)

Simo, T., M. Weidmer, S. van Simaeys, R. Sekti, H. van Gorsel, C. Strohmenger & A. Derewetzky (2011)- Sequence stratigraphic correlation and sedimentological implications, East Java Basin; comparisons and lessons learned from outcrop and subsurface studies. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-234, p. 1-9.
(Stratigraphic correlation in onshore NE Java Basin between Late Oligocene- Miocene of subsurface Cepu Block and outcrops in Rembang Hills)

Siregar, M.S. (1978)- Stratigrafi dan sejarah pengendapan serpih bitumen di daerah Mangunweni-Karangbolong. J. Riset Geologi Pertambangan (LIPI) 1, 2, p. 21-29.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.1-No.2-78.pdf
('Stratigraphy and depositional history of oil shale in the Mangunweni-Karang Bolong area'. Thin (0.3-1.6m) oil shale of early M Miocene age, near Mangunweni in Karangbolong area of S C Java. Oil content 6.2- 14.5%. Above volcanic breccia, below sandstone-limestone. Deposited in lagoonal environment.)

Siregar, M.S. (1996)- Endapan pasang-surut dalam Formasi Wonosari. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 120-126.

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('Limestone sedimentation of the Kalipucang Fm, SW Java')

Siregar, M.S. (1984)- Sedimentasi Formasi Rajamandala di daerah Tagogapu- Padalarang, Jawa Barat. J. Riset Geologi Pertambangan (LIPI) 5, 2, p. 25-36.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.5-No.2-2.pdf)
('Sedimentation of the Rajamandala Formation in the Tagogapu- Padalarang area, West Java'. Three types of limestone in E part of outcrops of latest Oligocene- earliest Miocene Rajamandala Fm: planktonic packstone, Lepidocyclina packstone and coral-lithoclast rudstone, interbedded with planktonic foram marl)

Siregar, M.S. (2005)- Sedimentasi dan model terumbu Formasi Rajamandala di daerah Padalarang-Jawa Barat. J. Riset Geologi Pertambangan (LIPI) 16, 1, p. 61-81.
(online at: http://elib.pdii.lipi.go.id/katalog/index.php/searchkatalog/downloadDatabyId/7924/7924.pdf)
('Sedimentation and reef model of the Rajamandala Formation in the Padalarang area, W Java'. Late Oligocene- E Miocene Rajamandala Fm carbonates interpreted to represent ENE-WSE trending barrier reef with reef front and basin to N. Reef front three facies (planktonic packstone, Lepidocyclina packstone and rudstone); reef core boundstone facies three subfacies (framestone, bafflestone and bindstone). Boundstone facies deposited in reef crest to reef flat environment. Miliolid packstone facies in various environments including surge channel, lagoon and back reef)

Siregar M.S., Kamtono, Praptisih & M.M.Mukti (2004)- Reef facies of the Wonosari Formation, South Central Java. J. Riset Geologi Pertambangan (LIPI) 14, 1, p. 1-17.
(Limestones of Wonosari Fm S of Yogyakarta excellent exposures of Tertiary reefs. Facies include planktonic packstone-wackestone (basinal toe of slope), packstone-rudstone (reef slope), coral boundstone (reef), grainstone-packstone facies (surge channel to lagoonal sediments) and algal-foraminiferal packstones (back reef to shelf sediments))

Siregar, M.S. & D. Mulyadi (2007)- Fasies dan diagenesa Formasi Rajamandala di daerah Padalarang, Jawa Barat. In: A. Tohari et al. (eds.) Pros. Seminar Geoteknologi Kontribusi ilmu kebumian dalam pembangunan berkelanjutan, Puslitbang Geoteknologi (LIPI), Bandung, p. 19-23.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/01/20/prosiding-2007/)
('Facies and diagenesis of the Rajamandala Formation in the Padalarang area, West Java'. Five carbonate facies distinguished in Late Oligocene Rajamanda Lst. Facies map showing ~15km long WSW-NNE trending zone of reefal boundstone, fringed by reef slope Lepidocyclina packstones to N, lagoon- backreef miliolid packstones to S)

Siregar M.S. & Praptisih (2008)- Fasies dan lingkungan pengendapan Formasi Campurdarat di daerah Trenggalek-Tulungagung, Jawa Timur. J. Riset Geologi Pertambangan (LIPI) 18, 1, p. 36-46.
(online at: www.geotek.lipi.go.id/wp-content/uploads/2008/08/04_safeipraptisih_1.pdf)
(Facies study of Campurdarat Fm carbonates in S part of Trenggalek- Tulungagung area (E Java, S coast). Four carbonate facies types. Interpreted as barrier-reef with back-reef part to S and reef front facing North. Age reported as Early Miocene, but larger foraminifera characteristic of zone Lower Tf and could be Middle Miocene; JTvG)

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(M Eocene- Early Oligocene planktonic forams in Nanggulan Fm marine clastic section overlain by Old Andesites)

Siswoyo (1982)- Heat flow measurements in the Northeast Java Basin, Indonesia. Proc. 18th Sess. Comm. Co-ord. Joint Prospecting Mineral Res. Asian Offshore Areas (CCOP), Seoul 1981, p. 236-243.

Siswoyo, S. & Sandjojo (1980)- Heat flow in Cepu Area, Northeast Java Basin, Indonesia. Proc. 16th Sess. Comm. Co-ord. Joint Prospecting Mineral Res. Asian Offshore Areas (CCOP), Bandung 1979, p. 272-280.
(Study of heat flow from 82 wells at 6 fields in Cepu area. Average T gradient 4.34 ± 0.42 °C/ 100m. Heat flow 2.10 ±0.17 HFU, much higher than world average)

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(online at: www.journal.lemigas.esdm.go.id/index.php/LPMGB/article/view/387)
('Evaluation of the geology of a gas seep in the Merapi region, Purwodadi, Central Java'. Natural gas seep in Merapi area, on W side of Godong High)

Situmorang, B., Siswoyo, E. Thajib & F. Paltrinieri (1976)- Wrench fault tectonics and aspects of hydrocarbon accumulation in Java. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 53-68.

Situmorang, B. & L. Tambunan (1985)- Generation and maturation of hydrocarbons in Cepu area, Central Java. Lemigas Scientific Contr. 9, 1, p. 14-21.
(Oil-gas production in Cepu area from upper Tuban (Ngrayong Sand) and Kawengan Fms. Rel.high total organic content (av. 0.75%) in Tuban Fm; low TOC in Kawengan Fm. Thermal maturity confined to Tuban Fm. Kerogen mainly Type III, with limited Type II. Source probably in Tuban Fm and/or deeper section)

Situmorang, R.L., D.A. Agustianto & M. Suparman (1986)- Geological map of the Waru and Sumenep Quadrangle, Madura, scale 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Situmorang, R.L., R. Smit & E.J. van Vessem (1992)- Geology map of the Jatirogo quadrangle, Jawa (1509-2), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 16p + map.

Sjamsuddin, I.F. & Djuhaeni (2008)- Biostratigrafi dan lingkungan pengendapan Formasi Ngrayong di daerah Cepu. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 98-112.
('Biostratigraphy and depositional environment of the Ngrayong Formation in the Cepu area'. Discussion of foram biostratigraphy in and around M Miocene (N9-N12) quartz-rich Ngrayong sandstone in wells Cepu 1-6 (not real well names?). With foram distribution charts, well correlations and paleogeographic map showing transition from inner neritic in N to bathyal paleoenvironment in S)

Sjarifudin, M.Z. & S. Hamidi (1992)- Geology of the Blitar Quadrangle, Jawa (Quad. 1507-6), 1:100,000. Geol. Res. Dev. Centre, Explanatory Notes, 7p. +map.

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(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/172/168)
('Organic content and geochemical properties of Paleogene and Neogene claystones in the Serayu Basin: an analysis of potential hydrocarbon source rocks'. Geochemistry of 2 samples of Paleogene claystone, 3 Neogene and one oil seep sample. TOC of Neogene claystone higher than Paleogene. One Neogene sample classified as oil- gas source; all others gas source rock. Neogene claystone at Gintung River can be correlated with oil seep. Kerogen types of all claystones Type III (terrestrial) to Type II (mixing terrestrial and marine))

Smit-Sibinga, G.L. (1949)- Pleistocene eustacy and glacial chronology in Java and Sumatra. Verhandelingen Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 15, p. 1-31.
(Discussion of control of Pleisocene glacial eustatic cycles on Pleistocene stratigraphy of C-E Java and S Sumatra (N.B.: Sumatra stratigraphy age interpretations too young; JTvG) (See also critical discussion by M.G. Rutten (1952))

Smit-Sibinga, G.L. (1952)- Interference of glacial eustasy with crustal movements and rhytmic sedimentation in Java and Sumatra. Geologie en Mijnbouw 14, 6, p. 220-225.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0S2czQkxZN3B5cE0/view)
(Rebuttal of Rutten (1952- Geosynclinal subsidence versus glacially controlled movements in Java and Sumatra) critique of Smit Sibinga (1949) paper. Repeats conclusion that Pleistocene eustatic sea level changes do interfere with large scale sedimentation trends)

Smyth, H.R. (2005)- Eocene to Miocene basin history and volcanic activity in East Java, Indonesia. Ph.D. Thesis University of London, p. 1-476. *(Unpublished)*
(Exposed Cretaceous basement in E Java of arc and ophiolitic character. Archean zircons in Miocene volcanics indicate basement beneath E Java includes Australian origin continental crust. Arc volcanism starts in M Eocene, earlier than previously thought (Late Oligocene). Many Cenozoic deposits previously interpreted as continental clastics from Sundaland with significant volcanic component and local basement source. Many quartz sst described as 'mature' are primary, crystal-rich volcaniclastics. Extensive explosive Plinian-style volcanism in M Eocene- E Miocene of E Java. Potential super-eruption in S Mountains (Semilir Eruption) at ~20 Ma. Load of volcanic arc may have generated Kendeng zone flexural basin. Late Cenozoic deformation and associated uplift in number of phases and not single event)

Smyth, H.R., Q.G. Crowley, R. Hall, P.D. Kinny, P.J. Hamilton & D.N. Schmidt (2011)- A Toba-scale eruption in the Early Miocene: the Semilir eruption, East Java, Indonesia. Lithos 126, 3-4, p. 198-211.
(Major E Miocene 'Semilir eruption' in S Mountains of E Java, with main phase at ~20.7 Ma)

Smyth, H. & R. Hall (2003)- Field guide to the geology of South East Java. University of London SE Asia Research Group Fieldtrip, October 2003, p.

Smyth, H., R. Hall, J. Hamilton & P. Kinny (2003)- Volcanic origin of quartz-rich sediments in East Java. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 541-559.
(Volcanic arc active in S Java from M Eocene-E Miocene. After lull in M Miocene, Late Miocene-Recent arc activity ~50 km farther N. Most Eocene-Miocene sands onshore Java have high volcanogenic content)

Smyth, H., R. Hall, J. Hamilton & P. Kinny (2005)- East Java: Cenozoic basins, volcanoes and ancient basement. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 251-266.
(E Java geology and history overview. Archean zircons suggest Gondwana continental crust below part of S Mountains)

Smyth, H.R., R. Hall & G.J. Nichols (2008)- Significant volcanic contribution to some quartz-rich sandstones, East Java, Indonesia. J. Sedimentary Res. 78, 5, p. 335-356.
(Cenozoic quartz-rich sandstones from E Java long been assumed to be product of erosion of continental source, but significant volcanic component. Quartz from acidic volcanic sources commonly overlooked)

Smyth, H.R., R. Hall & G.J. Nichols (2008)- Cenozoic volcanic arc history of East Java, Indonesia: the stratigraphic record of eruptions on a continental margin. In: A.E. Draut, P.D. Clift & D.W. Scholl (eds.) Formation and applications of the sedimentary record in arc collision zones. Geol. Soc. America (GSA), Spec.Publ. 436, p. 199-222.
(Indian Ocean lithosphere subducted continuously beneath Java from ca. 45 Ma, resulting in formation of volcanic arc, although volcanic activity not continuous. S Mountains Arc active from M Eocene- E Miocene (~45-20 Ma), and activity included significant acidic volcanism. Zircon ages in arc rocks indicates that acidic character of volcanism related to contamination by fragment of Archean- Cambrian continental crust beneath the arc. Activity in S Mountains Arc ended at 20 Ma with phase of intense eruptions. Volcanic quiescence from ~20-12 Ma, after which arc volcanism resumed in modern Sunda Arc, with axis 50 km N of older arc)

Smyth, H.R., P.J. Hamilton, R. Hall & P.D. Kinny (2007)- The deep crust beneath island arcs: inherited zircons reveal a Gondwana continental fragment beneath East Java, Indonesia. Earth Planetary Sci. Letters 258, p. 269-282.
(Inherited zircons from Oligo-Miocene volcanic arc rocks along E Java S coast only Archean- Cambrian zircons, probably from underlying Gondwana continental fragment, probably from W Australia. Clastics from N and W parts of E Java mainly Cretaceous zircons, not present in arc rocks to S. This implies continental crust was present at depth beneath arc in S Java when Cenozoic subduction began in Eocene.)

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Soebowo (1987)- Studi fasies turbidit Formasi Halang de daerah Panusupan, Banyumas, Jawa Tengah. J. RISET Geologi Pertambangan (LIPI) 8, 1, p. 34-47.
('Study of turbidite facies of the Halang Formations in the Panusupan area, Banyumas, Central Java'. Latest Miocene- E Pliocene (N18-N19) turbiditic sandstones, claystones, tuffaceous sandstone in Banyumas basin SW of Purwokerto sourced from magmatic arc in N)

Soedjoprajitno, S. & Djuhaeni (2006)- Unit genesa pasir Ngrayong di Desa Ngepon Jatim, Cekungan Jawa Timur Utara. Buletin Geologi (ITB), Bandung, 38, 1, p.
('Genesis of Ngrayong sand unit in Ngepon village, East Java, NE Java Basin')

Soeharto, R.S. (1987)- Gold and silver mineralization in sulphide vein deposits of the Cikotok area, West Java, Indonesia, M. Sc. Thesis, University of Wollongong, p. 1-130.
(online at: http://ro.uow.edu.au/theses/2830/)
(Cikotok mineralization in Tertiary volcano-magmatic belt of Java Island. Gold-silver mineralization at Cikotok accompanied by base metal sulphides, and is hosted by altered calc-alkaline volcanic rocks of Oligo-Miocene Old Andesite Fm (mostly andesites). Alteration of host rocks mainly silicification, propylitization, carbonatization, sericitization, chloritization and argilitization)

Soeka, S. & Mudjito (1993)- Paleogene foraminiferal biostratigraphy and its problem in the South Central Jawa, Indonesia. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology, Chiang Mai 1993, p.

Soeka, S., Suminta & T. Sudjaah (1980)- Neogene benthonic foraminiferal biostratigraphy and datum-planes of East-Jawa basin. Proc. 9th Ann. Mtg. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.
(Review of six Late Miocene-Pleistocene biozones based on rotaliid benthic foraminifera from outcrop sections in NE Java. Defined by evolutionary appearances of (old to young): Asterorotalia subtrispinosa, A. trispinosa, Pseudorotalia catilliformis, Asanoina globosa, P. tikutoensis/ P. indopacifica and Calcarina calcar)

Soeka, S., Suminta, E. Thayib & T. Sudjaah (1981)- Neogene benthonic foraminiferal biostratigraphy and datum-planes of East Java basin. Lemigas Scientific Contr. 5, 1, p. 1-25.
(Similar to Soeka et al. 1980 above. Six biozones, numbered NB1- NB6, identified, based on 12 outcrop sections in NE Java basin, using first appearances of biostratigraphically significant benthic forams)

Soeka, S., Suminta, E. Thayib & T. Sudjaah (1982)- The Miocene/Pliocene boundary in the North-East Java basin. Lemigas Scientific Contr. 6, 2, p.

Soenandar, H.B. (1996)- Western Indonesian Basins: constraints on their thermal history and provenance from Fission Track Analysis. Ph.D. Thesis, University of Waikato, Hamilton, NZ, p. 1-378. *(Unpublished)*

Soenandar, H.B. (1997)- Thermal history of the western Indonesian basins (Sunda-Asri, Northwest Java and Southwest Java): evidence from fission track geochronology of apatite. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 601-629.
(Apatite fission track from basement in Ciletuh, SW Java, basement of NW Java Basin, and from Eocene-Pleistocene sediments of Sunda-Asri, NW Java and SW Java forearc basins. Forward modelling indicates rapid increase in geothermal gradient Sunda-Asri and NW Java Basin since Plio-Pleistocene, probably caused by formation of Neogene volcanic belt. Ciletuh-Cimandiri region of SW Java forward modelling implies ~90°C of cooling in Late Miocene-E Pliocene, corresponding to ~3 km of uplift where basement is exposed)

Soenandar, H.B. (1999)- The role of the Sunda Shelf as the provenance of western Indonesia Tertiary basin: a zircon fission track study result. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia,

FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 22. *(Abstract only)*
(Zircon FT data from W Java: SW Java melange and NW Java basin basement: ~88-110 and 191-220 Ma; Eo-Oligocene sediments of Ciletuh, Walat, Jatibarang: ~61-65 and 128-161 Ma, etc.. All rocks strong Late Cretaceous signals, replaced by E Miocene component by E Miocene)

Soenandar, H.B. & P.J.J. Kamp (1998)- Constraints on sedimentary provenance in the Sunda-Asri Northwest Java Basins and the Ciletuh region: evidence from zircon fission track (FT) analysis. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 348. *(Poster abstract)*
(Zircon FT data from basement and sediments SW Java. All rocks strong Late Cretaceous signals, etc. etc.)

Soenarti, E. (1973)- Analisa batugamping Jatibungkus, Karangsambung, Java Tengah. Thesis Dept. Teknik Geologi, Institute Teknologi Bandung, p. *(Unpublished)*
('Analysis of the Jatibungkus Limestone, Karangsambung, Central Java'. Eocene limestone study; see also Paltrinieri et al. 1976)

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('Tectonic aspects from the stratigraphic evolution of the Todanan area, East Java')

Soeparyono, N. & P.G. Lennox (1989)- Structural development of hydrocarbon traps in the Cepu Oil field Northeast Java, Indonesia. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 139-156.
(Cepu oil fields in shallow water limey-clastic sequence in rifting back-arc basin with NE-SW basement faults. Deformation in early M Miocene caused basement fault reactivation in Nglobo-Semanggi with wrenching and development of flower structures, causing erosion of main reservoir rocks. Later Pliocene flower structures in Nglobo-Semanggi area, reflected at surface as en echelon anticlines. Tambakromo-Kawengan area minor N over S thrusting along E-W oriented listric reverse faults with detachment at shallow depths and development of Tambakromo-Kawengan hydrocarbon-bearing folds. Such folds related to imbricate blind thrusts parallel to Tambakromo-Kawengan thrust)

Soeparyono, N. & P.G. Lennox (1990)- Structural development of hydrocarbon traps in the Cepu oil fields, Northeast Java, Indonesia. J. Southeast Asian Earth Sci. 4, 4, p. 281-291.
(New model for Cepu oil fields. Generally shallow-water sequence developed in rifting back-arc basin with NE-SW oriented basement faults. Early M Miocene reactivation of basement faults in Nglobo-Semanggi area with flower structures caused areally restricted erosion of main reservoir rocks. Upper Pliocene deformation accelerated development of flower structures in Nglobo-Semanggi, shown at surface as en echelon, oil-bearing anticlines. Tambakromo- Kawengan area minor N over S thrusting along E-W oriented reverse faults with shallow detachment depth. Further hydrocarbon-bearing folds may exist N of Tambakromo-Kawengan structure: blind imbricate thrusts parallel to Tambakromo- Kawengan thrust)

Soeparyono, N. & P.G. Lennox (1991)- Structural styles, Cepu oil fields, Java, Indonesia. Exploration Geophysics (Bull. Soc. Australian Exploration Geophysicists) 22, 2, p. 369-374.
(Same paper as Soeparyono & Lennox 1990, 1991. Reinterpretation of 18 local and 7 regional seismic lines, well data and surface geology enabled new structural model for Cepu oil fields, which include both wrench and compressional structures)

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('Geology of the Kliripan area and surroundings and genesis of manganese ore deposits at Kliripan')

Soeria-Atmadja, R., R.C. Maury, H. Bellon, H. Pringgoprawiro, M. Polve & B. Priadi (1991)- The Tertiary magmatic belts in Java. In: Proc. Silver Jubilee Symposium on the dynamics and its products, Yogyakarta 1991, Res. Dev. Center for Geotechnology (LIPI), p. 98-112.

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(Two episodes of arc volcanism in E Java: 'Old Andesites' ~40-18 Ma in Southern Mountains, then start of modern Sunda Arc at 12-11 Ma ~50 km farther N)

Soeria-Atmadja, R. & D. Noeradi (2005)- Distribution of early Tertiary volcanic rocks in South Sumatra and West Java. The Island Arc 14, p. 679-686.
(Three main phases of volcanism: (1) M-L Eocene (43-33 Ma) island-arc tholeites (2) tholeitic pillow basalt in Miocene (11 Ma) and (3) calc-alkaline magmatism in Pliocene- Quaternary. Early Tertiary volcanics of Java S coast can be traced E as far as Flores; do not continue into S Kalimantan. Outboard shift in ?Eocene relative to Late Cretaceous arc related to docking of 'Sumba microcontinent', which also comprises much of E Java-Paternoster Platform- Spermonde Shelf, etc.)

Soeria-Atmadja, R., H. Pringgoprawiro & B. Priadi (1990)- Tertiary magmatic activity in Java: a study on geochemical and mineralogical evolution. In: Pros. Persidangan Sains Bumi and Masyarakat, Univ. Kebangsaan Malaysia, Kuala Lumpur July 1990, p. 164-180.

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(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/4954/pdf)
(Late Paleogene? S-type granitoid outcrop in Montongan, SE Pacitan, E Java. Gravity model suggests pluton 5 km wide and rootless. N-S seismic tomographic model indicates dense solid body overrides recent Java subduction zone. Supports idea of microcontinent beneath Southern Mountains of E Java?)

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('Study of the petrology of pillow lava from the Oligo-Miocene series of Kaki Lereng, S Mountains, C Java'.

Soesilo, J., E. Suparka, C.I. Abdullah & V. Schenk (2010)- Petrology and geochemistry of the quartz-white mica schist in the Luk Ulo Melange Complex, Central Java. Buletin Geologi 40, 3, p. 123-138.
(online at: http://eprints.upnyk.ac.id/12890/)
(Quartz-white mica schist from Pretertiary Luk Ulo complex in Sadang Area, 8 km N of Karangsambung and in Kaliwiro area, S Wonosobo mainly contains quartz; white mica, albite, garnet, etc. Foliated, gently N-NW dipping. Rutile and garnet indicated high pressure. Geothermometry/ geobarometry calculations suggest metamorphism at ~50 km depth)

Soesilo, J. & Sutanto (2000)- Study on garnet bearing quartz-muscovite schist blocks of the Luk Ulo Melange Complex, Kebumen, Central Java. Proc. Ann. Mtg. Indon. Assoc. Geol. (IAGI), Bandung 2000, 4, p. 1-5.
(Garnet-bearing quartz-muscovite schist outcrops in Kali Brengkok in Luk Ulo melange complex together with ophiolite, Nummulites limestone, turbidite sediments, high -P metamorphics and metabasite. Interpreted as continental protolith. K-Ar dates from muscovite yielded ~Aptian ages of 117, 115 and 110 Ma (Ketner et al. 1976, Miyazaki et al. 1998). Presence of Nummulites limestones as boudins in melange suggest melange formation still in progress in Eocene)

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(Description of the old Cepu area oil fields, E Java. All young surface anticlines, with M Miocene- Pliocene clastics reservoirs)

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('Planktonic foraminifera biozonation in the Cipamingkis River section, Jonggol, West Java Province'. Jatiluhur Fm in Cipamingkis River with M-L Miocene planktonic foraminifera of zones N13-N16)

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(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2016/02/Distribution-of-Ostracoda-from-Measured-Section-Data-at-Cimerang-River.pdf)
(Late M Miocene shallow marine deposits of Nyalindung Mb of Cimandiri Fm in Cimerang-River section, Sukabumi, W Java. Dominated by 6 species of ostracoda: Hemicytheridea ornata, H. reticulata, Cytherella hemipuncta, Cytherelloidea excavata, Cytherella javaseanse and Keijella carriei)

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(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.1-No.1-22-.pdf)
('Summary of tectonic events at the Old Andesite rocks in the south of East Java'. Rocks of mid-Tertiary Old Andesite arc at least 2 deformation periods: (1) M Miocene N-S compression, with dioritic- granodioritic intrusions; (2) Plio-Pleistocene migration of subduction towards Indian Ocean, with local N-S compression)

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(Cretaceous subduction complexes of Ciletuh (W Java), Karangsambung and Bayat (C Java), Meratus (S Kalimantan), and Bantimala and Barru (S Sulawesi) may belong to same orogenic belt. Bantimala and Barru complexes may form single and intact Mesozoic basement, linked to Meratus Range prior to Makassar Strait opening. Karangsambung and Bantimala common early history and form single tectonic entity. Metamorphism-exhumation- accretion cycle in both areas in Late Jurassic-Cretaceous, with Bantimala earlier than Karangsambung. Karangsambung accretion may have continued to Paleocene. HP metamorphism at 500- 600° C and 10-14 kb between 135-110 Ma, transformed basaltic rocks and trench-fill sediments into blueschist and eclogite at depths of >40 km. Fast uplift to 20-25 km immediately after peak metamorphism, while subduction continued during most of Cretaceous in C Java and ceased in Albian time in Bantimala)

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(Hydrocarbons in pre-Parigi reservoirs on Pre-Tertiary basement. Reservoirs complex, consisting of volcanic tuff, conglomerate, sandstone and carbonate, and with facies changes and combination traps. Structures drape over basement blocks. Hydrocarbons in lower units (Jatibarang Volcanics, Lower Cibulakan) and probably

also in upper units (U Cibulakan) originate from Talang Akar Fm. Vertical fractures important for hydrocarbon migration into upper units. High temperatures from DST probably related to recent volcanic influence and are higher than paleo temperatures indicated by maturation evaluation)

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(Seismotectonics between Java-Timor. Aseismic gap without strong earthquakes in Wadati-Benioff zone between 100-200 km depth. Active calc-alkaline volcanoes in Sunda Arc above this gap. Majority of earthquakes in wedge above subducted slab attributed to deep regional fracture zones, displaying thrust tectonic regime. Clusters of earthquakes beneath active volcanoes seismically active columns, induced by magma transport through lithospheric wedge. No seismically active columns beneath volcanoes of C Java: not at outcrop of seismically active fracture zone)

Spicak, A., V. Hanus & J. Vanek (2007)- Earthquake occurrence along the Java Trench in front of the onset of the Wadati-Benioff zone; beginning of a new subduction cycle? Tectonics 26, 1, TC1005, p. 1-16.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2005TC001867)
(Earthquake foci in central part of Sunda Arc (S Sumatra, W Java, Timor) show distinct strip of earthquakes distributed along Java Trench, separated by trench-parallel, 50-150 km wide aseismic link)

Sribudiyani, N., R. Muchsin, T. Ryacudu, P. Kunto, I. Astono et al. (2003)- The collision of the East Java microplate and its implication for hydrocarbon occurrences in the East Java Basin. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 335-346.
(Collision of Gondwanan microplate and Sundaland in Late Cretaceous- M Eocene, creating Meratus Mts and Lok Ulo melange in C Java. E-W structural trends of E Java inherited from microplate. With maps of structural elements and Late Cretaceous magmatic arc (mainly in S Java Sea) and Eocene arc across Java area)

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(Description of new species of petrified tree trunk (Dryobalanoxylon bogorense) from volcanic sediments at Leuwilang, 20km W of Bogor, W Java. Shows affinities with modern genus Dryobalanops of family Dipterocarpaceae, found today in tropical rainforests of Malaysia, Sumatra and Borneo, but not on Java)

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(Seven species of fish otoliths 'of deep-sea character' from Mio-Pliocene marls of Bojonegoro 1 well, NE Java. Four species of Scopelus, also Macurus gracilis and Argentina sp.)

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(online at: https://www.biodiversitylibrary.org/item/151131page/667/mode/1up)
('The Batu Dodol basalt cliff at Java's East coast and and its recent uplift'. Dark-colored basalt cliff at easternmost coast of Java, covered by recent coral limestone up to 30-50' above present sea level, suggesting young uplift)

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(Wonogiri prospect in SE part of C Java province, 30km S of Solo. Randu Kuning prospect with (1) porphyry type Cu-Au mineralization at as quartz sulphide oxide sheeted and stockwork vein zones, and (2) epithermal Au ± base metal mineralization, mainly as quartz-carbonate- base metal veins hosted in intrusive and volcanic rocks proximal to Randu Kuning (see also Muthi et al. 2013))

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('Gravity anomalies and geological hazard potential in the central part of West Java'. In C West Java Bouguer anomaly values 5-125 mGal. Lowest anomaly around Tagogapu, Padalarang area, showing sediment basin. Highest anomaly around Pelabuhanratu, reflecting presence of ultramafic rocks. Puncak area and surroundings are graben zone, filled by low density Quaternary volcanic rocks)

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('Subsurface geological structure of the Southern Mountains of W Java interpreted from Bouguer anomalies'. W Java Southern Mountains characterized by high anomaly gradients, mainly along S coast., some reflecting normal faults. High anomaly around Ciletuh, Sukabumi shows 240 mGals, while in the northern area is 10 mGals. Highest anomalies associated with ultramafic outcrop at Ciletuh, where Moho level is at ~13 km below sea level. Low anomalies in N indicate sedimentary basin, partly covered by Quaternary volcanics)

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(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/281)
(Bunikasih vein system in Pangalengan district, 60 km S of Bandung, is low-sulfidation, adularia sericite epithermal gold deposit, hosted by Late Miocene andesitic volcanic at SW side of Malabar Volcano complex)

Subroto, E.A. et al. (2006)- Detailed petroleum geochemical analyses on sedimentary rocks collected from southern West Java, Indonesia. Proc. Ann. Conv. Indon. Assoc. Geol. (IAGI), 2006, p.

Subroto, E.A., E. Hermanto, P. Kamtono & K. Kamtono (2010)- Source rock geochemical study in the Southwestern Java, a potential hydrocarbon basin in Indonesia. AAPG Int. Conf., Rio de Janeiro 2010. Extended Abstract, Search and Discovery Art. 1023612, 12p.
(online at: www.searchanddiscovery.net/documents/2010/10236subroto/ndx_subroto.pdf)
(Geochemical study of SW Java Eocene- Miocene outcrop samples from Ciletuh and Gunung Walat. Best source quality in Miocene Cimandiri and Nyalindung Fms, Oligocene Batuasih Fm and Eocene Bayah Fm. Oligo-Miocene sediments immature- marginally mature and unlikely sources of gas, unless buried deeply in basin. Eocene Bayah Fm coals significant oil and gas potential and locally mature. No oil seepage in area)

Subroto, E.A., A. Ibrahim, E. Hermanto & D. Noeradi (2008)- Contribution of Paleogene and Neogene sediments to the petroleum system in the Banyumas Sub-Basin, Southern Central Java, Indonesia. American Assoc. Petrol. Geol. (AAPG) Int. Conf. Exhibition, Cape Town 2008, 6p. *(Extended abstract)*
(Oil samples from seeps and DST in Jati 1 well in Banyumas sub-basin, C Java, more fluviodeltaic than marine character. Biomarker distributions suggest all one family. Both Paleogene and Neogene intervals possible sources. Postulate NE-SW trending Paleogene basins across C Java ('Meratus Trend'))

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('Petrology of high-pressure metamorphic rocks in the Karangsambung area, Kebumen, C Java')

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(On possibly unconformable stratigraphic contact between Eocene Wungkal-Gamping Fm limestone with Oligocene Kebo-Butak Fm in Jiwo Hills, C Java. Presence of black claystone)

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(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/104/96)
('Ore mineral paragenesis of hydrothermal sulfide mineralization in the Kluwih area of Pacitan District, East Java: approach based on mineralogy and fluid inclusions'. Epithermal low sulphidation system in S Mountains, with chalcopyrite-bornite-galena-sphalerite)

Sudijono (1985)- Foraminifera from the mud volcanic area, Sangiran, Central Java. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 253-273.
(Sedimentary rocks from mud volcano include limestones (M and Late Eocene with Nummulites- Pellatipira; E Miocene sandy limestones with Spiroclypeus, Lepidocyclina, Miogypsina, Miogypsinoides) and marls with Eocene, Oligocene, Miocene and Pliocene planktonic forams)

Sudijono (2005)- Age and the depositional environment of the Kalibiuk Formation of the Cisaat river section, Bumi Ayau, Central Java. J. Sumber Daya Geologi 15, 2 (149), p. 118-135.
(Well-documented study of foraminifera of ~370m thick, clay-dominated Kalibiuk Fm, in Bumiayu area, C Java, suggesting mainly Late Pliocene ages (upper N20-N21). Lower part deposited in shelfal marine environment (Cassidulina- Hanzawaia fauna), upper part in brackish shallow marine and lagoon (Ammonia- Elphidium-Nonion- Asterorotalia fauna))

Sudiro, T.W., G.A.S. Nayoan, A. Yasid, M. Lattreille, H. Oesterle et al. (1973)- The structural units of the Jawa Sea. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 177-185.
(Java Sea several N-S and NE-SW trending highs and lows. Sedimentation started with Eocene transgression from East)

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(Volcanic rocks and geologic structure of East Java and West Nusa Tenggara)

Sudrajat, A., I. Syafri & E. Budiadi (2010)- The geotectonic configuration of Kulun Progo area, Yogyakarta. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, 6p.
(Analysis of satellite imagery with field visits suggest three regional tectonic stages controlled development elongated dome of Kulon Progo in S Mountains, 30 km W of Yogyakarta: Meratus (SW-NE), Sunda (NNW-SSE) and Java trends (E-W). Not result of vertical undation force, as suggested by Van Bemmelen (1949))

Suedy, S.W.A, Muhadiono, S. Sabiham & I. Qoyim (2012)- Fosil polen mangrove berumur Pliosen dari Formasi Tapak daerah Kedung Randu, Banyumas. Bioma (Berkala Ilmiah Biologi) 14, 1, p. 17-24.
(online at: https://ejournal.undip.ac.id/index.php/bioma/article/view/9457)
('Pliocene fossil mangrove pollen in the Tapak Formation, Kedung Randu area, Banyumas')
(Samples from Tapak Fm of Kedung Randu, Banyumas, with 56 types of pollen and spores, 22 of which mangroves (Zonocostites, Spinizonocolpites, Florschuetzia, etc.). Presence of Stenochlaeniidites papuanus and Podocarpus imbricatus suggests P. imbricatus/ Dacrycarpidites australiensis Zone, Late Pliocene)

Sufiati, E. (2013)- Koleksi museum geologi fosil moluska holotype dari Bumiayu dan Cirebon, Jawa. UPT Museum Geologi, Bandung, p. 1-200.

('The Geological Museum collection of fossil mollusc holotypes from Bumiayu and Cirebon')

Sufiati, E., Aswan, A. Sopanji, D. Kistiani & R. Wahyudin (2014)- Evolusi lingkungan pengendapan Formasi Nyalindung berdasarkan kajian paleontologi Moluska, daerah Ciodeng, Sukabumi, Jawa Barat. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-069, 5p.
('Evolution of depositional environments in the Nyalindung Fm based on paleontology study of molluscs, Ciodeng River area, Sukabumi, West Java'. Nyalindung Fm deposited in shallow marine environments. At least 11 times of depositional environment changes caused by changes in Late Miocene sea level. Associations of Turritella-Dentalina, Turritella-Bufonaria, Strombus-Balanus, etc.)

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(Brief discussion of M-L Miocene Parigi Fm carbonate buildups in 'KL area', offshore NW Java)

Sugiarto, S., I.B.O. Agastya, M.O. Jene, T. Ramadhan & Y.B. Muslih (2018)- Architectural elements of volcanoclastic mass transport of Banyak Member, Western Kendeng, East Java. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-185-G, 16p.
(Banyak Mb is Late Miocene - E Pliocene andesitic volcaniclastic deep marine Mass Transport Deposits (slumps and debris flows) in W Kendeng Basin. Related to renewed and increasing volcanic eruption activity in Southern Mountains of Java. Not much detail)

Sugiatno, H. & C. Prasetyadi (1998)- Structural geology of the Rembang Hill, Central Java. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 3 (Geodin., Magmat. Volkanologi), p. 16-25.
(Rembang Hill in W Rembang zone E-W trending monoclinal structure, bounded by flexure in N and Jatipohon fault in S, and cut by E-W and NE-SW normal and sinistral slip faults. Major N70°E trending Jatipohon fault interpreted as normal fault, downthrown to N, with later inversion. Three segments, Klambu, Klampok and Todanan. W-most Klambu segment dominated by NE-SW sinistral slip faults with drag folds. Purwodadi High S of Klampok may act as structural barrier, weakening effects of N-directed compressive stress in W. Stratigraphic onlap of Ledok Fm on Bulu/Wonocolo Fms suggests Rembang structuring around 7.0 Ma)

Sugiharto (1984)- Stratigraphic traps defined by seismic data: a case study. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 227-240.
(KL field in Arjuna basin off NW Java stratigraphic traps in Baturaja Fm carbonate and M Miocene Cibulakan Fm clastics)

Suharsono & T. Suwarti (1992)- Geology of the Probolinggo Quadrangle, Jawa. Quad.1608-2, 1:100,000. Geol. Res. Dev. Centre, 9p.

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(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.5-No.1-2.pdf)
('Distribution of benthic foraminifera of the Miliolidae and Rotaliidae families in the Upper Kalibeng Formation in the Sangiran area, Sragen, Central Java'. Mixed shallow and deep foraminiferal faunas)

Suhendra, R. (2016)- Studi petrologi dan geokimia batuan metamorf berasosiasi dengan endapan emas orogenik pada lintasan Sungai Gebang, Desa Kaligua, Kecamatan Kaliwiro, Kabupaten Wonosobo, Provinsi Jawa Tengah. Thesis Gadjah Mada University, Yogyakarta, p. 1-333.
(summary online at: http://etd.repository.ugm.ac.id/...)
(Metamorphic rocks in Gebang River area of Karangsambung Complex, C Java, at least three types (1) overburden metamorphism (zeolite facies), (2) orogenic metamorphism (greenschist, epidote-amphibolite, amphibolite and blueschist facies), and (3) contact metamorphism (hornblende-hornfels and pyroxene hornfels facies). Occurrences of high sulfidation and skarn deposits show placer gold deposits in area not produced by single process (orogenic gold deposit))

Suhendra, R. (2017)- Petrogenesis of very low to low-grade metamorphic rocks in Luk Ulo melange complex, Karangsambung, Indonesia. Proc. 10th Seminar Nasional Kebumian, Dept. Teknik Geologi, Universitas Gadjah Mada (UGM), Yogyakarta, p. 1091-1113.
(online at: https://repository.ugm.ac.id/274159/1/OMP-09.pdf)
(Zeolite- and greenschist-facies metamorphic rocks in Karangsambung area widespread in N part of Luk UloMelange Complex, especially in Gebang River, Kaliwiro area, incl. scaly clay, mica schist, zeolitic rocks and basaltic lava. (S part of complex with higher-grade metamorphics))

Suherman, T. & A. Syahbuddin (1986)- Exploration history of the MB Field, coastal area of Northwest Java. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 101-122.
(1982 MB field straddles NW Java coast, ~35 miles NE of Jakarta. One of several fields in M Miocene Mid-Main Carbonate buildup. Productive interval over basement horst block (Rengasdengklok High). Faults defining N-S trending horst may be pathways from basinal areas (Ardjuna/Pasir Putih or Ciputat subbasin))

Sujanto, F.X. & Y.R. Sumantri (1977)- Preliminary study on the Tertiary depositional patterns of Java. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 183-213.
(Java five major E-W trending structural units, from N to S: Seribu Platform. N Java hinge belt, Bogor-Kendeng Trough, Axial Ridge-flexure, Southern slope of axial ridge-flexure)

Sujatmiko (1972)- Geologic map of Cianjur Quadrangle, Java, 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Sujatmiko (1994)- Batu permata Jawa Barat: potensi dan permasalahannya. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 882-889.
('Gemstones of West Java: the potential and its problems'. Brief review of presence of agate, silicified wood, jasper, opal, etc., in S Mountains of west Java))

Sujatmiko (2004)- Geologic map of Padalarang Quadrangle, Java, 1:100,000, 2nd Ed., Geol. Res. Dev. Centre (GRDC), Bandung.

Sujatmiko, H.C. Einfalt & U. Henn (2008)- Opal from Banten Province, Indonesia and its varieties. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 682-690.
(Opal mined since early 1970s in 9 x 13 km2 area in Banten Province, SE of Rangkasbitung. Opal found in 0.3-2.3m thick weathered pumice layer in Late Miocene Genteng Fm volcanoclastic sequence. Types of opal range from common opal to hyalite, fire opal, and white and black precious opal)

Sujatmiko & Santosa (1992)- Geology of the Leuwidamar Quadrangle, Jawa (Quad. 11093), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 38p.
(Map of SW Java, W of Pelabuhan Ratu. Oldest beds Eocene coal-bearing Bayat Fm)

Sujitno, P. & E. Ruslan (1978)- Seismik di Jawa Barat: kemajuan teknologi processing meningkatkan kemampuan interpretasi. Geologi Indonesia (IAGI). 5, p. 49-62.

Sukamto, R. (1975)- Geologic map of the Jampang and Balekambang Quadrangles, Jawa, Quads. 9-XIV-A & 8-XIV-C, 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 11p.

Sukandar, S., S.A. Siregar & L. Leverbvre (1982)- A reservoir description, based on wireline logs, geological and production data, aids selection of new well locations for optimum oil production. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 415-427.
(Reservoir description of Parigi limestone reef in Tugu Barat field, W Java. Thick gas cap and aquifer cause gas and water cuts in production from thin oil column. Two limestone facies: (1) reef core with high vertical permeability, and (2) overlying reef debris, with better stratification and reduced vertical permeability)

Sukandarrumidi (1983)- Geologi Pulau Kangean sebagai dasar pengembangan wilayah. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 223-231.
('Geology of Kangean island as basis of development of the region')

Sukandarrumidi (1986)- Neogene foraminifera from the Rembang Basin, East Java, Indonesia. M.Sc. Thesis University of Wales, Aberystwyth, p. 1-292. *(Unpublished)*

Sukandarrumidi (1989)- Late Cenozoic foraminifera from West Java (Jatibarang oil field, Java Sea). Ph.D. Thesis University of Wales, Aberystwyth, p. 1-730. *(Unpublished)*

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('Biostratigraphy of well CLS-X, Jatibarang'. M Miocene (Lepidocyclina verbeeki- Ammonia umbonata zone)- Pleistocene (Asterorotalia trispinosa zone) biostratigraphy of Jatibararang CLS-X well, drilled to 2630m, NW Java)

Sukanta U., E. Partoyo & A. Achdan (1994)- Depositional environment of the Besole Formation in the western part of the Blambangan region, East Jawa. J. Geologi Sumberdaya Mineral 4, 30, p. 9-14.
(On depositional environment of E Miocene volcanics-dominated Besole Fm in easternmost SE Java (part of Late Oligocene- earliest Miocene 'Old Andesites complex of S Mountains). Lower part deep water deposits, with andesitic pillow lavas passing upward into classic turbidites.Volcanic arc to backarc setting. Current directions probably NW to SE)

Sukardi (1992)- Geology of the Surabaya, Sapulu Quadrangle, Jawa (1608-1609-1), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Sukardi & T. Budhitrisna (1992)- Geology of the Salatiga Quadrangle, Jawa (1408-6), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 15p. + map.
(NE part of Central Java, with W part of Kendeng zone and Quaternary arc, including Sangiran Dome)

Sukarna, D. (1991)- Geochemistry and origin of gold in the Cikotok ore group (COG) and associated plutonic and volcanic rocks in the Bayah area, Banten- West Java, Indonesia. Ph.D. Thesis State University of Ghent, Belgium, p. 1-293. *(Unpublished)*

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('Geochemistry and isotopes of primitive basalts (volcanic rocks of the Bayah area)'. Primitive Late Eocene- E Oligocene basalt in Cisiih River, Bayah area, SW Java)

Sukarna, D. (1993)- Wall rock geochemistry and hydrothermal alteration of the Cikotok Ore Group (COG) in the Bayah area. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 16, p. 70-96.

Sukarna, D. (1994)- Paleogeography and evolution of the Bayah area during Tertiary. J. Geologi Sumberdaya Mineral 4, 37, p. 2-12.
(Bayah High area of SW Java (W of Pelabuhan Ratu) with outcrops of Eocene-Oligocene rocks, flanked by late E and M Miocene rocks. Three periods of tectonic activity: (1) Late Paleogene N-directed folding-thrusting of Paleogene; (2) latest M Miocene folding; and (3) latest Miocene faulting in N. In Late Cretaceous- E Eocene Bayah area was in fore-arc position, with source of Paleogene sands from N. Late Eocene- M Oligocene 'Lower Old Andesite' volcanic activity in Bayah area. Late Oligocene- E Miocene 'Upper Old Andesite'activity along all of S Java. No paleogeographic maps)

Sukarna, D. (1998)- Petrogenesa diorit Gunung Malang, daerah Bayah bukti bukti geokimia dan kimia mineral. J. Geologi Sumberdaya Mineral 8, 86, p. 2-12.

('Petrogenesis of the Mt. Malang diorite Mount Malang, Bayah area, based on geochemical and mineral chemistry'. Geochemistry of M Miocene(?) diorites at N side Bayah Dome, SW Java, which result from calc-alkaline island arc magmatism)

Sukarna, D. (1998)- Rb, Sr, Zr, Ba and Y behavior during mineralization in the Cirotan ore deposit. J. Geologi Sumberdaya Mineral 9, 90, p. 9-15.
(Cirotan ore deposit of Cikotok ore group in SW Java is epithermal gold deposit with polymetallic minerals, hosted in E Miocene 'Od Andesites')

Sukarna, D. (1999)- Rare elements distribution in Cirotan epithermal gold deposits. Indonesian Mining 5, p. 1-10.

Sukarna, D.J., A. Mangga S. & K. Brata (1993)- Geology of the Bayah area; implications for the Cenozoic evolution of West Java, Indonesia. In: G.H. Teh (ed.) Proc. Symp. Tectonic framework and energy resources of the W margin of the Pacific Basin, Bull. Geol. Soc. Malaysia 33, Kuala Lumpur 1992, p. 163-180.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1993013.pdf)
(Review of SW Java Eocene- Pliocene sedimentary and volcanic rocks. Island arc volcanics in Late Eocene and Late Oligocene- earliest Miocene ('Old Andesites') and Late Miocene- Recent)

Sukarna, D., Y. Noya & S.A. Mangga (1994)- Petrology and geochemistry of the Tertiary plutonic and volcanic rocks in the Bayah area. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 389-412.
(Three episodes of Tertiary igneous rocks in Bayah area, SW Java, all calc-alkaline arc rocks: (1) Lower Old Andesite (Late Eocene- E Oligocene, 53-36 Ma; rel. primitive basaltic magma in forearc setting?) (2) Upper Old Andesite (Late Oligocene- E Miocene and (3) MPV, late E Miocene- Late Miocene. 2 and 3 are volcanic arc deposits and can be linked to Indian Ocean Plate subduction; magmatic arc))

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('On two fossil woods from the deposits in Pacitan region of Java')

Sukiyah, E., I. Haryanto & A. Sudradjat (2016)- The skin tectonic control in the geomorphologic evolution of western part of Java, Indonesia. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 348-351.
(Dominant stress direction remains similar (N100E/ ~E-W strike azimuths) from M Eocene to Pliocene-Quaternary. U Miocene and younger strata same strike direction but generally more gentle dips. Ideal Java geomorphologic zonation from S to N: rel. undeformed plateau in S (Jampang)-(volcanic arc)- intensely folded ridges in middle- thin skin overthrusting in N)

Sukmono, S., D. Santoso, A. Samodra, W. Waluyo & S. Tjiptoharsono (2006)- Integrating seismic attributes for reservoir characterization in Melandong Field, Indonesia. The Leading Edge 25, 5, p. 532-538.
(Melandong Field in onshore NW Java Basin seismic reservoir characterization of fluvio-deltaic channels of Talang Akar Fm and carbonates of Batu Raja Fm)

Sulaeman, C., L. Cendekia Dewi & W. Triyoso (2008)- Karakterisasi sumber gempa Yogyakarta 2006 berdasarkan data GPS. J. Geologi Indonesia 3, 1, p. 49-56.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/219)
(Yogyakarta May 2006 magnitude 6.5 earthquake epicenter 10 km E of Bantul. GPS data suggest left-lateral strike slip along SW-NE trending fault)

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(Kumbang Fm Late Miocene submarine volcanoclastics in Bogor Trough. Sourced from proto-Ciremai volcano and interfingering with (upper?) Halang Fm. sediments. Potential volcanoclastic hydrocarbon play)

Sulistyoningrum, D. & Wartono Rahardjo (2010)- Identification and paleoecology of coraline fossils (Cnidaria: Anthozoa) from Jonggrangan Limestone, Western Slope of Kucir Hill, West Progo Area, Yogyakarta Special Province. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-056, 9p.
(On corals from M-L Miocene Jonggrangan Fm reefal limestone, Kucir Hill, W Progo Mts, S Central Java (age should be Tf1; late E- M Miocene; Lunt 2013, Reich et al. 2014))

Sumanagara, D.A. & D. Sinambela (1991)- Penemuan endapan emas primer di Gunung Pongkor- Jawa Barat. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 97-114.
('The discovery of the Gunung Pongkor primary gold deposit, West Java'. Pongkor gold mine discovered in 1988-1991, WSW of Bogor. Hosted in andesitic volcanics)

Sumanagara, D.A. & D. Sinambela (1993)- The discovery of the Gunung Pongkor gold deposit, West Java. In: M. Simatupang & B.H. Wahju (eds.) Proc. Indonesian mineral development Conf., Jakarta 1991, Indon. Mining Assoc., Jakarta, p. 275-301.
(Similar to Sumanagara & Sinambela 1991, above)

Sumantri, Y.R. (1982)- Gas karbondioksida didalam cekungan minyak Jawa Barat Utara (suatu pandangan mengenai genesanya). Proc. 11th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 213-236.
('Carbon dioxide gas in the NW Java oil basin (a view of its genesis)'. On CO2-bearing gas in onshore NW Java basin fields)

Sumarso & T. Ismoyowati (1975)- Contribution to the stratigraphy of the Jiwo Hills and their southern surroundings (Central Java). Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 19-26.
(Bayat area M-L Eocene clastics overlain by latest Oligocene- E Miocene volcanoclastics. M Miocene angular unconformity between Semilir beds (up to N9; basal M Miocene) and overlying Wonosari beds (N12). Late Miocene-Pliocene absent, probably erosion after Late Pliocene orogeny)

Sumarso & N. Suparyono (1974)- A contribution to the stratigraphy of the Bumiayu area. Proc. 3rd Conv. Indon. Assoc. Geol. (IAGI), p.

Suminto, M.M., Sidarto, S. Maryanto, E.E. Susanto, S.F. Aziz, I. Christiana & E. Fitriani (2004)- A study of the Solo River terraces from Kerek to Karsono: Ngawi and Bojonegoro regions, East Java. Geological Research and Development Centre, Bandung, p. .

Sumosusastro, S. (1957)- A contribution to the geology of eastern Djiwo Hills and the Southern Range in Central Java. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 112, 2, p. 115-134.
(Geologic history in Jiwo hills and adjacent Southern Mountains in C Java begins with Mesozoic deposition, uplifted during Late Cretaceous or E Eocene orogenic activity. Eocene transgressions and regressions followed by Oligocene orogenic phase with diorite intrusionsfolding pre-Tertiary-Eocene complex. Volcanic activity in lower Miocene time followed by M Miocene transgression, Mio-Pliocene uplift and E Pleistocene basalt extrusions. Collapse of geanticline along E-W faults to form rift zone was last tectonic event)

Sun, M. & I.N. Akbar (2011)- B-Field Reservoir simulation- characterization of carbonate fracture permeability using single and dual porosity models. Proc. 37th Ann. Conv. Indon. Petroleum Assoc., IPA11-E-237, 12p.
(Banyu Urip Field excess permeability due to karst and fractures)

Sunardi, E. (1997)- Magnetic polarity stratigraphy of the Plio-Pleistocene volcanic rocks around the Bandung Basin, West Java, Indonesia. Dr.Sc. Thesis, Osaka City University, Japan, p. *(Unpublished)*

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(Summary of paleomagnetic study of Plio-Pleistocene volcanics in Bandung area)

Sunardi, E. (2004)- Lithofacies stratigraphy and characteristic of Jampang Formation. In: Stratigrafi Pulau Jawa, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 30, p. 107-111.
(E Miocene Jampang Fm oldest volcanogenic deposit on Java. Breccias clasts mainly basalt, also skeletal limestone, lithic tuff, ripped-up tuffaceous sandstone)

Sunardi, E. (2011)- Stratigraphy review of Kuningan area in relation to the petroleum potential. Bull. Scientific Contr. (UNPAD) 9, 3. p. 125-138.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8269/3816)
(Kuningan area of Bogor Trough, E of Bandung and S of Cirebon, W Java, poorly known. First, shallow oil wells of Indonesia were drilled on oil seeps near Maja in N part of area by Reerink in 1871. Stratigraphy and hydrocarbon plays of offshore NW Java Basin may extend to Kuningan area)

Sunardi, E. & B.G. Adhiperdana (2008)- An account for the petroleum prospectivity in the Southern Mountains of west Java: a geological frontier in the west? Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-083, 12p.
(S mountains of W Java largely consists of inverted sub-basins, with deformed Tertiary sediments and dissected arc remnants. Base Tertiary ranges from >2000m depth to PreTertiary exposure at Ciletuh. Early Tertiary coal and shales likely source rocks. Geochemical results from 200-400m well samples of Paleogene sediments indicate mature and oil/gas prone source rocks. Potential for petroleum accumulations greatest in E part)

Sunardi, E. & B.G. Adhiperdana (2013)- Sedimentologi dan paleohidrologi sedimen fluvial Oligosen Formasi Walat, Sukabumi-Jawa Barat. Bionatura 15, 1, p. 8-13.
(online at: http://jurnal.unpad.ac.id/bionatura/article/view/7212/3311)
(Sedimentology and paleohydrology of fluvial sediments of the Oligocene Walat Formation, Sukabumi, West Java'. Fluvial Walat Fm outcrops show upward decrease of fluvial sinuosity, and rivers becoming more braided, with wider and deeper channels upsection, with more coarse-grained facies Represents relative sediment supply increases beyond capacity of accommodation, possibly related to sea level drop through Paleogene, and global climate change from greenhouse to icehouse conditions in Eocene-Oligocene time (NB: age of Walat Fm more likely Late Eocene?; Lunt 2013))

Sunardi, E., B.G. Adhiperdana, Nurdrajat, N. Muchsin, T.W. Kunto & R. Ryacudu (2001)- Facies analysis of the Cisubuh Formation outcrops analogues at Brebes-Tegal-Pemalang District, Central Java. In: A. Setiawan et al. (eds.) Proc. 2n FOSI Reg. Seminar, Deep-Water Sedimentation of Southeast Asia, Indon. Sedimentologists Forum, Jakarta 2001, p. 43-47. *(Extended Abstract)*

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(Datung of ~4-1 Ma old volcanic rocks around Bandung using radiometric ages and magnetic polarity)

Sunardi, E. & J. Kimura (1998)- Temporal chemical variations of the late Neogene volcanic rocks around the Bandung Basin, West Java, Indonesia: an inferred timetable resolving the evolutionary history of the upper mantle. J. Min. Petrol. Economic Geology, Tokyo, 93, p. 103-128.
(online at: https://www.jstage.jst.go.jp/article/ganko/93/4/93_4_103/_pdf)
(Bandung Basin underlain by late Cenozic volcanics. Pliocene lavas dated by K-Ar as 4.1 Ma and 3.3-2.8 Ma at W and SW side of Bandung Basin. Resurgence in melting with 'Old Quaternary' lavas between ~1.1- 0.6 Ma, simultaneous with uplift of Sunda Arc.Middle and Late Pleistocene lavas at Sunda (0.5-0.2 Ma) and Tangkuban Perahu (0.18-0.04 Ma) volcanoes)

Sunardi, E. & R.P. Koesoemadinata (1997)- Magnetostratigraphy of volcanic rocks in Bandung area. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 404-418.
(Plio-Pleistocene magnetic polarity stratigraphy supplemented with K-Ar dating, etc., for lava flows and dykes for last 4 Ma around Bandung Basin. 15 volcanic units assigned to paleomagnetic zones Gilbert (Selacau - Paseban volcanic unit, with mean age of 4.1 Ma and with reversed polarity), Gauss (calc-alkalic series of

Cipicung, Kromong E and W; 3.3, 3.1 and 2.9 Ma), Matuyama (Cicadas tholeiitic lavas; 1.7 Ma) and Brunhes. Etc.)

Sunarya, Y., S.S. Sudirman & T. Kosasih (1992)- The epithermal gold deposits in the Cikotok area, West Java, Indonesia. In: Epithermal gold in Asia and the Pacific, Mineral concentrations and Hydrocarbon accumulations in the ESCAP Region series, UN ESCAP, 6, p. 54-59.
(Gold mined since 1936 Cikotok area, Bayah Dome, SW Java. Gold in epithermal, sulpide-bearing quartz veins, mainly in N-S trending fractures. Hosted by propylitized Oligo-Miocene 'Old Andesites')

Sunarya, Y. & S. Suharto (1989)- The epithermal gold deposits in Cikotok area, West Java. In: First workshop on epithermal gold mineralization, ESCAP, Resources Div. and Geol. Survey Japan, Tsukuba 1989, 15p.

Sunjaya, E.S., A. Amir, D. Sudarmawan & A.H. Satyana (2006)- Sedimentology of Wonosari carbonates Southern Yogyakarta: outcrop study and petroleum implications. AAPG Int. Conf., Perth 2006. *(Abstract only)*
(Wonosari reefal carbonates rimmed shelf platform, deepening to N. Depositional environments from shallow S to deep N: (1) back reef-shelf with patch reef and algal foram packstones; (2) reef zone with boundstones and packstones-grainstones cut by surge channels; (3) reef slope with packstones and rudstones; (4) toe to slope with planktonic packstones and wackestones. Diagenetic processes: micritization, dolomitization, and dissolution. Locally good porosities. M Miocene Sambipitu Fm may provide source rocks but distribution limited. Mio-Pliocene Kepek limestones and marls may partly seal Wonosari reefs. Oil seeps absent in area)

Sunjaya E.S., M.I. Novian, E. Biantoro & A.H.Satyana (2006)- Exploration challenge on Kendeng zone: outcrop study and petroleum indication. Proc. 35th Ann. Conv. Indon Geol. Assoc. (IAGI), Pekanbaru, p. *(Poster abstract)*

Suparka, M.E. (1988)- Studi petrologi dan geokimia kompleks ofiolit Karangsambung utara Luh Ulo, Jawa Tengah, Evolusi geologi Jawa Tengah. Doct. Thesis, Inst. Teknologi Bandung (ITB), p. 1-181. *(Unpublished)*
('Study on petrology and geochemistry of North Karangsambung ophiolite, Luh Ulo, geological evolution of Central Java'. Karangsambung area (C Java) ophiolite consists of harzburgite, serpentinite, lherzolite, gabbro, diabase and pillow basalt. Originated from tholeiite magma from N-type mid oceanic ridge basalt. Radiometric ages of basalt and diabase 85.0 ± 4.3 Ma and 81.3 ±4.1 Ma.Mica schist ~85 and 102 Ma. Ophiolite result of thrusting part of mid oceanic ridge from Indo-Australia oceanic plate onto Eurasian continental plate in Late Cretaceous-Paleocene)

Suparka, M.E., M. Aziz, C.I. Abdullah & Suparka (2007)- Mineralization of Cu-Au porphyry deposits in Cihurip and surrounding area, Garut Regency, West Java, Indonesia. Proc. Joint Conv 32nd HAGI, 36th IAGI, and 29th IATMI Ann. Conf., Bali, p. 1319-1327.
(Cihurip Cu-Au mineralization in Garut Regency, S Mountains of W Java, hosted and enclosed by porphyry dyke, but not porphyry gold-copper deposit)

Suparka, M.E., S. Martodjojo & R. Soeria-Atmadja (1990)- Jalur magmatik maman Kapur-Tersier Awal di Jawa dan sekitarnya In: Pros. Persidangan sains bumi dan masyarakat, Univ. Kebangsaan Malaysia, Kuala Lumpur 1990, p. 81-91.
('Cretaceous- Early Tertiary magmatic belt in Java: and its surrounding areas')

Suparka, M.E. & R. Soeria-Atmadja (1991)- Major element chemistry and REE patterns of the Luk Ulo ophiolites, Central Java. Proc. Silver Jubilee Symposium on the dynamics of subduction and its products, Yogyakarta, LIPI, p. 204-218.

Suparka, S., K.H. Thio, S. Hadiwisastra & S. Siregar (1979)- Suatu tinjauan mengenai batuan metamorf di daerah Cihara, Bayah, Jawa Barat. J. Riset Geologi Pertambangan (LIPI) 2, 1, p. 1-6.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.2-No.1-2-2-.pdf)

('A review of the metamorphic rocks in the Cihara area, Bayah, West Java'. Actinolite chlorite schist, hornblende schist, micaschist and granodiorite gneiss N of Cihara granodiorite, W of Pelabuhan Ratu. Interpreted as cataclastic metamorphics of E-W transcurrent fault)

Supriatna, S., L. Sarmili, D. Sudana & A. Koswara (1992)- Geologic map of the Karangnunggal Quadrangle, Java, Quad. 1308-1, 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

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(Model of Miocene Upper Cibulakan and Parigi Fm carbonate development and thrust fault propagation in onshore NW Java basin)

Suratman, R.P. Koesoemadinata & E. Suparka (1994)- Stratigraphic sequence and carbonate diagenesis of the Paciran Formation, Northeast Java basin. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 19-32.
(Plio-Pleistocene Paciran Fm limestone on Tuban High in NE Java unconformable on early M Miocene Tuban Fm. Paciran Fm 7km E of Tuban with 'Karren' karst morphology. Two caliche horizons subdivide formation into three sequences. Diagenesis controlled by two sealevel drops in Pliocene and tectonic uplift in Pleistocene. Four diagenetic environments: marine, deep burial, paleo-arid freshwater and Recent freshwater)

Suratman & Mardiastro (1997)- Iodium di Cekungan Jawa Timur Utara. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 140-152.
('Iodine in the NE Java Basin'. NE Java Basin formation waters near Mojokerto and Surabaya locally relatively rich in in iodine, especially in Pucangan Fm of Kendeng zone. Commercial production since >100 years; currently by PT Kimia Farma at Watudakon anticline (~220 kg/day))

Suratman & S. Musliki (1996)- Anggota Ngrayong sebagai endapan regresif yang berprogradasi kaerah selatan. Proc. 25h Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 262 -274.
('The Ngrayong member as regressive deposit of a South-prograding system'. Middle Miocene Ngrayong sands represent major influx of sands into NE Java basin by prograding system from North)

Surono (1992)- The stratigraphic relationship between the Punung and the Wonosari Formations, Central Java. Geol. Res. Dev. Centre (GRDC), Bandung, Bull. 15, p. 31-37.
(M Miocene Punung and Wonosari limestones of S Mountains of C Java can not be differentiated and proposed to be united in one unit)

Surono (2005)- Sedimentology of the Paleogene Nanggulan Formation, West of Yogyakarta. J. Sumber Daya Geologi 15, 1 (148), p. 75-82.
(M-L Eocene Nanggulan Fm 250m outcrop section in Kunir River, Pendoweredjo Village, 21km W of Yogyakarta. Middle part delta plain environment, upper 30m shallow marine. Volcanic materials most common in Nanggulan Fm sandstones)

Surono (2008)- Sedimentasi Formasi Semilir di Desa Sendang, Wuryantoro, Wonogiri, Jawa Tengah. J. Sumber Daya Geologi 18, 1, p. 29-41.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/225/215 (?))
('Semilir Fm sedimentation in Sendang village, Wonogiri, C Java'. Volcanic Semilir Fm widely exposed in S Mountains. Overlies Butak Kebo Fm and overlain by Nglanggran Fm. Composed of sandstone, lapilli tuff and pumice breccias. Calcareous clays with nannofossils of E Miocene age. Zircon fission track in pumice breccia suggest ~16-17 Ma age (end of E Miocene). Depositional environment shallowing upward)

Surono (2008)- Litostratigrafi dan sedimentasi Formasi Kebo dan Formasi Butak di Pegunungan Baturagung, Jawa Tengah Bagian Selatan. J. Geologi Indonesia 3, 4, p. 183-193.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20080401.pdf)

(Oligocene- E Miocene 'Old Andesite' volcanics outcrop E-W along N foot of Baturagung Mountains, S Central Java. Early Oligocene Nampurejo basaltic pillow lava overlain by Late Oligocene Kebo Fm sandstone, siltstone, tuff, and shale and E Miocene Butak Fm polymict breccia with sandstone, shale, siltstone. Volcanics all deposited in marine basin. Volcanism most active during upper Kebo and Butak Fms)

Surono (2009)- Litostratigrafi Pegunungan Selatan bagian timur daerah istimewa Yogyakarta dan Jawa Tengah. J. Sumber Daya Geologi 19, 3, p. 209-221.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/206/197)
('Lithostratigraphy of the eastern part of the Southern Mountains in the Yogyakarta area and East Java'. S Mountains of C Java intensive volcanic activity in Late Oligocene- E Miocene. Middle-Late Miocene widespread carbonate platform deposition)

Surono Martosuwito, S. Bachri & Z.A. Kamal (2018)- Stratigraphical and sedimentological review of the Merawu Formation, Serayu Basin, Central Jawa, Indonesia. Indonesian J. Geoscience 5, 2, p. 117-128.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/393)
(Merawu Fm clastics widely distributed in Serayu Basin, C Java. Underlain by Paleocene Worawari Fm and overlain by Late Miocene Penyatan Fm. Previously interpreted as E-M Miocene turbidite sequence, but present research shows E Miocene-Pliocene tidal flat deposition)

Surono M. & R. Fakhruddin (2014)- Sedimen pasang-surut di Kali Keruh, Desa Lor Agung, Kabupaten Pekalongan. J. Geologi Sumberdaya Mineral 15, 1, p. 41-53.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/69/71)
('Tidal sedimentary rocks at the Keruh Creek, Lor Agung village, Pekalongan Residency'. Documentation of 194m thick measured section of Late Miocene- E Pliocene (N17-N19) age in N Central Java (Halang Fm equivalent?). With tidal flat sedimentary structures (but apparently also rich in planktonic foraminifera = open marine setting?; JTvG))

Surono, U. Hartono & S. Permanadewi (2006)- Posisi stratigrafi dan petrogenesis intrusi Pendul, Perbukitan Jiwo, Bayat, Kabupaten Klaten, Jawa Tengah. J. Sumber Daya Geologi 16, 5 (155), p. 302-311.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/372)
('Stratigraphic position and petrogenesis of the Pendul Intrusion, Jiwo Hills, Bayat, C Java'. Intrusive microgabbro into M-L Gamping-Wungkal Fm sediments. K-Ar analyses of diabase and diorite of Pendul Intrusion of Bayat/ Jiwo Hills suggests two intrusive ages, M Eocene- E Oligocene (39.8- 30.0 Ma) and M Miocene (17.2- 13.9 Ma). Nearby Tegalrejo Basalt 24.3 ± 0.7 Ma)

Surono & A. Permana (2009)- Lithostratigraphic and sedimentological significance of deepening marine sediments of the Sambipitu Formation, Gunung Kidul residence, Yogyakarta. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, 16p.
(On latest E Miocene (N8) Sambipitu Fm at Ngalang River section, S Mountains SE of Yogya. Thickness 223m, overlies E Miocene Nglanggran Fm volcanic breccias and grades upward into marl-dominated M Miocene Oyo Fm. Lower Member dominated by sandstone and siltstone, alternating with breccias; Upper Member siltstone-mudstone intercalated with sandstone, marl and conglomerate. Lower Member deposited on tidal flat, affected by sedimentation of volcanic material, deepening to inner shelf in Upper Member (NB: generally viewed as deeper water turbiditic series?; JTvG))

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(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/31/31)
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('The Semilir Formation in the Southern Mountains of Central Java, a result of an enormous eruption of a Miocene volcano'. Early Miocene volcanics with zircon ages of ~19-20 Ma)

Surono M., H. Samodra & Sidarto (2013)- Hubungan lembah Sadeng, cekungan Baturetno dan teras Bengawan Solo, Jawa bagian Tengah. J. Sumber Daya Geologi 23, 3, p. 153-161.
('Relations between the Sadeng valley, Baturetno basin and Solo River terraces, Solo, Central Java'. When Old Lawu erupted blocked Solo River and flooding of Baturetno basin S of Wonogiri in S Mountains)

Surono, B. Toha & I. Sudarno & S. Wiryosujono (1992)- Geological Map of the Surakarta- Giritontro Quadrangles, Jawa. 1: 100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 2 sheets.

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(Geothermal gradients and heat flow data calculated from 67 oil-gas and 3 geothermal wells. Heat flow in NW Java basin slightly higher than normal, from 60.8- 135.2 mW m-2. Temperature gradients 3.7- 6.6° C/100m. Very high heat flows in S part of basin. In volcanic area heat flow ~186.5 mW m-2. High heat flow outside volcanic area at border between gravity highs and lows, interpreted as faults)

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('Atlas of seismic reflection in Sunda Straits')

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(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=2973&context=theses)
(Study of M Miocene- Quaternary geology, stratigraphy and paleogeography of NE Java-Madura area. During M Miocene and before, the NE part of E Java Basin controlled by NE trending half-grabens along sutures between Late Cretaceous- E Tertiary subduction systems. Little is known about basin configuration in S part of basin before M Miocene. Since Late Miocene E -trending anticlinal zones developed, with Rembang anticlinal zone between Blora and Madura as dominant structure)

Susilohadi, S., C. Gaedicke & Y. Djajadihardja (2009)- Structures and sedimentary deposition in the Sunda Strait, Indonesia. Tectonophysics 467, p. 55-71.
(Sunda Strait opening initiated in early Late Miocene following M Miocene onset of Sumatra fault system. Three major graben systems/ pull-apart basins: W and E Semangko and Krakatau. Prior to Late Miocene most of Sunda Strait and surroundings probably developed in non-marine environment.)

Susilohadi, S., C. Gaedicke & A. Ehrhardt (2005)- Neogene structures and sedimentation history along the Sunda forearc basins off southwest Sumatra and southwest Java. Marine Geology 219, 2-3, p. 133-154.
(20 seismic lines in SW Sunda arc margin between Manna and W Java show fore-arc basin structures and stratigraphy since Late Paleogene. Paleomorphology of Cretaceous continental margin persisted until Oligocene and paleoshelf margin extended NW off Sumatra. Two structural events between Late Oligocene-Pliocene. Back thrust-faulting along S border of fore-arc basin and initiation of Cimandiri FZ in Late Oligocene; Sumatra and Mentawai FZ initiated in Pliocene. Four Neogene sedimentary cycles. Volcanic activity abundant since late M Miocene. Turbidite deposition common along and seaward of basin slope during sea level lows in late M Miocene and L Miocene)

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(1969 onshore waxy oil discovery 170km E of Jakarta. Reservoir Eocene- Oligocene Jatibarang Volcanics Fm, composed of >400m of sandy lithic tuffs with intercalations of andesites, red clay and basaltic intrusives)

Sutanto (1993)- Evolutions geochimiques et geochronologiques du magmatisme Tertiaire de Java (Indonesie). Memoire de DEA, Universite de Bretagne Occidentale, Brest, p. 1-89.
('Geochemical and geochronological evolution of the Tertiary magmatism of Java')

Sutanto (2000)- Batuan vulkanik daerah Kulon Progo, geokronologi dan geokimia. Bul. Tekmira 14, p.
('Volcanic rocks of the Kulon Progo area, geochronology and geochemistry')

Sutanto (2003)- Batuan volkanik Tersier di daerah Pacitan dan sekitarnya. Majalah Geologi Indonesia (IAGI) 18, 2, p. 159-167.
('Volcanic rocks of the Pacitan area and surroundings'. Eocene- U Miocene volcanic edifices around Pacitan, S coast of C Java, Common island arc andesites. K/Ar ages 42-9 Ma. M-U Miocene volcanics from adakitic magma, from melting of young and hot lithospheric plate)

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('Spatial and temporal distribution of Tertiary volcanic rocks in Central and East Java')

Sutanto (2008)- Geologi dan prospek geowisata Perbukitan Jiwo, Bayat, Jawa Tengah. J. Teknologi Technoscientia 1, 1, p. 111-121.
(online at: http://technoscientia.akprind.ac.id/wp-content/uploads/2009/11/Sutanto_111_121-okbgt.pdf)
(C Java Jiwo Hills near Bayat one of three places on Java with exposures of Pre-Tertiary and Paleogene rocks. Oldest rocks pre-Tertiary metamorphics, unconformably covered by Eocene Gamping-Wungkal Fm with Nummulites limestones. Cut by Late Eocene- E Oligocene (39.8, 33.2, 31.3 Ma) basaltic dykes. Unconformably covered by Oyo Fm calcarenite and marls. Proposal to preserve Jiwo Hills geotourism sites)

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(online at: https://jurnal.ugm.ac.id/jag/article/view/26982/16620)
(Randu Kuning prospect at Selogiri, ~40 km SE of Solo. Many Tertiary dioritic rocks in Randu Kuning area, with related porphyry Cu-Au and epithermal Au-base metal-bearing veins. Most porphyry veins cross cut by epithermal-type veins. Two type of hydrothermal breccias)

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(online at: https://journal.ugm.ac.id/jag/article/view/26951)
(Randu Kuning prospect at Selogiri with both porphyry Cu-Au and intermediate sulphidation epithermal Au-base metals mineralization. Mineralization in porphyry mainly in quartz-sulphides veins and disseminated

sulphides. Epithermal mineralization as pyrite+ sphalerite+ chalcopyrite+ carbonate ± galena veins and hydrothermal breccias)

Sutarto, A. Idrus, A. Harijoko, L.D. Setijadji, F.M. Meyer & Danny, R. (2015)- Characteristic of the fluid inclusions in quartz veins at the Randu Kuning porphyry Cu-Au deposit, Selogiri, Central Java. Pros. Seminar Nasional Kebumian X, UPN 'Veteran' University, Yogyakarta, p. 208-220.

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(Mineralization at Randu Kuning prospect in Selogiri area of C Java with early porphyry Cu-Au stage and late intermediate sulphidation epithermal Au-base metals stage. Associated with diorite intrusions.)

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('Sequence stratigraphy of carbonates of the Southern Mountains'. Late E- M Miocene carbonate sequence stratigraphy. Wonosari Fm with Lepidocyclina spp. and Cycloclypeus annulatus (Tf1-2). Not much detail)

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('Stratigraphic classification of the Southern Mountains, Yogyakarta special region and Central Java'. Sambipitu Fm spans zones N7-N9)

Sutrisman, A. (1991)- Source rock distribution and evaluation in the Talang Akar formation, onshore northwest Jawa Basin, Indonesia. M.Sc. Thesis University of Wollongong, p. *(Unpublished)*

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(Modern Citarum River Delta, NW coast of Java, shows different delta types at each of four tributaries).

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Suwarti, T. & Suharsono (1993)- Geology of the Lumajang Quadrangle, Java, Quad. 1607-5, 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 10p.

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Suyanto, F.X. (1982)- Note on the carbonate outcrops in Krawang Selatan, Jampang Tengah and Jampang Kulon. Proc. 11th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 237-252.

(Age of Parigi Fm carbonates in Krawang Seltan NW of Purwakarta Late Miocene (Tf2-3, N16). Cibodas Fm carbonates of Jampang Kulon Late Miocene (N17). Reefal limestones of Cimandiri Fm of Jampang Tengah (Bojonglopang) M Miocene (Tf1-2, N11-12) to Late Miocene (Tf2-3, N14-15))

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(Five gas-bearing carbonate reservoir horizons in NW Java: E Miocene Baturaja Fm and Zone 16, Middle Miocene Zone 15 and Zone 14, Late Miocene Parigi Fm)

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(NW Java basement: igneous rocks intruding into older metamorphic rocks. Radiometric dates of youngest igneous rocks ~58- 65 Ma (Paleocene); oldest metamorphic argillite 213 Ma (Triassic))

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Suyoto (1992)- Model facies karbonat Gunung Sewu, Wonosari, Yogyakarta. Master Thesis Inst. Teknologi Bandung, p. *(Unpublished)*
('Carbonate facies model of Gunung Sewu, Wonosari, Yogyakarta'. On Miocene carbonates of Southern Mountains SE of Yogyakarta, C Java)

Suyoto (1992)- Klasifikasi stratigrafi Pegunungan Selatan daerah istimewa Yogyakarta dan Jawa Tengah. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 472-485.
('Stratigraphic classification of the Southern Mountains, Yogyakarta Special Region and Central Java')

Suyoto (1994)- Sekuan stratigrafi karbonat Gunungsewu. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 67-76.
(Carbonate sequence stratigraphy of the Southern Mountains', C. Java)

Suyoto (2005)- Stratigrafi sekuen cekungan depan busur Neogen Jawa Selatan berdasarkan data di daerah pegunungan Selatan Yogyakarta. Doct. Thesis Inst. Teknologi Bandung (ITB), p.
(S Mountains S of Yogyakarta nine Neogene sequence boundaries. In Pacitan area angular unconformity between Oligocene volcanics and overlying quartz sandstones. S1= N7, S2 = N8, S3 = N9-N10, S4 = N11/N12, S5= N 13 S6= N14-N15, S7 = N 16/N 17, S8 = N18-N19, and S9 = N20-Recent. Correlation with global sea-level changes prove no age similarities. Two major transgressions and regressions: first transgression with S1 (late E Miocene), second with S6 (Late M Miocene). Early M Miocene onset of first regression with deposition of S3 and widespread caliche in Gunungsewu area, indicating Early M Miocene arid climate. Second regression in early Lt Miocene with deposition of S7 and diagenesis resulting in karst topography, still occurring today. Extensive karst topography indicates study area has been tropical since early U Miocene)

Suyoto, A.T. Rahardjo, A.A. Polhaupessy, S. Wiyono, L. Nugrahaningsih & E.B. Lelono (1994)- Zonasi polen Tersier Pulau Jawa. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 77-87.

('Tertiary pollen zonation of Java')

Svensen, H.H., K. Iyer, D.W. Schmid & A. Mazzini (2018)- Modelling of gas generation following emplacement of an igneous sill below Lusi, East Java, Indonesia. Marine Petroleum Geol. 90, p. 201-208.
(Lusi mud eruption started in 2006, near Arjuno-Welirang volcanic complex in NE Java. Erupting steam, CO2, and CH4, mud breccia and boiling water. Lusi eruption possibly driven by heat from deep-seated igneous sill from neighboring volcanic arc. CO2 may be from thermally matured organic matter in contact aureole of hypothetical 150m thick sill, emplaced within organic-rich Eocene Ngimbang Fm)

Syafri, I., E. Budiadi & A. Sudradjat (2013)- Geotectonic configuration of Kulon Progo Area, Yogyakarta. J. Geologi Indonesia 8, 4, p. 185-190.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/168/168)
(Kulon Progo Mountain elongated dome W of Yogyakarta. Structural elements mainly radial pattern. Mountain building of Kulon Progo not solely dominated by vertical undation force; but related to three regional tectonic stages: Meratus, Sunda and Java trends, with SW-NE, NNW-SSE and E-W directions respectively)

Syafri, I., A. Sudrajat, N. Sulaksana & G. Hartono (2010)- The evolution of Gajahmungkur paleovolcano, Wonogiri Regency, Central Java, as the reference to the revized terminology of "Old Andesite Formation". Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok 2010, PIT-IAGI-2010-231, 8p.
(Evolution of Gajahmungkur E Miocene 'Old Andesite' paleovolcano in Wonogiri area, S Mountains, SE of Yogyakarta. Identified volcanic facies and location of paleovolcano vent. Four stages: (1) submarine volcano with pillow lavas, (2) emergence above sea level forming volcano island, with alternating lavas-pyroclastics; (3) self-destruction by formation of caldera, dominated by pumice, ignimbrite breccias; (4) declining activity, with more basaltic rocks)

Syafri, I., A. Sudrajat, N. Sulaksana & G. Hartono (2010)- The evolution of Gajahmungkur paleovolcano, Wonogiri, Central Java, as a reference to revize the terminology of ñOld Andesite Formationò. J. Geologi Indonesia 5, 4, p. 263-268.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/282)
(Same paper as Syafri et al. (2010), above)

Syafri, I., E. Sukiyah & Hendarmawan (2014)- The chemical and mineralogical characteristics of Quaternary volcanic rock weathering profile in the southern part of Bandung Area, West Java, Indonesia. Int. J. Science and Research (IJSR) 3, 4, p. 79-85.
(online at: https://www.ijsr.net/archive/v3i4/MDIwMTMxMzg4.pdf)

Syafrizal, A. Imai, Y. Motomura & K. Watanabe (2005)- Characteristics of gold mineralization at the Ciurug vein, Pongkor gold-silver deposit, West Java, Indonesia. Resource Geology 55, 3, p. 225-238.
(Pongkor gold-silver mine, W of Bogor, W Java, in paprallel N-S trending epithermal veins in basaltic-andesitic breccia and lapilli tuff with andesite lava. Ciurug vein four main mineralization stages. Main metallic minerals pyrite, sphalerite, chalcopyrite and galena. Bornite only in S part of Ciurug vein at 515 m. Gold grades in Ciurug vein vary from 1.2 to 100's of ppm, highest in latest mineralization stage in sulfide band in vein quartz)

Syafrizal, A. Imai & K. Watanabe (2007)- Origin of ore-forming fluids responsible for gold mineralization of the Pongkor Au-Ag deposit, West Java, Indonesia: evidence from mineralogic, fluid inclusion microthermometry and stable isotope study of the Ciurug-Cikoret veins. Resource Geology 57, 2, p. 136-148.
(On Pongkor young (~2Ma) epithermal gold- silver deposits at NE flank of Bayah dome, in andestic and dacitic host rocks. Mineralization of precious metal ore zone at fluid temperatures between 180-220°C, and with low salinity. Minimum depth of vein formation below the paleo-water table is ~90-130m)

Syarifin (2011)- Paleontologi Formasi Nyalindung. Bull. Scientific Contr. (UNPAD) 9, 1, p. 17-27.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8259/3806)
('Paleontology of the Nyalindung Formation'. Brief review of diverse M Miocene marine fauna in Nyalindung Fm in W Java, long known for rich mollusc faunas. Mollusc assemblages contain 18% Recent species, incl.

marker species Siposiprarea caputviverae and Vicaria veurnelli. Larger foraminifera Lepidocyclina (T.) rutteni and L. (T.) kalahabensis indicate zone Tf3 (see also Martin (1911, etc.) and Van der Vlerk (1924, 1928))

Szemian, J.M.J. (1933)- Korte agrogeologische beschrijving. In: Toelichting bij blad 30 (Poerwakarta) van de Geologische kaart van Java, 1: 100,000, Dienst van den Mijnbouw, Bandung, p. 36-44.
(Soils of Purwakarta geological map sheet, Java)

Szemian, J.M.J. (1934)- Korte agrogeologische beschrijving. In: Toelichting bij blad 36 (Bandoeng) van de Geologische kaart van Java, 1: 100,000, Dienst van den Mijnbouw, Bandung, p. 36-43.
(Soils of Bandung geological map sheet, Java)

Szemian, J.M.J. (1934)- Korte agrogeologische beschrijving. In: Toelichting bij blad 58 (Boemiajoe) van de Geologische kaart van Java, 1: 100,000, Dienst van den Mijnbouw, Bandung, p. 56-63.
(Soils of Bumiayu geological map sheet, Java)

Takahashi, K. (1982)- Miospores from the Eocene Nanggulan Formation in the Yogyakarta region, Central Java. Trans. Proc. Palaeontological Soc. Japan, N.S. 126, p. 303-326.
(online at: http://naosite.lb.nagasaki-u.ac.jp/dspace/bitstream/10069/16852/1/tpps126_303.pdf)
(Palynology study of 48 palynomorph types in M Eocene lignite at Nanggulan, 17 of which are new)

Takahashi, R., Y. Shingo, A. Imai, K. Watanabe, A. Harijoko, I Wayan Warmada, A. Idrus, L.D. Setijadji, P. Phoumephone, A. Schersten & L. Page (2014)- Epithermal gold mineralization in the Trenggalek District, East Java, Indonesia. Resource Geology 64, 2, p. 149-166.
(Gold-mineralized quartz veins at Trenggalek district of S Mountains Range in E Java, 100km E of Pacitan, hosted by M Miocene volcaniclastics- volcanics, located near andesitic plugs of 200-300m diameter. Plugs are subalkaline tholeiitic basaltic-andesite to calc-alkaline andesite in composition. Ar-Ar age of vein ~16.3 Ma, crystal tuff in limestone-pyroclastic rock sequence ~15.6 Ma. Gold mineralization in N prospects took place in shallow marine to subaerial transitional environment (130-165m below paleo-water table at Sentul prospect))

Tampubolon, R.A., A.S.O. Tampubolon, A.S. Baskoro, R. Lagona & Nadila Novandaru (2014)- Evolusi stratigrafi, analisis fasies dan geokimia dari sedimen Mio-Pliosen di cekungan Banyumas. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-245, 10p.
(Stratigraphic evolution, facies analysis and geochemistry of Mio-Pliocene sediments in the Banyumas basin'. Late Miocene Upper Halang Fm facies associations of deep-sea fan, with immature sands. Kumbang breccia above Halang Fm massive and disorganized fragments derived from volcano. Overlain by Pliocene Tapak Fm with limestones and siliciclastics of shelf and tidal flat facies)

Tampubolon, R.A. & Y. Rizal (2019)- Sedimentary facies of the upper part of the Tapak Formation in Banyumas area, Central Java. Berita Sedimentologi 44, p. 5-10.
(online at: https://www.iagi.or.id/fosi/files/2019/10/FOSI_BeritaSedimentologi_BS44-October_2019.pdf)
(Upper part of Tapak Fm in Kali Cimande of Banyumas area example of tidal flat succession, deposited during Pliocene regressive event)

Tang, J.E. (2006)- Provenance of quartz-rich sandstones deposited adjacent to the Tertiary Java Arc, Indonesia. Masters Thesis, University of Wisconsin, Madison, p. 1-299. *(Unpublished)*
(E Java Basin sandstones volcaniclastic to lithic subarkose to quartzose. S Mountains M Eocene-E Oligocene lithic subarkoses and lithic arkoses with detrital zircons from Eocene (37-46 Ma), Late Cretaceous (60-92 Ma), M Triassic (224-240 Ma) and Proterozoic (1084-1998 Ma), suggesting input from volcanic arc and distal cratonic source. Late Oligocene- E Miocene sandstones volcaniclastic litharenites with zircon ages mainly Late Cretaceous (70-85 Ma), indicating minor cratonic input to arc-dominated sediments. W Kendeng Thrust Zone M Oligocene sandstones are volcanic arc-derived lithic arkoses; E Miocene sandstones are lithic subarkoses with recycled orogenic signature from uplift of local basement and older sandstone. Wide range of zircon ages, mainly Cretaceous (64-128 Ma), also Triassic (204-252 Ma) and Proterozoic (1754-2385 Ma). M Miocene

quartz arenites from Rembang Uplift Zone most mature sands in basin and derived from craton, with zircons mainly Cretaceous (73-141 Ma), with some Tertiary, Early Mesozoic, Paleozoic and Proterozoic ages)

Tanikawa, W., M. Sakaguchi, H.T. Wibowo, T. Shimamoto & O. Tadai (2010)- Fluid transport properties and estimation of overpressure at the Lusi mud volcano, East Java Basin. Engineering Geol. 116, p. 73-85.
(online at: http://bpls.go.id/bplsdownload/library/paper/2010_ENGEO3292_tanikawa_handoko_final.pdf)
(Mudstone of Late Pliocene- E Pleistocene U Kalibeng Fm source of mud at Lusi mud eruption, with lowest permeability of all samples. Permeability of U Kujung Fm limestone two orders of magnitude larger than Lower Kujung Fm limestone. Overpressure mainly caused by thick low-permeability sediments Upper Kalibeng Fm and high sedimentation rate. High overpressure below mudstone almost lithostatic levels. Small stress fluctuations, like Yogyakarta earthquake, may have caused mud eruption)

Tan Sin Hok (1934)- Uber mikrosphare Lepidocyclinen von Ngampel (Rembang, Mitteljava). De Ingenieur in Nederlandsch-Indie (IV), 1, 12, p. 203-211.
('On microspheric Lepidocyclinas from Ngampel (Rembang, C Java)'. Large microspheric Lepidocyclina from Lusi River near Ngampel, collected by Ter Haar, assigned to Lepidocyclina papulifera Douville)

Tan Sin Hok (1935)- Uber *Lepidocyclina gigantea* Martin von Sud-Priangan (West-Java), Tegal (Mittel-Java) und Benkoelen (Sud-Sumatra). De Ingenieur in Nederlandsch-Indie (IV), 2, 1, p. 1-8.
(online at: http://colonialarchitecture.eu/islandora/object/uuid%3Abafad9d0-575c-4d99-ad9b-a879ddb22d36/datastream/PDF/view)
('On Lepidocyclina gigantea Martin from S Priangan (W Java), Tegal (C Java) and Bengkulu (S Sumatra)'. Large microspheric Lepidocyclinids)

Tan Sin Hok (1935)- Zwei neue mikrosphare Lepidocyclinen von Java. De Ingenieur in Nederlandsch-Indie (IV), 2, 2, p. 9-18.
('Two new microspheric Lepidocyclinas from Java'. Two M-L Miocene new species described, L. (B) stratifera from Pasean village, C. Java, collected by Bothe and L. (B) omphalus, a stellate form from W Java)

Tan Sin Hok (1942)- The results of an investigation of the eastern part of the Soekaboemi- Tjibadak coalfield during June 6- June 16 1942. Report Geological Survey, Bandung, E42-41, 4p. *(Unpublished)*
(Survey report for coal in W Java during Japanese occupation)

Tan Sin Hok (1942)- The Oligocene coal area of Tjikarang (Tjimandiri coalfield, sheet 14 Bajah). Report Geological Survey, Bandung, E42-45, p. *(Unpublished)*
(Survey report for coal in SW Java during Japanese occupation)

Tan Sin Hok (1943)- Note on the occurrence of *Miogypsinoides* Yabe and Hanzawa in Oligocene deposits. Proc. Imperial Academy, Tokyo, 19, 9, p. 585-586.
(online at: www.jstage.jst.go.jp/article/pjab1912/19/9/19_9_585/_pdf)
(During exploration in 1942 of Cimandiri coalfield, W Java, sample N of mouth of Tjibeuleungbeung contains both Camerina fichteli and Miogypsinoides sp., accompanied by isolepidine-nephrolepidine and eulepidine Lepidocyclines, demonstrating Miogypsinoides first appeared in Oligocene time (Td))

Taufik, M. (2007)- Studi detail foraminifera bentonik besar di Formasi Baturaja. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 720-728.
('Detail study of larger benthic foraminifera in the Baturaja Fm'. Larger foraminifera from E Miocene reefal limestones of Baturaja Fm in 3 wells in West Java basin (no real well names or locations given; onshore?). Incl. Lepidocyclina, Austrotrillina, Spiroclypeus, Miogypsina, Miogysinoides, Borelis, etc. (zone Te5). Seven ecozones based on LBF clusters. Equivalent of nannoplankton zones NN1-NN2)

Ter Haar, C. (1929)- Boemi-Ajoe District. Fourth Pacific Science Congress, Java 1929, Bandung, Excursion Guide E4, p. 1-15.

(Fieldtrip guide to locality of Pleistocene fossil vertebrates in Kali Glagah, Bumiayu district of Tegal Residency, C Java, which contain rhinoceros, hippopotamus, Elephas, Cervus, etc. Bone beds dip 25-40° (therefore believed to be possibly of Pliocene age) and underlain by thin-bedded Late Miocene marl- limestone (with Lepidocyclina (Trybliolepidina), volcanic breccia zone and Turritella Marls (mammal fauna now interpreted as E Pleistocene Satir 'island fauna'; age of folding in this area is therefore post ~1.5 Ma; JTvG))

Ter Haar, C. (1933)- Aanteekeningen over de sediment petrografie van Java. De Mijningenieur 14, 8, p. 136-138.
('Notes on the sediment petrography of Java'. New work confirms view of Rutten (1925) that Neogene sediments of S Java are composed of detritus from volcanic arc of S Java, but those from NW and E Java mainly detritus from old rocks in N (Sundaland). Heavy minerals of Eocene quartz sst of Bayah, SW Java rich in tourmaline, also zircon, anatase, rutile, etc., suggesting erosion of 'old' acid plutonic rocks. M Miocene sandstone from N Bantam with zircon, tourmaline, staurolite, brookite and rare augite (mix of 'old rocks' and volcanic source), from N Rembang area mainly 'old rocks' provenance (zircon, andalusite, staurolite, anatase, brookite). Miocene sandstones from Tegal, C Java and S Mountains, of andesitic origin (augite, hypersthene, hornblende, magnetite). Etc.)

Ter Haar, C. (1935)- Geologische kaart van Java, 1:100,000. Toelichting bij blad 58 (Boemiajoe). Dienst Mijnbouw Nederlandsch-Indie, Batavia. 50p.
(Geologic map and description of Bumiaya area SW of Slamet volcano, showing complexly folded NE-directed thrusts involving Miocene rocks; partly remapped as Majenang Quadrangle by Kastowo & Suwarna, 1996?)

Thaden, R.E., H. Sumadirdja & P.W. Richards (1975)- Geologic map of the Magelang and Semarang quadrangles (11-XIV-B, 11-XIII-E), Scale 1: 100,000. Geol. Res. Dev. Centre (GRDC), Bandung, 11p. + map.

Thamrin, M. & S. Prayitno (1982)- Heat flow measurements in the Tertiary basin of northwest Java, Indonesia. Proc. 18th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Seoul 1981, p. 224-235.

Thayib, E.S. (1977)- The status of the melange complex in Ciletuh Area, South-West Java. Lemigas Scientific Contr. 1, 2, p.
(Same as Thayyib et al. 1977, below)

Thayyib S., Endang., E.L. Said, Siswoyo & S. Prijomarsono (1977)- The status of the melange complex in Ciletuh Area, South-West Java. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 241-253.
(Structurally complex mixture of ultrabasic rocks (partly serpentinized peridotite, gabbro, pilow basalts), metamorphic rocks (including glaucophane schist, phyllite) and sheared sediments (probably Upper Cretaceous shales) probably melange complex. Possible continuation of Luk Ulo melange, 370 km to E. Overlain by M Eocene- E Oligocene Ciletuh Fm quartz sandstones)

ôT Hoen, C.W.A.P. (1918)- Verslag over de uitkomsten van een geologisch-mijnbouwkundig onderzoek in een gedeelte der Residentie Rembang. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 2, p. 202-254.
('Report on geological investigations in Rembang Residency, E Java'. Rel. Detailed descriptions of Miocene stratigraphy of area around Ngandang-Lodan anticline, NW Rembang zone. Evaluation of 5-6 thin (<1m) coal horizons in what is now known as M Miocene Ngrayong quartz sandstone Formation, with detailed cross-sections across Ng-Lodan anticline. Similar coal-bearing series in Panowan-Kadjar anticline WSW of Lodan)

ôT Hoen, C.W.A.P. (1930)- Geologische overzichtskaart van den Nederlandsch-Indischen Archipel 1:1,000,000, Toelichting bij Blad XVI (Midden Java). Jaarboek Mijnwezen Nederlandsch Oost-Indie 58 (1929), Verhandelingen, p. 1-72.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/815013
Explanatory notes for 1929 1: 1 million scale geologic overview map of Central Java.)

Thommeret, J. & Y. Thommeret (1978)- 14C datings of some Holocene sea levels on the north coast of the island of Java. Modern Quaternary Research in Southeast Asia 4, p. 51-56.
(Terrace of presumed beach deposits with marine fossils 1.3-2.4 m above present sea level along N coast of Java at Jepara. Dated as 5000- 3650 years B.P. and interpreted as Holocene sea level highstand episode)

Thompson, S., D. Arpandi & F.X.Suyanto (1979)- Thermal maturity and oil generation with reference to the CMS-1 (Java) and Susu Selatan-1 (Sumatra) wells, Indonesia. Proc. 8th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 385-405.
(Liptinitic kerogen yield oil at earlier level of maturity than sapropelic kerogen.CMS-1 well (onshore NW Java) heavy waxy oils generated from liptinitic kerogen. Onset of oil generation at vitrinite reflectance 0.35% and spore colour index 3-3.5. Major oil generation at vitrinite reflectance 0.55%/ spore colour index 5. In Susu Selatan-1 well (N Sumatra), light oils generated from sapropelic kerogen. Optimum oil generation at vitrinite reflectance ~0.8%/ spore colour index 7.5. No heavy oil accumulations in this area)

Tiede, C., A.G. Camacho, C. Gerstenecker & J. Fernandez (2005)- Modelling the density at Merapi volcano area, Indonesia, via the inverse gravimetric problem, Geochem. Geoph., Geosys. (G3), 6, 9, p. 1-13.
(3-D model of anomalous density for Merapi and Merbabu by inversion of gravity field)

Tingay, M. (2010)- Anatomy of the ôLusiô mud eruption, East Java. Proc. ASEG Conf., Sydney 2010, 6p.

Tingay, M. (2015)- Initial pore pressures under the Lusi mud volcano, Indonesia. Interpretation (SEG) 3, 1, p. SE33-SE49.
(Lusi mud volcano at Porong, E Java erupted continuously since May 2006. Analysis of pore pressures immediately prior to Lusi eruption from nearby (150m) Banjar Panji-1 well indicate all sequences >350m below Lusi overpressured, and follow approximately lithostat-parallel pore pressure increase through Pleistocene clastics, Plio-Pleistocene volcanics (1870- 2833 m) and Miocene Tuban Fm carbonates, with pore pressure gradients of 17.2–18.4 MPa/km. Pore pressures in basal carbonates ∼23.0 MPa above hydrostatic. 'Textbook disequilibrium compaction overpressure')

Tingay, M. (2016)- What caused the Lusi Mudflow disaster in Indonesia? In: 2nd AAPG/EAGE/MGS Conf. Innovation in geoscience: unlocking the complex geology of Myanmar, Yangon 2015, Search and Discovery Art. 41791, 33p. *(Abstract + Presentation)*
(Lusi mudflow S of Surabaya, E Java, has been erupting continuously for 9 years, displaced 40000 people and caused >US$2.7 billion in damage. Ongoing debate whether the disaster was triggered by drilling kick in Banjar Panji-1 well (1 day earlier, 150m away), or natural event induced by 2006 Mw6.3 Yogyakarta earthquake (2 days earlier, 250km away). This study suggests drilling kick, not earthquake, caused catastrophic shear failure of borehole wall and subsequent reactivation of Watukosek fault)

Tingay, M., O. Heidbach, R. Davies & R. Swarbrick (2008)- Triggering of the Lusi mud eruption: earthquake versus drilling initiation. Geology 36, 8, p. 639-642.
(Lusi mud volcano in E Java unlikely to be triggered by Yogyakarta earthquake. Blowout in Banjar Panji-1 hydrocarbon exploration well was most likely mechanism for triggering Lusi mudflow)

Tingay, M., O. Heidbach, R. Davies & R. Swarbrick (2009)- The Lusi mud eruption of East Java. AAPG Int. Conf. Exhib., Cape Town 2009, 24p. *(Extended abstract and presentation)*
(Online at: www.searchanddiscovery.net/documents/2009/50187tingay/ndx_tingay.pdf)
('Lumpur Sidoarjo' mud eruption probably triggered by drilling of Banjar Panji 1 well in May 2006. Expelling mud up to 170,000 m3/ day. Mud flow now covers >700 ha of land to depths of up to 17m, engulfing 8 villages)

Tingay, M. M. Manga, M.L. Rudolph & R. Davies (2018)- An alternative review of facts, coincidences and past and future studies of the Lusi eruption. Marine Petroleum Geol. 95, p. 345-361.
(Review of likely causes of Lusi mud eruption in E Java. Drilling reports and data confirm wellbore was not intact, there was subsurface blowout, and there was connection between well and eruption. Yogyakarta earthquake too far away to have initiated new eruption. Strongly favor initiation of eruption by oil well drilling)

Tingay, M., M.L. Rudolph, M. Manga, R.J. Davies & C.Y. Wang (2015)- Initiation of the Lusi mudflow disaster. Nature Geoscience 8, p. 493-494.
(Repeat earlier conclusions that 'Lusi' mudflow eruption S of Surabaya was not triggered naturally but was consequence of Lapindo drilling operations)

Titani, K. (1942)- Oil-fields in Java. J. Mining Institute of Japan 58, 685, p. 309-316. *(In Japanese)*
(online at: www.jstage.jst.go.jp/article/shigentosozai1885/58/685/58_685_309/_pdf)
(Brief review of NE Java basin stratigraphy and oil fields))

Titisari, A. D. (2014)- Geochronology and geochemistry of Cenozoic volcanism in relation to epithermal gold mineralisation in western Java, Indonesia. Ph.D. Thesis, School of Earth Sciences, University of Melbourne, p. 1-297. *(Unpublished)*
(W Java hosts low-sulphidation epithermal gold deposits, with most important deposits in Pongkor, Cibaliung, Cikotok and Papandayan districts. Most volcanics with enriched LILE and LREE compositions characteristic of calc-alkaline arcs, but Papandayan basalts depleted LREE contents typical of island arc tholeiites. 40Ar/39Ar ages volcanic host rocks: Papandayan district ~18 Ma; Cibaliung district ~11 to ~9.5 Ma, Cikotok district ~18 - ~4.5 Ma, Pongkor district 2.7- ~2 Ma. Adularia crystallisation ages similar. Magmatic arc across W Java likely linked to SE Asia tectonic evolution, from E Miocene CCW rotation of Kalimantan to Late Miocene-Pliocene subduction. Three main events: E Miocene primitive tholeiite arc (20-18 Ma), M Miocene mature calc-alkaline arc (13-9 Ma) and Late Miocene- Pliocene evolved high-K calc-alkaline and shoshonitic arc (7-2 Ma). E Miocene Papandayan basement thinned island arc crust. Miocene- Pleistocene mineralisation of Cibaliung, Cikotok and Pongkor associated with calc-alkaline arc built on Sundaland continental crust)

Titisari, A.D., D. Phillips & Hartono (2014)- Geochemical variations on hosted volcanic rocks of Cibaliung epithermal gold mineralisation, Banten- Indonesia: implications for distribution of subduction components. J. Southeast Asian Applied Geol. (UGM) 6, 1, p. 39-52.
(online at: https://jurnal.ugm.ac.id/jag/article/download/7216/5655)
(Neogene Sunda-Banda arc hosts various styles of gold mineralisation. Major and trace element data for host basaltic andesites and rhyodacites of Cibaliung epithermal gold mineralisation characteristic of calc-alkaline arcs, with hydrous slab component)

Titisari, A.D., D. Phillips, Prayatna & E.P. Setyaraharja (2017)- 40Ar/39Ar geochronology of volcanic and intrusive rocks in the Papandayan metallic prospect area, West Java, Indonesia. Resource Geology 67, 1, p. 53-71.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/rge.12118/epdf)
(Papandayan metallic district in W Java, Indonesia with epithermal Au-Ag vein system in Arinem area. 40Ar/39Ar ages of basalt (11.7, 18.2 Ma) and andesite (7.7 Ma) samples of Jampang Formation volcanic rocks. Diorite intrusives: Gunung Halang (13.0 Ma), Gunung Lingga (10.8 Ma) and Gunung Buligir (7.4 Ma). Gunung Wayang fine-grained diorite dike 3.95 Ma. Adularia in Arinem vein (18.3 Ma). K-Ar illite ages of Arinem vein (9.4, 8.8 Ma). Ages suggest possibly multiple hydrothermal events)

Titisari, A.D., D. Phillips & E.P. Setyaraharja (2014)- Magmatic arc evolution in the Pongkor epithermal gold mineralisation district. Proc. 7th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, P3O-01, p. 488-503.
(online at: https://repository.ugm.ac.id/136277/1/488-503%20P3O-01.pdf)
(Pongkor epithermal gold mineralisation on NE flank Bayah Dome (~ 80 km SW of Jakarta) hosted in basaltic-dacitic volcanic breccias, lapilli tuffs and andesites. 40Ar/39Ar dating of andesites yielded average age of 2.74 ± 0.03 Ma, but may be age of hydrothermal alteration. Enriched LILE and LREE values characteristic of calc-alkaline arcs. Some andesite samples indicative of high-K calc-alkaline and shoshonite arcs. Temporal evolution from mature arc to evolved arc (high-K calc-alkaline- shoshonite volcanics)

Titisari, A.D., D. Phillips I.W. Warmada, Hartono & A. Idrus (2020)- 40Ar/39Ar Geochronology of the Pongkor low sulfidation epithermal gold mineralisation, West Java, Indonesia. Ore Geology Reviews 119, 15p.

(Pongkor gold deposit 90 km SW of Jakarta typical low sulfidation epithermal gold deposit. 40Ar/39Ar age results for adularia samples from Ciguha vein 1.8, 2.3 Ma and 1.9 Ma, plus one weighted mean age of 1.95 Ma. Adularia from Kubang Cicau veins age of 2.0Ma. Adularia ages similar to previously reported 40Ar/39Ar results, but significantly younger than previously reported K-Ar adularia dating results)

Tjia, H.D. (1961)- Tjatatan mengenai stratigraphy Pegunungan Karangbolong, Djawa Tengah. Proc. Inst. Teknologi Bandung (ITB) 1, 3, p. 18-22.
(online at: http://journal.itb.ac.id/index.php?li=article_detail&id=847)
('Notes on the stratigraphy of the Karangbolong Mountains, C Java'. Karangbolong Mts part of Java S Mountains. Oldest rocks 'Old Andesite Fm' composed of Oligocene- Aquitanian andesitic eruptive and intrusive rocks, unconformably overlain by Karangbolong Lst (Tf1-3, with Nephrolepidina, Trybliolepidina, Cycloclypeus spp.). To N uppermost limestone beds overlain by and interfingering with beds of Marl-tuff Mb of Tertiary f3. After this time marine sedimentation in this area came to halt)

Tjia, H.D. (1962)- Topographic lineaments in Nusa Barung, East Java. Proc. Inst. Teknologi Bandung (ITB) 2, 2, p. 89-98.
(online at: http://idci.dikti.go.id/pdf/JURNAL/ITB%20Journal%20of%20Science/)
(Nusa Barung island off Puger at S coast of E Java mainly N-S trending karsted limestone ridges, probably of Late Miocene age. Pleistocene S-ward tilting of island (<4°), similar to most of S Mountains)

Tjia, H.D. (1964)- Structural analysis of Sheet 30, Purwakarta. Laporan Kongres Ilmu Pengetahuan Nasional Kedua (Proc. 2nd Nat. Scientific Congress), Yogyakarta 1962, B, 4, MIPI, Jakarta, p. 517-527.

Tjia, H.D. (1964)- Paleo-current and initial slope indicators in the Subang area, W. Java. Contrib. Dept. Geology Inst. Technology Bandung (ITB), 57, p. 63-74.
(Pliocene deposits of Subang area with sedimentary structures indicating currents mostly longitudinal. Some arenites of Lower Pliocene unit deposited by turbidity currents)

Tjia, H.D. (1964)- Slickensides and fault movements. Geol. Soc. America (GSA) Bull. 75, 7, p. 683-686.
(On slickensides in Lokulo area, C Java)

Tjia, H.D. (1966)- Structural analysis of the Pre-Tertiary of the Luk-Ulo area, Central Java. Inst. Technology Bandung (ITB), Contrib. Dept. Geology 63, 110p.
('Analisis struktur daerah Pratersier Lokulo, Djawa. ITB Thesis)

Tjia, H.D. (1968)- The Lembang Fault, West Java. Geologie en Mijnbouw 47, 2, p. 126-130.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0VEdodFA2VGlONm8/view)
(Lembang fault, 10 km N of Bandung, N-ward facing scarp exposed over 22 km, parallel to Java's longitudinal axis. Former investigators attributed mainly dip slip displacements to this fault, but W part of fault (W of Tjikapundung valley), latest development sinistral strike slip in nature, with horizontal displacement of ~140m. E part of fault between Maribaja and Mount Pulusari is dip slip fault with exposed throws of 130-450m)

Tjia, H.D. (2013)- Morphostructural development of Gunungsewu karst, Jawa Island. J. Geologi Indonesia 8, 2, p. 75-88.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/157/157)
(Review of landforms in karst hills in Miocene limestone of Southern Mountains SE of Yogyakarta, cone-and sinoid-shaped. Km-long linear ridge are relics of paleo-breaker zones. Also circular and spiral landforms, etc. Changes in orientation of inland and coastal ridges interpreted to reflect progressive CCW rotation of Gunungsewu microplate, in accordance with paleomagnetic data)

Tjia, H.D. & V. Tjioe (1964)- Origin of Tjongkang Hill near Tomo, West Java. Bull. Geol. Survey Indonesia 1, 60p.

Tobing, S.M. (2003)- Inventarisasi bitumen padat dengan 'outcrop drilling' di daerah Ayah, Kabupaten Kebumen, Jawa Tengah. Kolokium Hasil Kegiatan Inventarisasi Sumber Daya Mineral- DIM, TA. 2003, p. 26.1- 26.3.
(online at: www.dim.esdm.go.id/kolokium%202003/batubara/Prosiding%20Ayah.pdf)
(Investigation of solid bitumen/oil shale in M Miocene Kalipucang Fm, Ayah area, Kebumen Regency, near S coast of C Java. Stratigraphy in area Late Oligocene- E Miocene Gabon Fm andesitic-basaltic volcanics, unconformably overlain by M Miocene Kalipucang Fm, mainly reef limestone, Late Miocene- E Pliocene Halang Fm turbidites and Late E Miocene- M Miocene andesitic intrusives. Solid bitumen/oil shale deposits in Kalipucang Fm in three main layers, 0.35- 3.9m thick, dipping 7- 65° to W-NW. Oil content 7- 50 liters/ ton. Bitumen resources is ~830,000 barrels oil)

Toha, B., M. Datun & Widiasmoro (1986)- Guidebook of Southern Mountains: Turbidite system excursions. Assoc. Indon. Geol. (IAGI), 21p.

Toha, B., R.D. Purtyasti, Sriyono, Soetoto, W. Rahardjo & P. Subagyo (1994)- Geologi daerah Pegunungan Selatan, suatu kontribusi. Proc. Geologi dan Geotektonik Pulau Jawa sejak akhir Mesozoik hingga Kuarter, Seminar Jurusan Teknik Geologi Fak. Teknik Universitas Gadjah Mada, p. 19-36.
('Geology of the Southern Mountains: a contribution')

Tregoning, P., F.K. Brunner, Y. Bock, S.O.O. Puntodewo, R. McCaffrey, J.F. Genrich, E. Calais, J. Rais & C. Subarya (1994)- First geodetic measurement of convergence across the Java Trench. Geophysical Research Letters 21, 19, p. 2135-2138.
(online at: http://web.pdx.edu/~mccaf/pubs/tregoning_java_grl_1994.pdf)
(GPS surveys on Christmas Island and Cibinong, W Java, suggest convergence at 67 ±7 mm/year orthogonal to trench)

Triwibowo, B. & K. Santoso (2007)- Potensi dan kualitas batuan Formasi Kujung sebagai batuan induk, pada lintasan Kali Wungkal, Tuban, Jawa Timur. In: Proc. Simposium Nas. IATMI, UPN, Yogyakarta, TS-03, 13p.
(online at: http://elib.iatmi.or.id/uploads/IATMI_2007-TS-03_Bambang_Triwibowo,_UPNVY.pdf)
('Source rock potential and quality of Kujung Fm rocks in the Kali Wungkal section, Tuban, E Java'. Samples from Oligocene Kujung Fm marls near Tuban suggest poor source rocks: low TOC and immature)

Tuakia, M.Z., B. Sapiie & A.H. Harsolumakso (2015)- Karakteristik dan deformasi pada Satuan Larangan, Banjarnegara, Jawa Tengah. Buletin Geologi (ITB) 42, 1, p. 41-57.
('Deformation characteristics of the Larangan Unit, Banjarnegara, Central Java'. (Larangan rock unit of Prasetyadi (2007) result of tectonic mixing in fault zone due to collision of Gondwana microcontinental plate with E part of Sundaland after Cretaceous-Paleocene subduction. Late Eocene age suggested by fossil content. Complex similar Jatisamit Unit Melange (blocks of sandstones with boudins, phyllite, schist, basalt, etc. in matrix of black scaly clay), with common SW-NE orientation and dip of ~39° to SE. Probably formed in reverse fault zone at depth 6-9km)

Tun, M.M., I.W. Warmada, A. Harijoko, O. Verdiansyah & K. Watanabe (2014)- High sulfidation epithermal mineralization and ore mineral assemblages of Cijulang prospect, West Java, Indonesia. J. Southeast Asian Applied Geol. (UGM) 6, 1, p. 29-38.
(online at: https://jurnal.ugm.ac.id/jag/article/view/7215/5654)
(Cijulang prospect in Garut District, W Java, high-sulfidation epithermal system in andesite lava and lapilli tuff. Mineralization characterized by pyrite-enargite-gold and associated acid sulfate alteration. Two stages: early Fe-As-S stage (with Au) and later Cu-Fe-As-S stage)

Tun, M.M., I.W. Warmada, A. Idrus, A. Harijoko, R. Al-Furqan & K. Watanabe (2014)- Characteristics of hydrothermal alteration in Cijulang area, West Java, Indonesia. J. Southeast Asian Applied Geol. (UGM) 7, 1, p. 1-9.
(online at: https://journal.ugm.ac.id/jag/article/view/16917)

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Twiss, W.J. (1921)- Een zinkertsvoorkomen in Zuid-Madioen. De Mijningenieur 2, 4, p. 44-51.
(online at: https://babel.hathitrust.org/cgi/pt?id=coo.31924081565537;view=1up;seq=149)
('An occurrence of zinc-ore in South Madiun'. Small zinc mining operation in E Java near Kerpoe village, 2.5km NE of Slahoeng, 10 km S of Balong. Zones (veins?) of pyrite and sphalerite in steeply dipping Miocene clastics and limestones)

Uhlig, H. (1980)- Man and tropical karst in Southeast Asia. GeoJournal 4, 1, p. 31-44.
(Mainly on 'cone karst' development in Gunung Sewu in S Mountains of Java. Also similar karst in Nusa Penida, S Bali, and N Bone and Maros in S Sulawesi)

Umbgrove, J.H.F. (1930)- Het ontstaan van het Dieng Plateau. Leidsche Geol. Mededelingen 3, 3, p. 131-149.
(online at: www.repository.naturalis.nl/document/549786)
('The origin of the Dieng Plateau'. The elevated Dieng Plateau of C Java is not caldera formation or crater bottom, but floor of an old mountain lake, enclosed by circle of volcanoes)

Umbgrove, J.H.F. (1945)- Corals from the Upper Miocene of Tjisande, Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 48, p. 340-344.
(online at: www.dwc.knaw.nl/DL/publications/PU00017948.pdf)
(Reefal limestone lenses in Upper Halang Beds along Cisande River, N of Lurahgung, C Java. Associated with rhinoceros tooth (Aceratherium boschi Von Koenigswald; oldest land mammal fossil known from Java). Twenty-one coral species,15 could be identified, 47% still living. Percentage suggests Cisande limestone older than coral-bearing localities in Pliocene Sonde beds (Th), probably latest Miocene)

Umbgrove, J.H.F. (1946)- Corals from a Lower Pliocene patch reef in Central Java. J. Paleontology 20, 6, p. 521-542.
(Small hill of Gunung Linggapadang near Prupuk, C Java, is Lower Pliocene patch reef in marly Tapak Beds. Reef comparable to patch reefs in Bay of Jakarta. Well- preserved coral fauna of 70 species)

Umbgrove, J.H.F. (1946)- Corals from the Upper Kalibeng beds (Upper Pliocene) of Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 49, 1, p. 87-93.
(online at: www.dwc.knaw.nl/DL/publications/PU00018197.pdf)
(35 coral species from Late Pliocene Upper Kalibeng Beds at Sonde in W part Kendeng zone, E Java, collected by members of Geological Survey)

Umbgrove, J.H.F. (1950)- Corals from the Putjangan beds (Lower Pleistocene) of Java. J. Paleontology 24, 6, p. 637-651.
(Forty species of corals from lower Pleistocene Pucangan beds of Kendeng zone, E Java, with only 49% living species. This abnormally low percentage probably due to special character of fauna which consists mainly of solitary 'deep water' corals)

Umbgrove, J.H.F. & J. Cosijn (1931)- Java's zuidkust bij Tji-Laoet-Eureum. Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap (KNGMG), Geol. Serie 9, 2, p. 133-134.
('Java's south coast near Tji-Laut Eureum'. Unusual erosional features on limestone plateau)

Umiyatun Choiria, S., B. Prastistho, R.E. Jati Kurniawan & Surono (2006)- Foraminifera besar pada satuan batugamping Formasi Gamping- Wungkal, Sekarbolo, Jiwo Barat, Bayat, Klaten, Jawa Tengah. Proc. Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, PIT IAGI2006-072, p. 1-11.
('Larger foraminifera from limestones of the Gamping- Wungkal Fm, W Jiwo, Bayat, C. Java'. M-U Eocene (zone Ta3) larger forams from classic Jiwo Hills locality include Nummulites javanus, N. djokdjakartae, N. pengaronensis, Assilina spp., Pellatispira orbitoidea, Discocyclina spp. and Spiroclypeus vermicularis)

Umiyatun Choiria, S. & J. Setiawan (2001)- The claystone age of Wungkal Formation based on calcareous nannofossils in Gunung Pendul area, Bayat Klaten, Central Java. Proc. 30th Ann. Conv. Indon. Assoc. Geol. (IAGI) and 10th GEOSEA Conv., Yogyakarta, p.

Untung, M. (1974)- Bouguer anomaly map of Jawa and Madura, Scale 1:1,000,000 (2 sheets). Geol. Res. Dev. Centre (GRDC), Bandung.

Untung, M. (1982)- Sebuah rekonstruksi paleogeographi Pulau Jawa. Geologi Indonesia (J. Indon. Assoc. Geol., IAGI) 9, 2, p. 15-24.

Untung, M. & Y. Sato (1978)- Gravity and geological studies in Java, Indonesia. Geol. Survey Indonesia and Geol. Survey Japan, Spec. Publ. 6, p. 1-207.

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Untung, M. & G. Wiriosudarmo (1975)- Pola struktur Jawa dan Madura sebagai hasil penafsiran pendahuluan data gayaberat. Geologi Indonesia (IAGI) 2, 1, p. 15-24.
('Structural pattern of Java and Madura as a result of preliminary interpretation of gravity data')

Uruma, R., Y. Kohno, K. Watanabe, A. Imai, T. Itya, L.D. Setijadji & A. Harijoko (2007)- Migration of subduction in Central Java, Indonesia. In: Proc. 5th Int. Workshop Earth Science and Technology, Fukuoka, p. 377-384.

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('The Cisubuh Formation as hydrocarbon reservoir rock in the NW Java and North Central Java basins'. Late Miocene- Early Pliocene Cisubuh Fm oil bearing in wells Jatirarangon 2 and 3 and Klantung-1)

Usman, T.K., Y. Fahrudi, E. Purnomo & P. Astono (2005)- Potensi batuan induk di daerah Majalengka dan implikasinya tehadap keberadaan hidrokarbon di daerah cekungan Bogor. Proc. 34th Ann. Conv. Indon. Assoc. Geol. (IAGI) and 30th Ann. Conv. HAGI, Surabaya, JCS2005-G084, 7p.
('Source rock potential in the Majalengkah area and implications for hydrocarbon rock potential of the Bogor Basin'. Geochemical/ biomarker study of rocks and oils from area near first oil well on Java, Maja 1)

Usman, T.K., I. Yuliandri, M. Fajar, D. Hilmawan, A. Naskawan, M.J. Panguriseng & W. Sadirsan (2011)- Strike-slip systems on Tanjung-Brebes area and their implication for hydrocarbon exploration. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-116, 8p.
(On N Central Java basin (N Serayu Basin) pull-apart basin evolution and oil seeps)

Usman, T.K., I. Yuliandri, M.J. Panguriseng, W.S. Sadirsan & D. Priambodo (2011)- New concept of Paleogene basin evolution of northern West Java. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-473, 5p.
(NW Java Basin basin evolution tied to S-ward shift of position of Indian Ocean subduction system from Jurassic to present-day. In E Eocene-Oligocene NW Java Basin was back arc system with shallow marine clastics, limestone intercalations and volcanics. Late Oligocene termination of volcanic system in NW Java and start of lacustrine deposition. Late Oligocene Rajamandala Fm is equivalent to Pondok Makmur Fm in NW Java, below Talang Akar Fm and interfingering with U Jatibarang Fm. In E Miocene growth of carbonates in NW Java Basin, with active volcanic sedimentation in Bogor Basin in S. No figures)

Utoyo, H. (2007)- Petrologi dan geokimia batuan gunung api terubah daerah Ponorogo, Jawa Timur. J. Sumber Daya Geologi 17, Spec. Issue (163), p. 35-46.

('Petrology and geochemistry of volcanic rocks in the Ponorogo area, East Java'. Volcanics of Late Oligocene-E Miocene Mandalika Fm (= 'Old Andesites?) of Ponorogo area, NE of Pacitan near C-E Java border, mainly andesitic, rhyolitic, dacitic to basaltic in composition, with dykes, pillow lavas, etc. Of calk-alkaline affinity, related to subduction. Presence of molybdenum suggests basement rock possibly of continental granitic type)

Utoyo, H., M.H.J. Dirk, S. Bronto & L.B. Kaspar (2004)- K-Ar age of volcanic rocks in Cupunegara, Subang, West Java. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 81-87.
(K-Ar dating of andesites from NNE of Bandung show Late Paleocene (59± 2 Ma) and Late Eocene (37± 4 Ma) ages. Possibly oldest volcanic rocks in region)

Utoyo, H. & L. Sarmili (2008)- Petrogenesa endapan pasir besi di Pantai Panggul, Trenggalek. J. Geologi Kelautan 6, 2, p. 104-117.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/154/144)
('Petrogenesis of iron sand deposits at Panggul beach, Trenggalek'. Magnetite-rich sands along S coast of E Java derived mainly from outcrops of Oligo-Miocene Mandalika Fm volcanics ('Old Andesites) in S Mountains)

Uyeda, S., T. Eguchi, S. Kamal & W.S. Modjo (1982)- Preliminary study on geothermal gradient and heat flow in Java. UN-ESCAP CCOP Techn. Bull. 15, p. 15-28.

Van Baren, F.A. (1939)- On the occurrence of celestine in Young Tertiary deposits in the Residency Rembang (Java). Geologie en Mijnbouw, n.s., 1, 12, p. 288-290.
(online at: https://drive.google.com/file/d/1dT-hyKAK5hV6zuPilO-LD3dbiUTgqKWX/view)
(Marly soil on Upper Kalibeng Fm on NE Java with 90% of heavy mineral fraction composed of small idiomorphic crystals of celestine (celestite; SrSO4) (origin not clear))

Van Bemmelen, R.W. (1934)- Geologische kaart van Java, 1: 100,000, Toelichting bij Blad 36 (Bandoeng). Dienst Mijnbouw Nederlandsch-Indie, Bandung. *(Unpublished Report)*
(Explanatory notes to Geological map of Java, 1: 100,000- sheet 36 (Bandung))

Van Bemmelen, R.W. (1934)- Ein Beispiel fur Sekundartektogenese auf Java. Geol. Rundschau 25, 3, p. 175-194.
('An example of secondary tectogenesis on Java'. On young, linked extensional and compressional structuring in mountains N of Bandung)

Van Bemmelen, R.W. (1937)- Geologische kaart van Java 1:100,000. Toelichting bij Blad 66 (Karangkobar). Dienst Mijnbouw Nederlandsch-Indie, Bandung, 50p.
(C Java Ungaran region, with original descriptions of Penyaten Fm, etc.. Four small areas with Eocene outcrops)

Van Bemmelen, R.W. (1937)- Examples of gravitational tectogenesis from Central Java. De Ingenieur in Nederlandsch-Indie (IV Mijnbouw en Geologie), 4, 3, p. 55-65.
(Example of N-directed Late Miocene folding-thrusting presumably caused by gravitational sliding in Karangkobar region, N of Banjarnegara, northern C Java)

Van Bemmelen, R.W. (1937)- Igneous geology of the Karangkobar region (Central Java) and its significance for the origin of the Malayan potash provinces. De Ingenieur in Nederlandsch-Indie (IV), 4, 7, p. 115-135.
(Continuation of Van Bemmelen 1937 on gravitational tectogenesis of Karangkobar area. Petrography of Late Miocene submarine calk-alkali basaltic rocks and associated feeders of Penjaten volcano, Pliocene volcanic necks (9) and breccias of Bodas- Ligoeng series, and Quaternary calc-alkali volcanism of Djembangan and Dieng Plateau. Successive eruptions in Dieng group with increasing SiO2 content)

Van Bemmelen, R.W. (1937)- The volcano-tectonic structure of the Residency of Malang (Eastern Java) (an interpretation of the structure of the Tengger Mountains.). De Ingenieur in Nederlandsch-Indie (IV), 4, 9, p. 159-172.

(Discussion of E Java between Madura Straits and Indian Ocean and Arjuna, Semeru- Bromo- Tengger and Lamongan volcanic complexes)

Van Bemmelen, R.W. (1938)- De Ringgit-Beser, een geplooide alkali-vulkaan in Oost-Java. Natuurkundig Tijdschrift Nederlandsch-Indie 98, p. 171-194.
('Ringgit-Beser, a folded alkali-volcano in East Java'. Ringgit-Beser volcanic complex originated in shallow sea at N coast of E Java during Plio-Pleistocene. Volcano grew above sea level, became connected with mainland, and was subjected to folding in younger Pleistocene (Beser Ridge anticline))

Van Bemmelen, R.W. (1940)- A limestone block in hyperstene dacite from the Koeda-neck (Kromong Complex, near Cheribon, Western Java). De Ingenieur in Nederlandsch-Indie (IV) 7, 3, p. 37-41.
(Kromong Mountains formed by complex of volcanic necks up to 587m high, at N foot of Ciremai volcano, ~20 km W of Cirebon. Volcanic necks probably of Late Pliocene age, intrusive in Miocene limestone and Mio-Pliocene marine sediments (Kaliwangu-series). Limestone with Miocene foraminifera exposed as uplifted blocks at NE and SE side of complex. At SE side large limestone inclusion on top of dacitic Koeda-neck, converted into fine-grained marble, with 1-2 cm reaction rim with secondary minerals)

Van Bemmelen, R.W. (1941)- Geologische kaart van Java, 1:100,000. Toelichting bij Blad 73 (Semarang) en 74 (Oengaran). Dienst Mijnbouw Nederlandsch-Indie, p. 1-116.
(Explanatory notes for Semarang and Unguran 1: 100,000 Geologic map sheets, C. Java (final map sheet published by the Dienst van den Mijnbouw; not sure if accompanying map was ever printed)

Van Bemmelen, R.W. (1941)- Granitische intrusies in het Zuidergebergte van West Java. De Ingenieur in Nederlandsch-Indie (IV), 8, 2, p. 9-18.
('Granitic intrusions in the Southern Mountains of West Java'. Two examples: quartz-dioritic intrusion in Tjilajoe River, 60 km S of Bandung and Tendjolaoet Ridge granodioritic intrusion 40 km SSW of Tasikmalaya. Probably part of 'Old Andesites' complex)

Van Bemmelen, R.W. (1947)- The Muriah volcano (Central Java) and the origin of its leucite-bearing rocks. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 50, 6, p. 653-658.
(online at: www.dwc.knaw.nl/DL/publications/PU00018362.pdf)
('Mediterranean-type' leucite-bearing rocks of Muriah volcano formed from limestone assimilation by 'Pacific-type' magmas. Volcanics of Rahtawu cauldron large inclusions of contactmetamorphic limestones with Katacycloclypeus annulatus, large Lepidocyclina, etc., belonging to (M Miocene) Rembang layers)

Van Bemmelen, R.W. (1949)- Java. In: The geology of Indonesia, Government Printing Office, The Hague, 1A, p. 545-659.
(Major review of Java geology, as known in late 1940's)

Van Benthem Jutting, T. (1937)- Non marine mollusca from fossil horizons in Java with special reference to the Trinil Fauna. Zoologische Mededelingen 20, p. 83-180.
(online at: www.repository.naturalis.nl/document/149951)
(Monograph of fresh water molluscs from collections of Dubois, Elbert and Selenka and Bandung Geological Survey, mainly from Latest Pliocene-Pleistocene of Kendeng zone/ Trinil area. Incl. Viviparus, Corbicula, Thiara, Lymnaea, etc.))

Van den Abeele, D. (1949)- Lepidocyclininae from Rembang (Java) with a description of *L. wanneri* n.sp. Proc. Kon. Nederl. Akademie Wetenschappen 52, 7, p. 760-765.
(online at: www.dwc.knaw.nl/DL/publications/PU00018695.pdf)
(Lepidocyclinids from E-M Miocene 'orbitoidal limestone (OK)' of Rembang Beds near Sumberan, Bringin and Gegunung oilfields, SE of Rembang, N and NW of Bojonegoro, collected by Wanner. Molluscs from same samples described by Wanner & Hahn (1935). Seven Lepidocyclina species, mainly subgenus Nephrolepidina, some Multilepidina. Lepidocyclina wanneri n.sp. introduced for specimens with multilepidine embryon)

Van den Bergh, G.D., W. Boer, H. de Haas, T.C.E van Weering & R. van Whije (2003)- Shallow marine tsunami deposits in Teluk Banten (NW Java, Indonesia), generated by the 1883 Krakatau eruption. Marine Geology 197, p. 13-34.
(Tsunamite from 1883 Krakatau eruption sandy layer with abundant reworked shell and other carbonate fragments. Coarse components consist of locally derived material eroded from seabed. Land-derived components in tsunamite only close to coast. Along open sea-facing slope of Banten Bay tsunamite relatively thin (<7cm) but well-preserved)

Van den Hoek Ostende, L.W., J. Leloux, F.P. Wesselingh & C.F. Winkler Prins (2002)- Cenozoic Molluscan types from Java (Indonesia) in the Martin Collection (Division of Cenozoic Mollusca), National Museum of Natural History, Leiden. Nat. Natuurhist. Mus. Techn. Bull. 5, p. 1-130.
(online at: www.repository.naturalis.nl/document/45042)
(Listing and re-descriptions of Tertiary mollusc type specimens in K. Martin collection at Naturalis Museum, Leiden, mainly from Java. Contains 5700 type specimens of 912 species)

Vanderkluysen, L., M.R. Burton, A.B. Clarke, H.E. Hartnett & J.F.Smekens (2014)- Composition and flux of explosive gas release at LUSI mud volcano (East Java, Indonesia). Geochem. Geophys. Geosystems 15, 7, p. 2932-2946.
(LUSI mud volcano in E Java erupting since 2006. Last few years of activity characterized by periodic short-lived eruptive bursts. Gases sampled 98% water vapor, 1.5% CO2, 0.5% methane)

Van der Sluis, J.P. & D.R. de Vletter (1942)- Young Tertiary smaller foraminifera from the neighbourhood of Ngimbang, East Java. Proc. Kon. Nederl. Akademie Wetenschappen 45, 10, p. 1010-1015.
(online at: www.dwc.knaw.nl/DL/publications/PU00017817.pdf)
(129 species of mainly deeper marine foraminifera in Pliocene marls. Samples collected by Rutten in SW corner of 109-Lamongan map sheet. No location map, no stratigraphic context)

Van der Vlerk, I.M. (1923)- De stratigrafie van het Tertiair van Java. De Ingenieur in Nederlandsch-Indie 4, p. 53-56.

Van der Vlerk, I.M. (1924)- Foraminiferen uit het Tertiair van Java. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch Oost-Indie 1, p. 16-35.
(Miocene larger forams from W. Java: Lepidocyclina rutteni n. sp. from Tji Lalang beds and Lepidocyclina/ Miogypsina/ Cycloclypeus and Rotalia beccarii atjehensis n. var. from Nyalindung beds near Sukabumi)

Van der Vlerk, I.M. & J.A. Postuma (1967)- Oligo-Miocene Lepidocyclinas and planktonic foraminifera from East Java and Madura, Indonesia. Proc. Kon. Nederl. Akademie Wetenschappen, B, 70, 4, p. 392-399.
(Composite section of Oligo-Miocene sediments of E Java and Madura with Lepidocyclinas and planktonic foraminifera. Lepidocyclinas 'grade of enclosure' increases systematically from 36% to 65% up section. Oligo-Miocene boundary placed above Globigerina ciperoensis ciperoensis zone)

Van der Werff, W. (1996)- Variation in forearc basin development along the Sunda Arc, Indonesia. J. Southeast Asian Earth Science 14, 5, p. 331-349.
(Sunda Arc fore-arc areas between Sumatra and Sumba. Present forearc basin configuration initially controlled by extension and differential subsidence of basement blocks in response to Late Eocene India-Asia collision. Late Oligocene increase in convergence between SE Asia and Indian Plates associated with new pulse of subduction resulted in basement uplift and formation of regional unconformity along entire Sunda Arc. In Miocene, Sumba and Savu forearc sectors characterized by forearc extension. Forearc basins initially with submarine fan deposits, followed by basin and slope sediments derived from evolving magmatic arc. Incipient collision between Australia and W Banda Arc caused back-arc thrusting and basin inversion. S of Java, increase in size of accretionary prism and convergence rates resulted in folding/ uplift of distal forearc basin strata. Along Sumatra W coast uplift along inner side of forearc along older transcurrent faults. Initial forearc basin subsidence relates to age of subducting oceanic lithosphere. Flexural loading of evolving accretionary prism and across arc strike-slip faulting may result in additional forearc subsidence.)

Van de Velde, J. (1946)- Eenige korte mededeelingen over twee nieuwe goud-zilver bedrijven op Java. Jaarboek Mijnbouwkundige Vereeniging te Delft 1941-1946, p. 165-177.
(online at: http://lib.tudelft.nl/mscans/mscans0428)
('Brief notes on two new gold-silver projects on Java'. Summary of lecture on Cikotok and Cirotan mines in SW Java (Mijnbouw Maatschappij Zuid-Bantam) and Cikodang mine near Sukabumi (Redjang Lebong Co.))

Van Diest, P.H. (1872)- Rapport van een voorlopig onderzoek van zink-, lood en kopererts en op den berg Sawal, afdeeling Galoe, Residentie Cheribon, eiland Java. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1872, 1, p. 173-193.
('Report of preliminary investigation of zinc, lead and copper ores on the Sawal Mountain, Cirebon Residency'. Brief survey in 1868 of trachytic rocks in the Priangan area of West Java, SW of Cirebon)

Van Dijk, P. (1872)- Geologische beschrijving der residentie Djokdjakarta. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1872, 1, p. 151-192.
('Geological description of the Residency Jogyakarta')

Van Dijk, P. (1872)- Beschrijving van het marmer voorkomende in de assistant-residentie Patjitan. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1, p. 193-215.
('Description of the marble in the assistant-residency of Pacitan'. Investigation of suitability as building stone of 'marble' (crystalline limestone) at East side of Panggul Bay, Southern Mountains of SE Java. On 1992 GRDC map this is shown as E Miocene Campurdarat Fm in area with common andesitic intrusions)

Van Dijk, P. (1873)- Steenkolen in het Semarangsche. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1873, 2, p. 164-174.
('Coal in the Semarang area')

Van Dijk, P. (1883)- Onderzoek naar het voorkomen van aardolie in de nabijheid van Poerwodadi. assistent-residentie Grobogan. Jaarboek Mijnwezen Nederlandsch Oost-Indie 12 (1883), Wetenschappelijk Gedeelte 2, p. 359-369.
('Survey of the occurrence of natural oil near Purwodadi, Grobogan region'. NE Java. Hill near Ngemba village in Lusi River valley near Purwodadi with steeply dipping Tertiary sediments, including limestone breccia with salt water with oil seeps)

Van Dijk, P. (1884)- Over de geologie van het noordelijke, niet-vulkanische gedeelte van de residentie Soerabaja. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1884, Wetenschappelijk Gedeelte, p. 5-76.
('On the geology of the northern, non-volcanic part of the Residency Surabaya'. Partly based on data rom 700+m deep well near Gresik)

Van Es, L.J.C. (1917)- Bijdrage tot de kennis van de stratigrafie van het Tertiair in de Residentie Bantam. Jaarboek Mijnwezen Nederlandsch Oost-Indie 44 (1915), Verhandelingen 2, p. 133-234.
('Contribution to the knowledge of the stratigraphy of the Tertiary in the Banten Residency' West Java. Attempt to compare S Banten and S Sumatra stratigraphies (but poor age control). Common andesitic intrusions)

Van Es, L.J.C. (1918)- Geologische overzichtskaart van den Nederlandsch-Oost-Indischen archipel (schaal 1:1,000,000)- Toelichting bij Blad XV (Lampongs, Straat Soenda, Bantam). Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 2, p. 55-140.
(Overview map and explanatory notes off southernmost Sumatra and W Java)

Van Es, L.J.C. (1918)- De voorhistorische verhoudingen van land en zee in den Oost-Indischen Archipel, en de invloed daarvan op de verspreiding der diersoorten. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 2, p. 255-304.
(Early paleogeographic map of Indonesia at end Pliocene and its implications for migration of animal species)

Van Es, L.J.C. (1920)- Nadere gegevens over het Bodjongmanik kolenveld. Jaarboek Mijnwezen Nederlandsch Oost-Indie 47 (1918), Verhandelingen 1, p. 150-153.
('Additional data on the Bojongmanik coal field'; West Java. Details on coal thickness and composition. Coals thought to be too thin and poor quality for commercial exploitation)

Van Es, L.J.C. (1926)- Geologische waarnemingen op Java. I. Djiwo en Zuidergebergte. De Mijningenieur 7, 9, p. 153-157.
('Geological observations on Java 1: Jiwo and Southern Mountains'. Early description of classic Jiwo-Southern Mountains successions N of Gunung Pendoel Miocene andesite intrusion (not much different from Verbeek and Fennema 1996): Pretertiary chlorite schists and crystalline limestones, overlain by Eocene conglomerates (mainly quartz pebbles), sandstones, claystones and limestones with Nummulites, Discocyclina, Pellatispira, etc., Early Miocene volcanic breccias. All formations unconformably overlain by near-horizontal 'young-Miocene' limestones with Lepidocyclina rutteni, Miogypsina, Orbulina, etc. (= Lower Tf; JTvG), suggesting Jiwo Anticline was already folded in Middle Miocene. Possibly 2000m of erosion prior to deposition of M-L Miocene limestone, most of it probably draining North, because more erosion on N flank of anticline)

Van Es, L.J.C. (1926)- Oude exploratiewerken in Zuid-Madioen. De Mijningenieur 7, 11, p. 205-210.
('Old exploration works in South Madiun'. Brief review of small mining exploration/ exploitation concessions S of Madiun, E Java. Mainly quartz veins with chalcopyrite in volcanics. Mining concessions: (1) Kesihan (1908-1925) S of Tegalombo (copper, zinc); (2) Kali Teloe (1908- 1925), N and W of Tegalombo (copper))

Van Es, L.J.C. (1929)- Trinil. Excursion Guide E5, Fourth Pacific Science Congress, Java 1929, p. 1-14.
(Field guide to Trinil hominid site, C Java)

Van Es, L.J.C. (1935)- De beteekenis en het voorkomen van fosfaat op Java. De Ingenieur in Nederlandsch-Indie IV, 2, 5, p. 37-47.
('The significance and occurrence of phosphate on Java'. Small phosphate deposits found at many localities on Java, all in present or former cave deposits, and formed from bat excrement)

Van Gorsel, J.T., D. Kadar, Soenarto, Budianto Toha et al. (1987)- Central Java Fieldtrip June 18-21, 1987. Indonesian Petroleum Association (IPA) Field Trip Guidebook, p. 1-29.

Van Gorsel, J.T., D. Kadar & P.H. Mey (1989)- Central Java Fieldtrip 27-30 October 1989. Indonesian Petroleum Association (IPA) Field Trip Guidebook, p. 1-67.

Van Gorsel, J.T. & S.R. Troelstra (1981)- Late Neogene planktonic foraminiferal biostratigraphy and climatostratigraphy of the Solo River section (Java, Indonesia). Marine Micropaleontology 6, 2, p. 183-209.
(Late Miocene-Pleistocene planktonic foram biostratigraphy of deep water deposits of Kendeng zone in Ngawi section. Paleoclimate signal inferred from fluctuations in cooler-climate planktonic forams used to correlate with Mediterranean Miocene-Pliocene boundary stratotype)

Van Heurn, F.C. (1927)- Waarnemingen in verband met het voorkomen van verkiezeld hout in de voormalige Residentie Batavia. Handelingen 21e Nederl. Natuurkundig Geneeskundig Congres, Amsterdam, p. 283-285.
('Observations regarding the occurrence of silicified wood in the former Batavia Residency'. Fossil wood from Bolang estate 35 km West of Bogor, mainly of Dipterocarpaceae family. See also Krausel 1922, Pfeiffer and Van Heurn 1928)

Van Regteren Altena, C.O. (1938)- The marine Mollusca of the Kendeng Beds (East Java). Gastropoda, Part. I (Families Fissurellidae-Vermetidae inclusive). Leidsche Geol. Mededelingen 10, p. 217-320.
(online at: www.repository.naturalis.nl/document/549598)
(First of series of paleontological papers on molluscs from Plio-Pleistocene Kendeng Beds W of Surabaya. Material collected by Geological Survey, Bandung, personnel during Kendeng zone mapping survey (Duyfjes et al.) and by Cosijn. Molluscs mainly from Pucangan Fm, some Upper Kalibeng Fm)

Van Regteren Altena, C.O. (1938)- The marine Mollusca of the Kendeng beds (East Java)- Gastropoda, Part I. Dienst Mijnbouw, Wetenschappelijke Mededeelingen 27, Bandung, p. 241-320.
(Reprint of Van Regteren Altena (1938)- Leidsche Geol. Mededelingen, above)

Van Regteren Altena, C.O. (1942)- The marine Mollusca of the Kendeng Beds (East Java) Gastropoda, Part II (Families Planaxidae-Naticidae inclusive). Leidsche Geol. Mededelingen 12, 1, p. 1-86.
(online at: www.repository.naturalis.nl/document/549625)
(Systematic study of marine molluscs from Plio-Pleistocene Kendeng beds of E Java, dealing with gastropods belonging to families Planaxidae, Potamididae, Cerithiidae, Triphoridae, Epitoniidae, Eulimidae, Pyramidellidae, Amaltheidae, Calyptraeidae, Xenophoridae, Strombidae and Naticidae)

Van Regteren Altena, C.O. (1943)- The marine Mollusca of the Kendeng beds, East Java, Gastropoda, part IV (Families Cassididae-Ficidae inclusive). Leidsche Geol. Mededelingen 13, p. 89-120.
(online at: www.repository.naturalis.nl/document/549495)
(Taxonomic descriptions of Plio-Pleistocene gastropods of families Cassididae and Ficidae from Upper Kalibeng and Pucangan formations of Kendeng zone, East Java (part III of this series is by Schilder 1941))

Van Regteren Altena, C.O. (1950)- The marine Mollusca of the Kendeng beds, East Java, Gastropoda, part V (Families Muricidae-Volemidae inclusive). Leidsche Geol. Mededelingen 15, 1, p. 205-240.
(online at: www.repository.naturalis.nl/document/549261)
(More taxonomic descriptions of Plio-Pleistocene gastropods of East Java)

Van Regteren Altena, C.O. & C. Beets (1944)- Eine Neogene Molluskenfauna vom Tji Gugur (Priangan), W. Java. Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap 14 (Gedenkboek Tesch), p. 37-67.
(Rich Neogene mollusc faunas from Priangan, SW of Bandung. No maps or stratigraphic context info)

Van Regteren Altena, C.O. & C. Beets (1945)- Beschouwingen over de toekomst van het onderzoek der Caenozoische mollusken van Nederlandsch-Indie. Geologie en Mijnbouw 7, 5-6, p. 45-50.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0cnhfT3FfV3BWbGM/view)
('Remarks on the future of research of the Cenozoic molluscs of the Netherlands Indies')

Van Simaeys, S., F. Musgrove, N. Stephens, A. Weidmer, A. Zeiza, R. Sekti, A. Derewetzky & T. Simo (2011)- Early carbonate growth in the East Java Basin, Indonesia: a case study from the Jambaran Field. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-205, 13p.
(Jambaran Field discovered in 2001. Tall gas column in steep-flanked Oligocene carbonate buildup with ~1000m of relief relative to platform. Main buildup ~10 km long, 1 km wide. Unconformities recognized on well logs and seismic coincide with global Rupelian- Chattian sea level fluctuations, subaerial exposure and meteoric diagenetic events)

Van Tuijn, J. (1932)- Over de rangschikking der Duizend eilanden. De Mijningenieur 13, 7, p. 132-134.
('On the alignment of the Thousand Islands' (Pulau Seribu, NW of Jakarta))

Van Valkenburg, S. (1924)- Het district Djampang-Koelon. Jaarboek Topographische Dienst 1924, Batavia, p. 1-9.
('The Jampang-Kulon District'. Geographic- geological observations in SW Java)

Van Valkenburg, S. & J.T. White (1924)- Enkele aanteekeningen omtrent het Zuidergebergte (G. Kidoel). Jaarboek Topographische Dienst 1923, Batavia, p. 3-16.
('Some notes on the Southern Mountains (Gunung Kidul)'. Geographic-geological observations in Southern Mountains (Gunung Kidul) SE of Yogyakarta)

Vanessa, A. & O. Verdiansyah (2014)- Inklusi fluida pada endapan emas epitermal sulfidasi tinggi Cijulang, Garut, Jawa Barat. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-256, 5p.

('Fluid inclusions in high sulfidation epithermal gold deposit Cijulang, Garut, West Java'. High sulfidation epithermal gold deposits in volcanic rocks of Miocene Jampang Fm. Relatively high T (216-320 °C) and salinity 2-5 wt% NaCl at formation)

Verbeek, R.D.M. (1883)- Over de dikte der Tertiaire afzettingen op Java. Natuurkundige Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, 23, p. 1-11
('On the thickness of the Tertiary deposits on Java'. Tertiary deposits in area S of Kuningan and S of Cirebon, ~4800m thick)

Verbeek, R.D.M. (1891)- Voorloopig bericht over nummulieten, orbitoiden en alveolinen in Java en over den ouderdom der gesteenten waarin zij optreden. Natuurkundig Tijdschrift Nederlandsch-Indie 51, 2, p. 101-138.
(online at: http://books.google.com/books/about/Natuurkundig_tijdschrift_voor_Nederlands.html?id=uFoYAAAAYAAJ)
('Preliminary note on Nummulites, orbitoids and alveolinids in Java and on the age of the rocks in which they occur'. Only 6 areas of Java with Early Tertiary in outcrop, 5 of which have Eocene sediments unconformably overlying Pretertiary metamorphics. Includes first descriptions of Eocene Nummulites (Nummulites javanus, N. bagelensis, Assilina, Discocyclina, Alveolina javana) from Java, also Timor. Mention of Cretaceous larger foram Orbitolina from Luk Ulo, C Java (smaller species than those known from W Kalimantan))

Verbeek, R.D.M. (1897)- Kort geologisch overzicht van Java. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 2, 12, p. 173-186.
(online at: https://babel.hathitrust.org/cgi/pt?id=hvd.hxhgly;view=1up;seq=193)
('Brief geological overview of Java'. No maps, figures)

Verbeek, R.D.M. (1898)- Die Geologie von Java. Petermanns Geogr. Mitteilungen 44, 2, p. 25-34.
('The geology of Java'. Brief overview of the geology in German, with 1:2,250,000 scale map)

Verbeek, R.D.M. & R. Fennema (1881)- Nieuwe geologische ontdekkingen op Java. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde, 21, p. 47-90.
('New geological discoveries on Java'. First report of Pre-tertiary rocks on Java, in three areas: (1) metamorphic rocks of S Serayu Mts/ Lok Ulo, N of Kebumen, associated with serpentinite and red chert, steeply dipping, roughly E-W strike (Junghuhn had called these Tertiary; Verbeek notes similarities with Sumatra old slates); (2) metamorphic rocks on three of 'Zutphen islands' in Sunda Straits and (3) Gedeh Mt near Jasinga, at border of Bogor and Bantam Residencies. Also first record of leucite-bearing volcanics of Muriah volcano, N coast of C Java)

Verbeek, R.D.M. & R. Fennema (1882)- Nieuwe geologische ontdekkingen op Java. Natuurkundig Tijdschrift Nederlandsch-Indie 41, p. 5-48.
('New geological discoveries on Java'. Same paper as 1881 paper above)

Verbeek, R.D.M. & R. Fennema (1896)- Geologische beschrijving van Java en Madoera. J.G. Stemler, Amsterdam, 2 vols, p. 1-1135. + Atlas.
('Geological description of Java and Madura'. Classic, comprehensive geologic description of Java and Madura, with oversized atlas of geologic maps. First to recognize Paleogene sediments and Pre-Tertiary schists in Central Java, and locally great thickness of Tertiary sediments)

Verbeek, R.D.M. & R. Fennema (1896)- Description geologique de Java et Madoura. J.G. Stemler, Amsterdam, p. 1-1183.
(Online at: http://openlibrary.org/works/OL1558191W/Description_geologique_de_Java_et_Madoura)
(or at: http://ia600508.us.archive.org/20/items/descriptiongol11verb/descriptiongol11verb.pdf)
('Geological description of Java and Madura'. French translation of Verbeek and Fennema Java book above)

Verdiana, P.R.M., Y. Yuniardi & A.A. Nur (2014)- Petrologi dan petrografi satuan breksi vulkanik dan satuan tuf kasar pada Formasi Jampang, daerah Cimanggu dan sekitarnya, Jawa Barat. Bull. Scientific Contr. (UNPAD) 12, 3, p. 171-179.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8378/3894)
('Petrology and petrography of volcanic breccias and coarse tuff of the Jampang Formation, Cimanggu and surrounding areas, West Java')

Verstappen, H.T. (1953)- Djakarta Bay, a geomorphological study on shoreline development. Doct. Thesis, Rijksuniversiteit Utrecht, Drukkerij Trio, s-Gravenhage, p. 1-101. *(Unpublished)*

Verstappen, H.T. (1954)- Het kustgebied van Noordelijk West Java op de luchtfoto. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 71, p. 146-152.
('The coastal region of northern West Java on air photos'. Geomorphical study of alluvial plain along N coast of W Java, which formed in last 5000 years, during lowering of sea level of 5-6m. With beach ridges, river levess, etc.)

Verstappen, H.T. (1956)- Landscape development of the Udjung Kulon Game Reserve. Penggemar Alam 36, Bogor, p. 37-51.
(Geomorphology study of poorly studied Ujung Kulon peninsula of SW Java. Not much on geology. Common travertine terraces in rivers of (Pliocene?)Marl Plateau, which appears to be tilted to NE)

Von Baumhauer, E.H. (1884)- Over den op 3 Oktober 1883 te Ngawi in Midden-Java gevallen meteoriet Jaarboek Mijnwezen Nederlandsch Oost-Indie 13 (1884), Wetenschappelijk Gedeelte, p. 331-342. (also in Verslagen Kon. Akademie Wetenschappen, Afd. Natuurkunde, (3), 1, 1885, p. 8-18)
(online at: http://www.meteoritehistory.info/VMAW/1883_Ngawi.pdf)
('On the meteorite that fell at Ngawi in Central Java on 3 October 1883'. Two pieces piece of stone meteorite that exploded over Central Java, largest piece 202 grams. Covered with black-brown melt crust from travel through atmosphere. External parallel scrathes possibly formed when hot meteorite hit soil. Thin section shows aggregate of rounded olivine, pyroxene (enstatite) aggregates, iron, etc. Stored in Leiden Geological Museum (Member of the very low-iron LL Ordinary chondrite group; on same day a 1.19 kg meteorite fell at Karang-Modjo in Magetean District of Java, most likely from same fall))

Von Ettingshausen, C. (1883)- Beitrag zur Kenntnis der Tertiarflora der Insel Java. Sitzungsberichte Akademie Wissenschaften, Wien, 87, 1, p. 175-194.
(online at: www.zobodat.at/pdf/SBAWW_87_0175-0193.pdf)
('Contribution to the knowledge of the Tertiary flora of the island of Java')

Von Hochstetter, F. (1864)- Geologische Ausfluge auf Java. In: Gesammelte Reiseberichte von der Erdumsegelung der Fregatte Novara 1857-59, I.e. Geol. Theil, Vienna, 2, p. 113-152.
(online at: https://www.zobodat.at/pdf/MON-GEO_0032_0113-0152.pdf)
('Geological excursions on Java'. Hochstetter's trips on Java during stop of Austrian Novara Expedition in Batavia in May 1858. Climbed volcanoes Gedeh and Tangkuban Prahu. Met with Junghuhn in Lembang. Surveyed trachyte and limestones west of Bandung)

Von Koenigswald, G.H.R. (1935)- Vorlaufige Mitteilungen uber das Vorkommen von Tektiten auf Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 38, 3, p. 287-289.
(online at: www.dwc.knaw.nl/DL/publications/PU00016689.pdf)
('Preliminary note on the occurrence of tektites on Java'. Tektites (glass pebbles associated with meteorite impacts) rel. widespread in SE Asia (Indochina, Billiton, also Java). This paper reports on occurrence of tektites at base of M Pleistocene Trinil beds, associated with Trinil fauna. No locality details (Verbeek earlier reported some tektites from Jepara near Semarang; reportedly also present near Bojonegoro)

Von Koenigswald, G.H.R. (1957)- Tektites from Java. Proc. Kon. Nederl. Akademie Wetenschappen, B 60, p. 371-382.

(Description of large collection of tektites from Pleistocene Trinil beds of C Java, probably of extraterrestrial origin. Proposal to call these 'javanites' (now thought to be part of very large Australasian tektite strewn field tied to Pleistocene asteroid impact near Laos-Cambodia around 700-800 ka; JTvG))

Von Koenigswald, G.H.R. (1963)- Rims, flow ridges and flanges in Javanese tektites. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 66, p. 206-208.
(Mild ablation features (partial melting in Earth's atmosphere) on Pleistocene tektites from Sangiran)

Von Koenigswald, G.H.R. (1978)- Tektite studies XII: Minute tektites from Central Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 81, p. 55-60.

Von Richthofen, F. (1862)- Bericht uber einen Ausflug in Java. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 14, p. 327-356.
(online at: https://www.biodiversitylibrary.org/item/148846page/339/mode/1up)
(Report on a trip on Java'. Summary of geological fieldtrip to W Java volcanoes and South coast by famous German geologist Von Richthofen with Franz Junghuhn, famous Java naturalist. Also comments of geology of Timor, Sulawesi, etc.. Not much new; no figures)

Von Richthofen, F. (1874)- 3. Beobachtungen an dem gehobenen Korallenriff Udjung Tji Laut-oron an der Sudkuste von Java. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 26, p. 239-250.
(online at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015035474918;view=1up;seq=255)
('Observations on the Udjung Tji Laut-oron raised coral reef on the East coast of Java'. 12-15m uplift of recent coral reef near mouth of Tji-Laut-oron river)

Von Staff, H. & H. Reck (1911)- Einige neogene Seeeigel von Java. In: M.L. Selenka & M. Blankenhorn, Die Pithecanthropus-Schichten auf Java, Engelmann, Leipzig, p. 41-45.
('Some Neogene sea urchins from Java'. Echinoids from Pliocene? marls in Trinil area, C Java, collected by Selenka 1907 expedition)

Vorstman, A.G. (1929)- Tertiaire vischotolieten van Java. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 5, p. 1-16.
('Tertiary fish otoliths from Java'. Descriptions of otoliths from Late Eocene of Nanggulan, E Miocene Nyalindung beds and Late Miocene Tjilanang beds in Bandung survey collections)

Wachjudin, S., R.A. Kuhnel & S.J. van der Gaast (1990)- The characteristics of bentonite from the Karangnunggal deposit, West Java, Indonesia. Applied Clay Science 5, 4, p. 339-352.

Wagner, D., I. Koulakov, W. Rabbel, B.G. Luehr, A. Wittwer, H. Kopp et al. (2007)- Joint inversion of active and passive seismic data in Central Java. Geophysical J. Int. 170, p. 923-932.
(130 seismographic stations onshore and off C Java and operated for >150 days. Inversion images show strong low-velocity anomaly (−30%) in backarc crust N of active volcanoes. In upper mantle beneath volcanoes a low-velocity anomaly inclined towards slab, probably paths of fluids and melted materials in mantle wedge. Crust in forearc appears strongly heterogeneous. Onshore part two high-velocity blocks separated by narrow low-velocity anomaly, interpreted as weakened contact zone between two rigid crustal bodies. Recent Java earthquake at lower edge of this zone. Focal strike slip mechanism consistent with orientation of this contact)

Wagner, D. W. Rabbel, B.G. Luehr, J. Wassermann, T.R. Walter, H. Kopp et al. (2008)- Seismic structure of Central Java. In: D. Karnawati, S. Pramumijoyo et al. (eds.) The Yogyakarta Earthquake of May 27, 2006, Star Publishing, Belmont, California, p. 2.1-2.11.
(C Java tomographic data reveals two low velocity anomalies, one at foot of volcanic arc, on NE-SW trending zone that separates forearc in two rigid blocks, and was likey epicenter of 2006 earthquake. Aftershocks mostly in Gunung Kidul Mountains, in zone semi-parallel to and 10-15 km E of Opak River fault)

Wagner, T., A.E. Williams-Jones & A.J. Boyce (2006)- Stable isotope-based modeling of the origin and genesis of an unusual Au-Ag-Sn-W epithermal system at Cirotan, Indonesia. Chemical Geology 219, p. 237-260.
(Late Pliocene Cirotan low-sulphidation epithermal gold deposit in Bayah Dome of SW Java complex polymetallic assemblages and progressive enrichment in Sn-W and Au-Ag in late stages of mineralization. Five ore/ alteration stages. Metallogenic model explains enrichment in Sn and W by increased recycling of slab-derived sedimentary material during Pliocene subduction)

Wahab, A. & D. Martono (1985)- Application of oil geochemistry for hydrocarbon exploration in Northwest Jawa. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 635-657.
(Analysis of source rocks in NW Java shows Lower Cibulakan (Talang Akar) sediments are main source in area. Distribution of mature source rocks delineated by applying Lopatin method)

Wakita, K. (2000)- Cretaceous accretionary-collision complexes in Central Indonesia. J. Asian Earth Sci. 18, p. 739-749.
(Cretaceous accretionary-collision complexes formed by accretionary or collision processes, forearc sedimentation, arc volcanism, back arc spreading. Oceanic plate subducted under Cretaceous arc from S, carried microcontinents from Gondwanaland. Accretionary wedge with fragments of oceanic crust (chert, siliceous shale, limestone, pillow basalt). Jurassic shallow marine allochthonous formation emplaced by collision of continental blocks. Collision exhumed high-P metamorphics from deeper part of pre-existing accretionary wedge. Cretaceous tectonic units rearranged by Cenozoic thrusting and lateral faulting during successive collision of continental blocks and rotation of continental blocks in Indonesian region)

Wakita, K., Munasri & W. Bambang (1991)- Nature and age of sedimentary rocks of the Luk-Ulo melange complex in the Karangsambung area, Central Java, Indonesia. Proc. Silver Jubilee Symposium on Dynamics of subduction and its products, LIPI, Yogyakarta, p. 64-79.
(Incl. Late Cretaceous age of radiolarite above pillow basalt at)

Wakita, K., Munasri & B. Widoyoko (1994)- Cretaceous radiolarians from the Luk-Ulo Melange complex in the Karangsambung area, Central Java, Indonesia. J. Southeast Asian Earth Sci. 9, p. 29-43.
(Five assemblages of Cretaceous radiolarians in shale and chert of Luk-Ulo Melange in Karangsambung area: I- Early Cretaceous ('up to Barremian'), II- Middle Cretaceous (Barremian-Albian?), III- early Late Cretaceous, IV- Late Cretaceous (Coniacian- M Campanian) and V- Late Cretaceous (Late Campanian-Maastrichtian). Siliceous- argillaceous rocks were deposited throughout Cretaceous time, and accreted at subduction trench in M- Late Cretaceous or earliest Paleocene. Fragmentation and mixing with schist and quartz porphyry must have occurred in Paleocene)

Waldron, H.H. (1962)- Geology of Djatiluhur damsite and vicinity, West Java, Indonesia. U.S. Geol. Survey (USGS) Prof. Paper 450-D, p. D21-D23.
(Brief review and map of folded Miocene clastic sediments with andesitic intrusions at Jatiluhur damsite, Bogor zone, W Java)

Waltham, A.C., P.L. Smart, H. Friederich, A.J. Eavis & T.C. Atkinson (1983)- The caves of Gunung Sewu, Java. Cave Science 10, p. 55-96.
(On caves in C Java Southern Mountains M Miocene Wonosari Limestone)

Waltham, D., R. Hall, H.R. Smyth & C. Ebinger (2008)- Basin formation by volcanic arc loading. In: A.E. Draut, P.D. Clift & D.W. Scholl (eds.) Formation and applications of the sedimentary secord in arc collision zones. Geol. Soc. America (GSA), Spec. Paper 436, p. 11-26.
(Paper quantifies flexural subsidence from loading by volcanic arc. Good fit of model to Halmahera Arc and E Java. Loads generated by arc sufficient to account for subsidence in basins within ~100 km of active volcanoes at subduction plate boundaries, if plate is broken. Basins will be asymmetrical with coarse volcaniclastic material close to arcand volcaniclastic turbidites farther away. Density contrast between arc and underlying crust required to produce arc basins means they are unlikely to form in young intra-oceanic arcs)

Wanner, J. (1938)- *Balanocrinus sundaicus* n.sp. und seine Epoke aus dem Altmiocaen der Insel Madura. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 79 B, p. 385-403.
('Balanocrinus sundaicus n.sp. and its…from the Early Miocene of Madura Island'. New crinoid species from blue-grey marls, collected by Weber near Bawarukem River, northern C Madura. Associated with Miogypsina thecidaeformis, M. kotoi, eulepidinid Lepidocyclina, Katacycloclypeus (= more likely Middle Miocene?; JTvG))

Wanner, J. & E. Hahn (1935)- Miocaene Mollusken aus der Landschaft Rembang (Java). Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 87, 4, p. 222-273.
('Miocene molluscs from the Rembang area (Java)'. Molluscs from area N and NNW of Bojonegoro (Sedan, Butak, Ngampel, Ngandong and Lodan). Mainly from M Miocene orbitoid-Cycloclypeus Lst (later called OK Limestone and Ngrayong Beds) and some from overlying Globigerina Marls series (later subdivided into Wonocolo, Ledok and Globigerina Marls Fms.). Wanner notes N to S facies changes. Richest mollusc localities on Dermawu-Mahindu and Gegunung anticlines. Molluscs mainly gastropods, 68 species, half of them new)

Wardhana, D.D., Kamtono & K.L. Gaol (2016)- Struktur tinggian di sub cekungan Majalengka berdasarkan metode gayaberat. J. Riset Geologi Pertambangan (LIPI) 26, 2, p. 85-99.
(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/278/pdf_88)
('Structural highs in the Majalengka subbasin based on gravity method'. Majalengka sub-basin in E part of Bogor Basin, NE of Bandung, covered by thick volcanic deposits, but with oil and gas seeps. Gravity model show NW-SE reverse faults and E-W and SW-NE shear faults. Depth of basement 2700-5000m. Kadipaten-Majalengka and Ujungjaya-Babakan Gebang structural highs may have hydrocarbon traps)

Warmada, I.W. (2006)- Karakteristik mineralogi dan proses pengendapan emas pada endapan emas-perak epitermal Gunung Pongkor, Jawa Barat. Media Teknik 28, 4, p. 32-36.
(Pongkor epithermal gold-silver deposit in W Java largest low-sulfidation deposit on Java. Formed in Pliocene (2.05 Ma). More than nine subparallel quartz-adularia-carbonate veins. Formation T ~220°C)

Warmada, I.W., B. Lehmann & M. Simandjuntak (2003)- Polymetallic sulfides and sulfosalts of the Pongkor epithermal gold-silver deposit, West Java, Indonesia. The Canadian Mineralogist 41, 1, p. 185-200.
(online at: http://rruff.info/doclib/cm/vol41/CM41_185.pdf)
(Pongkor gold-silver deposit Late Pliocene age (2.05 Ma) and largest low-sulfidation epithermal precious-metal deposit in Indonesia. Nine major subparallel quartz-'adularia'-carbonate veins with low sulfide content. Sulfides dominated by pyrite, chalcopyrite, sphalerite, galena. Gold occurs as Au-Ag alloy and uytenbogaardtite (Ag3AuS2))

Warmada, I.W., B. Lehmann, M. Simandjuntak & H.S. Hemes (2007)- Fluid inclusion, rare-earth element and stable isotope study of carbonate minerals from the Pongkor epithermal gold-silver deposit, West Java, Indonesia. Resource Geology 57, 2, p. 124-135.
(Pongkor gold- silver deposit near Bayah, SW Java, is largest low-sulfidation epithermal metal deposit in Indonesia, and is of Late Pliocene age (2 Ma). Nine subparallel, ~N-S trending quartz -adularia -carbonate veins with low sulfide content. Fluid inclusions indicate temperatures of 180-220°C and meteoric water origin)

Warmada, I.W., M.T. Soe, J. Sinomiya, L.D. Setijadji, A. Imai & K. Watanabe (2005)- Petrology and geochemistry of intrusive rocks from Selogiri area, Central Java, Indonesia. Proc. 2nd Int. Symp. Earth Resources Engineering and Geological Engineering Education (SEED), Yogyakarta 2005, p. 163-169.
(online at: http://warmada.staff.ugm.ac.id/Articles/petrology-geochem-slgr.pdf)
(Selogiri gold prospect in W part of S Mountains, C Java, porphyry copper-gold deposit, overprinted by low sulfidation epithermal gold quartz deposits. Intrusions dated as ~21.7 Ma (microdiorite; Jogmec) and ~12.5-11.9 Ma. Selogiri deposit formed during one or two intrusion periods, and short period of hydrothermal activities but did not create economic ore deposit)

Warmada, I.W., I. Sudarno & D. Wijonarko (2008)- Geologi dan fasies batuan metamorf daerah Jiwo Barat, Bayat, Klaten, Jawa Tengah. Media Teknik (UGM) 30, 2, p. 113-118.

('Geology and facies of metamorphic rocks in the West Jiwo area, Bayat, C Java'. Bayat area with metamorphic rock outcrops, intruded by igneous rocks (mainly diabase dikes). Phyllite, schist, gneiss and meta-sandstone widespread, locally also glaucophane schist, serpentinite and amphibolite. Three main metamorphic facies: greenschist, blueschist with transition to glaucophane greenschist, and amphibolite facies. Interpreted protolith of metamorphic rocks was melange of mafic/ultramafic rocks, pelitic rocks, carbonates and quartz sandstones)

Weeda, J. (1958)- Oil basins of East Java. In: L.G. Weeks (ed.) Habitat of oil, American Assoc. Petrol. Geol. (AAPG), Spec. Publ. 18, p. 1359-1364.
(In E-W trending E Java Tertiary basin 132 MBO produced since 1888 from 20 fields. Thick Miocene section, folded into 2 E-W trending zones in Plio-Pleistocene. Bulk of oil produced from M Miocene Ngrayong Sst (this was before Cepu oilfield discovery in Oligo-Miocene Kujung Fm Limestone; JTvG). Three oil types: (1) asphaltic oil from shallow Lidah and Kruka fields S of Surabaya from Pliocene U Globigerina Fm; (2) rel. light paraffinic oil from Upper Rembang and Lower Wonocolo sands in Ledok and nearby fields, and (3) heavy paraffinic oil in M Miocene Ngrayong sst at Kawengan)

White, J.V., A.N. Derewetzky, G.C. Geary, V.K. Hohensee, E.M. Johnstone, C. Liu, A.C. Pierce & J. Stevens (2007)- Temporal controls and resulting variations in Oligo-Miocene carbonates from the East Java Basin, Indonesia: examples from the Cepu area. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 549-559.
Five high-relief carbonate buildups drilled in Cepu area of E Java: Sukowati, Banyu Urip, Jambaran, Cendana and Kedung Tuban. Gross differences despite having all grown from a common, broad, probable E Oligocene carbonate platform. Timing of deposition of buildups established through robust (turns out to include bad dates; JTvG) Strontium isotope dating program. Carbonate deposition on buildups progressively terminated through time fromW to E)

Whitten, T., R.E. Soeriaatmadja & A.A. Suraya (1996)- The ecology of Java and Bali. The ecology of Indonesia Series II, Periplus Ed., Singapore, p. 1-968.
(Not much on geology)

Wibisono (1971)- Neogene planktonic foraminifera from Kawengan, East Java, Indonesia. Lemigas Scientific Contr. 1, 1, Jakarta, p. 1-69.

Wibowo, A.W., A. Prasetyo, W.A. Syukur, A.B. Mulyawan, E.A. Wibowo & H. Hadisaputro (2011)- Study of early-Mid Miocene carbonate facies and distribution: implications for exploration opportunities in southern Cipunegara sub-basin, North West Java basin, West Java. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-013, 4p.
(Onshore NW Java Cipunegara Sub-basin with small E-M Miocene (Upper Cibulakan Fm, 'mid-Main') coral reefal buildups along W-E trend in S part of basin. Reef sizes between 4- 40 km2 and 50-200m thick)

Wibowo, A.W., A. Pujianto, W. Hindadari, A.W. Soedjono & D.N. Susanti (2014)- Stratigraphic plays in active margin basin: fluvio-deltaic reservoir distribution in Ciputat half graben, Northwest Java Basin. AAPG Int. Conf. Exhib., Istanbul 2014, Search and Discovery Art.10656, 7p. *(Extended Abstract)*
(online at: http://www.searchanddiscovery.com/documents/2014/10656wibowo/ndx_wibowo.pdf)
(Oligocene synrift, 'pre-Talang Akar Fm' fluvio-deltaic clastic deposits in N-S trending Ciputat half-graben. Hydrocarbon-bearing in probable stratigraphic traps. Seismic attributes suggest N-S channel(s))

Wibowo, H. (2006)- Spatial data analysis and integration for regional-scale geothermal prospectivity mapping, West Java, Indonesia. M.Sc. Thesis Int. Inst. Geo-Information Science and Earth Observation (ITC), Enschede, p. 1-106.
(online at: www.itc.nl/library/papers_2006/msc/ereg/wibowo.pdf)

Wibowo, H.T., B.P. Istadi & W. Somantri (2012)- The structural geology at Lusi mud volcano, Indonesia. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-06, 5p.

(Lusi Mud volcano in Renokenongo village, Porong District, E Java, at E end of Kendeng Zone in S part of E Java inverted back-arc basin formed in Oligocene- E Miocene. Rapid deposition of thick organic rich sediment as part of Brantas delta. NE-SW fault can be interpretated as oblique-sinistral strike slip fault or NW-SE fault as dextral strike slip. Continuous topographic changes along active fault zone)

Wibowo, U.P. & R. Kapid (2014)- Biostratigrafi nannoplankton daerah Rajamandala. J. Geologi Sumberdaya Mineral 15, 4 (203), p. 185-194.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/57/59)
('Nannoplankton biostratigraphy of the Rajamandala area'. Brief review of nannofossils from 26 samples of Eocene- Miocene of Rajamandala area. Not much detail on sample localities or stratigraphic succession)

Wicaksana, H.I., A. Kurniasih & H. Nugroho (2017)- Ichnofossils analysis from Selorejo Formation in Gadu and Temengeng stratigraphic section Sambong, Blora, Central Java. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(Shallow marine trace fossil assemblages in Late Pliocene (N20-21) Selorejo Fm of NE Java)

Widagdo, A. (2008)- Fase-fase tektonik pembentuk ruang mineralisasi emas di daerah Selogiri- Wonogiri. Dinamika Rekayasa 4, 1, p. 23-29.
('Tectonic phases of gold mineralisation in the Selogiri- Wonogiri area'. Selogiri prospect with metallic minerals pyrite, chalcopyrite, galena, sphalerite, magnetite, ilmenite, gold, etc. Four extensional tectonic phases in the study area, with metal mineralization generated by epithermal processes filling ~N-S trending fractures formed during extensional phase II (E Miocene))

Widagdo, A. & S. Pramumijoyo (2004)- Tectonic phases of structural forming and its relationship with mineralization in Selogiri area, Wonigiri, Central Java. Proc. 1st Int. Symposium on Earth Resources Engineering and Geological Engineering Education, Yogyakarta 2004, p. 25-28.

Widarmayana, I.W.A., N. Anggraini, N. Stephens & F. Musgrove (2014)- Banyu Urip and other Cepu Block fields- nucleation of early carbonate buildups into isolated platforms. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-336, 12p.
(Cepu Block early carbonate growth in Rupelian in two main depositional environments, shallow water carbonate on horst blocks and deeper water carbonate in graben areas. Early carbonate mounds coalesced into larger carbonate platforms that then rapidly grew vertically to become Cepu Block oil-gas fields. Coalesced buildups tend to be located along larger fault systems, resulting in dominant ENE-WSW orientation of fields)

Widarto, D.S., E. Widianto, Sardjito, E. Purnomo & E. Biantoro (2009)- Gravity and magnetotelluric studies of the South Losari oil prospect, Central Java, Indonesia. Proc. 9th SEGJ Int. Symposium Imaging and interpretation, Sapporo, 4p.
(Gravity anomaly patterns suggest S Losari basement configuration controlled NW-SE trending Riedel shears and step-over splays, which subdivided study area in two depressions)

Widi, B.N. & H. Matsueda (1998)- Epithermal gold-silver tellurides-deposit of Cineam, Tasikmalaya District, West Java, Indonesia. Direct. Mineral Resources Indonesia, Spec. Publ. 96, p. 1-19.

Widianto, V., A. Priksawan, S.F. Yuflih, R. Kusumawardana, A. Angela, A. Subandrio & C. Prasetyadi (2016)- Ancient Oligo-Miocene volcanoes morphology affect on carbonate facies growth of Wonosari Formation in South East Java. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 638-644.
(E-M Miocene Wonosari Fm limestone in Gedangan and Blitar areas of SE Java developed on slopes of Mandalika island arc volcanoes, causing volcanoclastic sediment influx into shallow carbonate facies)

Widianto, E., D. Santoso, I.T. Taib & W.G.A. Kadir (2004)- Basin boundaries determination in West Java using 2-D gravity modeling. Majalah Geologi Indonesia (IAGI) 33, p. *(in Indonesian)*

Widiarto, F.X., J. Setyoko, H. Humaida & A. Zaennudin (2010)- Sidik jari hidrokarbon dalam lumpur Porong, Sidoardjo, Jawa Timur. Proc. 39th Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-187, 22p.
('Hydrocarbon fingerprinting from Porong mud, Sidoardjo, East Java'. Well-documented paper on analysis of oil and gas traces from mud of LUSI mud eruption S of Surabaya. Oil biomarkers suggestive of restricted marine or lacustrine source. Gas non-associated gas from marine source rock, with variable amounts of CO2)

Widijono, B.S. (2011)- Anomali gayaberat dan mendala tektonik Jawa Timur dan sekitarnya. J. Sumber Daya Geologi 21, 6, p. 321-333.
('Gravity anomalies and tectonic terrains of North Java and its surrounding area'. Tectonic zones of East Java well imaged by gravity anomalies. Southern mountains zone anomalies 100-130 mGal, Quaternary volcanoes zone 0-100 mGal, Kendeng Zone 0-40 mGal, Randublatung- Rembang Zone 0-25 mGal, Norht Java offshore 25-50 MGal)

Widijono, B.S. & B. Setyanta (2007)- Anomali gaya berat, kegempaan serta kelurusan struktur geologi daerah Jogjakarta dan sekitarnya. J. Sumber Daya Geologi 17, 2, p. 74-90.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/281/252)
('Gravity anomalies, seismicity and geological structure lineaments of Yogyakarta and surrounding areas'. Gravity modelling indicate presence of strike slip, thrust and normal faults in basement and Tertiary rocks)

Widijono, B.S. & Subagio (2009)- Anomaly gaya berat sebagai salah satu petunjuk keterdapatan gejala struktur geologi daerah Jogjakarta dan sekitarnya. In: Proc. Workshop Geologi Pegununungan Selatan, Yogyakarta 2007, Pusat Survei Geologi, Bandung, Spec. Publ. 38, p. 105-122.
(Gravity anomalies and geological structure of Yogyakarta and surrounding areas)

Widiyantoro, S. (2003)- Constraints on upper mantle structure and seismicity beneath the Sunda Strait from teleseismic data. Proc. 32nd Ann. Conv. Indon. Assoc. Geol. (IAGI) and 28th HAGI Ann. Conv., Jakarta, 6p.
(Sunda Strait area of active extension, marking transition from oblique subduction along Sumatra to near-perpendicular subduction along Java. Seismic tomography and seismicity pattern under Krakatau suggest (1) mantle plume ascending toward Krakatau volcano; and (2) columnar cluster of earthquakes below Krakatau trending almost vertically from Wadati-Benioff zone)

Widiyantoro, S. (2006)- Learning from the May 27, 2006 Yogya-Central Java destructive earthquake. Proc. 31st HAGI Ann. Conv., Semarang 2006, 5p. *(Extended abstract)*.
(Shear-wave seismic tomograms to explore buried structural features beneath Java. S-wave tomographic model suggests buried fault also exists below E Java)

Widiyantoro, S., H. Harjono, F. Lianto, Fauzi & Wandono (2004)- Seismisitas dan struktur kecepatan gelombang seismik di sepanjang Pulau Jawa. Proc. Ann. Conv. Indon. Assoc. Geoph. (HAGI), Yogyakarta, p.
('Seismicity and velocity structure along Java island'. Changes in seismic wave properties of subducting slab in E-W direction across Java and seismic gap below Central Java region)

Widiyantoro, S., Z. Zulhan, A. Martha, E. Saygin, P. Cummins, A.D. Nugraha & I. Meilano (2015)- Towards crustal structure of Java Island (Sunda Arc) from ambient seismic noise tomography. EGU General Assembly, Vienna 2015. *(Poster)*
(P- and S-wave tomography velocity model under Java from ambient seismic noise. Area of low gravity beneath Kendeng zone associated with low velocity zone. Southern Mountain range high gravity anomaly related to high velocity anomaly)

Widyastuti, S., Abdurrokhim & Y.A Sendjaja (2016)- Asal sedimen batupasir Formasi Jatiluhur dan Formasi Cantayan daerah Tanjungsari dan sekitarnya, Kecamatan Cariu, Kabupaten Bogor, Provinsi Jawa Barat. Bull. Scientific Contr. (UNPAD) 14, 1, p. 25-32.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/9813/pdf)
('Provenance of the Jatiluhur and Cantayan Fm sandstones in the Tanjungsari and surrounding area, Cariu district, Bogor, W Java'. M-L Miocene sandstones in Bogor Trough: (1) Jatiluhur Fm (feldspathic wacke,

derived from plutonic igneous rock, from Dissected Arc terrane) and Cantayan Fm (lithic arenite, derived from volcanic rock, from Transitional Arc- Undissected Arc terrane). Both units derived from magmatic arc terrane)

Wiedicke, M., H. Sahling, G. Delisle, E. Faber, S. Neben et al. (2002)- Characteristics of an active vent in the fore-arc basin of the Sunda Arc, Indonesia. Marine Geology 184, p. 121-141.
(Fluid venting at anticlinal structure at ~2910m water depth in forearc basin SW of Java, with water methane anomalies, elevated heat flow, vent-macrofauna (tube worms, bivalve Acharax), carbonate precipitation at sea floor and methane- rich pore fluids in sediment. Bottom-simulating reflectors (BSR) rise steeply towards vent, and lack of BSR below vent suggests perforation of hydrate-stability zone. Position on structure linked to oblique subduction suggests venting may be common along compressional /transpressional zones (Ujung Kulon FZ, Mentawai FZ) in NW fore arc of Sunda margin)

Wiedicke, M. & W. Weiss (2006)- Stable carbon isotope records of carbonates tracing fossil seep activity off Indonesia. Geochem. Geophys. Geosystems 7, 11, Q11009, 22p.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2006GC001292)
(Stable isotopes of carbonates in 20m long sediment cores from 1690-2995 m water depth in forearc basin off SW Java (Ujung Kulon) and SW Sumatra (Bengkulu) display significant 13C depletion, interpreted to be caused by methane seepage and associated authigenic carbonate precipitation near seafloor. Seep activity most intense between 3-7 kyr B.P. and 27-33 kyr B.P. Probable tectonic control of seepage. Benthic foram infauna at seep sites dominated by 5 species: Chilostomella oolina, Globobulimina pacifica, Hoeglundina elegans, Uvigerina peregrina and Bulimina striata. Epifauna mainly Pyrgo murrhina, Oridorsalis umbonatus, Cibicidoides wuellerstorfi and Sigmoilinopsis schlumbergeri)

Wijayanti, H.D.K., O. Verdiansyah, M.I. Novian, N.I. Setiawan & K. Rohman (2016)- Protolith of Joko Tuo marble, Bayat, Central Java; contribution to paleoenvironment and age of metamorphic rock. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 319-322.
(Low-metamorphic marble and phyllite form basement outcrop in Joko Tuo area, E Jiwo Hills, C Java. Presence of marble blocks and well-preserved mid-Cretaceous larger foram Orbitolina sp. in foliated chlorite-biotite-graphite)

Wijono, S. (1987)- Hubungan beberapa parameter sedimen dengan populasi foraminifera bentonik pada Formasi Ledok, Jalur Kedung Planangan, Kab. Blora, Jawa Tengah. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.
('Relations between some sediment parameters and the benthic foraminifera population in the Ledok Formation, Kedung Planangan, Blora district, C Java')

Willumsen, P. & D.M. Schiller (1994)- High-quality volcanoclastic sandstone reservoirs in East Java, Indonesia. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 101-118.
(Late Pliocene-Pleistocene volcanoclastic reservoirs in 1993 Porong 1 and WD 8 wells and in outcrops good reservoir qualities)

Wiloso, D.A., B.W. Seubert, E.A. Subroto & E. Hermanto (2008)- Studi batuan induk hidrokarbon di cekungan Jawa Timur Bagian Barat. Proc. 37th Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 476-489.
('Study of hydrocarbon source rocks in the W part of the E Java basin'. Eocene Ngimbang clastics Fm in Rembang-1 good source rock richness, early mature, and potential to produce oil and gas from Types II and III kerogen. C27-C28-C29 ternary plots from four oil seeps and source rock from three wells show correlation between oil from terrestrial source and Ngimbang clastics Fm)

Wiloso, D.A., E.A. Subroto & E. Hermanto (2009)- Confirmation of the Paleogene source rocks in the Northeast Java Basin, Indonesia, based from petroleum geochemistry. AAPG Int. Conf. Exhib., Cape Town 2008, Search and Discovery Art. 10195, 33p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.net/documents/2009/10195wiloso/images/wiloso.pdf)
(Geochemical analyses of sediments from 5 exploration wells (incl. Rembang 1, Padi-1), and four oil seeps indicate correlation between oils and thermally mature, organic-rich Late Eocene Ngimbang Fm)

Winardi, S., B. Toha, M. Imron & D.H. Amijaya (2010)- The potency of Nanggulan Formation shale as hydrocarbon source rock. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-310, 13p.
(In W Indonesia Eocene shale generally considered as potential source rock. 11 samples of Eocene Nanggulan Fm shale with Nummulites and Discocyclina, outcropping at Nanggulan/ Kulonprogo 25 km W of Yogya, analyzed. Seven samples TOC >1%. Kerogen type III amorphous-humic. Maturity level of samples immature (highest Ro 0.39%, Tmax 422°C and TAI 2). At higher levels of maturity Nanggulan Fm shale has source rock potential. In adjacent Yogyakarta Low Nanggulan Fm modeled to be late mature, generating gas since 0.4 Ma)

Winardi, S., B. Toha, M. Imron & D.H. Amijaya (2013)- The potential of Eocene shale of Nanggulan Formation as a hydrocarbon source rock. J. Geologi Indonesia 8, 1, p. 13-23.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/152/152)
(Similar to Winardi et al. (2010) paper)

Wirasantosa, S. & K. Karta (1995)- Seismic reflection study of a fore-arc basin and accretionary prism South of West Java. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 261-266.
(Single channel seismic profiles off SW Java. Fore-arc basins with 0.2- >1.5 sec of sediment, with two sequences separated by Late Miocene unconformity. Fore-arc sediments normally faulted adjacent to Sunda Strait and Pelabuhan Ratu Bay)

Witkamp, H. (1916)- De kalkbergen van Koeripan. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 33, 3, p. 417-423.
('The limestone mountains of Kuripan'. Group of three 30m high limestone hills near Ciseeng, W of Parung, W Java are sinter cones formed by hot spring activity)

Witkamp, H. (1939)- Een voorkomen van granodioriet in Zuid-Priangan. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 56, p. 638-653.
('An occurrence of granodiorite in South Preanger', SW Java. Along Tjilajoe (Cilayu) River, 60km S of Bandung)

Wiyoga, S.A. & N.I. Basuki (2010)- A microfacies study of carbonate rocks of the Citarate Formation, Cilograng Area, Lebak District, Banten. Proc. 34rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-SG-029, 7p.
(Outcrop study of ~180m thick Early Miocene Citarate Fm limestone 10 km NW of Pelabuhan Ratu)

Wiyoga, S.A. & N.I. Basuki (2010)- Diagenetic pattern in the Citarate carbonate rocks, Cilograng area, Lebak District, Banten. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, 8p.
(E Miocene Citarate Fm limestones 10 km NW of Pelabuhan Ratu. Regional M Miocene deformation formed NNE-WSW trending faults and E-W folds. Diagenesis include early marine cementation by fibrous aragonite, compaction, aragonite dissolution, precipitation of equant-grained calcite cement in phreatic environment, dissolution to form moldic porosities, dolomitization, formation of stylolites and fractures, and precipitation of late ferroan calcite during burial)

Wiyono, J., F. Rakhmanto, F. Andriyani, A. Susilo & A.M. Masdar (2007)- Characterization of carbonate reservoir at ñXò Field using attribute and seismic inversion: examples from the Cepu area. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, SG-12, p. 1-11.
(Seismicinterpretation study of X Field (= Sukowati Field; JTvG). In Kujung Fm carbonate buildup, Tuban Block, NE Java basin)

Wolbern, I. & G. Rumpker (2016)- Crustal thickness beneath Central and East Java (Indonesia) inferred from P receiver functions. J. Asian Earth Sci. 115, 1, p. 69-79.

(Earthquake data recorded in C and E Java suggests average crustal thickness of ~34 km. Support for presence of ophiolitic basement in center of island related to Meratus suture zone comes from shallowing of Moho to ~30 km (or less) under Kendeng zone, while to N and W Moho at anomalous depths to 39 km. Observed thick anomalies W and NW of Kendeng zone line up along hypothetical boundary between continental SW Borneo fragment and Meratus suture and may indicate crustal thickening caused by overthrusting in former collision zone. No clear evidence for postulated Muria-Progo lineament)

Woolfolk, E.R. & D.N. Tit (1939)- Geological report on the oil possibilities of the Banjoemas and Kedoe districts, South Central Java. Geological Survey, Bandung, Open File report E39-57, 13p.
(Stanvac 1938 survey report. Ten anticlines mapped in marine Tertiary section in S Central Java. Two main volcanic breccia horizons and several unconformities. No surface oil or gas seeps encountered)

Wu, C.Q., Z.W. Zhang, M.F. Rosana, Q. Shu, C.F. Zheng et al. (2019)- The continental crust contributes to magmatic hydrothermal gold deposit in Ciemas, West Java, Indonesia: constraints from Hf Isotopes of zircons and in situ Pb isotopes of sulfides. Ore Geology Reviews 112, 103010, p.
(Multistage porphyry-epithermal metallogenic systems in Late Eocene- E Miocene and Late Miocene- E Pleistocene magmatic belts of Java. In W Java common low-sulfidation type epithermal deposits, in E Java porphyry deposits. Newly discovered Ciemas deposit in W Java M Miocene (~17 Ma) porphyry-epithermal Au deposit. Zircons suggest M Miocene arc magmatism with intense crustal contamination, with mineralization materials mainly from ancient continental crust of Sundaland)

Wu, C.Q., Z.W. Zhang, C.F. Zheng & J.H. Yao (2014)- Mid-Miocene (~17 Ma) quartz diorite porphyry in Ciemas, West Java, Indonesia, and its geological significance. Int. Geology Review 57, 9-10, p. 1294-1304.
(Miocene quartz diorite porphyry from Ciemas area, SW Java, belongs to calc-alkaline-high K calc-alkaline series and formed by M Miocene arc magmatism. Porphyry, dacite and andesite rocks similar compositions. Zircon ages of andesite, amphibolic tuff breccia and quartz diorite porphyry 17.5, 16.9 and 17.1 Ma)

Yabe, H. & K. Asano (1937)- Contributions to the paleontology of the Tertiary formations of West Java. Part I. Minute foraminifera from the Neogene of West Java. Science Reports Tohoku Imperial University, Ser. 2 (Geol.) 19, p. 87-127.
(online at: http://hdl.handle.net/10097/30268)
(Shallow marine benthic foraminifera from samples collected by Chitani in 1935 in M Miocene- Pliocene, in Banten and Bogor areas. With stratigraphic columns of NW Java Mio-Pliocene. No locality details)

Yabe, H. & K. Asano (1937)- New occurrence of *Rotaliatina* in the Pliocene of Java. Chishitsugaku Zasshi (= J. Geol. Soc. Japan) 44, 523, p. 326-328.
(online at: www.jstage.jst.go.jp/article/geosoc1893/44/523/44_523_326/_pdf)
(Brief note describing new Pliocene rotalid foram species from Bojong and Cilegong, Banten, W Java. Derived from Rotalia schroeteriana and named Rotaliatina globosa (now assigned to Asanoina Finlay 1961))

Yabe, H. & M. Eguchi (1941)- On some simple corals from the Neogene of Java. Proc. Imperial Academy (Japan) 17, 7, p. 269-273.
(online at: https://www.jstage.jst.go.jp/article/pjab1912/17/7/17_7_269/_pdf)
(Description of small Miocene and Pliocene corals (Heterocyathus, Fungia), collected by Chitani in Banten and Bogor areas, W Java)

Yaman, F., T. Ambismar & T. Bukhari (1991)- Gas exploration in Parigi and pre-Parigi carbonate buildups, NW Java Sea. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 319-346.
(M Miocene Parigi and Pre-Parigi buildups with large quantities of gas. Reservoirs uniformly distributed vugular, mouldic and intragranular porosity. Gas is dry, interpreted to be thermogenic and sourced from deeper Talang Akar shales and coals. Migration of gas through vertical fault migration from Talang Akar into higher sections. Absence of oil implies heavier hydrocarbon fractions either stripped during migration or prevented from accumulating in buildups due to presence of earlier migrated gas)

Yang, F.Z., L. Luo, D. Jia, H.Q. Zhu, L. Wu & X. Li (2011)- Cenozoic tectonic evolution of the East Java Basin, Indonesia. Acta Metallurgica Sinica 17, 2, p. 240-248.
(online at: http://geology.nju.edu.cn/EN/abstract/abstract9358.shtml)
(In Chinese, with English summary. E Java Basin two rift phases and two compressional events. Eocene back-arc rifting basin resulted from N-ward subduction of Indo-Australian plate under Sundaland. Subduction changed direction to NE-SW in Oligocene, inducing 2nd phase of E-W extension and rifting. Collision of Roo Rise ocean plateau, S of E Java, at ~15 Ma caused inversion structures and formation of major oil traps. Part of Australian continental slope collided with Banda Arc at ~3.5-2 Ma, causing 2nd phase of compressional deformation in basin)

Yohanes, M.P. Koesoemo (1998)- Sikuen stratigrafi dan potensi reservoar air beryodium di Zona Kendeng bagian Timur, Cekungan Jawa Timur Utara. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 159-173.
('Sequence stratigraphy and iodine water reservoir potential of the East Kendeng zone, NE Java basin'. Study of Pleistocene Pucangan- Kabuh Fms in anticlinal structure ~6-8 km WNW of Mojokerto. Pleistocene folded, turbiditic Pucangan Fm and fluvial Kabuh Fm with iodine-bearing water (exploited by PT Kimia Farma wells at Watudakon). With gas seep at Bekucuk village)

Yohanes, M.P. Koesoemo & Soejono Martodjojo (1993)- Sea level changes and tectonism, causes and responses between stable Rembang and active Kendeng zones. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 135-.

Yokoyama, I., Surjo & B. Nazhar (1970)- Volcanological survey of Indonesian volcanoes, Part 4, A gravity survey in Central Java. Tokyo University Earthquake Res. Inst. Bull. 48, 2, p. 303-315.

Yulianto,E., L.M. Hutasoit, H. Pindratno, W.S. Sukapti & K. Hirakawawa (20xx)- Plio-Pleistocene boundary in Jakarta: micropaleontological analysis. Unpublished? 7p.
(online at: http://www.geocities.ws/ekoy001/foram-rev-2-web.htm)
(Plio-Pleistocene boundary below Jakarta varies in depth. In Blok-M core boundary at ~162 m depth, marked by Top Stenochlaeniidites papuanus at 162m, coinciding with Graminae abundance above the boundary.)

Yulianto, E., W.S. Sukapti & R. Setiawan (2019)- Palinostratigrafi, paleoekologi dan paleoklimatologi Plistosen Awal berdasarkan studi palinologi Formasi Pucangan di daerah Sangiran. J. Geologi Sumberdaya Mineral 20, 3, p. 133-141.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/461/404)
(‘Palynostratigraphy, paleoecology and paleoclimatology of Early Pleistocene based on a pollen study of the Pucangan Formation in the Sangiran area’. Co-occurrence of Phyllocladus hypophyllus and Podocarpus imbricatus in Pucangan Fm indicates Pleistocene age (Monoporites annulatus Peak Zone). Depositional setting savannah with sparse swamp, riparian and lowland forest, sparse mangroves on muddy sea-land interface and heterogenous montane forests in highlands. During deposition savannah flourished on new emerged land due to regression. Frequent volcanic eruptions during deposition of upper units destroyed heterogenous montane forest and led to homogenous Casuarina junghuniana forest)

Yulianto, I., R. Hall, B. Clements & C. Elders (2007)- Structural and stratigraphic evolution of the offshore Malingping Block, West Java, Indonesia. Proc. 31st Ann. Conv. Indon. Petroleum Assoc., IPA07-G-036, 13p.
(SW Java offshore Malingping Block series of extensional basins and highs, from W to E: Ujungkulon High, Ujungkulon Low, Honje High, W Malingping Low. Three major structural trends. Late Eocene movement on W-dipping NNE-SSW normal faults formed Ujungkulon Low. NE-SW faults parallel to Cretaceous subduction margin in Java interpreted as interaction between E-W extension and basement fabric. In shelf edge area, E-W trending normal faults active in Late Eocene and Early Oligocene. Reefal limestone build-ups on highs in Late Oligocene- E Miocene. E Miocene movements on E-dipping faults created full-graben geometry of Ujungkulon Low. E Miocene volcanism suggested to have terminated carbonate deposition. Minor inversion in E Miocene but little other evidence for contraction. Major Late Pliocene uplift period, resulting in regional unconformity, followed by renewed subsidence)

Yulianto, M.N., R. Galena & C. Prasetyadi (2011)- Karakteristik sesar Anjak dan pemodelan struktur geologi menggunakan metode Balances cross section daerah Kedungjati, Jawa Tengah (Kendeng Barat) dan daerah Ngawi, Jawa Timur (Kendeng Timur). Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-1305, 11p.
(Structure restoration in W and E Kendeng zones near Kedungjati and Ngawi, C-E Java)

Yulihanto, B. (1993)- Lembah torehan Miosen Atas dan perenannya dalam terbentuknya perangkap stratigrafi di daerah Cepu dan sekitarnya. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 770-780.
('The Upper Miocene incised valley and its role in the formation of stratigraphic traps in the Cepu area and surroundings'. Cepu area M-U Miocene sequence stratigraphy. Seismic evidence for N-S trending incised valley(s) at Late Miocene Ledok Fm level and sand-rich section in Kawengan field)

Yulihanto, B., B. Situmorang & L. Sriwahyuni (1994)- Peranan tektonik tarikan pada perkembangan runtunan pengendapan Tersier di bagian Barat Kawasan daratan cekungan Jawa Timur Utara. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 123-132.
('The role of extensional tectonics on the development of Tertiary depositional sequence in the western part of the onshore NE Java Basin. Oligocene- E Miocene extensional phase created NE-SW trending half-grabens. Second extensional phase in M Miocene. Late Pliocene basin inversion, NE-SW wrench faults and regional uplift)

Yulihanto, B., S. Sofyan & S. Musliki (1995)- Miocene- Pliocene Northeast Java Basin sequence stratigraphy. Int. Symposium Sequence Stratigraphy in SE Asia, Post-symposium fieldtrip, Indon. Petroleum Assoc. (IPA), p. 1-65.
(Outcrops of mainly Miocene clastics around Semarang, Cepu and Kendeng zone)

Yuniarni, R. (2014)- Karakteristik petrologi dan geokimia ofiolit Cikepuh, Kabupaten Sukabumi, Jawa Barat. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-067, 17p.
('Geochemical and petrologic characteristics of Cikepuh ophiolite, Sukabumi District, W Java'. Ultramafic rocks in Cikepuh River at Cibenda Village, Ciemas Subdistrict, SW Java, part of ophiolite complex. In outcrop mainly as blocks up to dozen meters in base of flaky clays, i.e. in melange, thrusted over continental l metamorphic and sedimentary rocks. Petrology characteristic of Mid Oceanic Ridge. Also radiolarian chert and basalt in area. Ophiolite rocks within tholeite series, sourced from upper mantle with low Neubium (Nb; 0.07 and 6.11 ppm)

Yuningsih, E.T. (2011)- Compositional variations of Au-Ag Telluride minerals of Arinem deposit, West Java. J. Sumber Daya Geologi 21, 3, p. 151-161.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/142/139)
(Epithermal gold-silver veins in Arinem area S of Papandayan volcano in SW Java contain Te bearing minerals (hessite (Ag Te), petzite (Ag Au Te), stutzite (Ag Te), tetradymite (Bi Te S), altaite (Pb Te))

Yuningsih, E.T. (2016)- Host rock and mineralized ores geochemistry of Arinem vein, Arinem deposit, West Java- Indonesia. Bull. Scientific Contr. (UNPAD) 14, 2, p. 205-222.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/9813/pdf)

Yuningsih, E.T. & H. Matsueda (2014)- Genesis and origin of Te-bearing gold-silver-base metal mineralization of the Arinem deposit in western Java, Indonesia. J. Mineralogical Petrological Sci. 109, p. 49-61.
(online at: https://www.jstage.jst.go.jp/article/jmps/109/2/109_130118a/_pdf)
(Arinem epithermal gold-silver-base metal deposit near SW Java coast S of Bandung hosted by Arinem vein system which cuts Late Oligocene- M Miocene volcanic rocks. M Miocene quartz diorite-andesitic intrusions most likely source of metals. Three main stages of ore mineralization in quartz-illite-calcite veining)

Yuningsih, E.T. & H. Matsueda & M.F. Rosana (2014)- Epithermal gold-silver deposits in Western Java, Indonesia: gold-silver selenide-telluride mineralization. Indonesian J. Geoscience 1, 2, p. 71-81.

(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/180/177)
(Gold-silver ores of W Java reflect major Mio-Pliocene metallogenic event. Two types of mineralization: W-most W Java (Pongkor, Cibaliung, Cikidang, Cirotan, etc. dominated by silver-arsenic-antimony sulfosalt, E part of W Java (Arinem, Cineam) dominated by silver-gold tellurides)

Yuningsih, E.T. & H. Matsueda & M.F. Rosana (2016)- Diagnostic genesis features of Au-Ag selenide-telluride mineralization of Western Java deposits. Indonesian J. Geoscience 3, 1, p. 71-81.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/246/206)
(Ore mineralogy of westernmost part of W Java (Pongkor, Cibaliung, Cikidang, Cikotok and Cirotan) characterized by dominance of silver-arsenic-antimony sulfosalt with silver selenides and rarely tellurides over argentite, whereas E part of W Java (Arinem and Cineam) deposits dominated by silver-gold tellurides)

Yuningsih, E., H. Matsueda, E.P. Setyaraharja & M.F. Rosana (2012)- The Arinem Te-Bearing gold-silver-base metal deposit, West Java, Indonesia. Resource Geology 62, p. 140-158.
(Arinem area, SW Java, Late Miocene (8.8–9.4 Ma) gold-silver-base metal vein system. Arinem vein hosted by Latest Oligocene-M Miocene Jampang Fm (23-11.6 Ma) andesitic volcanics and overlain unconformably by Pliocene-Pleistocene andesitic-basaltic volcanics)

Yuwono, F.S. & Akmaluddin (2015)- Biostratigrafi nanofosil gampingan Formasi Kepek jalur Sungai Rambutan, Kec. Paliyan, Kab. Gunungkidul, Daerah Istimewa Yogyakarta. Pros. Seminar Nasional Kebumian 8, Jurusan Teknik Geologi, Universitas Gadjah Mada, Yogyakarta, p. 391-399.
(online at: https://repository.ugm.ac.id/135459/1/...)
('Calcareous nannofossil biostratigraphy of the Kepek Formation in the Sungai Rambutan section, Kec. Paliyan, Gunungkidul, Yogyakarta Special Area'. Kepek Fm 55m thick and youngest formation of Java Southern Mountains stratigraphy. First appearances of Discoaster asymmetricus and Pseudoemiliana lacunosa allow subdivision into 3 biozones: Sphenolithus neoabies (NN 13), Discoaster asymmetricus (NN 14) and Pseudoemiliana lacunosa (NN 15), of E Pliocene age (~5.1- 3.8 Ma). Equivalent to N19 planktonic foram zone)

Yuwono, N.T. (1992)- Fasies batugamping terumbu Formasi Paciran, Rembang, Tuban, Jawa Timur. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), 2, Yogyakarta, p. 487-506.
('Reefal limestone facies of the Paciran Formation, Rembang, Tuban, East Java'. Plio-Pleistocene (and latest Miocene?) carbonate platform, NE Java, locally equivalent/interfingering with Mundu-Lidah Fms)

Yuwono, N.T. & Suratman (1990)- Aspek stratigrafi dan petrografi endapan turbidit (studi kasus: Formasi Kerek dan Anggota Banyak daerah Kedungjati, Jawa Tengah. Proc.19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 149-174.
('Stratigraphic and petrographic aspects of turbidite deposits (case study: Kerek Formation and Banyak Members in the Kedungjati area, Central Java'. M-LMiocene submarine fan deposits with tuffaceous sandstones SE of Semarang. Kerek Fm ~1300m thick claystones tuffceous sandstone planktonic foram zones N13-N16, overlain by Late Miocene Banyak Fm >720m thick debris flow sandstones with slumped beds in upper fan setting, zones N17-N18. Sands lithic graywackes with >25% lithics, mainly andesitic volcanics)

Yuwono, Y.S. (1987)- Contribution a l'etude du volcanisme potassique de l'Indonesie. Exemples du sud-ouest de Sulawesi et du volcan Muria (Java): Ph.D. Thesis, Universite de Bretagne Occidentale, vol. 1, p. 1-285 and vol. 2, p. 1-158. *(Unpublished)*.
('Contribution to the study of potassic volcanism of Indonesia; examples from SW Sulawesi and Muria volcano (Java)')

Yuwono, Y.S. (1997)- The occurrence of submarine arc-volcanism in the accretionary complex of the Luk Ulo Area, Central Java. Buletin Geologi (ITB) 27, 1, p. 15-25.
(Eocene tholeitic island arc volcanics at Karangsambung area)

Zacchello, M. (1984)- The Eocene mollusc fauna from Nanggulan (Java) and its palaeogeographic bearing. Memorie Scienze Geol., Padova, 36, p. 377-390.

Zacchello, M. (2001)- The Eocene stratigraphic sequence of Nanggulan and the levels reported by K. Martin. Memorie Scienze Geol., Padova, 53, p. 49-53.
(M Eocene Nanggulan Fm of C Java ~300m thick and subdivided into ten levels. Lowest level NG1 with lignite, without marine fauna, overlain by deeping-upward facies clastic succession. With listings of molluscs species and comparison to the 21-level stratigraphy of Oppenoorth & Gerth (1929))

Zainudin, A. & D.H. Amijaya (2016)- Hubungan kekerabatan minyak bumi pada antiklin Gabus di daerah Grobogan dan antiklin Kawengan di daerah Bojonegoro, Cekungan Jawa Timur Utara berdasarkan data biomarker. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 139-148.
(online at: https://repository.ugm.ac.id/273483/)
('The relationship of oils from the Gabus anticline in Grobogan and Kawengan anticline in the Bojonegoro area, NE Java Basin based on biomarker data'. Oils from Gabus (Ledok Fm) and Kawengan (Wonocolo Fm and Ngryong Fm) anticlines are related. API Gravity 24-30 °API, viscosity 2034-71 mm2/ s. Pr /Ph ratio 5.48-11.54, suggesting non-marine rocks with terrestrial Type III kerogen (high land plants. Some biodegradation)

Zamparini, M. (2001)- Some molluscs and foraminifers from the Eocene-Oligocene of Nanggulan (Java, Indonesia). Memorie Scienze Geol., Padova, 53, p. 54-56.

Zaputlyaeva, A., A. Mazzini, A. Caracausi & A. Sciarra (2019)- Mantle derived fluids in the East Java sedimentary basin, Indonesia. J. Geophysical Research, Solid Earth, 124, 8, p. 7962-7977.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2018JB017274)
(Gas geochemistry from hydrocarbon fields and surface seepage sites near the Arjuno-Welirang volcanic complex and around Lusi mud eruption site. Mainly dry thermogenic gas. Presence of noble gases with mantle-derived He signature comparable to fluids emitted at Lusi and Arjuno-Welirang fumaroles)

Zaputlyaeva, A., A. Mazzini, M. Blumenberg, G. Scheeder, W. M. Kurschner, J. Kus, M.T. Jones & J. Frielin (2020)- Recent magmatism drives hydrocarbon generation in northeast Java, Indonesia. Nature Scientific Reports 10, 1786, 14p.
(online at: https://www.nature.com/articles/s41598-020-58567-6.pdf)
(Oil generation may be accelerated by rapid reactions when carbon-rich sediments are exposed to migrating magmatic fuids. Lusi eruption in NE Java surface expression of present-day deep interaction between volcanic and sedimentary domains, with ongoing generation of hydrocarbons induced by a recent magmatic intrusion from neighbouring Arjuno-Welirang volcanic complex)

Zeiza, A., F. Hakiki, F. Musgrove. I. Kerscher, I. Maura & S. Wertanen (2016)- Effects of pervasive hydrothermal dissolution on the giant Banyu Urip Field. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-G-585, 12p.
(Development drilling campaign in Banyu Urip field, Cepu Block, E Java confirmed most predictions of carbonate reservoir, except well-test derived average permeabilities and productivity higher than predicted. Overlying deep water sand units nearly perfectly pressure connected and of high quality. More fracture swarms in tight drowning cap facies than in higher porosity Platform Interior Dissolution occurred millions of years after carbonates deposition and drowning as result of hydrothermal fluids)

Zeiza, A., N. Stephens & P. Glenton (2017)- A novel approach to the Banyu Urip 3D geologic model update. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-546-G, 13p.
(Updated geologic model of Oligo-Miocene carbonate and clastic reservoirs of Banyu Urip oil-gas field, Cepu Block, E Java. 46 wells drilled. Permeability from logs higher than core-based (matrix) permeability. Best quality reservoir in platform-interior zones (av. porosity 26%y). Drowning-cap dominated by deeper water facies with av. porosity ~15%. Margin zones cemented, recrystallized and rel. tight (av. porosity 9%))

Zeiza, A.D., H. Tanjung, K.P. Laya & W.A. Ramadhan (2007)- Carbonate mound deposit of Gunung Bodas, Bogor as part of analogue model for prospective mud mound hydrocarbon reservoirs in Miocene carbonates. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-SG-001, 6p.
(Gunung Bodas limestone hill in Bogor zone in Limestone member of M Miocene Bojongmanik Fm. Three major carbonate facies: massive coral-algal reef, back reef and mound facies)

Zeiza, A., S. van Simaeys, F. Musgrove, R. Sekti & F. Hakiki (2012)- The impact of differential subsidence rates in shallow water carbonate reservoir quality: an example from the East Java Basin, Indonesia. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-026, p. 1-13.
(Carbonate reservoir quality in Cepu fields better in Miocene than in Oligocene. Diagenetic leaching controls reservoir quality. Reservoir quality correlated to subsidence rates: high rates in U Oligocene and U Burdigalian meant less time for fresh water lens to leach carbonates and enhance reservoir quality)

Zhang, Z., C. Wu, X. Yang, C. Zheng & J. Yao (2015)- The trinity pattern of Au deposits with porphyry, quartz-sulfide vein and structurally-controlled alteration rocks in Ciemas, West Java, Indonesia. Ore Geology Reviews 64, p. 152-171.
(Ciemas ore deposit in SW Java associated with E Miocene andesite, dacite and quartz diorite. Host rocks zircon ages ~17.1- 17.5 Ma. Au deposition primarily during late magmatic activity and belongs to metallogenic system from porphyry to epithermal type)

Zheng, C., Z. Zhang, C. Wu & J. Yao (2014)- Sulfur isotope composition of Ciemas gold deposit in West Java, Indonesia. Acta Geologica Sinica (English Ed.) 88, Suppl. 2, p. 852-853. *(Abstract)*
(Ciemas Miocene high sulphidation epithermal deposit in Sukabumi province, W Java. Sulfur isotopes uniform and small positive d34S values, suggesting magmatic origin mixture of mantle-type and slab-derived sedimentary components)

Zheng, C., Z. Zhang, C. Wu & J. Yao (2017)- Genesis of the Ciemas gold deposit and relationship with epithermal deposits in West Java, Indonesia: constraints from fluid inclusions and stable isotopes. Acta Geologica Sinica (English Ed.) 91, 3, p. 1025-1040.
(Two volcanic belts in West Java: (1) late Miocene- Pliocene belt, generating Pliocene-Pleistocene epithermal deposits; (2) late Eocene- E Miocene belt generating Miocene epithermal deposits. Data from Ciemas gold deposit E of Ciletuh Bay (hosted in 'Old Andesites') indicate mixing of magmatic fluid with meteoric water. Miocene epithermal ore deposits in S part of West Java more affected by magmatic fluids and higher degree of sulfidation than those of Pliocene-Pleistocene)

Ziegler, K.G.J. (1918)- Kort bericht over het voorkomen van een granietgesteente in het stroomgebied van de Tji Hara, District Tji Langkahan, Afdeeling Lebak, Residentie Bantam. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 2, p. 48-54.
(Brief report on the occurrence of granitic rock on Java, along Cihara River, S Banten, SW Java. Interpreted as Neogene intrusive into Eocene sediments)

Ziegler, K.G.J. (1920)- Verslag over de uitkomsten van mijnbouw-geologische onderzoekingen in Zuid-Bantam. Jaarboek Mijnwezen Nederlandsch Oost-Indie 47 (1918), Verhandelingen 1, p. 40-140.
('Report on the results of mining geological investigations in South Bantam'. Mainly on Eocene coal fields Bojongmanik, Bayah, Cimandiri. With descriptions of minor oil seeps)

Zulfakriza, Z., E. Saygin, P.R. Cummins, S. Widiyantoro, A.D. Nugraha, B.G. Luhr & T. Bodin (2014)- Upper crustal structure of Central Java, Indonesia, from transdimensional seismic ambient noise tomography. Geophysical J. Int. 197, 1, p. 630-635.
(online at: http://seismo.berkeley.edu/~thomas/Publi/GJI_Java2.pdf)
(Ambient Noise Tomography collected during Merapi Amphibious Experiment in C Java in 2004. Tomographic images show shallow structures not evident in previous studies. Strong negative velocity under volcanic arc and Kendeng basin, surrounded by relatively high group velocities that may represent crustal blocks accreted to Sundaland core in Late Cretaceous)

Zulkarnain, I., E.T. Sumarnadi & R. Handoyo (1995)- Karakterisasi batuan serpentinit Karangsambung, Jawa Tengah sebagai bahun baku refraktori. In: Y. Kumoro et al. (eds.) Proc. Seminar Sehari Geoteknologi dalam indistrialisasi, Hasil-hasil Penelitian Puslitbang Geoteknologi LIPI, p. 218-228.
('Characterization of serpentinite rock of Karangsambung, Central Java, as refractory raw materials').

Zwierzycki, J. (1935)- Geologische beschrijving der petroleumterreinen van Java. Indonesia Geol. Survey Bandung, Open File Report E35-13, p. 1-46. *(Unpublished)*
('Geological description of the oil fields of Java'. Rel. detailed descriptions of BPM oil fields on NE Java, including information never published elsewhere)

III.2. Java Sea (incl. Sunda-Asri Basins, offshore NW Java basin)

Adhyaksawan, R. (2002)- Seismic facies and growth history of Miocene carbonate platforms, Wonocolo Formation, North Madura Area, East Java Basin, Indonesia. M.S. Thesis, Texas A&M University, College Station, p. 1-136. *(Unpublished)*

Adhyaksawan, R. (2003)- Seismic facies and growth history of Miocene carbonate platforms, Wonocolo Formation, North Madura area, East Java Basins, Indonesia. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 163-184.
(Miocene Wonocolo Fm in Java Sea N of Madura area numerous isolated carbonate platforms over ~3000 km2 area. Five growth phases. Platforms in W larger than E and record history of platform initiation, backstepping, progradation, coalescence into composite platforms, and termination. Eastern platforms: 1) smaller, 2) more widely spaced, 3) steeper platform margins, 4) largely aggradational stratal geometries, 5) slightly thicker than W platforms, and 6) tops at greater burial depths than W platforms. Most differences attributed to faster subsidence rates in E from 12-6 Ma, probably related to differential loading by volcanic arc)

Ageng, C., Hairunnisa, D. Hidayat, D. Nugroho & N.I. Basuki (2014)- Facies analysis, rock type, and property distribution in upper interval of Baturaja Formation, Krisna Field, Sunda Basin. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-055, 19p.
(E Miocene Baruraja Fm carbonates in Krisna field five lithofacies. Reservoir formerly interpreted as reef complex, but lithofacies and seismic facies indicate two facies associations: skeletal mound and slope to basin)

Albab, A. & N.C.D. Aryanto (2017)- Seismic facies of Pleistocene-Holocene channel-fill deposits in Bawean Island and adjacent waters, Southeast Java Sea. Bull. Marine Geol. 32, 1, p. 31-39.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/373/287)
(Sparker seismic profiles in SE Java Sea around Bawean show widespread Pleistocene incised lowstand paleo-channels, with late Pleistocene-Holocene (partial) fill. Older paleo-channels buried by up to 50m sediments. Width of main paleo-channels ~4 km. Two channel types: U-shaped channels in W part and V-shaped channels in E. Internal structure of incised-channels consist of chaotic reflectors at bottom, overlain by parallel-subparallel and almost reflection-free, homogenous sediments)

Aldrich, J.B., G.P. Rinehart, S. Ridwan & M.A. Schuepbach (1995)- Paleogene basin architecture of the Sunda and Asri Basins and associated non-marine sequence stratigraphy. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. on Sequence Stratigraphy in SE Asia, Jakarta, Indon. Petroleum Assoc. (IPA), Jakarta, p. 261-287.
(Nearly symmetric, fault bounded extension in Sunda and Asri basins early history, followed by shift to more asymmetric rift. Early Sunda Basin fill consists of Banuwati Fm and Zelda Mb of Talang Akar Fm. Banuwati Fm of Sunda Basin records overall transgressive event and culminates in widespread deposition of Banuwati Shale which is main source rock in Sunda Basin. Well log sequence stratigraphy and core study of non-marine Banuwati Fm in Sunda Basin identified alluvial fan, fluvial and shallow lacustrine facies)

Ardila, L.E. (1983)- The Krisna High: its geologic setting and related hydrocarbon accumulations. Proc. Offshore SE Asia Conf. 6, Singapore 1983, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 10-23.
(Krisna Field 1976 discovery on W flank Sunda basin, Java Sea. Mainly stratigraphic trap. Old basement High fringed by E Miocene Baturaja reefal buildup))

Ardila, L.E. & I. Kuswinda (1982)- The Rama Field: an oil accumulation in Miocene carbonates, West Java Sea. Proc. ASCOPE/CCOP Workshop., Surabaya 1982, Techn. Paper TP/2, p. 341-382.

Arifin, L. & I.W. Lugra & P. Raharjo (2009)- Zona sesar di perairan Kalimantan Selatan (LP 1611). J. Geologi Kelautan 7, 1, p. 11-21.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/166/156)
('Fault zones in the waters S of Kalimantan'. Shallow seismic data indicate young NE-SW fault structures in Java Sea NE of Bawean, now probably inactive. Directions coincide with Muria-Meratus Tectonic Zone)

Arisandy, M., B. Abrar & W. Bahri (2015)- Limestone diagenesis reservoir quality of CD Carbonate Formation East Java Basin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-038, 13p.
(Oligocene Ngimbang Fm ('CD") carbonates in 'Block P' E Java Sea, W of N Madura High, N of BD Ridge. Common larger foram wackestones, some coal floatstone, Most porosity is secondary. Two main diagenetic phases: (1) E-M Oligocene platform aggradation phase (keep up) with multiple times of exposure and dissolution by meteoric water; (2) Late Oligocene transgression (drowning) phase without exposure)

Armon, J., W.E. Harmony, S. Smith, B. Thomas, R. Himawan, B. Harman et al. (1995)- Complementary role of seismic and well data in identifying upper Talang Akar stratigraphic sequences- Widuri field area, Asri basin. In: C.A. Caughey et al. (eds.) Proc. Int. Symposium on Sequence stratigraphy in SE Asia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 289-309.
(Four parasequences in uppermost Talang Akar Fm in Widuri field, off SE Sumatra).

Asjhari, I. (2000)- Fast track exploration, development, production, and facilities to maximise return in the Poleng Field, Offshore Madura, Indonesia. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 71-84.

Atkins, D. (2005)- Integrating geology and petrophysics into seismic interpretation for reservoir definition and improved field development: a case study from the Banuwati Field. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 283-296.
(Study of gas-bearing Baturaja Fm carbonate buildup at Banuwati field, Sunda basin)

Atkinson, C.D., G.C. Gaynor & C.L. Vavra (1993)- Sedimentological and reservoir characteristics of the upper Cibulakan sandstones (main interval) in cores from the B-Field, offshore northwest Java. In: C.D. Atkinson et al. (eds.) Clastic rocks and reservoirs of Indonesia: a core workshop, Indon. Petroleum Assoc. (IPA), p. 59-90.
(M Miocene Upper Cibulakan Fm reservoirs ~75% of hydrocarbons discovered in ARCO NW Java PSC. B-Field produced 150 MMBO from B28/29 "Main" interval (N13-N14; E Tortonian). B28 interval is interbedded sandstones, shales and thin limestones. Ten depositional facies, reflecting series of deltaic to nearshore sub-environments, mostly mouth-bar, channel and channel fringe settings. Sandstone distribution influenced by syn-depositional structuring: thickest pay on flanks of field and thin dramatically over crest of structure. Highest oil rates from wells in elongate, channel sandstone bodies off main crest of structure)

Atkinson, C., M. Renolds, A, Clarke & S. Sampurno (2004)- Why look in deepwater when elephants prefer the shallows? The Biliton Basin revisited. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia and Australasia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 225-249.
(Tertiary Biliton basin, W Java Sea, one of the country's last remaining unexplored frontiers. Typical Eocene-Oligocene rift basin on SE margin of Sunda craton, NW of Karimundjava Arch. NE-SW trending, two depocenters with depth to metamorphic basement >4000m. M Miocene erosion-uplift episode)

Atkinson, C.D. & S.W. Sinclair (1992)- Early Tertiary rift evolution and its relationship to hydrocarbon source, reservoirs and seals in the offshore northwest Java Basins, Indonesia. AAPG 1992 Int. Conf., Sydney, American Assoc. Petrol. Geol. (AAPG) Bull. 76, p. 1088.
(Abstract only. Offshore NW Java basins originated by Late Eocene- E Oligocene rifting of S margin of Sunda Platform. N-S half-grabens fragment low-grade schist and igneous terrane. Most grabens show hanging-wall blocks dipping E. Oligocene largely nonmarine rift-fill deposits overlain by U Oligocene- Lower Miocene post-rift paralic- marine succession. In syn-rift phase block rotation and truncation episode noted. Half-grabens excellent hydrocarbon generation and accumulation systems)

Aveliansyah, P. Ponco, W. Triono & U.A. Saefullah (2016)- Pre-Talang Akar Formation: new hopes for hydrocarbon exploration in the Offshore North West Java Basin. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-146-G, 14p.
(Offshore NW Java Basin with mature conventional plays of Parigi, Main, Massive, Baturaja and Talang Akar Fms. Pre-Talang Akar Fm rel. underexplored. KL Field produced 11 BCF gas from Late Eocene carbonate

(33-37 Ma date from Sr isotopes). Jatibarang volcanism 3 phases: ~58 Ma, ~50 Ma and ~35 Ma. Cretaceous basement, incl. granites and schists-argillites)

Aveliansyah, Rinaldo, P. Ponco & U.A. Saefullah (2017)- Stratigraphic play concept potential in offshore North West Java Basin. Case study: Talang Akar Formation in BZZ area. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(Deeper play potential in stratigraphc traps in early rift sediments onlapping against basement highs in Talang Akar Fm, Arjuna basin, offshore NW Java)

Aziz, S., S. Hardjoprawiro & S.A. Mangga (1993)- Geological map of the Bawean and Masalembo Quadrangle, Java, 1610-1, 1710-1, 1710-4, scale 1:100,000. Geol. Res. Dev. Center, Bandung.
(Bawean Island in Java Sea widespread Pleistocene Balibak Fm volcanics, underlain by E Miocene Gelam Fm limestones and Late Miocene- Pliocene Kepongan Sst. Masalembo and Keramian islands Quaternary volcanics only)

Basden, W.A., J.V.C. Howes & S. Wibisana (1999)- Integrated evaluation of a paleo gas-water contact and residual gas zone in the Sirasun Field, East Java, East Indonesia. In: C.A. Caughey & J.V.C. Howes (eds.) Proc. Conf. Gas habitats of SE Asia and Australasia, Jakarta 1998, Indon. Petroleum Assoc. (IPA), p. 153-168.
(Strong seismic DHI beneath Sirasun gas field, E Java Sea N of Bali, cutting across lithologic boundaries and coinciding with base of residual gas zone 10m below current free water level)

Basden, W.A., H.W. Posamentier & R.A. Noble (1999)- Structural history of the Terang and Sirasun Fields and the impact upon timing of charge and reservoir performance, Kangean PSC, East Java Sea, Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 269-286.
(Terang-Sirasu- Batur structure offshore N Bali (E of Madura) with late charge of 0.9- 1.5 TCF biogenic gas. Reservoirs Late Miocene and Plio-Pleistocene sands and globigerinid limestones. Structuring Pleistocene (1.5 Ma) and recent inversion of Cretaceous-Oligocene extensional faults after (E?-) M Miocene early inversion)

Berger, P. & R.E. Crumb (1990)- An integrated approach for the evaluation of shaly-sands reservoirs, North West Java. In: 8th Offshore South East Asia Conf., Singapore 1990, SE Asia Petroleum Expl. Soc. (SEAPEX) Proc. 9, p. 133-142.
(On log analysis procedures in shaly sands in Miocene Main/ Massive Formations, Arjuna basin)

Bhatti, M.A., M. Iqbal & M.R. Khan (2008)- Multiple phases of tectonic inversion, East Java Sea Basin Indonesia, and potential analogues in Pakistan. Pakistan J. Hydrocarbon Research 18, p. 65-77.
(E Java Sea Basin two phases of extension, followed by tectonic inversion)

Bianchi, N. & H. Harsian (2016)- The passive thermal contribution of a dormant pre-Cenozoic giant of the East Java Sea: implications for exploration of the Kangean area. Proc. Indon. Petroleum Assoc. (IPA) 2016 Technical Symposium, Jakarta, IPA 4-TS-16, 13p.
(Large E-W trending pre-Cenozoic faulted synform of 200x50 km in Kangean area below base Cenozoic unconformity nucleated Paleogene extensional features, inverted in late Neogene to form Central High. Three thermal domains, controlled by burial depth of basement: in N and S, where basement near base Cenozoic unconformity, heat flows of 70-80 mW/m2. In C domain, where basement is deeper, heatflows <70 mW/m2, in axis of synform-60 mW/m2. Presence of pre-Cenozoic basin thus has negative impact on maturation of Eocene Ngimbang Fm source rocks)

Bianchi, N., H. Harsian, F. Febianto, R. Hariutama & D. Juliana (2018)- On the provenance of the Sepanjang oils: evidence from 3D petroleum system modeling. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-23-G, 15p.
(Petroleum system of Kangean area, E Java Sea, controlled by heat flow distribution, overpressure occurrence, and Late Neogene erosion. Charging of Sepanjang Field from late Neogene depocenter that formed in W-C part of Southern Basin as result of uplift and erosion of Central High. Depocenter activated E-ward oil expulsion

ring of Paleogene Ngimbang source rock, already overmature to W. Oil remains contained in Ngimbang reservoir complex, thanks to thick overpressured overburden and absence of vertical conduits)

Bianchi, N., H. Harsian, D. Juliana, R. Hariutama & Heri (2016)- CSI (Cenozoic Systems Investigation) Kangean - an alternative hydrocarbon charging model for the Pagerungan Field. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-49-G, 15p.
(Basin modeling in Kangean area, E Java Sea. N Platform is immature, and Pagerungan Field gas originated from high maturity pod of Paleogene Ngimbang mudstones to S, corresponding with Central High, a Paleogene extensional structure, inverted in Late Neogene. Coaly organo-facies not activated)

Bishop, M.G. (2000)- Petroleum systems of the Northwest Java province, Java and offshore Southeast Sumatra. U.S. Geol. Survey (USGS) Open File report 99-50-R, p. 1-34.
(online at: http:// pubs.usgs.gov /of/1999/ofr-99-0050/OF99-50R/index.html)
(Petroleum assessment NW Java basins)

Bransden, P.J.E. & S.J. Matthews (1992)- Structural and stratigraphic evolution of the East Java Sea, Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 417-453.
(Key E Java sea paper, describing Neogene inversion of Paleogene extensional basins. Widespread uplift/ inversion in Middle Miocene (~N11/N12). Oldest sediments overmature Upper Cretaceous, overlying Lower Cretaceous? accretionary complex)

Budiarso, H. (1996)- Distribusi gas CO2 dan upaya mengurangi resiko eksplorasi pencairan hidrokarbon di Cekungan Jawa Barat Utara. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 447-458.
(On CO2 gas distribution in NW Java basin)

Bukhari, T., J.G. Kaldi, F. Yaman, H.P. Kakung & D.O. Williams (1992)- Parigi carbonate buildups, Northwest Java Sea. In: C.T. Siemers et al. (eds.) Carbonate rocks and reservoirs of Indonesia: a core workshop, Indon. Petroleum Assoc. (IPA), Jakarta, p. 6-1 to 6-10.
(Parigi Limestone Late Miocene zones N17/NN11, forming N-S trending buildups up to 1100' thick in NW Java basin onshore and offshore. Eight carbonate lithofacies, up to four transgressive marine episodes. Porosity mainly primary interparticle, with local enhancement by dissolution)

Burbury, J.E. (1977)- Seismic expression of carbonate buildups, NW Java Basin. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 239-268.
(Offshore NW Java Basinwith carbonates at four stratigraphic levels. Widespread carbonate deposition in Oligocene-lower Miocene and late M Miocene time intervals, more localized deposition during two intervals in lower to middle Miocene. Carbonate build-ups developed in each of these times. Size, shape and disposition of build-ups, except those developed during late middle Miocene, related to tectonic framework, depositional history and local structural features of the basin)

Burollet, P.F., R. Boichard, B. Lambert & J.M. Villain (1986)- The Paternoster carbonate platform. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. 15, 1, p. 155-169.
(Recents sediment samples from E Java Sea all m-c grained carbonate sand from coral, red algae, molluscs and foraminifera. In some sheltered lows abundant Halimeda calcareous algae, representing 80% of sediment. Corals source of bioclasts on or near reef islands, elsewhere sand mainly forams)

Bushnell, D.C. & M.D. Temansja (1986)- A model for hydrocarbon accumulation in Sunda basin, West Java Sea. Proc. 15th Ann. Conv. Indon. Petroleum Assoc., p. 47-75.

Butterworth, P.J. & C.D. Atkinson (1993)- Syn-rift deposits of the Northwest Java Basin: fluvial sandstone reservoir and lacustrine source rocks. Indon. Petroleum Association (IPA), Core Workshop, Clastic Rocks and Reservoirs of Indonesia, Jakarta, p. 211-229.

Butterworth, P.J., R. Purantoro & J.G. Kaldi (1995)- Sequence stratigraphic interpretations based on conventional core data: an example from the Miocene upper Cibulakan Formation, offshore Northwest Java. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. Sequence Stratigraphy in SE Asia, Indon. Petroleum Assoc., p. 311-325.

C&C Reservoirs (1996)- Bima Field, Sunda Basin, Indonesia. Reservoir evaluation report, 20p.
(Part of series of unpublished multi-client oilfield summaries)

C&C Reservoirs (1996)- Krisna Field, Sunda Basin, Indonesia. Reservoir evaluation report, 27p.

C&C Reservoirs (1996)- Rama Field, Sunda Basin, Indonesia. Reservoir evaluation report, 16p.

C&C Reservoirs (1998)- Ardjuna-B Field, NW Java Basin, Indonesia. Reservoir evaluation report, 26p.

C&C Reservoirs (2001)- Pagerungan Field, East Java Basin, Indonesia. Reservoir evaluation report, 27p.
(Part of series of unpublished multi-client oilfield summaries. East Java Sea gas field discovered in 1985, producing since 1994, with recoverable reserves of 1.8 TCF Gas. Trap M-L Miocene W-E trending elongate inversion-related anticline, not filled to spill. Reservoir ~300 ft thick M-U Eocene Ngimbang Clastics Fm, two fluvial sandstone reservoirs separated by 7' shale seal unit (Lower Coal/Shale Member)

C&C Reservoirs (2002)- Cinta Field, Sunda Basin, Indonesia. Reservoir evaluation report, 24p.

C&C Reservoirs (2002)- Widuri Field, Sunda Basin, Indonesia. Reservoir evaluation report, 40p.

Cahyono, A.A. & A. Felder (2010)- Well placement optimization for a thin oil rim development in the Ujung Pangkah Field, East Java, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-E-079, 7p.
(Java Sea Ujung Pangkah field E Miocene Kujung-I carbonate reservoir with 60-90' oil column and >250' gas cap. Trap combination rim shelf morphology and young Madura inversion. Lower part of reservoir highly porous reefal limestone, upper part lower porosity red-algal dominated reef)

Carter, D.C. (2003)- 3-D seismic geomorphology: insights into fluvial reservoir deposition and performance, Widuri Field, Java Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 87, 6, p. 909-934.
(Seismic images of 4 reservoir intervals in Widuri Field show meandering fluvial depositional patterns)

Carter, D.C., J. Armon, W.E. Harmony, R.S. Himawan, P. Lukito, I. Syarkawi & P.C. Tonkin (1998)- Channel and sandstone body geometry from 3-D seismic and well control in Widuri field, offshore SE Sumatra, Indonesia. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 155-173.

Carter, D.C., W.E. Harmony, L. Harvidya, G. Juniarto, S. Lestari & A. Purba (2001)- Seismic interpretation methodology for fluvial sandstone reservoirs in Widuri field, offshore SE Sumatra, Indonesia. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 153-183.

Carter, D.C. & M. Hutabarat (1994)- The geometry and seismic character of Mid-Late Miocene carbonate sequences, SS Area, Offshore Northwest Java. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 323-338.
(M Miocene Paprigi and Pre-Parigi ~N-S trending linear buildups)

Carter, D.J., D. Mandhiri, R.K. Park, I. Asjhari, S. Basyuni, S. Birdus et al. (2005)- Interpretation methods in the exploration of Oligocene-Miocene carbonate reservoirs, offshore northwest Madura, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 179-214.
(Kodeco 2000-2005 oil- gas discoveries in Oligocene- E Miocene Kujung Fm carbonate in Kujung I reefal buildups and Kujung II-III platform carbonates. Kujung I discoveries KE-23B, KE-40, KE-24 and KE-30 in

2001-2001 followed by discovery of Kujung III interval in KE-40 in 2002. Seven further Kujung I discoveries in 2002- 2004. S Poleng largest discovery and doubled size of Poleng field, 30 years after discovery)

Cornelis, W. (1924)- Overblijfselen van rivierbeddingen in de Java-zee. Natuurkundig Tijdschrift Nederlandsch-Indie 84, p. 115-157.
('Remnants of river courses in the Java Sea'. Bathymetric profiles in parts of W and E Java Sea. Not a lot of data)

Crumb, R.E. (1989)- Petrophysical properties of the Bima Batu Raja carbonate reservoir, offshore N.W. Java. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. 2, p. 161-208
(Bima Batu Raja carbonate buildup reservoir undercompacted mudstone, wackestone and packstone with porosity up to 40%. Laboratory cut-offs (used to determine net-pay) unusually high at 26% porosity and 10 md permeability because rock believed to contain non-interconnected porosity)

Cucci, M.A. & M.H. Clark (1993)- Sequence stratigraphy of a Miocene carbonate buildup, Java Sea. In R.G. Loucks & J.F. Sarg (eds.) Carbonate sequence stratigraphy, recent developments and applications, American Assoc. Petrol. Geol. (AAPG), Mem. 57, p. 291-303.
(Late Eocene Miocene Gunung Putih carbonate complex in E Java Sea WSW-ENE trending asymmetric buildup, with aggradational N side inferred to lie on paleowindward side. Late Oligocene erosional event, Late Miocene drowning of reef)

Cucci, M.A. & M.H. Clark (1996)- Carbonate systems tracts of an asymmetric Miocene buildup near Kangean Island, E. Java Sea. In: C.A. Caughey, D.C. Carter et al. (eds.) Proc. Int. Symp. Sequence stratigraphy in Southeast Asia, Jakarta 1995, Indon. Petroleum Assoc. (IPA), p. 231-251.

Darmawan, F.H., I.W. Ardana, C.S. Lee & A.K. Wijaya (2016)- Unravel the Oligocene-Miocene depositional architectures in the North Madura Platform using seismic stratal volume. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-629-G, 12p.
(Oligocene-Miocene seismic horizon interpretations N of Madura Island.Showing small patch reefs in Kujung2 carbonate, meandering channel at end of Tuban stage, channel and delta lobe in Ngrayong Sst. etc.)

Darmawan, F.H., S. Shahar, T. Kurniawan, M.J.B. Hoesni, A.B. Abu Bakar, M. Mazied, M.A.B. Ismail, G. Kaeng & A.H. Wong Abdullah (2018)- North Madura platform charging and entrapment modeling study: an effort to understand hydrocarbon filling history in Bukit Tua field. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-50-G, 15p.
(Presence of oil and gas fields in N Madura Platform attributed to long distance migration from Central Deep and Madura Basin kitchen areas. In Bukit Tua and Jenggolo Field complex, oils initially trapped in lowest part of N Madura Platform (Ngimbang Fm, CD Carbonate). As charging of oil continued, top seal breached and oil filled overlying Kujung II clastics and carbonates. Later gas generation was able to breach Kujung II)

De Groot, C. (1851)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, I. Eiland Bawean. Natuurkundig Tijdschrift voor Nederlandsch Indie 2, 1, p. 263-274.
(online at: https://ia801900.us.archive.org/10/items/natuurkundigtijd1850koni/natuurkundigtijd1850koni.pdf)
('Contributions to the geological and mineralogical knowledge of the Netherlands Indies, I. Island Bawean'. Most of island composed of volcanic rocks, incl. tuffs, columnar basalts, porphyry. Some Tertiary limestones (with E-M Miocene larger forams; see Van Bemmelen 1949, p. 321), pure white quartz sandstones (used in factory in Surabaya) and non-commercial Pliocene? lignitic coal. (but: Hochstetter 1858, p. 291: fossils collected by De Groot included Terebratula, Pecten and Spondylus that looked rather like Cretaceous to him) With one map)

De Oliveira Martins, W. & R. Fainstein (2001)- Tectonics and stratigraphy of East Java Sea North of Madura Island, Indonesia. In: 7th Int. Congress Brazilian Geoph. Soc. (Salvador 2001), p. 1018-1021.
(Extended Abstract. E Java Sea basin M Eocne- E Miocene extension led to development of NE-SW trending tilted horst blocks and grabens. M Miocene and younger inversion structures. Late Miocene wrench-associated

structures, E Pleistocene compressional phase. Central Depression is inverted half-graben. Pre-Ngimbang Megasequence mud-dominated with some siltstone-sandstone and rare late Cretaceous marine microfossils)

Dinkelman, M.G., J.W. Granath, P.A. Emmet & D.E. Bird (2008)- Deep crustal structure of East Java Sea back-arc region from long-cable 2D seismic reflection data integrated with potential fields data. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-153, 6p.
(JavaSpan deep seismic imaging overview)

Dorobek S.L. & R. Adhyaksawan (2003)- Conditions conducive to coalescence of isolated platforms in the Miocene Wonocolo Formation, North Madura area, East Java Basin, Indonesia. AAPG Ann. Conv., Salt Lake City 2003. *(Abstract only)*
(M-U Miocene (~12-6 Ma) Wonocolo Fm offshore N Madura numerous isolated carbonate platforms, with up to five growth phases. In W part of area individual platforms larger in plan view than age-equivalent platforms to E and show initial development of several closely spaced isolated platforms that coalesce at middle of growth history into larger composite platforms. Leeward (E) margins of W-most platforms greatest amounts of progradation and filling of interplatform troughs. Smaller platforms in E part of study area steeper sided, farther apart, and largely aggradational geometries, possibly due to faster subsidence rates in E)

Dorojatun, A., A. Kusnin, M. Hutabarat, R.K. Suchecki & S.G. Pemberton (1996)- Geological reservoir heterogeneity of Talang Akar depositional system in the Jatibarang Sub-Basin, Offshore NW Java, Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. 2, p. 357-373.
(Talang Akar reservoirs in Jatibarang sub-basin along N border fault heterogeneous, coarse-grained sandstones to sandy mudstones deposited in fluvial-delta setting. Deposits historically regarded as alluvial-fan facies including highly anisotropic braided-stream fill and debris flows. Sedimentology and ichnology used to re-interpret these deposits as coarse-grained fluvial-deltaic to marginal marine with deposition along N border fault related to changes of base level or relative sea level that includes tectonic movements)

Easley, D., F. Yustiana & A. Hidayat (2011)- Seismic lineament analysis of a fractured limestone reservoir in the Ujung Pangkah Field. Proc. 35th Ann. Conv. Indon. Petrol Assoc. (IPA), Jakarta, IPA11-G-105, p. 367-375.
(Ujung Pangkah field in E Java Sea mainly fractured limestone reservoir of E Miocene age that has undergone several stages of deformation. Paleogene extensional faulting may have lasted throug Kujung Fm deposition. Late Early Miocene NNE-SSW compression seen from seismic isochrons, with field developing northerly tilt as well as inversion of older normal faults. N of Ujung Pangkah Fld also E-W trending left lateral strike-slip movement)

Ebanks, W.J. & C.B.P. Cook (1993)- Sedimentology and reservoir properties of Eocene Ngimbang clastics sandstones in cores of the Pagerungan-5 Well Pagerungan Field, East Java Sea. In: C.D. Atkinson et al. (eds.) Clastic rocks and reservoirs of Indonesia, IPA Core Workshop Notes, Indon. Petroleum Assoc. (IPA), p. 9-36.
(Sedimentological descriptions of Eocene gas-bearing fluvial clastics of Pagerungan field, E Java Sea)

Emery, K.O., E. Uchupi, J. Sunderland, H.L. Uktolseja & E.M. Young (1972)- Geological structure and some water characteristics of the Java Sea and adjacent continental shelf. United Nations ECAFE, CCOP Techn. Bull. 6, p. 197-223.
(Report on 1971Woods Hole marine geological- geophysical survey of Java Sea and part of Sunda Shelf. Identified NE trending basement ridges, etc.)

Emmet, P.A. (1996)- Cenozoic inversion structures in a back-arc setting, Western Flores Sea, Indonesia. Ph.D. Thesis Rice University, Houston, p. 1-277.
(online at: http://scholarship.rice.edu/handle/1911/16969)
(Geophysical-geological study of marginal basin in W Flores Sea. Underlying crust transitional between Sunda craton continental crust to W and Banda back-arc oceanic crust to E. Half-grabens began to form in M Eocene by extensional reactivation of thrusts in peneplained Cretaceous accretionary prism basement complex. Extension and regional subsidence continued until E Miocene, when compression began to invert extensional faults of half-grabens as thrusts. Inversion most dramatic during Late Miocene and Pliocene and continues

today. Paleogene orthogonal extension, oriented N-S. Neogene depositional sequences determined from seismic stratal patterns and biostratigraphy data compare generally favorably to Haq et al. (1987) global cycle chart)

Emmet, P.A. & A.W. Bally (1996)- Evolution of Cenozoic inversion structures, East Java Sea, Indonesia. AAPG Ann. Conv., San Diego May 1996. *(Abstract only)*.
(Study of deep water (>200m) subbasin in E Java Sea. Pelitic basement deformed in Cretaceous accretionary prism and uplifted/ peneplained in E Tertiary. ENE- trending half-grabens formed in Sunda back-arc in M Eocene- E Oligocene. Basin-bounding faults listric and inferred to sole into sub-horizontal detachment at <10 km. Extensional structures controlled by pre-existing thrusts and shaly bedding planes in basement. Eocene rifting in few deep basins. Oligocene rifting more broadly distributed in shallower basins. Inversion began in E Miocene as basin-bounding faults reactivated and graben-fill sediments displaced towards adjacent horst blocks. Most inversions trend ENE and grew in bathyal water depth. Inversion progressed through Miocene and culminated in development of regional basement-involved inversion high (E extension of Kangean high), uplifted and truncated in latest Miocene. Despite regional compression which continues today at deep structural level, small-displacement domino-style normal faults ubiquitous at shallow structural level and apparently form on flanks of growing inversions by gravity sliding)

Emmet, P.A. & P.R. Vail (1996)- Cenozoic inversion structures, East Java Sea, Indonesia: can tectonic and eustatic influences on stratal architecture be distinguished? AAPG Ann. Conv., San Diego 1996.
(Abstract only. Extensional half-grabens in Sunda back-arc filled by M Eocene non-marine siliciclastics, including lacustrine coals, transgressed by Late Eocene shallow-water carbonates on margins of rift basins with shale dominant in basin axes. Late Oligocene- E Miocene regional sag with aggradation of shallow water carbonates on basin margins, deep-water carbonate mudstone and shale in basin axes. Onset of compression in E Miocene reflected by increase in subsidence and sedimentation rates. Paleogene extensional basins progressively inverted as thick wedges of Miocene and younger calcareous mudstone accumulated on flanks. In Miocene N margin of basin strongly progradational reflecting tectonic stability and dominant eustatic influence, S margin back-stepped due to higher tectonic subsidence related to inversion process. In deep basin, horizons defining growth phases of inversion structures correlate with eustatically-controlled unconformities on basin margins)

Emmet, P.A., J.W. Granath & M.G. Dinkelman (2009)- Pre-Tertiary sedimentary ñkeelsò provide insights into tectonic assembly of basement terranes and present-day petroleum systems of the East Java Sea. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc., IPA09-G-046, 11p.
(E Java Sea deep seismic imaged up to 5 km of pre-M Eocene beds below angular unconformity, locally preserved in faulted synclines 20-50 km wide. These 'synformal keels' lie below known inversion structures, indicating Eocene extensional basins and Miocene inversions nucleated on pre-existing structures. E-W orientation of better imaged keels may represent fabric of source terrane, presumably Australian margin.)

Fahmi, B., A. Filza A., Y. Irsyadie A., J.A. Pribadi & D. Rakasiwi (2018)- Identification of biogenic gas potential using integrated seismic data, wireline log and geochemistry data; a study case: Muriah sub-basin, Bawean Arc, offshore Northern East Java. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-73-G, 18p.

Fainstein, R. (1987)- Exploration of the North Seribu Area, Northwest Java Sea. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 191-214.

Fainstein, R. & V.R. Checka (1988)- Seismic exploration of the Thousand Islands area, Java Sea. In: Proc. 58th Ann. Int. Mtg. Soc. Expl. Geophysicists (SEG), Anaheim, S8.7, p. 877-881.

Fainstein, R. & H. Pramono (1986)- Structure and stratigraphy of AVS Field, Java Sea. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 19-45.
(AVS Field multiple Oligocene Talang Akar Fm channel sand reservoirs. Two facies (1) fluvial/upper deltaic and (2) transitional/lower deltaic. Oil is on structural roll-overs confined laterally by growth faults of Thousand

Islands Fault System. No communication between multiple reservoir zones. Twenty oil- bearing reservoirs. Recoverable reserves >20 MBO)

Faisal, R., Bintoro W. & Munji S. (2005)- Deep reservoir challenge in Asri Basin, South East Sumatra. Proc. Joint Conv. 30th HAGI, 34th IAGI, 14th PERHAPI, Surabaya 2005, p.
(Deeper play in Asri basin tested in 1995 Hariet-2 well, penetrating Eo-Oligocene oil sandstone below 310' thick Banuwati Shale lacustrine source rock. Penetrated ~320' of Banuwati Clastics member that overlies granitic basement, with average porosity of 13.6%, permeability 10.8 mD. Sandstone heavily compacted, but widespread secondary moldic porosity)

Fisher, D.A. & L Suffendy (1999)- Dim spots and non-bright AVO associated with gas in the South Arjuna Basin, offshore NW Java. In: C.A. Caughey & J.V.C. Howes (eds.) Proc. Conf. Gas habitats of SE Asia and Australasia, Jakarta 1998, Indon. Petroleum Assoc. (IPA), p. 169-178.

Fletcher, G.L. & K.W. Bay (1975)- Geochemical evaluation, NW Java Basin. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 211-240.
(Early ARCO source rock paper, suggesting main source rocks are in U Cibulakan and Talang Akar Fms)

Forrest, J.K., A.Y. Sukmana, W. Suhana & I. Asjhari (2005)- Reservoir simulation challenges for modeling an oil rim with large gas cap in the Poleng Field, Kujung-I oil reservoir, East Java Basin, West Madura Block, Indonesia. In: SPE Asia Pacific Oil and Gas Conf., Jakarta 2005, SPE 93137, p. 1-16.
(On reservoir simulation model for Poleng field ~30km off N coast of Madura, producing oil from 1975-1978 the again since 1998, from Miocene Kujung Fm carbonates. Original oil-in-place 98.5 MMB Oil and 292 BCF gas. Thin oil column below large gas cap (see also Welker-Haddock et al. 2001))

Gordon, T.L. (1985)- Talang Akar coals- Ardjuna subbasin oil source. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 91-120.
(One of first papers to propose coals as oil source rocks in fields off NW Java)

Granath, J.W., J.M. Christ, P.A. Emmet & M.G. Dinkelman (2010)- Pre-Tertiary of the East Java Sea revisited: a stronger link to Australia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-007, 13p.
(Seismic lines over Pre-Tertiary in E Java Sea area suggests history of rift-fill, cratonic sedimentation and inversion similar to Goulburn Graben of Arafura Shelf. Suggest departure of E Java Terrane from Australian margin in Late Jurassic and suturing to SE Sundaland in mid-Cretaceous. N part of EJT (affected by Eocene Makassar Straits extension) probably related to E Indonesian islands and Tasman orogenic belt, while south correlates to Australian craton)

Granath, J.W., J.M. Christ, P.A. Emmet & M.G. Dinkelman (2011)- Pre-Tertiary sedimentary section and structure as reflected in the JavaSPAN crustal-scale PSDM seismic survey, and its implications regarding the basement terranes in the East Java Sea. In: R. Hall et al. (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 53-74.
(New regional seismic survey in Java Sea and Makassar Strait suggests E Java Sea underlain by continental basement with prolonged multiphase history of deposition punctuated by extensional and compressional events. E Java Terrane is major part of SE Sundaland between Meratus suture, Java arc and W Sulawesi orogenic belt, but is poorly constrained in N under N Makassar Basin and in Kalimantan. Precambrian-Permo-Triassic sedimentary section (age assumed) up to 8.5 km thick on basement in number of fault blocks, unconformably overlain by thin Cretaceous- E Paleogene overlap assemblage, unconformably overlain by M Eocene- Neogene clastics and carbonates representing Paleogene extension, sag, and Neogene inversion. E Java Terrane rifted from NW Australia in Jurassic and accreted onto magmatic arc of SE Kalimantan in Cretaceous)

Granath, J.W., P.A. Emmet & M.G. Dinkelman (2009)- Crustal architecture of the East Java Sea-Makassar Strait region from long-offset crustal-scale 2D seismic reflection imaging. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-047, 14p.
(East Java Sea-Makassar Straits, Banda Sea, Flores (oceanic) basin deep seismic lines)

Graetzer, M.K. (1980)- Upper Eocene-Lower Miocene planktonic foraminiferal biostratigraphy of wells JS 25-1 and JS 52-1, Offshore Eastern Java, Indonesia. M.Sc. Thesis University of Oklahoma, p. 1-112. *(Unpublished)*

Gresko, M.J. & P. Lowry (1996)- Seismic expression and channel morphology of a Recent incised-valley complex, offshore Northwest Java. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. Sequence Stratigraphy in S.E. Asia. Jakarta 1995, Indon. Petroleum Assoc. (IPA), p. 21-33.
(Identification of incised-valley complex on 3D seismic. Located within large erosional valley, 20-30km wide, >300 km long and >100m relief, likely formed during repetitive sea-level lowstands in Pleistocene. It focused drainage from fluvial systems in NW Java, SE Sumatra, and possibly S Borneo into area of present-day Java Sea. From there fluvial systems drained into Indian Ocean through Sunda Straits)

Gresko, M., C. Suria & S. Sinclair (1995)- Basin evolution of the Ardjuna rift system and its implications for hydrocarbon exploration, Offshore Northwest Java, Indonesia. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 148-161.
(Ardjuna Basin on S edge of Sunda craton, originated during Eocene- Oligocene rifting event. Large sag basin over three precursor rift halfgrabens, with varying amounts of primary hydrocarbon source rocks and reservoir facies, the Oligocene Talang Akar Fm)

Guntoro, A. (1999)- Tectonic and structural setting of the East Java-Flores Seas; an indication of a new subduction reversal polarity in eastern Indonesia. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symp. Shallow Tethys 5, Chiang Mai, p. 389-402.
(E-W oriented Tertiary sedimentary basins of E Java-Flores two major zones with back-arc thrusting, Wetar N of Wetar-Alor and Flores thrust N of Flores-Sumbawa. Hamilton (1979) proposed back-arc thrusts indicate subduction polarity reversal. Large negative free-air anomalies over accreted wedge 30 km S of deepest part of the Flores Sea suggest underthrusting plate is pulled down, as in subduction zones. Crustal loading between Flores and Flores thrust cannot completely explain deflection of Flores Basin lithosphere if bent as elastic plate. Underthrusting plate may extend to negative gravity anomalies of Flores Island, or gravitational instability is pulling it down into asthenosphere. Effect of subduction polarity influenced by type of basement)

Hadiyanto, N., D.E. Sartika, F. Deliani & O. Takano (2010)- Integrated 3-D Static reservoir modeling of Upper Pliocene Paciran carbonate in the Sirasun gas field, Kangean Block, East Java Basin. Proc. 34th Ann. Conv. Indon. Petroleum Geol. (IPA), Jakarta, IPA10-G-072, 12p.
(E Java Sea Sirasun Field 1993 discovery with >200' gas column Upper Pliocene Mundu Fm globigerinid foraminiferal grainstones (called 'ramp-type platform facies'). Gas biogenic, >99% methane)

Hafsari, S.W. & S.U. Choiriah (2002)- Characteristics of the lithofacies and depositional environment of the Eocene Ngimbang carbonate buildup, Wk-3 Well, Kangean PSC East Java Sea, Indonesia. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 29-41.
(350' of core in Eocene Ngimbang carbonate in well 'Ray 3' (=West Kangean 3?) immediately W of Kangean island, E Java Sea. Shallow platform lagoonal facies rich in miliolids overlain by rapidly deepening upward through Late Eocene transitional facies of Nummulites-rich packstone facies to deep marine platform facies, also with nummulitids. morozovellid planktonic foraminifera and platy corals)

Hafsari, S.W. & S.U. Choiriah (2003)- Diagenesis and fracture development of the Eocene Ngimbang carbonate RD-3 well, RD PSC, East Java Sea, Indonesia. Proc. 32nd IAGI and 28nd HAGI Ann. Conv., p. 1-6.
(Eocene Ngimbang Carbonate buildup in core from RD 3 well, W of Kangean Island, affected by deep marine platform diagenesis and shallow marine platform diagenesis. Shallow marine platform affected by marine diagenesis, meteoric subaerial exposure and burial diagenesis. After burial to 12,000' Ngimbang carbonate formation uplifted by inversion to 7000', important for development of fracture porosity. Low average matrix porosity (1.8%) and permeability (0.1 md). Upper sequence did not develop fracture porosity because of high detrital clay content and has poor reservoir potential)

Harmony, B., L. Harvidya, S.L. Supardi, F. Alkatiri, P. Mesdag, R. Van Eykenhof et al. (2003)- Time-elapse simultaneous AVO inversion of the Widuri field, offshore southeast Sumatra. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-13.

Harris, M. (2001)- East Java- the Kujung Formation revisited. SEAPEX Press 4, 6, p. 16-25.
(Brief review of Kujung Fm Oligocene-Miocene carbonate play and recent hydrocarbon discoveries)

Harsian, H. (2018)- Exploration challenge in Southern Basin area of East Java basin- an aftermath of South Saubi drilling campaign. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-91-G, 15p.
(South Saubi well S of Kangean island in E Java Sea surprisingly drilled >3500' of Miocene? volcanics/ volcanoclastics, just below top of Kujung Limestone. Exact age of volcanics unknown)

Hartanto, S., B. Sapiie, I. Gunawan & B. Wibowo (2018)- Analisis sekatan dan karakteristik sesar pada Formasi Kujung Reef di Kompleks Lapangan KE, Cekungan Jawa Timur: implikasi terhadap migrasi hidrokarbon. Bulletin of Geology (ITB) 2, 1, p. 134-148.
(online at: https://buletingeologi.com/index.php/buletin-geologi/issue/view/4/Paper-1%20vol.%202%20no.%201)
('Seal analysis and fault characteristics in the Kujung Reef Formation at the KE Field Complex, East Java basin: implications for hydrocarbon migration'. Geologic modeling and fault seal analysis of Kujung Reef formation at JS-1 ridge, E Java Sea)

Hartono, H.M.S. (1965)- Age and correlation of the geological formations found in Kangean. Proc. Baruna Expedition, 1, A-B-C, 1, p. 69-76.

Henk, B. (1992)- Tectono-stratigraphy of a Late Eocene rift system within the Kangean PSC Block-East Java Sea, Indonesia. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Brief Abstract only)*.
(Late Eocene extension led to formation of E-W trending rift system in Kangean Block, with series of sediment filled, facing and non-facing half-grabens. Late Miocene structural inversion overprinted earlier extensional fabric. Asymmetric half-graben axes sites for Ngimbang Clastics source and reservoir facies and deepwater Ngimbang Carbonate facies. High basement blocks on margins sites for thin clastic deposits and thick shallow water carbonate buildups. Ngimbang Shale blanketed entire carbonate system)

Hughes, T.M., J.A. Simo, A.S. Ruf & F. Whitaker (2008)- Forward sediment modeling of carbonate platform growth and demise, East Java basin: example North Madura. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-117, 10p.

Hutapea, E., Nusatriyo & C.H. Wu (1988)- The K-39 reservoir characterization for simulation, Ardjuna basin, offshore, Northwest Java. Proc. 17th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 99-117.
(K-39 sandstone reservoir main producing interval in U Cibulakan Fm of K field, offshore NW Java. E-M Miocene NE-SW trending shelf sand bar complex. Av. thickness 84' gross, 51' net, porosity 27%, perm. 152mD))

Ichimaru, Y. & H. Inoue (2015)- Exploration and development of Kangean block, East Java, Indonesia. J. Japanese Assoc. Petroleum Technologists 80, 1, p. 19-26.
(online at: https://www.jstage.jst.go.jp/article/japt/80/1/80_19/_pdf/-char/en)
(In Japanese, with English summary. Review of prospectivity of Kangean PSC block in E Java Sea. Two petroleum systems: (1) thermogenic oil-gas with pre-Ngimbang and Ngimbang Fm source rocks; (2) biogenic dry gas in shallow horizons. Terang-Sirasun gas field started production in 2012. S Saubi prospect large reef buildup of Kujung Lst, similar to Banyu Urip oilfield in NE Java (but mainly volcanics; Harsian 2018))

Ichimaru, Y., H. Nishita, T. Honda & H. Sutanto (2010)- The dynamic of hydrocarbon migration and accumulation around Kangean Island, East Java, Indonesia. Proc. Ann. Mtg. Japanese Assoc. Petroleum Technology, 2010. *(in Japanese)* *(Abstract only)*.

Ilahude, D. & M.S. Situmorang (1994)- Seismic reflection study on paleodrainage pattern of the Sunda River, off Southeast Kalimantan around Masalembo waters, Jawa Sea. J. Geologi Sumberdaya Mineral 4, 29, p. 2-10.
(Study of Pleistocene paleochannels in area near Masalembo, when Java Sea was exposed land area. Three channel types (horizons), mostly flowing from N to S, probably extensions of SE Kalimantan drainage, and merging with W to E oriented channel ('South Sunda River') in S of study area)

Indah, M.S., M. Natsir, D. Kadar & J. Setyowiyoto (2017)- Reconstruction chronostratigraphy in carbonate reservoirs surrounding wrench fault zone of RMKS, Sakala subbasin, East Java Basin, Indonesia. In: 79th EAGE Conf. Exhib., Paris 2017, p. *(Abstract)*

Indrasatwika, V., D. Hidayat & Hairunnisa (2017)- The Krisna sand: new potential within the Air Benakat Formation in the Krisna Field, Sunda Basin, Southeast Sumatra. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-124-G, 14p.
(Main producer in Krisna field is Baturaja Fm carbonate reservoir. Also production from some wells from poor-quality 200' thick Krisna Sand of M Miocene Air Benakat Fm (270 MBO cumulative production (?))

Isworo, H, U.A. Saefulah & T. Prasetyo (1999)- Depositional model of the MB Field Mid-Main carbonate reservoir Offshore Northwest Java, Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-7.
(MB field MMC build-up, EUR ~34 MBO, is N-S elongated patch reef complex, formed during several build-up development stages. Several transgressive-regressive cycles in overal transgressive succession. Karst breccia facies also recognized. Result of study is retrograding carbonate build-up model)

Johansen, K.B. (2003)- Depositional geometries and hydrocarbon potential within Kujung carbonates along the North Madura Platform, as revealed by 3D and 2D seismic data. Proc. Ann. Conv. Indon. Petroleum Assoc. (IPA), 2003, Jakarta, 1, p. 137-162.
(Numerous prospects along N Madura Platform in Kujung I and II/III carbonates. Structures in Kujung II/III large, low relief inversion anticlines, similar to Bukit Tua and Jenggolo fields. Kujung II/III carbonates different facies in stable carbonate platform area. Central part of N Madura Platform Kujung I buildups up to 150-250m high, 10s of km2 in size, separated by lagoonal facies. Kujung I and II/III carbonates extensively karsted; probably several phases of exposure. Kujung I play combined stratigraphic/ structural. Build-ups encased in mostly non-permeable sequences, but 'thief-beds' potential risk. Source rock in up to 6 km deep kitchen in SE, with 3-4 km potentially mature source rocks, mixed lacustrine, deltaic and marginal marine sediments (Ngimbang- Kujung Fms). Most traps 10-50 km from mature source, so carrier beds in Ngimbang or Kujung Fm critical. Long distance migration main risk, but proven by discoveries along N Madura Platform)

Johansen, K.B. (2005)- New insight into the petroleum system in the East Java- South Makassar Area. Proc. 2005 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 17p.
(Back-arc extension in Paleocene-Eocene formed basins around SE part Eurasian Plate. Three trends (1) S Makassar-Central Deep area, main faults NE-SW; (2) Sakala-Lombok Ridge, faults mainly E-W; (3) offshore SW Sulawesi overall NW-SE fault trends. Important inversion phase, particularly along Madura/Kangean wrench zone, initiated in E Miocene. Older extensional faults reactivated and some Eocene basins inverted. S Makassar Basin little affected by inversion. Inversion several phases through M/U Miocene- Present. Large number of leads: Ngimbang carbonate and clastic plays over Lombok Sub Basin; Eocene clastics and potential Late Oligocene carbonate plays in S Makassar, etc. Viable source rock main challenge in area.)

Kaldi, J.G. & C.D. Atkinson (1993)- Seal potential of the Talang Akar Formation, BZZ area, offshore NW Java, Indonesia. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 373-393.
(Seal potential comprises 1) seal capacity, 2) seal geometry and 3) seal integrity. In BZZ area best seal delta front shales: high seal capacity, thick, laterally continuous and very ductile. Potential is moderate in upper TAF transgressive carbonates: high seal capacity and continuous, but brittle and prone to fracturing. Delta plain shales and pro-delta shales poor seals due to limited seal capacity (delta plain) or too thin (pro-delta shales))

Kaldi, J.G. & C.D. Atkinson (1997)- Evaluating seal potential: example from the Talang Akar Formation, Offshore Northwest Java, Indonesia. In: R.C. Surdam (ed.) Seals, traps and the petroleum system, American Assoc. Petrol. Geol. (AAPG), Mem. 67, p. 85-101.
(Seal potential of various lithologies in U Oligocene Talang Akar Fm in offshore NW Java basin determined by (1) seal capacity (amount of hydrocarbon column height a lithology can support); (2) seal geometry (structural position, thickness and areal extent of seal); and (3) seal integrity. Best seal potential in delta-front shales (high seal capacity, thick, laterally continuous and very ductile))

Kaldi, J.G., D.S. MacGregor & G.P. O'Donnell (1997)- Seal capacity in dynamic petroleum systems: example from Pagerungan gas field, East Java Sea, Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum System of South East Asia and Australasia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 829-836.
(Seal capacity measurements suggest Ngimbang Shale top seal over Pagerungan Field, E Java Sea, supports maximum gas column of 213 m, but actual gas column is 328 m)

Kaldi, J.G., G.W. OóBrien & T. Kivior (1999)- Seal capacity and hydrocarbon accumulation history in dynamic petroleum systems: the East Java Basin, Indonesia and the Timor Sea region, Australia. Australian Petrol. Prod. Expl. Assoc. (APPEA) J. 39, 1, p. 73-86.
(Seals in E Java Basin dynamic rather than absolute barriers to fluid flow. Data from largest gas field, Pagerungan, suggest dynamically filling and leaking capillary trap, which may have been volumetrically larger in past. Timor Sea Neogene tectonism caused extensional faulting and basin formation. Faulting caused breaching of traps, whereas subsidence in new depocentres was drive for renewed hydrocarbon expulsion and migration, principally gas. In traps with high seal capacities, this charge of gas flushed preexisting oil accumulations. In other cases, breached traps refilled with gas over periods as short as perhaps 2-3 My)

Kamila, B., I. Muhsinah & E. Hartanto (2018)- Explore new insights in mature basin using play based exploration and common risk segment map: a case study of Sunda Basin, Indonesia. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-103-G, 13p.
(Play evalution of E Miocene Baturaja Lst Formation in Sunda Basin)

Keijzer, F.G. (1940)- A contribution to the geology of Bawean. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 43, 5, p. 619-629.
(online at: www.dwc.knaw.nl/DL/publications/PU00017446.pdf)
(Bawean island, Java sea, petrographic descriptions of rocks collected by Schmutzer in 1912: volcanic rocks (leucite-bearing; rel. young ?), E-M Miocene/Tf1-2 limestones with Miogypsina and quartz-sandstones. Some uncertainty whether the Bawean volcanics pre-date or postdate Miocene limestones)

Kenyon, C.S. (1977)- Distribution and morphology of Early Miocene reefs, East Java Sea. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 215-238.
(Classic paper on E Java Sea, N of Madura Island. Widespread, thick E Miocene limestone and shale sequence (Kujung Unit I), with reefs as exploration targets. Main E Miocene physiographic elements (a) deep water, E-W trending open marine clastic basin in S (E Java-Madura Basin), (b) extensive, E-W positive area of shallow water carbonate deposition to N (E Java-Madura Shelf), with high energy bank along S margin, (c) Central Depression with open marine, fine clastics- limestones with bioherms (Poleng Field); (d) NE-SW trending JS-I Ridge NW of C Depression, with shoal water carbonates. E Bawean Trough to W of JS-1 Ridge. Kujung Unit I depositional trends influenced by pre-E Miocene NE-SW structural grain along Asian continental margin)

Kohar, A. (1985)- Seismic expression of Late Eocene carbonate build-up features in the JS-25 and P. Sepanjang trend, Kangean Block. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 437-447.
(Over 20 carbonate build-ups at top Late Eocene carbonate shelf sequence. Features grew over basement highs, spreading E-W across Sepanjang island- JS25 area in Kangean block off N Bali. JS25-1 well penetrated >1000' of recrystallized Late Eocene limestone. Secondary porosity and fracturing produced good reservoirs)

Kovacs, P.P. (1982)- Rama reservoir model study. In: Offshore South East Asia 82 Conference, Singapore, p. 1-20.

Landa, J.L., R.N. Horne, M.M. Kamal & C.D. Jenkins (2000)- Reservoir characterization constrained to well-test data: a field example. Soc. Petrol. Engineers (SPE) Reservoir Evaluation and Engineering 3, 4, p. 325-334.
(also in Proc. SPE Ann. Techn. Conf, Denver 2000, Paper 35611, p. 177-192)
(Reservoir description for Pagerungan gas field, E Java Sea. Discovered in 1985, producing since 1994 from fluvial M-U Eocene Ngimbang Clastics Fm)

Lelono, E.B. (2007)- Palynological investigation of the Oligocene sediment in East Java Sea. Lemigas Scientific Contr. 30, 1, p. 7-17.
(Palynology study of interval 3700-5400' in unspecified 'Wells 1 and 2' from E Java Sea, NE of Madura Island. Occurrence of pollen Meyeripollis naharkotensis and spore Cicatricosisporites dorogensis suggests Oligocene age, confirmed by foraminifera of Letter stages Tc-Te4 and nannozones NP21-NP25. Appearance of Dacrydium and Casuarina may indicate earlier arrival of Australian immigrants here compared other parts of Indonesia)

Lelono, E.B. & R.J. Morley (2011)- Oligocene palynological succession from the East Java Sea. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 333-345.
(online at: http://searg.rhul.ac.uk/pubs/lelono_etal_2011%20Java%20Sea%20Oligocene.pdf)
(Palynomorph assemblages from independently dated marine Oligocene succession from E Java Sea wells here named X and Y. Early Oligocene with common rain forest elements, suggesting everwet, rainforest climate. Early part of Late Oligocene much reduced rain forest elements with grass pollen, indicating more seasonal climate. In latest Late Oligocene rainforest elements return in abundance, suggesting superwet climate. Palynological succession similar to Sunda Basin, W Java Sea)

Lelono, E.B. & R.J. Morley (2011)- Oligocene palynological succession from the East Java Sea. Lemigas Scientific Contr. 34, 2, p. 95-104.
(online at: www.lemigas.esdm.go.id/id/pdf/scientific_contribution/...)
(same paper as above)

Liu, X., Deng H.; Wang H., Wang S., Cui Yi & Di Y. (2009)- Sequence and depositional characteristics in syn-rift stage, Sunda Basin, Indonesia. Acta Sediment. Sinica, Beijing, 27, 2, p. 280-288.
(Five sequences in syn-rift section of Sunda basin. Depositional systems include fan delta, braided channel delta, fluvial, delta, nearshore subaqueous fans and beach)

Longley, I., C. Kenyon, A. Livsey & J. Goodall (2017)- Play mapping in the East Java Basin, Indonesia: a methodology for future exploration. In: 79th EAGE Conf. Exhib., Paris 2017, WS10, p.

Lunt, P. (2019)- The origin of the East Java Sea basins deduced from sequence stratigraphy. Marine Petroleum Geol. 105, p. 17-31.
(East Java Basin composed of at least six different basinal areas, with unique stratigraphic histories and petroleum systems. Formed as continuation of extension around Makassar Straits, not as back-arc basin. Elongate and anastomosing faults along S edge of extending crust, created unique stratigraphic zone S of Rembang Line Fault. Mid-Oligocene tectonic event created new Sibaru Trough depocentre. Poorly defined Ngimbang Formation should be abandoned)

Magee, T., C. Buchan & J. Prosser (2010)- The Kujung Formation in Kurnia-1: a viable fractured reservoir play in the South Madura Block. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-005, 22p.
(Kurnia-1well near S coast Madura island drilled rel tight (basinal?) Kujung Fm limestones, but reservoir potential enhanced by fractures)

Manur, H. & R. Barraclough (1994)- Structural control on hydrocarbon habitat in the Bawean area, East Java Sea. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. 1, p. 129-144.
(Bawean area two phases, Paleogene rift and Neogene reactivation. Eocene-Oligocene doming and faulting followed by subsidence and tectonic quiescence until E Miocene. NE-SW trending grabens formed in M Eocene

and filled with alluvial clastics, lateritic clays and lacustrine shales (source rocks). Basement onlap began in Late Eocene- E Oligocene with transgressive marine sandstones and limestones including reefs. Paleogene fault zones reactivated in Neogene. Wrench faulting, basin inversion or renewed subsidence from Late Miocene to Recent. Late Miocene structures generally dry, postdate main hydrocarbon generation. Pre-Late Miocene structures more attractive targets)

Matthews, S.J. & P.J.E. Bransden (1995)- Late Cretaceous and Cenozoic tectono-stratigraphic development of the East Java Sea Basin, Indonesia. Marine Petroleum Geol. 12, p. 499-510.
(E Java Sea Basin metamorphic basement, overlain by up to 3 km marine Upper Cretaceous sediments. Contraction and peneplanation of Cretaceous sediments and basement before middle E Eocene produced regional unconformity. E Eocene extension reactivated Cretaceous thrusts. E Eocene- E Oligocene normal faulting pulses, affecting progressively larger area with time. Paleogene fault-controlled sub-basins with fluvial, coastal plain and shelf clastic and carbonate sediments, recording overall transgression. E Oligocene regional subsidence; sediments dominated by deep marine clastics. Regional intra-Oligocene unconformity overlain by Oligocene- lowermost Miocene deep water calcareous mudrocks and limestones, locally onlapping Eocene rocks. Continuous regional subsidence during inversion history, resulting in gradual reversal of depocentre location. Paleogene depocentres became Neogene highs, Paleogene platforms Neogene depocentres. Tertiary structural evolution mainly dip-slip fault movement during extensional and contractional phases. Geometries similar to positive flower structures evolved by reverse reactivation of geometrically complex extensional fault system)

Maulin, H.B., C. Armandita, M.M. Mukti, D. Mandhiri, D. Rubyanto & S. Romi (2012)- Structural reactivation and its implication on exploration play: case study of JS-1 Ridge. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-072, p. 1-13.
(JS-1 Ridge in West Madura Offshore area at least three tectonic regimes: Eocene NE-trending extension-rifting, Neogene wrenching and Late Neogene compressional thrust folding. JS-1 Ridge is basement high on basement that probably is Australia-derived microcontinent 'Argoland', accreted to Sundaland in Paleocene. M-Late Miocene uplift in E part of basin, associated with E-W trending, down-to-S normal faults. Further uplift/ N-S compression in Late Miocene-E Pliocene. Most intense deformation in Late Pliocene- E Pleistocene. Main play E-M Miocene Kujung Fm carbonates)

Maulin, H.B., A. Nugraha, C. Sutisna, A. Prasetya, I. Harun, D. Rubyanto & B. Wibowo (2016)- JS-1 Ridge: exploration in ancient melange basement high. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 98-103.
(JS-1 Ridge in Java Sea is NE-tending horst-like structure, formed in Eocene or before, flanked by East Bawean Trough in W and Central Deep in E. Well basement penetrations in N part dominated by basic plutonic rocks (gabbro, basalt, and serpentinite in one well with ~81 Ma Ar/Ar age). Center of JS-1 Ridge composed of metamorphic rocks. In South diorite, volcano-clastics, to altered andesite (Ar/Ar age ~71 Ma). Southernmost area dominated by (meta-)volcanics, also possible Pretertiary sediments. JS1 rocks possibly represent E-M Cretaceous melange)

Maynard, K., M. Decker & W.A. Morgan (2005)- Thorough data acquisition during appraisal mitigates development risk of a thin karst reservoir, Bukit Tua reservoir, East Java, Indonesia. Petrol. Expl. Soc. Great Britain Carbonate Conf., Nov. 2005, p. *(Abstract only)*
(Early Oligocene carbonate reservoir model discrete thin karst zones <30' thick in offshore N Madura Platform wells. Increased permeability associated with karst confined to thin zones, leaving much of matrix with low permeability that is not expected to contribute to reserves. Karst zones exhibit varying degrees of porosity-permeability because of dissolution and probable fracture enhancement and flowed up to 4500 BOD at DST)

Maynard, K. & W.A. Morgan (2005)- Appraisal of a complex, platform carbonate, Bukit Tua discovery, Ketapang PSC, East Java Basin, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 317-330.

(Bukit Tua 2001 N Madura platform, E Java Sea, oil and gas discovery in 300' section of E Oligocene Ngimbang Fm/ 'CD' platform carbonates on basement, and in overlying Kujung Fm. Many uncertainties remain regarding distribution of facies and porosity. Includes overview of regional setting)

Mazied, M. (2002)- Application of sequence stratigraphic concepts and depositional models for reservoir mapping: an example from the Upper Cibulakan Formation in the L and LL Fields, Offshore Northwest Java. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 597-607.
(late E and M Miocene Massive and Main sand reservoirs, some interpreted as NNE trending tidal ridges)

McCaffrey, R. & J. Nabelek (1987)- Earthquakes, gravity and the origin of the Bali Basin: an example of a nascent continental fold-and-thrust belt. J. Geophysical Research 92, p. 441-460.
(Bali Basin is downwarp in Sunda Shelf crust, produced by thrusting along Flores backarc thrust zone)

McChesney, D., A. Rusmantoro, M.G. Smith & S. Mursid (1992)- The Krisna lower Batu Raja waterflood: an updated case history. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 21, 2, p. 403-430.

Miller, N.R. & J.G. Kaldi (1990)- Strontium isotope chronostratigraphy and diagenesis of the Batu Raja Limestone, offshore Northwest Java, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 74, 5, p. 728-729. *(Abstract only)*
(Sr isotope chronostratigraphy from 7 Bima field wells indicates Batu Raja limestone deposition started in Late Oligocene (26-27 Ma) and ceased in E Miocene (21-22 Ma). Eustatic sea level drop at ~21 Ma exposed Batu Raja carbonate platform to meteoric diagenesis and formed reservoir facies. Sr ratios of most Bima samples follow normal Tertiary trend. Zones significantly affected by early meteoric diagenesis have anomalously low ratios. Also, lower 87Sr/86Sr values in altered samples near Seribu fault. Migration of low 87Sr/86Sr early Tertiary marine formation waters up fault and into porous horizons likely mechanism for rock alteration)

Mohr, E.J.C. (1919)- Sedimenten der Java Zee. Handelingen Eerste Natuurwetenschappelijk Congres Ned. Indie, p. 219-223.
('Sediments of the Java Sea')

Molina, J. (1985)- Petroleum geochemistry of the Sunda Basin. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 143-179.
(Shale source rocks in Oligocene Talang Akar and E Miocene Batu Raja Fms. rich in amorphous and herbaceous kerogen, with 1-6% TOC in Talang Akar Fm. Upper Talang Akar coaly, with good source potential. Overlying Batu Raja Fm TOC up to 3.0%, also dominated by woody-coaly organic matter. Eight oil families identified, indicating generation from terrestrial and aquatic kerogen types. Oil-source correlations suggest oils from center or W margin of Sunda Basin mostly from middle Talang Akar, along E margin mostly from lower Talang Akar. Oil generation from lower Talang Akar started in M-L Miocene)

Moulton, D.E., B.S. Wilton & G.G. Ramos (1998)- Optimizing drilling strategies in a tectonic belt, Pagerungan Field, north of Bali. In: Proc. IADC/SPE Drilling Conference, Dallas, IADC/SPE Paper 39357, p. 559-572.

Mudjiono, R. & G.K. Pireno (2002)- Exploration of the North Madura platform, offshore, East Java, Indonesia. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 707-722.
(N Madura High E-W trending Ngimbang (M Eocene- E Oligocene) and Kujung (Late Oligocene- E Miocene) shelf edge carbonates. New Bukit Tua and Jenggolo oil-gas discoveries targeted layered Kujung platform carbonates on N Madura Platform, 10- 20 km from fringing reefs. Porosity may be from repeated exposure on crest of old Madura Platform. Migration pathways via permeable Kujung I carbonates, near-basement carrier beds and Ngimbang and Kujung II/III carbonates. Fringing reefs viable play, as indicated by discoveries in Ketapang PSC (Bukit Panjang 2000; Payang 2001), nearby W Madura blocks (KE-23B, KE-13, KE-24, KE-30) and Pangkah (Ujung Pangkah 1998; Sidayu 2000). With good basement and paleogeography maps).

Murtani, A.S., D.W. Dwiperkasa, P. Patria & J. Xu (2015)- Seismic lineament analysis of a fractured limestone reservoir in the Ujung Pangkah Field. Proc. 35th Ann. Conv. Indon. Petrol Assoc. (IPA), Jakarta, IPA15-G-055, 12p.
(Oligocene- E Miocene Kujung Fm carbonate reservoir in Ujung Pangkah oil field (SW part of JS-1 Ridge, E Java Sea) with three dominant fracture orientations: NE-SW, NW-SE and E-W)

Natasia, N., M. K. Alfadli & I. Syafri (2017)- Eocene- Late Miocene tectonostratigraphy of Bima Field in Northwest Java Basin. J. Geol. Sciences Applied Geology (UNPAD) 2, 3, p. 109-118.
(online at: http://jurnal.unpad.ac.id/gsag/article/view/15619/7346)

Nayoan, G.A.S. (1975)- Geology of the Karimunjawa Islands. Geologi Indonesia (IAGI) 2, 2, p. 13-20.
(Karimunjawa Islands in Java Sea N of Semarang up to >500m elevation. Two formations: Karimunjawa Fm Pre-Tertiary, unfossiliferous, steeply dipping, low-metamorphic sandstones, conglomerate, phyllite, possibly isoclinally folded, unconformably overlain by horizontal, ?Holocene basalts. Older formation correlated with Upper Triassic flysch by Van Bemmelen (1949), and probably southernmost Sundaland. Structural grain NW-SE, steeply dipping, mainly to SW (so unlikely to be part of Cretaceous accretionary terrane?; JTvG). Karimunjawa Arch surrounded by onlapping Tertiary sediments, probably always exposed during Tertiary)

Nedom, H.A. & H.J. Ramsey (1972)- Exploration and development of a new petroleum province, Java Sea, Indonesia. Proc. First Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 111-137.

Noble, R.A. & F.H. Henk (1996)- Source characteristics of Terang-Sirasun bacterial gas field. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1p. *(Abstract only)*
(Terang-Sirasun gas field 100 km N of Bali in E Java Sea. ~1 TCF in Plio-Pleistocene Paciran Fm sandstone and foraminiferal limestones. Gas >99% methane, of microbial origin in anoxic marine setting)

Noble, R.A. & F.H. Henk (1998)- Hydrocarbon charge of a bacterial gas field by prolonged methanogenesis: an example from the East Java Sea, Indonesia. Organic Geochem. 29, 1-3, p. 301-314.
(Terang-Sirasun 1982 field N of Bali >99.5% biogenic methane in Late Miocene-Pliocene Paciran Mb sandstone and globigerinid limestone, sealed by Quaternary Lidah Fm shales)

Nugraha, H.D., I.W.A. Darma & F.H. Darmawan (2016)- Ngimbang clastics play in the East Java Basin: new insight and concepts for North Madura Platform. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-98-G, 13p.
(Ngimbang clastics syn-rift succession in several NE-SW trending Paleogene half-grabens in E Java Basin. Consists of thick (~90m), but laterally-restricted fluvio-deltaic deposits, and thinner (~60m) but more extensive glauconitic shallow marine sandstones. Pagerungan Field produced 1.5 TCF gas from this play. Play fairway analysis with emphasis on reservoir distribution on N Madura Platform. Underlying basement NE-SW trending fold-thrust belt(s) (steeply dipping reflectors to NW on 3D seismic?))

Nugroho, A., A. Ginanjar, S. Radiansyah & P. Syuhada (2017)- Integrated G & G evaluation to unveil new shallow gas opportunities in Cisubuh Formation, APN Field, ONWJ PSC, Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(Shallow gas in Pliocene Cisubuh Fm sandstones in offshore NW Java basin formerly viewed as shallow drilling hazards, now potential targets (e.g. over ANP, Lima fields). Biogenic gas)

Pangesty, N.J., Aveliansyah, H. Nugroho & D. Utomo H. (2017)- Hydrocarbon potential mapping for fractured basement reservoir plays in the offshore North-West Java Block. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-670-SG, 19p.
(Hydrocarbon indications in Pretertiary basement of offshore NW Java Basin mainly in metamorphic rocks (schist, gneiss, marble, quartzite))

Pepper, A.S. & S.J. Matthews (2000)- Structural and petroleum systems modelling of the Eocene Ngimbang-sourced petroleum systems of the eastern East Java Sea. Part 2: Petroleum systems model. AAPG Int. Conf. Exhib., Bali, Indonesia, 1p. *(Abstract only)*
(Thermal modeling of hydrocarbon source potential of coals and carbargillites in Eocene Ngimbang clastics of E Java Sea suggests large areas of basin are at maximum burial and thermal stress today. Due to high oil expulsion temperature (140° C at 5° C/Ma) and relatively limited post-rift deposition areas of effective kitchen severely limited)

Phillips, T.L., R.A. Noble & F.F. Sinartio (1991)- Origin of hydrocarbons, Kangean Block Northern platform, offshore northeast Java Sea. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 637-662.
(Oil in JS 53 and gas in Pagerungan from Eocene and older source rocks in E-W trending kitchen between fields. Late Eocene Ngimbang Fm coals and carbonaceous shales correlated to oil at JS 53 and condensate at Pagerungan. Paleocene-M Eocene Pre-Ngimbang Fm probable gas source at Pagerungan. Cretaceous sediments overmature and non-generative. Seismic shows E-W trending syncline in Cretaceous and Pre-Ngimbang N of Pagerungan, with N limb subcropping beneath JS 53 and Igangan-1. S limb subcrops beneath Pagerungan. Ngimbang and Pre-Ngimbang at maximum burial today in syncline. Hydrocarbon generation triggered by sedimentation associated with Late Miocene N-S compressional event)

Pireno, G.E. (2004)- Deep-water petroleum systems of the Southern Basin, North Lombok, Indonesia. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier exploration in Asia and Australasia Symposium, Indon. Petroleum Assoc. (IPA), Jakarta, p. 321-332.
(Southern basin is Early Tertiary NE-SW and E-W half-graben, with sedimentation starting with M Eocene lacustrine sediments. Marine incursion started in mid Late Eocene. Inversion events in Late Eocene, mid-Oligocene and Plio-Pleistocene. L46-1 well tested oil in Eocene non-marine sandstone)

Poggiagliolmi, E., V.R. Checka, R.C. Roe & R. Purantoro (1988)- Reservoir petrophysics of Bima Field, N.W. Java Sea. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 359-373.
(Mapping of porosity on petrophysically calibrated seismic data. Bima Field large field in Miocene Baturaja Fm carbonate buildup on flank of N-S trending basement high and underlying Talang Akar Fm sandstones)

Ponto, C.V., C.H. Wu, A. Pranoto & W.H. Stinson (1988)- Improved interpretation of the Talang Akar depositional environment as an aid to hydrocarbon exploration in the ARII Offshore Northwest Java contract area: Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 397-422.
(Oligocene Talang Akar Fm previous facies interpretation deltaic and marine. New interpretation determined four environments: continental, delta complex, shore zone and shelf. Delta complex and shore zone good source and reservoir potential. Four stages in Talang Akar Fm depositional history)

Ponto, C.V., C.H. Wu, A. Pranoto & W.H. Stinson (1989)- Controls on hydrocarbon accumulation in the Main, Massive sandstones of the Upper Cibulakan Formation, Offshore Northwest Java Basin. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology Mineral Hydrocarbon Resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 345-361.
(M Miocene Upper Cibulakan E-M Miocene 'Massive' and 'Main' hydrocarbons controlled by depositional facies (deltaic and shelfal) and mature Oligocene source rock distribution. Four cycles of delta progradation from northern source)

Posamentier. H.W. (2001)- Lowstand alluvial bypass systems: incised vs. unincised. American Assoc. Petrol. Geol. (AAPG) Bull. 85, 10, p. 1771-1793.
(Miocene unincised and Pleistocene incised valleys imaged on 3D seismic on shelf offshore NW Java)

Posamentier. H.W. (2002)- Ancient shelf ridges- a potentially significant component of the transgressive systems tract: case study from offshore northwest Java. American Assoc. Petrol. Geol. (AAPG) Bull. 86, 1, p. 75-106.
(3-D seismic of Miocene off NW Java shows extensive shelf ridge deposits: linear bodies 0.3 - 2.0 km wide, >20 km long, and up to 17 m high. Features asymmetric, characteristically sharp-edged and thicker on one side.

Shelf ridge deposits tend to be sand prone and overlie ravinement surfaces. Ridges oriented parallel with axes of broad paleoembayments associated with structural fabric of basin. Ridges formed as result of erosion and reworking of sand-prone deltaic and/or coastal-plain deposits by shelf tidal currents, immediately after shoreline transgression. These deposits migrated across ancient sea floor, represent important component of transgressive systems tract, and have significant exploration potential.)

Posamentier, H.W. & P. Laurin (2005)- Seismic geomorphology of Oligocene to Miocene carbonate buildups offshore Madura, Indonesia. Soc. Expl. Geoph. (SEG) 2005 Ann. Mtg., Houston 2005, 4p. *(extended abstract)*
(Buildups N of Madura range from small patch reefs to platforms with outliers, and tide influenced elongate large patch reefs in Kujung 2, Kujung 1, and Wonocolo Fms. Clastic low-angle clinoforms from NNW beween deposition of Kujung 1 and Wonocolo Fms. Post Wonocolo basin subaerially exposed and veneered by fluvial systems. Small Kujung 2 patch-reef buildups <120- 500m wide. Across platform 100's of small circular buildups, with ~25-40m of relief. Larger Kujung 1 patch reefs coalesced to form NW-SE trending platform. Buildups within platform 600m- 2 km diameter and 200-300m thick. Smaller patch reefs 60-120m diameter at tops of buildups. Large build-ups off platform, up to 400m thick with diameters 1- 6.5 km. Anastamosing 200m deep and 650m wide channels normal to platform and terminate at buildup margin. Wonocolo buildups larger than Kujung buildups and have clinoform architecture: circular to elliptical, 4-10 km wide and up to 20 km long, separated by 1.2-2.5 km wide tidal channels)

Posamentier, H.W., P. Laurin, A. Warmath, M. Purnama & D. Drajat (2010)- Seismic stratigraphy and geomorphology of Oligocene to Miocene carbonate buildups offshore Madura, Indonesia. In: W.A. Morgan, A.D. George et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 175-194.
(Images of Miocene carbonate landscapes from 3D seismic off N Madura. Buildups range from small patch reefs to platforms with outliers. Tide-influenced elongate large patch reefs in Kujung 2 and K 1 and Wonocolo Fms. Clastics low-angle clinoforms from NNW. Top Wonocolo Fm subaerially exposed and site of densely spaced fluvial systems. Hundreds of small circular buildups of Kujung 2 range from 120-500m in diameter, and 25-40m of relief. Larger circular to elliptical patch reefs of Kujung 1 coalesced to form NW-SE trending platform. Buildups within platform 600m- 2 km wide and 200-300m thick. Smaller patch reefs at tops of buildups. Large buildups form off platform, up to 400m thick, 1-6.5 km wide. Anastamosing channels up to 200m deep and 650m wide, normal to platform. Woncolo buildups larger than Kujung (4-10 km wide, 20 km long), with internal clinoforms and separated from each other by tidal channels 1.2–2.5 km wide)

Posamentier, H.W., W. Suyenaga, D. Rufaida, R. Meyrick & S.G. Pemberton (1998)- Stratigraphic analysis of the Main Member of the upper Cibulakan Formation at E field, offshore northwest Java, Indonesia. Proc. 26th Ann. Conv. Indon. Petroleum Assoc., p. 129-153.
(Amplitudes in Upper Cibulakan Fm at E Field show E-W trending channel, likely deltaic. Biostratigraphic and sedimentologic data indicate open marine channel-fill. Main Member imaging reveals sand fields or patches, interpreted as sand waves migrating across transgressive surface of erosion)

Prasetya, A., S. Romi, A. Yumansa, R. Agustiana, M. Setiawan & I.M. Harun (2017)- An incised valley filled system on a Ngimbang Limestone sequence at JS-1 Ridge, offshore East Java Basin, Indonesia. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-507-G, 19p.
(Seismic evidence of undrilled N-S oriented incised valley in mid-Oligocene at Top Lower Ngimbang Fm carbonate-dominated section on JS-1 Ridge in E Java Sea)

Prasetyo, H. (1992)- The Bali-Flores Basin: geological transition from extensional to subsequent compressional deformation. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 455-478.
(Young back-arc thrusting N of Bali-Lombok-Flores, showing oceanic crust of Flores basin currently closing)

Prasetyo, H. & B. Dwiyanto (1986)- Single channel seismic reflection study of the eastern Sunda backarc basin, North central Flores, Indonesia. Bull. Marine Geol. Inst. Indonesia 2, 1, p. 3-11.

Prasetyo, H. & L. Sarmili (1994)- Structural and tectonic development of West-East Indonesian backarc transition zone; implications for hydrocarbon prospect. Bull. Marine Geol. Inst. Indonesia 9, 2, p. 23-60.
(W-E Indonesian Backarc Transition Zone (WEIBTZ) in E Sunda Arc System between Makassar Strait to N Bali and to E by NW-SE trending submarine ridge N of Flores. Tectonic phases: 1. Paleocene rifting; 2. M Miocene and younger basement-involved inversion to form 'Sunda Folds', related to collision of Buton micro-continent with Sulawesi arc. 3. Flexure of SE Sunda shield margin to S beneath volcanic ridge; 4. Neogene back arc fold-thrust zone, associated with Australian margin-Banda Arc collision and subduction of Roo Rise oceanic plateau in Sunda Trench S of Bali. Westward transition from well-defined accretionary wedge to fold structural styles indicates W-ward decrease in shortening. Back arc thrusting N of Lombok reflects initial stage of arc polarity reversal, in which oceanic crust of Flores Sea subducted S-ward beneath arc, while Bali Basin represents analog of initial stage of foreland fold-thrust belt. Back arc region of E Sunda arc currently closing)

Prasetyo, H., Y.R. Sumantri, B. Situmorang & S. Wirasantosa (1995)- The 'Doang Borderland System' in the Southeast Sunda Shield margin: implications for hydrocarbon prospect in the eastern Indonesia frontier region. In: Int. Seminar on the sea and its environments, Ujung Pandang 1995, p.
(Seismic, gravity, drill-holes, side-scan seafloor mapping and Airborne Laser Flourescensor data used to determine geologic-tectonic development of "Doang Borderland System", a NE-SW and E-W series of ridges and deep basins in E Sunda Backarc. Basement consists of mixed oceanic, continental and Paleogene volcanic rocks, suggesting multiphase deformation. At least five geologic- tectonic episodes: (1) Some of Pre-Tertiary and economic basement show compressive regime (subduction/ collision); (2) Most of DBS Paleogene extensional regime; (3) extensional regime inverted to form 'Sunda Fold' structures; (4) Flexural downbowing to S of SE Sunda Shield margin (N basin margin) alongN Sunda volcanic ridge; and (5) Backarc fold-thrusting since Neogene, associated with Australian margin- Sunda Arc collision and Roo Rise (oceanic plateau) subduction in Sunda Trench. Back arc portion of the DBS currently closing and will form suture zone in future)

Prasetyo, T. & Sugeng Herbudianto (1997)- First screening method use in low contrast low resistivity pay evaluation of the upper Cibulakan reservoirs in the L Field, offshore Northwest Java. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 58-70.
(On evaluation of Miocene low resistivity pay horizons in L field, Arjuna basin, offshore NW Java)

Pratama, W.V., A. Ikhrandi, T. Nugroho, F. Fathurrahman, H. Utomo & R. Amami (2015)- Bawean island as a new geoturism destination in East Java basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-110, 10p.
(Geotourism potential of Bawean Island on Bawean Arch, E Java Sea. With outcrops of Late Oligocene- E Miocene limestone, Late Miocene- Pliocene quartz sandstones and Pleistocene volcanics. Oil seep at in Mt. Lantung, Sangkapura district, S Bawean)

Primadani, G.S., I.M. Watkinson, H. Gunawan & D. Ralanarko (2018)- Tectonostratigraphy of the ASRI Basin, SE Sumatera, Indonesia: unlocking the hidden potential of Oligo-Miocene reservoirs and implications for hydrocarbon prospectivity. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-19-G, 14p.
(Brief review of rel. well-known basin)

Prior, S.W. (1987)- Bima Field, Indonesia, a sleeping giant. In: M.K. Horn (ed.) Trans. 4th Circum Pacific Council for Energy and Mineral Resources Conf., Singapore 1986, p. 199-212.
(On large ARCO Bima oil field, offshore NW Java, with ~100 MBO of recoverable reserves. 2/3 of oil in partly stratigraphic trap of E Miocene Baturaja Limestone. Additional pay in deeper Talang Akar Fm sst. First drilled in 1974 by ZZZ-1 well, but at that time deemed non-commercial and heavy oil)

Priyono, R., J. Widjonarko, E. Sunardi & B. Adhiperdana (2007)- Petroleum potential of the East Java- Lombok basin, North and South Makassar Strait and offshore Kutei basin. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, G-068, 12p.
(General paper promoting hydrocarbon potential)

Purantoro, R., P.J. Butterworth, J.G. Kaldi & C.D. Atkinson (1994)- A sequence stratigraphic model of the Upper Cibulakan sandstones (Main Interval), offshore Northwest Java Basin: insights from U-11 Well. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 289-306.

Radke, M., J. Rullkotter & S. P. Vriend (1994)- Distribution of naphthalenes in crude oils from the Java Sea: source and maturation effects. Geochimica Cosmochimica Acta 58, p. 3675-3689.
(C1-C3 naphthalenes and cadalene determined in 60 crude oil samples from Sunda, Arjuna and Jatibarang basins and in sample of Oligocene Talang Akar Fm resinite. Oils from Ardjuna and Jatibarang basins mainly derived from terrestrial sources. Transition to marine depositional environment in Sunda basin, indicated by decrease in C29 sterane relative abundance from 70 to 30%)

Rahardiawan R. & C. Purwanto (2014)- Struktur geologi Laut Flores, Nusa Tenggara Timur. J. Geologi Kelautan 12, 3, p. 153-163.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/256/246)
('Geological structures of the Flores Sea, East Nusa Tenggara'. Shallow seismic lines of Flores Sea between SE Sulawesi/Buton and Flores, with accretionary prisms, inactive volcanoes and active faults at seafloor)

Ralanarko, D., H. Gunawan, P. Nugroho, Sun Pengxiao & Su Chonghua (2015)- Uncertainty on stratigraphic heterogeneities within West Area and East Area of Widuri Field, offshore Ses Block, Indonesia: identifying 35-1 interval thin reservoir as an upside potential from fluvial channel system in Talangakar Formation, Asri Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-368, 6p.
(Reservoir sand distribution in fluvial 35-1 sand in Gita Mb of Talang Akar Fm in Widuri Field)

Ralanarko, D. & W. Senoaji (2012)- Shallow gas in ASRI Basin, Southeast Sumatra, Indonesia: drilling hazard or future potential? Proc. 37th Ann. Conv. Indon. Assoc. Geophys. (HAGI), Palembang, PITHAGI2012-065, 5p.
(Shallow gas in Air Benakat Fm sandstone reservoirs in Susana-01 around 1600- 1800' TVD and and in other wells at ~1400'. Gas accumulations can be identified as bright spots on 3D seismic. Gas 99% methane and viewed as biogenic, based on gas isotope lightness and low C2-C7 content. Most probably generated from shale in M-L Miocene Air Benakat Fm)

Ralanarko, D., J. Sunarta, H. Gunawan, P. Nugroho, W. Wijadhy, C.H. Su & P.X. Sun (2016)- Development of low resistivity pay in Asri Basin, Southeast Sumatera Block, Indonesia. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 108-113.
(Low resistivity of basal rift sandstone reservoirs tied to alluvial fan sediments)

Ralanarko, D., A. Wijaya, R.L. Jauhari & W. Senoaji (2012)- Geochemistry analysis for reoptimizing a gas well to be developed case study: ASRI Basin, offshore Southeast Sumatra, Indonesia. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-11, 6p.
('Asri Basin in W Java Sea with cumulative oil production of 549 MMBO. Talang Akar Fm main productive reservoir. Secondary target now is gas in Air Benakat Fm. Gas analysis: methane (98.9%), wetness 0.50%. Stable isotope data show gas unlikely to be biogenic gas without thermal hydrocarbons)

Ramadhan, G.C., Y.D. Setiawati, A. Ginanjar, P.K.D. Setiawan & P.I. Syuhada (2017)- Sub-facies coding of single sand ridge facies: a new approach to interpret detailed sand ridge reservoirs. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 7p.
(Discussion of EMiocene N-S trending shallow marine sand riges in U Cibulakan 'Main' and 'Massive' intervals of K, E and U fields, offshore NW Java basin (see also Setiawati et al. 2017)

Ramsay, H.J. & H.A. Nedom (1973)- Exploration and development of a new petroleum province; Java Sea, Indonesia. J. Petroleum Technology 25, 4, p. 395-401.
(Early paper on first 10 oil-gas discoveries made in offshore NW Java basins since start of exploratory drilling in 1968)

Ratkolo, T. (1994)- Reservoir characteristics and petroleum potential of the mid main carbonate, Upper Cibulakan Group, Northwest Java Basin, Indonesia. Ph.D. Thesis University of Wollongong, p. 1-509.
(online at: http://ro.uow.edu.au/theses/1402/)
(M Miocene Mid Main Carbonate sequence in Seribu Shelf area of NW Java Basin comprises numerous N-S trending reef build-ups. Five coral-algal-foraminiferal limestone facies distinguished. Main diagenetic processes early diagenetic marine and vadose cementation, followed by later dissolution and cementation. The latter processes with greatest effect on porosity and permeability. Larger pores mainly secondary vugular or fracture porosity (23%, 19%). Coarser grainstone- packstone facies locally reduced porosity by cementation (e.g. 14% porosity and low permeability in Coral Limestone facies). Good quality reservoirs >10% recovery efficiency. Oil from Mid Main Carbonate reservoir characterized by presence of bicadinane resins, oleanane and high pristane/phytane ratio, indicating tropical land-plant precursor)

Reksalegora, S.W. (1993)- Reservoir distribution of the Upper Cibulakan Formation in the Seribu Shelf M-MM area, ARII ONWJ contract area: the search for additional reserves. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 832-846.
(Reservoir distribution maps of offshore NW Java Seribu Platform show clastic and carbonate reservoir distribution controlled by underlying basement, with NNW-SSE trends for sandstones and N-S trends for carbonates)

Reksalegora, S.W. (1999)- Biogenic structures of the B-28 zone "Main" interval, offshore Northwest Java. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 43-45.
(Brief discussion of bioturbation in M Miocene tide-dominated shoreface to offshore deposits of U Cibulakan Fm B-28 zone of B Field. Common sub-horizontal trace fossils Thalassinoides, Planolites, Chondrites, etc.)

Reksalegora, S.W., Y. Kusumanegara & P. Lowry (1996)- A depositional model for the ñMainò interval, Upper Cibulakan Formation: its implications for reservoir distribution and prediction, ARII ONWJ. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 163-173.
(Two sandbody types in "Main" interval: (1): sharp-based, bioturbated, glauconitic sandstone, with Glossifungites surface and siderite mudclasts, N-S orientation, 1-2 km wide, 5-8 km long. Sandbodies of same age and similar facies in W Java outcrops pinch out over 500m. Lower bounding contact discordant with underlying interbedded sandstone and mudstone. Sandbody formed in response to sea-level lowstand. (2): middle to lower shoreface "cleaning upward", burrowed sandstone with sharp upper-contact. Lower contact burrowed, siltstones and mudstones. Laterally extensive and correlative over inter-field distances (10's of km).

Reynolds, J.R. (1995)- Northeast Java Basin. In: C. Caughey et al. (eds.) Seismic Atlas of Indonesian Oil and Gas Fields, Vol. 2: Java, Kalimantan, Natuna and Irian Jaya, Indon. Petroleum Assoc. (IPA), Jakarta, p. JAV11-JAV13.
(NE Java basin rel. stable northern platform (Java Sea) and series of deep basins to S (onshore), separated by 30-40 km wide, E-W trending Rembang inversion zone, which includes Madura Island. NE-SW trending Bawean Arch dominant positive feature offshore, which remained emergent from Eocene - E Miocene and was major source of clastic material to nearby depocenters. Smaller offshore highs, like JS-I-1 ridge, trend parallel to arch and separated by grabens and half-grabens with Eocene-Oligocene source rocks. With stratigraphic column and regional seismic line Trembul- Semanggi- Ledok- Kawengan fields)

Roberts, H.H., P. Aharon & C.V. Phipps (1988)- Morphology and sedimentology of *Halimeda* bioherms from the eastern Java Sea (Indonesia). Coral Reefs 6, 3-4, p. 161-172.
(Halimeda bioherms along W and S margins of Kalukalukuang Bank, E Java Sea. Numerous bioherms at N bank, with tops in 30-50m water depth. Fewer and thicker along deeper S margin. No reef-building corals below 15m. Upwelling of cold water and nutrient overloading from Pacific Troughflow water possible explanations for remarkable algal growth at expense of reef-building corals)

Roberts, H.H., C.V. Phipps & L. Effendi (1987)- *Halimeda* bioherms of the eastern Java Sea, Indonesia. Geology 15, p. 371-374.

(Bioherms composed mainly of Halimeda plates on Kalukalukuang Bank, 50-70 km E of central Sunda Shelf. Thickness up to 52m above Top Pleistocene surface. Presence and growth rate possibly related to upwelling of deep, nutrient rich S-moving Pacific Throughflow water from Makassar Strait)

Roberts, H.H., C.V. Phipps & L.L. Effendi (1987)- Morphology of large *Halimeda* bioherms, eastern Java Sea (Indonesia): a side-scan sonar study. Geo-Marine Letters 7, 1, p. 7-14.
(The most extensive, and thickest Halimeda bioherms reported from modern seas are along margins of Kalukalukuang Bank, E Java Sea. Features average 20-30m thick (max. 50m) and developed over large areas by coalescence of individual mounds. Morphologies range from small mounds (10-20m diameter) through hay-stack features (100m diameter) to broad swells. Upwelling of cold, nutritive water responsible for high Halimeda productivity and large bioherm development)

Roe, G.D. & L.J. Polito (1977)- Source rocks for oils in the Ardjuna sub-basin of the Northwest Java basin, Indonesia. In: Proc. Seminar Generation and maturation of hydrocarbons in sedimentary basins, Manila 1977. United Nations ESCAP CCOP Techn. Publ. 6, p. 180-194.

Roniwibowo, A. (2014)- Studi pendahuluan potensi gas biogenik- termogenik pada area tinggian Bawean, cekungan Muriah, Laut Jawa Timur Utara. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-115, 11p.
('Preliminary study on the potential for biogenic-thermogenic gas in the Bawean High area, Muriah basin, North East Java Sea'. Gas in Kujung Fm in Lengo-1 well mixture of hydrocarbon (67%) and non-hydrocarbon gas (CO2 13%, Nitrogen 20%). Carbon isotopes indicate gas is biogenic, or mixed biogenic- thermogenic. Main source of gas inMuriah basin. Several exploration wells with high CO2 in Tuban Fm sandstones and Kujung Fm limestones. CO2 in Lengo-1 gas derived from inorganic source, probably magmatic activity, in other wells derived from organic activity)

Roniwibowo, A. (2015)- Biogenic gas exploration in the Bawean High offshore North East Java Basin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-285, 14p.
(English version of Roniwibowo (2014). Active biogenic source in Muriah Trough, Bawean High and E Florence Basin, in coal beds and shale)

Roniwibowo, A. (2016)- Biogenic gas exploration in the Bawean High, offshore North East Java Basin, Part II. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 480-484.
(Follow-up of Roniwibowo 2014-2015 papers. Hydrocarbon gases in W part of Bawean High thermogenic (from SW part of Bawean High), mixed with 'secondary biogenic' (optimum development between ~1400'-~2750' ss). Late generation of CO2 (>90% in Merak wells) probably from local volcanic/magmatic activity)

Ruf, A.S., J.A. Simo & T.M. Hughes (2008)- Insights on Oligocene-Miocene carbonate mound morphology and evolution from 3D seismic data, East Java basin, Indonesia. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-093, 10p.
(3D seismic interpretation of Oligocene-Miocene carbonate buildups of N Madura Platform. Same paper as below. Locally high CO2 content in gases in region; mainly of inorganic (magmatic) origin)

Ruf, A.S., J.A. Simo & T.M. Hughes (2008)- Quantitative characterization of Oligocene-Miocene carbonate mound morphology from 3D seismic data: applications to geologic modeling, East Java Basin, Indonesia. In: Proc. Int. Petroleum Techn. Conf. (IPTC), Kuala Lumpur 2008, IPTC 12511, p. 1-11.
(3D seismic interpretation of N Madura Platform shows growth history of Oligocene-Miocene carbonate buildups. Mound initiation with small (<100-500m), closely spaced, domal buildups, which become nuclei for intermediate mounds (2-3 km), which coalesce into amalgamated platforms (>5 km diameter))

Russell, K.L., C. Sutton & W.C. Meyers (1976)- Organic geochemistry as an aid to exploration in the East Java Sea. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 69-80.
(E Java Sea Poleng field oils probably sourced from Kujung Unit III (Early Oligocene) shales, the only unit with TOC >1.5% and sufficiently mature)

Santoso, M.A., R. Hidayat & G. Mahar (2016)- Analisis sekatan sesar Abbher pada formasi Ngimbang, lapangan South Ridge, cekungan Jawa Timur bagian utara, Provinsi Jawa Timur. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 182-191.
(online at: https://repository.ugm.ac.id/273486/)
('Analysis of the Abbher fault in the Ngimbang Formation, South Ridge field, NE Java basin'. Pertamina Hulu South Ridge Field (not real name?) is oil-gas field at NW side of JS-1 Ridge, offshore W Madura Island in E. Java Sea. Cut by by NE-SW trending normal growth fault (syn-rift?; parallel to main E Bawean Trough border fault), which offsets Ngimbang Fm. Shale gouge ratios in 4 wells in Ngimbang Fm suggests sealing fault)

Setianingpring, P. (2016)- Tektonostratigrafi area North Bali III, Cekungan Jawa Timur Utara. S2 Thesis Gadjah Mada University, p. 1-79. *(Unpublished)*
('Tectonostratigraphy of the North Bali III area, NE Java basin'. Tectonostratigraphy study based on 43 seismic lines and 6 wells around the North Bali III Area, offshore NE Java basin. Four tectonostratigraphic units: Pre Tertiary pre-rift, Eocene rifting, Late Eocene-Oligocene post-rift and E Miocene and younger syn-inversion)

Setianingpring, P., E.Y. Sulistiyowati, S. Husein & S.S. Surjono (2016)- Tektonostratigrafi area North Bali III, Cekungan Jawa Timur Utara. Publikasi Ilmiah Pendidikan dan Pelatihan Geologi 12, 2, p. 43-51.
('Tectonostratigraphy of the North Bali III area, NE Java basin'. Geology of offshore block, N of Bali, E of Kangean. M Eocene rifting (Ngimbang clastics), Late Eocene post-rift (Ngimbang Shale), Oligocene post-rift (Kujung- Prupuh carbonates, M Miocene and younger inversions, etc.)

Setiawan, D., F.D. Marianto & D. Dwiperkasa (2017)- Compressional tectonic influence to the structural configuration and its contribution to the petroleum system on the northern platform of East Java Basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-71-G, 14p.
(Evidence of compression in Late Oligocene- mid E Miocene of E Java Sea (E-W RMKS fault zone inversion?))

Setiawati, Y.D., G.C. Ramadhan, A. Ginanjar, P.K.D. Setiawan & P.I. Syuhada (2017)- Sand ridge facies architecture of the transgressive shelf system using sand width and thickness ratios: a case study of the Main and Massive interval of Uniform Field, North West Java basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-139-G, 14p.
(U Field in Offshore NW Java Basin produces from E-M Miocene shelf sand ridge reservoirs of Main and Massive intervals of U Cibulakan Fm. Mainly N-S trending sand bodies)

Shofiyuddin & S. Sutiyono (2010)- Petrophysical assessment for early water production in the Ujung Pangkah Field, East Java, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-030, 9p.
(Ujung Pangkah oil-gas field offshore E Java with complex E Miocene Kujung I (Prupuh FM) carbonate reservoir: E-W trending platform margin reef build-up with steep southern margin. Early water production suspected caused by mobile water through fractures and vuggy porosity)

Sihombing, E.H., P.K.D. Setiawan, L.J. Wood & P. Syuhada (2018)- Strike-slip rift-basin architecture in offshore area Jatibarang subbasin- new findings and future opportunities. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-203-G, 26p.
(Study of Jatibarang sub-basin of NW Java, N of Cirebon. NW-SE trending border fault of Jatibarang sub-basin (OO-Brebes Fault) likely right-lateral transtensional fault and probably part of Pamanukan-Cilacap Fault Zone. Paleogeography maps of Oligocene Talang Akar Fm syn-rift intervals show alluvial fans and fan delta, sourced from N and E)

Sihombing, E.H., P.K.D. Setiawan, L.J. Wood & P. Syuhada (2018)- Sedimentological characteristics of lacustrine associated reservoir in transtensional rift basin: Lake Singkarak modern analogue application in Lower Talangakar Formation, Jatibarang subbasin, NW Java. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-310-G, 29p.
(Fluvial- lacustrine Lake Singkarak deposits compared to Late Oligocene Talangakar Fm in Jatibarang basin)

Situmorang, M., Kuntoro, A. Farurachman, D. Ilahude & D.A. Siregar (1994)- Distribution and characteristics of Quaternary peat deposits in eastern Jawa Sea. Bull. Marine Geol. Inst. Indonesia 8, 4, p. 9-20.
(Non-marine and marine sediments on E Java Sea seafloor between Madura and Kalimantan include channel, swamp, volcanogenic, kaolinitic and marine deposits. Widespread swamp deposits with peat layers in E Java Sea, with peat layers up to 0.72m thick. One thick peat layer S of Masalembo 0.4m below sea floor in 30m water radiometrically dated as Early Holocene, confirming Kalimantan- Java connection during Quaternary, with Sunda River flowing in middle of area)

Situmorang, M., Kuntoro, A. Faturachman, D. Ilahude & D. Arifin (1994)- Preliminary results on the occurrence of peat deposits in eastern Java Sea. Proc. 30th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, 2, p. 87-96.
(Similar to above. Peat layers on Java Sea floor suggest land areas between E Kalimantan and E Java-Madura during the Quaternary, with Sunda river flowing in middle of area)

Smart, S., D. Sturrock & A. Hidayat (2013)- Discrete fracture network modeling based on seismic data, logs, drilling losses, production, and outcrop data- Ujung Pangkah Field. AAPG Hedberg Conf., Fundamental controls on flow in carbonates, Saint-Cyr 2012, Search and Discovery Art. 120090, 4p. *(Extended-Abstract)*
(online at: www.searchanddiscovery.com/documents/2013/120090smart/ndx_smart.pdf)
(Ujung Pangkah Field is 1998 gas condensate field with oil rim just offshore NE Java. Reservoir Miocene Kujung Fm fractured carbonate with good- excellent matrix reservoir quality)

Smit-Sibinga, G.L. (1947)- The morphological history of the Java Sea. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 64, p. 572-576.

Smith, S.W., L. Danahey, R. Himawan, W.E. Harmony, H.L. Gilmore, J.W. Armon, T.L. Bowman & W. Smith (1996)- An example of 3-D AVO for lithology discrimination in Widuri Field, Asri Basin, Indonesia. The Leading Edge 15, 4, p. 283-288.
(Oil producing Lower Miocene U Gita Mbr sandstones of U Talang Akar Fm in Widuri Field, Asri Basin, off SE Sumatra, correlate with bright seismic amplitudes on 3-D seismic data. Amplitude maps at Base Upper Gita horizon interpreted as NE-SW trending belt of meandering distributary or fluvial channels)

Sosa J.C., F.B. Palao, J.S.S. Toralde & H. Zaki (2010)- Underbalanced drilling challenges and benefits in a marginal high-pour-point oil reservoir in Sepanjang Island, Indonesia. In: Proc. SPE/ IADC Managed pressure drilling and underbalanced operations Conf., Kuala Lumpur 2010, 12p.
(Sepanjang field is marginal oil field on Sepanjang Island, E Java Sea, part of Kangean PSC, first discovered by ARCO in 1990. Oil from (Eocene) Ngimbang Carbonate reservoir mostly of heavy black oil with high pour point of 120°F, wax content 24.9%., specific gravity 0.8574 and API gravity 33. Reservoir is tight Ngimbang Fm carbonate at depth of ~4600'. Underbalanced drilling for new wells to improve reservoir productivity

Sosrowidjojo, I.B. (2011)- Organic geochemistry: 1. Geographic location of crude oils based on biomarker compositions of the Sunda-Asri basins, Indonesia. Int. J. Physical Sci. 6, 31, p. 7291-7301.
(online at: www.academicjournals.org/article/article1380715460_Sosrowidjojo.pdf)
(Biomarker cluster analysis of 45 oil samples in Sunda-Asri basins shows 6 geographically separated groups)

Sudarmono, S. Herbudiyanto & T. Abdat (2003)- The state of the art finding new oil and gas reserves in an old and mature area, offshore Northwest Java Sea. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 1-17.
(Offshore NW Java basin mature area. Parigi carbonates neglected as targets because only gas. Success rate in Parigi <30%. Commonly thick Parigi buildups only thin gas columns at top, although one accumulation has >200' of column and holds >1 TCF gas. Example of U1 well. Oil and gas in channel-type sandstones of Talang Akar Fm. underdeveloped due to inability of seismic to image sandstones)

Sudibyo, T., Atmawan T., Ronnie P. & Bernato V. (2002)- Reservoir characterization study to delineate dimension of "Channel 8", Talang Akar Formation, Cinta Field, Sunda Basin. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 193-223.
(E-W trending deltaic 'channel 8' sand in Late Oligocene upper Talang Akar Fm in Cinta field, offshore NW Java, is 800-1500m wide and 17-70' thick. Produced ~11 MBO)

Sukamto, B., B. Siboro, T.D. Lawrence & S.W. Sinclair (1995)- Talang Akar (Oligocene) source rock identification from wireline logs- applications in the deep Ardjuna Basin, Offshore Northwest Java. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 185-200.

Sukanto, J., F. Nunuk, J.B. Aldrich, G.P. Rinehart & J. Mitchell (1998)- Petroleum systems of the Asri Basin, Java Sea, Indonesia. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 291-312.
(Asri Basin off SE Sumatra PSC recoverable oil reserves of ~500MMBO from nine fields includinge major Widuri and Intan oil fields. Penetration of organic-rich, mature source rock by Hariet-2 well in 1995 helped define primary petroleum system. Good geochemical match between produced oils and E Oligocene Banuwati Fm lacustrine shales)

Sukaryadi, E.K.A. (2001)- Characteristics and sandbody geometry of the 34-1 reservoir, Widuri Field offshore Southeast Sumatra. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 105-118.
(34-1 sandstone one of six productive reservoirs in Widuri field, Asri Basin, off SE Sumatra. The 34-1 thickness 10-53' and deposited in fluvio-deltaic setting. Incl. channel facies with E-W trend)

Suria, C. (1991)- Development strategy in the BZZ Field and the importance of detailed depositional model studies in the reservoir characterization of Talang Akar channel sandstones. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 419-451.

Suria, C., C.D. Atkinson, S.W. Sinclair, M.J. Gresko & B. Mahaperdana (1994)- Application of integrated sequence stratigraphic techniques in non-marine/marginal marine sediments; an example from the Upper Talang Akar Formation, Offshore Northwest Java. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 145-159.

Suria, C., P.J. Butterworth, M.J. Gresko, S.W. Sinclair & C.D. Atkinson (1995)- Sequence stratigraphic surfaces identified on conventional core data: Talang Akar Formation, Ardjuna Basin, offshore Northwest Java. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. Sequence stratigraphy in SE Asia, Indon. Petroleum Assoc., Jakarta, p. 327. *(Abstract only)*

Susilohadi, S. & T.A. Soeprapto (2015)- Plio-Pleistocene seismic stratigraphy of the Java Sea between Bawean Island and East Java. Berita Sedimentologi 32, p. 5-16.
(online at: http://www.iagi.or.id/fosi/files/2015/04/BS32-Marine-Geology-of-Indonesia_S.pdf)
Marine geology/ seismic stratigraphy of SE part of submerged Sunda Shelf, N of E Java and Madura. Multiple Quaternary erosional features resulting from exposure during major sea level lows)

Sutanto, H., N. Andani, J.T. Musu, E.A. Subroto, A. Bachtiar & A.H. Satyana (2016)- Mesozoic-aged oils in the Northeast Java Basin, Indonesia: evidence from triaromatic dinosteroid. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-663-G, 17p.
(High Triaromatic Dinosteroid Index in 3 oil samples from Sepanjang Island 1,3,4 wells, SE of Kangean, may correlate to Cretaceous age, as also supported by previously reported Oleanane Index <20%, which is common for samples from older sources than Cenozoic. 'Supports idea that Cretaceous source rocks were deposited in marine setting while Australia-derived microcontinent was drifting N-ward before it collided with SE margin of Sundaland in Cretaceous' (NB: If 'triaromatic dinosteroid' biomarker indicates Mesozoic and younger marine dinoflagellates and oleanane indicates (Upper) Cretaceous and younger angiosperm land plants, couldn't the low oleanane/ high dinosteroid signify marine Tertiary, not necessarily Cretaceous, source facies?; JTvG))

Sutanto, H. & J.T. Musu (2014)- Application of oleanane and sterane index for biostratigraphic age determination: examples from Kangean oils, Northeast Java Basin. Lemigas Scientific Contr. Petrol. Sci. Techn. 37, 1, p. 15-24.
(NE Java Basin hydrocarbon source rock generally believed to be in Late Eocene- E Oligocene early synrift Ngimbang Fm. Occurrence of Alisporites sp. suggest presence of Cretaceous sediments, which may also be potential source rock. Crude oils from Paleogene Ngimbang Fm in Kangean oil field in offshore NE Java Basin classified as mixed oil, with organic matter from both marine and terrestrial sources, deposited under oxidizing and reducing conditions. Very low oleanane Index (<20%; marker for flowering plants) suggests oils originated from Cretaceous source rock)

Sutanto, H. & J.T. Musu (2015)- Marine depositional environment determination using hydrogen isotopic composition of individual alkanes: case studies from Kangean oils, the Northeast Java basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-207, 9p.
(Geochemistry of oils from well in Kangean (Sepanjang) area, Java Sea and Kawengan, NE Java basin. Sepanjang 1, 3 oils may be from mixture of marine and terrestrial kerogens, low oleanane% suggests marine shale source. Kawengan oil clearly terrestrial oil from deltaic source rock)

Sutanto, H., J.T. Musu, A.H. Satyana & A. Bachtiar (2015)- Mesozoic source rocks in Northeast Java Basin, Indonesia: evidence from biomarkers and new exploration opportunities. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-090, 17p.
(Similar to paper above: biomarkers in some oils from Eocene Ngimbang carbonates in Sepanjang Field, SE of Kangean in Java Sea, show stronger marine character and reducing conditions than typical Cenozoic 'Sundaland' oils and also show very low oleanane and sterane indexes, indicating source of oils may be Cretaceous in age. Presence of Lower Cretaceous Alisporites sp. in sediments analyzed, is another indication that there is Cretaceous source in area (proposed to be part of Australian-derived Paternoster-Kangean microcontinent, but Cretaceous marine sediments are also known all around the Sundaland margin; JTvG))

Sutisna, K., H. Samodra & A. Koswara (1993)- Geological map of the Kangean and Sapudi Quadrangle, Java, 1708-4, 1709-3, 1808-4, scale 1:100,000. Geol. Res. Dev. Center, Bandung.
(Kangean and Sapudi islands folded Oligocene-Pliocene sediments, mainly N-dipping. Oldest rocks Late Oligocene Cangkaramaan Fm marls with planktonic forams. Upper part interfingers with Oligo-Miocene Tambayangan (= Kujung) orbitoid limestone. Overlain by E-M Miocene Jukong-Jukong Fm limestone, unconformably overlainby Late Miocene-Pliocene marine Brakas Fm limestone-sandstones)

Sutiyono, S. (2009)- Reservoir water saturation and permeability modeling in the Pangkah Field. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-022, p. 1-8.
(Ujung Pangkah Field is 1998 discovery in E Miocene platform margin carbonate reef build-up, offshore NE Java, in front of present day Solo river delta. Main producing Kujung-I Fm is complex carbonate reservoir. Paper is on initial petrophysical models to calculate water saturation and permeability)

Sutiyono, S. (2010)- Integrated petrophysics in Kujung carbonate reservoirs, East Java, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-012, 7p.
(On log interpretation challenges in E Miocene carbonate buildup of Ujung Pangkah Field, Java Sea)

Sutriyono, E. (1998)- Cenozoic thermotectonic history of the Sunda-Asri basin, southeast Sumatra: new insights from apatite fission track thermochronology. J. Asian Earth Sci. 16, 5-6, p. 485-500.
(AFT analysis of Cenozoic rocks from wells Asri-1, NE Ria-1, Hariet-1 and Yani-2 in Sunda-Asri basin suggest basin continues subsiding, probably due to extension initiated in Late Eocene. Recent heating of rocks consistent with 800m of Plio-Pleistocene burial. Geothermal gradients relatively constant through Cenozoic)

Sutton, C. (1978)- Depositional environments and their relation to chemical composition of Java Sea crude oils. In: Seminar Generation and maturation of hydrocarbons in sedimentary basins, Manila 1977, United Nations ESCAP, CCOP Techn. Publ. 6, p. 163-179.

Syafrie, I, A. Sudradjat & E. Usman (2012)- Posisi tektonik Bawean-Muria dalam hubungan dengan hidrokarbon cekungan Cepu, Jawa Tengah. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-08, p.
('Tectonic position of Bawean- Muriah in relation to the Cepu hydrocarbon basin, Central Java'. Bawean Island volcanics different from Java arc. Composed of phonotepite, basalt andesite, trachite and phonolite, with significant amounts of leucite, with ages of 0.67- 0.26 Ma. Similar to Muria volcano (0.6 -0.4 Ma))

Syarif, M., Bintoro W. & Reno F. (2005)- Seismofacies study in early fill to source rock depositional environment, Asri basin. Proc. Joint Conv. 30th HAGI, 34th IAGI, 14th PERHAPI, Surabaya 2005, JCS2005-S029, p. 98-111.
(Seimic facies maps of Eo-Oligocene early basin fill of Asri Basin, Java Sea, offshore SE Sumatra, incl. Banuwati lacustrine shale source rocks. Earliest fill alluvial-fluvial setting with N-S sediment transport direction, with local sediment sources from W and E flanks of rift basin)

Takano, O., A. Disiyona, A.P. Tata & B. Heruyono (2008)- Sequence stratigraphy and depositional model of the Ngimbang carbonate reservoir in Pagerungan Utara offshore, Kangean Block, East Java. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-062, 11p.
(Eocene Ngimbang Carbonate isolated platform reservoir in Pagerungan Utara two depositional sequences. Sequence boundary is onlap surface. HST of lower sequence (L-M Ngimbang Carbonate), two shoal complexes with progradational and aggradational patterns at W to C part and E part of platform. During relative sea level lowstand topographic highs at center of shoal complexes might be exposed. Subsequent relative sea level rise resulted in TST carbonate deposition (U Ngimbang Carbonate) only on platform with upward fining/deepening facies succession, and finally covered by hemipelagic shales (Ngimbang Shale))

Talo, A.J. & A.G. Randall (1985)- Krisna Lower Batu Raja waterflood project. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 169-194.
(NW Java basin oilfield development)

Temansja, A.D. & D.C. Bushnell (1986)- A model for hydrocarbon accumulation in Sunda Basin, West Java Sea. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 47-75.

Tognini, P., A.J. Bromley & N. Khifni (2007)- An alternative view on the existence of an effective petroleum system in the Bali-Lombok area. SEAPEX Exploration Conf. 2007, Singapore, 29p. *(Abstract + Presentation)*
(Bali-Lombok area water depth 200-1000m and extension of E Java Basin. Gravity data suggest thick Tertiary depocentre; part of Paleocene and M Eocene rift system that developed between. Two stage rift model that progressed from E to W. Marine transgression progressed from SE to NW. By end M Eocene Bali-Lombok area fully marine. By Late Eocene deep marine environment while areas to N had just been transgressed. Potential lacustrine and paralic source rocks only in Paleocene- E Eocene. Geochemical evidence of migrated hydrocarbons in dry wells. Basin modeling shows Paleocene- E Eocene source rock reached peak oil by end Eocene, so only Late Eocene- earliest Oligocene structures reasonable chance of capturing hydrocarbons)

Tonkin, P.C. (1995)- Determination of permeability in sandstone reservoirs affected by diagenetic kaolinite, Cinta Field, Southeast Sumatra. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 45-59.
(Sunda Basin Cinta Field produces from Late Oligocene Talang Akar Fm sandstones and overlying Baturaja Fm reefal carbonates. Sandstones frequently large amounts of pore-filling kaolinite, from breakdown of potassium feldspars from volcanic detritus)

Tonkin, P.C. & R. Himawan (1999)- Basement lithology and its control on sedimentation, trap formation and hydrocarbon migration, Widuri-Intan oilfields, SE Sumatra. J. Petroleum Geol. 22, 2, p. 141-165.
(Widuri-Intan fields in NW Asri Basin produced ~310 MB Oil from Late Oligocene Talang Akar Fm fluvial-deltaic sandstones. Oil in structural and stratigraphic traps in sinuous-meandering channel sandstones. Reservoir sands interbedded with mudstone and coal and overlie Cretaceous basement rocks. Basement lithologies: (1) hornblende granodiorite; (2) metamorphic rocks (mainly mica schist); (3) plugs of metabasalt and related volcanic rocks; (4) dolomitic limestone. Basement topography influenced subsequent distribution of

fluvial channels and sand pinch-outs. Faults controlled by basement lithology, especially at boundaries of intrusives. NW-SE shear zone offset basement between main Widuri and Intan fields. Lidya field reservoir pinch-out onto eroded areas of basement silicification along shear zone. Drape and compaction over eroded volcanic plugs enhanced structural-stratigraphic plays. Reservoir at Indri field underlain by dolomitic limestone and exhibits karst sinkhole and collapse structures)

Tonkin, P.C., A. Temansji & R.K. Park (1992)- Reef complex lithofacies and reservoir, Rama Field, Sunda basin, Southeast Sumatra, Indonesia. In: C.T. Siemers et al. (eds.) Carbonate rocks and reservoir rocks of Indonesia: a core workshop. Indon. Petroleum Assoc. (IPA), Jakarta, p. 7.1-7.32.
(Five main lithofacies in Rama field E Miocene Baturaja Fm. Secondary porosity restricted to packstones of bioclastic debris from main reef. Rel. minor in-situ reef facies tightly cemented poor reservoir)

Tyler, D.E. (1997)- New and significant fossil finds from Sangiran, Central Java. In: N. Jablonski (ed.) Changing face of East Asia during the Tertiary and Quaternary, Proc. Fourth Conf. Evolution of the East Asian Environment, p. 498-515.

Tyrrell, W.W. & R.G. Davis (1987)- Miocene carbonate shelf margin, Bali-Flores Sea, Indonesia. In: A. W. Bally (ed.) Atlas of seismic stratigraphy, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 27, 3, p. 174-179.
(Amoco seismic line showing SW prograding Miocene carbonate shelf margin)

Tyrrel, W.W., R.G. Davies & H.G. McDowell (1986)- Miocene carbonate shelf margin, Bali-Flores Sea. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 123-140.
(Central Lombok Block (CLB) N of Lombok/ Sumbawa underlain by Cretaceous melange and/or oceanic crust. After E Tertiary block faulting and nonmarine basin-fill, area underwent rapid subsidence. Most of upper Paleogene and Neogene in deep water facies, except along E and N margins where shallow water carbonate banks were progressively drowned. Local reversal of trend in Miocene along N part of CLB where shelf margin carbonate complex prograded ~9 km to SW over deep water basinal deposits during Miocene-?E Pliocene. This was followed by rapid subsidence causing 'drowning' of N shelf margin after which slope was onlapped and covered by deep water Plio-Pleistocene mudstone)

Usman, E. (2012)- Tektonik dan jalur volkanik busur belakang Bawean Muria sebagai pengontrol pembentukan Cekungan Pati dan potensi hidrokarbon. Indonesian J. Applied Sciences 2, 3, p. 111-118.
(online at: http://download.portalgaruda.org/article.php?article=104220&val=1389)
('Tectonics and position of Bawean-Muria back-arc volcanic arc as controlling the Pati Basin and hydrocarbon potential'. SW-NE trending Muria -Bawean back-arc magmatic belt part of Quaternary volcanic belt on SE border of granite belt of Java Sea. Volcanics in area of Gunung Muria calc-alkaline-shoshonite magmas. Meratus trend and Muria- Bawean back arc volcanic belt divides NE Java basin in Pati Basin in W and NE Java Basin in E)

Vear, A. & D.M. MacGregor (1996)- 2-D basin modeling of secondary petroleum migration in the Sakala Timur PSC, Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 421-435.
(E Java Sea Sakala Timur area basin modeling by BP. Reason for failure of ST-Alpha well was lack of suitable migration pathway from mature source kitchen to trap. Topseal capacity of silty Tertiary mudstones main risk)

Welker-Haddock, M., R. Park, I. Asjhari, J. Bradfield & B. Nguyen (2001)- The transformation of Poleng Field. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 681-698.
(Poleng Miocene carbonate reef off Madura once abandoned field revived as economic venture after 3-D seismic survey, directional and horizontal wells, and led to new discovery at KE-23 Field)

Welker-Haddock, M.L. R.K. Park & M. Sudarmono (1996)- Prediction of carbonate sweet spots from 3-D seismic: a case history from Krisna Field. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 353-365.

(Seismic response to variations in lithology is complex and non-unique. Most effective way to find carbonate reservoirs is to use seismic attributes in combination with conventional seismic interpretation such as structural mapping, isochron mapping to determine paleogeography and seismic morphology)

Wibowo, I.D., Sobani, L. Fransiska & M. Luciawaty (2018)- Successful story of proving-up a new play, an Eocene carbonate as a naturally fractured reservoir in offshore North West Java. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-317-G, 14p.
(Gas tested from fractured'Eocene pre-rift limestone in Kencanaloka Field, KLD Block, S Arjuna sub-basin, NW Java (NB: Eocene limestones not known from NW Java, and no evidence for age reported here; HvG))

Wicaksono, P., J.W. Armon & S. Haryono (1992)- The implications of basin modelling for exploration- Sunda Basin case study, offshore southeast Sumatra. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 379-415.
(Sunda Basin good match between oils and Banuwati Fm lacustrine shales Type I kerogens. Present day top 'oil window' 9,500'. Significant hydrocarbon generation began at end Talang Akar time in basin center and progressed outwards through time. Mature source rocks more limted areal extent than indicated in earlier work. Vertical migration crucial close to generation area, lateral migration dominates away from it beneath regional Gumai shale seal. Drainage areas identified. Boundaries of 'Banuwati generation- migration hydrocarbon system' delineate probable prospective areas)

Wicaksono, P., A.W.R. Wight, W.R. Lodwick, R.E. Netherwood, B. Budiarto & D. Hanggoro (1996)- Use of sequence stratigraphy in carbonate exploration: Sunda Basin, Java Sea, Indonesia. In: C.A. Caughey, D.C. Carter et al. (eds.) Proc. Int. Symp. Sequence Stratigraphy in SE Asia, Jakarta 1995, Indon. Petroleum Assoc. (IPA), p. 197-229.
(Lower Miocene Batu Raja Fm and Gumai Fm shallow marine limestones 250 MMBO, from seven fields. Several small discoveries in recent years, but accumulations not commercial due to unpredictable reservoir quality, limited areal extent, or low recovery factors. Sequence stratigraphic study of carbonates undertaken to produce a predictive model for porosity development)

Wicaksono, R.A., S.S. Angkasa, F.F. Azmalni, A.D. Kahfi & Alfardi A.P. (2009)- Deep hydrocarbon play in Banyumas sub-basin, Central Java: opportunities and risks. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PITIAGI2009-149, 9p.
(Mainly literature review)

Widiatmo, M.R., U. Mardiana, F. Mohamad & A. Ginanjar (2013)- 3D facies modelling of SS-44 mixed load channel reservoir, Karmila Field, Sunda Basin, South East Sumatera. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-SG-070, p. 1-12.
(Karmila field in Sunda Basin produces from Talang Akar sands. SS-44 reservoir complex is mixed load channel facies with NW-SE orientation)

Widjonarko, R. (1990)- BD field- a case history. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 161-182.
(BD field Mobil 1987 oil-gas discovery in W Madura Straits in E-W trending E Miocene reefal carbonate build-up (11,000'- 13,934'), with 29- 34% porosities in oil-gas zone and about 17% in water zone. Gas-oil column only 200')

Widjanarko, W. (1996)- Integrating nuclear magnetic resonance logging data with traditional downhole petrophysical data to optimize new development wells strategies in the Bravo Field offshore North West Java, Arco Indonesia PSC. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 205-213.

Wight, A. (1995)- Geologic summary of Java. In: C. Caughey et al. (eds.) Pertamina-IPA Seismic Atlas of Indonesian Oil & Gas Fields, II: Java, Kalimantan, Natuna, Irian Jaya, p. JAV1-JAV10.
(Overview of NW Java geology and hydrocarbons in Oligo-Miocene sandstone and carbonate reservoir horizons in offshore Sunda, Asri and Arjuna basins. Arjuna basin offshore extension of larger onshore basin,

with similar stratigraphy and productive horizons, but more carbonate in younger Miocene because farther from Sunda shield clastic provenance. With regional W-E seismic line across Sunda- Arjuna basins)

Wight, A., H. Friestad, I. Anderson, P. Wicaksono & C.H. Reminton (1997)- Exploration history of the offshore Southeast Sumatra PSC, Java Sea, Indonesia. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 121-142.
(Offshore SE Sumatra PSC in Java Sea produced >800 MBOE. Crude low sulphur, waxy and sourced by Oligocene lacustrine shales. >200 exploration wells since 1970; 21 commercial fields. Reservoirs Oligocene-E Miocene with ~25% of reserves in carbonates and 75% in fluvial-alluvial clastics. Main basins (Sunda, Asri) retro-arc, N-S oriented, asymmetric half-grabens between stable Sunda Shield and active volcanic arc on Java)

Wight, A. & D. Hardian (1982)- Importance of diagenesis in carbonate exploration and production, Lower Batu Raja carbonates, Krisna Field, Java Sea. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 211-235.
(High porosity in Lower Baturaja carbonate from secondary leaching in freshwater environment. Seven major carbonate facies recognized)

Wight, A., Sudarmono & Imron A. (1986)- Stratigraphic response to structural evolution in a tensional back-arc setting and its exploratory significance, Sunda Basin, West Java Sea. Proc.15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 77-100.
(Structure influences character and distribution of non-marine Oligo-Miocene TalangAkar and Banuwati Fms sandstone reservoirs in Sunda Basin, W Java Sea. Best reservoirs fluvial sandstones: (1) early braided regime derived from W and (2) younger meandering system flowing primarily from NE down graben axis. Recoverable reserves ~300 MMBO in nine fields)

Wight, A.W.R., S. Syafar, A. Kartika, R. Syah, J. Burgos, A. Telaumbanua, C. Oglesby & B Setiawan (2000)- óClassic clasticsô- has high-tech 3D improved imaging of stratigraphic traps found with ótraditionalô techniques? Yvonne óBô Field, Sunda Basin, Java Sea. AAPG Int. Conf. Bali 2000, 7p. *(Extended Abstract)*

Wijaya, A.K. (2014)- Rock type identification and complexity of carbonate reservoir in Kitty Field, Sunda Basin, Southeast Sumatra. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-216, 15p.
(On complex distribution of porosity and pore types in E Miocene Baturaja Fm carbonate reservoir in Kitty oil field, 1972 discovery in Sunda Basin. Most porosity secondary and much of this porosity is late)

Wijaya, A.K., M. Mazied, G. Fauzi & R. Spayung (2018)- Re-consideration of hydrocarbon migration in North Madura Platform area; an implication to the new exploration potential. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-314-G, 14p.
(N Madura Platform hydrocarbon producing area between two mature kitchens: Madura subbasin in S and Central Deep N and W. Hydrocarbon migration from Madura sub-Basin before inversion at ~7 Ma, but hydrocarbon migration from Central Deep in question, due to steep border fault and predicted poor reservoir quality of syn-rift deposits along fault. Oil geochemistry and basin modeling indicate N Madura Platform oils charged by both kitchens: mixed terrigenous-algal organofacies source from Ngimbang shale in Central Deep (expulsion since 22 Ma) and mainly terrigenous organofacies source in S part of platform)

Wijaya, A.K. & E. Yogapurana (2016)- The important role of burial diagenesis in reservoir quality development, case study from Oligo-Miocene carbonate, North Madura Platform. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 592-597.
(Most of secondary porosity in carbonates results from subaerial exposure and meteoric diagenesis, but Oligo-Miocene carbonate in N Madura Platform also evidence of late dissolution during burial diagenesis.)

Wijaya, A.K. & E. Yogapurana (2017)- The Oligo-Miocene carbonates evolution in North Madura Platform, the effect to the reservoir complexity distribution. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.

(Oligo-Miocene carbonates (CD and Kujung formations) in N Madura Platform developed as rimmed carbonate platform complex. Four growth stages. Complex diagenetic history; most porosity is formed by dissolution of some grains, micrites and cements. Several undrilled patch reef complexes in study area)

Wijaya, A.K., E. Yogapurana, P. Monalia & H. Haryanto (2016)- The evolution of CD carbonate In North Madura Platform, an effort to understand reservoir complexity distribution. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-649-G, 15p.
(Facies evolution of 70-200m thick Early Oligocene CD carbonates offshore North Madura. Developed as rimmed carbonate platform complex, with shelf margin reef developed basinward in S. Four stages)

Woodling, G.S., J.G. Kaldi, K.I. Oentarsih & R.C. Roe (1990)- Integrated reservoir simulation study of the Bima Field, Offshore N.W. Java. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 1-26.
(Bima field largest productive carbonate field offshore N.W. Java. Field startup was in 1987 with 7 platforms in N on primary production. Southern 2/3rd of field undeveloped. Multi-disciplinary reservoir study performed on Oligocene-Miocene U Batu Raja Limestone formation)

Woodling, G.S., J.G. Kaldi, R.C. Roe & K.I. Oentarsih (1991)- Multidisciplinary reservoir study of the Bima Field, Offshore NW Java, Indonesia: multidisciplinary studies. In: R.M. Sneider (eds.) The integration of geology, geophysics, petrophysics and petroleum engineering in reservoir delineation, description and management, American Assoc. Petrol. Geol. (AAPG), Spec. Publ. 26, p. 1-36.
(Bima Field with 700 MB OIP and 50 GCF gas in E Miocene Batu Raja limestone. Upper Batu Raja build-up thickest on highest parts of platform, with 'cleaning upward' cycles (muddy facies overlain by progressively more grain-rich sediments). Lower Miocene sea-level drop caused subaerial exposure of platform and leaching by meteoric fluids)

Xue, F., R.J. Broetz & E. Sirodj (2002)- Seismic evaluation of hydrocarbon prospedivity in offshore North Bali, Indonesia. Indonesia 2002 Acreage review, Petroleum Expl. Soc. Australia (PESA) News 56, 1p. *(Abstract)*
(Examples of 2D seismic section showing Oligocene carbonate platform and post- E Pliocene inversion of normal faults)

Yaseen, F.F., W. Gardjito & M.E. McCauley (1993)- Development of Pagerungan gas field, Kangean Block PSC area. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 495-508.
(Pagerungan 1985 gas discovery first gas development to provide fuel gas to power generation in E Java. No geology)

Yazid, Y., A.D. Haryanto & J. Hutabarat (2017)- Hubungan antara geokimia minyak bumi dan batuan induk di sub-cekangan Arjuna Tengah, Cekungan Jawa Barat Utara. Bull. Scientific Contr. (UNPAD) 15, 1, p. 69-86.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/11739/pdf)
('The relationship between geochemistry of oils and source rocks in the Central Arjuna sub-basin, NW Java Basin'. Source rock in Talang Akar Fm in offshore wells YZD-1, YY-1 and DZN-1 with kerogen types II-III, from terrestrial and algal sources. Oil samples suggest deep and shallow lake depositional environments, with mixture of higher plants and algae. Burial history modeling suggests oil generation in basal Talang Akar Fm began in E Miocene, deltaic Talang Akar in M Miocene)

Young, R. & C.D. Atkinson (1993)- A review of Talang Akar Formation (Oligo-Miocene) reservoirs in the offshore areas of Southeast Sumatra and Northwest Java. In: C.D. Atkinson et al. (eds.) Clastic rocks and reservoirs of Indonesia, Indon. Petrol Assoc. Core Workshop, p. 177-210.
(Talang Akar Fm succession of fluvio-lacustrine and fluvio-deltaic sediments up to 7000' thick. Productive reservoirs fluvial, distributary channel and marginal marine bar sandstones. Fluvial reservoirs tend to be thickest, most extensive and best reservoir quality. Talang Akar Fm diachronous lithostratigraphic rock unit in Late Oligocene- Early Miocene. Fluvio-deltaic sediments in upper part of succession retrogressively stacked in response to regional transgression which affected entire S margin of Sunda Shield)

Young, R., W.E. Harmony & T. Budiyento (1995)- The evolution of Oligo-Miocene fluvial sand-body geometries and the effect on hydrocarbon trapping, Widuri field, West Java Sea, In: A.G. Plint (ed.) Sedimentary facies analysis, Int. Assoc. Sedimentologists (IAS) Spec. Publ. 22, p. 355-380.

Young, R., W.E. Harmony, J. Gunawan & B. Thomas (1991)- Widuri field, offshore southeast Sumatra: sandbody geometries and the reservoir model. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 385-417.
(Widuri 1988 discovery in Asri Basin 170' net oil pay in 6 reservoirs in upper Talang Akar Fm sandstones. Faulted anticline formed ~19 Ma (E Miocene), shortly after deposition of Talang Akar Fm. Trap combination structure-stratigraphy. Basal reservoir coarse fluvial sandstone, uppermost reservoir fine distributary channel sand in tide-dominated delta. Gradual change in river/channel type accompanied by change in reservoir quality and geometry from thick sheet sandstone at base to thin, 2000' wide, shoestring sand at top).

Zhong, D., X. Zhu & Q. Zhang (2006)- The sedimentary system and evolution of the Early Tertiary in the Sunda basin, Indonesia. Petrol. Sci., Beijing University, 3, 1, p. 1-11.
(Sunda basin early Tertiary half-graben basin with alluvial, lacustrine, fluvial and swamp, subaqueous fan, shallow and deep lacustrine, turbidite fan, fan delta and delta deposit. Alluvial fan, subaqueous fan and fan deltas on steep slope adjacent to synrift boundary fault, and deltaic systems on gentle slope of basins. Zelda Mb of Talang Akar Fm previously interpreted as fluvial, now interpreted as subaqueous fan, fan delta, delta and lacustrine deposit system. Four stages of basin evolution: initial subsidence (Banuwati Fm), rapid subsidence (Lw Zelda Mb), steady subsidence (middle Zelda Mb) and uplift (Upper Zelda Mb and Gita Mb)

Zhong, D., X. Zhu & Q. Zhang (2006)- Sedimentary characteristics and evolution of Asri Basin in Early Tertiary. Petrol. Sci., Beijing University, 3, 3, p. 1-11.
(Asri basin half-graben with steep E side controlled by synrifting and gentle W slope, with Early Tertiar terrigenous clastics of Banuwati and Talang Akar Fm, in alluvial, fluvial and lacustrine facies. Four stages a.a. Sediment supply mainly from W and E, partly from N)

Zhu, X., S. Li, J. Ge, D. Zhong, Q. Zhang & D. Ge (2018)- Paleogene sequence framework and depositional systems in the Sunda and Asri Basins, Indonesia. Interpretation 6, 2, p. T377-T391.
(Banuwati Fm, Zelda and Gita Members in Oligocene of Sunda and Asri Basins divided into six 3rd-order sequences. Sedimentary evolution consistent with tectonic evolution)

III.3. Java - Quaternary Volcanism

Abdurrachman, M. (2012)- Geology and petrology of Quaternary volcano and genetic relationship of volcanic rocks from the Triangular Volcanic Complex around Bandung Basin, West Java, Indonesia. Doct. Thesis, Akita University, p. 1-131.

Abdurrachman, M., E. Suparka, R. Chrysant, H. Handley, D.P. Adli & J.N. Indriyanto (2017)- Subducted components and lithospheric contributions to arc magmatism in Java: insight from the distribution of major and trace elements of Quaternary volcanic rocks. Proc. Joint HAGI-IAGI-IAFMI-IATMI Conv. (JCM 2017), Malang, p.
(Major and trace elements of Papandayan and Merapi volcanoes significantly above other Java volcanoes of similar depth above Wadati-Benioff zone)

Abdurrachman, M. & M. Yamamoto (2011)- Geochemistry of Papandayan and Cikuray volcanoes: mapping the extent of Gondwana continental fragment beneath Java, Indonesia. American Geophys. Union (GSA), Fall Meeting 2011, Abstract V43C-2599, 1p. *(Poster presentation)*
(Geochemistry of contiguous volcanoes Papandayan (medium-K basaltic andesite (Early Stage), andesite (Middle Stage) and dacite (Late Stage); high 87Sr/86Sr) and Cikuray (low-K, low 87Sr/86Sr, etc.) suggests mixing of low-K Cikuray-type magma with Gondwanan continental fragment material (Pre-Cambrian-Devonian Australian granites) at Papandayan. Two volcanoes reflect change in underlying basement type in West Java: Sunda Land in N, Gondwana continent fragment in S. Papandayan volcano probably only Quaternary volcano underlain by Gondwana continental fragment)

Abdurrachman, M. & M. Yamamoto (2012)- Geochemical variation of Quaternary volcanic rocks in Papandayan area, West Java, Indonesia: a role of crustal component. In: Proc. 12th Reg. Congress Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA 2012), Bangkok, J. Geol. Soc. Thailand, p. 40-57.
(Papandayan and adjacent Cikuray volcanoes S of Bandung, W Java. Rel. high K2O and isotopic ratios of Papandayan magmas due to contamination from underlying Gondwana continental fragment)

Abdurrachman, M., M. Yamamoto, E. Suparka, Y.S. Yuwono & B. Sapiie (2012)- Sr-Nd isotopic study of Papandayan area, West Java: a window into the past magmatism and tectonic event. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-31, 7p.
(Sr-Nd isotopic ratios of young volcanics of Papandayan and nearby Cikuray (to E) volcanoes, located at Cretaceous suture zone. Papandayan volcano comprises medium-K series with high 87Sr/ 86Sr and low 143Nd/ 144Nd; Cikuray volcanics low-K series, with low 87Sr/86Sr and high 143Nd/144Nd ratios. Contrasting isotopic ratios explained by mixing of mantle wedge with Australian granites at Papandayan, perhaps of missing 'Argoland')

Akkersdijk, M.E. (1929)- Caldera of the Tengger-Mountain. Fourth Pacific Science Congress, Java 1929, Excursion Guide E 2, p. 1-12.

Alves, S., P. Schiano & C.J. Allegre (1999)- Rhenium-Osmium isotopic investigation of Java subduction zone lavas. Earth Planetary Sci. Letters 168, p. 65-77.
(Java arc lavas low in Osmium. Mixing between unradiogenic Os from peridotitic upper mantle and two different radiogenic Os components, reflecting two crustal contaminants or different proportions of subducted oceanic crust and sediments)

Andreastuti S.D. (1999)- Stratigraphy and geochemistry of Merapi Volcano, Central Java, Indonesia: implication for assessment of volcanic hazards. Ph.D. Thesis, University of Auckland, New Zealand, p. 1-910.
(Study of tephra deposits on flanks of Merapi showed 20 formations, two of which products of Merbabu. Oldest unit Sumber (~3000 yrs) and youngest Pasarbubar (~1800 AD?). Magma evolved from medium-K to high-K with time. Post-1800 AD eruptions mainly of open vent type, related to dome collapse events. Pre-1800 AD eruptions mainly controlled by deeper magmatic processes, with hornblende more abundant)

Andreastuti, S.D. (2007)- The 2006 eruption of Merapi, petrography and geochemistry of the June 14, 2006 pyroclastic flows. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 662-668.
(Pyroclastic flows generated during collapse of lava dome in 2006. Collapse of part of older dome added common older lithic blocks to pyroclastic flow deposits. SiO2 content 55.5-55.9 wt %)

Andreastuti, S.D., B.V. Alloway & I.E.M. Smith (2000)- A detailed tephrostratigraphic framework at Merapi volcano, Central Java, Indonesia: implications for eruption predictions and hazard assessment. J. Volcanology Geothermal Res. 100, p. 51-67.
(Merapi Volcano episodes of dome growth usually resulted in partial dome collapse events that generated pyroclastic flows. Eruptive record back to mid-Holocene, deduced from volcaniclastic fans of lower flanks, show most eruptions from 3000-250 years ago of different style from present period. Numerous coarse ash and lapilli beds interbedded with soil material, pyroclastic flow and surge deposits. In deeper parts of succession pyroclastic products from adjacent Merbabu Volcano, evidence of concurrent activity at both volcanoes)

Angkasa, S.S., T. Ohba, T. Imura, I. Setiawan & M. Rosana (2019)- Tephra-stratigraphy and ash componentry studies of proximal volcanic products at Mount Tangkuban Parahu, Indonesia: an insight to Holocene volcanic activity. Indonesian J. Geoscience 6, 3, p. 235-253.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/590/289)

Baak, J.A. (1949)- A comparative study on recent ashes of the Java volcanoes Smeru, Kelut, and Merapi. Mededelingen Algemeen Proefstation Landbouw, Buitenzorg (Bogor), 83, p. 1-60.

Bardintzeff, J.M. (1984)- Merapi volcano (Java, Indonesia) and Merapi-type nuee ardente. Bull. Volcanologique 47, 3, p. 433-446.

Belousov, A., M. Belousova, D. Krimer, F. Costa, O. Prambada & A. Zaennudin (2015)- Volcaniclastic stratigraphy of Gede Volcano, West Java, Indonesia: how it erupted and when. J. Volcanology Geothermal Res. 301, p. 238-252.
(Holocene volcaniclastic deposits. Major part of volcanic edifice of Gede Volcano, 60 km S of Jakarta, formed in Pleistocene with high-silica basalts. After inactive period of >30,000 years volcanic activity resumed at Pleistocene- Holocene boundary, with explosive basaltic andesite to rhyodacites. Four major Holocene eruptive episodes ~10,000, 4000, 1200, and 1000 yr BP. Most of erupted products transported as pyroclastic flows. Voluminous lahars common between eruptions. Recent eruptive period of volcano started ~800 years ago with frequent, weak explosive Vulcanian-type eruptions and rare small extrusions of viscous lava)

Berlo, K., V.J. van Hinsberg, N. Vigouroux, J.E. Gagnon & A.E. Williams-Jones (2014)- Sulfide breakdown controls metal signature in volcanic gas at Kawah Ijen volcano, Indonesia. Chemical Geology 371, p. 115-127.

Beauducel, F. (1998)- Structures et comportement mecanique du volcan Merapi (Java): une approche methodologique du champ de deformations. Doct. Thesis Universite de Paris 7, p. 1-243.
(online at: www.ipgp.jussieu.fr/~beaudu/download/ecrit.pdf)
('Structures and mechanical behaviour of the Merapi volcano (Java)')

Berthommier, P.C., G. Camus, M. Condomines & P.M. Vincent (1990)- Le Merapi (centre Java): elements de chronologie d'un stratovolcan andesitique. Comptes Rendus Academie Sciences, Paris, 311, 1, p. 213-218.
('Merapi, central Java: elements of chronology of an andesitic stratovolcano')

Blattmann, S. (1938)- Basaltisch-andesitische Gesteine des Salak-Gebirges in West Java. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 73, Abhandl. A, 3, p. 352-374.
('Basaltic-andesitic rocks of the Salak mountains in West Java')

Blumenthal, M.M. (1927)- Der Klut (Ost-Java), sein Eruptions- und Katastrophentypus und die getroffenen Praventicmassnahmen. Jahresbericht Naturforschenden Gesellschaft Graubunden 1926/27, 45, p.
('The Kelud (East Java), its eruption and catastrophe-type and the preventive measures taken')

Bogie, I., Y.I. Kusumah & M.C. Wisnandary (2008)- Overview of the Wayang Windu geothermal field, West Java, Indonesia. Geothermics 37, 3, p. 347-365.
(Wayang Windu geothermal field 35 km S of Bandung, associated with Gambung, Wayang, Windu Pleistocene volcanic centers)

Bogie, I. & K.M. MacKenzie (1998)- The application of volcanic facies models to an andesitic stratovolcano hosted geothermal system at Wayang Windu, Java, Indonesia. Proc. 20th New Zealand Geothermal Workshop, p. 265-276.
('Volcanic facies model' of Wayang Windu geothermal project 40 km S of Bandung, W Java, at S slope of active Malabar volcano. Wayang Windu is one of three small Pleistocene (0.10- 0.49 Ma) eruptive centers)

Boomgaart, L. (1947)- Some data on the Muriah volcano (Java), and its leucite-bearing rocks. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 50, 6, p. 649-652.
(online at: www.dwc.knaw.nl/DL/publications/PU00018361.pdf)
(Brief survey of Muriah volcano complex, NE Java. N slope built up mainly of breccias of leucite-bearing rock fragments with intercaled basaltic and leucitite flows. Columnar leucite tephrite on E side of N slope)

Boudon, G., G. Camus, A. Gourgaud & J. Lajoie (1993)- The 1984 nuee-ardente deposits of Merapi volcano, Central Java, Indonesia: stratigraphy, textural characteristics and transport mechanisms. Bull. Volcanology 55, p. 327-342.

Bourdier, J.L., I. Pratomo, J.C. Thouret, G. Boudon & P.M. Vincent (1997)- Observations, stratigraphy and eruptive processes of the 1990 eruption of Kelut volcano, Indonesia. J. Volcanology Geothermal Res. 79, p. 181-203.

Bourdier, J.L., J.C. Thouret, l. Pratomo, P.M. Vincent & G. Boudon (1997)- Menaces volcaniques au Kelut (Java, Indonesie): les enseignements de l'eruption de 1990. Comptes Rendus Academie Sciences, Paris, ser. IIa, 324, 12, p. 961-968.
('Volcanic hazards at Kelut volcano (Java island, Indonesia): lessons learned from the 1990 eruption')

Bronto, S. (1982)- Geologi G. Galunggung. Proc. 11th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 7-18.
('Geology of Mount Galunggung'. W Java active volcano NW of Tasikmalaya)

Bronto, S. (1989)- Volcanic geology of Galunggung, West Java, Indonesia. Ph.D. Thesis University of Canterbury, New Zealand, p. 1-490.
(online at: http://ir.canterbury.ac.nz/bitstream/10092/5667/1/bronto_thesis.pdf%E2%80%8E)
(Study of active Galunggung volcano, 100km SE of Bandung, W Java. Age of 'Old Galunggung' stratovolcano rocks mainly pyroclastic flows, pyroclastic fall and lahar deposits and lava flows, ~50ka- 10ka old. Younger formations erupted during caldera formation (4200 ±150 yrs BP) and in 1822, 1894, 1918, 1982-83)

Bronto, S. (1990)- Galunggung 1982-83 high-Mg basalt: Quaternary Indonesian arc primary magma. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 126-143.
(1982-1983 eruption of Galunggung volcano, W Java, began with Peleean activity, followed by Vulcanian and Strombolian eruptions, ending with extrusion of lava. Lava composition more basic with time. Rel.' primitive' high-Mg basalts probably derived from spinel peridotite source by 15% melting at ~45km depth)

Bronto, S. (1990)- G. Krakatau. Berita Berkala Vulkanologi, Edisi Khusus No. 133. Direktorat Vulkanologi, Bandung, 5p.

Bronto, S. (2006)- Fasies gunung api dan aplikasinya. J. Geologi Indonesia 2, 1, p. 59-71.
('Volcanic facies and its applications')

Bronto, S. (2010)- Geologi gunung api purba. Geological Survey, Bandung, Spec. Publ., p. 1-154.

('Geology of ancient volcanoes')

Bronto, S., P. Asmoro, G. Hartono & Sulistiyono (2012)- Evolution of Rajabasa volcano in Kalianda Area. J. Geologi Indonesia 7, 1, p.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/363
(Quaternary Rajabasa volcano in Lampung, SE tip of Sumatra formed in 25 km wide Pre-Rajabasa Caldera)

Bronto, S., E. Budiadi & H.G. Hartono (2004)- Permasalahan geologi gunungapi di Indonesia. Majalah Geologi Indonesia (IAGI) 19, 2, p. 91-105.

Brouwer, H.A. (1913)- Leucite-rocks of the Ringgit (East-Java) and their contact metamorphosis. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 15, 2, p. 1238-1245.
(online at: www.digitallibrary.nl)

Brouwer, H.A. (1914)- Uber leucitreiche bis leucitfreie Gesteine von G. Beser. Centralblatt Mineral. Geol. Palaont. 1914, p. 1-7.
(online at: https://babel.hathitrust.org/cgi/pt?id=uc1.b4291847;view=1up;seq=27)
('On leucite-rich to leucite-free rocks from Gunung Beser'. Extinct volcano N of Bondowoso in E Java, with transitions from leucite basalts to leucite-free rocks)

Brouwer, H.A. (1915)- De vulkaan Raoeng (Oost Java) en zijne erupties. Jaarboek Mijnwezen Nederlandsch Oost-Indie 42 (1913), Verhandelingen, p. 51-87.
('The Raung volcano (East Java) and its eruptions')

Brouwer, H.A. (1920)- On the composition and the xenoliths of the lava dome of the Galunggung (West-Java). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 23, 8, p. 1234-1240.
(online at: www.dwc.knaw.nl/DL/publications/PU00014780.pdf)
(On earlier recrystallization products in 1918 lava dome of Galunggung volcano, W Java)

Brouwer, H.A. (1928)- Alkaline rocks of the volcano Merapi. (Java) and the origin of these rocks. Proc. Kon. Nederl. Akademie Wetenschappen 31, 4-5, p. 492-498.
(online at: www.dwc.knaw.nl/DL/publications/PU00015607.pdf)
(Nearly all Java volcanoes produced pyroxene andesites and basalts. Xenoliths in volcanic rocks of Merapi volcano include metamorphic limestones with wollastonite and diopside, sandstones and arkose)

Brouwer, H.A. (1945)- The association of the alkali rocks and metamorphic limestone in a block ejected by the volcano Merapi. (Java). Proc. Kon. Nederl. Akademie Wetenschappen 47, p. 166-189.
(online at: www.dwc.knaw.nl/DL/publications/PU00018161.pdf)
(Another description of large block of metamorphosed limestone from lahar derived from pyroxene-andesite flow in Kali Batang at SW slope of Merapi. Originally described as lenses of limestone in green 'schist', but is limestone transformed into wollastonite, gehlenite, leucite-bearing minerals, etc. No fossil evidence reported from limestone)

Brun, A. (1909)- Quelques recherches sur le volcanisme aux volcans de Java, 4. Archives Sciences Phys.Naturelles, Geneve 27, p. 113-150.
('Some investigations of the volcanism of volcanoes of Java-4'. Old, brief descriptions of activity of Semeru, Bromo)

Camus, G., M. Diament, M. Gloaguen, A. Provost & P. Vincent (1992)- Emplacement of a debris avalanche during the 1883 eruption of Krakatau (Sunda Straits, Indonesia). GeoJournal 28, 2, p. 123-128.

Camus, G., A. Gourgaud, P.C. Mossand-Berthommier & P.M.Vincent (2000)- Merapi (Central Java, Indonesia): an outline of the structural and magmatological evolution, with a special emphasis to the major pyroclastic events. J. Volcanology Geothermal Res. 100, p. 139-163.

(Merapi Volcano history four periods: Ancient (40,000- 14,000 yrs BP), Middle, Recent (starting at 2200 yrs BP) and Modern Merapi (since eruption of 1786). Mount St. Helens-type edifice collapse during Middle Merapi stage between 6700- 2200 y BP. During Recent Merapi stage, violent magmatic to phreatomagmatic eruptions twice interrupted growth of volcano. Modern Merapi characterised by persistent growth of summit dome, y interrupted by collapses of dome to generate frequent Merapi-type nuees ardentes (blocks-and-ash flows and associated surges). Previous stages characterised by long lava flows, alternating with violent explosive phases. Merapi lavas calc-alkaline, with ~50-60% SiO2. 90% of Merapi lavas high-K basaltic andesites)

Camus, G., A. Gourgaud & P.M. Vincent (1987)- Petrologic evolution of Krakatau (Indonesia): implications for a future activity. J. Volcanology Geothermal Res. 33, p. 299-316.
(Krakatau Volcano in Sunda straits characterized by phases, each beginning with construction of cone and ending with destruction and formation of caldera. Two last (pre- and post-1883) cycles well known, but older ones not clearly defined. Lava evolution shows cyclicity tied structural evolution, from basalts to basic andesites, acid andesites to dacites. Destructive stages correspond to dacitic terms. Anak Krakatau from 1927-1979 characterized by basalts and basic andesites, 1981 eruption close to dacitic)

Camus, G. & P.M. Vincent (1987)- Discussion of a new hypothesis for the Krakatau volcanic eruption in 1883. J. Volcanology Geothermal Res.19, p. 167-173.
(Discussion of Krakatau 1983 eruption, interpreted to be Mount St. Helens-type collapse event)

Carey, S., D. Morelli, H. Sigurdsson & S. Bronto (2001)- Tsunami deposits from major explosive eruptions: an example from the 1883 eruption of Krakatau. Geology 29, 4, p. 347-350.
(Inundation of coastal areas by tsunamis during 1883 eruption of Krakatau volcano led to deposition of pumice-enriched deposits, some with significant coral fragments and non-volcanic beach sediment. Source of pumice widespread pumice rafts on surface of Sunda Straits, formed by fallout and pyroclastic flow activity)

Carey, S., H. Sigurdsson, C. Mandeville & S. Bronto (1996)- Pyroclastic flows and surges over water: an example from the 1883 Krakatau eruption. Bull. Volcanology 57, p. 493-511.
(Pyroclastic deposits from 1883 eruption of Krakatau described from Sebesi, Sebuku, and Lagoendi islands and SE coast of Sumatra. Massive and poorly stratified units formed from pyroclastic flows and surges that traveled over sea for distances up to 80 km. Decreasing sorting grain size and thickness with increasing distance from Krakatau. Deposits correlated to major pyroclastic flow phase on 27 August)

Carey, S., H. Sigurdsson, C. Mandeville & S. Bronto (1996)- Volcanic hazards from pyroclastic flow discharge into the sea: examples from the 1883 eruption of Krakatau, Indonesia. In: Volcanic hazards and disasters in human Antiquity, Geol. Soc. America (GSA), Special Paper 345, p. 1-14

Carn, S.A. (1999)- Application of synthetic aperture radar (SAR) imagery to volcano mapping in the humid tropics; a case study in East Java, Indonesia. Bull. Volcanology 61, p. 92-105.

Carn, S.A. (2000)- The Lamongan volcanic field, East Java, Indonesia: physical volcanology, historic activity and hazards. J. Volcanology Geothermal Res. 95, p. 81-108.
(Lamongan volcanic field in SE Java 61 basaltic cinder or spatter cones, >29 prehistoric maars, and central compound complex comprising three main vents including historically active Lamongan volcano. Persistently active between 1799-1898)

Carn, S.A. & D.M. Pyle (2001)- Petrology and geochemistry of the Lamongan volcanic field, East Java, Indonesia: primitive Sunda Arc magmas in an extensional tectonic setting? J. Petrology 42, 9, p. 1643-1683.
(online at: http://petrology.oxfordjournals.org/content/42/9/1643.full.pdf)
(Lavas of Lamongan volcano (E Java) include medium-K basalts and basaltic andesites, along with high-K suite. The least evolved lavas lowest SiO2 contents (43 wt % SiO2) in Sunda arc volcanics. Extensional tectonics, possibly related to arc segmentation created conditions promoting rapid ascent of parental magmas, probably responsible for this and other features of complex)

Caron, M.H. (1916)- Het zwavelvoorkomen van de Kawah Idjen. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 3 (Molengraaff issue), p. 57-63.
(online at: https://ia601908.us.archive.org/30/items/verhandelingenva3191geol/verhandelingenva3191geol.pdf)
('The sulfur occurrence of Kawah Idjen'. Horizontal beds of sulfur in E part of crater wall of Idjen volcano, E Java, are crater lake deposits)

Carr, B.B., A.B. Clarke & L. Vanderkluysen (2016)- The 2006 lava dome eruption of Merapi Volcano (Indonesia): detailed analysis using MODIS TIR. J. Volcanology Geothermal Res. 311, 1, p. 60-71.

Cassidy, M., S.K. Ebmeier, C. Helo, S.F.L. Watt, C. Caudron, A. Odell et al (2019)- Explosive eruptions with little warning: experimental petrology and volcano monitoring observations from the 2014 eruption of Kelud, Indonesia. Geochem. Geophys. Geosystems 20, 8, p. 4218-4247.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2018GC008161)
(At Kelud volcano, E Java, explosive and effusive eruptions at sourced from magma storage system at 2-4 km. Explosive eruptions fed by magma stored under relatively cool (~1000 °C) and water-saturated conditions, effusive eruptions fed by hotter (~1050 °C), water-undersaturated magmas)

Caudron, C., D.K. Syahbana, T. Lecocq, V. Van Hinsberg, W. McCausland, A. Triantafyllou, T. Camelbeeck, A. Bernard & Surono (2015)- Kawah Ijen volcanic activity: a review. Bull. Volcanology 77, 16, p. 1-39.
(online at: https://link.springer.com/content/pdf/10.1007%2Fs00445-014-0885-8.pdf)
(Historic activity since 1770 of Kawah Ijen (2386 m), a composite volcano within Pleistocene Ijen caldera, easternmost Java)

Chadwick, J.P., V.R. Troll, C. Ginibre, D. Morgan, R. Gertisser, T.E. Waight & J.P. Davidson (2007)- Carbonate assimilation at Merapi Volcano, Java, Indonesia: insights from crystal isotope stratigraphy. J. Petrology 48, 9, p. 1793-1812.
(Recent Merapi andesite lavas with abundant, complexly zoned, plagioclase phenocrysts. Sr isotopes require source or melt with elevated radiogenic Sr, rich in Ca and lower Mg and Fe. Abundant xenoliths, including metamorphosed volcanoclastic sediment and carbonate country rock. Mineralogy and geochemistry indicate magma-crust interaction at Merapi more significant than previously thought. Sr isotopes in plagioclase compared to Wonosari Lst from Parangtritis)

Chadwick, J.P., V.R. Troll, T.E. Waight, F.M. van Der Zwan & L.M. Schwarzkopf (2013)- Petrology and geochemistry of igneous inclusions in recent Merapi deposits: a window into the sub-volcanic plumbing system. Contrib. Mineralogy Petrology 165, 2, p. 259-282.
(Common igneous inclusions in basaltic-andesite lavas of Merapi, C Java, suggesting complex sub-volcanic magmatic system. Four main types: (1) highly crystalline basaltic-andesite inclusions, (2) co-magmatic enclaves, (3) plutonic crystalline inclusions and (4) amphibole megacrysts)

Charbonnier, S.J. & R. Gertisser (2008)- Field observations and surface characteristics of pristine block-and-ash flow deposits from the 2006 eruption of Merapi Volcano, Java, Indonesia. J. Volcanology Geothermal Res. 177, 4, p. 971-982.
(Internal archtecture of 2006 block-and-ash flow at S flank of Merapi vocano, C. Java)

Charbonnier, S.J. & R. Gertisser (2011)- Deposit architecture and dynamics of the 2006 block-and-ash flows of Merapi Volcano, Java, Indonesia. Sedimentology 58, 6, p. 1573-1612.
(Internal archtecture of 2006 block-and-ash flow at S flank of Merapi volcano, C. Java. Variations in distribution, surface morphology and lithology related to source materials involved during individual events and to effects of changing slope, channel morphology and local topographic features on flow dynamics)

Claproth, R. (1988)- Petrography and geochemistry of volcanic rocks from Ungaran, Central Java, Indonesia. Ph.D. Thesis, University of Wollongong, p. 1-500.
(online at: http://ro.uow.edu.au/theses/1398/)

(Ungaran volcano, C Java, forms part of second of three cycles of volcanism recognized on Java and was active between Late Pliocene- Late Pleistocene. Three stages of growth, interrupted episodes of cone collapse. Lavas are basalts, basaltic andesites and andesites. Most basalts are shoshonites, andesites are high-K calcalkaline. Shoshonitic rocks dominated early stages of activity. Low Mg-numbers indicate basalts crystallized from derivative melts, and do not represent mantle-derived magma)

Claproth, R. (1989)- Magmatic affinities of volcanic rocks from Ungaran, Central Java. Geologi Indonesia (IAGI) 12, 1 (Katili volume), p. 511-562.
(Lengthy paper on Late Pliocene- Late Pleistocene volcanic rocks of Ungaran volcano, C. Java. Early stages of Ungaran mainly shoshonitic rocks, later stages mostly high-K calk-alkaline andesites)

Cool, H. (1910)- Krakatau in 1908. Jaarboek Mijnwezen Nederlandsch Oost-Indie 37 (1908), p. 183-195.

Cool, H. (1910)- Verslag omtrent een onderzoek aan den Semeroe in verband met de ramp van Loemadjang. Jaarboek Mijnwezen Nederlandsch Oost-Indie, 38 (1909), p. 297-331.
('Report of an investigation of the Semeru in connection with the disaster of Lumajang'. Lumajang area damaged by ‘banjirs’ and mudflows derived from Semeru volcano on 29-30 August 1909)

Cool, W. (1931)- Het Merapi gebeuren in Midden-Java, bij de jaarwisseling 1930/31. De Ingenieur 46, 37, A, p. 341-357.
(online at: https://resolver.kb.nl/resolve?urn=dts:2958038:mpeg21:pdf)
(‘The Merapi eruption around New Year 1930/31’ (by brother of mining engineer Hugo Cool, who died in Makassar in March 1910 at age 30)

Dahren, B., V.R. Troll, U.B. Andersson, J.P. Chadwick, M.F. Gardner, K. Jaxybulatov & I. Koulakov (2012)- Magma plumbing beneath Anak Krakatau volcano, Indonesia: evidence for multiple magma storage regions. Contrib. Mineralogy Petrology 163, 4, p. 631-651.
(Petrological studies identified shallow magma storage 2-8 km beneath Krakatau, while seismic evidence pointed towards deeper crustal storage zones at 9 and 22 km. Clinopyroxene in Anak Krakatau lavas crystallized at of 7–12 km depth, plagioclase at shallow crustal (3-7 km) and sub-Moho (23–28 km) levels. New seismic tomography shows separate upper crustal (<7 km) and lower-mid-crustal magma storage regions)

De Belizal, E. (2012)- Les corridors de lahars du volcan Merapi (Java, Indonesie): des espaces entre risque et ressource. Contribution a la geographie des risques au Merapi. Doct. Thesis Universite Pantheon-Sorbonne, Paris I, p. 1-495.
(online at: https://tel.archives-ouvertes.fr/file/index/docid/931862/filename/de-belizal_edouard--these.pdf)
('The lahar corridors of the Merapi volcano (Java, Indonesia): spaces between risk and resource. Contribution to the risk geography at Merapi')

Decker, R.W. (1959)- Renewed activity of Anak Krakatau. Contr. Institut Teknologi Bandung, Bagian Geologi, 34, 5p.

Decker, R.W. & D. Hadikusumo (1961)- Results of the 1960 expedition to Krakatau. J. Geophysical Research 66, 10, p. 3497-3511.
(Vsit to Anak Krakatau on January 12-13, 1960, witnessing explosive eruptions of pyroclastics from fine ash to blocks 2m in diameter at 0.5 to 10-minute intervals. Twenty small, turbulent, explosion clouds of gas and ash rising 150-300 meters alternated with 4-6 larger eruptions of gas, ash, and lapilli clouds turbulently rising to 1200m, with larger blocks landing up to 600m from vent. Seismic records indicate eruptions begin at ~200m below sea level. Present composition of ejecta still basaltic)

Deegan, F.M., V.R. Troll, C. Freda, V. Misiti, J.P. Chadwick et al. (2010)- Magma- carbonate interaction processes and associated CO2 release at Merapi Volcano, Indonesia: insights from experimental petrology. J. Petrology 51, 5, p. 1027-1051.
(online at:http://petrology.oxfordjournals.org/content/51/5/1027.full.pdf)

(Evidence for late-stage interaction between magmatic system and local limestone at Merapi volcano, C Java: calc-silicate xenoliths within Merapi basalts-andesites and feldspar phenocrysts frequently with crustally contaminated cores and zones)

Deegan, F.M., V.R. Troll, C. Freda, V. Misiti & J.P. Chadwick (2011)- Fast and furious: crustal CO2 release at Merapi volcano, Indonesia. Geology Today 27, 2, p. 63-64.
(Experiments show that when magma interacts with carbonate-rich crustal rock, it rapidly liberates crustal CO2, with potentially devastating repercussions for explosive volcanic behaviour)

De Hoog, J.C.M, P.R.D. Mason & M.J van Bergen (2001)- Sulfur and chalcophile elements in subduction zones: constraints from a laser ablation ICP-MS study of melt inclusions from Galunggung Volcano, Indonesia. Geochimica Cosmochimica Acta 65, p. 3147-3164.

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Del Marmol, M.A. & B.D. Marsh (1988)- Merapi volcano, Central Java, Indonesia: petrology and geochemistry. Chemical Geology 70, 1-2, p. 86. *(Abstract only)*
(Merapi stratocone lavas are calc-alkaline hi-Al basalts and andesites ranging in Si02 from 49-56%)

Delmelle, P. & A. Bernard (1994)- Geochemistry, mineralogy, and chemical modeling of the acid crater lake of Kawah Ijen Volcano, Indonesia. Geochimica Cosmochimica Acta 58, 11, p. 2445-2460.

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(Chemical and isotopic analyses of samples from Kawah Ijen crater lake and spring)

Dempsey, S.R. (2013)- Geochemistry of volcanic rocks from the Sunda Arc. Ph.D. Thesis Durham University, p. 1-279.
(online at: http://etheses.dur.ac.uk/6948/1/ScottDempsey_Thesis.pdf)
(Geochemistry and isotopic (Sr-Nd-Hf-Pb) examination of volcanoes from W Java (Papandayan, Patuha, Galunggung), C Java (Sumbing), E Java (Kelut) and Bali (Agung). Contamination in arc crust more extensive than previously recognised, particularly in W and C Java. Papandayan and Patuha significant enrichments in isotope ratios above mantle values, indicating terrigeneous crustal contamination. Magma compositions of Sumbing similar to Merapi and Merbabu, with strong evidence for assimilation of carbonate-rich lithologies)

De Neve, G.A. (1953)- Krakatau and Anak Krakatau with a communication on the latest investigation in Oct. 1953: Proc. 8th Pacific Science Congress, Philippines, 2, p. 178-179.

De Neve, G.A. (1981)- Anak Krakatau, fifty years of geomorphological development and growth with the petrographically derived consequences. Proc. 10th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 7-40.

De Neve, G.A. (1981)- Historical notes on Krakatauǿs eruption of 1883, and activities in previous times. Nat. Inst. Oceanology (LON-LIPI), Publ. No. LON/COAST/III-14, Jakarta, p. 1-45.

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De Neve, G.A. (1983)- Krakatau's earliest known activity: was it prehistoric? Berita Geologi (Bandung) 15, p. 39-44.

De Neve, G.A. (1985)- Geovolcanology of the Krakatau Goup in the Sunda Strait region: review of a hundred years developments (1883-1983). In: D. Sastrapradja et al. (eds.) Proc. Symposium on 100 years development of Krakatau and its surroundings, Indonesian Inst. Science (LIPI), Jakarta, 1, p. 20-34.

De Neve, G.A. (1992)- Krakatau Bibliography: a comprehensive bibliography of Krakatau volcano in the Sunda Straits and its adjacent regions (Indonesia). Volcanological Survey of Indonesia, Bandung, p. 1-645.
(Very extensive bibliography of Krakatau volcano and geology of adjacent regions)

Dirk, M.H.J. (2007)- Petrologi dan geokimia batuan gunung api di Gunung Mandalawangi dan sekitarnya. J. Sumber Daya Geologi 17, Spec. Issue (163), p. 11-22.
('Petrology and geochemistry of volcanic rocks of Gunung Mandalawangi and surroundings'. Quaternary volcanics of Mandalawangi volcano ESE of Bandung, W Java, basaltic andesite, andesite, dacite and high-K rhyolite of calk-alkaline affinity, as typically formed in island arc environment)

Dirk, M.H.J. (2007)- Petrologi batuan gunung api Kareumbi dan sekitarnya, Sumedang, Jawa Barat. J. Sumber Daya Geologi 17, Spec. Issue (163), p. 23-34.
('Petrology of volcanic rocks of Kareumbi and surroundings, Sumedang, West Java'. Quaternary volcanics of Kareumi, E of Bandung, mainly basaltic andesite, andesite and dacite of calc-alkaline affinity)

Douglas, E.A. (1912)- De uitbarsting van den Tangkoeban Prahoe in April 1910. Jaarboek Mijnwezen Nederlandsch Oost-Indie 39 (1910), p. 80-86.
('The eruption of the Tangkuban Perahu in April 1910')

Doyle, E.E., S.J. Cronin, S.E. Cole & J. Thouret (2010)- The coalescence and organization of lahars at Semeru volcano, Indonesia. Bull. Volcanology 72, 8, p. 961-970.

Dvorak, J., J. Matahelumual, A.T. Okamura, H. Said, T.J. Casadevall & D. Mulyadi (1990)- Recent uplift and hydrothermal activity at Tangkuban Parahu Volcano, West Java, Indonesia. Bull. Volcanology 53, p. 20-28.

Edwards, C.M.H., M. Menzies & M. Thirlwall (1991)- Evidence from Muriah, Indonesia, for the interplay of supra- subduction zone and intraplate processes in the genesis of potassic alkaline magmas. J. Petrology 32, 3, p. 555-592.
(High-K alkaline volcano Muriah in C Java has younger highly potassic series (HK) and an older potassic series (K). Proposed model for Muriah lavas three source components: (1) asthenosphere of mantle wedge of Sunda arc, which has Indian Ocean MORB characteristics; (2) metasomatic layer at base of lithosphere, which has enriched mantle characteristics; (3) subducted pelagic sediments. Calc-alkaline magma contaminated by arc crust before mixing. Magmas show transition from intraplate to subduction zone processes in their genesis)

Edwards, C.M.H., M.A. Menzies, M.F. Thirlwall, J.D. Morris, W.P. Leeman &, R.S. Harmon (1994)- The transition to potassic alkaline volcanism in island arcs: the Ringgit-Beser complex, East Java, Indonesia. J. Petrology 35, 6, p. 1557-1595.
(Ringgit-Beser volcanic complex lavas of normal island arc calc-alkaline type and atypical potassic lavas, including high-Mg lavas. Incompatible trace element and Pb isotope data for calc-alkaline lavas indicate similar source to other calc-alkaline lavas in Java (Indian Ocean MORB mantle fluxed by fluids from subducted slab). Potassic lavas from enriched mantle sources within wedge not affected by recent subduction processes)

Erdmann, S., C. Martel, M. Pichavant, J.L. Bourdier, R. Champallier, J.C. Komorowski & N. Cholik (2016)- Constraints from phase equilibrium experiments on pre-eruptive storage conditions in mixed magma systems: a case study on crystal-rich basaltic andesites from Mount Merapi, Indonesia. J. Petrology 57, 3, p. 535-560.
(online at: https://academic.oup.com/petrology/article/57/3/535/1752840)

(Experiments on Merapi volcano basaltic andesites suggests pre-eruptive reservoir partially crystallizes at ~100-200 MPa (4.5- 9 km). Magmas are stored at ~925-950°C with melt H2O content of ~3-4 wt %. Pre-eruptive recharge magmas T 950-1000°C, and higher melt H2O content of ~4-5 wt %)

Escher, B.G. (1919)- De Krakatau groep als vulkaan. Handelingen Eerste Nederlandsch-Indisch Natuurwetenschappelijk Congres, Weltevreden 1919, p. 28-35.

Escher, B.G. (1919)- Veranderingen in de Krakatau-groep na 1908. Handelingen Eerste Nederlandsch-Indisch Natuurwetenschappelijk Congres, Weltevreden 1919, p. 198-219.

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(online at: www.repository.naturalis.nl/document/549247)
('The prehistoric collapse at Tasikmalaya and the Galunggung volcano'. The area of ten thousand hills of Tasikmalaya is in front of large missing sector of Galunggung volcano, and probably formed as gravity collapse of volcano)

Escher, B.G. (1927)- Vesuvius, the Tengger Mountains and the problem of calderas. Leidsche Geol. Mededelingen 2, p. 51-88.
(online at: www.repository.naturalis.nl/document/549675)
(Includes discussion of Bromo Caldera, Tengger Mountains of East Java)

Escher, B.G. (1928)- Krakatau in 1883 en in 1928. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 45, 4, p. 715-743.
(On Krakatoa eruptions of 1883 and 1928)

Escher, B.G. (1931)- Over het vulkanisme van Java in verband met de uitbarsting van den Merapi. De Ingenieur 46, 37, A, p. 357-373.
(online at: https://resolver.kb.nl/resolve?urn=dts:2958038:mpeg21:pdf)
(‘About the volcanism on Java, in relation with the eruption of the Merapi’)

Escher, B.G. (1933)- On the character of the Merapi eruption in Central Java. Leidsche Geol. Mededelingen 6, p. 51-58.
(online at: www.repository.naturalis.nl/document/549807)
(Mainly discussion of two paintings of 1865 Merapi eruption by Raden Saleh in 1865)

Fennema, R. (1886)- De vulkanen Semeroe en Lamongan. Jaarboek Mijnwezen Nederlandsch Oost-Indie 15 (1886), Wetenschappelijk Gedeelte, p. 5-130.
('The volcanoes Semeru and Lamongan', East Java)

Fennema, R. (1895)- De uitbarsting van den vulkaan 'Galoenggoeng' op 18 en 19 October 1894.. Jaarboek Mijnwezen Nederlandsch Oost-Indie 24 (1895), p. 58-84.
('The eruption of the volcano 'Galunggung' on 18 and 19 October')

Fennema, R. (1912)- De uitbarsting van den Tangkoeban Prahoe in Mei 1896. Jaarboek Mijnwezen Nederlandsch Oost-Indie 39 (1910), p. 74-79.
('The eruption of the Tangkuban Perahu in May 1896')

Fermin, P.G.H.A. (1951)- Beknopt verslag van een voorlopig geologisch onderzoek in 1942, op de hellingen van de Gunung Muriah, naar het voorkomen van leuciet-houdende gesteenten. De Ingenieur in Indonesie, IV, 3, 5, p. 23-30.

('Brief report on a preliminary investigation in July-August 1942 on leucite-bearing rocks on the slopes of Gunung Muriah'. Investigation into potassium-rich volcanics of the large, extinct Muriah double volcano in NE Java. By Geological Survey personnel including G. ter Bruggen (with assistent geologist A.F. Lasoet (Lasut)), L. Boomgaart (with Suno Sumosusastro) and P. Fermin (with Slamet), under Japanese supervision. Average 4.35% K2O)

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(Three hypotheses proposed to explain causes of 1883 Krakatau tsunami: (1) collapse of N part of Krakatau island (Verbeek, 1884); (2) submarine explosion (Yokoyama, 1981), and (3) emplacement of pyroclastic flows (Latter, 1981). Most likely mechanism Mt. St. Helens-like scenario, close to hypothesis of Verbeek, in which collapse of part of original volcanic edifice propagated major explosion)

Fukashi, M. & F. Imamura (2011)- Tsunami generation by a rapid entrance of pyroclastic flow into the sea during the 1883 Krakatau eruption, Indonesia. J. Geophysical Research, Solid Earth, 116, 9, B09205, p. 1-24.

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(online at: http://petrology.oxfordjournals.org/content/early/2012/10/31/petrology.egs066.full.pdf+html)
(Anak Krakatau is basaltic andesite cone that has grown following caldera-forming 1883 eruption of Krakatau. Since 1950s has been growing at rate of ~8 cm/ week. Anak Krakatau magmas have genetic relationship with 1883 eruption products. With granitic- dioritic and metasedimentary (with cordierite) xenolith.s Low levels of assimilation of quartzo-feldspathic sediment recorded)

Genareau, K., S.J. Cronin & G. Lube (2015)- Effects of volatile behaviour on dome collapse and resultant pyroclastic surge dynamics: Gunung Merapi 2010 eruption. Geol. Soc., London, Spec. Publ. 410, p. 199-218.

Gerbe, M.C., A. Gourgaud, O. Sigmarsson, R. Harmon, J.L. Joron & A. Provost (1992)- Mineralogical and geochemical evolution of the 1982-1983 Galunggung eruption (Indonesia). Bull. Volcanology 54, 4, p. 284-298.
(Pyroclastic deposition of 1982-1983 eruption of Galunggung, W Java, lasted 9 months, with diversity of eruptive style, and progressive evolution from andesite (58 wt.% SiO2) to high-Mg basalt (47 wt.% SiO2). Galunggung basalts most primitive basalts known from W Java, with phenocrysts of olivine, diopside, etc.)

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(Merapi is Indonesia's most dangerous volcano. Over past two centuries volcanic activity dominated by prolonged periods of basaltic andesite lava dome growth and intermittent dome failures to produce pyroclastic flows every few years. Explosive eruptions, such as in 2010, more common in pre-historic time. Calc-silicate xenoliths brought up by Merapi magmas indicate assimilation of carbonate rocks from sub-volcanic basement)

Gertisser, R., S.J. Charbonnier, J. Keller & X. Quidelleur (2012)- The geological evolution of Merapi volcano, Central Java, Indonesia. Bull. Volcanology 74, 5, p. 1213-1233.
(Eight main volcano stratigraphic units distinguished in Merapi volcano of C Java, linked to three main evolutionary stages:Proto-Merapi, Old Merapi and New Merapi. Construction of Merapi complex began after 170 ka. Proto-Merapi volcanic edifices Gunung Bibi (109±60 ka) in NE and Gunung Turgo and Gunung Plawangan (~138, 135 ka) in S. Old Merapi started to grow at ~30 ka as stratovolcano of basaltic andesite lavas and pyroclastic rocks and was destroyed by flank failure after 4.8±1.5 ka. Shift from medium-K to high-K character of volcanics at ~1900 years BP)

Gertisser, R. & J. Keller (2003)- Temporal variations in magma composition at Merapi Volcano (Central Java, Indonesia): magmatic cycles during the past 2000 years of explosive activity. J. Volcanology Geothermal Res. 123, p. 1-23.

(Merapi Volcano in C Java frequently active in M-Late Holocene time, producing basalts and basaltic andesites of medium-K composition in earlier stages of activity and high-K magmas from ~1900 BP to present. Periods of high eruption rates alternate with shorter time spans of reduced eruptive frequency since first appearance of high-K volcanic rocks. Cyclic variations result from interplay of several magmatic processes)

Gertisser, R. & J. Keller (2003)- Trace element and Sr, Nd, Pb and O isotope variations in medium-K and high-K volcanic rocks from Merapi volcano, Central Java, Indonesia: evidence for the involvement of subducted sediments in Sunda Arc magma genesis. J. Petrology 44, 3, p. 457-489.
(online at: http://petrology.oxfordjournals.org/content/44/3/457.full.pdf+html)
(Merapi Holocene basalts-andesites medium-K affinity, high-K over past 1900 yrs, largely reflecting variable contributions from subducted sediment to mantle wedge which was similar to MORB-source mantle before subduction-related modification)

Giachetti, T., R. Paris, K. Kelfoun & B. Ontowirjo (2012)- Tsunami hazard related to a flank collapse of Anak Krakatau Volcano, Sunda Strait, Indonesia. In: J.P. Terry & J. Goff (eds.) Natural hazards in the Asia-Pacific region, Geol. Soc., London, Spec. Publ. 361, p. 79-90.
(Anak Krakatau volcano built on steep NE wall of 1883 Krakatau eruption caldera, and active on SW side, which makes edifice unstable. Hypothetical 0.280 km3 flank collapse directed SW-wards would trigger initial wave 43m in height that would reach islands of Sertung, Panjang and Rakata in <1 min, with amplitudes from 15-30m. Waves would propagate across Sunda Strait, at 80-110/ hour. Tsunami would reach cities on Java W coast (Merak, Anyer, Carita) 35-45 min after onset of collapse, with amplitude from 1.5-3.4m)

Gourgaud, A., J.C. Thouret & J.L. Bourdier (2000)- Stratigraphy and textural characteristics of the 1982-83 tephra of Galunggung volcano (Indonesia): implications for volcanic hazards. J. Volcanology Geothermal Res. 104, p. 169-186.
(online at: https://hal-insu.archives-ouvertes.fr/hal-00093118/document)
(Galunggung volcano in W Java 9-month-long eruption in 1982-83 with phreatomagmatic phase with ash columns 20 km high. Magma composition evolved from andesite to primitive magnesian basalt and progressive increase of ratio of xenoliths versus juvenile magma before increase of explosivity)

Hammer, J.E., K.V. Cashman & B. Voight (2000)- Magmatic processes revealed by textural and compositional trends in Merapi dome lavas. J. Volcanology Geothermal Res. 100, p. 165-192.

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(online at: core.kmi.open.ac.uk/download/pdf/6116169)
(Geochem work on Salak, Gede, Idjen volcanoes shows progressive E-ward increase in Sr isotope ratio of volcanic rocks across W and C Java, broadly correlating with inferred lithospheric thickness (W Java thicker crust and more terrigenous signal of subducted sediment; E Java thin crust/ pelagic sediment). C- E Java transition may represent SE boundary of Sundaland (pre-Tertiary arc basement).

Handley, H.K., J. Blichert-Toft, R. Gertisser, C.G. Macpherson, S.P. Turner, A. Zaennudin & M. Abdurrachman (2014)- Insights from Pb and O isotopes into along-arc variations in subduction inputs and crustal assimilation for volcanic rocks in Java, Sunda arc, Indonesia. Geochimica Cosmochimica Acta 139, p. 205-226.
(New Pb isotope data for volcanoes across Java (Gede, Salak, Galunggung, Merbabu, Merapi, Ijen). Negative correlation between Pb isotopes and SiO2, combined with mantle-like δ18O values in Gede explained by assimilation of-primitive arc rocks and/or ophiolitic crust known to outcrop in West Java. Peak in δ18O whole-rock and mineral values in C Java volcanic rocks (Merbabu and Merapi) combined with along-arc trends in Sr isotope ratios suggest different or additional crustal assimilant of C Java volcanic rock, likely carbonate material. Strong E-to-W Java variations in Ba concentration attributed subducted source input)

Handley, H.K., J.P. Davidson, C.G. Macpherson & J.A. Stimac (2008)- Untangling differentiation in arc lavas: constraints from unusual minor and trace element variations at Salak Volcano, Indonesia. Chemical Geology 255, p. 360-376.
(Volcanic rocks from Salak Volcano, W Java show different minor and trace element geochemistry between central vent group lavas and rocks erupted at side vents)

Handley, H.K., C.G. Macpherson, J.P. Davidson and R. Gertisser (2006)- Along-arc heterogeneity in crustal architecture and subduction input at the Sunda arc in Java, Indonesia. Geochimica Cosmochimica Acta 70, 18, Suppl. 1 (Goldschmidt Conf. Abstracts), p. A227.
(Sunda Arc lavas across Java. Sr ratios increase from Krakatau in W to Merapi in C Java, but lower further E. Correlation between Sr ratio and volcano summit elevation indicates relation to lithospheric thickness. Other isotope ratios for W Java volcanics consistent with incorporation of subducted sediment dominated by terrigenous component. E Java volcanics greater involvement of subducted pelagic sediment and stronger slab-fluid imprint. Along-arc variation reflects decreasing thickness of turbidite deposits on down-going Indian Ocean lithosphere from Sumatra to Java)

Handley, H.K., C.G. Macpherson, J.P. Davidson, K. Berlo & D. Lowry (2007)- Constraining fluid and sediment contributions to subduction-related magmatism in Indonesia: Ijen Volcanic Complex. J. Petrology 48, 6, p. 1155-1183.
(Ijen Volcanic Complex in E Java on thickened oceanic crust. Caldera complex 20 km wide with 22 post-caldera eruptive centers. 'Old Idjen' volcanics unconformable on Miocene limestone. Lavas geochemistry suggest least contaminated mantle wedge source analysed in region. Indian-type mid-ocean ridge basalt (I-MORB) -like fertile mantle wedge first infiltrated by minor fluid from altered oceanic crust, prior to addition of <1% subducted Indian Ocean sediment (pelagic ooze and Mn-nodules))

Handley, H.K., C.G. Macpherson & J.P. Davidson (2010)- Geochemical and Sr-O isotopic constraints on magmatic differentiation at Gede Volcanic Complex, West Java, Indonesia. Contrib. Mineralogy Petrology 159, p. 85-98.

Handley, H.K., M. Reagan, R. Gertisser, K. Preece, K. Berlo, L.E. McGee, J. Barclay & R. Herd (2018)- Timescales of magma ascent and degassing and the role of crustal assimilation at Merapi volcano (2006-2010), Indonesia: constraints from uranium-series and radiogenic isotopic compositions. Geochimica Cosmochimica Acta 222, p. 34-52.
(Isotopic data sets from 2006 and 2010 eruptions at Merapi volcano,C Java, indicate relatively rapid ascent of more undegassed magma responsible for more explosive behaviour in 2010)

Handley, H.K., S. Turner, C.G. Macpherson, R. Gertisser & J.P. Davidson (2011)- Hf-Nd isotope and trace element constraints on subduction inputs at island arcs: limitations of Hf anomalies as sediment input indicators. Earth Planetary Sci. Letters 304, p. 212-223.
(New Nd-Hf isotope and trace element data for Javanese volcanoes, Hf anomaly variation may be controlled by fractionation of clinopyroxene or amphibole and does not represent magnitude or type of subduction input in some arcs)

Handini, E., T. Hasenaka, A. Harijoko & Y. Mori (2017)- Variation of slab component in ancient and modern Merapi products: a detailed look into slab derived fluid fluctuation over the living span of one of the most active volcanoes in Sunda Arc. J. Applied Geology (UGM) 2, 1, p. 1-14.
(online at: https://jurnal.ugm.ac.id/jag/article/view/30253/18263)
(Holocene eruptions of Merapi medium-K calc alkaline before 1900 years ago and high-K after that. Change attributed to increasing sediment input as volcano matures. Ancient Merapi sample higher input of slab derived fluid (1.5 % of sediment derived fluid) than 2006 eruption of Modern Merapi, opposite of suggested trend)

Harijoko, A., R. Uruma, Wibowo, E. Haryo, L.D. Setijadji, A. Imai, K. Yonezu & K. Watanabe (2016)- Geochronology and magmatic evolution of the Dieng volcanic complex, central Java, Indonesia and their relationships to geothermal resources. J. Volcanology Geothermal Res. 310, p. 209-224.

(Dieng volcanic complex three volcanic episodes: pre-caldera (>1 Ma), second (0.3-0.4 Ma) and youngest (after 0.27 M). Each episode distinct differentiation trends, indicating multiple shallow magma chambers)

Harmon, R.S. & M.C. Gerber (1992)- The 1982-83 eruption at Galunggung Volcano, Java (Indonesia): oxygen isotope geochemistry of a chemically zoned magma chamber. J. Petrology 33, 3, p. 585-609.
(Mt Galunggung in SW Java erupted four times in last two centuries. During most recent event in 1982-1983 305 million m3 of medium-K, calc-alkaline magma s erupted. Composition changed gradually during eruption from initial plagioclase (An60-75) and two-pyroxene andesites with ~58% SiO2 to final plagioclase (An85-90), diopside, and olivine (Fo85-90) bearing primitive magnesium basalts with ~47% SiO2. Eruption progressively tapped and drained magma chamber chemically stratified through extensive crystal fractionation)

Hartmann, M.A. (1938)- Die vulkanische Tatigkeit des Merapi Vulkanes (Mittel Java) in seinem ostlichen Gipfelgebiete zwischen 1902 und 1908. De Ingenieur in Nederlandsch-Indie (IV), 1, 5, p. 60-73.
('The volcanic activity of the Merapi volcano (Central Java) in the east top area between 1902 and 1908')

Hartmann, M.A. (1938)- Die Vulkangruppe im Sudwesten des Salak-Vulkans in West Java. Natuurkundig Tijdschrift Nederlandsch-Indie 98, 4, p. 215-249.
(online at: http://62.41.28.253/cgi-bin/...)
('The group of volcanoes SW of the Salak volcano in W Java'. Descriptions of 4 Recent volcanoes SW of Salak, from NE to SW: Perbakti, Endoet-Wajang, Kiaraberes and Gagak)

Hartono, U. (1994)- The petrology and geochemistry of the Wilis and Lawu volcanics, East Java, Indonesia. Ph.D. Thesis University of Tasmania, Australia, p. 1-441.
(online at: http://eprints.utas.edu.au/15767/2/1Hartono_whole_thesis.pdf)

Hartono, U. (1994)- Magma source characteristics in the Wilis Volcano, Eastern Sunda Arc: trace element and Sr and Nd Isotope constraints. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 250-270.
(Wilis Volcanic Complex in E Java medium-K arc volcanics, varying from basalts to andesites to dacites. Underlying mantle wedge with MORB characteristics. High Ba may be from sediments of subducting plate)

Hartono, U. (1994)- The olivine, pyroxene and amphibole chemistry from the Wilis volcano complex, East Jawa: implications for temperatures andpressures of the magma. J. Geologi Sumberdaya Mineral 4, 37, p. 7-19.
(Pyroxenes from Wilis basalt and andesite crystallized at T of 1150°C and 947°C respectively. Amphiboles from Wilis volcano dacite crystallized at pressure of ~5 kb)

Hartono, U. (1994)- Radiogenic and stable isotope data from the Wilis volcanic complex, East Java. J. Geologi Sumberdaya Mineral 4, 39, p. 8-15.
(Sr, Nd and O-isotope analyses of Quaternary volcanics of Wilis volcano, SE Java)

Hartono, U. (1995)- Oxygen isotope variations from the Wilis volcanic complex, East Java: evidence for assimilation and fractional crystallization. J. Geologi Sumberdaya Mineral 5, 43, p. 2-7.
(On 18O oxygen isotopes in Quaternary volcanics of Wilis Complex, E Java)

Hartono, U. (1995)- The major trace and rare earth elements geochemistry of the Lawu volcano, Central Java. J. Geologi Sumberdaya Mineral 5, 50, p. 12-29.
(Rocks from extinct Quaternary Lawu volcano typical calc-alkalic subduction volcanics (mainly andesites, minor dacites). Higher K2O and other incompatible elements in Young Lawu rocks may indicate crustal contamination)

Hartono, U. (1995)- Petrography and mineral chemistry of the Lawu volcano, Central Java. J. Geologi Sumberdaya Mineral 6, 52, p. 12-32.
(Quaternary lavas of Lawu volcano, C Java, mainly basaltic andesite to dacite. Mineralogical differences between 'Old Lawu' and Young Lawu': Young Lawu with olivine phenocrysts)

Hartono, U. (1996)- Stratigraphic geochemical trends of the Wilis volcanic complex, Eastern Sunda arc: implication for magma evolution. Bull. Geol. Res. Dev. Centre, Bandung, 19, p. 97-133.
(Wilis volcano, SE Java, five episodes of basaltic-andesitic volcanism, showing evolution from intitial poorly evolved basalts to more evolved andesitic magmas to finally dacitic magmatism)

Hartono, U. (1996)- Sr. Nd and O Isotope constraints on the petrogenesis of the island arc Wilis volcanics. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 233-249.

Hartono, U. (1997)- Petrogenesis of basaltic magmas from the Wilis volcano, Eastern Sunda Arc. Bull. Geol. Res. Dev. Centre, Bandung, 21, p. 39-62.
(Wilis extinct Quaternary volcano at border C-E Java with basalts high in Al2O3, low MgO, enriched in K-group elements (Ba, Rb, K), etc. Probably fractionation product from primary magma resulting from melting of MORB-like mantle wedge above subducting slab. May have begun to crystallize at depth of ~30 km. Ba and Sr concentrations in Wilis basalts significantly higher than in avarage Java tholeiite and island arc tholeiite, possibly indicating involvement of young subducted terrigenous sediments)

Hartono, U. (1997)- Basaltic andesites resulted from the reaction between hydrous basaltic magmas and anhydrous ferromagnesian minerals: evidence from the Lawu volcano, Central Java. J. Geologi Sumberdaya Mineral 7, 69, p. 2-10.
(Lawu volcano two parts, Old Lawu and Young Lawu. Both dominated by basaltic andesites and andesites, but Young Lawu contains olivine. Crystallization of amphibole of Old Lawu at ~18km depth)

Hartono, U. (1999)- Fractional crystallization and the origin of compositional gap between basaltic andesite and silicic rocks in the Wilis magmatism. J. Geologi Sumberdaya Mineral 9, 90, p. 2-8.

Hartono, U. & A. Achdan (1993)- Possible sediment involvement in the Wilis magmatism: a preliminary study. J. Geologi Sumberdaya Mineral 3, 27, p. 2-7.
(Basalts from extinct Quaternary Wilis volcano, Central-East Java have high Ba50 and Ba/La ratios and Sr and Nd isotope ratios that suggest contribution to magma source from subducted slab sediments (1% of sediment added to Indian Ocean MORRB source will give observed Sr and Nd anomalies))

Hartung, M.A. (1938)- Die Vulkangruppe im Sudwesten des Salak-vulkans in West-Java. Natuurkundig Tijdschrift Nederlandsch-Indie 98, 4, p. 215-249.
(online at: http://colonial.library.leiden.edu/)
('The volcano group in the SW of the Salak volcano in W Java'. Descriptions of Recent volcanoes Perbakti, Endut, Kiaraberes, Gagak)

Heim, A. (1916)- Auf dem Vulkan Smeru auf Java. Neujahrsblatt Naturforschenden Gesellschaft Zurich 1916, 118, 15p.
(online at: http://www.ngzh.ch/media/njb/Neujahrsblatt_NGZH_1916.pdf)
('On the Semeru volcano on Java'. Early report on ascent of Semeru in E Java)

Hidayati, S., A. Basuki, Kristianto & I. Mulyana (2009)- Emergence of lava dome from the crater lake of Kelud Volcano, East Java. J. Geologi Indonesia 4, 4, p. 229-238.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_download/255)
(On volcanic activity of Kelud Volcano, E Java in 2007, with creation of lava dome in crater)

Hirschi, H. (1925)- Die Radioaktivitat des Shoshonits von Bromo (Java) und Shonkinits vom Pik von Maros (Celebes). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 213-218.
('The radioactivity of the shoshonite of Bromo (Java) and the shonkinite of Maros Peak (SW Sulawesi)'. Found relatively low content of radioactive materials)

Horner, L. (1837)- Geologische gesteldheid van de vulkaan Gede op Java. Verhandelingen Bataviaasch Genootschap Kunsten Wetenschappen 17, 1, p. 1-28.
(online at: https://ia801900.us.archive.org/35/items/verhandelingenv171839bata/verhandelingenv171839bata.pdf)
('Geological condition of the Gede volcano on Java'. Some of first elementary geologic observations of G. Gede by Swiss member of the Commission of Natural Sciences Ludwig Horner)

Houwink, L. (1901)- Verslag van een onderzoek naar aanleiding van de uitbarsting van den vulkaan Keloet in den nacht van den 22e op den 23e Mei 1901. Jaarboek Mijnwezen Nederlandsch Oost-Indie 30 (1901), p. 122-136.
('Results of an investigation after the eruption of the Kelud volcano in the night of 22-23 May'. Much devastation of forest around volcano, with lahar flows towards Blitar fed by water from crater lake. Lake water still boiling, lake much reduced in size. With map of ash distribution across most of Java)

Innocenti, S. (2006)- Lavas and tephras of Merapi Volcano, Java, Indonesia: insights from textural analyses and geochemistry. M.Sc. Thesis, Pennsylvania State University, p. 1-210. *(Unpublished)*
(online at: https://etda.libraries.psu.edu/paper/7396/)
(Merapi volcano activity produces lava flows and viscous lava domes and explosive events. Evidence in support of multiple distinct plumbing systems. Varying proportions of subducted sediment and subducted crustal fluids can explain repeated shifts between medium- and high-K affinity (also displayed by other volcanoes in Java). Formation of viscous plug responsible for shift between effusive and explosive eruptions)

Innocenti, S., S. Andreastuti, T. Furman, M.A. del Marmol & B. Voight (2013)- The pre-eruption conditions for explosive eruptions at Merapi volcano as revealed by crystal texture and mineralogy. J. Volcanology Geothermal Res. 261, p. 69-86.
(Merapi tephra and lavas resided for similar lengths of time in mid-crustal reservoir, before ascending to surface and erupt explosively (tephra), or stagnate in shallow magma chamber before extrusion (lava))

Innocenti, S., M.A. del Marmol, B. Voight, S. Andreastuti, T. Furman (2013)- Textural and mineral chemistry constraints on evolution of Merapi Volcano, Indonesia. J. Volcanology Geothermal Res. 261, p. 20-37.
(Textures of Merapi lavas, from Proto-Merapi through modern activity, suggests distinct histories for basalts and basaltic andesites, presumably associated with different rheological behaviors and storage/transport systems)

Jaxybulatov, K., I. Koulakov, M. Ibs-von Seht, K. Klinge, C. Reichert, B. Dahren & V.R. Troll (2011)- Evidence for high fluid/melt content beneath Krakatau volcano (Indonesia) from local earthquake tomography. J. Volcanology Geothermal Res. 206, p. 96-105.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.727.4142&rep=rep1&type=pdf)
(Tomographic inversion for P and S velocities from 2005-2006 microseismic network shows zone of high Vp/Vs ratio beneath Krakatau complex, a probable indicator of partially molten or high fluid content material, with composition corresponding to deeper layers. Anomaly appears to be separated in two parts at depth of 5-6 km)

Jeffery, A.J., R. Gertisser, V.R. Troll, E.M. Jolis, B. Dahren, C. Harris et al. (2013)- The pre-eruptive magma plumbing system of the 2007-2008 dome-forming eruption of Kelut volcano, East Java, Indonesia. Contrib. Mineralogy Petrology 166, p. 275-308
(Kelut 2007-2008 lava dome provides evidence for complex magma system that comprises deep crustal, mid-crustal storage and upper crustal storage zones)

Jhonny, B. Priadi & R. Mulyana (2006)- Continental characters on volcanism of Lamongan volcano, East Java. Proc. 35th Ann. Conv. Indon Geol. Assoc. (IAGI), Pekanbaru, p.

Jousset, P., A. Budi-Santoso, A.D. Jolly, M. Boichu, Surono, S. Dwiyono et al. (2013)- Signs of magma ascent in LP and VLP seismic events and link to degassing: an example from the 2010 explosive eruption at Merapi volcano, Indonesia. J. Volcanology Geothermal Res. 261, p. 171-192.

Jousset, P., S. Dwipa, F. Beauducel, T. Duquesnoye M. Diament (2000)- Temporal gravity at Merapi during the 1993-1995 crisis: an insight into the dynamical behaviour of volcanoes. J. Volcanology Geothermal Res. 100, p. 289-320.
(During 1993-1995 activity of Merapi volcano, C Java, little deformation (<5 cm), but significant gravity changes, explained mostly by growth of lava dome)

Jousset, P., J. Palister & Surono (2013)- The 2010 eruption of Merapi volcano. J. Volcanology Geothermal Res. 261, p. 1-6.
(October-November 2010 eruption of Merapi volcano in C Java was largest eruption in >100 years, at volcano known for smaller eruptions occurring on average every 4-6 years)

Junghuhn, F.W. (1843)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java. I. Goenoeng Salak, II Goenoeng Pangerango, III. Goenoeng Gede. Tijdschrift voor Nederlands Indie 5, 1, p. 97-133.
('Contributions to the history of volcanoes in the Indies Archipelago, First part Java, I. Gunung Salak, II. Gunung Pangerango, III. Gunung Gede'. Early descriptions of Java volcanoes)

Junghuhn, F.W. (1843)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java. IV. Tangkoebang Prauw, V. Patoeha, VI. Malabar, VII. Waijang, VIII-IX. Goenoeng Goentoer, X. Kawa Manok, XI. Papandaijang. Tijdschrift voor Nederlands Indie 5, 1, p. 185-227.
('Contributions to the history of volcanoes in the Indies Archipelago, First part Java, IV, Tangkuban Perahu, V Patuha, VI Malabar, VII Waijang, VIII-IX Gunung Guntur, X Kawa Manok, XI Papandayang'. First of many continuations of above)

Junghuhn, F.W. (1843)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java, XII. Telaga Bodas, XIII, Galoeng Goeng. Tijdschrift voor Nederlands Indie 5, 1, p. 257-280.
('Contributions to the history of volcanoes in the Indies, etc. XII Telaga Bodas, XIII Galunggung')

Junghuhn, F.W. (1843)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java, XIV. Tjerimai. Tijdschrift voor Nederlands Indie 5, 1, p. 614-626.
('Contributions to the history of volcanoes in the Indies, etc. XIV Ciremai')

Junghuhn, F.W. (1843)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java, XV. Slamat. Tijdschrift voor Nederlands Indie 5, 1, p. 745-763.
('Contributions to the history of volcanoes in the Indies, etc. XV Slamet')

Junghuhn, F.W. (1844)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java, XVI Radja Djampangang, XVII. Het gebergte Dieng. Indisch Magazijn 1844, 4-6, p. 41-83 and p. 163-176.
('Contributions to the history of volcanoes in the Indies, etc., XVI Raja Jampangang, XVII The Dieng Plateau')

Junghuhn, F.W. (1844)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java, XVIII. Goenoeng Sindoro. Indisch Magazijn 1844, 4-6, p. 287-315.
('Contributions to the history of volcanoes in the Indies, etc., XVIII Gunung Sindoro')

Junghuhn, F.W. (1844)- Bijdragen tot de geschiedenis der vulkanen in den Indischen Archipel, Eerste afdeeling Java, XIX. Goenoeng Soembing. Indisch Magazijn 1844, 7-9, p. 64-94.
(Final part of 'Contributions to the history of volcanoes in the Indies Archipelago, First part Java, XIX Gunung Sumbing'. Series not completed as originally intended)

Kartadinata, M.N., M. Okuno, T. Nakamura & T. Kobayashi (2002)- Eruptive history of Tangkuban Perahu Volcano, West Java, Indonesia: a preliminary report. J. Geography (Chigaku Zasshi) 111, 3, p. 404-409.
(online at: www.journalarchive.jst.go.jp/..)

(Tangkuban Perahu volcano, N of Bandung, tephra group divided into two subgroups, Old Tangkuban Perahu (oldest radiometric date ~40,750 years) and Young Tangkuban Perahu (started at ~10,000 BP))

Katili, J.A. & A. Sudradjat (1984)- Galunggung the 1982-1983 eruption. Volcanological Survey Indonesia, Bandung, p. 1-102.

Kavalieris, I. (1994)- High Au, Ag, Mo, Pb, V and W content of fumarolic deposits at Merapi Volcano, Central Java, Indonesia. J. Geochemical Exploration 50, p. 479-491.
(Blue and red-green sublimates incrustations deposited in 1991 around high T (800°C) fumaroles at Merapi volcano. Blue sublimates comprise thin coating of Mo oxide on cristobalite-alunogen-anbydrite. They contain up to 3% Mo, 1.64% Pb and many other metallic elements. Related to ascent of new magma and degassing at depths of 2 km or less below the summit of volcano. High T fumarolic activity may form 'false'" anomalies of key elements such as Au, unrelated to hydrothermal fluids with potential for commercial mineralization)

Keil, K.F.G. (1933)- Uber das Vorkommen von leucitreichem Basalt am Gunung Ringgit (Java). Centralblatt Mineralogie Geologie Palaont. 1993, A, p. 245-249.
('On the occurrence of leucite-rich basalt at the Ringgit volcano, Java'. Ringgit is an extinct volcano center E of Arjuno- Welirang complex, East Java. Young basalts with leucite crystals up to 3 cm in size and locally up to 50% of rock)

Keil, K.F.G. (1934)- Der Goenoeng Ringgit und seine oeconomische Bedeutung fur Indien. Geologie en Mijnbouw 12, 10, p. 107-111.
('The Gunung Ringgit and its economic significance for the Netherlands Indies'. Leucite-rich basaltic volcanics of Ringgit volcano in E Java potential econic significant source of K2O)

Kemmerling, G.L.L. (1919)- De Kloetramp. De Ingenieur 34, 44, p. 804-813.
(online at: https://resolver.kb.nl/resolve?urn=dts:2981065:mpeg21:pdf)
('The Kelud disaster'. Presentation on trip to the Kelud volcano E of Kediri in E Java in late May 1919, immediately after the major eruption during the night of 19-20 May, which killed >5000 people and caused major destruction around Blitar due to the major Badak lahar flow)

Kemmerling, G.L.L. (1921)- De geologie en geomorphologie van den Idjen. In: Het Idjen Hoogland, Monografie 2, Kon. Natuurkundige Vereniging, Kolff, Batavia, p. 1-162.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:100003937:pdf)
('The geology and geomorphology of the Idjen'. On Ijen highlands and volcano and caldera complex, easternmost Java)

Kemmerling, G.L.L. (1921)- De uitbarsting van den G. Keloet in den nacht van den 19den op den 20sten Mei 1919. Vulkanologische Mededeelingen (Dienst Mijnwezen) 2, p. 1-120.
('The eruption of the Kelud in the night of 19-20 May 1919')

Kemmerling, G.L.L. (1921)- De hernieuwde werking van den vulkaan G. Merapi (Midden Java) van begin Augustus 1920 tot en met einde Februari 1921. Vulkanologische Mededeelingen (Dienst Mijnwezen Nederlandsch Oost Indie), p. 1-30.
('The renewed activity of the volcano G.Merapi (C Java) from early August 1920 through end February 1921')

Kemmerling, G.L.L. (1923)- De G. Semeroe, de G. Brama en de G. Lamongan in het begin van 1920. Vulkanologische Mededeelingen (Dienst Mijnbouw Nederlandsch-Indie), 4, p. 1-40.
('The Semeru, Brama and Lamongan volcanoes in early 1920)

Kohno, Y., L.D. Setijadji, P. Zoltan, H. Agung, P. Utami, A. Imai & K. Watanabe (2006)- Geochronology and petrogenetic aspects of Quaternary across arc magmatism on Merapi-Merbabu-Telomoyo-Ungaran volcanoes, Central Java, Indonesia. In: Proc. 3rd Symp. Earth resources and geological engineering education, Yogyakarta 2006, p. 194-201.

(online at: http://geothermal.ft.ugm.ac.id/wp-content/uploads/2012/12/Geochronology-and-Petrogenetic-Aspects-2006-Lucas-et-al.pdf)
(Document progressive N to S younging along Merapi- Merbabu- Telomoyo- Ungaran line of Quaternary volcanoes. Merapi in S currently active, with oldest flows dated as ~0.67 Ma. Ungaran in back-arc in N with Pleistocene K-Ar ages (0.22- 0.52 Ma and older ages (1.4± 0.5 Ma) from hornblende phenocrysts). Merapi lavas evolve from medium-K to high-K affinity during lifetime of magmatism)

Koulakov, I., G. Maksotova, K. Jaxybulatov, E. Kasatkina, N.M. Shapiro, B.G. Luehr, S. El Khrepy & N. Al-Arifi (2016)- Structure of magma reservoirs beneath Merapi and surrounding volcanic centers of Central Java modeled from ambient noise tomography. Geochem. Geophys. Geosystems 17, 10, p. 4195-4211.
(online at: http://gfzpublic.gfz-potsdam.de/pubman/item/escidoc:1975923:7/component/escidoc:1978904/1975923.pdf)
(3D S-wave velocity model of upper crust down to 20 km under C Java from seismic ambient noise from >100 seismic stations. Large low-velocity anomaly under S flank of Merapi, with two layers: (1) upper ~1 km cover of volcanoclastic deposits and (2) anomaly at ~4–8 km (possible magma reservoir). Under Merapi summit, low-velocity anomaly at~8 km , possibly active magma reservoir that feeds eruptive activity of Merapi)

Kupper, H. (1984)- Die Stellung des Vulkans Krakatao im Malayischen Archipel, Indonesien. Mitteilungen Osterreichischen Mineral. Gesellschaft 129, p. 65-68.
('The position of the Krakatau volcano in the Malay Archipelago')

Lavigne, F. (1998)- Les lahars du volcan Merapi, Java central, Indonesie: declenchement, budget sedimentaire, dynamique et zonage des risques associes. Ph.D. Thesis Universite Blaise Pascal, Clermont-Ferrand, p. 1-539.
('The lahars of Merapi Volcano, Central Java, Indonesia: triggering, sediment budget, dynamics and zoning of associated risks')

Lavigne, F. & J.C. Thouret (2002)- Sediment transportation and deposition by rain-triggered lahars at Merapi Volcano, Central Java, Indonesia. Geomorphology 49, p. 45-69.

Lavigne, F., J.C. Thouret, D.S. Hadmoko & C.B. Sukatja (2007)- Lahars in Java: initiations, dynamics, hazard assessment and deposition process. Forum Geografi 21, 1, p. 17-32.
(online at: http://journals.ums.ac.id/index.php/fg/article/view/1822/1274)
(Lahar term for rapidly flowing, high-concentration, poorly sorted sediment-laden mixtures of rock debris and water from a volcano. Resulting deposits poorly sorted, massive, made up of clasts (mainly volcanics) in mud-poor matrix Lahars may be direct result of eruptive activity or not temporally related to eruptions. Etc.)

Lavigne, F., J.C. Thouret, B. Voight, H. Suwa & A. Sumaryono (2000)- Lahars at Merapi volcano, Central Java: an overview. J. Volcanology Geothermal Res. 100, p. 423-456.
(Merapi volcano in C Java, is one of most active volcanoes in world. At least 23 of 61 reported eruptions since mid-1500s produced lahar deposits. Combined lahar deposits ~286 km2 on flanks and surrounding areas. Lahars commonly triggered by rainfalls of ~40mm in 2 hrs. Average velocities 5-7 m/s at 1000m)

Leterrier, J., Y.S. Yuwono, R. Soeria-Atmadja & R.C. Maury (1990)- Potassic volcanism in Central Java and South Sulawesi, Indonesia. J. Southeast Asian Earth Sci. 4, 3, p. 171-187.
(Neogene- Quaternary K-rich volcanics from back-arc of C Java and S Sulawesi 3 series: (1) silica-saturated or oversaturated potassic (SK); (2) weakly silica-saturated alkaline potassic (Muria 1, Genuk in Java; Baturape Fm, Cindako Fm, Camba 2a Fm and part of Lompobatang stratovolcano, S Sulawesi); and (3) silica-undersaturated ultrapotassic, usually leucite-bearing (Muria 2, Bawean in Java; Camba 2b Fm, Sopeng I Fm in Sulawesi). Rocks compatible with subduction-related environment, but in S Sulawesi emplacement post-dates latest known subduction. In C Java do not fit with model of increasing K2O with depth of Benioff plane, and location of UK series is independent from latter (Quaternary UK Series on Bawean away from 600 km isobath). Prefer genetic model for K-rich volcanic series by melting of mantle sources enriched in incompatible elements during previous subduction events, and possibly involving contribution of subcontinental mantle (C Java))

Maaskant, A. (1940)- Onderzoek van de plagioklasen uit de Krakatau-asch van 1883. Geologie en Mijnbouw, n.s., 2, 8, p. 160-167.
(online at: https://drive.google.com/file/d/130IjYQyZNXfIr0vcVFUzMS95psrIH6bW/view)
('Investigation of plagioclase from the Krakatau ash of 1883'. Krakatau 1883 ash 91% glassand 9% crystals. Two groups of (zoned) plagioclase crystals, one with core average An of 45%, one with average 75%)

Maeno, F. & F. Imamura (2011)- Tsunami generation by a rapid entrance of pyroclastic flow into the sea during the 1883 Krakatau eruption, Indonesia. J. Geophysical Research, Solid Earth, 116, B9, B09205, p. 1-24.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2011JB008253/epdf)
(Pyroclastic flow with volume of >5 km3 rapidly entering sea at 10 million m3/second(?) most plausible mechanism of 1883 Krakatau tsunami)

Maeno, F., S. Nakada, M. Yoshimoto, T. Shimano, N. Hokanishi, A. Zaennudin & M. Iguchi (2019)- A sequence of a plinian eruption preceded by dome destruction at Kelud volcano, Indonesia, on February 13, 2014, revealed from tephra fallout and pyroclastic density current deposits. J. Volcanology Geothermal Res. 382, p. 24-41.
(online at: https://www.sciencedirect.com/science/article/pii/S0377027317301385)
(Reconstruction of 2014 Kelud eruption sequence. Plinian phase preceded by destruction of earlier lava dome)

Maeno, F., S. Nakada, M. Yoshimoto, T. Shimano, N. Hokanishi, A. Zaennudin & M. Iguchi (2019)- Eruption pattern and a long-term magma discharge rate over the past 100 years at Kelud Volcano, Indonesia. J. Disaster Research 14, 1, p. 27-39.
(Kelud Volcano among most active volcanoes in Indonesia. Volumes of 1901, 1919, 1951, 1966, 1990, and 2014 eruptions estimated between 51-296 × 10^6 m3. Long-term mass discharge rate was estimated as ∼ 1.5 × 10^{10} kg/year, relatively high compared to other basaltic-andesitic subduction-zone volcanoes)

Mandeville, C.W., S.H.S. Carey & J. King (1994)- Paleomagnetic evidence for high temperature emplacement of the 1883 subaqueous pyroclastic flows from Krakatau volcano, Indonesia. J. Geophysical Research 99, B5, p. 9487-9504.
(1883 eruption of Krakatau volcano in Indonesia discharged > 6.5 km3 (dense rock equivalent) of pyroclastic material into Sunda Straits within 15km of volcano. Paleomagnetic evidence for high-emplacement T from pumice clasts from core of submarine pyroclastic deposits, showing mean inclination of ~24°, indicating cooling of clasts from >350°C after deposition)

Mandeville, C.W., S. Carey & H. Sigurdsson (1996)- Magma mixing, fractional crystallization and volatile degassing during the 1883 eruption of Krakatau volcano, Indonesia. J. Volcanology Geothermal Res. 74, p. 243-274.
(Krakatau eruption of 1883 produced ~12.5 km3 of magma, 90% rhyodacite, 4% mafic dacite, 1% andesite and ~5% lithic material. Magma chamber compositionally and thermally zoned with upper part rhyodacite at T of 880-890 °C, overlying more mafic dacite at 890-913°C, and andesite at 980-1000°C)

Mandeville, C.W., S. Carey & H. Sigurdsson (1996)- Sedimentology of the Krakatau 1883 submarine pyroclastic deposits. Bull. Volcanology 57, 7, p. 512-529.
(Majority of tephra generated during 1883 eruption of Krakatau deposited in sea within 15 km of caldera. Thickest accumulation of tephra from eruption on submarine slopes W of Sertung (80m). Two submarine pyroclastic facies (1) massive, poorly sorted pumice and lithic lapilli-to-block sized fragments in silty-sandy ash matrix (indistinguishable from 1883 subaerial pyroclastic flow deposits; result of sinking of components of pyroclastic flows over water), (2) less common well-sorted, planar-laminated to low-angle cross-bedded, vitric-enriched silty ash, likely deposited from low-concentration pyroclastic density currents generated by shear between submarine flows and seawater)

Marini, J.C. (2004)- LòHafnium dans les zones de subduction: bilan isotopique des flux entrant et sortant. Doct. Sci. Thesis, Universite Joseph Fourier, Grenoble, p. 1-135.
(online at: www.iaea.org/inis/collection/NCLCollectionStore/_Public/37/095/37095281.pdf)

('Hafnium in subduction zones: isotopic record of incoming and outgoing flows'. Includes chapters on Hafnium isotopes in N Luzon and Late Eocene- Pleistocene volcanic arc lavas from Java, which appear very radiogenic, possibly caused by contamination of oceanic pelagic sediments in magma sources)

Maury, R.C., R. Soeria-Atmadja, R. Bellon, J.L. Joron, Y.S. Yuwono & E. Suparka (1987)- Nouvelles donnees geologiques et chronologiques sur le deux associations magmatiques du volcan Muria (Java, Indonesie). Comptes Rendus Academie Sciences, Paris, 304 (II), 4, p. 175-180.
('New geological and chronological data on the two magmatic associations of Muria volcano'. Two lava types in Pleistocene Muria volcano: young (0.6- 0.4 Ma) ultrapotassic leucite-bearing lavas and underlying leucite-free rocks, less rich in K (1.1- 0.6 Ma))

Muller, M., A. Hordt, & F.M. Neubauer (2002)- Internal structure of Mount Merapi, Indonesia, derived from long-offset transient electromagnetic data. J. Geophysical Research 107, B9, p. 2187.
(Long-offset transient electromagnetic survey gave 2 resistivity profiles (10 km E-W and 15 km S-N) of Merapi volcano, C Java. Extensive conductive layer at depths of 1-2 km, probably caused by fluids)

Mulyadi, E. (1992)- Le complexe de Bromo-Tengger (Est Java, Indonesie): etude structurale et volcanologique. Doct. Thesis Universite Blaise Pascal, Clermont Ferrand, p. 1-152. *(Unpublished)*
('The Bromo- Tengger complex (East Java): structural and volcanological study')

Mulyadi, E. (1993)- The sand-sea and other calderas formation in Bromo-Tengger complex, East Java. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 35-44.
(In Indonesian. Bromo-Tengger complex in E Java composite strato-volcano. Five eruption centers since ~1.4 Ma, each destroyed by caldera formation. Current Sand Sea caldera 10km across and formed during two big eruption series that produced Tosari and Ngadas pyroclastic deposits (between ~2750- 8000 years ago?). Post-caldera volcanic cones Bromo, Batur, etc.)

Mulyaningsih, S. (2002)- Volcano-stratigraphy of the South Plain of Merapi, Yogyakarta: implication of volcanic activities to the civilization performance in the 8-16th centuries. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 397-411.
(Four periods of major eruption disasters at S side of Merapi: 8th, 10th (1006, demise of 'Old Mataram'?), 13th and 16th (1587) centuries)

Mulyaningsih, S. & S. Bronto (2000)- Genesis of the ancient Borobudur Lake, Central Java, related to Merapi volcano activities. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 149-154.
(Borobudur temple 27 km W of Merapi volcano built in area surrounded by former lake, possibly formed by damming of Progo River by Merapi eruption deposits around 1710 BC. Lake deposits ~13m thick)

Mulyaningsih, S., S. Hidayat, B.A. Rumanto & G. Saban (2016)- Identifikasi karakteristik erupsi gunung api Merbabu berdasarkan stratigrafi dan mineralogi batuan gunung api. Pros. Seminar Nasional Aplikasi Sains & Teknologi (SNAST 2016), Yogyakarta, p. 85-97.
(online at: http://journal.akprind.ac.id/index.php/snast/article/view/757/484)
('Identification of eruption characteristics of Merbabu volcano based on the stratigraphy and mineralogy of volcanic rocks')

Nadeau, O. (2011)- The behaviour of base metals in arc-type magmatic-hydrothermal systems- insights from Merapi Volcano, Indonesia. Ph.D. Thesis McGill University, Montreal, p. 1-195.

Nadeau, O., J. Stix & A.E. Williams-Jones (2013)- The behavior of Cu, Zn and Pb during magmatic-hydrothermal activity at Merapi volcano, Indonesia. Chemical Geology 342, p. 167-179.
(Fe, Cu, Co and Ni at Merapi volcano transferred from mafic melt to immiscible sulfide melt, then to magmatic volatile phase which carried them to surface)

Nadeau, O., J. Stix & A.E. Williams-Jones (2016)- Links between arc volcanoes and porphyry-epithermal ore deposits. Geology 44, 1, p. 11-14.
(Formation of porphyry and epithermal ore deposits tied to volcanic cycles (partly based on observations of variations in vapors from Merapi volcano, C Java). Injections of mafic magma (commonly with explosive volcanic eruptions) are followed by decompression of magmatic hydrothermal system, inducing fluid phase separation, rapid cooling, and deposition of porphyry and epithermal ores at rel. shallow depths (<5km))

Nadeau, O., A.E. Williams-Jones & J. Stix (2013)- Magmatic-hydrothermal evolution and devolatilization beneath Merapi Volcano, Indonesia. J. Volcanology Geothermal Res. 261, p. 50-68.

Nasution, A., M.N. Kartadinata, T. Kobayashi, D. Siregar, E. Sutaningsih, R. Hadisantono & E. Kadarstia (2004)- Geology, age dating and geochemistry of the Tangkuban Parahu geothermal area, West Java, Indonesia. J. Geothermal Res. Soc. Japan 26, 3, p. 285-303.
(online at: https://www.jstage.jst.go.jp/article/grsj1979/26/3/26_3_285/_pdf)
(Three main episodes of volcanic activity in Mt. Sunda volcanic complex (Sunda, Burangrang and Tangkuban Parahu volcanoes): (1) Batunyusun Andesite (1.1 Ma), which unconformably overlies Neogene sediments; (2) Sunda Volcanics (0.56 and 0.18 Ma; Sunda Andesite and huge volume of pyroclastics covering area of 200 km2 and with caldera-forming eruption between 0.205-0.18 Ma; (3) Tangkuban Parahu andesite and pyroclastics (62-22 ka). Younger craters at 9980-1440 yrs BP. No magmatic eruption since 1600)

Neumann van Padang, M. (1931)- Der Ausbruch des Merapi (Mittel Java) im Jahre 1930. Zeitschrift Vulkanologie 14, p. 135-148.
('The eruption of the Merapi (Central Java) in the year 1930')

Neumann van Padang, M. (1933)- De uitbarsting van den Merapi (Midden Java) in de jaren 1930ï 1931. Vulkanologische en Seismol. Mededeelingen 12, p. 1-116.
('The eruption of the Merapi (Central Java) in the years 1930-1931')

Neumann van Padang, M. (1933)- De Krakatau voorheen en thans. De Tropische Natuur 22, 8, p. 137-150.
(online at: http://natuurtijdschriften.nl/download?type=document;docid=511015)
('Krakatau, then and now'. Popular review of development of Krakatau volcano, 50 years after 1883 eruption)

Neumann van Padang, M. (1936)- Die Tatigkeit des Merapi-Vulkans (Mittel Java) in den Jahren 1883-1888. Zeitschrift Vulkanologie 17, p. 93-113.
('The activity of the Merapi volcano (Central Java) in the years 1883-1888')

Neumann van Padang, M. (1936)- Over de verplaatsing van de kraters der vulkanen Slamet, Lamongan, Merapi en Semeroe. De Ingenieur in Nederlandsch-Indie (IV), 3, 1, p. 1-6.
('On the shifting of the craters of the volcanoes Slamet, Lamongan, Merapi and Semeru'. Several of Java active volcano groups show shift of active craters from N to S (Ungaran-Merbabu- Merapi) or NE to SW (Slamet, Lamongan), probably following fault zones)

Neumann van Padang, M. (1937)- De uitbarsting van den Tjerimai in 1937. De Ingenieur in Nederlandsch-Indie (IV), 4, 12, p. 211-227
('The eruption of the Ciremai volcano in 1937', W Java)

Neumann van Padang, M. (1939)- Uber die vielen tausend Hugel im westlichen Vorlande des Raoeng-Vulkans (Ostjava). De Ingenieur in Nederlandsch-Indie (IV), 6, 4, p. 35-41.
('On the many thousand hills in the western foreland of the Raung Volcano (East Java)'. Numerous hills at W side of Raung volcano (E of Slamet) not small volcanic centers as suggested by Verbeek, but probably erosional remnants of large ancient landslide)

Newhall, C.G., S. Bronto, B. Alloway, N.G. Banks, I. Bahar, M.A. Del Marmol, R.D. Hadisantono, R.T. Holcomb et al. (2000)- 10,000 years of explosive eruptions of Merapi volcano, Central Java: archaeological and modern implications. J. Volcanology Geothermal Res. 100, p. 9-50.
(Stratigraphy and radiocarbon dating of pyroclastic deposits at Merapi Volcano, C Java, reveals ~10,000 years of explosive eruptions:(1) Construction of Old Merapi stratovolcano to height of present cone or slightly higher. Oldest age for explosive eruption 9630 yrs BP; (2) Collapse(s) of Old Merapi with impoundment of Kali Progo to form early Lake Borobudur at ~3400 yrs BP. Somma-forming collapse at ~1900 yrs BP. Current cone began to grow soon thereafter. (3) Explosive Merapi eruptions before and after Buddhist and Hindu temples construction in C Java between 732 and ~900 AD; (4) Partial collapse of New Merapi in 12th-14th century AD); (5) Lava-dome extrusion and dome-collapse pyroclastic flows dominant in 20th century)

Nicholls, I.A. & D.J. Whitford (1983)- Potassium-rich volcanic rocks of the Muriah complex, Java, Indonesia: products of multiple magma sources? J. Volcanology Geothermal Res. 18, p. 337-359.
(Extinct Pleistocene Muriah volcano in N-C Java two groups of lavas: (1) 'Anhydrous Series' leucite basanite to tephritic phonolite and (2)'Hydrous Series', tephrites and high-K andesites. Mafic A-series probably related to crustal doming-extension above dominant subduction regime. Hydrous Series magmas may be result of mixing between Anhydrous Series and high-K calc-alkaline basaltic- andesitic magmas related to subduction)

Niermeyer, J.F. (1900)- De vulkaan Idjen in Besoeki. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 17, p. 735-763.
(online at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015077870965;view=1up;seq=771)
('The Ijen volcano in Besoeki')

Nomanbhoy, N. & K. Satake (1995)- Generation mechanism of tsunamis from the 1883 Krakatau eruption. Geophysical Research Letters 22, 4, p. 509-512.
(Three models previously proposed for large tsunami generated by 1883 eruption of Krakatau: (1) large-scale caldera collapse of N part of Krakatau Island; (2) emplacement of pyroclastic flow deposits; (3) submarine explosion. Modeling suggests all three models displace same volume of water (11.5 km^3), but in different ways. Submarine explosion model of 1-5 min duration best explains generation of largest tsunami)

Nossin, J.J., R.P.G.A. Voskuil & R.M.C. Dam (1996)- Geomorphologic development of the Sunda volcanic complex, West Java, Indonesia. Int. Inst. Aerospace Survey and Earth Sciences (ITC) Journal, 1996, 2, p. 157-165.
(Sunda volcanic complex near Bandung characterized by one active volcano, Tangkuban Perahu, set in large caldera of former Sunda volcano. Another group of volcanoes to E (Bukittunggul-Manglayang complex) structurally related to Sunda complex. Sunda volcano blew up in probably two cataclysmic episodes and collapsed to leave caldera in which Tangkuban Perahu volcano arose)

Oba, N., K. Tomita & M. Yamamoto (1992)- An interpretation of the 1883 cataclysmic eruption of Krakatau from geochemical studies on the partial melting of granite. GeoJournal 28, 2, p. 99-108.
(Pumice from 1883 Krakatau eruption very different from other volcanics of Krakatau group, which are tholeiitic. Fragments of granitic rock in pumice flow are similar to W Malayan granites, and must have been captured by magma from underlying complex. Sialic crustal materials may have plunged into depths and partially melted to produce magma of granitic composition and mixed with ascending basaltic magma from upper mantle to produce pumice of dacitic composition)

Oba, N., K. Tomita, M. Yamamoto, S. Bronto, M. Istidjab, A. Sudradjat & T. Suhanda (1983)- Geochemical study of some volcanic products from Galunggung volcano, West Java. Reports Fac. Science, Kagoshima University (Earth Sci. & Biol.), 16, p. 1-20.
(online at: http://ir.kagoshima-u.ac.jp/bitstream/10232/5937/1/AN00040884_1983_001.pdf)
(Volcanic products of 1982 Galunggung eruptions range in chemical composition from basaltic andesite to basalt. Silica-contentof first stage (April 5-8 of 1982) ~55 wt %, later stages ~50%)

Oba, N., K. Tomita, M. Yamamoto, M. Istidjab, M. Badruddin, M. Parlin, Sadjiman, A. Djuwandi, A. Sudradjat & T. Suhanda (1983)- Geochemical study of lava flows, ejecta and pyroclastic flows from the Krakatau group, Indonesia. Reports Fac. Science Kagoshima University 15, p. 21-41.
(online at: http://ir.kagoshima-u.ac.jp/bitstream/10232/5932/1/AN00040884_1982_002.pdf)
(Rocks and ejecta of Anak Krakatau almost same lithologic and geochemical characteristics of island arc basaltic andesites. New volcanic ash different, more basic in composition. Volcanic rocks from Rakata three types: augite-hypersthene andesite, augiteandesite and olivine basalt. Pyroclastic flow from 1883 eruption, characterized by a large amount of volcanic glass and high-contents of SiO2, Na2O and K20 and low MgO, FeO and CaO; lithologically andesitic and geochemically dacitic. Granitic xenoliths of quartz monzonite in pyroclastic flow of Sertung)

Oba, N., K. Tomita, M. Yamamoto, M. Istidjab, A. Sudradjat & T. Suhanda (1986)- Geologic significance of granitic fragments found from pumice flow of 1883 eruption at the Krakatau Group, Indonesia. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 51-68.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986005.pdf)
(Pumice flow of 1883 Krakatau eruption at Rakata Kecil and Sertung differs from other volcanics of Krakatau Group which belong to Miyashiro's (1974) tholeiitic series. With lithic fragments of granitic rock (quartz monzonite- quartz monzodiorite; up to 30cm in size) similar in compositions to W Malay Peninsula granites. Granitic clasts presumably from underlying sialic crustal material at depth of Sunda Straits)

Paris, R., P. Wassmer, F. Lavigne, A. Belousov, M. Belousova, Y, Iskandarsyah, M. Benbakkar, B. Ontowirjo & N. Mazzoni (2014)- Coupling eruption and tsunami records: the Krakatau 1883 case study, Indonesia. Bull. Volcanologique 76, 814, p. 1-23.
(Five kinds of sedimentary and volcanic facies related to Krakatau 1883 identified along coasts of Java and Sumatra: (1, 2) bioclastic and pumiceous tsunami sands, deposited before and during Plinian phase (26-27 August); (3) rounded pumice lapilli reworked by tsunami; (4) pumiceous ash fall deposits and (5) pyroclastic surge deposits (only in Sumatra))

Pawellek, T. (2013)- Die grossen Caldera-Systeme Zentral-Indonesiens. Der Aufschluss 64, 4/5, p. 250-261.
('The large caldera systems of Central Indonesia'. Popular review of calderas of E Java (Tengger-Semeru, Ijen) and Bali (Batur))

Permanadewi, S., S. Maryanto & J. Subandrio (2017)- Mineralogi dan geokimia Tuf berumur Tersier dan Kuarter di daerah Cibadak, Sukabumi, Jawa Barat. J. Geologi Sumberdaya Mineral 18, 4, p. 211-214.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/295/299)
('Mineralogy and geochemistry of the Tertiary and Quarternary tuffs in the Cibadak area, Sukabumi, West Java'. Fine-grained pyroclastic rocks in Cibadak area, SW Java, two groups: Miocene tuffs of Jampang Fm and Quarternary tuffs)

Peters, S.T.M., V.R. Troll, F.A. Weis, L. Dallai, J.P. Chadwick & B. Schulz (2017)- Amphibole megacrysts as a probe into the deep plumbing system of Merapi volcano, Central Java, Indonesia. Contrib. Mineralogy Petrology 172, 16, p. 1-20.
(Metastable calcic amphibole megacrysts in basaltic andesites of Merapi volcano, C Java, crystallised at pressures of >500 MPa (mid- to lower crust))

Petroeschevsky, W.A. (1949)- Een eerste na-oorlogse verkenning van Lang Eiland en Anak Krakatau op 5 Juni 1949. Chronica Naturae 105, 10, p. 247-249.
('A first post-war reconnaissance of Pulau Panjang and Anak Krakatau on 5 June 1949'. Anak Krakatau little changed since 1941. Crater lake close to sea level. Max. height ~132m)

Philibosian, B. & M. Simons (2006)- A survey of volcanic deformation on Java using ALOS PALSAR interferometric time series. Geochem. Geophys. Geosystems 12, 11, p. 1-20.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2011GC003775/epdf)

(Satellite-based survey of volcanic deformation on Java during 2007-2008. Volcanoes experiencing small eruptions are typically fed by magma bodies too small to produce recognizable InSAR signal. Deformation event at Lamongan volcano likely linked to magmatic intrusion at several km depth. Second one at Slamet volcano at shallower depth that may have been related to subsequent eruption)

Prambada, O., Y. Arakawa, K. Ikehata, R. Furukawa, A. Takada, H.E. Wibowo, M. Nakagawa & M.N. Kartadinata (2016)- Eruptive history of Sundoro volcano, Central Java, Indonesia since 34 ka. Bull. Volcanology 78, 11, p. 1-19.
(Sundoro volcano 65 km NW of Yogyakarta, with 12 eruptive groups. Volcano very active since 34 ka)

Prastistho, B. (1992)- New data on ages of the Muria Complex, Java. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 507-516.
(Oldest rock dated from Muria volcano ~1.01 Ma. Lava flows in N part of Muria complex 0.95 and 0.90 Ma. Volcanic neck of recent summit 0.17 Ma. Old Muria dominated by andesite- trachyte; Young Muria mainly basalt, with composition change at ~0.65 Ma)

Pratama, A., S. Bijaksana, M. Abdurrachman & N.A. Santoso (2018)- Rock magnetic, petrography, and geochemistry studies of lava at the Ijen Volcanic Complex (IVC), Banyuwangi, East Java, Indonesia. Geosciences 8, 183, p. 1-14.
(online at: https://www.mdpi.com/2076-3263/8/5/183/pdf)
(Rock magnetic studies of basaltic- andesitic lavas from Ijen Volcanic Complex, East Java)

Pratama, A., H. Hadiyat, F.R. Atarita, S. Bijaksana, D. Santoso, M. Abdurrachman & S.J. Fajar (2019)- Petrology and geochemistry dataset of lava from the Ijen Crater and Mount Blau, Banyuwangi, East Java, Indonesia. Data in Brief 27, 104765, p. 1-8.
(online at: www.sciencedirect.com/science/article/pii/S2352340919311205!)

Preece, K., R. Gertisser, J. Barclay, K. Berlo & R.A. Herd (2014)- Pre- and syn-eruptive degassing and crystallisation processes of the 2010 and 2006 eruptions of Merapi volcano, Indonesia. Contrib. Mineralogy Petrology 168, 1061, p. 1-25.

Preece, K., R. Gertisser, J. Barclay, S.J. Charbonnier, J.C. Komorowski & R.A. Herd (2016)- Transitions between explosive and effusive phases during the cataclysmic 2010 eruption of Merapi volcano, Java, Indonesia Bull. Volcanology 78, 54, p. 1-16.

Priadi, B., I. Zulkarnain & H. Permana (2004)- Volcanism and submarine hydrothermal activities around Krakatau island in Sunda Strait, Indonesia Proc. 5th Int. Conf. Asian Marine Geology, Bangkok, p.

Purbawinata, M. & E. Kadasetia (1991)- Petrologi dan geokimia Gunungapi Ciremai, Jawa Barat. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 38. *(Abstract only)*
(Petrology and geochemistry of Ciremai volcano, West Java'. Active Ciremai volcano 90km E of Bandung, 190km above Wadati-Benioff zone, with three periods of volcanism. Calc-alkaline volcanics with SiO2 50-68 Wt%. Etc.)

Purbawinata, M., A. Ratdomopurbo, A. Sinulingga, I.K. Sumarti & S. Suharno (1997)- Merapi volcano- a guide book. Volcanol. Survey Indonesia, Bandung, p. 1-64.

Purnomo, B.J. & T. Pichler (2014)- Geothermal systems on the island of Java, Indonesia. J. Volcanology Geothermal Res. 285, p. 47-59.
(Two types of geothermal systems on Java, volcano-hosted and fault-hosted)

Putriastuti, M., T. Yudistira, A.D. Nugraha, S. Widiantoro & J.P. Metaxian (2017)- Ambient noise tomography of Merapi complex, Central Java, Indonesia: a preliminary result. In: Southeast Asian Conference on Geophysics, Bali 2016, IOP Conf. Series, Earth Environm. Science 62, 012040, 6p.

(online at: http://iopscience.iop.org/article/10.1088/1755-1315/62/1/012040/pdf)
(Ambient noise seismic velocity tomography around Mt. Merapi show pronounced NNW-SSE positive anomaly from under Mt. Merapi to Mt. Merbabu, interpreted as old basaltic lava. Negative anomalies in E and W flanks)

Ramdhan,M., S. Widiyantoro, A.D. Nugraha, A. Saepuloh, J.P. Metaxian, S. Kristyawan et al. (2017)- Seismic travel-time tomography beneath Merapi volcano and its surroundings: a preliminary result from DOMERAPI Project. In: Southeast Asian Conference on Geophysics, Bali 2016, IOP Conf. Series, Earth Environm. Science 62, 012039, 6p.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/62/1/012039/pdf)
(New tomographic imaging shows higher resolution at shallow depths (<35 km) below Merapi volcano, C Java. Magma reservoirs detected at ~27km and 12km depth. Dipping low velocity material rises from ~100km depth)

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(Geochemistry and Sr-Nd-Pb isotopes of Miocene-Quaternary basaltic-andesitic lavas from W Java arc. W Java arc existed in current configuration since at least 15 Ma. Two parallel volcanic ranges: southern (VF; volcanic front) and northern (RA rear arc). Partial melting in mantle source greater in VF. Fluid addition to mantle greater in VF. Across-arc geochemical variation between Tertiary and Quaternary lavas does not differ, implying W Java arc has been in 'steady state' over past 10 My, with continuous subduction input from Indian Ocean sediments and continuous upwelling and replenishment of depleted mantle source from back arc)

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(Extensive chronology of Merapi volcano, C Java. Major difference in eruption style between 20st and 19th centuries: in 20th century mainly growth of viscous lava domes and lava tongues, with occasional gravitational collapses of parts of oversteepened domes to produce nuees ardentes; in 1800s rel. large explosive eruptions with large 'fountain-collapse' nuees ardentes)

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(Quaternary basalts from Java-Bali sector of Sunda Arc show increase in high-field-strength elements (Nb, Zr, Hf) and decrease in Zr/Nb and Hf/Nb with increase of depth to Benioff zone, consistent with progressively enriched mantle wedge with depth)

Vukadinovic, D. & I.A. Nicholls (1989)- The petrogenesis of island arc basalts from Gunung Slamet volcano, Indonesia: trace elements and 87Sr/ 86Sr constraints. Geochimica Cosmochimica Acta 53, 9, p. 2349-2363.

Vukadinovic, D. & I. Sutawidjaja (1995)- Geology, mineralogy and magma evolution of Gunung Slamet volcano, Java, Indonesia. J. Southeast Asian Earth Sci. 11, 2, p. 135-164.
(Slamet two large overlapping Quaternary stratocones. Basaltic andesites and andesites with rare basalts dominate in W (Slamet Tua), basalts and basaltic andesites compose East cone (Slamet Muda))

Walter, T.R., M.H. Haghighi, F.M. Schneider, D. Coppola et al. (2019)- Complex hazard cascade culminating in the Anak Krakatau sector collapse. Nature Communications 10:4339, p. 1-10.
(online at: https://www.nature.com/articles/s41467-019-12284-5.pdf)
(On 22 Dec 2018 collapse event at Anak Krakatau in Sunda Strait, triggering tsunami that killed 430. Prior to collapse, elevated state of activity. Ccollapse of volcano's flank two minutes after small earthquake)

Wichmann, A. (1900)- Der ausbruch des Gunung Ringgit auf Java im Jahre 1593. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 52, 4, p. 640-660.
(online at: https://www.biodiversitylibrary.org/item/148377page/782/mode/1up)
('The eruption of Mt. Ringgit on Java in the year 1593'. Historic records of significant volcanic activity above Panarukan, with possibly 10,000 people killed)

Willumsen, P. (1997)- Krakatau, events and geology, a practical guide to Krakatau and surroundings. Indon. Petroleum Assoc. (IPA), Jakarta, 1-73.
(Brief introduction to Krakatau volcano, Sunda Straits, and its infamous eruption of 1883)

Wirakusumah, A.D. (1993)- Geology of and magma mixing process at Mt. Kelut, East Java. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 25-34.
(Kelud volcano in E Java ten eruption craters in SW-NE graben, that moved clockwise from ~238 ka to 4 ka. Volcanics dominated by basaltic andesites)

Wirakusumah, A.D., H. Juwarna & H. Loebis (1983)- The geological map of Merapi Volcano, Central Java. Volcanological Survey of Indonesia, Bandung. 1:50,000 scale map.

Yokoyama, I. (1981)- A geophysical interpretation of the 1883 Krakatau eruption. J. Volcanology Geothermal Res. 9, p. 359-378.
(Discussion of 1883 eruption of Krakatau from geophysical standpoint)

Yokoyama, I. (1987)- A scenario of the 1883 Krakatau tsunami. J. Volcanology Geothermal Res. 34, p. 123-132.

Yokoyama, I. (2014)- Krakatau caldera deposits: revisited and verification by geophysical means. Annals of Geophysics 57, 5, S0541, p. 1-11.
(online at: www.annalsofgeophysics.eu/index.php/annals/article/view/6404/6384)

Yokoyama, I. (2015)- Eruption products of the 1883 eruption of Krakatau and their final settlement. Annals of Geophysics 58, 2, S0220, p. 1-13.
(online at: www.annalsofgeophysics.eu/index.php/annals/article/view/6529/6509)
(Verbeek (1886) estimate of 12 km3 volume of Krakatau 1883 eruption ejecta revised to 19 km3, much more than volume of disrupted volcano edifice (8 km3). Does not support hypothesis that calderas formed by collapses of volcano edifices into magma reservoirs)

Yokoyama, I. & D. Hadikusumo (1969)- Volcanological survey of Indonesian volcanoes, Part 3. A gravity survey on the Krakatau Islands, Indonesia. Bull. Earthquake Res. Inst. (Tokyo University) 47, p. 991-1001.

Yuwono, Y.S., R. Soeria-Atmadja, M.E. Suparka & R.C. Maury (1991)- Mineralogical studies of two distinct volcanic rock series of the Muria products, Central Java. In: Proc. Silver Jubilee Symposium Dynamics of subduction and its products, Yogyakarta 1991, Indonesian Inst. Sciences (LIPI), p. 122-143.

Zaenudin, A., R.D. Hadisantono, R.D. Erfan & A.R. Mulyana (1994)- Geological map of Bromo- Tengger volcano, East Java. Volcanological Survey Indonesia, Bandung.
(online at: https://vsi.esdm.go.id/gallery/picture.php?/68/category/8)

Zaenudin, A., I.S. Sutawidjaja & D. Aswin (1993)- Geologic map of Salak volcano, West Java. Volcanological Survey Indonesia, Bandung.
(online at: https://vsi.esdm.go.id/gallery/picture.php?/79/category/8)

Zelenov, K.K. (1969)- Aluminum and titanium in Kava Ijen volcano crater lake; Indonesia. Int. Geology Review 11, 1, p. 84-93.

Zen, M.T. (1969)- The state of Anak Krakatau in September 1968. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung 2, 1, p. 15-23.

Zen, M.T. (1971)- Geothermal system of the Dieng-Batur volcanic complex. Inst. Teknologi Bandung (ITB) J. Science 6, 1, p. 23-38.
(Geothermal system of eastern Dieng volcanic complex, C Java, originated through intersection of two major fracture zones. Geothermal system is system of hot water and steam rather than dry steam only)

Zen, M.T., M. Alswar, S.H. Simatupang & G. Yuniart (1983)- Tektogenesa- gravitasi dan daur magmatik di sepanjang deretan volkanik Ungaran-Merapi di Jawa Tengah. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.
('Tektogenesis, gravity and magmatic cycles along the Ungaran-Merapi volcano row in Central Java')

Zen, M.T. & D. Hadikusumo (1964)- Recent changes in the Anak Krakatau volcano. Bull. Volcanology 27, p. 259-268.
(Visit to Anak-Krakatau in March 1963 reveal changes in Anak-Krakatau volcano since 1960. Former moonshaped crater lake (1960) disappeared and lava flows cover crater floor between inner cone and outer ring wall. Lava streams flowed over SW crater rim and spread fan-wise into sea)

Zen, M.T. & D. Hadikusumo (1965)- The future danger of Mt. Kelut (Eastern Java- Indonesia). Bull. Volcanology 28, 1, p. 275-282.

(Tunnel system of Hettinga Tromp proved Kelut eruption dangers can be minimized and no great lahars formed during eruption of 1951. However, eruption destroyed tunnels. New 1954 drainage tunnel system based on seepage principle, but failed to drain the lake completely. 23.5 million m3 of water still stored)

Zen, M.T. & A. Sudradjat (1983)- History of the Krakatau volcanic complex in Strait Sunda and the mitigation of its future hazards. Bul. Jurusan Geologi ITB 10, p.

Zirkel, F. (1875)- Leucitbasalt von Gunung Bantal Susum auf der Insel Bawean bei Java. Neues Jahrbuch Mineral. Geol. Palaeont. 1875, p, 175-176.
('Leucite basalt from the island Bawean near Java'. Brief letter on first discovery of first leucite-bearing basalts known outside Europe, from Gunung Bantal Susum on Bawean, Java Sea (leucite basalts also in Gunung Muriah, NE Java, and SW Sulawesi; JTvG))

Zulkarnain, I. (2003)- Petrographic evidence for magma mixing beneath the Krakatau volcano and its implication for eruption magnitude and its mechanism. J. Riset Geologi Pertambangan (LIPI) 14, 1, p. 1-11.

III.4. Madura- Madura Straits

Andrearto, W. & B. Syam (2010)- Carbonate reservoir prospect in Madura Island. Proc. 39th Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-161, 5p.
(Seven wells drilled in Madura island show carbonates in Madura Island have good reservoir potential. Prupuh Fm carbonates (N4, latest Oligocene- earliest Miocene) in S part of island bioclastic carbonates deposited in shallow marine- open marine facies with porosity 5-10%. Carbonate deposition in N relatively shallow marine and porosity 10-20%)

Arifin, L. (2000)- Struktur patahan, lipatan dan akumulasi gas di perairan Sampang- Bluto dan sekitarnya, Madura, Jawa Timur. J. Geologi Sumberdaya Mineral 10, 103, p. 16-22.
(Shallow seismic reflection study at N Madura Straits. Several major anticlinal trends. Indications of biogenic gas accumulations)

Arifin, L. (2001)- Akumulasi gas dalam sedimen de perairan Ambunten- Madura. J. Geologi Sumberdaya Mineral 11, 118, p. 19-25.
('Gas accumulation in sediments in waters off Ambunten, Madura. Indicators of shallow biogenic gas on shallow seismic lines offshore N Madura)

Arifin, L.& D. Kusnida (2009)- Mud diapir di perairan selatan Pulau Madura. J. Geologi Kelautan 7, 3, p. 135-144.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/178/168)
('Mud diapyrs in waters south of Madura Island'. Shallow seismic reflection lines show 10 mud diapyrs and gas-bearing sediments in N Madura Straits, S of E Madura Island from Sampang to Kalianget)

Arifin, M.T. & A. Ferguson (2017)- Reservoir characterization using seismic attributes and inversion analysis of *Globigerina* Limestone reservoir, Madura Strait, Indonesia. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-267-G, 16p.
(Hydrocarbons in latest Miocene- E Pliocene Mundu Fm bioclastic limestone reservoir of Madura Strait mainly formed of Globigerina planktonic foraminifera. Seismic inversion study shows W part of Mundis (=Maleo?) field more fractured, due to more fragile, cleaner facies. More porous reservoir in upper part of Mundu Fm. Two flat spots on seismic: lower at paleo oil-water contact, upper flat spot at present oil-water contact)

Arisandy, M. & W. Ardhana Darma (2016)- Our future is gas: the geology of the gas producer Mio-Pliocene Mundu Member *Globigerina* Limestone in East Java Basin. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 549-554.
(Pliocene Mundu Globigerina limestone one of main gas producers in E Java Basin. Reservoir winnowed planktonic foraminifera pelagic rains on crests of anticlines; with excellent porosity (28-47%). Gases in Oyong, Wunut and Kepodang fields mixed thermogenic (from Ngimbang Fm) and biogenic (from Plio- Pleistocene sequences. Paciran Fm claystone seal for Mundu reservoir, supporting gas column of >200m in nearby fields)

Arisandy, M., W. Darma, W. Nasifi, H. Haryanto, I.E. Amorita, W.N. Farida &, Y. Triyana (2017)- Future gas in East Java Basin? Control of paleo-terraces in reservoir facies distribution of Pliocene Mundu Member *Globigerina* Limestone. Proc. Joint HAGI-IAGI-IAFMI-IATMI Conv. (JCM 2017), Malang, 5p.
(Depositional model of Pliocene Globigerina grainstone reservoirs ('Mundu play'). Best reservoir quality on crests of highs/ terraces (28-47% porosity; maximum winnowing, less dilution with fine clastics))

Astjario, P. & L. Arifin (2007)- Struktur diapir bawah permukaan dasar laut di kawasan pesisir selatan Kabupaten Sampang- Pamekasan, Jawa Timur. J. Geologi Kelautan 5, 1, p. 25-36.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/132/122)
(Diapyric structures below the surface of the seabed in the southern coastal region of Sampang - Pamekasan Regency, East Java'. Shallow seismic profiles in N Madura Straits show Quaternary sediments undisturbed by folding/faulting, but Tertiary sediments off S coast of Pamekasan area tightly folded and with shale diapyrs)

Aziz, S., Sutrisno, Y. Noya & K. Brata (1992)- Geology of the Tanjungbumi and Pamekasan Quadrangle, Java (1609-2, 1608-5), 1:100,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of Central Madura. Folded Miocene-Pliocene sediments)

Banerjee, B.R. (1993)- Seismic signature as a porosity indicator in Early Miocene reefs in the Madura Strait via AVO inversion and modelling. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 445-481.
(High porosity carbonate acoustic impedance can be similar to, or lower than, that of overlying sediments, whereas acoustic impedance in low porosity carbonate usually much higher than in overlying rocks)

Boehm, A. (1882)- Ueber einige Tertiare Fossilien von der Insel Madura nordlich von Java. Denkschriften kaiserlichen Akademie Wissenschaften Wien, Mathem.-Naturwissenschaftl. Classe, 45, p. 359-372.
(online at: https://www.biodiversitylibrary.org/item/31607page/487/mode/1up)
('On some Tertiary fossils from Madura island, North of Java'. Descriptions of shallow marine fossils collected by F. Schneider from N coast of Madura near Sapuluh. Mainly echinoderms (7 new species) and bivalves (Ostrea, Spondylus, etc.)(viewed as 'Stage m3= Late Miocene- Pliocene? by Martin 1902))

De Groot, C. (1853)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, V. Eiland Madoera. Natuurkundig Tijdschrift voor Nederlandsch Indie 4, p. 445-450.
('Contributions to the geological and mineralogical knowledge of the Netherlands Indies, V. The island of Madura'. Brief report. Outcrops dominated by limestones. M minor coal. Mentions several areas with oil seeps)

Edwin, A., K. Han & W. Nusantara (2013)- A case study on using Mundu-Paciran nannofossil zones (MPNZ) to subdivide Mundu and Paciran sequences in the MDA Field, East Java Basin, Indonesia. Berita Sedimentologi 26, p. 26-32.
(online at: www.iagi.or.id/fosi/files/2013/05/BS26-Java.pdf)
(Reservoirs in MDA gas field in E Madura Strait are Late Pliocene planktonic foram grainstones-packstones, deposited as pelagic rains and redistributed by marine bottom currents across crest of Late Miocene inversion structure. Differentiating Mundu and Paciran Sequences (formation/ sequence names used onshore E Java) relies on biostratigraphy and chronostratigraphy, as lithologies are similar. Nannofossils used to define 8 local zones in NN11- NN18 (Late Miocene- Late Pliocene) interval. Best reservoir performance in latest Pliocene MPNZ-7 and MPNZ-6 zones)

Endharto, Mac (2004)- The tidal flat-shelf depositional system of the Ngrayong Sandstone in the western part of the Madura Island. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 17-41.
(M Miocene Ngrayong sst in W Madura deposited in tidal flat system (similar to Endharto 2005))

Endharto, Mac (2005)- The tidal flat-shelf depositional system of the Ngrayong Sandstone in the western part of the Madura Island. J. Sumber Daya Geologi 15, 2 (149), p. 61-80.
(Gunung Geger-Gujug Laut-Water Fall section suggests M Miocene Ngrayong Sst in W Madura formed in tidal sand flat, from supratidal-salt marsh to shallow subtidal environments. Tabular cross bedding in bioclastic lithic arenite, interpreted as sand flat in headward portion of macrotidal estuaries. Overlain by marine transgression of Bulu Limestone with Cycloclypeus, etc.. Paleocurrents from cross bedding from N to S or SW direction (200°- 190°)).

Faturachman, A. & S. Marina (2007)- Jalur migrasi dan akumulasi gas biogenik berdasarkan profil seismik Pantul Dangkal dan korelasi Bor BH-2 di perairan Sumenep, Jawa Timur. J. Geologi Kelautan 5, 3, p. 143-157.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/142/132)
('Migration pathway and biogenic gas accumulation based on seismic profiles of shallow sandstones in Sumenep waters and correlation with BH-2 core hole, East Java'. SE Madura offshore. In BH-2 core ~30m of Holocene-Recent black clay rests on the Pleistocene Pamekasan Fm. Minor biogenic gas)

Faturachman, A., R. Rahardiawan & A.H. Sianipar (2004)- Kandungan gas biogenik dan termogenik gas sedimen dasar laut di perairan Selat Madura (pengaruhnya terhadap sifat fisik dan keteknikan). J. Geologi Kelautan 2, 2, p. 21-30.

(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/111/101)
('Biogenic and thermogenic gas content of marine sediments in Madura Straits waters (their effect on physical properties and engineering)')

Fitrianto , T., E.P. Putra, V. Rowi, Chen Ying Fu & Kian Han (2016)- *Globigerina* Limestone sedimentation mechanism in GLX structure Madura Strait area, an example of upwelling current and winnowing process. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 584-591.
(GLX structure in NW Madura Strait with 2 wells drilled. Reservoir rock Pliocene Mundu-Selorejo Globigerina Limestones. Two types of Globigerina Lst: (1) planktonic foram 'drifts', winnowed by bottom currents, and (2) planktonic foram 'turbidites'. Mundu sequence deep marine pelagic rock with <1% detrital clay, affected by bottom currents (upwelling?). Overlying Selorejo Fm with significant clay content, mainly reworked Mundu Fm)

Flathe, H. & D. Pfeiffer (1963)- Outlines of the hydrogeology of the Isle of Madura (Indonesia). Int. Ass. of Scient. Hydrology, 64, Berkeley, p. 543-560.
(1961 hydrogeological inventory survey on Madura)

Hageman, J. (1862)- Nadere inlichtingen omtrent de op het eiland Madura ontdekte ontvlambare gasbronnen. Natuurkundig Tijdschrift Nederlandsch-Indie 24, p. 487-488.
('Aditional information on the flammable gas seeps discovered on Madura island'. Brief communication on existence of gas seeps on Madura. No maps or other specific information))

Htwe, P., S.S. Surjono, D.H. Amijaya & K. Sasaki (2015)- Depositional model of Ngrayong Formation in Madura area, North East Java Basin, Indonesia. J. Southeast Asian Applied Geol. (UGM) 7, 2, p. 51-60.
(online at: https://journal.ugm.ac.id/jag/article/view/26947/16594)
(early M Miocene Ngrayong Fm in outcrop sectons in central anticlinal part of Madura Island. After deposition of Kujung Formation basin morphology developed nearly E-W trending shelf edge. Ngrayong Sst variety of coastal and shallow marine depositional environments)

Iriska, D.M., N.C. Sharp &, S. Kueh (2010)- The Mundu Formation: early production performance of an unconventional limestone reservoir, East Java Basin- Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc., IPA10-G-174, 17p.
(Maleo and Oyong oil-gas fields in S Madura Straits Basin producing from E-M Pliocene Globigerina planktonic foram-rich limestone reservoir of U Mundu and lower Paciran sequences (~3-6 Ma). Typical porosities 36-55%, permeability 300-500 mD, but locally >1 Darcy)

Kusumastuti, A., P. van Rensbergen & J.K. Warren (2002)- Seismic sequence analysis and reservoir potential of drowned Miocene carbonate platforms in the Madura Strait, East Java, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 86, p. 213-232.
(Seismic study of four Miocene carbonate buildups in Madura Straits (Porong, KE, KD, BD) on WSW-ENE trending Oligocene fault block. Porong buildup Late Oligocene- E Miocene bioherm, buried by Plio-Pleistocene sediments. N flank steeper, probably windward side)

Latief, R., P. Mey & A. Suseno (1990)- Guide Book Post Convention Field Trip, Madura Island. Indonesian Petroleum Association (IPA), Jakarta, p. *(Unpublished)*

Mansyur, M., L. G. Wooley & Nurhasan (2017)- Controlling factor in Pliocene carbonate reservoir quality as key to evaluate play chances: case study from Mundu carbonate from South Madura Strait- East Java Basin. AAPG Asia Pacific Region Technical Symposium, Bandung 2017, Search and Discovery Art. 11007, 7p.
(online at: www.searchanddiscovery.com/documents/2017/11007mansyur/ndx_mansyur.pdf and www.searchanddiscovery.com/documents/2017/11007mansyur/slides.pdf)
(Pliocene Mundu carbonate reservoir of E Java Basin (Madura Straits) consist of >85% planktonic and deep marine benthic foraminifera bioclasts. Contains 3.5 TCF gas. Average porosities >40% (up to 60%),

permeability 100- >4000 mD. Sr isotope age 5.1- 5.8 Ma, older than suggested in previous publications. Reservoir quality controlled by marine sorting processes and diagenesis shutdown)

Mulhadiono, Harsono Pringgoprawiro & Sukendar Asikin (1986)- Tinjauan stratigrafi dalam tataan tektonik di Pulau Madura, Jawa Timur. Majalah Geologi Indonesia (IAGI) 11, 1, p. 1-8.
('Overview of stratigraphy in tectonic settings in Madura Island, East Java '. Revised nomenclature ofTertiary rocks on Madura. From lowest up: Ngimbang, Kujung (with Prupuh Mb in upper part), Tuban, Tawun (with Ngrayong and Rancah members), Pasean, Pasiran and Pamekasan Formations. Sedimentation and tectonics closely interrelated)

Nurhasan (2017)- Seismic DHI flat spot characteristic and statistic of the Pliocene *Globigerina* bioclastic limestones reservoir in Madura Strait area, East Java basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(All anticlinal structures drilled in Madura Straits with bright seismic flat spot at level of Mundu Fm Globigerina Limestone reservoir are commercial gas discoveries)

Pakpahan, A.S.P., J. Jyalita & S.S. Surjono (2015)- Sedimentology and characteristics of Pliocene shallow marine carbonate as reservoir alternative based on outcrop analogue in Madura and Puteran Island, Northeast Java Basin. AAPG/SEG Int. Conf. Exhib., Melbourne, Search and Discovery Art. 51212, 16p.
(online at: www.searchanddiscovery.com/documents/2015/51212pakpahan/ndx_pakpahan.pdf)
(Outcrop study of lateral facies in Pliocene carbonates in Madura and Puteran Island. All facies shallow marine, unlike age-equivalent gas-bearing globigerinid limestone reservoirs in Madura Straits fields)

Praptisih (1986)- Lingkungan pengendapan anggota Ngrayong Formasi Tawun daerah Guluk Guluk, Sumenep, Madura. J. Riset Geologi Pertambangan (LIPI) 7, 2, p. 44-53.
('Depositional environment of the Ngrayong member of the Tawun Formation in the Guluk Guluk area, Sumenep, Madura'. M Miocene (zone N10-N13) Ngrayong Mb shallow marine sandstone, marl and bioclastic limestones with Cycloclypeus. Marl below sandstone with Globorotalia peripheroacuta, Orbulina)

Purnomo, A.I., N. Hadiyanto & Y. Arakawa (2010)- P wave-S wave sensitivity analysis of globigerinid carbonate in Sirasun gas field. Proc. HAGI-SEG Int. Geosc. Conf., Bali 2010, IGCE10-OP-042, 10p.
(Seismic imaging of Pliocene globigerinid packstones in Sirasun biogenic gas field, Madura Straits. Despite carbonate lithology, distinct flat spot present on seismic, indicating gas-water contact)

Putra, P.S. (2007)- Sekuen pengendapan sedimen Miosen Tengah kawasan Selat Madura. J. Riset Geologi Pertambangan (LIPI) 17, 1, p. 20-36.
('Seismic stratigraphy of Middle Miocene sediments in the Madura Straits area'. Seismic stratigraphy study of Middle Miocene in S part of Madura Straits)

Ran, W., X. Luan, Y. Lu, H. Liu, J. Yang, Y. Zhao, W. He & Z. Yan (2019)- Formation and evolution of the Tertiary carbonate reefs in the Madura Strait Basin of Indonesia. J. Oceanology Limnology (China) 37, p. 47-61.
(Analysis of 2D seismic data Madura Strait Basin reveals seismic reflection characteristics of reefs and associated sediments Platform margin reefs controlled by E-W trending Paleogene normal faults and Neogene inversion structures. Tertiary reefs in MSB divided into: 1) Late Oligocene- E Miocene open platform coral reef, 2) Late Oligocene- E Miocene platform margin coral reef controlled by normal faults, 3) platform margin Globigerina mound controlled by "hidden" inversion structure in E Pliocene, and 4) platform margin Globigerina mound controlled by thrust faults in E Pliocene)

Ran, W., X. Luan, Y. Lu, X. Wei & M.S. Islam (2020)- Seismic characteristics and strontium isotope ages of the Middle Miocene Ngrayong Formation in the Madura Strait Basin: implications for the paleogeographic reconstruction of East Java. J. Asian Earth Sci. 190, 104109, p. 1-17.
(M Miocene paleogeography of Madura Straits, East Java. Madura Straits and present-day Kendeng Zone N of M Miocene volcanic arc. Extensive Ngrayong Fm fining in S-ward-prograding clastic sequences, deposited in

bathyal marine environment. In N region of Rembang-Madura Inversion Zone and N offshore of E Java deposited in transitional and neritic marine environments. Two new turbidite fans showing opposite source directions based on 3D seismic data in Madura Strait area)

Reksalegora, S.W., L.M. Hutasoit, A.H. Harsolumakso & A.M. Ramdhan (2017)- Stress determination in overpressure zone of East Java Basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-213-G, 12p.
(Stress information from wells in Madura Straits (E extension of Kendeng zone) suggest horizontal/ compressional stress is dominant and plays major role in generating overpressure. In S half of the study area fold and thrust stress regime, in N half likely strike slip stress regime).

Rutley, D.W. (2001)- Quantitative seismic reservoir characterisation: a model-based approach for the Sampang PSC, East Java, Indonesia. Exploration Geophysics 32, 4, p. 275-278.
(Modelling study of high amplitude seismic anomalies (gas prospects) in Madura Straits)

Situmorang, R.I., D.A. Agustianto & M. Suparman (1983)- Geology of the Waru-Sumenep Quadrangle, scale 1: 100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Supriyadi, B. (1992)- Peranan wrench fault pada akumulasi hidrokarbon di Pulau Madura. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 207-222.
('The role of wrench faults for hydrocarbon accumulation in Madura Island'.Madura Island >100 wells drilled since 1897 (most of them shallow). Deformed by reactivation of basement faults in early M Miocene, indicating start of wrench faulting. Later compression accelerated wrench faulting in Plio-Pleistocene. Hydrocarbons generated in Late Miocene in Ngimbang Fm, then migrated through wrench faults into younger horizons)

Surjaudaja, R., A.M. Ramdhan & I. Gunawan (2017)- Analisis mekanisme terjadinya tekanan-luap dan prediksi tekanan pori pada lapangan BD, Cekungan Jawa Timur. Bulletin of Geology (ITB) 1, 2, p. 85-93.
(online at: http://buletingeologi.com/index.php/buletin-geologi/issue/view/3/Paper-2)
('Analysis of mechanisms of overpressure and pore pressure prediction in the BD field, East Java basin'. Study of overpressure in Plio-Pleistocene deposits at BD field, Madura Straits. Main cause of overpressure is sediment loading, not smectite-illite transformation or hydrocarbon generation)

Surjono, S.S. & M. Gunawan (2018)- Onshore- offshore facies change of Ngrayong Sandstone in Madura area, Indonesia. ASEAN Engineering J. 8, 2, e-ISSN 2586-9159, p.1-15.
(online at: http://www.aseanengineering.net/aej/issue/2018-v8-no2/GeoE028_Formatted%20manuscript.pdf)
(M Miocene Ngrayong sandstone in NE Java basin clean sand facies and best reservoir. Reservoir quality decreases E-ward to Madura island, where more calcareous and shale. Ngrayong Sst evenly distributed across Madura Island and continues South into Madura Straits for 25-50 Km and 100-125 Km to E (well data). Facies changes more calcareous to E, and more shaly to South due to deeper marine environment)

Susilohadi (1998)- Quaternary sequence stratigraphy of Madura Strait, Indonesia. Proc. 33rd Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Shanghai 1996, 2, p. 362-383.
(Madura Strait characterized by syndepositional folding forming W-E trending basin between Madura and Java volcanoes. Basin with rapid subsidence and >200m of Quaternary deposits. Deposition interplay between Quaternary coarse-grained volcaniclastics deposition in S, marine fossiliferous mudstone from exposed Madura in N, and Quaternary sea level changes. During major sea level fall, E Kendeng zone and Madura Strait subaerially exposed, as shown by widespread thin fluvial and alluvial fan deposits)

Sutadiwiria, G. & H. Prasetyo (2006)- Uncertainty in geophysic-geology-reservoir modelling for Globigerinid sand carbonate in NE-Java Basin, Indonesia; case study: planning vs. actual of fields development at Madura Strait, Indonesia. In: Soc. Petrol. Engineers (SPE) Asia Pacific Oil & Gas Conference and Exhibition, Adelaide 2006, SPE 100957-MS, 6p. *(Extended Abstract)*

(In NE Java Basin Pliocene Mundu Fm Globigerinid sands carbonate with oil and gas MDA, TSB, O and M fields. Problems in reserves assessment include reservoir compartmentalization (structural and stratigraphic) variations in depth of fluids contacts, low-resistivity case in clean-oil zones, etc.)

Triyana, Y., G.I. Harris, W.A. Basden, E. Tadiar & N.C. Sharp (2007)- The Maleo Field: an example of the Pliocene *Globigerina* bioclastic limestone play in the East Java Basin, Indonesia. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-115, p. 45-61.
(Maleo field 2002 discovery in Madura Straits. Gas column 49m in E Pliocene Mundu and M-L Pliocene Paciran (Selorejo) carbonates, consisting almost entirely of planktonic Globigerina shells. Structure partly filled 4-way closure. Gas ~99% methane, primarily biogenic. Lime mud matrix % primary control on reservoir quality. Porosity up to 60%. Globigerina carbonates deposition in ~150-250m deep water, possibly on detached platform. Some oil production from Globigerina reservoirs onshore. Maleo first offshore discovery of this reservoir type to be commercialized)

Wahab, A. & A. Suseno (1990)- Madura, land of opportunity. Geologi Indonesia (J. Indon. Assoc. Geol. IAGI) 13, 2, p. 33-46.

Wijaya, P.H. & D. Noeradi (2010)- 3D properties modeling to support reservoir characteristics of W-ITB Field in Madura Strait area. Bull. Marine Geol. 25, 2, p. 77-87.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/27/27)
(W-ITB gas field (not real name?) in W part of Santos Sampang PSC, NW Madura Straits, discovered in 2006. In W-ITB 1 well gas reservoirs in Selorejo and Mundu Fms, but in W- ITB 2 no gas reservoir in Mundu Fm)

Yuniardi, Y. (2015)- Seismic and sequence analysis of Middle to Late Miocene deposits of Northeast Java Basin. Indonesian J. Geoscience 2, 2, p. 101-110.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/219/195)
(Sequence stratigraphy and seismic facies of M-L Miocene interval in Madura Straits, which onlaps Top Early Miocene surface from N to S)

IV. BORNEO (KALIMANTAN & NORTH BORNEO)

IV.1. Kalimantan/ Borneo General

Abidin, H.Z. (1996)- Hydrothermal fluid constraints on the Muyup gold deposit, East Kalimantan. J. Geologi Sumberdaya Mineral 6, 53, p. 2-8.
(Muyup gold prospect in NE part of SW-NE trending Miocene East-Central Kalimantan Volcanic belt)

Abidin, H.Z. (1996)- Petrology and geochemistry of volcanic and subvolcanic rocks from the Muyup gold prospect: implications for the tectonic development of the east Central Kalimantan volcanic belt. J. Geologi Sumberdaya Mineral 6, 57, p. 2-9.
(Muyup gold prospect in Latest Oligocene- M Miocene Muyup Volcanics at W margin Kutai Basin. Tied to SE-ward subduction of Proto-South China Sea plate under Borneo. Rel. high K content, and classified as shoshonitic and basaltic members of island arc calk-alkaline suite)

Abidin, H.Z. (1998)- The tectonic history and mineral deposits of the east-Central Kalimantan volcanic belt, Indonesia; a comparative study of the Kelian, Muyup and Masa Ria gold deposits. Ph.D. Thesis University of Adelaide, p. 1-286.
(online at: https://digital.library.adelaide.edu.au/dspace/handle/2440/19144)
(East-Central Kalimantan Early Miocene volcanic belt as result of subduction of South China Sea plate below Kalimantan. Andesitic and dacitic volcanics host several gold deposits in Kutai Basin (Kelian, Muyup) and Barito basin (Masupa Ria), all low sulphidation epithermal types)

Abidin, H.Z. (1998)- Mineralization and alteration of the Kelian gold deposit, East Kalimantan. J. Geologi Sumberdaya Mineral 8, 76, p. 2-10.
(Kelian gold deposit in E-C Kalimantan Volcanic Belt is low sulphidation epithermal gold deposit, genetically associated with Miocene volcanic and subvolcanic rocks. Mineralization consists of disseminations and stockworks, with minor sulphide veins. Mineralization generally at contact between andesite intrusives and (Eocene) pyroclastics. Several types of wallrock alteration)

Abidin, H.Z. (1998)- The genesis of Muyup gold prospect, East Kalimantan. J. Geologi Sumberdaya Mineral 8, 81, p. 10-22.
(Muyup small low sulphidation gold deposit discovered in mid-1980's in W part of Kutai Basin, hosted in Eocene Pamaluan Fm clastics. Associated with Muyup Volcanics of latest Oligocene- E Miocene East-Central Kalimantan Volcanic belt)

Abidin, H.Z. (1998)- Mineralization and alteration of the Masupa Ria gold prospect, East Kalimantan. J. Geologi Sumberdaya Mineral 9, 88, p. 16-27.
(Masupa Ria small gold deposit discovered in mid-1970's in East Central Kalimantan Volcanic Belt, ~150 km WSW of Kelian. Associated with E Miocene? volcanics and intrusions. Several ore bodies, mainly at contact between intrusive and volcanic rocks. Ore mineral mainly pyrite, sphalerite, chalcopyrite, stibnite and gold. (see also Thompson et al 1992))

Abidin, H.Z. (2001)- Iron oxides associated with the ultramafic rocks, Mt.Kukusan area, South Kalimantan. Indonesian Mining J. 7, 2, p. 14-23.

Abidin, H.Z. (2004)- Gold mineralization at the Pantain Bancah prospect, Pelaihari District, South Kalimantan. Majalah Geologi Indonesia (IAGI) 19, 2, p. 106-116.
(Gold prospect in S Meratus Mts)

Abidin, H.Z. & A.S. Hakim (2001)- Dismembered ophiolite complex in Mt. Kukusan Area, Batulicin District, South Kalimantan: synthetic origin and economic important. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 28, p. 75-88.
(Kukusan area, E of Meratus Mts, SE Kalimantan, dismembered ophiolite complex with ultramafic rocks, chert and volcanic flows. Ultramafic rocks dominate and consist of dunite, serpentinite, harzburgite. Reddish chert

outcrops in N area, formed in deep sea environment and structural contact with ultramafics. Origin of Kukusan ophiolite complex still controversial (obduction or plutonic intrusion, may be result of Oligocene W-ward obduction of E Sulawesi ophiolite and Miocene- Pliocene collision of Sula micro continents)

Abidin, H.Z. & B.H. Harahap (1996)- Geochemistry of young volcanic rocks from the Kelian gold prospect, East Kalimantan. J. Geologi Sumberdaya Mineral 6, 60, p. 2-8.
(Kelian area in W Kutai basin in E Kalimantan, with Oligocene-Miocene volcanics of volcanic arc character and Pleistocene volcanics of non-orogenic character, similar to Oceanic Island Basalt but probably related to period of uplift and continental rifting volcanism within Sundaland)

Abidin, H.Z., P.E. Pieters & D. Sudana (1993)- Geology of the Long Pahangai Sheet, 1716, Kalimantan 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(C Kalimantan map sheet, showing Permo-Triassic(?) Busang Complex granite-gabbro and metamorphic rocks, overlain by folded Cretaceous Selangkai Gp sediments, unconformably overlain by near-horizontal Late Eocene sediments. In N Embaluh melange composed of imbricated Late Cretaceous- Paleocene-Eocene sediments and some Danau ultramafics. Late Oligocene- E Miocene Sintang andesite intrusives, etc.)

Abidin, H.Z. & E. Rusmana (1997)- Petrology and geochemistry of the Tertiary volcanic/sub volcanic rock from the Masupa Ria Gold prospect, East Kalimantan. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 237-253.
(Masupa Ria gold prospect in E-C Kalimantan volcanic belt. Volcanics High-K calk-alkaline island arc volcanism as result of subduction of S China Sea plate under Kalimantan in Late Oligocene (~24.4 Ma))

Abidin, H.Z. & Sukardi (1997)- Geochronology and geology of the East-Central Kalimantan volcanic belt, Indonesia. J. Geologi Sumberdaya Mineral 7, 64, p. 17-27.
(NE-SW trending, ~400 km long belt of calk-alkaline volcanics with gold mineralization across C and E Kalimantan. K-Ar ages of andesites at Kelian, Muyup and Masupa Ria gold prospects from ~14.2- 24.6 Ma (E-M Miocene). Quaternary basalt and dacite at Kelian 1.53- 0.97 Ma (Pleistocene). Late Oligocene-Miocene volcanism related to subduction of S China Sea plate under N Borneo margin of Sundaland basement complex)

Advokaat, E.L., N.T. Marshall, S. Li, W. Spakman, W. Krijgsman & D.J.J. van Hinsbergen (2018)- Cenozoic rotation history of Borneo and Sundaland, SE Asia revealed by paleomagnetism, seismic tomography, and kinematic reconstruction. Tectonics 37, 8, p. 2486-2512.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2018TC005010)
(Paleomagnetic data from Kutai basin show Borneo underwent ~35° CCW rotation in Late Eocene and additional ~10° CCW rotation since E Miocene. How rotation was accommodated relative to Sundaland not clear. Late Eocene- E Oligocene rotation possibly driven by change in motion of Australia relative to Eurasia, from E-ward to N-ward, which also led to initiation of subduction along E Sunda trench and proto-South China Sea to S and N of Borneo, respectively)

Albrecht, J.C.H. (1946)- Contributions to the geology of the region between Soengai Klindjau and Soengai Belajan, Northern Koetai, Borneo. Ph.D. Thesis Universiteit van Utrecht, Kemink, Utrecht, p. 1-115.
(Study of samples collected by Witkamp 1922-1925 from NW edge of Kutai Basin and adjacent Pretertiary basement outcrops. Oldest rocks 'Old Slates' (?Devonian and younger), overlain by Danau Fm (Permo-Carboniferous and U Triassic). Unconformably overlain by Lower Tertiary clastics with Eocene limestones with Pellatispira, Biplanispira and Nummulites. Illustrations of deep marine trace fossils Helminthoida, Palaeodictyon spp., etc. from E Tertiary platy marls at L. Atan)

AMDEL (1983)- K-Ar geochronology of five hornblendes from South Kalimantan. Geol. Res. Dev. Centre, Bandung, p. *(Unpublished)*
(Heryanto & Panggabean 2004: Includes 113 ± 1 Ma age for hornblende schist from Aranio River, Meratus Range, SE Kalimantan)

Amiruddin (1989)- The preliminary study of the granitic rocks of West Kalimantan, Indonesia. M.Sc. Thesis, Wollonggong University, Australia, B-Geol. 951, p. *(Unpublished)*

Amiruddin (2000)- Petrology and geochemistry of of the Sepauk Tonalite and its economic aspect in the Schwaner batholith, West Kalimantan. J. Geologi Sumberdaya Mineral 10, 100, p. 2-14.
(Cretaceous Sepauk tonalite part of largest granitoid batholith in W Kalimantan. Intermediate, I-type granite, with K-Ar ages 87-123 Ma, interpreted to belong to sunbduction-related volcanic arc. Intruded into Pinoh Metamorphics, with contact aureoles suggesting depth of emplacement 7-16km)

Amiruddin (2000)- Characteristics of Cretaceous Singkawang and Triassic Sanggau batholiths, West Kalimantan. J. Geologi Sumberdaya Mineral 10, 103, p. 2-15.
(NW Kalimantan Cretaceous Singkawang batholith (NW of Schwaner Mts) and Triassic Sanggau batholith (N of Schwaner Mts) both I-type granites ('compressive granite' or 'volcanic arc granite'), related to subduction. Triassic Sedua granite in small Sanggau batholith intruded into Permian(?) Embuoi metamorphic rocks with K-Ar ages 195-232 Ma (= Late Triassic). Contact aureoles suggest depths of emplacement ~6.5- 16 km)

Amiruddin (2000)- Cordilleran and Caledonian types Cretaceous orogenic granitic rock belts: with the granitic samples from West-East Kalimantan, Indonesia. J. Geologi Sumberdaya Mineral 10, 108, p. 2-15.
(Two type of Cretaceous granite in Kalimantan: (1) Cordilleran-type large Schwaner (Sepauk Tonalite) and Singkawang batholiths in S, I-type granites created during subduction from 129-86 Ma; and (2) Caledonian-type E-W trending belt of isolated granite and granodiorites plutons in N, I-type and S-type granites, emplaced between 81-75 Ma (= Campanian) within collision zone)

Amiruddin (2009)- Cretaceous orogenic granite belts, Kalimantan, Indonesia. J. Sumber Daya Geologi 19, 3, p. 167-176.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/203/194)
(Two types of Cretaceous granite belts in Kalimantan: (1) Schwaner-Ketapang 'Cordilleran-type' large batholiths, tied to 'mid'-Cretaceous subduction of oceanic crust below continent, emplaced from 86- 129 Ma and (2) two belts of 'Caledonian-type' 'post-collisional' Late Cretaceous (75-81 Ma= Campanian) isolated plutons, the E-W trending Sambas- Mangkalihat belt and Meratus in SE (see also companion paper of Hartono (2012))

Amiruddin (2012)- Cretaceous granitoid magmatism. In: U. Hartono (ed.) Magmatism in Kalimantan, Centre for Geological Survey, Geological Agency (Bandung), Spec. Publ., p. 27-66.
(Review of widespread Cretaceous granitoids in Kalimantan.Two groups: (1) large, massive E-M Cretaceous batholiths in SW and W (Schwaner, Singkawang, Ketapang, Sanggau) and (2) Late Cretaceous isolated plutonic belts (Sambas- Mangkalihat small plutons in accretionary system all along N border of Kalimantan, W Meratus in SE Kalimantan). Radiometric ages of granitoids from 80-129 Ma)

Amiruddin & H.Z. Abidin (2005)- Preliminary indication of gold mineralization within the metamorphic rocks in Gunung Belanda area, Pelaihari, South East Kalimantan. Majalah Geologi Indonesia (IAGI) 20, 3, p. 123-128.
(Small, poorly studied epithermal gold prospect hosted in Huaran Metamorphics in S part of Meratus Mts of SE Kalimantan (Tempurung River, Pelaihari District)

Amiruddin & S. Andi Mangga (1999)- Geochemistry of Cretaceous peraluminous granite plutons in head water of the Mahakam River, East Kalimantan. J. Geologi Sumberdaya Mineral 9, 88, p. 2-10.
(U Cretaceous Topai and Nyaan Merah granites in N-C Kalimantan intruded into Cretaceous Embaluh Complex. Topai granite K-Ar ages ~75-77 Ma. Peraluminous S-type granites, probably derived from pelitic sediments. Tectonic setting syn-collisional, near collision zone?)

Amiruddin & D.S. Trail (1993)- Geology of the Nangapinoh sheet, Kalimantan, 1:250 000. Geol. Res. Dev. Centre (GRDC), Bandung, 49p. + map.

(Incl. large Early Cretaceous 'Sepauk Tonalite', intruding Pinoh Metamorphics. Aptian-Albian radiometric ages 107-112 Ma and 112-123 Ma)

Anggritya K.D. & B. Priadi (2016)- Basement characteristics of northern Barito Basin, Siung Malopot area, Central Kalimantan. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 301-309.
(Basement outcrops in Siung Malopot area in N part of Barito basin (277km NE of Palangkaraya) Cretaceous? low-metamorphic andesite and granodiorite. Also boulders of Early Tertiary limestone and presumably reworked latest Carboniferous - E Permian fusulinid foraminifera (Schwagerina))

Anonymous (1921)- Yzerertsafzettingen in Borneo. Verslagen Mededelingen Indische Delfstoffen en Hare Toepassingen, Dienst Mijnbouw Nederl.- Indie, Bandung, 9, p.
('Iron ore deposits in Borneo' (also spelled Ijzerertsafzettingen). Reviews of iron ore occurrences on Pulau Laut, Pleiari near Martapura (first discovered by Von Gaffron 1844, Rant 1854), Kota Waringin and Ketapang, and some others in W Borneo. Investigations in 1916-1919 were focused near outcropping peridotite bodies)

Anshari, G., A.P. Kershaw & S. Van der Kaars (2001)- A Late Pleistocene and Holocene pollen and charcoal record from peat swamp forest, Lake Sentarum wildlife reserve, West Kalimantan, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 171, 3-4, p. 213-228.
(Palynological record of last 30 kyrs from peat swamp forest in Upper Kapuas River Basin, NW Kalimantan. Late Pleistocene temperatures cooler. Charcoal values rise throughout period, reflecting increased human impact, especially in last 1400 years)

Anshari, G., A.P. Kershaw & S. Van der Kaars & G. Jacobsen (2004)- Environmental change and peatland forest dynamics in the Lake Sentarum area, West Kalimantan, Indonesia. J. Quaternary Science 19, p. 637-655.

Aral, H., M.I. Pownceby & J. Im (2008)- Characterisation and beneficiation of zircon-rich heavy mineral concentrates from central Kalimantan (Borneo, Indonesia). Applied Earth Sci. (Trans. Inst. Mining Metallurgy, London B), 117, 2, p. 77-87.
(C Kalimantan potentially significant zircon, ilmenite, rutile and other heavy mineral province. Study of zircon-rich heavy minerals from artisanal mine tailings in Sampit region, S C Kalimantan)

Aryanto, N.C.D., E. Suparka, C.I Abdullah & H. Permana (2013)- The petrology characteristic of granitoid rock based on geochemical analysis of Bajau Cape Coast and its surrounding, West Kalimantan. Bull. Marine Geol. 28, 1, p. 13-20.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/51/52)
(Granitoid along Bajau Cape coast near Singkawang, ~145 km N of Pontianak, NW Kalimantan. Rocks porphyric texture, with biotite. Classified as alkali feldspar granite, syeno-granite and quartz monzonite (part of Oligo-Miocene Sintang Intrusives or Cretaceous Mensibau/ Singkawang Group?)

Aryanto, N.C.D., E. Suparka, C.I Abdullah & H. Permana (2013)- Petrology and geochemie of Singkawang granitoid, West Kalimantan. Proc. 38th HAGI and 42nd IAGI Ann. Conv., Medan, JCM2013-010, 4p.
(Similar to Aryanto et al. (2013) paper above on Singkawang granite-granodiorite 145km N of Pontianak (no age info))

Atarita, T.C., Fatahillah & E. Anggraeni (2015)- Hydrocarbon prospective of Mesozoic sequence in Barito Basin, South Kalimantan. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-522, 1p. *(Abstract only)*
(3D seismic suggests NW-SE trending Pretertiary synrift system possibly developed, similar to Tertiary synrift. Evidence for Mesozoic sediments in wells of NE Barito Basin: Late Cretaceous sandstone shale in Bagok 2, 500m Cretaceous limestone with Orbitolina in Hayup 1)

Atmawinata, S., N. Ratman & Baharuddin (1995)- Geological map of the Muara Ancalong Quadrangle 1816, Kalimantan, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

(Geologic map of N side of Kutai Basin. Oldest rocks in NW corner Telen-Kelinjau Melange and Telen Fm metasediments, associated with Cretaceous Tebang Melange with blocks of Orbitolina limestone, gabbro, ultramafics, chert, etc.. Unconformably overlain by Eocene and younger clastics and limestones (with Nummulites, Pellatispira, etc.))

Aveliansyah & M. Syaiful (2010)- Facies and paleo-environment of Miocene Pulau Balang Formation and its implication to hydrocarbon potential in Kutai Basin, based on outcrop observation. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-SG-049, 8p.
(Samarinda area outcrop section description of 200m of M Miocene (N9-N14) tide-influenced delta plain-delta front facies)

Badaruddin, D.F., D. Noeradi, M. Nurhidayat & M.S. Burhanuddin (2018)- Retroarc foreland basin in Melawi Basin, West Kalimantan, and implication to hydrocarbon migration pathway. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-273-G, 14p.
(M Eocene- Oligocene Melawi Basin in NW Kalimantan 300km long and 100km wide and formerly classifiied as intra-continental rift, sag basin and strike slip basin. Sedimentation thicker in N, as result of thrust fault-controlled sediment deposition. N of basin subduction and collision-related rocks include M Eocene Piyabung arc volcanics and Boyan and Lubok Antu melanges. Further N lies Sarawak Basin, classified as Eocene-Oligocene foreland basin. Oil seeps around Kedukul-1 well, gas shows in Kayan-1 and Kedukul-1 wells. Melawi basin is retroarc foreland basin, with hydrocarbon migration pathways from foredeep in N to forebulge area in S part of basin)

Badaruddin, D.F., Suyono, M. Nurhidayat, P. Asmoro & R.Y. Saragih (2018)- Post-mortem analysis of drilling failure of Kayan-1 and Kedukul-1 wells in Melawi Basin, West Kalimantan. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-189-G, 15p.
(Melawi Basin in NW Kalimantan with oil seeps at surface, but two wells (Kayan 1, Elf 1986 and Kedukul 1, CanadianOxy 1995) only gas shows. Both wells E Oligocene beds at surface. In Kayan-1 E Miocene Sintang intrusions intruded Eocene Ingar and Dangkan Fms; Kedukul-1 TD in Sintang Intrusion. Reservoir sandstones poor porosity (av. 8-10%). Oil maturation window at surface in E Melawi basin due to Miocene regional uplift)

Baharuddin (2007)- Petrologi dan geokimia batuan gunung api Metulang di daerah Longbia, Kalimantan Timur: implikasi tektonikanya. J. Sumber Daya Geologi 17, 1 (157), p. 40-48.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/278/249)
('Petrology and geochemistry of Metulang volcanic rocks in the Long Bia area, East Kalimantan: its tectonic implications'. Plio-Pleistocene porphyric basaltic Metulang Volcanics petrology and geochemistry indicate island arc volcanics, related to Borneo- Palawan subduction)

Baharuddin (1994)- The petrology and geochemistry of the Cretaceous volcanic and subvolcanic rocks of the Schwaner Mountains Region, Southwest Kalimantan, Indonesia. M.Sc. Thesis University of Tasmania, p. 1-63. *(Unpublished)*

Baharuddin (1994)- The petrology and geochemistry of the Cretaceous Schwaner volcanic/ subvolcanic rocks and its implication to the tectonic evolution of Sundaland. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 271-290.
(Schwaner Mts Cretaceous E-W belt of Early Cretaceous granitoids (130-100 Ma) are rotated extension of continental E Asia. Also Late Cretaceous Kerabai volcanics, probably associated with slow, low-angle subduction, and Tertiary volcanics (30-16 Ma))

Baharuddin (1999)- Petrology and mineral geochemistry of the Cretaceous volcanic and subvolcanic rocks from the Schwaner Mountains, West Kalimantan. J. Geologi Sumberdaya Mineral 9 (89), p. 10-20.
(Schwaner Mts Cretaceous volcanics of Matan Volcanic Complex/ Kerabai Volcanics range from basaltic to rhyolitic, subvolcanics diorite to gabbro and dolerite. Composition of magma med-high K calk-alkaline)

Baharuddin (2001)- Struktur sesar pada batuan ultramafik di daerah Tanjungdewa-Batakan, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 11 (117), p. 2-10.
('Fault structure in ultramafic rocks in the Tanjung Dewa-Batakan area, South Kalimantan'. At S tip of Bobaris Range NW-SE left-lateral Batakan Fault and N-S right-lateral Tanjungdewa Fault)

Baharuddin (2006)- Hubungan keberadaan runtunan ofiolit dengan konsentrasi unsur logam dalam endapan Sungai aktif di daerah Pelaihari, Kalimantan Selatan. J. Sumber Daya Geologi 16, 4 (154), p. 198-209.
('The relationship between ophiolite and the concentration of metal elements in active river sediments in the Pelaihari River area, S Kalimantan'. Stream samples in Tambak-Bobaris zone of SW Meratus Mts suggest significant concentrations of Ni, Cu, Pt and Co, presumably derived from ophiolite)

Baharuddin (2011)- Petrologi dan geokimia batuan gunung api Tersier Jelai di daerah Malinau, Kalimantan Timur: implikasi tektoniknya. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-032, 6p.
('Petrology and geochemistry of Tertiary Jelai volcanic rocks in the Malinau area, NE Kalimantan: its tectonic implications'. Jelai Volcanics of NE Kalimantan W of Tarakan Basin, calc-alkaline basaltic andesites of island arc affinity, with M Miocene K-Ar ages between ~14.7- 16.1 Ma)

Baharuddin (2011)- Petrologi dan geokimia batuan gunung api Tersier Jelai di daerah Malinau, Kalimantan Timur: implikasi tektoniknya. J. Sumber Daya Geologi 21, 4, p. 2013-211.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/147/143)
(same as Baharuddin 2011, above)

Baharuddin & H.Z. Abidin (2005)- Preliminary indication of gold mineralization within the metamorphic rocks in Gunung Belanda area, Pelaihari, South East Kalimantan. Majalah Geologi Indonesia (IAGI) 20, 3, p. 123-128.

Baharuddin, M.H.J. Dirk & U. Hartono (2001)- Ciri petrologi dan geokimia batuan ofiolit Bobaris, Pegunungan Meratus, Kalimantan Selatan, dan potensi mineral ekonomisnya. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 28, p. 61-73.
(Bobaris ophiolite complex along W flank of Meratus Mts, SE Kalimantan, is dismembered ophiolite sequence emplaced in Maastrichtian, Late Cretaceous)

Baharuddin, B. Djamal & B. Harahap (2003)- Geochemistry of the Tertiary rhyolite from West Kalimantan and its geodynamic implications. Buletin Geologi (ITB) 35, 2, p. 1-43.

Baharuddin & R. Heryanto (2001)- Cretaceous Selangkai Formation of West Kalimantan and its tectonic implications. In: A. Setiawan et al. (eds.) Deep-water sedimentation of Southeast Asia, Proc. 2nd Regional Seminar Indonesian Sedimentologists Forum (FOSI), Jakarta 2001, 3p. *(Extended Abstract)*
(Early to Late Cretaceous Selangkai Fm deformed flysch type series in Sintang Quadrangle, N of Melawi and S of Ketungau Basins. Deposited in submarine fan environment, >3000m thick. With Embaluh Group in E region and Boyan Melange possibly parts of accretionary complex of SW-dipping (restores to W-dipping in Cretaceous) Pacific Ocean subduction zone, which ties to Cretaceous Schwaner magmatic belt)

Baharuddin, R. Heryanto & H. Panggabean (2002)- Cretaceous Selangkai Formation of West Kalimantan and its tectonic implication. J. Geologi Sumberdaya Mineral 12, 123, p. 2-9.
(Cretaceous Selangkai Fm well exposed on Sintang Quadrangle, NW Kalimantan, mainly between Melawi and Ketungau-Manda Tertiary basins). Deformed flysch- type deposit accumulated in submarine fan environment. Thickness >3000m. Fossils indicate E-Late Cretaceous ages. With Embaluh Complex and Boyan Melange are part of accretionary prism complex at (present-day) S-dipping Late Cretaceous subduction zone, which is tied to Cretaceous Schwaner magmatic belt and reflect W-dipping subduction of Pacific Ocean crust)

Baharuddin, P.E. Pieters, D. Sudana & S. Andi-Mangga (1993)- Geology of the Long Nawan sheet 1717 area, Kalimantan. 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

(C-E Kalimantan-Sarawak border area map, dominated by intensely folded Late Cretaceous-Paleogene Embaluh Gp metasediments, intruded by Late Cretaceous Topai granite. Locally overlain by M Eocene Nyaan volcanics and Pliocene Metulang Fm volcanics)

Baharuddin & E. Rusmana (2007)- Geochemical characteristics of the youngest volcanic rocks from Mount Acau, West Kutai Regency, East Kalimantan. J. Sumber Daya Geologi 17, Spec. Issue (163), p. 47-56.
(Quaternary Metulang Volcanics at Mount Acau with K/Ar ages of 0.93-0.01 Ma are basalt and basaltic andesite of low-K tholeitic and medium-K calk-alkaline types. Show characteristic intraplate magmatism, possibly due to backarc extension)

Baharuddin & P. Sendjaja (2014)- The petrology and geochemistry of the Cretaceous Schwaner volcanic/ subvolcanic rocks and its implication to the tectonic evolution of Sundaland. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 129-144.
(Schwaner Mts Domain in W Kalimantan dominated by E-W belt of I-type granitoids, ~200 km wide and 500 km long, including mainly E Cretaceous (130-100 Ma)tonalites and granodiorites, probably rotated extension of continental E Asia belt. Some evidence that granitoids in Schwaner Mts domain become younger from N (124 Ma) to S (74 Ma). Late Cretaceous 'Kerabai Volcanics' range from basalt to rhyolite, subvolcanic rocks diorite to gabbro and dolerite, comprising calc-alkaline orogenic association, probably subduction-related magma associated with slow, low-angle subduction)

Baharuddin & J. Wahyudiono (2007)- Kontrol struktur pada pola zig-zag aliran Sungai Kayan di daerah Peso, Kalimantan Timur. J. Sumber Daya Geologi 17, 3, p. 178-186.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/288/259)
('Structural control on zig-zag pattern of the Kayan River in Peso, East Kalimantan'. Peso area downstream of Kayan River, mainly occupied by flysch-type deposits of Cretaceous Rajang-Embaluh Group, unconformably overlain by Tertiary sediments and intruded by Tertiary-Quaternary magmatics. Zig-zag pattern of Kayan River in area closely related to major NE- SW and NW-SE-trending faults)

Baldwin, J. (2008)- Kelian; a precursor to the carbonate-base metal gold model. In: P.C. Lewis (ed.) Proc. Terry Leach Symposium 2008, Bull. Australian Inst. Geoscientists 48, p. 1-7.
(Review of Kelian gold mine in C Kalimantan. Discovered in 1975, production started in 1992, mining completed 2003. Miocene epithermal mineralization system (see also Van Leeuwen et al. 1990, Davies et al. 2008)

Barker, S. M., J. Jong & F.L. Kessler (2015)- Structural comparison of the fold-thrust belts along the Circum-Borneo margins. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2015, 4.1, 18p. *(Extended Abstract + Presentation)*
(Comparisons of nine fold-thrust belts (FTB) that fringe E Sundaland around NW and W Borneo margins: Bunguran, W Baram Delta, E Baram Delta, N NW Sabah Trough, Sandakan, Tarakan and Kutai-W Sulawesi. Almost all are 'thin-skinned' and in at least four belts frontal thrusting can be linked to proximal extensional growth faults (Bunguran/Rajang Delta, Sandakan, Tarakan, Kutai))

Barron, L.M., T.P. Mernagh R. Pogson & B.J. Barron (2008)- Alluvial ultrahigh pressure (UHP) macrodiamond at Copeton/Bingara (Eastern Australia) and Cempaka (Kalimantan, Indonesia), 9th Int. Kimberlite Conference, Extended Abstract 9IKC-A-00039, 3p.
(Similar diamonds in Cenozoic placers in E Australia and in SE Kalimantan. Copeton- Bingara diamonds ultrahigh pressure macrodiamonds, formed during termination of subduction by continental collision)

Bassi, D., L. Hottinger & Y. Iryu (2009)- Reassessment of *'Boueina' pacifica'* Ishijima, 1978 (Orbitolininae, Foraminiferida), formerly considered a green halimedacean alga. J. Foraminiferal Research 39, 2, p. 120-125.
(online at: http://jfr.geoscienceworld.org/content/39/2/120.full.pdf)
(Boueina pacifica Ishijima 1978 described from Aptian shallow-water carbonates at Seberuang, W. Kalimantan, originally ascribed to Halimeda-group algae, but is orbitolinid foraminifer. Type specimens no diagnostic features to identify genus or species of orbitolinids)

Batchelor, D.A.F. (1993)- Late Pleistocene sedimentation and landform development in western Kalimantan (Indonesian Borneo); discussion. Geologie en Mijnbouw 71, 3, p. 281-286.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0bW5rd1U5UFlVZnc/view)
(Disagrees with Thorp et al. 1990 correlation and age assignments of Pleistocene lithostratigraphic units in W Malaysia and Indonesian Tin Islands, which they correlated with 'NW Kalimantan Late Pleistocene Alluvials')

Bergman, S.C., D.P. Dunn & L.G. Krol (1988)- Rock and mineral chemistry of the Linhaisai Minette, Central Kalimantan, Indonesia, and the origin of Borneo diamonds. The Canadian Mineralogist, 26, 1, p. 23-43.
(online at: http://rruff.info/doclib/cm/vol26/CM26_23.pdf)
(Linhaisai minette dykes from C Kalimantan, just E of Muller Mts dated at ~7.8 Ma. Primitive nature and probably of mantle origin. Do not contain diamonds; Borneo alluvial diamonds must derive from elsewhere. Stratigraphy of area: Late Paleozoic metamorphics overlain by marine Cretaceous, overlain by Oligocene(?) Plateau sandstone, intruded by Neogene igneous rocks))

Bergman, S.C., W.S. Turner & L.G. Krol (1987)- A reassessment of the diamondiferous Pamali Breccia, southeast Kalimantan, Indonesia: intrusive kimberlite breccia or sedimentary conglomerate? In: Mantle metasomatism and alkaline magmatism, Geol. Soc. America (GSA) Spec. Paper 215, p. 183-195.
(Pamali Breccia along margin of Bobaris ophiolite often regarded as 'kimberlite' source of Borneo diamonds (Koolhoven 1935), but is fluvial conglomerate with angular ophiolite fragments)

Bladon, G.M., P.E. Pieters & S. Supriatna (1989)- Catalogue of isotopic ages commissioned by the Indonesia-Australia Geological Mapping Project for igneous and metamorphic rocks in Kalimantan, preliminary report. Geol. Res. Dev. Centre (GRDC), Bandung, p. *(Unpublished)*

Bleekrode, S.A. (1857)- Antimonium en platina van Borneo, onderzocht en beschreven. Tijdschrift De Volksvlijt, p. 1-39.
('Antimony and platinum from Borneo, investigated and described'. Review of occurrences and applications on antimony and platinum worldwide by physician and professor of chemical technology in Delft. Antimony ore mined in Sarawak (Bintala, Tabow, Balanian) and exported to Britain.

Bleekrode, S.A. (1859)- Platinerz von Goenoeng Lawack auf Borneo. Annalen der Physik 183, 5, p. 189-191.
('Platinum ore from Gunung Lawack on Borneo'. Brief note on chemistry of magnetic platinum ore, which contains ~75% Platinum, also ~8% each of Iridium and Osmium, 1% Palladium/ Rhodium. (No locality details, but presumably from Meratus-Bobaris Mountains region))

Bocking, M. (1855)- Mineral-Analysen, Platinerz von Borneo. Annalen Chemie Pharmacie 96, p. 243-244.
('Analyses of platinum ore from Borneo'. Platinum-Iridium-Osmium-Iron nugget from placer deposits in Gunung Lawack region near Martapura? (derived from Meratus/ Bobabris Range))

Brandon-Jones, D. (2001)- Borneo as a biogeographic barrier to Asian-Australasian migration In: I. Metcalfe et al. (eds.) Faunal and floral migrations and evolution in SE Asia-Australasia. Balkema, Lisse, p. 365-372.
(Widespread deforestations during Pleistocene cool dry glacial climates caused major discontinuities in distribution of primates and other fauna and flora of W Indonesia)

BRGM (1982)- Geological map of North-East Kalimantan, scale 1: 250,000. Bureau Rech. Geol. Minieres (BRGM), Orleans, France.
(Probably part of Lefevre et al. (1982 report))

Brouwer, H.A. (1910)- On micaleucite basalt from Eastern Borneo. Proc. Kon. Nederl. Akademie Wetenschappen 12, p. 148-154.
(online at: www.dwc.knaw.nl/DL/publications/PU00013424.pdf)

(English version of 1909 paper 'Glimmerleucitbasalt van Oost-Borneo'. Leucite-bearing basalts previously known only from Ringgit (Java), Bawean and SW Sulawesi. Also present in E Bawoei Mts, Upper Kajan area, Kalimantan. Rock type named kajanite)

Buchan, S.H., R.C. Campbell & S.F. Schuyleman (1971)- Report on a reconnaissance geological survey of North-East Kalimantan. BP Petroleum Dev. Co. Report, p. *(Unpublished)*

Buchan, S.H. (1973)- The stratigraphy of the island of Borneo. BP Petroleum Dev. Ltd., Report FE/GL/8, p. *(Unpublished)*

Bucking, H. (1904)- Liste einer Sammlung von Gesteinen vom Keleiflusse in Berouw, Ost-Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 8, p. 102-105.
('List of a collection of rocks from the Kelei River in Berau, E Kalimantan'. Summary petrographic descriptions of descriptions of Tertiary limestones with Lepidocyclina, shales and greywacke sandstones collected from the Kelei tributary of the Berau River by Spaan)

Buijs, D.W., H. Witkamp, F.H. Eendert, H.C. Siebers & F.D.K. Bosch (1927)- Midden-Oost-Borneo Expeditie 1925. Indisch Comite voor Wetenschappelijke Onderzoekingen, Kolff, Weltevreden, p. 1-407.
(Report on Central- East Borneo Expedition April- December 1925, sponsored by 'Indies Committee for Scientific Research'. Primarily a botanical study, with brief summary of geology by H. Witkamp (p. 105-116). (See also descriptions of rock samples from this expedition by Rutten, 1947))

Burgan, A.M. & C.A. Ali (2008)- Chemical composition of the Tertiary black shales of West Sabah, East Malaysia. Chinese J. Geochemistry 27, 1, p. 28-35.
(Chemistry of 60 outcrop samples of black shale of Belait, Setap Shale, Temburong and Trusmadi Fms: SiO2 ~62-65%, MgO 1.8-2.1%, K2O 2.5-3.1%, CaO 0.3-0.5%, Fe2O3 5.8-7.1%, etc.)

Burgan, A.M. & C.A. Ali (2009)- Characterization of the black shales of the Temburong Formation in West Sabah, East Malaysia. European J. Scientific Res. 30, 1, p. 79-98.
(Folded Miocene Terumbong Fm turbiditic series in SW Sabah thermally overmature. With substantial amount of land-derived organic matter, transported into the marine depositional setting)

Burgan, A.M. & C.A. Ali (2009)- An organic geochemical investigation on organic rich sediments from two Neogene formations in the Klias Peninsula area, West Sabah, Malaysia. Chinese J. Geochemistry 28, 3, p. 264-270.
(Organic geochemistry of Miocene Belait and Setap Shales from Klias Peninsula, SW Sabah. Setap Shale TOC 0.6-1.54% with a mean hydrogen index (HI) of 60.1 mg/g. Belait Fm TOC 0.36 - 0.61 wt% with mean HI of 38.2 mg/g. Not enough hydrogen-rich organic matter to be considered good quality source rocks. Maturation level varies from peak oil in Setap Shale to overmature in Belait Fm)

Burgan, A.M. & C.A. Ali (2010)- An assessment of paleodepositional environment and maturity of organic matter in sediments of the Setap Shale and Belait formations in West Sabah, East Malaysia by organic geochemical methods. Chinese J. Geochemistry 29, 1, p. 42-52.
(Geochemistry of black shales from two Miocene formations in Klias Peninsula, SW Sabah. Gas chromatograms consistent with open marine depositional environments dominated by marine biological matter. Rel. common gammacerane, indicating anoxic marine hypersaline environment. Common land plant-derived biomarkers, such as bicadinanes and oleananes shows major terrigenous input. Predominance of oleanane indicative of angiosperms and Tertiary age)

Burgath, K. (1988)- Platinum-group minerals in ophiolitic chromitites and alluvial placer deposits, Meratus-Bobaris area, Southeast Kalimantan. In: H.M. Pritchard et al. (eds.) Proc.Geo-Platinum 87 Symposium, Milton Keynes 1987, Elsevier, p. 383-403.
(Platinum-group mineral from alpine-type chromitites and placer deposits in SE Kalimantan typically small and occur mainly as Ru-rich and Os and Ir-rich laurites. PGM obtained from placers are Ag- and Cu-bearing

Pt-Fe alloys (up to >1 mm), rutheniridosmine containing Au and Cu, and Cu-bearing osmiridium. Ru-lr-Os phases in placers could have come from Meratus-Bobaris ophiolite chromitites)

Burgath, K.P. & M. Mohr (1986)- Chromitites and platinum-group minerals in the Meratus- Bobaris ophiolite zone, Southeast Borneo. Metallogeny of basic and ultrabasic rocks. In: M.J. Gallager et al. (eds.) Proc. Int. Symp. Metallogeny of basic and ultrabasic rocks, Edinburgh 1985, Inst. Mining and Metallurgy, London, p. 333-349.

Burgath, K.P. & M. Mohr (1991)- The Pamali Breccia near Martapura in South-East Kalimantan (Indonesian Borneo); a diamondiferous diatreme? Geol. Jahrbuch A127 (Festschrift M. Kuersten), p. 569-587.
(Pamali Breccia at SE flank of Bobaris Ophiolite Range, E of Martapura, Meratus Mts, is sedimentary ultramafic breccia-conglomerate, with ultramafics lacking typical kimberlite elements. Pamali Breccia not diamond-bearing diatreme as suggested by Koolhoven (1935). Diamond-bearing gravels in Martapura area have remarkably few ultrabasic components and may mainly be material reworked from U Cretaceous Lower Manunggul Fm diamond-bearing conglomerates, which lacks ultramafic components. Local miners note common association of diamonds and corundum-diaspore rocks)

Cahyo, N., D. Aryanto, Koesnadi H.S., Setyanto & N. Sukmana (2000)- Indikasi keberadaan dan kandungan mineral kasiterit di perairan selatan Kalimantan. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 61-72.
(Poster abstract. 'Indications of presence and content of the mineral cassiterite in the waters of S Kalimantan')

Chiang, K.K. (2002)- Geochemistry of the Cenozoic igneous rocks of Borneo and tectonic implications. Ph.D. Thesis, Royal Holloway and Bedford College, University of London, p. 1-364. *(Unpublished)*

Chiang, K.K., C. Macpherson, R. Hall & M. Thirlwall (2000)- A comparative study of the geochemistry and tectonic setting of Cenozoic igneous rocks from East Kalimantan and Sabah, Borneo. Goldschmidt 2000 Conf., Oxford 2000, p. 305 *(Abstract only)*
(E Miocene (~24-18 Ma) rocks in Kutei Basin E-W trend of intrusive rocks belonging to Sintang suite that extends E-W across Kalimantan. Youngest stages of Sintang episode overlap with eruptive volcanism in SE Sabah and precede intrusion of Kinabalu pluton in M Miocene. This period of igneous activity in NW Borneo is coeval with opening of Sulu Sea. Late Plio-Pleistocene volcanics of Borneo NE-SW trend)

Choanji, T. & R. Indrajati (2016)- Analysis of structural geology based on sattellite image and geological mapping on Binuang area, Tapin Region, South Kalimantan. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 352-361.

Coggon, J. (2010)- Application of the 190Pt-186Os isotope decay system to dating platinum-group minerals. Doct. Thesis, University of Durham, p. 1-99.
(online at: http://etheses.dur.ac.uk/398/1/Jude_Coggon_THESIS_with_corrections.pdf)
(Includes chapter on 190Pt-186Os isotope age dating of platinum minerals and ophiolite formation of samples from river placers in Pontyn River, Tanah Laut, near Asem Asem at SE of Meratus Range. Age 197.8 ± 8.1 Ma)

Coggon, J., G.M. Nowell, D.G. Pearson & S.W. Parman (2011)- Application of the 190Pt- 186Os isotope system to dating platinum mineralization and ophiolite formation: an example from the Meratus Mountains, Borneo. Economic Geology 106, 1, p. 93-117.
(Pt-Os dating of detrital Platinum Group Minerals from Pontyn River, Asem Asem Basin, SE of Meratus Mountains, SE Kalimantan, gave precise isochron age of 197.8 ± 8.1 Ma (earliest Jurassic). Interpreted as age of crystallization of PGM grains in ophiolite body, in lower oceanic lithosphere)

Cretier, H. (1879)- Looderts van Samarajak in de bovenlanden van het Landschap Kandawangan, in de Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederl. Oost-lndie 8 (1879), p. 239.
('Lead ore of Samarayak in upper Kandawangan, West Kalimantan'. Summary of chemical analysis of sample of lead ore from Kandawangan area, W Kalimantan: lead 54.9%, zinc 22.0%, sulfur 19.0%, etc.)

Croockewit, J.H. (1852)- De diamantgronden van Koesan. Natuurkundig Tijdschrift Nederlandsch-Indie 3, 3, p. 316-321
('The diamond terranes of Kasan', SE Kalimantan. Report on natives' diamond digging for diamonds in alluvial deposits in Kusan area (E of Meratus Range?): Sungei Dana/ Sungei Bakarang. No maps or figures)

Davies, A.G.S. (2002)- Geology and genesis of the Kelian gold deposit, East Kalimantan, Indonesia. Ph.D. Thesis, University of Tasmania, p. 1-380.
(online at: http://eprints.utas.edu.au/12977/2/Davies_A_PhD2002.pdf)
(Kelian is breccia- and vein-hosted low sulfidation epithermal gold-silver deposit in structural inlier of felsic volcaniclastic rocks (Kelian Volcanics) surrounded by Eocene terrestrial and shallow marine sedimentary rocks of Kutai Basin. Intersection of two regional lineaments was focus of rhyolite-andesite intrusions in Lower Miocene (~19.5- 19.8 Ma), associated with intense brecciation)

Davies, A.G.S., D.R. Cooke & J.B. Gemmell & K.A. Simpson (2008)- Diatreme breccias at the Kelian gold mine, Kalimantan, Indonesia; precursors to epithermal gold mineralization. Economic Geology 103, 4, p. 689-716.
(E Miocene volcanism with maar-diatreme breccia complex preceded main-stage epithermal gold mineralization at Kelian gold mine. Prior to brecciation, andesite intrusions (19.7 Ma) emplaced into felsic volcaniclastics and overlying carbonaceous sandstones and mudstones)

Davies, A.G.S., D.R. Cooke, J.B. Gemmell, T. van Leeuwen, P. Cesare & G. Hartshorn (2008)- Hydrothermal breccias and veins at the Kelian Gold Mine, Kalimantan, Indonesia: genesis of a large epithermal gold deposit. Economic Geology 103, 4, p. 717-757.
(Mineralized hydrothermal breccias and veins formed during and after waning stages of maar-diatreme-related volcanic activity at Kelian, Kalimantan)

Davies, A.G.S., T.M. van Leeuwen, D.R Cooke & J.B. Gemmell (2004)- The Kelian gold deposit; exploration history, critical factors and deposit summary. In: D.R. Cooke et al. (eds.) Special Publication Centre for Ore Deposit and Exploration Studies (CODES), University of Tasmania, Hobart, 5, p. 65-76.

Davies, L.B. (2013)- SW Borneo basement: age, origin and character of igneous and metamorphic rocks from the Schwaner mountains. Ph.D. Thesis Royal Holloway, University of London, p. 1-391. *(Unpublished)*
(Granitoids in Schwaner Mountains of SW Borneo: (1) In S within-plate granitoids, with zircon ages of ~186 and 76 Ma; (1) In North I-type, arc-related granitoids, typically tonalites and granodiorites, with zircon age populations of 112, 98, 84, and 76 Ma. Pinoh Metamorphics of metamorphosed pelites, quartzites and basalts. Zircon dating shows metamorphic protoliths of PMG younger than 130 Ma. Ar-Ar geochronology indicates peak regional metamorphism at ~110 Ma. Later shearing at 25 Ma)

Davies, L., R. Hall & R. Armstrong (2014)- Cretaceous crust in SW Borneo: petrological, geochemical and geochronological constraints from the Schwaner Mountains. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-025, 15p.
(Pinoh Metamorphic Group along N edge of Schwaner granitoid complex of SW Borneo low P- high T metamorphic rocks contain abundant Cretaceous zircons, with age distribution suggesting detrital origin, and chemistry suggesting significant reworked volcanic material. Volcanic rocks erupted in E Cretaceous (~130 Ma), reworked into sediments, buried and metamorphosed during extension probably associated with emplacement of Schwaner batholith later in E Cretaceous (120-80 Ma). Jurassic granites in S Schwaner Mountains(~187Ma) interpreted to be product of rifting of blocks from NW Australia)

Davies, L., R. Hall & M. Forster (2015)- Age and character of basement rocks in SW Borneo: New insights from Ar-Ar dating of Pinoh metamorphic group rocks. In: Tectonic evolution and sedimentation of South China Sea Region, AAPG workshop, Kota Kinabalu, 2p. *(Abstract only)*
(online at: www.searchanddiscovery.com/abstracts/pdf/2015/90236apr/abstracts/ndx_davies.pdf)

(Summary of thesis work. Pinoh Metamorphic Group of Schwaner Mts deposited as volcanogenic sediments in Lower Cretaceous (~130 Ma). Ar-Ar ages record onset of low-P metamorphism (~116 Ma), peak thermal metamorphism (~110 Ma), and later shearing event (~25 Ma) which may indicate age of exhumation in Schwaner Mts.)

De Groot, C. (1857)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, XVIII. Zuid-en Oosterafdeeling van Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 14, p. 1-86.
('The South and Eastern part of Borneo'. Early geological description of SE Kalimantan, incl. Oranje Nassau coal mine at Pengaron, from 1852, 1853 and 1855 visits)

De Groot, C. (1859)- Een woord betreffende eene beschouwing over de koolformatie op Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 17, p.

De Groot, C. (1863)- Notes on the mineralogy and geology of Borneo and the adjacent islands. Quart. J. Geol. Soc., London, 19, p. 515-517.
(Brief summary. Steam coal formation of Borneo underlies Nummulites Limestone, therefore belongs to 'Suessonien' of D'Orbigny. Search for lodes of copper in W part of Borneo: N of Pontianak strings of copper, very rich, but too small to be economic. Poor copper-lodes near Singkarak Lake, E of Padang, W Sumatra; and veins too poor to be worked. On Billiton island a vein 4-5' wide at Gunung Tadjouw with much tin ore; its exploitation started last year. No figures)

De Groot, C. (1874)- Zuid-en Oosterafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 3 (1874), 2, Verhandelingen, p. 3-84.
('The South and Eastern part of Borneo'. Early geological description of SE Kalimantan. Reprinted from Natuurkundig Tijdschrift voor Nederlandsch Indie 14 (1857). With 2 small maps, incl. one of Oranje Nassau coal mine NE of Martapura (reprint of De Groot 1857))

De Groot, C. (1878)- Verslag over de Borneo steenkolen en hare geschiktheid als brandstof. Jaarboek Mijnwezen Nederlandsch Oost-Indie 7 (1878), 2, p. 153-213.
('Report on the Borneo coals and its suitability as fuel')

De Keyser, F. & E. Rustandi (1993)- Geology of the Ketapang Sheet area, Kalimantan. Geol. Res. Dev. Centre (GRDC), Bandung, Indonesia, 1:250,000 scale map.

De Keyser, F. & J. Noya-Sinay (1992)- History of geoscientific investigations in West Kalimantan, Indonesia. BMR J. Australian Geol. Geophysics 13, 3, p. 251-273.
(online at: www.ga.gov.au/corporate_data/81323/Jou1992_v13_n3_p251.pdf)
(Thorough review of geological survey work in W Kalimantan from early 1800's- 1990 First journeys by Europeans into interior between 1816 and 1850. After 1850 establishment of Mines Department Everwijn checked reported mineral occurrences. Systematic mapping project in 1923-1932 covered most of W Kalimantan)

De Kroes, J. (1926)- Uitkomsten van het mijnbouwkundig onderzoek van goudhoudende terreinen in de zoogenaamde Chineesche districten van de residentie Westerafdeeling van Borneo. Verslagen Mededelingen lndische Delfstoffen en Hare Toepassingen, Dienst Mijnbouw Nederlandsch Indie, Weltevreden, 19, p. 1-27.
('Results of the mining investigations of gold-bearing terrains in the so-called Chinese districts of West Kalimantan'. With two maps)

De Roever, W.P. (1947)- Occurrences of the mineral pumpellyite in Eastern Borneo. Bull. Bureau Mines and Geol. Survey Indonesia 1, 1, p. 16-17.
(Pumpellyite in spilites and albite diabases from Danau Fm of E Kalimantan and many rocks in Celebes)

De Roever, W.P. (1947)- A pseudotachylitic rock from Eastern Borneo. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 50, 10, p. 1310-1311.

(online at: www.dwc.knaw.nl/DL/publications/PU00018414.pdf)
(Short note on tectonic breccia in E Kalimantan in Kajan River, downstream of confluence with Sungei Kat. Surrounding region mainly constituted by dynamo-metamorphic slates, arkoses, and sandstones, covered by younger volcanic rocks. Rock formed by intensive movements along fault zone)

De Roever, W.P. & A. Kraeff (1947)- Anorthoclase-bearing granogabbroid to granonoritic rocks from Boeloengan (Eastern Borneo). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 50, 10, p. 1315-1316.
(Short note on petrography of porphyritic rocks of granogabbroid affinity from Bulungan area, near confluence of Kajan and Bahau Rivers, E Kalimantan)

Dieckmann, W. (1922)- De ijzerertsafzettingen van het Koekoesan gebergte in Zuidoost Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 1, p. 70-86.
('The iron ore deposits of the Kukusan Mountains in SE Borneo'. Iron ore in Soengei Doewa area forms few meter thick crust on peridotite body and probably formed by soil weathering of peridotite)

Ding, Q.F., F.Y. Sun & B.L. Li (2004)- Evolution of Cenozoic collision orogen of north Kalimantan and its metallogenesis. J. Jilin University (Earth Science) 34, 2, p. 193-200. *(in Chinese with English abstract)*
(North Kalimantan orogen formed by collision between Luconia continental block and N margin of Sundaland. Complicated history from interior orogen to peripheral orogen and to interior orogen again. Imbricate thrusting during late Oligocene- M Miocene interior orogen was most important epoch of regional metallogenesis in Kalimantan)

Dirk, M.H.J. (1995)- Plagiogranit Pegunungan Meratus, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 5, 51, p. 23-32.
('Plagiogranite from the Meratus Mountains, S Kalimantan'. Plagiogranite from area of ultrabasic rocks in Meratus Mts ranges from tonalite to trondhjemite. K2O and SiO2 content place it in oceanic plagiogranite/ ophiolitic trondhjemite field. Similar to Troodos plagiogranite on Cyprus. Probably differentiation product of basic/ ultrabasic magma. K/Ar age 112 Ma (Albian, mid-Cretaceous; Permanadewi 1995))

Dirk, M.H.J. (1997)- Batuan subvolkanik kapur akhir di Pegunungan Meratus, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 7, 66, p. 11-17.
('Upper Cretaceous sub-volcanic rocks near the Meratus Mountains, S Kalimantan'. Late Cretaceous andesitic-dioritic inrusives from Meratus Mts with SiO2% 50.6-57.3%, with calk-alkaline to tholeiitic affinities. Formed in volcanic arc above subduction zone.)

Dirk, M.H.J. (2000)- Magma genesis and paleotectonic setting of a calc-alkaline plutonic rock series from Meratus Range, South Kalimantan. J. Geologi Sumberdaya Mineral 10, 105, p. 19-32.
(Cretaceous plutonic rock series of diorite-tonalite/ granite/trondhjemite of calc-alkaline affinity in Meratus Mts. Formed from dioritic- tonalitic magma in continental environment at <60 km depth. K-Ar ages of two samples 118 and 100 Ma (~Aptian-Albian))

Dirk, M.H.J. (2002)- Petrogenesa dan lingkungan tektonik granit Lumo, Propinsi Kalimantan Tengah. J. Geologi Sumberdaya Mineral 12, 125, p. 8-18.
('Petrogenesis and tectonic environment of the Lumo granite, C Kalimantan province'. Lumo granite outcrops W of N end Meratus Range, C Kalimantan, is holocrystalline porphyritic granite with cordierite, biotite, etc., formed from partial melting of crust, possibly greywacke in syn-orogenic or post orogenic setting (K-Ar ages age Permian (260 ±1.7 M)a and-Carboniferous (319 ± 1.7 Ma);S-type collisional granite; Dirk 2002, 2003)

Dirk, M.H.J. (2002)- Petrologi granit-kordirit Lumo- Kalimantan Tengah. J. Geologi Sumberdaya Mineral 12, 126, p. 13-21.
(Porphyritic Lumo granite with cordierite and K-feldspar crystallized from partial melting of pelitic-sedimentary source, probably at ~22km depth. K-Ar age of muscovite ~319 Ma, biotite ~260 Ma. S-type/ ilmenite series granite (= tin-bearing granite type))

Dirk, M.H.J. (2003)- Geodinamika dan model pembentukan granit Lumo, Propinsi Kalimantan Tengah: suatu tafsiran. J. Geologi Sumberdaya Mineral 13, 142, p. 48-58.
('Geodynamics and model of formation of the Lumo granite, C Kalimantan province; an interpretation'. Lumo granite of Lumo River, at W side of N Meratus Range, SE Kalimantan, with K-Ar ages of ~319 and 260 Ma. Formed from partial melting of greywacke during crustal thickening associated with collision, although also characteristics of volcanic arc granites)

Dirk, M.H.J. (2002)- Indikasi petrologi, petrogenesa dan lingkungan tektonik berdasarkan susunan geokimia-granit Palangkaraya, Propinsi Kalimantan Tengah. J. Geologi Sumberdaya Mineral 12, 131, p. 19-27.
('Petrology, petrogenesis and tectonic environment based on the geochemical composition of the Palangkaraya, granite, Central Kalimantan Province'. Several granite outcrops NW of Palangkaraya. Calk-alkaline, peraluminous, 'monzogranite', probably syn-collisional (no age information))

Dirk, M.H.J. & Amiruddin (2000)- Batuan granitoid. In: U. Hartono et al. (eds.) (2000)- Evolusi magmatik Kalimantan Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 37-51.
(Review of SW Meratus Mountains granitoids. M Jurassic Puruidalam 'plagiogranite' associated with ophiolites with K-Ar age 155 ±16 Ma). Lower Cretaceous volcanic arc-type Belawayan granite with ~101-131 Ma K-Ar ages)

Djamal, B., D. Sudana, Sutrisno, Baharudin & K. Hasan (1995)- Geological map of the Tanjung Mangkaliat sheet, Kalimantan, scale 1:250,000, Quad 2017. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of E end of Mangkalihat Peninsula. Mainly Eocene- Miocene marine clastics and limestones. Oldest rocks exposed in small area at N coast are Cretaceous? 'ophiolite' (gabbro, basalt, chert) associated with Cretaceous sandy limestone with Orbitolina. Unconformably overlain by Eocene Kuaro Fm shallow marine clastics and limestone)

Djokolelono, S. & E. Agoes (1988)- Uranium occurrences in the volcanic rocks of upper Mahakam, East Kalimantan. In: Proc. Conf. Uranium deposits in Asia and the Pacific; geology and exploration, Jakarta 1985, Int. Atomic Energy Agency (IAEA), Vienna, IAEA-TC-543/8, p. 109-120.
(Uranium survey by BATAN in Kawat River area in Upper Mahakam region. Kawat area tectonic depression with uranium occurrences in young volcanic facies, usually in aphanitic rhyolite. Mineralization consists of pitchblende, with molybdenite and pyrite. Oldest rocks in area folded, steeply dipping, ~E-W trending U Jurassic quartzite, ophiolitic rock and radiolarite and E-M Cretaceous black shale with quartzite and radiolarite. Unconformably overlain by U Cretaceous- Eocene clastics, with regional dip to SSE)

Doorman, J.G. (1906)- De diamantwinning in Landak. Tijdschrift Nijverheid Landbouw 73, p. 542-557.
('The exploitation of diamonds in Landak'. Brief review of traditional alluvial diamond mining industry of West Kalimantan)

Elliott, P.J. (2004)- Results from induced polarisation surveys over the Beruang copper-gold deposit in central Kalimantan, Indonesia. In: Proc. PACRIM 2004 Conf., Adelaide, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 307-316.
(Beruang copper-gold deposit near centre of Kalimantan is diorite porphyry/ dacitic tuff hosted deposit. Extensive Induced Polarisation coverage obtained over deposit and surrounding area. Drilling of targets derived from inversion modelling resulted in some significant copper-gold intersections)

Erzagian, E., L.D. Setijadji & I.W. Warmada (2016)- Studi karakteristik dan petrogenesis batuan beku di daerah Singkawang dan sekitarnya, Provinsi Kalimantan Barat. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 421-432.
(online at: https://repository.ugm.ac.id/137902/1/MOB-03.pdf)
('Study of the characteristics and petrogenesis of Beku rocks in the regions of Singkawang and surroundings, W Kalimantan Province'. On NW Kalimantan volcanic and intrusive rocks: (1) Permo- Triassic calk- alkaline subduction- and collision-related series with intrusions of S-type granite (2) Cretaceous calk-alkali to high-K

subduction and collision series with I- and S-type granites; (3) Eocene-Miocene calk-alkaline subduction series with I-type granitoids and (4) Pliocene tholeitic series formed in continental rift zones)

Escher, B.G. (1920)- Gesteenten van de Kelei (Berouw, Oost-Borneo). Natuurkundig Tijdschrift Nederlandsch-Indie 80, 1, p. 29-36.
(online at: https://archive.org/details/mobot31753002490180/page/n29)
('Rocks from the Kelei River, Berau Region, E Kalimantan'. Pebbles collected by Beucker Andreae in 1918. Some Oligo-Miocene foram limestones from this collection described by Rutten 1926. Includes quartz sst, slate, quartz-tourmaline rock, porphyrite, granite, breccias, radiolarian chert. Not overly useful)

Escher, B.G. (1933)- Uranium mineralen op Borneo? Geologie en Mijnbouw 12, 1, p. 5-6.
(online at: https://drive.google.com/file/d/1yodQJMRB_hYelv7qHS0yOy0seiM1mUyE/view)
('Uranium minerals on Borneo?'. Questions reported presence of uranium mineral broggerite from SE Kalimantan, as suggested by Tschernik (1909, 1910) (but uranium since proven to be present;JTvG))

Esenwein, P. (1932)- Petrologische beschouwingen omtrent de korund-diaspoorrots rolsteenen (leboer steenen) uit de diamantstreken van West en Zuidoost Borneo. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 22, p. 1-29.
('Petrologic observations on the korund- diaspore rock pebbles ('leboer'/ 'lebur rocks') from the diamond areas of W and SE Kalimantan'. 'Lebur' black pebbles composed of corundum diaspore, a bauxite-like Al2O3 mineral, considered by local miners as indication of diamond-bearing alluvial deposits. Origin not clear, possibly formed from contact-metamorphism of bauxite (formed from basaltic rock?), with reduction of water content. Association leboer- diamond probably result of river transport, not common origin)

Everwijn, R. (1854)- Voorlopig onderzoek naar kolen in de landschappen Salimbauw, Djongkong en Boenoet in de Res. Westerafdeeling van Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 7, p. 379-387.
('Preliminary investigation of coal in the areas of Salimbau, Jongkong and Bunut, W Kalimantan'. First of series of short reports on mineral exploration work by privately funded explorer Everwijn. Mentions 'Nummulites-marl' at Seberuang tributary of Kapuas River, but forams subsequently described as Patellina by Von Fritsch (1878), now known as mid-Cretaceous Orbitolina concava. Not much detail, no maps)

Everwijn, R. (1855)- Onderzoek naar tinerts in de landschappen Soekadana, Simpang and Matam, en naar antimoniumerts op de Karimata-eilanden. Natuurkundig Tijdschrift Nederlandsch-Indie 9, p. 58-64.
('Investigation of tin ore in the areas of Sukadana, Simpang and Matam and of antimony ore on the Karimata islands'. No tin found associated with granitic rocks at Sukadana, Simpang and Matam, W Kalimantan. Karimata island W of Kalimantan mountainous, mainly composed of granite, with some metamorphic rocks at NE coast. Some iron ore, but no tin. No maps, figures)

Everwijn, R. (1856)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, XV. Onderzoek naar tinerts in het landschap Kandawangan. Natuurkundig Tijdschrift voor Nederlandsch Indie 11, p. 449-460.
('Contributions to the geological and mineralogical knowledge of the Netherlands Indies, XV. Investigation on tin ore in the Kandawangan area'. Tin ores reported from southern parts of West Kalimantan. Tin found only in small quantities near Aboet in interior of Matang, but no traces of tin in other sites investigated. No maps)

Everwijn, R. (1858)- Wester Afdeeling van Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 17, p. 284-316.
('Western Division of Kalimantan'. Summary of Everwijn's prospecting activities for gold and other minerals, in SW Kalimantan. Also mention of coal in Kapuas- Bunut Rivers area near Sintang. Not much detail, no maps)

Everwijn, R. (1862)- Verslag van de onderzoekingen naar kopererts in het gebied van Mandhor, Westerafdeeling van Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 24, p. 403-428. *(also in Jaarboek Mijnwezen NOI 1878, 2, p. 117-143)*

('Report on investigations of copper ore in the area of Mandor, W Kalimantan'. Investigation of small CuS2 veins at Wang-phin-san, near Tampie Mountains, 3 hours from Mandhor, W Kalimantan. Associated with granite. Believed to be too small for exploitation)

Everwijn, R. (1873)- De groote diamant, of 'Danau Radja' van Matam, Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1873, 1, p. 197-203.
('The big diamond, or 'Danau Raja' from Matam, W Kalimantan'. Rumors of existence of a 375 carat diamond in Kalimantan could not be confirmed. Other large stones in area believed to be diamonds proved to be quartz)

Everwijn, R. (1878)- Verslag van de onderzoekingen naar kopererts in het gebied van Mandhor, gelegen in de Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 7 (1878), 2, p. 117-143.
('Report on investigations of copper ore in the area of Mandor, W Kalimantan'. Same as Everwijn 1862)

Everwijn, R. (1879)- Overzicht van de mijnbouwkundige onderzoekingen in de Westerafdeeling van Borneo verricht. Jaarboek Mijnwezen Nederlandsch Oost-Indie 8 (1879), 1, p. 3-116.
('Overview of mining investigations in W Kalimantan'. Summary of previous papers on prospecting surveys in W Kalimantan by mining-engineer Everwijn. Incl. coal in Kapoeas river area, copper or in Mandor and Boedok, gold in Landak, survey of tin ores in Soekadana, etc. (mainly negative for tin))

Fahruddin, S. Widyantoro, A.D. Nugraha & Afnimar (2017)- Search for mantle seismic discontinuities beneath northern Kalimantan, central Indonesia: a preliminary result of employing SS precursors. Int. J. Tomography Simulation 30, 1, p.
(Kalimantan located far from active subduction zones with few seismic stations. SS precursors show discontinuity at ~690 km depth and weaker discontinuity at ~290 km depth)

Fahir, S.L.N. & L.D. Setijadji (2011)- Studi evolusi batuan granitik di Kalimantan Barat. Yogyakarta, 52p.
('Study of the evolution of granitic rocks in West Kalimantan')

Fehn, H. (1930)- Die Insel Borneo (Bausteine zu einer Landeskunde). Mitteilungen Geogr. Ges. Munchen 23, 2, 80p.
('The island of Borneo- building stones for geography')

Fehn, H. (1933)- Die Oberflachenformen der Insel Borneo. Ein Uberblick. Mitteilungen Geogr. Gesellschaft Munchen 26, 1, p. 1-53.
('The surface features of the island of Borneo- an overview'. Old geomorphologic description of Borneo)

Ferguson, K.J. (1986)- The Kelian gold prospect, Kalimantan, Indonesia. In: Proc. Int. Volcanological Congress, Symposium 5: Volcanism, hydrothermal systems & related mineralisation, p. 41-46.

Frijling, H., Loth, J.E. & J.W.H. Adam (1920)- Bijdrage tot de geologie van het Landschap Kotawaringin en de afdeeling Ketapang resp. geleegen in de Residenties Zuider- en Ooster en Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch-Indie 47 (1918), Verhandelingen 1, p. 210-223.
('Contributions to the geology of the Kotawarin and Ketapang districts, etc.', SW corner of Kalimantan. Mainly granites, overlain by folded ?Mesozoic and rel. undeformed Tertiary sediments. Intruded and overlain by younger porphyrites and andesites. With 1:1 million geological sketch map)

Fuller, M., J.R. Ali, S.J. Moss, G.M. Frost, B. Richter & A. Mahfi (1999)- Paleomagnetism of Borneo. J. Asian Earth Sci. 17, p. 3-24.
(online at: http://searg.rhul.ac.uk/pubs/fuller_etal_1999%20Paleomagnetism%20Borneo.pdf)
(Paleomagnetic data support counterclockwise rotation of Borneo since Cretaceous. Mesozoic rocks older than 80 Ma in Kalimantan- Sarawak almost 90° CCW rotation. NW Borneo Late Cretaceous- Eocene Silantek Fm 41° CCW rotation, Oligo-Miocene rocks generally weak CCW rotations. Bulk of paleomagnetic data suggests up to ~50° CCW rotation of Borneo between 25-10 Ma)

Fuller, M., R. Haston, J. Lin, B. Richter, E. Schmidtke & J. Almasco (1991)- Tertiary paleomagnetism of regions around the South China Sea. J. Southeast Asian Earth Sci. 6, p. 161-184.
(Tertiary CCW rotation in Sarawak, and Sabah. Conflicting results from Kalimantan, some show no rotation with respect to Eurasia, others give CCW rotations)

Gaol, K.L., H. Permana & N.D. Hananto (2003)- Aplikasi model 2-D anomali gravitasi pada komplek akresi Pegunungan Bobaris- Meratus, Kalimantan Selatan. Jurnal Teknologi Indonesia 26, p. 25-33.
('Application of 2-D gravity model of the accretionary complex of the Bobaris- Meratus Mountains, S Kalimantan'. Preliminary modeling results suggest Bobaris-Meratus in near-Equatorial position since the Jurassic represents accretionary complex)

Gaol, K.L., H. Permana, A. Kadarusman, N.D. Hananto, D.D. Wardana & Y. Sudrajat (2005)- Model gayaberat pegunungan Bobaris- Meratus, Kalimantan Selatan, dan implikasi tektoniknya. Jurnal Geofisika 2005, 2, p. 2-9.
('Gravity model of Bobaris- Meratus Mountains and its tectonic implications'. Bobaris-Meratus mountains with ultramafic rocks flower structure?)

Gascuel, L. (1901)- Les gisements diamantiferes de la region sud-est de l'ile de Borneo. Annales des Mines (9), 20, p. 2-23.
('The diamond-bearing formations of the SE Borneo region'. Diamond-bearing deposits worked by locals for centuries in two main areas (but 'moribund since 1886'): (1) Landak in W Kalimantan near Pontianak and (2) Martapura near Banjarmasin, SE Kalimantan. Diamonds in Quaternary fluvial gravel deposits around Banyu-Irang River, which contain pebbles of white quartz, micaceous quartzites, porphyritic rocks, shelly limestones, chert, but no basic igneous rocks. Already in 1901 diamond industry in region in serious decline)

Geiger, M., D. Prasetyo & T. Leach (2002)- Porphyry copper-gold systems in Central Kalimantan. Annual Convention, Prospectors and Developers Association of Canada, Technical Paper, 8p.
(Exploration over past 15 years by Kalimantan Gold Corporation identified >30 copper and/or gold prospects. Porphyry copper-gold systems are viable exploration targets in central regions of Kalimantan)

Geiger, M., T. Leach & D. Prasetyo (2010)- Porphyry copper gold systems in Central Kalimantan. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. Kalimantan coal and mineral resources, MGEI-IAGI Seminar, Balikpapan 2010, p. 73-89.
(Oligocene and Miocene volcanic arc(s) across Kalimantan hosts several epithermal gold deposits, postulated to be near-surface manifestations of porphyry copper systems. Deeper exploration identified 30 copper-gold prospects)

Geinitz, H.B. (1883)- Uber Kreide-Petrefakten von West-Borneo. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 35, p. 205.
(online at: https://www.biodiversitylibrary.org/item/148375page/217/mode/1up)
('On Cretaceous fossils from W Kalimantan'. Brief note on 42 fossils sent to Geinitz by Verbeek (collected by Van Schelle?), incl. molluscs (Pholadomya, Trigonia, Vola, Gervillea, etc.) and Upper Cretaceous Hemiaster spp. echinoid. First record of Mesozoic rocks in Kalimantan. No figures (see also Verbeek 1883))

Gisolf, W.F. (1924)- Bijdrage tot de kennis van de waarschijnlijke genese der ijzerertsen van het Koekoesan gebergte (Zuid- en Oost-Afdeeling van Borneo). Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen 1, p. 296-303.
('Contribution to the knowledge of the likely genesis of iron ores of the Kukasan Mountains, SE Kalimantan'. Layer of iron ores above hartzburgite-serpentinite body probably initially concentration of magnetite/ hematite in final stage of magmatic cooling processes, then further concentrated during surface weathering)

Gisolf, W.F. (1928)- On the origin of some iron ores and serpentinite in the Dutch East Indies. Proc. 3rd Pan Pacific Science Congress, Tokyo 1926, 2, p. 1729-1732.

(In tropical climates serpentine not formed by weathering of olivine, because olivine preferentially weathers to limonite. Primary serpentine is present in peridotite. Serpentine may form from high pressure with access to water. Formation of serpentine and chlorite in SE Kalimantan peridotites caused by auto-metamorphism)

Gollner, E.R.D. (1924)- Verslag over de uitkomsten van mijnbouwkundig- geologische onderzoekingen op Poeloe Laoet. Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen 1, p. 4-55.
(Geological survey of Laut Island, SE Kalimantan, with focus on Eocene coal occurrences. Coal mined by NEI government on Pulau Laut since 1914. Two main coal horizons in ~160m basal quartz sandstone member, each 2-3m thick. Overlying Late Eocene marl member ~85m thick. Upper Eocene limestones common in other parts of SE Kalimantan, but missing on Pulau Laut. With 1:50,000 scale geologic map of N part of island)

Graham, I., T. Grieve, L. Spencer & S. Hager (2014)- Source of PGM and gold from the Cempaka palaeoplacer deposit, SE Kalimantan, Indonesia. In: E.V. Anikina et al. (eds.) 12th Int. Platinum Symposium, Inst. Geology and Geochemistry UB RAS, Yekaterinburg, p. 173-174. *(Abstract)*
(online at: http://conf.uran.ru/12IPS/12%20IPS%20ABSTRACTS.pdf)
(Cempaka palaeoplacer diamond deposit ~40 km SE of Banjarmasin. Host sediments for diamonds, Platinum Group Minerals and gold are upper unit of alluvial coarse gravels, sandy gravels and gravelly sands. PGM and gold appear transported and probably recycled several times. PGM mineralogy suggests derivation from bimodal source: ophiolites (Meratus or Bobaris ophiolites) and as yet undiscovered Alaskan-type complexes. Chemistry of gold suggests epithermal gold mineralization; closest source within Sumatra-Meratus Arc.)

Graham, I., L. Spencer, L.M. Barron & G. Yaxley (2006)- Nature and possible origin of the Cempaka diamond deposit, Southeastern Kalimantan, Indonesia. IAGOD Meeting, Moscow, 6p.

Graham, I.T., L. Spencer, G. Yaxley & L. Barron (2007)- The use of zircon in diamond exploration- a preliminary case study from the Cempaka deposit, SE Kalimantan, Indonesia. 2nd Conf. Specialist Group in Geochemistry, Mineralogy and Petrology, Dunedin 2007, Geol. Soc. Australia, Abstracts, 86, p. 32-35. *(Abstract only)*

Gunawan, R. & C.B.C. Valk (1972)- Notes on the geology of aluminous laterites of West Kalimantan. Bull. Nat. Inst. Geology and Mining (NIGM) 4, 1, p. 29-36.
(Large 300 km long and 50-100 km wide, NNW-SSE trending bauxite belt in W Kalimantan, explored by PT Alcoa. Bauxitic laterites formed on uplifted and dissected peneplain, mainly related to weathering of quartz-poor intrusives and best developed at margins of intrusives. Previously Bintan island, SE Sumatra, was main bauxite occurrence in Indonesia)

Gunter, B. (2010)- The geology, alteration and mineralization at the Jelai gold prospect, East Kalimantan. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. MGEI-IAGI Seminar Kalimantan coal and mineral resources, Balikpapan 2010, p. 91-106.
(Jelai prospect in NE Kalimantan 45 km W of Tarakan. Low sulphidation epithermal quartz veins associated with andesitic volcanics, dacites and intrusives. Oldest granitoids in region Late Cretaceous. Mineralizatons and volcanics in area dated as 22, 16 and 7-9.4 Ma)

Gunter, B. (2010)- The exploration history, geology and exploitation of the Buduk Gold Mine, West Kalimantan: an example of a small gold mine operation in Kalimantan. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. MGEI-IAGI Seminar Kalimantan coal and mineral resources, Balikpapan 2010, p. 129-144.
(Buduk area of NW Kalimantan, ~100km N of Pontianak, has been alluvial gold mining area since Chinese operations started in 1771 and Dutch-operated Sambas Gold Mines between 1936-1940. Several areas of gold mineralization. Mine within area of sub-horizontal sediments with minor volcanics of Late Triassic- E Jurassic Bengkayang Group, intruded by Miocene Sintang Intrusive suite, associated with skarn-type gold mineralization)

Gunter, B. (2011)- Sejarah eksplorasi, geologi, dan eksploitasi pertambangan emas Buduk, Kalimantan Barat: contoh sebuah operasi pertambangan emas kecil di Kalimantan. Majalah Geologi Indonesia (IAGI) 26, 3, p. 173-190.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/761)
('The exploration history, geology, and exploitation of the Buduk gold mine, W Kalimantan: an example of a small gold mining operation in Kalimantan'. Same paper as Gunther 2010)

Haile, N.S. (ed.) (1955)- Geological accounts of West Borneo- translated from the Dutch. Geological Survey Dept., British Territories in Borneo, Bull. 2, p. 1-285.
(Translations of papers on geology of W Kalimantan and adjacent areas of Sarawak by Dutch geologists (Krekeler, Krol, Ter Bruggen, Zeijlmans van Emmichoven and Ubaghs), originally published in 1925-1939. Age of Danau Fm in Sarawak is Cretaceous, not Permo-Triassic as suggested by Zeijlmans (1939) for Kalimantan)

Haile, N.S. (1961)- Notes on Mesozoic orogeny in West Borneo. Proc. 9th Pacific Science Congress, Bangkok 1957, Geol. Geoph. 12, p. 117-120. *(Extended Abstract)*
(online at: http://archive.org/details/geologyandgeophy032600mbp)
(Also in 'Annual Report Geological Survey Dept., British Territories in Borneo, 1957, p. 17-23) Moderately folded U Triassic-Cretaceous of W Kalimantan and W Sarawak unconformable on highly deformed Permian or Carboniferous age rocks. This and synchronous granite intrusions indicate folding in Late Permian or E Triassic and in E Jurassic. No evidence of orogenic activity in Cretaceous)

Haile, N.S. (1973)- West Borneo microplate younger than supposed? Nature 242, p. 28-29.
(Short note suggesting W Borneo possibly not part of Sunda shield and extension of continental SE Asia, but younger. Partly supported by occurrence of steeply dipping 'Ketapang Complex' unmetamorphosed grey shale in Pawan River, W Kalimantan, with Albian- Cenomanian pollen (Caytonopollenites zone of Muller). Flanked by massive volcanic rocks of Matan Complex. Area may be built chiefly of Late Cretaceous and younger rocks)

Haile, N.S. (1974)- Borneo. In: A.W. Spencer (ed.) Mesozoic-Cainozoic orogenic belts; data for orogenic studies. Geol. Soc., London, Spec. Publ. 4, p. 333-347.
(Late Mesozoic- Tertiary orogeny affected N part of Borneo, over 900 km from Makassar Straits to S China Sea. Four zones recognized, in direction of increasing age of main periods of mobility from N to S: Miri (youngest deformation), Sibu (greatest mobility; thick deformed Late Cretaceous-Eocene flysch), Kuching (deformed Mesozoic marine sediments) and W Borneo Paleozoic metamorphic basement with Late Paleozoic-Mesozoic sediments)

Haile, N.S. (1979)- Rotation of Borneo microplate completed by Miocene: palaeomagnetic evidence. Warta Geologi (Newsletter Geol. Soc. Malaysia) 5, 2, p. 19-22.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1979002.pdf)
(Samples from latest Oligocene- E Miocene U Silantek Beds show reversed magnetism close to present-day field, indicating 50° CCW rotation of Borneo since Cretaceous was completed by time of deposition of U Silantek Beds)

Haile, N.S., M.W. McElhinny & I. McDougall (1977)- Palaeomagnetic data and radiometric ages from the Cretaceous of West Kalimantan (Borneo), and their significance in interpreting regional structure. J. Geol. Soc. London 133, 2, p. 133-144.
(W Kalimantan complex history of magmatism and cooling from M Jurassic- Late Cretaceous. Well-defined granitic magmatic event in Schwaner zone at ~79-86 Ma, also recognized in Sarawak, S China Sea islands, Malay Peninsula, S Sumatra, and Java Sea. Paleomagnetism of Late Cretaceous samples yield mean paleomagnetic pole at 21°E, 41°N, and 0° paleolatitude for W Kalimantan. Paleomagnetic pole not significantly different from Cretaceous pole estimated for Malay Peninsula. Since M Cretaceous W Kalimantan and Malay Peninsula behaved as one unit, have remained in present latitude, but rotated anticlockwise ~50°)

Haile, N.S. & E. Urquhart (1995)- Dating Mesozoic melange and other problematic formations in Southeast Asia. In: Proc. Int. Symposium Geology of SE Asia and adjacent areas, J. Geology, Geol. Survey Vietnam, Hanoi, 5-6, p. 308-309. *(Abstract only)*
(Mesozoic melange in Borneo in discontinuous belt from NW tip to E coast (= Danau Fm of Molengraaff; JTvG). Over part of length it forms S limit of U Cretaceous- U Eocene flysch/ accretionary prism of N Borneo. Fossils in blocks in melange include Lw Cretaceous radiolaria in cherts, U Cretaceous forams in sediment blocks and rare Eocene nannofossils in matrix. Overlain by undisrupted Plateau Gp with U Eocene forams and pollen)

Halewijn, M.J. (1838)- Borneo- Eenige reizen in de binnenlanden van dit eiland, Beschrijving der diamantmijnen te Soengi Roentie in Bandjermasin in 1824. Tijdschrift voor Nederlandsch Indie 1, 2, p. 81-84.
('Travels in the interior of Borneo- Description of the diamond mines at Sungei Runti in Banjarmasin in 1824'. One of first descriptions of open pit alluvial diamond mines in SE Kalimantan. Diamond-bearing beds 'lead-colored stone' ('batu tima') at ~12 feet depth)

Hall, R. & G.J. Nichols (2002)- Cenozoic sedimentation and tectonics in Borneo: climatic influences on orogenesis. In: S.J. Jones & L. Frostick (eds.) Sediment flux to basins: causes, controls and consequences. Geol. Soc. London, Spec. Publ. 191, p. 5-22.
(Sediment volume in basins around Borneo indicates >6 km removed by Neogene erosion. Implied tectonic uplift not reflected in high mountains on island. High weathering and erosion rates in tropical climate likely factor governing formation of relief. Rapid removal of material by erosion prevented tectonic denudation by faulting: around Borneo there was no lithospheric flexure due to thrust loading and no true foreland basins developed. Sediment deposited adjacent to orogenic belt in older, deep oceanic basins. Sediment yield of Borneo mountains comparable to Alps or Himalayas)

Hall, R., M.W.A. van Hattum & W. Spakman (2008)- Impact of India-Asia collision on SE Asia: the record in Borneo. Tectonophysics 451, p. 366-389.
(History of Borneo not consistent with island forming part of large block extruded from Asia. Clockwise rotations predicted by indentor model for Borneo incompatible with paleomagnetic evidence. Great thicknesses of Cenozoic sediments in Borneo and circum-Borneo basins derived from local sources and not from distant sources in Asia. Cenozoic geological history of Borneo records subduction of proto-S China Sea and Miocene collision after this ocean lithosphere was eliminated, and effects from long-term subduction beneath SE Asia)

Harahap, B.H. (1987)- The petrology of some young subvolcanic and volcanic rocks from West Kalimantan, Indonesia. M.Sc. Thesis, University of Tasmania, 234p.
(online at: https://eprints.utas.edu.au/19986/1/whole_HarahapBhaktiHamonangan1988_thesis.pdf)
(Petrography and chemistry of Tertiary volcanic rocks from C and W West Kalimantan (mainly subduction-related arc volcanics) and Quaternary basaltic andesites from Mt. Niut (intra-plate volcanism not related to subduction). K-Ar ages of intrusions near Sintang: in South 23.0-30.4 Ma, in North 16.4-17.9 Ma (similar to intrusives in nearby Sarawak))

Harahap, B.H. (1990)- Magmatism in West Kalimantan. J. Indon. Assoc. Geol. (IAGI) 13, 1, p. 63-90.

Harahap, B.H. (1993)- Geochemical investigation of Tertiary magmatic rocks from central West Kalimantan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 304-326.
(Tertiary magmatic rocks in W Kalimantan mainly dacites, some rhyolites, basalts, andesites. Basalts in N province different source from S province. Volcanics in S intrude Cretaceous granodiorites, are most siliceous. Chemistry typical island arc, may be related to SE subduction under Sarawak accretionary prism)

Harahap, B.H. (1994)- Petrology of the Cretaceous subvolcanic and volcanic rocks from Singkawang area, West Kalimantan. J. Geologi Sumberdaya Mineral 4, 35, p. 15-24.
(Mid-Cretaceous volcanics from Singkawang area of W Kalimantan (W of Schwaner batholith) range from basalt to dacite, porphyritic, low-metamorphic, etc., with geochemistry typical of island arc lavas. One sample

from Damar Island dated as 106 Ma. Probably response to subduction from N, which may have been ancestral Pacific Ocean)

Harahap, B.H. (1994)- Petrology and geochemistry of Mount Niut Volcano, West Kalimantan. Bull. Geol. Res. Dev. Centre 17, p. 1-12.
(Pliocene basic volcanics)

Harahap, B.H. (1995)- The Boyan melange of West Kalimantan origin and tectonic development. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 18, p. 1-21.
(Boyan melange E-W trending belt in W Kalimantan, composed of km-size blocks of clastics, limestone (with Cenomanian Orbitolina), radiolarian chert, greenschist, large blocks (6 x 40 km) of sheared serpentinite, also granite (one 320 Ma K/Ar age), basalt, etc., in sheared chloritized dark 'scaly' shale. Common boudinage structures. Bounded to N and S by Selangkai Fm Turonian turbidites, with gradational contacts. Overall dips of beds/ cleavage to South. Interpreted as Late Cretaceous S-dipping subduction complex. Intruded by Miocene 'Sintang' dacitic rocks, one dated at 16.4 Ma)

Harahap, B.H. (1995)- Petrography and mineral chemistry of the Tertiary subducted related mafic subvolcanic rocks from West Kalimantan. J. Geologi Sumberdaya Mineral 5, 47, p. 2-15.
(Description of W-C Kalimantan basaltic- andesitic dykes and plugs in Nangapinoh and Sintang map sheets. (not clear what age; somewhere between Cretaceous- Miocene; JTvG))

Harahap, B.H. (1996)- Petrological characteristics of the Upper Miocene to Plio-Pleistocene volcanism in Kalimantan. J. Geologi Sumberdaya Mineral 6, 62, p. 21-31.
(Cretaceous- M Miocene volcanism in Kalimantan produced silica-rich calc-alkaline volcanic series in subduction-related volcanic arc systems. Upper Miocene- Plio-Pleistocene volcanics tholeiitic and alkaline and associated with ENE structural trend along highest points of Kalimantan. Basaltic lavas similar to intraplate continental basalts, not related to subduction)

Harahap, B.H. (1996)- Petrography and mineral chemistry of the Tertiary silicic subvolcanic rocks of the Sundaland of West Kalimantan. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 19, p. 75-95.
(95% of subvolcanic rocks of W Kalimantan are silica-rich dacites and rhyolites)

Harahap, B.H. (2012)- Regional geology and tectonics. In: U. Hartono (ed.) Magmatism in Kalimantan, Centre for Geological Survey, Geological Agency (Bandung), Spec. Publ., p. 13-26.
(Review of regional geology of Kalimantan. Borneo result of Mesozoic amalgamation of ophiolitic, island arc and microcontinental fragments of S China and Gondwana origin. Today far from active margins and stabilized in Late Miocene, after which extensional processes common. Most of Kalimantan continental crust. W region is part of Sundaland Craton, with Schwaner Mts E Cretaceous granites (continuation of E Asian Magmatic Arc). NW Kalimantan domain Late Carboniferous sediments flanked by metamorphics, intruded by Permian- M-L Triassic biotite granites, unconformably overlain by Late Triassic Serian Volcanics and Jurassic- Cretaceous marine sediments. Oldest igneous rock Late Carboniferous- E Permian Lumo Granite in N Meratus Mts. Etc.)

Hardjadinata, K. (1995)- Studi ofiolit Pegunungan Meratus-Bobaris, Kalimantan tengara. J. Geologi Sumberdaya Mineral, 5, 40, p. 10-18.
('Study of ophiolite of the Meratus- Bobaris Mountains, SE Kalimantan'. Meratus- Bobaris Mts association of pillow basalts, gabbro, dunite, pyroxenite peroditite and plagiogranite represents incomplete ophiolite assemblage. Chemistry suggests formation in island-arc environment. M Cretaceous (116-95 Ma; Aptian-Cenomanian) radiometric ages of plagiogranite and metadiabase. Ophiolite emplacement result of collision of Eurasian and Pacific Ocean plates)

Harloff, C.E.A. (1933)- Over een nog onbekende pseudomorfose naar andalusiet in een contactgesteente van Borneo. De Mijningenieur 7, p. 121-124.
('About an unknown pseudomorphosis from andalusite in a contactmetamorphic rock from Borneo'. Andalusite in hornfels from unknown location in Borno partly converted to corundum and sericite)

Harrison, T. (1975)- Tektites as "date markers" in Borneo and elsewhere. Asian Perspectives 18, 1, p. 61-63.
(The only place in North Borneo with tektites is NW coastal region 20 miles from Brunei city, at base of Jerudong Beds, and K-Ar dated as 730,000 BP by Zahringer (1963). However, associated wood much younger, so tektites may be reworked)

Harting, A. (1925)- Bijdrage tot de geologie van Beraoe (met een geologisch schetskaartje van Beraoe 1:750,000). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 205-212.
('Contribution to the geology of Berau, with a geological sketch-map, 1:750 000'. S Tarakan Basin, E Kalimantan. Brief review of upper Berau River area. Pre-Tertiary steeply-dipping phyllites and quartzites with reddish radiolarian cherts and granites and diabase-like rocks, similar to Molengraaff's Danau Formation. Strike mainly E-W trending, more SW-NE in W part of area. Unconformably overlain by Eocene Nummulites-bearing clastics and carbonates, Oligo-Miocene Lepidocyclina limestones, overlain by Globigerina marls, then coal-rich beds, unconformably overlain by Plio-Pleistocene Sadjau and Bunyu beds. Gas seep on Rantau Panjang anticline)

Harting, A. (1930)- Enkele geologische waarnemingen langs de S. Kajan. De Mijningenieur 11, p. 176-179.
(Some geologic observations along the Kajan River'. On the direction of Pre-Tertiary at Brem-Brem falls near Bulungan and unconformably overlying, horizontal Eocene limestone)

Hartmann, M.A. (1937)- Der Batoe Mesangat in Nord-Koetai, eine imposante Vulkanruine in Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 97, 4, p. 214-225.
(online at: http://62.41.28.253/cgi-bin/...)
('The Batu Mesangat in N Kutai, an imposing volcano ruin in Borneo'. Mesangat massif between Telen and Belayan Rivers and between Poh and Atan mountains in N Kutai, about 1500m high. In area of Pre-Tertiary rocks, from S to N: folded Danau Fm (mainly E-W, occ. WSW-ENE trending sandstones- shales- radiolarites and limestone/marble lenses and dynamometamorphically altered diorite, serpentinite, peridotite and diabase). Locally younger volcanics (basalt, andesite) and Mesozoic intrusions of quartz porphyry, dacite, liparite. To N widespread black, red and green shales-schists, mainly SW-NE trending, possibly Late Paleozoic age, unconformable over Danau Fm, and thrusted over Danau Fm against Kutai Basin. Batu Mesangat is quartz porphyry intrusive complex of possible Mesozoic age)

Hartono, H.M.S. (1984)- Tectonic development of Kalimantan and adjacent areas. Bull. Geol. Res. Dev. Centre (GRDC) 9, p. 1-13.
(Kalimantan tectonic history: Permian- Carboniferous volcanic arc, with subduction from N/ NE. Late Triassic collision, a continuation of Burmese- W Malayan microcontinent collision with Indochina. Late Cretaceous melange in E Kalimantan and volcanics in SW Kalimantan are part of arc system extending SW towards Java-Sumatra. Tertiary subduction/ accretion from N/NW)

Hartono, H.M.S. (1985)- Summary of tectonic development of Kalimantan and adjacent area. In: Proc. Second EAPI/CCOP Workshop, Energy 10, p. 341-352.
(Review of tectonic development of Kalimantan. Pre-Late Triassic rocks present, but history not clear. Carboniferous-Permian arc postulated. Kalimantan cratonized and stabilized by collision tectonics in Late Triassic, correlating with Indo-Sinian orogeny in peninsular Malaysia and Thailand. Late Cretaceous-Early Tertiary arc development with granitic plutons in SW Kalimantan. Post-Late Triassic deposition either platform cover or active marginal accretion)

Hartono, U. (1997)- Tertiary basalts and microgabbros from Pulau Laut, South Kalimantan: a primitive magma in island arcs. J. Geologi Sumberdaya Mineral 7, 71, p. 2-8.
(Paleogene basalts and microgabbros at Gunung Jembangan high-MgO primitive magma, derived from depleted mantle source, possibly 20% melting of spinel lherzolite, probably in subduction setting)

Hartono, U. (2000)- The origin of Tertiary basaltic and low-Y andesitic volcanic rocks from the Meratus Range, South Kalimantan. J. Geologi Sumberdaya Mineral, 10, 103, p. 23-32.
Small dikes and plugs of Tertiary basaltic, andesitic and dacitic volcanic rocks in Meratus Range and Pulau Laut, associated with strike-slip faults. K-Ar ages 62-23 Ma (Paleocene- E Miocene). High MgO and low-Y primitive magma source)

Hartono, U. (2000)- Batuan kerak samudera. In: U. Hartono, R. Sukamto et al. (eds.) (2000)- Evolusi magmatik Kalimantan Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 25-36.
('Oceanic crust rocks'. Review of SW Meratus Mountains ophiolites)

Hartono, U. (2003)- A geochemical study on the Plio-Pleistocene magmas from Kalimantan; their influence to the Tertiary mineralization system in Kalimantan. Majalah Geologi Indonesia (IAGI) 18, 2, p. 168-174.
(Plio-Pleistocene volcanics common along Kalimantan- Sarawak border. Matulang Fm basalts and basaltic andesites previously interpreted as intraplate magmatism. Geochemistry suggest mixing of deep mantle source and arc magma. Probably produced during extensional tectonism after Late Miocene collision of Miri-Luconia microcontinent with Kalimantan/Sundaland in NW Sarawak)

Hartono, U. (2003)- The role of South Kalimantan Tertiary volcanics in gold mineralisation. Prosiding Forum Litbang ESDM, 2003, p. 175-186.
(Widespread alluvial gold, but no economic primary gold deposits in S Kalimantan. Tertiary volcanics on Pulau Laut (Late Paleocene basalt and basaltic andesite + Eocene- E Miocene andesite) with rel. low gold mineralization. Geochemically look like subduction-related volcanics, but no subduction here in Tertiary?)

Hartono, U. (2006)- Petrogenesis of the Sintang Intrusives and its implications for mineralization in Northwest Kalimantan. J. Sumber Daya Geologi 16, 4 (154), p. 210-219.
(Late Oligocene- E Miocene Sintang intrusives of NW Kalimantan part of belt formed along N margin of Sundaland, can be followed from NW Kalimantan to Upper Tarakan/Mangkalihat, and is associated with gold mineralization. Mainly of granodiorites of adakite-type, probably derived from melting of subducted South China Sea oceanic crust, following M-L Oligocene compressional event in Kalimantan. Commonly with gold mineralization)

Hartono, U. (ed.) (2012)- Magmatism in Kalimantan. Centre for Geological Survey, Geological Agency, Bandung, Spec. Publ., p. 1-199.
(With chapters by Amiruddin, B. Harahap, I.G.B.E. Sutjipta, S, Bronto and U. Hartono. Major review of distribution of Cretaceous- Recent volcanic and plutonic rocks in Kalimantan, tectonic history and associated mineral deposits (see more detail under chapters))

Hartono, U. (2012)- Cretaceous arc magmatism. In: U. Hartono (ed.) Magmatism in Kalimantan, Centre for Geological Survey, Geological Agency, Bandung, Spec. Publ., p. 67-114.
(Review of Cretaceous volcanic and sub-volcanic rocks in SE (U Cretaceous/ ~83-66 Ma Haruyan Fm arc volcanics of Meratus Mts), SW (U Cretaceous/ ~88-65 Ma Kerabai Volcanics SW of Schwaner Mts; probably consanguineous with 91-86 Ma Sukadana granite) and NW Kalimantan (Lower Cretaceous/106 Ma Raya Volcanics))

Hartono, U. (2012)- Pliocene- Pleistocene magmatism. In: U. Hartono (ed.) Magmatism in Kalimantan, Centre for Geological Survey, Geological Agency, Bandung, Spec. Publ., p. 153-162.
(Review of Plio-Pleistocene (5.8- 1.7 Ma) Metulang and Niut volcanics of East-Central and NW Kalimantan. Differ from Tertiary volcanics, possibly 'non-orogenic' magmatism)

Hartono, U. (2012)- Tectono-magmatic evolution. In: U. Hartono (ed.) Magmatism in Kalimantan, Centre for Geological Survey, Geological Agency, Bandung, Spec. Publ., p. 191-199.
(Most of magmatic activity in Kalimantan related to subduction processes. Not much information on pre-Cretaceous magmatic activity. E Cretaceous Schwaner and Singkawang batholiths may form continuation of E Asian magmatic arc and result from subduction of Paleo-Pacific Plate (from present-day North) along E Asia.

Subduction continues to Late Cretaceous (Kerabai Volcanics, Sukadana granite). Also Cretaceous accretionary/ subduction complex in SE Kalimantan, tied to subduction of Indian Plate at S side of Sundaland (Batang Alai granite, Haruyan Volcanics), terminating in Paleocene with Paternoster Plate collision. Eocene to Oligocene or M Miocene subduction of proto-S China Sea oceanic crust under N Kalimantan, creating Rajang accretionary prism and Muller, Piyabung, Sintang, Nyaan and Serantak volcanics. Etc.)

Hartono, U. H.Z. Abidin & I.G.B.E. Sutjipta (2012)- Mineralization. In: U. Hartono (ed.) Magmatism in Kalimantan, Centre for Geological Survey, Geological Agency, Bandung, Spec. Publ., p. 163-190.
(Review of metallic mineral deposits in Kalimantan, all associated with magmatic belts. Kalimantan long history of alluvial gold mining. During 'gold rush' of 1980's-1990's several epithermal gold deposits discovered: E Kalimantan (Kelian, Muyup, Tasan, Busang, Seruyung, Jelai), C Kalimantan (Masupa Ria, Mt. Moro, Gunung Emas) and W Kalimantan (Sebuduk, Pandung, Salakaen, Bukit Timah) Most of these associated with Sintang Intrusives of Late Oligocene- M Miocene C Kalimantan magmatic arc. Small gold prospects also in S Kalimantan/ Meratus Mts (Miing, Pantain Bancah, Gunung Belanda), presumably also associated with Tertiary intrusives)

Hartono, U. & S. Bronto (2012)- Tertiary arc magmatism. In: U. Hartono (ed.) Magmatism in Kalimantan, Centre for Geological Survey, Geological Agency (Bandung), Spec. Publ., p. 115-152.
(Mineral deposits of Kalimantan mainly associated with Tertiary magmatism. Four main groups of Tertiary volcanics: (1) Eocene (~50 Ma) Piyabong/ Muller/ Nyaan volcanics in N-C Kalimantan (possibly arc volcanics from proto-S China Sea Plate subduction); (2) rel. widespread Oligocene- M Miocene (30-16 Ma) intermediate Sintang intrusives (>150) and Malasan volcanics in central parts (incl. common 'adakitic' rocks) (arc magmatism, also tied to S China Sea subduction); (3) M Miocene- Pliocene Jelai volcanics of NE Kalimantan; (4) Plio-Pleistocene Metulang/ Niut volcanics widespread along N border of Kalimantan)

Hartono, U., M.H.J. Dirk, P. Sanyoto & S. Permanadewi (1999)- Geochemistry and K/Ar results of the Mesozoic-Cenozoic plutonic and volcanic rocks from the Meratus Range, South Kalimantan. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 49-61.
(online at: www.gsm.org.my/products/702001-100834-PDF.pdf)
(Three main periods of magmatic activity in Meratus Mts: (1) E Cretaceous (131-103 Ma; Barremian-Albian) subduction-related granitoids (mainly island arc?; e.g. Batangalai granite), (2) Late Cretaceous (82-66 Ma; Campanian- Maastrichtian) Haruyan Fm submarine island arc basalt-andesite and granitoids and (3) Tertiary (62-19.5 Ma) andesitic-basaltic volcanics and granitoids (limited distribution; on Palau Laut along strike-slip faults). Microdiorite at G. Kukusan K-Ar age 19.6 Ma. Parts of U Cretaceous- Tertiary andesites high-MgO, probably formed by reaction between ascending melts and mantle peridotite)

Hartono, U. & D. Djumhana (2000)- Batuan malihan. In: U. Hartono, R. Sukamto et al. (eds.) (2000)- Evolusi magmatik Kalimantan Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 75-84.
(Review of mid-Cretaceous metamorphic rocks of SW Meratus Mountains, SE Kalimantan)

Hartono, U. & S. Permanadewi (2000)- Batuan volkanik. In: U. Hartono, R. Sukamto et al. (eds.) (2000)- Evolusi magmatik Kalimantan Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 53-74.
(Review of volcanic rocks, Meratus Mts, SE Kalimantan)

Hartono, U., S. Permanadewi & M.H.J. Dirk (1997)- Petrology and geochemistry of the Tertiary volcanic and subvolcanic rocks, South Kalimantan. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 419-427.
(Reprinted in Bronto & Surono 2014. Tertiary volcanics of Pulau Laut and Meratus Range associated with strike-slip faults. Most volcanics high MgO content. K-Ar ages of plagioclase from Pulau Laut andesite and micro-gabbro 57.5 Ma and 62.5 Ma, hornblende 32.5- 19.5 Ma. Probably originated from U Cretaceous- Lower Tertiary subduction, but magma produced accumulated in lower crust- upper mantle before rising to surface in E-M Tertiary)

Hartono, U. & I. Saefudin (2000)- Evolusi magmatik. In: U. Hartono, R. Sukamto et al. (eds.) (2000)- Evolusi magmatik Kalimantan Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 119-135.
(Review of magmatic evolution Meratus Mts, SE Kalimantan)

Hartono, U., P. Sanyoto, H.Z. Abidin, S. Permanadewi, W. Sunata, M.H.J. Dirk & I. Saefudun (1997)- Geochemical characteristics of the Cretaceous and Tertiary volcanics, South Kalimantan: implications for the tectono magnetic evolution. J. Geologi Sumberdaya Mineral 7, 66, p. 2-10.
(Cretaceous volcanics of Haruyan Fm in Meratus Mts and in Pulau Laut mostly porphyritic andesites, characteristic of subduction arc volcanism. Paleogene basaltic rocks along strike-slip faults on Pulau Laut MgO rich and characteristic of primitive magma (not shown on Rustandi et al. 1995 Pulau Laut geologic map?; Hartono 2003))

Hartono, U., R. Sukamto, Surono & H. Panggabean (eds.) (2000)- Evolusi magmatik Kalimantan Selatan. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 1-140.
('The magmatic evolution of South Kalimantan'. Collection of papers published earlier)

Hartono, U. & Sulistyawan (2010)- Origin of Cretaceous high magnesian andesites from southeast Kalimantan-geochemistry. J. Sumber Daya Geologi 20, 5, p. 261-276.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/177/173)
(Anomalously high MgO content of some andesites ('boninites') found with normal volcanic arc andesites of U Cretaceous Haruyan Fm in Meratus Range and on Pulau Laut. Both originated from subduction zone-type magma. Two possible origins of high-Mg andesites: (1) melting of mantle wedge above slab; (2) reaction between silicic magma and hot mantle peridotite (boninites typically form in fore-arc environments during early stages of subduction?; JTvG))

Hartono, U. & Suyono (2006)- Identification of adakite from Sintang intrusives in West Kalimantan. J. Sumber Daya Geologi 16, 3 (153), p. 173-178.
(U Oligocene- E Miocene Sintang high-level intrusives widely exposed in W Kalimantan. Consist of microdiorite, granite/ microgranite, quartz diorite, dacite, andesite and minor rhyolite and rhyodacite. K-Ar analyses 30.4- 23.0 Ma in Melawai Basin, 17.9- 16.4 in Ketangau Basin. Published geochemical data suggest most rocks adakites. Products of arc magmatism, probably from melting of subducted S China Sea oceanic crust beneath Kalimantan. Subduction started in Late Oligocene when crust was still young)

Hashimoto, W. & T. Koike (1973)- A geological reconnaissance of the reservoir area of the Riam Kanan dam, East of Martapura, Kalimantan Selatan (South Borneo), Indonesia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 13, p. 163-184.
(Description of Cretaceous (Aptian-Senonian)- Lower Tertiary stratigraphy of area of Riam Kanan dam at Aranio, 40 km E of Banjarmasin, SW Meratus Mts. Area now mainly flooded by water reservoir. Review of works of Verbeek (1875), Hooze (1893), Martin (1889), Krol (1920) and Koolhoven (1935), with additional observations. Oldest rocks crystalline schist, bounded by Bobaris Peridotite. Basal Cretaceous (Cenomanian?) conglomerate mainly composed of schist, also peridotite. Overlying marine sediments with volcanics. Orbitolina from limestone farther North not O. concavata, but older form of O. scutum type, in Japan associated with Upper Aptian ammonites. Latest Cretaceous non-marine shales with estheriids)

Hashimoto, W. & T. Koike (1974)- On the Martapura Cretaceous system of Southeast Kalimantan, Borneo, Indonesia (Geology along the upper stream of the Riam Kanan River). Chigaku Zasshi = J. Geography, Tokyo, 83, 1, p. 1-18. *(in Japanese)*
(online at: www.journalarchive.jst.go.jp/...)
(1972 survey of Meratus Mts Upper Cretaceous sediments at upper Riam Kanan River, E and Riam Kiwa W of Bobaris Mts. Basal conglomerates, sandstones and siltstones, unconformable over schist, with Turonian ammonoids and Inoceramus. Overlying Benuariam/Atiin Fm porphyritic lavas, agglomerates and tuffs, and conglomerates, Tabatan Fm sandstones and conglomerates with Aptian-Albian Orbitolina in limestone pebbles and reworked Benuariam Fm. Overlying Rantaulajon Fm fissile shale rich in estheriids, indicating non-marine

facies, probably Senonian. Includes record of mid-Cretaceous Orbitolina in Meratus Mts at Hantakan, E of Barabai. Study of Eocene- Miocene suggests Early Oligocene Td stage is absent in area)

Hashimoto, W. & K. Matsumaru (1974)- *Orbitolina* from the Seberuang Cretaceous, Kalimantan Barat (West Borneo), Indonesia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 89-99.
(Multiple localities of Selangkai Fm clastics at Seberuang River, U Kapuas, W Central Kalimantan with lenses of coral-bearing limestones rich in Orbitolina lenticularis. Fossils first described by Von Fritsch (1883), Martin (1899), Molengraaff (1900) and Zeijlmans (1939). Seberuang Orbitolina is Orbitolina lenticularis of Hofker (1966) groups II (within E Aptian) and I-II (Late Aptian). With map of all Orbitolina localities in W Indonesia)

Hattori, K., K.P. Burgath & S.R. Hart (1992)- Os-isotope study of platinum-group minerals in chromitites in alpine-type ultramafic intrusions and the associated placers in Borneo. Mineralogical Magazine 56, p. 156-164.
(online at: www.minersoc.org/pages/Archive-MM/Volume_56/56-383-157.pdf)
(187Os/ l86 Os ratios of ~1.04 in laurite grains in mid-Cretaceous (~110 Ma) chromitites from Bobaris and Meratus Mts, SE Kalimantan (and platinum group minerals in associated alluvial placers derived from ultramafics) suggest derivation from mantle, with no significant contribution of crustal 187Os. Also low ratio (1.06) in nugget from SE Sabah 40 Ma Darvel Bay ophiolite)

Hattori, K.H., L.J. Cabri, B. Johanson & M.L. Zientek (2004)- Origin of placer laurite from Borneo: Se and As contents, and S isotopic compositions. Mineralogical Magazine 68, 2, p. 353-368.
(Platinum-group mineral laurite (RuS2) from Pontyn River sediments, Tanah Laut, SE Borneo, derived from Meratus ophiolite. Formation of laurite in residual mantle or in magma generated from refractory mantle, followed by erosion after obduction of host ultramafic rocks)

Hattori, K. & S.R. Hart (1991)- Osmium-isotope ratios of platinum-group minerals associated with ultramafic intrusions: Os-isotopic evolution of the oceanic mantle. Earth Planetary Sci. Letters 107, p. 499-514.
(Includes Os-isotope data on Cretaceous Meratus ophiolite (two dismembered ophiolite bodies, obducted during subduction of Sundaland Plate at ~114 Ma; Pamali, Sungei Kalaan, Sungai Besar; SE Kalimantan) and Tertiary Darvel Bay (Sungei Edam, Sabah) ophiolites (extends N to ophiolite complex on Palawan Island, with Ar-age of metamorphic minerals of 36 Ma, in Miocene-age host rock stratigraphy))

Hendratno, A. & R. Al Furqon (2006)- Petrologi granit kordierit (studi kasis daerah Sungai Lumo- Kalimantan Tengah). Teknik Geologi Universitas Gajah Mada, p.
('Petrology of cordierite granite (study of Lumo River area, C Kalimantan))

Hennig, J., H.T. Breitfeld, R. Hall & A.M. Surya Nugraha (2017)- The Mesozoic tectono-magmatic evolution at the Paleo-Pacific subduction zone in West Borneo. Gondwana Research 48, p. 292-310.
(online at: http://searg.rhul.ac.uk/pubs/hennig_etal_2017%20Paleo-Pacific%20margin%20West%20Borneo.pdf)
(Metamorphic and magmatic rocks in NW part of Schwaner Mountains of W Kalimantan with mainly Cretaceous U-Pb zircon ages (~80-130 Ma). Triassic metatonalite near Pontianak with Triassic and Jurassic zircons formed at Paleo-Pacific margin of subduction under Indochina- E Malaya block. Geochemically similar Triassic rocks in Embuoi Complex to N and Jagoi Granodiorite in W Sarawak formed part of SE margin of Triassic Sundaland. One S-type granitoid (118.6 Ma) with inherited Carboniferous, Triassic and Jurassic zircons, indicating Sundaland basement. Two I-type granitoids with Cretaceous ages of 101.5 and 81.1 Ma. All three record Cretaceous magmatism at Paleo-Pacific subduction margin. Cretaceous zircons of metamorphic origin indicate recrystallisation at ~90 Ma, possibly related to collision of Argo block with Sundaland. Subduction ceased at that time, followed by post-collisional magmatism in Pueh (77.2 Ma) and Gading Intrusions (80 Ma) of W Sarawak (NB: West Borneo here viewed as part of Triassic Sundaland, extending to NW Schwaner zone and possibly further South; not SW Borneo block as previously assigned by Hall, etc.))

Herman, D.Z. (2007)- Kemungkinan sebaran zirkon pada endapan placer di Pulau Kalimantan. J. Geologi Indonesia 2, 2, p. 87-96.

(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/187)
('Possible zircon deposits in placer sediments in Kalimantan'. On hypothetical zircon placers from granites)

Hermanto, B., S. Bachri & S. Atmawinata (1994)- Geological map of the Pankalanbuun Quadrangle, Kalimantan, 1: 250,000, Quad. 1515. Geol. Res. Dev. Centre (GRDC), Bandung.
(S Kalimantan geologic map. S margin of Schwaner Mts. Oldest rocks ?Triassic Kuayan Fm andesitic volcanics, intruded by Cretaceous Mandahan granites, unconformably overlain by Late Miocene- Pliocene Dahor Fm)

Hermiyanto Zajuli, M.H & M.F. Sodiq (2019)- Mineralogy and Rock-Eval characteristic of Mesozoic fine grained sedimentary rock from Pedawan Formation: implication for shale hydrocarbon potential. Int. J. Science and Research (IJSR) 8, 8, p. 726-731.
(online at: https://pdfs.semanticscholar.org/3ca5/38f8672c5ff4369039d877384708c75fb5e1.pdf)
(In Singkawang Mesozoic basin in NW Kalimantan Cretaceous Pedawan Fm TOC values 0.27- 2.29, Hydrogen Index <100, BI 52-99%. Maturity level mature to overmature (478-556 °C). Pedawan Fm shale potential as unconventional hydrocarbon play)

Heryanto, R. (1991)- Sedimentology of the Melawi and Ketungau basins, West Kalimantan, Indonesia. Ph.D. Thesis University of Wollongong, vol. p. 1-255, vol. 2 Figures.
(online at: http://ro.uow.edu.au/theses/1405)
(Melawi and Ketungau 'forearc' basins in W Kalimantan formed between E Tertiary Lubuk Antu subduction zone in N and Semitau High to S. Semitau High part of Late Cretaceous Boyan Melange subduction complex (with up to km-size blocks, incl. Cretaceous Orbitolina Limestone, ultramafics, Permian granitoid and metamorphic microcontinental fragments). Up to 7500m of Late Eocene- Oligocene shallow marine- terrestrial deposits in Melawi and Ketungau Basins. Three unconformities in Melawi Basin. Melawi Group and Alat Sst can be correlated with Kantu Fm and Tutoop Sst in Ketungau Basin. Sand provenance from N, from uplifted melanges. Both basins with coal seams. Uplift of Semitau High (Boyan Melange) along backthrusts during Paleocene- E Eocene produced accretionary prism flanked to S by forearc Melawi Basin. N-ward migration of Benioff Zone in Late Eocene created forearc Ketungau Basin between old and new (Lubok Antu Melange) outer arc ridges. With palynology analyses by B. Porthault. Oligo-Miocene Sintang intrusives ~23-31 Ma in S, ~16-18 Ma in N)

Heryanto, R. (1996)- Diagenesis of the Melawi Basin sandstone, West Kalimantan, Indonesia. Bull. Geol. Res. Dev. Centre 20, p. 67-84.
(Diagenesis of >7 km thick Eocene and Oligocene fluvial, lacustrine and shallow marine sandstones of Melawi Basin. Generally characteristic of deeper burial)

Heryanto, R. (1996)- Sedimentology of the Ingar Formation. J. Geologi Sumberdaya Mineral 6, 53, p. 9-16.
(Ingar Fm Eocene mudstones and minor fine sandstones are oldest formation of Melawi Basin sequence in W Kalimantan. ~2000m thick outer shelf- upper slope deposits. With slump folds, ball-and-pillow structures and allochthonous limestone blocks. Classified as lithic arkose- feldspathic litharenite with 9-21% quartz and 12-40% lithics (mainly volcanics), derived from Schwaner Mountains volcanic arc rocks (entire Melawi Basin Eo-Oligocene section almost 8000m thick ?))

Heryanto, R. (1996)- Sedimentology of the Dangkan sandstone. J. Geologi Sumberdaya Mineral 6, 58, p. 6-16.
(Eocene Dangkan Sst in Melawi Basin of W Kalimantan. Unconformably overlies Selangkai Sst in N and Ingar Fm in S and is conformably overlain by Eocene Silat Shale. With polymict basal conglomerate, with clasts derived from Semitau High N of basin. Deposited in fluvial environment (Eocene in Melawi basin >5-6 km thick))

Heryanto, R. (1999)- Petrografi batupasir Formasi Manunggul di daerah Alimukim, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 9, 93, p. 16-26.
('Petrography of the Manunggul Fm sandstone in the Alimukim area, S Kalimantan'. Sandstones of U Cretaceous Manunggul Fm in Alimukim area, Meratus Mts, are feldspathic litharenites: quartz generally 1-8%,

andesitic lithics 20-40%, basalt 10-19% and plagioclase 8-15%. Provenance 'undissected' andesitic magmatic arc (from Paau Volcanics). Also contributions from granite, ultramafics, metamorphics and sedimentary rock, incl. radiolarian chert)

Heryanto, R. (1999)- Diagenesa batupasir Formasi Manunggul di daerah Alimukim, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 9, 98, p. 16-26.
('Diagenesis of Manunggul Fm sandstone in the Alimukin area, S Kalimantan'. Diagenesis of Upper Cretaceous volcanoclastics overlying Meratus ophiolite complex includes compaction, quartz, laumontite and calcite cement and secondary porosity from dissolution of feldspar and volcanic fragments)

Heryanto, R. (2000)- Pengendapan batuan sedimen kelompok Pitap di bagian selatan Pegunungan Meratus, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 10, 109, p. 2-19.
('Deposition of rocks of the Pitap Group in the southern part of the Meratus Mountains, S Kalimantan'. U Cretaceous Pitap Gp volcanoclastics in S Meratus Mts overlies basement of Batugamping Fm (Orbitolina Lst; ~100-300m thick?), E Cretaceous Paniungan mudstones (Berriasian-Barremian?) and ultramafic and granitic rocks. Composed of interfingering Pudak and Keramaian Fms. Lower Pudak Fm is olistostrome with blocks of Orbitolina limestone and volcanic rocks, deposited on continental slope, upper part submarine fan deposits)

Heryanto, R. (2000)- Tataan stratigraphy. In: U. Hartono et al. (eds.) Evolusi magmatik Kalimantan Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 7-24.
(Stratigraphy chapter in 'Magmatic evolution of South Kalimantan' book)

Heryanto, R. (2011)- Stratigrafi bagian barat dan tenggara Kalimantan: implikasinya terhadap keterdapatan sumber daya energi fosil. Geol. Survey Indonesia (PSG), Bandung, p. 1-63.
(Stratigraphy of West and SE Kalimantan: implications for fossil energy resources')

Heryanto, R. & H.Z. Abidin (1995)- Geological map of the Longbia (Napaku) Quadrangle 1818, Kalimantan, scale 1: 250.000. Geol. Res. Dev. Center (GRDC), Bandung.
(Map inboard of Tarakan Basin. Oldest rocks Jurassic-Cretaceous Telen Fm sheared black and red slate, chert and metasandstone. Unconformably overlain by thick U Cretaceous- Paleocene Embaluh Gp mainly flysch-type clastics with SW-NE trending folds, unconformably overlain by M-L Eocene clastics and limestones. Oligo-Miocene Jelai Fm basaltic-andesitic volcanics, Etc.)

Heryanto, R., B.H. Harahap, P.R. Williams & P.E. Pieters (1993)- Geology of the Sintang sheet area, Kalimantan, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(C Kalimantan map sheet, showing occurrences of Jurassic- Early Cretaceous Danau Mafic Complex (probably oceanic crust in Cretaceous Boyan accretionary melange), Semitau Metamorphics, thick Eocene sediments of Melawi and Ketungau basins, widespread Late Oligocene- E Miocene Sintang andesite intrusives, etc.)

Heryanto, R. & U. Hartono (2003)- Stratigraphy of the Meratus Mountains, South Kalimantan. J. Geologi Sumberdaya Mineral 13, 133, p. 2-24.
(Meratus Mts with Paleozoic Lumo continental granite NW of range and M Jurassic Puruidalam oceanic plagiogranite (155± 16 Ma) in ophiolite complex. Meratus stratigraphy three groups: (1) Jurassic- E Cretaceous imbricated ultramafics (120-155 Ma), chert, Aptian- Albian (110-199 Ma) metamorphic Hauran schist and Pelaihari phyllite, sediments (incl. pre-Aptian E Cretaceous Paniungan Fm mudstone and Barremian Batununggal Orbitolina Lst; should be Aptian?) and melange; (2) Late Cretaceous- Paleocene Pitap Gp volcanics and deep water Manunggul Fm volcanoclastics and island arc type Hawaja Granite (~70-87 Ma); (3) Eocene- Miocene sediments of Barito basin margin. Also Belawayan arc-type granite (K-Ar ages 101-131 Ma), U Cretaceous Pudak Fm olistostrome of volcanoclastics and limestone blocks in Pudak River)

Heryanto, R. & B.G. Jones (1996)- Tectonic development of Melawi and Ketangau basins, Western Kalimantan, Indonesia. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 19, p. 151-179.
(In Late Cretaceous most of W Kalimantan Melawi/ Ketangau basins was area of marine shelf, flysch and pelagic deposition. Early Tertiary S-directed thrusting created Melawi foreland basin with Eocene lacustrine,

fluvial and marginal marine sediments. In latest Eocene new thrust zone further North, producing second foreland basin (Ketangau))

Heryanto, R. & H. Panggabean (2010)- Characteristics and depositional environment on Jurassic-Cretaceous rock sequences in Meratus Mountains, South Kalimantan. Proc. Symp. Paleoclimates in Asia during the Cretaceous, IGCP Project 507, Yogyakarta 2010, p. 53-56. *(Abstract only)*
(Summary of Meratus Mts rocks, ages and tectonic development. Permo-Carboniferous S-type Lumo granite (319-260 Ma), represents continental Sundaland. M Jurassic metamorphic rocks (165-180 Ma). Mid-Cretaceous subduction suggested by arc-type Belawayan Granite (101-131 Ma) and metamorphic rocks (110-119 Ma). Belawayan granite overlain by Aptian-Albian Batununggal Lst. Palynomorphs from Paniungan Mudstone indicate Berriasian-Barremian age)

Heryanto, R. & P. Sanyoto (1994)- Geological map of the Amuntai Quadrangle 1713, Kalimantan, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of NW part of Barito Basin and part of NW Meratus Range)

Heryanto, R., P. Sanyoto & H. Panggabean (2003)- Depositional setting of the sedimentary rocks of Pitap Group in the northern Meratus High (Amandit, Alimukim and Paramasan Areas), Southeast Kalimantan. J. Geologi Sumberdaya Mineral 13, 141, p. 2-21.
(Pitap Group in Meratus Range all U Cretaceous- Paleocene clastic- volcanoclastic deep marine slope to submarine fan deposits. Three formations, Pudak Fm (post Aptian-Albian Orbitolina Lst), Karamaian Fm (with Valanginian- Cenomanian radiolarian cherts (?), maybe also younger) and Manunggul Fm)

Heryanto, R., P. Sanyoto, H. Panggabean & K. Hasan (2001)- Depositional environment of the Late Cretaceous Pitap Group, Meratus Mountain, Southeast Kalimantan. In: A. Setiawan et al. (eds.) Proc. Deep-water sedimentation of Southeast Asia, FOSI (Indon. Sedim. Forum) 2nd Reg. Seminar, Jakarta, 1p. *(Abstract only)*
(Pitap Group in Meratus Mts divided into interfingering Pudak, Keramaian and Manunggul Formations. Lower Pudak Fm is olistostrome with olistoliths, including Orbitolina Limestone and volcanics in volcanic sandstone matrix. U Pudak Fm volcanic sandstone interbedded with conglomerate/ breccia, deposited as upper submarine fan. Keramaian Fm and Manunggul Fms submarine fan conglomerate, sandstone and mudstone. Volcanic activity produced age-equivalent Late Cretaceous volcanic rocks of Haruyan Group, deposited directly above basement (imbricated Lower Cretaceous Batununggal Lst, Paniungan Mudstone, ultramafics, metamorphic and granitic rocks). Tertiary sediments unconformably overlie both Pitap and Haruyan Groups)

Heryanto, R., S. Supriatna, E. Rustandi & Baharuddin (1994)- Geological map of the Sampanahan Quadrangle, Kalimantan, Quad. 1813, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Includes NE part of Meratus Range. With in SW part of Range Batanglai granite (K/Ar age 115 Ma) overlain by Aptian Batununggal Fm Orbitolina limestone, Late Cretaceous Haruyan Fm basaltic lavas and >2000m thick Pitap Fm volcanoclasic flysch with common Kintap Orbitolina limestone olistoliths. Ultrabasic rocks in East)

Heryanto, R., Sutrisno, Sukardi & D. Agustianto (1998)- Geologic map Belimbing sheet, South Kalimantan, scale 1: 100.000. Geol. Res. Dev. Centre (GRDC), Bandung.

Hidayat, S., Amiruddin & D. Satrianas (1995)- Geological map of the Tarakan and Sebatik sheet, Kalimantan, Quad 1919, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet of Tarakan Basin in NE corner of Kalimantan, with NW-SE trending anticlines of folded Miocene and younger sediments. Older outcrops in SW of sheet, with folded Mesozoic Bengara Fm clastics and tuffs, unconformably overlain by Eocene Sembakung Fm clastics and Nummulites- Fasciolites limestone, unconformably overlain by Oligocene-Miocene Naintupo Fm clastics with limestone intercalations (with Eulepidina, Spiroclypeus, etc. E-M Miocene Jelai Fm volcanics and associated granitoids)

Hidayat, S. & I. Umar (1994)- Geological map of the Balikpapan sheet, Kalimantan. Geol. Res. Dev. Centre (GRDC), Bandung.

Hinde, G.J. (1900)- Description of fossil radiolaria from the rocks of Central Borneo. In: G.A.F. Molengraaff, Borneo-expedition. Geological explorations in Central Borneo (1893-94), Brill, Leiden, Appendix I, p. 1-57.
(Several localities of radiolarian chert in C Borneo, sampled by Molengraaff. Two kinds: intensely folded folded red radiolarian cherts in Danau Fm of Upper Kapuas River area, and radiolarian tuffs and marls S of Semitau Hills, both below M Cretaceous clastics with Orbitolina. Radiolarians of E Cretaceous or Late Jurassic age (called E Cretaceous by Sanfilippo and Riedel 1985 (Stichocapsa cribata Hinde limited to Valanginian in W Pacific ODP sites; Matsuoka (1992); Stylatractus ovatus n.sp. = Sphaerostylus lanceola= Tithonian-Aptian; Sanfilippo and Riedel 1989))

Hirano, H., S. Ichihara, Y. Sunarya, N. Nakajima, I. Obata & M. Futakami (1981)- Lower Jurassic ammonites from Bengkayang, West Kalimantan Province, Indonesia. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 4, p. 21-26.
(Two species of Toarcian (upper Lower Jurassic) ammonites (Harpoceras sp. and Dactylioceras sp.) from uppermost part of >3000m thick Upper Triassic- Jurassic Bengkayang Gp (Sungaibetung Fm) at Mt Bawang, Bengkayang area, W Kalimantan, in beds previously mapped as U Triassic. Formation intruded by E Cretaceous (~104 Ma) Mt. Raya granodiorite and Tertiary tonalite of 29-19 Ma age)

Hirschi, H. (1908)- Vorlaufiger Bericht uber einen geologischen Streifzug in centraal-Borneo- Oberlauf Moeroeng (Barito). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 25, p. 777-806.
(Preliminary note of a geological survey of the upper Murung tributary of the Barito River, N of Banjarmasin, C Kalimantan. Includes first report of diamonds and gold in alluvial deposits at Babuat River in headlands of Barito River, C Kalimantan)

Hollmann, F. (2000)- Felsmechanische und mikrostrukturelle Untersuchungen an Serpentinit-Proben aus SE-Kalimantan, Indonesien. M.Sc. Thesis; Institute of Geology, Ruhr-University, Bochum, Germany, p.
('Rock mechanics and micro-structural investigations on serpentinite samples from SE-Kalimantan, Indonesia'. Study of mechanical properties of brecciated serpentinite ('bimrock') for Kusan-3 Hydropower dam foundation in Meratus Mts. Original ultramafic rocks undergone complete serpentinization and fractured into fault breccia. Blocks re-cemented by precipitated serpentinite minerals forming block-in-matrix structure)

Hollmann, F.S., H.K. Kutter & U. Glawe (2001)- Felsmechanische und mikrostrukturelle Untersuchungen an Serpentinit-Kataklasiten aus SE-Kalimantan, Indonesien. In: 13th Nat. Tagung fur Ingenieurgeologie, Karlsruhe, Geotechnik 2001, Suppl., p. 203-204. *(Abstract only)*
('Rock mechanic and microstructural investigations of serpentinite-kataklasites from SE Kalimantan, Indonesia'. Summary of Hollmann (2000) thesis work)

Hooze, J.A. (1893)- Topographische, geologische en mijnbouwkundige beschrijving der afd. Martapoera, residentie Zuider- en Oosterafdeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 22 (1893), p. 1-431.
(maps online at: https://digitalcollections.universiteitleiden.nl/view/item/57151)
('Topographic, geologic and mining description of the Martapura District, S and E Kalimantan'. Extensive description of Martapura region geology and economic minerals, mainly on coal and diamonds)

Horner, L. (1837)- Verslag van een geologisch onderzoek van het zuidoostelijk gedeelte van Borneo Verhandelingen Bataviaasch Genootschap Kunsten Wetenschappen 17, 2, p. 89-119.
(online at: https://ia801900.us.archive.org/35/items/verhandelingenv171839bata/verhandelingenv171839bata.pdf)
('Report on a geologic investigation of the SE part of Borneo'. Probably first report on geology of SE Kalimantan; by young Swiss medical doctor/geologist Horner of the Commision of Natural Sciences, probably of Salomon Muller-led field party)

Hovig, P. (1930)- De oorsprong van de Borneo diamanten. Mijnwezen (Geologie en Mijnbouw) 8, 12, p. 157-161.

(online at: https://drive.google.com/file/d/1IsA9sp2MEHaeqL_IHPOyMvlLVrkM08Tm/view)
('The origin of the Borneo diamonds'. Brief review, largely based on Krol (1922). Quaternary diamond placers probably formed through multiple stages, from primary deposits (here believed to be contact zones of acid intrusions) into Lower Cenomanian clastics, then reworked into progressively younger sediments. No figures)

Hovig, P. (1931)- Waar zijn de Borneo diamanten ontstaan? Mijnwezen (Geologie en Mijnbouw) 9, 5, p. 51-55.
(online at: https://drive.google.com/file/d/1E498lefLrH386NtZtwaRrZtTYdDvcmkK/view)
('Where did the Borneo diamonds originate?'. Reply to Wing Easton (1931) discussion of Hovig 1930 paper, suggesting ultramafic rocks more likely source of diamonds. Hovig reasserts position that diamonds formed in contact zones of granites. This discussion led to new investigations by W.C.B. Koolhoven in 1932, and Hovig conceding he was wrong)

Hutchison, C.S. (1986)- Formation of marginal seas in S.E. Asia by rifting of the Chinese and Australian continental margins and implications for the Borneo region. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 201-220.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b11.pdf)
(SE Asian marginal basins formed by processes other than back-arc extension. Andaman Sea is Miocene leaky transform system. W Philippine Sea, Banda Sea, Celebes Sea and Sulu Basins are remnants of former Cretaceous- Eocene oceans, now trapped behind younger arc-trench systems, Etc. (many of the assumptions used here to build tectonic model differ from current interpretations; JTvG))

Hutchison, C.S. (1987)- Stratigraphic-tectonic model for Eastern Borneo. GEOSEA 6 Conference, Jakarta, p.

Hutchison, C.S. (1988)- Stratigraphic-tectonic model for Eastern Borneo. Bull. Geol. Soc. Malaysia 22, p. 135-151.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1988007.pdf)
(E Borneo nucleated since Late Cretaceous time around Miri Zone, whose basement may be microcontinent rifted from shelf of Vietnam and S China. E margin of Miri Zone interpreted as Atlantic-type margin, with down-faulted continental crust giving way E-wards to Late Cretaceous-Eocene oceanic lithosphere ('Chert-Spilite Fm' and underlying 'Crystalline Basement') of same age as ocean floor of adjacent Celebes Sea. Rajang Gp deposited as Late Cretaceous-Paleogene turbidite fan directly on Chert-Spilite Fm. E-wards subduction of this oceanic basement resulted in W and N Sulawesi volcanic arc. Etc.)

Hutubessy, S. & S. Panjaitan (2003)- Penelitian geomagnetik di cekungan Amuntai, Kabupaten Amuntai, Kalimantan Selatan. Proc. 32nd Ann. Conv. IAGI and 28th Ann. Conv. HAGI, Jakarta, 7p.
(Magnetic survey and model in Amuntai (NE Barito) basin, SE Kalimantan)

Ichihara, S., Y. Sunarya & N. Nakajima (1984)- Cretaceous and Tertiary granitic rocks, West Kalimantan (G. Bawang- Bengkayang- Darit- Pahuman area and G. Ibu area). Bull. Direct. Mineral Res. Indonesia 2, 15, p. 1-28.
(Descriptions of Cretaceous granodiorite plutons of Singkawang batholith, NW Kalimantan, etc.)

Icke, H. & K. Martin (1906)- Die Silatgruppe, Brack- und Susswasser-Bildungen der Oberen Kreide von Borneo. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 8, p. 106-144.
(online at: www.repository.naturalis.nl/document/552415)
('The Silat Group brackish and freshwater deposits of the Upper Cretaceous of Kalimantan'. Description of fresh and brackish water molluscs) from Melawi Basin E of Sintang, collected by Wing Easton. Mainly gastropods (Faunus eastoni, Paludinopsis silatiensis, Melania krausei) and some bivalves (Corbula silatiensis). Martin suggests most likely Late Cretaceous age (but palynology in Sutjipto (1991) believed to be Eocene))

Idrus, A., L.D. Setijadji & F. Thamba (2011)- Geology and characteristics of Pb-Zn-Cu-Ag skarn deposit. J. Geologi Indonesia 6, 4, p. 191-201.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/download/126/126)

(Geology of skarn Pb-Zn-Cu-Ag deposit at Ruwai mine, Lamandau Regency, SW Kalimantan. Ruwai skarn associated with Late Cretaceous dyke/stock, intruding into Triassic-M Cretaceous Ketapang volcanics and sediments, including limestone. Controlled by NNE-SSW-trending strike- slip faults and N70E-trending thrust fault)

Idrus, A., L.D. Setijadji & F. Tamba & F. Anggara (2011)- Geology and characteristics of Pb-Zn-Cu-Ag skarn deposit at Ruwai, Lamandau Regency, Central Kalimantan. J. Southeast Asian Applied Geol. (UGM) 3, 1, p. 54-63.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-3/no-1/jsaag-v3n1p054.pdf)
(Same as or similar to Idrus et al. 2011, above)

Ilyas, S. (2003)- Inventarisasi batubara bersistem di daerah Muara Wahau dan sekitarnya, Kabupaten Kutai Timur, Provinsi Kalimantan Timur. Kolokium Hasil Kegiatan Inventarisasi Sumber Daya Mineral, DIM, TA, p. 22-1- 22.10.
(online at: www.dim.esdm.go.id/kolokium%202003/batubara/Makalah%20Wahau%20Kaltim.pdf)
('Systematic investigation of coal in the Muara Wahau area, Kutai Regency, E Kalimantan Province'. Six main coal seams, 6- 45m thick, in Upper Wahau Fm (E Miocene?) in NE corner Kutai Basin. Ash content < 4%, sulphur 0.15%, mean vitrinite reflectance Rv mean 0.27%)

Ismail, Y. (1998)- Alterasi hidrotermal pada intrusi andesit G. Otje, Banjarmasin, Kalimantan Selatan. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1(Sumberdaya Mineral Energi), p. 200-211.
('Hydrothermal alteration at the Gunung Otje andesite intrusion, Banjarmasin, SE Kalimantan')

Jong, J., S. Barker & F.L. Kessler (2015)- A comparison of fold-thrust belts in Eastern Sundaland: structural commonalities and differences on the Circum-Borneo Margin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-138, 21p.
(Comparison structural commonalities of Neogene fold-thrust belts of E Sundaland margin in NW and E Circum-Borneo: Bunguran, W Baram Delta, E Baram Delta, C and N NWSabah Trough, Sandakan, Tarakan, Kutai and W Sulawesi foldbelts. Belts along E Borneo margin of Sulu, Tarakan, Kutai and W Sulawesi are induced by crustal subduction; compressive ('failed subduction') NW margin exhibits stretched continental crust of S China Sea, deformed by strike-slip tectonics, contractional block uplift, gravitational gliding and thrusting, inversion tectonics and clay diapirism)

Kadarusman, A. (2010)- The origin of Borneo (Kalimantan) diamond: a summary. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok 2010, 5p.
(Review of literature on Kalimantan diamonds. Primary host for diamonds still not identified. Kalimantan diamonds likely related to Kimberlite Clan rocks that originated in cratonic environment)

Kamiludin, U. & Y. Darlan (2005)-Keterdapatan emas letakan dan ikutannya di perairan Delta Kapuas, Pontianak, Kalimantan Barat. J. Geologi Kelautan 2, 3, p. 1-8.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/viewFile/123/113)
('Presence of gold placers in the waters of the Kapuas Delta, Pontianak, West Kalimantan'. Presence of gold placers, associated with Ag, Cu, Pb, Zn and Sn in offshore sediments originating from Kapuas River. Primary source probably Sintang intrusives)

Kamiludin, U., Y. Darlan & H. Kurnio (2008)- Sebaran endapan kuarsa di perairan Delta Kapuas, Pontianak, Kalimantan Barat. J. Geologi Kelautan 6, 3, p. 135-145.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/157/147)
('Distribution of quartz deposits in the waters of the Kapuas Delta, Pontianak, West Kalimantan'. Study of recent sands of Kapuas delta with high % quartz)

Kamiludin, U., I Wayan Lurga & S. Hakim (2003)- Sedimen permukaan dan kandungan mineralnya di perairan Pontianak, Kalimantan Barat. J. Geologi Sumberdaya Mineral 13, 143, p. 57-66.

('Surface sediment and mineral content in the waters of Pontianak, West Kalimantan'. Recent sediments off Pontianak dominated by quartz (from Sukadana granite and Kempari Sst Fm?). Heavy minerals include magnetite, hematite, cassiterite, pyrite, etc.)

Karyono, H.S. (1988)- Typologie de structures mineralisees du Bassin de Kalan, Kalimantan de l'Ouest, Indonesie; aspect tectonique et controle structural de mineralisations d'uranium. Doct. Thesis, Universite Louis Pasteur, Strasbourg, p. 1-202. *(Unpublished)*
('Mineralized structures of the Kalan Basin, W Kalimantan; tectonic aspects and structural control on uranium mineralizations')

Karyono, H.S. (1991)- Analisis kontrol tektonik pada vein mineralisasi di Bukit Eko, Kalan, Kalimantan Barat. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 115-128.
('Analysis of tectonic control on vein mineralization at Bukit Eko, Kalan, W Kalimantan')

Karyono, H.S. & M. Ruhland (1990)- Use of multiscalar processing of remotely sensed data in Kalan fracturation networks West Kalimantan, Indonesie for future mineralization research. ISPRS J. Photogrammetry and Remote Sensing 45, p. 428-441.
(Kalan area in C Kalimantan N of Schwaner Mts with 3000-4000m thick Permo-Carboniferous (or younger?; JTvG) low metamorphic sediments, surrounded by Cretaceous tonalitic intrusives. Two periods of tectonic deformation (1) plastic deformation, forming schistosity in metapelite, fracture cleavage in metasilt and regional folding (N70°E average axial direction; bedding planes av. strike N50°E, dip 50°S). With uranium mineralisation in fractures and schistosity; (2) brittle deformation that did not cause any extensive bed sliding, fracturing, etc. Fracture patterns may be result of large 'Kalan alignment' NE-SW sinistral strike-slip fault)

Kemmerling, G.L.L. (1915)- Topographische en geologische beschrijving van het stroomgebied van de Barito, in hoofdzaak wat de Doesoenlanden betreft. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 32, p. 575-641 and p. 717-772.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001661001:pdf)
('Topographic and geological description of the Barito drainage area, in particular the Dusun lands'. Mainly geographic description and review of stratigraphy. With 1:750,000 scale geologic map)

Khan, A.A. (2018)- An appraisal of the tectonic evolution of SW Borneo constraints from petrotectonic assemblage and gravity anomaly. Bull. Geol. Soc. Malaysia 66, p. 47-56.
(online at: https://gsm.org.my/products/702001-101756-PDF.pdf)
(Petrotectonic assemblages suggest early crust of SW Borneo evolved from depleted basaltic to enriched andesitic composition of intra-oceanic subduction melts and has undergone delamination. Due to intrusion and lateral spreading of hot upper mantle, lower crust has undergone partial melting, resulting in extrusion of tholeiitic magma into overlying basins. E-W trending Pre-Carboniferous inlier surrounded by Cretaceous intrusives and volcanics in Schwaner Mountains mark start of Cretaceous collision episode. Widespread oceanic rock assemblages, ophiolites, meta-sedimentary and igneous rocks in NW-SE zone signify derivation from paleo-ocean basin closure. Deformed Cretaceous flysch forms accretionary complex as dominantly Tertiary accretionary wedge to N. Indentation of Luconia micro-continent onto SW Borneo peri-continent edge after subduction had ceased. Sibu high segment of Luconia Block. Collision and subduction between Luconia micro-continent and SW Borneo peri-continent evolved "Sarawak Suture" and "Continental Arc")

Kim, I.J. (2005)- Occurrence of gold deposits of the Tumbang Lapan area of the Middle Kalimantan, Indonesia. Korean Soc. Econ. Environm. Geol. 38, 3, p. 347-353. *(In Korean, with English summary)*
(C Kalimantan Tumbang Lapan area (along tributary of Kahajan River) with Permian- Carboniferous Pinoh Metamorphic rocks, Cretaceous granites. Faults with gold-bearing hydrothermal quartz veins)

Kim, I.J. (2006)- Geochemical exploration for the stream sediments of the Tumbang Mirih in the Middle Kalimantan, Indonesia. Korean Soc. Econ. Environm. Geol. 39, 3, p. 301-328. *(In Korean, with English summary)*
(Common gold in Quaternary stream samples in Tumbang Mirih area in C Kalimantan)

Kim, I.J., W.S. Kee, K.Y. Song, B.G. Kim, S.R. Lee & G.H. Lee (2004)- Geology of the Kualkulun in the Middle Kalimantan, Indonesia: I. Stratigraphy and structure. Korean Soc. Econ. Environm. Geol. 37, 6, p. 437-457. *(In Korean, with English summary)*
(C Kalimantan Kualakulun area (area Kahayan River near Tewah, N of Palangkaraya) with Permian-Carboniferous Pinoh Metamorphic rocks (mica-schists, etc.), and Cretaceous Sepauk plutonics of Sunda shield, ovelain by Late Eocene Tanjung Fm (fluvio-delta plain deposits of S-ward flowing system, some coal, pebbles in conglomerate mainly vein quartz, changing upward into shallow marine environment), Oligocene Malasan Volcanics and Oligocene- E Miocene Sintang volcanics. Four main deformational phases)

Kim, I.J., G.H. Lee, D.L. Cho, S.R. Lee & S.R. Lee (2004)- Geology of the Kualkulun in the Middle Kalimantan, Indonesia: II. Mineralogy and geochemistry. Korean Soc. Econ. Environm. Geol. 37, 6, p. 459-475. *(In Korean, with English summary)*
(C Kalimantan Cretaceous Sepauk plutonic rocks calk-alkaline S-type granites, with K-Ar ages of biotite granite 100.5- 106.5 (Albian), med-grained granitoids 91.9- 102.6 Ma. Oligocene Malasan Volcanics intermediate dacitic pyroclastics and minor lavas of subalkaline series with K-Ar ages 31.5- 36.8 Ma. Oligocene- E Miocene Sintang intrusives are basic-intermediate basalts and trachyandesite with K-Ar ages 24.6-34.5 Ma)

Kleibacker, D., R. Tasrianto & A. Saripudin (2015)- Long distance migration in Central Kalimantan: a solution to the Barito dilemma? Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-085, 13p.
(Previous basin models concluded that 80 GBO and >100 TCF of gas (ConocoPhillips: ~66 GBO and ~70 TCF gas from Eocene Tanjung coals) should have been generated in Barito foreland basin, but only 200 MMBOE EUR discovered so far, in Tanjung Field and satellites. Apparent discrepancy coined 'Barito Dilemma' Possibility of long distance secondary oil migration (~100km) out of latest Miocene to Plio-Pleistocene S Barito fore-deep towards C Kalimantan Palangkaraya PSC suggested by oil seep(s))

Kloos, J.H. (1866)- Vorkommen und Gewinnung des Goldes auf der Insel Borneo. Tijdschrift voor Nederlandsch Indie 28, p. 207-216.
('Occurrence and exploitation of gold on the island of Borneo'. Brief review, observing gold present across much of Borneo, but mainly at W coast (Kapus area) and Sarawak. No maps or figures)

Kobayashi, T. (1973)- On the history and classification of the fossil Conchostraca and the discovery of Estheriids in the Cretaceous of Borneo. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia 13, Tokyo University Press, p. 47-72.
(Upper Cretaceous small fresh-water crustacean shells from shales near Rantaulajung, Riam Kanan River, Meratus Mts front, E of Martapura, SE Kalimantan. Mainly of species Pseudocyclograpta hashimotoi n.sp.)

Koolhoven, W.C.B. (1933)- Het primaire voorkomen van den Zuid-Borneo diamant (voorlopige mededeeling). De Mijningenieur 14, 8, p. 138-144.
('The primary occurrence of the South Borneo diamonds (preliminary communication)'. Diamonds have been mined in SE Borneo for centuries. Base of widespread M Cretaceous Manunggul Fm (locally with Orbitolina) unconformable over all older formations, with transgressive basal conglomerates containing older rocks and also detrital diamonds. (but Cretaceous basal conglomerates directly on Meratus peridotites lack diamonds). Eocene conglomerates also diamond-bearing. Peridotitic 'Pamali Breccia' with small diamonds proposed as primary diamond source. With map of diamond-bearing areas along NW side Meratus Mts, from Krol (1920))

Koolhoven, W.C.B. (1935)- Het primaire voorkomen van den Zuid-Borneo diamant. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 11, p. 189-232.
('The primary occurrence of the South Borneo diamonds'. Discussion of SE Borneo diamond occurrences, mainly in Upper Cretaceous and younger clastics at NW side of Meratus Mts. Thought thought to be derived from peridotitic 'Pamali Breccia'. Conclusion disputed Bergman et al. (1987), Burgath & Mohr (1991), etc.)

Kraeff, A. (1955)- A contribution to the petrology of the young extrusive and intrusive rocks of the river basin of S.Kajan (NE Borneo). Publ. Keilmuan, Bandung, Seri Petrologi 29, p. 11-19.

Krause, P.G. (1899)- Uber Lias von Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 5, p. 154-168.
(online at: www.repository.naturalis.nl/document/552379)
(also in Jaarboek Mijnwezen Nederlandsch Oost-Indie 25, Wetenschappelijk Gedeelte, p. 28-42).
('On the Liassic of Borneo'. Upper Liassic macrofossils from slightly bituminous dark shales interbedded with lighter sandstones in Sambas region, NW Kalimantan, collected by Wing Easton. With ammonites of Harpoceras radians group and possible Inoceramus)

Krause, P.G. (1899)- Uber Tertiare, Cretaceische und altere Ablagerungen aus West-Borneo. Sammlungen Geol. Reichs-Museums Leiden, E.J. Brill, ser. 1, 5, p. 169-218.
(online at: www.repository.naturalis.nl/document/552412)
('On Tertiary, Cretaceous and older deposits from West Borneo'. Brief, early description of W Borneo Mesozoic and Tertiary rocks and fossils from Molengraaff collection. Includes discussion of Cretaceous limestones with Orbitolina concava, as first reported by Von Fritsch (1875). No locality maps. Also in Jaarboek Mijnwezen Nederlandsch Oost-Indie 1899, Wetenschappelijk Gedeelte, 2, p. 1-52)

Krause, P.G. (1904)- Die Fauna der Kreide von Temojoh in West-Borneo, 1 Teil. Die Ammoniten. Sammlungen Geol. Reichs-Museums Leiden, E.J. Brill, ser. 1, 7, p. 1-28.
(online at: www.repository.naturalis.nl/document/552403)
('The Cretaceous fauna from Temojoh, W Borneo'. Cretaceous ammonites from slightly bituminous dark grey limestone at Temojoh village on the Landak River, collected by Koperberg in 1895. Associated with rel. small and thin-shelled gastropods, bivalves, plant remains and crustacean remnants. Ammonites mainly Knemoceras pinax n.sp., also Schloenbachia sp. (Knemoceras pinax assigned to genus Engoceras, a Late Albian- E Cenomanian genus that lived in rel. shallow shelfal marine facies in Tethys region (Bujitor 2010); JTvG))

Krause, P.G. (1911)- Uber unteren Lias von Borneo. Sammlungen Geol. Reichs-Museums Leiden, E.J. Brill, ser. 1, 9, 1, p. 77-83.
(online at: www.repository.naturalis.nl/document/552428)
('On Lower Liassic from Borneo'. Jurassic faunas reported earlier from W Borneo were mainly of Late Liassic M and U Jurassic ages (Martin, Vogel, Bullen Newton). New discovery of Early Jurassic ammonite in concretion collected by Van Dijk in float in area mapped by Wing Easton (1904) as mainly Paleozoic- Triassic outcrop, between Gunung Bentok, G, Sanggan and G, Melangsar. Ammonite most similar to E Liassic Aegoceras ziphus, but here described as Aegoceras borneense n.sp.)

Krekeler, F. (1932)- Over een nieuw voorkomen van fossielhoudend Palaeozoikum in Midden-West Borneo (voorlopige mededeeling). De Mijningenieur 13, p. 167-172.
('A new occurrence of fossiliferous Paleozoic in the central part of West Borneo (provisional report)'. See also English translation in Haile (1955). First description of fusulinids and brachiopods in W Kalimantan- W Sarawak border area, S of Kuching. Limestones associated with volcanic rocks and suggestive of Late Carboniferous age. Strike of folded, steeply dipping Late Paleozoic- Triassic rocks predominantly N-S. Overlain by Triassic volcanoclastics with Monotis salinaria (Fusulinid limestone subsequently named Terbat Lst by Haile (1954), and its fusulinids identified as E Permian by Cummings (1955))

Krekeler, F. (1933)- Aanvullende mededeelingen omtrent het voorkomen van fossielhoudend Palaeozoikum in West Borneo. De Mijningenieur 14, 11, p. 191-192.
('Supplementary report on the occurrence of fossiliferous Paleozoic in West Borneo'. See also English translation in Haile (1955). Brachiopod-bearing beds from dark claystone in volcanic series in Lower Sadong R area previously interpreted as Paleozoic also contains Halobia and now believed to be Triassic in age. Fusulinid beds from marly limestones in core of same anticline examined by Tan Sin Hok and provisionally identified as Staffella sp., believed to be same species (and same volcanoclastic facies) as U Carboniferous-Permian of Jambi, Sumatra (= E Permian?; JTvG))

Krekeler, F. (1955)- A new occurrence of fossiliferous Paleozoic rocks in the central part of West Borneo (provisional report). In: N.S. Haile (ed.) Geological accounts of West Borneo, Geological Survey Dept., British Territories in Borneo, Kuching, Bull. 2, p. 7-14.
(English translation of Krekeler (1932) original Dutch paper above)

Krekeler, F. (1955)- Supplementary report on the occurrence of fossiliferous Paleozoic in West Borneo. In: N.S. Haile (ed.) Geological accounts of West Borneo, Geological Survey Dept., British Territories in Borneo, Kuching, Bull. 2, p. 15-16.
(English translation of Krekeler (1933) original Dutch paper above)

Krokel, F. (1923)- Gesteine aus dem Gebiet des Boelangan-Flusses in Nordoestlichen Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 10, 3, p. 141-182.
(online at: www.repository.naturalis.nl/document/552377)
('Rocks from the area of the Bulungan River in NE Kalimantan'. Description of rocks collected by Herbordt of BPM in 1910. Includes biotite granite, quartz-diorite, dacite, augite-andesite, andesite tuff, breccia, conglomerate, sandstone, siliceous shale)

Krol, L.H. (1916)- Korte beschrijving van enkele 'groote' diamanten, in den laatste tijd gevonden bij Tjampaka, afd. Martapoera, Residentie Zuider- en Oosterafdeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 44 (1915), Verhandelingen 1, p. 13-17.
('Brief description of some 'large' diamonds found recently near Cempaka, Martapura'. In 1912-1915 stones of 12, 17 and 24 carats found at Danau Pumpung, S of Cempaka. Yellowish color, octohedral shape)

Krol, L.H. (1919)- De Borneo diamant, haar voorkomen, winning en bewerking. De Ingenieur 1919, September, p. 707-709.
('The diamonds of Borneo, its occurrences, exploitation and processing'. Summary of presentation)

Krol, L.H. (1920)- Over de geologie van een gedeelte van de Zuider- en Oosterafdeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 47 (1918), Verhandelingen 1, p. 281-367.
(Geology of SE Borneo, E of Banjarmasin, including Meratus- Bobaris Mountains. Cenomanian folding episode with 'intrusions' of peridotites and metamorphism. With 1:100,000 geologic map on 6 sheets)

Krol, L.H. (1922)- Bijdrage tot de kennis van den oorsprong en de verspreiding der diamant-houdende afzettingen in Zuidoost-Borneo en van de opsporing en winning van den diamant. Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 1, p. 250-304.
('Contribution to the knowledge of the origin and the distribution of diamond-bearing deposits in SE Kalimantan and its exploitation'. Diamonds found in much of Kalimantan: W (Landak River. Kajan area), SE (Martapura), Upper Barito, etc. Mainly found in Quaternary river terraces and source rock still unclear (and also in ?Cenomanian and Eocene conglomerates). Mid-Cretaceous Cenomanian peridotites/ serpentinites believed to be most likely diamond source, but not all rivers draining serpentinite terrains diamond-bearing)

Krol, L.H. (1927)- On the occurrence of the Danau formation in Martapura (S. E. Borneo). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 30, 3, p. 338-340.
(online at: www.dwc.knaw.nl/DL/publications/PU00015449.pdf)
(Critique of Rutten (1926) paper of same title. In Meratus Mts Alino and Waringin layers (including limestones with Orbitolina) affected by contact metamorphism by 'intra-Cenomanian intrusives' and may also have affected (Triassic-Jurassic?) Danau Fm radiolarites)

Krol, L.H. (1929)- Over het voorkomen der Danau-formatie in Martapoera (Z.O. Borneo). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 35, p. 988-990.
('On the occurrence of the Danau Fm in Martapura, SE Kalimantan'. Dutch version paper above)

Krol, L.H. (1929)- Plooiingsrichtingen in het Mesozoicum van West- (Centraal en Zuid-Oost?) Borneo. De Mijningenieur 10, 9, p. 200-202.

('Folding directions in the Mesozoic of West (Central and Southeast? Kalimantan'. In upper reaches of Sekayam River, Sarawak border area, strike directions of sediments with Triassic fossils around N 20° W, while Cretaceous beds strike N 60°(E?). Triassic with Monotis salinaria, M. inaequivalvis, Pseudomonotis ochotica, Steinmannites. Lower Cretaceous with Orbitolina, Vola, Micrabacia, Arca cenomanensis, U Cretaceous with Discorbina canaliculata (or Rosalina linnei= Globotruncana). Jurassic limestone of Bau, Sarawak at N 60° W (Krol's data questioned by Wing Easton (1929), Mijningenieur 10, 12, p. 271-272))

Krol, L.H. (1929)- Radiolarienhoudende gesteenten van Borneo. De Mijningenieur 10, 11, p. 243-248.
('Radiolarian-bearing rocks of Borneo'. Radiolarian-bearing rocks known from various parts of Kalimantan and Sarawak, probably of Triassic, Jurassic and Cretaceous ages. Three groups: (1) with 'normal' clastic sediments and limestones; (2) as siliceous rocks (cherts, jaspis, radiolarites), (3) conglomerates with clasts of older radiolarites. With appendix by Tan Sin Hok on radiolaria identifications (not very specific))

Krol, L.H. (1930)- De Mesozoische plooiingen op Borneo, Nederlandsch-Indie en omgeving en hunne waarde voor het kaarteren van onbekende, fossiellooze gebieden. De Mijningenieur 11, 4, p. 68-89.
('The Mesozoic folding in Borneo, Netherlands Indies and surrounding areas and its value for mapping unexplored non-fossiliferous areas'. English translation in Haile (1955, p. 17-38). Krol proposes controversial tectonic model, in which directions of folding are used to date ages of Mesozoic folding in unfossiliferous regions: Triassic N20°W, Cretaceous N60°E and Jurassic N60°W)

Krol, L.H. (1931)- Mijnbouwkundig-geologisch onderzoek in West-Borneo. Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), p. 48-54.
('Mining-geological survey in W Borneo'. Status report of West Kalimantan mapping by geological survey)

Kueter, N., J. Soesilo, Y. Fedortchouk, F. Nestola, L. Belluco, J. Troch, M. Walle, M. Guillong, A. Von Quadt & T. Driesner (2016)- Tracing the depositional history of Kalimantan diamonds by zircon provenance and diamond morphology studies. Lithos 265, p. 159-196.
(Diamonds in alluvial deposits in Kalimantan not accompanied by kimberlite or lamproite indicator minerals. Meratus Mts 'headless' diamond deposits. Provenance analysis of diamond-bearing 'Dahor Fm' Pleistocene river channel material and from outcrops of diamond-bearing Campanian-Maastrichtian Manunggul Fm. Diamonds from Meratus and Sanggau area look like classical kimberlite-type diamonds. Inclusions of olivine, coesite, garnet suggest P at formation 4.8-6.0 GPa and T of 930-1250°C. Zircons only small subset of kimberlitic affinity. Trace elements (U, Th and Eu) suggest eclogitic source for zircons. Data support model for Kalimantan diamonds of emplacement in N Australian Craton, then spread passively through SE Asia by terrane migration during Gondwana breakup. Diamond-bearing lithologies metamorphosed by terrane amalgamation events, destroying indicative mineral content. Orogenic uplift liberated diamond-content into new, autochthonous placer deposits)

Kusnaeny, K. (1968)- Die Manganerzvorkommen in West-Kalimantan (Indonesien) und Orissa (Indien). Geol. Jahrbuch 86, p. 655-692.
('The manganese ore occurrences in W Kalimantan (Indonesia) and Orissa (India)'. On mineralogy of manganese ores of W Kalimantan. Mineralization tied to veins with rhodonite and piemontite in volcanic rocks, subsequently enriched by lateritic weathering. Very little on geological setting)

Leach, T.M. (2002)- Alteration and mineralisation in the Busang gold prospect, East Kalimantan, Indonesia. In: Proc. AusIMM New Zealand Branch Annual Conf., 150 Years of Mining, 2002, 6p.

Le Bel, L., J.L. Nagel, P. Lecomte & A. Muchsin (1985)- CTA39A, Follow-up work in the Longlaai area, NE Kalimantan (The Longlaai Project)), Phase I. Bureau Rech. Geol. Minieres (BRGM) Report 86, p. 1-107. *(Unpublished) (Long Laai gold prospect associated with E Miocene (22.6 Ma) adamellite)*

Lefevre, J.C., J. Collart, M. Joubert, J.L. Nagel & A. Paupy (1982)- Geological mapping and mineral exploration in North-East Kalimantan 1979-1982; Final Report. Bureau Rech. Geol. Minieres (BRGM) and Direktorat Jend. Pertambangan Umum, BRGM Report 82RDM007AO, p. 1-120.

(Unpublished survey report, available in Geological Survey library, Bandung. Geological mapping and geochemical sampling program in area W of Tarakan Basin. Area dominated by tightly folded and faulted Cretaceous- E Eocene flysch-type sediments, unconformably overlain by subhorizontal, rel. thin M-U Eocene transgressive clastics series with reefal limestones, etc. Important volcanic phase in Miocene)

LeRoy, L.F. & G.O. Croes (1880)- Verslag van een onderzoek der lood en zinkertsafzetting aan de Kandawangan Rivier, in de Westerafdeeling van Borneo. (Met een naschrift van C.J. van Schelle). Jaarboek Mijnwezen Nederl. Oost-lndie 1880, 2, p. 3-13.
('Report on the lead and zinc ore deposit on the Kandawangan River in West Kalimantan. With a postscript by van Schelle'. Early report on lead and zinc ore occurrence in SW Kalimantan, where high grade ore was found by locals near Marouw on Kandawangan River, 14 km S of Ketapang border at Tanjung. Presence of ore confirmed in this paper at two sites, but not in situ as lode or vein (see also Cretier 1879))

Li, S., X. Yang & W. Sun (2015)- The Lamandau IOCG deposit, southwestern Kalimantan Island, Indonesia: evidence for its formation from geochronology, mineralogy, and petrogenesis of igneous host rocks. Ore Geology Reviews 68, p. 43-58.
(Lamandau Fe-Cu-Au deposit in SW Kalimantan related to Late Cretaceous diorite porphyries with zircon U-Pb ages of ~79 and 82 Ma. These arc-related igneous rocks may be tied to Pacific Plate subduction, but in extensional environment, related to rollback of Pacific plate. Magnetite compositions of low REE and high Cu-Au indicate possible Iron oxide copper-gold (IOCG) mineralization system

Lohr, J.A., (1914)- Mededelingen over de geologie van de Doesoenlanden. Verslagen Geol. Mijnbouwkundig Genootschap Nederland Kol., Geol. Sectie, I, p. 174-175.
('Notes on the geology of the Dusun Lands', upper Barito Basin, Kalimantan)

Loth, J.E. (1920)- Verslag over de resultaten van geologisch- mijnbouwkundige verkenningen en opsporingen in de residentie Wester-Afdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch-Indie 47 (1918), Verhandelingen 1, p. 224-280.
('Results of geological- mining reconnaissance in the West Borneo Residency' With 1:500,000 geological map and cross-sections on 2 sheets. Most of area, from Schwaner Mts in S, with granites overlain by rel. undeformed Cretaceous- Eocene sediments. In N WNW-ESE trending Semitau hills with folded deep-water Danau Fm shales with radiolarian cherts, unconformably overlain by less deformed, sandy Cretaceous (Cenomanian with Orbitolina and Senonian brackish-water Melawi Group). In far North near Sarawak border folded slates of unknown age. Rel. common Tertiary intrusives and volcanics)

Lumadyo, E., R. McCabe, S. Harder & T. Lee (1993)- Borneo: a stable part of the Eurasian margin since the Eocene. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 225-232.
(Paleomagnetic studies suggest SE Borneo has been at present position since Eocene, and no large Tertiary counterclockwise rotation was observed)

Macke, C.A.F. (1921)- Het voorkomen van ijzererts op de eilanden van de Poeloe Laoet groep en op de tegenoverliggende kuststreek van Borneo. Verslagen Mededelingen Dienst Mijnwezen 9, p.
('The occurrence of iron ore on the islands of the Pulau Laut group and the adjacent coastal area of Borneo')

Macke, C.A.F. (1924)- Resultaten van het geologisch-mijnbouwkundig onderzoek in Zuidoost Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie, 50 (1921), Verhandelingen 1, p. 269-303.
(Early geological-mining survey of area in SE Borneo: Pulau Laut, P. Sebuku and the Tanah Bumbu adjacent mainland of SE Kalimantan. Oldest rocks include serpentinized peridotites, gabbros and quartz-diorites)

MacKinnon, K., G. Hatta, H. Halim & A. Mangalik (1996)- The ecology of Kalimantan. The ecology of Indonesia Series, vol. III, Periplus Editions, Singapore (also Oxford University Press), p. 1-870.

Margono, U., Sutrisno & E. Susanto (1997)- Geologic map Kandangan sheet, Kalimantan, 1: 250.000. Geol. Res. Dev. Centre (GRDC), Bandung.

Martin, K. (1882)- Begeleidende woorden bij een geologische kaart van Borneo, geteekend door Von Gaffron. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 7, p. 16-22. *(also in Jaarboek Mijnwezen 1882, Wetenschappelijk Gedeelte, p.)*
('Text accompanying a previously unpublished geological map of Borneo made by Von Gaffron'. S Kalimantan map showing traverses made between 1843-1848; focused on mineral occurrences)

Martin, K. (1888)- Ueber das Vorkommen einer Rudisten fuehrenden Kreideformation im suedoestlichen Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 4, 4, p. 117-125.
(online at: www.repository.naturalis.nl/document/552380)
('On the occurrence of a rudist-bearing Cretaceous formation in SE Borneo'. Rel. poorly preserved molds of Cretaceous rudists, collected by Van Schelle in 'Patellina (=Orbitolina) marl' at Sebaruang River, a left tributary of Kapuas River (Danau Kloenten, Sungei Pangaringan, Sg. Limau Gulung, Sg. Djarikan). Identified as Sphaerulites and Radiolites (age interpreted by Martin to be Senonian, but Umbgrove (1938) considered this to be Cenomanian; JTvG)

Martin, K. (1888)- Ueber das Vorkommen einer Rudisten fuhrenden Kreideformation im sudostlichen Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1888, Wetenschappelijk Gedeelte, p. 72-80.
('On the occurrence of a rudist-bearing Cretaceous formation in SE Borneo'. Reprint of Martin (1888))

Martin, K. (1889)- Die Fauna der Kreideformation von Martapoera. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 4, p. 126-194.
(online at: www.repository.naturalis.nl/document/552423)
('The fauna of the Cretaceous formation of Martapura', SE Kalimantan. Marl-dominated U Cretaceous section with sandstones and conglomerates. With poorly preserved ammonites (Acanthoceras), common oysters (Ostrea martapuriensis, Ostrea ostracina), rudists (Sphaerulites, Radiolites), gastropods (incl. 8 species of Nerinea), brachiopods (Terebratula spp.), bivalves (Trigonia limbata, Vola, Cardium). Age probably Upper Cretaceous/ Senonian. With 7 plates)

Martin, K. (1889)- Die Fauna der Kreideformation von Martapoera. Jaarboek Mijnwezen Nederlandsch Oost-Indie 18, Wetenschappelijk Gedeelte, p. 1-74.
('The fauna of the Cretaceous formation of Martapura', SE Kalimantan. Reprint of Martin (1889) above)

Martin, K. (1889)- Versteinerungen der sogenanten alten Schieferformation von West Borneo. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 4, p. 198-208.
(online at: www.repository.naturalis.nl/document/552432)
('Fossils from the so-called Old Slate Formation of West Borneo'. Rare molluscs collected from shales by Van Schelle in 'Chinese districts' of W Borneo. Presence of Gervillia borneensis n.sp. and Corbula sp. probably indicate Cretaceous age (but Martin (1898) deemed these to be E Jurassic in age. See also Newton 1903, Vogel). With 2 plates)

Martin, K. (1889)- Versteinerungen der sogenanten alten Schieferformation von West Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 18 (1889), Wetenschappelijk Gedeelte, p. 75-85.
('Fossils from the so-called Old Slate Formation of West Borneo'. Reprint of Martin (1889)

Martin, K. (1889)- Untersuchungen uber den Bau von *Orbitolina* (*Patellina* auct.) von Borneo. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 4, p. 209-231.
(online at: www.repository.naturalis.nl/document/552418)
('Remarks on the construction of Orbitolina (= Patellina of earlier authors) from Borneo'. Early paper on mid-Cretaceous larger foram Orbitolina concava, called Patellina in earlier papers. Collected by Van Schelle on Seberuang River, a tributary of Kapuas River, Central Kalimantan)

Martin, K. (1889)- Untersuchungen uber der Bau von *Orbitolina* (*Patellina* auct.) von Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 18 (1889), Wetenschappelijk Gedeelte p. 86-108.
('Remarks on the construction of Orbitolina...'. Reprint of Martin (1889))

Martin, K. (1898)- Notiz uber den Lias von Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 5, p. 253-256.
(online at: www.repository.naturalis.nl/document/552398)
('Note on the Lias of Borneo'. Follow-up on Krause (1897) discovery of Liassic rocks of W Kalimantan. New material collected by Wing Easton from shales-sands at Sungei Kerassiek near Sepang in Sambas not only contained poorly preserved ammonite Harpoceras radians, but also bivalve Gervillia borneensis (already described by Martin (1889), possibly from same area). No figures)

Martin, K. (1898)- Notiz uber den Lias von Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 27 (1898), Wetenschappelijk Gedeelte p. 33-36.
('Note on the Lias of Borneo'. Same as Martin (1899))

Martin, K. (1898)- Die Fauna der Melawi-Gruppe, einer Tertiaren (Eocanen?) Brackwasser-ablagerung aus dem innern von Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 27 (1898), Wetenschappelijk Gedeelte, p. 37-96.
('The fauna of the Melawi Group, a Tertiary (Eocene?) brackish-water deposit from the interior of Borneo'. Same as Martin, 1899)

Martin, K. (1899)- Die Fauna der Melawi-Gruppe, einer Tertiaren (Eocanen?) Brackwasser-ablagerung aus dem innern von Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 5, p. 257-316.
(online at: www.repository.naturalis.nl/document/552430)
('The fauna of the Melawi Group, a Tertiary (Eocene?) brackish-water deposit from the interior of Borneo'. Descriptions of probably Late Eocene-age brackish-fresh water molluscs from Melawi and Kajan Rivers area, NW Kalimantan, collected by Wing Easton. Mainly species of bivalves Corbula (C. dajacensis), Cyrena (C. subrotundata, C. melaviensis) and gastropods Melania and Paludomus (P. gracilis, P. crassa); less common Arca melaviensis n.sp. Age indeterminate. With 2 plates)

Martin, K. (1899)- On brackish water-deposits of the Melawi in the interior of Borneo. Proc. Kon. Akademie Wetenschappen, Amsterdam, 1, p. 245-248.
(online at: www.dwc.knaw.nl/DL/publications/PU00014557.pdf)
(Molluscs collected by Wing Easton and Molengraaff in sediments of Melawi River area, Upper Kapuas, C Kalimantan, mainly fresh (Melania, Paludomus) or brackish water (Cyrena, Corbula), but also some shallow marine species. Age Tertiary, possibly Eocene)

Maryanto, S., Jamal & K.D. Kusumah (2014)- Mikrofasies batugamping Formasi Butanunggal di daerah Binuang, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 15, 4 (203), p. 195-204.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/58/60)
'Limestone microfacies of the Batununggal Fm in the Binuang area, S Kalimantan'. Microfacies of Early Cretaceous reefal limestone with Orbitolina (identified as Aptian-Albian Orbitolina oculata and O. primitiva) in Meratus Mts. Limestones occuring as olistoliths in Late Cretaceous- Paleocene Keramaian Fm (?))

Masdja, M. & S. Sastrawiharjo (1988)- Geochemical exploration for uranium deposits in the Kalan area, Kalimantan. In: Technical committee meeting on Uranium deposits in Asia and the Pacific: Geology and exploration; Jakarta 1985, Panel Proceedings Series, Int. Atomic Energy Agency, Vienna, p. 229-238.
(On 1971-1976 uranium exploration work in C Kalimantan by Indonesian (BATAN)/French (CEA) teams, identifying some mineralized outcrops and boulders in Kalan area)

Mazur, S., C. Green, M. Stewart, R. Bouatmani & P. Markwick (2011)- Rotation of Borneo revisited- new inferences from gravity data and plate reconstructions. In: Petrol. Geol. Conf. Exhib. (PGCE 2011), Kuala Lumpur, Warta Geologi 37, 1, p. 52. *(Abstract only; no figures)*

(online at: https://gsmpubl.files.wordpress.com/2014/09/warta37_1.pdf)
(Paleomagnetic data of 50+40° CCW rotation of Borneo since 80 Ma disputed. Large gravity lineaments running E-W through Kalimantan and into Sea of Kalimantan(?) as well as ENE-WSW gravity anomalies across Java Sea and into Sumatra are evidence of crustal continuity that is hard to reconcile with rotation model of Hall (2002). Alternative plate model predicts 12-13° of CW rotation for Kalimantan and Sarawak relative to S China since 30 Ma. N Sabah is separated from Sarawak and Kalimantan by plate boundary which implies common tectonic history for N Sabah and S Palawan and separate evolution until M Miocene docking of Palawan Block to N margin of Borneo and Cagayan Ridge)

McManus, J. & R.B. Tate (1976)- Volcanic control of structures in North and West Borneo. Proc. SEAPEX Offshore SE Asia Conf., Singapore 1976, 5, p. 1-14.
(Volcanic and epiclastic rocks rel. widespread in N and W Borneo, and relationship between volcanism, fracture patterns and sedimentation)

Milsom J. (1997)- The gravity field of Borneo and its region. Bull. Geol. Soc. Malaysia 40, p. 21-36.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997003.pdf)
(Review of gravity data on and around Borneo. Gravity data tends to support thin (<15km), probably oceanic crust under Makassar Straits (and Kutai Basin?). Isostatic effects dominate gravity field in Borneo region, with crust showing ability to support loads for short periods only and even then only in relatively small areas such as Darvel Bay)

Mohler, W.A. (1946)- Uber das Vorkommen von *Trocholina* Paalzow in der Unterkreide von West-Borneo. Eclogae Geol. Helvetiae 39, 2, p. 300-302.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1946:39327)
('On the occurrence of Trocholina Paalzow in the Lower Cretaceous of Borneo'. First report of small benthic foram Trocholina in SE Asia, from Lower Cretaceous of Seberuang River, Kapuas drainage basin, W Kalimantan. Associated ammonites described by Von Koenigswald 1939. Material collected by Zeijlmans 1939, who noted similarities of this material with Dusun Pobungo Cretaceous of Jambi, Sumatra)

Molengraaff, G.A.F. (1895)- De Nederlandsche expeditie naar Centraal-Borneo in 1894. Handelingen 5[e] Nederlandsch Natuur- Geneeskundig Congres, 4, p. 1-9.
(First summary report on 1894 Central Kalimantan geological expedition)

Molengraaff, G.A.F. (1900)- Geologische verkenningstochten in Centraal-Borneo. Maatschappij ter bevordering van het natuurkundig onderzoek der Nederlandsche kolonien, Brill, Leiden, p. 1-529 + Appendix 56p. + Atlas 22 plates.
(Text volume online at: http://openlibrary.org/works/OL7839000W/Borneo-expeditie or at : https://resolver.kb.nl/resolve?urn=MMKB21:039075000:pdf)
('Geological reconnaissance trips in Central Borneo'. Classic early work on first geologic reconnaissance of C Kalimantan, with traverses along Kapuas, Mandai, Embaluh, Seberuang, etc. rivers. Oldest rocks Crystalline Schist and Old Slate Formations. First descriptions of E-W belt of Late Jurassic - E Cretaceous Danau Fm (E-W trending, steeply dipping deep marine 'diabase tuff' deposits with radiolarian cherts), unconformably overlain by less-deformed M-U Cretaceous marine sandy clastics and marls with Orbitolina concava and plant debris. Overlain by widespread rel. flat-lying but clearly variously uplifted non-marine Tertiary clastics. Eocene Nummulites- Discocyclina limestones found only as float. Also various types of intrusive granitoids and volcanic, small peridotite massif on Upper Kapuas, glaucophane amphibolite on Sebilit River, etc.)

Molengraaff, G.A.F. (1902)- Borneo-expedition. Geological explorations in Central Borneo (1893-94). English revised edition. Brill, Leiden, 2 vols., p. 1-529 + Appendix 56p. + Atlas 22 plates.
(English version of Molengraaff (1900) above)
(Atlas online at: http://hdl.handle.net/1887.1/item:2033428)

Molengraaff, G.A.F. (1909)- On oceanic deep-sea deposits of Central Borneo. Proc. Kon. Nederl. Akademie Wetenschappen Amsterdam, 12, p. 141-147.

(online at: www.dwc.knaw.nl/DL/publications/PU00013423.pdf)
(Radiolarian cherts common in intensely folded Danau Fm (S of 'Old Slates' of U Kapuas mountain range near Kalimantan-Sarawak border), in ~60km wide belt stretching E-W over distance of 650 km across N Central Borneo from Upper Kapuas to Upper Mahakam Basin. Radiolarites often red in color and 97% silica) Interpreted as deep oceanic deposits, similar to those forming at depths below 5000m at equatorial latitudes today. (Age of Danau Fm oceanic assemblage is Jurassic- E Cretaceous according to Hinde (1900) and Heryanto et al. 1993))

Molengraaff, G.A.F. (1909)- Iets over de rivieren van het eiland Borneo in verband met zijn geologische gesteldheid. Handelingen Nederlandsch Natuur- Geneeskundig Congres 12, Utrecht, p. 700-712.
('About the rivers on the island of Borneo in relation to its geological condition'. In S half of Borneo all rivers drain from N to S, to Java Sea, in N half of island rivers drain W to E or E to W. Related to E-W striking fold trends in N Borneo, generally of Cretaceous age, while in S mostly granites, schists and Tertiary sandstones with no preferential strike directions)

Molengraaff, G.A.F. (1914)- Hoofdtrekken der geologie van Oost Borneo naar aanleiding der reizen van prof. dr. A.W. Nieuwenhuis en anderen. Verslagen Geologisch Mijnbouwkundig Genootschap, Geol. Sectie, 1, p. 175-179.
('Main points of the geology of East Kalimantan, after voyages of Prof. A.W. Nieuwenhuis and others')

Monnier, C., M. Polve, J. Girardeau, M. Pubellier, R.C. Maury, H. Bellon & H. Permana (1999)- Extensional to compressive Mesozoic magmatism at the SE Eurasia margin as recorded from the Meratus ophiolite (SE Borneo, Indonesia). Geodinamica Acta 12, 1, p. 43-55.
(Meratus ophiolitic series records (1) Jurassic continental rifting episode along Paleo-Eurasian margin followed by ?Cretaceous backarc opening, as seen in peridotites and (2) M-Late Cretaceous subduction-related calc-alkaline magmatism. Ophiolitic series ultramafics (lherzolites and pyroxenites) with minor metavolcanics, typically enriched MORB to normal MORB types. Meratus peridotites fragment of subcontinental lithospheric mantle. Back-arc basin basalts also in metamorphic soles of peridotites, formed in back-arc basin now accreted to E margin of Eurasia and partly covered by calc-alkaline magmatism (Alino Fm). Ophiolitic series crosscut by Late Turonian-Senonian Manunggul Fm calc-alkaline melts)

Moss, S.J. & M.E.J. Wilson (1998)- Biogeographic implications from the Tertiary palaeogeographic evolution of Sulawesi and Borneo. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia. Backhuys Publ., Leiden, p. 133-155.
(online at: http://searg.rhul.ac.uk/searg_uploads/2016/01/Moss_Wilson.pdf)
(Series of paleogeographic maps of Borneo- Sulawesi region, from 50- 4 Ma. W Sulawesi accreted onto Borneo by Late Cretaceous, then separated in M-Late Eocene. E Sulawesi collided with W Sulawesi in M-L Oligocene. Late Miocene accretion of Australia-derived microcontinents onto E Sulawesi)

Moyle, A.J., K. Bishoff, K.R. Alexander & H. Hoogvliet (1996)- Mt Muro gold deposit, Indonesia. In: Proc. Conf. Porphyry related copper and gold deposits of the Asia Pacific Region, Cairns 1996, Australian Mineral Found., Adelaide, p. 7.1-7.9.
(On Mt Muro gold deposit in C Kalimantan)

Muhammad, A.G. & B. Soetopo (2016)- Pemodelan dan estimasi sumber daya uranium di sektor Lembah Hitam, Kalan, Kalimantan Barat. Eksplorium 37, 1, p. 1-12.
(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/2668/pdf)
('Uranium resources modeling and estimation in Lembah Hitam sector, Kalan, West Kalimantan'. Lembah Hitam Sector part of Schwaner Mts and Kalan Basin. Uranium mineralization in Permo-Triassic Pinoh Metamorphics metasiltstone and metapelites (intruded by Cretaceous Sepauk Tonalite/ Sukadana Granite))

Muller, J. (1966)- Montane pollen from the Tertiary of NW Borneo. Blumea 14, 1, p. 231-235.
(online at: http://dare.uva.nl/cgi/arno/show.cgi?fid=565151)

(Majority of spores-pollen in Oligocene- Pliocene sediments of NW Borneo derived from various types of tropical lowland vegetation such as mangrove, peat swamp forest and mixed Dipterocarp forest. Some pollen types reflect montane vegetation: (1) Podocarpus imbricatus and Phyllocladus (only since Late Pliocene; migrated from New Guinea?); (2) Pinus, Picea, Tsuga, Ephedra an Alnus (abundant in Oligocene- E Miocene; gradually decreasing in frequency during Miocene). Many of these 'Asiatic montane' pollen are all mainland Asia types that do not occur in Borneo mountains today. Suggestive of rel. nearby Late Eocene uplift phase)

Murphy, R.W. (2002)- Throwaway lines on the petroleum geology of Borneo. SEAPEX Press 5, 2, p. 38-44.
(Series of statements on geology of North Borneo, incl. SW Borneo is underlain by Sunda cratonic continental crust that amalgamated in Late Triassic time, N Borneo underlain by stacked sequences of oceanic crust, dominantly of Late Jurassic- E Cretacous age, controversy exists about postulated Tertiary CCW rotations of Borneo, etc.)

Murphy, R.W. (2002)- Crustal evolution of Borneo. SEAPEX Press 5, 6, p. 28-30.
(Series of cartoons depicting tectonic evolution of Borneo from Late Triassic- Recent)

Murphy, R.W. & A.A. Morado (1998)- The structure of Borneo (7 crustal cross-sections). SEAPEX, p.

Nagel, J.L. (1990)- CTA 39A. Exploration of the Long Laai Zn-Pb-Ag skarn mineralisation in the Tahling Basin, Kalimantan Timur (Indonesia). Bureau Rech. Geol. Minieres (BRGM) Report R-30433, DEX-DAM-90 p.. *(Unpublished)*

Newton, R. Bullen (1903)- Notes on some Jurassic shells from Borneo, including a new species of *Trigonia*. Proc. Malacological Soc. London, 5, 6, p. 403-409.
(Jurassic rocks with molluscs known only from West of Borneo: Sultanate of Sambas and W Sarawak. Initially described as Cretaceous by Martin (1890), subsequently determined to be Liassic. Description of new Jurassic fossils from Boedak (Buduk), W Kalimantan, collected by McCarthy, incl. Trigonia molengraaffi n.sp., Protocardia, Corbula, Pseudomonotis, Exelissa, etc.. Most likely age 'Lower Oolitic' (= ~Bajocian, M Jurassic) (Trigonia molengraaffi considered to be species of Myophorella (Haidaia) by Kobayashi (1957) and is common in Upper Jurassic of Japan (Hayami 1984))

Newton, R.B. & R. Holland (1899)- On some Tertiary foraminifera from Borneo collected by Professor Molengraaff and the late Mr. A.H. Everett and their comparison with similar forms from Sumatra. Ann. Mag. Natural History ser. 7, 3, p. 245-264.
(Occurrences of Eocene Nummulites- Discocyclina limestones from Kalimantan- Sarawak/ Brunei border area, and from Gomanton hill, Kinabatang district)

Nila, E.S., E. Rustandi & R. Heryanto (1995)- Geological map of the Palangkaraya Quadrangle, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
('Peta geologi lembar Palangkaraya, Kalimantan'. Southern C Kalimantan map sheet E and S of palngkaraya town. Mainly Young Tertiary sediments with rel. small outcrop areas of Cretaceous granite and E Triassic(?) quartzite and Triassic(?) volcanics)

Nixon, P.H. & S.C. Bergman (1987)- Anomalous occurrences of diamonds. Indiaqua 47, p. 21-27.
(Includes suggestion Borneo diamonds are associated with ultramafic rocks of obducted ophiolite)

Panggabean, H. (2005)- The occurrence of methane gas seepages in the Upper Ketungau area, West Kalimantan. Indonesian Mining J. 8, 1, p. 1-8.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/205/122)
(Flammable methane gas seepages at Peturau River, N of Upper Ketungau River, Ketungau Basin, N of Semitau High (Boyan Melange), NW Kalimantan. Near outcrop of Sekalau coal seam and probably coalbed methane gas, leaking through NW-SE trending faults. Coals present in Eocene Kantu (Silantek) Fm and Miocene Late Oligocene-Miocene(?) Ketungau Fm (Sekalau and Malintang seams, 0.10- 0.95m thick, vitrinite Ro 0.66-0.70%). Kantu Fm coal vitrinite Ro 0.68-0.82%)

Panjaitan, S. (2015)- Dinamika dan evolusi cekungan Ketungau Kalimantan Barat berdasarkan metode gayaberat. J. Geologi Sumberdaya Mineral 16, 2, p. 103-114.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/45/46)
('Dynamics and evolution of the Ketungau basin, West Kalimantan, by gravity method'. Oil-gas seeps in Sinaning River and upper Puturau and Ara Rivers along S margin of Ketungau Basin. Gravity anomalies 2 areas: 16-58 mGal anomaly over Semitau high and 8-16 mGal over sedimentary basin. Ketungau Basin controlled by reverse and normal faults; formed as foreland basin when Kalimantan underwent 60º Oligocene-Miocene rotation to left. Basement interpreted as ophiolite or oceanic rocks, deformed by block faulting, Cretaceous- Tertiary sediment thickness Ketungau Basin up to ~4km)

Parkinson, C.D., K. Miyazaki, K. Wakita, A.J. Barber & D.A. Carswell (1998)- An overview and tectonic synthesis of the pre-Tertiary very-high pressure metamorphic and associated rocks of Java, Sulawesi and Kalimantan, Indonesia. Island Arc 7, p. 184-200.
(High-P metamorphic rocks common in Cretaceous accretionary complexes of Java, Sulawesi, SE Kalimantan. Many occur as imbricate slices of carbonate, quartzose and pelitic schists of shallow marine or continental margin parentage, interthrust with subordinate basic schists and serpentinite. Predominantly low-intermediate metamorphic grade, with K-Ar ages of 110-120 Ma. Metamorphic rocks from greater depths (>60 km) sporadically exposed, usually as tectonic blocks. Metamorphic rocks probably recrystallized in N-dipping subduction zone at Sundaland craton margin in Early Cretaceous. Exhumation may have been facilitated by collision of Gondwanan continental fragment with Sundaland margin at ~120-115 Ma)

Permanadewi, S., M.H.J. Dirk & U. Hartono (1997)- Penarikhan Kalium-Argon batuan granitik daerah Kalimantan selatan. J. Geologi Sumberdaya Mineral 7, 74, p. 25-32.
(K-Ar analyses of granitic rocks in the S Kalimantan area'. New analyses of Cretaceous granites from Meratus Range E of Kandangan and Barabai. Two groups of granitic rocks (1) E Cretaceous group (121-103 Ma; calc-alkaline, I-type, subduction-related volcanic arc granites) and (2) Late Cretaceous tonalite and diorite (71-70 Ma; unknown genesis). Also 131.1 ± 12.8 Ma age for gabbro)

Permanadewi, S., U. Hartono & I. Saifudin (1996)- Hasil pentarikhan Kalium- Argon dan jejak belah batuan gunungapi Pulau Laut: implikasinya terhadap evolusi magma Kalimantan Selatan. J. Geologi Sumberdaya Mineral 6, 63, p. 10-16.
('Results of K-Ar and trace elements of volcanic rocks from Pulau Laut; implications for the magmatic evolution of S Kalimantan'. K-Ar and fission track ages of volcanics of Laut Island off SE Kalimantan. K-Ar ages of Cretaceous Haruyan Fm andesitic volcanics 82 Ma (E Campanian) and 69.6 Ma; Paleocene andesite and microgabbro, Oligocene andesite of 32.5 Ma. Apatite Fission track ages of G. Peltin diorite at E side of island 7.6- 8.3 Ma)

Pieters, P.E. & S. Supriatna (1990)- Late Cretaceous- Early Tertiary continent- continent collision in Borneo. In: T.J. Wiley et al. (eds.) Terrane analysis of China and the Pacific Rim, Circum-Pacific Council Energy and Mineral Resources, Earth Science Series, 13, p. 193-194.

Pieters, P.E. & S. Supriatna (1990)- Geological map of the West, Central and East Kalimantan Area, 1: 1000,000. Geol. Res. Dev. Centre (GRDC), Bandung, Indonesia.
(Includes 91-80 Ma radiometric age for Sukadana Granite)

Pieters, P.E., Surono & Y. Noya (1993)- Geological map of the Nangaobat Sheet area, Kalimantan 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Pieters, P.E., Surono & Y. Noya (1993)- Geology of the Putussibau Sheet, Kalimantan 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(C Kalimantan map sheet, showing Permo-Triassic Busang Complex igneous and metamorphic rocks, overlain by folded Cretaceous Selangkai Gp sediments, unconformably overlain by near-horizontal Late Eocene

sediments. In North Kapuas and Embaluh melange with Danua ultramafics. Numerous Late Oligocene- E Miocene Sintang andesite intrusives, etc.)

Posewitz, T. (1882)- Unsere geologische Kenntnisse von Borneo. Mitteilungen Jahrbuch Konigl. Ungarischen Geologischen Anstalt, Budapest, 6, 4, p. 136-162.
(online at: http://pbc.gda.pl/Content/52889/C_TP_15007_Bd_6__.pdf)
('Our geological knowledge of Borneo')

Posewitz, T.A.K. (1883)- Geologische Notizen aus Central-Borneo (das Tertiare Hugelland bei Teweh). Natuurkundig Tijdschrift Nederlandsch-Indie 43, p. 169-175.
('Geologic notes from Central Borneo- the Tertiary hill country near Teweh'. Brief description of surface geology of upper Kutei basin near Muara Teweh. Common rel. hard sandstones, locally with plant fragments, overlain by marls and ~40m thick Nummulites- orbitoid limestone. Stratigraphy appears similar to Eocene of Pengaron (Barito basin). No figures/ maps)

Posewitz, T. (1883)- Das Goldvorkommen in Borneo. Mitteilungen Jahrbuch Konigl. Ungarischen Geologischen Anstalt, Budapest, 6, p. 176-190.
(online at: http://pbc.gda.pl/Content/52889/C_TP_15007_Bd_6__.pdf)
('The gold occurrences of Borneo'. Early report on distribution of gold in Kalimantan. Many of the alluvial and fluvial gold occurrences already mined by locals. Less common gold disseminated in metamorphic rocks, granites and quartz veins)

Posewitz, T. (1884)- Geologische Mitteilungen uber Borneo. 1. Das Kohlenvorkommen in Borneo. 2. Geologische Notizen aus Central-Borneo. Mitteilungen Jahrbuch Konigl. Ungarischen Geologischen Anstalt, Budapest, 6, p. 317-350.
(online at: https://epa.oszk.hu/03600/03681/00026/pdf/EPA03681_mittheilungen_1884_02_318-350.pdf)
('Geological notes from Borneo: 1. Coal occurrences in Borneo, 2. Geological notes from Central Borneo')

Posewitz, T. (1885)- Das Diamantvorkommen in Borneo. Mitteilungen Jahrbuch Konigl. Ungarischen Geologischen Anstalt 7, p. 183-192.
('The occurrence of diamonds in Borneo'. Appendix to Geology of Bangka paper. Review of 1800's Dutch literature on diamond occurrences on Kalimantan, which had been exploited by Chinese miners since 1700's, mainly in West Kalimantan (Landak). Also present in SE Kalimantan (mainly at Martapura and Cempaka and also E of Meratus Range in Pagattan and Kusan areas). All diamonds from alluvial deposits)

Posewitz, T. (1889)- Borneo: Entdeckungsreisen und Untersuchungen; gegenwartiger Stand der geologischen Kenntnisse, Verbreitung der nutzbaren Mineralen. Friedlander, Berlin, p. 1-385.
(online at: https://archive.org/details/borneoentdeckun00posegoog)
('Borneo: discovery journeys an investigations; present state of geological knowledge, distribution of economic minerals'. Early textbook with overview of exploration, geology, mineral occurrences of all of Borneo Island, with first geological map. Few illustrations)

Posewitz, T. & F.H. Hatch (1892)- Borneo: its geology and mineral resources. Edward Stanford, London, p. 1-495.
(online at: http://archive.org/details/cu31924009555594)
(English translation of German original. First non-Dutch overview of late 1800's state of knowledge of Borneo geology, coal and minerals)

Priadi, B (2010)- Kalimantan magmatic system. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. MGEI-IAGI Seminar Kalimantan coal and mineral resources, Balikpapan 2010, p. 187-190.
(Eocene-Miocene magmatic products in Kalimantan calc-alkaline, subduction-related magmatism, correlated to subduction of S China Sea Plate, indicating time of collision of Luconia continental plate to NW Kalimantan. Miocene-Pliocene magmatism of potassic calc-alkaline affinity, indicating development of present subduction system. Tholeiitc within-plate magmatism characterizes of Pliocene- Recent magmatism)

Priyomarsono, Sumarso (1985)- Contribution a lôœtude geologique du Sud-est de Borneo, Indonesia: geologie structurale de la partie meridionale de la chaine des Meratus. Thesis, Universite de Savoie, Chambery, Trav. Dept. Sciences de la. Terre 5, p. 1-198. *(Unpublished)*
(*Abstract at: http://edytem.univ-savoie.fr/archives/lgham/priyomarsono-r-fr.html*)
('Contribution to the study of SE Borneo: structural geology of the southern part of the Meratus chain'. Oldest rocks M Cretaceous Alino Fm volcanic arc deposits (Pulau Laut and W Sulawesi transitional arc-forearc rocks). Radiolarians and Orbitolina gave M Albian- Cenomanian age; interbedded lavas K/Ar age ~92 Ma, granite ~97Ma. Cenomanian obduction of peridotites with metamorphic sole dated at ~145 Ma, possibly due to collision of unknown microcontinent. Unconformably overlain by Turonian- Senonian Manunggul Fm molasse with calc-alkaline volcanics dated between 87-72 Ma. Eocene (and older?) extensional grabens with paralic, then marine deposits of Tanjung Fm. Middle Miocene compression, tied to Sula-Sulawesi collision, formed most folding and uplift along E border of Meratus Mts. Neotectonic uplift phase caused additional, recent uplift)

Priyomarsono, S. (1986)- Evolusi tektonik daerah Meratus dan sekitarnya, Kalimantan Tenggara. Proc. Ann. Conv. Indon. Assoc. Geol. (IAGI), p.
('Tectonic evolution of the Meratus and surrounding areas, Kalimantan'. Summary of thesis above)

Priyomarsono, S. & A. Sumarsono (1996)- Kontrol tektonik pada sedimentasi progading delta di cekungan Kutai, Kalimantan Timur. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 104-119.
('Tectonic control on prograding delta sedimentation in the Kutai Basin, E Kalimantan')

Pubellier, M., J. Girardeau & I. Tjashuri (1999)- Accretion history of Borneo inferred from the polyphase structural features in the Meratus Mountains. In: I. Metcalfe (ed.) Gondwana dispersion and Asian accretion, IGCP 321 Final results volume, A.A.Balkema, Rotterdam, p. 141-160.
(Meratus Mountains area of Mid-Cretaceous ophiolite obduction (oblique, N-S directed collision) and separates Eocene Barito and Asem-Asem basins. W front high-angle thrust, E flank gentle East dip. Main Meratus uplift around E-M Miocene boundary(remote response to Banggai-Sula collision). Two phases of Paleogene extension: N110E in Barito (Paleocene?) and N20E (Eocene; tied to Makassar Straits opening))

Pubellier, M. & D. Menier (2013)- The ups-and-downs of Borneo. In: 3rd Int. Conf. Palaeontology of South-East Asia (ICPSEA3), Malaysia, p. 42. *(Abstract only)*
(online at: www.senckenberg.de/files/content/forschung/projekte/igcp-596/igcp_596_malaysia_2013_abstrvol.pdf)

Purwanto, H.S. (2009)- Mineralisasi lead- zinc daerah Riamkusik, Kecamatan Marau, Kabupaten Ketapang, Propinsi Kalimantan Barat. J. Ilmiah Magister Teknik Geologi (UPN) 2, 2, 15p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/190)
('Lead- Zinc mineralization in the Riamkusik area, District Marau, Ketapang, W Kalimantan Province'. Massive sulphide mineralisation in SW Kalimantan with galena, magnetite, sphalerite, pyrite, stibnite, hematite, chalcopyrite, also some Au and Ag. In fault zone in Cretaceous volcanics/ andesitic intrusions (?))

Purwanto, H.S. & H. Riswandi (2010)- Jenis deposit ñmassive sulphideò Pb-Zn di dearah Riam Kusik, Kecamatan Ketapang, propinsi Kalimantan Barat. J. Ilmiah Magister Teknik Geologi (UPN) 3, 2, 12p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/209)
('Type of "massive sulphide" Pb-Zn deposit in Riam Kusik, Ketapang District, West Kalimantan'. Massive sulphide mineralization with galena, chalcopyrite, sphalerite, etc., following E-W structural grain)

Retgers, J.W. (1891)- Mikroskopisch onderzoek eener verzameling gesteenten uit de afdeeling Martapura, Zuid-en Oost Afd. van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1891, Wetenschappelijk Gedeelte, p. 5-212.
('Microscopic study of a collection of rocks from the department Martapura, SE Kalimantan'. Petrographic description of rocks collected by Hooze in 1883-1888. Mainly various schists, including glaucophane schist, all presumed to be of Precambrian age (more likely mid-Cretaceous; JTvG). No location maps)

Retgers, J.W. (1893)- Uber kristallinische Schiefer, insbesondere Glaukophanschiefer, und Eruptivgesteine im sudlichen Borneo. Neues Jahrbuch Mineral. Geol. Palaontologie 1893, 1, p. 39-43.
('On crystalline schists, particularly glaucophane schists, and volcanic rocks in southern Kalimantan'. First record of high P- low T glaucophane schists from Meratus Mountains at Pengaron and further north, collected by Hooze. Also peridotites-serpentinites. Little or no granite and true gneiss)

Retgers, J.W. (1895)- Mikroskopisch onderzoek van gesteenten van de Oostkust van Borneo, verzameld door J.A. Hooze. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1895, Wetenschappelijk Gedeelte, p. 78-98.
('Microscopic study of rocks from the east coast of Kalimantan, collected by J.A. Hooze'. Brief petrographic descriptions, many from Pulau Laut, of a.o. quartz sandstones from Kutai, porphyrite/ diabase, diorite, and serpentinite from Palau Laut, limestone from Laut straits, etc.)

Roberts, G.G., N. White, M.J. Hoggard, P.W. Ball & C. Meenan (2018)- A Neogene history of mantle convective support beneath Borneo. Earth Planetary Sci. Letters 496, 1, p. 142-158.
(Convective uplift possibly played role in sculpting Borneo physiography. Long wavelength free-air gravity anomaly of +60 mGal centered on Borneo coincides with distribution of Neogene basaltic magmatism and sub-plate slow shear wave velocity anomalies (anomalously hot asthenosphere?). Regional shortening does not account for km-scale regional elevation. Uplift history suggests Borneo topography grew in Neogene and ties to offshore Miocene transition from carbonate to clastic deposition. Regional uplift possibly partly generated and maintained by temperature anomalies within asthenospheric channel)

Robinson, G., N. Ratman & P. Senyaja (1996)- The accreted Meratus terranes Southeast Kalimantan. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 20, p. 35-56.
(At least 3 terranes accreted to SE Kalimantan from E between Barremian-Aptian and end-Paleocene. Meratus Mts consists of number of W-dipping partly subducted slabs of pre-Aptian oceanic crust, with granite and marine sediments. Stratigraphy includes Aptian-Paleocene arc volcanics, Barremian-Aptian granite, Aptian-Paleocene marine sediments and slivers of high P-low T metamorphic equivalents of these rocks. Meratus Mts uplifted and partly eroded at end-Paleocene, followed by deposition of Eocene- Pleistocene sediments (much of this is unlikely to be correct; JTvG))

Robinson, G.P., A.Y.S. Wah, B.T. Setiabudi, D.N. Sunuhadi, J.M. Hammarstrom, S. Ludington, A.A. Bookstrom, S.A. Yenie & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7019, Central Kalimantan-Indonesia and Sabah and Sarawak, Malaysia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rep. 2010-5090-D, Appendix I, p. 149-163.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in C Kalimantan- N Borneo dispersed belt of late Oligocene- Pliocene intermediate intrusives and volcanics. Relation of these intrusive rocks to subduction unclear, and tectonic setting for porphyry copper deposits in this tract likely post-subduction. All porphyry copper prospects likely of Miocene-Pliocene age. Only one known porphyry copper deposit: Mamut (Sabah; 1966))

Robinson, K. (1987)- Palinspastic thickness map of the Paleogene sequence of the Circum-Borneo region, Southeast Asia. Open-File Report U.S. Geol. Survey (USGS), Reston, OF 87-495-B.
(online at: http://pubs.usgs.gov/of/1987/0495b/plate-1.pd)
(Paleogene isopach map of circum-Borneo region)

Robinson, K. (1987)- Palinspastic paleogeographic map of the Paleogene sequence of the Circum-Borneo region, Southeast Asia. U.S. Geol. Survey (USGS), Reston, Open-File Report OF 87-495-C.
(online at: http://pubs.usgs.gov/of/1987/0495c/plate-1.pdf)
(Broad Paleogene paleogeography map of Borneo)

Robinson, K. (1987)- Palinspastic thickness map of the Neogene sequence of the Circum-Borneo region, Southeast Asia. Open-File Report U.S. Geol. Survey (USGS), Reston, OF 87-495-D.

(online at: http://pubs.usgs.gov/of/1987/0495d/plate-1.pd)
(Neogene isopach map of circum-Borneo region)

Robinson, K. (1987)- Palinspastic paleogeographic map of the Neogene sequence of the Circum-Borneo region, Southeast Asia. Open-File Report U.S. Geol. Survey (USGS), Reston, OF 87-495-E.
(online at: http://pubs.usgs.gov/of/1987/0495e/plate-1.pdf)
(Broad Neogene paleogeography map of Borneo)

Robinson, K. (1987)- Location map of major Tertiary sedimentary provinces and structural elements of the Circum-Borneo region, Southeast Asia. Open-File Report U.S. Geol. Survey (USGS), OF87-495-F.
(online at: http://pubs.usgs.gov/of/1987/0495f/plate-1.pdf)
(Simple Tertiary basins of Borneo area outlines map)

Robinson, K. & E.P. DuBois (1987)- Thickness map of the petroliferous Tertiary sequence of the Circum-Borneo region, Southeast Asia. Open-File Report U.S. Geol. Survey (USGS), Reston, OF 87-495-A.
(online at: http://pubs.usgs.gov/of/1987/0495a/plate-1.pdf)
(Tertiary isopach map of circum-Borneo region. Part of structure, isopach, paleogeographic maps series)

Rodenburg, J.K. (1984)- Geology, genesis and bauxite reserves of West Kalimantan, Indonesia. In: L. Jacob (ed.) Bauxite, Proc. 1984 Bauxite symposium, Los Angeles, American Inst. Mining Metall. Petroleum Engineers (AIME), New York, p. 603-618.
(Major bauxite belt evaluated from 1969 to 1974 by PT Alcoa in W Kalimantan, Indonesia. Bauxite occurs as capping of low hills, formed during post-Paleogene peneplanation stage. Deposits formed by in situ weathering of predominantly acidic and basic intrusive rocks)

Rusmana, E. & P. Pieters (1993)- Geology of the Sambas/Siluas sheet area, Kalimantan, Quads 1317-1417, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of NW tip of Kalimantan. Includes in North Late Jurassic- E Cretaceous Serabang melange complex with ultramafics, intruded by Upper Cretaceous Pueh granite. In S typical 'NW Kalimantan Domain' stratigraphy: Paleozoic-Triassic? metamorphics, overlain by very thick (>1500m) Late Triassic-Jurassic Bengkayang Gp clastics, overlain by Cretaceous Pedawan Fm, unconformably overlain by Paleogene Kayan Sst, intruded by numerous Late Oligocene-E Miocene Sintang intrusives and also Pliocene Niut Volcanics)

Rustandi, E., E.S. Nila, P. Sanyoto & U. Margono (1995)- Geological map of the Kotabaru Sheet, Kalimantan. 1:250,000, Quad 1812. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet of SE-most Meratus Mts, Asem Asem Basin and Pulau Laut and Sebuku islands. All areas with folded succession of ultramafic rocks (in E Meratus associated with 'amphibolite-garnet schist' and mid Cretaceous Kintap Orbitolina limestone olistoliths; on Pulau Laut overlain by basalt, silicified sandstones and radiolarian cherts), overlain by Upper Cretaceous Pitap Fm polymict clastics and Eocene clastics with coals. Oligocene Berai Lst covers much of Asem Asem basin. Overlain by Warukin Fm. Folding post-dates Miocene Warukin Fm deposition)

Rutten, L. (1926)- Over het voorkomen der Danau-formatie in Martapoera (Z.O. Borneo). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 35, p. 31-35.
('On the occurrence of the Danau Fm in Martapura, SE Kalimantan'. See English version below)

Rutten, L. (1926)- On the occurrence of the Danau-formation in Martapura (S.E. Borneo). Proc. Kon. Akademie Wetenschappen, Amsterdam, 29, 4, p. 524-528.
(online at: www.dwc.knaw.nl/DL/publications/PU00015300.pdf)
(Many rocks described by Hooze (1893) as Cretaceous Waringin and Alino claystones are radiolarites and may be considered as equivalents of Molengraaff's Danau Fm Mesozoic radiolarian-rich deep water deposits from C Kalimantan. Conclusion questioned by Krol (1926))

Rutten, L.M.R. (1927)- Chapters 13-21 on the geology of Borneo. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 191-310.
(Review of geology of Borneo in Rutten's classic lecture series)

Rutten, L. & C.J. Rutten-Pekelharing (1911)- De omgeving der Balikpapan-Baai. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 28, p. 579-601.
('The Balikpapan Bay area'. Brief geolographic- geologic description of area on E Kalimantan coast)

Rutten, M.G. (1940)- On Devonian limestones with *Clathrodictyon* cf *spatiosum* and *Heliolites porosus* from Eastern Borneo. Proc. Kon. Nederl. Akademie Wetenschappen 43, 8, p. 1061-1064.
(online at: www.dwc.knaw.nl/DL/publications/PU00017492.pdf)
(E-M Devonian coral Heliolites porosus and possibly Silurian stromatoporoid Clathrodictyon cf spatiosum in dark recrystallized limestone, collected by Witkamp in 1925 along Telen River (tributary of Mahakam R.), above confluence of Long Hoet, NE Kalimantan, in folded, low-metamorphic 'Old Slates', with nearby andesites. (NB: appear to be blocks in melange) (Both taxa also reported from M-L Devonian of Laos and NE Thailand (Fontaine 1954, 1993). and may also be similar to Australian Mid-Devonian limestones from Canning Basin, Tamworth Belt, etc.; JTvG))

Rutten, M.G. (1943)- Over enkele Devonische fossielen uit Midden Oost-Borneo. Handelingen XXIX Nederlandsch Natuur- Geneeskundig Congres, Amsterdam 1943, p. 58-59.
('On some Devonian fossils from Central E Borneo'. Brief note on Devonian coral and sponge fossils in Utrecht collection, collected by Witkamp (1925) in Telen River area, NE Kalimantan, in large area of 'Old Slates'. Rutten suggests Witkamp rocks are from 'Danau Fm', composed of isoclinally folded cherts, radiolarites, quartzitites (in other parts of C Kalimantan with Triassic Halobia and Monotis; Zeijlmans 1938), and greywackes, spilitic diabase and diabase porphyrites associated with (Permian) fusulinids. Telen location is ~200km NNW of Samarinda. Rocks part of N/E margin of 'Borneo continental core- SW Borneo Terrane', as exposed in NW Kalimantan- W Sarawak, or part of Panthalassan accreted arc terrane?; JTvG)

Rutten, M.G. (1947)- De gesteenten der Midden Oost-Borneo Expeditie 1925. Geogr. Geol. Meded., Rijksuniversiteit Utrecht, Physiogr.-Geol. Reeks II, 9, p. 1-51.
('The rocks of the Central East Borneo Expedition'. Geological results of 1925 geographic expedition and descriptions of rocks collected by Witkamp, now at Utrecht University. Gently folded Tertiary sediments in S part, isoclinally folded, radiolarian-rich pre-Tertiary Danau Fm in North. Diorites emplaced in Danau Fm. LocalLate Tertiary volcanics. Danau Fm two parts: older series of cherty sediments with radiolaria, intercalated limestones and diabase-spilites; younger part graywackes with fragments of rocks from older series (signifying orogenetic event?). With descriptions of Devonian coral and stromatoporoid, Eocene (Ta) Nummulites- alveolinid limestones, also rare Pellatispira, Miocene larger foraminifera, etc.)

Sambas Exploration Co. Ltd (1890)- Gold in Borneo. London, p. 1-39.
(online at: https://ia800405.us.archive.org/0/items/goldinborneo00samb/goldinborneo00samb.pdf)
(Review of gold in Kalimantan. Company owns two concessions South of Sambas, W Kalimantan)

Santy, L.D. (2014)- Diagenesis batupasir Eosen di Cekungan Ketungau dan Melawi, Kalimantan Barat. J. Geologi Sumberdaya Mineral 15, 3, p. 117-131.
('Diagenesis of Eocene sandstones of Ketungau and Melawi basins, W Kalimantan'. Eocene sandstones outcropping around Semitau High in NW Kalimantan show 'mesogenetic mature B' stage, indicating former burial between 2700-4000m in Melawi Basin. Eocene sands in Ketungau Basin 'mesogenetic semi-mature', i.e. burial depth of ~1500-2000m (less than Melawi Basin because of uplift with Semitau High in Oligocene))

Santy, L.D. & H. Panggabean (2013)- The potential of Ketungau and Silat shales in Ketungau and Melawi Basins, West Kalimantan: for oil shale and shale gas exploration. J. Geologi Indonesia 8, 1, p. 39-53.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/154/154)
(Ketungau and Melawi Paleogene intramontane basin, in NW Kalimantan have potential for oil shale and shale gas. Ketungau shale dominated by type III, immature, and gas prone kerogen. Silat shale in Melawi Basin

dominated by type II, immature- early mature, mixed gas, and oil prone kerogen. Both formations widespread and typically 900-1000m thick)

Sanyoto, P. (1992)- The stratigraphy and structure in the Semitau area; evidence for compressional tectonics in the Late Oligocene- Early Miocene. In: 29th Int. Geological Congress, Kyoto 1992, Abstracts, p. 433.

Sanyoto, P. (1993)- Regional tectonics of West Kalimantan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 136. *(Abstract only)*

Sanyoto, P. & P.E. Pieters (1993)- Geological map of the Pontianak/Nangataman Sheet area, Kalimantan, 1314/1315, 1:250,000, Geol. Res. Dev. Centre (GRDC), Bandung.
(W Kalimantan map sheet with oldest rocks pre-Cretaceous Pinoh Metamorphics, Cretaceous granitoids and volcanics. In Kapuas River area in N overlain by E Oligocene clastics of Melawi Basin. Youngest rocks Oligo-Miocene Sintang Intrusives)

Sanyoto, P. & R. Sukamto (2000)- Perkembangan tektonik. In: U. Hartono, R. Sukamto et al. (eds.) (2000)- Evolusi magmatik Kalimantan Selatan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 23, p. 85-117.
(Review of Meratus Mountains tectonics, in 'Magmatic evolution of S Kalimantan' book. Lower Cretaceous amalgamation of ophiolite/ Jurassic metamorphics and Sundaland margin, etc.)

Sarbini, S.A. & W. Wirakusumah (1988)- Uranium deposit model for estimation of ore reserves in the Remaja area, West Kalimantan. In: Proc. Conf. Uranium deposits in Asia and the Pacific; geology and exploration, Jakarta 1985, Int. Atomic Energy Agency (IAEA), Vienna, IAEA-TC-543/11, p. 155-166.
(On 1974-1978 uranium exploration work in W-C Kalimantan, identifying some mineralization in Kalan Prospect in N-dipping fault breccias in SE-dipping metasediments in Remaja area)

Sardjono (2000)- Evolusi kerak Lajur Meratus dan implikasi terhadap aspek mineralisasi. Majah Mineral Energi (EDSM) 2, 2, p. 16-19.
('Crustal evolution of the Meratus Mts and implications of aspects of mineralization')

Sarmili, L. (1997)- Indikasi mineral kasiterit dan mineral berat lainnya di perairan Kalimantan Barat dan sekitarnya. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, Sumber Daya Min. Energi, p. 254-262.
('Indications of cassiterite and other heavy minerals in waters of West Kalimantan'. Presence of cassiterite in seafloor sediments off SW Kalimantan suggests presence in source area of granites with same properties as granites around Bangka- Belitung)

Sarmili, L. (1998)- Surficial cassiterite deposits dispersal in southwest Kalimantan waters. Bull. Marine Geol. Inst. (MGI), Bandung, 13, 2, p. 1-8.
(Similar to Sarmili (1999) paper below. High anomaly cassiterite deposit in SW Kalimantan waters indicates tin deposits not only adjacent to Bangka and Belitung Islands, but also further E near Kalimantan. Extension of anomalies supported by shallow seismic and magnetic data indicating occurrence of granitic basement close to sea bed. Granitic basement may be different from basement of Bangka-Belitung (main granitic of tin belt), but may belong to Anambas-Natuna granitic belt)

Sarmili, L. (1999)- Submarine cassiterite in southwest Kalimantan waters. In: Proc. 35th Sess. Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Subic Bay 1998, 2, Techn. Repts., p. 93-102.
(Discovery of cassiterite anomalies in W Kalimantan waters, indicating tin placers may form not only near Banka and Belitung islands but also off Kalimantan. Shallow seismic data and strong magnetic anomalies indicate granitic intrusions close to surface, interpreted as source of cassiterite. Granites of Bangka-Belitung are part of Main granite tin belt whereas W Kalimantan intrusions belong to Anambas-Natuna granitic belt)

Sastratenaya, A.S. (1991)- Deformation et mobilite du megaprisme tectonique de Pinoh-Sayan, Kalimantan, Indonesie. Doct. Thesis, Universite Louis Pasteur de Strasbourg, p. 1-188. *(Unpublished)*

('Deformation and mobility of the Pinoh-Sayan tectonic mega-prism, Kalimantan'. Kalan sector of Pinoh-Sayan uranium exploration area on N side of Schwaner Mts. Basement Permo-Carboniferous metasediments, intruded by E Cretaceous tonalite and Late Cretaceous monzogranites, unconformably overlain by Tertiary Melawi Fm continental deposits. Tectonic phases: (1) Triassic folding and schistosity development; (2) Jurassic-U Cretaceous 65° CCW rotation of pre-existing structures along major NE-SW Kalan lineament, characterized by folding of schistosity and development of large sinistral WSW-ENE shear zone; (3) End-Cretaceous- Miocene reactivation of above two main features, causing lateral expulsion of 'tectonic megaprism' formed by these features, while fore-land cover is folded)

Satyana, A.H. (1994)- The northern massifs of the Meratus Mountains, South Kalimantan: nature, evolution, and tectonic implications to the Barito structures. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 457-470.
(Basement outcrops N of main Meratus Range contain similar Cretaceous subduction complex rocks and granodiorite. Form series of E-vergent thrusts, i.e. opposite direction of W-vergent main Meratus Range)

Satyana, A.H. (1996)- Adang-Lupar Fault, Kalimantan: controversies and new observations on the Trans-Kalimantan megashear. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 3, p. 124-143.
(Adang and Lupar faults are probably connected and form major WNW-ESE trans-Kalimantan left-lateral mega-shear fault zone, from Natuna to Makassar Straits, along which transpressional and transtensional deformation occurred)

Satyana, A.H. & C. Armandita (2008)- On the origin of the Meratus Uplift, Southeast Kalimantan- tectonic and gravity constraints: a model for exhumation of collisional orogen in Indonesia. Proc. 33rd Ann. Conv. Indon. Assoc. Geophys. (HAGI), Bandung 2008, 4p.
(Meratus Mts is collisional suture marking E-M Cretaceous collision of Schwaner and Paternoster continents. Presently, mountains are basement uplift separating Barito from Asem-Asem and Pasir Basins. Lack of gravity and magnetic expression of ultramafics suggests Meratus Mts are 'rootless', composed of thin allochthonous oceanic slab, exhumed in Late Cretaceous due to buoyancy of thick subducted Paternoster continent after oceanic front broke off. Lack of deformation on seismic data from S Makassar Strait and Paternoster terrane oppose common view that micro-continents colliding with E Sulawesi propagated their tectonic forces W-wards and uplifted Meratus Mts)

Satyana, A.H. & H. Darman (2000)- Kalimantan. In: H. Darman & F.H.Sidi (eds.) Outline of the geology of Indonesia, Chapter 5, Indonesian Association of Geologists (IAGI), Jakarta, p. 69-90.

Schairer, G. & A. Zeiss (1992)- First record of Callovian ammonites from West Kalimantan (Middle Jurassic, Kalimantan Barat, Borneo, Indonesia). BMR J. Australian Geol. Geophysics 13, 3, p. 229-236.
(online at: www.ga.gov.au/corporate_data/49556/Jou1992_v13_n3.pdf)
(New ammonite fauna of probable Callovian age from Brandung Fm dark limestones and shales in NW Kalimantan, 40 km NW of Sanggau. With Hectioceras spp., Reineckia, Indosphinctes, Kalimantanites n.gen., Borneoceras sanggauense n.gen. n.sp., etc. Many endemic elements, but main affinities with Iran and Europe (fauna different from Macrocephalites-dominated Callovian assemblages of E Indonesia/ New Guinea; JTvG))

Scheele, E. (1908)- Uber Einige Erdoele aus Borneo. Dissertation, Universitat Basel, p. 1-64.
(online at: http://books.googleusercontent.com/books/...)
('On some oils from Borneo'. Old chemical analyses of 15 crude oil samples from Sanga Sanga and Louise fields, E Kalimantan))

Schelmann, W. (1966)- Die lateritische Verwitterung eines marine Tons in Sudost-Kalimantan. Geol. Jahrbuch 84, p. 163-188.
('The lateritic weathering of a marine claystone in SE Kalimantan'. Study of 3m lateritic iron ore profile above Eocene marine clay which overlies serpentinite at SW flank of Kukusan Mountains, SE Kalimantan)

Schmutzer, J. (1908)- Bijdrage tot de kennis der oude eruptiefgesteenten en amphiboolschisten aan de Rivieren Sebilit en Tebaoeng in Centraal-Borneo. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam (2), 14, 3, p. 1-48.
(‘Contribution to the knowledge of old volcanic rocks and amphibole schists along the Sebilit and Tebaung Rivers in Central Kalimantan'. Petrographic descriptions of gabbros, diorite, peridotite-serpentinite and amphibolite from Molengraaff collection from steeply dipping section in Semitau Hills, NW Kalimantan. Most rocks float in Tebaung River)

Schmutzer, J. (1909)- The mineralogic and chemical composition of some rocks from Central Borneo. Proc. Kon. Akademie Wetenschappen, Amsterdam, 11, p. 398-415.
(online at: www.dwc.knaw.nl/DL/publications/PU00013553.pdf)
(Petrographic descriptions and chemical analyses of 4 igneous rocks collected along Sebilit and Tebaung Rivers in Central Borneo'. Samples collected by Molengraaff from C Kalimantan: amphibole dacite, andesite and microgranite)

Schmutzer, J.I.J.M. (1910)- Bijdrage tot de kennis der postcenomane hypoabyssische en effusieve gesteenten van het Westelijke Muller gebergte in Centraal Borneo, Doctoral Thesis Delft, Amsterdam, p. 1-214.
(online at: http://repository.tudelft.nl/islandora/object/uuid:6853c248-904d-476d-8d7f-1688bf4e2606?collection=research)
('Contribution to the knowledge of the post-Cenomanian hypabyssal and eruptive rocks of the western Muller Mountains in Central Borneo'. Descriptions of igneous and volcanic rocks of the Muller Range, collected by Molengraaff. Post-Cenomanian, possibly Early Tertiary age. Of limited use for regional geology?)

Schmutzer, J. (1911)- Die vulkanischen Gesteine des westlichen Mullergebirges in Zentral-Borneo. Centralblatt Mineralogie Geologie Palaont. 1911, p. 321-327.
(online at: www.biodiversitylibrary.org/item/192769page/345/mode/1up)
('The volcanic rocks of the western Muller Mountains in Central Kalimantan'. Summary description of volcanic rocks of Muller Range, described in more detail in Schmutzer (1910). No figures)

Schultz, J.F.H. (1877)- Iets over de diamantmijnen in Landak, Westerafdeeling van Borneo. Tijdschrift voor Nederlandsch Indie, new series (4), 6, 2, p. 454-465.
('Note on the diamond mines at Landak, western province of Borneo'. Diamonds mined from alluvial deposits along Landak River in W Kalimantan mainly by ~600 Chinese miners. Richest mines farthest upstream. Most diamonds <4 carats, some ~40 carats. Diamonds processed in Pontianak and Singapore. No maps or figures)

Seavoy, R.E. (1975)- Placer diamond mining in Kalimantan, Indonesia. Indonesia (Southeast Asia Program Publications at Cornell University) 19, p. 79-84.
(Diamonds, gold and platinum in river and terrace gravels in Martapura and Pleihari regions, SE Kalimantan. Most placer gold from nearby Bobaris Mts. Platinum from weathering of layered ultrabasic rocks that form cores of Bobaris and Meratus Mts. Diamonds from kimberlite pipes associated with ultrabasic rocks of Bobaris Mts. Only small-scale mining by villagers)

Seeley, J.B. & T.J. Senden (1994)- Alluvial gold in Kalimantan, Indonesia: a colloidal origin? J. Geochemical Exploration 50, 1-3, p. 457-478.
(Placer gold deposits in Quaternary paleochannels and Pleistocene terraces in Ampalit and Cempaga Buang drainage basins near Kasongan, C Kalimantan. Nearby in N and NW basement outcrops (Permo-Triassic metamorphics and large Jurassic-Cretaceous granodioritic plutons, with NE structural trend throughout basement) and Oligo-Miocene volcanics-intrusives associated with epithermal gold deposits. Morphology of gold grains (common spherical grains) from Ampalit indicates gold grains possibly of colloidal origin, not mechanically transported to present domain, but transported via ground water to zone of aggregation)

Sendjaja, P., M.E. Suparka & E. Sucipta (2009)- Adakites rocks from Sintang, West Kalimantan and Una-Una Island, Central Sulawesi, Indonesia: evidence of slab melting of subducted young oceanic crust. In: 11th Reg.

Congress Geology, mineral and energy resources of Southeast Asia (GEOSEA 2009), Kuala Lumpur, p. 42-43. *(Abstract) (online at: www.gsm.org.my/products/702001-101669-PDF.pdf)*
(Adakites refer to group of silicic arc igneous-volcanic rocks primarily produced by direct melting of basaltic portion of subducted young (<25 ma) oceanic crust. Geochemical characteristic high silica (SiO_2 >56%), high Al_2O_3 (>15%), low MgO (<3%), high Sr, low Y. M Miocene adakitic granodiorite from Sintang, W Kalimantan and Quarternary adakites volcanic rocks from UnaUna Island, C Sulawesi similar patterns of LREE-enriched signature of island arc, confirming rocks produced in convergent margin environment)

Setiabudi, B.T. (2001)- Geochemistry and geochronology of the igneous suite associated with the Kelian epithermal gold deposit, Indonesia. Ph.D. Thesis, Australian National University (ANU), Canberra, p. 1-203.
(online at: https://digitalcollections.anu.edu.au/handle/1885/12888)
(Kelian large gold mine ~250 km W of Samarinda, C Kalimantan.E Miocene intrusive-related low sulphidation system in C Kalimantan Continental Arc. Miocence calc-alkaline suites from Kalimantan volcanic arc two trends (1) 'productive' igneous suites at Kelian, Muyup and Ritan, typical calc-alkaline series;(2) Magerang-Imang and Nakan suites with high MgO. Zircon ages of Magerang hornblende andesite 19.4 Ma and 19.6 Ma, Nakan andesite 20.0 Ma. Central Andesite porphyry at Kelian 3 age populations: 21.2, 20.5 and 19.7 Ma, with youngest date (Burdigalian) interpreted as emplacement age. Runcing Rhyolite porphyry 3 age populations between 19.3- 20.8 Ma. Kelian and Magerang andesites short interval of emplacement (0.5- 1 Ma))

Setiabudi, B.T. (2002)- Nested cannibalistic intrusions associated with the Kelian gold deposit, Indonesia: zircon U-Pb dating by Excimer laser ablation ICP-MS. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 894-911.
(Kelian and Magerang andesites 250km W of Samarinda, with short age range. Magmatism and mineralization within 0.5- 1.0 Myrs around 19.4 Ma (E Miocene). Produced two types of eithermal deposits. Detrital zircons in nearby rivers Tertiary populations of 1.7-2.8 Ma and 15.8-21.7 Ma; large Cretaceous peak at ~105 Ma))

Setiabudi, B.T. (2002)-Geochemistry of the igneous suite of the Kelian region, East Kalimantan, Indonesia: implications for the gensis of the Kelian deposit. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 912-933.
(E Miocene calk-alkaline arc volcanics of Kelian region two magmatic differentiation trends. Part of Central Kalimantan continental arc of andesitic- trachyandesitic rocks)

Setiabudi, B.T., I.H. Campbell, C.E. Martin & C.M. Allen (2007)- Platinum group element geochemistry of andesite intrusions of the Kelian region, East Kalimantan, Indonesia; implications of gold depletion in the intrusions associated with the Kelian gold deposit. Econ. Geol. and Bull. Soc. Econ. Geol. 102, 1, p. 95-108.
(Gold mineralization at Kelian mine younger than associated C and E andesite intrusions (~19-20 Ma) considered to be related to S-dipping subduction zone in NW Sarawak. Gold probably derived from slightly younger intrusions. Parallel Cu-Au-PGE patterns due to mixing between mafic and more felsic magma)

Setiawan, B. (1993)- Les lignees granitiques et les skarns mineralisees en Zn de Longlaai, Est-Kalimantan (Borneo, Indonesie). Thesis Ecole Nationale Superieure des Mines de Paris, p. 1-481. *(Documents du BRGM no. 227)*
('The granitic suites and Zn-mineralized skarns from Longlaai, E Kalimantan')

Setiawan, B. (1993)- Studi kasus 3 tubuh granitik terkontaminasi di daerah Longlaai, Kabupaten Berau, Kalimantan-Timur. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 258-270.
('Case study of three contaminated granitic bodies in the Longlaai area, Berau district, East-Kalimantan'. E Miocene Mamak, Gupak and Segah granitoids in NE Kalimantan with 'calcic' contamination)

Setiawan, B. & M. Fonteilles (1998)- Granitic magmas in individual massifs as liquids derived from a single andesite parental melt- two examples from N.E. Kalimantan, Indonesia. J. Geologi Sumberdaya Mineral 8, 77, p. 12-26.
(Two groups of E Miocene leucogranitic intrusions in Longlaai area in NE Kalimantan, Upper Segah and Longlaai, separated by 15km zone without intrusives. Intruded into Lower Eocene Geh Fm, Sr isotope age 22 ±

2 Ma. Interpreted to be formed by fractional crystallization processes from single deep seated andesitic magma chamber, resulting in 'normal' group and 'shoshonitic' type)

Setiawan, B. & L.M. Le Bel (1987)- Discovery of a new tin province, Long Laai area, East Kalimantan, Indonesia. In: C.S. Hutchison (ed.) Tin and Tungsten granites, Proc. IGCP Project 220 Mtg, Ipoh 1986, Techn. Bull. 6, p. 61-82.
(Tin-bearing adamellites in small intrusions in Long Laai area, NE Kalimantan. Radiometric age 26 Ma)

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi & A. Asyŵari (2014)- Metamorphic evolution of garnet-bearing epidote barroisite schist from Meratus complex in South Kalimantan, Indonesia. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-106, 18p.
(First report on metamorphic evolution of garnet-bearing epidote-barroisite schist from Aranio River, etc. in Meratus Complex. P-T path of garnet-bearing epidote-barroisite schist and epidote-glaucophane schist: (1) first stage may be glaucophane - epidote assemblage (1.7-1.0 GPa, T 300-550 °C; maximum pressure limit of prograde stage); (2) peak P-T condition based on garnet rim, barroisite, phengite, epidote and quartz (550-690 °C, 1.1-1.5 GPa; albite epidote amphibolite-facies corresponding to depth of 50-60 km); (3) retrograde stage shows changing composition of amphiboles from Si-rich barroisite to actinolite (~0.5 GPa at 350 °C). Metamorphic rocks from Meratus Complex may have experienced high-P condition in epidote-blueschist facies before peak metamorphism in epidote-amphibolite facies. Garnet-bearing epidote-barroisite schist suggest higher geothermal gradient in Meratus Complex than in SW Sulawesi and C Java metamorphic terranes)

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi & A. Asyŵari (2015)- Metamorphic evolution of garnet-bearing epidote-barroisite schist from the Meratus complex in South Kalimantan, Indonesia. Indonesian J. Geoscience 2, 3, p. 139-156.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/833)
(Same paper as Setiawan et al. (2014) above)

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi, L.D. Setiadji & J. Wahyudiono (2013)- Late Triassic metatonalite from the Schwaner Mountains in West Kalimantan and its contribution to sedimentary provenance in the Sundaland. Berita Sedimentologi 28, p. 4-12.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-28-borneo.html)
(Metatonalites in W Schwaner Mountains of W Kalimantan have calc-alkaline affinities and derived from subduction-related arc tectonic environment (proto-S China Sea subduction?). Some have adakite signature. Zircon dating shows magmatic age at 233± 3 Ma (~Carnian, Late Triassic), older than accepted ages for granitoids in Schwaner Mountains and oldest recorded here. Schwaner Mountains therefore sediment source not only from Cretaceous age granites, but also from Triassic age granites)

Setiawan, R. & I. Nurdiana (2007)- Petrologi batupasir Formasi Mentarang kelompok Embaluh, di daerah Longbia, Kalimantan Timur. In: Geologi Indonesia: dinamika dan produknya, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 33, 2, p. 193-205.
(Petrology of deep marine Late Cretaceous -E Eocene Mentarang Fm sandstone of Embaluh Group in Longbia district, E Kalimantan. Partly low-metamorphic interbedded sandstones, siltstone, and slaty mudstone. Mainly litharenites, recycled orogen. Sandstones provenance Semitau Ridge and Schwaner Mts in SW Kalimantan, probably also Embuoi and Busang Complex in S. Andesitic-basaltic rock fragments more common than sedimentary and metamorphic rocks. Volcanism probably related to tectonics in N Kalimantan)

Setijadji, L.D. (2009)- Alluvial gold in Central Kalimantan: its mode of occurrence, source and consequences for primary deposits. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, 1p. *(Abstract only)*
(Alluvial gold deposits extensively distributed in C Kalimantan. Most deposits worked as small-scale traditional operations. Only large-scale dredging operation at Ampalit drainage basin near Kasongan in 1988-1992. Many alluvial gold deposits associated with muddy gravelly rocks. Much of gold may not be derived from Tertiary epithermal systems but from Mesozoic granite-related quartz veins)

Setijadji, L.D., N.I. Basuki & S. Prihatmoko (2010)- Kalimantan mineral resources: an update on exploration and mining trends, synthesis on magmatism history and proposed models for metallic mineralization. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok 2010, 14p.
(Kalimantan magmatic arcs Cretaceous and younger events. Subduction magmatism may ended after Late Cretaceous in much of island, followed by syn- and post-collision magmatism. Metallic mineralization in two main periods (1) Cretaceous or older, dominated by granitoid-related skarn iron and base metals in Schwaner and Meratus Mountains; (2) M-L Miocene gold and base metals mineralization associated with Sintang Intrusions. Miocene gold-bearing intrusions not products of ordinary subduction-zone magmatism, but derived from basalts source during major tectonic events following subduction)

Setijadji, L.D., N.R. Nabawi & I.W.Warmada (2014)- Tin occurrences in western Kalimantan island, Indonesia and implications on the new interpretation of the SE Asia tin-bearing granite belts. Proc. 4th Asia Africa Mineral Resources Conf., Algiers, p. *(Abstract ony)*
(Discovery of tin mineralization in Ketapang and Singkawang districts, W Kalimantan, suggests presence of S-type Triassic-Jurassic granites in Ketapang area, whose distribution is not well constrained due to overlapping of Cretaceous granitoids in Schwaner Mts, which are not known to produce tin. This suggests SW Kalimantan was already connected to Sumatra and Tin islands since at least Triassic-Jurassic)

Setijadji, L.D., F. Tamba & A. Idrus (2010)- Geology of the Ruwai iron and Zn-Pb-Ag skarn deposits Lamandau District, Central Kalimantan. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. MGEI-IAGI Seminar Kalimantan coal and mineral resources, Balikpapan 2010, p. 175-185.
((also in Majalah Geologi Indonesia 2011, 26, 3, p. 143-154; online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/759)
(Fe and Zn-Pb-Ag skarn mineralization in Ruwai District, Schwaner Mountains, C Kalimantan, result of Late Cretaceous- E Tertiary granitoids intrusions. Initially reported by Frijling et al (1920). Oldest rocks in area Permo-Carboniferous Pinoh Metamorphics, Late Triassic- Mid Cretaceous Ketapang Complex limestone-sandstone- siltstone and Kuatan/ Metan andesitic-rhyolitic volcanics, all intruded by E and Late Cretaceous Schwaner Arc (Sukadana batholiths))

Setyadi, H., W, Yudanto, D. Kristanto, T.R. Setiawan, D. Iswanto, B. Santoso, I. Hardjana & A. Ismanto (2015)- Discovery, characteristic and inventory of Seruyung deposit, Nunukan District, North Kalimantan Province, Indonesia. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 85-100.
(On Seruyung marginally economic gold deposit in NE Kalimantan, NW of Tarakan, dicovered in 1998. In Neogene andesitic volcanics, part of Miocene- Recent volcanic arc, built on Tidung Basin M Eocene-Miocene sediments, formed due to SE-ward subduction of Sulu Sea Plate. High sulphidation epithermal gold deposit, with mineralization mainly in vuggy quartz core zone with hydrothermal breccia hosted by volcanic breccia)

Setyanta, B. (2016)- Konfigurasi geologi bawah permukaan cekungan sedimen daerah Longbia-Muarawahau, Kalimantan Timur, berdasarkan analisa gayaberat. J. Geologi Sumberdaya Mineral 17, 4, p. 217-229.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/15/13)
('Configuration of basement of geological sedimentary basin area of Longbia-Muarawahau, East Kalimantan, based on gravity analysis'. Bouguer anomalies in NE Kutai basin suggest basement composed of granitic and ophiolitic fragments)

Setyanta, B. & I. Setiadi (2006)- Kompleks batuan ultramafik Meratus sebagai bagian dari ofiolit kerak samudra ditinjau dari aspek geomatik dan gaya berat. J. Sumber Daya Geologi 16, 6 (156), p. 355-348.
('Meratus ultramafic rocks complex as part of ophiolite oceanic crust from geomatics and gravity aspects'. Geomagnetic and gravity analysis in Banjarmasin Quadrangle at SW end of Meratus Range shows high geomagnetic anomaly values in S, generally low in N. Ophiolitic rock interpreted to overlie less magnetized granitic crust. Bobaris and Manjam ophiolite belts represent oceanic crust thrusted over granitic crust)

Setyanta, B., I. Setiadi & W.H. Sinamora (2008)- Model geologi bawah permukaan daerah Muara Wahau hasil analisis anomali gaya berat berdasarkan estimasi kedalaman dengan metode analisis spektral. J. Sumber Daya Geologi 18, 6, p. 379-390.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/258/238)
('Subsurface geology model of the Muara Wahau area from gravity anomaly analysis and depth estimation with the spectral analysis method')

Setyanta, B., B.S. Widijono & D.Z. Hayat (2002)- Kelurusan struktur geologi dan implikasinya terhadap evolusi tektonik daerah Samarinda-Sangatta, Kalimantan Timur berdasarkan analisis anomali gayaberat. J. Geologi Sumberdaya Mineral 12, 128, p. 14-23.
('Lineaments of geological structures and implications for the tectonic evolution of the Samarinda-Sangatta area, East Kalimantan, based on analysis of the gravity anomalies'. Kutai Basin regional WNW-ESE lineaments associated with top basement step faulting)

Setyanto, A. & M. Surachman (2017)- The occurences of heavy mineral placer at Kendawangan and its surrounding, West Kalimantan Province. Bull. Marine Geol. 32, 1, p. 33-40.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/319/288)
(Study of heavy mineral placers of Kendawangan coastal and adjacent offshore area, W Kalimantan. Cassiterite (0.3-15%) and zircon (1-26%) found at all locations and have potential to be further developed. High content of cassiterite (Sn) generally linked to sediment of Kendawangan River)

Shen, A.H., Tay Thye Sun, Ye Luo, J.T. van Gorsel, M. Rosana Fatimah, Tay Kunming & W. Deng (2017)- Kalimantan diamonds from Landak: gemmological characteristics, FTIR and photoluminescence spectroscopy. Proc. 35th Int. Gemmological Conf. (IGC) 2017, Windhoek, Namibia, p. 57-61.
(online at: www.igc-gemmology.org/)
(Diamonds found in 4 main areas of Kalimantan (Landak, Puruk Cahu, Martapura, Kelian), mainly in Quaternary alluvial deposits, some in Cretaceous and Eocene conglomerates. Landak diamond deposits along lower terrace of Landak river)

Shimazaki, Y. & K. Isono (1964)- Mineralogy of some laterite ores from Sebuku Island, Indonesia. Bull. Geol. Survey Japan 15, 8, p. 447-465.
(online at: https://www.gsj.jp/data/bull-gsj/15-08_01.pdf)
(Main minerals in laterite ores from Sebuku goethite, gibbsite, magnetite, chromite, spinel, hematite, quartz. No location data or geologic background info))

Sikumbang, N. (1986)- Geology and tectonics of pre-Tertiary rocks in the Meratus Mountains, South-East Kalimantan, Indonesia. Ph.D. Thesis, University of London, p. 1-313. *(Unpublished)*
(Meratus metamorphics two groups: widespread Hauran schists (K-Ar ages 108-119 Ma) and lower grade Pelahari phyllites, etc.. Orbitolina limestones in three tectonic settings. In N of study area limestones with granodiorite and granite detritus in basal part and deposited unconformably on Sunda continental basement at NW edge of Meratus Range. In SE area parautochthonous Orbitolina limestone in thrust sheets. Species identified by Rolf Schroeder as Palorbitolina lenticularis and Orbitolina (Mesorbitolina) parva, indicating early Late Aptian age. Also Barremian ammonites below Orbitolina limestone and intruded by Sg. Kintap granite with K/Ar age of 95.3 Ma (Cenomanian). Aptian and older rocks unconformably overlain by Albian-and younger Alino Gp, with basal Pudak Fm submarine volcanoclastics with Orbitolina limestone blocks (olistostrome?). Tabatan Fm polymict conglomerates above erosional surface, probably of Campanian age, overlain by ?lacustrine Rantaulajang Fm black clay with estherids)

Sikumbang, N. (1990)- The geology and tectonics of the Meratus Mountains, South Kalimantan, Indonesia. Geologi Indonesia (J. Indonesian Assoc. Geol., IAGI) 13, 2, p. 1-31.
(Meratus Mts highly deformed E Cretaceous- Paleocene ophiolitic and metamorphic rocks and sediments and island arc volcanics. Oldest rocks Berriasian- Aptian shelf-slope sediments, juxtaposed with ophiolite/ oceanic crust by strike-slip faulting shortly after deposition. Volcanic arc collided with Sundaland in Cenomanian. Absence of Paleocene- Lower Eocene suggests uplift. Late M Miocene and Plio-Pleistocene uplift events)

Sikumbang, N. & R. Heryanto (1994)- Geologic map of the Banjarmasin Quadrangle, Kalimantan, Quadrant 1712 (1:250,000). Geol. Res. Dev. Centre (GRDC), Bandung. *(also 2nd ed., 2009)*
(Geologic map, including SW part of Meratus Range)

Simandjuntak, H.R.W., U. Kuntjara, S. Simandjuntak, K.P. Burgath & M. Klimainsky (1986)- Investigations of chromite occurrences in the Bobaris ophiolite, S.E. Kalimantan, Indonesia. Report, Direktorat Sumberdaya Mineral, Bandung, p. 1-73. *(Unpublished)*

Simmons, S.F. & P.R.L. Browne (1990)- Mineralogic, alteration and fluid-inclusion studies of epithermal gold-bearing veins at the Mt. Muro Prospect, Central Kalimantan (Borneo), Indonesia. J. Geochemical Exploration 35, p. 63-103.
(Mt. Muro prospect in Upper Kutai basin numerous steeply dipping, epithermal gold-bearing quartz veins, formed during Oligo-Miocene calc-alkaline volcanism of C Kalimantan. Probably short-lived subduction andesitic volcanic event above S-dipping subduction zone)

Simmons, S.F. & P.R.L. Browne (1992)- Mineralogic, alteration and fluid-inclusion studies of epithermal gold-bearing veins at the Mt. Muro Prospect, Central Kalimantan (Borneo), Indonesia. In: Epithermal gold in Asia and the Pacific, mineral concentrations and hydrocarbon accumulations in the ESCAP Region series, UN ESCAP, 6, p. 60-64.
(Abbreviated version of paper above)

Sinamora, W.H. & I. Budiman (2000)- Penafsiran data gayaberat Kalimantan menggunakan teknik pengolahan dan penyajian citra warna dan citra relief bayangan. Geol. Res. Dev. Centre (GRDC), Geophys. Ser. 1, p. 35-46.
(On gravity anomaly trends across W Kalimantan)

Situmorang, B. (1987)- Emplacement of the Meratus ultrabasic massif: a gravity interpretation. Lemigas Scientific Contr. 11, 2, p. 61-72.
(SE of Banjarmasin Late Miocene sediemnts unconformable over Pretertiary, suggesting pre-Late Miocene uplift. Two dimensional gravity modeling suggests Meratus ophiolites are rel. thin (~300-350m; thicker if serpentinized) allochthonous sheets of Mesozoic ultrabasic rocks, emplaced in mid-Cretaceous, and probably underlain by ~26 km thick continental crust. Meratus massif part of larger oceanic crustal segment emplaced during M Cretaceous obduction (incl. diabase/gabbro at base Taka Talu 2 well, Paternoster Platform?))

Situmorang, R.L. & G. Burhan (1995)- Geological map of the Tanjung Redeb Quadrangle 1918, Kalimantan, scale 1: 250.000. Geol. Res. Dev. Center, Bandung.
(Map of part of Tarakan Basin. Four tectonic events, oldest in or before Late Cretaceous. Oldest formation is folded, low metamorphic Cretaceous Bangara Fm (= Bengara? flysch with radiolaria, in SE. Unconformably overlain by Eocene Sembakung Fm, with clastics in lower part, limestone (with Nummulites, Discocyclina) and tuff in upper part. Thick Late Oligocene- E Miocene limestone, Jelai Volcanics, Etc.)

Smith, C.B, G.P. Bulanova, S.C. Kohn, H.J. Milledge, A.E. Hall, B.J. Griffin & D.G. Pearson (2009)- Nature and genesis of Kalimantan diamonds. Proc. 9th Int. Kimberlite Conf., Lithos 112, Suppl. 2, p. 822-832.
(Alluvial diamonds from four main diamond mining districts in Kalimantan colourless or yellow- pale brown, with features indicative of fluvial transport and crustal recycling. Inclusions 68% peridotitic and 32% eclogitic. Re/Os dating of sulphide inclusion from one peridotitic diamond gave Archean age of 3.1 Ga ± 0.2. Kalimantan diamonds resemble those from kimberlite or lamproite from subcontinental lithospheric mantle. Five genetic groups recognized, but mixed occurrences due to long history of sedimentary recycling)

Smit Sibinga, G.L. (1932)- The interference of meridional and transversal stress in the southeastern part of Borneo. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 35, 8, p. 1090-1096.
(online at: www.dwc.knaw.nl/DL/publications/PU00016325.pdf)

(Two main trends of Tertiary folds in Kalimantan:'transverse' (E-W; parallel to Pretertiary nucleus of island) and 'meridional' (N-S). Mangkalihat Peninsula separates NW-SW trending folds in N from N-S trending folds in S)

Smit Sibinga, G.L. (1953)- On the origin of the drainage system of Borneo. Geologie en Mijnbouw N.S. 15, p. 121-136.
(Present river system of Borneo originated on initial relief in Early Neogene time. Early Neogene main divides were Schwaner Mts and Semitau-Kuching Ridge. Plio-Pleistocene diastrophism created present main Kinabalu-Schwaner-Karimata divide)

Smit Sibinga, G.L. (1953)- Pleistocene eustasy and glacial chronology in Borneo. Geologie en Mijnbouw 15, 11, p. 365-383.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0YV9fZXR4WGVTOG8/view)
(Terraces in more stable part of Borneo similar to those in Java and Sumatra and can be correlated to glacial-interglacial chronology)

Soeria-Atmadja, R., D. Noeradi & B. Priadi (1999)- Cenozoic magmatism in Kalimantan and its related geodynamic evolution. J. Asian Earth Sci. 17, p. 25-45.
(NE-SW Tertiary magmatic belt of C Kalimantan two periods of subduction: Eocene-Oligocene and Late Oligocene-Miocene. Younger magmatic belt on earlier belt; limited exposures of Eocene volcanics. Belt known as `gold belt' of C W Kalimantan, with Neogene epithermal mineralization at relatively shallow depths. Earliest known subduction-related magmatism in Eocene-E Oligocene with calc-alkaline silicic pyroclastics, followed by continental collision. Subsequent subduction-related magmatism from Late Oligocene-Pleistocene magma evolution from calc-alkaline to potassic calc-alkaline. Plio-Pleistocene magmatism with basalt flows)

Soesilo, J., Amiruddin, V. Schenk, E. Suparka & C.I. Abdullah (2012)- Plutonism and contact metamorphism in the Meratus Complex, Southeast Kalimantan. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-33, p. 28. *(Abstract only; no figures)*
(Plutonic rocks in Meratus Complex, SE Kalimantan, include Late Carboniferous- E Permian granite of Lumo, near Buntok (K-Ar ages of micas 319 and 260 Ma). To E, small outcrop of Late Jurassic Purui Dalam oceanic trondhjemite overlain by Late Cretaceous turbidites and volcanics. Mid-oceanic plagio-granite K-Ar age 155 Ma (Late Jurassic). Further SE mid-Cretaceous volcanic arc granitoids in main body of Meratus Complex: Riam Andungan trondhjemite 92±2 Ma; Hajawa granitoid 87 and 71 Ma; Batangalai 119 and 101 Ma. Common Cretaceous high-T contact metamorphism. U-Pb zircon dating of diorite and metapelite hornfels yield 115 Ma and 118.3 Ma (Aptian))

Soesilo, J., E. Suparka, V. Schenk & C.I. Abdullah (2012)- Glaucophanitic and its retrograded metamorphic rocks in the Southern Meratus Complex, Southeast Kalimantan. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-M-27, 1p. *(Abstract only)*
(Three metamorphic terrains in Meratus Complex, SE Kalimantan. High-P metamorphics represented by quartz-rich Aranio (or Hauran) schist with glaucophane-crossite in southern terrain, with outcrops at Hauran, Apukan and Riam Kanan Rivers. Amphibole exhibits retrograde path toward greenschist. Wakita et al. (1998) ages for high pressure metapelite schist 180-165 Ma (E-M Jurassic; now believed to be age of peak glaucophane metamorphism), to 112-108 Ma (Albian/Cretaceous; probably age of retrograding greenschist))

Soesilo, J., V. Schenk, E. Suparka, C.I. Abdullah and Amiruddin (2014)- The K-Ar and U-Pb SHRIMP zircon age dating of the Batangalai Pluton, Central Meratus, Southeast Kalimantan. Proc. Seminar Nasional Geologi Nuklir dan Sumber Daya Tambang, BATAN, Jakarta, p. 1-16.

Soetarno, D. (1992)- Mineralisation uranifere dans le bassin de la Kalan, Kalimantan (Indonesie); geologie et geochronologie. Doct. Thesis Universite de Nancy, p. 1-167. *(Unpublished)*
(Uranium mineralization in Kalan Basin, N flank Schwaner Mountains, N part of W Kalimantan Province, in schistose metapelites that underwent regional and contact metamorphism. Uraninites of Remaja emplaced at

151 Ma, Rirang at 140 Ma. Uranium mineralization corresponds with start of Yenshanian orogeny, manifested by granite intrusions around Jurassic- Cretaceous boundary)

Soetarno, D. (1992)- Geokronologi U-Pb pada mineralisasi uranium di Eko dan Rirang, Kalan, Kalimantan Barat. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 257-264.
('U-Pb geochronology of uranium mineralization in Eko and Rirang, Kalan, West Kalimantan'. U-mineralization in NW Kalimantan in fine-grained metasediments. Age of uranite at Eko tunnel 150 Ma. Age of uranite associated with monazite in Rirang 140 Ma. U mineralization in area not genetically related with formation of Schwaner granitoids)

Soetarno, D. (1993)- Karakter dan umur kimia mineralisasi uranium di Remaja dan Tanah Merah, Kalan, Kalimantan. Proc. 22nd Ann. Conv. Indon. Assoc. Geologists (IAGI), Bandung, 2, p. 724-735.
('Character and chemical age of uranium mineralization in Remaja and Tanah Merah, Kalan, Kalimantan'. Uranium mineralization in Kalan area, N margin of Schwaner Mts, NW Kalimantan. In Remaja mainly uraninite and branerite; in Tanah Merah mainly uraninite and monazite. Chemical ages of Remaja 145-150 Ma (or 125-130 Ma); Tanah Merah 145-150 Ma (or 135-145 Ma))

Soetrisno, S. Supriatna, E. Rustandi & K. Hasan (1994)- Geological map of the Buntok Quadrangle, 1: 250,000, Quad 1714, Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of N part Barito Basin, with Meratus Mountain front in East (folded Cretaceous granite, overlain by Late Cretaceous clastics and volcanics, Eocene Tanjung Fm, Oligocene Berai Limestone and Montalat Fm marls, Miocene Warukin Fm clastics, etc.)

Spencer, L.K., S.D. Dikinis, P.C. Keller & R.E. Kane (1988)- The diamond deposits of Kalimantan, Borneo. Gems & Gemology 24, 2, p. 67-79.
(online at: https://www.gia.edu/doc/The-Diamond-Deposits-of-Kalimantan-Borneo.pdf)
(Diamonds from West and SE Kalimantan are in alluvial deposits from unknown source. Do not believe in nearby ophiolite source)

Stauffer, P.H. (1983)- Phantom tektite localities of Borneo. Meteoritics 18, 1, p. 9-13.
(The only authentic Pleistocene tektite finds in Kalimantan are from around Martapura, SE Kalimantan (Pelaihari, Sungai Riam, etc. First reported by S. Muller in 1836. SW Kalimantan localities shown on maps in Lacroix and others are probably misinterpretations of older literature)

Stumpfl, E.F. & A.M. Clark (1966)- Electron-probe microanalysis of gold platinoid concentrates from southeast Borneo. Trans. Inst. Mining Metallurgy 74, p. 933-946.

Subagio & T. Patmawidjaja (2013)- Pola anomali Bouguer dan anomali magnet dan kaitannya dengan prospek sumber daya mineral dan energi di Pulau Laut, Pulau Sebuku dan Selat Sebuku, Kalimantan Selatan. J. Geologi Kelautan 11, 3, p. 115-129.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/236/226)
('Bouguer anomaly patterns and magnetic anomalies and their relation with mineral and energy prospects of Pulau Laut, Sebuku Island and Sebuku Strait, South Kalimantan'. Circular pattern of Bouguer gravity anomalies of 45-64 mGals reflect ultramafic rocks close to surface; exposed ultrabasic rocks indicated by high magnetic anomalies. Parallel Bouguer patterns reflect thrust and normal faults)

Subagio, B.S. Widijono & Sardjono (2000)- Model kerak lajur Meratus berdasarkan analisis data gayaberat dan magnet, implikasi terhadap potensi mineral ekonomi. Geol. Res. Dev. Centre (GRDC), Bandung, Geoph. Ser. 1, p. 47-67.
(Crustal models of two traverses across Meratus Mts (Kandahan and Martapura), based on gravity-magnetic data. Data can be interpreted with various models, one of them (fig. 8) with relatively thin obducted ultramafic slab over granite)

Subandrio, A.S. & A. Kuswanto (2010)- Geological investigation and geolectric tomography study on iron ore deposit of Kendawangan- West Kalimantan and their possible genetic significance. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. Kalimantan coal and mineral resources, MGEI-IAGI Seminar, Balikpapan 2010, p. 117-128.
(Kendawangan iron ore deposits in Triassic-Cretaceous in two areas of W Kalimantan, 400km S of Pontianak: (1) Bukit Besi area areally restricted, thick-bedded-massive hematite ores in lower part of Cretaceous magmatic complex (produced by submarine volcanism) and (2) Birai area metamorphosed, folded specularite ores within Triassic Pinoh Fm meta-sedimentary belt. Some mineralization smilar to Banded Iron Ore Fm)

Subiantoro, L., P. Widito & A. Marzuki (2003)- Sintesis geologi mineralisasi uranium di sektor Tanah Merah dan sekitarnya Kalimantan Barat. In: Kumpulan Laporan hasil penelitian Tahun 2003, Pusat Pengembangan Geologi Nuklir-Batan, p. 452-471.
(online at: http://digilib.batan.go.id/e-prosiding/File%20Prosiding/Geologi/Laporan_Pen._2004-2006_PPGN_berkas_A/artikel/lilik_s_452.pdf
('Synthesis of geology of uranium mineralization in the Tanah Merah area and surroundings, Kalan Basin, West Kalimantan'. Uranium in veins WNW -ESE trending fractures in Permian Nanga Pinoh Metamorphics. Uranium process tied to late-magmatic Sukadana granite of Cretaceous age?)

Sudradjat, S.A. (1976)- Geological map of the Tewah Quadrangle, Central Kalimantan (scale 1 : 250,000). Geol. Survey Indonesia, Bandung.

Sugiaman, F. & L. Andria (1999)- Devonian carbonate of Telen River, East Kalimantan. Berita Sedimentologi 10, p. 18-19.
(Devonian black limestones with Heliolites porosus coral, first reported by Witkamp (1925) and Rutten (1940, 1943) from melange complex at N margin Kutai basin (blocks floating in black slate and turbiditic sandstones). May be blocks in Permian sandstone. Telen River sst also with Permian Neoschwagerid fusulinids (Darman & Sidi, 2000, Geology of Indonesia, p. 86))

Sugiaman, F., L. Andria, A.Y. Arief, Nurcahyo W.H., Meizarwin, S. Mujiyanto, A. Budianto & F.A. Wisanggono (2016)- Devonian Expedition 1989, Telen River area, Muara Wahau District, Kutei region, East Kalimantan. Geology Student Association 'GEA', Institut Teknologi Bandung (ITB), p. 1-141.
(English edition of 1989 report on expedition to study Devonian limestone/fossils(oldest known rocks from W Indonesia), initially reported by Witkamp (1925) and Rutten (1940) in area of Telen River (tributary of Mahakam Delta). Oldest unit pre-Permian? dark schist. Overlain by ?Permian turbiditic metasandstones of Telen Unit, with black Devonian limestone boulders with Heliolites corals (up to 10's of m; debris flows?) and with common Permian fusulinid foraminifera (Neoschwagerinidae; similar to fusulinids from Danau Kapuas regions?; Krekeler 1932, 1933) in calcareous sandstone matrix. Sediments thrusted to E, but no evidence of 'melange'. Mesozoic and older metasediments unconformably overlain by Eocene quartz sandstones. With reverse faults and post-Eocene diorite intrusions. In Appendix Herman Darman suggests paleo-position at margin of Indochina block)

Sukardi, B. Djamal, S. Supriatna & S. Santosa (1995)- Geological map of the Muaralasan quadrangle, Kalimantan, scale 1:250,000. Sheet.1917, Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of W part of Mangkalihat Peninsula and area to W. Oldest rocks ophiolites (peridotite, gabbro, basalt) and thick, folded Telen Fm Low metasediments of Late Jurassic- E Cretaceous age in NW corner of sheet. Overlain by U Cretaceous Kelay Fm deep marine clastics with tuff, Eocene litoral Marah Fm clastics and marine Tabalar Fm clastics and limestones with Nummulites, Discocyclina, Biplanispira, etc.(in other papers Taballar Lst called Late Oligocene- E Miocene; JTvG). Also young volcanics)

Sukardi & R. Heryanto (1997)- Petrografi batupasir Formasi Pitap di Sungai Amandit, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 7, 75, p. 19-30.
('Petrography of the Pitap Fm sandstones at Amandit River, S Kalimantan'. U Cretaceous Pitap Fm, in Kandangan and Amuntai map sheets of Meratus Range well-bedded sandstones and siltstones. Composition

arkose- litharenite, derived from magmatic arc: quartz 2-74%, feldspar 22-88% and lithics 7-77%. Depositional environment deep marine turbiditic sediments)

Sukardi, N. Sikumbang, I. Umar & R. Sunaryo (1995)- Geological map of the Sangatta Quadrangle, Kalimantan, Quad 1916, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Map sheet of NE Kutai Basin, North of Samarinda sheet. Oligocene and younger clastic sediments with thin limestones, folded in N-S trending anticlines))

Sulistyawan, R.I.H., Baharuddin & U. Hartono (2013)- Geochemistry of the Jelai Volcanics from Mount Rian, East Kalimantan. J. Sumber Daya Geologi 23, 3, p. 133-141.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/86/80)
(M Miocene- Pliocene calc-alkaline Jelai Volcanics exposed at Mt Rian, NE corner of Kalimantan. Most K-Ar ages ~15-17 Ma. Consist of porphyritic basaltic andesitic lavas and pyroclastics. Subduction-related magmas, possibly part of Rajang- Cagayan volcanic belt of Soeria-Admadja et al. 1999))

Sumantri (1992)- Sebaran akumulasi Uranium pada tipe jalur mineralisasi di Eko-Remaja, Kalan, Kalimantan Barat. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta,1, p. 251-256.
('Dispersion of uranium accumulation on mineralized zone type at Eko-Remaja, Kalan, West Kalimantan'. Four mineralization types: intraschistose veins and boudinages, tectonic breccias, fractures, etc.))

Sumartadipura, A.S. & U. Margono (1996)- Geological map of the Tewah (Kualakurun) quadrangle, Central Kalimantan, Quad 1614, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geological map with in NW Schwaner Mts 'basement' rocks (Sepauk granitoids, Pinoh metamorphics with NE-SW foliation, Metan Complex ?Triassic low-metamorphic andesitic volcanics dipping SE 60°, Sintang Intrusives, Malasan Oligocene andesitic volcanics), In E Barito basin Tertiary sediments. Eocene Tanjung Fm (sands, shales and limestones with Pellatispira-Discocyclina) and Oligocene Montalat Fm marine marls only in NE corner; farther south Warukin Fm directly on Pre-Tertiary. 76 ± 8.7 Ma apatite and zircon fission track ages Batuan Pluton of Schwaner Mts)

Sunata, W. & S. Permanadewi (1995)- Data magnet purba dan penarikhan Kalium-Argon dari batuan mikrodiorit Gunung Kukusan utara, daerah Batulicin, Kalimantan Selatan. In: Proc. Seminar Hasil pemetaan geologi dan geofisika, Puslitbang Geologi, Bandung 1995, p. 260-268.
('Paleomagetic data and K/Ar ages of North Gunung Kukusan microdiorite, Batulucin area, S Kalimantan'. E Miocene (19.6 Ma) microdiorite paleomagnetism suggest weak CCW rotation; Fuller 1999)

Sunata, W. & H. Wahyono (1991)- VI. Palaeomagnetism. In: C.S. Hutchison (ed.) Studies in East Asian tectonics and resources (SEATAR): Crustal Transect VII Java-Kalimantan-Sarawak-South China Sea. CCOP, TP 26, p. 43-51.
(Paleomag results from W Kalimantan document CCW rotation between Jurassic- Miocene: (1) Triassic Gunung Bawan basalts (Serian volc.-equiv.) and shales with Monotis 73° CCW rotation and paleolatitude 17.2°; (2) Late Triassic Suti Semarang Kalung Fm black shales with Monotis 81.5° CCW rotation and paleolatitude 10.8°N or S; (3) Jurassic Tenguwe area black ammonite-mudstone 93° CCW rotation and paleolatitude 2.9° S; (4) Late Cretaceous Ketapang area igneous rocks 50° CCW rotation, no latitudinal displacement; (4) Oligo-Miocene basalt sills at Mandai River unrotated)

Sunata, W. & H. Wahyono (1998)- Data magnet purba teruji untuk formasi Tanjung, daerah Batulicin, Kalimantan Selatan; dan aplikasinya untuk menentukan waktu terjadinya rotasi. Pusat Penelitian dan Pengembangan Geologi, Bandung.
('Paleomagetic data of the Tanjung Formation in the Batulicin area, S Kalimantan'. Weak CCW rotation of Late Eocene Tanjung Fm sandstone; Fuller 1999)

Suparka, E. (1995)- Occurrence of adakites in Sintang area, West Kalimantan: a Neogene post-subduction volcanism phenomena. In: S. Nishimura & R. Tsuchi (eds.) Proc. Oji Seminar on Neogene evolution of Pacific Ocean Gateways, Kyoto, IGCP-355, p. 34-44.

Supiandi, S. (1988)- Studies on peat in the coastal plains of Sumatra and Borneo, I: Physiography and geomorphology of the coastal plains. Southeast Asian Studies (Kyoto) 26, 3, p. 308-335.
(online at: http://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/56338/1/KJ00000131463.pdf)

Supiandi, S. & B. Sumawinata (1989)- Studies on peat in the coastal plains of Sumatra and Borneo, II: The clay mineralogical composition of sediments in coastal plains of Jambi and South Kalimantan. Southeast Asian Studies (Kyoto) 27, 1, p. 35-54.

Supriatna, S. (1989)- Data baru mengenai geologi Pegunungan Meratus, Kalimantan Selatan. Bull. Geol. Res. Dev. Center 13, p. 30-38.
('New data on the geology of the Meratus Mountains, SE Kalimantan'. Including presence of Pre-Tertiary melange)

Supriatna, S. & Abidin (1995)- Geology of the Muara Wahau sheet area, Kalimantan, Quad 1817, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(NE Kalimantan map sheet, N of Kutai Basin. Oldest rocks Telen Fm sheared and brecciated ?Jurassic- Early Cretaceous metasediments (mainly NW-dipping?), associated with Jurassic? ultramafic rocks and Kelinjau melange (with blocks of Devonian reefal limestone (= Danau Fm of Molengraaff (1902)?). Mesozoic rocks intruded by Late Cretaceous Kelai biotite- hornblende granite (part of E-W Sambas- Mangkaliat accretionary prism belt with ~75-81 Ma age granitoids of Amiruddin 2000). Overlain by U Cretaceous Embaluh Gp low metamorphic sediments, unconformably overlain by Late Eocene conglomerates grading upward into marine Eo-Oligocene clastics and limestones. Oligo-Miocene Sintang intrusives)

Supriatna, S., U. Margono, Sutrisno, F. de Keyser, R.P. Langford & D.S. Trail (1993)- Geology of the Sanggau sheet area, Kalimantan Quadrangle 1617, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(NW Kalimantan map sheet which includes Kemajan Mts/ Mengkiang area with intensely folded Permo-Carboniferous Pinoh metamorphics and Balaisebut Group metasediments, intruded by Triassic Embuoi granites (K-Ar ages initial crystallisation 230-263 Ma, later recrystallization at 201-214 Ma). Unconformably overlain by Late Triassic andesitic Serian Volcanics and Sadong Fm clastics and by Cretaceous Pedawan Fm marine sediments, unconformably overlain by non-marine Lower Tertiary Kajan/ Plateau sandstone, etc. Includes Nuit volcano, with basalts with K/Ar date of 4.92 Ma)

Supriatna, S., A. Sudradjat & H.Z. Abidin (1995)- Geology of the Muara Tewe sheet area, Kalimantan Quadrangle 1715, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(C Kalimantan map sheet. In NW folded Upper Cretaceous Selangkai group, unconformably overlain by Late Eocene, intruded by Sintang volcanics. In SE Upper Kutai Basin with folded Oligocene sediments)

Supriatna, S., R. Sukardi & E. Rustandi (1996)- Geology of the Samarinda sheet area, Kalimantan, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Surata, M. (2005)- Challenges to develop the Tayan lateritic bauxite- West Kalimantan. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal siscoveries, IAGI Spec. Issues 2005, p. 106-117.
(Bauxite deposits in Tayan, E of Pontianak, W Kalimantan, formed by lateritization of E Cretaceous gabbro (high-iron type) and Late Cretaceous diorite (high-silica type))

Surata, M., O. Suksianto, M. Pratomo & Supriyadi (2010)- Discovery and its genetic relatonship of bauxite deposit in Mempawah and Landak Regency, West Kalimantan Province. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. Kalimantan coal and mineral resources, MGEI-IAGI Seminar, Balikpapan 2010, p. 107-116.
(W Kalimantan NNW-SSE trending lateritic bauxite belt parallel to West coast, geologically on Schwaner block. Rel. low grade. SiO_2 bauxite type derived from Cretaceous Mensibao diorite, Fe_2O_3-type from Cretaceous Gunungapi Raya Mb andesite and gabbro)

Surjono, S.S., H.D.K. Wijanti & Irawan (2012)- The influence of volcanism in sedimentary rock of Upper Kutai Basin. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-40, 6p.
(Influence of volcanic activity during sedimentation in Upper Kutai Basin shown by volcanic material in Late Eocene Batu Ayau and Late Oligocene- E Miocene Marah Fms along Belayan and Ritan Rivers)

Suryono, N., S. Supriatna & D. Satria (1994)- Geologi rinci dan prospeksi mineral berharga di dearah Muara Luhung (Permata Intan), lembar Muara-Tewe, Kalimantan Tengah. Geol. Res. Dev. Centre (GRDC), Bandung, Bull. 17, p. 40-55.
('Detailed geology and economic mineral prospecting in Muara Luhung (Permata Intan) area, Muara-Tewe sheet, Central Kalimantan')

Suwarna, N. & T. Apandi (1994)- Geological map of the Longiram Quadrangle, East Kalimantan, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Suwarna, N. & R.P. Langford (1993)- Geological map of the Singkawang Sheet area, West Kalimantan, Quad. 1316, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(NW coast Kalimantan. With thick Bengkayang Gp U Triassic- Lw Jurassic clastics, subdivided into Triassic Banan Fm clastics with acid tuffs near base (~1000m) and E Jurassic Sungaibetung Fm clastics (1500m). Intruded and overlain by large Early Cretaceous Mensibau granite intrusives and volcanics. Also numerous Late Oligocene- E Miocene Sintang intrusives)

Suyono (2013)- Stratigraphy and tectonics of the East Ketungau Basin, West Kalimantan during Palaeogene. J. Geologi Indonesia 8, 4, p. 205-214.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/170/170)
(East Ketungau Basin (=Mandai Basin) interpreted as Late Cretaceous- E Tertiary fore arc basin between Schwaner Arc /Boyan melange in S and Sarawak Accretionary Prism in N. Two phases of sedimentation: (1) Late Cretaceous marine Selangkai Fm fore-arc basin fill; (2) Eocene? marginal marine- non-marine Mandai Gp unconformably over Selangkai Fm, following 50° CCW rotation of Kalimantan. Stratigraphic succession of E Ketungau Basin similar to W Ketungau Basin and Melawi Basin in S)

Suyono & M.H. Hermiyanto (2010)- Study characteristic biostratigraphy and Rock Eval pyrolisis of Eocene mudstone in the Mandai Basin, West Kalimantan. Proc. 39th Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-186, 5p.
(Mandai Basin Paleogene frontier basin in W Kalimantan, 60 km S of Putussibau, Kapuas Hulu District. It is bounded by Semitau High/ Melawi basin in S, Lubuk Antu melange in N, Ketungau basin in W. Late Eocene Mandai Gp intertidal- shallow marine clastics unconformably overlie Selangkai Gp and other basement. Eocene mudstones analyzed by Rock Eval pyrolysis: TOC 0.3- 5.2% and classified as poor-fair gas source)

Suyono & M.H. Hermiyanto Zajuli (2018)- The Mesozoic hydrocarbon source rock potential of Singkawang Basin, West Kalimantan. J. Geologi Sumberdaya Mineral 19, 3, p. 131-144.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/233)
(Singkawang Basin Mesozoic basins, NW Kalimantan, with sedimentary rocks that may have hydrocarbon potential. TOC of E Jurassic Sungaibetung Fm 0.95-2.8%, Late Triassic Banan Fm 0.42- 2.4%, Cretaceous Pedawan Fm 0.27-2.3% and Late Cretaceous-Eocene Kayan Fm 0.41-1.8%. Hydrogen index (HI) suggest likely dry gasprone kerogen. Probably overmature thermal stage)

Swamidharma, Y.C.A. (2016)- Magmatic Fe-Ni-Cu sulphides occurence in Sebuku Island. Proc. 8th Ann. Conv. Indonesian Soc. Economic Geol. (MGEI), Bandung, p. 106-108.
(Fe-Ni-Cu sulphides, Co, Au and Platinum Group Elements minerals, associated with cumulus ultramafic zone of Late Triassic- E Cretaceous ophiolite complex in Sebuku Island)

Swamidharma, Y.C.A., A. Khoirrurozikin, A. Cahyadi, Y. Krisnanto & D. Herkusuma (2015)- Mineral resource and potentials in ultramafic cumulate complex of Sebuku Island. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 131-135.

(On exploration of lateritic iron ores from ultramafic complex of Sebuku Island, SE Kalimantan near Meratus Range. Also potential for nickel and other ferrous minerals at various places within cumulate complex. Some microdiamonds present in stream sediment samples near cumulate)

Tan Sin Hok (1936)- Vindplaatsen van *Globotruncana* Cushman in West-Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 96, 1, p. 14-18.
(online at: http://62.41.28.253/cgi-bin/...)
('Localities with Upper Cretaceous planktonic foraminifer Globotruncana in W Kalimantan'. Upper Cretaceous Globotruncana from 3 areas in W Kalimantan, Sungei Silat, Sg. Landak and Sg. Kajan, collected by Ehrat and Zeylmans)

Tarring, H. & G.D. Bellows (1952)- Mineral deposits of Northwest Borneo: a reconnaissance. Geol. Res. Dev. Centre (GRDC), Bandung, Unpublished Report F52-1, p.

Tate, R.B. (1991)- Cross-border correlation of geological formations in Sarawak and Kalimantan. Bull. Geol. Soc. Malaysia 28, p. 63-95.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991004.pdf)
(Regional correlation between S and W Sarawak stratigraphy and new C and NW Kalimantan stratigraphy. Oldest rocks pre-Late Carboniferous metamorphics (meta-oceanic?; no ancient continental basement on Borneo). Permo-Triassic igneous metamorphic complex in Sanggau Quad, with two crystallization events with K-Ar ages 263-230 Ma (Late Permian-E Triassic), and 214-201 Ma (Late Triassic-E Jurassic). Late Carboniferous- Permian with rare fusulinids in both NE Kalimantan/ W Sarawak and Kuching area. Also in both areas unconformably overlying Late Triassic- (E Jurassic?) Serian Fm andesitic arc volcanics, associated with thick Late Triassic-E Jurassic Sadong and Bengkayang Fm shallow marine sediments (with Krusin Flora). Unconformably overlain by thick Late Jurassic-Cretaceous Bau/Kedadom/ Pedawan/Selangkai Fms marine sediments. Widespread (Lower) Cretaceous granitoids and arc volcanics in Kalimantan. Two E-W trending melange zones: (1) BoyanMelange (U Cretaceous?)in S and Lubuk Antu-Kapuas (Eocene) in N)

Tate, R.B. (1996)- The geological evolution of Borneo Island. M.Sc. Thesis University of Malaya, Kuala Lumpur, p. 1-393.
(online at: http://studentsrepo.um.edu.my/774/)
(Extensive review of geology of Borneo island: (1) nature and origin of Late Paleozoic Basement; (2) stratigraphy of Mesozoic sediments and associated igneous and metamorphic rocks; (3) Cretaceous igneous-volcanic arc rocks and oceanic crustal rocks and associated deepwater sediments and melange zones; (4) Cenozoic rifting of Mesozoic landmass and development of basins and associated igneous activity)

Tate, R.B. (compiler) (2001)- The geology of Borneo Island. Geol. Soc. Malaysia, CD-ROM Publication.

Tate, R.B. (2002)- Geological map of Borneo Island, 1: 1,500,000. Geol. Soc. Malaysia.
(online at: http://geology.um.edu.my/gsmpublic/borneo.swf)
(New geologic map of Borneo island compiled from published geologic maps of Geological Survey of Malaysia (Sarawak and Sabah), Geological Research and Development Centre in Bandung (Kalimantan), Brunei Museum/ Shell maps and other sources. With 12p. accompanying notes. Oldest 'in-situ' rocks of Pinoh Metamorphics in W and SW Kalimantan, assumed to be of 'Pre-Carboniferous' age. Oldest in-situ fossiliferous rocks ?Carboniferous-Permian metasediments of Balaisebut/ Terbat Group in NW Kalimantan and W Sarawak)

Tate, R.B. (2002)- Notes to accompany the Geological map of Borneo. Geol. Soc. Malaysia, p. 1-12.
(Brief summary of geology and stratigraphy of Kalimantan and North Borneo. With 1:500,000 scale geological map, mainly compiled from published geological maps and publications. Not clear if Borneo is part of Triassic and older Malay Peninsula/ SE Asia craton. Oldest fossiliferous rock Devonian limestone in tectonic melange of probable Lower Cretaceous age in NE Kalimantan. Oldest in-situ rocks 'pre-Carboniferous' Pinoh Metamorphics. Followed by Permian-Triassic igneous and metamorphic rocks, U Triassic volcanics, Triassic-Jurassic- Cretaceous sediments, widespread Cretaceous granites, etc.)

Tay, T.S., P. Wathanakul, W. Atichat, L.H. Moh, L.K. Kem & R. Hermanto (2005)- Kalimantan diamond- morphology, surface features and some spectroscopic approaches. Australian Gemmologist 22, 5, p. 186-195.
(Cempaka diamonds abundant percussion scars, suggesting mechanical reworking. Deformation marks similar to those reported on diamonds from dredge waters off Phuket, Thailand. Zircon and olivine inclusions in diamonds suggest possibility of peridotitic source)

Taylor, W.R., A.L. Jaques & M. Ridd (1990)- Nitrogen-defect aggregation characteristics of some Australasian diamonds: time-temperature constraints on the source regions of pipe and alluvial diamonds. American Mineralogist 75, p. 1290-1310.
(online at: www.minsocam.org/ammin/am75/am75_1290.pdf)
(Alluvial diamonds from Landak, W Kalimantan and Keliam River NW of Barito Basin similar N content, absence of H defects and mantle residence T isotherm of 1145°C as alluvial diamonds from Copeton (NSW, New England Fold belt), and are different from Agyle/Kimberley Block diamonds. This suggests possible origin with E Australian Gondwanaland subcontinental lithosphere)

Ter Bruggen, G. (1932)- Oud-Tertiair in phyllitische facies in West Borneo. De Mijningenieur 1932, p. 56-57.
('Early Tertiary in phyllitic facies in West Borneo')

Ter Bruggen, G. (1935)- De Eocene fyllietformatie in Centraal-Borneo. Doct. Thesis, Delft Technical University, p. 1-139.
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:028955000:pdf)
(‘The Eocene phyllite formation in C Borneo’. See also English translation in Haile (1955, p. 39-124). Phyllites in NW Kalimantan/ S Sarawak Embaluh Complex contain zone Ta Assilina, Nummulites and Discocyclina, and transgressed by non-metamorphosed Late Eocene (zone Tb) clastics zone, suggesting Late Eocene or later low-grade metamorphism. Conclusions harshly criticized by Zeijlmans van Emmichoven & Ubaghs, 1936)

Ter Bruggen, G. (1936)- De Eocene fyllietformatie in Centraal-Borneo (een wederwoord). De Ingenieur in Nederlandsch-Indie (IV), 3, 7, p. 124-126.
(‘The Eocene phyllite formation in C Borneo (a reply)’. Reply to critical evaluation of Ter Bruggen (1935) by Zeijlmans & Ubaghs (1936). See also English translation in Haile (1955, p. 147-158))

õT Hoen, C.W.A.P. (1924)- Diverse meeningen over de ontstaanswijze der ijzererts-afzettingen in Z.O. Borneo. Jaarboek. Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen 1. p. 288-295.
('Varying opinions on the genesis of iron ores in SE Kalimantan'. Magnetite iron ores of Sungai Doewa in Kusambi or Kukusan Mts probably formed from weathering of serpentinized peridotite)

Thomas, M.F., M. Thorp & J. MacAlister (1999)- Equatorial weathering, landform development and the formation of white sands in north western Kalimantan, Indonesia. Catena 36, 3, p. 205-232.
(On Pleistocene white sand deposits of coastal NW Kalimantan, may be long-term weathering products of Miocene granodiorites)

Thompson, J.F.H., H.Z. Abidin, R.A. Both, S. Martosuroyo, W.J. Rafferty & A.J.B. Thompson (1994)- Alteration and epithermal mineralization in the Masupa Ria volcanic center, Central Kalimantan, Indonesia. In: T.M. van Leeuwen et al. (eds.) Indonesian mineral deposits- discoveries of the past 25 years, J. Geochemical Exploration 50, 1-3, p. 429-456.
(Masupa Ria andesitic volcanic center in C Kalimantan with epithermal precious metal-bearing quartz vein, dated 24.6 Ma. Part of NE-SW belt of mid-Tertiary calc-alkaline volcanic arc rocks through C Borneo, generally dated at 14.4-24.0 Ma)

Thorp, M.B., M.F. Thomas, T. Martin & W.B. Whalley (1990)- Late Pleistocene sedimentation and landform development in Western Kalimantan (Indonesian Borneo). Geologie en Mijnbouw 69, 2, p. 133-150.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0MGVDVVdDem5uUmM/view)

(Widespread Pleistocene podzolised white quartz sands 15-20m above Holocene floodplains in coastal regions of W Kalimantan, occuring as major alluvial bodies 15-20m higher than Holocene floodplains inland (see also discussion by Batchelor 1993))

Thorp, M.B. & M.F. Thomas (1993)- Late Pleistocene sedimentation and landform development in western Kalimantan (Indonesian Borneo); Reply. Geologie en Mijnbouw 71, 4, p. 363-368.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0cmU1TG5tamRBYjg/view)
(Reply to comments by Batchelor 1993 on Thorp et al. 1990 paper. Confirm earlier correlations between Late Pleistocene W Malaysian 'Old Alluvium' with W Kalimantan alluvial fan terraces)

Tichelman, G.L. (1931)- De onderafdeeling Barabai (Zuider- en Oosterafdeeling van Borneo). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 48, p. 461-486 and p. 682-711.
('The Barabai sub-department, SE Borneo'. Geographic description with some geologic-mining info on p. 463-465)

Tjokrokardono, S. (2002)- Studi provinsi Uranium Kalimantan, Kajian mineralisasi Uranium pada batuan metamorf dan granit di Pegunungan Schwaner. Proc. Seminar Iptek nuklir dan pengelolaan sumber daya tambang, Jakarta 2002, p. 66-77.
(online at: www.iaea.org/inis/collection/NCLCollectionStore/_Public/37/092/37092546.pdf)
('Study of the Kalimantan uranium province: assessment of uranium mineralization of metamorphic and granitic rocks at the Schwaner Mountains'. Uranium exploration by CEA-BATAN in SW Kalimantan discovered uranium anomalies in metamorphic and granite rocks of Schwaner Mts. Pinoh metamorphic rocks presumably of Permo-Carboniferous age, with uranium-bearing hydrothermal veins from U Cretaceous (90-81 Ma) Sukadana granite)

Tjokrokardono, S. & A.S. Sastratenaya (1988)- Rich mineralized boulders of the Rirang River, West Kalimantan. In: Proc. Uranium deposits in Asia and the Pacific; geology and exploration, Jakarta 1985, Int. Atomic Energy Agency (IAEA), Vienna, IAEA-TC-543/6, p. 79-95.
(Rirang River tributary of Kalan River, 400km SE of Pontianak. With boulders of unknown origin, with banded and non-banded monazite uranium mineralization (U-content 0.6- 6.7%). In Kalan Basin, dominated by 3000-4000m thick metasediments and volcanics with tonalite intrusions)

Tjokrokardono, S., D.Soetarno, Sapardi M.S., L. Subiantoro & R. Witjahyati (2004)- Studi geologi regional dan mineralisasi Uranium di Pegunungan Schwaner, Kalimantan Barat dan Tengah. Proc. Seminar Geologi Nuklir dan Sumberdaya tambang tahun 2004, Jakarta, p. 64-84.
(online at: www.iaea.org/inis/collection/NCLCollectionStore/_Public/39/123/39123070.pdf)
('Study of the regional geology and uranium mineralization in the Schwaner Mountains, West and Central Kalimantan')

Tjokrokardono, S., B. Sutopo, L. Subiantoro & K. Setiawan (2003)- Geologi dan mineralisasi uranium Kalan, Kalimantan Barat, Model termostratigrafi mineralisasi Uranium. In: Kumpulan Laporan hasil penelitian Tahun 2003, Pusat Pengembangan Geologi Nuklir-Batan, p. 27-52.
(online at: http://digilib.batan.go.id/e-prosiding/File%20Prosiding/Geologi/Laporan_Pen._2004-2006_PPGN_berkas_A/artikel/soeprapto_t_27.pdf)
('Geology and uranium mineralization, Kalan, W Kalimantan'. Uranium mineralization at Kalan as fracture fill in Pinoh Metamorphics, intruded by Jurassic- U Cretaceous granitic bodies)

Tobing, R.L. (2013)- Serpih Silat daerah Nanga Serawai, Kabupaten Sintang, Provinsi Kalimantan Barat dan potensinya sebagai serpih gas. Bul. Sumber Daya Geologi 8, 1, p. 1-6.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/659)
('Silat shale in the Nanga-Serawai area, Sintang District, and its shale gas potential'. Late Eocene Silat shale in Melawi Basin, C Kalimantan, deposited in lacustrine and delta environment. Organic material vitrinite (from plants) and liptinite (from plant fats or sea algae). TOC 0.54-1.15%, vitrinite reflectance 0.29-0.45%)

Tschernik, G. (1909)- Resultate der chemischen Untersuchung eines Uranminerals von der Insel Borneo. Bull. Academie Imp. Sci. de St. Petersbourg, 3, p. 1203-1212. *(in Russian?)*
(Results of the chemical analysis of a uranium mineral from Borneo island'. Analysis of broggerite (lead-uranium oxyde) from SE Kalimantan. (Presence of uranium minerals in Kalimantan questioned by Von Koenigswald (1933) and thought to have come from Chinese pharmacy, but may well be real; JTvG))

Tschernik, G.P. (1915)- Zur Mineralogie der Insel Borneo. Zeitschrift fur Kristallographie und Mineralogie 55, p. 184-191.
(online at: https://babel.hathitrust.org/cgi/pt?id=nyp.33433112057900;view=1up;seq=11
('On the mineralogy of the island of Borneo'. Summary of 1912 St Petersburg paper. Report on petrography and chemistry of platinum ores and associated Os-Ru group minerals (Osmiridium), gold and heavy minerals from Tanah Laut, SE Kalimantan)

Ubaghs, J.G.H. (1936)- De geologie van een gebied in Noord Kutai (Oost Borneo), gekenmerkt door Spiroclypeus-houdend Eoceen. De Ingenieur in Nederlandsch-Indie (IV), 3, 10, p. 183-195.
('Geology of an area in N Kutai (E Kalimantan), characterized by Spiroclypeus-bearing Eocene'. N margin of Kutei Basin with outcrops of intensely folded Pre-Tertiary (low metamorphic 'Danau Fm chert, marble, red phyllite and basic volcanics, overlain by less metamorphic ?Cretaceous thin-bedded sands-shales. Unconformably overlain by ~270m basal Tertiary conglomerates (incl. pebbles with Permian fusulinids?; De Neve 1961) and deltaic sandstones. Overlain by Eocene limestone bed with Nummulites, Discocyclina, and Pellatispira, followed by 1000's of m thick marly-sandy series with thin Eocene- Oligocene limestones)

Ubaghs, J.G.H. (1937)- Geologie van het gebied begrensd door de S. Boengalon, S. Telen, S. Mahakam en Straat Makassar. Geological Survey, Bandung, Open File report 24/CZ, p. 1-53.*(Unpublished)*

Ubaghs, J.G.H. (1940)- De geologie van Mangkalihat (Borneo). Dienst Mijnbouw Nederlandsch-Indie, Geological Survey, Bandung, Open File report F40-14, p. 1-62.
('The geology of Mangkalihat, Kalimantan')

Ubaghs, J.C.H. (1941)- Diamonds in Borneo. Geological Survey, Bandung, Report F 41-2, p.
(Translated from Dutch) (Van Leeuwen 2014: Kalimantan diamonds commonly found together with corundum, diaspore, zircon, chromite/spinel, pleonast, rutile and rare tektite)

Umar, I., A. Yasin & S. Koesoemadinata (1982)- Geologic map of the Balikpapan Quadrangle, East Kalimantan, 1:250,000 (sheet 1814). Geol. Res. Dev. Centre (GRDC), Bandung.

Untung, M., R. Sukamto, W. Sunata & H. Wahyano (1987)- Paleomagnetism along Transect VII, Geologic Report, Jawa-Kalimantan SEATAR Transect VII, Geol. Res. Dev. Centre (GRDC), Bandung, p. 73-85.
(Paleomagnetic study of 40 samples from 11 localities of Jurassic shallow marine rocks in NW Kalimantan, ~50 km S of Sarawak suggests 93° CCW rotation since Jurassic. Agrees well with Schmidtke et al. (1990) data for W Sarawak)

Untung, M. (1996)- Geoscientific study along Jawa-Kalimantan-Sarawak- South China Sea transect. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 163-183.
(W Borneo tectonically active from Triassic- Late Cretaceous, with 90° counterclockwise rotation since then)

Utoyo, H. (2014)- Mineralization of the Busang prospect, East Kalimantan. Indonesian Mining J. 17, 1, p. 27-39.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/342)
(Busang prospect in Kalimantan Volcanic belt, ~150 km SW of Kelian mine. Hosted within volcanic rocks intruded by Oligo-Miocene Atan Diorite. Hydrothermal alteration with gold, minor chalcopyrite, lead, sphalerite, pyrite and marcasite. Low sulfidation epithermal type)

Van Bemmelen, R.W. (1939)- De geologie van het westelijke en zuidelijke deel van de Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch-Indie (1939), Verhandelingen, p. 187-319.
(Compilation report of earlier mapping of W and S part of W Borneo. Mainly petrographic descriptions. Schwaner Mountains crystalline schists. C and E part described by Zeijlmans in same volume)

Van Bemmelen, R.W. (1949)- Borneo. In: The geology of Indonesia, Government Printing Office, Nijhoff, The Hague, 1, p. 325-360.

Van Es, L.J.C. (1920)- Geologische kaart van Nederlandsch-Indie, schaal 1:1,000,000, Toelichting bij Blad IX (Zuidwest Borneo en Billiton). Jaarboek Mijnwezen Nederlandsch-Indie 47 (1918), Verhandelingen 2, p. 1-35.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/814745)
(1:1 million geologic overview map and explanatory notes for West Borneo and Billiton)

Van Leeuwen, T.M. (2015)- The Kelian gold deposit, East Kalimantan, Indonesia: its exploration history, evolving geological model and 'invisible' coarse gold. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 1-26.
(Extensive review of history and geology of Kelian gold mine, NE Kalimantan, first discovered in 1976, exploited 1992-2004. Intermediate/ low sulfidation epithermal deposit associated with E Miocene (~20 Ma) andesite and rhyolite intrusions, and surrounded by Upper Cretaceous volcanoclastics and Eocene sedimentary rocks. Several ore zones)

Van Leeuwen, T.M., T. Leach, A.A. Hawke & M.M. Hawke (1990)- The Kelian disseminated gold deposit, East Kalimantan, Indonesia. J. Geochemical Exploration 35, p. 1-61.
(Kelian one of large Miocene volcanic-hosted gold discoveries, which occur in 400km long NE trending belt in C Kalimantan. Silicic pyroclastics overlain by Late Eocene sediments, which were folded/ faulted along N/ NE trends and intruded by andesitic bodies in E Miocene (K-Ar ages ~23 Ma), followed by hydrothermal alteration and mineralization around 20 Ma. Four stages of alteration/ mineralization. Magmatic-hydrothermal event followed by >900m uplift and erosion in M-L Miocene and basaltic volcanism in Plio-Pleistocene. Second cycle of erosion in Pleistocene removed most of young volcanic cover, exposing deposit as known today. (mine closed in 2003))

Van Leeuwen, T.M. & G.D. Muggeridge (1987)- Exploring for coal in East Kalimantan, Indonesia. In: Proc. Economic aspects of coal exploration, evaluation and exploitation, Bandung 1986, Econ. Social Comm. Asia Pacific (ESCAP) Series on Coal 5, p. 115-129.
(Coal exploration survey by PT Kaltim Prima Coal in E Kalimantan. Detailed exploration in Pinang area, N of Sangatta, with 5 main coal seams 1.2- 9m thick. Some coal affected by burning down to 40-50m)

Van Leeuwen, T.M., G.D. Muggeridge & S. Putra (1988)- Discovery and exploration of the Pinang coal deposit, East Kalimantan, Indonesia. In: Proc. Conf. Mining prospects and challenges in Indonesia during the fifth development plan, Jakarta 1988, p. 1-20.
(Pinang Dome coal deposit in Kutai Basin, 90km N of Samarinda, 10km long in N-S direction and 2-6km wide. Six main seams 1-14m thick and 17 thin coal seams in 950m interval of Miocene fluvio-deltaic sequence. High-quality coal with rel. low moisture (4-12%), low ash (<3%), low sulfur (0.2-1.4%) and high rank (VR 0.51-0.67%; burial 2000-3000m). Also some lower quality Eocene coal in area of higher rank (VR 0.65-0.75%))

Van Sandick, J.C.F. & V.J. van Marle (1919)- Verslag eener spoorwegverkenning in Noordwest-Borneo. Mededeelingen Dienst der Staatsspoor- en Tramwegen, Opname No. 13, vol. 1, p. 1-384, vol. 2.
('Reconnaissance for a railroad in NW Borneo'. Extensive description of geography of West Kalimantan, in conjunction of a potential 217km long railroad line from Pontianak to Sambas (never built). With a geological map of NW Borneo compiled from the Geological map of the Netherlands Indies by E.C. Abendanon)

Van Schelle, C.J. (1880)- De geologische en mijnbouwkundige onderzoekingen in de Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 9 (1880), 2, p. 33-41.
(Early geological and mining survey of west Kalimantan)

Van Schelle, C.J. (1882)- Eenige gegevens omtrent de goudproductie in een gedeelte der Res. Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 12 (1883), Technisch Admin. Ged., p. 45-69.
('Some data on the gold production in a part of W Kalimantan')

Van Schelle, C.J. (1883)- Beschrijving van de kolenafzetting bij Napan aan de rivier Bojan, in het landschap Boenoet. Jaarboek Mijnwezen Nederlandsch Oost-Indie 12 (1883), Technisch Admin. Ged., p. 92-97.
('Description of the coal deposit near Napan on the Boyan River, in the Bunut area')

Van Schelle, C.J. (1884)- De geologisch-mijnbouwkundige opneming van een gedeelte van Borneo's Westkust. Verslag No. 6. Onderzoek naar cinnaber en antimonium-glans in het boven stroomgebied der Sikajam-Rivier. Jaarboek Mijnwezen Nederlandsch Oost-Indie 13 (1884), Technisch Admin. Ged., p. 123-141.
('The geological-mining investigation of part of Borneo's West coast No. 6: Investigation into cinnaber and antimonium in the upper reaches of the Sikajam River'. Sarawak- Sanggouw border area is area of Chinese alluvial gold and diamond mines. In N part of area mainly folded shales, generally striking NE-SW dipping 30-50° to SE. In S gabbro. Some minor cinnaber only in Kajan gold mining area.)

Van Schelle, C.J. (1884)- De geologische opneming van een gedeelte van Borneo's Westkust. Verslag No. 7. Over een onderzoek naar goudaderen en stroomgoud in het Skadouw-gebergte. Jaarboek Mijnwezen Nederlandsch Oost-Indie 13 (1884), Technisch Admin. Ged., p. 219-260.
('The geological- mining investigation of part of Borneo's West coast No. 7: Investigation into gold veins and alluvial gold in the Skadouw Mountains'. Presence of some minor gold-bearing veins. Not much on geology)

Van Schelle, C.J. (1884)- De geologische opneming van een gedeelte van Borneo's Westkust. Verslag No. 8. Voorlopige onderzoekingen naar cinnaber in de Residentie Westerafdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 13 (1884), Technisch Admin. Ged., p. 260-276.
('The geological-mining investigation of part of Borneo's West coast No. 8: Preliminary investigations into cinnaber in the Residency of Western Borneo')

Van Schelle, C.J. (1885)- De geologisch-mijnbouwkundige opneming van een gedeelte van Borneo's Westkust. Verslag No. 9. Onderzoek naar goudaderen bij Melassan. Jaarboek Mijnwezen Nederlandsch Oost-Indie 14 (1885), Technisch Admin. Ged., p. 117-130.
('The geological-mining investigation of part of Borneo's West coast No. 9: Investigation of gold veins near Melassan'. Report on 1884 survey of area formerly mined for gold by Chinese kongsi's, now abandoned. Presence of quartz vein(s) in weathered 'old clay-shales' with pyrite and minor amounts of gold (0.0005%). Further exploitation deemed uneconomic)

Van Schelle, C.J. (1886)- Mededeeling omtrent de geologisch-mijnbouwkundige opneming van een gedeelte der Residentie Westerafdeeling van Borneo (vervolg). Jaarboek Mijnwezen Nederlandsch Oost-Indie 15 (1886), Technisch Admin. Ged., p. 109-135.
('Communication on the geological-mining investigation of part of the Residency of Western Borneo (continuation)'. Continuation of Van Schelle (1884) on geology of N / NW Kalimantan. Oldest rocks are slates and thin quartzites, believed to be of Devonian age, but fossils too poorly preserved for identication. Steeply dipping, mainly E-W trending, also SE-NW. At two localities with trunks of silicified wood. Igneous rocks include granite and younger porphyry diabase, gabbro, etc.. Overlain by U Cretaceous marls, Eocene? sandstones and post-Eocene clastics. Occurrences of diamonds (Landak), gold,)

Van Schelle, C.J. (1887)- De geologische opneming van een gedeelte van Borneoôs westkust. Verslag No. 10: Onderzoek naar goudaderen bij Sikarim. Jaarboek Mijnwezen Nederlandsch Oost-Indie 16 (1887), Technisch Admin. Ged., p. 95-128.
('The geological-mining investigation of part of Borneo's West coast No. 10: Investigations of gold veins near Sikarim')

Verbeek, R.D.M. (1883)- Over het voorkomen van gesteenten der Krijtformatie in de residentie Wester afdeeling van Borneo. Verslagen Mededeelingen Kon. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde, ser. 2, 18, p. 39-43.
(online at: google books)
('On the occurrence of Cretaceous rocks in W Borneo'. Fossils collected in 'Patellina marls' from Sajor along Seberuang tributary of Kapuas River in W Kalimantan examined by Prof. Geinitz, and can definitively be attributed Cretaceous age ('Lower Senonian'). This is first confirmation of presence of Mesozoic rocks in Netherlands Indies)

Viaene, W., T. Suhanda, N. Vandenberghe, Y. Sunarya & R. Ottenburgs (1981)- Geochemical soil prospecting in Northwest Kalimantan, Indonesia. In: 8th Int. Geochemical Exploration Symposium, J. Geochemical Exploration 15, 1-3, p. 453-470.
(Geochemical analysis of soils in NW Kalimantan found anomalies of Cu, Mo, Au and Bi. Explained by porphyry-type mineralization of mainly chalcopyrite and molybdenite in quartz-enriched granodiorite. Possibility of belt of porphyry-type mineralization in W Kalimantan)

Vogel, F. (1896)- Mollusken aus dem Jura von Borneo. Sammlungen Geol. Reichs-Museums. Leiden, E.J. Brill, ser. 1, 5, p. 127-153.
(online at: www.repository.naturalis.nl/document/552424)
('Molluscs from the Jurassic of Borneo'. Molluscs collected by Wing Easton and Bosscha. Mollusc breccia of Sungei Perdajun in Kendai area, Buduk in Sambas, etc. Occ. Corbula borneensis n.sp., Protocardia crassicostata n.sp., P. tenuicostata n.sp., Exelissa septemcostata n. sp.)

Vogel, F. (1896)- Mollusken aus dem Jura von Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 25, Wetenschappelijk Gedeelte, p. 1-27.
('Molluscs from the Jurassic of Borneo'. Reprint of Vogel (1896))

Vogel, F. (1900)- Neue Mollusken aus dem Jura von Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 6, p. 40-76. *(also in Jaarboek Mijnwezen Nederlandsch Oost-Indie 1899, Wetenschappelijk Gedeelte 2)*
(online at: www.repository.naturalis.nl/document/552402)
('New molluscs from the Jurassic of Borneo'. Additional Upper Jurassic mollusc material from NW Kalimantan (Sungai Pasi, Sungai Riong, etc.), collected by Wing Easton. Common bivalve molluscs (Astarte spp., Protocardia, Corbula, etc.) and gastropods)

Vogel, F. (1904)- Beitrage zur Kenntnis der mesozoischen Formationen in Borneo, 1: Der Nerineensandstein von Bana. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 7, p. 208-217.
(online at: www.repository.naturalis.nl/document/552427)
('Contributions to the knowledge of the Mesozoic formatons of Borneo, 1. The Nerinea sandstone of Bana'. Cretaceous molluscs from the Bana, Landak River, W Kalimantan (Itieria scalaris n.sp., Nerinea sp., Exogyra sp., Mytilus arrialoorensis, Arca, Astarte, Lucina, Tellina, Corbula)

Vogel, F. (1904)- Beitrage zur Kenntnis der mesozoischen Formationen in Borneo, 2: Trias in Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 7, p. 217-220.
(online at: www.repository.naturalis.nl/document/552427)
('Contributions to the knowledge of the Mesozoic formatons of Borneo, 2. Triassic in Borneo'. Upper Triassic shale rich in Monotis salinaria, probably from SE of Kendai)

Volz, W. (1905)- Die Insel Pulo Laut bei SO. Borneo als Beispiel einer Hebung durch ein Massenerguss. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 20, p. 354-364.
('Pulau Laut island near SE Borneo as example of uplift through a mass eruption'. Main mountains of E half of Pulau Laut island up to 700m high and composed of Post-Eocene porphyrites. Eruptions thought to have uplifted Eocene sediments)

Von Fritsch, K. (1878)- Patellinen von der Westseite von von Borneo. Palaeontographica, Suppl. 3, 1, p. 144-146.
('Patellinids from the West side of Borneo'. Descriptions of Patellina scutum and P. trochus from Seberuang River, left tributary of Kapuas River, W Kalimantan (re-assigned to mid-Cretaceous Orbitolina concava by Martin 1890; JTvG))

Von Gaffron, H. (1853)- Mededeeling aangaande den ijzererts gevonden ten Noorden van Kampong Tambaga in Tanah-Laut (Z.O. kust van Borneo). Natuurkundig Tijdschrift Nederlandsch-Indie 5, p. 225-232.
('Note on the iron ore found N of Tambaga village in Tanah Laut (SE coast of Kalimantan)'. Iron ore occurrence on slope of Poattion Dammar hill. Not much detail, no maps)

Von Gaffron, H. (1854)- Geognostische tabel der rotssoorten van den berg Pengaron. Natuurkundig Tijdschrift Nederlandsch-Indie 1, 6, p. 145-150.
('Geognostic table of the the rock types of the Pengaron hill'. Early cross section of Pengaron hill, Meratus Mts front, site of late 1800's mining of Eocene coal in SE Kalimantan)

Von Gaffron, H. (1857)- Verslag over de goudmijnen van Tanah Lawut (eiland Borneo). Natuurkundig Tijdschrift Nederlandsch-Indie 1, 9?, p. 30-40.
(Early report on alluvial gold mining by Chinese and dayaks in 'Tanah Laut' area, S Kalimantan)

Von Koenigswald, G.H.R. (1939)- Uber einige Ammoniten und Aptychen aus der Unteren Kreide von Borneo. Jaarboek Mijnwezen Nederlandsch-Indie 68, Verhandelingen, p. 162-171.
('On some ammonites and aptychs from the Lower Cretaceous of Borneo'. Lower Cretaceous ammonites collected by Zeijlmans in Seberuang area, W Kalimantan, in beds previously ascribed to Upper Cretaceous. Similarities with Jambi, Sumatra, Valanginian noted. Lower Bedungan Fm (unconformable on Permo-Carboniferous Bojan Fm meta-sediments and volcanics) with Valanginian Pecten, Hoplites neocomiensis, etc.)

Von Koenigswald, G.H.R. (1961)- Tektites in Borneo and elsewhere. J. Sarawak Museum 10, p. 319-324.

Wagner, C. (1986)- Mineralogy of the type kajanite from Kalimantan: similarities and differences with typical lamproites. Bull. Mineralogie 109, 5, p. 589-598.
(Unusual leucite-bearing potassic basalts named kajanite (initially described by Brouwer 1910) from E Kalimantan, with affinities to minettes and lamproites)

Wahyudiono, J. (2017)- Karakteristik petrologi dan geokimia batuan gunungapi berumur Oligosen Akhir-Miosen di daerah Gunung Muro, Kalimantan Tengah. J. Geologi Sumberdaya Mineral 18, 2, p. 105-115.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/266/283)
('Petrology and geochemistry characteristics of the Late Oligocene - Miocene volcanic rocks in the Gunung Muro Region, C Kalimantan'. Mt Muro calc-alkaline magmatic (part of Sintang Arc volcanics))

Wake, B.A. (1991)- Gold mineralization at the Muyup prospect, East Kalimantan, Indonesia.In: Proc. World Gold ó91- Gold forum on technology and practice, Cairns, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 271-278.

Wakita, K. (2002)- Secrets of lost diamonds- a geological trip Cretaceous accretionary complex in South Kalimantan, Indonesia. Chishitsu News, Geol. Survey Japan, 574, p. 53-67. *(in Japanese)*

Wakita, K. (2002)- Hard kiss of mosquito on the Equator- a geological trip Cretaceous accretionary complex in West Kalimantan. Chishitsu News 576, p. 44-59.
(in Japanese; online at: www.gsj.jp/Pub/News/pdf/2002/08/02_08_09.pdf)

Wakita, K., K. Miyazaki, I. Zulkarnain, J. Sopaluwakan & P. Sanyoto (1998)- Tectonic implications of new age data for the Meratus complex of South Kalimantan, Indonesia. The Island Arc 7, p. 202-222.

(Meratus Cretaceous subduction complex melange with chert (with early M Jurassic- M Cretaceous radiolarians), shale, limestone, basalt, ultramafic rocks and schist. Unconformably covered by Late Cretaceous island arc volcanics and submarine volcanoclastics (Pitap Fm with Cenomanian or older radiolarians). Constraints on tectonic setting: (1) melange caused by subduction of oceanic plate covered by early M Jurassic to late E Cretaceous radiolarian cherts; (2) Aptian-Albian (110-119 Ma) Haruyan Schist, high P-low T metamorphism caused by plate subduction. M Jurassic (165, 180 Ma) intermediate-P metamorphic rocks along N margin; (3) Haruyan Fm, submarine volcanism in immature island arc setting, locally contemporaneous with Meratus Complex melange)

Watters, R.A., G.B.H. Tucker & B. Soesila (1991)- Reconnaissance and follow-up exploration for gold in Central Kalimantan, Indonesia. J. Geochemical Exploration 41, 1-2, p. 103-123.
(Geochemical reconnaissance survey for gold in C Kalimantan delineated seven anomalies, associated with Cretaceous Sepauk Tonalite)

White, L., I. Graham, R. Armstrong & R. Hall (2014)- Tracing the Source of Borneoœs Cempaka diamond deposit. American Geophys. Union (AGU), Fall Mtg., San Francisco, EP21D-3565, 1p. *(Abstract only)*
(Detrital zircon ages from Cempaka alluvial diamond deposit in SE Kalimantan: 75-110 Ma (2/3; M-U Cretaceous), 223 Ma, 314-319 Ma, 353-367 Ma, 402-414 Ma, 474 Ma, 521 Ma, 549 Ma, 1135-1176 Ma, 1535 Ma and 2716 Ma. Cretaceous zircons euhedral with minor evidence of mechanical abrasion, likely derived from nearby Schwaner Mts granites. Triassic and older grains rounded and likely derived from Australia before Borneo rifted from Gondwana. Some ages resemble those of Merlin and Argyle diamond deposits of Australia. Geochemical data from diamonds implies association with lamproite intrusions)

White, L.T., I. Graham, D. Tanner, R. Hall, R.A. Armstrong, G. Yaxley, L. Barron, L. Spencer & T.M. van Leeuwen (2016)- The provenance of Borneo's enigmatic alluvial diamonds: a case study from Cempaka, SE Kalimantan. Gondwana Research 38, p. 251-272.
(Diamonds in alluvial deposits across C and S Borneo of unknown primary igneous source. Cempaka diamonds likely derived from at least two sources, one relatively local and/or involved little reworking, and other more distal with several periods of reworking. Distal diamond source interpreted to be recycled from diamond-bearing pipes of block that rifted from NW Australia. Local source possibly diamondiferous diatremes associated with eroded Miocene high-K alkaline intrusions N of Barito Basin, or from ophiolitic rocks exposed in nearby Meratus Mountains. Associated zircons mainly 75-110 Ma, similar to many other Borneo Tertiary sediments, others Triassic and older)

Williams, P.R. & B.H. Harahap (1986)- Geochemistry, age and origin of post subduction intrusive rocks in West Kalimantan and Sarawak. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 12, p. 43-54.
(Major phase of Late Oligocene- E Miocene igneous activity in NW Kalimantan and Sarawak. Mainly I-type granodiorites. Concentrated in thickest parts of Late Cretaceous- Early Tertiary Melawi and Ketungau sedimentary basin and probably represents deep crustal remelting in passive, post-subduction environment)

Williams, P.R. & B.H. Harahap (1987)- Preliminary geochemical and age data from postsubduction intrusive rocks, northwest Borneo. Australian J. Earth Sci. 34, p. 405-415.
(Major phase of Late Oligocene- E Miocene igneous activity in W Kalimantan and Sarawak, NW Borneo, mainly associated with thickest parts of Late Cretaceous- E Tertiary Melawi and Ketungau sedimentary basins. Majority is granodiorite, similar to I-type granitoids. K/Ar ages 23-30.4 Ma from S part of region (Melawi Basin), 16.4- 17.9 in N part (Ketungau basin). Age of magmatism, tectonic position and geochemistry suggest it is related to deep crustal re-melting and intrusion in passive, post-subduction environment (Hartono 2006 suggests these are subduction-related adakites; JTvG))

Williams, P.R. & R. Heryanto (1986)- Geological data record, Sintang 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p. *(Unpublished)*
(Tate 1995: incl. tin occurrence in Lower Cretaceous Menyukung Granite in W Kalimantan)

Williams, P.R., C.R. Johnston, R.A. Almond & W.H. Simamora (1988)- Late Cretaceous to Early Tertiary structural elements of West Kalimantan. Tectonophysics 148, p. 279-298.
(Three W Kalimantan domains after E Cretaceous-Eocene convergent tectonics: (1) Schwaner Mountains, E-W across S and C West Kalimantan with subduction granitoids intruded into low-grade metamorphic rocks in E Cretaceous; (2) NW Kalimantan Late Carboniferous- Cretaceous sediments and volcanics; (3) NW Kalimantan Cretaceous flysch accretionary complex, a S continuation of mainly Tertiary Sarawak accretionary wedge. Boundary between Cretaceous accretionary domain and NW Kalimantan domain is transform fault marking W limit of Late Cretaceous S-dipping subduction. Growth of accretionary complex resulted in uplift of melange and flysch, on which extensional half graben formed with lacustrine deposits. Sedimentary basin formed between continental rocks to S and emergent accretionary complex to N, in forearc basin position. As accretion proceeded, locus of underthrusting migrated N and second melange ridge and sedimentary basin developed farther N. S-dipping subduction in E part of W Kalimantan in Late Cretaceous- Early Tertiary)

Williams, P.R., S. Supriatna & B. Harahap (1986)- Cretaceous melange in West Kalimantan and its tectonic implications. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 69-78.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986006.pdf)
(Same as Williams et al. (1990) below. Boyan melange of Semitau zone of NW Kalimantan, which separates Cretaceous- E Tertiary Ketungau and Melawi basins, is chaotic mixture of blocks (several m to several km) of greenschist, serpentinite, granite, limestone (incl. mid-Cretaceous Orbitolina Lst), quartzite and radiolarian chert in sheared argilitic matrix (generally steep S-dipping cleavage). Glaucophane schist reported by Zeijlmans (1939) not seen, Also 15km long/ 3 km wide slab of ultramafic rocks. Unlikely that melange is tectonic shear zone related to transcurrent faulting, but may be S part of Late Cretaceous- Paleogene subduction complex of Sarawak)

Williams, P.R., S. Supriatna & B. Harahap (1990)- Cretaceous melange in West Kalimantan and its tectonic implications. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 14, p. 29-37.
(Extensive Boyan tectonic melange in W Kalimantan implies existence of WNW trending suture zone just S of Semitau on Kapuas River. Chaotic sheared argillite with blocks of metamorphics and ultramafics, now recognized as Late Cretaceous melange, not coherent Jurassic as suggested in 1939. Melange bordered by highly deformed Cenomanian- Turonian turbiditic Selangkai Fm, with blocks of shallow detritus, including Orbitolina sandstone. Characteristics of subduction zone, but no known igneous activity of this age)

Williams, P.R., S. Supriatna, C.R. Johnston, R.A. Almond & W.H. Simamora (1989)- A Late Cretaceous to Early Tertiary accretionary complex in West Kalimantan. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 13, p. 9-29. *(Much the same as Williams et al. 1988)*

Williams, P.R., S. Supriatna, D.S. Trail & R. Heryanto (1984)- Tertiary basins of West Kalimantan, associated igneous activity and structural setting. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 151-160.

Wing Easton, N. (1894)- Geologisch-mijnbouwkundige opneming van een gedeelte der Westerafdeeling van Borneo, Verslag 11, Het diamantvoorkomen in Landak. Jaarboek Mijnwezen Nederlandsch Oost-Indie 23 (1894), Technisch Admin. Ged., p. 94-130.
('Geological-mining survey of West Kalimantan, Report 11, The diamond occurrence in Landak'. Description of alluvial diamond occurrences and exploitation by local and Chinese miners. Most operations already depleted and abandoned. Diamond occurrences almost all in immediate vicinity of Landak River)

Wing Easton, N. (1895)- Diamanten in Landak, hun voorkomen en ontginbaarheid. Javasche Courant, Batavia, 8 March 1895, p.
('Diamonds in Landak, their occurrence and exploitability'. Diamonds present along main Landak River only, not in tributaries and none in Sambas River. Present in shallow gravelly alluvial deposits, often directly on steeply dipping slates. Generally associated with 'leboer'. No European exploration recommended)

Wing Easton, N. (1899)- Geologisch-mijnbouwkundige opneming van een gedeelte der Westerafdeeling van Borneo, Verslag 12, Het voorkomen van kopererts en in den omtrek van Mandor. Jaarboek Mijnwezen Nederlandsch Oost-Indie 28 (1899), Wetenschappelijk Gedeelte 1, p. 143-167.
('Geological-mining survey of West Kalimantan, Report 12, The occurrence of copper ores in the area of Mandor'. Small veins with copper minerals present, but not deemed economically significant)

Wing Easton, N. (1899)- Voorloopige mededeeling over de geologie van het stroomgebied der Kapoeas-Rivier in de Westerafdeeling van Borneo. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 16, p. 245-258.
('Preliminary communication on the geology of the drainage area of the Kapuas River, W Kalimantan'. Presence of mid-Cretaceous marly limestones with Orbitolina, E Jurassic with ammonites, Late Jurassic, etc.. Not much detail)

Wing Easton, N. (1904)- Geologie eines Teiles von West Borneo nebst einen kritischen Uebersicht des dortigen Ertzvorkommens. Jaarboek Mijnwezen Nederlandsch Oost-Indie 33 (1904), Wetenschappelijk Gedeelte, p. 1-542 + Atlas.
(Text online at: http://books.google.com/books/download/Jaarboek_van_het_mijnwegen_in_Nederlands…etc.)
('Geology of a part of W Borneo with a critical overview of its ore deposits'. Final report of years of W Kalimantan geological survey. With paleontology chapters by Martin, Krause and Vogel. Oldest rocks of W Kalimantan highly folded clay-slates (= 'old schists' of Molengraaff?). Overlain by U Triassic micaceous shale and sandstone with Monotis salinaria, E-M Jurassic clastics and marls limestones with ammonites (Harpoceras, Perisphinctes) and bivalves (Exelissa, Corbula, etc.), Cretaceous sandstones, etc.)

Wing Easton, N., C.J. Van Schelle, M. Koperberg & A.L.E. Gaston (1904)- Geologische Karte der Sultanate Pontianak und Sambas und der Panembahanate Mempawah und Landak in West-Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 33 (1904), Wetenschappelijk Gedeelte, Landsdrukkerij, Batavia, 12 plates.
(maps online at: https://digitalcollections.universiteitleiden.nl/view/item/56552)
('Geological map of the Pontianak and Sambas sultanates and Mempwah and Landak districts in West Borneo'. Atlas to accompant Wing Easton (1904), with ten 1:100,000 scale maps, one geologic overview map 1:500,000, one plate of index fossils, one plate of cross-sections)

Wing Easton, N. (1914)- Geologisch overzicht van West Borneo; verschil en overeenkomst met Centraal en Zuidoost Borneo. Verslagen Geol. Sectie Geologisch Mijnbouwkundig Genootschap Nederland Kolonien 1, p. 179-189.
('Geological overview of W Borneo; differences and similarities with C and SE Borneo'; Verbeek ref. 2802)

Wing Easton, N. (1917)- Had Borneo vroeger een woestijnklimaat? Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 34, 5, p. 680-695.
('Did Borneo have a desert climate in the past?'. Thick, massive unfossiliferous, unfolded, Eocene(?) 'Plateau sandstone' of W Kalimantan does not look like marine or fluvio-deltaic deposit, and is believed to be eolian deposit, possible E-W trending dunes. This would imply much drier climate than today. 'Plateau sandstones' are rel. unconsolidated sands, erosional product of granites ('quartz porphyry'), up to 1000m thick. Also called Kajan Sst)

Wing Easton, N. (1919)- Kristallijne schisten in West Borneo. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 4, p. 315-318.
('Crystalline schists in West Borneo'. Rocks originally described from W Kalimantan by Wing Easton in 1904 as diabase, quartz porhytites etc., should probably be regarded as metamorphic rocks (epidote-chlorite schists, quartzites and amphibolites). Metamorphism must be Early Triassic or older in age)

Wing Easton, N. (1933)- De natuurlijke minerale koolstof en haar ontstaansmogelijkheden. Toepassing op de Borneo-diamanten. De Mijningenieur 14, 4, p. 60-74.
('The natural carbon mineral and it possible origins; applications to Borneo diamonds'. Data and speculations on origin and distribution of diamonds of Kalimantan. Believed to originate from not-yet-located kimberlites)

Wing Easton, N. (1933)- De oorsprong der Borneo diamanten. Geologie en Mijnbouw 20, p. 202-204.
(online at: https://drive.google.com/file/d/1_iQfWDMYohAXgpp83ZllzSnGpMo2NI7R/view)
('The origin of the Borneo diamonds'. Brief discussion suggesting 'Pamali Breccia' in Meratus Mts may be kimberlitic-type source of Kalimantan diamonds, an idea further elaborated by Koolhoven (1935) (but rejected by Bergman et al. 1987 and Burgath & Mohr 1991). (No figures, nothing new))

Witkamp, H. (1925)- Bij een voorlopige schets der Klindjau en Atan (Borneo). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 42, p.
('Preliminary sketch of the Klindjau and Atan rivers' Upper Kutai Basin geological-geographic survey. (For more detailed map and descriptions of rocks collected see Albrecht (1946); JTvG))

Witkamp, H. (1927)- Beknopt overzicht van de geologische resultaten der Midden-Oost Borneo expeditie 1925. In: D.W. Buijs et al., Midden-Oost Borneo Expeditie 1925, Weltevreden, p. 105-116.
('Brief overview of geological results of the Central- East Borneo expedition 1925. Summary of geological observations made during geographic expedition. U Telen River area with 'Old Slate Formation', similar to that of W and C Borneo. Intensely folded, steeply dipping, striking E-W in W part of area of investigation (and like in W-C Borneo), farther East strike SSW-NNE, parallel to Tertiary folding directions. Relationship between Old Slate and Danau Fm not clear. Granitic massives present. Early Tertiary sandstones with abundant petrified wood and limestone unconformable over and probably 'deposited against a wall of Old Slates' (now at 1800m above sea level))

Witkamp, H. (1928)- De Kedang Rantau (O. Borneo). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 45, p. 34-61.

Witkamp, H. (1928)- Een tocht naar den Goenoeng Ketam (Borneo). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 45, p. 412-439.
('A trip to the Ketam mountain, Kalimantan'. Mainly geographic description)

Witkamp, H. (1932)- Diamantafzettingen van Landak. De Mijningenieur 13, 3, p. 43-55.
('Diamond deposits of Landak'. Summary of Witkamp report by Van Bemmelen. Diamonds only at gravely base and in lowest alluvial deposits, especially where directly on bedrock, and always associated with 'leboer' rock (lebur = black rounded pebbles, probably mainly corundum?). Diamonds probably reworked from 'Plateau Sandstone' conglomerates; primary igneous source unknown. Little or no remaining potential for diamond exploitation in lower Landak area, as all visible gravel deposits have been thoroughly worked by Chinese and local Malay and Dayak prospectors)

Witkamp, H. (1932)- Langs de Mahakam. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 49, p. 30-56.
('Along the Mahakam'. Travel report of 1930 river trip up to Mamahak, with some geological observations)

Wohler, F. (1866)- Ueber ein neues Mineral von Borneo: Laurit. Konigl. Gesellschaft Wissenschaften Gottingen, Nachrichten, p. 155-160.
('On a new mineral from Borneo: Laurite'. Platinum-group mineral Laurite (RuS_2; Ruthenium- Osmium sulfide) from Pontyn River, Meratus Range, SE Kalimantan (probably derived from Meratus Mts ultrabasic rock). (also in: Annalen der Chemie und Pharmacie 139, p. 116-120))

Wurst, A. (2004)- Geology and genesis of the Permata-Batu Badingding-Hulubai and Kerikil Au-Ag low sulfidation epithermal deposits, Mt. Muro, Kalimantan, Indonesia. Ph. D. Thesis, University of Tasmania, p. 1-423.
(online at: http://eprints.utas.edu.au/15789/1/1Wurst_whole_thesis.pdf)
(Permata-Batu Badinding-Hulubai vein and Kerikil breccia-hosted deposits of Mt Muro, Kalimantan, represent two styles of Au-Ag, low sulfidation epithermal deposit. Andesitic-basaltic host rocks correlated with E Miocene Sintang volcanism and Pliocene Metalung volcanism. PBH and Kerikil similar structural trends and NNW

dilational settings that are result of NNW-directed compression and dextral movement on major NW striking basement structures)

Yang, Mu & S.L. Peng (2004)- Geodynamical features and geotectonic evolution of Kalimantan and adjacent areas. J. Central South University of Technology, China, 11, 3, p. 312-315.
(Brief overview of Kalimantan tectonic provinces. No new data, poor English)

Yuwono, Y.S., S. Priyomarsono, R.C. Maury, J.P. Rampnoux, A.R. Soeria-Atmadja, H. Bellon & P. Chotin (1988)- Petrology of the Cretaceous magmatic rocks from Meratus Range, Southeast Kalimantan. J. Southeast Asian Earth Sci. 2, 1, p. 15-22.
(With exception of Riam Andungan plagiogranites (part of Peridotitic Nappe) all volcanic and plutonic rocks of Aptian-Senonian Manunggul Fm, and plutonic rocks intruding peridotitic nappe, in Meratus Mts are of island-arc calc-alkaline affinity. Subduction-related tectonic environment proposed for Middle- Late Cretaceous of Meratus Range both before (U Aptian- Cenomanian Alino Fm) and after obduction of peridotitic nappe (U Turonian- Senonian Manunggul Fm))

Zaw, K.L., L.D. Setijadji, W. Warmada & K. Watanabe (2011)- Petrogenetic interpretation of granitoid rocks using multicationic parameters in the Sanggau Area, Kalimantan Island, Indonesia. J. Southeast Asian Applied Geol. (UGM) 3, 1, p. 45-53.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-3/no-1/jsaag-v3n1p045.pdf)
(Semitau Ridge is most important structural feature in Sanggau area, NW corner of Kalimantan. It is E-SE trending ridge spanning outcrops of Permo-Triassic foliated igneous rocks of Busang Complex (=Late Triassic?; JTvG) in E and Embuoi Complex in Sanggau. Granitoid rocks range from diorite to granite, products of calc-alkaline island arc affinity, segment of island arc. Sintang Intrusion post subduction or syn-collision tectonic setting(?) (no mention of ages; JTvG))

Zaw, K.L., L.D. Setijadji, W. Warmada & K. Watanabe (2011)- Petrochemistry of granitoid rocks from the Singkawang Region, Kalimantan Island, Indonesia. In: Int. Symp. on Earth Science and Technology, Fukuoka 2010, p. 20-23.

Zaw, K.L., L.D. Setijadji, W. Warmada & K. Watanabe (2011)- Geochemical characteristics of Mesozoic granitoid rocks and associated mineralization from the Western Kalimantan Island, Indonesia. In: Proc. Int. Symposium on Earth Science and Technology 2011, p. 321-324.

Zaw, K.L., L.D. Setijadji, W. Warmada & K. Watanabe (2011)- Implications for adakite petrogenesis from the West Kalimantan. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-022, 8p.
(Samples from Sintang Intrusive rocks are within adakite field. Sintang Intrusives supposedly post-collision magmatic event, with K-Ar ages of 23.0- 30.4 Ma in Melawi Basin, 16.4- 17.9 Ma in N; and 16.5±4- 19±5 Ma in Sarawak adjacent to Sintang. Some samples within adakite field, but not entirely typical. Magmatic products of ~28.1 Ma chemical characters of adakitic magmatism. Sintang adakites may tie to Luconia Block collision instead of subducted young oceanic plate)

Zeijlmans van Emmichoven, C.P.A. (1935)- Bijdragen tot de geologie van Borneo. 2. Het Eoceen ten Z. van S. Kerijau in het O. deel van het centrale Mullergebergte (Wester-afdeeling van Borneo). De Ingenieur in Nederlandsch-Indie (IV) 2, 11, p. 102-105.
('The Eocene S of S Kerijau in the E part of the central Muller Range.' See also English translation in Haile (1955, p. 279-285). First report of non-metamorphic Upper Eocene in W Kalimantan: non-marine clastics and shallow marine limestones with Nummulites/alveolinids/ discocyclinids in E part of Muller Mountains. Unconformable over intensely folded Cretaceous and 'Danau Fm' and overlain by volcanics of uncertain age)

Zeijlmans van Emmichoven, C.P.A. (1936)- On the supposed Lower Cretaceous age of Orbitolinidae of Japan and the Netherlands Indies. De Ingenieur in Nederlandsch-Indie (IV), 2, p. 24-29.
(Another harsh and probably unfair 6-page critique by Zeijlmans on sentence in Yabe & Hanzawa (1931), suggesting Orbitolina from Kalimantan should be assigned to Orbitolina scutum and signify Late Aptian age.

ZvE thinks it should be 'Middle Cretaceous' (whatever that means) (Orbitolinid specialist Schroeder in Sikumbang (1986) also identified the Meratus Mts Orbitolina as Late Aptian species, validating Yabe & Hanzawa (1931) conclusions; JTvG)

Zeijlmans van Emmichoven, C.P.A. (1938)- Korte schets van de geologie van Centraal Borneo. De Ingenieur in Nederlandsch-Indie (IV) 5, 9, p. 135-149.
('Brief sketch of the geology of Central Borneo'. Important overview of poorly known Kalimantan-Sarawak border area from Kuching/S China Sea in W to upper reaches of Mahakam River in E. Three E-W trending tectonostratigraphic zones. Oldest rocks crystalline schists, as exposed in Schwaner Mts. Overlain by intensely folded Permo-Carboniferous (dominantly phyllitic abyssal rocks, locally with fusulinids, and basic volcanics; also plants identified by Jongmans (1940) as Pecopteris cf. arborescens and Calamites ex gr. leioderma (p. 138; =Cathaysian Permian; JTvG), Upper Triassic flysch (with Monotis, Halobia and acid volcanic complexes) and folded Cretaceous (locally with Orbitolina). Tertiary mainly represented by Paleogene, locally deformed and metamorphosed)

Zeijlmans van Emmichoven, C.P.A. (1939)- Pretertiary geology of the island of Borneo. Proc. 6th Pacific Science Congress, San Francisco, p.

Zeijlmans van Emmichoven, C.P.A. (1939)- De geologie van het Centrale en Oostelijk deel van de Westerafdeling van Borneo. Jaarboek Mijnwezen Nederlandsch-Indie 68, Verhandelingen, p. 1-186.
('The geology of the Central and Eastern part of the Western District of Borneo' (see also English translation in Haile (1955, p. 159-272). Overview of work of geological survey in NW Kalimantan and parts of adjacent Sarawak. WNW-ESE trending belt of crystalline schists in W Kalimantan near Sarawak border, overlain by folded Permo-Carboniferous with fusulinid foraminifera, Pecopteris and basic volcanics (no conglomerates). Unconformably overlain by Upper Triassic marine fine clastics with Monotis and Halobia and acid volcanics. Unconformably overlain by relatively complete marine Cretaceous section in Sebaruang area, with Orbitolina at several levels. Upper Cretaceous folding event. Tertiary includes brackish-water Melawi fauna. In Upper Kapuas area intense post-Paleogene folding and metamorphism event. Geology of W and S part of W Kalimantan described by Van Bemmelen in same volume)

Zeijlmans van Emmichoven, C.P.A. (1940)- Het Schwanergebergte (westerafdeeling van Borneo). De Ingenieur in Nederlandsch-Indie (IV), 7, 7, p. 79-100.
('The Schwaner Mountains (W Borneo) '. Description of geology and petrology of Schwaner mountains- part 1. First of 2-part somewhat chaotic descriptions of (Permo-Triassic?) tonalite intrusions, 'pre-tonalite' mica schist, 'post-tonalite' sediments (U Triassic?), granodiorite, ?Tertiary volcanics, etc.. No maps, cross-sections)

Zeijlmans van Emmichoven, C.P.A. (1940)- Het Schwanergebergte (westerafdeeling van Borneo)- vervolg. De Ingenieur in Nederlandsch-Indie (IV), 7, 8, p. 103-122.
('The Schwaner Mountains (W Borneo)- continuation'. Description of geology and petrology of Schwaner mountains. Includes description of probably non-commercial Keraroe iron ore occurrence. Stratigraphy: (1) pre-Carboniferous crystalline schists, (2) Permian- Triassic tonalitic plutons, (3) Upper Triassic post-tonalitic sediments, affected by dynamo-metamorphism by younger, but pre-Cretaceous orogenesis, (4) Mid-Cretaceous? E-M Triasic and Jurassic absent)

Zeijlmans van Emmichoven, C.P.A. (1941)- Mijnbouwkundige en geologische verkenningen in de Westerafdeeling van Borneo van 9 juli - 12 october 1940. *(Unpublished Geological survey report)*

Zeijlmans van Emmichoven, C.P.A. (1955)- The geology of the Central and Western division of Borneo. In: N.S. Haile (ed.) Geological accounts of West Borneo, Geological Survey Dept., British Territories in Borneo, Kuching, Bull. 2, p. 159-272.
(English translation of Zeijlmans (1939) original Dutch paper)

Zeijlmans van Emmichoven, C.P.A. & G. Ter Bruggen (1935)- Bijdragen tot de geologie van Borneo. 1. Voorlopige mededeeeling over het Tertiair ten W van het Merengebied in de Wester-afdeeling van Borneo. De Ingenieur in Nederlandsch-Indie (IV), 2, 11, p. 99-102.
('Contributions to the geology of Borneo 1: Provisional report on the Tertiary West of the Lakes district in the Western Division of Borneo'. See also English translation in Haile (1955, p. 273-277). Brackish-water Kantoe Beds clastics with thin coals can be correlated with Melawi Fm and Eocene zone Ta of Pengaron, Barito Basin. In SW overlain by 'Plateau- sandstone')

Zeijlmans van Emmichoven, C.P.A. & J.G.H. Ubaghs (1936)- Bijdragen tot de geologie van Borneo. 3. Beschouwingen over den veronderstelden eoceenen ouderdom van de gehele 'Oude lei formatie' in Centraal Borneo. De Ingenieur in Nederlandsch-Indie (IV), 3 3, p. 37-45.
('Contributions to the geology of Borneo 3: A discussion of the supposed Eocene age of the entire 'Old Slate Formation' in Central Borneo'. See also English translation in Haile (1955, p. 125-138). An unnecessarily harsh critique of Ter Bruggen's (1935) conclusion on Eocene age of Central Borneo phyllite formation, which does contain some Eocene/ zone Ta larger forams. Z & U believe some metamorphics are Pre-Tertiary)

Zientek, M.L., B. Pardiarto, H.R.W. Simandjuntak, A. Wikrama, R.L. Oscarson, A.L. Meier & R.R. Carlson (1992)- Placer and lode platinum-group minerals in South Kalimantan, Indonesia: evidence for derivation from Alaskan-type ultramafic intrusions. Australian J. Earth Sci. 39, p. 405-417.
(Platinum-group minerals (PGM) in placer deposits in several localities in S Kalimantan. Alluvial PGM found along Sungai Tambanio in part derived from chromitite schlieren in dunitic bodies intruded into clinopyroxene cumulates. Chromitite schlieren in serpentinite from one dunitic body with 'M'-shaped pattern typical of mineralization associated with Alaskan-type ultramafic complexes (see also Hattori et al. 2004))

Zulkarnain, I. (2003)- Quartz-chloritoid rocks from Bobaris Range, South Kalimantan, Indonesia.J. Riset Geologi Pertambangan (LIPI) 13, 1, p. 27-38.
(Quartz-chloritoid rocks in river on SW flank of Betagah Hill, S of Martapura, in Bobaris Range, S Kalimantan (as pebbles in contact zone between ultramafic and metamorphic rocks). Other pebbles of mica and glaucophane schists found nearby. Bobaris chloritoid classified as Fe-chloritoid, formed under medium pressure. Associated with quartz and muscovite. Absence of other pelitic- derived metamorphic minerals indicates source rocks probably clean sandstone with some clay impurities. Formed in accretionary complex)

Zulkarnain, I., J. Sopaheluwakan & S. Indarto (1995)- Geologi 'Komplek Akresi Kapur' Pegunungan Meratus-Bobaris, Kalimantan Selatan; sebuah tinjauan awal berdasarkan lintasan Pegunungan Bobaris. In: Proc. Seminar Sehari Geoteknologi dalam indistrialisasi, Puslitbang Geoteknologi LIPI, Bandung, p. 7-24.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/01/prosiding-1995.pdf)
('Geology of the 'Cretaceous accretionary complex' of the Meratus- Bobaris Mountains, South Kalimantan; a preliminary review of the Bobaris Mountains transect')

Zulkarnain, I., J. Sopaheluwakan, K. Miyazaki & K. Wakita (1996)- Chemistry and radiometric age data of metamorphic rocks from Meratus accretionary complex, South Kalimantan, and its tectonic implication. In: Sampurno et al. (eds.) Pros. Seminar Nasional Geoteknologi III, Puslitbang Geoteknologi (LIPI), Bandung, p. 687-696.
(online at: http://pustaka.geotek.lipi.go.id/index.php/2016/04/07/prosiding-1996/)
(No direct genetic connection between metamorphic rocks and ultramafic body of Meratus Range. Chemistry of metamorphic rocks variable from basaltic (48% SiO_2), granodioritic (65% SiO_2), clastic sediments (87% SiO_2) and pelitic rock (25% Al_2O_3). Two different radiometric ages of mica schist (180 Ma and 116 Ma), suggesting metamorphic rocks derived from different periods and environments, tectonically mixed during exhumation)

IV.2. East Kalimantan Cenozoic Basins, (bio-)stratigraphy

Abidin, H.Z. (2003)- Occurrence of coal seams within the Lower Tanjung Formation, Astambul District, South Kalimantan. J. Geologi Sumberdaya Mineral 13, 139, p. 2-15.
(Several 0.5-2.75 m thick coal beds in Eocene Lower Tanjung Fm of Astambul District, 75km NE of Martapura (Barito Basin). Dipping 12-30° toNW and SE)

Achmad, Z. & L. Samuel (1984)- Stratigraphy and depositional cycles in NE Kalimantan basins. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 109-120.
(Stratigraphy of NE Kalimantan Basin can be grouped into five major depositional cycles)

Addison, R., R.K. Harrison, D.H. Land & B.R. Young (1983)- Volcanogenic tonsteins from Tertiary coal measures, East Kalimantan, Indonesia. Int. J. Coal Geology 3, 1, p. 1-30.
(Laterally persistent tonsteins (kaolinite-mudstones of wide stratigraphical extent), up to 30cm thick, in coal seams and associated sediments in Miocene SSW of Samarinda. Probably of volcanogenic origin)

Ade, W.C., I.T. McMahon & W. Suwarlan (1988)- Seismic lithology (AVO) interpretation at the Badak and Nilam fields in the Sanga Sanga Block, Kalimantan. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 325-358.
(Badak and Nilam gas-oil fields of onshore E Kalimantan Kutai Basin contain 7.4 and 6.0 TCF original gas in place. Seismic amplitude responses can be used to detect gas sands)

Ade, W.C. & W. Suwarlan (1989)- Integrated interpretation of C-8 and G-61 sandstones at Badak and Nilam fields in Sanga-Sanga block of East Kalimantan, Indonesia. AAPG Ann. Conv., San Antonio 1989. *(Abstract only)*

Adhitiya, R., M.M. Adeyosfi, S.S. Angkasa & F. Sihombing (2012)- Facies and diagenesis of Tabalar and Tendehantu carbonate formation in Mangkalihat Peninsula area: an outcrop preliminary study to Oligocene-Miocene reservoir candidate prospect. Bul. Sumber Daya Geology 7, 2, p. 78-91.
(online at: http://psdg.bgl.esdm.go.id/buletin_pdf_file/Bul%20Vol7%20no.%202%20thn%202012/..)

Adriansyah, P. Sembiring, M. Badri & A. Akhtar (2005)- High frequency borehole seismic acquisition and its applications for reservoir delineation of the Bunyu Field, onshore Kalimantan, Indonesia. Proc. 30st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 391-404.

Akuanbatin, H. & T. Rosandi (1983)- Lingkungan pengendapan Formasi Tabul dan Formasi Tarakan serta hubungannya dengan potensi hidrokarbon di Pulau Bunyu. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 9-20.
('Depositional environment of the Tabul and Tarakan Formations and relations with hydrocorarbons on Bunyu Island'. Similar to Akuanbatin et al. 1984)

Akuanbatin, H., T. Rosandi & L. Samuel (1984)- Depositional environment of the hydrocarbon bearing Tabul, Santul and Tarakan Formations at Bunyu Island, NE Kalimantan. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 425-441.
(Bunyu Island up to 80 hydrocarbon-bearing reservoir zones between 500-2500m in M Miocene- Pleistocene deltaic deposits. Overall shallowing-upward series, progradation from W and SW)

Alam, F., Y. Sebayang, W. Djunarjanto & P.E. Prijanto (2010)- Coal stratigraphy of Separi, East Kalimantan, Indonesia. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. MGEI-IAGI Seminar Kalimantan coal and mineral resources, Balikpapan 2010, p. 13-26.
(Separi area 40 km NE of Samarinda with extensive coal mining. Seven coal-bearing zones in ~1000m thick section of M-L Miocene Balikpapan Fm clastics on Samarinda anticlinorium. Coal seams 0.3- 9.5m thick, labeled A-H. Kutai basin tectoncs (1) M Eocene extension, same time as Makassar Straits; (2) Late Oligocene extension along NW-SE faults; (3) M Miocene inversions mainly on E facing half grabens)

Alam, H., D.W. Paterson, N. Syarifuddin, I. Busono & S.G. Corbin (1999)- Reservoir potential of carbonate rocks in the Kutai Basin region, East Kalimantan, Indonesia. J. Asian Earth Sci. 17, 1-2, p. 203-214.
(Kutai Basin few carbonate reservoirs: Oligocene (Bebulu Lst)- Late Miocene (Dian Lst). Build-ups composed of platy-corals, encrusting red algae and larger foraminifera. Generally isolated mounds, up to 1000' thick. Primary porosity preservation generally poor, due to calcite cementation. Secondary porosity sevelopment limited, due to retardation of subsurface fluid flow by non-permeable layers, and absence of subaerial exposure dissolution and karstification. Porosity mainly vugs, best in coarse-grained shelf-margin facies, not filled by calcite cement. Early hydrocarbon migration may retard diagenesis and preserve porosity)

Alam, S. (2001)- Seismic sequence stratigraphy and depositional history of the Pliocene -Pleistocene fans in the Ganal Block, offshore Kutai Basin, Indonesia. Ph.D. Thesis Texas A&M University, College Station, p. 1-143.
(Seismic stratigraphy study of Pliocene- Pleistocene deep water clastics at Kutai Basin slope and basin floor of Makassar Straits. Six sequences identified, with lowstand features submarine canyons, channels and fan lobes)

Allen, G.P. (1985)- Deltaic sediments in Modern and Miocene Mahakam Delta. Field Guide to Indonesian Petroleum Association (IPA) Excursion, p.

Allen, G.P. (1996)- Sedimentary facies and reservoir geometry in a mixed fluvial and tidal delta system- the Mahakam Delta, Indonesia. Petroleum Expl. Soc. Australia (PESA) Journal 24, p. 140-155.
(Review of sedimentological characteristics of modem Mahakam delta, E Kalimantan. Dominated by mixture of fluvial and tidal processes, with wave energy practically zero. Modern delta dates from post-Holocene eustatic stillstand and presently depositing 50-70m thick regressive highstand system which downlaps older transgressive Holocene and Late Pleistocene deltaic lowstand deposits)

Allen, G.P. & J.L.C. Chambers (1998)- Sedimentation in the modern and Miocene Mahakam Delta. Indonesian Petroleum Assoc. (IPA), Guidebook, p. 1-236.

Allen, G.P. & J.L.C. Chambers (1998)- Regional setting of the Mahakam Delta. In: Sedimentation in the modern and Miocene Mahakam Delta, IPA Fieldtrip Guidebook, Chapter 6, p. 79-89.

Allen, G.P. & J.L.C. Chambers (1998)- Regional geology and stratigraphy of the Kutei basin. In: Sedimentation in the modern and Miocene Mahakam Delta, IPA Fieldtrip Guidebook, Chapter 9, p. 159-171.
(Brief overview tectonic history and stratigraphy Kutei basin)

Allen, G.P., D. Laurier & J.M. Thouvenin (1976)- Sediment distribution patterns in the modern Mahakam Delta. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 159-178.
(First of many G. Allen studies on modern Mahakam Delta deposits, E Kalimantan)

Allen, G.P., D. Laurier & J. Thouvenin (1979)- Etude sedimentologique du delta de la Mahakam. TOTAL Comp. Francaise Petroles, Notes et Memoires 15, p. 1-156.
('Sedimentological study of the Mahakam Delta'. Comprehensive study of sedimentology of modern Mahakam Delta, a mixed tide- and fluvial-dominated delta in humid equatorial climate)

Allen, G.P. & F. Mercier (1988)- Subsurface sedimentology of deltaic systems. Petroleum Expl. Soc. Australia (PESA) Journal 12, p. 30-44.
(Review of Mahakam Delta depositional system and depositional cycles)

Allen, G.P. & F. Mercier (1994)- Reservoir facies and geometry in mixed tide and fluvial-dominated delta mouth bars: example from the Modern Mahakam Delta (East Kalimantan). Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 261-273.

Amar, R.A. & B. Sapiie (2018)- Fault-seal analysis in offshore gas fields of South Mahakam area, Kutai Basin, Indonesia. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-60-G, 21p.

(Fault seal analysis of fields in S Mahakam offshore, with Jempang-Metulang, Mandu and Stupa gas fields along N side of Sepinggan Fault (parallel to Adang FZ). Gas reservoirs in M Miocene Sepinggan deltaic sands. High shale content leads to shale smear and high seal capacity of all faults)

Amarullah, D., U. Margani, S.N. Priatna, Priono & Sudiro (2002)- Inventarisasi dan evaluasi endapan batubara Kapubaten Barito Selatan dan Barito Utara, Provinsi Kalimantan Tengah. Kolokium Direktorat Inventarisasi Sumber Daya Mineral (DIM) 2002, p. 20/1- 20/19.
(Inventory and evaluation of coal deposits in South and North Barito Districts, Kalimantan)

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(New regional paleogeography of Kutai Basin. Kutai- N Makassar basins underlain by NE Schwaner Complex in W, N Meratus accreted continental-oceanic terrane in middle, N Makassar micro-continent in E, and Mangkalihat micro-continent in NE. Initial rifting of Kutai Basin mostly results of slab rollback of 3 subduction zones. Onset of rifting possibly Paleocene (60 Ma), not later than M Eocene (45 Ma). Five NE-SW trending highs and lows bounded by NW-SE strike-slip faults. Paleogeography of Upper and Lower Kutai Sub-basins radically reshaped during latest Oligocene- E Miocene. Several unexplored hydrocarbon plays. With seven M Eocene- Miocene paleogeography maps)

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(Molluscs collected by Witkamp in 1908 on N flank Kari Orang anticline 27 species are of Preangerian age (Late Miocene; Tf3). Five new species. Associated corals described by Felix 1921 and Gerth 1923)

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(online at: www.repository.naturalis.nl/document/148713)
(Molluscs collected by Rutten in Lower Sangkulirang Marls Preangerian, Tf3 (Late Miocene) age, not Early Miocene (Tf2) as originally interpreted. Twenty molluscan species (very few bivalves), including 4 new ones: (Polinices? orangensis, Nihonia witkampi, Conus kutaiensis, and Laevicardium rutteni)

Beets, C. (1984)- Mollusca from Preangerian deposits of Mandul island, Northeastern Kalimantan (East Borneo). Scripta Geologica 74, p. 49-80.
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(Molluscs collected in 1916 by BPM from Mandul Island, Tarakan basin. First examined by K Martin in 1916: 22 species, and age 'uppermost Old Miocene' or 'Upper Miocene'. Restudy identified 42 species, suggesting mixed faunas and Miocene age)

Beets, C. (1986)- Preangerian (Late Miocene) Mollusca from a hill near Sekurau, northern Kutai, Kalimantan Timur (East Borneo). Scripta Geologica 74, p. 1-37.
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(Molluscs fossils collected Schmidt in 1902 from hill near Sekurau, N Kutai, in Late Miocene clays with limestones and sandstones, overlain by Pliocene coral limestones. Sixty species suggesting Preangerian age (Tf3) and shallow marine conditions)

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('The Misedor well: palynofacies and elemental analysis of organic matter'. Organic matter in Mahakam Delta sediments mainly of humic origin, from land plants. No evidence of marine organics. Kerogens mainly Type III)

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(Tarakan sub-basin 5 provinces separated by normal faults, controlled by Oligocene to Pliocene growth fault systems. Fault development in three periods: Late Oligocene-E Miocene rift faulting, M-L Miocene growth faulting, and Mio-Pliocene growth faulting. Miocene faults rejuvenation of previous faults, coinciding with change from transgression to regression. Hydrocarbons trapped by growth faults: four way dip, roll-over against fault, fault traps, and unconformity closures)

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(Kutai Basin deepest Tertiary basin in Indonesia with >10 km sediments. Structural pattern is anticlinorium trending almost N-S, gradually changing to E-W at N edge. Compressional faults in N Kutai Basin are inversion faults, rejuvenating Eocene-Pliocene extensional faults. Late compression by coupling between Paternoster and Sangkulirang dextral strike slip faults in Plio-Pleistocene)

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(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/titleinfo/5251671)
('The fossil molluscs of the Eocene of Borneo'. Includes descriptions of molluscs from Eocene Tanjung Fm near Pengaron, Meratus Mts. 18 species of gastropods and many more bivalves, most of them marine, but the lowest clay beds associated with coals have mainly large fresh-brackish water Cyrena species)

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(Barito Basin ~5000m Cretaceous- Tertiary clastics with minor carbonates. M-Late Miocene compression divided basin along 'Tanjung Line': to N deformed zone with reverse faulted anticlines; to S virtually undisturbed sediments dipping down to axis of asymmetrical basin. Discoveries restricted to inverted area N of "Tanjung Line". Tanjung Fm in undisturbed S Barito Basin shows Paleocene and Cretaceous sediments in Lower Tanjung Fm (previously assigned to Lower Eocene). Primary reservoir basal transgressive sand (63 Ma), equivalent to Z860 sandstone in Tanjung Field. Principal source rocks are coals and coaly claystone with Type III kerogens. Claystones associated with flooding surfaces of sequence-4 seal in Tanjung Field and also expected to provide seals in study area)

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(Sisi and Nubi gas fields, off Mahakam delta, faulted anticlinal structures, compartmentalized by major NNE-SSW faults, creating 6 main compartments; 4 in Nubi, 2 in Sisi)

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(Attaka Field 1970 discovery in anticlinal structure in NE part Mahakam Delta. Stacked reservoirs in Early Pliocene deltaic sands)

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(Coal-rich, normally pressured delta-plain facies in synclines most effective source rock, not deep overpressured marine shales. Migration mostly parallel to bedding/ updip along structure flanks rather than vertically across bedding)

Burrus, J., E. Brosse, J. De Choppin & Y. Grosjean (1994)- Interactions between tectonism, thermal history, and paleohydrology in the Mahakam Delta, Indonesia: model results, petroleum consequences. AAPG Int. Conf. Exh., Kuala Lumpur 1994, American Assoc. Petrol. Geol. (AAPG) Bull. 78, 7, p. 1186. *(Abstract only)*
(Mahakam Delta 2-d maturity models along 70-km-long transects confirm fluid inclusions evidence that region cooled by up to 25°C in recent time. Cooling caused by topography-driven circulation in Late Miocene Fresh Water Sands, charged along 600m-high Pliocene coastal uplift. Best-fit age of uplift ~3 Ma. Most of flow system has disappeared due to erosion. Discharge of meteoric waters along listric normal faults at periphery of present-day delta. Observed temperatures and paleotemperatures agree with hypothesis that opening of N Makassar basin was Paleogene rather than Oligocene- E Miocene age sometimes proposed)

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(Burial depth, temperature and related maturation of carbonaceous material and pressure major controls on diagenesis of sandstones)

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(Thick, multi-storey M Miocene G053B reservoir with 180 BCF OGIP interpreted as incised valley fill (IVF) back-stepping sequence, deposited during relative sea level rise. IVF interpretation, rather than highstand distributary channel model based on clear incision and basinward shift in facies, coeval sediment-starved interfluves, and abnormal aspect ratio (3 km wide, 40m thick))

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(E-M Eocene turbidite deposits penetrated by a few wells and also exposed onshore along uplifted area S of Mangkalihat Peninsula, NE Kalimantan)

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Caratini, C. & C. Tissot (1987)- Le sondage Misedor- Etude palynologique. In: A. Combaz (ed.) Geochimie organique des sediments plio-quaternaires du delta de la Mahakam (Indonesie)- le sondage Misedor, Editions TECHNIP, Paris, p. 137-171.
(Palynogical study of 638.6 m deep Misedor core hole on Handil Anticline, SW Mahakam delta. TD in Upper Pliocene, continous deltaic facies. Stratigraphic markers Phyllocadus hypophyllus (Pleistocene- Recent), Podocarpus imbricatus and Stenochlaena laurifolia (latest Miocene- E Pleistocene) help locate Plio-Pleistocene boundary at sequence boundary at ~400m. Several short-lived peaks of Graminae (grass) pollen coincide with relative sea level lowstands and probably reflect development of savannas in drainage area during colder climates)

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(Mahakam delta MISEDOR well (638.5m) reaches U Pliocene. Palynology markers Phyllocladus hypophyllus, Podocarpus imbricatus and Stenochlaena laurifolia helped locate Plio-Pleistocene boundary at ~400m. Uniform paleogeographical features below this depth and great variability of conditions above it. Indications of climatic changes in several periods of low sea level with rise of detritus and high frequencies of grass pollen, due to savanna development in response to colder climatic conditions)

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('The Misedor well- synthesis of geologic studies'. Misedor shallow cored well in Handil Field area of Mahakam Delta penetraded Quaternary (0-400m) and Late Pliocene clastic sediments (400- 638.6m). Four transgressive- regressive sequences in deltaic setting)

Carbonel, P. & T. Hoibian (1988)- The impact of organic matter on ostracods from an equatorial deltaic area, the Mahakam Delta, Southeastern Kalimantan. In: T. Hanai et al. (eds.) Evolutionary biology of Ostracoda, its fundamentals and applications. Proc. 9th Int. Symposium Ostracoda, Shizuoka, Elsevier Developments in Paleontology and Stratigraphy 11, p. 353-366.
(On ostracod fauna in Mahakam delta area. In front of delta mouth number of species decreases, Hemicytheridea reticulata relatively common, and ornamentation of polymorphic species decreases. Between delta mouths ornamentation increases, probably due to less degradation of organic matter here)

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('Ecosystems and paleoenvironments of the Mahakam Delta zone since the end of the Neogene'. Comprehensive overview of delta plain environments and geographic distribution of benthic foraminifera (4 assemblages) and ostracodes (5 assemblages). With data from Misedor core hole on Handil Anticline)

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(Paleoenvironments in deltas can be defined by biological tracers, mainly benthic foraminifera and ostracods. In 200m of core these biomarkers show four transgressive marine sequences since 125,000 yr B.P., with sharp asymmetry in a transgression/progradation cycle)

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(Sequence stratigraphic subdivision of >5000m of Early Miocene sediment in onshore Kutai Basin establishing 'high-resolution' palynology zonation between 20-16 Ma)

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(Unpublished Shell report. Hutchison 1996: Embaluh Group of the Upper Mahakam and Boh rivers of Kalimantan yielded M Eocene planktonic foraminifera)

Cater, M.C. (1981)- Stratigraphy of the offshore area South of Kalimantan, Indonesia. Proc. 10th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 269-284.
(S Kalimantan Offshore Area altered pre-Tertiary, overlain separated unconformably by Eocene-Recent sediments. Karimundjawa Ridge separates main basins to E from Billiton Basin in W. Billiton Basin Oligocene-earliest Miocene in continental facies, more marine conditions in E with variable amounts of limestone)

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Chambers, J.L.C., I. Carter, I.R. Cloke, J. Craig, S.J. Moss & D.W. Paterson (2004)- Thin-skinned and thick-skinned inversion-related thrusting- a structural model for the Kutai Basin, Kalimantan, Indonesia. In: K.R. McClay (ed.) Thrust tectonics and hydrocarbon systems, American Assoc. Petrol. Geol. (AAPG), Mem. 82, p. 614-634.
(Regional compression reactivated basement extensional faults, inverting Paleogene depocenters as anticlines often flanked on one side by basement thrusts. Neogene section detached near top overpressured zone and deformed as thin-skinned fold-thrust belt. Response to inversion of Paleogene rift section controlled in part by heterogeneity in shallow section: syndepositional loading, delta progradation, normal faults, facies changes)

Chambers, J.L.C. & T. Daley (1995)- A tectonic model for the onshore Kutai Basin, East Kalimantan, based on an integrated geological and geophysical interpretation. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 111-130.
(Models for Samarinda Anticlinorium included gravity slumping, shale diapirism and thrusting. Structures in Runtu Block are rigid deltaic- shelf sediments deformed into box-folds above folded shaly prodelta- bathyal sediments. Detachment at top or within over-pressured shales at base of Lower Miocene deltaics. Gravity data suggests semi-regional uplifts of over-pressured strata. Basement not visible on seismic, but gravity and aeromagnetics show it between 7-14 km deep. Models imply small amounts of shortening across near-surface structures and relatively large uplift. C Kutai Basin inversion of deep Paleogene rift basin gave rise to broad regional folding of shale-rich over-pressured section. Closer spaced folding in near surface, normally pressured, less ductile deltaic -shelf section of Samarinda Anticlinorium result of same inversion)

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(Similar to above paper)

Chambers, J.L.C. & S.J. Moss (1999)- Depositional modeling of rift episodes and inversion of the Kutei Basin, Kalimantan, Indonesia. Petroleum Expl. Soc. Australia (PESA) Journal, 27, p. 9-24.
(Tertiary facies distributions in Kutai Basin re-interpreted and used to build models of tectonic basin evolution and depositional environments arrangements in relationship to major basin phases. Rift-related depocentres may offer alternative exploration target to proven Miocene systems. New understanding of basin development is important for appreciation of resource distribution in this and similar rift basins of Borneo and SE Asia)

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(Pelarang Anticline part of NNE-SSW Samarinda Anticlinorium, a detached thrust-and-fold belt in Kutai Basin. Airborne gravity survey suggests detachment fold, ~30km long with steep flanks (70°-80°). Anticline associated with strong, positive gravity anomaly. 2D modelling suggests shale body that is close to breaching surface, and feature cored by high pressure shales)

Christensen, K., A. Nurhono, R.U. Zahar, S. Chipchase, Marwoto, D. Mochtar & B. Simmonds (1998)- The Sepinggan Field: reducing field modelling and reserve calculation cycle time. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 329-339.
(Sepinggan Field off E Kalimantan complexly faulted deltaic sandstone, shales, and minor carbonates. In deltaic section only mappable units are coals. Over 100 M-L Miocene reservoir zones over more than 5,000')

Cibaj, I. (2009)- A fluvial series in the Middle Miocene of Kutei Basin: a major shift from Proto-Mahakam shallow marine to the continental environment. In: Variations in fluvial-deltaic and coastal reservoirs deposited

in tropical environments, AAPG Hedberg Conf., Jakarta 2009, 11p. *(online at: www.searchanddiscovery.com:16080/abstracts/pdf/2010/hedberg_indonesia/abstracts/ndx_cibaj.pdf)*
(In Proto-Mahakam delta outcrops early M Miocene fluvial sand-rich interval, ~700-800m thick, above deeper water marine facies, and overlain by more marine deltaic series)

Cibaj, I. (2010)- Fluvial channel complexes in the Middle Miocene of Lower Kutei Basin, East Kalimantan- the stacking pattern of sediments. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-053, 13p.
(600m thick M Miocene (N9-N13) section exposed near Samarinda. Basal Batu Putih reefal carbonates (called 10.5 Ma_mfs, but on Fig 1 shown as NN4-NN5= 14-18 Ma; called N8 by Allen & Chambers 1998) abruptly overlain by fluvial channel sands, flood plain shales and 1-3m thick coals. Stacked fluvial parasequences, each 40-50m thick. Transition to fluvial deposits interpreted as SB 10.2 Ma (likely older?; JTvG), with influx of coarse-grained sediment tied to tectonic uplift in hinterland)

Cibaj, I. (2011)- Channel-levee complexes in the slope turbidites of Lower Kutei Basin, East Kalimantan. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11 G-078, 18p.
(Description of geometry of sandstone reservoirs in slope turbidite channel- levee complexes in outcrop near Samarinda)

Cibaj, I. (2011)- Channel-levee facies and sea floor fan lobes in the turbidites of Lower Kutei Basin, East Kalimantan. Berita Sedimentogi 21, FOSI- IAGI, p. 15-21.
(Online at: www.iagi.or.id/fosi/files/2011/06/FOSI_BeritaSedimentologi_BS-21_June2011_Final.pdf)
(New outcrops of late Early- Middle Miocne (NN4-NN5) clastics and Batu Putih limestones on Samarinda Anticlinorium NW of Samarinda. Channel-levee complexes/ slope turbidites and debris flows below Batu Putih carbonates, which are thought to represent shelf break environment. Similar to paper above)

Cibaj, I. (2013)- Miocene stratigraphy and paleogeography of Lower Kutei Basin, East Kalimantan- a synthesis. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-090, p. 1-24.
(Review of 3500m thick Miocene section exposed in Samarinda area, Lower Kutei basin, at E flank of Separi anticline. Ranging in age from Late Burdigalian (zone NN4, ~17 Ma) to E Tortonian (~10 Ma). Overall regressive stacking pattern of deposits from slope turbidites of Hutunan village section, through shallow marine and deltaic deposits to fluvial deposits of Harapan Baru section at top.

Cibaj, I., U. Ashari, J.A. Dal, V. Mazingue & M. Bueno (2015)- Sedimentology and stratigraphic stacking patterns of the Sisi-Nubi Field Producing Interval, Lower Kutei Basin, East Kalimantan, Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-245, 33p.
(Sisi-Nubi field in shallow marine area off Mahakam Delta. Four third-order Genetic Sequences orders (in lower regressive and upper overall transgressive stacking mode) and numerous 5th order parasequences recognized in ~1800-2000m thick U Miocene (~7-5 Ma) Producing interval. Fresh-water sands throughout. In Upper Fresh Water Interval locally small (2-5 km wide) patch reefal carbonate buildups)

Cibaj, I., F. Lafont, E. Chavanne & G. de Tonnac (2006)- Upper Miocene fluvial deposits offshore modern Mahakam Delta. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc., Jakarta, 06-PG-29, 4p.
(Producing Upper Miocene (Messinian) Fresh Water Sands Fm offshore Mahakam Delta in Sisi-Nubi Field previously interpreted as deltaic sequence. Recent 3D seismic shows meandering features, evidence of fluvial deposit 30 km offshore from modern delta and <10 km from present shelf break)

Cibaj, I., B. Lambert, U. Ashari, B. Giriansyah, L. Schulbaum, P. Imbert & P. Cordelier (2014)- Sedimentology and stratigraphic stacking patterns of the Peciko Field Main Zone, Lower Kutei Basin, East Kalimantan, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-141, 22p.
(Four different orders of stratigraphic stacking pattern in Main Zone of offshore Kutei basin Peciko gas field. Main Zone is 2000m thick M-L Miocene (11-7 Ma) second order Genetic Sequence, subdivided into six ~300m thick third order sequences, subdivided into numerous individual deltaic cycles)

Cibaj, I., B. Lambert, P. Zaugg, U. Ashari, J.A. Dal & P. Imbert (2014)- Stratigraphic stacking patterns of the Mahakam Area, Lower Kutei Basin, East Kalimantan, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-145, 27p.
(M Miocene- Recent Mahakam Delta system in Lower Kutei Basin subdivided into four main 2nd order cycles, with boundaries (defined as Base Max. Flooding surfaces) at 15, 11, 7 and 5 Ma. Correspond to major E-ward (basinward) shifts of shelf break/ depocenters thickness)

Cibaj, I., N. Syarifuddin, U. Ashari, A. Wiweko & K.A. Maryunani (2007)- Stratigraphic interpretation of Middle Miocene Mahakam Delta deposits: implications for reservoir distribution and quality. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-116, p. 1-11.
(Samarinda area outcrops of 450m M Miocene deltaic deposits studied. Overall thickening-upward sequences interpreted as indicating regressive evolution of deltaic parasequences)

Cibaj, I. & A. Wiweko (2008)- Recognition of progradational shelf deposits in the Middle Miocene of Kutai Basin. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-171, p. 1-14.
(Outcrop study of M Miocene progradational deltaic deposits NW of Samarinda. Upward transition from a slope-basin environment to slope and from slope to shelf. No documentation of age control)

Cities Service Co. (1980)- Hydrocarbon plays in Tertiary, S.E. Asia basins. Oil and Gas J. 78, 29, p. 90-96.

Clark, T., J. Hadiwijoto, B. Zagalai, S. Martinez & D. Staples (1994)- Serang Field re-evaluation. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 339-353.
(Serang field N of Attaka field, N Mahakam, E Kalimantan, evolved from non-commercial discovery in 1973 to a field with proven reserves of 35 MBO and 275 GCF in Late Miocene deltaic sands)

Clark, T., M. Turk, J. Hadiwijoto & Y. Partono (1999)- Serang Field- discovery within a seismic "fault shadow". Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 323-341.
(Serang field off E Kalimantan. Structure for long time hidden in shadow under large listric normal fault. Main reservoir Upper Miocene fluvio-deltaic channel sands. Reefal carbonates preferentially developed on upthrown block in M Miocene- early late Miocene (reservoir quality rel. poor) and in Pliocene (very porous))

Clauer, N., T. Rinckenbach, F. Weber, F. Sommer, S. Chaudhuri & J.R. O'Neil (1999)- Diagenetic evolution of clay minerals in oil-bearing Neogene sandstones and associated shales, Mahakam delta basin, Kalimantan, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 83, 1, p. 62-87.
(Study of clays in Handil and Tunu fields. Cllay fraction of Mahakam Delta Basin mixed-layer illite/smectite, kaolinite/dickite, detrital illite, and chlorite. Hydrocarbon generation took place in deeper synclinal zones and that oil migrated upward with brines, probably inducing most of illitization in upper sequence)

Cloke, I.R. (1997)- Structural controls on the basin evolution of the Kutai Basin and Makassar Straits. Ph.D. Thesis, University of London, p. 1-376. *(Unpublished)*
(Flexural modelling of Neogene load of Mahakam Delta suggests sediments 20 km landward of present day shelf-break loaded lithosphere with high elastic thickness, corresponding to oceanic lithosphere of 47 Ma. Landward of this point, the elastic thickness is less and suggesting stretched continental crust.)

Cloke, I.R., J. Craig & D.J. Blundell (1999)- Structural controls on the hydrocarbon and mineral deposits within the Kutai Basin, East Kalimantan. In: K.J.W. McCaffrey et al. (eds.) Fractures, fluid flow and mineralization, Geol. Soc., London, Spec. Publ. 155, p. 213-232.
(Deep Kutai Basin formed in M Eocene extension, linked to opening of Philippines Sea, Celebes Sea and Makassar Straits. Seismic profiles across N Kutai Basin show M Eocene NNE-SSW and N-S half-graben. Late Oligocene extension on NW-SE trending faults, reactivating basement structures. Syn-rift coals sufficiently deeply buried to generate hydrocarbons prior to inversion. Shortening since E Miocene resulted in breaching of traps and generation of new traps. M Eocene, Late Oligocene- E Miocene and Plio-Pleistocene volcanic activity set up several mineral deposits. Reactivation of NW-SE and NE-SW trending basement structures controlled location of hydrocarbon and mineral deposits)

Cloke, I.R., J. Milsom & D.J.B. Blundell (1999)- Implications of gravity data from East Kalimantan and the Makassar Straits: a solution to the origin of the Makassar Straits? J. Asian Earth Sci. 17, 1-2, p. 61-78.
(Gravity modeling and flexural backstripping suggest N Makassar basin underlain by M Eocene oceanic crust)

Cloke, I.R., S.J. Moss & J. Craig (1997)- The influence of basement reactivation on the extensional and inversional history of the Kutai Basin, Eastern Kalimantan. J. Geol. Soc. London 154, p. 157-161.
(Kutai basins formed in M- Late Eocene above Late Cretaceous/Early Tertiary orogenic complex. Basement fabrics influenced extension and inversion. Basement fabric on margins and Tertiary cover dominated by NE-SW, NW-SE and NNE-SSW-trending structures. Larger scale NW-SE narrow linear gravity lows cut NNE-SSW highs on gravity data within basin. NNE-SSW basin-bounding faults overlap in right stepping en-echelon manner. Opposing antithetic and synthetic half-grabens linked by oblique NW-SE transfer faults. Inversion utilized extensional faults as reverse faults; however, NW-SE-oriented structures were reactivated as zones of lateral offset along fold-thrust belt, whilst fault kinks oriented NE-SW reactivated as oblique-slip reverse faults)

Cloke, I.R., S.J. Moss & J. Craig (1999)- Structural controls on the evolution of the Kutai Basin, East Kalimantan. J. Asian Earth Sci. 17, p. 137-156.
(Kutai Basin formed in M Eocene by extension linked to opening of Makassar Straits. N margin inverted NNE-SSW trending Eocene half-grabens. Late Oligocene extension on NW-SE trending en-echelon faults under different stress regime, indicating rotation of extension direction between 45-90°. Early Miocene N6-N8 inversion along E-facing half-grabens on N and S margins. WNW-vergent thrusts indicate compression from ESE. Miocene collisions with N and E Sundaland triggered punctuated basin inversion. Inversion concentrated in weak continental crust below Kutai Basin and various Sulawesi basins, while stronger oceanic crust or attenuated continental crust of Makassar Straits acted as passive conduit for compressional stresses)

Combaz, A. & M. de Matharel (1978)- Organic sedimentation and genesis of petroleum in Mahakam Delta, Borneo. American Assoc. Petrol. Geol. (AAPG) Bull. 62, 9, p. 1684-1695.
(Mahakam delta organic material in source rocks generally continental and vegetal origin. Oils paraffinic, increase in gravity with depth, and very low sulfur content. Accumulations probably not far from source rocks, but originate at greater depths. Hydrocarbons could have migrated vertically about 3000m along faults)

Core Laboratories (1996)- Regional sequence stratigraphic and geochemical study of the Tarakan Basin, Northeast Kalimantan., p. *(Unpublished Multi-client study)*

Core Laboratories (2006)- Deep water reservoirs, Asia- a regional evaluation, Phase I- Indonesia and The Philippines. p. *(Unpublished Multi-client study)*
(Study of deep water wells from Makassar Straits, Sulu Sea, S China Sea)

Courteney, S., P. Cockcroft, R. Lorentz, R. Miller, H.L. Ott, S. Wiman et al. (eds.) (1991)- Indonesia- Oil and gas fields atlas, 5, Kalimantan. Indonesian Petroleum Assoc. (IPA), Jakarta, p. 1-25, A1-A8.
(Introduction to Kalimantan geology and summary of oil and gas fields. Oil seeps first described from E Kalimantan in 1865, first oil production in 1899 on Tarakan Island by BPM predecessor)

Crumeyrolle, P. (2003)- Two contrasting styles of Lowstand Deltaic wedges: the Roda Sandstone (Spain) as seen from outcrops and the Late Pleistocene Mahakam Delta (Indonesia) as imaged from 3D and 2D Hr Seismic profiles. In: H.H. Roberts et al. (eds.) Shelf margin deltas and linked down slope petroleum systems- Global significance and future exploration potential, 23rd Ann. Gulf Coast SEPM Found. Perkins Conf., Houston, p. 639-645.
(During period of continuous sea level fall Mahakan Delta distributary channels converted into incised valleys with adjacent dendritic tributary channels. Main incised valleys reached shelf break, transporting sediments beyond shelf break. During sea levelrise incised valleys flood and remain largely underfilled)

Crumeyrolle, P. & I. Renaud (2003)- Quaternary incised valleys and low stand deltas imaged with 3D seismic and 2D HR Profiles, Mahakam Delta, Indonesia. AAPG Int. Conference, Barcelona 2003, Search and Discovery Art. 90017, 8p.
(online at: www.searchanddiscovery.com/abstracts/pdf/2003/intl/extend/ndx_82692.pdf)
(Review of Late Pleistocene- Holocene of Mahakam Delta , showing complete cycle of lowstand (incised valleys and prograding lowstand delta)- transgressive (up to 40m thick Halimeda carbonate buildups on interfluves of incised valleys on shelf)- highstand sequence tracts (prograding clastics of modern delta))

Crumeyrolle, P., I. Renaud & J. Suiter (2007)- The use of two- and three-dimensional seismic to understand sediment transfer from fluvial to deepwater via sinuous channels: example from the Mahakam shelf and comparison with outcrop data (South Central Pyrenees). In: R.J. Davies et al. (eds.) Seismic geomorphology: applications to hydrocarbon exploration and production, Geol. Soc., London, Spec. Publ. 277, p. 85-103.
(Stratigraphy and depositional environments of Pleistocene Mahakam delta lowstand delta/ fans, as mapped from seismic, used to interpret outcrops of Sobrarbe delta deposits in Pyrenees)

Curiale, J.A., J. Decker, R. Lin & R.J. Morley (2006)- Oils and oil-prone coals of the Kutei Basin, Indonesia. Abstract AAPG Int. Conf. Exh., Perth 2006, American Assoc. Petrol. Geol. (AAPG) Bull. 90 Program Abstracts.
(Kutei Basin Miocene and Eocene coals have oil-prone source rock potential. Nine Miocene and Eocene coals (15- 36 Ma) on Borneo compared with oils from same basin. Several coals qualify as oil-prone potential source rocks, but no single coal correlatable with any single oil)

Curiale, J., R. Lin & J. Decker (2005)- Isotopic and molecular characteristics of Miocene-reservoired oil of the Kutei Basin, Indonesia. Organic Geochem. 36, p. 405-424.
(Thirty-two oils from Miocene sands of Kutei Basin examined. Isotopic data discriminate single megafamily of oils dominated by angiosperm debris. Separable into two sub-families: onshore and continental shelf oils (low lupanoid ratio) and continental slope oils (high lupanoid ratio))

Dalman, R.A.F., T. Missiaen, D.A.S. Ranawijaya, S.B. Kroonenberg, J.E.A. Storms & J.B. Reinink (2009)- The Late Holocene progradation of the mixed fluvial-tidal Mahakam Delta, imaged using very high-resolution shallow seismics. AAPG Hedberg Conference, Jakarta 2009, 3p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/abstracts/pdf/2010/hedberg_indonesia/abstracts/ndx_dalman.pdf)

Darlan, Y. & Sahudin (2012)- Gas biogenik dan unsur mineral pada sedimen delta Kapuas, Kalimantan Barat. J. Geologi Kelautan 10, 3, p. 133-146
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/222/212)
('Biogenic gas and mineral elements in Kapuas delta sediments, West Kalimantan'. Bacterial-origin biogenic gas in Quaternary clastic sediments of shallow boreholes in Kapuas Delta)

Darman, H. (1998)- Carbonate slope deposit of Bengalun River, East Kalimantan. Berita Sedimentologi (Indon. Sediment. Forum, FOSI) 10, p. 4-6.
(Bengalon River near NE margin Kutei Basin exposes thick Paleogene and Neogene deep marine to fluvio-marine sediments. E Miocene (zone N4) bathyal marine calcareous shales with bioclastic calci-turbidites. Presence of carbonate sediments suggests nearby carbonate-producing shelf)

Darman, H. (1999)- Extracting flow pattern and point-bar characteristics of a modern river: a case study from the Wahau River, East Kalimantan. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 403-414.
(Study of modern Wahau River deposition)

Darman, H. (1999)- The Neogene tectonics and sedimentation of the Tarakan basin. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 56-59.
(Tarakan Basin initiated simultaneously with formation of Celebes Sea in M-L Eocene until end of E Miocene. Deltaic sedimentation from W in M Miocene- Pliocene, with significant growth faulting. Latest tectonic phase

latest Pliocene- Recent transform movement along 3 major (Semporna, Maratua, N Mangkalihat) and several smaller sinistral wrench faults crossing Makassar Straits, causing up to 1000m of local inversion uplift)

Darman, H. (2003)- Seismic expression of shelf breaks: examples from Borneo/Kalimantan basins. Berita Sedimentologi (Indon. Sediment. Forum FOSI) 18, p. 8-13.
(Examples of shelf breaks/clinoforms on previously published seismic examples from offshore Kutai, Tarakan, Sandakan, and NW Borneo)

Darman, H. (2017)- The Paleogene of East Borneo and its facies distribution. Berita Sedimentologi (Indon. Sediment. Forum, FOSI- IAGI) 37, p. 5-13.
(online at: www.iagi.or.id/fosi/files/2017/03/BS37-03032017.pdf)
(Review of East Kalimantan Barito, Kutei and Tarakan basins, all with M Eocene - U Oligocene Paleogene sediments. M Eocene dominated by fluvial settings, U Eocene common coastal to shallow shelf deposits. Carbonates developed in Oligocene in N and S; in Kutei Basin mainly shelf to bathyal clastics)

Darman, H. & K. Handoyo (2006)- "Deltaicò reservoir characteristics of giant fields of the Kutei and Baram Basins, Borneo. AAPG 2006 Int. Conf. Exhibition, Perth 2006, Search and Discovery Art. 20191 (2013), 6p. *(Abstract and Presentation)*
(online at: www.searchanddiscovery.com/documents/2013/20191darman/ndx_darman.pdf)
(Giant fields in two basins surrounding Borneo, Baram and Kutei, producing oil and gas from Miocene deltaic-shallow marine sandstones. Sandstones generally quartz dominated and derived from central part of Borneo. Structures of fields in Kutei Basin generally larger, but reservoirs less continuous (distributary mouth bars, interconnected by channel cuts))

Darman, H. & K. Handoyo (2008)- Deltaic reservoir characteristics of Kutei and Baram giant fields. In: J.A. Katili et al. (eds.) Tectonics and resources of Central and Southeast Asia (Halbouty volume), Pusat Survei Geol., Bandung, Spec. Publ. 34, p. 109-123.
(Kutei and Baram giant oil-gas fields both produce mainly from Miocene deltaic- shallow marine sandstones. These are part of progradational sequences, formed after large amounts of generally quartz-rich sediments began to pour from C Kalimantan into deep basins to N, W and E of Borneo in Early Miocene. Sands in Kutei basin structures generally larger, but deltaic reservoirs discontinuous. Baram coastal and shallow marine sandstones generally more continuous, but structures smaller)

Darman, H. & Y. Zaim (1994)- Sedimentologi endapan konglomerat batubara pada facies sungai, di daerah Samarinda, Kalimantan Timur. Buletin Geologi (ITB) 24, 1-2, p. *(also in Berita Sedimentologi 17, 2002)*
('Sedimentology of coal conglomerate deposits within channel facies in Samarinda Region, East Kalimantan'. Conglomerates with rounded-subrounded coal fragments in channel deposits of fluvial-deltaic Balikpapan Fm in Samarinda Region. Coal fragments may be transported wood or reworked fragments from older coal seam)

Darmawan, W., A. Subekti, E. Guritno, J. Smart, H. Mustapha, B. Nugroho & A. Bachtiar (2015)- Structural and stratigraphic evolution and implications for Paleogene syn rift exploration in North East Bangkanai, Upper Kutai Basin, Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-112, 15p.
(NE Bangkanai PSC in NW onshore Upper Kutai Basin underwent M-L Eocene rifting (deltaic and shallow marine clastics overlain by Nummulites limestones) and NW-SE strike-slip fault reactivation and E Miocene E-W directed compression, which formed NE-SW and N-S trending inversion structures. Regional uplift in E Miocene triggered start of regressive system and deposited fluvio-deltaic to marine sediments of M Miocene Balikpapan Fm. Latest tectonism in Borneo in Pliocene- Recent. Syn-rift exploration play)

Daulay, B. (1994)- Tertiary coal belt in Eastern Kalimantan, Indonesia: the influence of coal quality on coal utilization. Ph.D. Thesis, Wollongong University, Australia, p. 1-326.
(online at: http://ro.uow.edu.au/theses/1413/)
(E Kalimantan second largest coal resources in Indonesia after Sumatra coalfields (Bukit Asam, Ombilin), but currently has highest coal production. Coal in Kutei, Barito, Asem Asem and Tarakan Basins, which developed as result of rifting in the Makassar Strait in mid-Tertiary. Economic coal deposits of Miocene age in all basins;

economic Eocene coals only in Barito and Asem Asem Basins. Evaluation of lateral and vertical variations in coal thickness and chemical and physical properties, with discussion of economic uses of E Kalimantan coals. Vitrinite and liptinite dominant macerals in both Eocene and Miocene coals. Inertinite is minor component, but higher in Miocene coals. Mineral content low in most coals except in some Eocene coals. Rank of Miocene coals soft brown coal to high volatile bituminous, Eocene coals subbituminous- high volatile bituminous. Miocene coals in Sangatta area locally altered to semi-anthracite by igneous intrusion.)

Daulay, B. & H. Panggabean (2001)- Batubara sebagai sumber hidrokarbon: studi kasus cekungan Kutai dan Barito. J. Geologi Sumberdaya Mineral 11, 118, p. 1-17.
('Coal as a source of hydrocarbons: a case study in the Kutai and Barito Basins'. Coals good potential petroleum source rocks)

Debec, P. & G.P. Allen (1996)- Late Quaternary glacio-eustatic sequences and stratal patterns in the Mahakam delta. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. on Sequence Stratigraphy in SE Asia, Jakarta 1995, Indonesian Petroleum Association IPA), p. 381. *(Abstract only)*
(Late Quaternary eustatic cycles formed small-scale depositional sequences in Mahakam delta. High frequency and asymmetry of Pleistocene eustatic cycles and rapid rates of sea-level rise and fall led to differences from published sequence stratigraphic models. 3D seismic maps show narrow, incised fluvial valleys dissected by dendritic erosion pattern (= converted highstand delta distributary channels). Incised valleys same size as deltaic distributaries, relatively straight channels, 1-1.5 km wide and up to 30m of incision. Due to rapid sea-level rise and low tide range transgressive deposits thin and do not fill incised valleys (remain as prominent valley systems on transgressed shelf). During highstand delta progradation shelf valleys fill with prodelta mud. Each depositional sequence two episodes of deltaic progradation: early lowstand, and highstand systems tract)

De Groot, C. (1857)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, XVIII. Zuid- en Oosterafdeling van Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 14, p. 1-86.
(online at: https://ia801008.us.archive.org/32/items/natuurkundigtijd14koni/natuurkundigtijd14koni.pdf)
('Contributions to the geological and mineralogical knowledge of the Netherlands Indies, XVIII. The South- and East District of Borneo', Early geological description of SE Kalimantan, surveyed between 1852-1855. With 2 small maps, incl. one of Oranje Nassau coal mine NE of Martapura) (Reprinted in Jaarboek Mijnwezen 1872)

De Man, E., A. Gantyno, S. Huang, K. Petersen, E. Saferi, R. Widiarti, S. Wertanen & S. Rahardjanto (2012)- CBM operational lessons learned- Barito Basin. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-E-194, p. 1-20.

De Matharel, M., G. Klein & T. Oki (1976)- Case history of the Bekapai Field. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 69-93.
(1972 Bekapai oil field off Mahakam Delta on NNE trending anticline. Two main phases of delta progradation, separated by ?E Pliocene? marine transgression. Hydrocarbons in delta front sands of lower delta)

De Matharel, M., P. Lehman & T. Oki (1980)- Geology of the Bekapai Field. In: M.T. Halbouty (ed.) Giant oil and gas fields of the decade 1968-1978, American Assoc. Petrol. Geol. (AAPG), Mem. 30, p. 459-470.
(Bekapai Field 1972 discovery 15 km off Mahakam Delta. Large faulted anticline, multiple stacked deltaic reservoir sands between 1300-1600m)

De Neve, G.A. (1947)- A new *Archaias* species from East Borneo. Bull. Bureau of Mines and Geological Survey of Indonesia 1, 1, p. 13-16.
(New larger foraminifer species Archaias vandervlerki from E-M Miocene (Tf1-2) Poelobalang beds, Bengalan river region, Bontang, Samarinda. Associated with Austrotrillina howchina, Miogypsina kotoi. Poor figures (May be same as Pseudotaberina malabarica, Burdigalian (Banner & Highton 1989))

Demchuk, T.D & T.A. Moore (1993)- Palynofloral and organic characteristics of Miocene bog-forest, Kalimantan, Indonesia. Organic Geochem. 20, 2, p. 119-134.

(20m-thick Miocene Warukin Fm Sarongga lignite from SE Kalimantan distinct vertical variations in palynofloras. Three palynofloral zones of bog-forest and mangrove affinity. Palynofloras and low sulphur content suggest predominantly freshwater deposition. Plant material in Miocene lignite mainly derived from arborescent angiosperms Increasing abundances of mangrove pollen suggests encroachment of mangrove swamp toward bog-forest. Little variation in organic characteristics within seam)

Denney, D. (2008)- Reviving the mature Handil Field; from integrated reservoir study to field application. J. Petroleum Technology 60, 1, p. 63-65.
(Summary of Herwin et al. (2007) paper. Mahakam Delta 1974 Handil field production declined from 200,000 BOPD in late 1970s to 12,500 BOPD in 2003. Infill drilling and optimization of enhanced-oil-recovery increased production to 23,000 BOPD)

De Sitter, L.U. (1932)- Nota betreffende de foraminiferenfauna van het Neogeen van Koetai. Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Verhandelingen 3, p. 122-125.
('Note on the foraminiferal fauna of the Neogene of Kutai'. Summary of foraminifera distribution and BPM stratigraphy of Kutai Basin, E Kalimantan. Boundary between Beboeloe and Poeloe Balang stage characterized by extinction of Eulepidina. Alveolinella (=Flosculinella) bontangensis restricted to Poeloe Balang stage. With detailed Neogene foraminifera range chart)

De Sitter, L.U. (1948)- Het Quartair in het kustgebied van Koetei ten N van de Mahakam rivier. Geologie en Mijnbouw 10, 9, p. 177-183.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0Y2VnbkxZMHp5eFE/view)
('The Quaternary in the coastal region of Kutai, North of the Mahakam River'. Description of Quaternary coastal terraces and drainage pattern, influenced by peneplain uplift)

Dharmasamadhi, I.N.W. & S.W. Reksalegora (2009)- Using pressure data to build a stratigraphic framework in the deepwater Ranggas Field, Kutai Basin- East Kalimantan. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-181, 19p.
(Ranggas field 2001 oil-gas discovery mainly in Late Miocene slope channels in 1585m water depth. Pressure analysis indicates four laterally-continuous pressure sealing shales that can be used for correlation. Numerous thin shales, less than 100' thick, have potential to seal over extensive area)

Di Martino, E. & P.D. Taylor (2012)- Systematics and life history of *Antoniettella exigua*, a new genus and species of cribrimorph bryozoan from the Miocene of East Kalimantan (Indonesia). Boll. Soc. Paleontologica Italiana 51, 2, p. 99-108.
(online at: http://paleoitalia.org/media/u/archives/03.DiMartinoTaylor_2012_BSPI_512.pdf)
(New cheilostome bryozoan from rocks around Burdigalian-Langhian boundary near Bontang, Kutai Basin. Colonies encrust undersides of platy scleractinian corals that formed patch reefs in turbid shallow waters)

Di Martino, E. & P.D. Taylor (2012)- Morphology and palaeobiogeography of *Retelepralia*, a distinctive cheilostome bryozoan new to the fossil record. Neues Jahrbuch Geol. Palaont. Abhandl. 263, p., 67-74.
(New species of bryozoan, Retelepralia macmonagleae, from, Late Oligocene W of Sukau, E Sabah)

Di Martino, E. & P.D. Taylor (2014)- Miocene bryozoa from East Kalimantan, Indonesia. Part I: Cyclostomata and óAnascanô Cheilostomata. Scripta Geologica 146, p. 17-126.
(online at: www.scriptageologica.nl/cgi/t/text/get-pdf?c=scripta;idno=15146a02)
(Descriptions of 51 Miocene (late Burdigalian-Messinian) bryozoan species from 17 sections near Samarinda, Bontang and Sangkulirang in Kutai Basin. Eleven new species of Microeciella, Pseudidmonea, Cranosina, Parellisina, Vincularia and Canda. Bryozoans found mainly encrusting undersides of corals)

Di Martino, E. & P.D. Taylor (2015)- Miocene bryozoa from East Kalimantan, Indonesia. Part II: 'Ascophoran' Cheilostomata. Scripta Geologica 1486, p. 1-142.
(online at: www.scriptageologica.nl/cgi/t/text/get-pdf?c=scripta;idno=17148a01)

(Descriptions of 72 Miocene ascophoran-grade cheilostome bryozoa ((late Burdigalian-to Messinian) from 17 sections in E Kalimantan, Indonesian Borneo. Two new genera and 20 new species)

Di Martino, E., P.D. Taylor & K.G. Johnson (2015)- Bryozoan diversity in the Miocene of the Kutai Basin, East Kalimantan, Indonesia. Palaios 30, p. 109-115.
(123 species of bryozoans identified in Miocene (17.5- 6.1 Ma) limestones of E Kalimantan. Mainly encrusting species associated with plate-like scleractinian corals)

Di Martino, E., P.D. Taylor, V. Novak, N. Santodomingo, A. Rosler, J.C. Braga, K. Johnson & W. Renema (2012)- Bryozoans from a Langhian patch reef in East Kalimantan (Indonesia). In: Indo-Pacific Ancient Ecosystems Group (IPAEG) Conf., Catania 2012, Giornate Paleont. 12, 1p. *(Abstract only)*
(online at: http://ipaeg.org/content/bryozoans-langhian-patch-reef-east-kalimantan-indonesia)
(Langhian patch reef exposed near Bontang, E Kalimanta, with 61 species of bryozoans, almost double number of species (31) previously reported from Cenozoic of Indonesian Archipelago)

Djamas, Y.S. & E. Marks (1978)- Early Neogene foraminiferal biohorizons in E. Kalimantan, Indonesia. In: S. Wiryosujono & E. Marks (eds.) Proc. 2nd Working Group Mtg. Biostratigraphic datum-planes of the Pacific Neogene IGCP Project 114, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 1, p. 111-124.
(S Mangkalihat- N Kutai material allows some larger and planktonic foram zone calibrations:Late Oligocene N2-N3 correlates with Te1-4, Early Miocene N4-N5 zones correlate with Te5)

Djamil, A.H. & S.O. Bany (2005)- Exploration geology of Sebuku Block, offshore Kalimantan, Indonesia. Proc. 2005 SE Asia Petrol. Expl. Society (SEAPEX) Exploration Conf., Singapore, 21p. *(Abstract + Presentation)*
(Sebuku Block on Paternoster Platform. Makassar Graben kitchen with Eocene source rocks (Lower Tanjung lacustrine shales and fluvio-deltaic shales and coals). Lacustrine shale amorphous organic material (TOC 4-6%, Type II oil prone kerogen) and significant fresh water algae Pediastrum and Botryococcus. Fluvio-deltaic shale TOC 0.7- 2.54%, low HI, moderate gas potential. Coals TOC 20- 43% and HI 181-293, gas prone kerogen. Slicks from leaking gas-condensate and light oil in traps confirm Eocene source. Main reservoir Berai Lst, with gas in Makassar Straits-1 well. Carbonate deposited in basinal setting, with displaced material from adjacent reef/ platform margin. Fractured basement oil test in Pangkat-1. Berai Fm and U Warukin Fm reefal build-ups form exploration targets as well as clastic reservoirs of Lower Tanjung Fm in Makassar graben)

Doeglas, D.J. (1931)- Ostrakoden von N.O.-Borneo. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie, Bandung 17, p. 25-54.
('Ostracodes from NE Borneo'. 16 species of Oligocene- U Miocene ostracodes from 43 localities in NE Kalimantan, sampled by Leupold. Includes 14 new species, 11 of genus Nesidea, one of Cythere, Cytheridea and Cythereis)

Dory, D.M. (1997)- Evolution of structures in the NE Kalimantan Basin, Indonesia. M.Sc. Thesis, University of London, 40p. *(Unpublished)*

Doutch, H.F. (1992)- Aspects of the structural histories of the Tertiary sedimentary basins of East, Central and West Kalimantan and their margins. BMR J. Australian Geol. Geophysics 13, 3, p. 237-250.
(online at: www.ga.gov.au/corporate_data/49556/Jou1992_v13_n3.pdf)
(Semitau ridge is ESE trending structural ridge spanning outcrops of Permo-Triassic foliated igneous rocks of Busang Complex in E and Embuoi Complex in Sanggau. Age of Plateau Sandstone in Ketangau Basin Late Eocene, possibly extending into Early Oligocene)

Douville, H. (1905)- Les Foraminiferes dans le Tertiaire de Borneo. Bull. Soc. Geologique France, ser. 4, 5, p. 435-464.
(online at: www.biodiversitylibrary.org/item/97249page/487/mode/1up)
('The foraminifera in the Tertiary of Borneo'. M Eocene- Miocene larger forams from SE Kalimantan, collected by Buxtorf. Description of Spiroclypeus new genus and two new species S. orbitoideus and S. pleurocentralis.

No locality maps, but according to Verbeek (1908, p. 481) from Meratus Mts front between Rantau and Barabai)

Durand, B., A.Y. Huc & J.L. Oudin (1987)- Oil saturation and primary migration observation in shales and coals from the Kerbau wells, Mahakam Delta, Indonesia. Revue Inst. Francais Petrole (IFP) 45, p. 173-195.

Durand, B. & J.L. Oudin (1980)- Exemple de migration des hydrocarbures dans une serie deltaique: Le delta de la Mahakam, Kalimantan, Indonesie. Proc. 10th World Petroleum Congress, Colchester, UK, 2, p. 3-11.
('Example of hydrocarbon migration in a deltaic series: the Mahakam Delta, Kalimantan')

Dutrieux, E. (1991)- Study of the ecological functioning of the Mahakam delta (East Kalimantan, Indonesia). Estuarine, Coastal Shelf Science 32, 4, p. 415-420.
(Ecological functioning of Mahakam delta controlled by balance between influx of seawater during high tides and influx of continental water. Marine populations pronounced upstream to downstream zonation. Intermediate zones poor; richest near river mouth. Controlled mainly by physical factors, like salinity)

Duval, B. (2012)- Creative thinking led to 40 years of success in Mahakam, Indonesia. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 20185, p. 1-41. *(Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/20185duval/ndx_duval.pdf)
(Review of discovery of oil-gas fields in Mahakam delta since early 1970's)

Duval, B.C., C. Cassaigneau, G. Choppin de Janvry, B. Loiret & L.M. Alibi (1998)- Technology and exploration efficiency in the Mahakam delta province, Indonesia. Proc. 15th World Petroleum Congress, Beijing 1997, 2, p. 187-200.

Duval, B.C., G. Choppin de Janvry & B. Loiret (1992)- Detailed geoscience reinterpretation of Indonesia's Mahakam Delta scores. Oil and Gas J., August 10, 1992, p. 67-72.
(Brief review of Mahakam Delta petroleum geology/ petroleum system, based on OTC presentation)

Duval, B.C., G. Choppin de Janvry & B. Loiret (1992)- The Mahakam delta province: an ever changing picture and a bright future. Proc. 24th Ann. Offshore Technology Conf. (OTC), Houston, OTC 6855, p. 393-404.
(Mahakam Delta oil exploration started in 1888, with field geological investigations near oil and gas seepages. First oil discoveries at Sanga Sanga (1897) and Samboja (1909) in uplifted M Miocene sands. In 1970's several giant gas-oil fields discovered offshore. By 1985, proven and probable initial reserves ~2.6 GBO and 20-30 TCF gas.)

Duval, B.C., C. Cassaigneau, G. Choppin de Janvry, B. Loiret, M. Leo, Alibi & Y. Grosjean (1998)- Impact of the petroleum system approach to exploration and appraisal efficiency in the Mahakam Delta. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 277-290.
(New petroleum system model to identify stratigraphic targets near identified kitchens. Peciko recognized as new giant gas- condensate field. Understanding trapping model and hydrodynamic component key factor. Sedimentological studies with pressure measurements greatly contributed to field model. Thin sand reservoirs more continuous than expected. Peciko model applied to Tunu field lead to spectacular reserve additions)

Dwiantoro, M., S. Notosiswoyo, K. Anggayana & A.H. Widayat (2013)- Paleoenvironmental interpretation based on lithotype and macerals variation from Ritan's lignite, Upper Kutai Basin, East Kalimantan. Procedia Earth Planetary Sci. 6, p. 155-162.
(Composition of Miocene lignites from Ritan area, Upper Kutai Basin, E Kalimantan. Dominant maceral group huminite (28-79%), liptinite (20-31.5%), inertinite group (6.5- 12%). Vitrinite Reflectance of huminite 0.23-0.35% (transition stage from peat to lignite))

Edwards, T. (2000)- Redevelopment of the Sembakung oilfield- NE Kalimantan. SEAPEX Press 5, 6, p. 30-38.
(Redevelopment of N Tarakan basin oil field)

Edwards, T. & R. Walia (2002)- Reinterpretation of the Sembakung oilfield, Kalimantan, Indonesia utilizing modern 3D seismic data. In: Canadian Soc. Expl. Geophysicists (CSEG) 2002 Geophysics Conv., 6p. *(Extended Abstract). (online at: https://cseg.ca/assets/files/resources/abstracts/2002/Walia_R_Reinterpretation_of_the_Sembakung_CAS-1.pdf)*
(Sembakung field 1975 ARCO discovery onshore Tarakan (Tidung) basin, 80km N of Tarakan island, NE Kalimantan. 19 wells drilled until recent redevelopment. Producing since 1977 from stacked Miocene- Pliocene deltaic sands of Tabul Fm, in structurally controlled traps)

Ellen, H., M.M. Husni, U. Sukanta, R. Abimanyu, Feriyanto & T. Herdiyan (2008)- Middle Miocene Meliat Formation in the Tarakan Island, regional implications for deep exploration opportunity. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-048, 20p.
(Most hydrocarbon exploration in Tarakan Basin focused on shallow Upper Miocene-Pliocene deltaics of Tarakan and Santul Fms. In Bangkudulis and Sembakung Fields hydrocarbons in M Miocene Meliat Fm fluvial-deltaic clastics, 630m thick in Barat 1, and likely associated with sand-bearing slope fan facies overlying early lowstand basin floor fan E of island. Base Meliat Fm blocky sand above 16.5 Ma SB, tied to uplift event. Top is transgressive limestone (Kapal Lst))

Emata, W.M., C. Irawan, Y.R. Sinulingga, B. Irawan & Cue Kalimantan (2016)- Challenge and hydrocarbon potential of SN structure on Kutai Basin of East Kalimantan. In: Soc. Petroleum Eng. (SPE) Ann. Caspian Techn. Conf., Astana, SPE-182539-MS, p. 1-11.

Endharto, M.A.C. (1997)- Reservoir characteristic of sandstones in Kutai Basin and its tectonic setting of East Kalimantan. Geol. Res. Dev. Centre Bull. 21, p. 127-149.
(Three sandstone types in Miocene- Recent of Sanga-Sanga PSC in Kutai Basin: (1) E Miocene moderate quartz and lithics; (2) late E Miocene- early M Miocene (lateN7- early N10) volcanogenic, reflecting increase in volcanic activity in W Kalimantan 17- 14.5 Ma; (3) M and Late Miocene (mid N10- N18) high-quartz main reservoirs, reflecting sediment recycling after basin inversion event at 14.5 Ma)

Endharto, M. & A. Bachtiar (1993)- Tipe provenansi dan proses diagenesa batupasir Miosen Awal, Cekungan Kutai, Kalimantan Timur. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung. 2, p. 1044-1060.
('Provenance type and diagenetic processes of Lower Miocene sandstone, Kutei Basin, E Kalimantan'. QFL diagramssuggest 'Recycled orogen'-type provenance for Bebulu and Pemaluan sandstones)

Erriyantoro, E.S., N.I. Basuki, R. Heryanto, L.D. Santy (2011)- Provenance of the Kantu Formation Sandstones, Nanga Kantu Area, Ketungau Basin, West Kalimantan. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-SG-038, p.
(Provenance of Kantu Fm sandstones in Nanga Kantu area, Ketungau Basin, W Kalimantan, most likely from Late Jurassic- E Cretaceous Kapuas Complex/ Lubok Antu Melange and E Cretaceous- M Eocene Rajang Group located N-NE of Ketungau Basin, which were deformed and uplifted by end- Eocene Sarawak Orogeny)

Fardiansyah, I., A. Budiman & C. Prasetyadi (2010)- Identifying rock compressibilities influenced on delta facies at Simpang Pasir Area, Samarinda Seberang, Kutei Basin and its related to reservoir characterization. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-SG-011, 18p.

Febriadi, E. (2010)- PT Arutmin discovery of South Kalimantan coal. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. MGEI-IAGI Seminar Kalimantan coal and mineral resources, Balikpapan 2010, p. 27-48.
(Description of coal exploration by PT Arutmin and geology of Eocene and M-L Miocene of Asem Asem and Pulau Laut sub-basins. Company started as affiliate of ARCO/ Utah in 1981, sold to BHP in 1987. Senakin coal mine exploited since 1988. Apparently mainly based on unpublished report of Friederich (1985))

Febrian W.A. & B. Sapiie (2013)- Tectonic inversion impact to coal cleat characteristics of Tanjung Formation, Karangintan Area, Barito Basin, South Kalimantan. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-SG-049, p. 1-18.

Felix, J. (1921)- Fossile Anthozoen von Borneo. Palaontologie von Timor, Schweizerbart, Stuttgart, 9, 15, p. 1-61.
('Fossil corals from Borneo'. Miocene corals from outcrops in four areas of Kutai Basin, collected by BPM geologists)

Ferguson, A.J. (2016)- Kutai Basin exploration: past and future, an example of the use of simpe play types and serendipity for successful exploration and develoment. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 32-TS-16, p. 1-17.
(Kutai Basin mature basin, with high success rates drilling on surface anticlines, many of which are inversions of growth faults in delta systems. Two main remaining play types are stratigraphic traps along flanks of structural highs (e.g. Tunu) and drilling for isolated pressure compartments in overpressure zone)

Ferguson, A. & K. McClay (1997)- Structural modelling within the Sanga Sanga PSC, Kutei Basin, Kalimantan: its implication to paleochannel orientation studies and timing of hydrocarbon entrapment. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 727-743.
(Sanga Sanga PSC four large fields in M and U Miocene deltaic sandstones in NNE-trending structures of Mahakam fold belt. Gravity glide and strike-slip models do not simulate observed structures; thrusting, inverted extensional faults and differential load models only partially simulate structures. Preferred combined tectonic model for Mahakam fold belt is inversion of delta growth faults to form inverted graben structures, termed inverted delta growth fault model. Change from overall extension to contraction started at 14.0 Ma. Structures trending NNE are close to perpendicular to applied stress and become inverted)

Feriansyah, L.T., J.L.C. Chambers, S.H. Dewantohadi, M. Syaiful, Priantono & D.N. Imanhardjo (1999)- Structural and stratigraphic framework of the Palaeogene in the northern Kutei Basin East Kalimantan. Proc. 27th Ann. Conv. Indon. Petr. Assoc. (IPA), Jakarta, p. 443-455.
(Kutei basin 4 phases: (1) M-L Eocene extension; (2) L Eocene- Oligocene sag; (3) L Oligocene- E Miocene renewed extension/ subsidence; (4) E Miocene- Recent delta progradation coincident with older depocentres inversion; axis of deformation moves progressively E with time. Rapid facies variations in small extensional depocentres (~20 km wide, up to 70 km long). Intrabasinal highs with thin clastics or limestones. More regional depocentre in post-rift phase, beginning end-Late Eocene. Inversion process created two deformation styles: (1) inversion anticlines in Paleogene;(2) detached tight anticlines in thick Neogene. Detached section same amount of shortening (10-15%) as deeper inverted section)

Fernandes, H. & Djuhaeni (2018)- Analisis stratigrafi sikuen interval Pliosen pada lapangan Bunyu Tapa, Kalimantan Utara. Bulletin of Geology (ITB) 2, 1, p. 175-196.
(online at: https://buletingeologi.com/index.php/buletin-geologi/issue/view/4/Paper-4%20vol.%202%20no.%201)
('Sequence stratigraphy analysis of the Pliocene interval at Bunyu Tapa field, North Kalimantan'. Pliocene Tarakan Fm in Bunyu Tapa oil field in N Kalimantan can be subdivided in 5 delta plain-dominated sequences)

Fitriadi, Z., D. Nugroho & N.I. Basuki (2017)- Studi tipe batuan dan pemodelannya di Blok X, Cekungan Barito. Bulletin of Geology (ITB) 1, 1, p. 65-76.
(online at: http://buletingeologi.com/index.php/buletin-geologi/issue/view/2/09_BG201621)
('Study of rock types and modeling in Block X, Barito Basin'. Interpretation of fluvial depositional facies of (Eocene) Lower Tanjung Fm in wells of Tanjung Field, Barito Basin, SE Kalimantan. Highest porosity-permeability in channel and point bar sands)

Friederich, M.C., T.A. Moore, M.S.W. Lin & R.P. Langford (1995)- Constraints on coal formation in Southeast Kalimantan, Indonesia. Proc. 6th New Zealand Coal Conf., Wellington, 1, p. 137-149.
(SE Kalimantan Eocene coal significantly different from Miocene coal. Eocene coals thinner, laterally continuous, formed from palm/fern vegetation in transgressive setting, creating near-coastal peats as water table rose, and were terminated as sea transgressed over peat. Miocene coals formed in freshwater sequence, locally thick, sudden lateral thickness changes and very low ash and sulphur. Miocene coal component of

decay-resistant woody vegetation, Eocene palm/fern coal more susceptible to decay. Miocene coal beds formed as domed peats, which contributed to erratic thickness changes and locally thick coal)

Fukasawa, H., R. Sunaryo, & R.H. Napitupulu (1987)- Hydrocarbon generation and migration in the Sangatta area, Kutei Basin. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 123-139.
(Sangatta field 1939 BPM discovery N of Mahakam delta. Oils tied to M Miocene Balikpapan Fm shales)

Furlan, S., S. Chaudhuri, N. Clauer & F. Sommer (1995)- Geochemistry of formation waters and hydrodynamic evolution of a young and restricted sedimentary basin (Mahakam Delta Basin, Indonesia). Basin Research 7, 1, p. 9-20.
(Chemical and isotopic data on formation waters of oil-fields from Mahakam Delta provide information about mass transfers in sedimentary sequence. Depletions in Ca, Sr and K, etc., in waters related to illitization of smectite, precipitation of carbonate minerals and dissolution of K-feldspar and precipitation of albite)

Furlan, S., N. Clauer, S. Chaudhuri & F. Sommer (1996)- K transfer during burial diagenesis in the Mahakam Delta basin (Kalimantan, Indonesia). Clays & Clay Min. 44, 2, p. 157-169.
(In Mahakam delta basin Potassium necessary for illitization of illite/smectite mixed-layer minerals mainly from K-feldspar alteration in sandstones and from mica in shales. Most of K-feldspar alteration outside main zone of illitization, which is restricted to upper 2000m. Feldspar grains were altered below this depth, so illitization requires open sedimentary system)

Gangui, A., T. Rosaz, B. Lambert & D. Roy (2000)- Tectonic evolution of the South Mahakam area and its petroleum implications. AAPG Int. Conf. Exhib. Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1428. *(Abstract only)*
(SE part of offshore Mahakam PSC influenced by extension, with E Eocene- early Late Miocene development of NW-SE (transtensional?) normal faults (Maruat, Sesumpu, Sepinggan faults), separating Kutei basin from Paternoster Platform. Associated E-W faults probably related to strike-slip component. Metulang Field is in M Miocene tilted (growth-) fault block. Late Miocene-Pliocene compression (N150-170) caused dextral strike-slip reactivation of main normal faults, causing fault block reactivation (Mandu structure) and "en-echelon" folds (Jumelai Field). Most hydrocarbon accumulations are along major fault migration pathways)

Gany, M.U.A., D. Suyadi & Widodo (1994)- Pengaruh karbonisasi terhadap kualitas batubara, Kotabangun-Kalimantan Timur. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 1153-1159.
('Influence of carbonization on coal quality, Kotabagun, E Kalimantan')

Garrigues, P., M.L. Angelin, R. De Sury, J.L. Oudin, M. Ewald (1985)- Etude de la distribution des monomethylphenanthrenes dans une serie de roches meres du delta de Mahakam (Indonesie). Comptes Rendus Academie Sciences, Paris, Ser. 2, 300, 15, p. 747-750.
('Study of distribution of monomethylphenanthrenes in a series of source rocks in the Mahakam Delta')

Garrigues, P., J. Bellocq, P. Albrecht, A. Saliot & M. Ewald (1987)- Etude des marqueurs biogeochimiques tri-, tetra-, et pentaaromatiques dans les sediments quaternaires et Pliocene superieur du delta de la Mahakam (Indonesie). In: A. Combaz (ed.) Geochimie organique des sediments plio-quaternaires du delta de la Mahakam (Indonesie)- le sondage Misedor, Editions TECHNIP, Paris, p. 317-342.
('Study of tri-, tetra-, et pentaaromatic biogeochemical markers in Quaternary and Upper Pliocene sediments of the Mahakam Delta'. High levels of aromatic derivatives of higher plant constituents. No clear diagenetic evolution)

Garrigues, P., R. De Sury, M.L. Angelin, J. Bellocq, J.L. Oudin & M. Ewald (1988)- Relation of the methylated aromatic hydrocarbon distribution pattern to the maturity of organic matter in ancient sediments from the Mahakam Delta. Geochimica Cosmochimica Acta, 52, 2, p. 375-384.
(New maturation indices based on methyl-anthracenes,-chrysenes and -pyrenes presented, based on experiments on immature coal samples from well in Handil Field, Mahakam delta)

Garrigues, P., A. Saptorahardjo, C. Gonzalez, P. Wehrung, P. Albrecht, A. Saliot & M. Ewald (1986)- Biogeochemical markers in the sediments from Mahakam Delta. Organic Geochem. 10, p. 959-964.
(Analysis of the tri-, tetra- and pentaaromatic hydrocarbon fractions of sediments from well W of Handil field, Mahakam Delta, indicate predominance of biogeneic polycyclic aromatic hydrocarbons (PAH) diagenetically related to triterpenoid natural precursors (mainly from terrestrial land plant material))

Gastaldi, C., J.P. Biguenet & L. de Pazzis (1997)- A reservoir characterization from seismic attributes. An example from the Peciko Field (Indonesia). The Leading Edge 16, 3, p. 263-266.
(Seismic attributes used to map gas sand distribution in Peciko Field, 20 km S of Mahakam Delta, Reservoirs are Late Miocene (~10 Ma) distributary mouth bars deposited in distal delta front environment)

Gastaldo, R.A., G.P. Allen & A. Huc (1995)- The tidal character of fluvial sediments of the modern Mahakam River delta, Kalimantan, Indonesia. In: B.W. Flemming & A. Bartholoma (eds.) Tidal signatures in modern and ancient sediments, Int. Assoc. Sedimentologists (IAS), Spec. Publ. 24, Blackwell, Oxford, p. 171-181.
(Brief sedimentological description of low wave-energy, mixed tide- and fluvially controlled Mahakam delta complex. Medium- to fine-grained terrestrial sediment originates from 75 000 km2 drainage area. Two active distributary systems, with interdistributary area of tidal channels and former fluvial distributary channels which today are no longer connected to fluvial regime)

Gastaldo, R.A. & A.Y. Huc (1992)- Sediment facies, depositional environments, and distribution of phytoclasts in the recent Mahakam Delta, Kalimantan, Indonesia. Palaios 7, 6, p. 574-590.
(Overview of distribution of sediments, vegetation and plant detritus in modern Mahakam delta)

Gautama, A.B. (1989)- Abnormal pressure behaviour with special emphasis on transition zone, Handil Field, East Kalimantan. Proc. 18th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 135-160.

Gayet, J. & P. Legigan (1987)- Etude sedimentologique du sondage Misedor (delta de la Mahakam, Kalimantan, Indonesie). In: A. Combaz (ed.) Geochimie organique des sediments plio-quaternaires du delta de la Mahakam (Indonesie)- le sondage Misedor, Editions TECHNIP, Paris, p. p. 23-71.
('Sedimentological study of the Misedor well (Mahakam delta)')

Gerard, J. & H. Oesterle (1973)- Facies study of the offshore Mahakam area. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc., p. 187-194.
(First Miocene- Pliocene facies maps of Mahakam Delta. Mahakan Delta prograded E since M Miocene and reached maximum extent in Late Miocene- E Pliocene. Delta was bordered to S and N by carbonate sediments and limited to open sea by barrier reefs. Descriptions of deltaic subfacies and associated fauna)

Gerth, H. (1923)- Die Anthozoenfauna des Jungtertiars von Borneo. Sammlungen Geol, Reichs-Museums Leiden, ser. 1, 10, 3, p. 37-136.
(online at: www.repository.naturalis.nl/document/552385)
('The coral fauna of the Late Tertiary of Borneo'. Descriptions of ~120 species of Miocene- Pliocene coral from 52 localities in E Kalimantan and Sabah, from museum collections in Leiden, Utrecht, Basel, etc.)

Geyler, H.Th. (1877)- Ueber fossile Pflanzen von Borneo. Palaeontographica Suppl. 3, 1, 2, p. 61-84.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/5251665)
(‘On fossil plants from Borneo’. 13 new species of moderately well preserved Eocene flora collected by Verbeek from claystones associated with coal-bearing Tanjung Fm near Pengaron, SE Kalimantan. Eocene floras comparable to present-day tropical vegetation. Incl. Phyllites spp., Nephelium, Entoneuron, Carpites)

Geyler, H.Th. (1879)- Die Eocanformation von Borneo und ihre Versteinerungen. III. Ueber fossile Pflanzen von Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 8 (1879), 2, p. 3-54.
(‘The Eocene formation of Borneo. On fossil plants from the Eocene of Borneo’. Mainly on material collected by Verbeek from Tanjung Fm near Pengaron. Reprint of Geyler (1877) Palaeontographica paper)

Goulty, N.R. & A.M. Ramdhan (2010)- Overpressure in the Kutai Basin- a radical reappraisal. In: 72nd EAGE Conf. & Exhib., Barcelona 2010, F043, 5p. *(Extended Abstract)*
(Kutai Basin/ Mahakam Delta overpressure encountered in U Miocene at depths of 3-4 km in shelf area. Main mechanism of overpressure generation was thought to be disequilibrium compaction. Mudrocks in area may not be undercompacted, but overcompacted.)

Granier B., J.M. Villain & R. Boichard (1997)- Biohermes holocenes a *Halimeda* au large du delta de la Mahakam, Kalimantan (Indonesie)- Le concept de "section condensee dilatee". In: F.G. Bourroulh-Le Jan (ed.) Carbonates intertropicaux, Mem. Soc. Geologique France, n.s., 169, p. 225-230.
('Holocene Halimeda bioherms in front of the Mahakam Delta, Kalimantan- The concept of dilated condensed section')

Grosjean, Y., G.C. De Janvry & B.C. Duval (1994)- Discovery of a giant in a mature deltaic province: Peciko, Indonesia. Proc. 14th World Petroleum Congress, Stavanger, 2, p. 157-160.

Grosjean, Y., P. Zaugg & J.M. Gaulier (2009)- Burial hydrodynamics and subtle hydrocarbon trap evaluation: from the Mahakam Delta to the South Caspian Sea. Int. Petrol. Techn. Conf. (IPTC), Doha, IPTC 13962, 12p.
(On 'Burial Hydrodynamic Trapping' of hydrocarbons in Mahakam Delta (examples Peciko and West Tunu Field). Water expulsion from thick shale section during burial created tilted gas-oil-water contacts, and offsets core of accumulation from anticlinal crest)

Grundy, R. J., D.W. Paterson & F.H. Sidi (1996)- Uplift measurements in Tertiary sediments of the Kutei Basin, East Kalimantan, Indonesia, as it relates to VICO Indonesiaǿs PSC and the surrounding area. Int. Geoph. Conf., Soc. Expl. Geoph. (SEG), Jakarta 1996, Expanded abstracts, p. 81-85.

Guritno, E.E. & J. Chambers (1999)- North Runtu PSC: the first proven Eocene petroleum play in the Kutai Basin. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-20.
(Paleogene hydrocarbon system proven recently in onshore NE Kutai basin PSC, but uneconomic so far. Prospective areas exist in parts of Paleogene play fairway that have not suffered extensive uplift. System appears limited by reservoir quality in Eocene syn-rift section)

Gwinn, J.W., H.M. Helmig & L. Witoelar Kartaadipoetra (1974)- Geology of the Badak field, East Kalimantan, Indonesia. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 311-331.
(Badak large 1972 gas-oil discovery N of Mahakam Delta. Broad anticline with multiple stacked Late Miocene-Pliocene deltaic sandstones between 4500'- 11,000'. Estimated EUR 6 TCF gas, 50 MBO)

Hamdani, A.H., E. Sunardi & Y.A. Sanjaya (2014)- The Coalbed Methane potential from Sajau coal in eastern part of Berau Basin, East Kalimantan. Int. J. Science and Research (IJSR) 3, 3, p. 104-107.
(online at: https://www.ijsr.net/archive/v3i3/MDIwMTMxMDc5.pdf)
(Pliocene coal seams of Sajau Fm in Berau basin, lignite- subbituminous grade and categorized as high gaseous seams. with good CBM development potential)

Handoyo, K. (2003)- Sequence stratigraphy and reservoir heterogeneity of the Serang Field, Kutei Basin, Indonesia. M.Sc. Thesis, Colorado School of Mines, Golden, p. 1-175.
(online at: https://dspace.library.colostate.edu/bitstream/handle/11124/170544/T5727.pdf?sequence=1)
(Late Miocene sandstone reservoirs of offshore Unocal Serang Field (1973), NE of Mahakam Delta, with 10 facies associations. Sequence stratigraphic analysis showed three intermediate-term cycles, divided in short-term cycles. Overall landward-stepping, representing long-term base-level rise. Main reservoirs incised valley fills. Sediment sourced from paleo-Mahakam Delta. Younger cycles greater reservoir heterogeneity. Because of seaward-increasing mud content and bioturbation, rank of sediment bodies that act as reservoir in decreasing order: (1) fluvial/distributary channels, (2) distributary channels and (3) delta front bars)

Harahap, D. (1975)- Notes on log evaluation in the Badak Field, East Kalimantan, Indonesia. Geologi Indonesia (IAGI) 2, 2, p. 39-44.

(Badak Field reservoir rocks are sands deposited in deltaic environment. Shaliness common in pay sands and resistivity of formation waters varies from bed to bed)

Hartono A. & I. Saputra (2014)- Identifying carbonate play potential in Simenggaris Block, Tarakan Basin. Proc. 39th Ann. Conv. Indon. Assoc. Geophys. (HAGI), Solo, PIT2014-1174, 5p.
(Hydrocarbon plays in Tarakan Basin generally in M Miocene-Pliocene deltaic sandstones, but potential for carbonate play in Simenggaris Block, as shown by 2000' of carbonate penetrated by PF1 well (1979))

Harun, M.R., R.T. Putra & B.N. Ardhiansyah (2017)- Analog play concept and geophysical study at Warukin field, unlocking hidden potential in mature field. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(Warukin Field in Barito basin small oil field SE of Tanjung field, producing from M-L Miocene M Warukin Fm since 1965. Remaining potential in deeper zone, and in prospects between existing fields)

Hashimoto, W. (1973)- An unconformity discovered on the Tandjung anticline in the eastern rim of the Barito Basin, Kalimo Kalimantan Selatan, Indonesia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 179-188.
(NE Barito Tanjung anticline with 1200m thick Tanjung Fm (500m Eocene basal conglomerates, overlain by clastics, then Late Eocene/Tb limestones). Unconformity between Eocene Tb and Lower Oligocene Tc, characterized by basal Tc sand with thin coal and reworked Tab fauna on Tanjung anticline. In Kahajan wells Eocene/Tb directly overlain by Late Oligocene/Te. Tcd 295m thick in Tanjung area, thickening in Upper Mahakam region to 1800m. Berai Lst 650m thick and mostly Lower Te/ Late Oligocene)

Hashimoto, W. (1974)- Supplementary notes to 'The oil geology of East Kalimantan' by K. Masatani. J. Japanese Assoc. Petroleum Technologists 39, 2, p. 79-94. *(in Japanese)*
(online at: www.jstage.jst.go.jp/article/japt1933/39/2/39_2_79/_pdf)
(Supplement to Masatani (1967) paper on oil geology of E Kalimantan, focusing on geologic development of Meratus Range and E margin of Barito Basin. Cretaceous Manunggul Gp begins with basal conglomerate. Orbitolina identified as Aptian O. lenticularis and overlain by Turonian fossil-bearing formation. Several unconformities in Tertiary of Tanjung oilfield and Meratus front. Kahajan well (W margin Barito basin) Te limestone directly on Eocene Tab, so 'Tcd' reduced thickness to absent S, but thickening to N (1800m in Upper Mahakam region))

Hashimoto, W., K. Kurihara & F. Masuda (1973)- A study on some reticulate *Nummulites* from Kalimantan Selatan, Indonesia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 13, p. 73-90.
(Biometric study of E Oligocene Nummulites (N. fichteli, N. intermedia) from two zone Tc localities in SE Kalimantan: (1) 'Masoekoe Limestone' near kampong Masukou on N flank of Tandjung oil field anticline and (2) kampong Tunggul Baru, right bank of Riam Kawa River, S of Pengaron. Large microspheric forms previously described as N. intermedius, megalospheric forms are of Nummulites fichteli type)

Hashimoto, W. & K. Matsumaru (1973)- *Nephrolepidina parva* Oppenoorth from the Dahor area, Tandjung, Kalimantan Selatan, Indonesia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 11, p. 129-136.

Hayashi, Y., T. Inage, I. Suzuki & H. Nagura (1996)- Exploration history and trapping mechanism of Peciko gas field, East Kalimantan, Indonesia. J. Japanese Assoc. Petroleum Technologists 61, 1, p. 25-34.
(online at: https://www.jstage.jst.go.jp/article/japt1933/61/1/61_1_25/_pdf)
(In Japanese with English summary. Peciko gas field in offshore S Mahakam delta. Distribution of gas zones not controlled by distribution of sandstone layers, but by hydrodynamic trapping mechanism related to expulsion of compaction water in prodelta muddy facies E and S of Peciko gas field)

Hehanussa, P.E. (1981)- Basic data from Barito delta, south Kalimantan, Indonesia. LGPN-LIPI, Bandung, 21p.

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(Tarakan Basin passive continental margin with Late Eocene-Recent sediments on continental to oceanic crust, created during M-L Eocene opening of Celebes Sea. M Miocene uplift of Borneo hinterland uplift triggered massive influx of turbidites in deep-water area, deposited as fans in front of Tarakan delta and buried by rapidly prograding Plio-Pleistocene Tarakan Delta slope deposits. Potential reservoir systems in deepwater unconfined toe of slope fans, confined intra-slope fans and intra-slope channel-levee systems)

Hemmes, K., H. Darman, L. Suffendy & Meizarwin (2001)- Depositional systems of the deep-water Tarakan Basin, Indonesia. In: A. Setiawan et al. (eds.) Deep-water sedimentation of Southeast Asia, Proc. 2nd Regional Seminar Indonesian Sedimentologists Forum (FOSI), Jakarta, 4p. *(Extended Abstract)*
(Tarakan Basin passive continental margin with Late Eocene-Recent sediments on continental to oceanic crust, created during M-L Eocene opening of Celebes Sea. Rifting ceased in E Oligocene with quiet marine conditions until M Miocene when uplift of Borneo hinterland triggered massive influx of turbidites in deep-marine area, deposited as unconfined toe of slope fans ahead of prograding Tarakan delta. In Plio-Pleistocene deep water fans buried by rapidly prograding delta-slope deposits, which triggered gravity-driven toe thrusting. Small intra-slope basins formed between thrust ridges. In S part of delta, W-dipping normal faults limited progradation, resulting in excessive thickening of Pliocene-Pleistocene deltaic sequence and limiting sediment influx into deep-water area. Several potential deep-water reservoir systems: (1) unconfined toe of slope fans, (2) confined intra-slope fans, and (3) intra-slope channel-levee systems)

Hendrawan, A. Bachtiar, D. Apriadi, E. Kurniawan & Y. Bachtiar (1998)- Pemelajaran sedimentologi dari Singkapan batuan Miosen di Cekungan Kutai, Kalimantan Timur. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Sedimentology, Paleont. Stratigr., Yogyakarta, p. 1-15.
('Sedimentological study of Singkapan Miocene rocks in the Kutai Basin')

Heo, W., W. Lee and D.S. Lee (2015)- Hydraulic fracturing design for coalbed methane in Barito Basin, Indonesia. Geosystem Engineering 18, 3, p. 151-162.

Herdiyanto, R., J.A. Siadary & D. Fadlan (2018)- Complexity of pore pressure and stress analysis in Mahakam median axis of the lower Kutai Basin, Kalimantan, Indonesia. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-144-G, 14p.

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(online at: http://reposit.lib.kumamoto-u.ac.jp/bitstream/2298/9145/1/21-157.pdf)
(Geologic modeling of distribution and quality of multi-layer coal deposit from Lati Coal Mine, Tanjung Redeub, S part of Tarakan Basin (Berau), NE Kalimantan). Coal horizons in ~1800m thick M Miocene Berau (Latih) Fm, dominantly delta plain facies, overall progradational series. In Lati area 19 coal seams, individual thickness generally 0.5- 3 m, max. 5.8m. Comparison work on Barito Basin Eocene Tanjung Fm coal)

Heriawan, M.N. & K. Koike (2008)- Identifying spatial heterogeneity of coal resource quality in a multiplayer coal deposit by multivariate geostatistics. Int. J. Coal Geology 73, 3-4, p. 307-330.
(Geostatistical characterization of geometry and quality of multilayer coal deposit in E Kalimantan)

Heriawan, M.N. & K. Koike (2008)- Uncertainty assessment of coal tonnage by spatial modeling of seam distribution and coal quality. Int. J. Coal Geology 76, 3, p. 217-226.
(On spatial modeling of coal seam distribution and coal quality at multiplayer coal deposit in E Kalimantan)

Heriawan, M.N., J. Rivoirard & Syafrizal (2004)- Resources estimation of a coal deposit using ordinary block kriging. Proc. 13th Int. Symp. Mine Planning and Equipment Selection, Wroclaw, Poland, p. 37-43.
(On Tarakan Basin Eocene coal)

Heriyanto, N., A. Nawawi, A.D.M. Mason, F.T. Ingram, D.E. Pedersen & R.C. Davis (1996)- Exploratory update in the North Tanjung Block, South Kalimantan. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 55-68.
(Results of Permin Tracer 1993-1995 exploration in N Tanjung Block, NE Barito basin. Wells Patas 1 and Ngurit 1 with oil and gas shows. Muya 1 well high-wax oil that can not be produced. Exploration success depends on early formed structures that remained intact after subsequent episodes of structuring)

Heriyanto, N., W. Satoto & S. Sardjono (1991)- Pematangan hidrokarbon dan hipotesa migrasi di Pulau Bunyu, cekungan Tarakan. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 261-280.
(Maturation of hydrocarbons and hypothesis of migration in Bunyu Island, Tarakan Basin'. Similar to Heriyanto et al. 1992. With map of Top oil window of Tarakan subbasin, wells correlations, etc.)

Heriyanto, N., W. Satoto & S. Sardjono (1992)- An overview of hydrocarbon maturity and its migration aspects in Bunyu Island, Tarakan Basin. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-22.
(Geochemical data in Bunyu Island show gentle rise on top oil window from Bunyu field in SE to Tapa Field in NW. Water-washing of oil in Bunyu field (largest oil field). At Tapa major gas field, hydrocarbon altered by fractionation. Bunyu hydrocarbons from fluvio-deltaic source rocks; Tapa gas from shallow lacustrine-estuarine source. Differences of hydrocarbon type controlled by T gradient, higher in NW than SE. Hydrocarbon migration controlled by tectonic framework and position during Mio-Pliocene tectonism. Basement called Danau Fm. M Miocene regressive deltaics unconformably over E Miocene marine Naintupo Fm, formed after E Miocene tectonism (~N9-N10 unc.?))

Heriyanto, N. & M. Wahyudin (1994)- Reflectance gradient and shale compaction, their relationship to basin configuration during Early Neogene: a NE Kalimantan basin reassesment. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 927-943.
(In Indonesian. Relationships between thermal history, shale compaction and seismic shale velocity in Tarakan Basin. Thermal history in platform area dominated by Neogene intrusions, within main depocenters controlled mainly by sediment burial. Basement at Bangkudulis-1 well M Eocene basalt (43.9 ± 1.30 Ma))

Herwin, H., E. Cassou & H. Yusuf (2007)- Reviving the mature Handil Field: from integrated reservoir study to field application. SPE Asia Pacific Oil & Gas Conf. Exhib., Jakarta 2007, SPE-11082, 7p.
(Giant Handil field in Mahakam Delta was developed by more than 350 wells in 555 accumulations. Field production declining from 200,000 BOPD in late '70s to 12,500 BOPD in 2003. Workover campaigns and horizontal development wells increased production to 23,000 BOPD today)

Heryanto, R. (1993)- Neogene stratigraphy of Kalimantan. Bull. Geol. Res. Dev. Centre, p. 82-91.

Heryanto, R. (2008)- Paleogeografi Cekungan Tersier Barito, Kalimantan. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 238-257.
('Paleogeography of the Tertiary Barito Basin, Kalimantan'. Overview of Barito basin Tertiary stratigraphy and sketches of Barito Basin paleogeography in Eocene, Oligocene, Miocene and Plio-Pleistocene)

Heryanto, R. (2009)- Karakteristik dan lingkungan pengendapan batubara Formasi Tanjung di daerah Binuang dan sekitarnya, Kalimantan Selatan. J. Geologi Indonesia 4, 4, p. 239-252.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20090402.pdf)
('Characteristics and depositional environments of Tanjung Fm coal in the Binuang area, S Kalimantan'. Eocene Tanjung Fm at E margin Barito Basin unconformably overlain by Plio-Pleistocene Dahor Fm. Coarse sst- conglomerate in lower part, mudstone with coals and sandstone in middle, and mainly mudstone in upper parts. Coal seams 50-350cm thick, with common vitrinite in all zones, inertinite highest in E Zone (14-16%). Vitrinite reflectance of coal in W and Middle Zones ~0.45%, in E Zone is 0.45-0.50%, all subbituminous B rank. Depositional environment of coals in W and Middle Zones was delta plain back mangrove- fresh water swamp, in E Zone flood plain wet fresh water swamp)

Heryanto, R. (2010)- Geologi Cekungan Barito. Geol. Survey Indonesia (Badan Geologi), Bandung, Spec. Publ., p. 1-139.
('Geology of the Barito Basin'. Major review of Barito Basin stratigraphy, tectonics, hydrocarbons, coal, etc. Oldest rock in Meratus region is Permo-Carboniferous Lumo granite (319, 260 Ma). Also Jurassic and Cretaceous granites, Jurassic-Cretaceous metamorphic and ophiolitic rocks and Cretaceous sediments in Meratus Mts. Schwaner Mts: Pinoh Metamorphics with E Jurassic K-Ar age (189 Ma; biotite, C. Mouret 1987), Sepauk Tonalite 104-123 Ma (Aptian-Albian). Barito Basin widespread Tertiary deposits start with M-L Eocene coal-bearing Tanjung Fm rift deposits with sandstones ~75-85% quartz (mainly metamorphic provenance). Overlain by ~75-95m thick Berai Lst with Heterostegina borneensis, Miogypsinoides complanata, Spiroclypeus, etc. (= Lower Te, latest Oligocene). M-L Miocene coal-bearing Warukin Fm, followed by Late Miocene onset of Meratus Mts uplift. Etc.))

Heryanto, R. (2014)- Batubara Formasi Tanjung sebagai batuan sumber hidrokarbon di Cekungan Barito. J. Geologi Sumberdaya Mineral 15, 3, p. 105-111.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/51/53)
('The Tanjung Formation coal as a hydrocarbon source rock in the Barito Basin'. Coal seams in Eocene M Tanjung Fm in Kualakurun area 50-150 cm thick and potential oil-gas source rocks. Most coals humic and composed mainly of vitrinite (80-90%), with some exinite and inertinite and gas-prone. Some samples sapropelic, dominated by exinite (74%) and vitrinite (17%) and potential oil-prone source rock)

Heryanto, R. & U. Margono (2008)- The provenance and diagenesis of sandstone of the Eocene Tanjung Formation in the Kualakurun area, Central Kalimantan. J. Sumber Daya Geologi 18, 5, p. 291-298.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/249/229)
(Kualakurun area in W margin of Barito Basin. Eocene Tanjung Fm sandstone subarkose, sublitharenite and felspathic litharenite. Grains dominantly quartz with some lithics and feldspar. Derived from Craton Interior and Recycled Orogen, from Pre- Tertiary of Schwaner Mts W of area. Diagenesis indicates paleo-temperature of 80- 95° C and burial depth of 2-3 km)

Heryanto, R. & H. Panggabean (2004)- Fasies dan sedimentologi Formasi Tanjung di bagian barat, tengah dan timur tinggian Meratus, Kalimantan Selatan. J. Sumber Daya Geologi 14, 3 (147), p. 78-93.
('Facies and sedimentology of the Tanjung Formation in western, central and eastern Meratus Mountains, South Kalimantan'. Lower and Middle parts of Eocene Tanjung Fm in fluvial facies, upper part in deltaic sandy facies and lagoonal claystone facies. Sandstones quartzose 'Recycled Orogen' provenance. Lithics include volcanics, metamorphics and chert. Paleocurrents from WNW to ESE, probably from Schwaner Mts or Sundaland (Remarkably little feldspar suggesting Meratus Late Cretaceous arc volcanics not source for Tanjung?; JTvG).)

Heryanto, R. & H. Panggabean (2011)- Provenance dan diagenesis batupasir Paleogen di daerah Purukcahu-Muarateweh, Kalimantan Tengah. J. Sumber Daya Geologi 21, 6, p. 335-347.
(Provenance and diagenesis of the Paleogene sandstones in the Purukcahu- Muarateweh area, Central Kalimantan'. Area between Barito and W Kutai Basins. Eocene sandstones of Tanjung, Haloq and Batuayau Fms litharenites of recycled orogen provenance from Schwaner High Permo-Trias metamorphics and Cretaceous granites. Diagenesis suggests paleotemperature of 80-95°C, from depth of 2000- 3000m. Oligo-Miocene sst of Purukcahu and Karamuan Fms feldsphatic litharkose and litharenite, derived from magmatic arc of Malasan Volcanics and recycled orogenics of Schwaner High)

Heryanto, R. & H. Panggabean (2013)- Lingkungan pengendapan Formasi pembawa batubara Warukin di daerah Kandangan dan sekitarnya, Kalimantan Selatan. J. Sumber Daya Geologi 23, 2, p. 93-103.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/93/87)
('Depositional environment of the coal-bearing Warukin Formation in the Kandangan area and surroundings, South Kalimantan'. Miocene Warukin Fm coals in Barito Basin 0.5- 12m thick (some up to 50m thick; JTvG). Macerals mainly vitrinite, less exinite/ liptinite and inertinite. Classified as wet forest swamp deposits)

Hickman, R.G., C. Stuart & T.P. Seeley (2000)- Evolution of the Kutei Basin, East Kalimantan, Indonesia. AAPG Int. Conf. Exhib. Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1437-1438. *(Abstract only)*
(Kutei basin sedimentation linked to tectonism. Eo- Oligocene rift basins on Cretaceous accretionary prism from E. Kalimantan to S. Sulawesi. Late Oligocene- earliest Miocene carbonate banks and reefs along shale-prone basins. In late E Miocene regional compression and formation of opposing thrust belts in Borneo and Sulawesi and Paleogene rifts were inverted. Uplifts supplied sediment to deltas prograding to present coast by early M Miocene. Continued shortening caused E-ward folding of Miocene deltaics. In Mahakam depocenter large, low relief detached folds at former shelf breaks. N and S of depocenter linked growth faults and toe thrusts. Right-lateral Sangkulirang Bay fault accommodates shortening between Borneo and Sulawesi)

Hidayat, S. (1995)- Mud volcanoes as an indication of geological structure in East Kalimantan, Indonesia. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 267-281.
(Mud volcanoes on Samarinda anticlinorium (onshore of Mahakam delta). Mud samples with E Miocene (zone N6) planktonic forams, adjacent outcrops M Miocene age (zone N8). Probably caused by overpressure of shale by overthrusting)

Hidayati, S., E. Guritno, A. Argenton, W. Ziza & I. Del Campana (2007)- Re-visited structural framework of the Tarakan sub-basin Northeast Kalimantan- Indonesia. Proc. 31st Ann. Conv. Indon. Petroleum Assoc., IPA07-G-109, 18p.
(Tarakan sub-basin affected by E Eocene rifting creating stretched continental or transitional oceanic crust under main basin?), E Oligocene uplift, early M Miocene uplift (start of major deltaic deposition), Late Miocene growth faulting, Late Pliocene- Pleistocene compression. Stable area in W separated from Tarakan Basin depocenter by one major regional normal fault. Major growth fault nearshore linked to toe thrusts in deep water. NW-SE left lateral strike slip faults in basin believed to be continuation of Palu Koro fault system from Sulawesi, and has been active since Pliocene (~5 Ma). Major anticlines that set up Bunyu and Tarakan islands aligned in NW-SE direction, possibly formed above sinistral strike slip zones)

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('Benthic microfaunal markers in the evolution of an equatorial delta system: the Mahakam Delta (Kalimantan)'. Study of Recent foraminifera and ostracodes in Mahakam Delta (see also Carbonel et al. 1986))

Honda, H. (2013)- Evaluation of average flow rate of subsurface fluid based on an inclined gas/water contact in the Peciko gas field, Mahakam Delta Province, east Kalimantan, Indonesia. Chigaku Zasshi (= J. of Geography) 122, Issue p. 34-68.
(online at: www.jstage.jst.go.jp/article/jgeography/122/1/122_122.34/_pdf
(In Japanese with English summary. Peciko gas field in Mahakam Delta with tilted gas-water contact, caused by hydraulic gradient between adjacent hydrostatic domain and highly overpressured domain. Average flow rate in gas zone is slow, estimated at 3.1 mm/year)

Honda, H., H. Kobayashi & H. Banjarnahor (2011)- Towards a new exploration opportunity: an inclined gas/ water contact, pressure gradients and an overpressured domain in and around the Peciko area, Mahakam Delta Province, East Kalimantan. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11 G-103, p. 1-16.
(NWP-1 wildcat drilled in Mahakam Delta Province in 1992 confirmed N-dipping gas-water contact downdip from Peciko 1 and PGH 1 wells, suggesting partial hydrodynamic entrapment in Peciko anticlinal closure)

Hook, J.A., P.J. Butterworth & A. Ferguson (2002)- Contrasting Miocene fluvio-deltaic channel types from Perjuangan Quarry, East Kalimantan, Indonesia: implications for subsurface reservoir correlation. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 617-632.
(Outcrop of distributary channels and mouth bar sandstones near Samarinda)

Hook, J. & M.E.J. Wilson (2003)- Stratigraphic relationships of a Miocene mixed carbonate- siliciclastic interval in the Badak field, East Kalimantan, Indonesia. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 147-161.
(Badak Field in Sanga Sanga PSC, Kutai basin, with 7 TCF gas. Upper G interval transgressive systems tract with generally thin (up to 50'), poor-quality limestone reservoirs interbedded with Miocene clastics. Typically overlie flooding surfaces)

Hooze, J.A. (1886)- Onderzoek naar kolen in de Berausche Landen ter Oostkust van Borneo. Kolenterrein van Goenoeng Sawar, idem over Poeloe Sepinang en dat van Goenoeng Taboer. Jaarboek Mijnwezen Nederlandsch Oost-Indie 15 (1886), Verhandelingen, p. 5-105.
('Investigation of coal in the Berau region, Borneo East coast: coalfields of Gunung Sawar, Pulau Sepinang and Gunung Tabur'. Report on survey work of coal deposits in 1882-1883 in 'Berau lands' of NE Kalimantan (SW part of Tarakan Basin. Gunung Sawar ~14 km SW of Sambaliung on Kaleh River with 11 coal beds in quartz sandstones, with total coal thickness of ~22m. Coalfield across Pulau Sepinang in Berau River also 11 coal beds, but coal closer to lignite and of poor quality. Gunung Tabur area 5 coal beds, total thickness ~7m)

Hooze, J.A. (1887)- Onderzoek naar kolen in het Rijk van Koetai ter Oostkust van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 16 (1887), Verhandelingen 2, p. 5-94.
('Investigation of coal in the Kingdom of Kutai, East Kalimantan'. Report on coal terrains along Mahakam River above Samarinda, mainly near Batu Panggal. Several areas with 10-18 coal beds with cumulative thickness of 9-23 m)

Hooze, J.A. (1888)- Nadere gegevens betreffende enkele kolenterreinen in Koetai en onderzoek eener aardoliebron aldaar. Jaarboek Mijnwezen Nederlandsch Oost-Indie 17 (1888), Technisch Admin. Ged., 2, p. 325-336.
('Additional data on coal terrains in Kutai and investigation of an oil seep there'. Based on March 1886 fieldwork. Asphalt and burning gas seep at Sanga-Sanga)

Hooze, J.A. (1888)- Onderzoek naar kolen in de Straat Laut en aangrenzende landstreken. Jaarboek Mijnwezen Nederlandsch Oost-Indie 17 (1888), Technisch Admin. Ged., 2, p. 337-429.
('Investigation of coal in Laut straits and adjacent areas'. Fieldwork in 1881 by Menten and 1885 by Hooze)

Hooze, J.A. (1888)- Kolen aan de oostkust van Borneo, van de St Lucia- tot aan de Pamoekan-Baai. Jaarboek Mijnwezen Nederlandsch Oost-Indie 17 (1888), Technisch Admin. Ged., 2, p. 431-470.
('Coal along the East coast of Borneo, from the St Lucia to the Pamukan Bay'. Four coal-bearing horizons: Eocene (Palau Laut, Martapura), Middle Miocene (Sanga-Sanga, Samarinda), Upper Miocene (Samarinda), Lower Pliocene (Balikpapan Bay))

Hotz, W. & L. Rutten (1917)- Geographisch-geologische Beschreibung des Kustengebietes von Koetei zwischen Bontang und dem Santan Fluss (Ost Borneo). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 2, p. 243-248.
(online at: https://ia601301.us.archive.org/1/items/verhandelingenva2191geol/verhandelingenva2191geol.pdf)
('Geographical-geological description of the coastal area of Kutai between Bontang and the Santan River, E Borneo'. Early geological survey, reporting traverses-cross-sections of folded Miocene-Pliocene sediments)

Huffington, R.M. & H.M. Helmig (1980)- Discovery and development of the Badak field, East Kalimantan, Indonesia. In: M.T. Halbouty (ed.) Giant oil and gas fields of the decade 1968-1978. American Assoc. Petrol. Geol. (AAPG), Mem. 30, p. 441-458.

Huffington, R.M. & H.M. Helmig (1990)- Badak Field- Indonesia. In: AAPG Treatise on petroleum geology 17, Structural traps III: Tectonic fold and fault traps, American Assoc. Petrol. Geol. (AAPG), p. 265-308.
(Badak field anticlinal structure with multiple Miocene deltaic reservoirs, estimated reserves 6.5 TCF gas, 96 MB condensate and 47 MB Oil)

Husein, S. (2017)- Lithostratigraphy of Tabul Formation and onshore geology of Nunukan Island, North Kalimantan. J. Applied Geology (UGM) 2, 1, p. 25-35.
(online at: https://jurnal.ugm.ac.id/jag/article/view/30255/18265)
(Nunukan Island, in Tidung sub-basin N of Tarakan, built mainly by Late Miocene Tabul Fm clastics, deposited in transitional environment. Apparent coarsening upward sequence (but biostrat suggesting inverted section?; JTvG). E coast Pliocene Tarakan Fm fluvio-deltaic conglomerates unconformable over Tabul Fm clastics, suggesting Pliocene and younger deformation/ uplift of paleo-Simengaris Delta (sinistral movement of NW-SE Semporna Fault?), contemporaneous with common basaltic volcanism over NE Borneo, including basaltic intrusions in N Nunukan)

Idris, R., E. Nurjadi, Z. Azzaino, A. Mardianza & W.L. Ambarwati (2015)- Evaluation of Paleogene potential play in frontier area: Tanjung Area II Block, northern part of Barito Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-389, 3p. *(Extended Abstract)*
(Burial history modelling of 2 wells in NE Barito Basin shows Eocene Tanjung Fm already reached oil window in E Miocene time, and is in gas window in Lower Tanjung Fm)

Idris, R., E. Nurjadi, Z. Azzaino, A. Mardianza & W.L. Ambarwati (2015)- Revisit evaluation in Sangatta-Bungalun block: a new hope for non-focus exploration area. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-390, 4p. *(Extended Abstract)*
(Evaluation of reservoir prospectivity of Sangatta-Bungalun Block from basin modelling and petrophysics of wells Kariorang 1, Sembulu 1, Sekurau 1 and Batuhidup 1)

Idris, R. & T.S. Priantono (1994)- Perkembangan submarine fan Eosen- Oligosen pada daerah Benderang-Tapian Langsat, Cekungan Kutai, Kalimantan Timur. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 208-218.
('Development of Eocene- Oligocene submarine fans in the Benderang-Tapian Langsat area, Kutai Basin, East Kalimantan'. In Bungalun area of NE part of Kutai Basin Eocene-Oligocene Beriun Fm in bathyal marine facies with submarine fan sandstones)

Imanhardjo, D.N. & T.W. Kunto (1993)- Pemetaan parasekuen-set: suatu cara penyesuaian resolusi model geologi guna interpretasi seismik stratigrafi sedimen deltaik. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1130-1140.
('Mapping of parasequence sets: a way of adjusting the resolution of geological models using seismic stratigraphy interpretation of deltaic sediments'. With examples and facies maps of Sangatta field, E Kalimantan)

Inaray, J.C., Y.H. Setiawan, R. Schneider, J.T. Noah & E. Lumadyo (2001)- Merah Besar and West Seno Field discoveries: examples of exploration success on the slope environment, confined turbidity channel sand, deep-water Kutei Basin, Indonesia. In: A. Setiawan et al. (eds.) Proc. Deep-water sedimentation of Southeast Asia, FOSI 2nd Reg. Seminar, Jakarta 2001, p. 10-15. *(Extended Abstract?)*

Irawan, D. & D.H. Amijaya (2012)- Studi provenance batupasir Formasi Batu Ayau Cekungan Kutai di daerah Ritanbaru, Kutai Kartanegara, Kalimantan Timur. J. Teknik Geologi (UGM) 1, 2, 5p.
(online at: http://lib.geologi.ugm.ac.id/ojs/index.php/geo/article/view/10)
('Sandstone provenance of the Batu Ayau Fm of the Kutai Basin in the Ritanbaru area, E Kalimantan'. Batu Ayau Fm M Eocene syn rift deposit sandstone exposed in Ritanbar area. Provenance study shows sandstone dominated by volcanics, some metamorphic material and less chert. Provenance type is recycled orogen that changed to magmatic arc)

Iroe, H.D. (1981)- Evaluation of shaly sands Sepinggan Field, Indonesia. M.Sc. Thesis Colorado School of Mines, T2510, p. 1-298. *(Unpublished)*

Ito, Y. & T. Taguchi (1990)- Petroleum geology and hydrocarbon source rocks in Mahakam Delta, East Kalimantan, Indonesia. In: Symp. Application of geochemistry to petroleum exploration, J. Japanese Assoc. Petroleum Technologists (Sekiyu Gijutsu Kyokaishi) 55, 1, p. 54-65.
(online at: www.journalarchive.jst.go.jp...)
(In Japanese, with English abstract) (Coals, lignites and shales in M- Late Miocene deltaic sediments are recognized as potential oil source rocks in Mahakam Delta. Kerogens mainly type III)

Jacobs, S.J. & N.D. Meyer (2001)- Direct hydrocarbon response technique: application and opportunity in Barito-Kutai interbasinal high. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 249-260.
(Paper suggesting subsurface hydrocarbons can be detected with 'Direct Hydrocarbon Response Technique' tool, utilizing spectral anomalies over outcrops)

Jacques, J., P. Poluan, A.H. Satyana & P. Jacques (2011)- Tectonic and structural framework of the Sebatik and Nunukan islands- implications on hydrocarbon prospectivity. Proc. Joint Conv. Makassar IAGI-HAGI, Ujung Pandang 2011, JCM2011-479, 2p. *(Extended Abstract)*
(Sebatik and Nunukan Islands in NE part of Tarakan Basin explored but no discoveries. Oil and gas accumulations on Tarakan and Bunyu Islands first identified by seeps, with main traps NW-SE trending anticlines that run through the centre of each island and plunge to the SE. Sebatik Island also dominated by major NW-SE anticlinal fold with high-angle reverse faults. Broader, more open fold may exist on Nunukan. At SE Sebatik Island, several oil seeps, most likely from source area offshore)

Jaffe, P.R., P. Albrecht & J.L. Oudin (1988)- Carboxylic acids as indicator of oil migration; II. Case of the Mahakam Delta, Indonesia. Geochimica Cosmochimica Acta 52, 11, p. 2599-2607.
(Organic matter of Neogene Mahakam Delta sediments principally derived from terrestrial sources. Changes in acidic biomarker distributions during oil migration may help determine migration distances of oils)

Jamas, J. & D. Luwarno (1982)- Hubungan antara *Sigmoilina personata* dengan Foraminifera Eosen di Kalimantan Selatan. Geologi Indonesia 9, 2, p. 32-44.
('Association of Sigmoilina personata with Eocene foraminifera in S Kalimantan'. Good Eocene Discocyclina-Pellatispira larger foram assemblages in Tanjung Fm from wells in Barito Basin. Associated with small benthic foram Sigmoilina personata, a potential Eocene marker species as first proposed by Mohler (1946))

Jauhari, U., R. Permana, A. Wijanarko & A. Soenoro (2012)- Hydrodynamic trapping, tilted contacts and new opportunities in mature onshore Kutei Basin, East Kalimantan, Indonesia. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 41060, p. 1-12.
(online at: www.searchanddiscovery.com/documents/2012/41060jauhari/ndx_jauhari.pdf)
(Onshore Kutei Basin field with tilted gas-water contacts in most deep zone G reservoirs, connected to overpressured shales. Higher pressure gradient of water legs in flank provides hydrodynamic force to push GWC higher in one flank. Shallow E reservoirs unconnected to overpressured shales and have flat GWC)

Jeannot, J.P. (1981)- Haute resolution sismique dans le delta de la Mahakam. Petrole et Techniques (Assoc. Francaise Techniciens du Petrole) 283, p. 144-147.
('High-resolution seismic in the Mahakam Delta'. Conventional seismic not adequate to study reservoir or stratigraphic traps in Mahakam Delta. High-resolution seismic techniques used successfully in marine environments, but more difficult in terrestrial environments)

Jefferies, K.G. (1980)- The Sanga Sanga Field. Proc. 9th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 401-416.
(Sanga-Sanga field in onshore Mahakam delta 1898 discovery. Produced >255 million barrels of oil. NNE-SSW trending narrow, asymmetrical anticline, 32 x 1 km, 911 wells. Many producing horizons between 250'-5700')

Jezler, H. (1916)- Das Olfeld Sanga Sanga in Koetei (Niederl. Ost-Borneo). Zeitschrift f. Prakt. Geol. 24, p. 77-85 and p. 113-125.

('The Sanga-Sanga oilfield in Kutai, E Kalimantan'. Early, detailed description of Sanga Sanga oil field, onshore Mahakam Delta. Discovered in 1898 by mining engineer Menten and exploited by Shell predecessor company. Producing from Tertiary sandstones in large anticline with surface oil seeps. About 100 wells between 1901-1906, almost all <500m deep. Shallow oils rel. heavy)

Kadar, A.P., D.W. Paterson & Hudianto (1996)- Successful techniques and pitfalls in utilizing biostratigraphic data in structurally complex terrain: VICO Indonesia's Kutei Basin experience. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 313-331.
(Review of Oligocene-Pliocene stratigraphy/ biostratigraphy of East Kutai Basin)

Kiel, S., S. Reich, W. Renema, J.D. Taylor, F.P. Wesseling & J.A. Todd (2016)- A Late Miocene methane-seep fauna from Kalimantan, Indonesia. Proc. 1st Int. Workshop Ancient hydrocarbon seep and cognate communities, Warsaw 2016, 1p. *(Abstract only)*
(online at: http://seep.paleo.pan.pl/AHS_5.html)
(Late Miocene methane-seep deposit and associated fauna in Kutai Basin. Dominated by large, globular lucinid bivalve Meganodontia sp. nov. (up to 12.4 cm), and elongate bathymodiolin mussel, Gigantidas sp. nov.(up to 8.7 cm long). Also common small lucinid Cardiolucina aff. quadrata and Isorropodon sp., rare lucinid Lucinoma sp. and gastropods Bathybembix, Naticarius, Profundinassa, etc. Probably upper bathyal environment (400-500m). Close affinities to Recent tropical W Pacific seep faunas)

Klaus, S., S. Selvandran, J.W. Goh, D. Wowor, D. Brandis, P. Koller et al. (2013)- Out of Borneo: Neogene diversification of Sundaic freshwater crabs (Crustacea: Brachyura: Gecarcinucidae: Parathelphusa). J. Biogeography 40, p. 63-74.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2699.2012.02771.x/pdf)

Klompe, Th. (1941)- Report on detailed geological surveys in the Mandul, Boeloengan, and Beraoe regions, N.E. Borneo. Unpublished Report in Geological Survey Indonesia, Bandung, files.

Kloos, J.H. (1863)- Geologische opmerkingen over de kolen van Borneo. Tijdschrift Nederlandsch-Indie 25, p. 294-316.
('Geological remarks on the coal of Borneo'. Brief, early literature review on coal and geology of SE Kalimantan, where 'Oranje Nassau' mine near Pengaron, Martapura, had been operational since 1854. Also mention of coal at Pulau Laut, Samarinda (E Kalimantan) and Labuan (N Borneo). No maps or figures)

Koch, R.E. (1926)- Mitteltertiare Foraminiferen aus Bulongan, Ost-Borneo. Eclogae Geol. Helvetiae 19, 3, p. 722-751.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1925-1926:19::987&subp=hires)
(‘Middle Tertiary foraminifera from Bulongan, NE Kalimantan’. Listing of 255 deeper marine foram species, mainly from Late Oligocene marls in Sajau and Binai rivers drainage, SE Bulongan. First descriptions of planktonic foram marker species like Globigerina binaiensis and G. tripartita)

Koeshidayatullah, A. & B. Al-Ghamdi (2013)- Carbonate depositional model and facies distribution on the transpression zone, East Kalimantan. In: 75th EAGE Conference & Exhibition incorporating SPE EUROPEC 2013, p. *(Extended Abstract)*
(Depositional model of latest E- earliest M Miocene Tendehantu Fm reef- forereef carbonate microfacies at Antu Mountain, Mangkalihat Peninsula, NE Kalimantan)

Krausel, R. (1923)- *Nipadites borneensis* n. sp. eine fossil Palmenfrucht aus Borneo. Senckenbergiana 5, p. 77-81.
(On a new species of fossil fruit of Nypa-type mangrove palm from Eocene of Borneo)

Kristanto, R.B. & H. Murti (1992)- Potensi hidrokarbon daerah Sihung cekungan Barito, Kalimantan Selatan- Pendekatan tektionik dan geohirokarbon daerah Tanjung Raya. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 113-130.

('Hydrocarbon potential in the Sihung Area, Barito Basin, South Kalimantan- An exploration concept using a combined tectonic and geohydrocarbon approach in the Tanjung Area'. Hydrocarbons in Tanjung Raya area in different formations:Pretertiary- Eocene Tanjung Fm (Tanjung Field), Berai Fm (Tanta), Berai and Lower Warukin (South Dahor), in Warukin Fm in Warukin and Tapian Timur fields. At structural highs hydrocarbons trapped in older rocks)

Kristyarin, D.A., A.T. Rahardjo & Bambang P. (2016)- Paleoecology and paleoclimate of Tanjung Formation deposition, based on palynological data from Siung Malopot, Central Borneo. In: Proc. Int. Symposium on Geophysical Issues, Padjadjaran University, Bandung 2015, IOP Conf. Series, Earth Environm. Science 29, 012022, p. 1-10.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/29/1/012022/pdf)
(Outcrops in Siung Malopot area in N part of Barito basin (277km NE of Palangkaraya) show Late Cretaceous basement of Pitap Fm andesites and granites, unconformably overlain by M-L Eocene Tanjung Fm clastics with intercalations of coal and thin limestones. Palynomorphs Proxapertites cursus, Meyeripollis naharkotensis, Cicatricosisporites eocenicus, C. dorogensis and Palmaepollenites kutchensis indicate Late Eocene Proxapertites operculatus zone. Increasingly more humid climate with age. Depositional environment mainly back-mangrove (abundant Acrosticum auerum), with increasing marine influx in upper parts of Tanjung Fm)

Krol, L.H. (1925)- Eenige cijfers uit de 3 etages van het Eoceen en uit het Jong-Tertiair in de omgeving van Martapoera- Zuid-Oost Borneo. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 343-356.
('Some numerical data on the three stages of the Eocene in the Martapura area, SE Borneo'. Detailed stratigraphic thickness data of Eocene and young-Tertiary near Martapura. Little change from Verbeek 1875, except minor age interpretation changes. Total Eocene thickness 856m (= much thicker than Verbeek's estimates; JTvG))

Kurniawan, E., A. Bachtiar, Safarudin & B. Mulyanto (2001)- Paleosols in deltaic sediment: a case study in Semberah Field, Mahakam Delta, Kutai Basin. Proc. 30th Ann. Conv. Indon. Assoc. Geol. (IAGI) & 10th GEOSEA Regional Congress, Yogyakarta, p.

Kurniawan; E., A. Bachtiar & S. Martodjojo (2011)- Paleosols as an alternative method to define sequence boundary in fluvial system: a case study in Semberah Field, Kutei Basin. Berita Sedimentologi 21, FOSI- IAGI, p. 26-39.
(Online at: www.iagi.or.id/fosi/files/2011/06/FOSI_BeritaSedimentologi_BS-21_June2011_Final.pdf)
(Paleosols used to identify sequence boundaries in Late Miocene Balikpapan/ Kampung Baru Fm fluvial-deltaic sequences in outcrops at Semberah field, N part of Samarinda Anticlinorium, Kutai Basin. Total of 52 paleosols, grouped in 6 types, observed in 21 outcrops. Paleosols well developed in Highstand Sequence Tract, in Lowstand ST. Absent or rare in Transgressive ST)

Kurniawan, T., B. Prasetiyo & D. Tangkalalo (2010)- Subsurface surveillance in low permeability oil reservoir at Tanjung Field, Barito Basin, South Kalimantan. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-176, 13p.
(Tanjung Field low perm zones in Eocene Lower Tanjung Fm A and B main reservoirs caused by clays smectite and kaolinite. Lowermost Tanjung Fm ~200m of alluvial fan deposits with volcanic conglomerates)

Kusnama (2008)- Batubara Formasi Warukin di daerah Sampit dan sekitarnya, Kalimantan Tengah. J. Geologi Indonesia 3, 1, p. 11-22.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20080102.pdf)
('Warukin Fm coal in the Sampit area, C Kalimantan'. Miocene Warukin Fm in Sampit area, W Barito Basin, ~700m thick. Two main coal seams, A and B, 80- 200cm thick, generally banded brittle to friable, claystone partings, subbituminous C- A rank, and deposited in wet-forest swamp with by high plants and shrubs)

Kusnida, D. & L. Arifin (2008)- Karakteristik akustik dan fenomena geologi endapan sedimen Kuarter Delta Mahakam- Kalimantan Timur. J. Geologi Kelautan 6, 3, p. 167-173.

(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/160/150)
('Acoustic characteristics and geological phenomena of Quaternary sedimentary deposits of the Mahakam Delta -East Kalimantan'. Mahakam delta offshore shallow seismic profiles indicate at least four acoustic intervals (depositional sequences), separated by unconformities)

Kusuma, I. & T. Darin (1989)- The hydrocarbon potential of the Lower Tanjung Formation, Barito Basin, SE Kalimantan. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta), p. 107-138.
(Tanjung Oil Field 1939 discovery in Eocene, but limited success since. Paleocene-E Eocene rifting gave rise to NW-SE horsts- grabens across Barito basin. E Tertiary structural elements overprinted by Neogene- Recent compression, producing left-lateral reactivation of earlier normal faults. Thickness and facies changes with four distinct stages of deposition in Tanjung Fm, primarily from topography produced by E Tertiary rifting. Terrestrial coals and organic- rich shales of Lower Tanjung Fm prolific hydrocarbon source rocks. At least five E Tertiary rifts identified, each separate self-contained depocenter)

Kusuma, M.I. & A.N. Nafi (1985)- Prospek hidrokarbon Formasi Warukin di cekungan Barito, Kalimantan. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta 1985, p. 105-124.
('Hydrocarbon prospects of the Warukin Fm in the Barito Basin, Kalimantan')

Kusworo, A., S. Reich, F.P Wesselingh, N. Santodomingo, K.G. Johnson, J.A. Todd & W. Renema (2015)- Diversity and paleoecology of Miocene coral-associated molluscs from East Kalimantan (Indonesia). Palaios 30, 1, p. 116-127.
(Diverse Tortonian mollusc assemblage from coral carpet environment at Bontang, dominated by predatory snails)

Laffaure, A, P. Dupouy & N. Syarifuddin (2008)- The Sisi-Nubi case history: reservoir characterisation in a challenging geological setting. Proc. 32nd Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-096, 8p.
(Sisi (1986) and Nubi (1992) gas fields 25 km offshore Mahakam delta in 60-70m of water. Reservoirs Upper Miocene deltaic sands between 1900-3800m, divided into upper 'Fresh Water Sands' and lower overpressured 'Sisi Main Zone'. Deltaic cycles with average thickness of 25m. Fluids mainly gas, with columns from 20-100m for FWS. Anticlinal structures with several compartments. All channel sands >12m could be identified on seismic, but no channels thinner than 5m could be seen on seismic)

Laggoun-Defarge, F., B. Pradier, E. Brosse, S. Belin & J.L. Oudin (1995)- Analyse microtexturale des sediments organiques du delta de la Mahakam (Indonesie); relations avec les environnements de depot. Comptes Rendus Academie Sciences, Paris, II, 320, 11, p. 1055-1061.
('Microtextural analysis of the organic sediments of the Mahakam Delta; relations with environments of deposition'. Petroleum quality of humic organic matter of Mahakam delta is variable and not only correlated to organic composition, but also to relations of organic and mineral constituents. Characteristic organo-mineral microtextures identified in each depositional environment of delta)

Lalouel, P. (1979)- Log interpretation in deltaic sequences. Proc. 8th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 247-290.
(Examples of log interpretation in Miocene deltaic deposits of Handil Field, Mahakam Delta)

Lambert, B. (2003)- Micropaleontological investigations in the modern Mahakam delta, East Kalimantan (Indonesia). Carnets de Geologie/Notebooks on Geology, 2003/02, p. 1-21.
(online at: http://paleopolis.rediris.es/cg/CG2003_A02_BL)
(Distribution of benthic foraminifera in Mahakam Delta system controlled by three main parameters: fluvial input of fresh water and sediment, tides, and north to south drift current. Delta front environmments and characteristic forams are: (1a)mud flats with Trochammina, Ammotium salsum, Arenoparrella mexicana, Miliammina fusca; (1b) tidal flats (0-2m) with Trochammina, Ammobaculites agglutinans, Eggerelloides scabrum, Ammonia beccarii; (2) internal delta front and river mouth bars with Ammonia beccarii, Elphidium; (3) external delta front (1-5m) with Asterorotalia trispinosa; (4) prodelta (>5m) with Operculina gaymardi, Pseudorotalia conoides, Ammonia annectens)

Lambert, B., B.C. Duval, Y. Grosjean, I.M. Umar & P. Zaugg (2003)- The Peciko case history: impact of an evolving geologic model on the dramatic increase of gas reserves in the Mahakam Delta. In: M.T. Halbouty (ed.) Giant oil and gas fields of the decade 1990-1999, American Assoc. Petrol. Geol. (AAPG), Mem. 78, p. 297-320.
(>6 TCG gas in Late Miocene deltaics. Trap stratigraphic-hydrodynamic at flank of structure)

Lambert, B. & C. Laporte-Galaa (2005)- *Discoaster* zonation of the Miocene of the Kutei Basin, East Kalimantan, Indonesia (Mahakam Delta Offshore). Carnets de Geologie, Mem. 2005/01, p. 1-63.
(Online at: http://paleopolis.rediris.es/cg/CG2005_M01)
(Commonly used chronostratigraphic markers (foraminifera, spores and pollen) are rare or absent in most of the Kutei Basin. Calcareous nannofossils present in prodelta shales, but also poor and dominated by Discoasters. Propose modified Miocene nannofossil zonation of 13 zones for Outer Kutei basin, based on Discoasters only)

Lambiase, J.J. & Salahuddin Husein (2015)- The modern Mahakam Delta: an analogue for transgressive-phase deltaic sandstone reservoirs on low energy coastlines. AAPG Workshop 'Modern depositional systems as analogues for Petroleum Systems', Search and Discovery Art. 51108, 38p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2015/51108lambiase/ndx_lambiase.pdf)
(Mahakam Delta currently in transgressive phase, with distributaries filling with sediments and with minor reworking of pre-transgression sediment)

Lambiase, J.J., D. Remus & Salahuddin Husein (2010)- Transgressive successions of the Mahakam Delta province, Indonesia. AAPG Hedberg Conference, Jakarta 2009, Search and Discovery Art. 50257, 5p. *(Abstract)*
(online at: www.searchanddiscovery.com/documents/2010/50257lambiase/ndx_lambiase.pdf)
(Transgressive successions important component of M Miocene and younger stratigraphy of Mahakam Delta province and have considerable reservoir potential)

Lambiase, J.J., R.S. Riadi, N. Nirsal & Salahuddin Husein (2014)-The Mahakam Delta, Indonesia: a case study for the deposition and preservation of transgressive deltaic successions. Int. Petroleum Techn. Conf., Kuala Lumpur, IPTC-17867-MS, 4p.

Lambiase, J.J., R.S. Riadi, N. Nirsal & Salahuddin Husein (2017)- Transgressive successions of the Mahakam Delta Province, Indonesia. In: G.J. Hampson et al. (eds.) Sedimentology of paralic reservoirs: recent advances, Geol. Soc., London, Spec. Publ. 444, p. 335-348.
(Significant portion of Paleo-Mahakam Delta succession deposited during transgressive phases, either from extensive major transgressions or short-lived transgressions within mainly progradational phases. Sandstone facies with significant reservoir potential in transgressive successions: (1) backfilled distributary sandstones (coastline-perpendicular 10-20m thick sand bodies, fining-upward channel sands, becoming more marine upwards; (2) shoreline-parallel, transgressive shoreline sandstones)

Land, D.H. & C.M. Jones (1987)- Coal geology and exploration of part of the Kutei Basin in East Kalimantan, Indonesia. In: A.C. Scott (ed.) Coal and coal-bearing strata: recent advances, Geol. Soc. London, Spec. Publ. 32, p. 235-255.
(Survey of ~700 km2 of Miocene coal-bearing strata near Samarinda identified 1000 Mt of recoverable coal, ranking from lignite A to high-volatile C bituminous, in 43 seams 1.5- 13 m thick. Environments of deposition paralic. Section >3000m thick, divided into four formations, Loa Duri, Loa Kulu, Prangat and Kamboja Fms. Coals low ash, high moisture and generally low sulphur)

Larasati, D., S. Ardi, G. Widiyanto, F.M. Fiqih, D.S. Widarto & A. Guntoro (2016)- Integrated study of regional tectonics, geologic structures, and paleogeography reconstruction to develop CBM cleat model in Tanjung II Block, South Borneo. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-55-G, 15p.

(Coal cleat measurements in Warukin and Tanjung Fms of Barito Basin near Tanjung, tied to regional structure maps. Dominant structural lineament in study area E-SW, while cleat strike lines mainly E-W)

Larasati, D., F.M. Fiqih, R. Idris, D.S. Widarto & B. Sapiie (2015)- Fracture shale gas study of Tanjung Formation, Barito Basin, South Kalimantan. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-113, 21p.
(Fractures present in Eocene Tanjung Fm shale, with higher intensity near folds and faults ?)

Larrouquet, F., A. Gautama & L. Moinard (2003)- Identification of initial gas net-pay in deltaic reservoirs using wireline acoustic measurements. Proc. SPE Asia Pacific Oil and Gas Conf. Exh., Jakarta 2003, 80545-MS, 13p.
(Acoustic method to distinguish gas from liquid in Mahakam Delta sand reservoirs)

Latouche, C. & N. Maillet (1987)- Etude des corteges argileux dans les formations deltaiques de la Mahakam (Kalimantan, Indonesie), Essais d'interpretation paleogeographique et paleoclimatique. In: A. Combaz (ed.) Geochimie organique des sediments plio-quaternaires du delta de la Mahakam (Indonesie)- le sondage Misedor, Editions TECHNIP, Paris, p. 73-84.
('Study of clay assemblages in deltaic deposits of the Mahakam delta (Kalimantan), attempts of paleogeographic and paleoclimatic interpretation'. Clay minerals in Misedor well 3 assemblages: (1) base to 400m (Late Pliocene): kaolinite dominant; (2) 365-189m (E Pleistocene): smectite dominant; and (3) 189-37m: kaolinite dominant. Smectite presumably derived from erosion of lowlands, during rel. dry period of sealevel lowstand)

Laya, K.P., B. Nugroho, N. Hadiyanto & W. Tolioe (2013)- Paleogeographic reconstruction of Upper Kutei Basin: implications for petroleum systems and exploration play concepts. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-106, p. 1-16.
(Review of onshore U Kutei Basin, where 1985 Kerendan gas field proves presence of petroleum system. E-M Eocene NNE-SSW trending isolated half-grabens formed on U Cretaceous- Paleocene metasediments and Jurassic- U Cretaceous ophiolitic crust. With 7 E Eocene- M Miocene paleogeographic maps)

Laya, K.P., A. Prasetya, Y. Rizal, E. Guritno, D. Stokes & J. Smart (2014)- Sand fairway and play frameworks on the deepwater slope area of North Kutei Province. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-142, 11p.
(On Neogene deepwater slope play in Bontang and SE Sangatta PSC areas, off E Kalimantan. Neogene strata in N Kutai basin deposited in relatively narrow shelf associated with significant hinterland uplift and erosion. Shelf area characterized by extensional listric growth. Neogene deltas in Kalimantan primary sediment source for deepwater sand reservoirs in offshore Lower Kutai Basin. Productive turbidite sandstones with excellent quality on slope as confined canyon/channel-fill systems. Sand deposition strongly controlled by syn-kinematic lows, whereas intra-basinal highs commonly dominated by more silty and muddy deposits)

Laya, K.P., A. Subekti, S. Goesmiyarso & J. Warren (2017)- From isolation to inclusion: the application of isotope analysis to unravel the influences of depositional style and diagenesis in Berai carbonates, Central Kalimantan. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-362-G, 13p.
(Gas well W Kerendan-1 (2013) core and log analysis shows Oligocene carbonate reservoir of interlayered reservoir-quality grainstone and wacke-packstone units. Persistent presence of clastic materials suggest land-attached setting. Diagenetic events generated secondary porosity during intermediate-deep burial and uplift)

Lefort, J.J., J.P. Thiriet, P. Le Quellec & J.B. Bailey (2000)- Sequence stratigraphy of the offshore Tarakan. AAPG Int. Conf. and Exhib., Bali 2000, 8p. *(Extended Abstract)*
(Regressive Upper Miocene- Recent series, with major sequence boundaries and tectonically enhanced angular unconformities. From W to E fluvial sediments pass into deltaic and shelfal deposits. Late Miocene rapid subsidence and active N-S growth faulting trapped deltaic sediments in downthrown paleo-troughs in W, whilst E part comprised sediment starved paleo-highs with marine shales and limestones. In latest Miocene W part tilted and truncated. Pliocene subsidence slower and growth faulting less active. In Bunyu area, delta was able

to prograde E far towards paleo shelf-edge, since N-S trending paleohighs no longer present. Pleistocene subsidence rate high and NW-SE arches set-up by reactivation of old lineaments)

Lelono, E.B. (2003)- Stratigraphic interpretation of the Middle Miocene deltaic sediment in the Sangatta area, based on quantitative palynological data. Lemigas Scientific Contr. 2003, 2, p.
(Palynology study of M Miocene in 3 wells in Sangatta area, E Kalimantan. High abundance of mangrove pollen indicates deltaic sediments. Wells correlated using abundances of mangrove pollen Zonocostites ramonae and freshwater swamp pollen Ilexpollenites sp.)

Lelono, E.B. & C.A. Setyaningsih (2014)- Miocene palynology of the Barito Basin, South Kalimantan. Lemigas Scientific Contr. Petrol. Sci. Techn. 37, 1, p. 45-56.
(Rich palynomorph assemblages in Miocene of Barito Basin. Identified last occurrence of Florschuetzia trilobata (M-Late Miocene boundary) and first occurrence of F. meridionalis (E-M Miocene boundary). Other Miocene markers include Stenochlaenidites papuanus (Late Miocene) and Scolocyamus magnus (E-M Miocene). Brackish mangrove palynomorphs indicate marine influence during deposition)

Lemoy, C., A. Wahyudi & J. Luccioni (1988)- Detailed geological modeling and structural mapping in Bekapai Field: influence on the understanding of fluid movements and implications on oil recovery. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 33-47.
(Bekapai field, offshore SE Mahakam Delta 1972 discovery, producing since 1974. Anticlinal structure with oil-gas in Late Miocene- Pliocene deltaics)

Lentini, M.R. & H. Darman (1996)- Aspects of the Neogene tectonic history and hydrocarbon geology of the Tarakan Basin. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 168-172.
(Tarakan Basin one of three major Kalimantan Tertiary deltaic depocentres. Most production on dip oriented arches in mostly non-marine depositional environment. Forced regressions caused deposition of deltaic reservoirs far downdip in present day deep water. Tarakan Basin initiated simultaneously with formation of Celebes Sea by rifting between M-L Eocene and E Miocene on E-hading en echelon block faults. Increase in accommodation in M Miocene- Pliocene combination of subsidence and gravity-induced listric faulting. Dip-oriented arches formed during latest Pliocene- Recent transpression on wrench faults crossing Makassar Strait)

LeRoy, L.W. (1941)- Small foraminifera from the Late Tertiary of the Netherlands East Indies. 1. Small foraminifera from the Late Tertiary of the Sangkulirang Bay area, East Borneo. Quarterly Colorado School Mines 36, 1, p. 1-62.
(150 species of deep marine small foraminifera from Sangkoelirang marls in NE Kutai basin, collected in 1934 by NPPM (Caltex) geologists. Age presumably latest Miocene- E Pliocene)

Leupold, W. (1927?)- Geological description of Northeastern Borneo: landscapes of Bulungan and Berau. ~600p.
(Unpublished, pioneering report on geological survey and micropaleontology of large parts of NE Kalimantan. Copy of typescript reportedly in archive of Netherlands Centrum for Biodiversiteit (Naturalis), Leiden, as 'Verslag Boeloengan-Beraoe, Arch. 55 30031 (larger foraminifera from Leupold NE Kalimantan collection described in several papers by Van der Vlerk (1925, 1929))

Loiret, B. & J.F. Mugniot (1982)- Seismic sequences interpretation, a contribution to the stratigraphical framework of the Mahakam Area. Proc.11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 323-334.

Lubis, M.I. & S. Djaelani (2016)- Petroleum systems in the southern margin of the Kutei Basin. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 24-TS-16, p. 1-12.
(South Sesulu Block at S margin of offshore Kutai Basin, with structural traps formed during end-Early Miocene inversion along left-lateral faults of Adang flexure zone. SIS-A1 well (2015) penetrated good quality M-L Miocene deltaic and upper slope sandstones and tested dry gas from Late Miocene sandstone. Late Oligocene-Miocene coals and shales in S Sesulu area good source rock potential)

Lubis, T., D. Kurniawan & H. Ellen (2011)- Facies modeling of fluvial reservoirs in "M" Field, Tarakan PSC Block. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-156, 16p.
(Mamburungan Field on SE Tarakan Island, NE Kalimantan, discovered in 1985; 30 wells drilled since. At least 80 stacked sandstone reservoirs in Late Miocene- Pliocene Tarakan Fm, fluvial-dominated in upper part, delta-dominated in lower part. Facies analysis of sands from log suggest N-S channel orientations)

Madden, R.H.C. & M.E.J. Wilson (2012)- Diagenesis of Neogene delta-front patch reefs: alteration of coastal, siliciclastic-influenced carbonates from humid Equatorial regions. J. Sedimentary Res. 82, 11, p. 871-888.
(On diagenetic alteration of E Miocene patch reef of Samarinda area, Kutai Basin, E Borneo, that formed coevally with siliciclastic influx, in humid equatorial setting. No marine cements; dominant diagenetic feature is pervasive neomorphic stabilization and cementation of aragonite reef components to calcite. Meteoric aquifer flow from adjacent landmass main diagenetic fluid. Late-stage fracturing, cementation, and chemical compaction relatively minor features. Continental groundwater flow resulted in pervasive stabilization and calcitization, features rare in arid or temperate counterparts)

Madden, R.H.C. & M.E.J. Wilson (2013)- Diagenesis of a SE Asian Cenozoic carbonate platform margin and its adjacent basinal deposits. Sedimentary Geology 286-287, p. 39-57.
(Study of diagenesis of Kedango Carbonate Platform of Kutai Basin during Eocene- Miocene. Most prevalent and pervasive diagenetic feature is neomorphic alteration and replacement of metastable bioclasts and micritic matrix, together with calcitisation of pore spaces. Burial fluids with marine character inferred as parent diagenetic fluid, since stable-isotope compositions for neomorphic spar consistent with precipitation from SE Asian Oligocene-Miocene seawater in burial environment)

Magnier, P., T. Oki & L.Witoelar Kartaadiputra (1975)- The Mahakam Delta, Kalimantan, Indonesia. Proc. 9th World Petroleum Congress, p. 239-250.

Magnier, P. & B. Samsu (1975)- The Handil oil field in East Kalimantan. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 41-61.
(1974 discovery in S edge of Mahakam Delta. 11x4 km NNW-SSE trending anticline. Multiple stacked reservoirs, mainly tidal delta plain sands, now between 1400-2300m)

Majesta, C., D. Cook, P. Cardola, D. Kurniawan, I. Buldani, G. Aquillina & F. Prasetia (2016)- Formation evaluation in thin bed reservoirs, a case study from the Kutei Basin, Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-G-615, 13p.
(Log analysis case study of Jangkrik Field off E Kalimantan, in Pliocene gas-bearing deepwater canyon-fill turbiditic and debrite reservoir sands)

Mamuaya, J.M.B., E. Biantoro & R. Gir (1995)- The trace of sandstone distribution of Q layers using seismic amplitude and inversion: a case study in Sangatta Field, East Kalimantan. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 425-441.
(Seismic interpretation of distributary channels in Q-zone in Sangatta Field)

Marbun, A. (1992)- Hydrocarbon source rocks in the Balikpapan Bay area, East Kalimantan, Indonesia. M.Sc. Thesis, University of Wollongong, p. 1-428. *(Unpublished)*

Marino & N. Sunarya (1992)- Aplikasi metoda geofisika pada studi Cekungan pembawa batubara Ketungau, Kalimantan Barat. J. Geologi Sumberdaya Mineral 2, 4, p. 9-20.
('Application of geophysical methods to the study of the Ketungau Basin coal, Ketungau, W Kalimantan'. Gravity and seismic refraction work in Ketungau Basin, NW Kalimantan)

Marheni, L., R. Adityo, A.E. Putra & E. Anggraeni (2009)- Tertiary tectonic of Barito Basin, South East Kalimantan, and implication for petroleum system. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PITIAGI2009-183, 15p.

(Literature review; no new data. Barito basin Eocene rifting, Late-Miocene- Pliocene inversion. Largest oil field is the Tanjung (1938), with highly paraffinic oil in Eocene Tanjung Fm and fractured basement. Warukin and Tapian Timur Fields produce more asphalitic oil from Miocene regressive Warukin Fm)

Marks, E., Sujatmiko, L. Samuel, H. Dhanutirto, T. Ismoyowati & B.B. Sidik (1982)- Cenozoic stratigraphic nomenclature in East Kutei basin, Kalimantan. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 147-179.
(E Kutai Basin five deposystems: Pleistocene- Recent Mahakam Group (deltaic Handil Dua Fm to W, marine Attaka Formation to E); M Miocene- Pliocene Kampong Baru Group (deltaic Tanjung Batu Fm to W, marine Sepinggan Fm to E); M Miocene Balikpapan Group (uppermost carbonate to marine clastic Klandasan Tongue of Gelingseh Fm and paralic-deltaic Mentawir Fm); E-M Miocene Bebulu Group (carbonate Maruat Fm and deeper water clastic and carbonate Pulau Balang Fm) and Late Oligocene- E Miocene Pamaluan Fm)

Marshall, A.J. & H.O. Schumann (1981)- Stratigraphy and hydrocarbon potential of the Klandasan beds in the Kutei Basin, East Kalimantan, Indonesia. Proc. 10th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 285-295.
(Thick M Miocene (N9-N12) Klandasan Beds predominantly quartz sands, deposited at S margin of Kutei Basin. Interval 2310'-7574' in Bongkaran No. 1 selected as type section of Klandasan Beds)

Marshall, N. (2016)- Improving the age control of Eastern Borneoôs Miocene sedimentary record. Ph.D. Thesis University of Utrecht, Utrecht Studies in Earth Sciences 109, p. 1-214.
(online at: https://dspace.library.uu.nl/bitstream/1874/334448/1/Marshall.pdf)
(Collection of studies on Miocene of E Kalimantan (paleoenvironmental reconstruction, magnetostratigraphy, strontium isotope stratigraphy, cyclostratigraphy and paleomagnetic rotations). Mahakam Delta cyclic sediment alternations match Earth's orbital oscillations (20, 40 and 100 kyr cyclicity in M Miocene, 15-11Ma). Paleomag work on Eocene- Miocene sediments indicates Borneo island probably did not rotate drastically since at least ~40 Ma, Late Eocene, but data from Cretaceous basalts do suggest ~40° CCW rotation)

Marshall, N., V. Novak, I. Cibaj, W. Krijgsman, W. Renema, J. Young, N. Fraser, A. Limbong & R. Morley (2015)- Dating Borneoôs deltaic deluge: Middle Miocene progradation of the Mahakam Delta. Palaios 30, p. 7-25.
(Stratigraphic age model for 4km thick late E Miocene- early Late Miocene section of Samarinda region, E Kalimantan, using magnetostratigraphy, sequence stratigraphy and biostratigraphy. Two thin reef complexes at Samarinda dated at ~15 Ma (Batu Putih; 16m; early zone Tf2 with Lepidosemicyclina polymorpha and Nephrolepidina ferreroi) and 11.6 Ma (Stadion section, 10m; late Tf2 with Lepidosemicyclina and Cycloclypeus annulatus). Mahakam Delta went through major phase of buildout and progradation during Middle and earliest Late Miocene, during which time progradation across former shelf break took place in Samarinda area)

Marshall, N., C. Zeeden, F. Hilgen & W. Krijgsman (2017)- Milankovitch cycles in an equatorial delta from the Miocene of Borneo. Earth Planetary Sci. Letters 472, p. 229-240.
(Paleo-Mahakam delta of E Kalimantan, Borneo developed during globally warm M Miocene in equatorial setting. Statistical analysis of sandstone/shale alternations show distinct pattern of cycles with thicknesses of ~90, ~30, and ~17m, translating into periods of ~100, 40, and 20 kyr, matching orbital eccentricity, obliquity and precession cycles. Proximal paleo-Mahakam sedimentation dominantly controlled by allogenic orbital forcing, probably as consequence of glacioeustasy (also in Marshall 2016 thesis))

Martin, K. (1914)- Miocane Gastropoden von Ost-Borneo. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 9, 1, p. 326-336.
(online at: www.repository.naturalis.nl/document/552439)
('Miocene gastropods from E Kalimantan'. Fossiliferous marls of NE Kutai Basin collected by Rutten. Localities Sungei Gelingseh, Sg. Bungalun and Bontang. With molluscs already known from Java and mainly pointing to Late Miocene ages. With locality map but no other figures)

Maryanto, S. (1996)- Neoformisma bioklastika batugamping Bebulu daerah Tenggarong, Kalimantan Timur. J. Geologi Sumberdaya Mineral 6, 62, p. 2-7.
('Neomorphism of bioclasts in the Bebulu Limestone of the Tenggarong area, E Kalimantan'. Diagenesis of Late Oligocene- earliest Miocene limestone in outcrops off Mahakam River, Kutai Basin)

Maryanto, S. (2009)- Diagenesis dan batuan sumber batupasir Formasi Lati di Daerah Berau, Kalimantan Timur, berdasarkan data petrografi. Bull. Scientific Contr. (UNPAD) 7, 2, p. 109-126.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8237/3785)
('Diagenesis and source of sandstone of the Lati formation in the Berau Region, East Kalimantan, based on petrographic data'. MMiocene Lati Fm sandstones of NE Kalimantan classified as litharenites and wackes. Provenance mainly from granitic rocks, with transport to SE (see also Maryanto 2013))

Maryanto, S. (2011)- Stratigrafi dan keterdapatan batubara pada Formasi Lati di daerah Berau, Kalimantan Timur. Bul. Sumber Daya Geologi 6, 2, p. 97-110.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/455)
('Stratigraphy and occurrence of coal of Lati Formation in the Berau area, E Kalimantan'. M Miocene Lati Fm up to 400m thick and deposited in delta plain- fluvial swamps. Coal seams locally developed in middle part of formation, more common in upper part. Coal seams intensively cleated, subconchoidal fractured, moderate density, sometimes with very fine siliciclastics partings and up to 6.5m thick)

Maryanto, S. (2013)- Diagenesis and provenance of Lati Sandstones in the Berau Area, East Kalimantan Province, based on petrography data. J. Geologi Indonesia 7, 3, p. 137-144.
(online at: http://jgi.bgl.esdm.go.id/index.php/JGI/article/view/31/23)
(M Miocene deltaic sandstones of Lati Fm, Berau Area, SW Tarakan Basin, NE Kalimantan, classified as litharenite, feldspathic litharenite, etc.. Provenance 'recycled orogenic', dominated by granitic rocks, sediments and metamorphics. Transport directions to S and E)

Maryanto, S. (2016)- Sedimentologi batugamping Formasi Berai gunung talikur dan sekitarnya kabupaten Tapin, Kalimantan Selatan, berdasarkan data petrografi. J. Geologi Sumberdaya Mineral 17, 2, p. 85-98.
(online at: http://kiosk.geology.esdm.go.id/artikel/pdf/sedimentologi...)
('Limestone sedimentology of the Berai Formation at the Talikur Mountain and its surrounding area, Tapin Regency, South Kalimantan based on petrographic data'. Late Oligocene- E Miocene Berai Fm in NW foothills of Meratus Range ~75m thick with several reefal environments in overall transgressive situation (with pictures of Borelis pygmaeus, Heterostegina borneensis)

Maryanto, S., Rachmansjah & T. Sihombing (2005)- Mekanisme pengendapan batuan sedimen Tersier awal di daerah Tewah, Gunung Mas, Kalimantan Tengah: kaitannya dengan keterdapatan batubara. J. Sumber Daya Geologi 15, 1 (148), p. 38-56.
('The mechanism of deposition of Tertiary sedimentary rocks early in the Tewah area, Gunung Mas, Central Kalimantan: relation with coal formation'. Study of Late Eocene Tanjung Fm in C Kalimantan with basal alluvial fan deposits grading upward into fluvial flood plain with 10-80cm thick coal seams in upper part)

Maryanto, S., Rachmansjah & T. Sihombing (2005)- Lingkungan pengendapan batuan pembawa batubara Formasi Warukin di lintasan Kuala Kurun- Hulu Sungai Manyangan, Gunung Mas, Kalimantan Tengah. J. Sumber Daya Geologi 15, 4 (150), p. 64-81.
('Depositional environment of coal-bearing Warukin formation in the Kuala Kurun- Hulu Manyangan, River section, Gunung Mas, Central Kalimantan'. On 500m thick M-L Miocene coal-bearing deposits in C Kalimantan. At least 8 seams, coals subbituminous with vitrinite reflectance 0.52-0.55% (=~2km of sediment removed?; JTvG), 9-11% water, etc. Associated with quartz-rich sandstones)

Maryanto, S., Rachmansjah, T. Sihombing & S.Wiryosujono (2005)- Sedimentologi batuan pembawa batubara Formasi Lati di lintasan Lati, Berau, Kalimantan Timur. J. Sumber Daya Geologi 15, 4 (150), p. 33-48.
('Sedimentology of rocks below the coals of the (M Miocene) Lati Fm in the Lati section, Berau, E Kalimantan'. Deposition of tide-dominated delta in E-M Miocene)

Maryanto, S. & T. Sihombing (2001)- Stratigrafi Paleogen daerah Kalimantan Selatan: kaitannya dengan keterdapatan batubara. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 26, p. 29-51.
('Paleogene stratigraphy of S Kalimantan'. Study of End-Eocene coal-bearing Tanjung Fm in SE Kalimantan. Max. thickness of coal seams in Middle Tanjung Fm is 340 cm, deposited in fluvial- delta plain facies)

Mason, A.D.M., J.C. Haebig & R.L. McAdoo (1993)- A fresh look at the North Barito Basin, Kalimantan. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 589-606.
(New opinions on Barito basin. Tanjung Field structure not young thrust fold, but long-lived anticlinal structure, first folding and initial trap formation in Early Oligocene and again in late M Miocene. Also Plio-Pleistocene tectonic pulse associated with Meratus Mts uplift, with opposing sets of thrust faults)

Masatani, K. (1967)- Oil geology of East Kalimantan. J. Japanese Assoc. Petroleum Technologists 32, 4, p. 228-240. (*in Japanese)*
(online at: https://www.jstage.jst.go.jp/article/japt1933/32/4/32_4_228/_pdf)

Maubeuge, F. & I. Lerche (1993)- A north Indonesian basin: geo, thermal and hydrocarbon generation histories. Marine Petroleum Geol. 10, 3, p. 231-245.
(Elf-Aquitaine basin modelling study of unnamed basin, 'offshore north of Kalimantan'. (Location unknown, so who cares; JTvG))

Maubeuge, F. & I. Lerche (1994)- Geopressure evolution and hydrocarbon generation in a North Indonesian basin: two-dimensional quantitative modelling. Marine Petroleum Geol. 11, 1, p. 105-115.
(Elf-Aquitaine study of unnamed basin 'offshore north of Kalimantan', in young deltaic environment (more information from mystery basin; JTvG))

Maulin, H.B., U.A. Saefullah, A. Wicaksono, A. Direzza, M. Purnama & I. Setiawan (2017)- Neogene unconformity surfaces as evidence to tectonic re-activation- case study in Tarakan sub-basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-390, 5p.
(Tarakan basin overall E-ward prograding delta system complicated by (1) sourcing by multiple feeder rivers (proto-Sesayap, Sesanip and others) and (2) angular unconformities within delta deposits caused by several tectonic cycles. Late Oligocene uplift of Kucing High, Late Miocene uplift E of Kucing High (Simenggaris area, etc.; creating angular unconformity between Santul and Tarakan Fms), and Pleistocene renewed uplift in same area and folding of present day Bunyu, Tarakan and Ahus structures)

McClay, K., T. Dooley, A. Ferguson & J. Poblet (2000)- Tectonic evolution of the Sanga Sanga Block, Mahakam Delta, Kalimantan, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 84, p. 765-786.
(online at: http://www.searchanddiscovery.com/documents/mcclay/images/00_0765.pdf)
(Sanga Sanga Block four large fields in M-U Miocene deltaic sandstones, in NE-trending Mahakam fold belt, characterized by long, tight, faulted anticlines and broad synclines. Anticlines cored by overpressured shales and formed by reactivation of early delta-top extensional growth faults. Change from gravity-driven extension to contraction at ~14 Ma (Calvert 2003: ~10.5 Ma inversion event in Kutei basin tied to collision of Banggai-Sula microcontinent with E Sulawesi, but had already started in E Miocene)

Milligan, E.N., M.C. Friederich & Meng Sze Wu Lim (1996)- Coal exploration and development in Southeastern Kalimantan, Indonesia. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 221-230.
(Early 1980's exploration and development by BHP of Eocene coal in Pasir (Asem Asem) basin, E of Meratus Mts. Eocene coal measures remarkably uniform over area of 20,000 km2. Coal in one major interval in lower part of Tanjung Fm, total thickness ~13m, with thin bands of claystone. One thin (0.5-1.5m) but persistent coal horizon 50-100m above main horizon. One thin (1-6m) limestone bed rich in Discocyclina, 100+m above coal measures, could be traced over >100km in N-S direction)

Moge, M. & F. Febvre (2001)- Integrated study of a complex deltaic sand reservoir. Soc. Petrol. Engineers (SPE) Paper 68659, p.

Mohler, W. (1943)- Palaeontology and stratigraphy of the Tertiary of SE Borneo. Chishitsuchosajo (Geol. Survey, Bandung) Report 24/CX, 12p. *(Unpublished)*
(Unpublished review by W. Mohler, former BPM-Balikpapan paleontologist, during the Japanese occupation allowed to work at the Geological Survey due to Swiss nationality. Used by Van Bemmelen 1948, p. 137-141)

Mohler, W.A. (1946)- *Sigmoilina personata* n.sp., eine Leitform aus dem Eocen von Sudost Borneo und Java. Eclogae Geol. Helvetiae 39, 2, p. 298-300.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1946:39325)
('Sigmoilina personata n.sp., an index species from the Eocene of SE Borneo and Java'. Description of new small miliolid Sigmoilina personata, an index species for Upper Eocene in SE Kalimantan (Asem Asem and many other E Kalimantan localities) and C Java (Nanggulan))

Mohler, W.A. (1946)- *Lepidocyclina crucifera* n.sp. aus dem Burdigalien von Ost-Borneo. Eclogae Geol. Helvetiae 39, p. 302-309.
(online at: http://retro.seals.ch/digbib/view?pid=egh-001:1946:39::329)
('Lepidocyclina crucifera new species from the Burdigalian of E Kalimantan'. Stellate and advanced nephrolepidine Lepidocyclina with four rays from Sungai Mandai, Berau area. Associated larger foram assemblage includes Miogypsina and Miogypsinoides and suggests zone Tf1, Burdigalian)

Mohler, W.A. (1948)- Uber das Vorkommen von *Alveolina* und *Neoalveolina* in Borneo. Eclogae Geol. Helvetiae 41, 2, p. 321-329.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1948:41335)
('On the occurrence of Alveolina and Neoalveolina in Kalimantan'. Eocene Alveolina rel. common in NE Kalimantan, but not S of Sangkulirang Bay. Also common in Lutetian, M Eocene (Ta), but not in Priabonian. Neoalveolina (N. pygmaeus group= Borelis; JTvG) first occurs at base of Tc/ Oligocene, commonly associated with Nummulites fichteli)

Mohler, W.A. (1949)- *Flosculinella reicheli* n.sp. aus dem Tertiar e5 von Borneo. Eclogae Geol. Helvetiae 42, 2, p. 521-527.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1949:42540)
Flosculinella reicheli, a new species of almost globular flosculinellid from foram-rich marl of Te5/Burdigalian age, in Hajup rubber plantation N of Tanjung, Hulu-Sungei area, N Barito basin, E Kalimantan)

Monthioux, M., P. Landais & J.C. Monin (1985)- Comparison between natural and artificial maturation series of humic coals from the Mahakam delta, Indonesia. Organic Geochem. 8, 4, p. 275-292.
(Laboratory simulation of in-situ hydrocarbon formation from kerogen, comparing Type III-humic organic matter from Mahakam delta to artificial and natural coal series. Natural maturation simulated better when pyrolysis performed under confined conditions)

Monthioux, M., P. Landais & B. Durand (1986)- Comparison between extracts from natural and artificial maturation series of Mahakam delta coals. Organic Geochem. 10, p. 299-311.

Moore, T.A. (1990)- An alternative method for sampling and petrographically characterizing an Eocene coal bed, Southeast Kalimantan, Indonesia. Ph.D. Thesis. University of Kentucky, Lexington, p. 1-240.

Moore, T.A., M. Bowe & C. Nas (2014)- High heat flow effects on a coalbed methane reservoir, East Kalimantan (Borneo), Indonesia. Int. J. Coal Geology 131, p. 7-31.
(Miocene Balikpapan Fm in Sangatta, E Kalimantan, >1500m thick with common coal seams, <1- >5m thick, and distributed throughout section. Measured gas <1- 13 m3/t, increasing downhole in cores. Sangatta area higher geothermal gradient (50 °C/km) than most of E Kalimantan, especially near Pinang Dome in SW. Gas in

higher rank area could be thermogenic, while gas isotopes from well away from Pinang Dome indicate biogenic origin)

Moore, T.A. & J.C. Ferm (1988)- A modification of procedures for petrographic analysis of Tertiary Indonesian coals. J. Southeast Asian Earth Sci. 2, 3-4, p. 175-183.
(Plant parts and tissues in SE Kalimantan Eocene coals classified on basis of morphology and degree of degradation. Highest concentration and best preservation of plant parts and tissues in banded coal)

Moore, T.A. & J.C. Ferm (1992)- Composition and grain size of an Eocene coal bed in southeastern Kalimantan, Indonesia. Int. J. Coal Geology 21, 1-2, p. 1-30.
(Eocene coal in SE Kalimantan (Asem Asem) composed of plant parts and tissues in matrix of fine-grained particulate and amorphous material. Plant parts consists of stems, roots and leaves. Amorphous matrix consists of unstructured humic gels and bitumen. Bright banded coal types contain greatest proportion of well-preserved plant parts. Absence of large (>2mm) plant material and roots in Eocene coal different from Miocene lignite and Holocene peat. Eocene coal formed from palms and ferns which are easily degraded, younger lignite and peat formed from woody angiosperms more resistant to decay)

Moore, T.A., J.C. Ferm & G.A. Weisenfluh (1990)- Relationship of megascopic coal types to quality variation within Eocene-age, Indonesian coal beds. Int. J. Coal Geology 16, p. 147-149. *(Abstract)*
(Mineable deposits (>1 m) of Eocene subbituminous-A rank coal in SE Kalimantan variable quality. Occur in podlike bodies ~3×3 km in areal extent. Four major types. Bright coal types low in ash (6-14%). Bright, banded coal types composed of well-preserved plant tissues (20-35%) and moderately high HGI (35-38). Bright, non-banded coal lower of preserved plant structures (<15%) and lower HGI (30-35). Dull coal types higher ash (15-35%) and HGI (35-40). Sulfur content highest at top of coal beds, associated with overlying marine and brackish water sediments. Thicker, unsplit portions of seams composed of bright, low-ash coal. Dull, high-ash coal types occur in thinner, split benches of coal body)

Moore, T.A. & M.C. Friederich (2010)- A probabilistic approach to estimation of coalbed methane gas-in-place for Kalimantan, Indonesia. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. Kalimantan coal and mineral resources, MGEI-IAGI Seminar, Balikpapan 2010, p. 61-71.
(Preliminary study of Eocene and Miocene coal in Asem-Asem area indicates 253 BCF gas in place (P50))

Moore, T.A. & M.C. Friederich, J. Trofimovs, F. Anggara & D.H. Amijaya (2020)- Syn-sedimentary mafic volcanics in the coal-bearing Tanjung Formation (Eocene), Senakin Peninsula, South Kalimantan (Borneo), Indonesia. Indonesian J. Geoscience, p. *(in press)*
(Dark-grey basalt lava and volcaniclastic units in Late Eocene Tanjung Fm extensive distribution in E Senakin Peninsula, SE Kalimantan, below and above the Main Senakin coal seam. Palagonite alteration on margins of clasts and presence of bivalve and coral fragments in clasics below volcaniclastic unit indicates emplacement into marine environment. Basalt unit is designated Tanah Rata Basalt Member of Tanjung Fm)

Moore, T.A. & R.E. Hilbert (1992)- Petrographic and anatomical characteristics of plant material from two peat deposits of Holocene and Miocene age, Kalimantan, Indonesia. Review Palaeobotany Palynology 72, p. 199-227.
(Kalimantan Holocene and Miocene peats two types of organic material: plant organs/tissues and fine-grained matrix (cell walls and fillings, fungal remains, spores-pollen, resin). Some matrix material amorphous)

Moore, T.A., J.C. Shearer & S.L. Miller (1996)- Fungal origin of oxidised plant material in the Palangkaraya peat deposit, Kalimantan Tengah, Indonesia: implications for 'inertinite' formation in coal. Int. J. Coal Geology 30, p. 1-23.
(Palangkaraya extensive surface peat layer 0-6 m thick. Common oxidised plant material formed from fungal alteration)

Moore, T.A., J. Trofimovs, D. Murphy, F. Anggara, M.C. Friederich & D.H. Amijaya (2020)- Geochemistry of Cenozoic syn-sedimentary mafic volcanism in southeast Kalimantan (Borneo), Indonesia. J. Asian Earth Science *(in prep.)*

Morley, R.J., J. Decker, H.P. Morley & S. Smith (2006)- Development of high resolution biostratigraphic framework for Kutei Basin. Proc. Int. IPA Geosci. Conf. Exhib., Jakarta 2006, PG 27, 6p.
(28 sequences identified in M Miocene- Pleistocene of W Makassar Straits)

Morley, R.J. & H.P. Morley (2010)- Neogene climate history of the Makassar Straits, with emphasis on the the Attaka region, East Kalimantan, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-208, 17p.
(Reconstruction of M Miocene- Recent Neogene climate history of E Kalimantan, based on Quaternary Makassar Straits cores and Attaka field well samples, and compared to Natuna and Malay basins. Everwet tropical climate since Late Miocene. Some intervals with evidence for 100 ka eccentricity cycles)

Moss, S.J. (1998)- Embaluh Group turbidites in Kalimantan- evolution of a remnant oceanic basin in Borneo during the Late Cretaceous to Paleogene. J. Geol. Soc. London 195, p. 509-524.
(Turbidites outcrops in NW Borneo: Embaluh Group in Kalimantan and Rajang Group in Sarawak. Previous interpretation of Late Cretaceous- Paleogene deep marine deposition and deformation in accretionary prism implies S-dipping thrusts, N-ward stratigraphic younging, existence of arc- trench system and deformation and metamorphism of turbidites. New fieldwork established S-ward stratigraphic younging in Kalimantan, no evidence for S-dipping thrusts, metamorphism and accretionary complex-related deformation. Bulk of Rajang-Embaluh Gp postdates inboard subduction-related magmatism. Rajang-Embaluh Group turbidites formed in post-collisional foreland basin or remnant ocean basin. Lack of identifiable mountain belt and linked thrust system, and probable oceanic affinity of crust beneath Rajang-Embaluh Group basin favor latter)

Moss, S.J., A. Carter, S. Baker & A.J. Hurford (1998)- A Late Oligocene tectono-volcanic event in East Kalimantan and the implications for tectonics and sedimentation in Borneo. J. Geol. Soc. London 155, 1, p. 177-192.
N Kutai Basin rapid Late Oligocene (~25 Ma) cooling of Late Cretaceous sandstone, E Miocene arc volcanism at 23-18 Ma, E-ward shift of W basin margin and inception of delta deposition along new basin margins. Elsewhere in Borneo also major Late Oligocene-E Miocene thrust imbrication and volcanic arc activity, possibly caused by Australia-Philippine Sea Plate collision, Neogene counterclockwise rotation of Borneo or initial impingement of blocks of S China origin with N Borneo- S Palawan)

Moss, S.J. & J.L.C. Chambers (1999)- Tertiary facies architecture in the Kutai Basin, Kalimantan, Indonesia. J. Asian Earth Sci. 17, p. 157-181.
(Kutai Basin Jurassic- Cretaceous basement ophiolitic units overlain by Cretaceous turbidite fan. Basin initiated in M Eocene, with rifting and likely sea floor spreading in Makassar Straits, producing fault-bounded depocentres, followed by sag phase sedimentation. Eocene depocentres variable sedimentary fills depending on position. More uniform sedimentation in later Eocene and Oligocene. Tectonic uplift along S and N basin margins and related subsidence of Lower Kutai Basin in Late Oligocene. Subsidence associated with high-level andesitic-dacitic intrusives and associated volcanics. Miocene, basin fill overall regressive style of sedimentation, interrupted by periods of tectonic inversion throughout Miocene to Pliocene)

Moss, S.J. & J.L.C. Chambers (1999)- Depositional modeling and facies architecture of rift and inversion episodes in the Kutai Basin, Kalimantan, Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-22.
(Kutai basin initiated in M Eocene in conjunction with rifting/ sea-floor spreading in N Makassar Straits. Sedimentary fill of Eocene N-S/NE-SW trending, fault-bounded depocentres varies with position relative to sediment source, paleo-water depths and half-graben geometry. This contrasts with uniform sedimentary styles in Late Eocene and Oligocene. Late Oligocene ~N3 unconformity reflects uplift of C Kalimantan and extension Lower Kutai Sub-basin is associated with andesitic-dacitic intrusives and volcanics. Volcanism and basin

margin erosion supplied large volumes of material E-wards, along with material from inverted Paleogene depocentres. Miocene regressive sedimentation, interrupted by Miocene- Pliocene tectonic inversions)

Moss, S.J., J. Chambers, I. Cloke, D. Satria, J.R. Ali, S. Baker, J. Milsom & A. Carter (1997)- New observations on the sedimentary and tectonic evolution of the Tertiary Kutai Basin, East Kalimantan. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia, Geol. Soc. London, Spec. Publ. 126, p. 395-416.
(Kutai Basin opened in M-L Eocene in Borneo. Extensional faulting in foreland setting S of Late Cretaceous/ Paleogene C Kalimantan fold belt with U Cretaceous granites. Paleogene stratigraphy basal conglomerates, shallow marine clastics and thick bathyal marine shales. Neogene stratigraphy dominated by deltaic clastics and carbonate platforms. Three Tertiary suites of igneous activity, variously interpreted as melting of orogenic root, extensional driven melting and/or subduction related melting. New model relates formation of Kutai Basin to opening of Celebes Sea and collapse of uplifted Late Cretaceous/Paleogene orogenic belt)

Moss, S.J. & E.M. Finch (1998)- Geological implications of new biostratigraphic data from East and West Kalimantan, Indonesia. J. Asian Earth Sci. 15, p. 489-506.
(New biostrat data from Cretaceous- Miocene of various parts of Kalimantan)

Munniks de Jong, W.D. (1915)- Aantekeningen over de Tidoengsche landen (Res. Z en O. afd. Van Borneo) bewerkt naar het rapport van W.D. Munninks de Jongh. Jaarboek Mijnwezen Nederlandsch Oost-Indie 42 (1913), Verhandelingen, p. 22-35.
(Summary of reconnaissance survey report by Munniks de Jongh in 'Tidung lands' (NE Kalimantan- Sabah border area). Occurrences of steep hills of Eocene Nummulites limestone (some also with Pellatispira; Rutten 1915a, b). Older 'Sembakoeng beds' are intensely folded shales and sands with bands of red radiolarite rock, similar to Cretaceous Alino-Waringin beds of SE Kalimantan Meratus Mountains. Rutten (1915) found fragments of this radiolarite in Eocene limestone)

Nagasaka, M. (1978)- Exploration of the Mahakam Delta, East Kalimantan, Indonesia. J. Japanese Assoc. Petroleum Technologists 43, 6, p. 407-415.
(online at: www.journalarchive.jst.go.jp/..)
(In Japanese, with English summary. In response to rising Kuching High, large amount of paralic sediments deposited to East. Mahakam Delta at least two paleo-deltas in M Miocene-Pliocene. All oil-gas production from paralic sediments, 90% or more are from deltaic sediments. With generalized paleogeographic maps)

Nainggolan, D.A., T. Padmawidjaja & W.H. Simamora (2004)- Interpretasi gayaberat terhadap Cekungan Kutai Barat, dan struktur-struktur lain di Lembar Long Pahangai dan Long Nawan, Kalimantan Timur. J. Sumber Daya Geologi 14, 3 (147), p. 181-195.
('Interpretation of gravity of the W Kutai Basin and structures in the Longpahangai and Longnawan sheets, E Kalimantan')

Nandang, H. & M. Wahyudin (1994)- Reflectance gradient and shale compaction, their relationship to basin configuration during Early Neogene: a NE Kalimantan Basin reassessment. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 927-942.

Napitupulu, H. & I.B. Sosrowidjojo (2002)- The Warukin Formation: an alternative source rock in the Barito Basin. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 138-155.
(M Miocene coal-bearing Warukin Fm good-excellent hydrocarbon source rocks. Vitrinite reflectance in wells 0.3-0.68% (slightly suppressed?) ,suggesting lower part of formation could be fully mature in 2 depocenters. Onset oil generation in Bangkau depocenter at ~4 Ma (top oil window 2250m), in Tapian Deep at ~6 Ma (top oil window ~2900m. Modelling suggests oil expulsion of ~2000 MMBO in last few Myrs)

Napitupulu, H. & Yulian B. (1987)- Kematangan batuan induk di lapangan Tapa- Pulau Bunyu. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.
('Maturation of source rocks in the Tapa field, Bunyu Island')

Nas, C. (1994)- Spatial variation in thickness and coal quality of the Sangatta seam, Kutei Basin, Kalimantan, Indonesia. Ph.D. Thesis, University of Wollongong, Wollongong, NSW, Australia, p. 1-324. *(Unpublished)*
(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=2409&context=theses)
(Late M Miocene Sagatta coal seam is most important seam in Balikpapan Fm of Sangatta coalfield, N Kutai Basin, E Kalimantan. Formed as raised peat bog in floodplain of mixed load fluvial-deltaic system. Average coal thickness 6m. High vitrinite (av. 91%). Low liptinite (av. 3%), inertinite (av. 3%), mineral matter (av. 2%) and sulfur (av. 0.4%))

Netherwood, R. & A. Wight (1992)- Structurally-controlled, linear reefs in a Pliocene delta front setting, Tarakan Basin, Northeast Kalimantan. In: C.T. Siemers, M.W. Longman et al. (eds.) Carbonate rocks and reservoirs of Indonesia, Indonesian Petroleum Assoc. (IPA), Core Workshop Notes 1, Ch. 3, p. 1-36.
(Sceptre Vanda-1 targeted 90m clean but cemented and partly shaly Pliocene? limestone. Four depositional facies: coral framestone, coral rudstone, argillaceous coral floatstone-rudstone and laminated silty claystone. Four cleaning-up cycles, representing sequences of reef-growth and progradation. None of cored limestones good reservoir potential)

Nikijuluw, R., Z.A. Suwito, M.A. Arianto & D.A. Anggraini (2005)- Integrated reservoir assessment: a way to identify "overlooked" multi-layered reservoirs. Soc. Petrol. Engineers (SPE) Asia Pacific Oil and Gas Conference and Exhibition, Jakarta, Paper 93198-MS, 10p. *(Extended Abstract)*
(VICO Semberah field 1974 oil-gas discovery in onshore Mahakam Delta, E Kalimantan, in complex multi-layer M-U Miocene fluvio-deltaic sandstone reservoirs. New assessment of previously overlooked thin-bedded Fxx sand series)

Nirsal, N. (2010)- Facies distribution and stratigraphic development in the paleo-Mahakam Delta, Indonesia M.Sc. Thesis, Chulalongkorn University, Bangkok, p. 1-83. *(Unpublished)*

Nirsal, N.B. (2010)- Facies distribution and stratigraphic development in the Palaeo-Mahakam Delta, Indonesia. Bull. Earth Sci. Thailand (BEST) 3, 2, p. 25-27.
(online at: www.cupetrogeoscience.com/BEST_Nadia%20Binti%20Nirsal%20%20.pdf)
(Brief summary of facies in 200m outcrop sectionS of Samarinda, E Kalimantan. Transgressive marine beds)

Noeradi, D., B.P. Muritno, Sukowitono, E.A. Subroto & Djuhaeni (2005)- Petroleum system and hydrocarbon prospectivity of the Simenggaris Block and its surrounding areas, Tarakan Basin, East Kalimantan, Indonesia: a new approach by using sequence stratigraphy. In: AAPG Int. Conf. Exh., Paris 2005, 6p *(extended abstract)*
(Eight sequences/ sequence boundaries of Late Oligocene/ Early Miocene-Pliocene age identified in W, onshore part of Tarakan basin)

Noon, S.W., J. Harrington & H. Darman (2003)- The Tarakan Basin, East Kalimantan: proven fluviodeltaic, prospective deep-water and Paleogene plays in a regional stratigraphic context. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 417-430.
(Tarakan basin four sub-basins Tidung, Tarakan, Berau and Muaras. Rift sedimentation underway by 43 Ma (M Eocene) and may have begun in Cretaceous. Rifting continued until tectonic event near Eocene-Oligocene boundary. Basin sag and eustasy controlled sedimentation until M Miocene. Episodic compression, punctuated by eustatic events, characterizes M Miocene- Recent. Neogene source rocks mostly coals and 'fluvio-deltaic, paralic' organic-rich shales. Reservoired oils in shelf settings point to mature Miocene source. Evidence for hydrocarbons from Eocene or older organic matter. Paleogene or older lacustrine, brackish and marine, syn-rift sediments)

Novak, V. & W. Renema (2015)- Larger foraminifera as environmental discriminators in Miocene mixed carbonate-siliciclastic systems. Palaios 30, p. 40-52.
(Larger foraminifera from late E-M Miocene mixed carbonate-siliciclastics near Samarinda and Bontang, E Kalimantan, suggest Batu Putih section paleoenvironments ranged from delta front to shelf edge reefs, Bontang and Stadion sections formed in more restricted environments, under higher terrigenous inputt settings)

Novak, V., N. Santodomingo, A. Rosler, E. Di Martino, J.C. Braga, P.D. Taylor, K.G. Johnson & W. Renema (2013)- Environmental reconstruction of a late Burdigalian (Miocene) patch reef in deltaic deposits (East Kalimantan, Indonesia). Palaeogeogr. Palaeoclim. Palaeoecology 374, p. 110-122.
(Paleoenvironment and biodiversity of Late Burdigalian (Tf1 with Miogypsina cf. globulina, Lepidosemicyclina polymorpha, Flosculinella bontangensis, etc.) patch reef developed in mixed carbonate- siliciclastic system. Outcrop at NE margin of Kutai Basin near Bontang. Five facies types distinguished: foraminiferal packstone (FP), bioclastic packstone with foralgal communities (BP), thin-platy coral sheetstone (CS), platy-tabular coral platestone (CP), and shales (S). Assemblages and growth forms of coralline algae no major differences between facies types and dominated by melobesioids and Sporolithon)

Noventiyanto, A. & I. Wahyudi (2011)- How geochemical analysis led to a discovery: South Sebuku-1 case, Bengara I PSC, North East Kalimantan. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-360, 7p.
(Sebuku-1, drilled by ARCO in 1976, had many hydrocarbon shows in Tabul and Meliat Fms. Heptane content in gas higher than many dry holes in other areas, suggesting leakage from nearby oil or condensate accumulation could be source of light hydrocarbons. Sebuku-1 well was drilled down-dip of N flank of S Sebuku structure. S Sebuku-1 well discovered deltaic reservoirs with gas-condensate in Tabul and Meliat Fms in 2009)

Novian, M.I. & H.D.K. Wijayanti (2012)- Paleogeography and sedimentation dynamics of Ujoh Bilang-Batubelah Limestone Member, upstream Mahakam River, Ujoh Bilang Area, East Kalimantan Province. J. Southeast Asian Applied Geol. (UGM) 4, 2, p. 99-107.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-4/no-2/jsaag04-art05-IndraNovian.pdf)
(Upstream Mahakam River area with M-L Eocene rift deposits, overlain by Oligocene sag phase marine claystones- sandstones with two carbonate members: Ujoh Bilang Fm (Early Oligocene, with Nummulites, Eulepidina) and Batu Belah Lst (Late Oligocene, with Austrotrillina, Miogypsinoides, etc.)

Novita, D. & K.D. Kusumah (2016)- Karakteristik dan lingkungan pengendapan batubara Formasi Warukin di Desa Kalumpang, Binuang, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 17, 3, p. 139-152.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/12/5)
('Characteristics and depositional environment of the Warukin coal formation in Kalumpang village, Binuang, South Kalimantan'. Warukin Fm coal near Kulumpung deposited in upper delta plain and floodplain environments. Vitrinite reflectance (Vr) 0.29- 0.49% (lignite- subbituminous = immature- earliest mature))

Nuay, E.S., A.M. Astarita & K. Edwards (1985)- Early Middle Miocene deltaic progradation in the southern Kutai Basin. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 63-81.
(Eastward prograding M Miocene delta system in Balikpapan area, driven by early M Miocene uplift. Source for well-sorted and rounded quartz-rich sediments probably sandstones of earlier progradational cycle derived directly from granitic Sunda shield. Age of base sandy series ('Omega' horizon) near zone N8-N9 boundary. (Equivalent of E Java Ngrayong sst ?; JTvG))

Nuay, E.S. & A.P. Kadar (1994)- Neogene bioevents in the Kutai basin, Sanga-Sanga contract area, East Kalimantan, Indonesia. In: R. Tsuchi (ed.) Pacific Neogene events in time and space, Contributions to the West Pacific. IGCP-246, Shizuoka University, Japan, p. 87-100.

Nugraha, R.H.C. & N.I. Basuki (2012)- Evidence of backstepping carbonate platform during Oligo-Pliocene in Landas Area, eastern tip Mangkalihat Peninsula, Eastern Borneo, Indonesia. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-016, p. 1-15.

Nugroho, B., E. Guritno, H. Mustapha, W. Darmawan, A. Subekti & C. Davis (2016)- Post rift Oligocene marine source rock, a new petroleum system in Greater Bangkanai, Upper Kutai, Indonesia. In: Int. Petroleum Technology Conf. (IPTC), Bangkok, IPTC-18922-MS, 15p.

(Kerendan Gas Field in Bangkanai PSC, onshore Kutai Basin, is Oligocene carbonate gas producer. Gas previously postulated to be generated from Eocene terrestrial source rocks, but recent C isotope data suggest gas generation from marine source rock, not terrestrial in origin)

Nugroho, S.B. & D. Mandhiri (1993)- Reservoir modeling in the Bunyu Tapa gas field- an integrated study. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 617-626.
(Bunyu Tapa gas field in N Tarakan basin with >84 mappable fluvio-deltaic sand bodies, with thickness of <1->30m. Same paper as Ramli, Nugroho et al. 1993, published by IPA)

Nugroho, S.B., B.S. Murti & B.M. Toha (2004)- Implementation of volume interpretation in revealing upside potential in a mature field, the Sangatta oilfield: a case study. In: ASEG 17th Geophysical Conference, Sydney 2004, p. 1-5. *(Extended Abstract)*
(Seismic 3D volume interpretation revealed deeper play potential below mature Sangatta oil field, onshore E Kalimantan)

Nummedal, D., Y.J. Partono, L. Greene, M. Boehm et al. (2000)- High-frequency sequence architecture in upper Miocene and Quaternary strata on the Mahakam Shelf, East Kalimantan, Indonesia. AAPG Int. Conf. Exhib., Bali, Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1470-1471. *(Abstract only)*
(online at: www.searchanddiscovery.com/abstracts/html/2000/intl/abstracts/297.htm)
(U Miocene productive interval in typical Attaka well ~1325 m thick, subdivided in ~35 sequences, averaging ~38 m thick. Age of succession 10.7- 7.3 Ma (3.4 My), suggesting sequences may be Milankovitch 100 ky climate cycles. Sequences stacked in progradinging pattern. In some sequences, predominantly in lower part of sampled interval, clinoforms downlap onto TST and HST carbonates. 100 ky climate cycles also dominated Late Quaternary sedimentation on Mahakam shelf. Last Quaternary cycle average 40m thick, with erosional basal sequence boundary deeply incised by paleovalleys)

Nursanto, E., A. Idrus, H. Amijaya & S. Pramumijoyo (2013)- Characteristics and liquefaction of coal from Warukin Formation, Tabalong area, South Kalimantan, Indonesia. J. Southeast Asian Applied Geol. (UGM) 5, 2, p. 99-104.
(online at: https://journal.ugm.ac.id/jag/article/view/7211)

Nurwono, P.T. (1978)- Producing gas-condensate and oil rim reservoirs from channel sands of the Badak field. Proc. 7th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 383-398.

Oppenoorth, W.F.F. (1930)- Verslag der diepboringen op het eiland Boenjoe. Jaarboek Mijnwezen Nederlandsch Oost-Indie 58 (1929), Verhandelingen, p. 158-186.
('Report of deep drilling on Bunyu Island'. Two 'deep' (500, 342m) wells drilled in 1923-1925 by Geological Survey on anticlinal structure with small gas seeps on S Bunyu, NE Kalimantan. Drilled with purpose of finding oil. Oil and gas shows encountered, but well stopped short of target. Well 1 drilled in 1923-1924, with gas blowouts and total depth of 492m. Also 7 shallow (125-235m) reconnaissance wells. Detailed well lithology columns show numerous coal beds. With detail map of S Bunyu structure made by Leupold (Umbgrove 1932))

Orange, D.L., P.A. Teas, J. Decker, P. Baillie & T. Johnstone (2009)- Using SeaSeep surveys to identify and sample natural hydrocarbon seeps in offshore frontier basins. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 21p.
(High resolution bathymetry and backscatter surveys help identify seafloor hydrocarbon seepage)

Ott, H.L. (1987)- The Kutei Basin- a unique structural history. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 307-317.
(Structural model, combining tectonic, gravitational and isostatic forces to produce present day structures)

Oudin, J.L. (1987)- Diagenese de la matiere organique dans le bassin de la Mahakam. In: Geologie de la matiere organique, Mem. Soc. Geologique France, N.S., 151, p. 107-114.
('Diagenesis of organic matter in the Mahakam Basin')

Oudin, J.L, B. Durand & M. Shoell (1985)- Migration of oil and gas in the Mahakam Delta, Kalimantan; evidence and quantitative estimate from isotope and biomarker studies. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 49-56.

Oudin, J.L. & P.F. Picard (1982)- Genesis of hydrocarbons in the Mahakam Delta and the relationship between their distribution and the overpressured zones. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 181-202.
(Oil- gas fields in Mio-Pliocene deltaics with high % of organic material. Though mainly vegetal, good source potential for gas and oil. Oils from different reservoirs in Handil field similar composition, but lighter oils in shallower reservoirs. Distribution of oil and gas fields primarily depends on kinetics of hydrocarbon expulsion)

Page, S.E., R.A.J. Wust, D. Weiss, J.O. Rieley, W. Shotyk & S.H. Limin (2004)- A record of Late Pleistocene and Holocene carbon accumulation and climate change from an equatorial peat bog (Kalimantan, Indonesia): implications for past, present and future carbon dynamics. J. Quaternary Science 19, 7, p. 625-635.
(A 9.5m core from inland peatland in Kalimantan reveals organic matter accumulation started around 26,000 ky, providing oldest reported initiation date for lowland ombrotrophic peat formation in SE Asia)

Palar, S., J.F. Bowen, A. Elim, K.P. Leger, B. Simmonds, G.C. Fryns, M. Hursey & Marwoto (1999)- Sepinggan Field development: a cross-functional team effort to develop bypassed attic oil. SPE Asia Pacific Oil and Gas Conf. Exh. Jakarta, 1999, 12p.

Panggabean, H. (1991)- Tertiary source rocks, coals and reservoir potential in the Asem-Asem and Barito basins, Southeastern Kalimantan, Indonesia. Ph.D. Thesis, University of Wollongong, p. 1-224.
(online at: http://ro.uow.edu.au/theses/2113/)
(Late Paleocene- E Eocene rifting in SE Borneo created the originally contiguous Barito, Asem-Asem and Kutei basins. Meratus uplift started in Late Miocene. Eocene and Miocene coals)

Panggabean, H. (1999)- Paleogene sedimentary rocks and paleogeography in Northeast Kalimantan basins. J. Geologi Sumberdaya Mineral 9, 96, p. 2-20.
(Review of Eocene-Oligocene stratigraphy and paleogeography of Tidung, Berau, Muara and Tarakan sub-basins, NE Kalimantan. Initiation of basis probably back-arc extension. Paleogene rocks starts with Eocene basal conglomerates, unconformable on tectonized Cretaceous Danau and Embaluh Fms. Paleogene coals rel. limited. Late Eocene- E Oligocene and early M-Late Miocene (Sabah Orogeny) deformation/ uplift events. Rel. widespread Oligocene limestones. With paleogeographic maps for Late Cretaceous, Eocene and Oligocene)

Panggabean, H. & R. Heryanto (2014)- Karakteristik mikroskopis dan fasies batubara di daerah Kualakurun dan sekitarnya, Kalimantan Tengah. Majalah Geologi Indonesia (IAGI) 29, 3, p. 127-141.
('The microscopic characteristics and coal facies in Kualakurun and surrounding area'. Eocene Tanjung Fm coals at Kahayan River area, W side of Barito Basin, C Kalimantan. Coal bed 0.3-3.0m thick, deposited in delta plain environment. Vitinite 80-92%, liptinite 0.4-5.0%, inertinite 0-10%. Vitrinite reflectance (Rv) 0.48-0.62% (= immature- early mature; = >2km of overburden removed?; JTvG))

Panigoro, H. (1983)- Petrographic characteristics of Badak and Nilam field sandstone reservoirs. Proc. 12th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 191-206.
(E Kalimantan Badak and Nilam fields 140 reservoir sands between 4000'- 13000'. Sandstones quartz arenites and felspathic are main cementing agents, some carbonate and ferruginous cement also observed)

Panigoro, H. (1989)- Exploration implications of porosity and permeability preservation by early migration of hydrocarbon in the Kutei Basin, East Kalimantan, Indonesia. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-15.
(Wet sands generally tighter than hydrocarbon bearing ones, suggesting presence of hydrocarbons inhibited porosity-permeability reduction by diagenesis)

Panjaitan, B., D. Pakpahan & S. Sirait (2014)- Potensi CBM berdasarkan data analisa kimia batubara dan studi geologi regional pada Formasi Warukin dan Formasi Tanjung, cekungan Barito bagian utara, Kalimantan Tengah dan Selatan. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-040, 5p.
('CBM potential based on chemical analysis data of coal and regional geological study on the Warukin and Tanjung Fms in N part of the Barito basin, C and S Kalimantan'. Miocene Warukin Fm coal with moisture 3-14%, volatile matter 35-50%, ash 4-20%, sulfur 0.4- 4%, calories 5000-6000 ca /g (sub-bituminous coal quality B A). Eocene Tanjung Fm coal moisture 3-6%, volatile matter 30-50%, 3% ash, sulfur 0.2- 2%, calories 6000-7000 cal/g (bituminous A). Presence of face and butt cleats support potential of CBM)

Panuju, I. Prayitno, G. Rahmat, I. Firdaus & G. Sunardyanto (2007)- Revision of the Late Miocene nannoplankton biostratigraphy for Kutei Basin. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, JCB2007-098, p. 629-646.
(Higher resolution Late Miocene calcareous nannoplankton zonation, based on samples from 23 unidentified wells in Kutai Basin. Seven zones subdividing Martini zones NN9- NN12 zones, based on, from base to top: FO (Base) Discoaster quinqueramus, LO (Top) Minilitha convalis, FO Amaurolithus primus, FO Reticulofenestra rotaria, LO Discoaster berggrenii, LO Reticulofenestra rotaria and LO Discoaster quinqueramus)

Partono, Y.J. (1992)- Low-resistive sandstone reservoirs in the Attaka Field. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 21-34.
(Giant Attaka oil field in E Kalimantan reservoirs are M- L Miocene multi-layered deltaic- shallow marine sandstones. Both high-resistive and low-resistive hydrocarbon-bearing sandstone layers present)

Passe, W.B.B., H.R.E. Nugraha, M.A. Wijaya, L. Sitio & Y. Febriyeni (2008)- Hydrocarbon play in Ketungau-Melawi basins. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IP08-SG-082, 9p.
(Ketungau- Melawi intra-continental basins of W Kalimantan separated by Semitau Ridge. Semitau Complex ?Triassic metamorphic basement unconformably overlain by Cretaceous marine Pedawan Fm clastics, possible source rocks. Tertiary terrigeneous and marine clastics. Source rock in (Eocene?) Silat and Sekayak Fms. Reservoir rocks in deltaic sandstone of E-M Miocene (should be Eocene; JTvG) Haloq Fm. Paleocurrent and provenance analysis indicate clastic source from N, from uplift of Boyan melange and Lubok Antu melange)

Paterson, D.W., A. Bachtiar, J.A. Bates, J.A. Moon & R.C. Surdam (1997)- Petroleum systems of the Kutai Basin, Kalimantan, Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 709-726.
(M- Late Miocene delta plain- delta front coals and carbonaceous shales are source for Lower Kutei Basin oil and gas fields)

Payenberg, T.B., S.C. Lang, G.P. Allen & R. Koch (1999)- Orientations of deltaic and alluvial channels in the Middle Miocene onshore part of the Kutai Basin, East Kalimantan and their potential as hydrocarbon reservoirs. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 64-66.
(Paleocurrents in M Miocene deltaic sandstones of Mutiara Field, S of Mahakam Delta. Smaller, isolated fluvial-dominated delta distributary channels oriented generally N-S; Amalgamated alluvial channels (incised valleys) orientation mainly WSW-ENE)

Payenberg, T.H.D. & A.D. Miall (2001)- A new geochemical sequence stratigraphic model for the Mahakam Delta and Makassar Slope, Kalimantan, Indonesia: Discussion. American Assoc. Petrol. Geol. (AAPG) Bull. 85, 6, p. 1098-1101.
(Discussion of Peters et al. 2000 paper, taking issue with using outdated cycle chart and undocumented sequence ages)

Payenberg, T.B., F.H. Sidi & S.C. Lang (2003)- Paleocurrents and reservoir orientation of Middle Miocene channel deposits in Mutiara field, Kutei Basin, East Kalimantan. In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology, Society for Sedimentary Geology (SEPM) Spec. Publ. 76, p. 255-266.

(Mutiara field producing from M Miocene fluvio-deltaics. Main reservoirs channelized sandstones. Single-story channels overall flow direction to S, parallel to strike of anticlines, probably response to M Miocene tectonic activity. Multi-story incised valley(s) E-W orientation)

Pelton, P.J. (1974)- Exploration of the South Barito Basin reef tract, Kalimantan, Indonesia. Proc. 3rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 153-169.
(Barito basin exploration started in 1937 with unsuccessful NKPM Kahajan and Kuripan wells. Conoco 1971 drilled four more dry wells, targeting Upper Berai Fm carbonate buildups)

Permana, A.K., Y.A. Sendjadja, H. Panggabean & L. Fauzely (2018)- Depositional environment and source rocks potential of the Miocene organic rich sediments, Balikpapan Formation, East Kutai Sub Basin, Kalimantan. J. Geologi Sumberdaya Mineral 19, 3, p. 171-186.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/407/359)
(Organic rich shales of Miocene Balikpapan Fm near Samarinda with TOC up to 15.6%, coals from 2.25% to 57.1%. Organic matter dominated by vitrinite with minor liptinite and inertinite (terrigenous organic matter). Hydrogen index values low (4-248 mgHC/g TOC). Ro ~0.7% shows low-moderate thermal maturation levels)

Pertamina BPPKA (H. Darman et al.) (1996)- Petroleum geology of Indonesian basins. V: Tarakan basin, Northeast Kalimantan. Petroleum geology of Indonesian basins: principles, methods, and application, Jakarta, p. 1-36.

Pertamina BPPKA (A. Bachtiar et al.) (1996)- Petroleum geology of Indonesian basins, XI: Kutai Basin. Petroleum geology of Indonesian basins: principles, methods, and application, Jakarta, p. 1-

Peters, K.E., J.W. Snedden, A. Sulaeman, J.F. Sarg & R.J. Enrico (1999)- New deepwater geochemical model for the Mahakam delta and Makassar slope, Kalimantan. Proc. 27th Ann. Conv. Indon. Petr. Assoc. (IPA), Jakarta, p. 381-395.
(New source model: (1) waxy highstand oils onshore from M-U Miocene coals and shales deposited in coastal plain highstand kitchens; (2) less waxy lowstand-1 oils offshore from M-U Miocene coaly source rocks in deepwater lowstand kitchens. Most lowstand-2 oils higher maturity than lowstand-1 oils and originated from L-M Miocene coaly source rocks. (3) low-maturity, nonwaxy transgressive oils onshore from M Miocene marine shales deposited near maximum flooding surfaces)

Peters, K.E., J.W. Snedden, A. Sulaeman, J.F. Sarg & R.J. Enrico (2000)- A new geochemical sequence stratigraphic model for the Mahakam Delta and Makassar Slope, Kalimantan, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 84, 1, p. 12-44.
(Generally accepted geochemical-stratigraphic model for Mahakam-Makassar Straits fails to explain recent discoveries. Revised model upgrades potential of outer shelf. M Miocene source rock interval within oil window based on seismic reinterpretation and source specific kerogen kinetics. Two major and two minor petroleum systems recognized, dominated by terrigenous type III organic matter)

Pieters, P.E., D.S. Trail & S. Supriatna (1987)- Correlation of Early Tertiary rocks across Kalimantan. Proc. 16th Ann. Conv. Indon. Petr. Assoc. (IPA), Jakarta, p. 291-306.
(Major unconformity at base Tertiary across Kalimantan. Basal Tertiary sandstone, dominantly terrestrial and dated as Late Eocene, overlain by mudstone, then sandstone/mudstone unit. Second unconformity truncates this sequence in W Kalimantan and is succeeded by overlapping terrestrial sandstone and Oligocene mudstone. Third unconformity confined to E Kalimantan is overlain by Miocene deltaic sediments. Elongate, W-trending basin filled by Early Tertiary sediments is folded and overthrust along N contact with orogenic complex by N-dipping thrusts. With 3 paleogeographic maps)

Polhaupessy, A.A. (1998)- Palynology of Tanjung Formation, Rantau, South Kalimantan. In: Proc. 34th Sess. Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Taejon, Korea 1997, 2, Techn. Repts., p. 35-39.

(Palynology of two sections of Tanjung Fm at Linuh and Miyawa, E of Rantau, Barito basin. Contain Late Eocene-Oligocene assemblages of Florschuetzia trilobata, Retistephanocolpites williamsi, Meyeripollis naharkotensis and Verracutosporites usmensis. Depositional environment intertidal backmangrove vegetation system, in transgressive system)

Polhaupessy, A.A. (2007)- Palynocycles of Late Eocene Formation: a case study in Tanjung Formation, South Kalimantan. In: Geologi Indonesia: dinamika dan produknya, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 33, 2, p. 149-165.
(Quantitative palynological study of Late Eocene Tanjung Fm in Asem-Asem basin, S Kalimantan, to determine cyclic patterns. Tropical assemblages. Diversity maximum at cycle boundaries, minimum in middle cycle)

Posthumus, O. (1929)- Vischotolieten van N.O. Borneo. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 9, p. 87-108.
('Fish otoliths of NE Borneo'. Description of fish otoliths from Miocene- Pliocene samples collected in NE Kalimantan Bulungan and Berau areas by Leupold)

Pramudhita, B.A.B., S.A. Siregar, H. Tanjung, M. Faris, R. Indrajaya, Satrio & Y. Kambu (2009)- Palynology analysis and coal characterization: a preliminary study for CBM prospectivity of Balikpapan Fm., Kutei Basin. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-SG-040, p. 1-11.
(Palynogy analysis of outcrops of M Miocene Balikpapan Fm delta plain deposits in Kutai Basin shows four facies-controlled assemblages. Coal 70-95% vitrinite and early mature for thermogenic gas generation, but at peak for biogenic gas generation)

Prasetya, A., K.P. Laya, A. Subekti, Y. Rizal, J. Boast & J.D.C. Smart (2013)- The dynamics of sediment-source catchment areas in North Kutei Basin: implications for deepwater plays prospectivity. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-108, p. 1-14.
(Pleistocene-Recent river drainage systems in N Kutei Basin- slope characterized by sediment-starved conditions, but active sediment source into N Kutei Basin in Late Miocene-Pliocene, probably derived from Beriun Massifs, ~100 km to NW)

Prasetyo, B. (2003)- Facies mapping and reservoir potential of the G58 interval using 3D seismic data in Nilam Field, Sanga-Sanga PSC, Indonesia. M.Sc. Thesis, Universiti Brunei Darussalam, Bandar Seri Begawan, p. 1-101. *(Unpublished)*

Prasongko, B.K., S. Notosiswoyo, K. Anggayana & C.I. Abdullah (2007)- Cleat distribution controls on the sulphur content of the Miocene coal seam in the Palaran and Busui areas, East Kalimantan. Jurnal Teknologi Mineral (ITB) 14, 3, p. 145-155.
(online at: www.fttm.itb.ac.id/galeri/Cleat.pdf)
(Correlation between cleat frequency and sulphur content in M-Lt Miocene coal of Busui area, Pasir basin, and Palaran Anticline, Kutai basin. Highest sulphur near fault zones. Coal seams associated with lower delta plain sandstones)

Pratama, D.A.P. & D.H. Amijaya (2015)- Lingkungan pengendapan batubara Formasi Warukin berdasarkan analisis petrografi organik di daerah Paringin, Cekungan Barito, Kalimantan Selatan. Proc. 8th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 582-593.
(online at: https://repository.ugm.ac.id/135493/1/GEO95%20LINGKUNGAN%20PENGEND etc.
('Depositional environment of Warukin Formation coal based on organic petrographic analysis in the Paringin area, Barito Basin, S Kalimantan'. Macerals in Miocene Warukin coals suggest deposition in telmatic environment in transition between lower and upper delta plain environment, as paleomire in wet forest swamp)

Pretkovic, V., J.C. Braga, V. Novak, A. Rosler & W. Renema (2016)- Microbial domes and megaoncoids in Miocene reefs in the Mahakam Delta in East Kalimantan, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 449, 1, p. 236-245.

(Coral patch reefs in Miocene Mahakam delta in E Kalimantan developed in shallow marine turbid waters, in delta front- prodelta environment. Langhian patch reefs in limestone quarries of Air Putih area near Samarinda with two types of microbial carbonates: low-relief domes and large nodules ('megaoncoids') around nuclei of coral fragments. Slope of patch reef flank favored falling and rolling of encrusted corals, with continued growth of microbial crusts on all sides of nodules. Both types near base of reef slope)

Priantono, T.S. & Raden Idris (1994)- Perkembangan submarine fan Eosen-Oligosen pada daerah Benderang-Tapian Langsat, Cekungan Kutai, Kalimantan Timur. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 208-218.
('Eocene- Oligocene submarine fan deposits in Benderang- Tapian Langsat area, Kutai Basin, E Kalimantan')

Priyantoro, A., E. Kusmana & A. Ruswandi (2010)- Facies characteristics of formation from the Upper Kutei sub-basin, East Kalimantan. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-189, 11p.
(On thick uplifted and exposed Upper Cretaceous- Paleogene section of Upper Kutai Basin. Fluvial Cretaceous- E Eocene, fluvial-deltaic to shallow marine M-L Eocene and shallow marine Oligocene deposits. Sandstones mainly quartz, but also feldspar and rel. common metamorphic rock lithics)

Provale, I. (1908)- Di alcune Nummulitine e Orbitoidine dellóIsola di Borneo. Rivista Italiana Paleont. 14, p. 55-80.
('On some nummulitids and orbitoidal foraminifera from the island of Borneo'. Late Eocene Nummulites, Discocyclina (called Orthophragmina) and Pellatispira (here called Assilina) from 'Oudjou Halang' in C Borneo, collected by Italian BPM geologist Count Guido Bonarelli. No locality maps or stratigraphy)

Provale, I. (1909)- Di alcune Nummulitine e Orbitoidine dellóIsola di Borneo (parte seconda). Rivista Italiana Paleont. 15, p. 1-34.
(Second part of Provale (1908) paper. Late Eocene- E Miocene LBF from SE, E and NE Kalimantan. No locality maps or stratigraphy)

Purnomo, E. & R. Kadir (1992)- Konsep eksplorasi hidrokarbon di Pulau Bunyu, Kabupaten Bulungan, Propinsi Kalimantan Timur. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 147-159.
('A new concept for hydrocarbon exploration in Bunyu Island, Bulungan District, North East Kalimantan'. Bunyu island in Tarakan Basin petroleum exploration by BPM and NKPM since 1930. 14 wells, two producing fields (Tapa, Nibung- Bunyu Lama). Anticlinal structures in blocks at downthrown side of N-S trending growth faults)

Purwanto, T., R. Haryoko, S. Martodjojo & Djuhaeni (1998)- Analisa sekuen stratigrafi resolusi tinggi daerah Sangatta Kalimantan Timur. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 78-90.
('High-resolution sequence stratigraphy analysis in the Sangatta area, E Kalimantan'. Sequence stratigraphic interpretation and correlation of two wells in Sangatta oilfield. Productive zone with 14 sequences and 96 fluvial-deltaic sandstone reservoirs in M Miocene- Recent interval)

Putra, P.I., R. Ranjani, Z. Yahya, R.S. Afifah & Widodo (2015)- Determination of turbidite facies and 3D model based on outcrops and petrographic description in Mahakam area and implication as hydrocarbon source rock in Kutai Basin. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-109, 16p.
(Study of marine slope and lobe fan turbidite deposits of Late Oligocene- E Miocene Pamaluan Fm in outcrop of Separi Anticline in W Samarinda area, E Kalimantan. Babulu Limestone deposited conformably above it)

Putra, P.R., Tasiyat, B. Sapiie & A.M. Ramdhan (2017)- Pore-pressure prediction and its relationship to structural style in offshore Tarakan Basin, Northeast Kalimantan. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-523-G, 14p.
(Two main structural styles in offshore Tarakan sub-basin: (1) proximal-shelf deformation dominated by normal-growth faults and (2) distal-slope deformation dominated by toe-thrusts, both result of gravitational

sliding on upper E Miocene shale detachment surface. Top overpressure created by fluid expulsion predicted at depth of 2000-3500m TVDss in M-L Miocene shale. Decrease of overpressure in distal direction)

Radke, M., P. Garrigues & H. Willsch (1990)- Methylated dicyclic and tricyclic aromatic hydrocarbons in crude oils from the Handil Field, Indonesia. Organic Geochem. 15, p. 17-34.
(Organic compounds suggest high maturities of Mahakam Delta Handil field oils. Methylphenanthrene Index indicates origin from source rocks at present depth of >3400m, deeper than previously assumed)

Raguwanti, R., A. Naskawan, D. Tangkalalo & T. Kurniawan (2007)- Innovation technology using acoustic impedance modeling for reservoir characterization at Tanjung oil field, Barito Basin, Southeast Kalimantan, Indonesia. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 494-503.
(Modeling of six producing sandstone layers and dolerite sill in E-M Eocene Lower Tanjung Fm reservoir interval in Tanjung Field)

Rahmad, B., K. Anggayana, S. Notosiswoyo, S. Widodo & A.H. Widayat (2013)- Occurrence of long-chain n-alkanes in Muara Wahau coal, Upper Kutai Basin, Indonesia. Int. Symp. Earth Science and Technology, CINEST 2012, Procedia Earth Planetary Sci. 6, p. 38-41.
(online at: http://ww.sciencedirect.com/science/article/pii/S1878522013000064)
(E Miocene Muara Wahau coal of Upper Kutai Basin 8-66m thick. With bimodal distribution of n-alkanes at n-C16 and n-C31. n-C31 may be derived from higher plants, as is unusual high n-C38 in some Kalimantan coals)

Ramdhan, A.M. (2010)- Overpressure and compaction in the Lower Kutai Basin, Indonesia. Doct. Thesis Durham University, p. 1-300.
(online at: http://core.ac.uk/download/pdf/85553.pdf)

Ramdhan, A.M. & N.R. Goulty (2010)- Overpressure generating mechanisms in the Peciko field, Lower Kutai Basin, Indonesia. Petroleum Geoscience 16, 4, p. 367-376.
(Peciko Field gas in multiple Miocene deltaic reservoirs. In deeper reservoirs gas trapped hydrodynamically by high lateral overpressure gradients. Top of overpressure below 3 km burial depth, below depth range for smectite to mixed-layer illite/smectite transformation. Gas generation and chemical compaction responsible for overpressure generation, contradicting previous interpretation of disequilibrium compaction)

Ramdhan, A.M. & N.R. Goulty (2011)- Overpressure and mudrock compaction in the Lower Kutai Basin, Indonesia: a radical reappraisal. American Assoc. Petrol. Geol. (AAPG) Bull. 95, 10, p. 1725-1744.
(Overpressure at depths below ~3 km in Lower Kutai Basin generally attributed to disequilibrium compaction, but more likely to be controlled by chemical compaction/ cementation of mudrocks)

Ramdhan, A.M. & N.R. Goulty (2014)- Overpressure in the shelfal area of the Lower Kutai Basin. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-357, 13p.
(Overpressure in shelfal area of Lower Kutai Basin commonly believed to be due to disequilibrium compaction. but more likely caused by unloading mechanisms. Top of hard overpressure at T just >130°C, indicating gas generation may be principal process of overpressure generation, with probable additional contribution from clay diagenesis, especially illitization of kaolinite)

Ramdhan, A.M. & N.R. Goulty (2018)- Two-step wireline log analysis of overpressure in the Bekapai Field, Lower Kutai Basin, Indonesia. Petroleum Geoscience 24, 2, p. 208-217.
(online at: http://pg.lyellcollection.org/content/petgeo/24/2/208.full.pdf)
(Interpretation of overpressure from sonic and density wireline logs in oil-gas field off Mahakam Delta)

Ramli, R., S.B. Nugroho, J. Bradfield & S. Hansen (1993)- Reservoir modelling in the Bunyu Tapa gas field- an integrated study. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 225-251.
(Bunyu Tapa 1975 gas field on Bunyu Island, NE Kalimantan, reservoir sands deposited as distributary channel sands. Wells on W edge are on E flank of N-S trending anticline, close to gas-water contact, and separated from eastern wells by N-S trending normal faults)

Ranawijaya, D.A.S., E. Usman, Y. Noviadi & K.T. Dewi (2004)- Paleoclimatology and sea-level changes of Mahakam delta, East Kalimantan, interpreted from integrated geological and geophysical integrated data. In: Q. He et al. (eds.) Proc. 41st CCOP Ann. Sess., Tsukuba 2004, p. 35-44.
(online at: www.ccop.or.th/download/pub/41as_ii.pdf)
(On evolution of Mahakam Delta in Late Quaternary. Four climatic events controlled sedimentation)

Ranawijaya, D.A.S., E. Usman, Y. Noviadi & K.T. Dewi (2004)- Paleoclimatology and sea-level changes of Mahakam delta, East Kalimantan, based on geological and geophysical integrated data. Bull. Marine Geol. (MGI, Bandung), 19, 2, p. 41-58.
(Same paper as above)

Rant, H.F.E. (1856)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, XIII. Onderzoek naar kolen aan de rivier Assam-Assam, in de Tanah Laut, Residentie Zuid- en Oosterafdeling van Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 10, p. 277-281.
('Investigation into coal along the Asam-Asam River in the Tanah Laut, Residency SE Borneo'. Brief report on investigation of coals along Asam_Asam River near Tabanio and Martapura in 1853. Lignitic coals. No maps)

Rant, H.F.E. (1856)- Bijdragen tot de geologische en mineralogische kennis van Nederlandsch Indie, XIV. Ijzererts in het Tanah Laut, Residentie Zuid- en Oosterafdeling van Borneo. Natuurkundig Tijdschrift Nederlandsch-Indie 10, p. 282-
(‘Iron ore in the Tanah Laut’, SE Kalimantan. Also in Jaarboek van het Mijnwezen 1873, 1. Brief report on 1854 investigation of iron ore occurrences at Pematang Damar near Tambaga, Pleiari, and at Pontijn (Pontanio?), SE Kalimantan. Associated with ‘greenstone’ (serpentinite?). No maps or figures (Also investigated by Von Gaffron in 1844))

Reksalegora, S.W., M.J. Hursey, N. Nurdiansyah, Sukerim et al. (2002)- Development strategy for a highly compartmentalized reservoir in the Middle Miocene Yakin Sandstone, East Kalimantan. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 671-680.

Renaud, G.P.A. (1874)- Verslag van de kolenmijn Oranje-Nassau te Pengaron, Zuider en Ooster Afdeeling van Borneo. Jaarboek Mijnwezen Nederlandsch Oost-Indie 3, 2, p. 85-117.
(‘Report on the Oranje Nassau coal mine at Pengaron, SE Borneo’. Mostly mining technical description and history)

Renema, W., V. Warter, V. Novak, J.R. Young, N. Marshall & F. Hasibuan (2015)- Ages of Miocene fossil localities in the Northern Kutai Basin: (East Kalimantan, Indonesia). Palaios 30, p. 26-39.
(Documentation of ages of 12 Miocene (Late Burdigalian- Messinian; ~16- 5 Ma) short-lived reefal limestone localities in siliciclastics-dominated section of NE Kutai Basin)

Rengifo, R., W. Priyantono, S. Perrier, A.I. Julius & R. Phasadaon (2012)- Tunu Main Zone, an innovative approach to integrate massive static and dynamic data into a Live 3D geological model. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-019, p. 1-12.
(Reservoir model of Tunu giant gas-condensate field off Mahakam Delta, 75x15 km in size, with >800 wells. Few 1000 stacked independent gas reservoirs. Main zone reservoirs stacked fluvio-deltaic Miocene sands between 2000-5000m subsea. Best reservoirs channel sandstones, mainly E-W oriented)

Rengifo, R., T. Yoga & I. Cibaj (2012)- Tunu shallow gas combine traps, from drilling hazard to massive successful development. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-020, p. 1-12.
(Tunu giant gas-condensate field in front of Mahakam Delta, E Kalimantan, with 800 wells drilled so far. Shallow Pliocene reservoirs above 2500m previously viewed as drilling risk, but recently identified as new production horizons. Two domains: W flank region mainly stratigraphic traps in local structures and sharp lateral boundaries and E crest area with more extensive reservoirs controlled by structure)

Reza, M., I.P. Pratama & A.Y. Pratama (2016)- A new insight to define a chronostratigraphy with sequence stratigraphy and cyclostratigraphy- INPEFA log integrated approach: Miocene Mahakam outcrop study case. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 130-133.
(Example of cyclostratigraphy interpretation of outcrops of Miocene near Samarinda area, E Kalimantan)

Riadi, R.S. (2013)- Depositional environments and stratigraphic development of the Grand Taman Sari circuit outcrop: an analogue for transgressive Mahakam Delta successions. Bull. Earth Sci. Thailand (BEST) 6, 2, p. 115-121
(online at: www.geo.sc.chula.ac.th/BEST/volume6/number2/BEST-13Ridha%20Santika%20Riadi-Vol6No2-pp115-121.pdf)

Riadi, R.S. & J. Lambiase (2015)- Outcrop analogues for subsurface sand body geometries in regressive and transgressive Mahakam Delta successions. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-100, 14p.

Rizka, W. Gunawan, A. Kadir, S. Alawiyah & E.J. Wahyudi (2011)- Studi identifikasi struktur dan prospek hidrokarbon berdasarkan metode gaya berat pada cekungan Kutai, Kalimantan Timur. Jurnal Teknologi Mineral (ITB) 18, 4, p. 221-236.
(online at: http://idci.dikti.go.id/pdf/JURNAL/JTM/JTM%20XVIII%202011%20No.4/paper%205.pdf)
(Based on gravity anomalies Kutei Basin has faults/folds of almost NE-SW orientation) and structures are reverse faults and wrench faults. Two sub-basins (1) Upper Kutei with continental basement and (2) Lower Kutei with oceanic basement. Kutei Basin has deep top basement, with up to ~9.4 km of sediment)

Roberts, H.H. & J. Sydow (1996)- The offshore Mahakam delta: stratigraphic response of late Pleistocene-to-modern sea level cycle. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 147-161.
(Late Pleistocene-to-modern stratigraphy of Mahakam Delta records a progradational continuum from falling stage in sea level, through initial rise, to modern highstand deposition. These results contrast with popular sequence stratigraphic concepts which predict that large, rapid sea level drops, typical of latest Pleistocene, should result in sedimentary bypass of entire shelf)

Roberts, H.H. & J. Sydow (1997)- Siliciclastic- carbonate interactions in a tropical deltaic setting: Mahakam delta of East Kalimantan (Indonesia). Proc. 8th Int. Coral Reef Symposium, Panama, 2, p. 1773-1778.
(Holocene Mahakam Delta prograded across narrow shelf with carbonate buildups. Size of buildups from 25m mud mounds in inner-middle shelf to 80m at shelf edge. Both types rich in aragonitic Halimeda green alga flakes, probably related to flooding of shelf with nutrient-rich Pacific Intermediate water that flows through Makassar Straits. Clinoforms of lowstand delta downlap and encase carbonate buildups))

Roberts, H.H. & J. Sydow (2003)- Late Quaternary structure and sedimentology of the offshore Mahakam delta, East Kalimantan (Indonesia). In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology, SEPM Spec. Publ. 76, p. 125-145.
(Alternating clastic deltaics and shelf carbonates reflect high-frequency cyclic sea level changes. Halimeda bioherms on ravinement surface during Early Holocene transgression. Below ravinement surface are falling-stage and lowstand fluvial- delta plain- incised valley deposits)

Roberts, H.H., J. Sydow, R. Fillon & B. Kohl (2002)- Stratigraphic architecture and fundamental sedimentology of two Late Pleistocene deltas: Gulf of Mexico and Indonesia. In: Sequence stratigraphic models for exploration and production: evolving methodology, emerging models, and application histories, 22nd Annual Gulf Coast Sect. SEPM (GCSSEPM) Foundation Bob F. Perkins Research Conf. 22, p. p. 289-301.
(Sequence architectures of two Late Pleistocene deltas, built during falling to-lowstand relative sea-levels (Mahakam River Delta of E Kalimantan and Mobile River Delta in Gulf of Mexico), differ significantly. Lowstand progradation of Mobile River's Lagniappe delta in numerous lobes incised by complex channel network, and clinoforms downlap outer shelf shale above interglacial condensed section. Mahakam Delta lowstand clinoforms downlap irregular surface of transgressive carbonate bioherms. Both depocenters are multilobate)

Roberts, H.H., J. Sydow, R. Fillon & B. Kohl (2003)- Late Quaternary shelf-edge deltas from Northeastern Gulf of Mexico and Eastern Borneo (Indonesia): a comparison. In: Shelf margin deltas and linked down slope petroleum systems, In: Proc. 23rd Annual Gulf Coast Sect. SEPM (GCSSEPM) Foundation Bob F. Perkins Research Conf., p. 843-847.
(Shorter version of paper above)

Roberts, H.H., J. Sydow, J. Robalin & R. Fillon (2000)- A comparison of two Late Pleistocene shelf-edge deltas (Indonesia and Gulf of Mexico)- stratigraphic architecture, systems tracts, bounding surfaces, and reservoir potential. Trans. Gulf Coast Assoc. Geol. Soc. (GCAGS) 50, p. 361-367.
(Comparison of N Gulf of Mexico (Mobile River) and E Borneo shelf (Mahakam River) Late Pleistocene shelf-edge deltas. Both deltas constructed by falling-to-lowstand deposition associated with latest Pleistocene glacial maximum. Mahakam shelf falling-to-lowstand clinoforms downlap irregular surface of isolated carbonate bioherms built above transgressive surface formed during preceding sea level rise. NE Gulf of Mexico dominated by siliciclastic sedimentation)

Rohmana, R.C., I. Fardiansyah, L. Taufani, A. Budiman & A. Gunawan (2016)- Digital Outcrop Model (DOM) and high-resolution sedimentology of Balikpapan deltaic sandstone: perspective of heterogeneities in thin-bed reservoir. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-243-G, 14p.
(3-D description of outcrop of M Miocene deltaic Balikpapan Fm sands-shales)

Rohmana, R.C., I. Fardiansyah, L. Taufani & D. Harishidayat (2019)- Depositional processes and facies architecture of Balikpapan Sandstone: application of 3D Digital Outcrop Model (DOM) to identify reservoir geometry and distribution in deltaic system. Lemigas Scientific Contributions Oil and Gas 42, 3, p. 85-93.

Rosary, D., A.B. Nicaksana & J.K. Wilkinson (2014)- A correlation of climate stratigraphy with biostratigraphy to confirm stratigraphic units in the Sebatik Area. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-258, 17p.
(Review of N Tarakan Basin petroleum geology around Sebatik PSC blocks. 16 stratigraphic packages recognized and correlated in Eocene- Recent interval, using log-derived transform curves considered to reflect climate stratigraphy curves (no indication that actual climate or biostratigraphy data was used; JTvG))

Rosary, D., E. Sunardi, Yuniyanto & A. Krisna (2003)- Facies analysis of the Lower DR Sands, based on core and wireline log interpretation, Attaka Field. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-11.
(Attaka Field 125 km NE of Balikpapan. Lower DR Sand in overpressure sequence at 10050- 10130'. Core and log data from 20 wells show deltaic depositional system, which could be divided into 5 coarsening upward units. Depositional environment interpreted as delta front and prodelta. Sand bars SW-NE orientation)

Rose, R. & P. Hartono (1978)- Geological evolution of the Tertiary Kutai- Melawi Basin, Kalimantan, Indonesia. Proc. 7th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 225-252.
(Kutei basin and Melawi-Ketungau areas connected in Paleogene, with Melawi-Ketungau area open to NW Borneo basin. Schwaner Block of SW Kalimantan and Kuching Arch of C Borneo yielded sediments throughout Tertiary. Paleogene deposition transgressive except in Melawi-Ketungau area where it was regressive. Greatest Kalimantan Paleogene carbonate development on Barito and Paternoster platforms. Isopach maps suggest Meratus range was Tertiary depocenter. Meratus graben Eocene- M Miocene sediments uplifted, folded and faulted in M-L Neogene. Obduction in Sabah area accompanied NW rotation which uplifted Kuching High and resulted in deposition of second generation regressive sediments to N and S and provided impetus for gravitational folds. Counter-clockwise rotation accomplished by M Tertiary. Late Neogene obduction of oceanic crust onto E Sulawesi partially closed Meratus graben)

Rosler, A., V. Pretovic, V. Novak, W. Renema & J.C. Braga (2015)- Coralline algae from the Miocene Mahakam Delta (East Kalimantan, Southeast Asia). Palaios 30, p. 83-93.

(Study of 31 species of crustose coralline algae from 6 localities of E-M Miocene (Burdigalian- Serravallian) reefal limestone in E Kalimantan. Two main assemblages: (1) S: shallow-water, dominated by Neogoniolithon, thick crusts of Spongites and Hydrolithon; (2) D: darker water, with mainly thin crusts of Lithothamnion, Mesophyllum and Sporolithon)

Rotinsulu, L.F., S. Sardjono & N. Heriyanto (1993)- The hydrocarbon generation and trapping mechanism within the northern part of Barito basin, South Kalimantan. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 607-633.
(Barito Basin two types of source rocks: Tanjung and Lower Warukin Formations shales and coals)

Rowley, K.G. (1973)- Rehabilitation and development of Tarakan Island. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 217-220.
(Pamusian Field discovered in 1905, cum. production 181 MBO from ~1100 wells, from reservoirs between 180'- 7000'. With history of Tarakan Island oil production)

Rullie, S. (1982)- Pengembangan batubara didaerah Kalimantan Timur dan Selatan. Proc. 11th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 129-142.
('Coal in the area of E and S Kalimantan')

Ruppert, L.F. & T.A. Moore (1993)- Differentiation of volcanic ash-fall and water-borne detrital layers in the Eocene Senakin coal bed, Tanjung Formation, Indonesia. Organic Geochem. 20, 2, p. 233-247.
(Thin interbeds in Eocene Senakin coal bed, SE Kalimantan, are volcanic ash-falls and mixed volcanics-clastics, possibly related to volcanism between Kalimantan and Sulawesi)

Rutten, L. (1911)- On *Orbitoides* of the Balikpapan Bay, East coast of Borneo. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 15, p. 1122-1139.
(online at: www.dwc.knaw.nl/DL/publications/PU00013345.pdf)
(Miocene lepidocyclinids (called Orbitoides here) from Balikpapan Bay area: star-shaped L. radiata/ L. martini, small L. sumatrensis and large species. Several new species proposed: L. acuta, L. flexuosa, L. polygona. Also new subgenus of E-M Miocene miogypsinids Lepidosemicyclina, with new species L. thecidaeformis and L. polymorpha. Locality map, but no good foram illustrations)

Rutten, L. (1912)- Studien uber Foraminiferen aus Ost-Asien, 1. Uber *Miogypsina* von Ost-Borneo. Sammlungen Geol. Reichs-Museums Leiden (1), 9, p. 201-213.
(online at: http://www.repository.naturalis.nl/document/552438)
('Studies on foraminifera from East Asia, 1. On Miogypsina from East Kalimantan'. E-M Miocene Miogypsina from Balikpapan Bay and Bontang areas, incl. Miogypsina bifida n.sp., M. (Lepidosemicyclina) polymorpha)

Rutten, L. (1912)- Studien uber Foraminiferen aus Ost-Asien, 2. Uber Foraminiferen aus dem Gebiet des oberen Kapoewas-Moeroeng, Sud-Borneo. Sammlungen Geol. Reichs-Museums Leiden (1), 9, p. 213-217.
('Studies on foraminifera from East Asia, 2. Foraminifera from the Upper Kapuas- Murung area, South Kalimantan'. Early Miocene foram limestones from Sg, Mahanjong with large Lepicyclina formosa and Cycloclypeus communis)

Rutten, L. (1913)- Studien uber Foraminiferen aus Ost-Asien, 3. Eine neue *Alveolinella* von Ost-Borneo. Sammlungen Geol. Reichs-Museums Leiden (1), 9, p. 219-224.
('Studies on foraminifera from East Asia, 3. A new Alveolinella from East Kalimantan'. Alveolinella bontangensis n. sp. from Miocene marl with Miogypsina 20 km W of Bontang. Now assigned to Flosculinella)

Rutten, L. (1914)- Studien uber Foraminiferen aus Ost-Asien, 4. Neue Fundstellen von Tertiaren Foraminiferen in Ost-Borneo. Sammlungen Geol. Reichs-Museums Leiden (1), 9, p. 281-307.
(online at: www.repository.naturalis.nl/document/552393)
('Studies on foraminifera from East Asia, 4. New localities of Tertiary foraminifera in E Kalimantan'. Mainly on Miocene Lepidocyclina spp. near Balikpapan, Bontang and other localities)

Rutten, L. (1914)- Studien uber Foraminiferen aus Ost-Asien, 6. Lepidocyclinenkalke von Batoe Poetih bei Poeroek Tjahoe, Sud- Borneo. Sammlungen Geol. Reichs-Museums Leiden (1), 9, p. 320-322.
(online at: www.repository.naturalis.nl/document/552393)
('Studies on foraminifera from East Asia, 6. Lepidocyclina limestones of Btau Putih near Puruk Cahu, South Kalimantan'. Coralline nummulitid limestones described by Hirschi from Batu Putih rich in large Lepidocyclina formosa (= Eulepidina), therefore not Eocene, but Oligocene or E Miocene age)

Rutten, L. (1915)- Studien uber Foraminiferen aus Ost-Asien, 8. Vier Eozanvorkommen aus Ost-Borneo. Sammlungen Geol. Reichs-Museums Leiden (1), 10, p. 3-10.
(online at: www.repository.naturalis.nl/document/552375)
('Studies on foraminifera from East Asia, 8. Four Eocene localities in East Kalimantan'. (1) Eocene at Sg Bungalun with Pellatispira (but here called Calcarina), Nummulites and Discocyclina (here called Orthophragmina), (2) Tanjung Mangkalihat (Discocyclina, Nummulites), (3) Tanjung Seilor (Kayan River; Alveolina; also with N. fichteli= E Oligocene ?) and (4) black Nummulites limestone from Sebuku River)

Rutten, L. (1915)- Eocene orbitoiden en nummulieten van Paloe Laoet. Jaarboek Mijnwezen Nederl-Indie 43 (1914), Verhandelingen 2, p. 74-77.
(Orthophragmina (=Discocyclina) omphalus and Nummulites bagelensis demonstrate Eocene age of marl formation above sandstone- coal beds on Pulau Laut, SE Borneo)

Rutten, L. (1916)- Foraminiferen-kalksteenen uit de Tidoengsche landen (Noord-Oost Borneo). Jaarboek Mijnwezen Nederlandsch-Indie 44 (1915), Verhandelingen 1, p. 29-32.
('Foraminiferal limestones from the Tidung Lands, NE Kalimantan'. Follow-up of Rutten (1915) description of Eocene limestones collected by Munniks de Jongh (1913) in upper Tarakan basin. With Nummulites bagelensis, N. javanus, Discocyclina dispansa, Alveolina. Sample from Sungai Apat also rich in Pellatispira, previously described as Calcarina)

Rutten, L. (1916)- Veranderingen in de facies van het Tertiair van Oost Koetei. Verslagen Akademie Wetenschappen, Amsterdam 25, p. 700-709.
(Original Dutch version of Rutten (1917) 'Modifications of the facies...' below)

Rutten, L. (1917)- Modifications of the facies in the Tertiary Formation of East-Kutei (Borneo). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 19, 1, p. 728-736.
(online at: www.dwc.knaw.nl/DL/publications/PU00012397.pdf)
(Observations on Miocene stratigraphy in East Kutei basin outcrops)

Rutten, L. (1920)- Over het voorkomen van *Halimeda* in Oudmiocene kustriffen van Oost Borneo. Verslagen Kon. Nederl. Akademie Wetenschappen, Amsterdam, 28, p. 1124-1126.
('On the occurrence of Halimeda in Old-Miocene coast reefs of East Borneo'. Calcareous algae Halimeda rel. common in modern coastal reefs in E Indonesia, but rel. uncommon in Miocene limestones. Several E Miocene limestones from E Kalimantan have Halimeda, probably same as recent species H. opuntia)

Rutten, L. (1921)- On the occurrence of *Halimeda* in Old-Miocene coast reefs of East Borneo. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 23, 1, p. 506-508.
(online at: www.dwc.knaw.nl/DL/publications/PU00014672.pdf)
(English version of Dutch paper above))

Rutten, L. (1925)- Tertiaire gesteenten uit noordwestelijk Britsch Borneo en uit Beraoe (O. Borneo). Verslagen Kon. Akademie Wetenschappen, Amsterdam 34, 6, p. 579-583.
('Tertiary rocks from British Borneo and from Berau, E Borneo'. Dutch version of Rutten (1925), below)

Rutten, L. (1925)- Tertiary rocks from Northwestern Borneo and from Berau (E. Borneo). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 28, 7, p. 640-644.

(online at: www.dwc.knaw.nl/DL/publications/PU00015203.pdf)
(Rocks from British Borneo include clastics derived from 'old rocks', with relatively rare limestones (described in more detail in Rutten (1925)). Berau rocks collected by Weber from N Sangkulirang from thick Early Oligocene- Miocene marl-limestone dominated section, with larger forams at several levels and with Old Neogene volcanics (described in more detail in Rutten (1926)). Many Tertiary rocks in Berau and British N Borneo have pebbles or sandy grains of ?Mesozoic radiolarite. No maps, illustrations)

Rutten, L. (1925)- De eruptiefgesteenten van de subrecent vulkaantjes Moerai en Beloeh, en andere gesteenten uit het Njawatan-gebied, Zuid Koetai. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (KNAG) (2) 42, p. 642-652.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001677001:pdf)
(Petrographic descriptions and chemical analyses of basaltic young volcanics from Upper Kutai area. Samples collected by H. Witkamp in 1923)

Rutten, L. (1925)- Borneo, geologisch-geografisch bekeken. Zesde Koloniale Vacantiecursus voor Geografen, Amsterdam 1925, Comite voor Indische Lezingen en Leergangen, p. 2-7.
('Geologic- geographic view of Borneo'. Lecture notes of review of Borneo geology. Netherlands Borneo relatively better known than British Borneo, through surveys of 'Mijnwezen' and scientific expeditions. Borneo is aseismic, has no active volcanoes and is commonly viewed as 'old continent'. However, no rocks proven older than Triassic and locally very thick Tertiary deposits, common young deformation, etc. not compatible with 'old landmass'. Two widespread Mesozoic deposits: (1) Danau Fm (Triassic- Jurassic?) red radiolarites and basic volcanics and (2) Cenomanian Orbitolina-bearing shallow marine sediments. No figures)

Rutten, L. (1926)- Over Tertiaire, foraminiferenhoudende gesteenten uit Beraoe (Oost Borneo). Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 7, 4, p. 297-328.
('On Tertiary foraminifera-bearing rocks from Berau, E Kalimantan'. Oligocene and Miocene larger forams Lepidocyclina, Miogypsina, reticulate Nummulites, etc. from widespread limestones in Berau region, NE Kalimantan, collected by Weber (NKPM) and Beucker Andreae. Most Tertiary clastic sediments contain rounded fragments of Mesozoic radiolarite, suggesting significant Pre-Tertiary uplift)

Rutten, M.G. (1948)- On the contemporaneous occurrence of *Lepidocyclina* and *Discocyclina* in Northern Borneo. Geologie en Mijnbouw 10, 8, p. 170-172.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0M2FZWEhucTVNLTA/view)
(Unusual co-occurrence of (Eocene) Discocyclina/ Biplanispira and Lepidocyclina (Nephrolepidina and Eulepidina) in sample from N Borneo originally described by L. Rutten (1925) Possibly Neogene age with reworked Eocene (also mentions common Lockhartia, but is probably Pellatispira; JTvG))

Rutten, M.G. (1950)- Comparison of *Lepidocyclina zeijlmansi* Tan from Borneo with *Lepidocyclina birmanica* Rao from Burmah. Proc. Kon. Nederl. Akademie Wetenschappen 53, 2, p. 196-198.
(online at: www.dwc.knaw.nl/DL/publications/PU00018769.pdf)
(Larger foram genus Lepidocyclina very rare in Eocene of SE Asia. First and only occurrence is Lepidocyclina zeijlmansi Tan Sin Hok 1936 from northern Central Borneo. L. birmanica Rao 1942 from Eocene of Burma is distinct, but closely related species. Both belong in subgenus Polylepidina)

Sadirsan, W.S., D.N. Imanhardjo & T.W. Kunto (1994)- The ancient Sangatta delta: new insight to the Middle Miocene Northern Kutai Basin deltaic systems, East Kalimantan. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 45-55.
(M Miocene deltaics in Sangatta Field suggest Sangatta delta system separate from Mahakam Delta to S)

Safarudin & M.H. Manulang (1989)- Trapping mechanism in Mutiara Field, Kutei Basin, East Kalimantan. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 399-421.
(Huffco Mutiara field combination structural- stratigraphic trap of N-S trending M-L Miocene delta sandstones draped over NE-SW trending anticline)

Saib, M.D. & B.H. Suwandi (1991)- Interpretation of overpressured zone in Tunu field using Eaton formula and sonic log data. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 61-85.
(Most wells in Tunu field offshore Mahakam Delta encountered overpressure, probably tied to undercompaction of shales below ~2000- 3000m)

Saib, M.D. & B.H. Suwandi (1992)- Penggunaan metoda D'Exponent untuk mendeteksi tekanan lapisan batuan pada pemboran sumur eksplorasi di daerah kerja Total Indonesia, Delta Mahakam, Kalimantan Timur. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 147-159.
('D-Exponent method usage to detect formation pressure in exploration drilling in Total Indonesie contract area, Mahakam Delta, East Kalimantan')

Saito, K., R.D. Nurim & T. Uchiyama (1988)- Sedimentological and geometrical analysis of sandstones in Pamaguan Field, Kutei Basin- case study Indonesia. World Oil, July 1987, p. 43-46.

Sallee, J.E. & B.R.Wood (1984)- Use of microresistivity from the dipmeter to improve formation evaluation in thin sands, Northeast Kalimantan, Indonesia. J. Petroleum Technology 36, 9, p. 1535-1544.
(On evaluation of U-M Miocene thin-bedded oil sands in Tarakan Basin, which were commonly overlooked in reserves calculations, using dipmeter microresistivity curve processing)

Saller, A., R. Armin, L.O. Ichram & C. Glenn-Sullivan (1992)- Sequence stratigraphy of Upper Eocene and Oligocene limestones, Teweh area, Central Kalimantan. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 69-92.
(Four major latest Eocene- Oligocene depositional sequences in Teweh area, straddling Barito Platform- Kutai basin. Each sequence 200-500m thick. During sequences 2-4 carbonate shelf in S part Teweh area, basinal shales to N. Overall deepening- backstepping of facies (to S or interior of platform). No evidence for 'global' 29-30 Ma mid-Oligocene Haq et al. 1987 sea level drop, which must either be of less magnitude, or different time. Looks like solid biostratigraphic and Sr-isotope age control, but little supporting data included)

Saller, A., R. Armin, L.O. Ichram & C. Glenn-Sullivan (1993)- Sequence stratigraphy of aggrading and backstepping carbonate shelves, Oligocene, Central Kalimantan, Indonesia. In: R.G. Loucks & J.F. Sarg (eds.) Carbonate sequence stratigraphy: recent developments and applications. Mem. American Assoc. Petrol. Geol. (AAPG) 57, p. 267-290.
(Teweh area of C Kalimantan with four major Oligocene carbonate sequences, each 200-500 m thick, with carbonate shelves developed in S part of Teweh area)

Saller, A.H., J.T. Noah, J.C. Waugaman & A.P. Ruzuar (2003)- Sequence stratigraphy of isolated carbonate buildups in a deltaic province, Kutei Basin, east Kalimantan, Indonesia. AAPG Ann. Conv., Houston 2002, Search and Discovery Art. 30014, 9p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2003/saller/images/saller)
(Kutei basin dominated by clastic deposition, but isolated carbonate buildups also common in Lower Oligocene- Holocene. Buildups accumulated during transgressions, preferentially on structural highs and margins of lowstand deltas. Pliocene outer shelf buildups that grew during single seismic-scale sequence typically 100m thick, 5 km long, 1 km wide. Thicker buildups consist of stacked sequences. Carbonate buildups drowned due to rapidly rising sea level and/or nutrient poisoning associated with approaching deltas)

Saller, A., S.W. Reksalegora & P. Bassant (2010)- Sequence stratigraphy and growth of shelfal carbonates in a deltaic province, Kutai Basin, Offshore East Kalimantan. In: W.A. Morgan, A.D. George et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 147-174.
(Kutai Basin Neogene dominated by deltaics, but carbonates also common. Carbonate-siliciclastic interactions studied in U Pleistocene and U Miocene-Pliocene off N Mahakam delta. U Pleistocene carbonates on siliciclastic shelf margins during ~110 kyr eustatic cycles. Carbonates also in two sequences in uppermost Miocene and lower Pliocene. Mio-Pliocene carbonate buildups on shelf margin ~255 m thick, 5 km long, 1 km wide and composed largely of bioclastic packstone and grainstone. Most Mio-Pliocene shelf-margin buildups filled with water, probably because overlying siliciclastics do not seal)

Saller, A. & S. Vijaya (2002)- Depositional and diagenetic history of the Kerendan carbonate platform, Oligocene, central Kalimantan, Indonesia. J. Petroleum Geol. 25, p. 123-150.
(Kerendan Berai Lst platform 11x16 km in W Kutei Basin. Aggradation during Oligocene transgression, contemporaneous with aggradation- backstepping of Barito shelf margin. ~1000m thick, three aggrading seismic sequences. Carbonate deposition started in Late Eocene, ended by drowning in Late Oligocene (~28.6 Ma). Three areas (1) platform interior/ lagoon wackestone-packstones with porosities <5%; (2) raised platform rim, 1-2 km wide, with wacke-, pack-, grain- and boundstones, with grainstones increasing toward platform margin. Greater porosity (5-13%) than platform interior because more grainstone and more dissolution by acidic waters from compacting basinal shales near platform margin; (3) platform margin and slope)

Samson, P., T.D. Rochette & M. Lescoeur (2005)- Peciko geological modelling: optimizing fluid distribution and model resolution of a giant gas field in a shale-dominated deltaic environment. Proc. Asia-Pacific Oil and Gas Conf. Exh., Jakarta 2005, SPE 93253, p. 1-10.
(Geologic model of Peciko field, SE part of Mahakam Delta. Reservoir sands mainly distributary mouth bars, triangular in outline, and limited extent (1.5- 4.5 km wide, 1-3m thick). Diagrams of distributary mouth bars. See also below)

Samson, P., T.D. Rochette, M. Lescoeur & P. Cordelier (2005)- Peciko geological modelling: possible and relevant scales for modelling a complex giant gas field in a mudstone dominated deltaic environment. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 345-354.
(Geologic model of large (250 km2) Peciko field, SE of Mahakam Delta. Complex geology, mud- dominated deltaic reservoir section with 2000m of gross gas column in tens of reservoirs. Total of 96 deltaic cycles)

Samuel, L. (1980)- Relation of depth to hydrocarbon distribution in Bunyu. Island, N.E. Kalimantan. Proc. 9th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 417-432.
(Geothermal gradients on Bunyu Island average 4.28°/100m, ranges 3.7- 5.3°C/100m. Maturation studies indicate present subsurface temperatures maximal in history of deltaic Late Miocene- Pleistocene sediments)

Samuel, L. & S. Muchsin (1975)- Stratigraphy and sedimention in the Kutai Basin, East Kalimantan. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 27-39.

Santodomingo Aguilar, N. (2014)- Miocene reef-coral diversity of Indonesia: unlocking the murky origins of the Coral Triangle. Ph.D. Thesis University of Utrecht, Utrecht Studies in Earth Sciences 63, p. 1-340.
(online at: https://dspace.library.uu.nl/handle/1874/300545)
(Study of Miocene corals from patch reefs in E Kalimantan; collection of manuscripts. Incl. revision of fossil record of Acropora (31 species) and Isopora in Indo-Pacific. Platy coral assemblages common up to M Miocene (Serravallian), branching coral assemblages become dominant in Late Miocene (Tortonian) and first occurrence of entirely massive coral assemblage (similar to modern) in Messinian)

Santodomingo, N., V. Novak, V. Pretkovic, N. Marshall, E. Di Martino, E.L.G. Capelli, A. Rosler, S. Reich et al. (2015)- A diverse patch reef from turbid habitats in the Middle Miocene (East Kalimantan, Indonesia). Palaios 30, p. 128-149.
(Faunas and facies of small 8-10m thick M Miocene 'Stadion section' patch reef in Mahakan Delta system near Samarinda, E Kalimantan. 69 species of corals, 28 bryozoan and coralline algae (Neogoniolithon, Spongites, Lithoporella, etc.). Key larger foraminifera incl. Nephrolepidina martini, Cycloclypeus annulatus and Lepidosemicyclina bifida. Seven facies types)

Santodomingo, N., W. Renema & K.G. Johnson (2016)- Understanding the murky history of the Coral Triangle: Miocene corals and reef habitats in East Kalimantan (Indonesia). Coral Reefs 35, 3, p. 765-781.
(Corals from E Kalimantan outcrops contain 79 genera and 234 species. Three different coral assemblages in small patch reefs, developed under influence of high siliciclastic input from Mahakam Delta. Platy coral assemblages (Porites, Leptoseris, etc.) common until Serravallian, branching corals became dominant in Tortonian. By Late Tortonian massive coral assemblages dominated, similar to modern-style coral framework)

Santodomingo, N., C.C. Wallace & K.G. Johnson (2015)- Fossils reveal a high diversity of the staghorn coral genera *Acropora* and *Isopora* (Scleractinia: Acroporidae) in the Neogene of Indonesia. Zoological J. Linnean Society 175, 4, p. 677-763.
(online at: https://academic.oup.com/zoolinnean/article/175/4/677/2449809)
(Extensive collections of Miocene corals from E Kalimantan, Indonesia, with 31 species of Acropora and 2 of Isopora, in E Miocene (max. age 18-20 Ma). 12 extant species already present in E Miocene. Most corals associated with shallow turbid habitats)

Santoso, B. (2009)- Geologic factors controlling mineral content in selected Tertiary coals- southern Kalimantan. Indonesian Mining J. 12, 2, p. 67-74.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/565/427)
(In Asem-Asem basin average mineral content of Miocene coals (3.9%) lower than Eocene coals (6.7%). Miocene coals bright lithotypes/ vitrinite-rich coal with fewer clay partings; Eocene coals dull lithotypes/vitrinite-poor)

Santoso, B. (2011)- Geologic aspects controlling maceral and mineral matter content of Satui coals- South Kalimantan. Indonesian Mining J. 14, 2, p. 63-73.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/494/358)
(Coals in Asem-Asem Basin, SE Kalimantan, in Eocene Tanjung and M Miocene Warukin Fms. Eocene(?) coals from Satui area dominated by bright-banded and banded types. Vitrinite and liptinite dominant macerals, minor inertinite Mineral content relatively high. Brighter coal more vitrinite-rich. Vitrinite reflectance 0.48-0.54%)

Santoso, B. (2011)- Organic petrology of selected coal samples of Eocene Kuaro Formation from Pasir- East Kalimantan. Indonesian Mining J. 14, 3, p. 146-153.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/485/349)
(Coals from Eocene Kuaro Fm in Pasir area in S-most Kutai Basin. Maceral composition similar to most SE Kalimantancoals. Presence of common pyrite and calcite reflects marine incursion. Vitrinite reflectance (Rvmax%) 0.53-0.71% (subbituminous A- high volatile bituminous C))

Santoso, B. & B. Daulay (2004)- Organic petrology of selected Tertiary Kalimantan coals. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 104-114.
(E and S Kalimantan Eocene and Miocene coals dominated by vitrinite, common exinite and rare inertinite. Paleogene coals sub-bituminous to high volatile bituminous rank (Rv max. 0.53-0.67%), Miocene coals brown to sub-bituminous rank (Rv max 0.30-0.57%)

Santoso, B. & B. Daulay (2005)- Type and rank of selected Tertiary Kalimantan coals. Indonesian Mining J. 8, 2, p. 1-12.

Santoso, B. & B. Daulay (2006)- Geologic influence on quality of selected Tertiary Barito coals. Indonesian Mining J. 9, 2, p. 14-22.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/647/508)
(Petrography of Eocene coals of Tanjung Fm, Barito basin, SE Kalimantan. Coals mainly vitrinite (av. 83%), liptinite (av. 12%), rare inertinite and mineral matter Resinite, cutinite and sporinite are dominant liptinite macerals. Mineral matter mainly clay and pyrite. Vitrinite reflectance of Eocene coal 0.53- 0.64% (sub-bituminous- high-volatile bituminous); Neogene coals 0.30- 0.47% (brown coal- subbituminous)

Santoso, B. & B. Daulay (2006)- Geologic influence on type and rank of selected Tertiary Barito coal, South Kalimantan, Indonesia. In: C. Chou et al. (eds.) Abstracts 23rd Ann. Mtg. Soc. Organic Petrology, Beijing 2006, p. 214-216. *(Extended Abstract)*

Santoso, B. & B. Daulay (2008)- Importance of organic petrology to type and rank of Miocene Asem-Asem coal- South Kalimantan. Indonesian Mining J. 11, 3, p. 1-10.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/580/442)

(Coal petrography of 34 samples from Miocene Warukin Fm. Coals composed mainly of vitrinite with subordinate liptinite, low inertinite, and very low mineral content. Vitrinite reflectance Rv 0.25-0.46% (brown coal- sub-bituminous rank))

Santoso, B. & B. Daulay (2009)- Geologic and petrographic aspects for coal exploration in Sangatta- East Kalimantan. Indonesian Mining J. 12, 1, p. 10-22.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/572/434)
(Miocene coals in folded Balikpapan Fm of Sangatta area, Kutai Basin. Mean vitrinite reflectance Rv 0.48-0.63% (brown coal- subbituminous rank), locally altered by intrusives to semi-anthracite (Rv 1.87%). Coal rank increases from E to W towards Meratus Range and Kuching Highs due to increase in sediment cover in W. Coals composed mainly of vitrinite, with subordinate liptinite, low inertinite and mineral matter, indicative of humid tropical forest vegetation without significant dry season)

Santoso, B. & N.S. Ningrum (2010)- Characteristics of selected Mangkalihat coals according to petrographic and proximate analyses. Indonesian Mining J. 13, 3, p. 128-134.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/519/383)
(Coals in Eocene Kuaro Fm in Manggkalihat area of E Kalimantan, below Oligocene and younger limestone section. Three seam,s 1.5-4.0m thick. Coals with very thin claystone-sandstone laminae and rel. common pyrite, suggesting marine influence during deposition. High moisture (15-19%). Vitrinite reflectance 0.46-0.49% (subbituminous A and B rank))

Santy, L.D. & R. Heryanto (2015)- Endapan kipas bawah laut Kapur Akhir di Kalimantan. J. Sumber Daya Geologi 16, 4, p. 195-211.
(online at: http://kiosk.geology.esdm.go.id/artikel/pdf/endapan-kipas-bawah-laut-kapur-akhir-di-kalimantan)
('Late Cretaceous submarine fan deposits in Kalimantan'. In two places: (1) Semitau High, W Kalimantan (Selangkai Fm and Belikai Conglomerate), and (2) Meratus High, SE Kalimantan (Pitap Group))

Sapiie, B., A. Pamumpuni & M. Hadiana (2008)- Balancing cross-section and sandbox modeling of Satui fold-thrust-belt, Asem-Asem Basin, South Kalimantan. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-151, 19p.
(NW-SE directed shortening in Asem-Asem basin at SE side of Meratus Range. Late Miocene deformation of Eocene coal-bearing sediments related to major uplift of Meratus Mountains. >24% shortening in mine area)

Sapiie, B. & A. Rifiyanto (2017)- Tectonics and geological factors controlling cleat development in the Barito Basin, Indonesia. J. Engineering Technol. Sci. (ITB), 49, 3, p. 322-339.
(online at: http://journals.itb.ac.id/index.php/jets/article/view/3510/2961)
(Late Eocene Tanjung Fm and E-M Miocene Warukin Fm coals in Barito Basin with cleats (micro-fractures) predominantly oriented in WNW-ESE and NNE-SSW directions. Cleat density increases with structural position like fold hinges and fault zones. Cleats form during coalification (shrinkage), and are superimposed by later processes like fluid pressure and tectonic stresses and also affected by composition of the coal)

Sapiie, B., A. Rifiyanto & L.A. Perdana (2014)- Cleats analysis and CBM potential of the Barito Basin, South Kalimantan, Indonesia. AAPG Int. Conf. & Exh., Istanbul 2014, Search and Discovery Art. 10653, 19p. *(Extended Abstract)*
(Cleat distribution and orientations in coal in Barito Basin 3 major trends: WNW-ESE, NNW-SSE and NE-SW. Cleat formation in Eocene Tanjung Fm may be related to NW-SE trending rifting, in Miocene Warukin Fm to transpression along Meratus Range which produced NW-SE compressive stress Cleat spacing varies with coal type and ash content. Decreasing cleat spacing from low to high coal rank. Cleat density higher with low ash content. Some coals of Barito Basin have permeability of 20-2000 md)

Saputra, I. & A.Y. Prasetya (2017)- Pulse of depositional environment change in Tarakan Basin: some perspective from onshore Simenggaris Area. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.

(In Tarakan Basin much of Eocene- E Miocene in marine facies. Common Oligocene limestones. Late M Miocene huge sediment influx came in into Tarakan basin and deltaic sedimentation began)

Saputra, I. & T. Wibisono (2016)- Strike-slip fault geometry and its significance for petroleum play in Tarakan Basin: a perspective from onshore Simenggaris area. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-488-G, 8p.
(Tarakan Basin with NE-SW trending folds of gravitational fault system related to deltaic sedimentation. Also major NW-SE high-dip faults with flower structures in Bunyu, Tarakan, Ahus and Sebatik Arches, interpreted as younger, transpressional strike-slip faults. Several oil fields near NW-SE trend (Bunyu, Tarakan, Sembakung, Pamusian, etc.). Onshore Tarakan Basin mainly transpressional deformation, offshore mainly affected by gravitational fault system)

Saputra, I., T. Wibisono & A.Y. Prasetya (2018)- Middle Miocene depositional environment shift in the Tarakan Basin: some perspectives from the onshore Simenggaris area. Berita Sedimentologi 40, p. 45-54.
(online at: http://www.iagi.or.id/fosi/berita-sedimentologi-no-40.html)
(Stratigraphic succession in onshore Tarakan Basin two major depositional environments: Eocene-E Miocene marine and upper M Miocene-Pliocene deltaic depositional environment)

Sardjono (1999)- Gravity field and structure of the crust beneath the Kutei Basin, East Kalimantan, Indonesia. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 62. *(Abstract only)*
(Summary of gravity field of Kutei Basin and surrounding areas. Onshore Bouguer anomalies generally from +10 to +50 mGal; in Balikpapan area depocenter ~75 mGal. Assuming 9000m of sediment and underlying continental crust, anomalies here should be ~ -115 mGal. One possible explanation is rise in Moho)

Sardjono, S. & L. Rotinsulu (1992)- The hydrocarbon generation and trapping mechanism within the northern part of Barito Basin, South Kalimantan. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 131-145.
(In NE Barito basin hydrocarbons sourced from two intervals: Eocene Tanjung Fm (lacustrine oil type) and Miocene Lower Warukin Fm (fluviodeltaic oil type). First hydrocarbon generation in M Miocene from Tanjung source; from Warukin source in Plio-Pleistocene)

Satyana, A.H. (1995)- Paleogene unconformities in the Barito Basin, Southeast Kalimantan: a concept for the solution of the "Barito dilemma" and a key to the search for Paleogene structures. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 263-275.
(Barito basin only 4 commercial discoveries, all in NE part of basin. Multiple unconformities and young inversion. Suggests fields are preserved paleo-traps not affected by young structuring)

Satyana, A.H. (2010)- Geodynamic origins of Kalimantan sedimentary basins. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok 2010, 8p.
(Sedimentary basins of Kalimantan prolific for petroleum and coal deposits. Paleogene geologic evolution of SE Asia strongly controlled by escape tectonics due to collision of India to Eurasia in M Eocene. Trans-Kalimantan Lupar-Adang-Paternoster strike slip fault, opening of Makassar Strait and opening of S China Sea responsible for formation of sedimentary basins in Kalimantan-Borneo)

Satyana, A.H. & E. Biantoro (1996)- Seismic stratigraphy of Eocene Beriun sands of West Bungalun, East Kalimantan, Indonesia: a contribution to the Palaeogene stratigraphical knowledge of the Kutai Basin. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. Sequence Stratigraphy in SE Asia, Jakarta 1995, Indon. Petroleum Assoc. (IPA), p. 383-393.
(Kutei Basin up to 12,000m of sediments. E Eocene- E Oligocene generally transgressive sequences. Eocene NE Kutei W Bungalun area Beriun reservoir-quality sands equivalent to hydrocarbon-bearing Tanjung sands of Banto Basin. At least three seismic stratigraphic sequences. Deposition affected by growth faulting. Interpreted as fan delta deposits in extensional tectonic regime)

Satyana, A.H. & R. Idris (1996)- Chronology and intensity of Barito uplifts, Southeast Kalimantan: a geochemical constraint and windows of opportunity. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 207. *(Poster Abstract)*
(Barito Basin Paleogene mainly extensional deformation. Uplift and inversion of extensional structures starting in Miocene and continuous today. Five uplift events in Tertiary: M Eocene, E-M Oligocene, late Oligocene- E Miocene, M Miocene and Late Miocene- Pleistocene. First two uplift episodes interrupted Paleogene extension. Late Miocene- Pleistocene major uplift event (~1200m). Oligo- Miocene uplift relatively minor (~50m))

Satyana A.H., D. Nugroho & I. Surantoko (1999)- Tectonic controls on the hydrocarbon habitats of the Barito, Kutei and Tarakan Basins, Eastern Kalimantan, Indonesia: major dissimilarities in adjoining basins. J. Asian Earth Sci. 17, 1-2, p. 99-122.
(Barito, Kutei, and Tarakan Basins different Tertiary tectonic styles. Barito Basin initial transtension followed by transpression. NE structures increasingly imbricated towards Meratus Mts and involve basement. W and SE Barito Basin weakly deformed. Kutei Basin dominantly tight NNE-SSW trending anticlines, forming Samarinda Anticlinorium in E. Deformation less intense offshore. M Miocene- Recent growth suggested by thinning over structures. W basin area uplifted. Tarakan Basin NNE-SSW normal faults, formed on older NW-SE trending folds and normal to direction of sedimentary thickening, suggesting growth-faults. Onshore older N-S trending folds from collision of Central Range terranes to W of basin. Barito Basin fields in W-verging faulted anticlines. Tarakan Basin NW-SE anticlines with main producing pools in downthrown blocks of faults)

Satyana, A.H., M.E.M. Purwaningsih & M. Imron (2002)- Coal seams within Eocene Tanjung Formation of the Barito Basin, Southeast Kalimantan: sequence stratigraphic framework and geochemical constraints for source potential. Berita Sedimentologi (Indon. Forum Sedimentologi, FOSI) 17, p. 14-21, 26.
(Barito Basin M Eocene synrift- postrift Lower Tanjung Fm clastics 7 sequences. Coals in three sequences of postrift phase. Mostwidespread and thickest coal seams in transition between synrift- postrift phases. Coals deposited in paralic to upper deltaic settings in various systems tracts. Coals TOC 44-73%, hydrogen index (HI) 285-567 mgHC/gTOC and hydrogen to carbon ratio (H/C) of 0.87-1.18, showing coals are liptinitic and can generate oil. Carbon isotopes and biomarkers show Tanjung Fm coals sourced Tanjung field oil)

Satyana, A.H. & P.D. Silitonga (1993)- Thin-skinned tectonics and fault-propagation folds: new insights to the tectonic origin of Barito folds, South Kalimantan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 282-291.
(Barito Basin foredeep at Meratus front with closely spaced folds-thrusts, formed in M Miocene and Plio-Pleistocene, all with high-angle reverse faults. Become increasingly imbricate towards Meratus Range. Strike slip faults cut older structures. Hydrocarbons known only from folds and paleo-highs in N end of foredeep.

Satyana, A.H. & P.D. Silitonga (1994)- Tectonic reversal in East Barito Basin, South Kalimantan: consideration of the types of inversion structures and petroleum system significance. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 57-74.
(E Barito basin Tertiary structural history characterized by tectonic reversal. Paleogene rifting with NW- SE trending horsts and grabens followed by WNW to ESE Neogene compression with inversion of Paleogene structures. Rift sedimentation resulted in E-M Eocene Lower Tanjung source rocks and reservoir sandstones. Late Eocene- E Oligocene U Tanjung Fm postrift shales effective seal. Inversion started in E-M Miocene (N Kalimantan and E Sulawesi collisions). Plio-Pleistocene inversion might create new traps or destroy previous accumulations and remigrate hydrocarbons. Tanjung Raya fields ideal hydrocarbon-trapping conditions)

Sawada, H., T. Matsuyama, Y. Konda, T. Ishiyama & T. Hashimura (2007)- Middle and Upper Miocene slope channel sandstone reservoir of Sadewa gas field, offshore Mahakam Delta, North Kutei Basin, East Kalimantan, Indonesia; modeling of channel sand body based on exploratory wells and 3D seismic. In: Proc. JAPT Symposium Exploration and exploitation in deep water, Sendai 2006, J. Japanese Assoc. Petroleum Technologists (Sekiyu Gijutsu Kyokaishi), 72, 1, p. 98-107.
(online at: www.jstage.jst.go.jp/article/japt/72/1/98/_pdf)

(In Japanese with English summary. Sadewa Field 2002 gas discovery on slope in 1000-2800' water off Mahakam delta. Cores of Sadewa reservoir exhibit episodic turbiditic deposition of reworked delta sediments. Slope channel sandstone reservoirs of Sadewa field detected as high-amplitude anomalies in 3D seismic data)

Saxby, R. & R. Latief (1988)- Post Convention Field Trip 1988: Samarinda, East Kalimantan, Guide Book. Indonesian Petroleum Association (IPA), 19p.

Schlumberger, C. (1902)- Note sur un *Lepidocyclina* nouveau de Borneo. Sammlungen Geol. Reichs-Museums Leiden (1), 6, p. 250-253.
(online at: www.repository.naturalis.nl/document/552434)
('Note on a new Lepidocyclina from Borneo'. Lepidocyclina formosa n.sp. from Teweh, upper Barito area, SE Kalimantan. Associated with Heterostegina margaritata (= large Eulepidina and Spiroclypeus of latest Oligocene- E Miocene Miocene age, zone Te4-5; JTvG))

Schoell, M., B. Durand & J. L. Oudin (1985)- Migration of oil and gas in the Mahakam Delta, Kalimantan: evidence and quantitative estimate from isotope and biomarker studies. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 49-56.
(Oils of Nilam field derived from humic organic matter at ~3500-4000m. Gases mature-overmature, formed between ~5000-6000m)

Schoell, M., M. Teschner, H. Wehner, B. Durand & J.L. Oudin (1983)- Maturity related biomarker and stable isotope variations and their application in the Mahakam delta, Kalimantan. In: M. Bjoroy et al. (eds.) Proc. Int. Mtg. Organic Geochemistry 1983, Advances in Organic Geochemistry 10, Wiley & Sons, p. 156-163.

Schophuys, H.J. (1936)- Het stroomgebied van de Barito; landbouwkundige kenschets en landbouw voorlichting. Ph.D. Thesis Agricultural University Wageningen, p. 1-207.
(online at: edepot.wur.nl/136042)
('The drainage area of the Barito River; agricultural characterization')

Schurmann, H.M.E. (1925)- Over jong-Tertiaire bruinkolen in Oost Borneo. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek memorial volume), p. 429-440.
('On Young Tertiary lignites in East Kalimantan'. Mainly discussion on relationship between water content and age of lignite/ coal of Neogene of Kutei basin)

Schurmann, H.M.C. (1927)- Uber jungtertiare Braunkohlen in Ost-Borneo. Braunkohle 26, p. 609-612, 634-641.
('On Young Tertiary lignites in East Kalimantan'. Short version of above 1925 paper in German)

Schwaner, C. (1850)- Iets omtrent de Borneosche steenkolen. Indisch Archief I, 2, p. 152-157.
('On coal from Borneo')

Schwaner, C. (edited by J. H. Croockewit) (1852)- Reis naar, en aanteekeningen betreffende de steenkolen van Batoe Belian (Zuid-Oostkust van Borneo). Natuurkundig Tijdschrift Nederlandsch-Indie 3, p. 673-688.
('Trip to, and notes on coal at Batu Belian, SE coast of Borneo'. Posthumously published short report by Schwaner regarding a short survey trip in December 1846, rowing upstream Martapura River from Martapura/ Sungai Raja. Six coal beds at Gunung Garam, SE of Batu Belian, dipping 50-60° to NNW. Similar to coals at Riam, now being exploited, but likely better quality. No maps or figures?)

Schwaner, C. (1853)- Borneo. Beschrijving van het stroomgebied van den Barito en reizen langs eenige voorname rivieren van het Zuid-Oostelijke gedeelte van dat eiland op last van het Gouvernement van Nederlandsch-Indie, gedaan in de jaren 1843-1847. Van Kampen, Amsterdam, vol. 1 (1853), p. 1-234, vol. 2 (1854), p. 1-200.
(online at: https://books.google.com/books?id=LwVdAAAAcAAJ&source=gbs_similarbooks and at: https://books.google.com/books?id=NwVdAAAAcAAJ&source=gbs_similarbooks)

('Borneo: description of the drainage area of the Barito and travels along some important rivers of the SE part of that island undertaken by order of the Netherlands Indies government in 1843-1847'. First geologic-geographic/ anthropological survey work among Dayaks, etc. in SE Kalimantan. Includes discovery of coal in 1844 at Riam Kiwa, SE Kalimantan)

Schwaner, C. (1857)- De steenkolen in het rijk van Bandjermasin. Tijdschrift voor Nederl. Indie 19, 2, 9, p. 129-156.
(online at: https://archive.org/details/tijdschriftvoor30hogoog/page/n138)
('Coal in the Banjarmasin region'. Paper compiled from notes of C.A.L.M. Schwaner, who visited the coal deposits of the Banjarmasin area in 1841 and died in 1851. One of first descriptions of coal in SE Kalimantan, exploited at Pengaron from 1848 onwards. No maps, figures)

Schwartz, C.M., G.H. Laughbaum, B.S. Samsu & J.D. Armstrong (1973)- Geology of the Attaka oilfield, East Kalimantan, Indonesia. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 195-215.
(Attaka first commercial offshore field in Kalimantan in 1970. NNW trending structure. Late Miocene- Pliocene fluvial-deltaic reservoirs between 600'- 7800', with oil produced from 34 sands between 2000-3400'. Structure young anticline, but thinning of sands over crest of structure suggest Late Miocene- Pliocene early growth. Strong positive gravity anomalies under Kutai Basin and Makassar Straits suggestive of oceanic crust basement)

Seigneurin, A., D. Muller, A. Galli & C. Ravenne (1993)- Optimization of the well-spacing with a geostatistical model Tunu Field- Mahakam Area. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 1-17.
(Reservoir model of >4 TCF Tunu gas field, Mahakam Delta. Multiple distal deltaic reservoir sands, mainly rel. thin (1.5-2 m average) channel mouth bars, with occasional distributary channels. Gas in Tunu Main Zone, immediately below Fresh water sands, from 2200- 4100m deep)

Septama, E., H. Darman & T. Tri Handayani (2017)- Mahakam delta system: the integration of outcrops, modern depositional processes and subsurface data. IAGI Fieldtrip Guidebook, p. 1-66.

Septama, E., C.M.E. Putra, D. Vitri & T. Widiyanto (2014)- The development scheme in the oilfield with subtle stratigraphic trap, a key to extend mature field life-span in Sangasanga Field, East Kalimantan, Indonesia. AAPG Int. Conf. Exhib., Istanbul, Search and Discovery Art. 20285, 22p.
(online at: www.searchanddiscovery.com/documents/2014/20285septama/ndx_septama.pdf)
(Fluvio-deltaic sands of Balikpapan Group in Sanga-Sanga Field prolific hydrocarbon reservoirs, with cumulative production of ~360 MMBO. Most of past oil production from structural traps in Sanga-sanga anticline. New pools expected in stratigraphic traps in distributary and tidal channel-fills, etc.)

Septama, E., P. Suseno, C. Mustopa E.P., G. Nuansa, F. Iswanto & Rizky Andi (2019)- How did channel systems survive the high sea level periods? New sedimentological insights from outcrop, modern analogue and subsurface data in the lower Kutai Basin, E.Kalimantan. Berita Sedimentologi 42, p. 5-21.
(online at: www.iagi.or.id/fosi/files/2019/01/FOSI_BeritaSedimentologi_BS42_January2019.pdf)
(Three typical depositional models of highstand fluvial channels, from 3km outcrop transect in Samarinda anticlinorium (Miocene?))

Setyaningsih, C.A. (2009)- Studi palinologi Formasi Mentawir, Sub Cekungan Kutai Bawah, Kalimantan Timur. Jurnal Widyariset (LIPI) 12, 1, p. 109-115.
(online at: http://widyariset.pusbindiklat.lipi.go.id/index.php/widyariset/article/view/205/198)
('Palynological Study of the Mentawir Formation, Lower Kutai subbasin, E Kalimantan'. Palynology of interval 100'-4140' in well 'X' of 'DNA' field. Age mainly M Miocene (F. trilobata zone), 100-850' Late Miocene)

Setiawan, A. (1993)- Development of deltaic sedimentation in the E67/E68/E69 reservoir series, Nilam Field, East Kalimantan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 847-862.
(E-W trending delta distributary channels in M Miocene 'E' sequences of Balikpapan Fm in Nilam giant gas field, discovered in early 1970's by Huffington/ VICO in onshore Mahakan Delta area)

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(Review of M Eocene- Miocene paleogeography and coal distribution in Kutai Basin. Highest potential for coal development in fluvial-delta plain facies of M-L Eocene (Tanjung Fm equivalent), Late Oligocene- E Miocene (Pamaluan Fm equiv.) and multiple delta systems in M-L Miocene (Balikpapan Fm equiv.))

Siagian, H.P. & B.S Widijono (2013)- Anamali gayaberat kaitannya keterdapatan formasi pembawa batubara di daerah Banjarmasin dan sekitarnya, Kalimantan Selatan. J. Geologi Sumberdaya Mineral 14, 1, p. 29-37.
('Gravity anomaly in relation to the coal-bearing formation in Banjarmasin and surrounding areas, South Kalimantan'.Gravity anomalies grouped into 3 parts: high gravity anomaly of 45-75 mGal tied to Meratus High, anomalies of 20 -45 mGal tied Pretertiary and Tertiary rocks, (3) low gravity anomalies of -15 to 20 mGal reflecting Tertiary sedimentary basins)

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('Geological structure of the Sanga-Sanga area, E Kalimantan')

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(Badak and Nilam fields in M Miocene paleo-Mahakam fluvio-deltaic system. Productive horizons numerous isolated mouth bar and distributary channel sandstone reservoirs in basin with high subsidence rates and high sediment influx. High degree of cyclicity at three scales: (1) smallest (100-150') represent delta lobes, parasequences produced by autocyclic processes (2) Intermediate (800-1200') regressive-transgressive parasequence sets; (3) largest (6000-8000') associated with major basin-fill patterns due to progradation of shelf and slope. Larger-scale maximum flooding events cut across regional stratigraphic markers, indicating they are diachronous along depositional strike. Lateral variations in stacking patterns, controlled by migration of zones of sediment influx. Local tectonic effects tend to blur eustatic signatures in basin)

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(Siderite layers 20-30cm thick in Miocene coal-bearing series reflect reprecitation of iron in (brackish) coastal plain zone)

Siemers, C.T., S. Sutiyono & S.K. Wiman (1992)- Description and reservoir characterization of a Late Miocene, delta-front coral-reef buildup, Serang Field, Offshore East Kalimantan, Indonesia. In: Carbonate rocks and reservoirs of Indonesia: a core workshop, Indon. Petroleum Assoc. (IPA), p. 5-1-5-27.
(Late Miocene in Serang Field dominated by fluvial/deltaic and shallow-marine siliciclastics. Also numerous carbonate units indicative of coral reef growth in delta-front, marine-shelf setting. The 80-6 Limestone (67'), includes 'Lower reef' (25'; platy corals in argillaceous matrix grading up to massive and branching coral fragments in mud matrix) and 'Upper reef' (42'; platy-coral-bearing wackestone, overlain by argillaceous coral rubble, porous 10' reef-core type coral rubble and 13' of non-porous, reworked mix). Reef overlain by shallow shelf- delta-front calcareous, shelly, silty shale. 80-6 Limestone represents cluster of buildups with lateral extent of >2.5 km and possibly up to10's of kms. Post-depositional degradation of reservoir quality. Extensive recrystallization of skeletal fragments (especially corals, molluscs) and carbonate mud matrix).

Sigit, S. (1962)- Penjelidikan geologi terhadap endapan batubara didaerah Sungup-Selaro, di bagian utara Pulau Laut (Kalimantan Tenggara). Djawatan Geologi Indonesia, Publ. Teknik, Seri Geol. Ekonomi 3, 43p.
('Geological investigations of the Sungup-Selaro Region in the Northern Part of Pulau Laut (SE Kalimantan'). Geologic reconnaissance in coal-bearing Sungup-Selaro region in N part of Laut island. Five seams in Eocene coal measures, one with reserves of economic importance)

Sigit, S. (1963)- Penjelidikan geologi terhadap endapan batubara di Pulau Sebuku (Kalimantan Tenggara). Djawatan Geologi Indonesia, Publ.Teknik, Seri Geol. Ekonomi 5, 41p.
('Geological investigations of the coal deposits of Pulau Sebuku (SE Kalimantan)'. Reconnaissance in S part of Sebuku island, E of Palau Laut, showed Eocene coal only in W part of widespread Eocene formations. Only one seam, formed mainly from allochthonous material)

Silaban, S.A., S. Ardi, V. S. Agustin (2013)- Preliminary study depositional environment of Batu Ayau Formation and its CBM play evaluation, Upper Kutai Basin, East Kalimantan. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-071, p. 1-15.
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Simanjuntak, T.O. (1999)- Neogene Dayak Orogeny in Kalimantan. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 83-90.
(Neogene orogeny in Kalimantan mainly characterized by extensional triplejunction, associated with Neogene non-arc volcanics)

Simatupang, D.P. & D. Amarullah (2010)- Coal Bed Methane potency of Tanjung Formation in Tanah Bumbu South Kalimantan. Bul. Sumber Daya Geologi 5, 2, p. 1-8.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/427)
(On CBM resources and deep coal potential of Eocene Tanjung Fm coals in Tanah Bumbu Area, Asem-Asem Basin, SE Kalimantan. CSAT-1 well drilled 10 coal seams with 3 main seams (E, I, J) between 212- 275m depth, 1-5m thick. High rank coal. Coal resources between 300- 1000m depth 112.7 M tons, giving potential methane resources estimate of ~430 MSCF, with methane content 1.2- 6.6 ft3/ton of coal)

Sinaga, I.B., R. Nikijuluw & H. Ilham (2006)- A composite analysis for fluid facies interpretation and hydrocarbon identification using advanced gas data. Case study Mutiara wells, East Kalimantan, Indonesia. AAPG Int. Conf. Exh., Perth 2006, 1p. *(Abstract)*

Singh, P.K., M.P. Singh, A.K. Singh & M. Arora (2010)- Petrographic characteristics of coal from the Lati Formation, Tarakan Basin, East Kalimantan, Indonesia. Int. J. Coal Geology 81, 2, p. 109-116.
(Coals from outcrops in Tarakan basin high concentration of huminite (telohuminite), low concentrations of liptinite and inertinite macerals. Coals originated under telmatic condition. Predominance of wood derived tissues. High subsidence rates prevailed. Alternating phases of oxic and anoxic moor conditions)

Siregar, M.S. & R. Sunaryo (1980)- Depositional environments and hydrocarbon prospects, Tanjung Formation, Barito Basin, Kalimantan, Indonesia. Proc. 9th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 379-400.
(Eocene Tanjung Fm producing oil since 1960's. Lower member terrestrial-paralic clastics, middle member maine-deltaic clastics, upper member marine shales and thin limestones. Plio-Pleistocene uplift of Meratus Block and NNE-SSW trending anticlines)

Siregar, P.H., D. Ramdan, S.A. Yani, P. Bransden, A. Prasetya, T. Kearney & D.B. Waghorn (2010)- Hydrocarbon potential of the North Kutei Basin: new exploration opportunities based on the new 3D seismic data. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-019, 25p.
(3D seismic offshore Sangatta field, N Kutei basin, shows Late Miocene- E Pliocene slope channel play)

Situmorang, B., C.D. Dwiyoga, A. Kustamsi (2006)- The untapped 'unconventional' gas: CBM resources of Kutai Basin with reference to the North Kutai Lama Field, Sangasanga Area, East Kalimantan. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), 06-OT-07, 11p.
(Eleven onshore coal basins of Indonesia contain 453 Tcf coalbed methane resources, of which 80.4 Tcf in Kutai Basin (ARI, 2003). N Kutai Lama (NKL) field main targets for CBM development are M Miocene Prangat and Late Miocene Kamboja Fms and uppermost E Miocene Loa Kulu Fm. Results from two wells between 700-1400m indicate in-place CBM resources of NKL field 147 BCF)

Sjadzali, M.M. & J.M. Kachelmeyer (1986)- Yakin West and Yakin North fields: optimum development trough integrated completion techniques. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 43-64.

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(Kutei and Sarawak basins two petroleum producing provinces where tectonics greatly impacted formation of stratigraphic sequences. Sequence bounding unconformities can be used in tectonically active areas to provide chronostratigraphic correlations across several paleoenvironments)

Snedden, J.W. & J.F. Sarg (1998)- Reducing reservoir and source risk in deepwater plays: examples from Southeast Asia. In: Proc. SEAPEX 12th Offshore SE Asia Conf. OSEA 98, Singapore 1998, p. 257-269.
(Offshore Kutai and Sarawak basins sequence stratigraphy interpretation)

Snedden, J.W., J.F. Sarg, M.J. Clutson, M. Maas, T.E. Okon, M.H. Carter et al. (1996)- Using sequence stratigraphic methods in high-sediment supply deltas: examples from the ancient Mahakam and Rajang-Lupar deltas. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 281-296.

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(Semberah Field small 1973 oil discovery in N Mahakam area, 140 km N of Balikpapan, producing since 1991. Paper mainly engineering history of marginal oil field)

Stankiewicz, B.A., M.A. Kruge & M. Mastalerz (1996)- A geochemical study of macerals from a Miocene lignite and an Eocene bituminous coal, Indonesia. Organic Geochem. 24, 5, p. 531-545.
(Study of macerals from Miocene Warukin Fm lignite and Eocene Tanjung Fm high-volatile bituminous C coal from SE Kalimantan. Most Indonesian lignites and low rank coals liptinite-rich (~10%) with low inertinite and high vitrinite. Tropical angiosperm vegetation (Dipterocarpaceae), dominant in swamps of Kalimantan, are prolific resin producers. Suberins from corkified plant cell walls form maceral suberinite in Indonesian lignites. Resins in Eocene coal chemically and botanically different from Miocene and younger dammars)

Storms, J.E.A., R.M. Hoogendoorn, M.A.C. Dam, A.J.F. Hoitink & S.B. Kroonenberg (2005)- Late-Holocene evolution of the Mahakam delta, East Kalimantan, Indonesia. Sedimentary Geology 180, p. 149-166.
(Late Holocene Mahakam Delta example of mixed tide-fluvial dominated delta system. Delta prograded ~60 km in past 5000 years. Natural levees, crevasse splays and avulsions absent in delta plain. Sand content decreases significantly from fluvial to tidal-dominated areas. Progradational delta system evolved under conditions of slowly rising sea level. Present day sediment load of Mahakam River insufficient to explain sediment volume of subaerial and subaqueous Mahakam delta, suggesting hydraulic conditions in past may have been different)

Stromer, E. (1931)- Die ersten Alt-Tertiaren Saugetier-Reste aus den Sunda-Inseln. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie, Bandung, 17, p. 11-14.
('The first Early Tertiary mammal remains from the Sunda islands'. Two teeth from probable Eocene beds at Gunung Sebumban Ulu, Sedona River, Sanggau area, W Kalimantan, are first record of E Tertiary mammals in Indonesia. Probably belong to small anthracotherid Artiodactylus, a family rel. common in M-U Eocene of mainland SE Asia and Europe)

Stuart, C.J., H.F. Schwing, R.A. Armin, B. Sidik, R. Abdoerrias, W.D. de Boer et al. (1996)- Sequence stratigraphic studies in the Lower Kutai Basin, East Kalimantan, Indonesia. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. Sequence Stratigraphy in SE Asia. Indon. Petroleum Assoc. (IPA), Jakarta 1995, p. 365-368.
(Summary paper on Miocene Lower Kutei basin Unocal Miocene stratigraphy work)

Suandhi, P.A., A. Bachtiar, P.T. Setyobudi, E. Nurjadi, A. Mardianza, B.D. Harisasmita, M. Arifai & D. Hendro H.N. (2017)- Sangatta delta evolution with an updated Miocene paleogeography. Berita Sedimentologi 39, p. 25-36.
(online at: www.iagi.or.id/fosi/files/2017/12/FOSI_BeritaSedimentologi_No39_Dec2017.pdf)
(Discussion of Miocene-age Sangatta Delta system (Balikpapan and Kampung Baru Fms) in NE Kutai Basin. Development controlled by Rantau Pulung- Mangkupa paleohigh, bound by NE-SW and N-S strike slip faults that represent Neogene reactivations of old basement faults. Delta development started with small proto-Sangatta Delta in E Miocene and became larger during M-L Miocene after inversion/ uplift at Kuching High to W. More than 10 stacked, E-ward prograding fluvial-deltaic parasequence sets)

Suandhi, P., A. Bachtiar, P.T. Setyobudi, M. Rozalli & Y.S. Purnama (2013)- Paleogen facies model of North Barito Area, comprehensive study of sedimentology, stratigraphy and potential reservoir. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-149, p. 1-13.
(N Barito basin outcrop study, from Pre-Tertiary metamorphics, M-L Eocene syn-rift clastics, Oligocene post-rift clastics and carbonate, Miocene deltaics, etc.))

Suandhi, P.A. P.T. Setyobudi, A. Bachtiar, E. Nurjadi, A. Mardianza, B.D. Harisasmita, M. Arifai & D. Hendro H.N. (2018)- Sangatta delta evolution with an updated Miocene paleogeography. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-166-G, 12p.
(N Kutai Sangatta delta (Balikpapan and Kampung Baru Fms) development started in E Miocene with at least two fluvial-deltaic parasequence sets prograding to E. Delta became larger in M-L Late Miocene as regional inversion and uplift took place at Kuching High to W of delta. >10 stacked fluvial- deltaic parasequence sets identified, all showing progradation to E)

Subekti, A., K.P. Laya, E. Guritno & M.N. Krisnayadi (2017)- Greater Bangkanai prospectivity: the application of full-tensor gravity and magnetic survey, onshore Central Kalimantan. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-361-G, 17p.
(Gravity-mag survey in upper Kutai Basin, in area with Kerendan and West Kerendan gas fields in Oligocene carbonates. NE-SW trending surface anticlines are mainly (M Miocene?) inversions of M-L Eocene extensional structures)

Subekti, A., H. Mustapha, E. Guritno, J. Smart, A. Susilo, B. Nugroho, W. Darmawan & M. Wilson (2015)- New insights into the Kerendan Field carbonate morphology Upper Kutai Basin, Central- East Kalimantan. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-118, 16p.

(Late Oligocene Berai carbonate play in Upper Kutai Basin underexplored; Kerendan discovered by Unocal in 1982 is only hydrocarbon accumulation, in carbonate platform with two culminations with common gas-water contact. Oligocene carbonate built on NNE-SSW trending Paleogene horsts. Kerendan High created by inversion of rift faults. Kerendan Carbonate system not atoll rim carbonate with interior lagoon as previously interpreted, but open platform carbonate complex with partially developed rim in which platform, coral reefal buildups and carbonate sand aprons developed. Most porosity secondary, diagenetic)

Subroto, E.A. (2015)- The role of coaly materials as source rocks (conventional and unconventional) in the Kutai Basin, Indonesia. In: Hydrocarbons in the tropics: on the edge, Abstracts 32nd Ann. Mtg. Soc. Organic Petrology, Yogyakarta 2015, p. 123-128. *(Extended Abstract)*
(Five proven and potential types of petroleum source rocks identified in Kutai basin. Most oils tied to deltaic coaly shales. Coaly materials significant role in hydrocarbon generation, conventional and unconventional)

Subroto, E., A. Bachtiar & B. Istadi (2006)- Source rock characterisation in the Kutai Basin, East Kalimantan, Indonesia, based on biomarkers. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta06-PG-28, 4p.
(Analyses 73 crude oils and 86 rock samples from Kutai Basin. Based on biomarkers five source types: deltaic coaly shales, marine shales, mixed deltaic and marine shales, marine calcareous shales, and immature deltaic coaly sediments. 62 oils correlate to deltaic coaly shales, remaining 11 correlate to marine shales. No mixed sources detected in crude oils. Vitrinite reflectance data for some sediments appear to be suppressed)

Subroto, E.A., B.P. Muritno, Sukowitono, D. Noeradi & Djuhaeni (2005)- Petroleum geochemistry study in sequence stratigraphic framework in the Simenggaris Block, Tarakan basin, East Kalimantan, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, IPA05-G-159, p. 421-432.
(Tarakan Basin Simenggaris Block 8 Oligocene-Pliocene sequences, with shales TOC between 0.65- 7%, indicating several may be hydrocarbon source. Almost all sequences contain some coals or carbonaceous materials. Only SB-2 and SB-1 (Naintupo Fm and older) reached optimal maturity. In deeper areas SB-5 to SB-3 (Meliat Fm) are in middle mature stage)

Sudarmono, A. Direza, H.B. Maulin & A. Wicaksono (2017)- Some new insights to tectonic and stratigraphic evolution of the Tarakan sub-basin, North East Kalimantan, Indonesia. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-722-G, 22p.
(Tarakan Basin with E-ward prograding fluvio-deltaic sedimentation since E Miocene, sourced from multiple feeder rivers (Sesayap, Sesanip and others). Deltaics at and E of Bunyu Island deposited on oceanic crust of Celebes Sea. Tarakan sub-basin bounded by left-lateral strike slip faults Sampoerna (in N; Celebes Sea transform fault?) and Maratua and Mangkalihat FZs (in S; continuation of Palu-Koro fault of Sulawesi?). Major tectonic event at end of Late Miocene (end of Santul Fm), which uplifted part of area E of Kucing High. Second major tectonic event in Pleistocene, forming present-day Bunyu, Tarakan and Ahus structures)

Sudradjat A. & A.H. Hamdani (2015)- The tectonic control on the formation of cleats in the coalbeds of Sajau Formation, Berau Basin, Northeast Kalimantan. The 2nd. Int. Conf. and 1st Joint Conf. Faculty Geology Univ. Padjadjaran Univ. Malaysia Sabah (IGC 2015), p. 187-192.
(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2016/02/The-Tectonic-Control-on-the-Formation-of-Cleats-in-the-Coalbeds-of.pdf)
(Distributions of cleat orientation, spacing, and aperture in Pliocene Sajau Fm lignite seams controlled by main tectonic structures in area)

Sudradjat A. & A.H. Hamdani (2018)- Tectonic control on the formation of cleats in the coal beds of the Sajau Formation, Berau Basin, Northeast Kalimantan. Indonesian J. Geoscience 5, 3, p. 235-250.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/286/270)
(Similar to above paper)

Suessli, P. (1978)- The Tendeh Hantu atoll- a Lower Miocene carbonate build-up in Mangkalihat Peninsula, East Kalimantan. In: Proc. Carbonate Seminar, Jakarta 1976, Indon. Petroleum Assoc. (IPA), p. 121-122. *(Abstract only)*
(Narrow E-W trending high with steep N and S flanks formed in M Oligocene tectonic event, persisted through Mio-Pliocene and developed into Mangkalihat Peninsula. Lower Miocene carbonate buildup outcrops, including Tendeh Hantu 'atoll' sub-circular platform, ~30 km across. Overlain by Pliocene sediments. Coralline sediments of edge dip at 30-50° towards interior of 'atoll'. Most limestones in interior slightly dolomitized packstones. Larger foraminifera Flosculinella globulosa, F. reicheli and Austrotrillina howchini suggest early M Miocene (Lower Tf), age, age-equivalent of nearby zone N9 calciturbidites)

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Sugiaman, F., A. Cebastiant, K. Werner, A. Saller, D. Glenn & R. May (2007)- Reservoir characterization and modeling of an Upper Miocene deepwater fan reservoir, Gendalo Field, Kutai Basin, Offshore East Kalimantan. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-056, 18p.
(Gendalo Field largest deepwater gas discovery off E Kalimantan. Primary reservoir U Miocene thin-bedded turbidites (average sand bed thickness 15 cm), deposited at base-of-slope as unconfined fan. Three internal units mapped based on 3D seismic data and four wells)

Suiter, J.S. (1996)- Shallow 3-D seismic analysis of Late Pleistocene lowstand deltas (Mahakam, Indonesia). Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 347-351.
(Shallow 3D seismic facies analysis of Late Pleistocene Mahakam Delta)

Sujatmiko, A.Salim & B.S. Irawan (1984)- Geology of the Tunu gas field. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 341-363.

Sukanta, U., Y. Kusnandar, S. Hidayati, H.I. Priyonggo, A. Siravoet al. (2009)- Understanding hydrocarbon-bearing reservoirs and their critical factors for deep water exploration in the Tarakan Basin, North East Kalimantan (Indonesia). Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-155, 3p.
(Short paper suggesting series of rapid sea level drops in M Miocene- Pliocene lead to deposition of sand-rich turbiditic deposits along slope and basin floor in eastern deep offshore Tarakan basin)

Suleiman, A., D.A. Wulandari & A. Bachtiar (1998)- Identifikasi fosil rombakan di lapisan Miosen Cekungan Kutai dan implikasi geologinya. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p. 2.16- 2.26.
('Identification of reworked fossils in Miocene sediments of the Kutai Basin and its geological implications'. Locally common reworked bathyal foraminifera in Miocene deltaic deposits of Kutai Basin (incl. agglutinants Cyclammina, Bathysiphon, Ammodiscus, large Haplophragmoides))

Sulistyo, Z.R., A. Sutanto & H. Sukhendra (2012)- Preliminary study of CBM potential in Jorong-Kintap area, Asem-Asem Basin, South Kalimantan. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-05, 7p.
(also as PITHAGI2012-002) (Asem-Asem Basin good Coal Bed Methane potential. Main coal bearing formations of Jorong-Kintap area are Miocene Warukin Fm (49 m) and Eocene Tanjung Fm (6.1m). Coals of Warukin Fm total moisture 27%, ash 2.9%, volatile matter 41%, macerals dominated vitrinite (83%), classified as lignite. Eocene coals of Tanjung Fm total moisture 6.1%, ash 11.5%, volatile matter 43%, Ro 0.46%, macerals dominated by vitrinite (78.4%), classified as sub-bituminous B)

Sumawinata, B. (1998)- Sediments of the lower Barito basin in South Kalimantan: fossil pollen composition. J. Southeast Asian Studies, Kyoto, 36, 3, p. 293-316.
(online at: https://kyoto-seas.org/pdf/36/3/360302.pdf)
(Palynology/ environments of Holocene sediments from Lower Barito and Martapura Rivers shallow cores)

Sunardi, E., V. Isnaniawardhani, I. Cibaj, Amiruddin & I. Haryanto (2014)- The lithological succession in East Kutai Basin, East Kalimantan, Indonesia: revisited in a new data on litho-biostratigraphic. Int. J. Science and Research (IJSR) 3, 4, p. 707-713.
(online at: https://www.ijsr.net/archive/v3i4/MDIwMTMxNTcy.pdf)
(Brief review. Kutai Basin basement slickensided serpentinites (Kuaro, Muru River) and deep marine turbiditic metasediments with polymict conglomerate, and pelagic sediments (Tewe River), interpreted as Jurassic ultramafic complex. Overlain by E Miocene(?) and younger beds with numerous repetitions of prograding patterns (fluvial-deltaic and shallow marine facies, with transgressive carbonate build ups). In Late Miocene retrograding patterns and progressively deeper facies)

Sunaryo, R., S. Martodjojo & A. Wahab (1988)- Detailed geological evaluation of the possible hydrocarbon prospects in the Bungalun area, East Kalimantan. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 423-446.
(Bungalun Area on SW side Mangkalihat Peninsula. Shallow wells between 1900-1941 with oil shows in thin Late Miocene-Pliocene sands. Underlain by oceanic basalt or melange (Late Cretaceous Danau Fm). Overlain by Eocene Mangkupa- Beriun deepwater? clastics in W and tuffs-dominated Sembulu Fm in E. Oligocene-E Miocene to younger sequences two facies. Peripheral zones mainly limestones, younging to SE: Oligocene Kedango Lst (700m), E Miocene Tabalar Lst (500m) and M Miocene Sekerat Lst (200-300m). Deeper parts of basin mainly fine clastics. Bungalun Basin N-S structural grain, similar to Kutai basin, except E-W direction near Sangkulirang Bay. Change of trend caused by rotation effect of Palu-Koro Fault further E)

Sunoto (1990)- Hubungan jendela minyak dan zone bertekanan lua (dengan sebaran hidrokarbon di Pulau Bunyu). Geologi Indonesia, p. 49-60.
('Relationship between oil window and overpressure zone (with distribution of hydrocarbons in Bunyu Island)')

Sulaeman, Teteh S. (1997)- Late Tertiary palynology of the Handil Field, Kutei Basin, East Kalimantan, Indonesia. Ph.D. Thesis, University of Queensland, p. 1-228. *(Unpublished)*
(Palynostratigraphic study on core samples from Miocene reservoirs 28- 4 in 22 wells in Handil Field, Mahakam Delta. Palynoflora composition: 224 species of fungal spores, 88 species of pollen grains and 14 species of spores. Four E Miocene- E Pliocene informal stratigraphic assemblages distinguished, based on subzones of Florschuetzia meridionalis Zone)

Susianto, A., E.R. Esomar, R. Rahadi & M.N. Ardhie (2012)- The characteristics of the Sepinggan strike slip fault zone and its role in forming structural traps the Southeast Kutei Basin. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-062, p. 1-23.
(Sepinggan Fault is SE-NW trending right-lateral strike-slip fault, extending >70 km from offshore SE Balikpapan to onshore S Penajam area. It is part of Adang fault zone. Initially formed as transform during Eocene rifting, reactivated as strike slip in Miocene compression. Several significant hydrocarbon traps formed along fault (Yakin, Sepinggan, Mahoni))

Sutha, N., I.M.A., R. Adi & Z. Arifin S. (2008)- Evaluating hydrocarbon potential at attic position in deltaic multi complex reservoirs case study: ñA100ò reservoir, Semberah Field. Proc. 37th Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 544-556.
(Semberah field in N part of Sanga-Sanga Block, E Kalimantan, part of ancient Mahakam delta complex, with multi layer M-U Miocene reservoirs. Paleo-environment transition fluvio-tidal delta, dominated by delta plain and delta front sedimentation. Search for additional reserves by evaluating hydrocarbon potential at 'attic position', focused on evaluating channel facies in updip position of wet wells)

Sutiyono, S. (1995)- Magnetic resonance image log use in evaluation of low resistivity pay in the Attaka Field. Proc. 24th Ann. Conv. Indon. Petr. Assoc. (IPA), Jakarta, 1, p. 167-179.

Sutjipto, R. Heryanto (1991)- Sedimentology of the Melawi and Ketungau basins, West Kalimantan, Indonesia. Ph.D. Thesis, University of Wollongong, p. 1-255. *(Unpublished)*
(online at: http://ro.uow.edu.au/theses/1405/)

(Melawi and Ketungau similar basins, separated by Paleocene-E Eocene Semitau High (composed of highly deformed turbiditic Selangkai Fm and U Cretaceous 'Boyan melange' tectonic breccia). Melawi Basin fill up to 7500m thick Eocene- Oligocene, gently folded, in 4 main units: (1) ?Late Eocene Ingar Fm outer shelf mudstone (typical Eocene palynomorphs, also common reworked U Cretaceous marine forams), sandstones derived from magmatic ar detritus from Schwaner Mts in S; (2) Late Eocene fluvial and marine Suwang Gp (Dangkan Sst, Silat Shale), with increasing quartz and decreasing volcanics of recycled orogen-type provenance;(3) Melawi Gp fluvial- lagoonal with Late Eocene Payak Fm/ Sepauk Sst and E Oligocene Tebidah Fm; (4) Oligocene fluvial Kapuas Gp, unconformably over Melawi Gp after E Oligocene minor folding. With Late Oligocene- E Miocene Sintang intrusives. Provenance from S and W in Ingar Fm, mainly from melange/ subduction complex in N in Suwang and Melawi Groups (recycled orogenic material from uplifted Late Cretaceous Boyan and Eocene Lubok Antu melanges?). With palynology analyses by B. Porthault of Elf-Aquitaine (later papers by Sutjipto under name Heryanto; JTvG))

Suwardji, A. Buhari, K. Kukuh & R. Prayitno (1994)- Low resistivity reservoir study: Sangatta field, Kalimantan. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 119-130.
(Identification of previously unrecognized low-resistivity oil reservoirs in Sangatta Field (1936 BPM discovery, developed by Pertamina in 1970's))

Suwarna, N. & B. Hermanto (2007)- Berau coal in East Kalimantan; its petrographics characteristics and depositional environment. J. Geologi Indonesia 2, 4, p. 191-206.
(online at: http://oaji.net/articles/2014/1150-1407911582.pdf)
(E-M Miocene Berau coal in Berau Basin. M Miocene Lati Fm coal high in vitrinite (66-96%), mainly vitrinite B, followed by inertinite (14-27%), exinite (1-7%) and mineral matter (0.4- 10.6%). Vitrinite reflectance 0.40-0.58%. Depositional environment peat swamp in upper delta plain/ alluvial plain. Original vegetation mainly cellulose rich, shrub-like plants, tree ferns, herbaceous plant communities, with minor amount of trees)

Suwarna, N., B. Hermanto, T. Sihombing & K.D. Kusumah (2006)- Coalbed methane potential and coal characteristics in the Lati Region, Berau Basin, East Kalimantan. J. Geologi Indonesia 1, 1, p. 19-30.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/161)
(Miocene coalbed methane potential and coal characteristics in Lati region, Berau basin, E Kalimantan. Volatile matter of Lati coal 32-39.6%, sulfur 0.35-3.0%, ash 2.8-14.5% and moisture 12-20%. Vitrinite reflectance (Rv) 0.42-0.57%, indicating sub-bituminous B- high volatile bituminous C coal rank. Low ash content. Thermally immature- early mature, suggesting gas is biogenic)

Suwarna, N., H. Panggabean, M.H. Hermiyanto & A.K. Permana (2007)- Characterization of unconventional fossil fuels in selected areas of Sumatera and Kalimantan, using organic petrography and geochemistry. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G079, 15p.
(Studies of oil shales and coalbed methane in Sumatra and Kalimantan)

Suwondo, D.H.H. Nugroho, A. Krisyunianto, A. Bachtiar, A. Suleiman & W. Utomo (2015)- Surface study for subsurface analogue model for hydrocarbon potential evaluation in Pulaulaut Island, Asem-Asem Sub-basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-290, 6p.
(Outcrop study of Pulau Laut, SE Kalimantan. Synrift Eocene rocks with source potential in lacustrine shales)

Syarifuddin, N., M. Azhar, C.M. Adam, A. Wiweko, P. Dupouy et al. (2008)- South Mahakam exploration and development: synergies that make it happen. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-098, 9p.
(Most of S Mahakam delta fields discovered years ago, but of marginal size and none developed. Fields mainly gas-condensate, incl. Jumelai (1975), Jempang (1990), Stupa (1996) and Metulang (1998). Most gas in M-U Miocene Sepinggan deltaic series at 2850-3700m subsea, except for Jumelai reservoir, which is in M Miocene Jumelai sands. Recent revival of exploration and development)

Syarifuddin, N. & I. Busono (1999)- Regional stress alignments in the Kutai Basin, East Kalimantan, Indonesia: a contribution from a borehole breakout study. J. Asian Earth Sci. 17, p. 123-135.

(Borehole breakout data from 134 wells in Kutai Basin indicate maximum regional stress direction NW-SE, which deviates from anticlinorium trends and from strike of thrust-faults in region. Patterns influenced by reactivation of weak zones related to sediment loading (structural inversion))

Syarifuddin, N. & S. Masitah (2010)- Sisi-Nubi Field Development: Sand control strategy and implementation. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-E-015, 11p.
(Sisi-Nubi 1986-1992 gas discoveries 25 km offshore Mahakam Delta in 60-90m water depth. Reservoirs multi-layered Upper Miocene deltaic deposits between 1900-3800m SS interval. Poorly consolidated fresh-water bearing sands in upper part and relatively poor to tight, partly overpressured sands in deeper part.

Syarifuddin, N. Wahyudi Susanto, Mauricio Bueno, Effendy Siawira (2010)- Optimized well placement and design to maximize recovery in Sisi-Nubi field development. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-016, 8p.

Sydow, J. (1996)- Holocene to Late Pleistocene stratigraphy of the Mahakam Delta, Kalimantan, Indonesia. Ph.D. Thesis Louisiana State University, Baton Rouge, p. 1-170.
(online at: https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=7163&context=gradschool_disstheses)
(Late Pleistocene depositional cycles of Mahakam shelf stratal geometries indicating progradational continuum from falling sea level stage to initial rise (no Late Pleistocene sediment bypass of entire shelf). Extensive, thick Halimeda carbonate buildups during transgression and highstand flooding of shelf.

Taieb, R. & M.F. Sheppard (1993)- Les eaux de formation du Delta de Mahakam (Indonesie); evidences pour une infiltration d'eaux meteoriques dans les champs a hydrocarbures. Comptes Rendus Academie Sciences, Paris, Ser. 2, 317, 5, p. 623-628.
(Evidence for infiltration of meteoric waters into formation waters from the Mahakam Delta oil fields)

Tanean, H., D.W. Paterson & M. Endharto (1996)- Source provenance interpretation of Kutei Basin sandstones and the implications for the tectono-stratigraphic evolution of Kalimantan. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 333-345.
(Three Miocene- Recent sandstone types, all 'recycled orogenic' provenance. E Miocene (23-17 Ma) and Pliocene- Recent sandstones moderately quartzose with lithics from Cretaceous Rajang metasediments. Volcanic lithics record continuous volcanic activity. End-E- earliest M Miocene sandstones volcanogenic, recording increase in W Kalimantan volcanic activity between 17-14.5 Ma. High-quartz M -L Miocene sandstones form reservoirs in oil and gas fields along coast and offshore, and are recycled products of basin inversion events that advanced from W to E. Onset of basin inversion at zone N10 (14.5 Ma). No associated volcanic activity recorded in sediment)

Tan Sin Hok (1936)- *Lepidocyclina zeijlmansi* n.sp., eine neue *Polylepidina* von Zentral Borneo, nebst Bemerkungen uber die verschiedenen Entstehungsweisen der Lepidocyclinen. De Ingenieur in Nederlandsch-Indie (IV, Mijnbouw en Geol.), 3, 1, p. 7-14.
('Lepidocyclina zeijlmansi n.sp., a new Polylepidina from Central Borneo, with remarks on the various origins of the Lepidocyclinids'. New, primitive species of Lepidocyclina from Eocene in Tjihan River, tributary of Mahakam River, C Kalimantan. Possibly close to Lep. boetonensis from Eocene(?) of Buton. First (and only?) record of Eocene lepidocyclinid from Indonesia)

Tan Sin Hok (1937)- On the genus *Spiroclypeus* Douville with a description of the Eocene *Spiroclypeus vermicularis* nov. sp. from Koetai in East Borneo. De Ingenieur in Nederlandsch-Indie (IV), 4, 10, p. 177-193.
(Review of larger foram genus Spiroclypeus. Stratigraphic range Late Oligocene- E Miocene (zone Te) and also in Late Eocene (Tb). On p. 179: mention of Biplanispira in Wani series of Buton)

Thalmann, H.E. (1942)- *Hantkenina* in the Eocene of East Borneo. Stanford University Publ., Geol. Sci. 3, 1, p. 5-24.

(Occurrences of Late Eocene planktonic foram marker genus Hantkenina in marls from (1) Sangkulirang area (Karangan and Batolepo Rivers; associated with thin limestones rich in Asterocyclina, Discocyclina, Nummulites) and Tanjung Selor regions, E Kalimantan)

Thamrin, M. & Prayitno (1985)- Terrestrial heat flow in East Kalimantan (Barito, Kutei, Tarakan Basins). Proc. 21st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bandung, 2, p. 110-121.
(E Kalimantan basins average T gradient in 90 wells 3.22°C/ 100m. Normal heat flow values in basins: Barito with 1.80 HFU, Kutei 1.59 HFU and Tarakan-Bunyu with 1.68 HFU)

Thore, P. & P. Spindler (2013)- Breaking the limit of seismic resolution; a synthetic example based on Tunu shallow gas development. The Leading Edge 32, 11, p. 1318-1326
(Seismic resolution commonly assumed to be limited to 1/4th of seismic bandwidth, often too coarse to resolve thin layering inside reservoir zones. New seismic inversion application in U Miocene- Pliocene shallow gas zone of Tunu field, offshore E Kalimantan, could retrieve layers as thin as 1/20th of seismic bandwidth)

Tiwar, S. & J. Tasuno P.H. (1980)- The Tanjung (South Kalimantan) and Sei Teras fields (South Sumatra): a case history of petroleum in Pre-Tertiary basement. Proc. 16th Sess. CCOP, Bandung 1979, p. 238-249.
(Part of oil production in Tanjung field, Barito basin, is from Pre-Tertiary weathered and fractured porphyritic volcanics and tuffaceous sandstones. Cumulative production about 21 MB oil and 14 GCF gas)

Tjia, H.D. (1963)- Large deltas in Kalimantan. Contr. Dept. Geology, Inst. Technology Bandung 53 (Th.H.F. Klompe Memorial Volume), p. 73-90.

Tjia, H.D. (1970)- Eocene directional indicators near Tandjung, Southeast Kalimantan. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung 3, 1, p. 29-32.
(Pebble orientation and imbrication, ripple marks, etc. in basal member of Eocene Tanjung Fm in foothills of Meratus Mts suggest dominant current to NNE- NE)

Tobler, A. (1926)- *Miogypsina* im untersten Neogen von Trinitad und Ost Borneo. Eclogae Geol. Helvetiae 19, 3, p. 719-721.
(online at: http://retro.seals.ch/digbib/view?pid=egh-001:1925-1926:19::729)
('Miogypsina in the basal Neogene of Trinidad and East Borneo'. Brief paper on occurrence of Miogypsina with Spiroclypeus in Tabalong section, E Kalimantan, collected by Buxtorf. Not much new)

Tobler, A. (1927)- *Maeandropsina* im Tertiar von Ost-Borneo. Eclogae Geol. Helvetiae 20, 2, p. 321-323.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1926-1927:20335)
('Meandropsina in the Tertiary of East Borneo'. Larger foram Meandropsina from marly limestone of Samui near Balikpapan, E Kalimantan, from donated collection in Basel. Assigned to Zone Tertiary 3y of Van der Vlerk. May be Pseudotaberina (NB: Meandropsina s.s. is Upper Cretaceous genus; JTvG))

Tokita K., K. Tsukada, T. Akutsu & H. Honda (2005)- History and functions of petroleum system concepts in the Mahakam Delta province; a view in the history of petroleum production. In: Oil and gas from the Cenozoic non-marine source rocks in East Asia; a point of contact between petroleum system and Earth system, Sekiyu Gijutsu Kyokaishi (J. Japanese Assoc. Petroleum Technologists), Tokyo, 70, 1, p. 66-73.
(Tertiary Mahakam Delta Province produced >3 GBO-equivalent. Origin of oil and gas believed to be non-marine. Produced oils mostly waxy, heavy- medium oil. Exploration concept assumed non-marine origin of oil and gas, and reverse faults for oil and gas migration. Exploration targets in deepwater areas need significant supply of coal and coaly mud from delta to deepwater areas in periods of lowstand)

Tosin, S. & R. Kadir (1996)- Tipe reservoir sedimen Miosen Tengah di sub-cekungan Tarakan, Cekungan Tarakan, Kalimantan Timur. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 495-512.
('Middle Miocene reservoir types in sub-basin Tarakan, E Kalimantan')

Tossin, S. & T.S. Priantono (1994)- Pengaruh deformasi intra Miosen pada perkembangan biostratigrafi daerah Tanjung, Cekungan Barito, Kalimantan Selatan. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 219-227.
('Influence of intra-Miocene deformation on biostratigraphic development in the Tanjung area, Barito Basin, S Kalimantan'. Regional unconformity between Warukin and Dahor Formations (late M Miocene?))

Trevena, A.S., S. Mahadi, S.A. Martinez, Marwoto et al. (1993)- Characterization of Upper Miocene deltaic reservoirs at Attaka field, offshore East Kalimantan, Indonesia. In: C.D. Atkinson et al. (eds.) Clastic rocks and reservoirs of Indonesia; a core workshop, Indon. Petroleum Assoc. (IPA), Jakarta 1993, p. 91-116.
(Attaka reservoirs fluvial and distributary channels and delta-front bars in series of Upper Miocene sequences. Mean porosity/ permeability for fluvial sandstone cores are 30%/1040 mD; distributary sandstones, 27%/ 390 mD; high-energy, delta-front sandstones, 18%/ 21.5 mD. Shallow sandstones at Attaka field abundant volcanic rock fragments and lower porosity- permeability than underlying more quartz-rich sandstones)

Trevena, A.S., Y.J. Partono & T. Clark (2003)- Reservoir heterogeneity of Miocene- Pliocene deltaic sandstones at Attaka and Serang fields, Kutei Basin, Offshore East Kalimantan, Indonesia. In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology, Soc. Econ. Paleontol. Mineral. (SEPM) Spec. Publ. 76, p. 235-254.
(Attaka and Serang fields M-Late Miocene sandstone reservoirs are delta front bars and distributary channels. Delta-front bars burrowed- laminated, fine-grained sandstones, up to 5m thick, and several km wide. Channel sandstones cross-stratified, coarse- to fine-grained, 3-17 m thick and < 1.5 km wide). Coarsest grained and thickest sandstones typically in lowstand deposits)

Ubaghs, J.G.H. (1929)- De geologie van Koetai (Z.O. Borneo). Dienst Mijnbouw Nederlandsch-Indie, Indon. Geological Survey, Bandung, Open File Report F29-03, p. 1-158.
('The geology of Kutai, E Kalimantan')

Ubaghs, J.G.H. (1934)- The geology of the area bordered by the Boengaloen River, Mahakam River and Makassar Strait. Indon. Geol. Survey, Bandung, Open File Report S 37-3, p. 1-54.
(Unpublished; original in Dutch)

Ubaghs, J.G.H. & C.P.A. Zeijlmans van Emmichoven (1936)- Beschouwingen over het Palaeogeen van Borneo. De Ingenieur in Nederlandsch-Indie, IV, 3, 9, p. 164-172.
(Critical review of 'confusing' Borneo chapter in Badings (1936) paper 'Paleogene of Indies Archipelago')

Ucok, H., C. Landeck, K. O'Donnell, D. Staples, W. de Boer & B. Antariksa (1995)- Small field development offshore East Kalimantan. Proc. 24th Ann. Conv. Indon. Petr. Assoc. (IPA), Jakarta, 2, p. 343-360.
(Description of undeveloped 1971 Unocal Santan discovery, 10 miles E of Attaka, in Late Miocene reservoirs)

Umar, L., E. Purnomo & A. Bachtiar (1987)- Prospek hidrokarbon batupasir Formasi Beriun di daerah Sangatta-Bungalun, Cekungan Kutai. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.
('Hydrocarbon prospects in sandstones of the Beriun Formation in the Sangatta- Bungalun area, Kutai Basin')

Umbgrove, J.H.F. (1927)- Neogene foraminiferen van de Soengei Beboeloe, Pasir (Zuid Oost Borneo). Wetenschappelijke Mededeelingen, Dienst Mijnbouw Nederlandsch-Indie 5, p. 28-41.
(?Middle Miocene 'Upper Tf' larger foraminifera from Bebulu River, Pasir, SE Borneo)

Umbgrove, J.H.F. (1929)- Anthozoa van Noord-Oost Borneo. Wetenschappelijke Mededeelingen, Dienst Mijnbouw Nederlandsch-Indie 9, p. 45-76.
('Anthozoans from NE Borneo'. Low diversity coral assemblages from Late Miocene- Pliocene Menkrawit, Antjang and Domaring beds, collected by Leupold in NE Kalimantan)

Umbgrove, J.H.F. (1936)- *Heterospira*: a new foraminiferal genus from the Tertiary of Borneo. Leidsche Geol. Mededelingen 8, p. 155-157.

(online at: www.repository.naturalis.nl/document/549681)
(Description of Late Eocene larger foram Heterospira mirabilis n. gen., n.sp. from several localities in E Kalimantan. Genus renamed Biplanispira in 1937, Leidsche Geol. Mededelingen 8, p. 309)

Umbgrove, J.H.F. (1938)- A second species of *Biplanispira* from the Eocene of Borneo. Leidsche Geol. Mededelingen 10, p. 82-89.
(online at: www.repository.naturalis.nl/document/549462)
(Biplanispira absurda n.sp. from Eocene of Sungei Sangajam, Tanah Bumbu, SE Kalimantan, with double arrangement of chambers on both sides of a median plane. Considered to be aberrant specimens of Pellatispira madaraszi or Pellatispira mirabilis by Cole (1970))

Usna, I. (1983)- The geological analysis of diamond-bearing gravels in Cempaka- Banyuirang area, S.E. Kalimantan. M.Sc. Thesis, Kensington University, p. 1-107. *(Unpublished)*

Vallet, J. (1983)- Seismic facies study in the Sepasu area of East Kalimantan. Proc. 12th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 359-373.
(Sepasu area on NE margin Kutai basin three major sequences: (1) Phase of M Miocene delta construction; (2) early Late Miocene transgression phase with extensive carbonate deposition; (3) E-ward basin tilting and regression with deltaic deposition in Late Miocene- Pliocene)

Van de Weerd, A.A., R.A. Armin, S. Mahadi & P.L.S. Ware (1987)- Geological setting of the Kerendan gas and condensate discovery, Tertiary sedimentation and paleogeography of the northwestern part of the Kutai Basin, Kalimantan, Indonesia. Proc. 16th Ann. Conv Indon. Petr. Assoc. (IPA), Jakarta, p. 317-338.
(Four phases of Tertiary sedimentation in NW Kutei Basin. (1) E-M Eocene Tanjung Fm basal coarse clastics grade upwards into shallow-marine clastics, up to 1000m thick, onlap stable Barito Shelf. Syndepositional faults in basal sequence. Oil-productive near Tanjung. E Eocene subsidence synchronous with renewed or accelerated subduction beneath N-NW margin of Borneo; (2) Late Eocene-E Oligocene claystones in deep basins, flanked by shallow marine clastics and carbonates. Phase terminated by minor compressional event, with uplift and erosional truncation of some basement blocks; (3) Late Oligocene transgression, with platform carbonates (Berai Fm) over Barito Shelf and Kutei Basin basement highs and slope carbonates and deep-marine shales (Bongan Fm) in basin. Kerendan 1 gas discovery in isolated Oligocene carbonate platform on basement high in W Kutei Basin. (4) thick uppermost Oligocene-Miocene deltaic and non-marine deposits. Introduction of deltaics probably from areas undergoing inversion and uplift in N part of Kutei Basin and S China Sea area. Inversion and uplift of this part of Kutei Basin probably in Late Miocene)

Van de Weerd, A.A. & R.A. Armin (1992)- Origin and evolution of the Tertiary hydrocarbon-bearing basins in Kalimantan (Borneo), Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 76, 11, p. 1778-1803.
(M Eocene formation of Kalimantan extensional basins. Transgressive M Eocene and E Oligocene non-marine and shallow marine clastics, carbonates and deep marine clastics, followed by regressive Late Oligocene-Miocene. Oligocene uplift, erosion, and structural segmentation into smaller basins. Deltaic sedimentation in latest Oligocene in upper Kutei basin, prograding E. By end E Miocene deltas near present Kutei coast. Lower(?)- M Miocene deltaic sediments also in Barito, Asem Asem and Pasir basins, probably contiguous with Kutei. Separate Miocene deltaic depocenter in Tarakan basin. Carbonate sedimentation in shallow areas between deltas. M Oligocene tectonism and magmatism. Inversion of upper Kutei basin and Meratus Mts uplift started in early M Miocene, related to third major plate readjustment in SE Asia. Regionally synchronous Miocene-Pliocene tectonic phases probably related to collisions of microcontinents along Sulawesi)

Vandenbroucke, M., Y. Debyser, M. Fabre, M. Montacer, P. Pillon, L. Jocteur-Monrozier & P. Jeanson (1987)- Geochemie de la matiere organique du sondage Misedor. In: A. Combaz (ed.) Geochimie organique des sediments plio-quaternaires du delta de la Mahakam (Indonesie)- le sondage Misedor, Editions TECHNIP, Paris, p. 257-292.
('Geochemistry of the organic matter of the Misedor well'. Geochemical analyses of organic matter in Late Pliocene- Recent sediments of interval 0-640m in the Misedor well, SW Mahakam Delta. Organic matter all Type III, and derived from same higher land plants as organic matter in deeper water deltaic sediments)

Van der Vlerk, I.M. (1923)- Een nieuwe *Cycloclypeus* soort van Oost-Borneo. Sammlungen Geol. Reichs-Museums Leiden 10, 3, p. 137-140.
(online at: www.repository.naturalis.nl/document/552419)
('A new Cycloclypeus species from East Borneo'. Sample from Gunung Mlendong near Kari Orang, Kutai basin (no map or stratigraphy info) rich in ?M Miocene larger forams. Contains Cycloclypeus martini n.sp., which looks like and is associated with C. annulatus with concentric rings, but is smaller and has somewhat different embryon. Associated with Cycloclypeus annulatus, Flosculinella bontangensis, Lepidocyclina spp., etc.)

Van der Vlerk, I.M. (1925)- A study of Tertiary Foraminifera from the "Tidoengsche landen" (E. Borneo). Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 3, p. 13-32.
(Late Oligocene- Early Miocene larger forams from 5 localities in Naintoepo and Tempilan beds, upper tributaries of Sebuku River, NE Kalimantan, collected by Leupold. With Lepidocyclina spp., Cycloclypeus, three new species of Spiroclypeus (S. tidoenganensis, S. yabei, S. wolfgangi). Little or no location info)

Van der Vlerk, I.M. (1925)- *Lepidocyclina mediocolumnata* nov. spec. de Pasir (SE-Borneo). Eclogae Geol. Helvetiae 19, p. 267-269.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1925-1926:19281)
(New species of Lepidocyclina (Eulepidina) from Sungei Telakai, Pasir, SE Kalimantan. Associated with Lepidocyclina (Eulepidina) formosa and Spiroclypeus, suggesting Late Oligocene- E Miocene age)

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(Upper Kutei Basin at intersection of two tectonic trends: NW-SE (Adang- Cross Barito) and NNE-SSW (Meratus). Meratus trend reflected by deep magnetic anomalies which divide Upper Kutei into two domains. Surface strata believed to represent Cretaceous imbricated subduction complex with forearc, arc and backarc elements. NNW-SSE Meratus trend Paleogene basin precursor. NW-SE Adang Cross Barito High trend interpreted as part of Trans-Kalimantan tectonic zone linking Paternoster Platform with Lupar fault zone. Upper Kutei lower Paleogene Basins opened NW parallel to this trend. At end Paleogene this basin closed and SE-ward opening Kutei Basin was established. NW-SE trend activity overprinted NNE-SSW Meratus trend and culminated in Late Miocene-Pliocene with major basin inversion and back-thrusting orthogonal to Adang-Cross Barito trend. NW limit of this back thrusting corresponds to interpreted Cretaceous volcanic arc)

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(Water salinities in Mahakam delta fields similar to range of connate water (fresh water in fluvial channels to sea water in marine mouth bars). However, analyses show present-day composition results from mixing of original connate waters with compaction water expelled from overpressured shales)

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(online at: www.trijurnal.lemlit.trisakti.ac.id/index.php/mindagi/article/view/96/96)
('Study of depositional facies of coal in utilization of coalbed methane gas potential in the Balikpapan, East Kalimantan area, based on proximate analysis and petrography'. Core from 130m deep EPL 01 well in

Miocene Balikpapan Fm in Penajam area. 11 coal layers 0.2-3.1m thick, lignite- sub bituminous rank (Rv 0.28-0.38%), up to 84% vitrinite. Environment wet forest swamp, dominated by woody plants, in lower delta plain)

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(Tarakan Basin with four major oil (Pamusian, Bunyu, Sembakung, Juata), one large gas (Bunyu Tapa) and five minor oil fields, in NW-SE trending anticlinal structures, mainly on Tarakan and Bunyu islands. Cum. production >320 MMBO. Reserves mainly in stacked fluvial Pliocene-Pleistocene sandstone reservoirs, but also in 90 Upper Miocene- Pliocene shallow marine reservoirs. Bunyu and Tarakan islands Late Miocene-Pliocene depocenters, inverted in Late Pleistocene. Unlike Kutai, major fold axes sub-parallel to sand fairways, leading to rel. small closures. Oils generated from lacustrine and fluvial sources, at rel. low maturities. Tarakan Basin underlain by metamorphosed Cretaceous island arc spilites of Danau Fm)

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Wijaja, P.H., D. Noeradi, A.K. Permadi, E. Usman & S. Rusl (2011)- Sand distribution modeling of Middle Miocene reservoir of "East Tarakan A Field" in eastern part of Tarakan Island, East Kalimantan. Bull. Marine Geol. (MGI, Bandung) 26, 2, p. 119-134.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/39/40)
('E Tarakan A-1' 2007 well encountered gas in M Miocene Meliat Fm deltaic sands, which also produces hydrocarbons in other onshore Tarakan fields. Sand distribution models suggest E-W trending distributary channel reservoirs)

Wijaya, P.H., D. Noeradi, A.K. Permadi, E. Usman & A.W. Djaja (2012)- Potensi migas berdasarkan integrasi data sumur dan penampang seismik di wilayah offshore cekungan Tarakan, Kalimantan Timur. J. Geologi Kelautan 10, 3, p. 117-131.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/221/211)
('Oil and gas potential based on well and seismic data integration in offshore Tarakan basin, East Kalimantan')

Wijayanti, H.D.K., S.S. Surjono & Soedarmono (2014)- The paleogeography of Berau sub basin, NE Kalimantan. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-161, 6p.
(M Eocene- Pleistocene facies distribution study of Berau Sub-basin, S-most onshore depocenter of Tarakan Basin. Basin located on passive margin, initiated with formation of Sulawesi Sea by rifting of N Sulawesi from E Kalimantan in M Eocene. M Eocene- E Oligocene transgressive succession to marine conditions. Regression

related to regional uplift of W basin margin began in Late Oligocene, followed by transgression. M Miocene uplift created newly emergent area to W and formed W to E prograding delta. Late Miocene tectonic event produced folds and reverse faults, mainly strike slip reactivation on older NE-SW and NW-SE basement fractures. Regressive sedimentation continued until Pleistocene. Tectonic uplift in Pleistocene)

Wilson, M.E.J. (2005)- Development of equatorial delta-front patch reefs during the Neogene, Borneo. J. Sedimentary Res. 75, 1, p. 114-133.
(Early and Middle Miocene patch reefs formed in turbid waters associated with high siliciclastic input at Mahakam Delta margin. Reefs initiated on unstable substrates on local low-relief bathymetric highs associated with delta-front channels or distributary mouthbars in process of abandonment. Patch reefs developed only in shallow waters, formed low-relief buildups, lacked rigid frameworks, and had gently sloping margins)

Wilson, M.E.J., W. Camp & M.J. Evans (2010)- Paleogene clastics, Mangkalihat, Borneo: implications for petroleum systems. AAPG Conv., New Orleans 2010, Presentation, 25p.
(online at: www.searchanddiscovery.net/documents/2010/10251wilson/ndx_wilson.pdf)
(Outcrops of Eocene siliciclastics investigated at Mangkalihat Peninsula, NE Kalimantan. M Eocene deep marine Malio Mudstone with interbedded basalts underlain by E-M Eocene marginal marine Sembakung Fm with coals, sandstones, claystones and sandy carbonates, grading upward into carbonate-clastic shelf deposits. Late Eocene Sujau Fm quartz arenites, coals and sandy limestone (picture showing Pellatispira). Clastics in W derived from volcanic and low-grade metamorphic terrain, in E from higher grade metamorphic source with some cherts. Eocene block and basin development influenced environments and sediment pathways)

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(M Eocene- Plio-Pleistocene carbonates in N Kutai Basin and Mangkalihat Peninsula, NE Kalimantan)

Wilson, M.E.J., J.L.C. Chambers, C. Manning & D.S. Nas (2012)- Spatio-temporal evolution of a Tertiary carbonate platform margin and adjacent basinal deposits. Sedimentary Geology 271-272, p. 1-27.
(Evolution of carbonate platform margin of little known Late Eocene- E Miocene Kedango Limestone that developed in semi-enclosed marine embayment at Bengalon area, NE margin of Kutai Basin. Eleven carbonate facies in 30km long W margin of >600m thick platform and adjacent slope and basinal deposits)

Wilson, M.E.J. & M.J. Evans (2002)- Sedimentology and diagenesis of Tertiary carbonates on the Mangkalihat Peninsula, Borneo: implications for subsurface reservoir quality. Marine Petroleum Geol. 19, p. 873-900.
(Mixed carbonate-siliciclastic shelf with intervening deeper water areas on E part of Mangkalihat Peninsula in the Late Eocene- Oligocene. During Oligo-Miocene shallow-water platform carbonates accumulated over much of Mangkalihat Peninsula. Platform steep, reef-rimmed N margin with marine cements. Platform interior low energy area, affected by leaching of aragonitic bioclasts. Best reservoir quality on platform in grainstones and packstones, towards platform interior from platform margin, with primary and secondary mouldic porosity)

Wilson, M.E.J., M.J. Evans, N.H. Oxtoby, D.S. Nas et al. (2007)- Reservoir quality, textural evolution, and origin of fault-associated dolomites. American Assoc. Petrol. Geol. (AAPG) Bull. 91, 9, p. 1247-1272.
(Origin of dolomite near faults in Late Oligocene-E Miocene Taballar Lst of Mangkalihat Peninsuls, NE Borneo. Sr isotope signature suggestive of remobilization of fluids from older limestone)

Wilson, M.E.J. & S.J. Moss (1999)- Cenozoic palaeogeographic evolution of Sulawesi and Borneo. Palaeogeogr. Palaeoclim. Palaeoecology 145, p. 303-337.
(Early Eocene- Pliocene paleogeographic maps on plate tectonic reconstructions illustrate evolution of Borneo and Sulawesi in Tertiary. Progressive accretion of continental and oceanic material from E onto E margin of Sundaland, with resultant development of volcanic arcs. Large tracts of W Sulawesi, E Borneo, E Java Sea and Makassar Straits formed extensive basinal area through much of Tertiary)

Wiman, S.K., A.W.R. Wight & S. Courteney (1995)- Geologic summary of Eastern Kalimantan. In: Seismic Atlas of Indonesian Oil and Gas Fields, II: Java, Kalimantan, Natuna, Irian Jaya, Indon. Petroleum Assoc. (IPA), Jakarta, p. KAL-1-KAL-19.
(Brief overviews of Kutei, Tarakan, Barito basins)

Win, C.T., D.H. Amijaya, S.S. Surjono, S. Husein & K. Watanabe (2014)- A comparison of maceral and microlithotype indices for interpretation of coals in the Samarinda area, Lower Kutai Basin, Indonesia. Advances in Geology 2014, Art. 571895, 17 p.
(online at: https://www.hindawi.com/journals/ageo/2014/571895/)
(Coals from 250m of M Miocene (Seravallian) Balikpapan Fm exposed in section near Samarinda. Coals degraded humodetrinite-rich group, deposited from terrestrial into telmatic condition of peat formation, with vegetation of degraded woody forest type. These formed with intermittent moderate-high flooding as paleopeat environment shifted from mesotrophic to ombrotrophic)

Win, C.T., S.S. Surjono, D.H. Amijaya, S. Husein, A. Aihara & K. Watanabe (2013)- Distribution of pyrite and mineral matter in coal seams from Samarinda area, Lower Kutai Basin, Indonesia. In: ASEAN Forum on clean coal technology, 11th Int. Conf. Mining Material and Petrol. Engineering, Chiang Mai 2013, p. 17-24.
(online at: http://mining.eng.cmu.ac.th/wp-content/uploads/2013/11/Clean-Coal-Technology_4_PaperID-35.pdf)
(Samples of coal from Balikpapan Fm near Samarinda with both epigenetic and syngenetic pyrite. Tied to influence of marine conditions, more prominent in lower part of studied section. Epigenetic pyrite and minerals may originate from erosion of E Tertiary marine sediments of C Kalimantan ridge)

Winantris, I., H. Hamdani & E. Harlia (2017)- Paleoenvironment of Tanjung Formation Barito Basin- Central Kalimantan. J. Geoscience Engineering Environm. Technol. (JGEET) 2, 2, p. 110-116.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/download/305/126)
(Late Eocene coals in Tanjung Fm inMuara Teweh area, N Barito Basin, formed in, in upper delta plain swamp environment with marine influence. Palynomorphs grouped into six types: fresh water and lowland (42%), brackish water swamp (30%), peat and freshwater swamp (18%), marine (8%), backmangrove (1.5%) and upland (1%). Palmae pollen dominant (Dicolcopollis, Proxapertites cursus, P. operculatus, Longapertites and Palmaepollenites kutchensis). Also with Magnastriatites howardi Verrucatosporites usmensis, Retistephanocolpites and Ixonantes, indicative of Late Eocene age)

Winantris, I. Syafri & R. Rinawan (2006)- Kandungan mikrofosil dalam formasi pembawa batubara dari daerah Perian, Kecamatan Muntai, Kabupaten Kutai Kartanegara, Kalimantan Timur. Bull. Scientific Contr. (UNPAD) 4, 1, p. 7-17.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8109/3686)
('Microfossils in the coal-bearing formation in the Perian region, Muntai District, Kutai Regency, East Kalimantan'. Palynomorphs from 4 samples from Perian River in Kutai Basin include Stenochlaenidites papuanus, Florschuetzia meridionalis and F. levipoli, suggesting most likely M Miocene age. Foraminifera rare Miocene forms only. Mainly mangrove and swamp environments)

Witts, D. (2011)- Stratigraphy and sedimentology of the Barito Basin, Southeast Kalimantan, Indonesia. Ph.D. Thesis, Royal Holloway, University of London, p. *(Unpublished)*

Witts, D. (2011)- Recognising sediment source areas of a transgressive coastal plain: the Barito Basin, Southeast Kalimantan, Indonesia. In: Conf. Sediment provenance studies in hydrocarbon exploration & production, Geol. Soc., London, 2011, p. 24-25. *(Abstract only)*
(late M Eocene- E Oligocene Tanjung Fm at base of Tertiary Barito Basin section deposited in tidally-influenced coastal plain setting, undergoing transgression. Paleocurrent data indicate sediment transport into coastal plain by river system flowing to N. Sediment derived from Schwaner Complex in W and Karimunjawa Arch in SW, as indicated by provenance work. Sandstones texturally immature, but compositionally mature, due to tropical weathering processes removing unstable minerals and lithic grains. Karimunjawa Arch was elevated during Eocene and acting as barrier to transport from inland areas of Sundaland))

Witts, D. (2013)- Palaeocurrents and provenance: uplift history of the Meratus Complex, SE Kalimantan. Berita Sedimentologi 28, p. 25-30.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-28-borneo.html)
(Paleocurrent and provenance data from W flank of Meratus Mountains. Paleocurrents and sandstone provenance of Kiwa Member suggest N part of Meratus was uplifting in E Miocene. Paleocurrents from M-L Miocene Warukin Fm two distinct trends, first to ESE (present-day Meratus), second to WNW (i.e. away from Meratus; in channel sandstones in uppermost ~500m of formation. Switch in paleocurrents interpreted as recording Late Miocene early stage of uplift of S Meratus Mts)

Witts, D., L. Davies & R. Morley (2014)- Uplift of the Meratus Complex: sedimentology, biostratigraphy, provenance and structure. Proc. 38th Ann. Conv., Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-082, 21p.
(SE Kalimantan Meratus Mts emerged diachronously in E Miocene in N, earlier than previously suggested, but in Late Miocene further S. Paleocurrents from Warukin Formation directed towards ESE (i.e. towards present-day Meratus) in lower part, to WNW (i.e. away from Meratus) in upper ~500m of formation (M-U Miocene Tapin Mb). Paleocurrents in E Miocene Kiwa Mb of Montalat Fm indicate sediment transport to NW (zircons age populations same as in Eocene Tanjung Fm, suggesting reworked Tanjung Fm from Meratus High?). Meratus Range probably elongate positive flower structure)

Witts, D., L. Davies, R.J. Morley & L. Anderson (2015)- Neogene deformation of East Kalimantan: a regional perspective. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-246, 22p.
(Review of Adang Line, etc.)

Witts, D., R. Hall, R.J. Morley & M.K. BouDagher-Fadel (2011)- Stratigraphy and sediment provenance, Barito basin. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-054, 18p.
(Revised Eocene- Miocene stratigraphy and depositional model for Barito basin surface sediments. M Eocene-E Oligocene Tanjung Fm clastics, minor limestones and coal deposited in fluvio-tidal coastal plain to marginal marine setting, sediment sourced from W and SW and mainly derived from metamorphic rocks. M-L Miocene Warukin Fm marginal marine to fluviodeltaic, sediment was being transported from W for oldest part, mainly derived from Schwaner Complex, lesser extent Rajang-Crocker Gp, partly from E for younger coal-bearing sequences (=Meratus Mts uplift?))

Witts, D., R. Hall, G. Nichols & R. Morley (2012)- A new depositional and provenance model for the Tanjung Formation, Barito Basin, SE Kalimantan, Indonesia. J. Asian Earth Sci. 56, p. 77-104.
(Tanjung Fm of Barito Basin deposited from late M Eocene- late Early Oligocene. Most of formation deposited in tidally-influenced coastal plain and estuarine setting, and sediment was transported by rivers flowing to N (NB: Witts et al. 2011 suggest Tanjung Fm from W and SW?; Heryanto & Panggabean 2004 suggested mainly from WNW; JTvG). Heavy minerals and zircon geochronology identified Schwaner Complex W Borneo, Karimunjawa Arch and S continuation of Meratus Complex in Java Sea as main sediment sources)

Wiroyudo, G.K. (1982)- Exploration review of the Bunyu PSC Area. CCOP Tech. Publ. 11, p. 141-154.

Wiweko, A. (1998)- Sedimentary facies and depositional geometry of distributary mouth bars in Tunu Field, Miocene Kutei Basin and comparison with modern Mahakam Delta. Ph.D. Thesis Queensland University of Technology, Brisbane, p.

Wiweko, A. & B. Giriansyah (2000)- Sedimentary facies of the Mahakam Delta: comparison between the Modern and the Miocene. Berita Sedimentologi (Indon. Sediment. Forum FOSI) 12, p. 6-9.
(Modern Mahakam Delta developed in last 5000 years, after decline in rate of Holocene transgression. Deposition dominated by fluvial and tidal processes. U Miocene Paleo-Mahakam delta sediments often slightly coarser grain size, more high-energy flood events, higher sand % and less tidal influence)

Wulandari, T., A. Sukapradja, A. Krisnaputra & J. Clark (2016)- An integrated reservoir characterization to determine remaining potential in Sisi Nubi Field. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 485-494.
(Sisi -Nubi gas fields, 25 km offshore Mahakam delta, discovered in 1986 and 1992 and cumulative production >1 TCF gas, and 26 MMbbl condensates. With 4 main producing intervals, 69 geological layers and >300 fluvial- deltaic reservoir units)

Yabe, H. (1921)- Notes on some Eocene foraminifera, II. Notes on two foraminiferal limestones from E.D. Borneo. Science Reports Tohoku Imperial University, 2nd ser. (Geol.), 5, p. 100-106.
(online at: http:// ir.library.tohoku.ac.jp/re/bitstream/10097/30174/1/KJ00004176256.pdf)
(Eocene Nummulites subbrongniarti, N. pengaronensis, Discocyclina javana, Assilina orientalis, etc. in limestone from Marah, Bulungan, NE Kalimantan)

Yabe, H. & S. Hanzawa (1924)- A *Lepidocyclina* limestone from Sangkoelirang, Dutch E. Borneo. Japanese J. Geology Geography Trans. Abstr. 3, 2, p. 71-76.
(M Miocene limestone with Miogypsina polymorpha, Cycloclypeus annulatus, Lepidocyclina angulosa, etc. from Maloewi Anticline, Sangkulirang, E Kalimantan)

Yoga, T.Y, F. Panggabean & Z. Abidin (2009)- Slump scar reconstruction and distribution in Tunu area and its impacts on field development strategy. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA-G-093, 13p.
(Tunu giant gas field located at E limit of present Mahakam delta. Reservoirs mainly lower M Miocene deltaics between 7.3 Ma regional flooding surface and regional unconformity at 10.5 Ma. Local collapse of edge of deposited sediments during M Miocene produced large slump scars parallel to strike of Tunu anticline)

Yoga, T.Y & F. Tampilang (2016)- Mahakam Delta core workshop: TM-62 core synthesis a tight G zone reservoir, Tambora Field, East Kalimantan. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 47-TS-16, p. 1-13.
(Core description of delta distributary channel and mouth bar sand of M-U Miocene G-zone reservoir in Tambora Field, Mahakam Delta)

Yuh, S., A. Anshariy, S. Ariawan, H. Khairy & C.M. Adam (2015)- Application of AVO seismofacies technique to detect undrained prospects in Handil Shallow and Upper Zones, Mahakam Delta, East Kalimantan. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-083, 14p.
(Handil field in Mahakam Delta >550 hydrocarbon accumulations between 230-3000m depth in 4-way dip structure. Over 400 wells drilled. AVO analyses of 2011 3D seismic survey helps identify un-drained areas)

Yulihanto, B., B. Wijayanto, Sulistiyono & T. Junaedi (2006)- Hydrocarbon system of the Paleogene sediment of the Melawi Basin, West Kalimantan, Indonesia. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta06-PG-11, 4p.
(Melawi Basin intracontinental basin, surrounded by Triassic-Jurassic basement highs composed of granites and schists. Thick Early Cretaceous- Oligocene sediments. Main source rock kerogens of lacustrine-deltaic origin in Cretaceous and Late Eocene-Early Oligocene)

Yuniardi, Y. (2006)- Potensi dan kualitas batubara daerah Lipon Gedang, Kecamatan Sungai Durian, Kabupaten Kotabaru, Kalimantan Selatan. Bull. Scientific Contr. (UNPAD) 4, 1, p. 41-51.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8113/3689)
(On Eocene Tanjung Fm coal potential in Lipon-Gendang area, Sungai Durian District, E of Kandangan Meratus Mts front, SE Kalimantan. Four outcropping coal seams mapped, 0.2- 3m thick. Predicted resources 1,403,550 ton with average caloric value of ~5400 cal/gr and average sulfur 1.47%)

Yuniardi, Y., R. Fakhrudin & L. Jurnaliah (2010)- Zonasi paleontologi Cekungan Kutai Bagian Bawah, daerah Balikpapan dan sekitarnya, Provinsi Kalimantan Timur. Bull. Scientific Contr. (UNPAD) 8, 2, p. 123-129.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8250/3798)

(Paleontological zonation of the Lower Kutai Basin, Balikpapan and surrounding area, East Kalimantan'. Brief general discussion of Miocene- Recent foraminifera, calcareous nannoplankton and palynology biozonations. No details on Kutai Basin)

Yuniardi, Y., B. Muljana & R. Fakhrudin (2012)- Kronostratigrafi Cekungan Kutai bagian bawah, daerah Balikpapan dan sekitarnya, Kalimantan Timur. Bull. Scientific Contr. (UNPAD) 10, 1, p. 41-57.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8277/3824)
('Chronostratigraphy of the lower Kutai Basin in Balikpapan and surrounding area, East Kalimantan'. Brief review of latest Oligocene- Pliocene biozones in outcrops of Kutai basin. Little location/stratigraphy detail)

Zagalai, B.M. (1994)- A deterministic approach to modeling a giant field with numerous stacked reservoirs. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 51-64.
(Reservoir model of Attaka Field (2 GBO and 3 TCF gas in place), N of Mahakam Delta. Producing reservoirs stacked over 10,000' of Miocene deltaics)

Zahra, K.A., A.H. Hamdani & R.T. Rosmalina (2015)- Paleoenvironmental Implications from biomarker investigations on the Pliocene Lower Sajau lignite seam in Kasai Area, Berau Basin, Northeast Kalimantan, Indonesia. J. Geoscience and Environment Protection 3, 5, p. 140-152.
(online at: http://file.scirp.org/pdf/GEP_2015080611180523.pdf)
(Pliocene age lignites from Lower Sajau seam in borehole in Kasai Coal Field, Berau Basin. Lignite-grade coal with abundant terpenoid biomarkers including lupane and oleanane indicate angiosperm-dominated vegetation. Also hopanoid biomarkers indicating acidic depositional environment)

Zajuli, M.H.H. (2013)- Batuan sedimen halus kelompok Mandai berdasarkan analisis scanning electron microscope (SEM). J. Sumber Daya Geologi 23, 3, p. 121-127.
('Fine-grained sedimentary rocks of the Mandai group, based on scanning electron microscope analysis'. In E part of Ketungau Basin (also called Mandai Basin) of NW Kalimantan E Tertiary mudstones of Mandai Gp consist of illite, smectite and kaolinite. Also Botryococcus algae. Diagenesis suggest burial to 2500-4000m)

Zajuli, M.H.H. & Suyono (2011)- Organic geochemistry and Rock-Eval pyrolysis of Eocene fine sediments, East Ketungau Basin, West Kalimantan. J. Geologi Indonesia 6, 2, p. 95-104.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/publisher_detail/4)
(Geochemistry of Eocene Mandai Gp mudstones of E Ketungau Basin, NW Kalimantan, suggest poor to fair, ga- prone source rock potential)

Zajuli, M.H.H. & J. Wahyudiono (2018)- Rock-Eval pyrolysis of the Oligocene fine-grained sedimentary rocks from the Pamaluan Formation, Gunung Bayan Area, West Kutai Basin, East Kalimantan : implication for hydrocarbon source rock potential. J. Geologi Sumberdaya Mineral 19, 2, p. 73-82.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/343/338)
(?Late Oligocene shales of coal-bearing Pamaluan Fm in Gunung Bayan area of upper/NW Kutai Basin poor-good quality source rock with gas-prone Type III kerogen. Maturity level mainly immature)

Zhang, Z. & C.S. Wright (2017)- Quantitative interpretations and assessments of a fractured gas hydrate reservoir using three-dimensional seismic and LWD data in Kutei basin, East Kalimantan, offshore Indonesia. Marine Petroleum Geol. 84, p. 257-273.
(Description of fractured gas hydrate reservoir over 500 km region from seismic data in offshore Kutei basin)

Zuffardi-Comerci, R. (1928)- Di alcuni foraminiferi terziari dellôisola di Borneo. Bol. Soc. Geol. Italiana 47, 2, p. 127-148.
('On some Tertiary foraminifera from the island of Borneo'. Includes descriptions of 'new' E Miocene larger foram species from Bintut-Amuntai area (= Berai Lst, Barito Basin?). Proposed new species names (Miogypsina verrucosa, M. cupulaeformis, Lepidocyclina amoentai, L. fovelata, etc.) never used; JTvG)

Zulmi, I., R. Ramadian, F. Fabian, M. Momen & U. Sukanta (2014)- Stratigrafi sikuen resolusi tinggi untuk memahami distribusi reservoir di lapangan Semberah, Cekungan Kutai bagian bawah. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-180, 11p.
('High-resolution sequence stratigraphy to understand reservoir distribution in the Semberah Field, Lower Kutai basin'. Detailed correlations of M-L Miocene deltaic sands, shales and minor coals and limestones in Mentawir Fm (Balikpapan Mb) (palynozones Florschuetzia levipoli from 100'- 850', Florschuetzia trilobata from 850'- 4140'). At least 6 sequences)

IV.3. North Borneo (Sarawak, Sabah, Brunei)

Abdul Hadi & T.R. Astin (1995)- Genesis of siderite in the Upper Miocene offshore Sarawak: constraints on pore fluid chemistry and diagenetic history. In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. 1994, Southeast Asian basins; oil and gas for the 21st century, Bull. Geol. Soc. Malaysia 37, p. 395-413.
(Authigenic siderite common inshelfal and tidal Upper Miocene reservoir sandstone of Baram field. Siderite cemented zones up to 2m thick. Siderite cement in five different sandstone types and four different crystal morphologies. Rhombic siderite, common in bioturbated and heterogeneous sandstone, has most adverse effect on reservoir characteristics of sandstones, reducing porosity to 10% and permeability to 2 md. Oxygen isotopes compatible with precipitation at shallow burial depth from unaltered seawater)

Abdul Hadi, A.R., K. Xainey, M.S. Ismail & N. Mazshurraiezal (2017)- Sedimentology of the Lambir Formation (Late Miocene), northern Sarawak, Malaysia. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 569-580.

Abdul Manaf, M. & R.H.F. Wong (1995)- Seismic sequence stratigraphy of the Tertiary sediments, offshore Sarawak deepwater area, Malaysia. Bull. Geol. Soc. Malaysia 37, p. 345-361.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a26.pdf)
(Sarawak deepwater area with eight seismic horizons representing tops of depositional sequences. Six upper horizons (Late Oligocene- Pleistocene) tied to wells and dated based on paleontologic data. Older horizons dated by correlation to global sea-level chart. With seismic facies maps)

Abd. Rahman, A.H.A., D. Menier & M Y. Mansor (2014)- Sequence stratigraphic modelling and reservoir architecture of the shallow marine successions of Baram field, West Baram Delta, offshore Sarawak, East Malaysia. Marine Petroleum Geol. 58B, p. 687-703
(Sequence stratigraphic study of Late Miocene Baram field, a medium-sized oilfield located in NE Baram Delta Oil Province, off Sarawak)

Abdullah, N.S. & Harminzar M. (2013)- North Baram & North East Luconia play analysis. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, P43, 4p. *(Extended Abstract)*
(North Baram and NE Luconia three major play types: (1) Pre-Mid-Miocene Unconformity (Late Oligocene- E Miocene Cycle I-II) play at NE Luconia, (2) Post-MMU play (Upper Cycle V-VI) at N Baram Delta and (3) M-Late Miocene Carbonate buildup play in C Luconia province

Abdullah, Nuraiteng T. & A. Kushairi (1987)- Pedawan Formation of the Penrissen area, Sarawak: a revision of its upper age limit. Warta Geologi (Newsl. Geol. Soc. Malaysia) 13, 2, p. 43-50.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1987002.pdf)
(Youngest Globotruncana species at top of Pedawan Fm in Penrissen area (S of Kuching) Marginotruncana coronata, Marginotruncana angusticarinata and Dicarinella carinata, signifying U Santonian age)

Abdullah, Nuraiteng T. & C.Y. Yaw (1993)- Distribution of foraminiferal assemblages in the Upper Eocene Batu Gading Limestone, Sarawak. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, p. 231-242.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/..)
(In Batu Gading are off Baram River, Sarawak, S of Brunei, , massive U Eocene limestone, disconformably overlain by Late Oligocene limestone breccia with mixed Late Eocene and Late Oligocene taxa, suggesting post-Late Eocene emergence. With abundant Eocene larger foraminifera, incl. Nummulites javanus, N. pengaronensis, Discocyclina, Asterocyclina. Limestones overlain by deep marine beds with earliest Miocene Globigerina sellii- G. binaiensis planktonic foraminifera)

Abdullah, W.H. (1997)- Common liptinitic constituents of Tertiary coals from the Bintulu and Merit Pila coalfields, Sarawak, and their relation to oil generation from coal. Petroleum Geology Conference '96, Kuala Lumpur, Bull. Geol. Soc. Malaysia, 41, p. 85-94.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997026.pdf)

(Oligocene and Lower Miocene onshore and offshore sequences of Sarawak contain numerous coal seams. Oil possibly sourced from these coals. Study of coals from Bintulu area and Merit-Pila coalfield shows liptinitic constituents commonly considered to indicate oil generation and expulsion from coals)

Abdullah, W.H. (1997)- Evidence of early generation of liquid hydrocarbon from suberinite as visible under the microscope. Organic Geochem. 27, 7/8, p. 591-596.
(Example of early generation of liquid hydrocarbons from suberinite in coal sample from Merit-Pila coal field, C Sarawak. As observed under microscope, generation of oil-like material, mainly as exsudatinite, from maceral suberinite occurs at maturity level of ~0.4% vitrinite reflectance)

Abdullah, W.H. (1999)- Oil-generating potential of Tertiary coals and other organic-rich sediments of the Nyalau Formation, offshore Sarawak. J. Asian Earth Sci. 17, p. 255-267.
(Coals and organic-rich clastics from Late Oligocene- E Miocene Nyalau Fm believed to be major source rock. Coals dominated by vitrinite, with moderate- low exinite and inertinite. Samples vitrinite reflectance 0.42-0.72%. Good oil-generating potential anticipated)

Abdullah, W.H. (1999)- Petrographic features of oil-prone coals from the Brunei-Muara District, Negara Brunei Darussalam. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 621-627.
(online at: www.gsm.org.my/products/702001-100779-PDF.pdf)
(M Miocene Belait Fm coals from Brunei-Muara District possess characteristics of oil-prone coals, like: high abundance of hydrogen-rich macerals such as suberinite and liptodetrinite, presence of exsudatinite, oil globules, oil haze and changes in fluorescence intensity. Expulsion of hydrocarbons may start at relatively low thermal maturity level of 0.42 to 0.49%Ro)

Abdullah, W.H. (2002)- Oil staining in the onshore Togopi Formation, Dent Peninsula, NE Sabah Basin. Warta Geologi 28, 4, p. 153-156.
(online at: www.gsm.org.my/products/702001-100440-PDF.pdf
(Extensive dark oil staining in white Late Pliocene- Pleistocene Togopi Fm limestone in remote outcrop of, Dent Peninsula, NE Sabah)

Abdullah, W.H. (2002)- Organic petrological characteristics of limnic and paralic coals of Sarawak. In: G.H. Teh (ed.) GSM Annual Geological Conference, Kota Bharu 2002, Bull. Geol. Soc. Malaysia 45, p. 65-69.
(online at: www.gsm.org.my/products/702001-100741-PDF.pdf)
(Study of Tertiary coals from Merit-Pila and the Mukah-Balingian coalfields of Sarawak. Coals deposited in two distinct depositional settings: Mukah-Balingian coals in paralic, lower coastal plain setting, Merit-Pila coals were deposited inland in lacustrine setting)

Abdullah, W.H. (2003)- Coaly source rocks of NW Borneo: role of suberinite and bituminite in oil generation and expulsion. In: G.H. Teh (ed.) Petroleum Geol. Conf. Exhib. 2002, Bull. Geol. Soc. Malaysia 47, p. 153-163.
(online at: www.gsm.org.my/products/702001-100602-PDF.pdf)
(Organic petrography suggests suberinite and some others identified as the most oil-prone macerals in NW Borneo coals. Oil-prone macerals most likely fom bark and root tissues of mangrove plants and other suberin-bearing plant species)

Abdullah, W.H., M.H. Hakimi, I.E. Shushan & A.H.B. Rahman (2017)- Petroleum source rock characteristics of marine versus coastal settings: A comparative study between Madbi Formation of Masila Basin, Yemen and Nyalau Formation of Sarawak, Malaysia. Bull. Geol. Soc. Malaysia 63 (Geol. Soc. Malaysia 50th Anniversary Issue 1), p. 103-115.
(online at: www.gsm.org.my/products/702001-101706-PDF.pdf)
(Comparison of two completely different oil source rocks, Jurassic of Yemen and Oligo-Miocene of Sarawak)

Abdullah, W.H., M.J. Hoesni & P. Abolins (1995)- Aspects of oil generation from coals: a Sarawak case study. The importance of exsudatinite and variations in organic facies characteristics. Geol. Soc. Malaysia Petroleum Geology Conf. 1995, Warta Geologi 21, 6, p. 403-406. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1995006.pdf)
(Brief report on petrographic/ geochemical study of Tertiary coals from Sarawak, from Nyalau Fm in Bintulu area and Balingian Province. Two main oil types can be tied to two coal types: oleanane-rich oils from Balingian sourced from exsudatinite-rich coals and oleanane-poor oils from exsudatinite-poor coals)

Abdullah, W.H., V. Kiselev, Y.M. Makeen, T.S. Olayinka & K.A. Mustapha (2014)- Direct liquefaction on low rank Batu Arang coals of Malaysia: influence of petrographic composition. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 95-98.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014010.pdf)

Abdullah, W.H. & C.P. Lee (2002)- Hydrocarbon-bearing fissure in the limestone of the Togopi Formation, Dent Peninsula, Sabah. Warta Geologi 28, 5, p. 193-196.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm2002005.pdf)
(Geochemistry of dark stained fissure in outcrop, believed to be migrated oil)

Abdullah, W.H., C.P. Lee, P. Gou, M.K. Shuib, T.F. Ng, A.A. Albaghdady, M.F. Mislan & K.A. Mustapha (2013)- Coal-bearing strata of Labuan: mode of occurrences, organic petrographic characteristics and stratigraphic associations. J. Asian Earth Sci. 76, p. 334-345.
(Four Cenozoic units with coal-bearing sediments recognized on Labuan, Sabah. From youngest, immature Belait Fm to Setap Shale and Temburong Fm, to oldest W Crocker Fm, with vitrinite reflectance 0.8-0.9%. Analysed coals mainly mangrove-derived and considered to be oil-prone as suggested by common occurrences of oil haze, suberinite, bituminite, exsudatinite and perhydrous vitrinite)

Abdullah, W.H., S.Y. Lee, M.K. Shuib & M.H.A. Hakimi (2011)- Organic-rich sequences of the Miri Formation, Sarawak : implication for oil generating potential. Proc. 24th Ann. National Geoscience Conference 2011 (NGC2011), Johor Baru, B13, p. 52-53. *(Extended Abstract)*
(online at: http://geology.um.edu.my/gsmpublic/NGC2011/NGC2011_Proceedings.pdf)
(Organic facies in outcrops around Miri, Sarawak. M Miocene Miri Fm with organic-rich sandstone intervals with coal clasts and carbonaceous laminae. Early mature (Vitrinite reflectance Ro 0.35- 0.50%))

Abdullah, W.H., O.S. Togunwa, Y.M. Makeen, M.H. Hakimi, K.A. Mustapha, M.H. Baharuddin, S.G. Sia & F. Tongkul (2017)- Hydrocarbon source potential of Eocene-Miocene sequence of Western Sabah, Malaysia. Marine Petroleum Geol. 83, p. 345-361.
(Organic matter present in all formations studied mainly of terrigenous origin and gas prone (Type III and Type III-IV kerogen), except for minor occurrence of mixed oil-gas prone Type II-III kerogen in Miocene Belait Fm and in slump mass transport deposits of West Crocker Fm)

Abubaker, T., W.H. Abdullah & A.H. Abd. Rahman (2004)- Biomarkers as palaeoenvironment and thermal maturity indicators of the Sandakan Formation (Late Miocene) East Sabah, Malaysia. Malaysian J. Science 23, 2, p. 165-174.
(Biomarker distributions and their application as thermal maturity and paleoenvironmental indicators for Late Miocene Sandakan Fm. Samples analysed thermally immature for oil generation)

Abu Bakar, Z.A., M. Madon & A. Jalil Muhamad (2007)- Deep-marine sedimentary facies in the Belaga Formation (Cretaceous-Eocene), Sarawak: observations from new outcrops in the Sibu and Tatau areas. Bull. Geol. Soc. Malaysia 53, p. 35-45.
(online at: www.gsm.org.my/products/702001-100506-PDF.pdf)
(Description of submarine fan facies in folded, flysch-type deep-marine rocks of Cretaceous- Eocene Belaga Fm of Rajang Group)

Adams, C.G. (1959)- Foraminifera from limestone and shale in the Batu Gading area, Middle Baram, East Sarawak. Geol. Survey Dept. British Borneo, Annual Report 1958, p. 73-85.
(Eocene larger foraminifera from Sarawak; see also Adams and Haak, 1962)

Adams, C.G. (1960)- Eocene and Miocene foraminifera from limestone and shale in the middle Baram Valley, Sarawak. British Borneo Geol. Survey, Annual Report 1959, p. 64-67.
(Occ. Eocene larger forams, incl. Discocyclina javana, Eorupertia, Halkyardia, Nummulites javanus, etc.)

Adams, C.G. (1964)- The age and foraminiferal fauna of the Bukit Sarang limestone, Sarawak, Malaysia. Geol. Survey Borneo Region, Annual Report 1963, p. 152-162.
(Bukit Sarang Limestone of Sarawak, 20km SE of Tatau, Bintulu, rel. thin (~90m). With Tc/ Early Oligocene species only: Borelis pygmaeus, Dictyoconus melinauensis n.sp., Halkyardia, Nummulites fichteli, etc.)

Adams, C.G. (1965)- The foraminifera and stratigraphy of the Melinau Limestone, Sarawak, and its importance in Tertiary correlation. Quart. J. Geol. Soc. London 121, p. 283-338.
(Melinau Lst in NE Sarawak up to 7000' thick. Age based on larger foraminifera Late Eocene- E Miocene. One new genus, Wilfordia, three new species: Dictyoconus melinauensis, Neoalveolina inflata, and Wilfordia sarawakensis. Dictyoconus recorded for first time from Oligocene-age strata)

Adams, C.G. & R. Haak (1962)- The stratigraphical succession in the Batu Gading area, Middle Baram, North Sarawak. In: N.S. Haile, The geology and mineral resources of the Suai-Baram Area, North Sarawak, British Borneo Geol. Survey Memoir 13, p. 141-150.
(Along Middle Baram River in NE Sarawak ~120' N-dipping massive Late Eocene limestone unconformably on folded Late Cretaceous Kelalan/ Rajang Fm. Late Eocene with Tb larger forams Pellatispira, Discocyclina, Aktinocyclina, Nummulites javanus, etc. Overlain (with erosional surface/ E Oligocene hiatus) by 40' thick limestone breccia and bedded limestone with reworked Eocene larger forams and Heterostegina borneensis, Spiroclypeus, Eulepidina, Borelis pygmaeus and Miogypsinoides (Te1-4; interpreted as E Miocene, but should be latest Oligocene; JTvG). Overlain by earliest Miocene (N4-N5) calcareous shales with Globigerinoides, Globigerina binaiensis, G. dissimilis, G. ciperoensis)

Adams, C.G. & H.J.C. Kirk (1962)- The Madai-Baturong Limestone member of the chert- spilite formations, North Borneo. Geol. Magazine 99, 4, p. 289-303.
(Madai-Baturong limestone of Semporna Peninsula, SE Sabah, forms important marker horizon in 'oceanic' Chert-Spilite Fm. Steeply NE-dipping, up to 2000' thick at Mt Madai. At Mt Madurong with oolite beds. In lower part with Lower? Cretaceous shallow marine algae (Lithocodium, Cayeuxia, Hensonella) and Dictyoconus foram. Upper part and breccias with U Cretaceous deep marine planktonic foraminifera (Campanian Globotruncana, Heterohelix, Praeglobotruncana). Chert-Spilite Fm uplifted against Upper Tertiary sediments along thrust fault. (Interpreted as seamount deposit on oceanic crust high by Lee (2003))

Adams, C.G. & H.J.C. Kirk (1963)- The Madai-Baturong Limestone member of the chert- spilite formations, North Borneo. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Geol. Survey Dept., British Territories in Borneo, Bull. 4, Kuching, p. 79-86.
(Same paper as Adams & Kirk 1962)

Adams, C.G. & G.E. Wilford (1972)- On the age and origin of the Keramit and Selidong Limestones, Sarawak, East Malaysia. Geol. Survey Malaysia, Geological Papers 1, p. 28-42.
(Keramit and Selidong limestones deposited in moderately deep water; Eocene and Oligocene shales with pelagic foraminifera interbedded with calcarenites with Late Oligocene (Lower Te) larger foraminifera)

Adams, E.W., R.E. Besems & S.J. Gough (2012)- ñPre-MMUò carbonates and the influence of age and tectonic regimes on their growth styles, Sarawak, Malaysia. In: Petroleum Geoscience Conf. Exhibition (PGCE 2012), Kuala Lumpur, Warta Geologi 38, 2, p. 120-121.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta38_21.pdf)

(Extended Abstract. 'Traditional' offshore Sarawak carbonate exploration is in M-Late Miocene Luconia Province carbonates, above 'M Miocene unconformity (MMU)', when many of the Luconia Province carbonates initiated during major M Miocene flooding. Carbonates also in 'pre-MMU' section. U Eocene-Lw Oligocene carbonates onshore Sarawak, developed speculatively as isolated thrust-top platforms, in front of Rajang accretionary wedge as result of Luconia Block docking against Borneo. Late Oligocene relatively stable, regionally extensive shelf system. Shift from foram-and-algal to coral-dominated carbonate deposition at Oligocene-Miocene boundary)

Adams, E.W., P.F.M. Janssen, S. Ghani, S.J. Gough & P. Winefield (2013)- The Lower Miocene Great Barrier Reef of Sarawak, Malaysia: the exploration potential of Cycle II and III carbonates. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, O25, 3p. *(Extended Abstract)*
(E Miocene (~20 Ma) widespread passive shelf-margin carbonate deposition in distal part of NW-SE trending paleo-Sarawak shelf, from northern C Luconia in NW to onshore Sarawak in SE. High-relief carbonate platform margin developed, and in some locations continued into M-Late Miocene Luconia Province carbonates. Vast parts of Lower Miocene Cycle II and III carbonates have poor primary reservoir properties)

Adepehin, E.J., C.A. Ali, A.A. Zakaria & Z. Konjing (2020)- Post-depositional controls on siliciclastic tight reservoirs: implications from the Oligocene Nyalau Formation (Cycle 1), onshore Central Sarawak, Borneo. Marine Petroleum Geol. 111, p. 786-806.
(online at: https://www.sciencedirect.com/science/article/pii/S0264817219304519)
(Subsurface tight reservoir sandstones of Oligocene Nyalau Fm in onshore C Sarawak. Porosity reduction by cementation (40-58%), exceeds porosity loss by compaction (22-53%))

Adepehin, E.J., C.A. Ali, A.A. Zakaria & M.S. Sali (2019)- An overview of 20 yearsô hydrocarbon exploration studies and findings in the Late Cretaceous-to-Tertiary onshore Central Sarawak, NW Borneo: 1997-2017 in retrospect. J. Petroleum Expl. Production Technology 9, p. 1593-1614.
(online at: https://link.springer.com/content/pdf/10.1007/s13202-018-0591-8.pdf)

Agostinelli, E., M. Raisuddin, E. Antoinelli & M. Aris (1990)- Miocene- Pliocene palaeogeographic evolution of a tract of Sarawak offshore between Bintulu and Miri. In: G.H. Teh (ed.) 13th Petroleum Geology Seminar, Bull. Geol. Soc. Malaysia 27, p. 117-135.
(online at: www.gsm.org.my/products/702001-101080-PDF.pdf)
(Six Mio-Pliocene paleogeographic maps offshore Sarawak show progressive shift of paleo-shoreline. W Baram line paleo-escarpment evident at least since M Miocene. NE of escarpment filled mainly in Late Miocene-Pliocene by deposits associated with prograding paleo-Baram Delta)

Aitchison, J.C. (1994)- Early Cretaceous (pre-Albian) radiolarians from blocks in Ayer Complex melange, eastern Sabah, Malaysia, with comments on their regional tectonic significance and the origins of enveloping melanges. J. Southeast Asian Earth Sci. 9, 3, p. 255-262.
(Red ribbon-bedded chert blocks in Miocene mudstone matrix melange in E Sabah with E Cretaceous radiolarian fauna (pre-Albian?; no diagnostic species), older than age of oceanic basement rocks in Sulu and Celebes Seas. Chert-Spilite Fm of E Sabah, from which blocks probably derived, may represent fragments of early Pacific Ocean seafloor. Blocks incorporated into mud-matrix melange developed during E Miocene NW-directed collision and overthrusting of Sulu volcanic arc onto thinned continental crust rifted from S China)

Akiyama, Y. (1984)- A case history- exploration, evaluation and development of the Mamut porphyry copper deposit. Bull. Geol. Soc. Malaysia 17, p. 237-255
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1984012.pdf)
(Mamut deposit in NW Sabah higher associated gold-silver than normal porphyry copper deposits. Mineralization tied to Late Miocene adamellite intrusions into Eocene- Miocene Trusmadi Fm)

Albaghdady, A., W.H. Abdullah & Lee Chai Peng (2003)- An organic geochemical study of the Miocene sedimentary sequence of Labuan Island, offshore western Sabah, East Malaysia. Bull. Geol. Soc. Malaysia 46, p. 455-460.

(online at: www.gsm.org.my/products/702001-100618-PDF.pdf)
(Labuan island off W coast of Sabah with outcrops of E-M Miocene Temburong, Setap Shale and Belait Fms. Thermal maturity is early mature to mid mature for oil generation)

Alexander, J.B. (1956)- British Borneo. In: Lexique stratigraphique international, Stratigraphic Comm., Int. Geol. Congress, Paris, III (Asie), 7, p. 1-313.
(First edition of North Borneo stratigraphic lexicon; see also second edition by Fitch (1961))

Algar, S. (2012)- Big oil from ñgas-proneò source rocks and leaking traps: Northwest Borneo. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 10465, p. 1-40. *(Abstract and Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/10465algar/ndx_algar.pdf)
(Murphy 2002 Kikeh Field oil discovery in offshore Sabah deepwater (>400 MMBO) in deepwater sands in thrust structure. Oil source material M Miocene terrestrial plant material, present mainly in sandstones. Most oil fields on Sabah shelf have abundant crestal faulting; presence of oil fields in 'gas province' probably due to gas leakage via faults)

Algar, S., C. Milton, H. Upshall, J. Roestenburg & P. Crevello (2011)- Mass-transport deposits of the deepwater Northwestern Borneo margin- characterization from seismic-reflection, borehole, and core data with implications for hydrocarbon exploration and exploitation. In: R.C. Shipp et al. (eds.) Mass-transport deposits in deepwater settings, Soc. Sedimentary Geology (SEPM) Spec. Publ. 96, p. 351-366.
(In Late Miocene to Recent deep water thrust belt off NW Borneo up to 50% of sediments large-scale remobilized mass-transport deposits. MTD's 10-200m thick, composed mainly of claystone. Intercalated with turbidites, which form sandstone reservoirs of petroleum discoveries. Thickest sands often immediately overlying MTDs. MTD lithofacies continuum from debritic claystones to more simply folded claystones)

Ali, A.M. & E. Padmanabhan (2014)- Quartz surface morphology of Tertiary rocks from North East Sarawak, Malaysia: implications for paleo-depositional environment and reservoir rock quality predictions. Petroleum Expl. Development 41, 6, p. 761-770.
(Study of surface damage of quartz crystals from weathering and diagenesis in Miocene outcrop sandstones from Sarawak. Belait conglomerates with euhedral quartz crystals with mechanical weathering defects, and higher porosity than. Lambir sandstones with more chemical weathering features. Coatings of authigenic clay and iron oxides inhibit or delay cementation, consequently preserving porosity

Ali, M.Y. (1992)- Carbonate cement stratigraphy and timing of hydrocarbon migration: an example from Tigapapan Unit, offshore Sabah. Bull. Geol. Soc. Malaysia 32, p. 185-211.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992022.pdf)
(Late Miocene Tigapapan Unit one of several hydrocarbon-bearing reservoirs in offshore NW Sabah Basin. Consists of bioclast-rich, clastics, interpreted as progradation storm shoal deposits. Cathodoluminescence, geochemical and isotopic studies indicate 9 stages of carbonate cementation, formed from near surface to 2 km depth. Sr isotope dating of dolomites indicates two events, 10.5 Ma and 8.9 Ma))

Ali, M.Y. (1995)- Carbonate cement stratigraphy and timing of diagenesis in a Miocene mixed carbonate-clastic sequence, offshore Sabah, Malaysia: Constraints from cathodoluminescence, geochemistry, and isotope studies. Sedimentary Geology 99, p. 191-214.
(Similar paper to Ali (1992) on carbonate cementation history in Middle-Late Miocene sandstone reservoir offshore NW Sabah)

Ali, M.Y. (2014)- An integrated analysis of the depositional control, sedimentology and diagenesis of Cenozoic carbonates from the Sarawak Basin, East Malaysia. Ph.D. Thesis Imperial College, University of London, p. 1-467.
(online at: https://spiral.imperial.ac.uk/handle/10044/1/29605)
(Comprehensive analysis of Cenozoic carbonates from Sarawak Basin, both onshore (4 Late Eocene -E Miocene units) and offshore (4 M-L Miocene build-ups in offshore C Luconia). Carbonate growth mainly controlled by paleo-basement structures: some carbonates on flat rift blocks show flat-top morphology; on

tilted sub-blocks often conical shapes. Eustacy probably main controlling mechanism for carbonate growth. Late Eocene Lower Batu Gading Lst massive nummulitic facies with Pellatispira; E Miocene U Batu Gading Lst on disconformity and composed of finely bedded and brecciated limestones. Suai Lst (Te5?) fining-upward parasequences of larger foraminifera dominated by large Eulepidina spp. E Miocene Subis Lst (Te5) rich in corals, foraminifera and algae. Bekenu Lst laminated marls-shale calci-turbidites). Luconia offshore carbonates greater similarity in facies and sequences. Ten stages of calcite cementation/ dolomitisation. Presence of high T minerals indicate late stage corrosive fluids of hydrothermal origin, responsible for porosity- permeability enhancement of reservoirs)

Alias, F.L. (2014)- Organic petrological and organic geochemical of tertiary coals within the west middle block of the Pinangah coal field, Sabah, Malaysia. Masters Thesis, University of Malaya, p. 1-140.
(online at: http://studentsrepo.um.edu.my/4870/)
(Coals of E-M Miocene Tanjong Fm in Pinangah coalfield, Maliau Basin, S Sabah, excellent hydrocarbon-generative potential. Coals humic and dominated by vitrinite, >15% liptinite and low inertinite macerals. Bitumen yields 57,300-140,000 ppm. High hydrogen index up to 300 mg HC/g TOC, consistent with Type II and mixed Type II-III kerogen. Vitrinite reflectance 0.42%-0.66 Ro% (immature- early mature). With Rhizophora, Casuriana, Dactylocdalus and Podocarpus pollen. Deposition on lower delta plain)

Alias, F.L., W.H. Abdullah, M.H. Hakimi, M.H. Azhar & R.L. Kugler (2012)- Organic geochemical characteristics and depositional environment of the Tertiary Tanjong Formation coals in the Pinangah area, onshore Sabah, Malaysia. Int. J. Coal Geology 104, p. 9-21.
(Tertiary Tanjong Fm coals in Pinangah Coalfield, S Sabah, are humic, dominated by vitrinite, with significant liptinite and low inertinite macerals. Total organic carbon 51-78%, with bitumen values 57,300-140,000 ppm, therefore source rock with good hydrocarbon-generative potential. Good liquid hydrocarbons generation potential can also be expected from significant liptinitic content (>15%). Vitrinite reflectance Ro 0.42- 0.66%, indicating immature- early mature stage for hydrocarbon generation)

Allen, A.W. (1951)- The geology of the Lundu-Sematon-Tanjong Datu area of the first division of Sarawak. M.Sc. Thesis Durham University, p. 1-170.
(online at: http://etheses.dur.ac.uk/10289/1/10289_7083.PDF?UkUDh:CyT)

Allman-Ward, P. (1998)- Subsurface deepwater challenges in Brunei. Proc. 12th Offshore SE Asia Conf. 1998 (OSEA 98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 219-233.
(Offshore Brunei deepwater play in marine turbidites with variable reservoir development. Only sizeable deepwater finds to date: Brunei Shell Merpati (1992) gas/condensate field and Elf Perdana oil discovery)

Almond, J., P. Vincent & L.R. Williams (1990)- The application of detailed reservoir geological studies in the D18 Field, Balingian Province, offshore Sarawak. Bull. Geol. Soc. Malaysia 27, p. 137-159.
(online at: www.gsm.org.my/products/702001-101079-PDF.pdf)
(Reservoir study of 1981 D18 Field discovery, 56 miles NW of Bintulu, Balingian province, off Sarawak. Productive reservoirs E Miocene (Cycle II) lower coastal plain and delta plain deposits. Geological model with NW to NE progradation and abandonment of small delta lobes in river-dominated lower delta plain setting)

Alshebani, K.A., W.H. Abdullah & A.H. Abd. Rahman (2003)- Biomarker characterization and thermal maturity evaluation of Ganduman Formation, Sahabat area, Dent Peninsula, E Sabah, Malaysia. Bull. Geol. Soc. Malaysia 46, p. 461-466.
(online at: www.gsm.org.my/products/702001-100617-PDF.pdf)
(Pliocene sediments fluvio-deltaic/ lacustrine Ganduman Fm in Sahabat area of Dent Peninsula, E Sabah, still immature for hydrocarbon generation. Extract of one immature sandstone sample thermally mature, suggesting migrated hydrocarbons)

Anderson, J.A.R. & J. Muller (1975)- Palynological study of a Holocene peat and a Miocene coal deposit from NW Borneo. Review Palaeobotany Palynology 19, p. 291-351.

(Palynology study of Holocene raised peat bog near Marudi (Sarawak) and Miocene coal near Berakas (Brunei) and compared with present-day swamp vegetation along NW Borneo coast. 76 pollen and spore types recognized. Floristic composition of mixed swamp forest stage in both bogs closely comparable. Only one spore type, Stenochlaena areolaris became extinct in Borneo)

Anuar, A., P. Abolins, P. Crevello & W.H. Abdullah (2003)- A geochemical evaluation of the west Crocker Formation- clues to deepwater source rock facies. Warta Geologi 29, 6, p. 267-268. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm2003006.pdf)
(Geochemistry of outcrop samples from deep water facies of West Crocker Fm around Kota Kinabalu. Pelagic basin floor shales with low organic content (TOC <0.5%) and unlikely source facies. Biomarkers mainly marine signature (even C27, C28, C29 sterane, presence of C30 steranes, absence of higher plant indicators oleanane and bicadinanes and low Tm/ Ts and Pr/Ph ratios). Fine turbiditic shales (levee/overbank deposits or fine tails of turbidity currents with variable TOC (0.11-2.5%); possible source facies. Shales associated with slumps and debris flows with TOC of 0.42- 2.75%. Debris flows can be very carbonaceous, with TOC up to 69%, with biomarkers with strong terrigenous, higher plant signature (marked C29 preference, lack of C30 steranes, high 18a(H) oleanane), suggesting promising source rock facies. Vitrinite reflectance shows variable maturity of West Crocker Fm (Ro 0.65- >2.0%))

Anuar, A. & R.R.F. Kinghorn (1995)- Sterane and iriterpane biomarker characteristics from oils and sediment extracts of the Middle-Upper Miocene sequences, Northern Sabah basin. In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. 1994, SE Asian basins; oil and gas for the 21st century. Bull. Geol. Soc. Malaysia 37, p. 415-436.
(online at: www.gsm.org.my/products/702001-100937-PDF.pdf)
(Biomarker studies on oils and sediments from N Sabah Basin wells show dominantly terrigenous organic matter source for hydrocarbons: high triterpane/sterane ratios, compounds diagnostic of land-derived plant organic matter such as oleanane and resins W, T and R, and predominance of C 29 regular steranes over C27 and C28. Majority of extracted sediments immature (first authors to suggest landplants as main hydrocarbon source in deep marine enviroments around Borneo?; JTvG))

Anuar, A. & A.J. Muhamad (1997)- A comparison of source rock facies and hydrocarbon types of the Middle Miocene sequence, Offshore NW Sabah Basin, Malaysia. In: Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta 1997, p. 773-786.
(Potential source rocks in NW Sabah Basin in three broad paleoenvironments: 1) coastal-lower coastal plain; 2) fluviomarine and 3) continental shelf-deep marine areas. Preservation of organic matter seems related to high productivity, high sediment accumulation rates and resistant nature of Type I11 higher land plant waxes to oxidation and biodegradation. Anoxic depositional conditions not essential for organic matter preservation. Oils discovered in each of these settings similar biomarkers: large oleanane peak, common bicadinanes, and C2q-tetracyclic terpane, but only a small portion of source extracts correlates positively with Sabah oils)

Asis, J., M.N.I. Abdul Rahman, B. Jasin & S. Tahir (2015)- Late Oligocene and Early Miocene planktic foraminifera from the Temburong Formation, Tenom, Sabah. Bull. Geol. Soc. Malaysia 61, p. 43-47.
(online at: www.gsm.org.my/products/702001-101677-PDF.pdf)
(Temburong Fm at Paal River, Tenom district, SW Sabah, fine-grained flysch deposits of distal part of deep-sea fan. Two shale samples with planktonic foraminifera: (1) Globorotalia ciperoensis Zone (P22; Chattian) and (2) Catapsydrax dissimilis-Praeorbulina sicana Zone (N7; late Burdigalian))

Asis, J. & Basir Jasin (2010)- Radiolaria Kapur dalam kompleks ofiolit Teluk Darvel di Sungai Sipit Lahundai, Kunak, Sabah. Borneo Science 27, p. 1-4.
(online at: http://borneoscience.ums.edu.my/wp-content/uploads/2010/09/)
('Cretaceous radiolaria in the Darvel Bay Ophiolite Complex at the Sipit Lahunday River, Kunak, Sabah'. Darvel Bay Ophiolite Complex consists of mafic-ultramafic association, overlain by bedded chert. Bedded chert has abundant radiolarians and is exposed at Sipit Lahundai River, 22 km from Kunak. Three Aptian- Turonian assemblages)

Asis, J. & Basir Jasin (2011)- Some Cretaceous radiolaria from Darvel Bay Ophiolite complex, Kunak, Sabah. Proc. 24th Ann. National Geoscience Conference 2011 (NGC2011), Johor Baru, B13, p. 82. *(Abstract)*
(online at: http://geology.um.edu.my/gsmpublic/NGC2011/NGC2011_Proceedings.pdf)
(Darvel Bay Ophiolite Complex of SE Sabah withperidotite, gabbro, pillow basalt and reddish-brown chert. Cherts along Kunak-Semporna road with 56 species of radiolaria, of 3 assemblages: I: Aptian-Albian, with Sticomitra simplex, Crucella bossoensis, etc.; II: Albian-Cenomanian, with Xitus mclauglini, Pseudoaulophacus sculptus, Dictyomitra gracilis, etc.; III: Turonian, with Pseudotheocampe tina, Crucella cahensis, Dictyomitra multicostata, etc.. Bedded chert with abundant radiolarians indicates high plankton productivity, possibly related to upwelling. Absence of limestone suggests deposition below CCD depth)

Asis, J. & Basir Jasin (2012)- Some Cretaceous radiolaria from Kuamut Melange, Kunak, Sabah. Geol. Soc. Malaysia, Nat. Geoscience Conf., Kuching 2012, Paper A2, p. 9-10.
(E Miocene Kuamut melange with broken Paleogene rock formations and dismembered ophiolite blocks embedded in shale matrix. Chert interbedded with folded siliceous shale and contains Aptian- Turonian radiolaria; slightly longer version below)

Asis, J. & Basir Jasin (2012)- Aptian to Turonian radiolaria from the Darvel Bay Ophiolite Complex, Kunak, Sabah. Bull. Geol. Soc. Malaysia 58, p. 89-96.
(online at: https://gsmpubl.files.wordpress.com/2014/08/bgsm2012013.pdf)
(Darvel Bay Ophiolite Complex (formerly known as Chert-Spilite Fm) of E Sabah composed of ultramafics, basalts, etc., capped by red radiolarian chert. Folded bedded cherts with 56 species of Aptian-Turonian radiolarians in three assemblages. I (Aptian-Albian) with Sticomitra simplex, Crucella bossoensis, Xitus clava, Dictyomitra communis, etc.; II (Albian-Cenomanian)with Xitus mclaughlini, Pseudoaulophacus sculptus, Dictyomitra gracilis, etc.; III (Turonian) with Pseudotheocampe tina, Ultranapora cretacea, Alievium superbum, Crucella cachensis, etc.. Abundance of radiolarians reflects high planktonic productivity. Absence of limestone indicates deposition below Calcite Compensation Depth)

Asis, J. & Basir Jasin (2013)- Aptian to Turonian radiolarians from chert blocks in the Kuamut Melange, Sabah, Malaysia. Sains Malaysiana 42, 5, p. 561-570.
(online at: www.ukm.edu.my/jsm/pdf_files/SM-PDF-42-5-2013/02%20Junaidi.pdf)
(Miocene Kuamut Melange in Kunak district, SE Sabah, probably unconformably overlies Darvel Bay Ophiolite Complex. Consists of broken Paleogene formations and dismembered ophiolite blocks embedded in shale with chert matrix. Fourteen samples from 1-2.5m thick chert-siliceous shale section on pillow basalt, with 45 species of radiolaria. Three assemblages: I (Aptian-Albian), II (Albian-Cenomanian) and III (Turonian). Cherts deposited on floor of marginal ocean basin in Cretaceous and tectonically deformed in melange in M Miocene)

Asis, J. & Basir Jasin (2013)- Miocene larger benthic foraminifera from the Kalumpang Formation, Tawau, Sabah: preliminary interpretation. In: Proc. Nat. Geoscience Conf., Ipoh 2013, Geol. Soc. Malaysia, p. 66-68. *(Extended Abstract only)*
(online at: http://geology.um.edu.my/gsmpublic/NGC2013/…)
(Miocene larger foraminifera from Spit Lst unit of Kalumpang Fm in Teck Guan Quarry, Tawau, SE Sabah, with 14 species of larger foraminifera, incl. Lepidocyclina (Nephrolepidina) spp., Lepidocyclina (Eulepidina), Miogypsina, Cycloclypeus (Katacycloclypeus) annulatus, Flosculinella bontangensis, etc. (most likely age Middle Miocene; Langhian; JTvG). See also Asis and Jasin 2015))

Asis, J. & Basir Jasin (2015)- Miocene larger benthic foraminifera from the Kalumpang Formation in Tawau, Sabah. Sains Malaysiana 44, 10, p. 1397-1405.
(online at: www.ukm.my/jsm/pdf_files/SM-PDF-44-10-2015/04%20Junaidi%20Asis.pdf)
(Samples of Kalumpang Fm/ Sipit Mb reefal limestone in 46m thick section at Teck Guan Quarry, 50km E of Tawau, SE Sabah. Formation faulted and thrusted against Cretaceous Darvel Bay Ophiolite Complex at Darvel Bay area. 17 species of larger foraminifera, in two assemblages: (1) Lepidocyclina (N) parva, L. (Eulepidina) formosa (Te5, Aquitanian-Burdigalian; E Miocene); (2) Lepidocyclina (N) sumatrensis, Lepidocyclina (N) angulosa, Lepidocyclina spp., Miogypsina sp., Katacycloclypeus annulatus, Cycloclypeus spp., Flosculinella bontangensis, etc. (Tf1-2; M Miocene))

Asis, J., S. Tahir, Basir Jasin & B. Musta (2018)- Lower Miocene, larger benthic foraminifera fauna and depositional environment of limestone facies from Batu Luang, Klias Peninsula, Sabah. Bull. Geol. Soc. Malaysia 65, p. 125-130.
(online at: https://gsm.org.my/products/702001-101731-PDF.pdf)
(Limestone unit exposed in Batu Luang with Lepidocyclina (N.) verbeeki assemblage (zone Te5, early Miocene (Aquitanian)). Small reef deposited in shallow marine environment)

Asis, J., S. Tahir, B. Jasin, N. Abdullah & B. Musta (2018)- Larger benthic foraminifera from Early Miocene limestone of the Setap Shale Formation at Batu Luang, Klias Peninsula, Sabah, Malaysia. Int. Research J. Earth Sciences 6, 10, p. 12-19.
(online at: http://www.isca.me/EARTH_SCI/Archive/v6/i10/2.ISCA-IRJES-2018-013.pdf)
(Limestone unit of Setap shale Fm exposed at Batu Luang, Klias Peninsula, Sabah. Limestone with encrusting coral in lower part. Upper part massive, with 11 species of larger foraminifera, incl. Austrotrillina, Lepidocyclina (Eulepidina), Lepidocyclina (Nephrolepidina) spp., Miogypsinoides dehaarti, Spirocyclopeus sp. and Tansinhokella, idicative of Te5, earliest Miocene (older than previous work))

Asis, J., S. Tahir, B. Musta & Basir Jasin (2018)- Lower Miocene planktic foraminifera from the Temburong Formation in Menumbok, Klias Peninsula, Sabah. Bull. Geol. Soc. Malaysia 65, p. 59-62.
(online at: https://gsm.org.my/products/702001-101739-PDF.pdf)
(Lower Miocene Temburong Fm exposed at SW Klias Peninsula two local biozones, N4 and N5. Deposited in distal deep-sea fan environment in latest Oligocene- earliest Miocene (U Chattian- Aquitanian))

Asis, J., S. Tahir, B. Musta, Basir Jasin, H.F.W. Soehady & D. Gabda (2019)- Paleoclimate of Upper Oligocene-Lower Miocene Temburong Formation, Klias Peninsula, Sabah, base on planktonic foraminifera assemblage. In: 12th Seminar on Science and Technology, J. Physics: Conference Ser. 1358, 012071, p. 1-9.
(online at: https://iopscience.iop.org/article/10.1088/1742-6596/1358/1/012071/pdf)
(Temburong Fm on Klias Peninsula, Sabah composed of flysch-type deposit. Planktonic foraminifera in 9 samples 3 zones, P21-P22, N4 and N5-N6. Cool climate indicators (Catapsydrax, small Globigerina) more common in Late Oligocene sediment, gradually shifted to warm climatic indices (Globigerinoides spp., Globoqudrina altispira) in Lower Miocene section)

Atkinson, C.D., M.J.B.G. Goesten, A. Speksnijder & W. van der Vlugt (1986)- Storm-generated sandstone in the Miocene Miri Formation, Seria Field, Brunei (NW Borneo). In: R.J. Knight & R.J. McClean (eds.) Shelf sands and sandstones, Canadian Soc. Petroleum Geol. Memoir 11, p. 213-240.
(Cores from 20-25m thick reservoir interval in U Miocene Miri Fm, Seria field of Baram Delta Basin composed predominantly of silty-sandy shales interspersed with numerous sandstone beds. Sands two main types: (1) thin (0.1-1.5m), fining-upward units with patchy, sheet-like geometry and lateral extent of 100- 1500m (single storm events); and (2) thicker (1.5- 3m), more extensive (>2 km) amalgamated sands (stacked storm sands of the lower-middle shoreface. Overall shelf regression and shoaling, followed by transgression and deepening)

Aziz Bin Ali, Che (1993)- Sedimentology and diagenesis of the E11 carbonate buildup and the Subis Limestone (Miocene), Sarawak, Malaysia. Ph.D. Thesis, University of Reading, p. 1-. *(Unpublished)*

Bachir, O. (1998)- Asymmetrical deformation, thrusts and microscale fracturation of the Nyalau Formation at Bintulu. Bull. Geol. Soc. Malaysia 42, p. 55-62.
(online at: www.gsm.org.my/products/702001-100856-PDF.pdf)
(Oligo-Miocene Nyalau Fm deltaic sandstones and shales. Episode of deformation in Bintulu area of Sarawak creating ENE-WSW oriented folds-thrusts, with vergence to S. Tied to Late E- M Miocene collision of Luconia block with Borneo)

Back, S., C.K. Morley, M.D. Simmons & J.J. Lambiase (2001)- Depositional environment and sequence stratigraphy of Miocene deltaic cycles exposed along the Jerudong Anticline, Brunei Darussalam. J. Sedimentary Res. 71, 6, p. 913-921.

(Km-scale prograding delta clinoforms in outcrop. Large clinoforms at base of Miocene Belait delta represent three major sand-shale sequences. Accumulation most likely during relative sea-level lowstand. Overlying 1-1.5 km thick shale unit interpreted as transgressive and early highstand conditions. Rapid progradation of thick sand-dominated shoreface deposits characterizes late highstand. All sediments formed in shoreface to shelfal setting in front of mud-rich delta, not continental-slope to deep-marine environment)

Back, S., F. Strozyk, P.A. Kukla & J.J. Lambiase (2008)- Three-dimensional restoration of original sedimentary geometries in deformed basin fill, onshore Brunei Darussalam, NW Borneo. Basin Research 20, p. 99-117.
(W flank of Jerudong Anticline, onshore Brunei, exposes base of majorMiocene mud-rich delta, including km-scale prograding clinoforms, delta-front turbidites and large- scale syndepositional faults. Lateral continuation of system in subsurface of Belait Syncline is documented on 2D seismic data and wireline logs)

Back, S., H.J. Tioe, T.X. Thang & C.K. Morley (2005)- Stratigraphic development of synkinematic deposits in a large growth-fault system, onshore Brunei Darussalam. J. Geol. Soc., London, 162, p. 243-257.
(Km-scale syn-sedimentary fault in outcrop in M Miocene deltaics along Jerudong Anticline, onshore Brunei Darussalam)

Baioumy, H., A.M. A. Salim, M.H. Arifin, M.N.A. Anuar & A.A. Musa (2018)- Geochemical characteristics of the Paleogene-Neogene coals and black shales from Malaysia: implications for their origin and hydrocarbon potential. J. Natural Gas Science Engineering 51, p. 73-88.
(On Cenozoic coals and associated black shales in Peninsular Malaysia (Eocene- Oligocene coals in small basins on West coast), Sarawak (Late Oligocene- Miocene coals in Nyalau, Liang, Begrih and Balingian Fms) and S Sabah (M Miocene coals in Tanjong Fm). All have mixed Type II-III kerogens and hydrogen index suggesting potential for gas and oil generation. Coals and black shales from M Miocene Tanjong Fm formed under wetter climate conditions than others)

Bait, B. (2003)- Geology of Kinabalu field and its water-injection scheme. In: G.H. Teh (ed.) Petroleum Geology Conference and Exhibition 2002, Bull. Geol. Soc. Malaysia 47, p. 165-179.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003a12.pdf)
(Geology and development of Late Miocene shallow marine 'L sandstone' reservoir in 1989 Kinabalu oil discovery, offshore Sabah shelf. Hydrocarbons in >30 reservoirs, trapped against Kinabalu growth fault)

Balaguru, A. (1997)- Sedimentologi dan stratigrafi batuan sedimen Miosen di Lembangan Malibau, Sabah. Bull. Geol. Soc. Malaysia 40, p. 177-105.

Balaguru, A. (2001)- Tectonic evolution and sedimentation of the southern Sabah Basin, Malaysia. Ph.D. Thesis, University of London, p. 1-420. *(Unpublished)*

Balaguru, A. (2008)- Tectonic evolution, sedimentation and chronostratigraphic chart of Sabah, Malaysia. Petroleum Geology Conf. Exhib. (PGCE), Kuala Lumpur 2008, 2p. *(Abstract only)*
(At least three major episodes linked to NW-SE compression coinciding with subduction of Proto-South China Sea: (1) Late Eocene (Sarawak Orogeny; collision of Luconia Continental Block; onshore Sarawak only); (2) middle E Miocene (22-20Ma; Sabah Orogeny-BMU-Base Miocene Unc.; collision of Dangerous Ground continental block to NW Borneo and referred as 'Sabah Orogeny') and (3) early M Miocene (15.5Ma, MMU-M Miocene Unc./DRU-Deep Regional Unc.; collision in N Borneo between Cagayan Arc and Palawan micro continental block. Late Miocene major folding-uplift event of Shallow Regional Unconformity (SRU, 8.6Ma) probably caused by NW-SE trending strike-slip faulting and transpressional fault movement. Transpression along major strike-slip faults in region probably continued during Late Pliocene and possibly related to propagation of deformation from Sulawesi towards NW Sabah)

Balaguru, A. (2009)- Basin evolution, stratigraphy and petroleum system of the NE Sabah Basin: based on integrated onshore and offshore studies. In: Proc. Petrol. Geol. Conf. Exh., Kuala Lumpur 2009, 4p.
(At least 3 major tectonic phases in Mio-Pliocene in NE Sabah basin: pre-rift forearc, rift and post-rift inversion. Regional intra-E Miocene unconformity as consequence of collision of Dangerous Ground Block

with NW Borneo. End of rifting related to 15.5 Ma collision of Palawan microcontinent and Cagayan arc, producing inversion and M Miocene unconformity. Late Miocene unconformity uplift and erosion related to 8.6 Ma collision of Philippine Block and SE margin of SE Asia)

Balaguru, A. & R. Hall (2009)- Tectonic evolution and sedimentation of Sabah, North Borneo, Malaysia. Extended Abstract AAPG Int. Conf. Exhibition, Cape Town 2008, 15p.
(online at: www.searchanddiscovery.net/documents/2009/30084balaguru/images/balaguru.pdf)
(At least 3 major episodes of NW-SE compression coinciding with ongoing subduction of proto-South China Sea during Late Eocene, E Miocene and M Miocene)

Balaguru, A. & T. Lukie (2012)- Tectono-stratigraphy and development of the Miocene delta systems on an active margin of Northwest Borneo, Malaysia. Petrol. Geosc. Conf. Exh. (PGCE 2012), Kuala Lumpur, Warta Geologi 38, 2, p. 127-129.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta38_21.pdf)
(Extended Abstract. Miocene- Recent regressive fluvio-deltaic systems progressively deformed and overlie Oligocene low-metamorphic Crocker accretionary complexes. Three deltaic complexes, generally younging from E to W: (1) mid E Miocene - early M Miocene Meligan Delta is separated by M Miocene unconformity (= Deep Regional unconformity) from (2) M-L Miocene Champion Delta; separated by Late Miocene Shallow Regional Unconformity from (3) Baram Delta)

Balaguru, A. & G. Nichols (2004)- Tertiary stratigraphy and basin evolution, Southern Sabah (Malaysian Borneo). J. Asian Earth Sci. 23, p. 537-554.
(Stratigraphy revision, with recognition of late E Miocene regional unconformity around 22-19 Ma, earlier than generally accepted age of ~17 Ma. Cretaceous? ophiolitic basement overlain by Eocene accretionary complex and Oligocene deep marine forearc sediments. Late Oligocene- E. Miocene melange formation, etc.)

Balaguru, A., G.J. Nichols & R. Hall (2003)- The origin of the 'circular basins' of Sabah, Malaysia. Bull. Geol. Soc. Malaysia 46, p. 335-351.
(Sub-circular basins' of Meliau, Malibau and Tidung areas are structurally controlled synclines, interpreted as remnants of single large basin, deformed in NW-SE trending transpressional zones. Recognition in field of E Miocene regional unconformity, possibly equivalent to Deep Regional Unconformity offshore. Below unconformity deposits of Eocene accretionary complex over ophiolitic basement and Oligocene Labang/ Kuamut Fms deep water succession formed in forearc basin, and underwent syn-depositional deformation. Above unconformity is Tanjung Fm of Late E Miocene to M Miocene (NN3-NN5))

Balaguru, A., G.J. Nichols & R. Hall (2003)- Tertiary stratigraphy and basin evolution of Southern Sabah: implications for the tectono-stratigraphic evolution of Sabah, Malaysia. In: G.H. Teh (ed.) Petroleum Geology Conf. 2002, Bull. Geol. Soc. Malaysia 47, p. 27-49.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003a03.pdf)
(Revised stratigraphy and tectonic evolution of S Sabah. E Miocene (Burdigalian; ~22-19 Ma) uplift/erosion event in outcrop, probably equivalent to Deep Regional Unconformity offshore (but usually placed at 17 Ma). Eocene accretionary complex over ophiolitic basement and Late Paleogene deep water forearc basin series, including extensive melange. Localised limestone deposition during E Miocene uplift followed by up to 6000m of M Miocene deltaic clastics in two coarsening-upward successions. E Miocene unconformity result of deformation and uplift following underthrusting of S China Sea continental crust, which terminated Paleogene subduction beneath N Borneo. Renewed subsidence related to rifting in Sulu Sea. Transpressional deformation in Late Pliocene, possibly related to propagation of deformation from Sulawesi towards NW Sabah)

Banda, R.M. (1994)- Planktonic foraminiferal biostratigraphy of Miri-Tinjar road section, North Sarawak, Malaysia. In: F. Chand (conv.) Proc. 25th Geol. Conf., Techn. Papers, 6, Geol. Survey Malaysia, p. 77-116.

Banda, R.M. (1998)- The geology and planktic foraminiferal stratigraphy of the Northwest Borneo basin, Sarawak, Malaysia. Ph.D. Thesis, University of Tsukuba, Japan, p. 1-145.
(online at: www.tulips.tsukuba.ac.jp/limedio/dlam/B14/B1451308/....)

(Overview of NW Borneo/ West Sarawak geology, mainly reflecting Early Cretaceous- Eocene period of S-directed subduction, creating accretionary complexes, which ceased after Late Eocene Luconia Block collision. Followed by study of planktonic foraminifera from overlying Late Oligocene-Pliocene basin)

Banda, R.M. (2000)- The planktic foraminiferal biostratigraphy of the Miri-Gunong Subis area, Sarawak, Malaysia. Techn. Papers Min.Geosc. Dept. Malaysia 1, p. 89-131.
(Miri-Gunong Subis area four lithostratigraphic unit: Suai Fm metamorphosed shale (Ga binaiensis Zone; early Early Miocene), Sibuti mudstone (Gs sicanus Zone; Mid Early Miocene), Lambir sandy alternations (Orbulina suturalis-Gr peripheronda Zone; early Mid Miocene) and Miri Fm (barren) sandy alternations)

Banda, R.M. & A.U. Ambun (1997)- Major geological events since Cretaceous in Sarawak, Malaysia. In: M.P.J. Militante (ed.) Third Int. Symp. Int. Geol. Correl. Program (IGCP) Project 350, Cretaceous environmental change in East and South Asia. J. Geol. Soc. Philippines 52, p. 198-215.
(Sarawak and NE Kalimantan 5 tectonostratigraphic units 1) Borneo Basement of Carboniferous-Triassic volcanics and metamorphics in NW and C Kalimantan; 2) E Cretaceous melange, widespread in Sarawak and Kalimantan, slices of W Sarawak Block, shallow to deep marine sediments and underlying ophiolitic rocks; 3) Folded Rajang Group, 5000' of Early Cretaceous- Paleocene sediments in accretionary prism formed in response to S- directed subduction of oceanic lithosphere from E Cretaceous- Late Eocene; 4) Isolated Basin clastics, and 5) Peripheral Neogene basin clastics. Late Eocene regional deformation and uplift, termed Sarawak Orogen, with development of major faults like Lupar, Sebangkoi and Mersing)

Banda, R.M., Amiruddin, W. Gunawan, A. Yan, Y. Ramli, D. Badang, T. Galina & R. Banjar (2012)- Progress report- Malaysian-Indonesian geological correlation program in the border area Sintang-Silantek area. Geol. Soc. Malaysia, Nat. Geoscience Conf., Kuching 2012, Paper A20, p. 36-38.
(In Sintang-Silantek area same geological formations are stretching NW-SE across Sarawak- Kalimantan border but names and stratigraphic nomenclatures differ: (1) in NE tightly folded turbiditic sediments (Kapuas Complex, Lupar Fm) in fault contact with: (2) Lubok Antu= Keriau melange/ Kapuas Complex belt of broken formation, ophiolitic rocks and Jurassic-Cretaceous cherts in sheared shale matrix (Danau Complex, Pakong mafic complex), possibly as young as Paleocene?; (3) in SW sandstone basins of Kantu (= Silantek Fm; Late Eocene?), Tutoop (= Plateau Sst) and Ketangau Fms. Widespread mainly Miocene intrusives in Sintang and Silantek area, named Sintang Intrusives)

Banda, R.M. & E. Honza (1996)- Miocene stratigraphy of northwest Borneo Basin. Warta Geologi (Newsl. Geol. Soc. Malaysia). 22, 3, p. 242-243. *(Brief abstract only)*
(Regional Mapping Programme of Geological Survey of Malaysia in NW Sarawak defined four formations in Miocene of area: Miri Fm (Mid to Late Miocene), Lambir Fm (early M Miocene), Sibuti Fm in mid E Miocene and Suai Fm from early E Miocene. Additional member ise Subis Limestone Mb in the lower part of Sibuti Fm)

Banda, R.M., D. Lakkui, P. Chung & N. Lian (2009)- Lithostratigraphic and biostratigraphic correlations of Miocene sediments in the Pinangah coal basin and surrounding areas, Sabah. In: 11th Reg. Congress Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA 2009), Kuala Lumpur, p. 50. *(Abstract only)*
(Summary of mapping coal in outcrops of M Miocene Tanjong Fm, central South Sabah)

Barckhausen, U., D. Franke, D. Behain & H. Meyer (2002)- New insight into the crustal structure of the continental margin offshore NW Sabah/Borneo. EGS 27th General Assembly, Nice, EOS Transactions, American Geophys. Union (AGU) 83 (47, Suppl.), p. 1291-1292. *(Abstract only)*
(Continental margin offshore NW Sabah looks like typical accretionary margin, formed during subduction of proto-S China Sea. Presently inactive. Seaward of Sabah Trough extended continental lithosphere, with rotated fault blocks, half grabens and E Oligocene- E Miocene carbonate platform. Continental crust also under Sabah Trough and adjacent continental slope. Dangerous Grounds' extended continental crust can be traced landward of Sabah Trough beneath sediments of upper plate. Magnetic signatures of young volcanic features continue under continental slope. Tectonic scenario for NW Sabah continental margin: Seafloor spreading in S China Sea from ~30 Ma separated Dangerous Grounds area from SE Asia and ceased in late E Miocene when oceanic crust of proto-S China Sea was fully subducted. In E and/or M Miocene, Borneo rotated CCW and was thrusted

onto edge of Dangerous Grounds block. Subducted oceanic crust of proto S China Sea today below E Sabah, not along present NW Sabah Trough)

Barker, S.M., J. Jong, Q.T. Tran, K. Ogawa & S. Noon (2017)- A high resolution bio-sequence stratigraphic interpretation of quaternary geology- a case study from deepwater Sarawak area. Asia Petroleum Geoscience Conf. Exhib. (APGCE 2017), Kuala Lumpur, 43205, p. 29-37. *(Extended Abstract)*
(Bunguran Trough is intra-continental pull-apart basin in deepwater offshore Sarawak, and distal part of Rajang Delta system. Discussion of Messinian-Holocene sequence/ biostratigraphy in area based on new JX Nippon 'T-1' exploration well, with ~770m thick M Pleistocene and almost 1000m Late Pleistocene- Holocene. New Late Pleistocene- Holocene cycle (cycle IX) proposed for Shell 'NW Borneo cycle scheme')

Bayliss, D.D. (1966)- Foraminifera from the Bau Limestone Formation, Sarawak, Malaysia. Geol. Survey Borneo region Malaysia, Annual Report 1965, p. 173-195.
(Bau Limestone in W Sarawak with rel. low diversity Late Jurassic foraminifera assemblages, mainly Nautiloculina oolithica, Pseudocyclammina lituus (forma alpha) and Torinosuella peneropliformis (see also Wilford & Kho 1965))

Beattie, D. (1986)- Gravity modeling of a mafic-ultramafic association, Darvel Bay, Sabah, Northern Borneo. B.Sc. Thesis Dalhousie University, Halifax, p. 1-56.
(online at: www.earthsciences.dal.ca/aboutus/publications/theses/BSc/ES_1986_BSc_Beattie_Dwayne.pdf)
(Pre-Tertiary mafic-ultramafic rocks at Darvel Bay, E Sabah, form ophiolite suite and provide evidence for M Tertiary island arc-continent collision zone from SE to NW Sabah. Gravity survey shows positive anomaly of 70 mgal associated with outcropping mafic and ultramafic rocks (see also Ryall & Beattie 1996))

Beauvais, L. & H. Fontaine (1990)- Corals from the Bau limestone formation, Jurassic of Sarawak, Malaysia. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 209-239.
(Well-preserved coral fauna of Late Jurassic (Kimmeridgean- Tithonian, possibly extending into earliest Cretaceous) age from Bau Lst, W Sarawak, incl. Cladophyllia ramaea, Cuneiphyllia, Latiphyllia, Litharaeopsis, etc.. Corals belong to species of North Tethys, no species as known from S Tethys. (Limestone similar to some limestones from Sumatra and N Palawan Block, with common species stromatoporoid Cladocoropsis, foram Pseudocyclammina lituus, algae Salpingoporella, etc. JTvG))

Beets, C. (1943)- *Brechites venustulus*, ein neuer Fund aus dem Miocan der Landschaft Serawak, N.W. Borneo. Leidsche Geol. Mededelingen 13, p. 329-333.
(On a new species of tube-shaped pelecypod of genus Brechites from Miocene of Sarawak)

Behain, D. (2005)- Gas hydrate offshore NW Sabah: morpho-tectonic influence of gas hydrate and estimation of concentration of gas hydrate above and free gas below the gas hydrate stability zone. Doct. Thesis Technische Universitat Clausthal, p. 1-153.
(online at: www.gbv.de/dms/clausthal/E_DISS/2005/db107866.pdf)
(In offshore NW Sabah gas hydrates, with Bottom-Simulating Reflector on seismic, mainly in zone of coast-parallel ridges (top of imbricated thrust anticlines). Minimum water depth for BSR 600m, and 250-350m below seafloor)

Benard, F., C. Muller, J. Letouzey, C. Rangin & S. Tahir (1990)- Evidence of multiphase deformation in the Rajang-Crocker Range (northern Borneo) from Landsat imagery interpretation: geodynamic implications. Tectonophysics 183, p. 321-339.
(Sarawak structural trends essentially E-W, with first deformation in E-M Eocene. Second event marked by N-ward thrusting of Eocene over Oligocene, prior to deposition of M Miocene. In Crocker Belt of Sabah two oblique generations of structures before deposition of U-M Miocene. Tight folds, trending N-S in Brunei, N60E in N Sabah, bending to N130°E in Sandakan area. This pattern affected by late N60E-trending normal faults in C Sabah) (see also Comments by (1) Hutchison, Tectonophysics 204, p. 175-177 and (2) Haile, Tectonophysics 204, p. 178-180))

Ben-Awuah, J. & E. Padmanabhan (2014)- Porosity and permeability modifications by diagenetic processes in fossiliferous sandstones of the West Baram Delta, Offshore Sarawak. Int. J. Petroleum Geoscience Engineering (IJPGE) 2, 2, p. 151-170.
(online at: www.aropub.org/wp-content/uploads/2014/07/AROPUB-IJPGE-14-61.pdf)
((Productive units of M-U Miocene cycles V and VI in Baram Delta have enhanced porosity-permeability from dissolution of fossils. Similar to 2015 paper below)

Ben-Awuah, J. & E. Padmanabhan (2015)- Porosity and permeability modification by diagenetic processes in fossiliferous sandstones of the Baram Delta, Sarawak Basin, Malaysia. In: M. Awang et al. (eds.) 3rd Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2014), Kuala Lumpur 2014, Springer Verlag, p. 47-57.
(Productive units of M-U Miocene cycles V and VI in Baram Delta have enhanced porosity-permeability from dissolution of fossils)

Ben-Awuah, J. & E. Padmanabhan (2015)- Effect of bioturbation on reservoir rock quality of sandstones: a case from the Baram Delta, offshore Sarawak, Malaysia. Petroleum Exploration Development 42, 2, p. 223-231.
(Depending on type of burrow, porosity- permeability of sandstone reservoirs in M-U Miocene of offshore Baram Delta either enhanced (Ophiomorpha burrows with clean sand fill) or reduced (Diplocraterion burrows with clays and organic matter in burrow fills) by bioturbation)

Ben-Awuah, J. & E. Padmanabhan (2017)- Heterogeneity in hydrocarbon and organic matter distribution in the offshore West Baram Delta, Sarawak Basin. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 373-384.

Ben-Awuah, J., E. Padmanabhan, S. Andriamihaja, P.O. Amponsah & Y. Ibrahim (2016)- Petrophysical and reservoir characteristics of sedimentary rocks from offshore west Baram Delta, Sarawak Basin, Malaysia. Petroleum and Coal 58, 4, p. 414-429.
(online at: www.vurup.sk/wp-content/uploads/dlm_uploads/2017/07/pc_4_2016_awuah_444.pdf)
(Reservoir quality of M-U Miocene sandstones on offshore W Baram Delta wells. Average porosity 25 %, permeability 1911 mD for coarse grained sandstones, 5.7 % and 1.4 mD for very fine grained sandstones, 16.5% and 23 mD for bioturbated sandstone, etc. Excellent reservoir rock quality in coarse sandstones attributed to lack of cement between grains, good intergranular porosity and pore connectivity)

Ben-Awuah, J., E. Padmanabhan & R. Sokkalingam (2017)- Geochemistry of Miocene sedimentary rocks from offshore West Baram Delta, Sarawak Basin, Malaysia, South China Sea: implications for weathering, provenance, tectonic setting, paleoclimate and paleoenvironment of deposition. Geosciences J. 21, 2, p. 167-185.
(Geochemistry, provenance, tectonic setting, etc., of offshore Miocene clastics in W Baram Delta Sandstones provenance mainly felsic-intermediate igneous with minor mafic contribution. Passive margin tectonic setting after continental collision and rifting stages of foreland basin. Paleoclimate warm and humid, enhancing chemical weathering)

Bergman, S.C., C.S. Hutchison, D.A. Swauger & J.E. Graves (2000)- K:Ar ages and geochemistry of the Sabah Cenozoic volcanic rocks. Bull. Geol. Soc. Malaysia 44, p. 165-171.
(online at: http://gsmpubl.files.wordpress.com/2014/09/bgsm2000021.pdf)
(M Miocene (~14-19 Ma) K-Ar dates of volcanic rocks of S Dent Peninsula and Semporna Peninsula. Pliocene rift-related, low K tholeiite series subaerial basalts of Kunak area. Miocene volcanics of Semporna and S Dent Peninsulas calc-alkaline affinities with geochemistry indicating subduction related genesis)

Bernard, B.B. (2005)- Proof of an active petroleum system in the Bunguran delta front, deepwater Sarawak, East Malaysia. Proc. 2005 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 36p. *(Abstract + Presentation)*

(Geochemical indications of thermogenic gas and non-biodegraded oil seepage in 6 of 10 piston cores from Amerada Hess Block F, off Sarawak)

Besems, R.E. (1993)- Dinoflagellate cyst biostratigraphy of Tertiary and Quaternary deposits of offshore NW Borneo. In: G.H. Teh (ed.) Proc. Symp. Tectonic framework and energy resources of the western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 65-93.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1993006.pdf)
(Most extensive review of Cenozoic dinoflagellates in SE Asia. Paleogene- Recent dinoflagellate zonation, based on analysis of 56 wells off NW Borneo and regional data)

Bidgood, M.D., M.D. Simmons & C.G.C. Thomas (2000)- Agglutinated foraminifera from Miocene sediments of northwest Borneo. In: M.B. Hart et al. (eds.) Proc. 5th Int. Workshop on Agglutinated foraminifera, Plymouth 1997, Grzybowski Foundation Spec. Publ. 7, p. 41-58.
(online at: www.gf.tmsoc.org/Documents/IWAF-5/Bidgood+Simmons+Thomas-IWAF5-1997.pdf)
(34 taxa of agglutinated forams in Miocene of Brunei and Sarawak and paleoenvironmental interpretation)

Bundesanstalt Geowissenschaften und Rohstoffe (1990)- Mineral resources investigation in Sabah, East Malaysia, 1980-1984. Geol. Jahrbuch B74, p. 1-135.
(Collection of papers on mineral exploration activities in Sabah by Malaysian-German co-op, 1980-1984)

Bol, A.J. & B. van Hoorn (1980)- Structural styles in western Sabah offshore. Bull. Geol. Soc. Malaysia 12, p. 1-16.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1980001.pdf)
(Two structural provinces in Neogene basin W of Sabah mainland. In S and C Sabah (between Labuan-Mangalum) Late Miocene main tectonic phase creating steep, narrow, basement-involved anticlines. U Miocene foldbelt separated by important fault zones from province with similar, but Pliocene-age structures (between Mangalum and Kudat))

Bowen, J.M. & J.A. Wright (1957)- Geology of Crocker Range and adjoining areas. Shell Geologic Report 747, p. *(Unpublished)*
(Geology/ stratigraphy of Crocker Range in unpublished oil company report. Much of information captured in Liechti (1960))

Bracco Gartner, G.L., W. Schlager & E.W. Adams (2004)- Seismic expression of the boundaries of a Miocene carbonate platform, Sarawak, Malaysia. In: G.P. Eberli et al. (eds.) Seismic imaging of carbonate reservoirs and systems, American Assoc. Petrol. Geol. (AAPG), Memoir 81, p. 351-365.
(Miocene carbonate platform slope angles 2-25° and 250-300m relief. S slope characterized by bypass or erosion throughout aggrading phase of platform development and buried by shale with onlapping beds transported from S. On N flank, shale started to pile up during platform aggradation. Phases of erosional or bypass conditions were short and alternated with two phases formed when platform debris interfingered with shale. Asymmetry of platform architecture and distribution of sediments most likely due to paleowinds)

Breitfeld, H.T. (2015)- Provenance, stratigraphy and tectonic history of Mesozoic to Cenozoic sedimentary rocks of West and Central Sarawak, Malaysia. Ph.D. Thesis, Royal Holloway, University of London, p. 1-808. *(Unpublished)*

Breitfeld, H.T., T. Galin & R. Hall (2014)- U-Pb detrital zircon ages from Sarawak: changes in provenance reflecting the tectonic evolution of Southeast Asia. American Geophys. Union (AGU), Fall Mtg., San Francisco, V43D-4921, 1p. *(Poster Abstract)*
(Sarawak five Triassic- Cenozoic sedimentary basins. Zircons from Triassic of Sadong-Kuching Basin sourced by Carnian- Norian (mainly ~220-260 Ma) volcanic arc and from Cathaysian rocks with Paleoproterozoic zircons (peak at ~1800-1900 Ma). U Jurassic- E Cretaceous sands of Bau-Pedawan Basin (Pedawan Fm) indicate initiation of subduction below W Sarawak in Late Jurassic, but still with common inherited Cathaysian zircons. Subduction beneath Schwaner Mountains in early Late Cretaceous. After uplift forming Pedawan-

Kayan unconformity two episodes of extension: (1) Kayan Basin in latest Cretaceous- E Paleocene (Kayan Sst zircons mainly M Cretaceous and Triassic), and (2) Ketungau Basin and Penrissen Sst in M-Late Eocene. Zircons indicate nearby volcanic activity throughout E Cenozoic in NW Borneo. Inherited zircon ages indicate alternation between Borneo and Tin Belt source rocks)

Breitfeld, H.T., T. Galin, R. Hall, I. Sevastjanova, M.A. Forster & G.S. Lister (2015)- Provenance and age of Mesozoic to Cenozoic sedimentary successions and tectonic history of West and Central Sarawak. Asia Petrol. Geoscience Conf. Exhib. (APGCE), Kuala Lumpur, 25853, 5p. *(Extended Abstract)*
(Provenance study in Triassic-Cenozoic basins of Kuching (W Sarawak) and Sibu Zones (C Sarawak deep marine Rajang Gp) (separated by 'Lupar Line'). Ar-Ar ages of micas from metamorphic rocks in W Sarawak indicate Late Triassic collisional event. Widespread Triassic volcanic and volcaniclastic rocks associated with subduction; Triassic U-Pb magmatic ages from zircons in Jagoi Granodiorite. Triassic Sadong Fm and deep marine equivalent (Kuching Fm), sourced by Triassic (Carnian-Norian) volcanic arc. Pedawan-Kayan regional unconformity marks end of subduction beneath Sarawak and indicates Late Cretaceous collision. Fluvial Kayan Gp divided into Kayan Sst Fm and Penrissen Sst. Kayan Sst U-Pb detrital zircon ages indicate maximum depositional ages of Undan Mb 71 Ma (Maastrichtian; with Cretaceous and Permo-Triassic zircons), Bungo Mb 62 Ma (Danian; dominated by Cretaceous zircons) and Penrissen Sst 47-51 Ma (Late Ypresian- Lutetian). Ketungau Gp records second episode of terrestrial sedimentation in W Sarawak. Basal Silantek Fm no older than 42 Ma (Lutetian), unconformably on Cretaceous accretionary complex, Tutoop Sst (=Late Eocene- E Oligocene Plateau Sst) and Ketungau Fm. Bako-Mintu Sst in upper part no older than 40 Ma (Bartonian). Kuching and Sibu Zones connected with SW Borneo and Sundaland since Cretaceous)

Breitfeld, H.T., T. Galin, R. Hall, I. Sevastjanova, M. Forster & G. Lister (2015)- Proto-South China Sea and South China Sea early history: a view from Sarawak. AAPG Asia Pacific Workshop Tectonic evolution and sedimentation of South China Sea Region, Kota Kinabalu, Search and Discovery Art. 90236, 4p.
(online at: http://www.searchanddiscovery.com/abstracts/pdf/2015/90236apr/abstracts/ndx_breitfeld.pdf)
(Extended Abstract. New Ar-Ar dating of white micas from supposed basement schists in W Sarawak yielded Triassic ages. Triassic volcanic and volcaniclastic rocks widespread in W Sarawak. Triassic U-Pb magmatic ages from zircons in Jagoi granodiorite, W of Bau. Metamorphism associated with contemporaneous volcanic arc magmatism, recording Triassic subduction and collision)

Breitfeld, H.T. & R. Hall (2018)- The eastern Sundaland margin in the latest Cretaceous to Late Eocene: Sediment provenance and depositional setting of the Kuching and Sibu Zones of Borneo. Gondwana Research 63, p. 34-64.
(Kuching Zone in Borneo several large sedimentary basins of Late Cretaceous- Late Eocene age. W Sarawak Kayan Basin with U Cretaceous- Lower Eocene Kayan and Penrissen Sandstones (Late Cretaceous- Paleocene with abundant Cretaceous, Permian-Triassic and Precambrian zircons; Paleocene- E Eocene mainly Cretaceous zircons from Schwaner granites of SW Borneo). In Kuching Zone Ketungau Basin with unconformably overlying M-U Eocene Ketungau Group, with oldest sediments derived from nearby sources, probably Triassic Sadong and Kuching Fms. Kuching sediments can be correlated with deep marine Rajang Gp. Some magmatism but scarcity of contemporaneous zircons indicates it was very minor)

Breitfeld, H.T., R. Hall, T. Galin, M.A. Forster & M.K. BouDagher-Fadel (2017)- A Triassic to Cretaceous Sundaland- Pacific subduction margin in West Sarawak, Borneo. Tectonophysics 694, p. 35-56.
(online at: http://searg.rhul.ac.uk/pubs/breitfeld_etal_2017%20Triassic-Cretaceous%20Sarawak%20subduction%20margin.pdf)
(Metamorphic rocks in W Sarawak previously assumed to be pre-Carboniferous basement but new Ar/Ar ages from quartz-mica schists show Late Triassic metamorphism (~216-220 Ma; Norian). Metamorphics associated with Triassic acid and basic igneous rocks. Late Triassic Sadong Fm with youngest zircon ages of ~205, 212 Ma and inherited age peaks of 240-270 Ma and 1.8 Ga. Zircon ages from Jagoi Granodiorite ~208 Ma with inherited ages of 240 Ma, reflecting M-L Triassic subduction in W Sarawak (most likely W-directed Paleo-Pacific subduction). W Sarawak and NW Kalimantan underlain by continental crust that was already part of Sundaland in Triassic. Detrital zircon ages in Cretaceous volcanoclastic Pedawan Fm with major peaks 110-120, 150-160, 220-240, 250-260 Ma, 1.8-1.9 Ga), similar to ages of Schwaner granites of SW Kalimantan plus

additional sources; interpreted as Cretaceous forearc basin with material eroded from magmatic arc that extended from Vietnam to W Borneo. Youngest ages from zircons in tuff layer from uppermost Pedawan Fm indicate end of volcanic activity/ subduction at ~86-88 Ma. Cretaceous metamorphism of Serabang, Sejingkat, Sebangan Fms and Lubok Antu- Kapuas (and Boyan?) melange associated with Cretaceous subduction zone. Results of study cast doubt on existence of separate 'Semitau block')

Breitfeld, H.T., R. Hall, T. Galin, M.A. Forster & M.K. BouDagher-Fadel (2018)- Unravelling the stratigraphy and sedimentation history of the uppermost Cretaceous to Eocene sediments of the Kuching Zone in West Sarawak (Malaysia), Borneo. J. Asian Earth Sci. 160, p. 200-223
(online at: http://searg.rhul.ac.uk/pubs/breitfeld_etal_2018%20Kuching%20provenance.pdf)
(Kuching Zone in W Sarawak two sedimentary basins (Kayan, Ketungau) that extend into Kalimantan. Uppermost Cretaceous (Maastrichtian)- Lower Eocene Kayan Gp above Pedawan Unconformity, marking end of Paleo-Pacific subduction-related magmatism (above Cretaceous Pedawan Fm forearc sediments). Kayan and Penrissen Sst mainly fluvial- alluvial fan deposits. In late E or early M Eocene, sedimentation in basin ceased and Ketungau Basin developed to E. Change marked by Kayan Unconformity. Sedimentation resumed in M Eocene (Lutetian) with marginal marine Ngili Sst and fluvial Silantek Fm. Top of Ketungau Gp fluvial-dominated Tutoop Sst. Paleocurrent measurements show dominant southern source, suggesting uplift of S Borneo in region of Schwaner Mountains from latest Cretaceous onwards. Ketungau Gp also with reworked Kayan Gp. Kuching Supergroup predominantly horizontal or low dips, with steep dips restricted to faults)

Breitfeld, H.T., J. Hennig, M.K. BouDagher-Fadel & R. Hall (2017)- The Rajang unconformity: major provenance change between the Eocene and Oligo-Miocene sequences in NW Borneo. American Geophys. Union (AGU) Fall Meeting, New Orleans, EP21A-1829, 1p. *(Poster Presentation)*
(online at: https://agu.confex.com/agu/fm17/meetingapp.cgi/Paper/223716)
(Detrital zircon age distributions suggest major change in provenance at unconformity between E-M Eocene deepwater Belaga- Bawang Fms and fluvio-deltaic Oligo-Miocene Tatau-Nyalau Fms. Unconformity previously interpreted as Late Eocene orogeny, but no evidence for subduction or collision event at this time in Sarawak; possibly marks late M Eocene plate reorganisation. Borneo main source of Cretaceous (~120-150 Ma peak?) zircons (Schwaner Mts, W Sarawak). Dominant Triassic (~220-240 Ma peak?) zircon age population in Nyalau Fm indicates either provenance from Malay Peninsula tin belt or Indochina (SE Vietnam). (or unidentified Triassic granites on Borneo? Persistent ~1800 Ma age peak; HvG))

Breitfeld, H.T., C.G. Macpherson, R. Hall, M. Thirlwall, C.J. Ottley & J. Hennig-Breitfeld (2019)- Adakites without a slab: remelting of hydrous basalt in the crust and shallow mantle of Borneo to produce the Miocene Sintang Suite and Bau Suite magmatism of West Sarawak. Lithos 344-345, p. 100-121.
(Neogene magmatic rocks of W Sarawak E Miocene West Sarawak Sintang Suite (~19- 21 Ma) and M Miocene Bau Suite (~12-14 Ma). Magmatism in multiple short-lived pulses from ~24 Ma and coeval with magmatic activity in NW and E Kalimantan. Bau Suite mainly adakitic, W Sarawak Sintang Suite mainly non-adakitic. No active subduction zone or slab associated with adakitic magmatism. Mafic mantle-derived magma with felsic magma from remelting of hydrous, mafic rock emplaced into Borneo lithosphere previously, suggesting intraplate, mantle-derived magmatism responsible for remelting older hydrated basaltic rocks in crust)

Brondijk, J.F. (1963)- Sedimentation in Northwest Borneo. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Geol. Survey Dept., British Territories in Borneo, Bull. 4, Kuching, p. 19-30.
(Brief note about 'geosynclinal' settings of 32 formations described from U Cretaceous- Late Tertiary in NW Borneo by Liechti et al. 1960. Early recognition of some of Miocene sediments as turbidites)

Brondijk, J.F. (1963)- A reclassification of a part of the Setap Shale Formation as the Temburong Formation. British Borneo Geol. Survey Annual Report 1962, p. 56-60.
(Oligocene Temburong Fm introduced for more folded lower part of Tetap Shale (now limited to E Miocene))

Brondijk, J.F. (1963)- Sedimentological investigation in North Borneo and northern Sarawak. British Borneo Geol. Survey Annual Report 1962, p. 61-74.

Brondijk, J.F. (1964)- The Danau Formation in NW Borneo. Geol. Survey, Borneo Region, Malaysia, Annual Report 1963, p. 167-178.
(Danau Fm with folded radiolarian cherts first described by Molengraaff in area of the great lakes of N-C Kalimantan, in ~650 km E-W trending zone with average width of 60 km from W Borneo almost to E coast. Proposal to reinstate name Danau Fm in Sarawak and Sabah for similar deposits like Lupar- Engkilili Fm and Chert-Spilite- Wariu Fms)

Brown, K.M. (1987)- Structural and physical processes in accretionary complexes: the role of fluids in convergent margin development. Ph.D. Thesis, Durham University, p. 1-500.
(online at: http://etheses.dur.ac.uk/7186/1/7186_4368.PDF)
(General study on accretionary prisms and mud volcanoes, with chapter on North Borneo Crocker Range)

Burgan A.M. & C. Aziz Ali (2009)- An organic geochemical investigation on organic rich sediments from two Neogene formations in the Klias Peninsula area, West Sabah, Malaysia. Chinese J. Geochem. 28, 3, p. 264-270.
(Belait and Setap Shale Fms in Klias Peninsula area, W Sabah. Setap Fm TOC from 0.6 -1.54 wt% with mean hydrogen index 60.1 mg/g, Belait Fm TOC values 0.36-0.61 wt% with mean HI 38.2 mg/g. Not good quality source rocks. Maturation levels early peak oil in Setap Shale Fm and overmature in Belait Fm)

Burgan A.M. & C.A. Ali (2009)- Characterization of the Black Shales of the Temburong Formation in West Sabah, East Malaysia. European J. Scientific Res. 30, 1, p. 79-98.
(online at: www.eurojournals.com/ejsr_30_1_07.pdf)
(Miocene Temburong Fm at Tenom Pangi Dam site, W Sabah, steeply dipping, turbiditic deep water sediments. TOC's less than 0.5%. Organic matter mostly marine, with land plant contribution)

Burgan A.M. & C. Aziz Ali & S. Tahir (2008)- Chemical composition of the Tertiary black shales of West Sabah, East Malaysia. Chinese J. Geochem. 27, 1, p. 28-35.
(Chemical analyses of various shales from W Sabah)

Burhannudinnur, M. & C.K. Morley (1997)- Anatomy of growth fault zones in poorly lithified sandstones and shales: implications for reservoir studies and seismic interpretation: part 1, outcrop study. Petroleum Geoscience 3, p. 211-224.
(Outcrop study of normal faults in poorly lithified Miocene-Pliocene deposits of Miri Fm in NE Brunei (see also Part 2: Morley and Burhaniddunur 1997, Seismic reflection geometries))

Burton-Johnson, A. (2013)- Origin, emplacement and tectonic relevance of the Mt. Kinabalu granite pluton of Sabah, Borneo. Ph.D. Thesis Durham University, p. 1-262.
(online at: http://etheses.dur.ac.uk/9450/1/Complete_Thesis_-_Post-Viva_-_Mt_Kinabalu_-_Alex_Burton-Johnson_2013.pdf)
(Ophiolitic basement of Sabah not underlain by felsic crust. Sabah Ophiolite emplacement in E Jurassic (~200Ma; similar to Meratus, and older than generally accepted). Emplacement of Mt Kinabalu granite during regional NW-SE extension in SE Asia. Felsic magma of Mt Kinabalu derived by low degree melting of incompatible element enriched basaltic melts (from fertile mantle source))

Burton-Johnson, A., C.G. Macpherson & R. Hall (2017)- Internal structure and emplacement mechanism of composite plutons: evidence from Mt Kinabalu, Borneo. J. Geol. Soc., London, 174, 1, p. 180-191.
(manuscript online at: http://dro.dur.ac.uk/19338/1/19338.pdf?DDD15+dgl0cm+d700tmt)
(Composite granitic intrusion of Mt Kinabalu in Sabah emplaced in upper-middle crust in Late Miocene over 0.8 Myrs, at contact between ultramafic basement and sedimentary cover. Emplacement during regional NNW-SSE-oriented extension. Six major units, oldest tonalite/granodiorite and two final porphyritic granites. Preferential emplacement of successive units along granite-country rock contact of previous units rather than basement-cover rock contact exploited by initial units)

Burton-Johnson, A., C.G. Macpherson, I.L.Millar, M.J.Whitehouse, C.J.Ottley & G.M.Nowell (2020)- A Triassic to Jurassic arc in north Borneo: geochronology, geochemistry, and genesis of the Segama Valley felsic intrusions and the Sabah ophiolite. Gondwana Research 84, p. 229-244.
(Segama Valley Felsic Intrusions of Sabaho arc-derived tonalites, not continental basement. U-Pb zircon emplacement ages Triassic 241 ± 2 Ma, 251 ± 2 Ma) and E Jurassic: (~179 Ma); contemporaneous with peaks in magmatism and detrital zircons in Sarawak and W Kalimantan. Most likely setting continuation of Sundaland continental arc, expanding Triassic and Jurassic extent of Borneo and Sundaland arc, and challenges models of Borneo's development through allochthonous terrane accretion in Cretaceous. Propose model of protracted autochthonous growth through supra-subduction zone crustal extension and associated magmatism)

Carrillat, A., T. Basu, R. Tsaccis, J. Hall, A. Mansor & M. Brewer (2008)- Integrated geological and geophysical analysis by hierarchical classification: combining seismic stratigraphic and AVO attributes. Petroleum Geosciences 14, 4, p. 339-354.
(Seismic attribute interpretation applied to Greater Samarang sub-block, E Baram Delta, offshore Sabah)

Carter, R.R., J.L.W. van Gils, W. Walton & K.F. Yap (1997)- Application of a new high resolution sequence stratigraphy for reservoir modeling studies of the Upper Miocene deltaic reservoirs of Champion field, offshore Brunei Darussalam. In: K.W. Shanley & B.F. Perkins (eds.) Shallow marine and non-marine reservoirs, Gulf Coast SEPM Found. 18^{th} Ann. Research Conf., p. 67-97.

Casson, N., M. Wannier, J. Lobao & P. George (1998)- Modern morphology- ancient analogue: insights into deep water sedimentation on the active tectonic margin of West Sabah. In: G.H. Teh (ed.) Proc. GEOSEA ô98, Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 399-405.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999040.pdf)
Hydrocarbon potential offshore W Sabah margin heavily dependent on success of deep water M-L Miocene-Pliocene turbidite play. Main prospects in water depths >900m. Analogues other 'turbidite provinces' may not be applicable due to exceptionally large height differential of 7km, over relatively short distance of 200 km between sedimentary hinterland and base of continental slope)

Challis, M., C. Curtis, N.L. Mahadzir, J. Mennie & S.B. Zainal (2015)- The Kebabangan gas field, Malaysia: a 20 year journey continues. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2015, 6.2, 3p. *(Abstract)*
(Kebabangan gas field off NW Sabah started gas production in 2014, 20 years since drilling KBB-1 by Shell/ Petronas. Long believed to be stranded gas resource)

Chiang, K.K. (2002)- Geochemistry of the Cenozoic igneous rocks of Borneo and tectonic implications. Ph.D. Thesis, Royal Holloway University of London, p. 1-364. *(Unpublished)*
(Cenozoic arc-like magmatism in Borneo thought to be due to subduction of proto-S China Sea beneath NW Borneo. SE Sabah igneous rocks are extension of subduction of Sulu Sea in SE direction along Sulu trench. Wide range of basaltic to rhyolitic igneous rocks in Kalimantan with 5 phases of igneous activity: Paleocene, Eocene, late Oligocene- E Miocene, late Miocene -Pliocene and Plio-Pleistocene (similar phases of igneous activity in Sabah and Sarawak). SE Sabah igneous rocks divided into three groups. Oligo-Miocene andesites and dacites, Late Miocene-Pliocene andesites and dacites, and Plio-Pleistocene basaltic lavas. Cenozoic igneous rocks of Sarawak 4 phases of activity, coinciding with Phases II-V of Kalimantan and Sabah)

Chen, S.P. (1986)- Coal potential and exploration in Sarawak. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 649-665.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b31.pdf)
(Several coal deposits in Sarawak may be of economic importance. Silantek is Eocene coal in Ketungau basin at Kalimantan border. Three others Mio-Pliocene. Quality variable, grade from lignite to bituminous)

Chen, S.P. & J.W.E. Lau (1978)- Malaysia, onshore sedimentary basins of Malaysia. 2. Sarawak. In: Stratigraphic correlation between sedimentary basins of the ESCAP region, V, Min. Res. Dev. Ser. 44, p. 20-26.

Chiu, S.K. (1990)- The use of SAR imagery for hydrocarbon exploration in Sarawak. In: GSM Petroleum Geology Seminar 1989, Bull. Geol. Soc. Malaysia 27, p. 161-182.
(online at: www.gsm.org.my/products/702001-101078-PDF.pdf)
(SAR survey of Block SK-12 onshore Sarawak allowed more detailed geological and cultural interpretation)

Chouya, S., J. Jong, J. Boay, S. Nakatsuka, S. Lee & P. Millot (2018)- Integrated reservoir fluid characterization in thinly laminated formations- a case study from deepwater Sabah. Bull. Geol. Soc. Malaysia 65, p. 19-36.
(online at: https://gsmpubl.files.wordpress.com/2018/08/bgsm201803.pdf)

Chung, E., Ting King King & O. Al Jaaidi (2012)- Karst modeling of a Miocene carbonate build-up in Central Luconia, SE Asia: challenges in seismic characterisation and geological model building. In: Int. Petroleum Technology Conference (IPTC), Bangkok 2012, 2, IPTC 14539, p. 1023-1028.
(Alpha field one of best imaged isolated carbonate platforms in C Luconia. Dendritic features, interpreted as karst dissolution during sub-aerial exposure. Exploration well encountered total losses while drilling into karst (common in Central Luconia carbonates). Wells nearer to karst more likely to water out quicker)

Chung, K.W., A.H.A. Rahman & C.W. Sum (2012)- Sedimentology stratigraphy and microfossils of mid-Late Tertiary clastic, Sandakan Formation in NE Borneo. In: ICIPEG 2012Conf., Kuala Lumpur 2012, p.
(Extended Abstract. Sandakan Fm of Segama Group exposed across Sandakan Peninsula, E Sabah. U Miocene part of Segama Group three lithofacies: 1) brackish mudstone, 2) shallow marine sandstone and mudstone and 3) cross-bedded estuarine sandstone)

Chung, K.W., C.W. Sum & A.H.A. Rahman (2015)- Stratigraphic succession and depositional framework of the Sandakan Formation, Sabah. Sains Malaysiana 44, 7, p. 931-940.
(online at: www.ukm.my/jsm/pdf_files/SM-PDF-44-7-2015/03%20Khor%20Wei%20Chung.pdf)
(Sedimentology of Late Miocene Sandakan Fm, exposed across Sandakan Peninsula in E Sabah. Unconformably overlies Garinono Fm. Seven lithofacies in estuary and shallow marine facies)

Chung, W.K. & D. Ghosh (2017)- Growth timing of Southern Field High carbonates, Central Luconia Province. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 491-497.
(Growth timing of studied Miocene carbonate platform at C Luconia Province ~ 4 Myrs, governed by third-order sea-level fluctuations and syndepositional tectonics. First karstification during Burdigalian sea-level drop, over complex horst- graben setting, configured by seafloor expansion of S China Sea, before carbonate initiation. Second major subaerial exposure/ karstification in Langhian. Third subaerial exposure minor karstification. Final drowning in Serravallian without subaerial exposure)

Chung, W.K., D. Menier, S.N.F. Jamaludin & D. Ghosh (2016)- Geomorphology and karstification of the Southern Field High carbonates in Central Luconia Province. Proc. Offshore Technology Conference Asia, Kuala Lumpur 2016, OTC-26650-MS, 16p.
(Miocene carbonate platform development of Southern Field High of C Luconia Province. Initial patchy growth during Burdigalian, followed by build-out and backstepping. Four 3rd order Burdigalian-Serravallian eustatic cycles prior to platform drowning and rapid proto-Borneo clastic influx. With extensive karst development by sub-aerial exposure and re-submergence of carbonate platforms. Karstification mainly along fractures and faults. Final drowning correlated to surge of sea level rise in Serravallian)

Church, J. & Bong Poh Yuk (2012)- The Seria Field, Brunei...80 years on...near field exploration going strong! Int. Petrol. Techn. Conf. (IPTC), Bangkok 2012, 3, IPTC 15199, p. 2849-2852.
(Seria oil field in onshore discovered in 1929 and produced >1.1 billion BO. Production peaked 120,000 BOD in 1956. Field still has undeveloped hydrocarbon resources on N flank under shallow surf zone, to be targeted by onshore 'fish-hook wells')

Clark, J. (2017)- Neogene tectonics of Northern Borneo: a simple model to explain complex structures within Miocene-Recent deltaic-deepwater sediments both onshore and offshore. In: SEAPEX Exploration Conference 2017, Singapore, Session 7, 26p. *(Extended Abstract + Presentation)*
(All Neogene deformation across N Borneo is result of uplift and erosion of detached, gravity-driven collapse system and shale diapyrism, not product of multi-phase basement tectonics. Deep Regional Unconformity may not be unconformity, rather diachronous mechanical boundary of different responses of overpressured shale and more competent sandy sediments to gravity-driven collapse)

Clark, J., P. Owen, S. OôBrien & B. Dawe (2015)- Central Luconia carbonates- ôShooting fish in a barrelô: insights into success and failure mechanisms in a mature gas province. Proc. 2015 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, 5.3, p. 1-4. *(Extended Abstract)*
(>110 wells drilled in C Luconia area since 1968, offshore Sarawak, discovering 50 TCF gas-in-place, mainly in Late Miocene carbonate buildups. Lack of charge (migration focus) principal cause of failure in carbonate structures, with presence of seal (presence or absence of 'thief beds') over buildups a secondary factor)

Clark, J., P. Owen, S. OôBrien, B. Dawe (2017)- Central Luconia carbonate exploration- an update after three more SK408 wildcats, has the story changed? In: SEAPEX Exploration Conference 2017, Singapore, Session 7, 3p. *(Extended Abstract + Presentation)*
(In C Luconia province off Sarawak 60 TCF gas in-place discovered, majority in Late Miocene carbonate buildups play. Many carbonate buildups underfilled, probably due to 'thief beds'. Since 2015 paper two more discoveries made in SK408 PSC, including accumulation with gas column height >900m)

Clennell, B. (1991)- The origin and tectonic significance of melanges in Eastern Sabah, Malaysia. J. Southeast Asian Earth Sci. 6, 3-4, p. 407-429.
(E Sabah melanges composed mainly of deep water clastics, deposited in C Sabah Basin, mixed with exotic ophiolitic material. Melanges not metamorphosed; vitrinite reflectance data suggest maximum temperature of <120°C in matrix. Ophiolitic blocks commonly have tectonic shearing fabrics associated with low temperature metamorphism and interpreted as inherited from shear in ocean floor environment (e.g. fracture zones) or associated with ophiolite obduction. All melanges of E Sabah formed in series of related events in late E Miocene and earliest M Miocene time. These events, which triggered sedimentary, diapiric and tectonic melange-forming processes, are related to coeval onset of extension and sea floor spreading in SE Sulu Sea)

Clennell, M.B. (1992)- The melanges of Sabah, Malaysia. Ph.D. Thesis, University of London, p. 1-404. *(Unpublished)*

Clennell, M.B. (1996)- Far-field and gravity tectonics in Miocene basins of Sabah, Malaysia. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of SE Asia, Geol. Soc. London, Spec. Publ. 106, p. 307-320.
(Oceanic spreading ceased in S China Sea at ~17 Ma, after start of collisions of Asian mainland continental blocks and NW Borneo and Palawan, causing uplift, erosion and 'Deep Regional Unconformity' in NW Sabah. During compression at S margin of S China Sea, Sulu Sea underwent extension, with rifting in NW and oceanic spreading in SE. E Sabah changed from deep marine clastic depositional environment in Oligocene- E Miocene, to shallow marine and terrestrial sedimentation in M-L Miocene, with melange formation at time of the Deep Regional Unconformity. Inversion of Miocene in E Sabah limited to edges of basement blocks, which moved by far-field tectonic stresses. Post M Miocene basin evolution Sabah and Sandakan Basin influenced by mud diapirism and sagging of progradational sand-rich sediments into underlying muds and melange units)

Collenette, P. (1955)- The coal deposits and a summary of the geology of the Silimpopon area, Tawau District, colony of North Borneo. Geol. Survey Department British Territories in Borneo, p. 1-74.
(Coal seams of Silimpopon area in gently dipping Miocene strata. Pre-upper Eocene sediments (probably Upper Cretaceous-Lower Eocene) in N. Local igneous masses. Only one seam of economic significance)

Collenette, P. (1958)- The geology and mineral resources of the Jesselton- Kinabalu area, North Borneo. Geol. Survey Department British Territories in Borneo, Memoir 6, p. 1-194.

(Geology of area of NW Sabah, mainly dominated by thick series of Eocene- M Miocene sediments, severely folded in M Miocene time, incl. Late Cretaceous- E Eocene Chert-spilite Fm (interbedded spilite-basalt and chert-rich sediments; = Danau Fm of Molengraaff?), Eocene 'flysch-type' deep marine Trusmadi and Crocker Fms, associated with peridotites. Unmetamorphosed facies of Trusmadi dettrital limestone interbeds with M-L Eocene larger forams (Aktinocyclina, Pellatispira, Nummulites). Also Late Miocene Mt Kinabalu granodiorite, Trusmadi Mts phyllites and ultrabasic rocks. With 1:125,000 scale geologic map)

Collenette, P. (1960)- Pensiangan and Upper Kinabatang area. Annual ReportBritish Borneo Geol. Survey, 1960, p. 99-106.
('Preview' of Memoir 12, S Sabah (Collenette 1965))

Collenette, P. (1963)- The Miocene backdeep in Borneo. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Geol. Survey Dept., British Territories in Borneo, Bull. 4, Kuching, p. 47-60.
(In C-E Sabah NNE-SSW trending Miocene basinal basinal area, here called a 'backdeep', behind (East of) a N-S 'geanticlinal ridge. Latest Oligocene (Te1-4) and E Miocene (Te5) sediments unconformable on Cretaceous- Eocene deep water sediments of chert-spilite and Crocker Fms. Upper Miocene unconformably oversteps Lower Miocene. Possibly >30,000' of sediments, possibly related to rifting and possible ties with 'Plateau Sandstone' of C Kalimantan (see also Balaguru et al. 2003; Meliau- Tikung 'circular basins'; on trend with Tarakan Basin?; JTvG)

Collenette, P. (1964)- A short account of the geology and geological history of Mt Kinabalu. Proc. Royal Society (London), B, 161, 982, p. 56-63.
(Mt Kinabalu is E Pliocene circular granodiorite body, intruded into highly folded Eocene- Miocene sediments and associated ultrabasic and basic igneous rocks. Present landform considered to be mid-Pliocene peneplain, arched and deeply dissected, through which Kinabalu granodiorite has risen in isostatic adjustment)

Collenette, P. (1965)- The geology and mineral resources of the Pensiangan and Upper Kinabatangan area, Sabah. Borneo Region Malaysia Geological Survey, Memoir 12, p. 1-150.
(Geologic map and description of S Sabah, at NE Kalimantan border. Mainly deep-water ('eugeosynclinal') U Cretaceous- U Eocene Rajang Gp sedimentary rocks in NE trending thrust faults of accretionary complex, which have locally undergone metamorphism. Overlain unconformably by shallower facies Oligocene-Miocene Kinabatang Gp, some folded in large 'circular basins' like Meliau and Malibau. Associated with U Cretaceous-Lower Eocene basalt and spilite, Oligocene? gabbro and peridotite and younger basalt and spilite)

Collenette, P. (1966)- The Gerinono Formation, Sabah, Malaysia. Borneo Region Malaysia, Geological Survey Annual Report for 1965, Kuching, p. 161-167.

Collins, D.S., H.D. Johnson & P.A. Allison (2015)- Mixed-energy, coupled storm-flood depositional model: application to Miocene successions in the Baram Delta Province, NW Borneo. AAPG Search and Discovery Art. 51133, 33p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2015/51133collins/ndx_collins.pdf)

Collins, D.S., H.D. Johnson, P.A. Allison & A.R. Damit (2018)- Mixed process, humid-tropical, shoreline-shelf deposition and preservation: Middle Miocene- modern Baram Delta Province, Northwest Borneo. J. Sedimentary Res. 88, 4, p. 399-430.
(Comparision of outcrop analyses of facies and stratigraphic architecture in M Miocene Belait Fm with process-based geomorphological and sedimentological analyses of coastal-deltaic depositional environments in present-day Baram Delta Province)

Collins, D.S., H.D. Johnson, P.A. Allison, P. Guilpain & A.R. Damit (2017)- Coupled ǿstorm-floodô depositional model: application to the Miocene- modern Baram Delta Province, north-west Borneo. Sedimentology 64, 5, p. 1203-1235.
(manuscript online at: https://core.ac.uk/download/pdf/77017250.pdf)

(Miocene -Recent Baram Delta Province 9-12 km of coastal-deltaic to shelf sediments over past 15 Myr. Facies analysis of outcrops suggests 'storm-flood' depositional model, with two distinct periods: (1) fair-weather periods dominated by longshore sediment reworking and coastal sand accumulation; and (2) monsoon-driven storm periods characterised by increased wave energy and offshore-directed downwelling storm flow that occur simultaneously with peak fluvial discharge caused by 'storm-floods')

Collins, J.S.H., C. Lee & J. Noad (2003)- Miocene and Pleistocene crabs (Crustacea, Decapoda) from Sabah and Sarawak. J. Systematic Palaeontology 1, 3, p. 187-226.
(Three new genera and 20 new species of Miocene and Pleistocene fossil crabs described from area SW of Miri, Sarawak and Sandakan Peninsula of E Sabah. See also Morris & Collins 1991)

Cottam, M., R. Hall, C. Sperber & R. Armstrong (2010)- Pulsed emplacement of the Mount Kinabalu granite, northern Borneo. J. Geol. Soc., London, 167, 1, p. 49-60.
(Sabah Mt. Kinabalu pluton at least four discrete pulses of intrusion. Concentric growth zones in zircons indicate crystallization between 7.85- 7.22 Ma, and show pluton was emplaced in <800 kyrs. Oldest ages coincide with highest elevations. Inherited zircon ages indicate Upper Unit derived from S China margin attenuated continental crust, subducted beneath Sabah. Middle Unit sourced from melting of crystalline basement in Sabah)

Cottam, M., R. Hall, C. Sperber, B.P. Kohn, M.A. Forster & G.E. Batt (2013)- Neogene rock uplift and erosion in Northern Borneo: evidence from the Kinabalu granite, Mount Kinabalu. J. Geol. Soc., London, 170, 5, p. 805-816.
(*Kinabalu granite emplaced between ~7.2-7.8 Ma. Late Miocene- E Pliocene rapid exhumation and uplift of granite demonstrated by radiometric ages of (1) biotite (40Ar/39Ar; 7.3-7.6 Ma), (2) zircon fission-track (6.6-5.8 Ma) and (3) apatite (~5.5 Ma). Emplacement and exhumation of Kinabalu granite not related to Sabah orogeny (terminated in E Miocene), but caused by extension related to subduction rollback of Sulu Arc)*

Cotton, L.J., P.N. Pearson & W. Renema (2014)- Stable isotope stratigraphy and larger benthic foraminiferal extinctions in the Melinau Limestone, Sarawak. J. Asian Earth Sci. 79A, p. 65-71.
(Major extinction of larger foraminifera close to Eocene-Oligocene boundary in Melinau Limestone already recognized by G. Adams. Isotope analyses (δ13C and δ18O) of rock samples studied by Adams show end-Eocene LBF extinction event in Melinau Limestone below isotope excursion)

Couzens-Schultz, B.A. & K. Azbel (2014)- Predicting pore pressure in active fold-thrust systems: an empirical model for the deepwater Sabah foldbelt. J. Structural Geol. 69B, p. 465-480.
(Deepwater Sabah well data used for empirical model for predicting pore pressure in active fold-thrust belt)

Cox, L.R. (1948)- Neogene Mollusca from the Dent Peninsula, British North Borneo. Schweizer. Palaeontol. Abhandlungen 66, 2, p. 3-70.
(Molluscs from Late Miocene- Pliocene sandy marls and clays near E tip of Dent Peninsula. Discusses proportion of living species, geologic ranges and index species).

Crevello, P.D. (2001)- The great Crocker submarine fan: a world-class foredeep turbidite system. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 378-407.
(Major Late Eocene-Early Miocene submarine fan complex off N Borneo, covering >25,000 km2)

Crevello, P.D., H.D. Johnson, F. Tongkul & M.R. Wells (2008)- Mixed braided and leveed-channel turbidites, West Crocker Fan system, Northwest Borneo. In: T.H. Nielsen et al. (eds.) Atlas of deep-water outcrops, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 56, p. 50-72.
(Chapters 13-19 on examples of turbidite facies of outcrops in NW Borneo)

Crevello, P., C. Morley, J. Lambiase & M. Simmons (1997)- The interaction of tectonics and depositional systems on the stratigraphy of the active Tertiary shelf margin of Brunei Darussalam. In: J.V.C. Howes & R.A.

Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia., Jakarta, Indon. Petroleum Assoc. (IPA), p. 767-772.
(M Miocene-Recent stratigraphy of Brunei Darussalam series of seaward younging basins. More than 15 km of deltaic marine sandstone and shale deposited in migrating depocenters. Sediments derived from nearby uplifted Crocker-Rajang accretionary range. Region dominated by at least three delta complexes)

Cullen, A.B. (2010)- The Klias Peninsula and Padas River: NW Borneo, an example of drainage capture in an active tropical foreland basin. AAPG Conv. 2010, New Orleans, Search and Discovery Art. 50294, 7p.

Cullen, A.B. (2010)- Transverse segmentation of the Baram-Balabac Basin, NW Borneo: refining the model. Petroleum Geoscience 16, p. 3-29.
(W Baram Line separates two petroleum systems: (1) SW: Oligocene sst- Lower Miocene carbonate reservoirs of gas-prone Luconia system; (2) NE: oil-rich Baram-Balabac Basin in M Miocene- E Pliocene sst deposited in foreland basin. Baram-Balabac Basin four structural domains, with NW-SE trending boundaries similar to strike of W Baram Line. Domain boundaries probably deep structures in underlying rifted continental crust. Basin post-dates Sarawak Orogeny Eocene-E Oligocene collision of Dangerous Grounds-Reed Bank with Sabah and Palawan. Minimal Oligo-Miocene subduction of oceanic crust under NW Borneo. Sabah Orogeny and younger inversion events related to underthrusting of Dangerous Grounds driven by S China Sea opening and NW-directed subduction beneath SE Sabah)

Cullen, A. (2011)- Influence of hinterland bedrock lithologies on aspect of Borneo's deepwater fold and thrust belt. Berita Sedimentologi 21, FOSI- IAGI, p. 9-14.
(Online at: www.iagi.or.id/fosi/files/2011/06/FOSI_BeritaSedimentologi_BS-21_June2011_Final.pdf)
(Catchment areas of Borneo's major river systems different bedrock lithologies, affecting provenance type and potential reservoir quality. U Cretaceous-Paleogene deepwater Rajang-Embaluh Gp clastics main source of reworked quartzose sands shed into Kutei, Tarakan and Baram Basins. Much of Baram basin mud-dominated source, influencing development of raised peat mires, and structural style of deep water fold- thrust belt)

Cullen, A. (2012)- Nature and significance of the West Baram Line, NW Borneo. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 30252, 12p.
(online at: www.searchanddiscovery.com/documents/2012/30252cullen/ndx_cullen.pdf)
(Boundary between Luconia-Balingian carbonate province in SW and Baram clastics-dominated basin in NE placed along W Baram and Tinjar Lines. This is is not large-scale E Miocene transform fault, but ancient crustal discontinuity that was persistently re-activated in Cenozoic)

Cullen, A. (2014)- Nature and significance of the West Baram and Tinjar Lines, NW Borneo. Marine Petroleum Geol. 51, p. 197-209.
(West Baram- Tinjar Line not transform boundary between Luconia and Dangerous Grounds, but boundary between domains of continental crust that underwent differential extension in Eocene. Baram Basin underlain by hyperextended continental crust on NE side of Baram Line, with Luconia in SW more rigid block)

Cullen, A., C. Macpherson, N.I. Taib, A. Burton-Johnson, D. Geist, T. Spell & R.M. Banda (2013)- Age and petrology of the Usun Apau and Linau Balui volcanics: windows to central Borneoȏs interior. J. Asian Earth Sci. 76, p. 372-388.
(Usun Apau plateau in Sarawak along Tinjar Line, which defines onshore part of suture between Luconia and Dangerous Grounds blocks. Plateau made of dacite and andesite erupted between 3.9- 4.1 Ma, and minor basaltic dikes and flows (~2.1 Ma) represening younger episode of volcanism, similar in age and character to Linau Balui basalts 100 km SE of plateau. Volcanics too young to be linked to subduction beneath Borneo. Isotope ratios indicate assimilation of old, possibly Precambrian, continental crust, and similar to Pliocene volcanics of South China Sea and Sulu Arc)

Cullen, A., M.S. Zechmeister, R.D. Elmore & S.J. Pannalal (2012)- Paleomagnetism of the Crocker Formation, northwest Borneo: implications for late Cenozoic tectonics. Geosphere 8, 5, p. 1146-1169.

(Paleomagnetic study of Eocene- E Miocene sandstones from NW Sabah Crocker Fm. Sandstones pervasively remagnetized. Mean ChRM directions for 7 locations between Kota Kinabalu and Keningau indicate minor CW rotation, two locations near Tenom record CCW rotation. Remagnetization between 35-15 Ma. Probably early episode of regional CCW rotation before 35 Ma, overprinted by CW rotation of crustal blocks during opening of S China Sea (32-23 Ma), and also locally by CCW rotation after 10 Ma)

Cummings, R.H. (1955)- A preliminary account of foraminifera from the Carbo-Permian, West Sarawak. Annual Report Geological Survey Dept., British Territories in Borneo, 1955, p. 79.

Cummings, R.H. (1962)- Limestones of the Terbat Formation, West Sarawak. Annual Report Geological Survey Dept., British Territories in Borneo, 1961, p. 36-48.
(Terbat Limestone Fm in W Sarawak with fusulinid foraminifera assigned to Early Permian (Wolfcampian; = (Asselian- Artinskian?) Pseudoschwagerina zone (Pseudoschwagerina heritschi, P. uber, Paraschwagerina, Schwagerina). Associated small foraminifera suggest local correlation with Sumatra and Malaya (incl. Nummolostegina cf. velebitana, Pseudotextularia sumatrensis, Cribrogenerina sumatrana, Climacammina elegans (= similar to Bigenerina/ Cribrostomum elegans from Permian of Sumatra) (For Davydov et al. 2013 these forms signify broad latest Carboniferous- E Permian age. See also Fontaine 1990; JTvG))

Curiale, J., J. Morelos & W. Mueller (2000)- Molecular and isotopic compositional characteristics of Brunei oils; implications for source rock depositional setting. AAPG Ann. Mtg., Abstracts, p. A28. *(Abstract only)*
(Brunei oils highly paraffinic, enriched in pristane relative to phytane, rich in oleanane and bicadinanes, enriched in C29 steranes relative to C27 and C28, and relatively depleted in extended homohopanes, consistent with presence of angiospermous organic matter and probably implying origin from coals or coaly shales)

Curiale, J., J. Morelos, J. Lambiase & W. Mueller (2000)- Brunei Darussalam- characteristics of selected petroleums and source rocks. Organic Geochem. 31, p. 1475-1493.
(Three Tertiary deltaic complexes deposited up to 10 km of sediments. Strong correlations between certain molecular maturity indicators and present-day temperature of reservoirs. Liquid hydrocarbon source potential in tidal and coastal embayment facies, and greatest in Miocene coals)

Darman, H. & A.R. Damit (2003)- Structural control on sediment distribution in offshore Brunei Darussalam, South China Sea. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 347-353.
(Brunei offshore Neogene clastics compartmentalized by faults controlled by gravitational gliding and tectonics. Two types of fault systems, NW dipping down-to-basin faults and SE dipping, counter-regional faults)

Darman, H., A. Sabli, A. Ang, S. Daud, H. Dejong, Bong Poh Yuk, A.R. Damit, M. Tajuddin (2007)- The depositional model of the Upper Miocene section of the eastern offshore Area of Brunei Darussalam. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-086, 7p.
(Study of Upper Miocene sandstone reservoir distribution on area of Champion, Iron Duke Field and Bugan fields, ~30 km NW of Bandar Seri Begawan. Sediment distribution controlled by structural events)

De Coo, J.C.M. & J.W.E. Lau (1977)- Recognition of reef facies in the Bau limestone (Upper Jurassic- Lower Cretaceous), Sarawak. Geol. Survey Malaysia, Geological Papers 2, p. 72-78.
(Brief survey of facies in Late Jurassic- Early Cretaceous Bau Limestone S of Kuching, W Sarawak. Deposited in reefal setting, mostly oncolite- algal and pelletal back-reef facies. Reef facies rudist-gastropod boundstone and coralgal boundstone. No facies maps)

Dedeche, A.R., B. Pierson & A. Hunter (2013)- Outcrop analogs to the offshore Sarawak Miocene fields, how effective can they be? The Subis limestone as an example. Proc. Petroleum Geoscience Conf. Exhib. (PGCE), Kuala Lumpur 2013, 30p. *(Presentation only)*
(online at: https://seacarledu.files.wordpress.com/2016/06/2015_12_10_dedeche_niah_outcrop-analogs.pdf)
(Gunung Subis large flat-topped limestone hill in Sarawak still represents shape of original E Miocene backstepping isolated carbonate platform. Similar to S China Sea/ Luconia carbonate buildups in terms of growth history, but different diagenetic history)

Dedeche, A.R., B. Pierson & A. Hunter (2013)- Growth history and facies evolution of the Subis Limestone- a carbonate platform exposed onshore Borneo Island, Malaysia. Proc. 75th EAGE Conf. Exhib., Carbonate depositional environments and diagenesis, London, 1, TuP15 08, p. 55-57.
(presentation online at: https://seacarledu.files.wordpress.com/2016/06/2015_12_10_dedeche_niah_outcrop-analogs.pdf)
(Subis Limestone onshore Sarawak (with Niah cave) 2 main sequences: (1) U Oligocene lower sequence, deep marine; (2) Lower Miocene upper sequence; reefal, and forming spectacular limestone hill that reflects original carbonate platform. Good analogue to Sarawak offshore carbonate platforms)

De Heer, P.E. & H.I. Thio (1998)- South Furious Field, the evolution of an interpretation: subsurface model based on latest drilling results. In: Proc. Offshore South East Asia Conference 1998 (OFFSEA 98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 125-139.
(S Furious oil field off N Sabah, NE of Labuan Island, 1974 discovery in M Miocene sands in complex compressional wrench structure)

De Kroes, J. (1926)- Uitkomsten van het mijnbouwkundig onderzoek van goudhoudende terreinen in de zoogenaamde Chineesche districten van de residentie Westerafdeeling van Borneo. Dienst van den Mijnbouw in Nederl.-Indie, Verslagen Mededelingen Indische delfstoffen en hare toepassingen 19, p. 1-27.
('Results of mining investigations of gold-bearing terrains in the so-called Chinese Districts of the Residency of West Borneo'. Area extensively exploited for alluvial gold by Chinese 'kongsi's' in mid-1800's. Large number of 5-10m deep shallow drillholes revealed only sub-economic quantities of gold. Not much on geology of area)

Demyttenaere, R., J.P. Tromp, A. Ibrahim, P. Allman-Ward & T. Meckel (2000)- Brunei deep water exploration: from sea floor images and shallow seismic analogues to depositional models in a slope turbidite setting. In: P. Weimer et al. (eds.) Deep-water reservoirs of the world, GCSSEPM Found. 20th Ann. Res. Conf, p. 304-317.

De Silva, S. (1986)- Stratigraphy of the South Mukah- Balingian region, Sarawak. Warta Geologi (Newsl. Geol. Soc. Malaysia), 12, 5, p. 215-220.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1986005.pdf)
(Onshore W Sarawak S Mukah- Balingian region with intensely folded Eocene Belaga Fm unconformably overlain by gently folded Late Miocene- Pliocene Balingian and younger formations)

Dhonau, T.J. & C.S. Hutchison (1966)- The Darvel Bay area, East Sabah, Malaysia. Malaysia Geol. Survey, Borneo Region, Annual Report 1965, p. 141-160.

Dieseldorff, A. (1906)- Neue Manganerz-Vorkommen in Britisch Nord-Borneo. Zeitschrift Praktische Geologie, Berlin, 14, p. 10-11.
('New manganese ore occurrences in British North Borneo'. Brief report on Maruda Bay area occurrences. Little or no geology)

Dill, H.G. & E.E. Horn (1996)- The origin of a hypogene sarabauite-calcite mineralization at the Lucky Hill Au-Sb mine Sarawak, Malaysia. J. Southeast Asian Earth Sci. 14, p. 29-35.
(M Miocene? gold-bearing hypogene Sb mineralization from Lucky Mill Mine in Bau mining district, Sarawak, contains sarabauite and calcite as major constituents. Mineralization two stages, I: wollastonite, diopside and epidote in Bau Limestone at T >400°C; II, sarabauite with gold at T above 377°C)

Doust, H. (1977)- Geology and exploration history of offshore Central Sarawak. Proc. First ASCOPE Conf. Jakarta, p. 279-302.
(Same as Doust 1981)

Doust, H. (1981)- Geology and exploration history of offshore Central Sarawak. In: M. Halbouty (ed.) Energy Resources of the Pacific Region, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 12, p. 117-132.

(Central part of offshore Sarawak is ~300 km wide continental shelf that forms E-most part of N Sunda shelf. Geologically, it includes NW Borneo basin with Oligocene-Holocene coastal-plain to deeper marine sediments, developed in 8 depositional cycles. Deformation most severe in nearshore part or Balingian Province. Outer shelf (Luconia Province) characterized by an extensive Miocene reefal carbonates. Exploration of shelf area during last 15 years resulted in one oil field and several gas discoveries)

Dronamraju, S.V.C., J. Finol, A.M. Koraini & A.A. Zakaria (2005)- Constraining geological heterogeneity in complex reservoirs: implications for stochastic modeling and reservoir management. In: SPE Asia Pacific Oil and Gas Conference and Exhibition, Jakarta 2005, 93853-MS, p. 1-11.
(Depositional model of Lower Miocene fluvial and deltaic reservoir bodies in D18 field, 20km offshore Bintulu, Sarawak. 80% of production from distributary channels and mouth bars of middle Cycle 2)

Edwards, M.B. (2002)- Sequence stratigraphic responses to shoreline-perpendicular growth faulting in shallow marine reservoirs of the Champion field, offshore Brunei Darussalam, South China Sea: Discussion. American Assoc. Petrol. Geol. (AAPG) Bull. 86, 5, p. 919-921.
(Critical discussion of Hodgetts, Imber et al. (2001) paper, followed by Reply)

Elliott, G.F. (1972)- *Trinocladus exoticus*, a new dasycladacean alga from the Upper Cretaceous of Borneo. Palaeontology 15, 4, p. 619-622.
(online at: http://palaeontology.palass-pubs.org/pdf/Vol%2015/Pages%20619-622.pdf)
(New algal fossil from Upper Cretaceous Chert-Spilite Fm, Sabah. Signifies warm, shallow marine water)

Epting, M. (1980)- Sedimentology of Miocene carbonate buildups, Central Luconia, Offshore Sarawak. Bull. Geol. Soc. Malaysia 12, p. 17-30.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1980002.pdf)
(Central Luconia Miocene carbonate province with >200 buildups seismically mapped, 43 drilled, leading to 20 gas discoveries. Majority with excellent secondary porosity from fresh-water leaching and dolomitization. Four basic facies types)

Epting, M. (1989)- The Miocene carbonate buildups of Central Luconia, offshore Sarawak. In: A.W. Bally (ed.) Atlas of seismic stratigraphy, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 27, p. 168-173.
(Over 60 M-L Miocene carbonate buildups tested in C Luconia province shelf area since 1967. Seven giant gas fields >1 Tcf and >20 smaller gas accumulations. Size and distribution of buildups structurally controlled. Large platform-type buildups on highs, pinnacle-type buildups in areas of stronger subsidence, and closer to the source of clastic material. SW-NE alignment of buildups probably reflects rift-induced structural trends. Most buildups now covered by 1000-2000m of progradational deltaic clastics)

Everett, A.H. (1878)- Notes on the distribution of the useful minerals in Sarawak. J. Straits Branch Royal Asiatic Society 1, p. 13-30.
(Early note on occurrences of gold, coal, diamonds, etc., in Sarawak. No maps)

Faisal, M.M., S.A.K. Omang & S.H. Tahir (1995)- Geology of Kota Kinabalu and its implications to groundwater potential. Bull. Geol. Soc. Malaysia 38, p. 11-20.
(online at: www.gsm.org.my/products/702001-100929-PDF.pdf)
(Kota Kinabalu, Sabah, area underlain by complexly folded and often steeply dipping Late Eocene-Lower Miocene Crocker Fm sands-shales, deformed during middle Late Miocene 2-phase folding with older N-S trend followed by broad NE-SW orientation (Crocker Thrust). Superimposed are Late Miocene E-W trending gentle folds. Only Crocker Fm sandstone units and overlying Quaternary alluvium significant groundwater reservoirs)

Farrant, A.R., P.L. Smart, F.F. Whitaker & D.H. Tarling (1995)- Long-term Quaternary uplift rates inferred from limestone caves in Sarawak, Malaysia. Geology 23, p. 357-360.
(Long-term base-level lowering measured in Mulu limestone caves in Sarawak is ~19cm/ ky, and has remained constant over at least last 700 ka. Base-level lowering occurs in response to epeirogenic uplift of more resistant

limestones due to regional denudation of softer shales, and flexural isostasy associated with high rates of offshore sedimentation)

Ferdous, N. & A.H. Farazi (2016)- Geochemistry of Tertiary sandstones from southwest Sarawak, Malaysia: implications for provenance and tectonic setting. Acta Geochimica 35, 3, p. 294-308.
(online at: http://english.gyig.cas.cn/pu/papers_CJG/201608/P020160809534849297876.pdf)
(Paleocene- Miocene sandstones from SW Sarawak (Kayan Sst, Plateau Sst, Silantek Fm) sublitharenites, dominantly composed of quartz with minor mica, feldspar and volcanic fragments. Derived from quartz-rich recycled orogenic sources. Felsic igneous source suggested by a low TiO2 compared to CIA, etc.)

Ferguson, A., A. Bouma, L.D. Santy & S. Suliaman (2004)- Control of regional and local structural development on the depositional stacking patterns of deepwater sediments in Offshore Brunei Darussalam. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia & Australasia symposium, Jakarta 2004, Indon. Petroleum Assoc. (IPA), p. 113-125.

Fiah, N.M. & J.J. Lambiase (2014)- Ichnology of shallow marine clastic facies in the Belait Formation, Brunei Darussalam. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Volume), p. 55-63.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014006.pdf)
(M-L Miocene Belait Fm in Brunei outcrops with pervasive Cruziana and Skolithos trace fossil assemblages in shallow marine setting. Tidal channel sandstones have low energy Skolithos ichnofacies, sandy and muddy tidal flats have Cruziana ichnofacies. Upper shoreface sandstones have low energy Skolithos ichnofacies, lower shoreface sandstones have Cruziana ichnofacies)

Fitch, F.H. (1955)- The geology and mineral resources of part of the Segama Valley and Darvel Bay area, Colony of North Borneo. Geological Survey Dept., British Territories in Borneo, Memoir 4, p. 1-142.
(Mapping of Segama valley- Darvel Bay area, E Sabah. Pre-Late Eocene peridotites asscociated with Late Cretaceous- E Eocene deep marine sediments and volcanics (Chert-spilite formation), deformed into N-dipping thrust sheets. Rare metamorphics, including glaucophane schist. After 'Middle' Eocene folding-uplift locally overlain by Eocene and Miocene formations, with reworked ophiolite debris at base of Tertiary. Period of andesitic volcanism in Early Miocene (Aquitanian). Folding episode between E Miocene (Td-Te1-4; = Oligocene;JTvG) and rel. undeformed Late Miocene (Te5-Tf; = E-M Miocene; JTvG). With 1:125k scale geologic map, with remarkable lack of faults)

Fitch, F.H. (1956)- Problems of stratigraphy and geotectonics in North Borneo. Proc. 8th Pacific Science Congress, Philippines 1953, 2, p. 537-551.
(Status of geologic research in N Borneo, with special reference to age of pre-Tertiary and lower Tertiary sedimentary and intrusive rocks and close tectonic relationship of N Borneo with Philippines)

Fitch, F.H. (1958)- The geology and mineral resources of the Sandakan area and parts of the Kinabatangan and Labuk valleys, North Borneo. Geol. Survey Dept., British Territories in Borneo, Memoir 9, p. 1-189.
(Area with sedimentary, extrusive, intrusive, and metamorphic rocks of upper Cretaceous-Tertiary age. W quarter of area ultrabasic intrusives of Tingka-Meliau mountains and flanking basalts surrounded by sediments of Eocene Kulapis and Crocker Fms. Flatter country of remainder of area Kulapis Fm, with Aquitanian strata, and Upper Miocene beds that form circular basins. Copper deposits in Sandakan area)

Fitch, F.H. (1961)- Oil in Sarawak, 1910-1960. Annual Report Geological Survey Dept., British Territories in Borneo, 1960, Kuching, p. 22-31.
(Summary of Shell commemorative volume of same title. Main event was Miri oilfield discovery by Royal Dutch/Shell subsidiary in 1910. Miri 1 producing mainly from ~1000' depth)

Fitch, F.H. (1961)- British Borneo. In: Lexique stratigraphique international, 2nd Edition, Stratigraphic Comm., Int. Geol. Congress, Paris, III, Asie, 7b, p. 1-126.
(Second edition of North Borneo stratigraphic lexicon (first edition by Alexander (1956))

Fitch, F.H. (1961)- Geological map of Sarawak and part of Brunei, scale 1:2,000,000. Geological Survey, Federation of Malaysia, 1961.

Fitch, F.H. (ed.) (1963)- Proceedings of the British Borneo Geological Conference 1961, Kuching, Geol. Survey Dept., British Territories in Borneo, Bull. 4, Kuching, p. 1-184.
(Collection of 11 papers by Haile, Brondijk, Fitch, Collenette, Wilson, Adams, Wolfenden, Keij, etc.)

Fitch, F.H. (1963)- Possible role of continental core movements in the geological evolution of British Borneo. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Geol. Survey Dept., British Territories in Borneo, Bull. 4, Kuching, p. 31-46.
(Structure of Borneo Island explained as continuous N/ NW-ward movement of its continental core from Late Cretaceous to present, with short pauses in Late Eocene and Middle Miocene, 'underthrusting the floor of the geosyncline'. North Borneo is >100 mile wide belt of steeply dipping deep-water sediments. Mainly thrusting and imbrication, less isoclinal folding. Driving mechanism not clear)

Fitch, F.H. (1963)- Geological relationship between the Philippines and Borneo. Philippine Geologist (J. Geol. Soc. Philippines) 17, 2, p. 41-47.

Fontaine, H. (1990)- The Terbat Formation of Sarawak (Malaysia): a very peculiar limestone. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 173-181.
(W Sarawak Terbat Fm dark grey limestone with fusulid foraminifera and little or no corals, described earlier by Krekeler (1932), Cummings (1961) and Sanderson (1966). Locally up to 600m thick. Unlike earlier papers here believed to be mainly of M-U Carboniferous age, ranging up into earliest Permian (Moscovian- E Asselian). Warm water limestones with some similarities to limestones of E Malay Peninsula, E Thailand and Vietnam, but very different from age-equivalent rocks of W Malay Peninsula- Peninsular Thailand ('Sibumasu'). Pebbles of possibly related fusulinid limestone found in conglomerates of Triassic (Sadong Fm), Jurassic (Kedadom Fm) and Cretaceous (Pedawan Fm) ages (also reworked in Paleogene of NW Kutai Basin; JTvG))

Fontaine, H. & W.K. Ho (1989)- Note on the Madai-Baturong limestone, Sabah, East Malaysia; discovery of Caprinidae (Rudists). CCOP Newsletter, Bangkok, 14, 3-4, p. 27-32.
(Isolated limestone occurrence with Upper (Lower?) Cretaceous caprinid rudists at Gunung at Madai and Baturong hills SE of Lahad Datu, SE Sabah. (probably deposited on seamount in oceanic setting; Lee 2003))

Foo Yuan Han (2010)- Biostratigraphy correlation of the Subis Limestone with equivalent limestone bodies in offshore Balingian province, Sarawak and Prupuh limestones in Java. In: Proc. ICIPEG 2010, Int. Conf. Integr. Petroleum Engineering and Geosciences, Kuala Lumpur 2010, p. 31-32. *(Abstract only)*
(Subis Lst is member of Tangap Fm at Niah. Larger foraminifera include Miogypsina, Nephrolepidina, probably E Miocene age. Similar age limestone in wells in Balingian province, offshore Sarawak and NE Java)

Forrest, J.K. (2009)- Samarang Field- seismic to simulation redevelopment evaluation brings new life to an old oilfield, Offshore Sabah, Malaysia. Int. Petroleum Technology Conf. (IPTC), Doha, IPTC13162, p. 1-16.
(online at: https://www.slb.com/~/media/Files/technical_papers/130/13162.pdf)
(Samarang field 35 year-old oilfield in E part of Baram Delta. Initially developed by Shell in 1975. Petronas currently operating and reducing production decline rates Large rollover anticline, producing from Late Miocene- E Pliocene deltaic- marine sandstones. Not much on geology)

Franke, D., U. Barckhausen, I. Heyde, M. Tingay & N. Ramli (2008)- Seismic images of a collision zone offshore NW Sabah/ Borneo. Marine Petroleum Geol. 25, p. 606-624.
(BGR seismic data from S South China Sea, used for investigation of Miocene- Recent compressional sedimentary structures of continental margin off NW Borneo. Closing of Proto-S China Sea began at ~44Ma)

Galin, T. (2013)- Provenance of the deep marine Belaga Formation in the Sibu Zone north of the Lupar Line, Sarawak, Malaysia. M.Sc. Thesis, Royal Holloway, University of London, p. 1-161. *(Unpublished)*

Galin, T., H.T. Breitfeld, R. Hall & I. Sevastjanova (2017)- Provenance of the Cretaceous-Eocene Rajang Group submarine fan, Sarawak, Malaysia from light and heavy mineral assemblages and U-Pb zircon geochronology. Gondwana Research 51, p. 209-233.
(online at: http://searg.rhul.ac.uk/pubs/galin_etal_2017%20Rajang%20provenance%20Sarawak.pdf)
(Rajang Gp clastics in N Borneo thick, large deep-water submarine fan complex. In Sarawak Lupar and Belaga Fms deposited fom latest Cretaceous (Maastrichtian)- late M Eocene. Borneo one of the few places in SE Asia with sediments of this age preserved. Main source regions Schwaner Mts in SW Borneo, and W Borneo/Malay Tin Belt. Heavy mineral assemblages and detrital zircon U-Pb dating show 3 units: (1) Late Cretaceous- E Eocene age zircon-tourmaline-dominated (2) Early to M Eocene zircon-dominated, abundant Cretaceous zircons and few Precambrian zircons derived primarily from Schwaner Mts; (3)M Eocene zircon-tourmaline-dominated. Limited contemporaneous magmatism during Rajang Gp deposition, inconsistent with subduction/ arc setting. Rajang Gp deposited N of shelf edge formed by Lupar Line strike-slip fault)

Gartrell, A., J. Torres & N.M. Hoggmascall (2012)- A regional approach to understanding basin evolution and play systematics in Brunei- unearthing new opportunities in a mature basin. Int. Petroleum Technology Conference (IPTC), Bangkok 2012, IPTC 15171, p. 2802-2806. *(Extended Abstract)*
(Summary of Shell Brunei integrated geologic study of deepwater Brunei acreage. Deltaic sediments derived from uplifted and eroding hinterland (Crocker Ranges) built out over pre-existing and intermittently active foreland fold-thrust belt. Series of basinward younging extensional growth faults formed due to differential loading in paleo-outer shelf locations. Major anticlinal structures on shelf previously interpreted as shale diapirism now reinterpretated as inversion structures. Etc.)

Gartrell, A., J. Torres & N. Hoggmascall (2012)- A regional approach to understanding basin evolution and play systematics in Brunei- unearthing new opportunities in a mature basin. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 10467, p. 1-14.
(online at: www.searchanddiscovery.com/documents/2012/10467gartrell/ndx_gartrell.pdf)
(Presentation. Pretty regional cross-sections, etc., with little or no explanation)

Ganesan, B.M.S. (1997)- Geology and hydrocarbon potential of the offshore western Sarawak shelfal area. Proc. ASCOPE 97 Conf., 2, p. 131-148.

Gassim M.B., S.H. Tahir & S. Sadikun (1995)- Structural geology of the Crocker Formation and its tectonic control, Sabah, Malaysia. Proc. Int. Symp. Geology of Southeast Asia and adjacent areas, Hanoi 1995, J. of Geol. Hanoi, B, 1995, 5-6, p. 181-196.
(Late Eocene- Early Miocene Crocker Fm turbiditic sediments of W coast Sabah subjected to at least two tectonic events: (1) Early-Middle Miocene folding due to N-S and NW-SE directed compression and (2) Pliocene NE-SW compression, less pronounced than (1))

Gassim, M.B. & S.H. Tahir (1995)- Canggaan bertindan dalam Formasi Crocker di kawasan Tamparuli.Bull. Geol. Soc. Malaysia 38, p. 49-61.
('Superposed deformation in the Crocker Formation of the Tamparuli region'. Measured section of Crocker Fm sandstone-shale along Tuaran-Tamparuli road. Sedimentary structures show beds are inverted. Deformation in two events: early M Miocene folding along NE-SW trend, followed by deformation along NW-SE trend)

Gassim, M.B., S. Tahira & D.A. Brunotte (1993)- Tectonic evolution of Marudu Bay, Sabah. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 513-527.
(Marudu Bay, N Sabah, stratigraphic sequences in ascending order: Chert-Spilite Fm, Crocker Fm, Kudat Fm, S Banggi Fm and Timohing Fm. Igneous rocks, especially serpentinite, also randomly distributed. Several episodes of deformation. Marudu Bay has undergone rifting due to clockwise rotation since M Miocene)

Gastony, G.J. (1969)- Sporangial fragments referred to *Dictophyllum* in Triassic chert from Sarawak. American J. Botany 56, 10, p. 1181-1186.

(Sporangial fragments of Mesozoic ferns in Late Triassic (Norian) black chert interbedded with trachytic volcanic rocks of Serian Volcanic Fm, Penrissen Region, W Sarawak. Referred to Dictyophyllum exile)

Gebregergis, T.M. & W.I.W. Yukoff (2010)- Burial and thermal history model to evaluate source rock, in Tatau Province, offshore Sarawak Basin, Malaysia. AAPG Int. Conf. Exh., Calgary 2010, Search and Discovery Art. 40706, 10p.
(online at: www.searchanddiscovery.com/documents/2011/40706gebregergis/ndx_gebregergis.pdf)

Gee, M.J.R., H.S. Uy, J. Warren, C.K. Morley & J.J. Lambiase (2007)- The Brunei slide: a giant submarine landslide on the North West Borneo margin revealed by 3D seismic data. Marine Geology 246, p. 9-23.
(3D seismic data offshore Brunei show giant landslide with volume of 1200 km3, area of ~5300 km2 and average thickness of ~240m. It extends for >120 km from Baram Canyon in ~200m water depth to deep basin floor of NW Borneo Trough. Complex deposit, involving chaotic debris flow matrix, with blocks 500-1000m wide and up to 250m thick. Imaging of basal sliding surface reveals striations ~30-120 km long, and ~10-30m deep with significant basal erosion. Also older landslides buried several 100m below basin floor)

Geiger, M.E. (1963)- Paleogeography of Late Cretaceous- Eocene geosyncline in the Northwest Borneo. Geol. Sutvey Malaysia Annual Report 1963, Kuching, p, 179-187.
(Paleogeography of 'Geosynclinal' Late Cretaceous- Eocene in Sarawak and Sabah. Geosynclinal phase ended with Late Eocene orogeny. (not clear what is lumped together where; not overly useful?; JTvG))

Geikie, J.S. (1905)- The occurrence of gold in Upper Sarawak. Trans. Inst. Mining and Metallurgy 15, p. 63-79.
(Early description of gold deposits near Bau and Bidi, 15m SW of Kuching. Ore bodies in Jurassic limestone, close to porphyry dike)

Gendang, R., A.S. Hashim & D. Johari (2006)- Limestone resources in the Baram Area. Miri Division, North Sarawak, Minerals Geoscience Dept. Malaysia, IMP 3/2005, p. 1-151.

Gerritsen, S., F. Ernst, C. Field, Y. Abdullah, D.N.P.H. Daud & I. Nizkous (2016)- Velocity model building challenges and solutions in a SE Asian basin: beyond reflection tomography. First Break 34, 10, p. 91-97.
(Examples of seismic velocity building technologies to generate accurate models for imaging and depth conversion in offshore Brunei)

Ghaheri, S. & M. Suhaili Bin Ismail (2017)- Review of tectonic evolution of Sabah, Malaysia. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 597-604.
(Sabah structure and tectonic history dominated by Late Oligocene- M Miocene S China Sea seafloor spreading and Sulu Sea subduction. Sabah tectonics started in E Cretaceous. S China Sea subducted under N Borneo margin, forming M Eocene- E Miocene basin sediments. Celebes Sea subducting N-ward under Dent Peninsula in Late Oligocene. Circular basins in E part of Sabah formed in E-M Miocene, thought to be related to SE Sulu Sea Basin rifting. Volcanic arc in Dent Peninsula also formed during this time, due to S-ward subduction of Sulu Sea. In Late Miocene SE Sulu Sea Basin rifting ceased)

Goesten, M.J.B.G. & P.J. Ealey (1986)- Storm generated sandstones and their depositional geometry in a Miocene reservoir from the north coast of Borneo. In: R.J. Knight & R.J. McClean (eds.) Shelf sands and sandstones, Canadian Soc. Petrol. Geol. Memoir 11, p. 339-340.

Goh, H. S., J. Jong, S. McGiveron. & J. Fitton (2017)- A case study of gas hydrates in offshore NW Sabah, Malaysia: implications as a shallow geohazard for exploration drilling and a potential future energy resource. National Geoscience Conference 2017, Kuala Lumpur, Warta Geologi, 43, 3, p. 205-207

Gou, P. (2014)- Organic petrographic characteristics of the Crocker Formation, NW Sabah, Malaysia. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 65-75.
(online at: www.gsm.org.my/products/702001-101647-PDF.pdf)

(Average vitrinite reflectance in deep marine Crocker Fm in NW Sabah is 0.82% Ro, indicating average burial depths of 4.1 km. Crocker Fm poor petroleum source rock because of low phytoclast content (<2%) and lack of oil-prone liptinitic macerals)

Gower, R.J.W. (1990)- Early Tertiary plate reconstructions for the South China Sea region: constraints from NW Borneo. J. Southeast Asian Earth Sci. 4, 1, p. 29-35.
(Subduction of oceanic crust beneath NW Borneo in Late Cretaceous- E Tertiary, associated with development of major 'Crocker-Rajang' accretionary complex. Contemporaneous outer arc basin sedimentation in W Sarawak and E Kalimantan consistent with SE-dipping subduction zone. Initiation of major clastic depocenter in Baram-Belait area in E Miocene (Brondijk 1963) indicates major change in sedimentation and deformational style at NW Borneo continental margin)

Grant, C.J. (2003)- The Pink Fan: a classic deep-marine canyon-fill complex, Block G, NW Sabah. In: G.H. Teh (ed.) Petroleum Geology Conference and Exhibition 2002, Bull. Geol. Soc. Malaysia 47, p. 85-94.
(3D-seismic and well data for deep water NW Sabah sand-prone fan systems. Four major Middle-Upper Miocene fan depositional cycles between ~12 and 6 Ma. Pink Fan is youngest, furthest outboard, still connected to its feeder systems, and with two unnamed wells. Four or more separate feeder-fan apron systems)

Grant, C.J. (2004)- The Upper Miocene deepwater fans of Northwest Borneo. In: R.A. Noble et al. (eds.) Deepwater and frontier exploration Symposium, IPA-AAPG Jakarta 2004, p. 421-428.
(Offshore NW Borneo 1992 Shell discovery of large gas volumes in turbidite reservoirs beneath shelf edge, proving existence of large deepwater sand-rich fan systems offshore NW Borneo)

Grant, C.J. (2005)- Sequence boundary mapping and paleogeographic reconstruction: the keys to understanding deepwater fan deposition across the NW Borneo active margin. Proc. 2005 SE Asian Petrol. Expl. Soc. (SEAPEX) Exploration Conf., Singapore 2005, 1p. *(Abstract only)*

Graves, J.E., C.S. Hutchison, S.C. Bergman & D.A. Swauger (2000)- Age and MORB geochemistry of the Sabah ophiolite basement. Bull. Geol. Soc. Malaysia 44, p. 151-158.
(online at: http://gsmpubl.files.wordpress.com/2014/09/bgsm2000019.pdf)
(Late Jurassic- E Cretaceous (Neocomian) age most likely for ophiolite basement of Sabah, consistent with Barremian-Aptian age of overlying ribbon cherts. K-Ar dates unreliable. Ophiolite suite of Labuk and Segama Highlands of low-K tholeiitic affinity, with geochemistry indicating MORB characteristics. Before uplift, Sabah ophiolitic basement formed part of either W Pacific or E Indian Ocean, still extant as ocean floor W of Australia. Oceanic lithosphere of Sabah not 'proto South China Sea'; no genetic relationship to present day South China Sea. N.S. Haile suggested more appropriate term 'Danau Sea')

Graves, J.E. & D.A. Swauger (1997)- Petroleum systems of the Sandakan Basin, Philippines. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), p. 799-813.
(Offshore Sandakan basin (Sulu Sea) up to 16 km of Mio-Pliocene sediment, eroded mainly from Eocene-Oligocene Crocker Fm in Sabah, after extensive Miocene uplift. 17 wells drilled, 7 with hydrocarbon tests or shows. Probable Mid-Miocene mixed oil-gas prone source rock. Sandakan basin history: Early Miocene intra-arc rifting accompanied by widespread volcanic activity, M- L Miocene delta aggradation, latest Miocene growth faulting, Pliocene delta progradation, Plio-Pleistocene carbonate deposition)

Grissemann, C., H. Henning & A. Yan (1990)- Geophysical contribution to prospecting for massive sulfide deposits in the Bidu Bidu Hills in Sabah, Malaysia. Geol. Jahrbuch B74, p. 31-63.
(On exploration of massive sulfide ores in areas of chert-spilite formations in E Sabah)

Haak, R. (1955)- A study of the Miocene Gunong Subis Limestone complex. Shell Group Report, 25948, p. 1-30. *(Unpublished)*
(Haile 1962: Subis Lst member of Setap Shale is isolated reefal carbonate platform dated as latest Oligocene (Te1-4 in Subis 2 well; with Heterostegina borneensis, Miogypsinoides ubaghsi), continuing into basal Miocene

(Te5; with Miogypsinoides dehaartii, Sproclypeus spp., Austrotrillina howchini, etc.) at Bukit Subis outcrop. Thickness 5900' in Subis 2 well, more commonly ~3000' thick. Locally common corals)

Hadley, D.F., E. Arochukwu, K. Nishi, M. Sarginson, H. Salleh & M. Omar (2006)- Depositional modelling of Champion Field, Brunei: assessing the impact of reservoir architecture on secondary recovery. In: Proc. SPE Asia Pacific Oil Gas Conf., Adelaide 2006, 30p.
(Champion field multi-billion bbl STOIIP oilfield off Brunei, producing since 1972 from >250 wells. Production to date is <20% of original oil in place. Two main reservoir types: (1) stacked shoreface parasequences (majority of reservoirs); (2) tide-dominated sediments channel fill or bar complexes)

Hageman, H. (1987)- Palaeobathymetrical changes in NW Sarawak during Oligocene to Pliocene. Bull. Geol. Soc. Malaysia 21, p. 91-102.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1987005.pdf)
(Comparison of NW Sarawak Oligocene-Pliocene paleobathymetric history with global curve suggest Middle Miocene- Pliocene changes largely controlled by eustacy, but Late Oligocene- E Miocene global changes masked by tectonic movements)

Haile, N.S. (1952)- The coal deposits and geology of part of the Klingkang Range, West Sarawak, with a detailed account of the Silantek and Abok seams. Geol. Survey Dept., British Territories in Borneo, 30p.
(Tertiary (probably Eocene) coal-bearing beds outcrop along N scarp of Klingkang Range over ~18 miles. Several seams, interbedded with Tertiary estuarine deposits. Coal high-grade bituminous in rank, may be due to metamorphism caused by emplacement of nearby igneous intrusions)

Haile, N.S. (1954)- The geology and mineral resources of the Strap and Sadong Valleys, West Sarawak, including the Klingkang Range Coal. British Territories in Borneo Region Geol. Survey, Memoir 1, p. 1-150.
(W Sarawak Strap-Sadong valley area with intensely folded Carboniferous-Permian (grey Terbat Lst with fusulinids, white chert and shale) and U Triassic (clastics with Monotis and Halobia, becoming more sandy to S and E). Unconformably overlain by thick E Tertiary non-marine Silantek Fm shale-dominated series with thin coals and brackish water molluscs and >1000m of Plateau Sandstone. Igneous rocks: pre-Triassic granite, Triassic lavas and tuffs and Tertiary shallow igneous stocks and sills. Workable quantities of probably Eocene-age coal, small amounts of gold, diamonds, bauxite, etc.)

Haile, N.S. (1956)- Limestone reserves in the Batu Gading area on the Baram River. British Borneo Geol. Survey Ann. Report, Kuching, p. 30-38.

Haile, N.S. (1957)- The geology and mineral resources of the Lupar and Saribas Valleys, West Sarawak. Malaysia Geol. Survey Borneo Region, Memoir 5, p. 1-123 + 125,000 scale map.
(Lupar-Saribas valley region complex geology, between two different tectono-stratigraphic regions: to W U Paleozoic- Mesozoic, to NE U Cretaceous- Tertiary sediments. With isoclinally folded, steeply (dominantly S-?) dipping deep marine 'flysch-type' U Cretaceous- Lower Eocene Rajang group geosynclinal sediments and volcanics (in slaty facies in N, pelagic 'Danau/Engkilili' calcareous facies with radiolarian chert in S) (= Lubok Antu melange= Paleo-Eocene melange complex with Cretaceous radiolaria, Orbitolina Lst, Assilina, etc.?; see Tan 1979, Haile 1996; JTvG). Unconformably overlain by 'molasse-type' Upper Eocene- Miocene estuarine and continental beds of Plateau series. Late Tertiary intrusive granitic stocks and laccoliths and dolerite sills. Thin-bedded coals in Plateau series and gold-bearing placers exploited on small scale (Marup))

Haile, N.S. (1957)- New evidence of the age of the Plateau Series in West Sarawak. Annual Report Geological Survey Dept., British Territories in Borneo, 1957, p. 77.
(Brief note on presence of Late Eocene (Tb) larger foraminifera Aktinocyclina and Nummulites at base of Kantu Beds (lowest part of Plateau Series), proving Late Eocene or older age of 'Plateau Series transgression' over Pretertiary- Lower Eocene rocks)

Haile, N.S. (1962)- The geology and mineral resources of the Suai-Baram area, North Sarawak. British Borneo Geol. Survey Memoir 13, p. 1-176.

(Suai-Baram area of N Sarawak part of 'North Borneo geosyncline', S of Miri/ Brunei. With >45,000' thick U Cretaceous -Recent sandstones and shales (but U Cretaceous only in one outcrop). Sediments derived from central granitic part of Borneo and later from recycled Cretaceous and Eocene sediments. Pre-Pliocene strata moderately to highly folded. Regional strike N to NE. Major unconformity between Miocene and U Pliocene (E Pliocene folding) (?). Paleocene limestones. Disconformity between U Eocene and Miocene (should be latest Oligocene?; JTvG)(local angular unconformity below base Setap Shale (latest Oligocene; Te1-4) (basal conglomerate with reworked Cretaceous radiolarian chert), missing E Oligocene in Melinau Lst and Batu Gading Lst. Batu Gading Lst 120m of Late Eocene overlain with hiatus by 40m of latest Oligocene (Te1-4) limestone. Subis Lst Mb of Setap shale with Te5/ E Miocene Miogypsinoides dehaarti/ Spiroclypeus (with appendices by Adams & Haak on Batu Gading Lst and Johnson on calcareous algae))

Haile, N.S. (1963)- The Cretaceous- Cenozoic Northwest Borneo geosyncline. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Geol. Survey Dept., British Territories in Borneo, Bull. 4, Kuching, p. 1-18.
(NW Borneo Geosyncline with thick Upper Cretaceous- Recent sediments in 500 mile long, 200-250 mile wide belt from Lupar Valley in West Sarawak, all of Brunei, to W part of Sabah. Thirty-two formations distinguished (Liechti et al. 1960), grouped here in 4 lithostratigraphic groups: (1) Rajang Gp (U Cretaceous- Oligocene Te 1-4, C Sarawak- N Kalimantan- W Sabah, foredeep eugeosynclinal grading upward to miogeosynclinal, common flysch, also radiolarian cherts and spilite in Lupar and Danau Fms, intensely folded, up to 50,000' thick?); (2) Baram Gp (U Eocene- U Miocene, miogeosynclinal, unconformable over Rajang Gp, 28,000' thick); (3) Plateau Gp (U Eocene- ?Miocene 'molasse-type' sediments in 'backdeep' after Late Eocene folding; Melawi- Ketungau basins; up to 30,000' thick?) (should be foredeep?) and (4) Brunei Gp (U Miocene- Pliocene in coastal areas of Brunei- NE Sarawak; late geosynclinal isolated basins, ~30,000' thick?))

Haile, N.S. (1968)- The Northwest Borneo geosyncline in its geotectonic setting. Bull. Geol. Soc. Malaysia 1, p. 59. *(Abstract only)*
(Summary of Haile (1969) paper. One of last tectonics papers of SE Asia to use geosynclinal theory)

Haile, N.S. (1969)- Geosynclinal theory and the organizational pattern of the North-West Borneo geosyncline. Quart. J. Geol. Soc., London, 124, 2, p. 171-188.
(NW Borneo geosyncline of Sarawak, Brunei and W Sabah, ~800 km in NE-SW direction. Thick Late Cretaceous- late Cenozoic sequence, classified into 4 groups: (1) Rajang Gp (Late Cretaceous- E Miocene): thick, folded flysch with chert-ophiolite at base; (2) Baram Gp (Late Eocene- Late Miocene): mainly argillaceous, with sandstones and limestones; (3) Plateau Gp (Late Cretaceous to? Miocene): thick molasse-type continental deposits in S; (4) Brunei Gp (Oligocene to Recent): estuarine and marine deposits with molasse affinities in N. Migration of flysch deposition, orogeny, and molasse deposition, from S to N)

Haile N.S. (1992)- Evidence of multiphase deformation in the Rajang-Crocker Range (northern Borneo) from Landsat imagery interpretation: geodynamic implications- Comment (2). Tectonophysics 204, p. 178-180.
(Critical review of Benard et al. 1990 paper)

Haile, N.S. (1996)- Note on the Engkilili Formation and the age of the Lubok Antu Melange, West Sarawak, Malaysia. Warta Geologi (Newsl. Geol. Soc. Malaysia) 22, 2, p. 67-70.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1996002.pdf)
(Lupar Valley of W Sarawak is junction of Rajang Group accretionary prism to N and more continental part of W Sarawak to S. Engkilili Fm fossiliferous calcareous shales with Paleocene-E Eocene limestone blocks mapped by Haile as 'lower Eocene calcareous facies', distinct from the main 'cherty' facies, now known as Lubuk Antu melange, to N. Most likely age of melange ~mid-Eocene; Engkilili Beds possibly slightly older)

Haile, N.S., S.K. Lam & R.M. Banda (1994)- Relationship of gabbro and pillow lavas in the Lupar Formation, West Sarawak; implications for interpretation of the Lubok Antu Melange and the Lupar Line. In: G.H. Teh (ed.) GSM Petroleum Geology Seminar VIII, 1991, Bull. Geol. Soc. Malaysia. 36, p. 1-9.
(online at: www.gsm.org.my/products/702001-100981-PDF.pdf)

(Lupar Line regarded by many as major suture, but uncertainties regarding relationship of various belts and rock types. Outcrops for Hydroelectric Project show gabbro in U Cretaceous Lupar Fm bedded flysch is intrusive and pillow lavas interbedded (not older oceanic crust emplaced tectonically as faulted slices). Junctions between Lubok Antu Melange and Lupar Fm, and between Lupar and Layar Fm, may be major sutures, whereas Lupar Valley may only be fault zone in broad melange belt)

Haile, N.S. & N.P.Y. Wong (1965)- The geology and mineral resources of Dent Peninsula, Sabah. British Borneo Geol. Survey Memoir 16, p. 1-199.

Hakimi, M.H. & W.H. Abdullah (2013)- Liquid hydrocarbon generation potential from Tertiary Nyalau Formation coals in the onshore Sarawak, Eastern Malaysia. Int. J. Earth Sciences (Geol. Rundschau) 102, p. 333-348.
(Oligocene- E Miocene coals of Nyalau Fm exposed in N-C onshore Sarawak with TOC of 58-81%, hydrogen index values of 282-510 mg HC/g TOC, Type II and mixed Type II–III kerogens. Vitrinite reflectance 0.47-0.67% Ro, indicating initial oil window maturity. Coals are humic and generally dominated by vitrinite, with significant amounts of liptinite and low amounts of inertinite. Good liquid hydrocarbons generation potential)

Hakimi, M.H., W.H. Abdullah, F.L. Alias, M.H. Azhar & Y.M. Makeen (2013)- Organic petrographic characteristics of Tertiary (Oligocene-Miocene) coals from eastern Malaysia: rank and evidence for petroleum generation. Int. J. Coal Geology 120, p. 71-81.
(Coal samples from Tanjung Fm of Pinangah coalfield (E-M Miocene, Sabah) and Nyalau Fm of Bintulu coal fields (Oligocene- E Miocene, C Sarawak) from N Borneo relatively high hydrogen index values (282 and 516 mg HC/g TOC), indicating coals dominated by Type II to mixed Type II–III kerogens, and considered to generate mainly oil. This is supported byhigh amounts (11-31%) of oil-prone liptinite macerals, incl. suberinite)

Hakimi, M.H., W.H. Abdullah, S.G. Sia & Y.M. Makeen (2013)- Organic geochemical and petrographic characteristics of Tertiary coals in the northwest Sarawak, Malaysia: implications for palaeoenvironmental conditions and hydrocarbon generation potential. Marine Petroleum Geol. 48, p. 31-46.
(Tertiary coals from Mukah and Balingian coalfields in W Sarawak good source rock potential. Dominated by Type III kerogen and mixed Type II/III kerogens with HI values of 90-289 mg HC/g TOC. C coals thermally immature (lignite to sub-bituminous C rank), with huminite reflectance of 0.26-0.39%)

Halim, M.F.A. (1994)- Geothermics of the Malaysian sedimentary basins. Bull. Geol. Soc. Malaysia 36, p. 163-174.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994031.pdf)
(Geothermal gradient database from well and temperature data of wells in Malay basin (101 wells, av. 51.8 °C/km), Sarawak basin (88 wells; av. 43.3 °C/km) and Sabah basin (54 wells; av. 30.5°C/km))

Hall, R. (2013)- Contraction and extension in northern Borneo driven by subduction rollback. J. Asian Earth Sci. 76, p. 399-411.
(online at: http://searg.rhul.ac.uk/pubs/hall_2013%20Borneo%20extension-rollback.pdf)
(Paleogene subduction of Proto-South China Sea ended with E Miocene collision of Dangerous Grounds/Reed Bank/N Palawan block and Sabah-Cagayan Arc. Much of N Borneo then became emergent, forming Top Crocker Unconformity. N-ward subduction of Celebes Sea initiated Sulu Sea backarc basin, followed by subduction rollback to SE; associated volcanic arc emerged briefly above sea level and collapsed in M Miocene. Rollback drove extension in N Borneo and Palawan. Two main extensional episodes (1) ~16 Ma, marked by Deep Regional Unconformity; (2) ~10 Ma, Shallow Regional Unconformity. Both episodes caused exhumation of deep crust, probably on low angle detachments, followed by granite magmatism. NW Borneo-Palawan Trough interpreted as flexural response to gravity-driven deformation of sediment wedge, caused by uplift on land that resulted from extension, with contribution of deep crustal flow)

Hall, R. (2015)- Trenches, troughs and unconformities; collision, contraction and extension: South China Sea, Borneo-Palawan and Sulu Sea. Geoscience Techn. Workshop, Tectonic evolution and sedimentation of South China Sea Region, Kota Kinabalu 2015, AAPG Search and Discovery Art. 90236, 3p. *(Extended Abstract)*

(online at: www.searchanddiscovery.com/pdfz/abstracts/pdf/2015/90236apr/abstracts/ndx_hall.pdf.html)
(Mainly summary of Hall (2013))

Hall, R., M.A. Cottam, S. Suggate, F. Tongkul, C. Sperber & G.E. Batt (2008)- The geology of Mount Kinabalu. Sabah Parks Publ. 13, p. 1-77.
(online at: http://searg.rhul.ac.uk/pubs/Kinabalu/Kinabalu_handbook_cs3.pdf)
(Mt Kinabalu 4100m high and highest mountain in SE Asia between E Himalayas and New Guinea. Composed mainly of granite that formed at ~7-8 Ma. Partly underlain by serpentinised peridotites and by subducted crust of S China margin)

Hamdan, N.H. & S.N.F. Jamaludin (2018)- Reservoir characteristics of carbonates build-ups in southern Central Luconia Province: a study based on different scales. Bull. Geol. Soc. Malaysia 66, p. 99-105.
(online at: https://gsm.org.my/products/702001-101750-PDF.pdf)
(Reservoir qualities for Cycles III and IV carbonates in two carbonate buildups offshore Sarawak. Pinnacle build-ups fair-good porosity with decreasing occurrence of dolomite with depth; carbonate platform poor- fair porosity due to higher mud content)

Harper, G.C. (1975)- The discovery and development of the Seria oilfield. Brunei Museum, Penerbitan Khas Bil. 10, p. 1-99.

Harzhauser, M., H. Raven, B. Landau, L. Kocsis,A. Adnan, M. Zuschin, O. Mandic & A. Briguglio (2018)- Late Miocene gastropods from northern Borneo (Brunei Darussalam, Seria Formation). Palaeontographica A 313, 1-3, p. 1-79.
(Tortoniangastropods from Seria Fm at Ambug Hill section, Tutong District, Brunei. Low-diversity assemblage with 62 species, 37 unknown from other Neogene faunas of Indo-West Pacific Region (IWP). 23 new species. Low relations with Neogene gastropod faunas from Indonesia at species level might be explained by the biogeographic isolation between faunas of Java and Celebes seas and that from S China Sea)

Hasegawa, S., R. Sorkhabi, S. Iwanaga, N. Sakuyama, M. Naofumi & O.A. Mahmud (2005)- Fault-seal analysis in the Temana Field, offshore Sarawak, Malaysia. In: R. Sorkhabi & Y. Tsuji (eds.) Faults, fluid flow, and petroleum traps, American Assoc. Petrol. Geol. (AAPG), Mem. 85, p. 43-58.
(Fault-seal assessment of normal fault in Tertiary clastics in Temana field, Balingian, offshore Sarawak. Shale smear factor values <6 and clay content ratio >30% on fault surface indicate across-fault sealing of reservoir rocks on sand-sand interfaces)

Hashimoto, W. (1973)- *Sarawakia ellipsactinoides*, gen. et sp., nov., an *Elipsactinia*-like fossil from the Bau Limestone Formation, Sarawak, Malaysia. In: T. Kobayasi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press,12, p. 207-215.
(New stromatoporoid species from Late Jurassic Bau Limestone, S of Kuching, W Sarawak)

Hashimoto, W. (1982)- Preliminary notes on fossil records of East Malaysia and Brunei. In: T. Kobayasi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 23, p. 137-175.

Hashimoto, W. & K. Matsumaru (1977)- *Orbitolina* from West Sarawak, East Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 18, p. 49-57.
(Lower Cretaceous Orbitolina from Pedawan Fm, W Sarawak (?))

Hashimoto, W. & K. Matsumaru (1981)- Larger foraminifera from Sabah, Malaysia, part 1: Larger foraminifera from the Kudat Peninsula, the Gomantan area and the Semporna Peninsula. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 22, p. 49-54.

Hashimoto, W. & M. Tamura (1968)- Report of geological and palaeontological reconnaissance of Malaysia. Mem. Faculty of Education, Kumamoto University 17, p. 34-50.

(Kakizaki et al. 2013: Pedawan Fm above Bau Limestone of SW Sarawak yields ammonoids of Late Tithonian-E Cretaceous age (e.g. Berriasella or Micracanthoceras sp.))

Hay, A.K. (2000)- Overview of the Baram Delta province, Brunei Darussalam. Berita Sedimentologi (Indon. Sediment. Forum FOSI) 12, p.

Hazebroek, H.P. & D.N.K. Tan (1993)- Tertiary tectonic evolution of the NW Sabah continental margin. In: G.H. Teh (ed.) Proc. Symposium on tectonic framework and energy resources of the Western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 195-210.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1993015.pdf)
(NW Sabah continental margin 6 tectono-stratigraphic provinces. Two main phases of Tertiary basin development: (1) pre-early M Miocene deep-marine clastic sedimentation; (2) post-early M Miocene clastic shelf/ slope deposition, prograding NW over unconformably underlying sediment wedge. NW Sabah Trough young feature, not Paleogene trench (Baram Delta prism masks Paleogene trench). Tectonic evolution: (1) Late Eocene-early M Miocene oblique subduction of S China Sea oceanic crust beneath NW Sabah; (2) Diachronous collision of S China Sea attenuated continental crust with Sabah and cessation of ocean-floor spreading in early M Miocene, led to uplift and erosion of accretionary prism (Deep Regional Unconformity); (3) Resumption of convergence between Borneo and NW Sabah Platform in middle Late Miocene, with formation of Shallow Regional Unconformity. E Sabah ophiolite complex continues into Palawan)

Hazebroek, H. P., D.N.K. Tan & J. M. Lamy (1992)- Tectonic evolution of the Northwest Sabah continental margin since Late Eocene. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015, p.
(Abstract only; see also Tan and Lamy 1990) (Four-stage tectonic evolution model of NW Sabah shelf (1) Late Eocene - early M Miocene subduction of S China Sea oceanic crust beneath Borneo, with creation of accretionary prism, (2) collision of S China Sea attenuated continental crust with Borneo in early M Miocene, leading to uplift and erosion of accretionary prism and creation of 'Deep regional unconformity', followed by M Miocene- early Late Miocene NW progradation over inboard belt;. (3) Cessation of active subduction in middle Late Miocene accompanied by major tectonic activity, with compressional deformation of Inboard Belt, creating 'Shallow Regional Unconformity';(4) In Outboard Belt and East Baram Delta, thick prograding wedge built out to NW from Late Miocene- Holocene. Late Pliocene deformation mainly in Outboard Belt and E Baram Delta)

Heller, J., D. Basuki, M. Choo, S. O ćConnor & R. Swarbrick (2014)- Using simple loading models to predict crestal pore pressures in Miocene carbonate exploration targets, Luconia, Sarawak. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-169, 9p.
(C Luconia province in offshore Sarawak Basin with numerous Miocene- Recent carbonate build-ups, many with commercial hydrocarbons. Key risk for tall (up to 1km relief) buildups traps is mechanical seal failure, where pore pressure at crest of structure exceeds fracture strength of seal. Overpressure prediction model proposed based on sedimentation rates and stratigraphic ages)

Heng, Y.E, S.S. Keong & D.K. Tan (1992)- Geological map of Sarawak, 2nd Ed., Geological Survey of Malaysia, p.

Hennig-Breitfeld, J., H. T. Breitfeld, R. Hall, M. BouDagher-Fadel & M. Thirlwall (2019)- A new upper Paleogene to Neogene stratigraphy for Sarawak and Labuan in northwestern Borneo: paleogeography of the eastern Sundaland margin. Earth-Science Reviews 190, p. 1-32.
(Revised stratigraphy of Miri Zone in N Sarawak. Rajang unconformities identified at ~37 Ma (change from deep marine to fluvial-margina marine sedimentation) and Nyalau unconformities at ~17 Ma (widespread uplift in Borneo and reorganisation of drainage systems. Coastline orientation changes from NW-SE to NE-SW at ~17 Ma. Mukah-Balingian and Belait Fms similar and reworked from Kuching-Rajang range)

Hesse, S. (2010)- The tectonic evolution of NW Borneo. Dokt. Thesis Rheinisch-Westfalischen Technischen Hochschule, Aachen, p. 1-95.
(online at: http://publications.rwth-aachen.de/record/64045/files/3524.pdf)

(Thesis on seismic interpretation of structure of NW Borneo deepwater fold-thrust belt, composed of three papers, published earlier (Hesse et al. 2009, 2010). Pliocene-Recent gravity-driven shortening decreases from S to N, total shortening increases slightly to N, suggesting basement-driven compression along NW Borneo increases to N. Main thrust activity in Late Pliocene-Holocene. Maximum shortening in C part of study area)

Hesse, S., S. Back & D. Franke (2009)- The deep-water fold-and-thrust belt offshore NW Borneo: gravity-driven versus basement-driven shortening. Geol. Soc. America (GSA) Bull. 121, p. 939-953.
(Tectonic restorations of NW Borneo fold-and-thrust belt comparing amount of deep-water shortening compared to extension across shelf suggests gravity-driven shortening decreases from S to N, while total amount of shortening increases slightly to N. Basement-driven compression inferred to increase to N. Most of shortening Late Pliocene and younger, ongoing)

Hesse, S., S. Back & D. Franke (2010)- The structural evolution of folds in a deepwater fold and thrust belt- a case study from the Sabah continental margin offshore NW Borneo, SE Asia. Marine Petroleum Geol. 27, 2, p. 442-454.
(2D regional seismic interpretation of deepwater fold and thrust belt offshore Sabah, NW Borneo)

Hesse, S., S. Back & D. Franke (2010)- Deepwater folding and thrusting offshore NW Borneo, SE Asia. In: G.P. Goffey et al. (eds.) Hydrocarbons in contractional belts, Geol. Soc., London, Spec. Publ. 348, p. 169-185.
(2D seismic data shows extensive series of folds at leading edges of imbricate thrusts in deepwater offshore NW Borneo. Widest and youngest anticlines near present-day thrust front, narrowest and oldest folds in most landward parts of fold-thrust belt. Main thrust activity Pliocene- Holocene age)

Hinz, K., J. Fritsch, E.H. Kempter, A.M. Mohamed, J. Meyer, D. Mohamed, H. Vosberg, J. Weber & J. Benavidez (1989)- Thrust tectonics along the north-western continental margin of Sabah, NW Borneo. Geol. Rundschau 78, 3, p. 705-730.
(Plate tectonic models suggest inactive subduction zone along NW continental margin of Sabah. BGR seismic data show autochthonous continental terrane with Oligocene- E Miocene carbonate platform, progressively overthrust by allochthonous rock complex)

Hiscott, R.N. (2001)- Depositional sequences controlled by high rates of sediment supply, sea-level variations and growth faulting: the Quaternary Baram Delta of northwestern Borneo. Marine Geology 175, p. 67-102.
(Shelf off Baram Delta is 50-70 km wide, underlain by 8-9 km of post-Eocene upper slope to estuarine deposits. Shelf break is fault scarp at ~130m below sea level. Outer-shelf Quaternary locally >1 km thick. Uppermost Quaternary thickens 2-5x across en echelon shelf-edge growth faults. Five widespread 'key' reflectors, on high-res seismic profiles (downlap surfaces beneath clinoforms, two directly overlying fluvial channels. Widespread 4th-order lowstand- bypass sequence developed during 120-10 ka sea-level cycle, up to 400m thick)

Hiscott, R.N. (2003)- Latest Quaternary Baram prodelta, Northwestern Borneo. In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology, Soc. Sedimentary Geology (SEPM) Spec. Publ. 76, p. 89-107.
(Quaternary Baram Delta >1 km thick on outer continental shelf of Brunei, with mud-prone highstand delta lobes, sand-prone lowstand shelf-edge deltas, incised-valley fills and transgressive sheet-like deposits on wave-cut ravinement surfaces. Shelf break defined by prominent fault scarp ~130m below sea level. Rugged slope relief due to growth faulting, mud diapirism, submarine canyons, sediment sliding, levees along turbidity-current channels that head in region of shelf-edge deltas, ETC.)

Hitam, R. & M. Scherer (1993)- Distribution and maturity of source rocks in Brunei Darussalam. Proc. 5th Asian Council on Petroleum Conference and Exhibition (ASCOPE), Bangkok 1993, 5135, p. 1-12.

Ho, F., G. Jaeger & P. Lambregts (2003)- Seismic interpretation of carbonate turbidites in Central Luconia. In: G.H. Teh (ed.) Petroleum Geology Conf. Exhibition 2002, Bull. Geol. Soc. Malaysia 47, p. 77-83.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003a06.pdf)

(C Luconia offshore carbonate buildups mainly Middle-Late Miocene age. Growth initiated on highs formed during Late Oligocene rifting. Seismic evidence for carbonate turbidite deposits between buildups)

Ho, Wan Kin (1990)- Central Luconia Middle Miocene carbonate play, Sarawak Basin, Malaysia. CCOP Techn. Publ. 23, p. 67-85.
(Play description of hydrocarbons in widespread Middle Miocene cabonate play of Luconia, offshore Sarawak)

Hodgetts, D., J. Imber, C. Childs, S. Flint, J. Howell, J. Kavanagh, P. Nell & J. Walsh (2001)- Sequence stratigraphic responses to shoreline-perpendicular growth faulting in shallow marine reservoirs of the Champion field, offshore Brunei Darussalam, South China Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 85, 3, p. 433-457.
(Champion field, off Brunei, thick M-U Miocene shallow marine sediments associated with major growth fault systems and deposited as part of paleo-Baram delta. Growth faults strike perpendicular to paleo-shoreline orientation. Depositional responses to growth faulting layer thickening and addition of layers in hanging wall. See also Discussion by Edwards 2002)

Hoesni, M.J. & M.N.C Mood (1995)- History of hydrocarbon generation in the Tembungo field, offshore northwest Sabah. In: G.H. Teh (ed.) Southeast Asian basins: oil and gas for the 21st century, Proc. AAPG-GSM Int. Conf. 1994, Bull. Geol. Soc. Malaysia 37, p. 309-320.
(online at: www.gsm.org.my/products/702001-100945-PDF.pdf)
(Tembungo field off Sabah producing oil from Upper Miocene turbidite reservoirs. Oils low sulphur and wax contents and API gravity 38-40°, derived from marginal marine source with significant land plant input. High sedimentation rates in M-L Miocene. Tembungo structure began to grow in Late Miocene (7.2 Ma), with accelerated growth in Early Pliocene. Faults sealing; barrier faults contributed to overpressure. Hydrocarbon generation began at ~9.0 Ma and oil began to be trapped in Tembungo structure in Late Miocene-E Pliocene. Oils most likely sourced from M Miocene sediments)

Hoffmann-Rothe, J. (1994)- Brunei/ Brunei. In: H. Kulke (ed.) Regional petroleum geology of the world, I, Borntraeger, Berlin, p. 739-746.
(Brief review of oil-gas basin and fields of Brunei; in German)

Hoggmascall, N., C. Gibson, D. Blades & J. Torres (2012)- Source to sink modelling in NW Borneo: improving understanding of the deepwater slope delivery system and utilising DEM and shallow analogues for deeper prospectivity. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 50755, p. 1-12.
(online at: www.searchanddiscovery.com/documents/2012/50755hoggmascall/ndx_hoggmascall.pdf)
(Summary of integration work on offshore Brunei floodplain to basin floor for intervals in last 12 million years)

Ho Kiam Fui (1976)- Morphogenetic trend of *Lepidocyclina* and its application in time stratigraphy. Geologie en Mijnbouw 55, 3-4, p. 147-158.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0ZlpZYlRsbzN6b1U/view)
(Correlation between Lepidocyclina degree of curvature and planktonic foram zonation in E-M Miocene of C Luconia wells, Sarawak)

Ho Kiam Fui (1978)- Stratigraphic framework for oil exploration in Sarawak. Bull. Geol. Soc. Malaysia 10, p. 1-13.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1978001.pdf)
(Upper Eocene- Pleistocene sequence in Sarawak subdivided into 8 sedimentary cycles, separated by rapid and widespread transgressions. With overview of biozonatons used)

Ho Wan Kin (1990)- Central Luconia Middle Miocene carbonate play, Sarawak Basin, Malaysia. In: CCOP/WRGA Play modelling exercise 1989-1990, CCOP Techn. Publ. 23, p. 67-85.
(Description and hydrocarbon assessment of M-L Miocene carbonate play play, offshore Sarawak. With schematic Late Oligocene- Recent paleogeographic maps and 'Cycle V/VI carbonate buildup distribution map)

Hon, V. (1976)- Some analyses of the Serian Volcanics of the Kuap area. Annual Report Malaysia Geol. Survey for 1975, p. 212-220.
(Late Triassic intermediate-basic Serian Volcanics from Kuap area, S of Kuching, W Sarawak, show affinity to tholeiitic series)

Hon, V. (1981)- Physical controls of mineralization in the Bau town area, west Sarawak, Malaysia. Sarawak Mining Bull. 1, p. 43-54.

Hon, V. & S.K. Lam (1992)- Geological Map of Sarawak, 2nd Edition, scale 1:500 000. Geol. Survey Malaysia.

Honza, E., J. John & R.M. Banda (2000)- An imbrication model for the Rajang accretionary complex in Sarawak, Borneo. J. Asian Earth Sci. 18, 6, p. 751-759.
(Rajang accretionary complex generally S- dipping and younging N-ward. Interpreted as thrust slices, each 10-15 km wide, formed by accretion at subduction trench. Accretion of Late Jurassic- Cretaceous oceanic crust from Pacific (E) in Late Cretaceous, forming part of arc along E Asia margin from Japan to Kalimantan. E Tertiary bending of S end of arc in Borneo changed direction of subduction to accretion from N)

Hood, F.H. & S. Tahir (2011)- Lithostratigraphy of the Late Neogene sedimentary sequence in Sandakan Peninsula. Proc. 24th Ann. National Geoscience Conference 2011 (NGC2011), Johor Baru, P1-27, p. 107-109. *(Extended Abstract)*
(online at: http://geology.um.edu.my/gsmpublic/NGC2011/NGC2011_Proceedings.pdf)
(Sandakan Peninsula outcrops. Oldest exposed unit is M Miocene Garinono Fm, widely distributed in E Sabah, with lower sequence of sedimentary melange/olistostrome and volcanics-dominated upper sequence, part of M Miocene Cagayan Volcanic Arc. Volcanic facies andesite- dacite and tuff- tuffaceous sandstone. Unconformity between volcanics and base of overlying Sandakan Fm also M Miocene age (Globorotalia fohsi fohsi). Sandakan Fm 12km thick mudstones and cross-bedded sandstones. Common lignite seams, fossilized wood and consolidated quartz pebble lenses)

Hoppe, P. (1990)- Photogeological investigations in the area of Mt. Kinabalu and adjacent parts of Sabah, East Malaysia. Geol. Jahrbuch B74, p. 115-135.
(Photogeologic interpretation of parts of Sabah to obtain improved regional structure information. Area around Mt Kinabalu is where two subduction zones merge, with 90° bend in folds of Crocker Fm Miocene accretionary complex, etc.)

Houtz, R.E. & D.E. Hayes (1984)- Seismic refraction data from Sunda Shelf. American Assoc. Petrol. Geol. (AAPG) Bull. 68, p. 1870-1878.
(Velocity changes in disturbed sediments on W edge Sarawak basin support claim Borneo subduction melange (accretionary prism) extends into Sarawak basin. Zone of thickened subduction melange sediments may extend N to shelf edge. Basement salient in E part West Natuna basin requires ~45 km shift in W boundary of Cretaceous subduction melange. Crust below Sarawak basin oceanic, implying shelf edge advanced ~300 km N over oceanic crust as result of post-Eocene progradation. Pre-Oligocene sediments thin in Sarawak basin)

Hutchison, C.S. (1968)- Tectogene hypothesis applied to the Pre-Tertiary of Sabah and The Philippines. Bull. Geol. Soc. Malaysia 1, p. 65-79.
(online at: https://gsmpubl.files.wordpress.com/2014/08/bgsm1967008.pdf)
(Sabah correlated with Philippines in Pre-Tertiary arcuate tectogene-geosyncline system (pre-plate tectonics paper))

Hutchison, C.S. (1971)- An alpine association of metabasites and ultrabasic rocks in Darvel Bay, East Sabah, Borneo. Overseas Geology and Mineral Resources 10, 4, p. 289-308.

Hutchison, C.S. (1972)- Alpine-type chromite in North Borneo, with special reference to Darvel Bay. American Mineralogist 57, 5-6, p. 835-856.

(Chromite layers and pods in dunite and serpentinite lenses in peridotite outcrops of Sabah. Association of chromite-bearing ultramafic rocks with gabbro bodies and high-metamorphic tholeitic metabasalts (generally as amphibolite, occasionally hornblende granulite) have formed in oceanic spreading zone)

Hutchison, C.S. (1978)- Ophiolite metamorphism in northeast Borneo. Lithos 11, p. 195-208.
(Darvel Bay ophiolite sequence of mantle harzburgite, gabbro(2 km thick), basalt and associated Late Cretaceous (subsequent work has shown Early Cretaceous age; JTvG)- Eocene chert-spilite and Miocene melange and olistostrome deposits. Ophiolite is extension into Borneo of Sulu Archipelago non-volcanic arc (opinion revised in Hutchison, 2000). Parts of ophiolite metamorphosed to gneiss, amphibolite, etc.)

Hutchison, C.S. (1982)- Pre-Tertiary basement of Borneo: what and where? Warta Geologi (Newsl. Geol. Soc. Malaysia) 8, p. 295-297. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1982006.pdf)
(Brief discussion of poorly known sialic basement terranes of Borneo. No maps)

Hutchison, C.S. (1988)- Stratigraphic-tectonic model for eastern Borneo. Bull. Geol. Soc. Malaysia 22, p. 135-151. *(also in Proc. GEOSEA 6 Conf., Jakarta 1987)*
(NE Borneo nucleated since late Cretaceous around N Borneo Miri zone microcontinent that rifted off Vietnam/ S China. E margin passive, and grades into oceanic lithosphere of 'chert-spilite zone'. Early Miocene collision of Miri microcontinent, causing folding-thrusting of Rajang group (suggests collision with Sulawesi, followed by Makassar Straits opening, but this had already opened in Eocene; JTvG))

Hutchison, C.S. (1991)- Neogene arc-continent collision in Sabah, Northern Borneo (Malaysia)- Comment. Tectonophysics 200, p. 325-329.
(Critical discussion of Rangin et al. (1990) paper. Palawan-N Borneo Trench not active subduction or collision zone, and quite a few other 'incorrect' details. Miri Zone and Dangerous Grounds are singe continental block and were both foreland in ?Miocene)

Hutchison, C.S. (1992)- Evidence of multiphase deformation in the Rajang-Crocker Range (northern Borneo) from Landsat imagery interpretation: geodynamic implications- Comment (1). Tectonophysics 204, p. 175-177.
(Critical discussion of Benard et al. (1990) paper; see also Haile (1992))

Hutchison, C.S. (1992)- The Southeast Sulu Sea, a Neogene marginal basin with outcropping extensions in Sabah. Bull. Geol. Soc. Malaysia 32, p. 89-108.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992017.pdf)
(Sulu Sea marginal basin resulting from E Miocene intra-arc rifting. Early stages with explosive volcanic activity and rifting resulting in extensive Ayer, etc. olistostromes, corresponding to Ayer, Tungku and Kuamat, Garinono Fms. Uplift of Crocker Fm to W provide source for major quartz sands in SabahTanjong Fm and major NE flowing delta near Sandakan fed turbidites of deep Sulu Sea. Sabah ophiolite complex predates late early Miocene opening of Sulu Sea basin and represents Lower Cretaceous ocean floor on which arc was built. Rare metabasite with glaucophane)

Hutchison, C.S. (1994)- Melange on the Jerudong Line, Brunei Darussalam, and its regional significance. In: G.H. Teh (ed.) Petroleum geology Conf. 8, Bull. Geol. Soc. Malaysia 36, p. 157-161.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994030.pdf)
(Large olistostrome deposit S along Jerudong Line, with sandstone blocks up to 3m diameter embedded in Setap Shale. Jerudong Line was Late Miocene submarine continental slope down which unconsolidated sands slumped W into deeper water part of Baram Delta)

Hutchison, C.S. (1996)- The ôRajang accretionary prismô and Lupar Lineô problems of Borneo. In: R.Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 247-261.
(Rajang Group in Sarawak (and Embaluh Group in Kalimantan and equivalent rocks in Sabah, E Kalimantan) N-facing accretionary prism, composed of Cretaceous- Late Eocene turbiditic sediments, younging N-ward. Compressed into steeply S-dipping phyllite-quartzite complex (= M-Late Eocene Sarawak orogeny; collision

between Schwaner Mts Zone and Luconia-Balingian-Miri microcontinent). Unconformably overlain in N and S by M-U Eocene continental- neritic clastics. Sabah W Crocker Fm Oligocene turbidites more shaly in N, and nearshore in S. Several Miocene folding-uplift pulses. Provenance from uplifted U Cretaceous-Eocene of NE Kalimantan and E Sarawak. M-Late Miocene Crocker Fm uplift ('Sabah orogeny' = E-M Miocene;JTvG). Uplift ceased in Late Miocene. Paleocurrents show Upper Eocene basal sandstones provenance from metamorphosed Sibu Zone. Kalimantan Melawi and Mandai basins unconformably over flysch-belt. Basins not forearc, but formed after transformation of accretionary prism to collision complex landmass)

Hutchison, C.S. (2001)- Sundaland half-grabens of Sarawak; implications. Abstracts Petrol. Geol. Conf. Exhib. 2001, Paper 12, Warta Geologi (Newsl. Geol. Soc. Malaysia) 27, 5, p. 228-230. *(Abstract only)*
(Sundaland large continental peninsular landmass with half-grabens rifting from Late Eocene-Oligocene. Sarawak W of West Balingian Line (Tatau or Mukah Province) integral part of this landmass, with NW-SE Late Eocene- pre M Miocene grabens with up to 5km non-marine fill; marine inundation only after M Miocene sag. Similar half grabens simultaneously developed on uplifted Rajang Group of Sibu Zone (Rajang had become part of Sundaland after Late Eocene Sarawak Orogeny. Ketungau Basin of Kalimantan not unique. Sundaland Late Eocene half-grabens are intermontane basins, like Basin and Range province of W North America)

Hutchison, C.S. (2002)- Did the northwest Borneo Trough terminate at the West Baram line; what do the Miocene adakites/diorites indicate? Warta Geologi (Newsl. Geol. Soc. Malaysia) 28, 5, p. 250-251.
(NW Borneo Trough represents extinct plate margin and was active trench during spreading of S China Sea marginal basin, from anomalies 11 (31 Ma) to 5c (16 Ma)).

Hutchison, C.S. (2005)- Geology of North-West Borneo- Sarawak, Brunei and Sabah. Elsevier, Amsterdam, p. 1-421.
(Extensive review of Sarawak, Brunei, Sabah and N Kalimantan geology and stratigraphy)

Hutchison, C.S. (2010)- The North-West Borneo Trough. Marine Geology 271, 1-2, p. 32-43.
(NW Borneo Trough in deepwater Brunei-Sabah with melange wedge along SE margin, best explained as fossil trench-accretionary prism, preserved when subduction ceased in M Miocene with arrival of thinned continental crust at Benioff Zone, choking subduction and causing isostatic uplift of W Cordillera of Sabah. Overlain by undeformed Upper Miocene- Holocene drape. Alternative interpretation was a SW major NW-directed thrust Sheet System over autochthonous Dangerous Grounds terrane of attenuated continental crust of S China Sea passive margin. Enigmas remain in Palawan area, where trough position is bathymetrically obscure in places and position makes it impossible to derive Calamian micro-continent from continental Asia as required from its stratigraphy. In SW Trough terminates abruptly at W Baram Line. Trough contains several spectacular edifices, formerly suggested to be volcanoes or mud volcanoes but are drowned carbonate build-ups)

Hutchison, C.S. (2010)- Oroclines and paleomagnetism in Borneo and South-East Asia. Tectonophysics 496, p. 53-67.
(Oroclinal bending of Borneo is result of indentation and collision by continental Miri Zone- C Luconia Block in Eocene. Collision caused strong compression and uplift of Sibu Zone U Cretaceous- Eocene Rajang-Embaluh Gp turbidite basin, which is floored by oceanic crust of Proto South China Sea. No paleomagetic work on oroclinally bent Sibu Zone rocks in NW limb. Limited paleomagnetic support for required CCW rotation in NE limb. Previous syntheses emphasised CCW rotation or stable non-rotation of Borneo region as coherent entity, without internal deformation, ignoring oroclinal shape defined by geology of island)

Hutchison, C.S. (2011)- Oroclines and paleomagnetism in Borneo and South-East Asia. In: Petrol. Geol. Conf. Exhib. (PGCE 2011), Kuala Lumpur, Warta Geologi 37, 1, p. 39. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta37_1.pdf)
(Oroclinal bending of Borneo resulted from indentation and collision of Miri Zone- C Luconia continental block of N Sundaland into S Sundaland (= Late Eocene 'Sarawak Orogeny'))

Hutchison, C.S., S.C. Bergman, D.A. Swauger & J.E. Graves (2000)- A Miocene collisional belt in north Borneo: uplift mechanism and isostatic adjustment quantified by thermochronology. J. Geol. Soc. London 157, p. 783-793.
(Subduction followed by underthrusting of continental lithosphere, driven by Oligocene-Miocene spreading in S China Sea, account for Sabah tectonic features. Isostatic rebound caused Late Miocene uplift of W Cordillera. Strata buried to 4-8 km, then rapidly exhumed and cooled at ~0.6mm/year. Rapid erosion supplied abundant clastics to Baram Delta, E lowlands and Sulu Sea. E Lowlands affected by Miocene Sulu Sea rifting)

Hutchison, C.S. & T.J. Dhonau (1969)- Deformation of an alpine ultramafic association in Darvel Bay, East Sabah, Malaysia. Geologie en Mijnbouw 48, 5, p. 481-494.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0NjFyMklsVGpMdlE/view)
(Early description of Late Mesozoic ophiolites of Darvel Bay, E Sabah. Serpentinized peridotites (folded, with boudinage), associated with gneiss, amphibolite chert-spilite formation, etc.))

Hutchison, C.S. & T.J. Dhonau (1971)- An alpine association of metabasites and ultrabasic rocks in Darvel Bay, East Sabah, Malaysia. Overseas Geol. Miner. Res. 10, p. 289-308.
(Includes 140 Ma (basal Cretaceous) K-Ar age for meta-basalt from Sabah ophiolite)

Hutchison, C.S. & T. Surat (1991)- Sabah serpentinite sandstone and conglomerate. Warta Geologi (Newsl. Geol. Soc. Malaysia) 17, 2, p. 59-64.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1991002.pdf)
(Serpentinite conglomerate and sandstone (grit) in Labuk Valley, NE Sabah W of Sandakan. Eroded from uplifted peridotite and/or gabbroic layer of ophiolite. Age unknown. but possibly part of contiguous Oligocene Kulapis Fm or Kamansi Beds)

Ibbotson, R. (2007)- Silimpopon- a Borneo coal mine. Opus Publications, Kota Kinabalu, p. 1-199.
(History of exploitation of Silimpopon coal mine, operating from 1905-1932 in Sabah, upriver from Tawau)

Ibrahim, C.A., L. Light, J. Ngu-Chee Kong & J. Mennie (2012)- Foresee the unforeseen: modeling West Baram Delta overpressure, Offshore Sarawak. AAPG Search and Discovery Art. 41109, p.
(online at: www.searchanddiscovery.com/documents/2012/41109ibrahim/ndx_ibrahim.pdf)
(Data from 62 W Baram Delta wells indicates onset of overpressure occurs at different depths, controlled structurally and stratigraphically. Under-compaction overpressure, driven by rapid sedimentation, predominant overpressure mechanism)

Ibrahim, N.A. (2003)- Deposition of the Tembungo deep-water sands. In: G.H. Teh (ed.) Petroleum Geology Conference and Exhibition 2002, Bull. Geol. Soc. Malaysia 47, p. 105-126.
(Core and seismic study of several 100m thick Late Miocene deep-water sands in Tembungo field off Sabah, above the 'Shallow Regional Unconformity' (= ~9 Ma))

Idris, H.A.B.M., J. Jong, D.A. Nuraini B.A.B. & N.F.B.Salim (2015)- Jemuduk-1ST1 post well analysis: implications on hydrocarbon charge and sedimentary fairway development of the Rajang Delta. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-017, 20p.
(Jemuduk-1ST1 exploration well off Sarawak tested anticlinal structure (toe thrust) in Bunguran Trough fold-thrust belt, linked to growth faults in Rajang Delta (= W Luconia Delta). Non-economic gas shows throughout Pliocene Cycles VI-VIII clastic reservoirs. Total 350m gross sandy interval, with porosity 16-25%)

Idris, H.A.B.M., A.B. Mustapha, N.F.B. Salim, D.A.N.B.A.Bakar, J. Jong & T. Murray (2015)- ñJ-1ST1ò post well analysis: implications on hydrocarbon charge and sedimentary fairway development of the West Luconia Delta. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2015, 5.1, 42p. *(Extended Abstract + Presentation)*
(Similar to Idris et al. 2015. J1ST1 well tested Plio-Pleistocene sands of West Luconia/ Rajang Delta shelf)

Idris, M.B. (1989)- Fossil crabs of Sabah. Warta Geologi 15, 5, p. 207-213.

(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1989005.pdf)
(Six localities of Late Miocene- Quaternary age in Sabah with crab fossils, incl. Macropthalmus, Scylla, Euphylax and Martinaarcinus)

Idris, M.B. (1992)- CO2 and N2 contamination in J32-1, SW Luconia, offshore Sarawak. Bull. Geol. Soc. Malaysia 32, p. 239-246.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992025.pdf)
(SW Luconia area offshore Sarawak prone to high CO2 (>60%; especially high in carbonate) and N2 contamination. Recent exploration well J32-1 five gas-bearing reservoirs in Neogene sands and limestones. with CO2 from 2-76% and N2 from 1-12%). Contaminants commonly thought to be basement derived, but possible other causes)

Idris, M.B. & K.H. Kok (1990)- Stratigraphy of the Mantanani Islands, Sabah. Bull. Geol. Soc. Malaysia 26, p. 35-46.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990004.pdf)
(Mantanani islands off N Sabah M Miocene bioclastic limestones and calcarenites with Lepidocyclina, overlain by massive conglomerates)

Imai, A. (1994)- Sulfide globules associated with a felsite intrusion in the Mount Kinabalu quartz monzonite, Sabah, East Malaysia: sulfide melt immiscibility in a highly silicic melt. Economic Geology 89, p. 181-185.

Imai, A. (2000)- Genesis of the Mamut porphyry copper deposit, Sabah, East Malaysia. Resource Geology, Tokyo, 50, p. 1-23.
(Sabah Mamut porphyry type Cu-Au deposit ~10 km SE of Mt Kinabalu genetically related to quartz monzonite ('adamellite') porphyry stock of latest Miocene age (~7 Ma), associated with Late Miocene Mt Kinabalu plutonism)

Imai, A. & K. Ozawa (1991)- Tectonic implications of the hydrated garnet peridotites near Mt Kinabalu, Sabah, East Malaysia. J. Southeast Asian Earth Sci. 6, p. 431-445.
(Garnetiferous peridotites part of ultramafic complex in Mt Kinabalu area. Associated with abundant spinel lherzolites and in fault contact with surrounding Tertiary strata. High T peridotite mineral assemblages overprinted by lowerT hydrous assemblages with abundant hornblende. Garnet peridotites part of sub-crustal mantle under Kalimantan, metasomatized during ascent due to tectonism)

Ingram, G.M., T.J. Chisholm, C.J. Grant, C.A. Hedlund et al. (2004)- Deepwater North West Borneo: hydrocarbon accumulation in an active fold and thrust belt. Marine Petroleum Geol. 21, p. 879-887.
(Deepwater acreage of NW Borneo active fold- thrust belt with hydrocarbon accumulations. Typical trapping geometries hanging-wall anticlines, foreland folds and ridges and sub-thrust footwall cut-offs. Drilling targets in deformed Miocene-Pliocene clastics, charged from active petroleum system. Major challenge is to avoid drilling traps that expelled hydrocarbons during periods of active deformation)

Ishibashi, T. (1982)- Upper Jurassic and Lower Cretaceous ammonites from Sarawak, Borneo, East Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 23, p. 65-75.
(Ammonites from Lower Pedawan Fm of W Sarawak. Paraboliceras jubar, Virgatosphinctes sp. and Phanerostephanus sp. indicate latest Jurassic (Tithonian) age). Also Early Cretaceous Neocomites, Limaites, Phylloceras, Thurmanniceras from Pedawan Fm)

Ismail, M.I.B. (1999)- Petroleum resources, Sabah. In: Petronas (1999) The petroleum geology and resources of Malaysia, p. 593-602.
(On petroleum resources in 3 Neogene basins: Sabah, NE Sabah (Sandakan) and SE Sabah. Main basin is Sabah Basin off NW Sabah, Discovered recoverable oil 1.2 BB Oil, 7.0 TCF gas in 23 oil and 28 gas fields)

Ismail, M.I., A.R. Eusoff, A.M. Mohamad, S.A. Aziz & B. Mahendran (1995)- The geology of Sarawak deepwater and surrounding areas. In: G.H. Teh (ed.) Southeast Asian Basins, oil and gas for the 21st century, Proc. AAPG-GSM Int. Conf., Kuala Lumpur 1994, Bull. Geol. Soc. Malaysia 37, p. 165-178.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a12.pdf)
(Study of 1989 Sarawak deepwater seismic transects. Two tectonostratigraphic provinces. North Luconia 7-8 km of Tertiary sediments, NNE-SSW trending extensional faults, buried hills and local forced folds. On E boundary NNE-SSW fault separates it from NW Sabah Platform with NE-SW trending rifts with only 2-4 km sediment. West Luconia Province up to 13 km of sediments, very thick post M Miocene, with E-W trending growth faults and slumps/ toe thrusts formed by gravity gliding. These overlie normal-faulted section at mid Miocene unconformity. Five sub-megasequences recognised)

Ismail, M.I. & R.B.A. Hassan (1999)- Tinjar province. In: Petronas (1999) The petroleum geology and resources of Malaysia, Chapter 16, p. 395-409.
(Geology and hydrocarbon of area onshore Sarawak with U Eocene- U Miocene sediments, uplifted and folded at end Early Miocene and Late Miocene. No discoveries so far)

Ismail, W.N.W, S.H. Tahir & Basir Jasin (2014)- Barremian-Aptian radiolaria from Chert-Spilite Formation, Kudat, Sabah. Warta Geologi 40, 3-4, p. 59-61.
(online at: www.gsm.org.my/products/702001-101643-PDF.pdf)
(Radiolarian chert in siliceous shale in ophiolitic rocks at Bukit Pangaraban, Kudat, E Sabah, with radiolarians dominated by Thanaria pacifica, Dictyomitra communis, Pseudoeucyrtis hanni and Podobursa typica, suggesting Barremian-Aptian (E Cretaceous) age. Radiolarian chert is from basalt association. Low CaO content suggests deposition below calcite compensation depth. Chert deposited on E Cretaceous oceanic crust and represent oldest rocks in Sabah)

Iyer, S.R., Ong Swee Keong, N. Asmah, F. Nazihah & Satyanarayana (2010)- An insight into the tectonic framework and structural evolution of a frontier area in Sarawak Offshore Basin, Malaysia. Petrol. Geosc. Conf. Exhib. (PGCE) 2010, Kuala Lumpur, p. 178-181. *(Extended Abstract)*
(Structural fabric off Sarawak characterized by strong overprint of NW-SE to N-S reactivated basement trend, over the older, less distinct, NE-SW trend. Post MMU tectonic setting: quiescent W half, separated by West Balingian zone, from an active wrench- tectonics-dominated E half. Timing of wrench movement shifted from Late Miocene in W to Recent in E)

Iyer, S.R., Ong Swee Keong, F. Nazihah & S.A. Abdullah (2012)- New perspective on evolution of northern provinces of offshore Sarawak Basin, Malaysia. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 10482 (2013), 19p. *(Presentation package)*
(online at: www.searchanddiscovery.com/documents/2013/10482iyer/ndx_iyer.pdf)
(Basins offshore Sarawak initiated as Late Cretaceous (?)- Late Eocene intra-cratonic rifts on continental crust on foreland bulge (Phase I), creating N-S and NE-SW-trending half-grabens, dipping to E and SE. Gravity modeling results suggest 15-20 km thick attenuated continental crust. Extension continued, with opening of S China Sea in E Oligocene (Phase II), and subsequent drift phase up to early M Miocene. Well results suggest non-marine to transitional environment for Cycle I -Lower Cycle II, and outer neritic to bathyal for Cycle III. Regional uplift in late E Miocene- M Miocene, resulted in regional Middle Miocene Unconformity. Age of MMU younger towards E. Major NW-SE transtension close to MMU time along SW Luconia fault zone resulted in formation of W Luconia Trough. Late Miocene-Recent NE sag of basin led to a deep-water setting)

Iyer, S.R., H. Rosidah & A.S. Amar (2012)- Maturation of a new play concept in Northern Provinces of Offshore Sarawak Basin, Malaysia. Petrol. Geosc. Conf. Exh. (PGCE 2012), Warta Geologi 38, 2, p. 125-126.
(online at: http://geology.um.edu.my/gsmpublic/warta/Warta38_2_draft.pdf)
('Sequence-A play concept' is based on seismic evidence: postulated lacustrine sediments ?Lat Cretaceous-Eocene early half- graben fill in first phase of extension)

Jackson, C.A.L. & H.D. Johnson (2009)- Sustained turbidity currents and their interaction with debrite-related topography: Labuan Island, offshore NW Borneo, Malaysia. Sedimentary Geology 219. p. 77-96.

(E Miocene Temburong Fm at Labuan Island off NW Borneo, deposited in a lower slope- proximal basin-floor setting. Two gravity-flow facies: slump-derived debrites and turbidites deposited by sustained turbidity currents. Routing of turbidity currents influenced by topographic relief at top of underlying debrite)

Jackson, C.A.L., A.A. Zakaria, H.D. Johnson, F. Tongkul & P.D. Crevello (2009)- Sedimentology, stratigraphic occurrence and origin of linked debrites in the West Crocker Formation (Oligo-Miocene), Sabah, NW Borneo. Marine Petroleum Geol. 26, 10, p. 1957-1973.
(Oligocene-E Miocene W Crocker Fm of N Borneo large submarine fan, part of accretionary complex. Range of gravity-flow deposits observed (see also Zakaria et al. 2013)

Jacobson, G. (1970)- Gunung Kinabalu area, Sabah, Malaysia. Malaysia Geol. Survey Rept. 8, p. 1-111.

Jamaludin, S.N.F. & M. Pubellier (2013)- Interpretations on seismic volume over two Miocene carbonate platforms in Central Luconia. In: Proc. Nat. Geoscience Conf., Ipoh (NGC2013), Geol. Soc. Malaysia, B07, p. 76-78. *(Extended Abstract)*
(online at: www.gsm.org.my/products/702001-101658-PDF.pdf)

Jamaludin, S.N.F., M. Pubellier & D. Menier (2014)- Relationship between syn-depositional faulting and carbonate growth in Central Luconia Province, Malaysia. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Volume), p. 77-83.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014008.pdf)
(Seismic interpretation of Miocene carbonate platforms EX and FY in C Luconia Province shows carbonate buildups affected by syndepositional faulting. Faults formed during or just after final rifting of S China Sea)

Jamaludin, S.N.F., M. Pubellier & D. Menier (2017)- Structural restoration of carbonate platform in the southern part of Central Luconia, Malaysia. J. of Earth Science (China) 29, 1, p. 155-168.
(Tectonic events affected growth of Miocene carbonates in C Luconia. Three stages: pre-carbonate (Late Oligocene- E Miocene), syn-carbonate (M-L Miocene) and post-carbonate (Pliocene). Rifting of S China Sea and subduction of proto-South China Sea responsible for pre-carbonate faulting; movement of ancient Baram Line controls strike directions of normal faults in syn-carbonate stage. Subsidence and compaction due to overburden of clastics from prograding deltas main reason for gravitational tectonics in post-carbonate stage)

Jamaluddin, T.A. (1989)- Struktur sedimen dalam Formasi Crocker di kawasan Tamparulih, Sabah. Bull. Geol. Soc. Malaysia 24, p. 135-157.
(online at: www.gsm.org.my/products/702001-101307-PDF.pdf)
('Sedimentary structures of the Crocker Formation in the Tamparuli region, Sabah')

Janjuhah, H.T., A. Alansari & P.R. Santha (2018)- Interrelationship between facies association, diagenetic alteration and reservoir properties evolution in the Middle Miocene carbonate build up, Central Luconia, Offshore Sarawak, Malaysia. Arabian J. Science Engineering 44, 1, p. 341-356.
(C Luconia E-M Miocene Cycle IV-V carbonates subdivided into 8 lithofacies: (1) coated grain to packstone (2) coral lime grainstone, (3) oncolite lime grain to packstone, (4) skeletal lime packstone and (5) coral lime mud to packstone, etc.. Dissolution contributes to porosity enhancement, micritization, compaction and cementation have a negative impact on reservoir quality)

Janjuhah, H.T., A.M.A. Salim, M.Y. Ali, D.P. Ghosh & Meor H.A. Hassan (2017)- Development of carbonate buildups and reservoir architecture of Miocene carbonate platforms, Central Luconia, Offshore Sarawak, Malaysia. In: SPE/IATMI Asia Pacific Oil Gas Conf. Exhib, Jakarta, SPE-186979-MS, p. 1-12.
(online at: https://umexpert.um.edu.my/file/publication/00006513_154787_66167.pdf)

Janjuhah, H.T., A.M.A. Salim & D.P. Ghosh (2017)- Sedimentology and reservoir geometry of the Miocene carbonate deposits in Central Luconia, Offshore, Sarawak, Malaysia. J. Applied Sciences 17, 4, p. 153-170.
(online at: http://scialert.net/qredirect.php?doi=jas.2017.153.170&linkid=pdf)
(Eight carbonate facies in M-L Miocene reefal buildups of offshore C Luconia province))

Janjuhah, H.T., A.M.A. Salim, A.M.A. Alansari & D. Ghosh (2018)- Presence of microporosity in Miocene carbonate platform, Central Luconia, offshore Sarawak, Malaysia. Arabian J. Geosciences 11, 9, 204, p. 1-18.
(Miocene carbonate gas reservoirs in C Luconia with partially water-filled microporosity that overprint wireline logs. Three different types of microporosity, ranging from 10 to 60% of total measured porosity)

Janjuhah, H.T., A.M.A. Salim, D.P. Ghosh & A. Wahid (2017)- Diagenetic process and their effect on reservoir quality in Miocene carbonate reservoir, offshore, Sarawak, Malaysia. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 545-558.

Janjuhah, H.T., J.A.G. Vintaned, A.M.A. Salim, I. Faye, M.M. Shah & D.P. Ghosh (2017)- Microfacies and depositional environments of Miocene isolated carbonate platforms from Central Luconia, offshore Sarawak, Malaysia. Acta Geologica Sinica (English Ed.) 91, 5, p. 1778-1796.
(13 microfacies identified in core samples from well in C Luconia M-U Miocene reef complex)

James, D.M.D. (ed.) (1984)- The geology and hydrocarbon resources of Negara Brunei Darussalam. Muzium Brunei, p. 1-164.

Jamil, A.S.A., M. Anwar & E.S.P. Kiang (1991)- Geochemistry of selected crude oils from Sabah and Sarawak. Bull. Geol. Soc. Malaysia 28, p. 123-149.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991007.pdf)
(35 crude oils from 15 offshore Sabah and Sarawak oil fields analyzed. Three oil types: (1) normal, non-waxy, (2) waxy and (3) biodegraded. Oils derived from landplant-derived organic matter)

Jasin, Basir (1991)- Some larger foraminifera and radiolaria from Telupid olistostrome, Sabah. Warta Geologi 17, 5, p. 225-230.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1991005.pdf)
(Telupid Olistostrome overlies Chert-Spilite Formation and ultramafic rocks, and probably result of submarine sliding. Large limestone boulder with Late Eocene Pellatispira, Biplanispira, Nummulites, Spiroclypeus, Discocyclina, Asterocyclina)

Jasin, Basir (1991)- The Sabah Complex- a lithodemic unit (a new name for the Chert Spilite Formation and its ultramafic association). Warta Geologi 17, 6, p. 253-259.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1991006.pdf)
(Propose to replace name Chert-Spilite Fm with Sabah Complex, including its ultramafic association. Scattered across Sabah. Early Cretaceous radiolaria in chert (Valanginian-Barremian; many Tan Sin Hok species; JTvG); mafic-ultramafic volcanic rocks must be older probably Late Jurassic)

Jasin, Basir (1992)- Significance of radiolarian cherts from the Chert-Spilite formation, Telupid, Sabah. Bull. Geol. Soc. Malaysia 31, p. 67-83.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992005.pdf)
(Thin-bedded, reddish chert-shale in Telupid area, Sabah, overlying Late Jurassic or earliest Cretaceous ocean floor basalt, pillow lava and peridotite. No pelagic limestones. Dismembered ophiolite sequence exposed by obduction or thrusted during Late Cretaceous-Early Paleogene. Chert composed mainly of radiolaria: Early Cretaceous assemblage with Archaeodictyomitra brouweri, A. pseudoscalaris, Pseudodictyomitra lilyae, Hemicryptocapsa pseudopilula, etc. (many Tan Sin Hok species), most likely age Late Valanginian-Barremian. Nearby (overlying?) olistostrome with M Eocene limestone blocks)

Jasin, Basir (1993)- Early Cretaceous radiolarians from the chert pebbles in the Lupar Formation, Sarawak. Sains Malaysiana 23, 1, p. 71-79.

Jasin, Basir (1996)- Late Jurassic to Early Cretaceous radiolarian from chert blocks in the Lubok Antu melange, Sarawak, Malaysia. J. Southeast Asian Earth Sci. 13, 1, p. 1-11.

(Lubok Antu melange with blocks of mudstone, sandstone, chert, limestone, hornfels, basalt, gabbro and serpentinite in sheared, chloritised mudstone matrix (with Early Eocene nannofossils; Hutchison 2005). Common chert blocks in melange, with radiolarians of Late Tithonian, M Valanginian- Barremian and Late Albian- Cenomanian ages (suggesting subducted 'proto-South China Sea' oceanic crust older than this?; = equivalent of Danau Fm of Molengraaff 1902? JTvG))

Jasin, Basir (2000)- Geological significance of radiolarian chert in Sabah. Bull. Geol. Soc. Malaysia 44, p. 35-43.
(online at: http://gsmpubl.files.wordpress.com/2014/09/bgsm2000005.pdf)
(Sabah radiolarian cherts associated with ophiolitic rocks in Chert Spillite Fm and as blocks in chaotic deposits. Ophiolitic chert association from Bukit Pengaraban quarry near Kudat with 17 radiolarian taxa of Barremian-Aptian age (with many 'Tan Sin Hok species'; JTvG). Chert samples from Wariu Complex suggests Albian age. Radiolarian chert originally deposited on oceanic crust close to spreading center.Ophiolitic chert association is oldest rock in Sabah)

Jasin, Basir (2000)- Significance of Mesozoic radiolarian chert in Sabah and Sarawak. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf. 2000, Pulau Pinang, p. 123-130.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_17.pdf)
(Mesozoic cherts exposed in W Sarawak and Sabah dated by radiolarian faunas. Oldest chert with E Jurassic (Pliensbachian- E Toarcian Canoptum spp, Parasuum spp., etc.) in dacitic tuff of Binong Pass, overlying Serian Volcanics basalts-andesites. Chert sequence at base of Pedawan Fm with Late Tithonian-Berriasian radiolarians of Tethyan affinity. Lubok Antu melange with chert blocks of three ages: (1) late Tithonian with Parvicingula excelsa and Ristola altissima, (2) M Valanginian- Barremian with Cerops septemporata and (3) late Albian-Cenomanian. Radiolarian chert pebbles from Lupar Fm with Hauterivian-Barremian radiolaria. Chert from Sabah ophiolitic and melange associations Valanginian-Cenomanian. Cherts deep-marine and related to high plankton productivity in E Jurassic and Early to early Late Cretaceous)

Jasin, Basir (2002)- Middle Miocene planktonic Foraminifera and their implications in the geology of Sabah. Geol. Soc. Malaysia Ann. Geol. Conf. 2002, Kota Bharu, Bull. Geol. Soc. Malaysia 45, p. 157-162.
(online at: www.gsm.org.my/products/702001-100727-PDF.pdf)
(Planktonic foraminifera from M Miocene of Sabah. Garinono Fm melange in Bidu-Bidu area with early M. Miocene Gs. sicanus zone (N 8); overlying tuffaceous mudstone with early M Miocene zone N10 (Orbulina, Globorotalia peripheroacuta). Libong Tuffite Fm on Dent Peninsula with middle M Miocene Gr. fohsi fohsi Zone (N12) assemblages. Setap Shale Fm at Kampung Sungai Berdaun, Labuan, with N8 assemblages a.a.)

Jasin, Basir & M.S. Firdaus (2019)- Some deep-marine ichnofossils from Labuan and Klias Peninsula, west of Sabah. Bull. Geol. Soc. Malaysia 67, p. 59-63.
(online at: https://gsm.org.my/products/702001-101785-PDF.pdf)
(Temburong Fm flysch deposited in distal part of submarine fan system. With 25 taxa of ichnofossils of Nereites ichnofacies. Two sub-ichnofacies: Paleodictyon (in thin-bedded distal fan lobe) and Ophiomorpha rudis (in thick-bedded sandstone channels and proximal fan lobes)

Jasin, Basir, A. Jantan, Lim P.S. & M.N. Abd. Rahman (1989)- Some microfossils from the Wariu Formation. Sains Malaysiana 18, 1, p. 57-75.

Jasin, Basir, I. Komoo & A. A.F. Abdullah (1993)- Some planktic foraminifera from the Setap Shale, Wilayah Persekutuan Labuan. Sains Malaysiana 22, 1, p. 35-45.
(Early Middle Miocene (N8) planktonics; see also B. Jasin 2002)

Jasin, Basir & A. Madun (1996)- Some Lower Cretaceous radiolaria from the Serabang Complex, Sarawak. Warta Geologi (Newsl. Geol. Soc. Malaysia) 22, 2, p. 61-65.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1996002.pdf)

(Serabang Complex of Sarawak, W of Kuching, not W continuation of Lubok Antu melange but older. Slaty shale with 11 species of radiolaria: Hemicryptocapsa spp., Archaeodictyomitra lacrimula, Pseudodictyomitra puga, Thanaria conica, T. pulchra, Parvicingula sp. and Xitus sp., indicating Valanginian- M Aptian age)

Jasin, Basir & U. Said (1999)- Significance of Early Jurassic radiolaria from West Sarawak. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 491-502.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999050.pdf)
(Pliensbachian (-E Toarcian) radiolarian chert in dacitic tuff-chert series, above Upper Triassic Serian Volcanic/ Sadong Fm, but unconformably? under Late Jurassic Kedadom/ Bau Fm. With Parahsuum simplum, P. directiporatum, Praecocaryomma media, P. decora, etc., suggest Parahsuum directiporatum Zone. Cherts deposited in deep marine marginal basin environment very close to (Serian?) island arc)

Jasin, Basir & U. Said (1999)- Some Late Jurassic- Early Cretaceous radiolarian faunas from the Pedawan Formation, Sarawak. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 611-620.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999060.pdf)
(Deepwater Late Tithonian- Berriasian radiolarian chert in basal part of 4500m thick latest Jurassic-Cretaceous Pedawan Fm, above Bau Limestone in Bau and Tubeh areas, Sarawak. With Loopus primitivus in lower part, Artocapsa(?) amphorella and Hsuum raricostatum in upper part of ~5m thick chert sequence)

Jasin, Basir, U. Said & A.D. Woei (1996)- Discovery of Early Jurassic radiolaria from the tuff sequence, near Piching, West Sarawak. Warta Geologi (Newsl. Geol. Soc. Malaysia) 22, 5, p. 343-347.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1996005.pdf)
(17 species of Early Jurassic (Late Pliensbachian- E Toarcian) radiolaria in >50m thick siliceous tuff sequence in Sarawak- Kalimantan border area S of Kuching. Sequence dips ~50° to SW. Overlies Serian Volcanics and probably basal part of Kedadom Fm. Key species Praeconocaryomma media, P. decora, Pantanellium sanrafaelense, Canutus indomitus, Canoptum anulatum and C. rugosum)

Jasin, Basir & Sanudin Tahir (1978)- Middle Miocene planktonic Foraminifera from the Libong Tuffite Formation, Sabah. Sains Malaysiana 16, 1, p. 85-95.
(see also Jasin 2002. Zone N10-N12 planktonic foraminifera in tuffaceous marine sediments)

Jasin, Basir & Sanudin Tahir (1988)- Barremian radiolaria from Chert-Spilite Formation, Kudat, Sabah. Sains Malaysiana 17, 1, p. 67-79.

Jasin, Basir, H. Sanudin Tahir & R.H.S. Abdul (1985)- Lower Cretaceous radiolaria from the Chert-Spilite Formation, Kudat, Sabah. Warta Geologi 11, 4, p. 161-162.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1985004.pdf)
(Brief paper on Lower Cretaceous radiolaria from chert above pillow lava in in Chert-Spilite Fm of N Sabah (ocean floor sediments). First paper to conclusively demonstrate Barremian age of basal radiolarites above ophiolite. Including several Tan Sin Hok 1927 species like Conosphaera tuberosa, Hemiaryptocapsa pseudopilula, Stiahocapsa pseudodecora and Archaeodictyomitra pseudoscalaris, suggesting possible Barremian- E Albian age)

Jasin, Basir, Sanudin Tahir & Z. Harun (1995)- Some Miocene planktonic foraminifera from Bidu-Bidu area, Sabah. Warta Geologi 21, 4, p. 241-246.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1995004.pdf)
(Garinono Fm in Bidu-Bidu area, C Sabah with chaotic melange/ debris flow deposits. Planktonic foraminiferal assemblage from melange mudstone matrix include Globigerinoides bisphericus and Praeorbulina sicana (N8, late E Miocene). Overlain by well bedded tuffaceous mudstone-sandstone sequence with Orbulina universa, O. suturalis and Globorotalia fohsi peripheroacuta (N10; early M Miocene). During M Miocene intense volcanic activity with widespread tuffaceous material in E Sabah)

Jasin, Basir, H.T. Sanudin & F.F. Tating (1991)- Late Eocene planktonic foraminifera from the Crocker Formation, Pun Batu, Sabah. Warta Geologi 17, 4, p. 187-191.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1991004.pdf)
(Red mudstone from Crocker Fm near Pun Batu, SW Sabah, rich in latest Eocene planktonic foraminifera, incl. Turborotalia cerroazulensis, Hantkenina alabamensis, Cribrokantkenina inflata, etc.)

Jasin, Basir & Selvarajah (1988)- Paleogene planktonic Foraminifera from Pulau Kalampunian Kecil, Sabah. Sains Malaysiana 17, 1, p. 99-113.

Jasin, Basir & Taj Madira Taj Ahmad (1995)- Some Paleogene planktonic foraminifera from the Lubok Antu melange, Sarawak, Malaysia. Warta Geologi 21, 3, p. 147-151.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1995003.pdf)
(13 species of planktonic foraminifera from mudstone matrix of Lubok Antu Melange of Lupar Valley, W Sarawak. Two assemblages:(1) early M Paleocene with Subbotina triloculinoides, S. velascoensis, Morozovella uncinata, M. trinidadensis, etc.; (2) M Eocene with Morozovella aragonensis, Acarinina bulbrooki, etc.. Blocks in melange include common Late Jurassic- Cretaceous radiolarian cherts)

Jasin, Basir & F. Tongkul (2000)- Fosil radiolaria daripada jujukan ofiolit Lembah Baliojong, Tandek, Sabah. In: Ibrahim Komoo & H.D. Tjia (eds.) Warisan Geologi Malaysia 3, LESTARI, UKM, p. 219-230.
('Radiolarian fossils in the ophiolite sequence in Baliojong Valley, Tandek, Sabah')

Jasin, Basir & F. Tongkul (2013)- Cretaceous radiolarians from Baliojong ophiolite sequence, Sabah, Malaysia. J. Asian Earth Sci. 76, p. 258-265.
(Baliojong ophiolite sequence Baliojong River in N Sabah consists of basalts, overlain by well-bedded cherts, mudstones and sandstones. Ophiolite sequence occurs as steeply-dipping, N-S oriented, overturned thrust slices in Cenozoic sediments. Two radiolarian assemblage zones in cherts: (1) Dictyomitra communis Zone (Barremian-Aptian) including Dictyomitra pseudoscalaris (Tan) and Pantanellium squinaboli (Tan) and (2) Pseudodictyomitra pseudomacrocephala Zone (Albian-Cenomanian). Cherts probably first sediment deposited on newly formed Cretaceous oceanic crust, intensely folded before deposition of Paleogene Crocker Fm)

Jennings, A.V. (1888)- Notes on the orbitoidal limestone of North Borneo. Geol. Magazine 5, 12, p. 529-532.
(Limestones of uncertain location, probably Silungen in Soubis and from Batu Gading, collected by Burls contains Discocyclina spp. and Asterocyclina, probably Eocene in age)

Johansson, M. (1999)- Facies analysis of the Plateau Sandstone (Eocene to Early Miocene?), Bako National Park, Sarawak, Malaysia. J. Asian Earth Sci. 17, p. 233-246.
(Sandstones near Kuching, W Sarawak, known as 'Plateau Sandstones', of possible Eocene- E Miocene age. Anomalous kerogen compositions, proximity of onlap surface and paleocurrent direction to NNE, suggest Bako Peninsula sands unrelated to Plateau Sst Fm in Klingang Range on Kalimantan border. New name Bako Sst. Very thick-bedded sst with lenses of conglomerates and sandy mudstones, formed in braided channel environment)

Johnson, H.D., J.W. Chapman & J. Ranggon (1989)- Structural and stratigraphic configuration of the Late Miocene Stage IVC reservoirs in the St. Joseph field, offshore Sabah, NW Borneo. Bull. Geol. Soc. Malaysia 25, p. 79-118.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1989c06.pdf)
(Large, structurally complex field along Lower Pliocene wrench fault zone. Main reservoir Late Miocene marine sands)

Johnson, H.D., T. Kuud & A. Dundang (1989)- Sedimentology and reservoir geology of the Betty field, Baram Delta province, offshore Sarawak, NW Borneo. Bull. Geol. Soc. Malaysia 25, p. 119-161.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1989c07.pdf)
(Moderate size oil field in Baram Delta Province. Structure combination E-W trending delta-related growth faulting and later Pliocene NE-SW trending folding. Reservoirs stacked Miocene shallow marine sandstones)

Johnson, H.D., S. Levell & A.H. Mohamad (1987)- Depositonal controls of reservoir thickness and quality distribution in Upper Miocene shallow marine sandstones (Stage IVD) of the Erb West Field, offshore Sabah. Bull. Geol. Soc. Malaysia 21, p. 195-220.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1987011.pdf)
(Erb West field off W Sabah NE-SW trending anticline, with hydrocarbons in 800' Late Miocene section with shallow marine sandstones. Five main sandstone facies)

Johnson, J.H. (1966)- Calcareous algae from Sarawak. In: N.S.Haile, The geology and mineral resources of the Suai-Baram area, North Sarawak, British Borneo Geol. Survey Mem. 13, p. 151-168.
(Descriptions of Late Eocene and E Miocene coralline algae from Bukit Besungai and Batu Gading, E Sarawak. Incl. Lithophyllum borneoense n.sp. and L. besalotos n.sp, Archaeolithothamnium spp., etc.)

Johnson, J.H. (1966)- Tertiary red algae from Borneo. Bull. British Museum (Natural History), Geology, 11, 6, p. 255-280.
(online at: http://archive.org/details/bulletinofbritis11brit)
(41 species of red calcareous algae from Eocene-E Miocene limestones of Melinau Gorge and Paleocene localities of upper Baram and Belukan River regions)

Johnston, J.C. & P.J. Walls (1975)- Geology of the Telupid area, Sabah. Geol. Survey Malaysia, Annual Rept. for 1973, p. 213-220.
(Incl. glaucophane-bearing metabasalts from Telupid area, possibly part of Chert-Spilite Fm of Sabah)

Jones, M., S. Burley, N. Sharp & N. Wilson (2016)- Pushing the boundaries of exploration in East Malaysia: building on early success. AAPG Int. Conf. Exhibition, Melbourne 2015, Search and Discovery Art.110226, 28p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/110226jones/ndx_jones.pdf)
(On Tertiary deep-water sandstones exploration by Murphy Oil in deep water region off NW Sabah, with Kikeh, etc. oil fields)

Jones, R., P. Restrepo-Pace, C. Goulder, Yee Ah Chim & C. Russell (2011)- The romance of NE Sabahӧs shelf-SB303 exploration potential. Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, 18, 26p. *(Abstract + Presentation)*
(Multiple hydrocarbon play types in Miocene carbonate buildups and clastics in Lundin blocks off NW Sabah)

Jong, J., S.A. Abdullah, S.M. Barker & T. Yoshiyama (2015)- Structural restoration and deformation history of the Bunguran and Sabah fold-thrust belts, NW Borneo. In: Asia Petroleum Geosc. Conf. Exh. (APGCE), Kuala Lumpur, 25992, p. 355-359. *(Extended Abstract)*
(Bunguran (= deepwater Rajang Delta) and Sabah (= deepwater Baram Delta) Fold-thrust belts result from complex interplay between gravity-driven deformation and episodic regional thin-skinned compression driven by South China Sea tectonics along margin)

Jong, J., P. Barber, L.H. Chim, Q.T. Tran, H. Kusaka, K. Muramoto & R. Uchimura (2013)- The petroleum systems of onshore West Baram Delta, Northern Sarawak, Malaysia. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, O2, 4p. *(Extended Abstract)*
(Onshore part of W Baram Delta petroleum province in N Sarawak with two distinct petroleum system: (1) southern overmature gas system, sourced from deeply buried Eo-Oligocene basinal shales, charging wrench-induced traps like Engkabang Anticline; (2) permit-wide oil and gas system sourced from peak mature Mid-Late Miocene carbonaceous shales-coals in synclines, charging inversion and compressional fold structures. Expulsion and charge of traps started in Late Miocene and continues to present-day)

Jong, J., P. Barber, Q.T. Tran & R. Uchimura (2015)- The petroleum systems of onshore West Baram Delta, Northern Sarawak, Malaysia. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2015, 5.2, 4p. *(Extended Abstract + Presentation)*

(Onshore W Baram Delta petroleum province in N Sarawak with Eocene-Recent sediment succession, affected by three main deformation episodes: (1) late Cretaceous- Eocene (80-36 Ma) block faulting, with Eocene (rel. tight) platform carbonates on local highs (2) late Oligocene- M Miocene (30-20.5 Ma) wrench movement along West Baram-Tinjar Line, (3) M Pliocene- Recent (4.0-0 Ma) uplift and compression/inversion (e.g. Miri Anticline). With 2014 Adong Kecil West-1 discovery near Miri. Source rocks: (1) southern gas system from overmature Eo-Oligocene basinal shales, (2) northern oil-gas system from mature M-L Miocene carbonaceous shales/ coals in synclinal areas)

Jong, J. & S. Barker (2015)- Sequence stratigraphy, deformation history and gross deposition environmental study of deepwater Block 2F. In: Asia Petroleum Geoscience Conf. Exhib. (APGCE 2015), Kuala Lumpur, p. 323-327.
(Block 2F in Bunguran Trough, deepwater Rajang Delta area, off Sarawak in S China Sea. Trough evolved as tectonically-induced sag basin. Oldest known rocks shelfal clastics of E Miocene Cycles I/II, now buried >6000m. Late Miocene Cycle V ~3000m of slope and toe-of-slope deposits, overlain by Plio-Pleistocene sediments with turbiditic fairways forming main objectives in current exploration campaign)

Jong, J., S. Barker, F.L. Kessler & T.Q. Tan (2014)- The Sarawak Bunguran fold belt: structural development in the context of South China Sea tectonics. In: Proc. 8th Int. Petrol. Techn. Conf. (IPTC), Kuala Lumpur, 18197-MS, 30p.
(Bunguran Trough in offshore Sarawak Deepwater Block 2F with folded Neogene anticlines with reverse faults and thrusts in cores. Bunguran Fold Belt is deepwater setting of Rajang Delta/ W Luconia Delta, for which gravity sliding was advocated as mechanism of deformation. However, steep folds in anticline cores with mainly reverse faults and anticlines in zones of thicker sediment, suggest inversions of sediment depocentres by compressional tectonics. Foldbelt deformation driven by both gravity and regional compression)

Jong, J., S. Barker, F.L. Kessler & T.Q. Tan (2015)- One basin with several sediment sources: stratigraphic records of the Bunguran Trough, Central South China Sea. In: Tectonic evolution and sedimentation of South China Sea region, AAPG Workshop Kota Kinabalu, Search and Discovery Art. 30405, 7p. *(Ext. Abstract)*
(online at: www.searchanddiscovery.com/documents/2015/30405jong/ndx_jong.pdf)
(Bunguran Trough intra-continental deepwater basin in W Luconia Province, off Sarawak in S China Sea. Sag basin, where two major lineaments crossed. Oldest known rocks E Miocene shelfal clastics, now buried at >6000m, overlain by U Miocene Cycle V 3000m of slope and toe-of-slope deposits, overlain by distal muddy sediments of Muda Fm equivalent. All Pleistocene and older units underwent multiple deformations. Main Neogene sediment supply shifted from Natuna High to Rajang Delta, then back to Natuna area in Pliocene)

Jong, J., S. Barker, F.L. Kessler & T.Q. Tan (2017)- Basin with multiple sediment sources: tectonic evolution, stratigraphic record and preservation potential of the Bunguran Trough, South China Sea. Berita Sedimentologi 38, p. 5-48.
(online at: https://drive.google.com/file/d/0B35lLH-Cki2NV01LNEVCcGl2Z2M/view)
(Deepwater Bunguran Trough off Sarawak is intra-continental pull-apart basin in deepwater Rajang/West Luconia Delta province. Oldest stratigraphy shelf clastic deposits Late Oligocene Cycle I (= Gabus Fm of Natuna Basin), now buried to >7000m. Sediments sourced from: (1) Natuna Arch in Oligocene- E Miocene and Late Pliocene- Pleistocene (feldspatic and quartz-rich turbidites); (2) Rajang/ W Luconia Delta (Neogene) and (3) minor contributions from Dangerous Grounds/ N Luconia and C Luconia Platform areas to N and E)

Jong, J., H.A.B.M. Idris, P. Barber, F.L. Kessler, Tran Q. Tan & R. Uchimura (2017)- Exploration history and petroleum systems of the onshore Baram Delta, northern Sarawak, Malaysia. Bull. Geol. Soc. Malaysia 63 (Geol. Soc. Malaysia 50th Anniversary Issue 1), p. 117-143.
(online at: www.gsm.org.my/products/702001-101705-PDF.pdf)
(Review of onshore Baram Delta province in N Sarawak, with M Eocene- Holocene succession and 1910 Miri oilfield discovery. Three episodes of deformation: (1) Late Cretaceous- Eocene (79.5-36 Ma) block faulting, (2) Late Oligocene- M Miocene (30-20.5 Ma) wrench movement and folding; (3) M Pliocene (4 Ma)- Holocene uplift and compressional folding. Two major anticlinal trends: Engkabang-Karap in S, Miri-Asam Paya in N. Two distinct petroleum systems: (1) overmature gas in S, sourced from deep Eo-Oligocene basinal shales with

reworked terrestrial organic matter. Earlier oil charge probably in Oligocene before late basin reversal; (2) oil and gas system from peak-mature M-L Miocene carbonaceous shales and coals in synclines, charging inversion compressional structures along N Miri-Asam Paya anticlinal trend, and Miocene at Engkabang-Karap Anticline. Expulsion and charge started in Late Miocene and is continuing to present-day. Exploration results of Eo-Oligocene carbonate play disappointing. Onshore Baram Delta still contains attractive plays)

Jong, J. & F.L. Kessler (2019)- The Setap Shale Formation on either side of the Baram Line divide: facies aspects and tectonic implications. Bull. Geol. Soc. Malaysia 67, p. 53-65.
(online at: https://gsm.org.my/products/702001-101784-PDF.pdf)
(Oligocene-Miocene Setap Shale Fm of different character on either side of W Baram Line in N Sarawak)

Jong, J., K.L. Kessler, S. Noon & T.Q. Tan (2016)- Structural development, depositional model and petroleum system of Paleogene carbonate of the Engkabang-Karap Anticline, onshore Sarawak. Berita Sedimentologi 34, p. 5-25.
(online at: www.iagi.or.id/fosi/files/2016/01/BS34-01142016_FINAL.pdf)
(400 km2 large Eocene- Oligocene carbonate body of Engkabang-Karap Anticline, onshore Sarawak (equivalent of Melinau Lst). Tight reservoir facies encountered in two Engkabang wells)

Jong, J., M.A. Khamis, W.M. Z.W. Embong, T. Yoshiyama & D. Gillies (2016)- A sequence stratigraphic case study of an exploration permit in Deepwater Sabah: comparison and lessons learned from pre- versus post-drill evaluations. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-51-G, 24p.
(Deepwater Sabah basin with discontinuous Miocene submarine fan reservoir sands)

Jong, J., D.A. Nuraini & M.A. Khamis (2014)- Basin modeling study of deepwater Block R (DWR) offshore Sabah and its correlation with surface geochemical analyses. Int. Petroleum Technology Conference (IPTC), Kuala Lumpur, IPTC-18186-MS, p. 1-11.

Kaeng, G.C., S. Sausan & Z. Simatupang (2016)- Overpressure mechanisms in compressional tectonic of Borneo deepwater fold-thrust belt. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-496-G, 9p.
(Review of mechanisms that caused high overpressure in N Borneo deep-water fold-thrust belts. Active deposition over ongoing lateral compression results in complex sediment compaction mechanism)

Kakizaki, Y., T. Ishikawa, J. Matsuoka & A. Kano (2010)- Lithostratigraphy and Sr-isotope ages of the Bau Limestone Formation of Northwestern Borneo. Japan Geoscience Union Mtg. 2010, Makahari, Chiba 1010, p.
(Abstract only)
(Bau Limestone from two quarries (Marup, SSF; Gunung Panga) 30 km SW of Kuching, W Sarawak. Massive reefal limestone locally rich in corals and rudists. Bunkit Akut quarry 40 km SW of Kuching well-bedded, deeper water equivalent. Sr-isotopes suggest Late Oxfordian- E Kimmeridgean ages)

Kakizaki, Y. & A. Kano (2009)- Lithology and reefal fauna of the Bau Limestone Formation in Northwestern Borneo, Malaysia. J. Geological Soc. Japan 15, p. 13-14.
(Brief report, in Japanese).

Kakizaki, Y., H. Weissert, T. Hasegawa, T. Ishikawa, J. Matsuoka & A. Kano (2013)- Strontium and carbon isotope stratigraphy of the Late Jurassic shallow marine limestone in western Palaeo-Pacific, northwest Borneo. J. Asian Earth Sci. 73, p. 57-67.
(Sr and C isotope stratigraphy of 202m thick shallow marine carbonate section of Late Jurassic Bau Lst at SSF quarry, SW Sarawak, which was deposited in W Paleo-Pacific. Sr ratios of rudists suggest age of section is latest Oxfordian (155.95 Ma)- Late Kimmeridgian (152.7 Ma), consistent with previous biostratigraphy. δ13C values of Bau Limestone generally ~1‰ lower than Tethyan values)

Kamis, A.M. & W.R. van der Vlugt (1988)- The impact of modern seismic in an old field. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 8, p. 17-27.

(On the use of seimic in resolving structural complexity on Seria Field, Brunei. Field doiscovered in 1928, 769 wells drilled, Oil-in-place ~2.8 billion barrels. ENE-WSW- trending faulted anticline, with Mio-Pliocene deltaic reservoir sandstones)

Kanno, S. (1978)- Brackish molluscan fauna (Upper Eocene) from the Silantek Formation in West Sarawak, Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 103-112.
(Descriptions of brackish water bivalves Corbula dajacensis Martin, Taeniodomus gracilis Kruse, Geloina hashimoto n.sp. and gastropod Paludomos)

Karimi, S.B.S, J.J. Lobao & M.M. Wannier (1997)- Seismic identification of depositional processes in a turbidite fan environment, Deepwater Block SB-G, NW Sabah. Bull. Geol. Soc. Malaysia 41, p. 13-29.
(online at: www.gsm.org.my/products/702001-100873-PDF.pdf)
(Seismic interpretation of Late Miocene- E Pliocene Upper Lingan Fan Unit in deepwater Sabah area, 120 km NW of Kota Kinabalu. With examples of seismic facies of slope channels, leveed channels, mounded facies, etc. (see also Mohamad & Lobao 1997))

Kasama, T., H. Akimoto, S. Hada & G. Jacobson (1970)- Geology of the Mt. Kinabalu area, Sabah, Malaysia. J. Geosciences Osaka City University 13, p. 113-148.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0130006.pdf)
(Reconnaissance study of Mt Kinabalu area, at junction of Borneo and Sulu tectonic arcs. Mt Kinabalu 4000m high and composed of granite- granodiorite with K-Ar ages between 7.6- 9.0 Ma. A few younger isotope ages of 1.3 and 1.7 Ma may represent time of rapid uplift. Surrounded by Tertiary sediments of Crocker Fm and Tenumpok Fms, with 1km or more wide metamorphic aureole with hornfels and gneiss. Crocker Fm isoclinally folded, mainly in E-M Miocene (~19-20 Ma), mainly S dipping. E-W belt of ultrabasic rocks S of Mt. Kinabalu.)

Kayes, A.D. (2012)- Synthetic seismic validation of reservoir models of the carbonate gas fields in offshore Sarawak, Malaysia. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 41087, p. 1-29.
(online at: www.searchanddiscovery.com/documents/2012/41087kayes/ndx_kayes.pdf)
(Shell Sarawak Gas Asset 20 producing gas fields with >40 Tcf of gas in place. Seismic modeling constrains geological models of Miocene carbonate reservoirs)

Keij, A.J. (1964)- Upper Palaeocene *Distichoplax* Limestones of Kudat Peninsula and Pulau Banggi, Sabah. Geol. Survey Borneo Region of Malaysia, Annual Report 1963, p. 153-154.
(Suangpai quarry in Tajau area of N Kudat Peninsula has basal marl with Late Paleocene planktonic forams, overlain by dense white limestone with Discocyclina, Aktinocyclina, Asterocyclina (Ta zone) and the algae Distichoplax biserialis, restricted to Paleocene- E Eocene in other areas of the Tethys. No maps or other stratigraphy info)

Keij, A.J. (1964)- *Distichoplax* from Kudat Peninsula and Banggi island, Sabah, Borneo. Revue Micropaleontologie 7, 2, p. 115-118.
(Well-illustrated account of Paleocene- E Eocene ?algae Distichoplax biserialis, commonly found in thin limestones across Sarawak and W Sabah with Linderina, Opertorbitolites. In Suangpai Lst of N Kudat Peninsula, with common Discocyclina, Aktinocyclina, Nummulites and Alveolina and nearby marls with Late Paleocene planktonic forams)

Keij, A.J. (1965)- Late Cretaceous and Palaeogene arenaceous foraminifera from flysch deposits in northwestern Borneo. Malaysia Geol. Survey Annual Report 1964, p. 155-158.
(Late Cretaceous- Paleogene flysch deposits across >550 mile belt from Sarawak to Sabah (Crocker Range). Forams dominated by monotonous bathyal arenaceous 'Bathysiphon-Cyclammina-Trochammina' assemblages, with rare calcareous benthics and planktonic foraminifera. Subtle varations between relative abundances probably reflect environmental factors like oxygenation)

Keij A.J. (1965)- Note on the echinoid *Temnopleurus toreumaticus* (Leske) from the coastal cliffs of Penanjong. Malaysia Geol. Survey Annual Report 1964, p. 159.

Keij, A.J. (1964)- Neogene to Recent species of *Cytherelloidea* (Ostracoda) from northwestern Borneo. Micropaleontology 10, 4, p. 415-430.
(Cytherelloidea common in Neogene-Recent ostracode assemblages of N Borneo. Fifteen species, ten new)

Kessler, F.L. (2009)- Observations on sediments and deformation characteristics, Sarawak Foreland, Borneo Island. Warta Geologi 35, 1, p. 1-10.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta35_1.pdf)

Kessler, F.L. (2009)- The Baram Line in Sarawak: comments on its anatomy, history and implications for potential non-conventional gas deposits. Warta Geologi 35, 3, p. 105-110.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta35_3.pdf)
(NW-SE trending Baram Line is tectonic discontinuity between stable Luconia Block and mobile Baram Delta Block, acting as boundary for extension and compression in Baram Delta and Sabah. Originated in E-M Miocene, when Baram-Sabah Foredeep opened. Potential for non-conventional gas in Setap Shale recognized)

Kessler, F.L. (2012)- The Jokut Quarry observations on an intensely folded carbonate sequence North-West of Mulu, Sarawak. Warta Geologi 38, 1, p. 1-3.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta38_1.pdf)
(Jokut Quarry almost depleted limestone quarry NE of Mulu Massif. Probably N-most known occurrence of carbonates in this part of Sarawak. Exposed U Oligocene (Lower Te) Selidong Fm carbonates steeply dipping, intensely folded and fractured, floating in intensely folded shales and slates. Carbonates mainly mudstones to packstones, with mounded features)

Kessler, F.L. (2013)- The Batu Gading, Bukit Besungai Hollystone Quarry- observations on an tectonically isolated carbonate sequence northeast of Long Lama, Sarawak. Warta Geologi 39, 1, p. 1-4.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta-39_1.pdf)
(Batu Gading Hollystone Quarry ENE of Long Lama, one of several isolated carbonate blocks, tectonically confined by regional faults, the nature of which remains uncertain. Carbonates in quarry ~50m thick and of Late Eocene and E Miocene (should be Late Oligocene?; JTvG) ages (E Oligocene missing), predominantly reefal, deposited on wave-cut shelf formed by Rajang Gp deep marine clastics. Carbonate body at least three unconformities, second one angular (forams studied by Adams & Haak, 1962))

Kessler, F.L. & J. Jong (2014)- Habitat and C-14 ages of lignitic terrace deposits along the northern Sarawak coastline. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 27-34.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014003.pdf)
(Quaternary lignitic transgressive terrace deposits in coastal locations in Miri area (C-14 ages 28.6- 8.2 ka; Late Pleistocene- E Holocene), unconformably over Pliocene sediments. Thickness 1.5- 7.5 m. Now at different elevations (14-38m altitude) and appear to be block-faulted, implying tectonic movements in Holocene)

Kessler, F.L. & J. Jong (2014)- The origin of Canada Hill- a result of strike-slip deformation and hydraulically powered uplift at the Pleistocene/Holocene border? Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 35-44.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm20140041.pdf)
(Canada Hill in centre of Miri, Sarawak, roofed by Pleistocene/Holocene terrace deposits, implying very young uplift of complex anticline. Structure explained by strike-slip deformation, in conjunction with diapyric pillow of Setap Fm clay)

Kessler, F.L. & J. Jong (2015)- Incision of rivers in Pleistocene gravel and conglomeratic terraces: further circumstantial evidence for the uplift of Borneo during the Neogene and Quaternary. Bull. Geol. Soc. Malaysia 61, p. 49-57.
(online at: www.gsm.org.my/products/702001-101676-PDF.pdf)

(Incised Pleistocene gravel beds and conglomerates common feature of Baram, Limbang and Temburong drainage systems in NW Sarawak and Brunei. Incision from 9-76 m likely result of strong precipitation, combined with ongoing uplift. Conglomerates almost exclusively from Lower Miocene Meligan Sst, and deposited in nested fluvial terraces. Uplift may be ongoing present day)

Kessler, F.L. & J. Jong (2015)- Tertiary uplift and the Miocene evolution of the NW Borneo shelf margin. Berita Sedimentologi 33, p. 21-46.
(online at: www.iagi.or.id/fosi/files/2015/09/BS33-Marine-Geology-of-Indonesia-II-R1.pdf)
(In NW Borneo transition from muddy M Miocene shelf to unusually sandy one attributed to (1) rise of Borneo part of Sundaland in M-L Miocene, caused by tectonic compression and (2) availability, through erosion of Rajang/Crocker sand source. E-M Miocene Cycle III 'Setap Shale' in Baram Delta rel. lean in sand. First massive regional sand pulse in Baram Delta and Sabah during Cycle IV (Serravallian), post-MMU/DRU times. Continued sand supply established shelf edge that remained almost stationary throughout Mid Cycle V)

Kessler, F.L. & J. Jong (2016)- Northwest Sarawak: a complete geologic profile from the Lower Miocene to the Pliocene covering the Upper Setap Shale, Lambir and Tukau Formations. Warta Geologi 41, 3-4, p. 45-51.
(online at: https://gsmpubl.files.wordpress.com/2016/03/warta41_3-4.pdf)
(~1000m thick outcrop section along 3-4 km of new Miri- Long Lama road (NW Sarawak), with two major regional unconformities: (1) M Miocene Unconformity (MMU) between U Setap Shale and Lambir Fm, and (2) Mio-Pliocene angular unconformity between folded Lambir rocks and unfolded Tukau Fm)

Kessler, F.L. & J. Jong (2016)- Paleogeography and carbonate facies evolution in NW Sarawak from the Late Eocene to the Middle Miocene. Warta Geologi 42, 1-2, p. 1-9.
(online at: https://gsmpubl.files.wordpress.com/2016/08/warta42_1_2.pdf)
(After Paleocene-E Eocene Sarawak Orogeny (~40-36 Ma) shallow shelf developed in NW Sarawak, which included Luconia/Tinjar terranes and rimmed recently emerged Rajang Gp hinterlands. Late Eocene benthic foraminiferal limestone banks and ramps developed on sheltered shoals. By E-M Oligocene carbonate deposition slowed. Second episode of carbonate deposition in E-M Miocene, with small coral-algal bioherms)

Kessler, F.L. & J. Jong (2017)- Examples of fault architecture and clay gouging in Neogene clastics of the Miri area, Sarawak. Warta Geologi 43, 1, p. 15-20.
(online at: www.gsm.org.my/products/702001-101701-PDF.pdf)
(Good correlation between normal fault throw and fault gouge thickness)

Kessler, F.L. & J. Jong (2017)- Carbonate banks and ramps on the northern shore of Palaeogene and Early Neogene Borneo: observations and implications on stratigraphy and tectonic evolution. Bull. Geol. Soc. Malaysia 63 (Geol. Soc. Malaysia 50th Anniversary Issue 1), p. 1-26.
(online at: www.gsm.org.my/products/702001-101710-PDF.pdf)
(In NW Sarawak two independent carbonate systems: Late Eocene-Oligocene foraminiferal limestone banks and E-M Miocene coral-algal buildups. No outcrop or well shows continuity of carbonate deposits from Late Eocene to M Miocene. Eo-Oligocene carbonate system formed during deepening of NW Borneo foredeep after Paleocene- E Eocene Sarawak Orogeny; E-M Miocene carbonates originated as foredeep shallowed and eventually disappeared with establishment of shallow, clastic shelf)

Kessler, F.L. & J. Jong (2017)- The roles and implications of several prominent unconformities in Neogene sediments of the greater Miri area, NW Sarawak. Warta Geologi 43, 4, p. 1-8.
(Neogene sequence of greater Miri area in NW Sarawak with up to four Neogene unconformities: well-established Mid-Miocene Unconformity (MMU; ~15.5 Ma?) and less well-defined Shallow Regional Unconformity (SRU; ~10 Ma), Intra-Pliocene Unconformity (IPU; 3.6 Ma) and Lower Pleistocene Unconformity (LPU; ~1.6-1.8 Ma). Timings yet-to-be fully established)

Kessler, F.L. & J. Jong (2017)- A study of Neogene sedimentary outcrops of the Greater Miri area- can clay gouging be calibrated in outcrops and shallow subsurface boreholes? Berita Sedimentologi 39, p. 5-24.
(online at: www.iagi.or.id/fosi/files/2017/12/FOSI_BeritaSedimentologi_No39_Dec2017.pdf)

(Fault zones with clay gouge in outcrops and shallow boreholes of Late Miocene- E Pliocene deltaic clastics show no fault sealing capability. Probably due to weathering)

Kessler, F.L. & J. Jong (2018)- Hydrocarbon retention in clastic reservoirs of NW Borneo- examples of hydrocarbon trap, reservoir, seal and implications on hydrocarbon column length. Berita Sedimentologi 40, p. 6-44.
(online at: http://www.iagi.or.id/fosi/berita-sedimentologi-no-40.html)
(Hydrocarbon column length offshore Sarawak, Brunei and NW Sabah mainly controlled by effective and laterally continuous top seal. Seal capacity affected by mineralogy, grain size, diagenesis and lateral continuity. Hydrocarbon columns tend to be longer in clay-prone environments, like outer shelf and deepwater turbidite environments (av. ~250m), and shorter in sand rich shallow marine- deltaic settings (av. 30m))

Kessler, F.L. & J. Jong (2018)- A new limestone and shale outcrop profile on the Coastal Road from Miri to Bekenu. Warta Geologi, 44, 4, p. 304-306.

Kessler, F.L. & J. Jong (2019)- Destructive diagensis observed in outcrop examples of Neogene sandstone reservoir and clay contact zones, Miri, Northern Sarawak. Berita Sedimentologi 43, p. 5-14.
(online at: https://www.iagi.or.id/fosi/files/2019/06/FOSI_BeritaSedimentologi_43_June_2019.pdf)
(Outcrop examples of diagenetically-derived iron-rich zones in Pliocene sediments)

Khamis, M.A., J. Jong & S.M. Barker (2018)- Deformation profile analysis of a deepwater toe-thrust structural trend- Implications on structural kinematics and sedimentary patterns. Bull. Geol. Soc. Malaysia 65, p. 1-12.
(online at: https://gsmpubl.files.wordpress.com/2018/08/bgsm201801.pdf)
(Offshore NW Sabah deepwater fold-thrust belt with tightly folded and thrusted Miocene-Pleistocene sediments, resulting from interaction between gravitational and compressional forces. Shallow-Regional Unconformity (SRU) separates pre- and post-kinematic phases. Structuration and deformation history of "L-B-P" structures varied along structural trend and play role in controlling sediment fairway distribution patterns)

Khamis, M.A., J. Jong, S.M. Barker, S.A. Abdullah & Y. Watanabe (2018)- Deformation profile analysis of deepwater Sabah toe-thrust structural trends- observations on structural kinematics and implications on sedimentary fairway distribution patterns. Offshore Technology Conf. Asia, Kuala Lumpur, OTC-28338-MS, 22p.
(Deepwater NW Sabah toe-thrust dominant NW-SE oriented compression from Early-Late Miocene, during closing of proto-S China Sea and subsequent opening of S China Sea. Deformation history varied along structural trends. Genetic link between structural growth and sediment fairways)

Khan, A.A., W.H. Abdullah, Meor H. Hassan & K. Iskandar (2017)- Tectonics and sedimentation of SW Sarawak basin, Malaysia, NW Borneo. J. Geol. Soc. India 89, 2, p. 197-208.
(SW Sarawak basin S-ward sloping basement characterized by passive margin tectonics: Triassic extension, Cretaceous transpression and Oligo-Miocene compression. Deeper basin zone between Schwaner Mts block to S and SW Sarawak basin to N. E-W trending Cretaceous carbonate platform in SW Sarawak basin signify shelf zone where shallow marine sedimentation progressed during Cretaceous transpression. Late Cretaceous- E Eocene Kayan Sst unconformable on Cretaceous Pedawan Fm. NW-SE trending Oligo-Miocene continental volcanic arc. Back-arc extension prevailed in Oligo-Miocene. SW Sarawak basin two sub-basins (Senibong in W, Kuching in E), with wide range of transpressive features. Sri Aman marginal sea-basin characterized by oceanic assemblages, ophiolite, serpentinite and pillow basalt)

Kho, C.H. (1968)- Bintulu Area, Central Sarawak, East Malaysia. Explanation of sheet 3/113/13. Geol. Survey Malaysia, Borneo region, Report 5, p. 1-83.
(1:50,000 scale geologic map of area around Bintulu town, C Sarawak, with primary purpose evaluation of Miocene coal beds. Oldest beds up to 14,000' thick Nyalau Fm marine-paralic clastics with zone Te4- Te5 (latest Oligocene- E Miocene) foraminifera limestones with Miogypsinoides and Heterostegina borneensis and Lepidocyclina (Eulepidina), etc. Overlain by E Miocene Setap Shale Fm (or lateral equivalent of Nyalau Fm.; Hutchison 2005). Folded in E Pliocene)

King, R.C., G. Backe, C.K. Morley, R.R. Hillis & M.R.P. Tingay (2010)- Balancing deformation in NW Borneo: quantifying plate-scale vs. gravitational tectonics in a delta and deepwater fold-thrust belt system. Marine Petroleum Geol. 27, 1, p. 238-246.
(GPS show 4-6 mm/yr of NW Borneo plate-scale shortening, not accommodated by plate-scale structures. Total shortening observed in Baram delta toes does not balance against active extension in delta top; additional shortening therefore attributed to plate-scale shortening across NW Borneo produced by far-field compression)

King, R.C., R.R. Hillis, M.R.P. Tingay & A.R. Damit (2010)- Present-day stresses in Brunei, NW Borneo: superposition of deltaic and active margin tectonics. Basin Research 22, 2, p. 236-247.
(Two present-day stress provinces previously identified across Baram Delta System: (1) inner shelf inverted province with margin-normal (NW-SE) max. horizontal stress orientation and (2) outer shelf extension province with margin-parallel (NE-SW) max. horizontal stress. Borehole breakouts from 12 petroleum wells confirm margin-normal max. horizontal stress orientations of inverted province (mean max. hor. stress orientation of ~117°). NW Borneo continental margin currently tectonically quiescent)

King, R.C., R.R. Hillis, M.R.P. Tingay & C.K.Morley (2009)- Present-day stress and neotectonic provinces of the Baram Delta and deepwater fold-thrust belt. J. Geol. Soc., London, 166, p. 197-200.
(Present-day stress orientation measurements across Baram delta and deepwater delta toe fold-thrust belt)

King, R.C., M.R.P. Tingay, R.R. Hillis, C.K. Morley & J. Clark (2010)- Present-day stress orientations and tectonic provinces of the NW Borneo collisional margin. J. Geophysical Research 115, B10415, p. 1-15.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2009JB006997/epdf)
(Borehole deformation of 55 petroleum wells across NW Borneo collisional margin combined with seismic and outcrop data, define seven tectonic provinces. Baram Delta- Deepwater Fold-Thrust Belt deltaic gravitational tectonics with 3 provinces (inner shelf inverted province, outer shelf extension province and slope to basin floor compression province). Shale and minibasin provinces offshore Sabah. In Balingian province, sH is ESE-WNW, reflecting ESE absolute Sunda plate motions due to absence of thick detachment seen elsewhere in NW Borneo. C Luconia province poorly constrained orientations)

Kirk, H.J.C. (1957)- The geology and mineral resources of the Upper Rajang and adjacent areas. Geological Survey Dept., British Territories in Borneo, Kuching, Memoir 8, p. 1-181.

Kirk, H.J.C. (1961)- A preliminary account of Cretaceous to Recent volcanic activity in relation to the geological structure of British Borneo. Proc. 9th Pacific Science Congress, Bangkok 1957, 12, p. 192-197.
(Also in 'Annual Report Geological Survey Dept., British Territories in Borneo, 1957, p. 23-29)
(Two main periods of volcanic activity in North Borneo (Sabah): basalt-spilite interbedded with Cretaceous-Eocene sediments and widespread Upper Tertiary- Quaternary basalt- andesite-dacite association eruptions)

Kirk, H.J.C. (1962)- The geology and mineral resources of the Semporna Peninsula, North Borneo. Geological Survey Dept., British Territories in Borneo, Kuching, Memoir 14, p. 1-178.
(Also summary in British Borneo Geol. Survey Ann. Rept. 1960, p. 106-123). Semporna Peninsula of SE Sabah, S of Darvel Bay, with four main rocks units: (1) intensely folded- thrusted Cretaceous-Eocene Chert-Spilite Fm of greywacke with basalts, chert, Madai-Baturong Lst (Cretaceous seamount) and some gabbro, serpentinite; (2) Oligo-Miocene (Td-Tf) Kalumpang Fm folded clastics, limestones and volcanics (with serpentinite 'intrusions'); (3) Pliocene-Quaternary andesites and basalts; (4) Quaternary sediments. Abundant intrusives of different ages and composition. Most fertile soils on outcrops of younger volcanics, particularly olivine basalts)

Kirk, H.J.C. (1963)- Pliocene and Quaternary volcanic activity in British Borneo. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Geological Survey Dept., British Territories in Borneo, Bull. 4, Kuching, p. 137-142.
(Two groups of Pliocene and Quaternary volcanism: (1) Upper Rajang area of E Sarawak and (2) Semporna Peninsula of SE Sabah (continuation of Sulu Arc). Mainly explosive eruptions of andesite, dacite and rhyolite in Pliocene, followed by extensive olivine basalts in Quaternary)

Kirk, H.J.C. (1966)- The mineralogy of Pinanduan copper deposit, Sabah, Malaysia. Geol. Survey Malaysia, Borneo Region, Annual Report 1965, p. 196-204.

Kirk, H.J.C. (1967)- The igneous rocks of Sarawak and Sabah. Geol. Survey Malaysia, Borneo Region, Kuching, Bull. 5, p. 1-210.
(see also 'preview' in Borneo Region Malaysia Geol. Survey, Annual Report 1963, p. 82-94. Incl. M Jurassic K-Ar date forbiotite in hornfels in Segama Valley, Sabah, suggesting pre-Cretaceous metamorphic basement?)

Kirk, H.J.C. (1967)- The Mamut copper prospect, Kinabaluh, Sabah. Geol. Survey Malaysia, Borneo Region, Kuching, Bull. 8, p. 68-80.

Kivior, I., S. Markham, S. Damte, S. Randle, M. Shimada, J. Jong, H. Kusaka & TranN Quoc Tan (2011)- Mapping regional sedimentary horizons in the onshore Baram Delta, Sarawak, from magnetic and gravity data using Energy Spectral Analysis. In: Proc. Petroleum Geology Conference and Exhibition (PGCE), Kuala Lumpur, Malaysia, p.

Kob, M.R.C. & M.Y. Ali (2008)- Regional controls on the development of carbonates in East Natuna Basin and Luconia area. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA-08-G-078, 6p.
(E Natuna basin- Luconia platforms off NW Borneo between areas of subsidence/ faulting in N and compressional tectonics in S. Extensive development of carbonates in Early -Late Miocene. Late Oligocene- E Miocene extension in Luconia and nearby areas, followed by episodic compression in M Miocene. Areas near main uplifted region in E and SW dominated by clastics, carbonates thrived on rifted margin in W. Similar setting in E Natuna. Subsequent compression resulted in inversion and folding, with uplift of parts of E Natuna-Luconia region. Folds formed sites for latest M-Late Miocene carbonate growth. Sea level rise at base Pliocene drowned most of carbonate in region except few buildups in NW, which still thrive today)

Kob, M.R.C. & M. Mohamed (1995)- Chronostratigraphy of Miocene turbiditic sequence of Sabah Basin from nannofossil assemblages. In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. Southeast Asian basins: oil and gas for the 21st century, Kuala Lumpur 1994, Bull. Geol. Soc. Malaysia, p. 143-163.
(online at: www.gsm.org.my/products/702001-100955-PDF.pdf)
(Offshore Sabah Basin is Neogene trench-associated basin filled with progradational cycles of marine and coastal sediments. Age-determinations of M-L Miocene strata through quantitative nannofossil analysis more reliable than foraminifera due to floods of reworked forms. Dominant indigenous assemblages differentiated from reworked assemblages through quantitative analysis)

Kob, M.R.C., J. Norazlina, A.H. Samsudin & A. Mansor (2015)- Tectono-stratigraphic evolution and hydrocarbon prospectivity of the North Tarakan Basin, Onshore Sabah. In: Asia Petrol. Geoscience Conf. Exhib. (APGCE), Kuala Lumpur, 26151, 5p. *(Extended Abstract)*
(SE Sabah N Tarakan basin Paleogene-Neogene sediments evolved as foreland basin in relation to thrusting of Rajang fold-thrust belt (accretionary complex). Basin uplifted and eroded in stages in E Miocene-Pliocene. E-M Miocene Tanjong, Kapilit and Kalabakan Fms potential oil and gas resources. Conventional traps due to thrust and wrench tectonics. Late Eocene unconformity between Sapulut and Labang Fms= 'Sarawak Orogeny')

Kocsis, L., A. Briguglio, A. Roslim, H. Razak, S. Coric & G. Frijia (2018)- Stratigraphy and age estimate of Neogene shallow marine fossiliferous deposits in Brunei Darussalam (Ambug Hill, Tutong district). J. Asian Earth Sci. 158, p. 200-209.
(Outcrops of sandstones-clays at Ambug Hill in NE Brunei with layers rich in marine fossils. Calcareous nannoplankton of Late Tortonian- E Messinian (NN11) age, confirmed by Sr-isotope age from bivalves (8.3- 6.2 Ma). Overlain by emersion surface, possibly tied to Me1 (7.25 My) or Me2 (5.73 My) sequence boundary)

Kocsis, L., H. Razak, A. Briguglio & M. Szabo (2018)- First report on a diverse Neogene cartilaginous fish fauna from Borneo (Ambug Hill, Brunei Darussalam. J. Systematic Palaeontology, 2018, 30p. *(online preview)*

(Diverse Late Miocene cartilaginous fish fauna from Brunei (~6.5-8 Ma). Chondrichthyan fish remains 24 taxa of selachians (sharks, etc.) and batoids (rays). Shark fauna dominated by Carcharhiniformes, including teeth extinct giant Otodus (Megaselachus) megalodon shark. Batoids dominated by Myliobatiformes. Dominance of carcharhinid sharks and small rays suggests shallow marine, coastal paleoenvironment)

Kon'no, E. (1968)- Some Upper Triassic species of Dipteridaceae from Japan and Borneo. J. Linnean Soc. London, Botany, 61, 384, p. 93-105.
(Description of Cuxthropteris (=Clathropteris) meniscoides from near SW border of Sarawak, southernmost occurrence of Dipteridaceae flora of SE Asia in Borneo in Upper Triassic)

Konôno, E. (1972)- Some Late Triassic plants from the Southwestern border of Sarawak, East Malaysia. In:T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 10, p. 125-178.
(Plants from beds near basal conglomerates of Halobia-bearing coaly series near Krusin, SW Sarawak. Probably Late Carnian age. 15 species from Sadong Fm, now called'Krusin flora'. With Neocalamites, Clathropteris miniscoides, Dictyophyllum cf. nilssoni, Cladophlebis spp., Todites, etc. Belongs to Dictyophyllum-Clathropteris floral province of E Asia/ SW Pacific, without any European or North Asian floral elements, and similar to Norian Tonkin Flora of N Vietnam. No stratigraphy details (Hutchison 2005: associated in same formation Carnian-Norian bivalves Halobia and Monotis salinaria and sands derived from Serian Volcanics) (Krusin flora classified as Carnian age, and 'East Asian floristic zone', similar to 'Yamaguti Flora' of Japan, by Dobruskina 1994))

Koopman, A. (1996)- Regional geological setting. In: S.T. Sandal (ed.) The geology and hydrocarbon resources of Negara Brunei Darussalam (2nd ed.), Spec. Publ. Muzium Brunei and Brunei Shell Petroleum Company Berhad, Syabas, Bandar Seri Begawan, p. 49-60.

Koopman, A. & J. Schreurs (1996)- The coastal and offshore oil and gas fields. In: S.T. Sandal (ed.) The geology and hydrocarbon resources of Negara Brunei Darussalam (2nd ed.), Spec. Publ. Muzium Brunei and Brunei Shell Petroleum Company Berhad, Syabas, Bandar Seri Begawan, p. 155-192.

Koopman, A. & J. Schreurs (1996)- The inland hydrocarbon accumulations. In: S.T. Sandal (ed.) The geology and hydrocarbon resources of Negara Brunei Darussalam (2nd ed.), Spec. Publ. Muzium Brunei and Brunei Shell Petroleum Co. Berhad, Syabas, Bandar Seri Begawan, p. 193-198.

Koopmans, B.N. (1967)- Deformation of the metamorphic rocks and the Chert-Spilite formation in the southern part of the Darvel Bay area, Sabah. In: Geological papers 1966, Geol. Survey of Malaysia, Borneo Region, Bull. 8, p. 14-24.

Koopmans, B.N. & P.H. Stauffer (1968)- Glacial phenomena on Mount Kinabalu, Sabah. In: Geological papers 1966, Malaysian Geol. Survey, Borneo region, Bull. 8, p. 25-35.
(Evidence of Pleistocene glacial erosion above 12,000' at on Mt. Kinabalu (elev. 4100m/ 13,455'). Glaciated, with ice cap of ~5.4 km2 in Pleistocene until about 10,000 years ago. Two Pleistocene glaciations, but no clear moraines)

Kosa, E. (2012)- Pore-pressure and subsurface-plumbing patterns in Central Luconia; Offshore Sarawak, Malaysia. In: Delivering value: realising exploration & development potential, Proc. Petrol. Geosc. Conf. Exh. (PGCE 2012), Kuala Lumpur, 4p. *(Extended Abstract)*
(Hydraulically blown traps and overpressure-related operational issues still encountered in C Luconia carbonate buildup play. Predictive pressure model proposed based on identification of five principal pressure domains, characterised by different drainage mechanisms)

Kosa, E. (2013)- The rivers of Luconia: the effects of sea-level lowstands on the stratigraphy of a mixed carbonate/clastics province; Miocene- Present, Offshore Sarawak, NW Borneo. In: Proc. Petrol. Geosc. Conf. Exh. (PGCE 2013), Kuala Lumpur, 5p. *(Extended Abstract)*

(C Luconia gas-producing province with ~250 carbonate build-ups, now mostly covered by clastics. Clastics historically interpreted as marine, pro-delta sediments deposited over drowned carbonates, but re-interpreted as stacked delta lobes with paleo-coastlines extending basinward of most Luconia build-ups. This study suggests evidence for fluvial and other erosional geomorphology and links this to hydrocarbon habitats, carbonate-clastic interactions and reservoir/seal distribution. Fluvial processes exerted major control on carbonate inception inM Miocene, and on hydrocarbon-retention capacity of clastic overburden)

Kosa, E. (2013)- Wings, mushrooms and Christmas trees: insights from carbonate seismic geomorphology into the evolution of Central Luconia. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 50783, 51p. *(Presentation and Abstract; see also full paper Kosa et al. (2015))*
(online at: www.searchanddiscovery.com/documents/2013/50783kosa/ndx_kosa.pdf)
(C Luconia gas province off Sarawak, NW Borneo with >200 Miocene-Recent carbonate build-ups identified. Interpretation of carbonate geomorphology from seismic varied through time. Prevalent model of evolution of C Luconia infers 'maximum transgression' initiating carbonate growth in M Miocene, followed by progressive burial of province under Borneo-sourced clastic deltas in Late Miocene. Hydrocarbon columns in C Luconia tend to be short and terminate at intersections of carbonate edifices with clastic sequence boundaries. New model of clastic stratigraphy proposed, of stacked delta-lobes punctuated by exposure and/or flooding surfaces and evolving contemporaneously with carbonates)

Kosa, E. (2015)- Sea-level changes, shoreline journeys, and the seismic stratigraphy of Central Luconia, Miocene-present, offshore Sarawak, NW Borneo. Marine Petroleum Geol. 59, p. 35-55.
(C Luconia province of Sarawak Basin with>200 M Miocene- Recent carbonate build-ups. Clastic sediments around/ between carbonate build-ups interpreted as stacked low-relief deltas, which frequently prograded beyond area of carbonate build-ups. Deltaic topsets juxtaposed against carbonate build-ups hydrocarbon migration routes. Most carbonate reservoirs underfilled; hydrocarbon columns limited to youngest onlapping sequence)

Kosa, E., A. Hafrez, K. Boey, A. Azhar & G. Wee (2012)- Sequence stratigraphy of clastic overburden of the Miocene carbonate gas province in Central Luconia, Offshore Sarawak, NW Borneo: implications for hydrocarbon-retention capacity. In: Int. Petrol. Techn. Conf. (IPTC), Bangkok 2012, IPTC 14578, p. 1208-1213.
(C Luconia, off NW Borneo, mature gas province with >45TCF gas discovered in Miocene carbonate build-ups. Most commercial discoveries in carbonate platforms, but remaining prospectivity mostly in pinnacle-shape carbonates, where commercial volumes require long hydrocarbon columns)

Kosa, E., G.M.D. Warrlich & G. Loftus (2015)- Wings, mushrooms, and Christmas trees: the carbonate seismic geomorphology of Central Luconia, Miocene-present, offshore Sarawak, Northwest Borneo. American Assoc. Petrol. Geol. (AAPG) Bull. 99, 11, p. 2043-2075.
(see also Kosa (2013). C Luconia province of Sarawak Basin off NW Borneowith extensive Miocene-Holocene carbonate buildupse up to 2km thick and with complex seismic geomorphologies. Intermittent carbonate and siliciclastic deposition governed by oscillating sea level and variable siliciclastic input. Location of buildups with respect to deltaic facies and seismic expressions of marginal carbonate strata, locally known as wings, used here to classify carbonate seismic geomorphologies)

Kosaka, H. & K. Wakita (1975)- Geology and mineralization of the Mamut mine, Sabah, Malaysia. Mining Geology 25, 132, p. 303-320. *(In Japanese, with English summary)*
(online at: https://www.jstage.jst.go.jp/article/shigenchishitsu1951/25/132/25_132_303/_pdf)
(Mamut mine in NW Sabah, ~65 km E of Kota Kinabalu, is first porphyry copper mine in Borneo. Commercial operation started in 1975. Ore reserves ~178 Mtons of 0.476 percent copper. Area occupied by U Cretaceous and Tertiary flysch type sediments and igneous rocks. In mineralized area sedimentary rocks mainly Paleocene-Eocene sandstone, with serpentinized ultrabasic rocks and adamellite porphyry intrusions, possibly parts of large batholith under area, represented by Mt. Kinabalu. Late Miocene- E Pliocene K-Ar ages. Size of main adamellite porphyry intrusive ~800x 300m. Ore zone max. width 450m, length 800m and depth 200m)

Kosaka, H. & K. Wakita (1978)- Some geologic features of the Mamut porphyry copper deposit, Sabah, Malaysia. Economic Geology 73, 5, p. 618-627.
(Mamut porphyry copper-gold deposit of Paleocene- Upper Miocene age one of many mineralized centers in NW-SE trending tectonic zone in Sabah, N Borneo. Copper mineralization associated with K-rich adamellite porphyry intrusion. Wall rocks consist of serpentinite and clastic sediments. See also Imai (2000))

Kosters, M., P.F. Hague, R.A. Hofmann &d B.L. Hughes (2008)- Integrated modeling of karstification of a Central Luconia Field, Sarawak. In: Int. Petroleum Techn. Conf. (IPTC 2008), Kuala Lumpur, IPTC 12327, 9p.
(Some carbonate fields in C Luconia gas province karstified, as demonstrated by severe drilling losses. Largest gas field (1969 discovery, ~175km NNW of Bintulu, producing since 1987) is elongate Miocene buildup. Seismic study suggests extensive dendritic karst network in zones 3 and 4, mainly in C and E parts of field. Overlying zone 2.3 part of transgressive systems tract with rel. poor porosities and form field-wide baffle)

Krebs, W.N. (2011)- Upper Tertiary chronosequence stratigraphy of offshore Sabah and Sarawak, NW Borneo, Malaysia: a unified scheme based on graphic correlation. Bull. Geol. Soc. Malaysia 57, p. 39-46.
(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm57/bgsm2011006.pdf)

Krebs, W.N. & A. van Vliet (2009)- The Middle Miocene Unconformity (MMU): neither Middle Miocene nor unconformity? In: Programme and abstracts Petroleum Geology Conf. Exh., Kuala Lumpur 2009, Geol. Soc. Malaysia, Paper 16. *(Abstract only)*
(online at: http://geology.um.edu.my/gsmpublic/PGCE2009/Draft/Old/Geology%20Papers%20v.0.1.pdf)
(Middle Miocene Unconformity of N Borneo/ S China Sea not true unconformity, but end of late E Miocene extension around 'oceanic' core of S China Sea. Crests of fault-blocks experienced minor submarine erosion. Bako-1 and Mulu-1 wells drilled on paleo-highs, reveal age of MMU is late E Miocene)

Krol, L.H. (1927)- Palaeozoicum (?) in Sarawak en Britsch-Noord Borneo. De Mijningenieur 8, p. 113-115.
(On the age of coal-bearing rocks from Sarawak: initially believed to be of Late Paleozoic age (Tennison Woods, 1885, based on presumed presence of Vertebraria and Phyllotheca), but more likely of Tertiary age)

Lam, K.S. (1988)- Sibu Area, Central Sarawak Malaysia, Explanation Sheet 2/111/12. Geol. Survey Rept., Geol. Survey Malaysia, Sarawak, p. 1-151.

Lam, K.S. (1983)- Tektite found in Sarawak. Warta Geologi 9, 6, p. 273-275.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1983006.pdf)
(First record of tektite in Sarawak, from Bukit Nanas Quaternary gravel terrace deposit SW of Limbang. With brilliant black lustre, spherical in shape, diameter 25mm, weight 35g. Limbang tektite may be correlated to nearby finds of tektites in Brunei (Tate 1970) and Kalimantan (Von Koenigswald?) (probably part of Pleistocene (~0.77 Ma) Australasian strewn field))

Lambiase, J. & A. Cullen (2012)- Sediment supply systems of the Champion "Delta" of NW Borneo: implications for the distribution and reservoir quality of associated deepwater sandstones. AAPG Int. Conf. Exh., Singapore 2012, Search and Discovery Art. 50775, p. *(Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/50775lambiase/ndx_lambiase.pdf)
(M Miocene- Pliocene sedimentation on NW Borneo margin not product of one large Champion deltaic system, but several structurally active sub-basins segregated Champion shallow marine strata into thick, wave-dominant and tide-dominant successions)

Lambiase, J. & A. Cullen (2013)- Sediment supply systems of the Champion ñDeltaò of NW Borneo: implications for deepwater reservoir sandstones. J. Asian Earth Sci. 76, p. 356-371.
(M Miocene- Pliocene 'Champion Delta' sedimentation on NW Borneo margin not one simple, large delta. Multiple sand sources from Padas, Limbang and Trusan Rivers)

Lambiase, J.J., A.R. Damit, M.D. Simmons, R. Abdoerrias & A.A. Hussin (2003)- A depositional model and the stratigraphic development of modern and ancient tide-dominated deltas in NW Borneo. In: F.H. Sidi et al.

(eds.) Tropical deltas of Southeast Asia; sedimentology, stratigraphy and petroleum geology. Soc. Sedimentary Geology (SEPM) Spec. Publ. 76, p. 109-123.
(Modern deltas of NW Borneo may be wave-dominated (Baram River) or tide-dominated (deltas within Brunei Bay). Details on Trusan River Delta, outcrops of M-Miocene and younger Belait Fm, etc.)

Lambiase, J.J., A.A.A. Rahim & C. Yaw Peng (2002)- Facies distribution and sedimentary processes on the modern Baram Delta: implications for the reservoir sandstones of NW Borneo. Marine Petroleum Geol. 19, 1, p. 69-78.
(Present-day Baram Delta wave-tide dominated. Tertiary shoreface reservoir sandstones wave-dominant, tidal signatures absent. Modern Baram Delta not appropriate analogue for most shoreface reservoir sands)

Lambiase, J.J. & S. Tulot (2013)- Low energy, low latitude wave-dominated shallow marine depositional systems: examples from northern Borneo. Marine Geophysical Res. 34, 3-4, p. 367-377.
(Depositional environments of wave-dominant successions in M-L Miocene Belait and Sandakan Fms in Brunei and NE Sabah)

Lambiase, J.J., T.Y. Tzong, A.G. William, M.D. Bidgood, P. Brenac & A.B. Cullen (2008)- The West Crocker formation of northwest Borneo: a Paleogene accretionary prism. In: A.E. Draut et al. (eds.) Formation and applications of the sedimentary record in arc collision zones, Geol. Soc. America (GSA), Spec. Paper 436, p. 171-184.
(West Crocker Fm in NW Borneo interpreted as accretionary prism. Two episodes of syndepositional folding-thrusting. Probable Eocene age differs from accepted Oligocene- E Miocene age and consistent with deposition of W Crocker Fm during phase of NW Borneo margin tectonism. Sandstones in W Crocker deposited by high-density turbidity currents that constructed progradational lobes in ~1000m or more water. Sandstones with abundant feldspars and lithics suggests first-cycle product of eroded orogenic belt and short transport distance)

Lasman, M.R. (1998)- Channel chasing in the D35 field offshore Sarawak. In: G.H. Teh (ed.) Petroleum geology Conference 1997, Bull. Geol. Soc. Malaysia 42, p. 39-45.
(online at: www.gsm.org.my/products/702001-100858-PDF.pdf)
(D35 oilfield offshore Sarawak in Balingian Province 1983 discovery in E-M Miocene 'Cycle III' delta plain channel deposits. Seismic ampitudes help identify channel sand thickness)

Latiff, A.H A., S.N.F. Jamaludin & M.N.A. Zakariah (2015)- Post-stack seismic data enhancement of thrust-belt area, Sabah Basin. PowerMEMS 2015, IOP Conf. Ser., Earth Environm. Science 30, 012006, p. 1-6.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/30/1/012006/pdf)
(Seismic processing offshore NW Sabah))

Lau, J.W.E. (1974)- The 'rediscovery' of rudist with its associated fauna in the Bau Limestone and its palaeobiogeographic significance in circumglobal correlation and plate tectonic studies. Malaysia Geol. Survey, Borneo Region, Annual Report for 1973, p. 188-197.
(Description of macrofauna of Late Jurassic- Early Cretaceous Bau Limestone at Paku Mine E of Bau, W Sarawak. Mainly primitive diceratid rudists, incl. Heterodiceras aff. luci (= Epidiceras speciosum of Skelton 1985?; JTvG) and diverse gastropods with Discotectus, Pileolus, etc., and rare corals (Cladophyllia, Stylina, Actinastraea))

Lau, J.W.E. (1977)- Stratigraphic correlation of Tertiary basins in offshore Malaysia, South China Sea. ASCOPE, p. 1-30.

Lee, C.P. (2003)- The Madai-Baturong Limestone in eastern Sabah and its new interpretation as a seamount. Bull. Geol. Soc. Malaysia 46, p. 161-165.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003027.pdf)
(Isolated shallow marine limestone bodies up to 300m-600m thick and 2.5-3.5 km wide, surrounded by deepwater deposits of Rajang/ ‘Chert-Spilite’ formation probably Cretaceous seamount deposits. Algae, Hensonella and small simple Dictyoconus suggest Early Cretaceous age. Jasin (1991) suggested Madai-

Baturong Limestone was deposited on horst while Valanginian-Barremian chert of Chert-spilite Fm was deposited in surrounding deep waters)

Lee, D.T.C. (1968)- The Sandakan Formation, East Sabah. Bull. Geol. Survey Malaysia, Borneo Region, 9, p. 43-50.

Lee, D.C. (1970)- Sandakan Peninsula, Eastern Sabah, East Malaysia, explanation of sheet 6/117/16, 6/118/13, 5/117/4 and 5/118/1. Geol. Survey East Malaysia, Rept. 6, 75p.

Lee, D.T.C. (1990)- Formation of Pulau Batu Hairan and other islands around Pulau Banggi, Northern Sabah. Bull. Geol. Soc. Malaysia 26, p. 71-76.
(online at: www.gsm.org.my/products/702001-101094-PDF.pdf)
(New island emerged from sea E of Pulau Banggi, N Sabah in 1988. Grey muds and red mudstones with blocks up to several m diameter of sandstone (from Crocker Fm?), chert, and rare ultrabasic rocks (from Chert-spilite formation). With prominent 10m long radial tensional fractures. Formed by diapyric action, but no gas or mud cones. >40 other small island E and SE of Pulau Banggi probably similar origin)

Lee, D.T.C. & H.S. Weber (1986)- Base metal exploration in Sabah. In: G.H. Teh & S. Paramananthan (eds.) Proc. GEOSEA V Conf., Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 405-419.
(Base metal explation program since 1980 initially focused on anomalies associated with Late Tertiary volcanics and copper-zinc anomalies related to pillow-lava stage of C Sabah ophiolite assemblages. Follow-up work lead to discovery of Cyprus-type massive sulphide occurrences related to volcanics of Chert-Spilite Formation in Bidu-Bidu hills, NE Sabah)

Legrand, X., S. Sherkati & M.L. Lee (2015)- Evolution of deformation-sedimentation interaction in NW Offshore Sabah: implication for hydrocarbon exploration. Asia Petrol. Geosc. Conf. Exhib. (APGCE 2015), Kuala Lumpur, 4p. *(Extended Abstract)*
(Offshore Sabah subjected to tectonic and gravity deformation since E Tertiary. E Miocene event led to crustal overthickening and uplift of former deep marine thick shale (Setap Fm) to shallow water environment. Relief prepared initial conditionsfor delta-related sequence in M Miocene time. Differential loading triggered mobile shale, forming mini-basins and shale ridges. Late Miocene more shale-prone prograding system. Gravity faults with rollovers and associated outboard, Late Miocene- Pliocene toe-thrusts, linked along shallow detachment. Further offshore imbricate thrust system rooted in deeper detachment)

Leong, K.M. (1972)- The occurrences of *Orbitolina*-bearing limestone in Sabah, Malaysia. In: N.S. Haile (ed.) Regional Conference on the Geology of Southeast Asia, Kuala Lumpur, Abstracts of papers, Geol. Soc. Malaysia, p. 38. *(Abstract only)*
(Hutchison (2005), p. 226-229: Brecciated, probably Aptian-Albian age limestone with Orbitolina lenticularis and Hedbergella in Segama Highlands. Possibly related to Madai-Baturong Lst and part of Eastern Rajang Group, which has been interpreted as seamount deposit in oceanic environment)

Leong, K.M. (1974)- The geology and mineral resources of the Upper Segama Valley and Darvel Bay area, Sabah, Malaysia. Geol. Survey. Malaysia, Kuching, Memoir 4, p. 1-354.
(Revision of Fitch (1955) monograph on same area of SE part of Sabah. Includes 210 Ma age for granite (dismissed by Hutchison (1988), but validated by Graves et al. 2000?))

Leong, K.M. (1975)- New ages from radiolarian cherts of the Chert-Spilite Formation, Sabah. Warta Geologi 1, 5, p. 96-98.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1975005.pdf)
(First Lower Cretaceous (Valanginian- Barremian) age date obtained from sample J7250 of radiolarian chert of Chert-Spilite Fm by W. Riedel, based on Staurosphaera septemporata, Sphaerostylus *lanceola and probably Dictyomitra boesii, etc. Previously believed to be mainly Upper Cretaceous age. Same as Leong (1977))*

Leong, K.M. (1976)- Miocene chaotic deposits in eastern Sabah: characteristics, origin, and petroleum prospects. Malaysia Geol. Survey, Borneo Region, Annual Report 1975, p. 238.

Leong, K.M. (1977)- New ages from radiolarian cherts of the Chert-Spilite Formation of Sabah. Bull. Geol. Soc. Malaysia 8, p. 109-111.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977007.pdf)
(Lower Cretaceous age for radiolarians from cherts, Sabah, identified by W. Riedel. Valanginian- Barremian species Staurosphaera septemporata, Sphaerostylus lanceolata, etc., in one sample suggest Chert-spilite Fm (= cover of Sabah obducted oceanic crust) older than previously assumed by Geological Survey reports. Other samples with U Cretaceous radiolaria. Same paper as Leong (1975))

Leong, K.M. (1978)- óThe Sabah Blueschist Beltô- a preliminary note. Warta Geologi 4, 2, p. 45-51.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1978002.pdf)
(Proposed 'Sabah blueschist belt' is partly shear zone and partly sedimentary melange. Belt, with blocks of serpentinite, glaucophane schist, amphibolite, etc. in Miocene Ayar Fm, extends across C Sabah, trending NW from Dent Peninsula. Probably related to S-dipping subduction zone related to SW movement of Sulu Sea plate during Miocene)

Leong, K.M. (1998)- Sabah crystalline basement; óspuriousô radiometric ages? Continental? Warta Geologi 24, 1, p. 5-8.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1998001.pdf)
(Sabah Upper Segama area with metamorphic (amphibolite) and igneous rocks (granite, granodiorite, diorite, tonalite), some with Jurassic radiometric ages of 150, 160 and 200 Ma. Suggesting possible pre-Cretaceous igneous-metamorphic continental crustal material below Cretaceous 'new oceanic basement' known as Chert-Spilite Formation. Age and composition of Crystalline Basement debated)

Leong K.M. (1999)- Geological setting of Sabah. In: The petroleum geology and resources of Malaysia, Petronas, Kuala Lumpur, Chapter 21, p. 473-497.
(Review of Sabah geology, mainly based on Tongkul (1991). Paleogene and Neogene basins. Common mud volcanoes in E Sabah)

Leong, K.M. (2009)- A discussion on the paper- óAge and MORB geochemistry of the Sabah ophiolite basement by Graves et al. (2000)ô. Warta Geologi 35, 1, p. 11-13.
(online at: www.gsm.org.my/products/702001-100403-PDF.pdf)
(Jurassic radiometric ages in Graves et al. (2000) vindicate oldest K-Ar radiometric age (210±3 Ma) from Sabah determined by Leong (1974) from granitoid in Kawag Gibong river, but never accepted by Hutchison (1988, 1989). (NB: 210 Ma= Late Triassic JTvG))

Leong, K.M. (2016)- Discussion on omission of Sabah Pre-Cretaceous geology and geochronology data in Tate (2002), Balaguru et al. (2003), Lee et al. (2004) and Wan Nursaiedah Wan Ismail et al. (2014). Warta Geologi 42, 1-2, p. 10-11.
(online at: https://gsmpubl.files.wordpress.com/2016/08/warta42_1_2.pdf)
(Oldest fossiliferous rocks of Sabah are E Cretaceous limestone and chert, but older metamorphic rocks and granite and tonalite (minimum age E Jurassic or Triassic) also present)

Leong, K.M. (2017)- Review of 50-years (1966-2016) debate on age of Sabah crystalline basement granitic rocks: are the granitic rocks in Upper Segama Sabah fragments of supercontinent Pangaea? Proc. 30th Nat. Geosc. Conf. Exhib. (NGC 2017), Kuala Lumpur, DRG29-116, Warta Geologi 43, 3, p. 223-224. *(Extended Abstract)*
(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_032.pdf)
(Sabah granites often viewed in literature as Cretaceous in age and related to ophiolites, but radiometric ages of 210 and 185 Ma suggest it predates ophiolites and more likely represents Pre-Cretaceous continental basement that originated from continental margin of E Asia during creation of Proto-South China Sea Basin)

Leong, K.M. & A. Anuar (1999)- Northeast Sabah Basin. In: Petronas (1999) The petroleum geology and resources of Malaysia, Kuala Lumpur, p. 543-569.

Leong, K.M. & A. Anuar (1999)- Southeast Sabah Basin. In: Petronas (1999) The petroleum geology and resources of Malaysia, Kuala Lumpur, p. 573-589.

Levell, B.K. (1987)- The nature and significance of regional unconformities in the hydrocarbon-bearing Neogene sequences offshore West Sabah. Bull. Geol. Soc. Malaysia 21, p. 55-90.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1987004.pdf)
(W Sabah Tertiary trench-associated basin with up to 12 km of mainly siliciclastic sediments. Two phases: (1) pre-M Miocene deep marine, imbricated sediments related to S/ SE ward subduction; (2) M Miocene and later NW-prograding shelf-slope sequences, after cessation of subduction. Boundary is 'Deep Regional Unconformity', marking end of subduction in early M Miocene. Additional unconformities in younger sequence. NW Sabah underlain by six separate basement blocks)

Levell, B.K. & A. Kasumajaya (1985)- Slumping in the Late Miocene shelf-edge offshore west Sabah: a view of a turbidite basin margin. Bull. Geol. Soc. Malaysia 18, p. 1-29.
(online at: www.gsm.org.my/products/702001-101146-PDF.pdf)
(Series of elongate spoon-shaped unconformities mapped along 150km of 250km long Late Miocene shelf edge offshore W Sabah. Interpreted as slump scars, formed by retrogressive submarine slumping. Relief between neighbouring slump scars, overlain by slope clays, may provide stratigraphic trap potential. Slump scar-rich unconformities point to redeposited, sand-prone turbidites downslope)

Liechti, P., F.W. Roe & N.S. Haile (1960)- The geology of Sarawak, Brunei and the western part of North Borneo. British Territories of Borneo, Geological Survey Dept., Bull. 3, p. 1-360.
(Comprehensive 1960 compilation of North Borneo geology by Shell geologists. With chapter on igneous rocks by Kirk. Region composed mainly of Upper Cretaceous- Miocene geosynclinal formations and Upper Eocene-Pleistocene strata deposited in isolated basins. Igneous activity in Late Paleozoic-Early Mesozoic and Upper Cretaceous-Quaternary. Three pre-Tertiary and four Tertiary phases of folding)

Liechti, P. (1967)- Uber synsedimentare Tektonik und ihre olgeologische Bedeutung. Freiberger Forschungshefte, ser. C, 229, p. 31-63.
('On syn-sedimentary tectonics and their significance for oil geology'. With examples of melange deposits of North Borneo)

Light, M.P.R. D.J. Bird, G.A. Posehn & M.A.A Hudi (1994)- Complex transtensional structures and the hydrocarbon potential of the Greater Sarawak Basin as defined by Synthetic Aperture Radar. Bull. Geol. Soc. Malaysia 36, p. 145-156.
(online at: www.gsm.org.my/products/702001-100969-PDF.pdf)
(SAR and other data over onshore Greater Sarawak Basin reveal complex tectonostratigraphic history. West Sarawak Basin and NE Borneo underwent complex transtensional deformation in Tertiary related to strike-slip motion caused by indentation of India against Asia. Sinistral strike-slip zones well developed as Sabah Shear, W Baram-Tinjar Lines and Lupar Line-Paternoster Fault. Onshore extension of seismically defined transverse faults in S China Sea likely controlled migration and accumulation of hydrocarbons in Sarawak. Borneo under compression in M Miocene. Fold interference produced by Cenozoic strike-slip faults and N-advance of Rajang Accretionary Prism well displayed on SAR)

Lim, P.S. (1980)- The evaluation, assessment and calculation of ore reserves of the Mamut Mine- a case history. Geol. Survey Malaysia, Geological Papers 3, p. 114-125.
(Mamut mine at SE slopes of Mt Kinabalu is the only porphyry copper mine in Sabah)

Lim, P.S. & Y.E. Heng (1985)- Geological map of Sabah, 1: 500,000, 3rd Ed.. Geological Survey of Malaysia.

Lim, P.S. & S. Tunggah (1989)- Geology and coal potential of the northeastern Meliau Basin, Sabah. Proc. 20th Geological Conf. 1989, Techn. Papers 1, Geol. Survey Malaysia, p.

Lim, W.Y., L.C. Peng & N.T. Abdullah (2012)- Sediment and fauna of the Arip Limestone of the Tatau Formation, Sarawak, Malaysia. Geol. Soc. Malaysia, Nat. Geoscience Conf., Kuching 2012, Paper P1-10, p. 105. *(Abstract only)*
(Occurrence of M-U Eocene Arip limestone of Tatua Fm in SW Tatau area. With Nummulites, Discocyclina, Pellatispira and planktonic foraminifera)

Lindsay, R.O. & R.K. Foster (2002)- Correcting a false assumption-offshore Brunei. The Leading Edge 21, p. 536.
(Classic AVO/ inversion seismic-analysis procedures failed in deepwater offshore Brunei. No geology)

Lu Hongbo & R.C. Shipp (2011)- Impact of a large mass-transport deposit on a field development in the upper slope of southwestern Sabah, Malaysia, offshore northwest Borneo. In: R.C. Shipp et al. (eds.) Mass-transport deposits in deepwater settings, Soc. Sedimentary Geol. (SEPM) Spec. Publ. 96, p. 199-220.
(Description of large submarine mass failures on upper continental slope. One of features fan-like outline in plan view, up to 10 km wide, up to 40 km dip extent and thickness up to176 m)

Lubis, L.A., S. Bashah & D.P. Ghosh (2015)- Comparison of different rock physics models to evaluate the impact of pore types on velocity-porosity relationship in carbonates of Central Luconia Sarawak. In: M. Awang et al. (eds.) Third Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2014), Kuala Lumpur 2014, Springer Verlag, p. 387-393.

Lukie, T. & A. Balaguru (2012)- Sequence stratigraphic, sedimentologic and petrographic insights of the Miocene (Stage IVA) outcrops of the Klias Peninsula and Labuan Island, Sabah, Malaysia, Borneo. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 10468, 37p. *(Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/10468lukie/ndx_lukie.pdf)
(Outcrop study of fluvial and deltaic sediments in Sabah))

Lunt, P. (2014)- A review of the foraminiferal biostratigraphy of the Melinau Limestone, Sarawak. Berita Sedimentologi 29, p. 41-50.
(online at: www.iagi.or.id/fosi/files/2014/04/BS29-Biostratigraphy_SEAsia_S.pdf)
(Study of Melinau limestone, Sarawak shows age range from late M Eocene (Letter Stage Ta) to E Miocene (Te5, ~20.3 Ma). Strontium dating and biostratigraphy shows significant change in sedimentary rates or preserved thickness during mid-Oligocene (latest Tc or intra-Td times). Termination of Melinau limestone with initial event near Oligocene-Miocene boundary (Te4-Te5 boundary) and youngest limestones dated as Te5)

Lunt, P. (2019)- A new view of integrating stratigraphic and tectonic analysis in South China Sea and north Borneo basins. J. Asian Earth Sci. 177, p. 220-239. \
(S China Sea and N Borneo region traditionally divided into provinces, each with distinct stratigraphy. Oligo-Miocene transition questions viability of commonly cited slab-pull tectonic model)

Lunt, P. & J.H.M. Jais (2015)- Correlating Borneo outcrop to offshore geology; a regional perspective. AAPG Geoscience Techn. Workshop, Tectonic evolution and sedimentation of South China Sea region, Kota Kinabalu, Sabah, Malaysia, AAPG Search and Discovery Art. 90236, 3p.
(online at: www.searchanddiscovery.com/abstracts/pdf/2015/90236apr/abstracts/ndx_lunt.pdf)
(Extended Abstract; no figures. Many mismatches in stratigraphic correlations between E Natuna, Sarawak, Kalimantan, Sabah and Palawan. Three main unconformities: (1) M Miocene Unconformity (MMU) peaks in NN4 (= late E Miocene); (2) Top Crocker (TCU) at ~Oligo-Miocene boundary; (3) Deep Regional Unc. (DRU) compressional event in W Sabah and Palawan starting in latest E Miocene and ending in mid M Miocene, leaving angular contact once sedimentation renewed (tied to end of subduction off E Sabah, terminating activity of Sulu volcanic arc). Old plate tectonic model of NW-ward subduction with trench on E side of Sabah (e.g.

Rangin 1989) preferred over current model of S-ward subduction of Mesozoic oceanic crust under Sabah and Sulu Sea)

Lunt, P. & M. Madon (2017)- A review of the Sarawak cycles: history and modern application. Bull. Geol. Soc. Malaysia 63 (Geol. Soc. Malaysia 50th Anniversary Issue 1), p. 77-101.
(online at: www.gsm.org.my/products/702001-101707-PDF.pdf)
(Major review of Late Eocene-Pleistocene depositional cycles I-VIII, used by Shell since 1960's for Sarawak/ Brunei Tertiary. Cycles originally defined by initial transgression changing to regression, and probably reflect interplays between tectonic and eustatic events. Initial (unpublished) definitions updated through time, but most biostrat support data unpublished. Cycles I-III, seem to be linked to regional extension and subsidence. Cycle I-II boundary close to Oligocene- Miocene boundary, coinciding with Top Crocker Unconformity in Sabah and onset of seafloor spreading in W South China Sea. Base Cycle IV transgression at ~15.5 Ma called 'break-up unconformity' by Hutchison (2004), based on strongly rifted topography called 'M Miocene Unconformity' (MMU); followed by accelerated sediment supply. Base Cycle V at ~12-13 Ma. Etc.)

Lunt, P. & M. Madon (2017)- Onshore to offshore correlation of northern Borneo; a regional perspective. Bull. Geol. Soc. Malaysia 64 (Geol. Soc. Malaysia 50th Anniversary Issue 2), p. 101-122.
(online at: www.gsm.org.my/products/702001-101714-PDF.pdf)
(Review of Oligocene - Pleistocene stratigraphy of N Borneo, with emphasis on dating regional unconformities: Top Crocker Unconformity (TCU; Oligo-Miocene boundary, ~23 Ma); Deep Regional Unconformity (DRU, late M Miocene, ~12 Ma; 'Sabah Orogeny' (around E-M Miocene boundary, with uplift in C Borneo and accelerated progradation of deltic deposits to N))

Macpherson, C.G., K.K. Chiang, R. Hall, G.M. Nowell, P.R. Castillo & M.F. Thirlwall (2010)- Plio-Pleistocene intra-plate magmatism from the southern Sulu Arc, Semporna Peninsula, Sabah, Borneo: implications for high-Nb basalt in subduction zones. J. Volcanology Geothermal Res. 190, 1-2, p. 25-38.
(Chemistry of Plio-Pleistocene high-Nb basalts/ basaltic andesites from Semporna Peninsula at S end of Sulu Arc. Semporna basalts not associated with adakitic magmatism, which is frequent in some subduction zones)

Madden, R.H.C., M.E.J. Wilson, M. Mihaljevic, J.M. Pandolfi & K. Welsh (2017)- Unravelling the depositional origins and diagenetic alteration of carbonate breccias. Sedimentary Geology 357, p. 33-52.
(Batu Gading Limestone isolated outcrops along Baram River, ~80 km SE of Miri, Sarawak, and part of Melinau Limestone Fm. Unconformably overlies Cretaceous turbiditic Kelalan Fm. Basal transgressive sequence 40m thick with Late Eocene larger foraminifera Pellatispira, Discocyclina and Nummulites (probably deepening-upward series), overlain by 10m thick limestone breccia with mixed clasts of Late Eocene and Late Oligocene age (Te1-4; with Heterostegina borneensis and Miogypsinoides), overlain by deep marine Miocene beds. Breccia formation probably in submarine slope setting)

Madon, M. (1994)- The stratigraphy of northern Labuan, NW Sabah Basin, East Malaysia. In: G.H. Teh (ed.) Petroleum Geology Conf. VIII, Bull. Geol. Soc. Malaysia 36, p. 19-30.
(online at: www.gsm.org.my/products/702001-100979-PDF.pdf)
(Labuan Island Neogene basin with >12 km of sediments. 'Basement' of basin Paleocene-Eocene Rajang Gp foldbelt, consisting of highly deformed deepwater deposits (accretionary wedge s formed during Late Eocene-M Miocene subduction under Sabah), underlain by ?Jurassic-Lower Cretaceous complex of ultramafic intrusive rocks, radiolarian chert, and spilite. M Miocene regional uplift at end of subduction caused erosion of Rajang foldbelt and regional DRU unconformity. On Labuan deformed argillaceous strata under Belait conglomerate ridge near Layang-Layangan typical of Temburong Fm, suggesting Setap Shale Fm is absent)

Madon, M. (1997)- Sedimentological aspects of the Temburong and Belait formations, Labuan (offshore west Sabah). In: G.H. Teh (ed.) Petroleum Geology Conference '96, Kuala Lumpur, Bull. Geol. Soc. Malaysia 41, p. 61-84.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997025.pdf)
(E-M Miocene Temburong Fm (= lower Setap Shale)- Belait Fm of Labuan Island off W Sabah overall shallowing-upward sequence from relatively deep water and unstable slopes to shallow nearshore facies)

Madon, M. (1999)- North Luconia Province. In: The petroleum geology and resources of Malaysia, Chapter 19, Petronas, Kuala Lumpur, p. 443-454.
(Review of deepwater offshore N Sarawak N Luconia province. Hydrocarbon exploraton unsuccessful so far)

Madon, M.B. (1999)- Geological setting of Sarawak. In: The petroleum geology and resources of Malaysia, Petronas, Kuala Lumpur, Chapter 12, p. 275-290.
(Review of Sarawak geology. Petroleum produced mainly from Neogene of offshore Sarawak basin. Kuching zone in W-most Sarawak is part of W Borneo/ Sundaland continental basement core, which extends S into Kalimantan, with oldest rocks pre-U Carboniferous Kerait Fm metamorphics, U Carboniferous- Triassic limestones with Late Triassic intermediate volcanics, overlain by Jurassic-Cretaceous siliciclastics, etc.. Sibu zone intensely deformed Late Cretaceous-Eocene turbidites of Rajang accretionary prism, equivalent of Selangkai Fm in Kalimantan. Miri zone less deformed U Eocene- Recent sediments. Sarawak Basin originated as Oligocene- E Miocene foreland basin after collision of Luconia Block with W Borneo Basement)

Madon, M. & P. Abolins (1999)- Balingian Province. In: The petroleum geology and resources of Malaysia, Chapter 14, Petronas, Kuala Lumpur, p. 345-367.
(Review of offshore Sarawak hydrocarbon province, with 4 main fields (Temana, Bayan, D18, D35) in Late Oligocene- E Miocene deltaic clastics)

Madon, M., Cheng L.Kim & R. Wong (2013)- The structure and stratigraphy of deepwater Sarawak, Malaysia: Implications for tectonic evolution. J. Asian Earth Sci. 76, p. 312-333.
(History of N Luconia Province, Sarawak deepwater area, related to tectonic history of S China Sea. Sarawak Basin initiated as foreland basin as result of collision of Luconia block with Sarawak (Sarawak Orogeny), with deep foreland basin ('flysch') phase in Late Eocene-Oligocene, followed by 'molasse' phase of shallow marine shelf progradation to present day. E Miocene Unconformity caused by relative uplift and submarine erosion between ~19-17 Ma, with 500-2600m of missing section, equivalent to 8-10 My time gap. EMU extends over entire NW Borneo margin and related to Sabah Orogeny which marks cessation of sea-floor spreading in S China Sea and collision of Dangerous Grounds block with Sabah. Sarawak basin part of remnant ocean basin that closed by oblique collision along NW Borneo margin. Closure started in Late Eocene in Sarawak and moved progressively NE into Sabah until M Miocene)

Madon, M. & A. Hadi Abd Rahman (2007)- Penecontemporaneous deformation in the Nyalau Formation (Oligo-Miocene), Central Sarawak. Bull. Geol. Soc. Malaysia 53, p. 67-73.
(online at: www.gsm.org.my/products/702001-100502-PDF.pdf)
(Outcrops of Late Oligocene- E Miocene Nyalau Fm in Tg. Similajau and Bintulu areas show common penecontemporaneous deformation (thrusts/ folds, slumps, etc.), indicating tectonic controls on sedimentation in Sarawak foreland basin)

Madon, M. & R.B.A. Hassan (1999)- Tatau Province. In: The petroleum geology and resources of Malaysia, Chapter 17, Petronas, Kuala Lumpur, p. 413-426.
(Review of offshore Sarawak Tatau hydrocarbon province, with gas-oil fields in non-marine U Oligocene- Lw Miocene clastics and M-U Miocene carbonates. Characterized by NNW trending E Miocene normal faults)

Madon, M. & R.B.A. Hassan (1999)- West Luconia Province. In: The petroleum geology and resources of Malaysia, Chapter 18, Petronas, Kuala Lumpur, p. 428-439.
(W Luconia Province in W part of Sarawak continental shelf. Major Oligocene- Miocene West Luconia Delta system developed between C Luconia carbonate platform in E and Natuna Platform in W. Underexplored area, with hydrocarbon shows in U Miocene)

Madon, M., K.M. Leong & Azlina Anuar (1999)- Sabah Basin. In: The petroleum geology and resources of Malaysia, Chapter 22, Petronas, Kuala Lumpur, p. 501-542.
(NW Sabah Basin mainly offshore with >12km of early M Miocene and younger sedimentary basin, formed after uplift and exhumation of underlying Oligocene- E Miocene and older unmetamorphosed turbidites of

'Crocker fold-thrust belt', with upper and lower Rajang units separated by major Late Eocene unconformity. Pre-and post lower M Miocene sediments separated by 'Deep Regional Unconformity'. Basin includes Baram Delta complex, which extends west into Sarawak and Brunei. Several oil-gas fields, incl. Tembungo, Barton, Erb South, Ketam, etc.)

Madon, M., J. Norazlina, A. Ayub, K.S.M. Nor, S.M. Najmi, I.A. Zamzamie & A. Yusof (2015)- Structural evolution of the NW Sabah deepwater fold and thrust belts and its implication for hydrocarbon prospectivity. Asia Petrol. Geosc. Conf. Exhib. (APGCE), Kuala Lumpur, p. 317-321. *(Extended Abstract)*
(NW Sabah deepwater fold-thrust belt may be viewed as deformed sedimentary fill of Sabah Trough foreland basin. Deformation along margin appears diachronous, increasing N-wards. Mainly forward/seaward-breaking thrusts, while landward-verging backthrusts in N resulted in complex interference fold-thrust structures)

Mahmud, O.A.B. (1999)- Petroleum resources, Sarawak. In: The petroleum geology and resources of Malaysia, Petronas, Kuala Lumpur, p. 457-472.

Mahmud, O.A., H.D. Tjia & M.I. Ismail (2001)- Interpretation of newly acquired aerogravity data enhances the prospectivity of the Tinjar Province, onshore Sarawak. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia, Annual Geol. Conf. 2001, Pangkor, p. 19-26.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_04.pdf)
(No commercial discoveries in onshore Sarawak since 1910 Miri field. Tinjar Province of onshore N-C Sarawak underexplored, due to assumption of shallow basement after Oligo-Miocene uplift and erosion. Shallow basement not supported by seismic or gravity-magnetic data. New aerogravity and magnetic data showed up to 5000m sediment in Tinjar Province and surrounding area, with series of highs and lows)

Majid, M.F.A., M.S. Ismail, A.H.A. Rahman & M.A. Mohamed (2017)- Facies distribution and petrophysical properties of shoreface- offshore transition environment in Sandakan Formation, NE Sabah Basin. In: Proc. 5th Int. AeroEarth Conf., Kuta 2017, IOP Conf. Series, Earth Environm. Science 88, 012023, p. 1-8.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/88/1/012023/pdf)
(Outcrop study in Sandakan, NE Sabah, of Miocene shallow marine sandstone of Sandakan Fm. Shoreface to offshore transitional environments, with common Hummocky Cross Stratified sandstone)

Mansor, H.E., J.Asis & Meor H.A. Hassan (2017)- Oligocene-Miocene large benthic foraminifera from the Tajau Sandstone Member, Kudat Formation, Sabah. Proc. 30th Nat. Geosc. Conf. Exhib. (NGC 2017), Kuala Lumpur, DRG29-112, Warta Geologi 43, 3, p. 220-221. *(Extended Abstract)*
(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_032.pdf)
(Tajau Sst Member of Kudat Peninsula, Sabah, gently folded thick pebbly coarse sandstones with Late Oligocene (Te1-4) larger foram assemblage (Heterostegina borneensis, Eulepidina, etc.))

Mansor, M.Y., J.W. Snedden, J.F. Sarg, B.S. Smith, T. Kolich & M. Carter (1999)- Pre-drill predictions versus post-drill results: use of sequence stratigraphic methods in reduction of exploration risk, Sarawak deep-water blocks, Malaysia. J. Asian Earth Sci. 17, 1-2, p. 247-254.
(Sequence stratigraphic methods used to assess reservoir, source and seal distribution in Mobil-operated deep-water blocks of Sarawak. Wells Mulu-1 and Bako-1 penetrated high-quality shallow marine sandstone reservoirs in E-M Miocene. Lack of hydrocarbon charge may be due to position relative to coaly source. Wit small paleogeographic maps of E Miocene)

Mantaring, A., F. Matsuda & M. Okamoto (1995)- Analysis of overpressure zones at the southern margin of the Baram Delta Province and their implications to hydrocarbon expulsion, migration and entrapment. In: G.H. Teh (ed.) Proc.AAPG-GSM Int. Conf. Southeast Asian basins; oil and gas for the 21st century, Kuala Lumpur 1994, Bull. Geol. Soc. Malaysia 37, p. 179-190.
(online at: www.gsm.org.my/products/702001-100953-PDF.pdf)
(Baram Delta province, on- and offshore N Sarawak, Malaysia, Brunei, with thick, rapidly deposited Late Eocene- Pleistocene marine- deltaic sediments, leading to common overpressure. Overpressure zones normally in thick marine claystones below or at base of major oil and gas accumulation. Onshore Sarawak, S of Baram

Delta Province thick Late Eocene- Miocene uplifted after latest Miocene, with abnormal pressure zones in three different settings)

Mathew, M.J. (2016)- Geomorphology and morphotectonic analysis of North Borneo. Doct. Thesis, Universite de Bretagne Loire, p. 1-140.
(online at: www.theses.fr/2016LORIS408.pdf)
(Collection of papers on geomorphology and morphotectonic analysis of Rajang and Baram drainage basins of Sarawak. Characterized by high denudation rates since Miocene. At end of Miocene rapid uplift of possibly whole Interior Highlands and coastal areas of Sarawak. Enhanced post 5 Ma erosion rates led to rapid progradation of deltas and Plio-Quaternary sediments that reach thicknesses of >6 km)

Mathew, M.J., D. Menier, A.H. Abdul Rahman, N.A. Siddiqui, M. Pubellier & M. Hassaan (2014)- Tertiary Sarawak Basin origin: a small step in demystifying the ambiguity. AAPG Int. Conf. & Exhib., Istanbul 2014, Search and Discovery Art. 10642, 9p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2014/10642mathew/ndx_mathew.pdf)
(Oligocene- Recent tectonic subsidence plots from 7 offshore wells show rapid initial subsidence and gradual decrease in subsidence rate with time, indicative of rift origin following McKenzie model)

Mathew, M.J., D. Menier, N.A. Siddiqui, S.G. Kumar & C. Authemayou (2016)- Active tectonic deformation along rejuvenated faults in tropical Borneo: inferences obtained from tectono-geomorphic evaluation. Geomorphology 267, p. 1-15.

Mathew, M.J., D. Menier, N.A. Siddiqui, M. Ramkumar, M. Santosh, S. Kumar & M. Hassaan (2016)- Drainage basin and topographic analysis of a tropical landscape: insights into surface and tectonic processes in northern Borneo. J. Asian Earth Sci. 124, p. 14-27.
(Geomorphic analysis of Rajang and Baram drainage basins, N Borneo. Landscape of N Borneo experienced rapid uplift after 5 Ma and undergoing active folding of Rajang Group thrust belts today)

Mat Zin, Ismail C. (1992)- Regional seismostratigraphic study of the Tembungo area, offshore West Sabah. Bull. Bull. Geol. Soc. Malaysia 32, p. 109-134.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992018.pdf)
(Seismic stratigraphic study of Late Miocene hydrocarbon-bearing Stage IVD turbidite sequence around Tembungo field, offshore W Sabah. Turbidite sequence, characterised by oblique seismic reflection pattern, deposited in sedimentary bypass system tract as result of wrench-related uplift of Bunbury-St. Joseph area)

Mat Zin, Ismail C. (1994)- Dent Group and its equivalent in the offshore Kinabatangan area, East Sabah. In: G.H. Teh (ed.) Petroleum Geology Conf. VIII, Bull. Geol. Soc. Malaysia 36, p. 127-143.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994028.pd)
(Dent Peninsula in E Sabah with thick Miocene deltaics (Dent Group), unconformably overlying Oligocene - E Miocene (and older?) Segama Gp conglomeratic rocks with ultrabasic, etc. boulders. Onshore Dent Peninsula Togopi Fm mainly marls, Ganduman Fm delta plain deposits grading to shallow marine deltaic and marine eastward, argillaceous Sabahat Fm marine deposit) Three major uplifts of regional significance occurred in E Miocene (deformation of Segama Gp), Late Miocene and Late Pliocene times)

Mat Zin, Ismail C. (1996)- Tertiary tectonics and sedimentation history of the Sarawak basin, East Malaysia. Ph.D. Thesis Durham University, p. 1-277.
(online at: http://etheses.dur.ac.uk/5198/1/5198_2651.PDF)
(Seismic stratigraphic study of offshore Sarawak Basin. Seven regional unconformities in Tertiary sedimentary succession of Sarawak Basin, some related to eustatic sea-level falls; others probably tectonic in origin. Sarawak Basin best explained as result of NW-SE trending right lateral fault movement in Oligocene- Pliocene. Rapid subsidence in early stage of basin formation. Tectonism in region combination of strike-slip movements and counter-clockwise rotation of Borneo in Oligo-Miocene. Five major dextral strike-slip lineaments: Igan-Oya Line, Mukah Line, W Balingian Line, Tinjar Line and W Baram Line)

Mat Zin, Ismail C. (1997)- Tectonics evolution and sedimentation history of the Sarawak Basin. In: G.H. Teh (ed.) Petroleum Geology Conference '96, Kuala Lumpur, Bull. Geol. Soc. Malaysia 41, p. 41-52.
(online at: www.gsm.org.my/products/702001-100871-PDF.pdf)
(Seismic stratigraphy of offshore Sarawak Basin shows 7 unconformities in Tertiary section. Development of basin started in late Oligocene, with deposition along coastline in NW-SE direction (along ~W Balingian Line; parallel to major structural lineaments) and became oriented to present day NE-SW direction in Late Miocene. Basin formed as result of NW-SE trending right-lateral fault movement in Late Oligocene-Miocene. Deposition and preservation of coastal plain and shallow marine sediments continued in E, while W area remained as high until Late Miocene)

Mat Zin, Ismail C. (1997)- Subsidence history of Sarawak Basin. In: Proc. ASCOPE 97 Conf. Challenges and opportunities in the 21st century, 1, p. 107-127.

Mat Zin, Ismail C. (1998)- Subsidence nature of a strike-slip related basin: an example learned from the Sarawak Basin. In: G.H. Teh (ed.) Petroleum geology conference 1997, Bull. Geol. Soc. Malaysia 42, p. 63-83.
(online at: www.gsm.org.my/products/702001-100855-PDF.pdf)
(Subsidence profile of Sarawak Basin suggests basin formed by strike-slip tectonism, not foreland lithospheric flexure by subduction of S China Sea oceanic crust beneath NW Sarawak. Burial history curves for wells show rapid early subsidence followed by later phase of slower subsidence, indicative of rift-type tectonic origin. These are followed by compressional basin inversion events or continued with thermal subsidence similar to rift basin profile. Stretching factors and heat-flow show consistent with strike-slip tectonics)

Mat Zin, Ismail C. (1999)- Tertiary tectonic model of North-West Borneo. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 417-432.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999042.pdf)
(Sarawak Basin dominated by NE-SW strike-slip tectonism. Onshore Lupar Melange Lupar Melange in SW Sarawak ~20 km wide, composed of blocks in sheared pelitic matrix with Lower Eocene microfauna; chert blocks with E-M Cretaceous radiolaria. Commonly interpreted as subduction melange, but may beformed by strike-slip tectonics. Eight other NW-SE trending strike slip zones identified on- and offshore Sarawak)

Mat Zin, Ismail C. (2000)- Stratigraphic position of the Rangsi Conglomerate in Sarawak. In: G.H. Teh et al. (ed.) Geol. Soc. Malaysia Ann. Conf. 2000, Pulau Pinang, p. 131-136.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_18.pdf)
(Rangsi conglomerate that outcropping in Tatau Horst area in Sarawak long regarded as (Late Eocene) basal unit of Tatau Fm. Seismic stratigraphic suggests Rangsi conglomerate much younger than Tatau Fm, possibly equivalent to Balingian Fm of Late Miocene age. 'Tatau Horst' not extensional horst, but positive flower structure, formed as result of Miocene transpressional strike-slip episode)

Mat Zin, Ismail C. & J. Sipan (1994)- Application of sequence stratigraphic techniques on the non-marine sequences: an example from the Balingian Province, Sarawak. Bull. Geol. Soc. Malaysia 36, p. 105-117.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994026.pdf)
(Sequence stratigraphic interpretation of non-marine lower coastal plain deposits of late Oligocene- E Miocene sediments Cycle I and II in onshore Balingian Province, onshore C Sarawak)

Mat Zin, Ismail C. & R.E. Swarbrick (1997)- The tectonic evolution and associated sedimentation history of Sarawak Basin, eastern Malaysia: a guide for future hydrocarbon exploration. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia. Geol. Soc. Spec. Publ. 126, p. 237-245.
(Seismic-stratigraphy of offshore Sarawak shows seven unconformities in Tertiary sediments, Development of Sarawak Basin started in Late Oligocene with deposition along NW-SE coastline, perpendicular to present-day coastline. Coastline oriented to present-day NE-SW in Late Miocene. Oils generated from land plant dominated source rocks. Basin formed as result of Late Oligocene- Miocene NW-SE trending right-lateral fault movement. Movement progressive younging in E-ward direction)

Mat Zin, Ismail C. & M.E. Tucker (1999)- An alternative stratigraphic scheme for the Sarawak Basin. J. Asian Earth Sci. 17, 1-2, p. 215-232.
(Sequence stratigraphic model of Sarawak basin. Eight major sequences in mid-Oligocene- Pleistocene, separated by seven regional unconformities. Oldest unconformity between basement (Belaga Fm) and overlying Late Oligocene sediments. New sequences named T1S- T7S. Sequences probably tectonically induced, rather than related to global eustatic sea-level falls.)

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(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-28-borneo.html)
(Description of large, Recent Brunei Mega mass transport complex, sourced from Baram Canyon)

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McGilvery, T.A. & D.L. Cook (2004)- Depositional elements of the slope/basin depositional system Offshore Brunei. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), DFE04-OR-019, 13p.
(Modern continental slope deposition off Brunei. 'Stepped slope' resulting from basinward thrusting and deltaic sediment loading. Elongate, structurally controlled mini-basins 2-10 km wide, 20-60 kmlong. Primary elements: 1) Sediment dispersal fairways 2-5 km wide; 2) Distributary channel/lobe complexes of sheet deposits and low relief channels; 3) Mass wasting features; 4) Submarine canyons developed by mass wasting along forelimbs of thrust structures)

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(Seismic profiles and maps description of 500m diameter mud volcano caldera at 1100m water depth offshore Sabah. Mud volcano overlies toe-thrust anticline and has well-defined caldera)

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(Shallow water flow in Mass Transport Deposits in deepwater wells off NW Sabah)

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(Part of Sulu Sea floor (Late Cretaceous-Eocene 'chert-spilite Fm' of Darvel Bay and associated ultrabasic rocks) obducted in Early Miocene(?) onto N margin of Borneo microcontinent. Intensely sheared and imbricated. Resting on partly metamorphosed sediments of Eocene- Oligocene age (Ta- Te1-4))

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986016.pdf)
(Chaotic deposits common in post-Eocene in Sabah and mapped as slump breccias, but probably products of mud volcanism (Garinono, Wariu, Kuamut, Ayer Fms). Mud volcanism linked to M Miocene collisional event)

Menier, D., M. Mathew, M. Pubellier, F. Sapin, B. Delcaillau, N. Siddiqui, M. Ramkumar & M. Santosh (2017)- Landscape response to progressive tectonic and climatic forcing in NW Borneo: implications for geological and geomorphic controls on flood hazard. Nature Scientific Reports 7, 457, p. 1-18.
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(On consequences of uplift and orographic-precipitation on evolution of orogens and landscapes of NW Sabah)

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(Analysis of seismic morphologies of M-L Miocene carbonate platforms of C Luconia Platform off Sarawak (mainly 'Mega-Platform') and satellite images of possible Recent analogues in Tun Sakaran Marine Park, S Sulu Sea, off Sabah)

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(online at: https://umexpert.um.edu.my/file/publication/00004125_92877.pdf)
(Facies analysis of Lower Miocene U Nyalau Fm, exposed around Bintulu, Sarawak. Wave- and tide-dominated coastal system (shoreface, fluvio-tidal channels, bay and mangrove facies associations))

Meor, H.Hassan, H.D. Johnson, P.A. Allison & Wan H. Abdullah (2017)- Sedimentology and stratigraphic architecture of a Miocene retrogradational, tide-dominated delta system: Balingian Province, offshore Sarawak, Malaysia. In: G.J. Hampson et al. (eds.) Sedimentology of paralic reservoirs: recent advances, Geol. Soc., London, Spec. Publ. 444, p. 215-250.
(Balingian Province of NW Borneo with oil production mainly from Early Miocene (cycle II) coastal plain deposits. Four types of vertical facies successions. Cycle II tide-dominated delta system, partly analogous to modern Rajang Delta and Lupar Embayment of S Sarawak. Fluvio-tidal channel and tide-dominated delta successions represent periods of progradation; wave-dominated shoreface and barrier lagoon successions during transgression and/or delta lobe abandonment. Several high-order sequences stacked into two lower-order, ~100-300m thick fining-upwards megasequences)

Metcalfe, I. (1985)- Lower Permian conodonts from the Terbat Formation. Warta Geologi (Geol. Soc. Malaysia), 11, 1, p. 1-4.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1985001.pdf)
(Sparse uppermost Carboniferous- early Lower Permian conodont assemblage from Terbat Lst at Gunung Selabor near Indonesian border SSE of Kuching. First record of conodonts from N Borneo, incl. Anahignathodus and Streptognathodus elongatus. Color Alteration Index of 4 suggests heating to 190-300°C)

Mihaljevic, M., W. Renema, K. Welsh & J.M. Pandolfi (2014)- Eocene- Miocene shallow-water carbonate platforms and increased habitat diversity in Sarawak, Malaysia. Palaios 29, 7, p. 378-391.
(online at: http://marinepalaeoecology.org/wp-content/uploads/2011/09/Mihaljevic-et-al-2014-PALAIOS.pdf)
(Indo-Pacific marine biodiversity hotspot originated between Late Eocene and E Miocene, coinciding with increase in availability of shallow-marine habitats driven by opening of S China Sea and collision of Australia with Pacific arcs and SE Asian margin. Carbonate platform environments in Sarawak (ramp-like late M Eocene- E Miocene Melinau carbonate platform and unattached basal Miocene Subis carbonate platform)

suggest increase in habitat diversity from Eocene to Miocene. Corals first appear in Oligocene, but true reef facies not observed until Miocene)

Mihaljevic, M. & A.J. Rosenblatt (2018)- A new fossil species of *Clypeaster* (Echinoidea) from Malaysian Borneo and an overview of the Central Indo-Pacific echinoid fossil record. Swiss J Palaeontology 137, 2, p. 389-404.
(New E-M Miocene echinoid from Sarawak, Clypeaster sarawakensis. Similar to modern C. rarispinus. Central Indo-Pacific echinoid fossil record shows rapid diversity increase at Oligocene-Miocene boundary)

Mihaljevic, M. (2019)- Oligocene Miocene scleractinians from the Central Indo-Pacific: Malaysian Borneo and the Philippines. Palaeontologia Electronica 22.3.61, p. 1-55.
(online at: https://palaeo-electronica.org/content/pdfs/978.pdf)
(Late Oligocene- E Miocene corals from Sarawak (E Miocene Melinau and Subis Lst), Negros and Cebu (Late Oligocene). 44 morphospecies, 30 genera)

Milroy, W.V. (1953)- Geology of West Sarawak with notes on the palaeontology of west Sarawak by W.E. Crew and comments on the geology of W Sarawak by P. Liechti. Report GR602, Royal Dutch Shell, p. *(Unpublished) (Hashimoto et al. 1975, p. 286: incl. occ. Maastrichtian larger foram Lepidorbitoides cf blanfoldi in Engkilili Fm)*

Milsom, J., R.A. Holt, C.S. Hutchison, S.C. Bergman, D.A. Swauger & J.E. Graves (2001)- Discussion of a Miocene collisional belt in North Borneo: uplift mechanism and isostatic adjustment quantified by thermochronology. J. Geol. Soc. London 158, p. 396-400.
(Milsom & Holt critique of Hutchison et al. (2000) paper 'Miocene collisional belt N Borneo', and reply by Hutchison. Hutchison et al. interpretations of deep structure of Sabah incompatible with Holt (1998) data on gravity field)

Milsom, J., R. Holt, D.B. Ayub & R. Smail (1997)- Gravity anomalies and deep structural controls at the Sabah-Palawan margin, South China Sea. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 417-427.
(SE margin of S China Sea divided into segments with differing gravity patterns by NE-SW lineaments (W Baram-Tinjar Line, Balabac Line). Sabah Trough gravity low is foreland basin on extended continental crust of terrane derived from Eurasian margin (with Palawan), which collided with Sabah margin in E-M Miocene)

Mohamad, M. & J.J. Lobao (1997)- The Lingan Fan: Late Miocene-Early Pliocene turbidite fan complex, North West Sabah. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia & Australia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 787-798.
(Seismic facies study of Late Miocene/Early Pliocene Lingan Fan complex of turbidite fans offshore NW Sabah. Fan system divided into 4 seismic sequences. Turbidite systems first pond into higher, more proximal basins and reach more distal basins by successive fill and spill processes. Four seismic facies identified)

Mohamed, A., A.H. Abd Rahman and M. S. Ismail (2015)- Sedimentary facies of the West Crocker Formation North Kota Kinabalu-Tuaran Area, Sabah, Malaysia. Journal of Physics, Conference Series 660, 012004, IOP Publishing, p. 1-6.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/30/1/012004/pdf)
(Sedimentology study of new outcrops in W Crocker Fm in Sabah suggests deposition in sand-rich submarine fan setting, with inner fan channel-levee complex, mid-fan channelised lobes, and outer fan facies)

Mohamed, Idris & O.C Meng (1992)- Sequence stratigraphy of Tertiary sediments offshore Sarawak (Balingian and Luconia provinces). In: Symposium on the Tectonic framework and energy resources of the western margin of the Pacific Basin. Warta Geologi 18, 6, p. 277-278.

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a26.pdf)
(Sarawak deepwater seismic sequence stratigrapy study identified eight sequences, grouped into four supersequences A, B, C and D, tied to regional tectonic events of S China Sea. Higher order sequences also interpreted from paleontologic, lithologic, paleofacies data and GR-logs from four wells. Four main seismic facies, ranging from non-marine to deepmarine. Seismic facies maps for Oligocene-Lower Miocene Ss C indicate all four facies, overall transgressive stacking, and NW-SE trending paleoshoreline. M Miocene-Recent Ss D suggests mainly outer shelf- deep marine facies and E-W trending paleoshoreline)

Mohammad, Y.b. Ali. & P. Abolins (1999)- Central Luconia Province. In: Petronas (1999) The petroleum geology and resources of Malaysia, p. 371-391.

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(online at: http://londonevolutionarynetwork.files.wordpress.com/2010/02/2008conferencebook.pdf)
(Abstract only. Modern Indo-W Pacific characterised by highest global species diversity in reef corals. Reef-coral fauna collected from Oligocene patch-reef facies in Gomantong Fm of Sabah, Malaysia (late Early to early Late Oligocene) doubled number of coral species previously known from Oligocene of Borneo, and suggests apparent paucity of Paleogene corals from SE Asia could be result of sampling bias. Coral diversification had occurred by Early Oligocene, rather than at Oligocene/Miocene boundary)

McMonagle, L.B., P. Lunt, M.E.J. Wilson, K.G. Johnson, C. Manning & J. Young (2011)- A re-assessment of age dating of fossiliferous limestones in eastern Sabah, Borneo: implications for understanding the origins of the Indo-Pacific marine biodiversity hotspot. Palaeogeogr. Palaeoclim. Palaeoecology 305, p. 28-42.
(Shallow marine limestones rel. rare onshore N Borneo and show punctuated development, in area underlain by oceanic crust and dominated by deep marine sedimentation. Re-dating of limestones in E Sabah: (1) Lower Kinabatangan Lst mid-Oligocene (coral-rich, larger foram zone Te1, nannofossil zone NP24, Sr isotope ages 28.8-27.6 Ma); (2) Gomantong Lst Early Miocene (LBF zone Te5/earliest Tf1, Sr age 21.0 Ma); (3) Togopi Limestone with Alveolinella quoyi and abraded Calcarina (Pliocene-Pleistocene; Sr age 1.72 Ma)

Morgan, A.B. (1974)- Chemistry and mineralogy of garnet pyroxenites from Sabah, Malaysia. Contrib. Mineralogy Petrology 48, p. 301-314.
(Garnet pyroxenites ('eclogites') and corundum-garnet amphibolites from Dent Peninsula of E Sabah occur as exotic blocks in Late Miocene slump breccia deposit of Segama Gp. Bulk composition and mineralogy similar to garnet pyroxenite lenses within ultramafic rocks. Estimated T and P for pyroxenites ~850° C and ~19 kbar (= mantle depth, ~65km?)

Morley, C.K. (2003)- Outcrop examples of mudstone intrusions from the Jerudong anticline, Brunei Darussalam and inferences for hydrocarbon reservoirs. In: P. van Rensbergen et al. (eds.) Subsurface sediment mobilization, Geol. Soc., London, Spec. Publ. 216, p. 381-394.
(Mudstone intrusions in Jerudong area represent natural hydraulic fractures developed above mobile mudstone diapir sourced from M Miocene Setap Fm. Intrusion geometries influenced by pre-existing normal faults)

Morley, C.K. (2007)- Interaction between critical wedge geometry and sediment supply in a deep-water fold belt. Geology 35, 2, p. 139-142.
(On low angle dips of surface and basal detachment faults of Late Miocene–Holocene deep-water fold-and-thrust belt of offshore NW Borneo)

Morley, C.K. (2009)- Geometry of an oblique thrust fault zone in a deepwater fold belt from 3D seismic data. J. Structural Geol. 31, 12, p. 1540-1555.
(Late Pliocene-Recent growth of 12 km long, deepwater anticline at distal margin of Baram Delta Province)

Morley, C.K. (2009)- Growth of folds in a deep-water setting. Geosphere 5, 2, p. 59-89.

(Seismic data of deep-water area off NW Borneo provide picture of interaction between sedimentary processes on continental slope and growth of major folds over time period of ~3.5-5 Ma)

Morley, C.K. & S. Back (2008)- Estimating hinterland exhumation from late orogenic basin volume, NW Borneo. J. Geol. Soc., London, 165, 1, p. 353-366.
(Miocene- recent sediment volumes for Baram Deltaic Province estimated. Volume restoration onto sediment source area determined exhumation of ~5 km from 17 Ma- Recent. Denudation for M Miocene, Late Miocene and Pliocene- Recent proceeded at similar rates. Initial uplift of central Borneo attributed to buoyancy of thinned continental crust that jammed subduction zone under NW Borneo in E Miocene. Absence of decay in erosion rates from M Miocene-Recent suggests additional uplift possibly related to slab detachment)

Morley, C.K., S. Back, P. van Rensbergen, P. Crevello & J.J. Lambiase (2003)- Characteristics of repeated, detached, Miocene-Pliocene tectonic inversion events in a large delta province on an active margin, Brunei Darussalam, Borneo. J. Structural Geol. 25, p. 1147-1169.
(Baram Delta province evolved in M Miocene- present day from foreland basin to shelf margin. Episodic folding events caused uplift of hinterland, delta progradation and inversion of gravity-related faults. Region best understood as development of W-verging thrust belt in M Miocene foreland basin with major folds forming in M Miocene. Onshore thrust and inversion features dominantly N-S-trending and began activity in M Miocene. In Late Miocene (7.5 Ma) NE-SW inversion folds developed. Continuation of deformation into Pliocene largely confined to offshore; onshore N-S structures not reactivated in Pliocene)

Morley C.K. & M. Burhannudinnur (1997)- Anatomy of growth fault zones in poorly lithified sandstones and shales: implications for reservoir studies and seismic interpretation: part 2, Seismic reflection geometries. Petroleum Geoscience 3, 3, p. 225-231.
(Seismic reflection data across growth faults off NW Borneo show many of small-scale fault geometries recognized in outcrop can also be interpreted on seismic data. Some fault zones single fault plane; others up to 1km wide bundles of overlapping fault planes connected by hard and soft linkage geometries)

Morley, C.K., P. Crevello & Z.H. Ahmad (1998)- Shale tectonics and deformation associated with active diapirism: the Jerudong Anticline, Brunei Darussalam. J. Geol. Soc., London, 155, p. 475-490.
(Jerudong anticline of Brunei outcrop example of multiple phases of diapir growth and interaction with country rock. N-S-trending anticline overlies high-angle transpressional basement fault zone. Deformation history: (1) M Miocene E-W to NE-SW-trending growth faulting and shale-diapir growth; (2) Late Miocene- E Pliocene transpression. Continued uplift and erosion elevated overpressured horizons to where hydraulic fracturing reached surface and Holocene-age mud volcanoes developed)

Morley, C.K., R. King, R. Hillis, M. Tingay & G. Backe (2011)- Deepwater fold and thrust belt classification, tectonics, structure and hydrocarbon prospectivity: a review. Earth-Science Reviews 104, p. 41-91.
(Overview of deepwater fold-thrust systems. Includes examples from NW Borneo)

Morley, C.K., M. Tingay, J. Warren, P. Boonyasaknanon & A. Julapour (2014)- Comparison of modern fluid distribution, pressure and flow in sediments associated with anticlines growing in deepwater (Brunei) and continental environments (Iran). Marine Petroleum Geol. 51, p. 210-229.
(On structural development, overpressure generation and fluid type/migration in deep-water offshore Brunei and outcrops in Central Basin of Iran)

Morley, R.J. (1998)- Palynological evidence for Tertiary plant dispersals in the SE Asian region in relation to plate tectonics and climate. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 211-234.
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(Includes re-evaluation of Muller (1968) conclusions on palynological ages of Pedawan Fm (most likely Albian- Santonian) and Kayan/ Plateau sandstone (more likely Paleocene than Late Cretaceous-Eocene))

Morris, S.F. & J.S.H. Collins (1991)- Neogene crabs from Brunei, Sabah and Sarawak. Bull. British Museum (Natural History), Geology, 47, p. 1-33.
(online at: www.biodiversitylibrary.org/)
(Descriptions of 36 species of Mio-Pliocene crab fossils from 17 localities in NW Borneo. Abnormally high proportion of leucosiids)

Morrison, K. & W.C. Lee (2003)- Sequence stratigraphic framework of Northwest Borneo. In: G.H. Teh (ed.) Petroleum Geology Conf. Exh. 2002, Bull. Geol. Soc. Malaysia 47, p. 127-138.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003a09.pdf)
(Eocene- Recent depositional sequences of Sarawak, Sabah and Brunei, tied to Haq et al. (1988) global cycle chart. Major regional unconformities (mostly tectonic events): near Base Miocene/22.2 Ma; Deep Regional Unconformity/ 15.5 Ma; late Middle Miocene/12.1 Ma/uplift event; early Late Miocene/10.6 Ma/eustatic, Shallow regional Unconformity/Late Miocene/8.5 Ma; latest Miocene/5.6 Ma/ eustatic; latest Pliocene/~2 Ma/compression)

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(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm56/bgsm2010007.pdf)
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Muda, J. & F. Tongkul (2008)- Geoheritage resources of the Baliajong River: Potential for geotourism development. Bull. Geol. Soc. Malaysia 54, p. 139-145.
(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm54/bgsm2008021.pdf)
(Baliajong River ~3 km NE of Tandek, E of Marudu Bay, N Sabah, with outcrop of Lower Cretaceous-Paleocene oceanic crust (formerly 'Chert-spilite Fm'), comprising N-S trending imbricated gabbro and interbedded pillow basalts and red, bedded radiolarian cherts, forming basement rock of N Sabah. Deformed basement overlain by Miocene (22-15 Ma) Crocker Fm clastics, which were folded at 15 Ma. Failed manganese mining operation in 1903-1908. Area promoted as geotourism destination)

Mueller, F.P. (1915)- Tektite from British Borneo. Geol. Magazine, ser. 6, 2, 5, p. 206-211.
(online at: http://doc.rero.ch/record/303887/files/S0016756800177726.pdf)
(Four black lustrous tektites 1.5-3 cm in diameter, found in 1913 near Tutong Station, SW of Brunei town, washed out of white quartz sand 1-2' below surface, in terrace deposit ~40' above sea level. With first map of distribution of billitonite/ tektite of Malaysia- Indonesian region?)

Muff, R. (1990)- Geological, geochemical, and ore microscopic investigations of the massive, cupriferous sulfide occurrences at West Sualog in the Bidu Bidu Ophiolite Complex, Sabah, East Malaysia. Geol. Jahrbuch B74, p. 65-95.
(On stratabound copper-bearing massive sulphides in upper part of basic volcanic sequence of ophiolite complex in U Cretaceous- Eocene Sabah Melange Complex, overlain by fine-clastic sedimentary rocks)

Muhamad, Abdul J. & M.J. Hoesni (1992)- Possible source for the Tembungo oils: evidence from biomarker fingerprints. Bull. Geol. Soc. Malaysia 32, p. 213-232.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992023.pdf)
(Tembungo field off NW Sabah faulted anticline, with similar oils in Late Miocene sandstones in different fault blocks: paraffinic, low sulfur and waxy. Biomarkers suggest terrigenous source rocks with abundant land plant organic matter)

Muller, J. (1964)- Palynological contributions to the history of Tertiary vegetation in N.W. Borneo. In: D. Murchison & T.S. Westoll (eds.) Coal and coal-bearing strata, Elsevier, p. 39-40.

Muller, J. (1964)- A palynological contribution to the history of mangrove vegetation in Borneo. In: L.M. Cranwell (ed.) Ancient Pacific floras, the pollen story, University of Hawaii Press, Honolulu, p. 33-42.

Muller, J. (1968)- Palynology of the Pedawan and Plateau sandstone formation (Cretaceous- Eocene) in Sarawak, Malaysia. Micropaleontology 14, 1, p. 1-37.
(online at: www.micropress.org/micropen2/articles/1/4/58391_articles_article_file_1406.pdf)
(Pioneering study of palynology of U Cretaceous- Eocene section of Sarawak. Pedawan Fm is Cenomanian-Turonian age, Plateau Sandstone is of Senonian- Eocene age (Senonian age of basal Plateau Sst supported by Said et al. (1996) but Plateau Sst mainly viewed as Paleocene- E Eocene by Morley (1998), Hutchison (2005))

Murtaza, M., A.H.A. Rahman & C.W. Sum (2015)- The shallow marine succession of Begrih Formation (Pliocene), Mukah Area, Sarawak: facies, stratigraphic characteristics, and paleoenvironmental interpretation. In: M. Awang et al. (eds.) 3rd Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2014), Kuala Lumpur 2014, Springer Verlag, p. 337-362.
(Facies analysis of Pliocene Begrih Fm exposed along Mukah-Selangau road, NW Sarawak. 15 facies deposited in shallow marine setting with pronounced storms, wave, fluvial, and tidal influence)

Murtaza, M., A.H.A. Rahman, C.W. Sum & Z. Konjing (2018)- Facies associations, depositional environments and stratigraphic framework of the Early Miocene-Pleistocene successions of the Mukah-Balingian area, Sarawak, Malaysia. J. Asian Earth Sci. 152, p. 23-38.
(Outcrop sections along Mukah-Selangau road dominated by fluvial, floodplain and estuarine related coal-bearing deposits.(E-M Miocene Balingian, Late Miocene Begrih and M Pliocene- Pleistocene Liang Fms). Multiple regressive-transgressive cycles, with sediments derived from uplifted Penian high and Rajang Gp)

Mustafar, M.A., W.J.F. Simons, K.M. Omar & B.A.C. Ambrosius (2014)- Monitoring of local deformations in North Borneo. In: 25th Congress Int. Federation Surveyors (FIG), Kuala Lumpur, TS11, 12p.
(online at: www.fig.net/resources/proceedings/fig_proceedings/fig2014/papers/ts11a/)

Mustafar, M.A., W.J.F. Simons, F. Tongkul, C. Satirapod, K.M. Omar & P.N.A.M. Visser (2017)- Quantifying deformation in North Borneo with GPS. J. Geodesy, p. 1-19.
(online at: https://link.springer.com/content/pdf/10.1007%2Fs00190-017-1024-z.pdf)
(GPS survey results indicates extension along coastal regions of Sarawak and Brunei (5-9 mm/ year W-directed movement) but strain rate tensors in Sabah reveal only insignificant extension, while compression occurs throughout NW Borneo. CW (microblock) rotation of N part of North Borneo. Low subsidence rates along W coast of Sabah, but inconsistent trends between Crocker and Trusmadi Mts. Unable to confirm hypothesis of gravity sliding as main driving force. Ongoing Sundaland- Philippine Sea plate convergence may still play role in present-day deformation)

Mustapha, K.A. & W.H. Abdullah (2013)- Petroleum source rock evaluation of the Sebahat and Ganduman Formations, Dent Peninsula, Eastern Sabah, Malaysia. J. Asian Earth Sci. 76, p. 346-355.
(Evaluation of petroleum potential of M Miocene- E Pliocene Sebahat Fm and Pliocene Ganduman Fm. Thermally immature onshore, but continue into Sandakan sub-basin of S Sulu Sea)

Mustapha, K.A., W.H. Abdullah, Z. Konjing, S.S. Gee & A.M. Koraini (2017)- Organic geochemistry and palynology of coals and coal-bearing mangrove sediments of the Neogene Sandakan Formation, Northeast Sabah, Malaysia. Catena 158, p. 30-45.
(Coals in mangrove sediments of Sandakan Fm of Sandakan Peninsulawith vitrinite reflectance (Ro) 0.31-0.49%, indicating immature- very early mature for hydrocarbon generation. Dominated by Type III kerogen, with some Type II/III. Presence of dinoflagellate cysts and offshore mudstones consistent with rel. high sulphur content from marine inundations. Palynomorphs with abundant mangrove and freshwater pollen Presence of Florschuetzia levipoli, F. meridionalis and F. semilobata suggests E-M Miocene age)

Mustard, H.M. (1997)- The Bau gold district- East Malaysia. In: Proc. World Gold Conf. '97, Singapore 1997, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, 2, p. 67-80.
(Gold and platinum in Miocene fault-controlled veins and replacements in U Jurassic- Lower Cretaceous Bau Limestone in SW Sarawak. Mined since 1820)

Myers, L.C. (1977)- Weathering profile developed on ultrabasic rocks at Telupid, Sabah. Geol. Survey Malaysia, Geol. Papers 2, p. 66-71.

Mylius, H.G. (1990)- The geological setting of a cupfiferous sulfide mineralization in the Kiabau area of the Bidu Bidu Hills, Sabah, East Malaysia. Geol. Jahrbuch B74, p. 97-114.
(Massive copper-bearing pyrite mineralization in sequence of altered basalt and mudstone close to contact with ultrabasic rocks)

Nagano, K., S. Takenouchi, H. Imai & T. Shoji (1977)- Fluid inclusion study of the Mamut porphyry copper deposit, Sabah, Malaysia. Mining Geology 27, 143, p. 201-212.
(online at: www.journalarchive.jst.go.jp...)

Nagarajan, R., J.S. Armstrong-Altrin, F.L. Kessler, E.L. Hidalgo-Moral, D. Dodge-Wan & N.I. Taib (2015)- Provenance and tectonic setting of Miocene siliciclastic sediments, Sibuti Formation, northwestern Borneo. Arabian J. Geosciences 8, 10, p. 8549-8565.
(Provenance study of Miocene Sibuti Fm clastics, Sarawak, suggests recycled continental nature, mainly from metasedimentary source (Rajang Fm) in collision zone)

Nagarajan, R., J.S. Armstrong-Altrin, F.L. Kessler & J. Jong (2017)- Petrological and geochemical constraints on provenance, paleoweathering, and tectonic setting of clastic sediments from the Neogene Lambir and Sibuti Formations, Northwest Borneo. In: R. Mazumder (ed.) Sediment provenance: influences on compositional change from source to sink, Chapter 7, Elsevier, Amsterdam, p.123-153.
(Petrography and geochemistry suggest Miocene Lambir and Sibuti Fms clastics derived from recycled sedimentary/metasedimentary sources in an evolving passive-to-active continental margin setting)

Nagarajan, R., J. Jong & F.L. Kessler (2017)- Provenance of the Neogene sedimentary rocks from the Tukau and Belait Formations, Northeastern Borneo by mineralogy and geochemistry. Warta Geologi 43, 2, p. 10-16.
(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_02.pdf)
(Miocene quartz-rich clastics of Tukau and Belait Fms sourced from area comparable to Rajang-Crocker mountain belt in Borneo hinterland. Tukau Fm supplied from moderately-weathered continental hinterland composed of acidic igneous and/or metamorphic lithologies, and older sediments. Miocene Belait Fm reflects stronger weathering and significant input of mafic minerals (i.e. biotite, Mg-chromites))

Nagarajan, R., P.D. Roy, M.P. Jonathan, R. Lozano, F.L. Kessler & M.V. Prasanna (2014)- Geochemistry of Neogene sedimentary rocks from Borneo Basin, East Malaysia: paleo-weathering, provenance and tectonic setting. Chemie der Erde- Geochemistry 74, p. 139-146.
(Neogene sediments of Sarawak classified as extremely weathered sandstones, with post-depositional K-metasomatism and zircon enrichment through sediment recycling. Geochemical characteristics suggest mixed-nature provenance. Enriched Cr in quartz arenite and Fe-sandstone related to contribution from ophiolite or fractionation of Cr-bearing minerals)

Nagarajan, R., P.D. Roy, F.L. Kessler, J. Jong, V. Dayong & M.P. Jonathan (2017)- An integrated study of geochemistry and mineralogy of the Upper Tukau Formation, Borneo Island (East Malaysia): sediment provenance, depositional setting and tectonic implications. J. Asian Earth Sci. 143, p. 77-94.
(Late Miocene or younger ((~10–2.6 Ma) Tukau Fm of Sarawak formation unconfomably overlies M Miocene Lambir Fm. Clastics highly mature and recycled from weathered sedimentary- metasedimentary sources, with granitoids and mafic-ultramafic rocks. Cretaceous and Triassic-age detrital zircons from felsic rock, tie to granitoids of Schwaner Mts (Kalimantan) and Tin Belt granites, but probably recycled via Rajang Group, uplifted and eroded in Neogene. Chromian spinels indicate minor influence of mafic- ultramafic rocks. Deposited in passive margin with passive collisional and rift settings)

Nagtegaal, P.J.C. (1989)- A century of petroleum exploration in Sarawak and Sabah. ASEAN Council on Petroleum, p. 29-36.

Nakai, I., H. Adachi, S. Matsubara, A. Kato, K. Masutomi, T. Fujiwara & K. Nagashima (1978)- Sarabauite, a new oxide sulfide mineral from the Sarabau Mine, Sarawak, Malaysia. American Mineralogist 63, 7-8, p. 715-719.
(online at: https://rruff-2.geo.arizona.edu/uploads/AM63_715.pdf)
(New realgar-like red mineral in hydrothermal ore deposits in U Jurassic- Cretaceous of Sarabau Au-Ag mine near Bau, SW of Kuching)

Nakamura, T., T. Miyake, N. Kanao & N. Tomizawa (1970)- Exploration and prospecting in Mamut Mine, Sabah, Malaysia. Mining Geology 20, 100, p. 106-113.
(online at: www.journalarchive.jst.go.jp...) (In Japanese, with English abstract)
(Mamut mine 7 miles N of Ranau on E flank of Mt. Kinabalu. Originally located during 1965 geochemical survey. Ore deposit of Mamut-2 mine is low grade gold-bearing 'porphyry copper'. Pyrite, chalcopyrite and chalcocite form bulk of sulphides, associated with minor molybdenite and bornite)

Newton, R. Bullen (1897)- On a Jurassic Lamellibranch and some other associated fossils from the Sarawak River Limestones of Borneo; with a sketch of the Mesozoic fauna of that island. Geol. Magazine IV, 4, p. 407-415.
(Review of Jurassic- Cretaceous macrofossils known from Borneo, and description of M Jurassic bivalve Alectryonia amor in British Museum collection, probably from Sarawak River, with distinct European affinity.)

Newton-Smith, J. (1967)- Bidu-Bidu Hills area, Sabah, East Malaysia. Geol. Survey Malaysia Borneo Region, Report 4, Kuching, p. 1-109.
(Mapping of Bidu-Bidu area in C Sabah. Area consists of Chert-spilite Formation, ultrabasic rocks, basic rocks, Miocene Garinono Fm melange and and Kamansi Beds tuffaceous sediments)

Newton-Smith, J. (1977)- Geology and mineralization at the Mamut copper prospect. Sabah. Geol. Survey Malaysia, Geol. Papers 2, p. 55-65.
(Additional observations on Tertiary porphyry copper type ore body on SE slope of Mt Kinabalu, first described by Kirk (1967))

Ng, P.K.L. & Earl of Cranbrook (2014)- Fossil brachyuran crabs from the Jambusan Caves (Bau, Sarawak), collected by A.H. Everett in 1878-1879. In: R.H.B. Fraaije et al. (eds.) Proc. 5th Symp. Mesozoic and Cenozoic Decapod Crustaceans, Krakow 2013, Scripta Geologica 147, p. 289-307.
(online at: http://dpc.uba.uva.nl/cgi/t/text/get-pdf?c=scripta;idno=16147a21)
(Crustacean fossils from Jambusan Caves in Bau (Sarawak) assigned to two species of potamid freshwater crabs (Brachyura) that are still extant in area, Isolapotamon bauense and I. consobrinum. Two species were probably collected for food by early human inhabitants of Sarawak)

Ng, T.S. & M. Mohamad (1996)- A quantitative analysis of seismic reflection in a gas-bearing carbonate buildup, offshore Malaysia. In: P. Weimer & T.L. Davis (eds.) Applications of 3-D seismic data to exploration and production, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 42, p. 219-244.
(Some 200 Miocene carbonate buildups mapped in Luconia Province, offshore Sarawak. Vertical and lateral porosity variations in carbonate reservoirs can be calibrated to seismic amplitude and acoustic impedance)

Nijman, M., S. Paris & J. Boyd-Gorst (2012)- New opportunities through reservoir performance reviews and facies based dynamic modelling of a mature oil field under waterflood. Int. Petroleum Techn. Conf. (IPTC), Bangkok 2012, 11p.
(Champion Field in Brunei Darussalam, producing since 1972. Field geologically complex, with >500 stacked sandstones reservoirs, heavily faulted, at depths from 200-1500m subsea. Primary and secondary recovery from pattern waterflood since 1984. Reservoir modeling effort is part of ongoing Champion Waterflood project, which aims to increase recoverable reserves and production capacity from mature field)

Noad, J.J. (1999)- The sedimentary evolution of the Tertiary of Eastern Sabah, Northern Borneo. Ph.D. Thesis, University of London, p. 1-456. *(Unpublished)*

Noad, J. (2001)- The Gomantong Limestone of eastern Borneo: a sedimentological comparison with the near-contemporaneous Luconia Province. Palaeogeogr. Palaeoclim. Palaeoecology 175, p. 273-302.
(C Sabah basin was Eocene-Miocene E-W trending foreland basin, with carbonates in E. Late Oligocene-earliest Miocene (Te5) Gomantong Lst outcrops in E. Sabah interpreted as shelf with fringing and patch reefs. Carbonate deposition ended with 'rejuvenation of C Sabah basin' around E-M Miocene boundary, ~16 Ma)

Noad, J. (2013)- The power of palaeocurrents: reconstructing the palaeogeography and sediment flux patterns of the Miocene Sandakan Formation in eastern Sabah. Berita Sedimentologi 28, p. 31-40.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-28-borneo.html)
(Outcrop study on Miocene Sandakan Fm on Sandakan Peninsulla, E Sabah showed five facies belts, from mangrove deposits through shoreface sediments to open marine. Paleocurrent data show sediment dispersion across paleo-Sandakan Basin, from N-directed flow through mangrove channels into longshore drift on shallow marine, coastal shelf to a belt of tempestite deposits cut by N-directed rip current channels)

Noad, J. & R. Preece (2014)- Making sense of mud: the use of benthic foraminifera in mudstone sedimentology, Sabah, North Borneo. Berita Sedimentologi 29, p. 53-65.
(online at: www.iagi.or.id/fosi)
(On use of benthic foraminifera in interpretation of depositional environments of mudstone samples from five formations outcropping in E Sabah, NE Borneo, ranging in age from Eocene- Pliocene)

Nordin, A.F. H. Jamil, M.N. Isa, A. Mohamed, S.H. Tahir, B. Musta, R. Forsberg, A. Olesen et al. (2016)- Geological mapping of Sabah, Malaysia, using airborne gravity survey. Borneo Science 37, 2, p. 14-27.
(online at: http://borneoscience.ums.edu.my/wp-content/uploads/2016/09/)
(Airborne gravity survey database for land and marine areas compiled to update geological map of Sabah)

Nugraheni, R.D., W.S. Chow, A.H.A. Rahman, S.N.M. Nazor & M.F. Abdullah (2014)- Tertiary coal-bearing heterolithic packages as low permeability reservoir rocks in the Balingian Sub-basin, Sarawak, Malaysia. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 85-93.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014009.pdf)

Nuttall, C.P. (1961)- Gastropoda from the Miri and Seria Formations, Tutong Road, Brunei. In: G.E. Wilford, The geology and mineral resources of Brunei and adjacent parts of Sarawak, British Borneo Geol. Survey Memoir 10, p. 73-87.
((Miocene?-)Pliocene gastropods from Brunei. Living species 65-80%. No figures)

Nuttall, C.P. (1961)- Mollusca from the Togopi Formation (Upper Cenozoic) of North Borneo. Malaysia. British Borneo Geol. Survey, Borneo, Annual Report 1960, p. 83-96.
(Late Miocene-Pliocene molluscs collected by Collenette from Topogi Fm at E Dent Peninsula of Sabah. Living species ~75-83%. Mainly shallow marine taxa. No figures)

Nuttall, C.P. (1964)- Report on Mollusca from the Sebahat Formation, Tunku River, Dent Peninsula, Sabah. Geol. Survey, Borneo Region, Malaysia, Annual Report 1963, p. 165-166.
(Brief note on small collection of likely Late Miocene- Pliocene molluscs from Tungku River near Lung Sangai)

Nuttall, C.P. (1965)- Report on the Haile collection of fossil Mollusca from the Plio-Pleistocene Togopi Formation, Dent Peninsula, Sabah, Malaysia. Geol. Survey Borneo Region, Malaysia, Memoir 16, p. 155-192.

Nuttall, C.P. & K.M. Leong (1972)- Occurrence of *Acteonella* (Opistobranch gastropod) in the Cretaceous of Sabah. Geol. Survey Malaysia, Geol. Papers 1, p. 1-8.

Ogawa, K. & J. Jong (2016)- A leaking hydrocarbon charge system in deepwater Sabah- evidence from reservoir fluid geochemistry and mud-gas isotope analysis. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-57-G, 26p.
(Distribution of oils in Miocene Kamunsu and Kinarut turbiditic reservoirs in Bestari-1 well, offshore Sabah)

Ogawa, K. & J. Jong (2017)- A unique Post-MMU hydrocarbon charge system in the Bunguran Trough: a case study from deepwater Sarawak and implications for petroleum exploration. In: SEAPEX Exploration Conference 2017, Singapore, Session 7, 3p. *(Extended Abstract)*
(Bunguran Trough intra-continental basin in deepwater setting of Rajang Delta, off Sarawak. Characterised by deepwater clastic deposition of post-M Miocene Unconformity sediments. Pre-MMU sediments now buried to >6000m One potential source rock intervals currently mature for hydrocarbon generation in post-MMU sequences is Lower Pliocene section)

Oke, B., J. Keall, P. Carroll, R. Noble & T. Setzer (2004)- Zebra Prospect- reading between the stripes. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia and Australasia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 429-441.
(Pliocene amplitude anomaly drilled by Unocal in Philippines part of Sandakan Basin off Sabah encountered numerous thin, uneconomic gas zones)

Olave-Hoces, S. (2006)- Controls on isolated carbonate platform evolution and demise, Central Luconia province, South China Sea. M.Sc. Thesis Texas A&M University, College Station, p. 1-85.
(online at: http://repository.tamu.edu/bitstream/handle/1969.1/ETD-TAMU-1795/OLAVE-HOCES-THESIS.pdf)
(Many isolated carbonate platforms in C Luconia in M-Late Miocene. Flooding at ~16.5 Ma initiated near-simultaneous carbonate sedimentation. Five growth stages. SE C Luconia platforms thicker and larger, reflecting greater subsidence to SE. First platforms drowned in E at ~12.5-9.7 Ma, affected by siliciclastic sediments and high local subsidence. Platforms drowned later (~6.3-5.5 Ma) caused by rapid sea-level rise and local subsidence. C Luconia carbonate platforms drowned earlier (latest Late Miocene) than E Natuna platforms (E Pliocene))

Omang, S.A.K. (1993)- Petrology, geochemistry and structural geology of the Darvel Bay Ophiolite, Sabah, Malaysia. Ph.D. Thesis Royal Holloway, University of London, p. *(Unpublished)*

Omang, S.A.K. (1995)- Petrology and geochemistry of the mantle-sequence peridotite of the Darvel Bay Ophiolite, Sabah, Malaysia. Bull. Geol. Soc. Malaysia 38, p. 31-48.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995004.pdf)
(Mantle-sequence peridotites of Darvel Bay Ophiolite mainly depleted harzburgites. Less depleted (refractory) mantle than harzburgites of Oman, Papuan and Halmahera ophiolites and represent supra-subduction zone (SSZ) ophiolite type)

Omang, S.A.K. (1996)- Sub-ophiolite metamorphic rocks in the Tungku area, Lahad Datu, eastern Sabah, Malaysia; origin and tectonic significance. In: G.H. Teh (ed.) Petroleum geology conference, Kuala Lumpur 1995, Bull. Geol. Soc. Malaysia 39, p. 51-64.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1996006.pdf)
(Sub-ophiolite metamorphic garnet amphibolites (clasts in late E Miocene- M Miocene melange) formed at high P-T and interpreted as derived from metamorphic sole below Darvel Bay Ophiolite Complex, formed during subduction of ocean crust and emplacement of ophiolite complex. Garnet amphibolites were oceanic crust MORB tholeiites, metamorphosed in upper mantle and deformed and recrystallised with mylonitic textures in amphibolite facies. K/Ar age of 76± 21 Ma (Cretaceous- Eocene!) coincides with Late Cretaceous-Paleogene age of subduction beneath Darvel Bay Ophiolite inferred from stratigraphic evidence)

Omang, S.A.K. (1996)- Petrology and geochemistry of the volcanic rocks associated with the Darvel Bay Ophiolite, Lahad Datu, eastern Sabah, Malaysia. In: G.H. Teh (ed.) Petroleum geology conference, Kuala Lumpur 1995, Bull. Geol. Soc. Malaysia 39, p. 65-80.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1996007.pdf)

(At least three unrelated volcanic rock groups in ophiolitic terrain of Darvel Bay area. Group I and II may be related to oceanic crust formation, Group III to M Miocene volcanic arc activity of Dent Peninsula)

Omang, S.A.K. & A.J. Barber (1996)- Origin and tectonic significance of the metamorphic rocks associated with the Darvel Bay Ophiolite, Sabah, Malaysia. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of SE Asia, Geol. Soc. London, Spec. Publ. 106, p. 263-279.
(Banded hornblende gneiss, amphibolite and schists form lenses in 8 km wide belt in Darvel Bay Ophiolite Complex, representing gabbros, plagiogranites, basaltic dykes, basaltic volcanics and cherts formed at spreading ridge in supra-subduction zone environment, deformed at high T- low P along transform fault. Garnet pyroxenites and amphibolites found as clasts in Miocene volcanic agglomerates formed at high-P, and derived from metamorphic sole formed during ocean crust subduction and emplacement of ophiolite complex)

Omang, S.A.K., M.M. Faisal & S.H. Tahir (1994)- The Kudat Ophiolite Complex, northern Sabah, Malaysia- field description and discussion. Warta Geologi (Newsl. Geol. Soc. Malaysia) 20, 5, p. 337-346.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1994005.pdf)
(Scattered M Jurassic- E Cretaceous ophiolitic rocks in Kudat Fault Zone, N-most Sabah, here named Kudat Ophiolite Complex. Represents dismembered ophiolite sequence, with most components of ophiolite present: sheared and brecciated serpentinite, plagiogranite, doleritic to basaltic dykes and submarine pillow basalt overlain by radiolarian chert with Lower Cretaceous radiolaria (Basir Jasin et al. 1985). May represent supra-subduction zone ophiolite type (= Kinabalu Suture of Tjia 1988))

Omang, S.A.K., W.A.W. Mohamed & S.H. Tahir & S.A. Rahim (1992)- The Darvel Bay ophiolite complex, SE Sabah, Malaysia- preliminary interpretations. Warta Geologi 18, 3, p. 81-88.
(Darvel Bay ophiolite complex of E Sabah consists of ultramafic (mantle peridotite and ultramafic cumulate), gabbro (gabbroic rocks, amphibolites and plagiogranites) and volcanic-sedimentary units (basaltic lavas and Cretaceous radiolarian cherts). Complex bounded by E-M Miocen melanges to N and S, with blocks of ophiolite. Complex interpreted as part of the oceanic crust segment which lay between Sundaland craton and the Philippines archipelago and was obducted onto Sabah in Late Paleogene to Neogene time)

Omang, S.A.K. & S.H. Tahir (1995)- Cretaceous and Neogene lavas of Sabah; origin and tectonic significance. Bull. Geol. Soc. Malaysia 38, p. 21-30.
(online as: www.gsm.org.my/products/702001-100928-PDF.pdf)
(Cretaceous Telupid basalt low-K tholeiitic lava or "boninitic suite", formed in response to intra-oceanic subduction. As subduction proceeded, magma composition changed to calc-alkaline suite (high-K Neogene Tungku and Tanjung Batu andesites). Volcanics evolution starts with oceanic island arc, where supra-subduction zone extension led to genesis of tholeiitic/ boninitic lava (Telupid basalt), followed by volcanic arc (Tungku andesite), followed by arc-splitting, as extension continued, Sulu Sea marginal basin formed. Partial closing of Sulu Sea caused S-ward subduction beneath older arc and formation of Tanjung Batu andesite)

Ooi Phey Chee, M. Poppelreiter, D. Ghosh & R. Lazar (2017)- Study of Central Luconia Miocene carbonate buildup: integration of geological, modern carbonates and 3D seismic characterization Proc. 30th Nat. Geosc. Conf. Exhib. (NGC 2017), Kuala Lumpur, PDPT16-107, Warta Geologi 43, 3, p. 290-291. *(Extended Abstract)*
(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_032.pdf)
(Brief review of geologic model of 3x5km M-L Miocene carbonate buildup of TX Field, 170km N of Bintulu, offshore Sarawak)

Ooi Phey Chee, M. Poppelreiter, D. Ghosh, R. Lazar & U. Djuraev (2018)- Study of a TX field Miocene carbonate build-up: integration of sedimentological data with modern carbonate analogue and 3D seismic characterization to establish carbonate facies modelling workflow. Bull. Geol. Soc. Malaysia 65, p. 135-140.
(online at: https://gsmpubl.files.wordpress.com/2018/08/bgsm201816.pdf)
(C Luconia Province with >200 Miocene carbonate build-ups, many gas-bearing. Facies modelling of carbonate build-up from integrated core, modern carbonate platform and 3D seismic data)

Osmaston, H. (1980)- Patterns in trees, rivers and rocks in the Mulu Park, Sarawak. The Geographical J. 146, p. 33-50.
(Study of geomorphology and geological control in Mulu Park karst terrain)

Ovinda & J.J. Lambiase (2017)- Lateral facies and permeability changes in upper shoreface sandstones, Berakas Syncline, Brunei Darussalam. Indonesian J. Geoscience 4, 1, p. 11-20.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/333/228)
(Facies and permeability changes in outcrops of M Miocene Belait Fm in Berakas Syncline, Brunei)

Pierson, B.J. (2010)- Contrasting dolomite textures of Miocene carbonate platforms in Central Luconia, Sarawak, Malaysia. Petrol. Geosc. Conf. Exhib., Kuala Lumpur 2010, p. *(Extended Abstract)*

Percival, T.J. & A.H. Hofstra (2002)- Bau, Malaysia; SRHDG deposit associated with Miocene magmatism. Geol. Soc. America, 2002 Ann. Mtg., Abstracts with Programs 34, 6, p. 142. *(Abstract only)*
(Bau district, NW Borneo, produced 37.3 t gold. It is in thrust sheet comprised of Late Jurassic- M Cretaceous limestone and clastics and Late Triassic island arc volcanics that is overthrust by L Jurassic- L Cretaceous siliciclastic turbidites. M Miocene magmatism due to SE subduction of Proto- S China Sea under Borneo. Numerous 10-13 Ma, I-type, intermediate to felsic porphyry stocks intrude >30 km long NNE transtensional fault zone. Au deposits at intersection of NNE fault system and ENE-striking anticline)

Percival, T.J., A.S. Radtke & W.C. Bagby (1990)- Relationships among carbonate-replacement gold deposits, gold skarns, and intrusive rocks, Bau Mining District, Sarawak, Malaysia. Mining Geology 40, 1, p. 1-16.
(online at: www.jstage.jst.go.jp/article/shigenchishitsu1951/40/219/40_219_1/_pdf)
(Three distinct styles of gold mineralization in U Jurassic Bau Limestone, associated with M Miocene calk-alkaline micro-granodiorite porphyry stocks in Bau mining district, 24 km SW of Kuching. Most gold produced from 'Carlin-type' carbonate-replacement deposits. Common gold deposits along Tai Parit fault suggest major conduit for hydrothermal fluids)

Petronas (1999)- The petroleum geology and resources of Malaysia. Petronas, Kuala Lumpur, p. 1-665.
(Most comprehensive overview of Malaysia (incl. N Borneo) geology and oil and gas fields)

Pilz, R. (1913)- Geologische Studien in Britisch Nordborneo. Jahresberichte Freiburger Geol. Gesellschaft 6, p. 12-39.
('Geological studies in British North Borneo'. Early reconnaissance survey of Sabah by German mining engineer Pilz for British North Borneo Company. First to recognize: (1) presence of Jurassic-Cretaceous deep marine sediments with radiolaria (Danau Fm of Molengraaff), overlain by Tertiary clastics and carbonates and (2) young age of Kinabalu volcanics and pluton (see also Wannier 2017))

Pimm, A.C. (1965)- Serian Area, West Sarawak, East Malaysia. Geol. Survey Borneo Region Malaysia, Report 3, p. 1-92.
(Serian area in W Sarawak- W Kalimantan border area, SE of Kuching. Pre-Upper Carboniferous Kerait schists, similar to 'NW Kalimantan Domain'. Overlain by steeply-dipping, NW striking, brecciated Late Carboniferous- E Permian Terbat Fm interbedded fusulinid limestone, chert and shale, at least 3000' thick. Unconformably overlain by Late Triassic (late Carnian-Norian) Sadong Fm clastics and tuffs with Halobia and late Norian? Serian Fm andesitic-basaltic volcanics. Sadong-Serian Fms folded before deposition of Late Jurassic Bau Limestone. Unconformably overlain by ?Eocene Silantek Fm clastics. Intrusives dated as M Miocene in S part of area, continuing into Kalimantan. With 1:50,000 scale geologic map)

Pimm, A.C. (1967)- Bau Mining District, West Sarawak, Malaysia. Part II- Krokong. Geol. Survey Borneo Region Malaysia, Bull. 7, 2, p. 1-97.

Pimm, A.C. (1968)- Triassic volcanic rocks in East and West Malaysia. Geol. Survey Borneo Region Malaysia, Bull. 8, p. 36-40.

Pour, A.B. (2014)- Remote sensing aspects of Bau Gold District, Serawak, Malaysia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 393-413.
(Lithological-structural mapping with remote sensing of mineralized zones in Bau gold field in W Sarawak with Carlin style gold deposits. Late Triassic Serian Volcanics overlain by Late Jurassic- Cretaceous sediments. E Jurassic deformation event, with 190 Ma Jagoi granodiorite. M Miocene Bau Trend porphyritic granodiorites with porphyry-copper style mineralization, skarn, limestone polymetallic replacement, epithermal precious metal, disseminated gold, and Ba-Hg deposits)

Pour, A.B. & M. Hashim (2014)- Structural geology mapping using PALSAR data in the Bau gold mining district, Sarawak, Malaysia. Advances in Space Research 54, p. 644-654.
(Synthetic Aperture Radar data useful in remote sensing of tropical/sub-tropical regions. Bau gold mining district in W Sarawak similar to Carlin style gold deposits, but mineralization more structurally controlled. Most quartz-gold bearing veins in high-angle faults, fractures and joints in massive units of Bau Limestone. Four deformation events in district: (D1) ENE trending parallel faults, pre- E Jurassic, associated with E Jurassic Jagoi Granodiorite? (= Late Triassic; Breitfeld et al. 2017); (D2) SW-NE oriented compressional tight folds, (D3) E-W to NW-SE trending folds, folding Tertiary molasse; (D4) NNE trending lineaments along which M Miocene microgranodiorites emplaced, probably right-lateral transcurrent faults)

Pour, A.B., M. Hashim & J. van Genderen (2013)- Detection of hydrothermal alteration zones in a tropical region using satellite remote sensing data: Bau goldfield, Sarawak, Malaysia. Ore Geology Reviews 54, p. 181-196.

Prasetyo, T., A. Firth & M.R. Lasman (2007)- A relationship of overpressure, diagenesis and hydrocarbon accumulation, East Balingian Basin, Offshore Sarawak- Malaysia. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-070, 15p.
(E Balingian Basin oil-gas fields in large NE-SW trending folds, resulting from episodic inversion events which started in late M Miocene (11.7 Ma). Deeper reservoirs of East Balingian generally overpressured and of low quality (quartz overgrowths, dolomite cement), even where hydrocarbon-bearing. Top overpressure varies between different stratigraphic units, but all in thick shale-prone sequences)

Prosser, D.J. & R.R. Carter (1997)- Permeability heterogeneity within the Jerudong Formation: an outcrop analogue for subsurface Miocene reservoirs in Brunei. In: A.J. Fraser et al. (eds.) Petroleum geology of Southeast Asia, Geol. Soc. London, Spec. Publ. 126, p. 195-235.
(Permeability measurements on outcrop of 56m of Late Miocene (E Tortonian) Jerudong Fm at Punyit Beach, Brunei, show large variations)

Prouteau, G., R.C. Maury, C. Rangin, E. Suparka, H. Bellon, M. Pubellier & J. Cotten (1996)- Les adakites miocenes du NW de Borneo, temoins de la fermeture de la proto-mer de Chine. Comptes Rendus Academie Sciences, Paris 323, ser. IIa, 11, p. 925-932.
('The Miocene adakites of NW Borneo, witnesses of the closing of the proto-South China Sea'. Early Miocene Sintang granodiorite intrusives aged 18.3 and 19.2 Ma, with characteristics of oceanic slab melts (adakites). Youngest rocks (16.5, 16.7 Ma) are calc-alkaline dacites. Sintang adakites coeval with subduction of Proto South China Sea Basin which may have started at ~20 Ma)

Prouteau, G., R.C. Maury, F.G. Sajona, M. Pubellier, J. Cotton & H. Bellon (2001)- Le magmatisme post-collisionnel du Nord-Ouest de Borneo, produit de la fusion d'un fragment de croute oceanique ancre dans le manteau superieur. Bull. Soc. Geologique France 172, 3, p. 319-332.
('The post-collisional magmatism of NW Borneo: product of melting of a fragment of oceanic crust in the upper mantle'. Magmas in Sarawak formed by melting of subducted oceanic crust in upper mantle, as evidenced by Miocene adakites. Two kinds of intrusions: High-medium K calc-alkaline diorites in N of study area (Lower Miocene; 22.3-23.7 Ma); microtonalites and dacites near Kuching and S Sarawak (M-U Miocene, 14.6- 6.4 Ma). Lower Miocene diorites characteristic of subduction-related magmas. M-U Miocene microtonalites and dacites also adakitic features: SiO2-rich (65-70%) and sodic; rare pyroxenes, etc.)

Rahim, A.R., Z. Konjing, J. Asis, N. Jalil, A.J. Muhamad, N. Ibrahim, A.M. Koraini, R.C. Kob, H. Mazlan & H.D. Tjia (2017)- Tectonostratigraphic terranes of Kudat Peninsula, Sabah. Bull. Geol. Soc. Malaysia 64 (Geol. Soc. Malaysia 50th Anniversary Issue 2), p. 123-139.
(online at: www.gsm.org.my/products/702001-101713-PDF.pdf)
(Four geological terranes make up Kudat Peninsula: (1) N Sabah exotic Terrane (Eocene sandstones with M-L Eocene Suang Pai Lst with Discocyclina, Pellatispira, etc.), separated by (2) Kudat Fault Zone (up to 6 km wide horst with E Cretaceous ophiolite and oceanic crust) from (3) Slump Terrane (wide area from Sikuati to Kota Marudu, consisting of mainly lower slope turbidites with slump intervals). S-most terrane is (4) Mengaris Duplex (latest Eocene to Oligocene West Crocker Fm turbidites)

Rahman, M.H., B.J. Pierson & W.I.W. Yusoff (2012)- Classification of microporosity in carbonates: examples from Miocene carbonate reservoirs of Central Luconia, Offshore Sarawak, Malaysia. In: Proc. Int. Petrol. Techn. Conf. (IPTC), Bangkok 2012, IPTC 14583, 12p. *(Extended Abstract)*
(Five types of microtextures in C Luconia Miocene carbonates: a) chalky moldic limestone, b) argillaceous tight limestone, c) moldic limestone, d) Moldic dolomitic limestone and e) chalky limestone)

Rahman, Z.A. (1999)- Structural pattern of the Crocker Formation in southern part of Beaufort area, Sabah. Borneo Science 6, p. 11-20.
(online at: http://borneoscience.ums.edu.my/wp-content/uploads/2011/08/2.-Structural-Pattern-Of-The-Crocker-Formation-In-Southern-Part-Of-Beaufort-Area-Sabah.pdf)
(Oligocene- E Miocene deep marine Crocker Fm in SW Sabah deformed by M Miocene faulting-folding, under NW-SE compression)

Ramkumar, M., M. Santosh, R. Nagarajan, S.S. Li, M. Mathew, D. Menier, N. Siddiqui, J. Rai, A. Sharma et al. (2017)- Late Middle Miocene volcanism in Northwest Borneo, Southeast Asia: implications for tectonics, paleoclimate and stratigraphic marker. Palaeogeogr. Palaeoclim. Palaeoecology 490, p. 141-162.
(Zircon dating of 6 cm thick tephra layer in thick coal near Mukah, Sarawak, suggests latest M Miocene volcanic event (main zircon age group ~11.4- 11.8 Ma). Also older inherited zircons)

Ramli, M.N. & Ho Kiam Fui (1984)- Depositional environments and diagenesis of the F6 reef complex, central Luconia province, offshore Sarawak, Malaysia. In: Proc. Joint ASCOPE/ CCOP Workshop on hydrocarbon occurrences in carbonate rocks, Surabaya 1982, ASCOPE Techn. Paper 2, Jakarta, p. 269-292.

Ramli, M.Y. (1992)- Paranchangan fault zone; the southern sector, Sabah. In: Y.E. Heng (ed.) Proc. 23rd Geol. Conf. Techn. Paper, Geol. Survey Malaysia, p. 131-140.

Rangin, C. (1991)- Neogene arc-continent collision in Sabah, northern Borneo (Malaysia)- Reply. Tectonophysics 200, p. 330-332.
(Reply to Hutchison (1991) critique of Rangin (1990) paper)

Rangin, C., H. Bellon, F. Benard, J. Letouzey, C. Muller & S. Tahir (1990)- Neogene arc-continent collision in Sabah, N. Borneo (Malaysia). Tectonophysics 183, p. 305-319.
(Sabah arc-continent collision in early M Miocene, followed by intraplate shortening, still active today. Late Oligocene-M Miocene volcanic arc imbricated with melanges and thrust NW-ward on polyphase-deformed Late Cretaceous-M Miocene turbiditic sequence (Crocker Range). Intraplate shortening seen in thrusting- folding offshore Sabah along Palawan-N Borneo Trench and broad folds and strike-slip faulting in previously sutured terranes. Collision result of final stage of S-ward subduction of Proto-S China Sea or back thrusting of Sulu volcanic arc during Celebes Sea subduction to N. K-Ar age of 137 Ma for gabbro of Sabah oceanic crust basement, 6 Ma cooling age for Kinabalu granodiorite) (see also comments and reply by Hutchison (1991))

Razak, H. & L. Kocsis (2018)- Late Miocene *Otodus* (*Megaselachus*) *megalodon* from Brunei Darussalam: body length estimation and habitat reconstruction. Neues Jahrbuch Geol. Palaont. Abhandl., 288, 3, p. 299-306.

(Otodus megalodon biggest shark that ever lived. Only previous occurrences from Indo-Pacific region from Java and Madura (Martin 1887, Kouman 1949, Leriche 1954). Size of teeth of Late Miocene Brunei megalodon near Tutong suggest length of 5.5- 7.1 m, probably juvenile (adults >10m))

Redfield, A.H. (1922)- Petroleum in Borneo. Economic Geology 17, 5, p. 313-349.
(Early review of petroleum discoveries on Borneo, including Tarakan, Sanga Sanga in E Kalimantan and Miri district of Brunei)

Reinhard, M. (1922)- Contributions to the physiography and geology of the South-East Coast of British North Borneo. The Geographical J. 63, 2, p. 121-134.
(One of earliest geologic maps and descriptions of Sabah, surveyed in 1913-1914 for 'Nederlandsche Koloniale Petroleum Maatschappij')

Reinhard, M. & E. Wenk (1951)- Geology of the colony of North Borneo. Bull. Geological Survey Dept., British Territories in Borneo, 1, p. 1-160.
(Early compilation of North Borneo geology, commissioned by Shell. Cretaceous? Pre-Eocene Danau Fm of flysch, radiolarian chert, ophiolitic rocks (serpentinite, gabbro) and manganese ore, always intensely folded/ imbricated. Slate Formation probably older than Danau Fm, both often hard to distinguish from Danau Fm. Etc.)

Rice-Oxley, E.D. (1991)- Palaeoenvironments of the Lower Miocene to Pliocene sediments in offshore N.W. Sabah area. Bull. Geol. Soc. Malaysia 28, p. 165-194.
(online at: www.gsm.org.my/products/702001-101064-PDF.pdf)
(Biostratigraphy and seismic stratigraphy used in Miocene-Pliocene in offshore NW Sabah to define paleo-shelf edges/ paleo-coastlines and 4 seismic facies. Offshore Sabah pre-early M Miocene deposition of deep marine Stage III sediments. Post-early M Miocene deposition of Stage IV shelf/slope deposits, punctuated by major erosional events reflecting periods of tectonism (7 regional unconformities). With 10 paleoenvironmental maps)

Rijks, E.J.H. (1981)- Baram Delta geology and hydrocarbon occurrence. Bull. Geol. Soc. Malaysia 14, p. 1-18.
(online at: www.gsm.org.my/products/702001-101200-PDF.pdf)
(Baram Delta thoroughly explored, classic delta province, containing bulk of Sarawak oil reserves. With 11 oil fields, 2 gas fields, one onshore (Miri, 1910). Delta depocenter developed in Late Eocene and from early M Miocene onward characterized by multiple regressive phases of sedimentation. Tectonic interaction of N-hading growth faults and NE-SW trending latest Miocene folds)

Robinson, K. (1984)- Assessment of undiscovered recoverable petroleum resources in Tertiary sedimentary basins of Malaysia and Brunei. U.S. Geol. Survey (USGS), Open File Rept. 84-328, p. 1-19.
(online at: http://pubs.usgs.gov/of/1984/0328/report.pdf)
(In W Malaysia, commercial discoveries of oil and gas only in Malay Basin. Geothermal gradients moderate to high (3.5°F/100' in N of basin in Thai waters, to 2°F/100' at S end of basin in Malaysian waters). N part of basin tends to be gas prone, S part both oil and gas prone. In E Malaysia and Brunei discoveries in Balingian, C Luconia, and Baram Delta Provinces of Sarawak Basin, and in Sabah Basin. Balingian, Baram Delta and Sabah Basin primarily oil prone. Geothermal gradients from rel. high 2.3°F/100' in Balingian Province to low 1.4°F/100' and 1.75°F/100' in Baram Delta and Sabah Basin. C Luconia essentially gas prone, with geothermal gradient 2.4°F/100'. Gas contained in carbonate platform build-ups and large pinnacle structures)

Robinson, K. (1985)- Assessment of undiscovered conventionally recoverable petroleum resources in Tertiary sedimentary basins of Malaysia and Brunei. Bull. Geol. Soc. Malaysia 18, p. 119-131.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1985005.pdf)
(Modified from Robinson (1984). Undiscovered petroleum resources assessment suggests mean 8 billion B Oil and 80 TCF gas remaining to be discovered in Malaysia and Brunei)

Robinson, K., P. Baltensperger, A. Thomas & S. Noon (2009)- The Middle Miocene unconformity (MMU) and globigerinid sands in deepwater Sarawak. In: Programme and abstracts Petroleum Geology Conf. Exh., Kuala Lumpur 2009, Geol. Soc. Malaysia, Paper 17, 3p. *(Abstract only)*
(online at: http://geology.um.edu.my/gsmpublic/PGCE2009/Draft/Old/Geology%20Papers%20v.0.1.pdf)
(Talang 1 well gas in planktonic foraminifera sands of early M Miocene age (N8, 16.1- 16.3 Ma Sr age), immediately above 'Mid-Miocene angular unconformity', on flank of rotated fault block. Underlying "Mid Miocene unconformity" dated as Early Miocene (zone N6) in age with Sr Isotope age of 18.5-19.0 Ma)

Roe, F.W. (1954)- Outline of the geology of British Borneo. Annual Report Geological Survey Dept., British Territories in Borneo, 1954, Kuching, p. 6-22.

Roe, F.W. (1955)- Radioactive age determinations of West Sarawak igneous rocks. Annual Report Geological Survey Dept., British Territories in Borneo, 1955, Kuching p. 76-77.
(Klompe 1962: Granites from NW Borneo radiometrically dated as 185 and 210 Ma, although Roe and Haile believed these granites were emplaced in late Permian- E Triassic and E Permian - late Carboniferous)

Roe, F.W. (1957)- Sketch map showing the geology of Borneo, scale 1:2000,000. Annual Report Geological Survey Dept., British Territories in Borneo, 1957, Kuching, p.
(map online at: https://openresearch-repository.anu.edu.au/handle/1885/107974)

Roe, F.W. (1964)- The geological relationship between Mt Kinabalu and neighbouring regions. Proc. Royal Society (London), B, 161, 982, p. 49-56.
(Mt Kinabalu in Sabah 13,455' high. Main peaks granodiorite, intruded across two areas of ultrabasic rocks. Recent radiometric dates by Snelling on biotite 9 ± 2 Ma and 1.3 ± 0.7 Ma. Sundaland rocks may extend into Sabah: biotite hornfels in Segama Valley dated as 160 ± 8 Ma (E Jurassic) age of metamorphism)

Ronghe, S. & S. Pambayuning (2002)- Depth-induced impedance variations in reservoir sands; implications for predicting lithology and fluid distributions offshore Brunei Darussalam. The Leading Edge 21, p. 388-393.
(On the use of seismic impedance to delineate extent of hydrocarbon-bearing sand reservoirs)

Roohi, G. (1994)- Biostratigraphy and palaeoecology of the Subis limestone, Sarawak, East Malaysia. M.Sc Thesis University of Malaya, Kuala Lumpur, p. 1-168. *(Unpublished)*
(Early Miocene Subis Limestone of Sarawak. With Niah caves, 65 km SW of Miri)

Roohi, G. (1998)- Biostratigraphy and paleoecology of the Subis Limestone (Early Miocene) Sarawak, East Malaysia and correlation with the Neogene of the Indus Basin, Pakistan. Pakistan J. Hydrocarbon Research 10, p. 81-104.

Roslim, A., A. Briguglio, L. Kocsis, S. Coric & H. Gebhardt (2019)- Large rotaliid foraminifera as biostratigraphic and palaeoenvironmental indicators in northwest Borneo: an example from a late Miocene section in Brunei Darussalam. J. Asian Earth Sci. 170, p. 20-28.
(Outcrop of Ambug Hill, E of Tutong, with 9.5 m clay- and fossil-rich Late Miocene marine sequence. With 50 foram taxa, dominated by two rotaliid species: Cavarotalia annectens and Heterolepa dutemplei)

Rutten, L. (1915)- Studien uber Foraminiferen aus Ost-Asien, 9. Tertiare Foraminiferen von den Inseln Balambangan und Banguey, nordlich von Borneo. Sammlungen Geol. Reichs-Museums Leiden 10, p. 11-18.
(online at: www.repository.naturalis.nl/document/552375)
('Studies on foraminifera from East Asia, 9. Miocene and Eocene larger forams from Balambangan and Banguey islands, North of British Borneo'. M Miocene marls with Lepidocyclina angulosa, Cycloclypeus annulatus, Oligocene with Nummulies fichteli, Eocene with Orthophragmina (= Discocyclina), etc., collected by Hotz from two islands N of Sabah, Balambangan and Banguey (= Banggi))

Rutten, L. (1921)- Over den ouderdom der Tertiaire oliehoudende afzeetingen van Klias-schiereiland en Poeloe Laboean (Noordwest Borneo). Verslagen Kon. Akademie Wetenschappen, Amsterdam, 29, p. 1140-1149.

('On the age of the Tertiary oil-bearing deposits of the peninsula of Klias and Pulu Labuan'. Dutch version of Rutten (1921) below)

Rutten, L. (1921)- On the age of the Tertiary oil-bearing deposits of the peninsula of Klias and Pulu Labuan (N.W. Borneo). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 23, 2, p. 1142-1150.
(online at: www.dwc.knaw.nl/DL/publications/PU00014767.pdf)
(Samples from Klias Peninsula and Klias island off N Borneo with E-M Miocene larger forams. Recognizes 'stupendous uplift' of Central Borneo, generating huge volumes of Neogene clastics in E, SE and NW. In Sangkulirang area, E Borneo, Neogene deposits more pelagic to East, 'pointing to an old marine territory in Makassar Strait'. Oil-producing beds of Tarakan island field are of Tertiary h age (Plio-Pleistocene))

Rutten, L. (1925)- Over fossielhoudende Tertiaire kalksteenen uit Britsch Noord Borneo. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek Memorial Volume), p. 415-428.
('On fossiliferous Tertiary limestones from British North Borneo'. Kudat Peninsula N of Kinabalu Eocene limestones with Discocyclina, Spiroclypeus and Pellatispira, but some samples with younger Lepidocyclina)

Ryall, P.J.C. & D. Beattie (1996)- A gravity high in Darvel Bay. In: G.H. Teh (ed.) Petroleum geology conference, Kuala Lumpur 1995, Bull. Geol. Soc. Malaysia 39, p. 113-122.
(online at: www.gsm.org.my/products/702001-100902-PDF.pdf)
(Gravity survey along coastlines and on islands of Darvel Bay shows broad WNW-striking gravity high of 60 mgal, with maximum on S coast of Pulau Sakar, suggesting extensive ultramafic body beneath Darvel Bay)

Sadikun, S. (1997)- Some quantitative studies on wireline logs of the Baram Delta Field. Bull. Geol. Soc. Malaysia 41, p. 139-150.

Said, U., M.R. Umor & A. Jantan (1996)- On the lowermost palynomorphs assemblage in the Kayan Sandstone from Gunung Senggi, Bau, Sarawak. Warta Geologi (Newsl. Geol. Soc. Malaysia). 22, 3, p. 244.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1996003.pdf)
(Abstract only. Kayan Sst overlies Cretaceous Pedawan Fm with slight angular unconformity in area N of Bau, W Sarawak. At Gunung Senggi basal rocks are N and NW-dipping shale and sandstone of Pedawan Fm. Towards top arenaceous rocks of Kayan Sst dip in opposite direction and contain well-preserved palynomorphs dominated by Balmeisporites holodictyus, Dictyophyllidites equiexinus, Alisporites similis, also Araucariacites australis, Polypodiaceoisporites retirugatus, Reticolpites sarawakensis, etc. Assemblage assignable to Senonian Rugubivesiculites zone of Muller (1968). Palynomorphs from Gunung Senggi considered to be lowermost palynological zone of Kayan Sst)

Sakamoto, T. & T. Ishibashi (2002)- Paleontological study of fusulinoidean fossils from the Terbat Formation, Sarawak, East Malaysia. Mem. Fac. Science, Kyushu University, Ser. D, Earth Planetary Sci. 31, 2, p. 29-57.
(U Carboniferous- basal Permian Terbat Fm limestone, chert and shale, S of Kuching, W Sarawak, with diverse fusulinid foram assemblage of M Moscovian (lower U Carboniferous)- Asselian (basal Permian) age. (29 species, 18 genera: Millerella, Ozawainella, Pseudostaffella, Fusiella, Schubertella, Boultonia, Profusulinella, Fusulinella, Beedeina, Fusulina, Quasifusulina, Darvasites, Chusenella, Rugosofusulina, Paraschwagerina Triticites, Sphaeroschwagerina). Correlates with faunas from E Tethys, including Thailand, S China, Japan)

Salim, N.F.B., H.A.B.M. Idris, D.A.N.B.A. Bakar, K. Ogawa, T.Q. Tan & J. Jong (2015)- Jelawat-1ST1 post-well analysis revisited & the main reason for failure in finding effective hydrocarbon accumulation. In: Asia Petroleum Geosc. Conf. Exh. (APGCE), Kuala Lumpur, 25867, 5p. *(Extended Abstract)*
(Jelawat-1ST1 2004 wildcat tested anticline in Bunguran Trough fold-thrust belt, deepwater Rajang Delta. Late Miocene Cycle V turbidites with high amplitude anomalies deepest objective, but only tight reservoirs with minor gas shows. No other effective reservoirs in overlying section. Modelling suggests adequate hydrocarbon generation and migration, but ineffective regional top seal)

Salleh, Z., A.S.A. Jamil, K.R. Mohamed & C.A. Ali (2008)- Hydrocarbon generation potential of the coals and shales around the Eucalyptus campsite area, Maliau Basin, Sabah. Bull. Geol. Soc. Malaysia 54, p. 147-158.
(Shales and coals of M Miocene Kapilit Fm, Maliau Basin, SE Sabah, good- very good hydrocarbon generating potential. Vitrinite Reflectance of most samples 0.57- 0.70%, indicating early oil generation stage)

Saller, A. & G. Blake (2003)- Sequence stratigraphy and syndepositional tectonics of Upper Miocene and Pliocene deltaic sediments, Offshore Brunei Darussalam. In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia-sedimentology, stratigraphy and petroleum geology, SEPM Spec. Publ. 76, p. 219-234.
(Two main Late Miocene-Pleistocene delta systems on Brunei shelf, Champion and Baram. 'Fourth-order' sequences of 100-200k years average duration, probably close to 100 ky Milankovich frequency)

Sandal, S.T. (ed.) (1996)- The geology and hydrocarbon resources of Negara Brunei Darussalam, 1996 Revision. Brunei Shell Petroleum Co. and Brunei Museum, Bandar Seri Begawan, Syabas, p. 1-243.
(summary online at: www.bsp.com.bn/panagaclub/pnhs_old/geology/web/…)
(Standard work on geology and oil-gas of Brunei, mainly by Brunei Shell geologists. This is updated version of James et al. (1984) book)

Sanderson, G.A. (1966)- Presence of Carboniferous in West Sarawak. American Assoc. Petrol. Geol. (AAPG) Bull. 50, 3, p. 578-580.
(Preliminary note on Terbat Limestone Fm, Upper Sadong valley, W Sarawak. With three different fusulinid assemblages, probably Late Carboniferous and Early Permian in age. Not much detail)

Sanudin, H.T. & T.H. Tan (1986)- The Sabah Melange- a stratigraphic unit? Warta Geologi 12, 2, p. 58-59.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1986002.pdf)
(Outcrops of "Chert-Spilite Formation" in Sabah invariably associated with sheared ophiolitic rocks and olistholiths. Outcrops of chert and spilite in melanges are broken blocks of ophiolite suites. Sedimentary formations with chert and spilite, all having features of melange, should be grouped as one mappable body and named 'Sabah Melange')

Sanudin, H.T., B.G. Muhammad, J.J. Pereira & C.J. Quek (1992)- Occurrence of melange in the Bengkoka Peninsula, Sabah. Warta Geologi 18, 1, p. 1-7.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1992001.pdf)

Sapawi, A., M.L. Anwar & E. Seah P.K. (1991)- Geochemistry of selected crude oils from Sabah and Sarawak. Bull. Geol. Soc. Malaysia 28, p. 123-139.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991007.pdf)
(Oils from 15 offshore Sabah and Sarawak fields three different types (waxy, normal non-waxy and biodegraded). Biomarkers show sourced from landplant-derived organic matter. High pristine/phytane ratio over 3.0 suggests source rocks probably from peat swamp environments)

Sapin, F. (2010)- Impact du couple erosion/sedimentation sur la structuration dôun prisme dôaccretion: lôexemple du prisme NO Borneo: approche geologique, sismique et thermique. Ph.D. Thesis Universite Paris 6, p. 1-254. *(Unpublished)*
('Impact of erosion / sedimentation on the structural configuration of an accretionary wedge: example of the NW Borneo Wedge; geological, seismic and thermal approach')

Sapin, F., I. Hermawan, M. Pubellier, C. Vigny & J.C. Ringenbach (2013)- The recent convergence on the NW Borneo Wedge- a crustal-scale gravity gliding evidenced from GPS. Geophysical J. Int. 193, 2, p. 549-556.
(online at: https://gji.oxfordjournals.org/content/193/2/549.full.pdf+html)
(Frontal fold-and-thrust belt in deep water NW Borneo Wedge ('toe-thrusts') traditionally considered as inactive and attributed to thin-skin gravity-driven Baram and Champion deltas. However, some evidence of convergence and compression from GPS velocities and stress field from borehole analysis between NW Borneo and Sunda Plate (Dangerous Grounds). Recent compression on frontal FTB is result of orogenic collapse of NW Borneo in Sabah- N Sarawak since 1.9 Ma, after lithospheric convergence ceased at 3.6 Ma)

Sapin, F., M. Pubellier, A. Lahfid, D. Janots, C. Aubourg & J.C. Ringenbach (2011)- Onshore record of the subduction of a crustal salient: example of the NW Borneo wedge. Terra Nova 23, 4, p. 232-240.
(Subducted horst in NW Borneo Wedge evidenced by strong bend of structural trend of Rajang-Crocker Belt and area with 'hummocky', texture representing dismantled packages of sediments, also some large back and out-of-sequence thrusts in internal zones and complex folds rooted on shear structures in accretionary wedge)

Sapin, F., M. Pubellier, J.C. Ringenbach & T. Rives (2011)- The Brunei fold-and-thrust belt: tectonically- or gravity-driven? AAPG Hedberg Conf., Tirrenia 2009, 6p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/abstracts/pdf/2011/2009hedberg-italy/abstracts/ndx_sapin.pdf)
(NW Borneo Margin commonly considered as inactive because of absence of seismicity, but recent GPS studies (Socquet 2003, Simons et al. 2007) show relative motion between NW Borneo coastline and fixed Sunda Plate of 6 mm/yr, attributed to convergence in NW Borneo Trench. Champion deltaic province prograded over active fold-thrust belt. Brunei deepwater fold-and-thrust belt active since M Miocene, but mainly gravity-driven since Late Miocene, with lithospheric convergence accommodated in Brunei onshore area)

Sapin, F., J.C. Ringenbach, T. Rives & M. Pubellier (2012)- Counter-regional normal faults in shale-dominated deltas: origin, mechanism and evolution. Marine Petroleum Geol. 37, p. 121-128.
(On 'counterregional normal faults' on seismic data from Tertiary Niger delta and Brunei Champion- Baram Basin delta system. Faults initiated on apex of early folds, as shelf-break propagated seaward)

Sarkar, S.S. (1973)- The extension of Tethyan Lower Cretaceous to Sarawak, East Malaysia. Geol. Soc. Malaysia Newsl. 45, p. 4-5.
(online at: www.gsm.org.my/products/702001-101595-PDF.pdf)
(U Tithonian- Lower Valanginian ammonites Berriasiella, Micracanthoceras and Turmanniceras from basal Pedawan Fm shales (overlying Bau Lst). Tethyan-affinity assemblage. No illustrations. Locality clarified in Hashimoto et al. (1975) as 19 mile marker on Serian Road)

Saw, J.V.M., A.W. Hunter, K.G. Johnson & A.H.B. Abdul Rahman (2019)- Pliocene corals from the Togopi Formation of the Dent Peninsula, Sabah, northeastern Borneo, Malaysia. Alcheringa 43, 2, p. 291-319.
(Togopi Fm of Dent Peninsula near E coast of Sabah with Plio-Pleistocene sediments with 28 species of Pliocene corals from quarries previously dated as 4.5-3.4 Ma, 21 of which extant species. Rel. high diversity of corals casts doubt on impact of Plio-Pleistocene extinction previously reported from C Indo-Pacific)

Schaar, G. (1976)- The occurrence of hydrocarbons in overpressured reservoirs of the Baram Delta (Offshore Sarawak, Malaysia). Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 163-169.

Schaub, H.P. & A. Jackson (1958)- The northwestern oil basin of Borneo. In: L.G. Weeks (ed.) Habitat of Oil, American Assoc. Petrol. Geol. (AAPG), Spec. Publ. 18, p. 1330-1336.
(Shell paper on oil province of North Borneo, Sarawak and Brunei, where oil was first found on Labuan island in 1866. Commercial production from Upper Miocene- Lower Pliocene clastics)

Scherer, F.C. (1980)- Exploration in East Malaysia over the past decade. In: M.T. Halbouty (ed.) Giant oil and gas fields of the decade 1968-1978, American Assoc. Petrol. Geol. (AAPG), Mem. 30, p. 423-440.
(N Borneo exploration resulted in discovery of 2 large oil fields, 6 large gas fields and several smaller oil fields. Descriptions of giant fields Baronia (1967- Baram Delta), Samarang (1972- S Sabah) and Central Luconia gas fields (1968-1975, C Sarawak, mainly in M-L Miocene carbonates))

Schlee, D., P.H. Chan, J. Dorani & F.K. Voong (1992)- Riesenbernsteine in Sarawak, Nord-Borneo. Lapis 17, 9, p. 13-23.
('Giant amber from Sarawak'. Large (up to 3.5m long, >10cm thick) slabs of fossil resin (amber), associated with coaly beds in Miocene Nyala Fm)

Schmidt, C. (1904)- Uber die Geologie von Nordwest-Borneo und eine daselbst enstandene ñNeue Inselò. Gerlands Beitrage Geophysik 7, 1, p. 127-136.
('On the geology of NW Borneo and a newly-formed island'. Discussion of folded Tertiary around Brunei Bay, Klias Peninsula and Labuan Island and 'birth' of new mud diapyr island off W side of Klias Peninsula in 1897)

Schmidtke, E. (1988)- Paleomagnetic study of the Sundaland continental massif: implications for Southeast Asian tectonics. M.A. Thesis, University of California, Santa Barbara, p. 1-101. *(Unpublished)*

Schmidtke, E.A., M.D. Fuller & R.B. Haston (1990)- Paleomagnetic data from Sarawak, Malaysian Borneo, and the late Mesozoic and Cenozoic tectonics of Sundaland. Tectonics 9, 1, p. 123-140.
(Paleomagnetic data from 231 samples of W Sarawak U Jurassic-Miocene show increasing CCW declination deflection with age. Samples from mid-Cretaceous Orbitolina limestone near Pedawan ~90° CCW rotation. Oligo-Miocene intrusions CCW rotations of 52° (26 Ma) and 22° (17 Ma). Sites in U Eocene- Oligocene Silantek Fm ~41° CCW rotation. CCW rotation extends into Malay Peninsula, suggesting W Borneo and Malay Peninsula stable block in latest Cretaceous-Cenozoic, with up to 108° CCW rotation. Cenozoic rotation also possibly between Indochina and Borneo. Sense of rotation does not support 'propagating extrusion tectonics' model of Tapponnier et al. (1982, 1986) for Cenozoic of Sundaland)

Schreurs, J. (1997)- Geology of Brunei deltas, exploration status updated. Oil and Gas J. 95, 31, p. 76-80.
(Summary of Brunei petroleum geology)

Schreurs, J. (1997)- The petroleum geology of Negara Brunei Darussalem; an update. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc., p. 751-766.
(Summary of Sandal et al. (1996) Shell book on geology and hydrocarbons of Brunei. Brunei in Neogene Baram Delta Province. Three main delta phases in overall regressive system: (1) Meligan Delta (Proto-Champion, early Baram Delta), pre-M Miocene, only preserved as erosional remnants in uplifted hinterland; (2) Champion Delta (E Baram Delta), axis of progradation along Brunei- Sabah border, M-Late Miocene (14.2-7.4 Ma); (3) Baram Delta, main axis in Brunei's W Offshore, E Pliocene (5.2 Ma) - Recent)

Schuh, W.D. (1993)- Geology, geochemistry, and ore deposits of the Bau gold mining district, Sarawak, Malaysia. Ph.D. Thesis University of Arizona, p. 1-395.
(online at: http://arizona.openrepository.com/arizona/handle/10150/187561)
(Study of ore deposits and structural- tectonic setting of Bau area, W Sarawak. In Late Triassic, Bau was in island arc- back-arc basin environment (Serian andesitic volcanics). E Jurassic deformation and uplift followed by active margin development with subduction of W Pacific oceanic plate under NW Kalimantan block. Erosion of Serian Volcanics produced turbidites of Latest Jurassic- Late Cretaceous Pedawan Fm. Coeval development of rudist patch reefs on unstable shelf edge of overriding plate until Cenomanian. Early Tertiary molasse deposition ended with M Eocene event. Crustal-scale dextral strike-slip fault system (Bau Trend) developed during M Miocene post-subduction regional extension. Principal gold mineralization in M-L Miocene (12-10 Ma), when I-type, calc-alkaline granodiorites intruded along Bau Trend and intersection with ENE fracture zones. Central Bau underlain by ENE trending plutonic body at depth)

Schulz-Rojahn, J.P., P. Walshe & I. Suhaili (2004)- Champion West field development, Brunei: a study in seal, compartmentalisation and fluid fill uncertainty. In: Proc. SPE Asia Pacific Oil and Gas Conf. Exh., Perth 2004, 13p.
(Paper addressing management of contact uncertainty in Champion field, with common thin, multi-layered, intensely faulted sandstone reservoirs with complex fluid fill distributions)

Schwing, H.F., S. Algar, P. Crevello & J. Roestenburg (2005)- Mass transport complexes of the Northwest Sabah deepwater: characterisation from seismic and borehole data. Proc. 2005 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore. 1p. *(Abstract only)*

(Mass transport complexes make up significant part of sediments in deepwater Sabah Trough off NW Borneo. MTCs vary in scale from 100s of m wide/ 10s of m thick to amalgamated bodies of 100s of km2 with thicknesses of 100s of m. Both debritic facies and coherent slump facies recognised)

Shoup, R.C. (2007)- The relationship between recovery efficiency and depositional setting in a deltaic plain environment. AAPG Ann. Conv., Long Beach 2007, Search and Discovery Art. 40240, p. 1-17.
(online at: www.searchanddiscovery.com/documents/2007/07040shoup/images/shoup.pdf)
(Study of Temana Field, Balingian Province, offshore Sarawak, with >100 Oligo-Miocene deltaic reservoir compartments. Channel sandstone reservoirs in estuarine settings where connected laminated overbank deposits provide aquifer support have recovery efficiencies up to 50%. Channel sands without connected overbank deposits have recovery efficiency of 30%.)

Shuib, M.K. (2003)- A dextral strike-slip model for the Miri Structure. Bull. Geol. Soc. Malaysia 47, p. 95-103.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003a13.pdf)
(Miri Field structure result of interplay between compression and tensional wrenching (NNE-trending dextral strike-slip))

Siddiqui, N.A., M.J.Mathew, M. Ramkumar, B.S. M. Usman, A.H.A. Rahman, M.A.K. El-Ghali et al. (2020)- Sedimentological characterization, petrophysical properties and reservoir quality assessment of the onshore Sandakan Formation, Borneo. J. Petroleum Science and Engineering 186, 106771, p.
(Analysis of well-exposed M Miocene- Pliocene shallow-marine sandstone deposits of Sandakan Fm, N Borneo)

Siddiqui, N.A., A.H.A. Rahman, C.W. Sum, M.J. Mathew & D. Menier (2014)- Facies characteristics and static reservoir connectivity of some siliciclastic Tertiary outcrop successions in Bintulu and Miri, Sarawak, East Malaysia. AAPG Int. Conf. & Exhib., Istanbul 2014, Search and Discovery Art. 51035, 21p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2014/51035siddiqui/ndx_siddiqui.pdf)
(Outcrop analysis and characterization of sandstones in Miocene Nyalau and Miri Fms marginal- shallow marine succession in Bintulu and Miri area, Sarawak)

Siddiqui, N.A., A.H.A. Rahman, C.W. Sum, M.J. Mathew & D. Menier (2016)- Onshore sandstone facies characteristics and reservoir quality of Nyalau Formation, Sarawak, East Malaysia: an analogue to subsurface reservoir quality evaluation. Arabian J. Science Engineering, 41, 1, p. 267-280.
(Sedimentology of shallow marine sandstones of Nyalau Fm (Oligocene-M Miocene) outcrops, Bintulu area)

Siddiqui, N.A., A.H.A. Rahman, C.W. Sum & M. Murtaza (2017)- Sandstone facies reservoir properties and 2D-connectivity of siliciclastic Miri Formation, Borneo. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 581-595.

Siddiqui, N.A., M. Ramkumar, A.H.A. Rahman, M.J. Mathew, M. Santosh, C.W. Sum & D.Menier (2019)- High resolution facies architecture and digital outcrop modeling of the Sandakan Formation sandstone reservoir, Borneo: implications for reservoir characterization and flow simulation. Geoscience Frontiers 10, 3, p. 957-971.
(online at: www.sciencedirect.com/science/article/pii/S1674987118301087)
(Digital imaging and reservoir quality analysis of 750m outcrop of Late Miocene or younger, shallow marine-deltaic Sandakan Fm, Sabah)

Sidek, A, U. Hamzah & R. Junin (2015)- Seismic facies analysis and structural interpretation of deepwater NW Sabah. Jurnal Teknologi (UTM, Sciences & Engineering) 75, 1, p. 115-125.
(online at: www.jurnalteknologi.utm.my/index.php/jurnalteknologi/article/view/3677/3373)

Sim, D. & G. Jaeger (2004)- Tectonostratigraphy and trap styles of the half-graben sub-province in West Luconia, offshore Sarawak. In: Petroleum Geology Conf. Exhib. (PGCE) 2003, Kuala Lumpur, Bull. Geol. Soc. Malaysia 49, p. 107-110.
(online at: http://www.gsm.org.my/products/702001-100559-PDF.pdf)

(Half-Graben sub-province in W Luconia, offshore Sarawak, characterised by NNW trending, SW-dipping extensional faults, creating sub-basins within half-grabens during M Miocene. Syn-rift carbonates at base of half-graben drowned as result of rapid graben subsidence and influx of clastics. M Miocene fluviomarine sediments filled half-grabens. Rifting ended at start of Late Miocene. Post-rift sediments two main hiatuses: U Miocene (~10.6 Ma) and Lower Pliocene (~5.6 Ma). Miocene-Pliocene boundary last major deformation, with faulted anticlinal structures in NW area, attributed to wrench-related inversion of extensional faults)

Sia, S.G. & W.H. Abdullah (2011)- Concentration and association of minor and trace elements in Mukah coal from Sarawak, Malaysia, with emphasis on the potentially hazardous trace elements. Int. J. Coal Geology 88, 4, p. 179-193.
(On hazardous elements in coal from Mukah field, which is enriched in As, Cr, Cu, Pb, Sb, Th, and Zn. Field with 12 coal seams in U Miocene Balingian Fm (E Miocene?; see Sia et al. 2014), which is unconformably overlain by E Pliocene Begrih Fm. Balingian Fm with brackish water forams Ammodiscus, Glomospira, Haplophragmoides, Trochammina)

Sia, S.G. & W.H. Abdullah (2012)- Geochemical and petrographical characteristics of low-rank Balingian coal from Sarawak, Malaysia: its implications on depositional conditions and thermal maturity. Int. J. Coal Geology 96-97, p. 22-38.
(Geochemical and coal petrographical analyses of low-rank U Pliocene Balingian coal from Sarawak. Characterised by high moisture, low ash and low sulphur contents. Low ash and sulphur content, together with lack of epiclastic partings indicate coal deposition in ombrotrophic raised bogs)

Sia, S.G. & W.H. Abdullah (2012)- Enrichment of arsenic, lead, and antimony in Balingian coal from Sarawak, Malaysia: modes of occurrence, origin, and partitioning behaviour during coal combustion. Int. J. Coal Geology 101, p. 1-15.
(Balingian Coal from U Pliocene Liang Fm in Sarawak highly enriched in As, Pb and Sb and vaporized and released into atmosphere during coal combustion. Enrichment may be related to nearby Sb-As mineralization. Liang Fm unconformably overlies Lower Pliocene Begrih Fm in N and Eocene Belaga Fm in S)

Sia, S.G., W.H. Abdullah, Z. Konjing & A.M. Koraini (2014)- The age, palaeoclimate, palaeovegetation, coal seam architecture/mire types, paleodepositional environments and thermal maturity of syn-collision paralic coal from Mukah, Sarawak, Malaysia. J. Asian Earth Sci. 81, p. 1-19.
(online at: https://umexpert.um.edu.my/file/publication/00004125_105774.pdf)
(Mukah coal in Balingian Fm previously assigned Late Miocene age, but abundance of Casuarina pollen associated with Dacrydium, Stenochlaena palustris, Florschuetzia levipoli and Stenochlaena areolaris indicate palynozone PR9, Early Miocene, i.e. during collision between Luconia- Dangerous Grounds Block with Borneo. Coal with common detrohuminite without enrichment of liptinite group macerals. Low sulphur content and evidence from palynomorphs in seams show coal was deposited in freshwater mires with little or no marine influence. Fauna present in host rock formation suggests brackish-water deposition)

Sia, S.G., W.H. Abdullah, Z. Konjing & J. John (2014)- Floristic and climatic changes at the Balingian Province of the Sarawak Basin, Malaysia, in response to Neogene global cooling, aridification and grassland expansion. Catena 173, p. 445-455.
(Increased seasonality or reduced rainfall as result of Neogene global cooling and aridification in onshore Balingian Province, but everwet climates persisted. Flora in region changed from predominantly Kerangas forest in Ey Miocene to species-rich peat swamp forest in Pliocene)

Sidek, M.A.b.M. & U. Hamzah (2018)- Structural analysis of Northwest Sabah basin by 2D reconstruction of seismic sections. J. Geoscience Engineering Environm. Technol. (JGEET) 3, 2, p. 69-76.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/1413/1043)
(Fold-thrust-foldbelt in NW Sabah basin affecting M Miocene- Recent deposits in deformational zone between Sunda Shelf, SuluSea and S China Sea. Restoration of M Miocene- Recent packages. NW-SE compression, with total shortening >14.7 km in SW to 0.9 km in NE. Shortening decreasing towards Pliocene-younger deposits)

Sidek, A., U. Hamzah & R. Junin (2015)- Seismic facies analysis and structural interpretation of deepwater Sabah. Jurnal Teknologi (Sciences & Engineering) 75, 1, p. 115-125.
(online at: www.jurnalteknologi.utm.my/index.php/jurnalteknologi/article/view/3677/3373)
(Deepwater NW Sabah and Sabah Trough seismic shows 8 Paleocene- Recent seismic stratigraphic units, 6 seismic facies and 5 sequence boundaries)

Sidek, A., U. Hamzah, A.R. Samsudin, M.H. Arifin & R. Junin (2015)- Deep crustal profile across NW Sabah Basin: integrated potential field data and seismic reflection. ARPN J. Engineering Applied Sciences 11, 3, p. 1401-1411.
(online at: www.arpnjournals.org/jeas/research_papers/rp_2016/jeas_0216_3513.pdf)
(Crustal profile model across Deepwater Fold and Thrust Belt, Sabah Trough, Dangerous Grounds Province and Thrust Sheet Zone. Formation of half-grabens and normal faults in Dangerous Grounds which subducted beneath Sabah Trough. Moho depth (top upper mantle) range 26-33km)

Simmons, M.D., M.D. Bidgood, P. Brenac, P.D. Crevello, J.J. Lambiase & C.K. Morley (1999)- Microfossil assemblages as proxies for precise palaeoenvironmental determination- an example from Miocene sediments from north-west Borneo. In: R.W. Jones & M.D. Simmons (eds.) Biostratigraphy in production and development geology, Geol. Soc., London, Spec. Publ. 152, p. 219-241.
(Palynomorphs and foraminifera allow distinction of paleoenvironments where core is absent in Miocene deltaic-marine clastics formations of Brunei-Sabah)

Simon, Khor, M. Hakif & M.P.J. Barbeito (2014)- Sedimentology and stratigraphy of the Miocene Kampung Opak limestone (Sibuti Formation), Bekenu, Sarawak. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 45-53.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014005.pdf)
(Kampung Opak Limestone in Sibuti Fm, onshore Sarawak, 44m thick wackestone-mudstones with Miogypsina and marls with M Miocene (N9- N13) planktonic foraminifera, probably representing distal margins of carbonate platform)

Sleumer, B.H.G. (1978)- The Subis Limestone Complex- Sarawak, Malaysia. In: Proc. Carbonate Seminar, Indon. Petroleum Assoc., Jakarta 1976, p. 120-121. *(Abstract only)*
(Subis Lst, 100 km S of Miri, ~1000' thick isolated carbonate buildup with caves in Sarawak. Age early E Miocene (larger foram zone Te5; Eulepidina+ Miogypsina). Contemporaneous Setap Fm shales belong to G. binaiensis planktonic foram zone)

Sorkhabi, R. (2010)- History of oil- Miri 1910. GeoExpro 7, 2, p. 44-49.
(1910 oil discovery in U Miocene Miri Fm of N Sarawak by Anglo-Saxon Petroleum (Royal Dutch/Shell Group) in area of oil seeps. Peak production reached 15,211 BOPD in 1929. Total production by end-1940 ~7 MBO; 597 wells had been drilled in the field. Field closed in 1972)

Sorkhabi, R. (2011)- Kota Kinabalu, Sabah; a turbidite paradise. GEO ExPro 8, 5, p. 52-56.

Sorkhabi, R. & S. Hasegawa (2005)- Fault zone architecture and permeability distribution in the Neogene clastics of Northern Sarawak (Miri Airport road outcrop), Malaysia. In: R. Sorkhabi & Y. Tsuji (eds.) Faults, fluid flow and petroleum traps, American Assoc. Petrol. Geol. (AAPG), Mem. 85, p. 139-151.

Sperber, C.M. (2009)- The thermotectonic development of Mount Kinabalu, Sabah, Malaysia. Ph.D. Thesis Royal Holloway, University of London, p. *(Unpublished)*
(Mount Kinabalu is 4095m high post-orogenic granitic intrusion, emplaced far from active plate boundaries at ~8 Ma. Thermochronological study suggests exhumation rates of ~0.40 mm/yr for central zone and ~0.60 mm/yr for marginal zone of igneous body)

Staub, J.R., H.L. Among & R.A. Gastaldo (2000)- Seasonal sediment transport and deposition in the Rajang River delta, Sarawak, East Malaysia. Sedimentary Geology 133, p. 249-264.

(Description of sedimentary processes in Rajang Delta, NW Borneo, and variations in deposition between wet and dry seasons)

Staub, J.R. & J.S. Esterle (1993)- Provenance and sediment dispersal in the Rajang River delta/ coastal plain system, Sarawak, East Malaysia. Sedimentary Geology 85, p. 191-201.
(Rajang delta in embayment formed by folded Mesozoic and Cenozoic sediments of C Borneo Massif. Alluvial valley floodplain, abandoned tidally flushed delta plain and actively accreting rectilinear delta/coastal plain. 50-80% of surface area covered by peat 1-20m thick. Margins of thick, domed peat deposits interfinger with and are overlain by root-penetrated siliciclastic sediments)

Staub, J.R. & J.S. Esterle (1994)- Peat-accumulating depositional systems of Sarawak, East Malaysia. Sedimentary Geology 89, p. 91-106.
(Prograding coastal depositional systems of Sarawak contain domed peat-accumulating environments in which low-ash, low-sulfur peats are being deposited in areas of clastic sedimentation. Depositional systems are as large as 11,400 km2, individual peat deposits >20m thick and 1000 km2 in area. Basal high-ash, high-sulfur, degraded peats overlain by low-ash, low-sulfur, well preserved peats)

Staub, J.R. & R.A. Gastaldo (2003)- Late Quaternary sedimentation and peat development in the Rajang River Delta, Sarawak, East Malaysia. In: F.H. Sidi et al. (eds.) Tropical deltas of Southeast Asia; sedimentology, stratigraphy, and petroleum geology. Soc. Sedimentary Geology (SEPM), Spec. Publ. 76, p. 71-87.
(Thick, domed peat deposits on Rajang delta tide-influenced alluvial valley and coastal plain. NE-striking shoreline terrace sands along landward margin of delta and coastal plain and gravel outcrops in alluvial valley expression of VIIa/ 125 ka highstand surface. Lignite near present coast at 80m depth represents IIIb highstand surface, indicating 40m of subsidence in last 40 ka. Gravel dominates base of incised-valley fill 10km wide-45m thick and overlain by fining-upward succession with tidally influenced upper part. Interfluve areas in landward half of NE delta plain and adjacent coastal plain with >10m Recent peat deposits on Pleistocene began accumulating between 7.3- 5.8 ka as rate of sea-level rise slowed. Seaward half of NE delta plain, delta front, and prodelta up to 40m thick seaward-thickening wedge, accumulated in last 5 ka, with basal gravel lag over rooted alluvial soil, overlain by delta-front and prodelta clays- silts, delta-front distributary-mouth sands and shoreline sands. Young (<5 ka), thin (<10m) peat on top of wedge in this part of delta plain)

Stauffer, P.H. (1967)- Studies in the Crocker Formation, Sabah. Bull. Geol. Survey Borneo Region 8, p. 1-13.
('The most significant paper on the Crocker Fm'; Hutchison 2005. Paleocene- E Miocene deformed submarine fan system)

Stauffer, P.H. & D.T.C. Lee (1972)- Sedimentology of the Sandakan formation, East Sabah. Geol. Survey of Malaysia, Geol. Papers 1, p. 10-17.

Stephens, E.A. (1956)- The manganese deposits of North Borneo. In: J. G. Reyna (ed.) Symposium sobre yacimientos de manganeso, 4, Asia y Oceanica, Reports 20th Sess. Int. Geological Congress, Mexico, 4, p. 297-312.
(Manganese mineralization in N Borneo associated with radiolarian chert in Paleocene- Lower Eocene cherts and spilites, capped by M Eocene- Miocene sandstone, shale, and limestone. Ore mainly psilomelane and pyrolusite. Manganese probably introduced simultaneously with extrusion of basic lavas, contemporaneous with silicification. Tropical weathering subsequently concentrated manganese)

Stephens, E.A. (1958)- The geology and mineral resources of the Kota Belud and Kudat area, North Borneo, with an account of Taritipan manganese deposits. Geological Survey Dept., British Territories in Borneo, Mem. 5, p. 1-137.
(Kota Belud Kudat region with Chert-Spilite Fm Cretaceous- Early Eocene cherts (with manganese ores in Taritipan district), spilites and related geosynclinal deposits, with intermediate-ultrabasic igneous intrusives. Thick Eocene sands-shales and (mainly N of Kudat) Miocene shallow marine sediments and andesites. Oil seeps near Sikuati)

Stinton, F.C. (1963)- Teleostian otoliths from the Upper Tertiary strata of Sarawak, Brunei and North Borneo. British Borneo Geol. Survey, Annual Report 1962, p. 75-92.
(18 species (14 new) of marine fish otoliths from M-U Miocene- E Pliocene Miri and Seria Fms of Brunei and Sarawak and Togopi Fm of E Sabah)

Straub, K.M. & D. Mohrig (2009)- Constructional canyons built by sheet-like turbidity currents: observations from offshore Brunei Darussalam. J. Sedimentary Res. 79, 1, p. 24-39.
(Seismic examples of Quaternary canyons in 900m of water off Brunei, not formed by erosion, but in net deposition conditions)

Straub, K.M., D. Mohrig & C.Pirmez (2012)- Architecture of an aggradational tributary submarine channel network on the continental slope offshore Brunei Darussalam. In: E. Bradford et al. (eds.) Application of the principles of seismic geomorphology to continental slope and base-of-slope systems: case studies from seafloor and near-seafloor analogues, Soc. Sedimentary Geol. (SEPM) Spec. Publ. 99, p. 13-30.

Suggate, S. (2011)- Provenance of Neogene sandstones of Sabah, Northern Borneo. Ph.D. Thesis, Royal Holloway, University of London, p. 1-441. *(Unpublished)*

Suggate, S. (2011)- Provenance of Neogene sandstones, Sabah, Northern Borneo. In: Conf. Sediment provenance studies in hydrocarbon exploration & production, Geol. Soc., London 2011, p. 32. *(Abstract only)*
(E Miocene Sabah Orogeny deformed/ exposed pre-Neogene rocks in N Borneo (Top Crocker Unconformity) Most Neogene sands compositionally and texturally mature, and recycled from pre-Neogene sediments, ultimately derived from Schwaner Mts and Malay-Thai Tin Belt Granites, with some input from N Borneo ophiolitic basement, and Cenozoic volcanic rocks. Exception is oldest member of E Miocene Kudat Fm, which is immature, with granites and metamorphic rocks of Palawan Microcontinental Block contributing significant amounts of sediment. Jurassic zircon populations indicate S China source. Also garnet composition supports derivation of garnets from Palawan)

Suggate, S.M., M.A. Cottam, R. Hall, I. Sevastjanova, M.A. Forster, L.T. White, R.A. Armstrong, A. Carter & E. Mojares (2014)- South China continental margin signature for sandstones and granites from Palawan, Philippines. Gondwana Research 26, 2, p. 699-718.
(online at: http://searg.rhul.ac.uk/pubs/suggate_etal_2014%20Palawan.pdf)
(Heavy mineral analysis and U-Pb dating of detrital zircons from metasediments and Cenozoic sandstones and U-Pb dating of zircons from Cenozoic granites of N Palawan Continental Terrane and S Palawan Terrane. NPCT metasediments zircons maximum Late Cretaceous depositional age, derived from sediments deposited on S China margin before rifting/ opening of South China Sea. Miocene SPT sandstones with similar heavy mineral assemblages. Palawan Terrane sandstones similar to Lower Miocene Kudat Fm of N Borneo (and different from other Borneo sandstones), suggesting sediment transport from Palawan to Borneo in E Miocene following arc-continent collision. C Palawan granite Eocene age (42Ma). Capoas granite age 13.8-13.5 Ma, with inherited zircon ages implying melting of S China-derived continental crust with Cenozoic rift-related and arc material)

Suggate, S.M. & R. Hall (2013)- Using detrital garnet compositions to determine provenance: a new compositional database and procedure. In: R.A. Scott et al. (eds.) Sediment provenance studies in hydrocarbon exploration and production, Geol. Soc., London, Spec. Publ. 386, p. 373-371.
(Detrital garnet compositions suggest Neogene sandstones of N Sabah derived from metamorphic and igneous garnets from Palawan Block in E Miocene)

Sulaiman, N.B. (2017)- Controls on the geometry and evolution of deep-water fold thrust belt of the NW Borneo. Ph.D. Thesis University of Leeds, p. 1-163.
(online at: http://etheses.whiterose.ac.uk/18877/1/Sulaiman_NB_%20Earth%20and%20Environment_PhD_2017.pdf)

(On the offshore NW Sabah gravity-driven extensional-compressional system. Pulses of M Miocene- Recent proximal uplift started in E (now onshore) part of NW Borneo and increased slope elevation and sediment supply to basin. Shortening resulted in response to gravity spreading of uplifted continental interior)

Swauger, D.A., S.C. Bergman, A.P. Marillo, E.S. Pagado & T. Surat (1995)- Tertiary stratigraphy and tectonic framework of Sabah, Malaysia: a field and laboratory study. In: 8th Regional Conf. Geology Minerals, and Energy Resources of SE Asia (GEOSEA 95), Manila 1995, p. 35-36.

Swauger, D.A., C.S. Hutchison, S.C. Bergman & J.E. Graves (2000)- Age and emplacement of the Mount Kinabalu pluton. Bull. Geol. Soc. Malaysia 44, p. 159-163.
(online at: www.gsm.org.my/products/702001-100753-PDF.pdf)
(Radiometric dates of Mt Kinabalu pluton reflect Middle-Late Miocene igneous cooling history: hornblende 13.7 Ma, biotite 10.3 Ma and zircon 8.8 Ma)

Swinburn, P.M. (1993)- Tectonic styles of the Balingian Province. Warta Geologi 19, 6, p. 269-270. *(Abstract only)*
(Balingian Province off Sarawak bounded to N by more stable C Luconia Province. To W and E are W Balingian and W Baram Lines, both major NW-SE trending lineations, and may represent old transform faults. Deformation in Tertiary times related to periodic movement along major bounding transform faults and opening of S China Sea. Balingian Province 3 sub-provinces: (1) E Balingian, with strong, late Miocene to Pliocene wrench-related deformation; (2) SW Balingian, with Oligocene- E Miocene wrench-related deformation; (3) NW Balingian several phases of strong deformation from Oligocene- Pliocene)

Syazwani, N., B.J. Pierson & A.W. Hunter (2013)- Diagenetic responses to sea level changes on Pleistocene-Holocene carbonates in the Celebes Sea, East Sabah, Malaysia. Proc. 75th EAGE Conf. Exhib., Carbonate depositional environments and diagenesis, London, 1, Tu P15 07, p. 52-54.
(On diagenesis of elevated Quaternary reef limestone in Celebes Sea, E of Sabah)

Tahir, S.H. & A. Jantan (1994)- Stratigraphy of the Middle Miocene volcanic facies, Dent Peninsula, Sabah. Warta Geologi (Newsl. Geol. Soc. Malaysia) 20, 3, p. 225-227. *(Abstract)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1994003.pdf)
(M Miocene volcanic facies of Dent Peninsula, E Sabah, here named Silabukan Fm, 2000m thick and with 3 members. Probably submarine island arc volcanics and part of Sulu Arc. Uncormably over Dent melange/ Crocker Fm accretionary complex. Major phase of uplift coincident with early pulse of volcanic activity in early M Miocene (base planktonic foram zone N10))

Tahir, S.H., B. Musta & I.A. Rahim (2010)- Geological heritage features of Tawau volcanic sequence, Sabah. Geol. Soc. Malaysia 56, p. 79-85.
(online at: www.gsm.org.my/products/702001-100383-PDF.pdf)
(Description of Early Cretaceous oceanic crust/ Neogene volcanic arc terrane of Semporna Peninsula, SE Sabah near Kalimantan border. Oldest rocks fragmented oceanic crust material (Chert-Spilite Fm), emplaced in Albian-Cenomanian (similar age as Meratus Mts?). Overlain by thick, folded M Miocene volcanic island arc deposits, overlain by Plio-Pleistocene volcanics. Sabah deformation phases in M Eocene, M Miocene and Plio-Pleistocene. Two volcanic arc phases: (1) related to closing of Celebes and Sulu marginal basins in M Miocene and (2) related to S Philippine Sea Plate in Plio-Pleistocene)

Tahir, S.H., S.A.K. Omang & M.M. Faisal (1995)- Middle Miocene volcanic sequence in Eastern Sabah. Borneo Science 1, 1, p. 9-27.
(online at: wwwsst.ums.edu.my/data/file/NMXJD058e7Up.pdf)
(M Miocene calc-alkaline volcanic arc deposits of Segama Gp in Dent Peninsula and Kalumpang Fm in Semporna Peninsula, E Sabah are parts of volcanic arc. Remnants of volcanic arc extend N-ward into Sulu Ridge and volcanism ended in late M Miocene. Arc assemblage overlies late E- early M Miocene melange. Probably submarine stratovolcano, with mainly pyroclastics, breccias, some lava flows, lenses of shallow

marine carbonates and open marine tuffaceous shales with common planktonic foraminifera, incl. Orbulina, Globorotalia praefohsi, Gr. fohsi and Gr. fohsi robusta (= zones N11-N12, ~12-14 Ma)).

Taib, N.E. (2012)- Plio-Pleistocene volcanism in the Upper Rajang Valley- a window into the crust under the Rajang Group. Geol. Soc. Malaysia, Nat. Geoscience Conf., Kuching 2012, Paper A15, p. 28. *(Abstract only)*
(Plio-Pleistocene bimodal volcanic edifices in upper Rajang valley (Niewenhuis Mts, Usun Apau, Hose Mts, Linau-Balui volcanics and others in N Kalimantan). Ar/Ar ages of Usun Apau dacites 4 Ma, Usun Apau and Linau-Balui basalts 2-2.5 Ma. Usun Basalts reminiscent of Oceanic Island Basalts (OIB), associated with mantle plumes and rifting/extension. Bimodal volcanism also associated with rifting and extension. Similarities to basalts from S Sulu Arc on Semporna pensinsula, interpreted earlier as contamination of mantle melts with radiogenic component from Paleozoic lower crust)

Taira, K. & W. Hashimoto (1971)- C-14 age calculated for raised coral reef limestones near Semporna, Sabah, North Borneo, Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 9, p. 161-164.
(C-14 dating of oyster in raised coral limestone on Sipangao island 21' above high tide ~28,000 BP or older. On Danawan island coral cliffs >40' high)

Tamura, M. (1973)- Two species of lower Cretaceous *Parvamussium* from Kyushu, Japan, and Sarawak, Borneo. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 11, p. 119-124.
(Lower Cretaceous pectinid bivalve from Sarawak, S of Kuching. Also report perisphinctid ammonite from Bau series black shale, probably Berriasella or Microanthoceras indicating Tithonian-Berriasian age)

Tamura, M. & C. Hon (1977)- *Monotis subcircularis* Gabb from Sarawak, East Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 18, p. 29-31.
(Late Triassic thin-shelled bivalve Monotis subcircularis found at Kuap, Sarawak. Identified as M. subcircularis, but more likely Monotis (Eomonotis) according to Silberling (1985))

Tamura, M. & C. Hon (1977)- Upper Jurassic bivalves from the Kedadom formation of Sarawak, Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 18, p. 33-47.
(Kedadom Limestone Fm of W Sarawak rich in bivalves (Nuculana, Grammatodon, Somapecten, Lucina, Neoburmesia, etc.) show Callovian or Kimmeridgean to Berriasian age and related to Torinosu fauna on Pacific side of Japan (Kobayashi 1978, Hayami 1984) (similar to Vogel (1896, 1900) faunas from W Kalimantan?; also viewed as 'Torinosu-type fauna' by Tamura 1959; JTvG))

Tan, D.N.K. (1975)- Preliminary notes on the melange in the Lupar Valley. Annual Report Geol. Survey of Malaysia 1974, p. 219-228.

Tan, D.N.K. (1978)- Lower Cretaceous age for the chert in the Lupar Valley, West Sarawak. Warta Geologi 4, 6, p. 173-176.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1978006.pdf)
(Radiolaria assemblages identified by Pessagno from 5 exotic chert blocks in Lubok Antu melange of Lupar Valley, W Sarawak. Believed to be same as radiolaria studied by Hinde in Molengraaff (1902) from cherts in adjoining Upper Kapuas Valley in NW Kalimantan. Radiolaria studied by Pessagno indicate Early Cretaceous age, most likely Valanginian-Barremian (incl. Thanaria conica, Parvacingula spp., Pantanellium spp, Archaeodictyomitra, etc.)

Tan, D.N.K. (1979)- Lupar Valley, West Sarawak; Explanation of sheets 1-111-14, 1-111-15, and 1-111-16. Geol. Survey Malaysia Report 13, p. 1-159.
(Hutchison 2005: Lupar Line complex composed of imbricated U Cretaceous flysch with paleocurrents SW to NE (Lupar Fm), chaotic melange (Lubok Antu melange with E-M Eocene microfauna in matrix) and ophiolitic rocks (Pakong mafic complex: gabbro and pillow basalts))

Tan, D.N.K. (1982)- The Lubok Antu melange, Lupar Valley, West Sarawak: a Lower Tertiary subduction complex. Bull. Geol. Soc. Malaysia 15, p. 31-46.
(online at: www.gsm.org.my/products/702001-101188-PDF.pdf)
(Lower Tertiary Lubok Antu melange in W Sarawak 10.5 km wide in Lupar Valley, extending SE into Kalimantan. S of melange is U Cretaceous Lupar Formation = Danau Complex of Molengraaff (1902), with turbidite flow directions to NE. N of melange is Pakong mafic complex with overturned pillow lavas dipping steeply to NE. Melange contains of blocks of Lower Cretaceous (Valanginian-Barremian) radiolarian chert, mid-Cretaceous Orbitolina limestone, U Cretaceous greywacke and slate, Paleo-Eocene limestone with Distichoplax, Discocyclina and Nummulites, calcareous shale, mudstone, sandstone, basalt, spilite, gabbro and serpentinite in pervasively sheared pelitic matrix, locally with E Eocene foraminifera and nannofossils. Also recognition of low-grade prehnite-pumpellyite facies metamorphics. Geotectonic setting is Late Cretaceous- E Tertiary SW-dipping subduction of oceanic crust under West Borneo continental basement)

Tan, D.N.K. (1983)- Nomenclature of the Upper Cretaceous-Tertiary molasse deposits of West Sarawak. Annual Report Geol. Survey of Malaysia 1981, p. 348-355.
(Introduction of name Plateau Sandstone, used earlier in Kalimantan, to massive molasse deposits in W Sarawak by Liechti et al. (1961) caused much confusion. Some sands assigned to this should be 'Kayan Sst')

Tan, D.N.K. (1984)- Palaeocurrents in the Tertiary sedimentary deposits in western Sarawak. Bull. Geol. Soc. Malaysia 17, p. 258-264.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1984013.pdf)
Tertiary fluvial-deltaic sediments from 7 localities in W Sarawak investigated for paleocurrent indicators. Local mean directions to NW, N, NE, NNE and ESE suggest provenance of these rocks is Carboniferous-Permian and Mesozoic sedimentary, igneous and metamorphic rocks of present Bau-Kuching-Serian area)

Tan, D.N.K. (1986)- Palaeogeographic development of West Sarawak. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 39-49.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986004.pdf)
(Four paleogeographic maps of W Sarawak: Carbo-Permian, Triassic, Jurassic-Cretaceous and Lower Tertiary. Carbo-Permian data limited. M-L Triassic Sadong Fm mixed continental- shallow marine deposits and Serian Volcanics. Early Jurassic orogeny/ uplift, feeding Late Jurassic-Cretaceous Kedadom and Pedawan Fms, and offshore deep-sea pelagic deposits. By Early Tertiary most of W Sarawak uplifted; intermontane basins with Silantek Fm, Kayan Sst and Plateau Sst)

Tan, D.N.K., B.A.R. Abdul Hadi, A. Azlina, B. Boniface & K.T. Chow (1999)- West Baram Delta. In: Petronas (1999) The petroleum geology and resources of Malaysia, Ch. 13, p. 293-341.
(Baram Delta is NW prograding delta system since M Miocene. Onshore Brunei exploration resulted in discovery of one large field (Miri,1910) and 27 unsuccessful wells. Offshore Brunei and Sabah 11 oil-gas discoveries by Shell between 1955-1988. Additional fields discovered in 1990's. Structures dominated by gravity tectonics (rotated fault blocks with growth faults. Oils generally light, low sulfur, derived from landplant material)

Tan, D.N.K. & J.M. Lamy (1990)- Tectonic evolution of the NW Sabah continental margin since the Late Eocene. Bull. Geol. Soc. Malaysia 27, p. 241-260.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990027.pdf)
(NW Sabah Shelf tectono-stratigraphic provinces. Four tectonic stages: (1) Late Eocene- early M Miocene subduction of proto-S China Sea oceanic crust under Borneo; (2) early M Miocene collison of S China Sea continental crust with Borneo, with uplift and erosion of accretionary prism and 'Deep Regional Unconformity'; (3) cessation of subduction in M-L Miocene accompanied by compressional deformation associated with deep-seated N-S shear zones in inboard belt (4) Late Miocene-Holocene: inboard belt stable and eroding, outboard belt E Baram Delta, prograding to NW)

Tate, R.B. (1970)- Tektites in Brunei. Brunei Museum J. 2, 2, p. 253-259.
(Tektites from Jerudong Fm near Brunei coast dated as ~730,000 yrs old. Originated from large M Pleistocene Australasian tektite shower (but assoociated with 30,000 year old wood, so tektites possibly reworked into younger younger terrace deposits?))

Tate, R.B. (1976)- Palaeo-environmental studies in Brunei. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX), Singapore, 3, p. 102-124.
(Measured sections of Brunei Neogene deltaic deposits with interpretations of paleoenvironments)

Tate, R.B. (1991)- Cross-border correlation of geological formations in Sarawak and Kalimantan. Bull. Geol. Soc. Malaysia 28, p. 63-95.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991004.pdf)
(Correlation charts to reconcile new stratigraphy established by Kalimantan Australian- Indonesian mapping team and Sarawak)

Tate, R.B. (1992)- The Mulu Shear Zone- a major structural feature of NW Borneo. Bull. Geol. Soc. Malaysia 31, p. 51-65.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992004.pdf)
(Major regional NE-SW trending shear zone from NE Sarawak- Brunei to Sabah. Affects basal Melinau Limestone. Oldest movements probably post-Eocene, youngest sediments·affected by NE shears probably Pliocene or even younger in offshore areas. Possibly tied to oblique subduction, but transcurrent movement continues after end of subduction in M Miocene?)

Tate, R.B. (1994)- The sedimentology and tectonics of the Temburong Formation- deformation of early Cenozoic deltaic sequences in NW Borneo. Bull. Geol. Soc. Malaysia, p. 97-112.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994010.pdf)
(Oligocene?-age Temburong Fm in E Brunei deposited mostly in shallow water, subsaline embayment or lower alluvial floodplain. Rocks metamorphosed to sericite grade. Deformation probably between U Oligocene-Lower Miocene)

Tate, R.B. (1995)- The Balingian shear zone, West Balingian and West Baram lines, Sarawak, and their importance in the early Cenozoic evolution of NW Borneo. Bull. Geol. Soc. Malaysia 38, p. 141-151.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995013.pdf)
(Major zone of WNW- trending intense deformation near Sg. Balingian between Sibu and Bintulu, probably continuing offshore along gravity lineament. W Balingian and W Baram Lines mark boundaries of offshore hydrocarbon provinces and together with new shear zone, form fundamental tectonic framework for this part of NW Borneo. Distribution of heat flow, igneous rocks, Oligocene deltas and Oligocene-Miocene carbonates across N Sarawak and N Kalimantan appear to be related to framework which extends across C Borneo)

Tate, R.B. & V. Hon (1991)- The oldest rocks in Borneo; a note on the Tuang Formation, West Sarawak and its importance in relation to the presence of a "Basement" in West Borneo. Warta Geologi (Newsl. Geol. Soc. Malaysia) 17, 5, p. 221-224.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1991005.pdf)
(Oldest rocks in W Sarawak are Tuang and Kerait schists, possibly equivalent units and possibly correlative with Pinoh Metamorphics of C Kalimantan. Low grade (greenschist) metamorphic rocks, presumably of pre-Late Carboniferous age. Tuang Fm probably meta-turbidites and ultrabasic rocks, possibly Permian-Carboniferous ocean floor)

Teoh Ying Jia (2009)- Characteristics of sedimentary facies and reservoir properties of some Tertiary sandstones in Sabah And Sarawak, East Malaysia. M.Sc. Thesis Universiti Sains Malaysia, p. 1-115.
(partly online at: http://eprints.usm.my/8935/)

Teoh Ying Jia & A.H. Abd Rahman (2009)- Comparative analysis of facies and reservoir characteristics of Miri Formation (Miri) and Nyalau Formation (Bintulu), Sarawak. Bull. Geol. Soc. Malaysia 55, p. 39-45.

(Outcrop study of sandstones of tidal- shallow marine M Miocene Miri and Nyalau Fms in Sarawak)

Thies, K., M. Ahmad, H. Mohamad, R. Bischke, J. Boyer & D.Tearpock (2006)- Structural and stratigraphic development of extensional basins: a case study offshore deepwater Sarawak and Northwest Sabah, Malaysia. AAPG Ann. Conv. 2005, Search and Discovery Art. 10103, 6p.
(online at: www.searchanddiscovery.net/documents/2006/06026thies/images/thies.pdf)
(Half-grabens of deepwater Sarawak and Sabah two or more regressive cycles of rift fill, related to early rifting from ~43-30 Ma and S China Sea seafloor spreading between 30-16 Ma, separating Dangerous Grounds-Luconia microplates from Eurasia. Collision of Luconia Block with Kalimantan Block in M Oligocene and Dangerous Grounds block in M Miocene, terminating half-grabens extension. Lower part of rift-fill cycles predominantly bathyal facies; upper parts more sand prone inner neritic to fluvio-marine)

Ting, Ching Soon (1992)- Jurassic-Cretaceous palaeogeography of the Jagoi-Serikin area as indicated by the Bau Limestone Formation. Bull. Geol. Soc. Malaysia 31, p. 21-38.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992002.pdf)
(Bau Lst near Kuching, W Sarawak, is Late Jurassic- E Cretaceous fringing reef complex, deposited on and around basement high of Jagoi granodiorite , with earliest Jurassic ~195 Ma radiometric age (but Late Triassic 208 Ma, according to Breitfeld et al. 2017). Back-reef facies closest to landmass (Jagoi granodiorite, Gunung Kisam) at edge of basin with Pedawan Fm deposition)

Ting, K.K., B.J. Pierson, O.S. Al-Jaaidi & P.F. Hague (2012)- Effects of syn-depositional tectonics on platform geometry and reservoir characters in Miocene carbonate platforms of Central Luconia, Sarawak. Int. Petrol. Techn. Conf. IPTC, Bangkok 2012, IPTC 14247, p. 245-261.
(Evidence of syn-depositional tectonic movements in 'Mega Platform', a 30x50km large and 1.2km thick carbonate Miocene carbonate platform (cluster of 6 buildups) in N part of C Luconia Basin. In Luconia Province carbonate reefs started to grow during Miocene on uplifted half graben footwalls)

Tingay, M.R.P. (2003)- In situ stress and overpressures of Brunei Darussalam. Ph.D. Thesis, Adelaide University, Australia, p. 1-271.
(online at: https://digital.library.adelaide.edu.au/dspace/handle/2440/508180)
(Study of stress and overpressure from 157 wells in 61 fields in Brunei. Overpressure observed in 54 fields in underlying prodelta shales and inner shelf deltaic sequences)

Tingay, M.R.P., R.R. Hillis, C.K. Morley, R.C. King, R.E. Swarbrick & A.R. Damit (2009)- Present-day stress and neotectonics of Brunei: implications for petroleum exploration and production. American Assoc. Petrol. Geol. (AAPG) Bull. 93, 1, p. 75-100.
(Present-day stress in Tertiary Baram Delta exhibits range of values that reflect NW Borneo active margin (situated underneath the basin) and local stresses generated within delta)

Tingay, M.R.P., R.R. Hillis, C.K. Morley, R.E. Swarbrick & S.J. Drake (2005)- Present-day stress orientation in Brunei: a snapshot of prograding tectonics in a Tertiary delta. J. Geol. Soc. London 162, p. 39-49.
(Baram Delta on active margin. Structures margin-parallel gravity tectonics and margin-normal transpressive tectonics associated with active margin. Maximum horizontal stress margin-normal (NW-SE) in proximal parts of basin and margin-parallel (NE-SW) in outer shelf. Rotations result of 'deltaic' and 'basement-associated' tectonic regimes that 'prograde' basinwards. Proximity of active margin resulted in uplift and inversion of hinterland that forced delta system to prograde rapidly. Zone of active deltaic growth faulting 'prograded' as delta rapidly prograded across shelf. After uplift and delta progradation, old growth faults of inner shelf ceased being active and successively reactivated by similarly 'prograding' margin-normal inversion front)

Tingay, M.R.P., R.R. Hillis, C.K. Morley, R.E. Swarbrick & S.J. Drake (2005)- ôProgradingô tectonics in Brunei: regional implications for fault sealing. In: Alaska Rocks 2005, The 40th U.S. Symp. Rock Mechanics (USRMS): Rock mechanics for energy, mineral and infrastructure development in the Northern Region, Anchorage, ARMA/USRMS 05-785, 14p.
(online at: www.asprg.adelaide.edu.au/asm/papers/tingay2005b.pdf)

(Baram Delta province of Brunei built on active margin. Structures are result of both margin-parallel gravity-driven deltaic tectonics and margin-normal transpressive tectonics associated with active margin. Breakouts and DITFs observed in 19 wells suggest maximum horizontal stress oriented margin-normal (NW-SE) in proximal parts of basin and margin-parallel (NE-SW) in distal region. Margin-normal σHmax direction perpendicular to strike of Miocene-Pliocene normal growth faults, suggesting ~90° rotation over time. All major fields located in inner shelf region of Brunei where faults not optimally aligned for present-day reactivation and seal breach)

Tingay, M.R.P., R.R. Hillis, C.K. Morley, R.E. Swarbrick & E.C. Okpere (2003)- Pore pressure/ stress coupling in Brunei Darussalam; implications for shale injection. In: P. van Rensbergen et al. (eds.) Subsurface sediment mobilization, Geological Soc., London, Spec. Publ. 216, p. 369-379.
(Shale dykes, diapirs and mud volcanoes common in Brunei. Outcrop examples show shale intruded along faults and tensile fractures. Changes in pore pressure are coupled with changes in total minimum horizontal stress, so rocks can sustain greater pore pressure prior to failure than predicted)

Tingay, M.R.P., R.R. Hillis, C.K. Morley, R.E. Swarbrick & E.C. Okpere (2003)- Variation in vertical stress in the Baram Basin, Brunei: tectonic and geomechanical implications. Marine Petroleum Geol. 20, p. 1201-1212.
(Vertical stress determined in 24 fields in Baram Basin, using density log and checkshot velocity data. Basin shows variation in vertical stress gradient between 18.3 and 24.3 MPa/km at 1500m depth below surface. Variation caused by bulk rock density change of 2.48-2.07 g/cm3 from hinterland to delta front. Differential uplift of hinterland and undercompaction caused density and hence vertical stress variation)

Tingay, M.R.P., R.R. Hillis, R.E. Swarbrick & C.K. Morley (2005)- Origin and petrophysical log response of overpressures in the Baram Delta Province, Brunei. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 381-390.

Tingay, M.R.P., R.R. Hillis, R.E. Swarbrick, C.K. Morley & A.R. Damit (2007)- óVertically transferredô overpressures in Brunei: evidence for a new mechanism for the formation of high-magnitude overpressure. Geology 35, 11, p. 1023-1026.
(Pore pressure data from 61 fields across Baram Delta province reveal two types of overpressure: basal pro-delta shales overpressures generated by disequilibrium compaction, overlying sand/shale deltaic sequence overpressures generated by fluid expansion. Fluid expansion overpressures in fields that were inverted during Pliocene, which resulted in large-scale fluid migration from prodelta shales into deltaic sequences)

Tingay, M.R.P., R.R. Hillis, R.E. Swarbrick, C.K. Morley & A.R. Damit (2009)- Origin of overpressure and pore-pressure prediction in the Baram Delta province, Brunei. American Assoc. Petrol. Geol. (AAPG) Bull. 93, 1, p. 51-74.
(Baram Delta overpressures in inner shelf deltaic sequences and prodelta shales, generated by disequilibrium compaction in prodelta shales and by fluid expansion in inner-shelf deltaic sequences. Overpressures in inner-shelf deltaics vertically transferred into reservoir units via faults from prodelta shales. Sediments overpressured by disequilibrium compaction different physical properties to those overpressured by vertical transfer)

Tjia, H.D. (1970)- Transcurrent faulting in the Sarawak-Kiri region, Sarawak, East Malaysia. Geol. Magazine 107, 3, p. 217-224.
(Left-lateral, NNW-SSE trending transcurrent fault in Sarawak-kiri valley, W Sarawak. Belongs to important fracture zone that extends into Kalimantan, and continues in N direction along edge of Sunda Shelf beneath S China Sea. Continental part of SE Asia rotated counter-clockwise up to Lower Paleogene)

Tjia, H.D. (1972)- Structural pattern of Bau Limestone Formation, Sarawak. Sains Malaysiana (Malaysian J. Science) 1, B, p. 173-182.
(Abrupt change in trend from SSW-NNE to NW-SE, compression directions reflected in topography, etc.)

Tjia, H.D. (1974)- Sense of tectonic transport in intensely deformed Trusmadi and Crocker sediments, Ranua-Tenompok area, Sabah. Sains Malaysiana 3, 2, p. 129-161.

Tjia, H.D. (1983)- Quarternary tectonics of Sabah and Sarawak, East Malaysia. Sains Malaysiana 12, p. 191-215.

Tjia, H.D. (1988)- Accretion tectonics in Sabah: Kinabalu Suture and East Sabah accreted terrane. Bull. Geol. Soc. Malaysia 22, p. 237-251.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1988012.pdf)
(Kinabalu suture zone 80 km wide belt with Triassic(?)- M Miocene rocks across Sabah from Darvel Bay-Telupid- Marudu Bay to Banggi and Balambangan islands. Three collisional rock assemblages: (1) Cretaceous- Paleocene chert-spilite Fms, (2) Paleocene- Oligocene turbiditic Trusmadi Fm and Crocker Fms and (3) Oligocene-M Miocene Garinono-Kalabakan olistostromes. W Sabah is continental piece from Asian continent, E Sabah is oceanic basin. By end M Miocene Sabah terrane welded to mainland Borneo)

Tjia, H.D. (1998)- The Dulit Triangle in Sarawak: a most striking example of detachment tectonics. In: G.H. Teh (ed.) Petroleum geology Conference 1997, Bull. Geol. Soc. Malaysia 42, p. 95-100.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1998009.pdf)
(Dulit triangle conspicuous kink in NE and ENE structural trendlines of C and N Sarawak. Structures of triangle comprise open synclines of Neogene Belait Fm and tight folds in U Oligocene-Lw Miocene Nyalau Fm that were bent about vertical axes into NE and SE trending structures)

Tjia, H.D. (2003)- Northwest Sabah overthrust system. Proc. Ann. Geol. Conf. 2003, Bull. Geol. Soc. Malaysia 46, p. 5-10.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003002.pdf)
(Study of folding/ thrusting in outcrops of Crocker and Trusmadi Fm turbidites of Sabah and their regional context. Suggest major 300km wide NW-verging overhrust sheet formed around E-M Miocene boundary and producing Deep Regional Unconformity (DMU))

Tjia, H.D. (2007)- Kundasang (Sabah) at the intersection of regional fault zones of Quaternary age. Bull. Geol. Soc. Malaysia 53, p. 59-66.
(online at: www.gsm.org.my/products/702001-100503-PDF.pdf)

Tjia, H.D. (2012)- The paleo-orientations of Northwestern Borneo and adjacent to South China Sea Basins. J. Geologi Indonesia 7, 2, p. 67-76.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/400)
(Limited paleomagnetic data from W. Kalimantan and SW Sarawak indicate CCW rotation of >50° during Cenozoic. However, region consists of mosaic-like assemblage of diverse tectono-stratigraphic terranes, each with separate tectonic development. Stress fields changed in different ways in different terranes and indicate that regional, progressive CCW rotation of Borneo not possible)

Tjia, H.D. (2015)- Sole markings of extraordinary size and variety in Crocker sandstones of Sabah. Bull. Geol. Soc. Malaysia 61, p. 11-21.
(online at: www.gsm.org.my/products/702001-101680-PDF.pdf)
(Eocene- E Miocene Crocker Fm of Sabah with large sole markings near Kaung Village on mid-slope of Mount Kinabalu, incl. >10m long groove casts. Effects of turbulent flow. Nereites-Zoophycos ichnofacies with Paleodictyon confirm bathyal-abyssal depth of deposition. In other localities of Crocker Fm in Sabah, paleocurrents ran N-ward, exception near Kaung Village where S-directed)

Tjia, H.D. (2016)- Temburong and Setap in Northwestern Borneo: equivalent or different formations? Berita Sedimentologi 35, p. 65-72.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-35-palaeogene-of-the-eastern-margin-of-sundaland-part-1.html)
(On marine Oligocene- E Miocene Temburong Fm and mainly late Early- M Miocene Setap Fm in NW Borneo)

Tjia, H.D. & M.I. Ismail (1994)- Tectonic implications of well-bore breakouts in Malaysian basins. Bull. Geol. Soc. Malaysia 36, p. 175-186.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994032.pdf)
(Over 100 well-bore breakout directions in Malay, Sarawak, Sabah and Sandakan basins show consistent correlation with current and past tectonic stress fields. Younger layers of Malay Basin (above 5500') breakouts oriented NE, consistent with shallow-focus earthquake stress trajectories associated with subduction of Indian Ocean Plate W of Sumatra. In older layers breakouts responded to N-S regional compression. Etc.)

Tjia, H.D., M.I. Ismail & O.A. Mahmud (1998)- The Tubau Lineament (Sarawak) is a strike-slip fault zone. Warta Geologi 24, 3, p. 129-132.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1998003.pdf)
(N-S Tubau Lineament 25-km left-stepping change of Bukit Mersing Line, 25-km of linear Tubau river valley, and as long axis of Ulu Suai Dome which adds ~30 km to lineament. Tubau Lineament originated as pre-Upper Miocene time left-lateral strike slip fault zone with ~25 km displacement)

Tjia, H.D., I. Komoo, P.S. Lim & Tungah Surat (1991)- The Maliau Basin, Sabah: geology and tectonic setting. Bull. Geol. Soc. Malaysia 27, p. 261-292.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990028.pdf)
(Circular E Maliau Basin, Sabah, is landward extension of Tarakan Basin. Fieldwork found good quality coal seams in E-M Miocene Tanjung Fm. Majority of current indicators to NE. Miocene rocks uplifted to 1600m above SL)

Tjia, H.D., I. Komoo, C.A. Ali & S.H. Tahir (1992)- Geology of Taman Bukit Tawau, Semporna Peninsula, Sabah. Bull. Geol. Soc. Malaysia 31, p. 113-131.
(online at: www.gsm.org.my/products/702001-101046-PDF.pdf)
(Volcanic mountains in SE Sabah up to 1320m high are Quaternary dacitic, andesitic and basaltic volcanics)

Tjia, H.D., B. Sidi & C.L. Teoh (1987)- Superimposed deformation and vergence of lower Tertiary sediments near Tatau, Sarawak. Bull. Geol. Soc. Malaysia, 21, p. 251-271.
(online at:https://gsmpubl.files.wordpress.com/2014/09/bgsm1987013.pdf)
(Outcrops along trunk road near Tatau, C Sarawak, include Late Eocene- E Oligocene turbidites(associated with explosive volcanics), unconformably overlain by less deformed M Oligocene- M Miocene neritic- littoral sediments. Two tectonic vergences:earlier N-ward vergence with large recumbent folds and later W-vergence with smaller overturned folds. E Tertiary deposition in fore-arc basin on ocean side of magmatic arc)

Togunwa, O.S., W.H. Abdullah, M.H. Hakimi & P.J. Barbeito (2015)- Organic geochemical and petrographic characteristics of Neogene organic-rich sediments from the onshore West Baram Delta Province, Sarawak Basin: implications for source rocks and hydrocarbon generation potential. Marine Petroleum Geol. 63, p. 115-126.
(M-L Miocene outcrop samples in W Baram Province S of Miri, Sarawak Basin, generally organic rich (TOC 1-11%), but mainly gas-prone Type III kerogen (hydrogen Index <105 mg HC/g). Vitrinite reflectance Ro of 0.39-0.48% indicates immature- very early mature kerogens. Offshore equivalents buried deeper and could be effective petroleum (gas) source rock)

Tokuyama, A. & S Yoshida (1974)- Kinabalu fault, a large strike-slip fault in Sabah, East Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia 14, University of Tokyo Press, p. 171-188.
(Series of NW-SE trending left-lateral strike-slip fault zones with possible 300km of displacement across Sabah-Kinabulu, supposedly linking up with Palu-Koru fault of Sulawesi)

Tongkul, F. (1987)- Sedimentology and structure of the Crocker Formation in the Kota Kinabalu area, Sabah, East Malaysia. Ph.D. Thesis University of London, p. 1-318. *(Unpublished)*

Tongkul, F. (1989)- Sedimentology and structure of the Crocker Formation in the Kota Kinabalu area, Sabah, East Malaysia. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 135-156.
(Crocker Fm Eocene- E Miocene flysch-type outcrops in NW Sabah composed of lower shaly unit, upper sandy sequence, interpreted as large N-prograding Eocene-Oligocene submarine fan system. Deposition of coarse sediment peaked in Oligocene. Sediment source Borneo/Sunda Shelf to SW (quartz-rich continental, current directions generally to N). Fan sediments imbricated into series of E-dipping thrust slices, 200-600m thick, with resistant ridges repeating every 1-2km, formed during subduction/ accretion against Borneo in Late Oligocene-E Miocene. Termination of deformation followed by major uplift of Crocker complex in M-L Miocene, after collision of Dangerous Grounds microcontinent)

Tongkul, F. (1989)- Geological control on the birth of the Pulau Batu Hairan mud volcano, Kudat, Sabah. Warta Geologi 14, 4, p. 153-165.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1988004.pdf)
(Birth of new island E of Pulau Banggi in N Sabah, due to mud volcanism related to N-S trending fractures and N-S compression in overpressured muds. Rock fragments in mud are sandstone, siltstone, limestone, chert, basalt/spilite and serpentinite)

Tongkul, F. (1990)- Structural styles and tectonics of Western and Northern Sabah. Bull. Geol. Soc. Malaysia 27, p. 227-240.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990026.pdf)
(Deformational episodes of W and N Sabah E Cretaceous-Pliocene igneous and sedimentary rocks: (1) Late Cretaceous- E Eocene basement (chert-spilite oceanic formation) deformation/ uplift; (2) M Miocene NW-SE and N-S directed thrusting of M Eocene- E Miocene Crocker- Kudat sediments (3) gentle deformation of U Miocene- Pliocene sediments)

Tongkul, F. (1991)- Basin development and deposition of the Bongaya Formation in the Pitas area, northern Sabah. Bull. Geol. Soc. Malaysia 29, p. 183-193.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991016.pdf)
(Small basin in Bengkoka Peninsula of N Sabah with Late Miocene Bongaya sediments controlled by earlier faults trending NE-SW, N-S and NW-SE on underlying, uplifted Crocker and Chert-Spilite Fms. Nearly circular basin sediments sourced from older uplifted rocks to E, S and SE by overlapping fluvio-deltaic fan lobes)

Tongkul, F. (1991)- Tectonic evolution of Sabah, Malaysia. J. Southeast Asian Earth Sci. 6, p. 395-406.
(SE-ward subduction in front of rifted continental block of S China under emergent oceanic basement in E Sabah controlled development of NE-SW trending basin with M Eocene-E Miocene sediments. Opening of S China Sea Basin in M Oligocene-M Miocene caused further subduction and narrowing of basin. M Eocene-E Miocene sediments compressed into fold-thrust belt trending ~NE-SW in W Sabah and NW-SE in N and E Sabah. Subduction accompanied by volcanic activity in E Sabah in E-M Miocene. Deformed sedimentary pile and underlying oceanic basement then subjected to NW-SE extension related to E-M Miocene opening of Sulu Sea Basin. This resulted in development of extensive chaotic deposits in E and C Sabah and also controlled development of circular basins for deposition of thick, Early- Late Miocene sediments. Continued extension resulted in further SE-ward subduction in SE Sabah, producing Late Miocene-Quaternary volcanics)

Tongkul, F. (1993)- Tectonic control on the development of the Neogene basins in Sabah, East Malaysia. In: G.H. Teh (ed.) Proc. Symp. Tectonic framework and energy resources of the Western Margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 95-103.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1993007.pdf)
(Two structural trends, NE-SW and NW-SE, controlled Miocene basin evolution in Sabah)

Tongkul, F. (1994)- The geology of northern Sabah: its relationship to the opening of the South China Sea. Tectonophysics 235, p. 131-137.
(N Sabah E Cretaceous-Pliocene sedimentary and igneous rocks. Three deformation episodes associated with NW-SE and N-S oriented compression: (1) Late Cretaceous- E Eocene uplifted oceanic basement, site for

deposition of M Eocene- E Miocene Crocker and Kudat Fms, sourced from continental basement in SW; (2) Latest Oligocene and early M Miocene N-S directed imbricate thrusting, controlling E-W trending basins development filled with U Miocene S Banggi and Bongaya Fms; (3) Minor continuation of N-S compressional deformation. Deformation episodes related to S-ward movements of continental blocks separated from S margin of China during opening of S China Sea subbasins)

Tongkul, F. (1995)- The Paleogene basins of Sabah, East Malaysia. In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. Southeast Asian Basins: oil and gas for the 21st century, Kuala Lumpur, Bull. Geol. Soc. Malaysia 37, p. 301-308.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a20.pdf)
(Paleogene basins of Sabah developed in two stages: (1) latest Mesozoic? wide NE-SW trending basin, with continental block to NW and emergent oceanic basement to SE. Paleogene mainly deep water clastic sediments, with limestone lenses; (2) M Eocene? deformation divided basin into two parallel basins, also NE-SW. Basins independently filled by shallow to deep water late Paleogene sediments derived axially from SW and laterally from NW and SE. Basins finally closed in E Miocene, with Paleogene fold-thrust belt of Sabah)

Tongkul, F. (1997)- An ancient oceanic crust in Tandek, Sabah - a unique geological heritage. Sabah Society J. 14, p. 1-10.
(Outcrop of Cretaceous oceanic crust and ocean floor ('chert-spilite'). See also Muda and Tongkul, 2008)

Tongkul, F. (1997)- Sedimentation and tectonics of Paleogene sediments in central Sarawak. Bull. Geol. Soc. Malaysia 40, p. 135-155.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997011.pdf)
(Deposition of Paleogene sediments in C Sarawak occurred in four stages, with depocentres generally advancing and younging to NE in response to progressive SWt subduction-accretion of Mesozoic oceanic lithosphere under W Sarawak)

Tongkul, F. (1997)- Polyphase deformation in the Telupid Area, Sabah, Malaysia. J. Asian Earth Sci. 15, p. 175-184.
(Telupid area in C Sabah Mesozoic ophiolitic basement, overlain by Cretaceous- Oligocene sediments. At least three deformation phases: (1) M Eocene folding- thrusting of basement and older Paleogene sediments trending N70E, (2) early Lower Miocene imbrication of basement rock and overlying sediments to NE; (3) early M Miocene thrusting of deformed basement rock and overlying sediments to NW)

Tongkul, F. (1999)- Batuan kerak lautan kuno Sungai Baliojong, Tandek, Kota Marudu, Sabah. In: I. Komoo & M.S. Leman (eds.) Warisan Geologi Malaysia 2, LESTARI, UKM, p. 299-328.
('Ancient oceanic crust in the Baliojong River, Tandek, Kota Marudu, Sabah')

Tongkul, F. (1999)- Regional geological correlation of Paleogene sedimentary rocks between Sabah and Sarawak, Malaysia. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 31-39.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999004.pdf)
Three groups of Paleogene sedimentary rock units can be correlated regionally between Sabah and Sarawak: (1) intensely deformed, Paleocene- E Eocene turbiditic clastic sediments, partly metamorphosed to slate and metasandstone; (2) 'E Crocker' steeply dipping late Lower Eocene- early U Eocene submarine fan sandstone-shale with thrust transport directions generally to N and NW, and (3) 'W Crocker' U Eocene- U Oligocene sandstone- shale, with local conglomerate, limestone and marl, with deformation similar to Unit 2. Paleogene sediments deposited in large basin along NW Borneo. Deposition and deformation of sediments in successive stages: younger sediments were deposited on top or in front of older accreted sediments in response to NW-SE closure of elongate basin)

Tongkul, F. (2006)- The structural style of Lower Miocene sedimentary rocks, Kudat Peninsula, Malaysia. In: Petroleum Geol. Conf. & Exh. 2003, Kuala Lumpur, Bull. Geol. Soc. Malaysia 49, p. 119-124.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004019.pdf)

(Kudat Peninsula mostly Lower Miocene sediments, deformed into large-scale folds on three major WNW-ESE trending imbricate thrust slices. Deformation probably caused by progressive N-S transpression related to M Miocene collision of Dangerous Ground/ Reed Bank with NW Sabah along NW Borneo Trough)

Tongkul, F. (2017)- Active tectonics in Sabah- seismicity and active faults. Bull. Geol. Soc. Malaysia 64 (Geol. Soc. Malaysia 50th Anniversary Issue 2), p. 27-36.
(online at: www.gsm.org.my/products/702001-101721-PDF.pdf)
(Sabah under WNW-ESE compressive stress due W-ward movements of Philippine-Pacific plate against SE-moving Eurasian plate, causing NE-SW trending active thrust faults and NW-SE trending strike-slip faults. Resultant regional folding/ warping of upper crust produced uplifted NE-SW belt in W Sabah (Crocker-Trusmadi Range) and is thought to be driving extensional tectonics, creating 6 elongate Quaternary graben-like basins (Tenom, Keningau, Tambunan, Ranau, Timbua and Marak-Parak))

Tongkul, F. & F.K. Chang (2003)- Structural geology of the Tertiary Maliau Basin, Sabah. In: G.H. Teh (ed.) Petroleum Geology Conf. Exhib. 2002, Bull. Geol. Soc. Malaysia 47, p. 51-61.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003a04.pdf)
(Maliau Basin saucer-shaped basin in C and S Sabah. 7500m thick clastics section, mainly M Miocene age and deltaic- coastal facies)

Torres, J., A. Gartrell & N. Hoggmascall (2011)- Redefining a sequence stratigraphic framework for the Miocene to Present in Brunei Darussalam: roles of local tectonics, eustacy and sediment supply. Int. Petrol. Techn. Conf. (IPTC), Bangkok 2011, IPTC 15167, p. 2790-2801.
(Summary of Brunei Shell work on M Miocene- Recent deltaic sequences of Baram-Balbac Basin. Previous studies used global sequence framework and underestimated local autocyclic forcing. Revised tectono-stratigraphic framework established ten 3rd order Late Miocene- Present sequences. Some can be tied to regional compressional pulses, two sequence boundaries now calibrated to two major global eustatic falls (11.7 and 5.73 Ma). 11.7 Ma event shows ~15 km basinward shift of shelf edge, but no sub-aerial erosion on emerged shelf. The 5.73 Ma event (near Top Discoaster quinqueramus) shows modest basinward shift of shelf edge, widespread canyon incision along margin and major incision of fluvial system feeding Champion Delta)

Ujie, H. (1970)- Miocene foraminiferal faunas from the Sandakan Formation, North Borneo. In: T. Kobayasi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 8, p. 165-185.
(Sandakan Fm on Sandakan Peninsula, NE Sabah, >4500m thick clastic series, mostly barren, 3 samples with M Miocene planktonic forams (Gr. fohsi zone))

Ujie, H. (1977)- New species and subspecies of benthonic foraminifera from the Miocene Sandakan Formation, North Borneo. In: T. Kobayasi & R. Toriyama (eds.) Geology and Palaeontology. Southeast Asia, University of Tokyo Press, 18, p. 87-102.
(Descriptions of marine benthic forams from Middle Miocene Sandakan Fm. New species of Bolivina, Ammonia, Pseudorotalia borneensis, Gyroidina, etc. No stratigraphy or biozonations)

Ulfa, Y., N. Sapari & Z.Z.T. Harith (2011)- Combined tide and storm influence on facies sedimentation of Miocene Miri Formation, Sarawak.Eksplorium 32, 2, p. 77-89.
(online at: jurnal.batan.go.id/index.php/eksplorium/article/download/2814/2586)
(Outcrop facies study of M-L Miri Fm in Miri Field area, Sarawak. Two main facies associations: (1) tide-dominated estuary; and (2) wave and storm- dominated facies)

Unjah, T., Basir Jasin & Uyop Said (2000)- Aspek paleontologi Formasi Pedawan Kawasan Batu Kitang- Bau, Sarawak. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf. 2000, Pulau Pinang, p. 159-163.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_22.pdf)
('Paleontological aspects of the Pedawan Formation at Batu Kitang- Bau, Sarawak'. Brief discussion of palynomorphs and macrofaunas in Cretaceous Pedawan Fm, SW Sarawak)

Vachard, D. (1990)- A new biozonation of the limestones from Terbat area, Sarawak, Malaysia. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 183-208.
(Terbat Lst of W Sarawak- NW Kalimantan border area with 7 diverse M Carboniferous- earliest Permian fusulinid assemblages: M Carboniferous with (1) Profusulinella- Goksuella and (2) Beedeina- Komia; (3) latest Carboniferous with (3) Dutkevichites and (4) Pseudofusulina-Ozawainella; (5) earliest Permian (lower Asselian) with Occidentoschwagerina fusulinoides, Ozawainella (=Nummulostegina velebitana of Cummings); (6) M-U Asselian with Ozawaiella angulata, Schwagerina, Boultonia willsi, Tricitites and (7) U Artinskian with Langella ex. gr. perforata (= Padangia perforata Lange 1925) and common Permocalculus. Sarawak assemblages most similar to S and N China and Alps)

Vahrenkamp, V.C. (1998)- Miocene carbonates of the Luconian Province, Offshore Sarawak: implications for regional geology and reservoir properties from Strontium-isotope stratigraphy. In: G.H. Teh (ed.) Geol. Soc. Malaysia Petrol. Geol. Conf., Kuala Lumpur 1997, Bull. Geol. Soc. Malaysia 42, p. 1-13.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1998001.pdf)
(Luconia province E-M Miocene carbonate platforms growth and demise correlated with 2nd-order eustatic sea-level cycle. Sr isotopes suggest late E Miocene- Middle/Late Miocene boundary ages. Major karst horizons, flooding, aggradation and progradation packages linked to 3rd order eustatic sea-level fluctuations. Simultaneous with 2nd order sea-level drop (late M Miocene) influx of siliciclastics split province into S part with low relief carbonate banks and N part with high relief platforms. All growth terminated at end M Miocene. Low relief banks buried, high relief platforms karstified prior to drowning (Late Miocene-Pliocene). Porosity-permeability distribution linked to duration of exposure and burial diagenesis)

Vahrenkamp, V.C., F. David, P. Duijndam, M. Newall & P. Crevello (2004)- Growth architecture, faulting, and karstification of a Middle Miocene carbonate platform, Luconia Province, Offshore Sarawak, Malaysia. In: G.P. Eberli et al. (eds.) Seismic imaging of carbonate reservoirs and systems, American Assoc. Petrol. Geol. (AAPG), Mem. 81, p. 329-350.
(Mega Platform is 30x50-km large and 1.2-km-thick carbonate platform, originating in late Early- early M Miocene on structural high. First aggraded, then backstepped in M Miocene. Several transgressive, aggradational, and progradational cycles overprinted by karst events. Demise of platform either drowning from combined subsidence- eustatic sea level rise, or much-later drowning, preceded by period of exposure resulting from second-order sea level fall and decrease in subsidence caused by onset of Late Miocene tectonism in Borneo. Hiatus of ~5 m.y. before platform was buried by deep-marine siliciclastics prograding from large NW Borneo deltas. Growth architecture, faulting and karstification key to exploiting hydrocarbon reservoirs)

Vahrenkamp, V.C., Y. Kamari & S.A. Rahman (1998)- Three dimensional reservoir geological model and multiple scenario volumetrics of the F23 Miocene carbonate build-up, Luconia Province, offshore Sarawak. Bull. Geol. Soc. Malaysia 42, p. 15-26.
(online at: www.gsm.org.my/products/702001-100860-PDF.pdf)
(Gas reservoirs in M Miocene carbonate builups of C Luconia with complex internal reservoir architecture influenced by paleo-wind pattern and sea level fluctuations, with backstepping, progradational and aggradational growth phases. Transgressive systems dense argillaceous limestones, possibly isolating gas volumes. During repeated periods of flooding platform backstepped up-wind, then prograded down-wind again during sea level high stands. Most likely gas volume in F23 field 3.98 Tcf)

Van Borren, L.K., A. Koopman & A.J. Schreurs (1996)- Stratigraphy. In: S.T.Sandal (ed.) The geology and hydrocarbon resources of Negara Brunei Darussalam (2nd ed.), Spec. Publ. Muzium Brunei and Brunei Shell Petroleum Company Berhad, Syabas, Bandar Seri Begawan, p. 81-128.
(Includes review of biostratigraphy in Brunei region (p. 81-96))

Van den Brink, H. (2001)- Neogene dinoflagellate cysts from a deep water well, offshore Sabah, northern Borneo. Berita Sedimentologi 16, p. 22-25.
(Study of marine dinoflagellate cysts in U Miocene- Pliocene of deep water well offshore Sabah. Potential useful 'tops' in Pliocene: Hystrichokolpoma rigaudiae, H. okinawinum, Dapsilidinium pastielsi, Lingulodinium pycnospinosum. For U Miocene: Selenopemphix brevispinosa and Systematophora placacantha)

Van den Brink, H. (2002)- Neogene dinoflagellate cysts from a deep water well, offshore Sabah, northern Borneo. Proc. 34th Ann. Mtg. American Assoc. Stratigr. Palynologists (AASP), p. 278-279. *(Abstract only)*
(Attempt to establish dinoflagellate cyst biozonation for Late Miocene- Recent in deep-water wells off Sabah and Brunei. Palynological assemblages dominated by land plant material; marine elements (dinoflagellate cysts, acritarchs, algae) only 2-5% of microflora. Dinoflagellate cyst assemblages similar to open oceanic assemblages from E Indian Ocean and NE Australian margin)

Van den Brink, H. (2019)- The stratigraphic distribution of Neogene dinoflagellate cysts from a deep water well, Offshore Sabah, Northern Borneo. Berita Sedimentologi 43, p. 15-28.
(online at: https://www.iagi.or.id/fosi/files/2019/06/FOSI_BeritaSedimentologi_43_June_2019.pdf)
(Late Miocene- Pliocene dinoflagellate cyst distribution in well Kebabangan-1, deep water offshore Sabah. Dinoflagellate cysts recovered from mud-rich shelfal topsets and underlying mud-rich slope fan systems, while basal sand-rich base-of-slope fans barren of palynomorphs)

Van der Zee, W. & J.L. Urai (2005)- Processes of normal fault evolution in a siliciclastic sequence: a case study from Miri, Sarawak, Malaysia. J. Structural Geol. 27, 12, p. 2281-2300.
(Outcrop observations of normal faults formed at shallow depth in deltaic sand-clay sequence near Miri used to study early stages of fault development)

Van Ditzhuijzen, P.J.D. & J.A. de Waal (1984)- Reservoir compaction and surface subsidence in the Central Luconia gas bearing carbonates, offshore Sarawak. Proc. 5th Offshore South East Asia Conf., SE Asia Expl. Soc. (SEAPEX), Singapore, p. 27-40.
(Pores in carbonates with common moldic porosity may collapse as reservoirs are depleted, and cause subsidence)

Van Hattum, M.W.A. (2005)- Provenance of Cenozoic sedimentary rocks in Northern Borneo. Ph.D. Thesis Royal Holloway College, University of London, p. 1-467. *(Unpublished)*

Van Hattum, M., R. Hall & G.J. Nichols (2003)- Provenance of northern Borneo sediments. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 305-319.
(Upper Cretaceous- Eocene sediments mature quartzose, possibly derived from mainland SE Asia/Indochina. In Eocene shift to relatively immature recycled orogenic sands. Eo- Oligocene Crocker Fm mainly derived from granites; ultimate source probably S Borneo Schwaner Mountains)

Van Hattum, M.W.A., R. Hall, A.L. Pickard & G.J. Nichols (2006)- Southeast Asian sediments not from Asia: provenance and geochronology of North Borneo sandstones. Geology 34, 7, p. 589-592.
(Eocene- Lower Miocene Crocker turbidite sst of N Borneo derived from Borneo and SE Asia, not from Asian sources after India-Eurasia collision. Compositionally mature due to tropical weathering, but mostly first-cycle sandstones from granitic and subordinate metamorphic, sedimentary and ophiolitic rocks. Detrital zircons Archean- Eocene ages, mostly Mesozoic. Main source Cretaceous granites of Schwaner Mts in SW Borneo in Eocene, Permo-Triassic granites and Proterozoic basement of Malay-Thai Tin Belt in Oligocene)

Van Hattum, M.W.A., R. Hall, A.L. Pickard & G.J. Nichols (2013)- Provenance and geochronology of Cenozoic sandstones of northern Borneo. J. Asian Earth Sci. 76, p. 266-282.
(Crocker Fan of Sabah deposited during subduction of Proto-South China Sea in Eocene- E Miocene. Collision of microcontinental blocks with N Borneo in E Miocene terminated deep water sedimentation and resulted in regional Top Crocker Unconformity, followed by sedimentation of fluvio-deltaic- shallow marine facies in late E Miocene. Crocker Fan sandstones derived from sources in Borneo and nearby SE Asia. Sandstones mostly from granitic sources, with some metamorphic, sedimentary and ophiolitic material. In Eocene sands mainly Cretaceous zircons (~90-130 Ma; from granites of Schwaner Mts). In Oligocene sands more common zircons from Permian-Triassic granites (~213-268 Ma) and Paleoproterozoic (~1850 Ma) from basement of Malay Tin Belt. Miocene fluvio-deltaics mostly recycled from deformed Crocker Fan. Lower Miocene Tajau Sst of Kudat

Fm in N Sabah derived mainly from granitic and high-grade metamorphic source rock, probably from N, from continental crust from S China and subduction-related metamorphic rocks)

Van Heck, S.E. (2001)- Calcareous nannoplankton and planktonic foraminifera from the Neogene offshore Northwest Borneo. Berita Sedimentologi 16, p. 14-21.
(Summary of sequence of M Miocene and younger foram and nannoplankton biostratigraphic events recognized in deepwater NW Borneo wells)

Vannucchi, P., A. Maltman, G. Bettelli & B. Clennell (2003)- On the nature of scaly fabric and scaly clay. J. Structural Geol. 25, 5, p. 673-688.
(On scaly clay fabric, including chapter on scaly clay in E-M Miocene East Sabah melange)

Van Rensbergen, P. & C.K. Morley (2000)- 3D seismic study of a shale expulsion syncline at the base of the Champion delta, offshore Brunei and its implication for the early structural evolution of large delta systems. Marine Petroleum Geol. 17, p. 861-872.
(Example of Late Miocene expulsion rollover syncline related to mobile shale, described from 3D seismic)

Van Rensbergen, P., C.K. Morley, D.W. Ang, T.Q. Hoan & N.T. Lam (1999)- Structural evolution of shale diapirs from reactive rise to mud volcanism: 3D seismic data from the Baram Delta, offshore Brunei Darussalam. J. Geol. Soc. London 156, p. 633-650.
(Two areas of shale diapyrism in Baram Delta)

Van Rensbergen, P. & C.K. Morley (2003)- Re-evaluation of mobile shale occurrences on seismic sections of the Champion and Baram Deltas, offshore Brunei. In: P. Van Rensbergen et al. (eds.) Subsurface sediment mobilization, Geol. Soc. London, Spec. Publ. 216, p. 395-409.
(3D seismic data in Baram and Champion delta provinces show chaotic areas, conventionally interpreted as shale diapers, have dimmed but coherent reflectivity. Dimming attributed to sediment intrusive complexes, overpressured fluids, gas clouds or processing artefacts. M Miocene-Recent Champion and Baram deltaic provinces characterized by gravity tectonics-related structures, also affected by episodic contraction, with inversion of some growth faults. Emplacement of shale pipes, gas clouds and intrusive complexes generally later (Pliocene) than underlying reactive diapirs (Late Miocene))

Van Vliet, A. & W.N. Krebs (2009)- The Middle Miocene Unconformity (MMU) in North Luconia, deepwater Sarawak: how unconformable is the unconformity? Warta Geologi 35, 3, p. 131-133.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta35_4.pdf)
(M Miocene Unconformity (MMU) of S China Sea in most places neither M Miocene age, nor true widespread break in stratigraphic record. Crustal extension in late E Miocene resulted in listric faulting, fault-block rotation and accelerated subsidence around 'oceanic' core of S China Sea. Crests of fault-blocks experienced minor (mainly submarine) erosion)

Van Vliet, A. & M.M. Schwander (1989)- Stratigraphic interpretation of a regional seismic section across the Labuan Syncline and its flank structures, Sabah, North Borneo. In: A.W. Bally (ed.) Atlas of seismic stratigraphy, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 27, p. 163-167.

Vijayan, V.R., C. Foss & H. Stagg (2013)- Crustal character and thickness over the Dangerous Grounds and beneath the Northwest Borneo Trough. J. Asian Earth Sci. 76, p. 389-398.
(Crustal thickness across Luconia Province and Dangerous Grounds is 25-30 km. NW Borneo/ Sabah Trough is underlain by thinned crust (25-20 km total crustal thickness), without tectonic discontinuity)

Vogt, E.T. & M.F.J. Flower (1989)- Genesis of the Kinabalu (Sabah) granitoids at a subduction-collisional junction. Contrib. Mineralogy Petrology 103, 4, p. 493-509.
(Kinabalu batholith is Late Neogene granitoid in NW Sabah, where subducted S China Sea lithosphere of extinct Borneo-Palawan subduction zone interacted with collisionally thickened crust of N Sabah collision suture. Intruded into melange lithologies of Trusmadi and Crocker Fms. Exposed batholith with small core of

biotite-quartz monzodiorite grading to hornblende-quartz monzonite. Unusual zonation from inner low-K to outer high-K compositions)

Wahab, M.H., A. Asraff, J.J. Ismail & C.A. Ibrahim (2013)- Significant hydrocarbon accumulation in deep overpressured play of West Baram Delta: a breakthrough. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, 3p. *(Extended Abstract)*
(Two recent HPHT wells successfully tested deep overpressured play in W Baram Delta, offshore Miri, with discoveries of gas and condensate at >4500m below mudline. Reservoir pressure ~14,000 psi. 200m net gas sand penetrated with all gas bearing reservoirs filled to structural spill (~650m of vertical gas colum). No maps, well names, etc.)

Wakita, K. (1981)- The alteration and mineralization of serpentinite of the Mamut porphyry copper deposit. Mining Geology 31, 5, p. 351-365.
(online at: www.journalarchive.jst.go.jp/..)
(Mamut porphyry copper deposit associated with Upper Miocene adamellite porphyry intrusion. Localized in intrusion and in serpentinite and clastic sediments wall rocks. Four types of serpentinite alteration)

Walker, T. (1993)- Sandakan Basin prospects rise following modern reappraisal. Oil and Gas J., 10 May, p. 43-47.

Wang, P.C., S.Z. Li, L.L. Guo, S.H. Jiang, I.D. Somerville, S.J. Zhao, B.D. Zhu, J. Chen, L.M. Dai, Y.H. Suo & B. Han (2016)- Mesozoic and Cenozoic accretionary orogenic processes in Borneo and their mechanisms. In: Evolution of West Pacific Ocean, South China Sea and Indian Ocean, Geological J. 51, Suppl. S1, p. 464-489.
(Borneo Accretionary Orogen Mesozoic- Cenozoic accretionary orogeny, with intensely deformed Rajang-Crocker Gp Accretionary prism, ophiolites and calc-alkaline igneous rocks. Four episodes of Sabah deformation: (D1) displacement foliation (S1) and NNE-trending thrusts (Sabah Orogeny; 23-16 Ma); (D2) WNW- or NW-striking thrusts (formation of Deep Regional Uncomformity at 16 Ma), followed by NNW-SSE-trending thrusts and folds; (D3) Shallow Regional Uncomformity at 10 Ma; (D4) NNE-trending sinistral strike-slip faults and WNW-trending dextral faults (NW-SE-trending extension after multi-stage collisional events). Accretionary orogen related to evolution of Proto-S China Sea, which continuously subducted under Borneo Block and closed in Late Eocene- E Miocene. BAO still active, as thrusting and subduction of Dangerous Grounds under Borneo Block. NNE-trending faults considered as transform faults, rotating to present-day NW-trending faults due to CCW rotation of entire Borneo Block. Previous NNE-trending Tinjar Fault major boundary, with Oligocene- E Miocene strata and igneous rocks to NE, and Cretaceous-Late Eocene to SW)

Wanner, J. (1922)- Beitrage zur Geologie und Geographie von Nordost-Borneo. Ergebnisse einer von Dr. Stamm in den 1913 und 1914 ausgefuhrten Reise nach Borneo. Neues Jahrbuch Geol. Palaont., Beilage Band 45, 1921, p. 149-213.
('Contributions to the geology and geography of NE Borneo'. Summary of results of field survey in N Borneo in areas of Darvel Bay, Siagau River and Sandakan Bay by K. Stamm for NKPM in 1913-1914)

Wannier, M. (2009)- Carbonate platforms in wedge-top basins: an example from the Gunung Mulu National Park, Northern Sarawak (Malaysia). Marine Petroleum Geol. 26, 2, p. 177-207.
(Melinau carbonate platform of NE Sarawak initiated in M Eocene on rotating slice of Rajang accretionary prism. Differential loading enhanced rotation of mobile substratum and created asymmetrical wedge-top basin. Extensional S margin of basin ~2200m thick Eocene-Oligocene carbonates. Backstepping and dismemberment of carbonate system started in latest Oligocene; deep-marine sedimentation prevalent in E Miocene)

Wannier, M., P. Lesslar, C. Lee, H. Raven R. Sorkhabi & A. Ibrahim (2011)- Geological excursions around Miri, Sarawak, 1910-2010, Celebrating the 100th anniversary of the discovery of the Miri oil field. Belle's Bookshop, Ecomedia, Miri, Sarawak, p. 1-279.
(Shell geologists review of geology of Miri oilfield, Sarawak (discovered 1910, peak production 1929) and outcrop descriptions of Miocene- Quaternary deltaic sediments and faults around Miri anticline, Niah National

Park with caves in E-M Miocene Subis Lst, Mulu National Park with caves in Late Eocene- Oligocene Melinau Lst, etc.. With notes on fossils, mud volcanoes, tektites)

Warrlich, G.M.D., E.W. Adams, A. Ryba, T.C.F. Tam, K.K. Ting & H.K. Tang (2019)- What matters for flow and recovery in carbonate gas reservoirs: Insights from the mature Central Luconia Province, offshore Sarawak, Malaysia. American Assoc. Petrol. Geol. (AAPG) Bull. 103, 3, p. 691-721.
(Key factors affecting oil-gas flow in Miocene carbonate reservoirs in C Luconia, offshore Sarawak. Reservoir heterogeneities impacting flow grouped into 'horizontal heterogeneities' (argillaceous flooding layers, exposure karst) and 'vertical heterogeneities' (especially along platform margins; fault-bounded reef margins, karsts, etc. can be vertical conduits for aquifer inflow)

Warrlich, G.M.D., E.W. Adams, T.C.F. Tam, E. Kosa, K.K. Ting & A.D. Kayes (2013)- The value of regional correlation and analogues in managing a mature asset: examples from the Central Luconia gas fields. Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpar, 5p. *(Extended Abstract)*
(Consistent, sequence-stratigraphic correlation framework in C Luconia gas fields and use of modern-day and fossil outcrop analogues aid in planning development wells, predicting recovery factors and optimizing recovery. Gas recovery depends on presence or absence of argillaceous tight layers formed during flooding events in reservoir, as well as their relative position to GWC)

Warrlich, G.M.D., D. Palm, H. van Alebeek, D. Volchkov, S.C. Hong, E.W. Adams, A. Ryba et al. (2014)- Scenario-based pore pressure prediction to reduce drilling risks, examples from the Sarawak Asset, North West Borneo, Malaysia: Int. Petrol. Techn. Conf. (IPTC), Kuala Lumpur, Paper 17952, 13p.

Warrlich, G., C. Taberner, W. Asyee, B. Stephenson, M. Esteban, M. Bya-Ferrero, A. Dombrowski & J.H. van Konijnenburg (2010)- The impact of postdepositional processes on reservoir properties: two case studies of Tertiary carbonate buildup gas fields in Southeast Asia (Malampaya and E11). In: W.A. Morgan et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 99-127.
(Comparison of two Tertiary gas-bearing carbonate buildups formed in similar depositional environments and ages: E11 in Luconia, off N Borneo and Malampaya, off Philippines. Diagenetic histories different: (1) E11 secondary porosity formed by dolomitization and late leaching; (2) Malampaya by exposure and burial-related leaching. Low-porosity zones in Malampaya result of meteoric diagenesis during exposure and late cementation; in E11 non-leached, deeper-water argillaceous wackestones. Early diagenetic alterations follow depositional trends. Diagenetic overprints in burial realm may be guided by faults)

Watanabe, Y., H. Natori & G. Lingkai (1995)- Geochemical characteristics of the Tertiary argillaceous rocks from central-Northeast Sarawak, Malaysia. J. Sediment. Soc. Japan 41, p. 3-15.
(online at: www.journalarchive.jst.go.jp/..)
(Geochemical analyses of Lower Neogene marine argillaceous rocks from outcrops in C NE Sarawak shows derivaion mostly from granitic provenance without mafic- ultramafic components. Higher horizons more enriched in exposed weathered materials from uplift of hinterland. Hydrocarbon source potential poor due to post-depositional oxidation)

Watters, D.G., R.C. Maskall, I.M. Warrilow & V. Liew (1999)- A sleeping giant awakened: further development of the Seria Field, Brunei Darussalam, after almost 70 years of production. Petroleum Geoscience 5, 2, p. 147-159.
(Seria Field 1929 discovery in large WSW-ENE trending anticline. Produced 164 Mm3 (>1 billion barrels)of oil from 778 wells by 1996 (34% of in-place volumes). 3D seismic used to identify undrilled closures and areas of unswept oil in field)

Weber, H.S. & D.T.C. Lee (1990)- Mineral resources investigation in Sabah, East Malaysia, 1980-1984; selected results and conclusions. Geol. Jahrbuch B74, p. 3-29.
(Results of German mineral resources survey in Sabah. Focused on lead-zinc-copper anomalies associated with Late Tertiary volcanic belt of Semporna Peninsula and copper-zinc anomalies associated with Late Cretaceous-E Tertiary ophiolites of C Sabah)

Weng, H.C., E. Rollett, K. Maguire, G. Stone, S. Hayon & L.B. Leong (2011)- Identification, significance and correlation of Mass Transport Complexes in Malaysian deepwater fields. Int. Petroleum Technology Conference (IPTC) 2011, Bangkok, IPTC-14781-MS, p. 1851-1864.
(Distribution of Mass Transport Complexes in deepwater Sabah strong control on distribution of reservoir and seal. MTCs typically exhibiting high angle chaotic dips, are denser than overlying and underlying sediments, and generate strong seismic markers)

Wenk, E. (1946)- Gunong Kinabalu, der Viertausender von Borneo. Die Alpen, Bern, 12, p. .
('Mount Kinabalu, the four-thousander of Borneo'. Description by Shell geologist)

Whittaker, J.E. & R.L. Hodgkinson (1979)- Foraminifera of the Togopi Formation, eastern Sabah, Malaysia. Bull. British Museum (Natural History), Geology, 31, p. 1-120.
(online at: www31.us.archive.org/details/bulletinofbritis31brit)
(125 species of foraminifera described from Late Miocene Togopi River section. Species names Ammonia togopiensis n.sp. introduced for Billman et al (1980) marker species Ammonia ikebei; Asterorotalia pulchra for more commonly used name Asterorotalia trispinosa)

Whittle, A.P. & G.A. Short (1978)- The petroleum geology of the Tembungo Field, East Malaysia offshore. Proc.SE Asia Petroleum Expl. Soc. (SEAPEX) Offshore SE Asia Conf. 6, Singapore, 11p.
(Tembungo 1971 first oil and gas discovery offshore Sabah in anticlinal structure with Late Miocene turbidite reservoir sands. Reserves ~15 MBO)

Wicker, J.J. & J.E.F Stearn (1999)- Baram Field- the 3D marine re-processing challenge. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 439-450.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999044.pdf)
(Baram Field 1963 Shell discovery offshore Sarawak is largest field in Baram Delta Province (EUR 283 MMBO). Complex structure and stratigraphy, with >746 hydrocarbon-bearing reservoirs identified. Re-processing of 1988 seismic survey improved interpretation)

Wilford, G.E. (1955)- The geology and mineral resources of the Kuching-Lundu area, West Sarawak, including the Bau mining district. Geological Survey Dept., British Territories in Borneo, Memoir 3, p. 1-254.
(Kuching-Lundu area is westernmost part of Sarawak. N Borneo composed of sedimentary rocks from probably Devonian to Quaternary age and variety of volcanic and intrusive igneous rocks. Structurally part of Sunda shelf, an extension of continental Asia. Gold and diamonds mined in early 19th century. Gold, antimony, and mercury ores genetically associated with Tertiary acid intrusions. With 1:125,000 geologic map of study area and 1:50,000 map of Bau gold mining district)

Wilford, G.E. (1957)- Geology of Brunei and adjoining areas of Sarawak- Tektites. Annual Report Geological Survey Dept., British Territories in Borneo, 1957, Kuching, p. 121-124.
(Black, glossy rounded pebbles from Quaternary alluvial sands and gravels in Brunei, interpreted as tektites/ glassy meteorites)

Wilford, G.E. (1961)- The geology and mineral resources of Brunei and adjacent parts of Sarawak with descriptions of Seria and Miri oilfields. British Borneo Geol. Survey Dept., Memoir 10, p. 1-319.
(Major review of Brunei geology. Area part of centre of 'NW Borneo geosyncline', with great thicknesses of Paleocene- Recent sediments (possibly >100,000'). Presence of (reworked?). Pleistocene tektites in gravel pits in young terrace deposits (K-Ar date of tektite from Pentuan Hill 730,000 years))

Wilford, G.E. (1964)- The geology of Sarawak and Sabah caves. Geol. Survey Borneo Region, Malaysia, Bull. 6, p. 1-181.
(Caves in all larger limestone outcrops of North Borneo. Mainly Permian (Terbat Fm), Jurassic and Cretaceous (Bau Fm) ages in W Sarawak, mainly Eocene- Miocene ages (Melinau Lst, Tangap Fm) in E

Sarawak, Cretaceous (Madai-Baturong Lst) and Miocene (Gomantong Lst) in Sabah. Most limestones fine-grained and very low porosity. One 'lava tunnel' in basalt near Darvel Bay, E Sabah. Limited geology info)

Wilford, G.E. (1967)- The effects of late Tertiary and Quaternary tectonic movements on the geomorphological evolution of Brunei and adjacent parts of Sarawak. J. Tropical Geography, Singapore, 24, p. 50-56.

Wilford, G.E. (1968)- Notes on the geomorphology of Sabah. In: P. Collenette & J. Goh (eds.) Geological Papers 1967, Geological Survey of Borneo Region, Malaysia, Bull. 9, p. 1-22.

Wilford, G.E. & C.H. Kho (1965)- The geology and mineral resources of the Penrissen area, West Sarawak, Malaysia. Malaysia Geol. Survey Borneo Region, Rept. 2, p. 1-195.
(Description of geology and 1:50,000 scale geologic map of area S of Kuching along NW Kalimantan border. Named after 4350' high Penrissen Peak, which is on border, composed of Plateau Sandstone. Oldest rock U Triassic Sadong Fm (with U Triassic bivalves Halobia, Grammatodon, Monotis salinaria, etc.) and Serian Volcanics. Triassic unconformably overlain by Kedadom Fm with Kimmeridgian ammonoids Lithacoceras and Subplanites sp. Conformably overlain by Bau Lst with latest Jurassic- E Cretaceous algae (Cladocoropsis, Clypeina, Salpingoporella, Thaumatoporella, etc.) and foraminifera (Pseudocyclammina lituus, Nautiloculina oolithica). Widespread Cretaceous Pedawan Fm with radiolaria, Etc..)

William, A.G., J.J. Lambiase, S. Back & M.K. Jamiran (2003)- Sedimentology of the Jalan Selaiman and Bukit Melinsung outcrops, western Sabah: is the West Crocker Formation an analogue for Neogene turbidites offshore? In: G.H. Teh (ed.) Petroleum Geology Conf. Exhib. 2002, Bull. Geol. Soc. Malaysia 47, p. 63-75.
(online at: www.gsm.org.my/products/702001-100608-PDF.pdf)
(Outcrop study of~500m of Oligocene- E Miocene West Crocker Fm turbidites, W Sabah. Texturally immature sands. Paleocurrent directions consistently to N, oblique to NE-SW marginal basin, possibly derived from uplifted Rajang accretionary prism)

Wilson, M.E.J., E. Chang Ee Wah, S. Dorobek & P. Lunt (2013)- Onshore to offshore trends in carbonate sequence development, diagenesis and reservoir quality across a land-attached shelf in SE Asia. Marine Petroleum Geol. 45, p. 349-376.
(online at: http://searg.rhul.ac.uk/pubs/wilson_etal_2013%20Offshore%20Borneo%20carbonate%20trends.pdf)
(Onshore to offshore trends in carbonate development and reservoir quality assessed across Late Oligocene-Miocene of NW Borneo (Sarawak) shelf from outcrops and wells. Carbonates developed as localised build-ups and more continuous sheet-like deposits in near-coast to shelf margin positions. Most samples show evidence for marine micritisation and in shelf margin positions isopachous cements. Burial diagenesis predominates (compaction, neomorphism, fracturing, late leaching, dolomitisation). Some early, probable meteoric leaching affected inner shelf deposits prior to pervasive calcite cement formation, probably reflecting alteration from terrestrial groundwaters in meteoric aquifers derived from humid landmass of Borneo. Best porosity (20-35%) in outer shelf- shelf margin high energy grainstones and rudstones that experienced minimal clastic influx, most commonly from backstepping to aggradational carbonate sequences)

Wilson, R.A.M. (1961)- The geology and mineral resources of the Banggi island and Sugut River area, North Borneo. Geol. Survey Dept., British Territories in Borneo, Memoir 15, p. 1-143.
(Geology of NE Borneo Banggi and Balamban Islands off N tip of Sabah and mainland Sugut river area. Thick Late Eocene-Miocene Crocker Fm geosynclinal sequence on mainland, mainly S/ SW dipping. On islands imbricated, sheared (strike N, shearing towards W), Chert-Spilite Fm of Upper Cretaceous or Lower Eocene pillow lavas, basaltic intrusions and chert beds, brecciated and intruded by serpentinite sheets and younger ultrabasic plutonics. S Banggi Fm with E Miocene (Te5) limestones, some with reworked Eocene Discocyclina and ?Pellatispira). M Miocene (lower Tf) Balambangan Lst with Miogypsina, Katacycloclypeus annulatus)

Wilson, R.A.M. (1963)- The Chert-Spilite Formation of North Borneo. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Bull. Geol. Survey Dept., British Territories in Borneo, 4, Kuching, p. 61-78.

('Chert-spilite Fm sediments form NE/NNE trending discontinuous 'ophiolitic' belt across C-E Sabah, from Sempurna Peninsula in SE to Kota Belud in NW and Balambangan- Banggi Islands in N. Mainly deep marine radiolarian cherts, basaltic volcanics (pillow lavas), graywacke sandstones and serpentinite sheets of Cretaceous- Eocene age. All strongly imbricated and often look like slickensided breccias. Also breccias with boulders in clay matrix. Relationships with underlying and overlying formations not clear. Most of tectonic activity predates Crocker and Kulapis Fm)

Wilson, R.A.M. (1964)- The geology and mineral resources of the Labuan and Padas Valley area, Sabah, Malaysia. Geol. Survey Borneo Region, Malaysia, Memoir 17, p. 1-150.

Wolfenden, E.B. (1960)- The geology and mineral resources of the lower Rajang Valley and adjoining areas, Sarawak. Geol. Survey Dept., British Territories in Borneo, Memoir 11, p. 1-167.
(Area of C Sarawak with mainly Upper Cretaceous- Recent sediments and rare Tertiary intrusive and extrusive igneous rocks. Thick Upper Cretaceous- Upper Eocene deep water Rajang Fm series of mildly dynamically metamorphosed argillaceous rocks, sandstone, and conglomerate, intensely folded in Late Eocene. Oldest rocks Upper Cretaceous (with Globotrunca, Orbitolina)- U Eocene Belaga Fm (incl. Pellatispira, Discocyclina, planktonics). Tatau Fm with rich Eocene- Oligocene foraminifera. In NE thick Upper Eocene- Pliocene sandstones and shales with thin Late Eocene limestones and volcanics. Upper Eocene- Pliocene rocks folded)

Wolfenden, E.B. (1961)- Molluscs from the Bau Formation of the Tebakang area, First Division. Annual Report Geological Survey Dept., British Territories in Borneo, 1960, Kuching, p. 47-
(Brief note on Late Jurassic fauna in conglomeratic shale of Bau Lst Fm of W Sarawak: ammonites (Lithacoceras or Subplanites), bivalves (Nuculana, Cucullaea, Astare, Corbula). No figures)

Wolfenden, E.B. (1961)- Bauxite in Sarawak. Economic Geology 56, 5, p. 972-981.
(Tropical weathering of basic and intermediate igneous rocks generated bauxite (= >40% alumina) deposits of W Sarawak, W of Lupar River. Highest-grade material (Munggu Belian) formed from pyroxene andesite; other parent materials gabbro, diorite, plagioclase amphibolite and altered andesites and basalts. Bauxite consists mainly of gibbsite. In Sarawak local local company Sematan Bauxite Ltd started mining bauxite in 1957 at Munggu Belian and Bukit Gebong near, Sematan)

Wolfenden, E.B. (1963)- Sematan and Lundu area, West Sarawak. British Borneo Geol. Survey Report 1, p. 1-159.
(Includes detailed descriptions of bauxite occurrences)

Wolfenden, E.B. (1963)- Bauxite in West Sarawak. In: F.H. Fitch (ed.) Proc. British Borneo Geological Conference 1961, Kuching, Bull. Geol. Survey Dept., British Territories in Borneo, 4, p. 119-136.
(Bauxite deposits (= rocks with >40% alumina) in W Sarawak only W of Lupar River (rel. old 'Continental core' of Borneo). Possibly commercial deposits near Sematan. Formed from tropical weathering of intermediate-basic igneous rocks (andesite, gabbro and altered dolerite))

Wolfenden, E.B. (1965)- Geochemical behaviour of trace elements during bauxite formation in Sarawak, Malaysia. Geochimica Cosmochimica Acta 29, 9, p. 1051-1062.
(Bauxite and kaolinitic clay formed by weathering of andesite lava under humid tropical conditions in W Sarawak. At Sematan bauxite is ~10' thick on hills and extends under surrounding alluvial sand and clay where composition secondarily modified (swamp bauxite). During formation of hill bauxite, Cr, Zr and Ga are concentrated, Ni, Co, P, Mn, Sr and Y are depleted. No geology details)

Wolfenden, E.B. (1965)- Bau mining district, West Sarawak, Malaysia, Part 1: Bau. Geol. Survey Borneo Region, Malaysia, Bull. 7, 1, p. 1-147.
(Geologic map of part of W Sarawak, SW of Kuching, an area with long history of gold-siver mining. Includes description of >1800' thick, massive Upper Jurassic Bau Limestone with foram Pseudocyclammina lituus, algae Thaumatoporella parvovesiculifera, stromatoporoid Cladocoropsis mirabilis and also Calpionella. Locally with sandstone- pebbly sandstones with abundant igneous rock fragments at base, unconformable on U Triassic

basaltic Serian volcanics. Conformably overlain by >10,000' of marine Cretaceous Pedawan Fm, now mostly eroded in Bau region. Upper Cretaceous folding phase, strongest NW of Bau, rel. minor to SE, followed by deposition of Plateau Sandstone. Also probably M Miocene folding phase. Acidic igneous intrusions of probably M Miocene age.)

Wolfenden, E.B. & N.S. Haile (1963)- Sematan and Lundu Area, West Sarawak. Explanation of sheets 1-109-3, 1-109-4, 1-109-7, 1-109-8 and 2-109-15. Geol. Survey Dept., British Territories in Borneo, Kuching, Report 1, p. 1-159.
(Geologic maps at 1:50,000 scale of W-most part of Sarawak, W of Kuching, bordering W Kalimantan. Oldest rocks thick, intensely folded and locally metamorphosed Jurassic- Cretaceous Serabang Fm flysch, radiolarian chert and ultrabasics (mainly gabbro-dolerite). Interpreted as 'geosynclinal' series (Hamilton 1979 and Hutchison 2005 suggest this is Lower Cretaceous melange, similar to Lubuk Antu/ 'Lupar Line' further East; it is accretionary prism formed during Early Cretaceous subduction of Proto China Sea from N. Unconformably overlain by gently-dipping Paleogene? Plateau Sandstone)

Wolfenden, E.B. & H.J.C. Kirk (1967)- Bauxite and laterite in British Territories in Borneo. The Philippine Geologist (J. Geol. Soc. Philippines) 21, 3, p. 102-116.
(Bauxite was found at Sematan in W Sarawak in 1949. Further prospecting in Sarawak and N Borneo from 1950-1952 not successful. In Sarawak some laterite associated with bauxite, but not economic. Bauxite and laterite present in N Borneo, but extent little known)

Wong, R.H.F. (1993)- Sequence stratigraphy of the Middle Miocene-Pliocene Southern offshore Sandakan Basin, East Sabah. In: G.H. Teh (ed.) Proc. Symposium on the Tectonic framework and energy resources of the western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 129-142.
(Offshore Sandakan Basin sequence stratigraphic study based on seismic and 8 wells. Three main units: (1) M Miocene- early U Miocene (moderate progradation; five 3rd order sequences); (2) middle U Miocene (high progradation, low aggradation; three 3rd order sequences); (3) late U Miocene- Pliocene (high aggradation, low progradation; five 3rd order sequences. Shelf edges mainly N-S trending and prograding East)

Wong, R. (1996)- Seismic sequence stratigraphic interpretation enhances remaining hydrocarbon potential of the SE Collins Field. In: G.H. Teh (ed.) Petroleum Geology Conf. 1995, Bull. Geol. Soc. Malaysia 39, p. 223-240.
(online at: www.gsm.org.my/products/702001-100895-PDF.pdf)
(SE Collins field 1972 marginal oil field discovery in complexly faulted central portion of the Inboard Belt of NW Sabah Basin. Elongated, N-S anticlinal structure with reverse faults on N, W and S. Main reservoirs M Miocene sands. New sequence stratigraphic study lead to doubling of reserves estimate)

Wong, R.H.F. (1997)- Sequence stratigraphy of the Upper Miocene Stage IVC in the Labuan-Paisley Syncline, NW Sabah Basin. Bull. Geol. Soc. Malaysia 41, p. 53-60.
(online at: www.gsm.org.my/products/702001-100870-PDF.pdf)
(Sequence stratigraphic study of U Miocene Stage IVe in Labuan-Paisley Syncline, NW Sabah Basin)

Wong, Y.L. (2012)- Stratigraphy of the Ransi Member of the Middle Eocene to Oligocene Tatau Formation in the Tatau-Bintulu area, Sarawak, East Malaysia. M.Sc. Thesis, University Malaya, Kuala Lumpur, p. 1-256.
(online at: http://studentsrepo.um.edu.my/3871/)
(Ransi conglomerate-sandstone originally dated as U Miocene-Pliocene, but basal part of U Eocene- Oligocene Tatau Fm. Separated from underlying more tightly folded Belaga Fm by angular unconformity. Conglomerate mainly angular- subangular clasts of chert, quartz, igneous and metamorphic fragments. Igneous clasts rhyolite similar to M Eocene igneous intrusion at Bukit Piring in Tatau Area. Source of Ransi beds mainly from chert and metamorphic rocks of older Rajang Gp to S, as indicated by paleocurrent determinations. Volcanic clasts suggest volcanic source in hinterland during deposition. Arip Lst (equivalent to or younger than Ransi Mb) in Tatau Formation to SW with M-L Eocene microfossils such as Discocyclina, Nummulites, Pellatispira)

Woods, J., G.R. Gaafar & Shin Ni Chai (2012)- Chemostratigraphic correlation of Miocene turbidite sequences Offshore Sabah, Malaysia. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-076, p.
(Brief review of use of geochemical rock data for sand correlations)

Wu, J.E. (2010)- 4D evolution of deepwater fold and thrust belt, NW Borneo, South China Sea. Ph.D. Thesis University of London, p. 1-616. *(Unpublished)*

Xue, F.J., G. Sen, M.A. Beg & H.H.B. Abu Bakar (2016)- Effective karst modelling for carbonate build-ups in Central Luconia, Offshore Malaysia. In: 3rd EAGE Integrated Reservoir Modelling Conference, Kuala Lumpur, 4p. *(Extended Abstract)*
(On mapping karst features on 3D seismic over large offshore Miocene carbonate buildup in C Luconia)

Yabe, H. (1918)- Notes on a *Carpenteria* Limestone from B.N. Borneo. Science Reports Tohoku Imperial University, Sendai, Japan, Ser. 2 (Geol.), 5, p. 15-30.
(Three limestone samples from Kinatabang River, British N Borneo, with Cycloclypeus annulatus and common Carpenteria (interpreted by Yabe to be Oligocene, but more likely M Miocene?; JTvG))

Yabe, H. & S. Hanzawa (1925)- A *Lepidocyclina* limestone from Klias Peninsula, B.N. Borneo. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 617-632.
(Early Miocene limestone with Lepidocyclina, Miogypsina, Spiroclypeus from Klias Peninsula)

Yabe, H. & S. Hanzawa (1926)- A foraminiferous limestone, with a questionable fauna, from Klias Peninsula, British North Borneo. Science Repts. Tohoku Imp. University, Sendai, Japan, Ser. 2 (Geol.), 9, 1, p. 1-7.
(online at: http://ir.library.tohoku.ac.jp/re/bitstream/10097/30195/1/KJ00004178169.pdf)
(Discusssion of Rutten (1925) and description of another example of limestone with mixed Eocene (Pellatispira, Discocyclina, Nummulites) and Late Oligocene-E Miocene (Spiroclypeus, Lepidocyclina) larger forams)

Yan, A.S.W. (1991)- Features of volcanic-hosted epithermal gold mineralization in the Nagos and Mantri areas, Sabah. Proc. 22nd Geological Conference, Geol. Survey Malaysia, Kuala Lumpur, Techn. Paper 3, p. 1-16.

Yanagida, J. & J. Lau (1978)- The Upper Jurassic and Middle Cretaceous Terebratulidae from the Bau Limestone formation in West Sarawak, Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 35-47.
(Bau Limestone E of Paku, 4 km E of Bau, SW Sarawak, contains Oxfordian- lower Kimmeridgean terebratulid brachiopods, incl. Neumayrithyris torinosuensis (originally described from Jurassic Torinosu series in Japan) and Ornatothyris bauensis n.sp.)

Yin, E.H. (1985)- Geological map of Sabah, East Malaysia, 3rd edition. Geol. Survey of Malaysia.

Yin, E.H. (1992)- Regional geology- Sarawak. Malaysia Geol. Survey Annual Report 1991, p. 58-74.

Yin, E.H. (1992)- Regional geology- Sabah. Malaysia Geol. Survey Annual Report 1991, p. 74-82.

Yokoyama, K., Y. Tsutsumi & W.S.K. Bong (2015)- Age distributions of monazites in the Late Cretaceous to Late Eocene turbidite from northwestern Borneo and its tectonic setting. Bull. Natl. Museum Nat. Sci., Tokyo, C 41, p. 29-43.
(online at: www.kahaku.go.jp/research/publication/geology/download/41/L_BNMNS_C41_29-43.pdf)
(Late Cretaceous- Late Eocene turbidites of Rajang Gp widely distributed in NW part of Borneo. Three main peaks in monazite age distributions of recent sands in 4 rivers: 200-300 (~240?) Ma, 400-500 (~440) Ma and 1850-1900 Ma, and weak cluster at 700-1100 Ma. Age distributions suggest detrital grains not from Indochina Peninsula, but from S China Craton.)

Zaiauri, W.M., W. Embong, H. Mohamad & K. Mansor (2008)- New perspective on exploration prospect analysis: a case study on the Central Luconia carbonates, Sarawak, East Malaysia. In: Int. Petroleum Techn. Conf. (IPTC), Kuala Lumpur 2008, 12792-MS, p. 1-3 *(Extended Abstract)*
(>70% of major gas discoveries in Malaysia in M-L Miocen carbonate reservoirs of C Luconia Province. Many remaining carbonate structures (pinnacles) believed to be (1) too small, (2) severely overpressured and therefore capable of holding only short gas columns; (3) contain high CO2 and H2S, and (3) likely leak through thief beds in overburden. Recent gas discoveries include Petronas PC4-1 which found 640m gas column at normal pressure and with minimal H2S and CO2)

Zakaria, A.A., H.D. Johnson, C.A.L. Jackson & F. Tongkul (2013)- Sedimentary facies analysis and depositional model of the Palaeogene West Crocker submarine fan system, NW Borneo. J. Asian Earth Sci. 76, p. 283-300.
(Sedimentological analysis of Paleogene W Crocker Fm around Kota Kinabalu, SW Sabah. Large submarine fan system at tectonically active margin of NW Borneo, interpreted as multiple-sourced, shelf-fed, Type II, low-efficiency, sand-rich depositional system)

Zakaria, A.A., H.D. Johnson, C.A.L. Jackson & F. Tongkul (2013)- Sedimentology of the major W Crocker submarine fan system; analogue to the younger productive fans, NW Sabah Basin. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, P13, 5p. *(Extended Abstract)*
(W Crocker Formation outcrops in NW Sabah near Kota Kinabalu. Represents large (25,000 km2), Oligocene - E Miocene sand-dominated basin-floor submarine fan, deposited in accretionary foredeep basin. One of largest Cenozoic basin floor fan systems in SE Asia. Five facies associations. Multiple-sourced, shelf-fed, Type II, low-efficiency and sand-rich system.Probably comprised of several small lobes. Fan built out N-ward with sediment supply from SW. Fan system later accreted, uplifted and imbricated into series of thrust slices (see also Tongkul 1987, Crevello 2001, Jackson et al. 2009))

Zakaria, A.A., H.D. Johnson, C.A.L. Jackson & M.N.M. Yusoff (2013)- Mass Transport Complex (MTC) on NW Borneo Slope; influence of thrust related folding on its stratigraphic development. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, P37, 5p. *(Extended Abstract)*
(Lingan fan system on steep (2-4°) NW Borneo margin off Sabah, located in a toe-thrust foldbelt area in front of E Baram Delta. With mass transport complexes in channelised fan systems

Zampetti, V. (2004)- Interdependence of seismic imaging and sedimentology (Miocene carbonate platforms, South China Sea). Doct. Thesis Vrije Universiteit, Amsterdam, p. 1-134. *(Unpublished)*

Zampetti, V. (2010)- Controlling factors of a Miocene carbonate platform: implications for platform architecture and off-platform reservoirs (Luconia Province, Malaysia). In: W.A. Morgan, A.D. George et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 129-145.
(Growth of Luconia Province carbonate platform began in Late Oligocene- Early Miocene by coalescence of isolated patch reefs, and includes phases of progradation, backstepping and occasional collapse of platform flanks, terminated by gradual drowning. Platform margins asymmetry related to ocean currents rather than wind. Platform affected by strike-slip deformation during sedimentation. Platform material also deposited as slide masses in adjacent basin floor, passing into debris-flow and turbidites and can extend many km's across basin floor. Much secondary porosity dissolution during deep burial)

Zampetti, V., W. Schlager, J.H. van Konijnenburg & A.J. Everts (2003)- Depositional history and origin of porosity in a Miocene carbonate platform of Central Luconia, offshore Sarawak. In: G.H. Teh (ed.) Petroleum Geology Conf. Exhib. 2002, Bull. Geol. Soc. Malaysia 47, p. 139-152.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003a10.pdf)
(Seismic and core study of unidentified M-Late Miocene carbonate platform in Luconia province. Buildup growth primarily vertical aggradtion, with flat top, with backstepping of margin. Two phases of progradation, youngest steep and with segments of slope collapsing in large landslides. Porosity very heterogeneous, mostly secondary and related to dissolution under deep burial conditions)

Zampetti, V., W. Schlager, J.H. van Konijnenburg & A.J. Everts (2004)- Architecture and growth history of a Miocene carbonate platform from 3D seismic reflection data; Luconia province, offshore Sarawak, Malaysia. Marine Petroleum Geol. 21, 5, p. 517-534.
(online at: http://www.personal.kent.edu/~jortiz/carbonates/seismic1.pdf)
(Luconia carbonate platform growth started in Late Oligocene-E Miocene by coalescence of isolated patch reefs. Growth history includes phases of progradation, backstepping and collapse of platform flanks. Most pronounced seismic reflections correspond to flooding events. Subaerial exposure demonstrated in only one case. Platform growth terminated by gradual drowningin Late Miocene)

Zampetti, V., W. Schlager, J.H. van Konijnenburg & A.J. Everts (2004)- 3-D Seismic characterization of submarine landslides on a Miocene carbonate platform (Luconia Province, Malaysia). J. Sedimentary Res. 74, 6, p. 817-830.
(Submarine landslides on flanks of Miocene carbonate platform. Chaotic deposits basinward of slide scar widen in transport direction and end in indistinct lobes. Slide masses extend for 1.5 km into basin, with130m maximum thickness. Slide deposit on W flank two events, separated by smooth reflection interpreted as hemipelagic mud between carbonate-rich slide masses. Syndepositional faulting affects geometry of platform margins, particularly at time of slope failure)

Zheng, Q.L., S.Z. Li, Y.H. Suo, X.Y. Li, L.L. Guo, P.C. Wang, Y. Zhang, Y.B. Zang, S.H. Jiang & I.D. Somerville (2016)- Structures around the Tinjar-West Baram Line in northern Kalimantan and seafloor spreading in the Proto South China Sea. Geological J. 51, Suppl. S1, p. 513-523.
(Tinjar-West Baram Line is NW-trending trans-lithospheric fault in N Borneo; its NW extension into S China Sea is W Baram Line. Originated as NE/NNE-trending transform fault during spreading of Proto-South China Sea before 35 Ma and before NW trending strike-slip movement since Oligocene)

Zielinski, G.W., M. Bjoroy, R.L.B. Zielinski & I.L. Ferriday (2007)- Heat flow and surface hydrocarbons on the Brunei continental margin. American Assoc. Petrol. Geol. (AAPG) Bull. 91, 7, p. 1053-1080.
(Brunei margin thermogenic hydrocarbons in landward half of study area (heat flow 83.7 ± 66.5 mW/m2). Seaward, mean heat flow is 59.0 ± 22.6 mW/m2, and surface thermogenic hydrocarbons largely absent. Low-heat-flow zone coincides with Palawan Trough paleosubduction zone. High-heat-flow zone of seepage coincides with land-derived Baram delta sediments, constituting a pseudo-accretionary prism)

IV.4. Makassar Straits

Aini, S.N., R. Hall & C.F. Elders (2005)- Basement architecture and sedimentary fill of the North Makassar Basin. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 483-497.
(N Makassar Basin probably underlain by extended continental crust rather than oceanic crust. Age of rifting M-L Eocene. Mainly thin, deepwater sediment. Becomes foreland basin in E Pliocene with W-ward propagation of W Sulawesi fold-thrust belt, resulting in increase in sediment supply from E)

Argakoesoemah, R.M.I. (2017)- Middle Eocene palaeogeography of the greater Makassar Straits region, Indonesia: a review of Eocene source rock distribution. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-247-G, 22p.
(Review of E-M Eocene synrift sediments of Makassar Straits wells and proto-Barito and Kutai and W Sulawesi basins, areas with similar Eocene stratigraphies. Non-marine syn-rift deposition likely initiated M Eocene, in peripheral foreland basin, with widespread marine shales by Late Eocene. Area of well-developed lacustrine M Eocene in E part of S Makassar Basin)

Argakoesoemah, R.M.I., H.B. Nainggolan, I. Wahyudi, A. Hidayat & M.F. Shahab (2016)- Fluvial-to-deepwater stratigraphy and structural development of southern part of North Makassar Basin, Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-728-G, 23p.
(Review of Eocene- Recent stratigraphy of S part of N Makassar Basin. E Eocene non-marine synrift sequences overlain by Late Eocene late rift and Oligocene-younger post rift deepwater deposits across basin, exception for Paternoster Platform area. Late Early Eocene (~47 Ma) seafloor spreading initiated in Celebes Sea and was believed to extend to SW into N Makassar Basin, but still controversial. Major inversion-uplift of Paternoster Platform in M Miocene)

Ariyono, D., J. Kupecz, I. Sayers, C. Tanos & A. Hilman (2013)- Source rock and thermal calibration for timing of generation and expulsion in the South Makassar Basin, Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-160, p. 1-20.
(Hydrocarbons in wells in S Makassar Basin area (Ruby Field gas, Pangkat-1 oil, Sultan-1 gas) confirm presence of working petroleum system. Geochemical analyses from Kelara-1, Makassar Straits-1, Martaban-1 and Pangkat-1 suggest main source in M Eocene coals and lacustrine shales. Late Eocene little or no source potential. Hydrocarbon generation started at ~20 Ma in S Makassar Basin and 12 Ma in Pangkat Graben. Timing of hydrocarbon generation relative to seal emplacement is critical risk for pinnacle reefs like Sultan-1)

Armandita, C. (2014)- The geometry and origin of gravity-controlled structures: mass transport complex (giant slump) in South Makassar Strait basin. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-048, 6p.
(Large, but rel. coherent Pliocene Mass Transport Complex (deep water gravity slump) identified in S Makassar Strait Basin, with area >9000 km2 and volume of 2438 km3. Derived from NW)

Armandita, C., C.K. Morley & P. Rowell (2015)- Origin, structural geometry, and development of a giant coherent slide: The South Makassar Strait mass transport complex. Geosphere 11, 2, p. 376-403.
(S Makassar Strait Mass Transport Complex with extensional headwall region in upper slope of Paternoster Platform. Area of >9000 km2, volume 2438 km3, core region thickness ~1.7km. Composed of shale-dominated sediments. With relatively coherent internal stratigraphy. Toe region deformed into thrust-related structures. Probably caused by caused by ~2° seaward rotation of Paternoster platform in Pliocene. ~6-7 km of shortening in toe region of MTC occurred at slow strain rate)

Azidin, N.F.N., A. Balaguru & N. Ahmad (2011)- Structural styles of the North West Sabah and West Sulawesi fold thrust belt regions and its implication to the petroleum system- a comparison. In: Petroleum Geology Conference and Exhibition 2011, Kuala Lumpur, Poster 23, p. 173-176. *(Extended Abstract)*
(Brief comparison of offshore NW Sabah foldbelt (toe thrust of delta system) and W Sulawesi foldbelt in Makassar Straits)

Bacheller, J., S.P. Buck, A.B. Cahyono, S.R. Polis, C.E. Helsing, Zulfitriadi, E.M. de Man, P.M. Hillock, A.S. Ruf & J.K. Toxey (2011)- Early deepwater drilling results from a new exploration play, Offshore West Sulawesi, Indonesia. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-243, p. 1-15.
(Four wildcat wells in N and S Makassar Straits proved some hydrocarbon system elements for Eocene-Oligocene carbonate play. 102m gas column in Oligocene carbonate in Sultan 1 well, S Makassar)

Bachri, S. (2012)- Fase kompresi di Selat Makassar berdasarkan data geologi daratan, seismic laut dan citra satelit. J. Sumber Daya Geologi 22, 3, p. 137-144.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/113/105)
('Compressional phase in Makassar Straits based on geological land data, marine seismic and satellite imagery'. Last deformation phase in Makassar Strait is compressional, unlike older extensional phase that formed Makassar Strait. Seismic data from E part of Makassar Strait and outcrop geology in W Sulawesi show W-verging fold-thrust system that is still active today. Thrust-fold structures in onshore E Kalimantan and offshore W Makassar Straits show vergence to E)

Baillie, P. & J. Decker (2011)- The Makassar Straits new thoughts on an old area. Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, 35p. *(Abstract + Presentation)*
(Makassar Straits formed by M Eocene extension, typical Sundaland, grabens and half-grabens. With top syn-rift unconformity of Late Eocene (38-40 Ma) age. Basement is stretched continental crust. Deepwater sediments deposited in response to tectonic events in adjacent Borneo and Sulawesi in Late Eocene- Neogene. M Miocene pulse of E-directed quartzose turbidites deposited in deepwater. All petroleum system elements present)

Baillie, P. & J. Decker (2012)- Geological development of the Straits of Makassar, Indonesia. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 30251, p. 1-4. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2012/30251baillie/ndx_baillie.pdf)
(Makassar Straits resulted from M Eocene (42 Ma) extension, creating grabens and half-grabens in continental or marginal marine setting. In central part of Strait up to 4km of deep marine sediment above Late Eocene (~36 Ma) top syn-rift unconformity. Turbidite sediments both W- and E-directed (major Borneo-derived pulse in E-M Miocene; sediments from Sulawesi in latest Miocene-Pliocene. While classic turbidite sedimentation has occurred, hyperpycnal flow from tropical river floods contributed substantially to fill of Makassar Strait)

Baillie, P., P. Gilleran, W. Clark, S.J. Moss, A. Stein, E. Hermantoro & S. Oemar (1999)- New insights into the geological development of the deepwater Mahakam delta and Makassar Straits. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta 1999, p. 397-402.
(New non-exclusive 2D seismic survey revealed new insights into geological evolution and prospectivity of N Makassar Straits. Neogene deepwater basin floor fans and channel complexes identified in Neogene. Near present-day shelf edge of Mahakam Delta area discontinuous NNE-trending, E-verging imbricate fold-thrust system, with folding age younging to E. M Eocene-Oligocene shales acted as regional decollement. Thrusts primarily gravitational deformation of delta toe and can often be linked to extensional slope graben and regional growth faults updip)

Baillie, P., P.A. Teas, J. Decker, D. Orange & Widjanarko (2008)- Contrasting deepwater sediment feeder systems, Sulawesi, Indonesia. AAPG Hedberg Conference, Ushuaia-Patagonia, Argentina, Search and Discovery Art. 90079, p. *(Extended Abstract)*
(Present-day deepwater depositional channel systems which drain W Sulawesi, imaged on multibeam bathymetry: (1) high-sinuosity system draining NW into Makassar Strait from Palu Bay, and (2) low-sinuosity system draining S into Bone Bay and E Java Sea)

Berendson, E., A. Cebastiant, D. Glenn, F. Hariyannugraha, K. Kirschner, R. May, R. Schneinder et al. (2005)- Geocellular modelling and uncertainty qualification of reservoir properties: a deepwater laminated-sand reservoir, Gendalo Field, Kutei Basin, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 499-504.
(Makassar Strait Gendalo field ~60 km SE of Mahakam Delta in 2500'-5200' of water. Miocene basin floor fan sands primary pay. Broad, anticline, formed as result of Late Pliocene compression. Reservoir thin-bedded

sand (most sands <3 cm) and shale sequences. Depositional environment ranges from channelized sequences to unconfined fan lobes)

Bernando N., H., I. Wahyudi & R.M.I. Argakoesoemah (2017)- Structural style of the southern province of West Sulawesi fault thrust belt, and its implication for hydrocarbon exploration, Makassar Strait, Indonesia. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-387-G, 14p.

Brackenridge, R.E., U. Nicholson, B. Sapiie, D. Stow & D.R. Tappin (2020)- Indonesian Throughflow as a preconditioning mechanism for submarine landslides in the Makassar Strait. In: A. Georgiopoulou et al. (eds). Subaqueous mass movements and their consequences: advances in process understanding, monitoring and hazard assessments, Geol. Soc. London, Spec. Publ. 500, 23p.
(online at: https://sp.lyellcollection.org/content/specpubgsl/early/2020/03/29/SP500-2019-171.full.pdf)
(Several moderate (>10 km3) to giant (up to 650 km3) mass transport deposits formed by submarine landslides in Pleistocene-Recent section of N Makassar Basin. Majority in Mahakam prodelta. Ocean-current erosion and contourite deposition across upper slope suggests ITF acts as along-slope conveyor belt, transporting sediment to S, where slope oversteepening results in submarine landslides and potential tsunamis)

Burollet, P.F., R. Boichard, B. Lambert & J.M. Villain (1986)- Sedimentation and ecology of the Pater Noster carbonate platform. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 155-169.
(Pater Noster Platform broad shallow platform off SE Kalimantan. Recents sediments m-c grained carbonate sand. Reef islands and vicinity sands composed of coral fragments, red algae, molluscs and foraminifera. Some sheltered lows up to 80% Halimeda algae. Open marine area sands mainly forams, often larger ones. On E slope and medium deep terraces of Massa Lima, sediments rich in planktonic foraminifera and coccoliths; glauconite may be abundant)

Burollet, P.F. & C. Salle (1981)- Seismic reflection profiles in Makassar Strait. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 273-276.
(Brief discussion of old 1974 IFP/ Total/ Elf seismic survey across Makassar Straits)

Chudanov, D. A., A. Terry, Y. Partono & J. Inaray (2004)- Field Overview of West Seno. In: Offshore Technology Conf. (OTC), Houston 2004, OTC-16520-MS, 8p.
(West Seno in Makassar Strait PSC in 2400- 3400' of water on slope of N Mahakam Delta discovered in 1998 and is Indonesia's first deepwater oil-gas field. First production in 2003. U Miocene reservoir sands series of deepwater amalgamated channel and channel-levee deposits (see also Redhead et al. 2000))

Cloke, I.R., J. Milsom & D.J.B. Blundell (1999)- Implications of gravity data from East Kalimantan and the Makassar Straits: a solution to the origin of the Makassar Straits? J. Asian Earth Sci. 17, p. 61-78.
(Gravity modeling and flexural backstripping suggest North Makassar basin underlain by M Eocene oceanic crust)

Courel, R., G. Hollomon, M. Kim, D. Richert, C. Tiranda & P. Tognini (2011)- A re-evaluation of the South Makassar Basin using an integrated multi-discipline approach. Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, Presentation 21, p. 1-43.
(S Makassar basin off Sulawesi in water depths averaging 2000m. Basin along SE margin of Sundaland province and thought to be composed of extended continental crust. Initiated during early Middle-Late Eocene back-arc rifting, creating tilted basement blocks topography, followed by Late Eocene- Oligo-Miocene carbonate deposition. New data led to revision of age of rifting and of Neogene megasequences. Heat flow from BSR overall higher in S Makassar Basin than in N Makassar. Bouguer gravity differences between N and S Makassar basins may suggest presence of oceanic basement in N Makassar Strait)

Damayanti, S. & J.A. Paju (2012)- New findings and updating of petroleum systems in Makassar Strait area. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-08, p.

(Hydrocarbon exploration in deepwater Makassar Straits in last 6 years has not come up positive results, but cannot yet be conclusively condemned)

Decker, J., P.A. Teas, J.A. Curiale, E.A.E. Johnson & D.L. Orange (2004)- Multibeam exploration in the Makassar Strait. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), Jakarta, DFE.04-0R-043, p. 11-30.
(Unocal multibeam bathymetry surveys over 3 PSC blocks in Makassar Straits. Papalang and Popodi blocks off E Kalimantan numerous anomalous seafloor bathymetry features, many characterized by gas seeps, and few oil seeps. Sangkarang PSC off SW Sulawesi no indications of thermogenic hydrocarbons in 109 samples from 33 cores; Lombosang 1 well confirmed lack of charge in one portion of that basin)

Decker, J., P.A. Teas, R.D. Schneider, A.H. Saller & D.L. Orange (2004)- Modern deep sea sedimentation in the Makassar Strait: insights from high-resolution multibeam bathymetry and backscatter, sub-bottom profiles, and USBL-navigated cores. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 377-387.
(Makassar Strait Papalang block multibeam bathymetry shows modern large basin floor fan (65 km long, area 2500 km2, only 2m maximum relief) in water depth >2000m. Incised feeder channel flows from S to N. Upslope migrating deep sea sediment waves, 1-3 km long and 10-30m high, composed of interbedded fine sand-mud)

Del Negro, R., P. Castellano, A. Kuhfuss, L. Mattioni, J. Moss & M. Vialla (2013)- Structural styles and petroleum system modelling of the North Makassar Straits, Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-077, p. 1-20.
(N Makassar Basin initiated with rifting in M Eocene- E Oligocene, resulting in development of NNW-SSE-oriented en-echelon basement faults. At same time, protodelta of Mahakam River developed S of present-day location. NW-SE trending compression started in M Miocene and continued until today. 2D basin modeling indicates M Miocene source rocks in dry gas zone (Ro~2.0) in W to early mature (0.6<Ro<1.2) in E)

De Man, E., F. Ashby, J. Bacheller, A. Cahyono, Suriamin, J. Corthay, P. Hillock & S. Wilmot (2011)- Deep-water site investigation- Makassar Straits (Indonesia). Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-198, 14p.
(On pre-drill site investigation for potential geohazards at ExxonMobil exploration wells in deepwater Makassar Strait (Rangkong, Sultan, Kris))

De Vera, J. & K. McClay (2011)- Structural styles of the West Sulawesi deep-water fold and thrust belt, Makassar Straits, Indonesia. Berita Sedimentologi 22, p. 15. *(Abstract only)*
(online at: www.iagi.or.id/fosi/files/2011/11/FOSI_BeritaSedimentologi_BS-22_October2011.pdf)
(Active, Late Miocene/E Pliocene- Recent NE-SW-trending and NW-verging deepwater fold and thrust belt offshore West Sulawesi in E Makassar Straits, ~250km long and as up to 75 km wide. Five structural domains ondip sections, from NW to SE: abyssal plain, deformation front, folded domain, thrust domain and inversion domain. Styles of deformation front controlled by inversion of Pliocene-Pleistocene extensional faults (large anticlines resulting from reactivation of Paleocene rift structures))

Dinkelman, M.G., J. Granath, D. Bird, J. Helwig, N. Kumar & P. Emmet (2009)- Predicting the Brittle-Ductile (B-D) transition in continental crust through deep, long offset, prestack depth migrated (PSDM), 2D seismic data. AAPG Int. Conf. Rio de Janeiro 2009, 6p. *(Extended Abstract)*
(Online at: www.searchanddiscovery.net/documents/2010/40511dinkelman/ndx_dinkelman.pdf)
(Deep seismic imaging allows interpretation of features in crystalline basement. Example of stretched continental crust for S Makassar Basin, showing supracrustal faults sole out near top of seismic transparent zone, possibility brittle-ductile transition in lower continental crust)

Dunham, J., R. Lin, A. Saller, J. Decker & T. Nicholson (2003)- Transportation and concentration of oil- and gas-prone kerogen into deep water sediments of the Kutei Basin, East Kalimantan, Indonesia. Indon. Petroleum Assoc. (IPA) Newsl., June 2003, p. 26-30.

Dunham, J.B. & L.D. McKee (2001)- Hydrocarbon discoveries in Upper Miocene unconfined submarine fan facies, deep-water Kutei Basin, Indonesia. Proc. 2nd Reg. Seminar Indon. Sedim. Forum (FOSI), p. 50.

Dunham, J. & Unocal Expl. Team (2016)- Deepwater discoveries in turbidite sands of the Makassar Straits, East Kalimantan, Indonesia. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 8-TS-16, p. 1-18.
(Review of Mio-Pliocene deep-water slope channel exploration in Kutai Basin side of Makassar Straits. First oil and gas discoveries in Merah Besar (1996) and West Seno (1998) fields, followed by deeper water Gendalo (2000) and Ranggas (2002) discoveries. Deepest prospect in >6000' of water and >15,000' feet deep was Gehem (2003), reaching M Miocene fan-sands with significant gas column. Substantial exploration potential remains in M Miocene base-of-slope fan plays)

Effendi, L. (1993)- Selat Makasar merupakan wilayah kompleks antara perairan bagian barat dan timur. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 950-961.
('Makassar Straits constitutes a complex region between eastern and western areas')

Eisma, D. (1990)- Dispersal of Mahakam River suspended sediment in Makassar Strait, Indonesia. In: V. Ittekkot et al. (eds.) Facets of modern biogeochemistry, Springer, Berlin, p. 127-146.

Faugeres, J.C., J. Gayet & E. Gonthier (1989)- Microphysiographie des depots Quaternaires dans le detroit de Makassar (Ocean Indien); opposition entre une marge stable (Borneo, Kalimantan) et une marge active (Celebes, Sulawesi). Bull. Soc. Geologique France, Ser. 8, 5, 4, p. 807-818.
('Micro-physiography of Makassar Straits Quaternary deposits, between stable Borneo and active Sulawesi margin'. Seabeam profiles of N Makassar Straits show passive Borneo margin with high clastic influx and active Celebes margin with narrow shelf and less terrigenous influx)

Faugeres, J.C., J. Gayet, E. Gonthier, C.Latouche & N. Maillet (1990)- Variation des sources de sediments dans le detroit de Makassar (Indonesie) au Quatemaire recent: role des facteurs morphostructuraux et eustatiques. Oceanologica Acta 1990, Spec. Vol. 10, Actes du Colloque Tour du Monde Jean Charcot 1989, p. 295-306.
(online at: http://archimer.ifremer.fr/doc/00268/37924/36005.pdf)
('Variations in sediment sources in Makassar Straits (Indonesia) in the late Quaternary: the role of morphostructural and eustatic factors'. Mineralogy of sediments from Makassar Straits show differences between sediments supplied from Kalimantan in W and Sulawesi in E. Kalimantan source quartzitic sand, with rare feldspars. Heavy minerals mainly pyroxene (hypersthene) and amphibole, clays mainly illite-kaolinite. Sulawesi source abundant feldspars, lithoclasts and micas, with amphibole and pyroxene (augite) and illite-chlorite clay mineraIs. During Late-Pleistocene of sealevel lowstand Mahakam River discharged directly on shelf edge, dominating sediment supply. Rising sealevel in Holocene trapped river sediments in delta, so most sediment supplied to Makassar Straits from steep Sulawesi margin)

Fowler, J.N., E. Guritno, P. Sherwood & M.J. Smith (2001)- Depositional architectures of Recent deep water deposits in the Kutai Basin, East Kalimantan. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 409-422.
(Seismic facies and depositional models of Recent slope channel and basin floor fan system in NW Makassar Straits)

Fowler, J.N., E. Guritno, P. Sherwood, M.J. Smith, S. Algar et al. (2004)- Depositional architectures of Recent deepwater deposits in the Kutei Basin, East Kalimantan. In: R.J. Davies et al. (eds.) 3D seismic technology: application to the exploration of sedimentary basins. Geol. Soc., London, Mem. 29, p. 25-33.
(Seismic examples of slope channes and basin floor fans. Large depocentres occur where gradients are low and system switches from confined to unconfined. Erosionally confined channels feed basin floor fans at toe-of-slope, while channels confined by levees feed fans on 'distal' basin floor)

Fraser, T.H. & L.A. Ichram (1999)- Significance of Celebes Sea spreading centre to the Paleogene petroleum systems of the SE Sunda Margin, Central Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 431-441.
(Celebes Sea is Eocene spreading centre active until ~37 Ma, same time as Sarawak Orogeny. About 300 km of Paleogene Celebes oceanic crust now partly consumed by Minahasa Trench. Makassar Straits is continuation of Celebes Sea extension. Paleogene clastics much thicker in SW Sulawesi than in Barito Basin. Source of clastics in Sangkarang Graben proposed to be craton of west C Kalimantan. Development of S Makassar Straits ruptured proto-Barito fluvial system which previously flowed from Kalimantan into Flores Sea)

Fraser, T.H., B.A. Jackson, P.M. Barber, P. Baillie & K. Myers (2003)- The West Sulawesi foldbelt and other new plays within the North Makassar Straits- a prospectivity review. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, G-171, p. 429-450.
(Makassar Straits started in Eocene in response to extension propagating SW from Celebes Sea spreading centre. After initial opening of Straits, Eocene horst- graben terrains overlain by Oligocene-Miocene basinal sag sediments. Following Neogene uplift of Borneo and outbuilding of Mahakam Delta, considerable amounts of sediment redeposited as turbidite facies in N Makassar Basin. Plio-Pleistocene inversion of extensional areas as successive micro-continental fragments from Australian Plate collided with SE margin of Sundaland. This collision assembled Sulawesi into K-shape and formed W Sulawesi Fold Belt, which obscures E part of original Makassar Straits Eocene rift. Traps in foldbelt compressional folds over thin-skinned detachment in probably overpressured Late Eocene- E Miocene mudrocks. Neogene turbidite reservoirs postulated charged from Paleogene and Neogene source rocks)

Fraser, T.H., B.A. Jackson, P.M. Barber, P. Baillie & K. Myers (2003)- The West Sulawesi Foldbelt- a new exploration play in the Makassar Straits, Indonesia. SEAPEX Press 6, p. 27-38.
(Similar to paper above. Makassar Straits formed by Paleogene rifting- sea floor spreading. Onset of compression in Miocene, resulting in development of W Sulawesi foldbelt in Pliocene)

Gallup, D.L., P.C. Smith, J.F. Star & S. Hamilton (2005)- West Seno deepwater development case history- production chemistry. Int. Symposium on oilfield chemistry 2005, Soc. Petrol. Engineers (SPE), SPE 92969, p. 1-13.

Gartrell, A., C. Hudson & B. Evans (2005)- The influence of basement faults during extension and oblique inversion of the Makassar Straits rift system; insights from analog models. American Assoc. Petrol. Geol. (AAPG) Bull. 89, 4, p. 495-506.
(Analog models used to investigate influence of cross-trending basement faults on inverted rift systems like Makassar Straits)

Gayet, J., P. Carbonel, J. Duprat, L. Labeyrie, J.C. Faugeres, E. Gonthier & J. Moyes (1990)- Impact de la transgression holocene sur la sedimentation dans le detroit de Makassar. Oceanologica Acta, Spec. Vol. 10, p. 321-327.
(online at: http://archimer.ifremer.fr/doc/00268/37898/35979.pdf)
('Impact of the Holocene transgression on sedimentation in Makassar Straits'. During glacial maximum/sea-level low sediments deposited by turbidity currents from Kalimantan. During deglaciation/ rise of sea-level, sediment from Kalimantan contributed to Mahakam delta or dispersed over shelf, circulation in straits slowed down and stratification became more marked, reflecting present day monsoon system. Sulawesi input less abundant and mineralogically different from Kalimantan material)

Gayet, J., J.C. Faugeres & E. Gonthier (1990)- La sedimentation quaternaire recente dans le detroit de Makassar. Oceanologica Acta, Spec. Vol, 10, p. 307-320.
('Quaternary sedimentation in Makasar Straits'. Kullenberg drop cores 1.8-10m of Quaternary sediments from 50-2440m water depth in N and S Makassar Straits)

Gunawan, B.K. & S. Damayanti (2010)- New insight: basin development mechanism and tectono-stratigraphy of Makassar Basin. Proc. HAGI-SEG Int. Geosciences Conf., Bali 2010, IGCE10-OP-138, 23p.

(Makassar Straits basin result of transtensional pull-apart tectonics, with WNW- ESE regional strike-slip faults: Sangkulirang-Palu Koro, Adang-Lupar and S Makassar Strait faults. New tectono-stratigraphic basin fill nomenclature proposed like 'syn-transtensional' and 'foreland'. Horsts and grabens formed in multiple periods from M Eocene- Late Miocene, not only in M Eocene- E Oligocene: Syn-transtension 1 (M Eocene- U Oligocene), Syn-transtension 2 (E Miocene- upper M Miocene), Syn-transtension 3 (U Miocene))

Guntoro, A. (1999)- The formation of the Makassar Strait and the separation between SE Kalimantan and SW Sulawesi. J. Asian Earth Sci. 17, p. 79-98.
(SE Kalimantan and W Sulawesi separated due to Eocene opening of Makassar Strait. Seismic refraction and gravity modeling support Eocene extension and Eocene-Oligocene oceanic crust in central parts of Makassar Straits. Makassar Strait formed by backarc spreading/ trench roll-back of Cretaceous accretionary crust, related to subduction east of W Sulawesi. Subduction polarity changed after Banggai-Sula collision in Miocene caused partial subduction of oceanic crust of E part Makassar Strait beneath W Sulawesi)

Guntoro, A. (2000)- Makassar Strait. In: H. Darman & F.H.Sidi (eds.) Outline of the geology of Indonesia, Chapter 6, Indonesian Association of Geologists (IAGI), Jakarta, p. 90-96.
(Makassar Straits basement characterized by strong posive isostatic gravity anomaly, suggesting oceanic marginal basin)

Guritno, E., L. Salvadori, M. Syaiful, I. Busono, A. Mortimer, S. Hakim, J. Dunham, J. Decker & S. Algar (2003)- Deep-water Kutei Basin: a new petroleum province. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 519-540.
(Deep-water Kutei Basin Merah Besar and West Seno discoveries in toe-thrust anticlines. Development of toe-thrust anticlines influenced deposition of reservoir, source, maturity, migration routes and traps. Mildly structured Upper Miocene in C Province is gas prone, N Province contains oil and gas)

Hall, R., I.R. Cloke, S. Nurĉaini, S.D. Puspita, S.J. Calvert & C.F. Elders (2009)- The Makassar Straits: what lies beneath? Petroleum Geoscience 15, 2, p. 147-158.
(online at: http://searg.rhul.ac.uk/pubs/hall_etal_2009_N%20Makassar%20Straits.pdf)
(Makassar Straits formed by rifting, starting in M Eocene. Structures beneath Late Eocene unconformity may be carbonate build-ups on tilted fault blocks or volcanic edifices. Authors of this paper can not agree on whether basement beneath straits is oceanic or extended continental)

Harjono, H. (1981)- Selat Makassar: hasil awal penelitian geologi dan geofisika marin SO-16C. J. Riset Geologi Pertambangan (LIPI) 4, 1, p. 14-19.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.4-No.1-2-.pdf)
('Makassar Strait: preliminary results of marine geological and geophysical studies SO-16C'. Geophysical survey in S Makassar Basin suggests similarities to N Makassar Basin. Oceanic basement seems to be present in center of S Makassar Basin)

Heri, T., R. Mathers & R.A. McCarty (2009)- West Seno; the first deepwater field in Indonesia a strategy to optimize reserves. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-E-192, 15p.
(West Seno gas-oil field off E Kalimantan in 2400- 3400' of water. Reservoirs ~50 independent compartments in mainly Upper Miocene amalgamated deepwater channel-levee sands)

Hidayat, R., S. Husein & S.S. Surjono (2012)- Regional depositional model of South Makassar Basin depocenter, Makassar Strait, based on seismic facies. J. Southeast Asian Applied Geol. (UGM) 4, 1, p. 42-52.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-4/no-1/jsaag04-art06-RahmadiHidayat.pdf)
(Seismic facies maps of synrift Eocene to post-rift Berai Lst to Miocene Warukin Fm in block off SW Sulawesi)

ISIS Petroleum Consultants/ TGS-NOPEC (2003)- CM-01 MC2D Seismic survey- Hydrocarbon potential of the deep water Makassar Straits, Indonesia. Unpubl. Multi-client study, p.

(More detailed version of Fraser et al. (2003) papers. N Makassar Basin on Cretaceous accretionary crust, followed by E-M Eocene (50-42) Ma rifting, 42 Ma breakup, Late Eocene/ 42-38 Ma sea floor spreading with volcanic centers along spreading axes/ transfer faults, Oligocene (38-20.5 Ma) sag phase)

Isnawati, D. Sunarjanto, Julikah & S. Munadi (2006)- Optimistic view for hydrocarbon exploration in South Makassar Basin. Proc. Int. Geosc. Conf. Exhib., Jakarta 2006, Indon. Petroleum Assoc. (IPA), 06-PG-06, 4p.
(Paleogene rifting between Kalimantan and Sulawesi created conditions for generation of hydrocarbons)

Jackson, B.A. (2004)- Seismic evidence for gas hydrates in the North Makassar basin, Indonesia. Petroleum Geoscience 10, p. 227-238.
(Gas hydrates suggested by bottom simulating reflectors (BSR), primarily in offshore extension of W Sulawesi Fold Belt. Turbidites in fold belt mini-basins provide reservoir and source of organic material for production of biogenic methane gas. Geothermal gradients from BSR database av 4.7°C/100m)

Jackson, B.A. (2004)- Gas hydrates in the North Makassar Basin, Indonesia. In: R.A. Noble et al. (eds.) Deepwater and Frontier Exploration in Asia Symposium, Indon. Petroleum Assoc. (IPA), Jakarta, p. 373-375.
(Gas hydrate in deep-water N Makassar Straits. Sediments in West Sulawesi Fold Belt sourced from Mahakam Delta until Late Pliocene, when tectonic event in Sulawesi reversed direction of sediment transport. Sulawesi fold-belt numerous thrust sheets, creating long anticlinal structures and intervening mini-basins. Most BSR anomalies concentrated on E side of study area in vicinity of WSFB ~300 ms below seafloor. No figures)

Johansen, K., S. Maingarm & A. Pichard (2007)- Hydrocarbon potential of the South Makassar Basin, Indonesia. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2007, Singapore, 43p. *(Abstract + Presentation)*
(S Makassar Basin unexplored area in 1000-2000m water. Sulawesi Fold Belt to E, Paternoster Platform to W and E Java Sea/Doang Platform to S. Separated from N Makassar Basin by Adang strike slip Fault Zone. S Makassar rift basins part of Eocene extensional phase from C Java to onshore S Sulawesi. Half graben syn-rift fill two seismic facies: lower main rift non marine clastics, upper sequence late syn-rift or early post rift marine clastics. Syn-rift fill >2 km thick and potential source rock. DHI's and gas anomalies indicate active petroleum system. Structural plays mainly defined by Eocene rift phase. Main reservoirs Oligocene carbonates and Eocene- E Oligocene clastics over basement highs. Platform carbonates and pinnacle type reefs may have better reservoirs. Oligocene-E Miocene turbidities possible secondary play. Post-rift thermal subsidence resulted in 3-4 km of mudstone- shales. Late Miocene-Pliocene compressional tectonics resulted in minor deformation of S Makassar Basin, resulting in N-S trending folds and thrusts along Sulawesi Fold Belt)

Kacewicz, M., J. Decker, R. Lin, C. Stuart, P. Taylor & E. Johnson (2002)- A new regional heat flow and hydrocarbon migration model for the Kutei Basin and Central Makassar Straits. AAPG Ann. Mtg., Houston, Texas *(Abstract)*.
(New heat flow model based on crustal stretching in deepwater Kutei basin and C Makassar Straits. Heat flow varies from 32-44mW/m2 in shallow water to 45- 52 mW/m2 in deepwater at present. No significant difference between deepwater heat flow N and S of Mahakam delta and no basinward cooling)

Kapid, R., K.T. Dewi & A. Muller (2004)- New biostratigraphic sub-biozonation for Indonesia, derived from calcareous nannoplankton and ostracode assemblage in Makassar Strait. 5th Int. Conf. Asean Marine Geology, Bangkok 2004, p.

Kirschner, K. & S.F. Walden (2004)- A case study: gas in place sensitivities from geocellular modeling of the Gendalo Field, Ganal PSC. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), Jakarta, DFE04-PO-054, 5p.
(Modeling of Gendalo Field deepwater gas field off Mahakam Delta. Water depths 3500'-5000'. Two deep water turbiditic sand intervals)

Kupecz, J., I. Sayers, P. Tognini, A. Hilman, C. Tanos & D. Ariyono (2013)- New insights into the tectono-stratigraphic evolution of the South Makassar Basin. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-158, p. 1-41.
(Updated regional tectono-stratigraphic model for S Makassar Basin. Four mega-sequences in M Eocene- M Miocene: (1) M Eocene (45-37 Ma) extension, creating half-grabens with NW-SE orientation, such as Pangkat-1 area; (2) more widespread extension in Late Eocene- E Oligocene (37-28 Ma; possibly to 20 Ma), evidenced by NNE-SSW trending Taka Talu Graben, etc.; (3) drop in relative sea-level at start of E Oligocene, with erosion of carbonate platform deposits from Paternoster Platform and re-deposition in bathyal Pangkat Graben as debris flows (Ruby Field); (4) second major lowstand occurred from E-M Miocene (20-12 Ma), coinciding with demise of carbonates in area. Pro-delta sediments prograded from NW to SE, filling Pangkat Graben, backstepping onto Paternoster platform, and prograding into S Makassar Basin)

Lelono, E. B. (2007)- Palinomorf Eosen dari Selat Makasar. Lembaran Publikasi Lemigas 41, 2, p. 1-10.
('Eocene palynomorphs from C Makassar Straits'. Interval 8100'-11850' of 'Well O' in Makassar Straits with Eocene age palynomorphs, incl. Proxapertites operculatus, P. cursus, Palmaepollenites kutchensis, Cicatricosisporites eocenicus, etc. Lower abundance/diversity than in Nanggulan Fm of C Java, probably due to Late Eocene age. Appearance of moderate Restioniidites punctulosus pollen indicates dry climate)

Lin, R., A. Saller, J. Dunham, P. Teas, J. Curiale, M. Kacewicz & J. Decker (2005)- Source, generation, migration and critical controls on oil vs. gas in the deepwater Kutei petroleum systems. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 447-466.
(Kutei Basin deep water geochemical analyses indicate that allochthonous land-plant organic matter is source of hydrocarbons. TOC 1%- >50% with hydrogen indices between 100- 400. Overall kerogen assemblages type III and subordinate type II, consistent with gas condensate to gas volatile oil system. No marine algal remains evident. Gases mainly thermogenic; mixing of 'biogenic' methane and CO2 in some shallow Pliocene reservoirs. Generation of oil and gas mostly at 'oil window' maturities)

Lumadyo, E. (1999)- Deep-water exploration in the Kutei Basin, East Kalimantan. In: C.A. Caughey & J.V.C. Howes (eds.) Proc. Conf. Gas habitats of SE Asia and Australasia, Jakarta 1998, Indon. Petroleum Assoc. (IPA), p. 205-209.
(Summary of Unocal deep water Makassar Straits evaluation)

Lunt, P. & J.T. van Gorsel (2013)- Geohistory analysis of South Makassar. Berita Sedimentologi 28, p. 14-24.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-28-borneo.html)
(S Makassar Straits Basin after initial rifting of grabens there were four major unconformities that affected sedimentation, and all thought to be controlled by tectonism: (1) ~39 Ma (late M Eocene) with accelerated rifting on distal margins of Sundaland; (2) 36 Ma (early Late Eocene) with rapid localized subsidence in S Makassar Straits basin; (3) 34 Ma (near Eocene- Oligocene boundary), with onset of Berai Limestone in W and strongly reduced rates of deep-water sedimentation throughout Makassar- Spermonde area; and (4) ~24 Ma (near Oligocene-Miocene boundary), with start of new clastic phase with high rates of sedimentation.)

Malecek, S.J. & P. Lunt (1996)- Sequence stratigraphic interpretation of Middle-Late Miocene lowstand sands in the Makassar Strait, offshore east Kalimantan, Indonesia. In: C.A. Caughey, D.C. Carter et al. (eds.) Proc. Int. Symp. Sequence stratigraphy in Southeast Asia, Jakarta 1995, Indon. Petroleum Assoc. (IPA), p. 369-379.
(Lowstand deepwater sands reservoirs in M-L Miocene of Makassar Straits off Kalimantan. Depositional patterns and correlations on slope and basin floor modified by compressional folding and faulting, most evident in M Miocene and older sections. Also deformed by growth faulting and shale diapirism in much of Late Miocene and younger section. With Teritis- Perintis wells correlation)

Malecek, S.J., C.M. Reaves, W.S. Atmaja & K.O.Widiantara (1993)- Seismic stratigraphy of Miocene and Pliocene age outer shelf and slope sedimentation in the Makassar PSC, Offshore Kutei Basin. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 345-371.
(Sequence stratigraphic framework for Miocene-Pliocene age outer shelf, slope and basin floor sediments in Makassar PSC. No detailed stratigraphy)

McKee, D. & J. Dunham (2004)- Does 2D seismic still have a role in frontier exploration? A perspective from the deepwater Kutei Basin. In: R.A. Noble et al. (eds.) Proc. Symp. Deepwater and frontier exploration in Asia and Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 59-69.
(Deepwater Makassar Straits 2D seismic identified 11 prospects, 10 drilled, 5 successful)

Morley, R.J., J. Decker, H.P. Morley & S. Smith (2006)- Development of high resolution biostratigraphic framework for Kutei Basin. Proc. Jakarta 2006 Int. Geosci. Conf. Exh., Indon. Petroleum Assoc., PG 27, 6p.
(28 sequences identified in M Miocene- Pleistocene of Makassar Straits)

Morley, R.J. & H.P. Morley (2011)- Neogene climate history of the Makassar Straits, Indonesia. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 319-332.
(Neogene climate history of Makassar Straits from palynological studies of Late Quaternary cores from ocean floor and petroleum exploration wells penetrating E Pleistocene- M Miocene section. Distinctly seasonal climate during last glacial maximum. Equatorial climate has been everwet since M Miocene, but at subequatorial latitudes seasonal climates became established from Late Pliocene onward)

Morley, R.J., H.P. Morley, A.A.H. Wonders, Sukarno & S. van der Kaars (2004)- Biostratigraphy of modern (Holocene and Late Pleistocene) sediment cores from Makassar Straits. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia and Australasia, Indon. Petrol Assoc. (IPA), Jakarta 2004, 11p.
(Palynology and foraminifera from two shallow Late Pleistocene- Holocene cores from Makassar Straits and offshore SW Sulawesi)

Moss, S.J., W. Clark, P.W. Baillie, I. Cloke, A.E. Hermantoro & S. Oemar (2000)- Tectono-stratigraphic evolution of the North Makassar Basin, Indonesia. AAPG Int. Conf. Bali 2000, p. A-63, 3p. *(Extended abstract)*
(New seismic in Makassar Straits indicates M Eocene extension and sufficient rifting to generate seafloor spreading in deeper parts of N Makassar Straits. Evidence for oceanic crust underlying parts of N Makassar Straits includes rugose nature of top basement and volcanic topography (seamounts). N Makassar Basin is M Eocene marginal oceanic basin formed with extension of W Philippines Sea- Celebes Sea spreading ridge into E Borneo/W Sulawesi margin. Interpretation in line with plate tectonic, gravity modeling and paleogeographic reconstructions. Four prominent seismic stratigraphic markers in N Makassar represent major phases of basin development from early extension to present-day contractional tectonics)

Musgrove, F.W., R. Avianto & R. Schneider (1999)- Construction and destruction at a deepwater slope seabed: implications for reservoir models in the Makassar Strait, offshore East Kalimantan. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 415-429.
(High frequency data of present-day deepwater sea bed useful for models of deepwater deposition)

Nainggolan, H.B., R.M.I. Argakoesoemah, I. Wahyudi, A. Hidayat & M.F. Shahab (2015)- Structural description of Adang Fault, Makasar Strait, Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-157, 11p.
(Adang Fault along N flank of Paternoster Platform, S part of N Makassar Basin, is high-angle, NW-SE trending transtensional dextral strike-slip fault. Many of fault splays reach sea floor, suggesting recent activity. After syn-rift deposition in Late Eocene inversion/uplift of Peternoster Platform starting in E Miocene, resulting in Oligocene carbonate debris partially flushed towards deepwater basin; uplift peaked in M Miocene)

Nicolini E., D. Spinelli, F. Paone, A. Marceglia, A. Mashedi A, F. Paoni, R. Canever, F. Felappi & C. Monti (2012)- A wide detailed geophysical survey of offshore Makassar Strait. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-127, p. 1-14.
(Shallow seabed seismic surveyand bathymetry around new Jangkrik field on upper slope in ~150-450m water depth, 605km offshore in Makassar Strait, SE of Mahakam delta, E Kalimantan)

Nur' Aini, S., R. Hall & C.F. Elders (2005)- Basement architecture and sedimentary fill of the North Makassar Straits basin. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 483-497.
(2D seismic, gravity and well data over N Makassar Strait extensional basin shown-echelon faults bounding disconnected NNW-SSE trending half-graben and graben depocentres, most likely produced by oblique rifting. Principal extension direction E-W. Rifting M- Late Eocene. Crust beneath N MS interpreted to be continental. Three postrift megasequences: (1) Late Eocene- Oligocene, (2) E-M Miocene prograding delta after uplift of Kalimantan, (3) Late Miocene with turbidite interval in central part of basin. E Pliocene increase sediment supply from E as result of W-ward propagation of W Sulawesi fold- thrust belt)

Nurusman, S. (1986)- Etude geothermique des bassins profonds du detroit de Makassar (Indonesie). Implications geodynamiques. Doct. Thesis, Universite de Bretagne Occidentale, Brest, p. 1-175. *(Unpublished)*
(Geothermal study of Makassar Straits and geodynamic implications. Yuwono et al. 1988: Makassar Straits rifting caused thinning of continental crust without significant opening)

Nurusman, S. (1990)- Heatflow measurements in the deep basins of the Makassar Strait (Indonesia). In: B. Elishewitz (ed.) Proc. CCOP Heat Flow Workshop III, Bangkok 1988, CCOP Techn. Publ. 21, p. 27-38.
(35 surface heatflow measurements along two profiles: NW-SE across N Makassar Basin, E-W across S Makassar Basin. Heatflow values rather uniform, around 63-64 mW/m2/sec, lower than average heatflows of adjacent Barito (75.3), Kutai (66) and Tarakan-Bunyu (70.2) basins, but still classified as 'normal')

Panjaitan, S. (2003)- Kemungkinan adanya minyak dan gas alam dari data gayaberat bagian Timur cekungan Selat Makassar Utara daerah Pasangkayu, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 13, 137, p. 18-30.
('Oil and gas possibilities from gravity data in the eastern part of the North Makassar Straits basin, Pasangkayu area, S Sulawesi')

Pireno, G.E. (2014)- Perkembangan porositas dan permeabilitas batugamping fragmental endapan laut dalam di daerah Paparan Paternoster, Cekungan Makassar Selatan. Ph.D. Dissertation Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('The development of porosity and permeability of deep marine detrital limestones marine sediment in the area of the Paternoster Platform, South Makassar Basin')

Pireno, G.E., C. Cook, D. Yuliong & S. Lestari (2009)- Berai Carbonate debris flow as reservoir in the Ruby Field, Sebuku Block, Makassar Straits: a new exploration play in Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-005, 19p.
(Ruby Field, originally discovered in 1974 with Makassar Straits 1 well. Located in NW-SE trending W Makassar Graben, at S side of Paternoster Platform. Inversion structure? in NW-SE trending W Makassar Graben. Reservoir Upper Berai Fm Late Oligocene- earliest Miocene re-deposited carbonate, derived from Paternoster Platform in NE)

Pireno, G.E. & D.N. Darussalam (2010)- Petroleum system overview of the Sebuku Block and the surrounding area: potential as a new oil and gas province in South Makassar Basin, Makassar Straits. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-169, p. 673-688.
(Overview of SW Makassar Straits petroleum system. Source rocks Eocene Lw Tanjung Fm lacustrine shale (Pangkat 1) and fluvio-deltaic coaly beds (Martaban 1). Potential reservoir rocks Lw Tanjung Fm sandstones, Berai Fm carbonates (reefal facies, Berlian-1; carbonate debris, Ruby Field) and U Warukin Fm carbonates)

Pireno, G.E., E. Suparka, D. Noeradi & A. Ascaria (2015)- Porosity and permeability development of the deep-water Late-Oligocene carbonate debris reservoir in the surroundings of the Paternoster Platform, South Makassar Basin, Indonesia. J. Engineering Technol. Sci. (ITB), 47, 6, p. 640-657.
(online at: http://journals.itb.ac.id/index.php/jets/article/view/746/1096)
(Ruby Field gas discovery in Late Oligocene Berai Fm deep marine, re-deposited carbonate debris reservoir near Paternoster Platform. Limestone clasts range from pebble-size to boulders in matrix of micrite and fine bioclasts. Matrix-supported facies better porosity- permeability than clast-supported facies. Porosity generally

moldic and vuggy, resulting from dissolution, and controlled by deep-burial diagenesis by dewatering of underlying Lower Berai Fm bathyal shales and overlying Lower Warukin shales during burial)

Posamentier, H.W., P.S.W. Meizarwin & T. Plawman (2000)- Deep-water depositional systems ultra-deep Makassar Strait, Indonesia. In: P. Weimer, R.M. Slatt et al. (eds.) Deep-water reservoirs of the world, Gulf Coast Section SEPM Found. (GCSSEPM), Proc. Annual Bob F. Perkins Research Conf. 20, p. 806-816.
(Deep water environment in Makassar Strait characterized by abundant turbidite, debrite and sediment wave deposits. Depositional elements deposited in deep-water depositional sequences as: 1) debris flow sheets/lobes at base, 2) distributary channels or frontal splays, 3) leveed channels, capped by 4) less widespread debris flow sheets or lobes. Miocene- Pleistocene leveed channels common in >2000m water depth, and characterized by moderate-high sinuosity and range in width from <250m- 1 km, and are associated with overbank wedges with abundant sediment waves, best developed on outer bends of channel meanders. Leveed channels feed and overlie distributary channel complexes (= submarine fans; JTvG), which can be >10 km wide and >80m thick. Amalgamated debris flow sheets up to 150m thick and >20 km wide)

Prasetya, G.S, W.P. De Lange & T.R. Healy (2001)- The Makassar Strait tsunamigenic region, Indonesia. Natural Hazards 24, 3, p. 295-307.
(Makassar Strait region highest frequency of historical tsunami events for Indonesia. Seismic activity due to convergence of four tectonic plates. Main tsunamigenic features are Palu-Koro and Pasternoster transform fault zones. Earthquakes from both fault zones appear to cause subsidence of W coast of Sulawesi)

Prelat, A., J.A. Covault, D.M. Hodgson, A. Fildani & S.S. Flint (2010)- Intrinsic controls on the range of volumes, morphologies, and dimensions of submarine lobes. Sedimentary Geology 232, p. 66-76.
(Comparisons of submarine fan lobe dimensions from six different systems, including Pleistocene fan of Kutai basin/ W Makassar Straits (mainly from data in Saller et al. 2004, 2008). Pleistocene basin floor fan 22x22 km across, deposited during period of low sea level that ended at ~240 ka, fed by paleo-Santan River, N of Mahakam river. Main depocentre of fan located where seabed gradient decreases from 2.1° (slope) to 0.3° (basin floor), basinward of toe-trust belt)

Przywara, M., J. McArdle & A. Sola (2016)- New insights into the North Makassar Basin: revitalizing the data brings new prospectivity. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-523-G, 4p.
(Mainly PGS brochure for reprocessed seismic dataset in deepwater N Makassar Straits off NE Kalimantan)

Redhead, R.B., E. Lumadyo, A. Saller, J.T. Noah, T.J. Brown, Y. Yusri, J. Inaray et al. (2000)- West Seno field discovery, Makassar Straits, East Kalimantan, Indonesia. In: P. Weimer et al. (eds.) Deep-water reservoirs of the world, Gulf Coast Section SEPM (GCSEPM) 20th Ann. Research Conf., p. 862-876.
(West Seno 1998 Unocal discovery in 730-975m water depth, NE of Mahakam Delta. W Seno 2 discovery well encountered>59m of oil-bearing sandstones, W Seno-1 well >113 m of oil and gas bearing sandstones in adjacent downthrown fault block. Reservoirs M-U Miocene turbiditic channel sandstones, associated with interbedded, levee-overbank sand/shale sequences, deposited in mid-slope position. Fault and stratigraphically trapped in an updip position. Porosity 22-32%, permeability 150-1500 mD. Oil and gas derived from mainly terrestrial plant organic material. Oils API gravity 35-46°)

Rousseau, M., V. Guerin, F. Sapin, D. Restiadi, C. Malla-Meidianna & J.M. Gaulier (2015)- South Makassar Basin: 3D thermal modeling- implication for future exploration. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-262, p. 1-15.
(S Makassar Basin is rift basin initiated in Eocene, subsequently inverted since E Miocene (incl. M Miocene uplift/ inversion in Paternoster High. Three exploration wells found mainly gas, suggesting S Makassar Basin essentially gas prone, but 3D thermal model suggest significant oil rim may exist in periphery of basin)

Ruzuar, A.P., R. Schneider, A.H. Saller & J.T. Noah (2005)- Linked lowstand delta to basin-floor fan deposition, Offshore East Kalimantan: an analogue for deepwater reservoir systems. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 467-482.

Saller, A. (2013)- Pleistocene shelf-to-basin depositional systems, offshore East Kalimantan, Indonesia: insights into deep-water slope channels and fans. AAPG Distinguished Lecture, 2012-2013 Lecture Series, Search and Discovery Art. 50847, 52p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2013/50847saller/ndx_saller.pdf)
(3D seismic data y of Pleistocene shelf margin, slope and basin offshore E Kalimantan/ Makassar Straits. Clastic sequences on shelf dominated by progradational packages deposited during highstands and falling eustatic sea level. During last two sealevel lowstands (~18 and ~130 ka), coarse lastics generally not deposited in deep-water because lowstand deltas did not prograde over underlying shelf margin. During lowstand of ~240 ka, deltas prograded over previous shelf edge, and sand-rich sediments spilled onto slope. Channel-levee complexes on slopes where deltaic sediment supply was large (paleo-Mahakam River); incised valleys/canyons on slopes with limited clastic input. Basin floor deposits dominated by mass-transport complexes, suggesting slope valleys and canyons formed by mass failures of slope, not erosion associated with turbidite sands)

Saller, A. (2017)- Mixed carbonates and siliciclastics North of the Mahakam Delta, Offshore East Kalimantan, Indonesia. AAPG Ann. Conv. Exhib., Houston 2017, Poster, Search and Discovery Art. 1393, 5p. *(Abstract + Poster presentation)*
(online at: www.searchanddiscovery.com/documents/2017/51393saller/ndx_saller.pdf)
(For last 7 My carbonates mixed with siliciclastics N of Mahakam delta. Modern carbonates deposited locally N of delta while large amounts of clastics coming out of delta. Late Pleistocene carbonate mounds(on upthrown side of faults) and shelf margin carbonates (on underlying shelf margins) repeatedly grew during transgressions. During sea level highstands siliciclastics prograded across shelf, covering many carbonates. During last 7 My shelf margins generally backstepping landward N of Mahakam delta. Shales covering carbonates are downlapping packages, generally not effective seals)

Saller, A.H., T. Brown, R.B. Redhead, H.F. Schwing & J. Inaray (2000)- Deepwater depositional facies and their reservoir characteristics, West Seno Field, offshore East Kalimantan, Indonesia. AAPG Int. Conf. Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1484-1485. *(Abstract only)*
(Upper Miocene deepwater strata between 7500-8800' in West Seno Field about 27% sand, f-vf-grained and poorly sorted, deposited in middle- upper slope channel-levee complexes. Massive sands best reservoirs (av. porosity 29.3%, perm 630 mD), deposited as channel-fills or splay deposits. 'High resistivity-terrigenous' shales with thin silt and sand laminae interpreted as lowstand overbank deposits. Massive to burrowed, 'low-resistivity-hemipelagic' shales widespread and interpreted as transgressive and highstand deposits. Very thin sheets of coaly fragments locally abundant immediately above and within sand beds)

Saller, A. & I.N.W. Dharmasamadhi (2012)- Controls on the development of valleys, canyons, and unconfined channel-levee complexes on the Pleistocene slope of East Kalimantan. Marine Petroleum Geol. 29, 1, p. 15-34.
(Contrasting depositional patterns on Pleistocene deepwater slopes of offshore E Kalimantan: (1) in N dominated by deep valleys and canyons (relatively 'starved' for siliciclastic sediment); (2) central slope dominated by unconfined channel-levee complexes (large amounts of sediments from Mahakam Delta during Pleistocene lowstands)

Saller, A., I.N.W. Dharmasamadhi, T. Lilburn & R. Earley (2010)- Seismic geomorphology of submarine slopes; channel-levee complexes versus slope valleys and canyons, Pleistocene, East Kalimantan, Indonesia. In: L.J. Wood, T.T. Simo & N.C. Rosen (eds.) Seismic imaging of depositional and geomorphic systems, Gulf Coast Sect. SEPM, Ann. Perkins Research Conf. 30, Houston, p. 433-471
(3-D seismic images of Pleistocene deepwater slope channels E of Mahakam Delta. Channel-levee complexes developed where sediment supply was high; erosional channels where siliciclastic input rel. low)

Saller, A., R. Lin & J. Dunham (2006)- Leaves in turbidite sands: the main source of oil and gas in the deep-water Kutei Basin, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 90, 10, p. 1585-1608.
(Hydrocarbons in Kutei basin derived from land-plant source material. Leaf fragments in turbidite sandstones look like main source of deep-water oil and gas)

Saller, A. & J. Noah (2005)- Sequence stratigraphy of a linked shelf to basin floor system, Pleistocene, north Kutei Basin, East Kalimantan, Indonesia. Proc. Soc. Econ. Geoph. (SEG) 2005 Conv., Houston, 4p. *(Extended Abstract)*
(Pleistocene lowstand delta-canyon- basin-floor fan system, 240 ka old. The 18 and 130 ka lowstand deltas did not reach slope)

Saller, A., J.T. Noah, A.P. Ruzuar & R. Schneider (2004)- Linked lowstand delta to basin-floor fan deposition, offshore Indonesia; an analog for deep-water reservoir systems. American Assoc. Petrol. Geol. (AAPG) Bull. 88, 1, p. 21-46.
(3D seismic study of Pleistocene lowstand delta to basin floor deposition offshore E Kalimantan. Reflectors traced downslope from lowstand delta to basin-floor fan in last three Pleistocene cycles (each 110 k.y. in duration). During sea level lowstand at ~240 ka, delta prograded over previous shelf edge and sand-rich sediments spilled onto slope. Slope canyon connects 240-ka lowstand delta to coeval basin-floor fan. Canyon fill lower amalgamated channel complex and upper channel-levee complex. Lower part of basin-floor fan broad lobes with relatively continuous reflectors. Higher part sinuous channel-levee complex that prograded over lower fan and fed sheetlike lobes on outermost fan. Lowstand strata do not onlap slope but extend from last clinoforms of lowstand deltas)

Saller, A., J.T. Noah, R. Schneider & A.P. Ruzuar (2003)- Lowstand deltas and a basin-floor fan, Pleistocene, Offshore East Kalimantan, Indonesia. In: H.R. Roberts et al. (eds.) Shelf margin deltas and linked down slope petroleum systems, Proc. 23rd Annual Gulf Coast Chapter SEPM Bob F. Perkins Research Conf., p. 421-439.
(U Pleistocene N of Mahakam delta three cycles between ~18 and ~370 ka, defined on shelf by progradational packages, separated by parallel reflectors with carbonate buildups. During lowest of three cycles (~270-370 ka), lowstand delta prograded over underlying shelf margin, and sand-rich sediment spilled downslope, feeding slope-channel complex and basin-floor fan. Pleistocene cycles different from sequences/ systems tracts models defined in 1980s. Lowstand systems no onlap of slope, but generally parallel reflectors. Cycles best separated at tops of prograding packages (transgressive surfaces))

Saller, A., K. Werner, F. Sugiaman, A. Cebastiant, R. May, D. Glenn & C. Barker (2008)- Characteristics of Pleistocene deep-water fan lobes and their application to an upper Miocene reservoir model, offshore East Kalimantan, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 92, 7, p. 919-949.
(Late Pleistocene basin-floor fan seismic study to provide analog for deep-water fields off E Kalimantan. Pleistocene basin-floor fan ~170m thick, 22 km across, and with 18 lobes. Average lobe size 3.8x 7.2 km and 34m thick. Lobes contain sheetlike splays, distributary channels and younger incised channels. U Miocene Gendalo 1020 reservoir composed of turbidite sands draped over anticline. Gross reservoir interval 50-150m thick thin-bedded turbidite sands with net-to-gross ~50%)

Sardjono (1999)- Crustal structure of the Makassar Strait implication for geodynamics processes. Proc. 24th Ann. Conv. Indon. Assoc. Geophys. (HAGI), Surabaya, p. 3-10.

Sardjono (2000)- Gravity field and structure of the crust beneath the Makassar Strait, Central Indonesia. AAPG Int. Conf. Exhib., Bali. *(Abstract only)*
(Basement of Makassar Strait attenuated continental crustal rocks and probably also parts of upper mantle. Basins with up to 15,000m sediment and water depth of 2000-3000m. SEASAT data show trends and structure of crust, indicating stretching of continental crust in or before Miocene but tectonic polarity changed, probably in Late Miocene. Buckling-up of lower crustal rocks, suggests regional stretching ceased and regional compression prevailing until today. No figures)

Sassen, R. & J.A. Curiale (2006)- Microbial methane and ethane from gas hydrate nodules of the Makassar Strait, Indonesia. Organic Geochem. 37, 8, p. 977-980.
(White gas hydrate nodules in piston cores from Borneo side of deep water Makassar Strait. Hydrocarbon 99.9% methane and traces of microbial ethane, relatively depleted in 13C. Detrital higher-plant material likely source of microbial methane-ethane, formed by in-situ reduction of CO2 by extremophile bacteria adapted to

high pressure. Hydrate several 100m above base of gas hydrate stability zone. Nodular hydrate associated with seafloor authigenic carbonate and chemosynthetic clams characteristic of deep cold vent sites)

Satyana, A.H. (2015)- Rifting history of the Makassar Straits: new constraints from wells penetrating the Basement and oils discovered in Eocene section- implications for further exploration of West Sulawesi Offshore. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-104, p. 1-35.
(New basement penetrations in N Makassar Straits by wells: Rangkong-1 and Kaluku-1 suggest basement of Makassar Straits is Paternoster-W Sulawesi microcontinent, thinned due to rifting from E-M Eocene to E Miocene, as response to back-arc rifting related to subduction roll back in SE Sundaland. Eocene rifted grabens and horsts were sites for shallow lacustrine sources, sandstone reservoirs, and traps)

Schwing, H.F. (1999)- Deep-water exploration in the Kutei basin, East Kalimantan, Indonesia. In: Palawan 99 Int. Conf., p.

Sebayang, D., E. Guritno & B. September (2004)- Seismofacies comparison of deepwater sequences: Pleistocene to Recent examples from offshore North Sumatra and Kutei Basins, Indonesia. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia and Australasia symposium, Jakarta 2004, Indon. Petroleum Assoc. (IPA), p. 349-360.
(Basic paper on deep water channel-levee complexes)

Teas, P.A., J. Decker, A. Nurhono & A. Isnain (2004)- Exploration significance of high resolution bathymetry in the Makassar Straits. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia and Australasia symposium, Jakarta 2004, Indon. Petroleum Assoc. (IPA), p. 389-397.
(Bathymetric map of Makassar Strait illustrates compression across basin, dominant over past ~15Ma, with surface anticlines on both sides of strait. High resolution resolves slumping of over-steepened forelimb and re-direction of depositional systems. Focused views show areas of active extensional faulting and folding, and submarine mud-volcanoes defining areas of active fluid venting. Tectonic lineaments expressed by changes in slope angle and degree of canyonization. Evidence for recent rapid uplift at N margin of Makassar Strait vs. aggrading canyon systems on W margin)

Sherwood, P., S. Algar, G. Goffey, I. Busono, J.N. Fowler, J. Francois, M.J. Smith & A. Strong (2001)- Comparison of recent and Mio-Pliocene deep water deposits in the Kutei Basin, East Kalimantan. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 423-438.
(Deepwater Kutei Basin (Makassar Straits) seismic examples of slope and basin floor sediments)

Siringoringo, L.P. & D. Noeradi (2016)- The Paleogene tectonostratigraphy of northern part Masalima Trench Basin. J. Geoscience Engineering Environm. Technol. (JGEET) 1, 1, p. 7-24.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/2/2)
(N part of Masalima Trench Basin in S end of Makassar Straits and extends to NE part of Java Sea. N part of Masalima Trench Basin formed by NE-SW normal faults with early syn rift sediment (M Eocene), deep marine late syn rift (Late Eocene- E Oligocene) and deep marine post rift (E Oligocene- E Miocene). Basement in 'Alpha well' red radiolaria chert, presumably tectonic melange, in 'Beta well' (on high) metasediments with K-Ar age of 131 ± 7 Ma (Lower Cretaceous))

Situmorang, B. (1977)- The Makassar Trough regional geology and hydrocarbon prospects. Lemigas Scientific Contr. 1, 1, p. 3-20.
(N and S Makassar basins originated as continental rift in triple-junction rift-system. Classified as marginal sea, flanked in W by Asian continental margin and by volcanic arc of Sulawesi in E. Strongly positive gravity anomalies suggest it is underlain by oceanic crust. Melawi-Ketungau basins of Kalimantan possible third arm of triple junction rift system. Possible presence of turbiditic reservoir rocks, and favorable conditions for accumulation of organic matter during initial rifting stage of seafloor spreading suggest Makassar basins may be highly prospective)

Situmorang, B. (1982)- The formation and evolution of the Makassar Basin, Indonesia. Ph.D. Thesis Chelsea College, University of London, p. 1-313. *(Unpublished)*

Situmorang, B. (1982)- The formation of the Makassar Basin as determined from subsidence curves. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 83-107.
(Subsidence of Makassar Basin compatible with McKenzie stretching model. Basin formation started with rifting in E-M Eocene or earlier, continuing until E Miocene. Rifting ceased by end of E Miocene, and since then >6 km of sediments deposited across basin without significant deformation. Oceanic crust will occur at stretching factor of 2.9, corresponding to present water depth of >3.2 km. No such water depths, so basin underlain by thinned continental crust (but includes sediment thickness?; JTvG))

Situmorang, B. (1984)- Formation, evolution, and hydrocarbon prospects of the Makassar Basin, Indonesia. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, American Assoc. Petrol. Geol. (AAPG), p. 227-232.
(Makassar Straits subsidence explained by stretching of continental crust by factor of 2.0- 2.9. Initially fault-controlled subsidence started in E-M Eocene, or possibly earlier. Active crustal stretching lasted until end of E Miocene; thermally controlled subsidence since M Miocene. Predicted crustal thickness in central part of basin 15 km. Assuming heatflow of 1.6 HFU Pre-Lower Miocene reached maturity for hydrocarbon generation. With seismic profile 605)

Situmorang, B. (1987)- Seismic stratigraphy of the Makassar Basin. Lemigas Scientific Contr. Petrol. Science Techn. 11, 1, p. 3-38.
(Three main discontinuity surfaces in Cenozoic sediments of seismic lines across N and S Makassar Straits basin. Rel. poor data)

Situmorang, B. (1989)- Crustal structure of the Makassar basin as interpreted from gravity anomalies: implications for basin origin and evolution. Lemigas Scientific Contr. 13, 1, p. 10-24.
(Gravity, well subsidence data and seismic data of (South) Makassar Basin interpreted to suggest it is underlain by highly attenuated continental crust with average thickness of 15km (but central zones of line A-A' in South Makassar basin E of Paternoster Platform modeled as ~8-9 km crustal thickness= oceanic crust thickness?; JTvG). Continental rifting during M Eocene- E Miocene, followed by thermal subsidence)

South, D., G. Toxopeus & B. Myhren (2013)- Karama PSC well results-a lesson learned on provenance and seismic imaging of deepwater systems. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-070, p. 1-7.
(Karama block off W Sulawesi in N Makassar Strait multiple prospects (bright seismic amplitudes in Late Miocene- E Pliocene section in young foldbelt structures). Sediments sourced from Sulawesi hinterland, with deep-water fans and debris flow identified from 3D seismic data. Three wells drilled on interpreted sand fairways showed bright seismic amplitudes not sand but siltstones, greywacke sandstones with no to poor reservoir properties)

Subroto, E. A., D. Noeradi, A. Priyono, H.E. Wahono, E. Hermanto & M. Syaifuddin (2007)- Preliminary study on Paleozoic and Mesozoic source rocks in the frontier offshore South Makassar basin, Indonesia. In: Y. Wang & T.D. Bullen (eds.) Proc. 12th Int. Symposium on Water-rock interaction, Kunming 2007, Taylor and Francis, London, 2, Chapter 188, p. 905-908.
(Oil and and gas known from onshore and offshore S Makassar Basin, but source rocks not established yet. Most likely source in basin Eocene- Oligocene sediments and, possibly also Miocene. Samples from exploration wells suggest most samples have not reached oil window. Basin modeling suggest Eocene sediments mature from peak oil to dry gas window, Miocene sediments range from barely mature to peak of oil generation (Misleading title?; JTvG))

Tanos, C.A. (2011)- Diagenetic effects on reservoir properties in a carbonate debris deposit: case study in the Berai Limestone, ñMò Field, Makassar Strait, Indonesia. Bull. Earth Sci. Thailand 4, 2, p. 17-24.

(online at: www.geo.sc.chula.ac.th/BEST/volume4/number2/3_Chrisna_Asmiati_Tanos_BEST_4_2_p%2017-24.pdf)
(S Makassar Straits 'M' gas field (= Ruby/ Makassar Straits) developed in Oligocene- E Miocene Berai Fm carbonate slope debris reservoirs. With multistage diagenetic and tectonic evolution, incl. phase of late deep burial leaching)

Tanos, C.A., J. Kupecz, A.S. Hilman, D. Ariyono & I.L. Sayers (2013)- Diagenesis of carbonate debris deposits from the Sebuku Block, Makassar Strait, Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-159, p. 1-18.
(Ruby Field, SW Makassar Strait, will be developed from Late Oligocene carbonate debris flow reservoirs. Reservoir facies mainly matrix- and clast-supported breccias. Debris deposits correspond to two global sea level lowstands (Chattian-1; 28 Ma) and Burdigalian-1; 20 Ma). Adjacent feature (NW Ruby-1) unexpectedly dry, and, unlike Ruby Field, did not undergo extensive late dissolution, and may also have been isolated from lateral hydrocarbon migration)

Tanos, C.A., J. Kupecz, S. Lestari, J.K. Warren & A. Baki (2012)- Depositional and diagenetic effects on reservoir properties in carbonate debris deposits: comparison of two debris flows within the Berai Formation, Makassar Strait, Indonesia. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 50768, p. (*Presentation*)
(online at: www.searchanddiscovery.com/documents/2012/50768tanos/ndx_tanos.pdf)
(After successful gas discovery and appraisal of Makassar Straits field (= Ruby) in Late Oligocene Upper Berai Fm bathyal debris flow carbonate reservoir in Pangkat Graben, S Makassar Basin, a subsequent exploration well in adjacent NW-1 feature was unexpectedly dry. Differences in post-depositional diagenesis explain better reservoir quality in Ruby field)

Teague, R., J.T. Noah, R. Redhead, M. Swanson, T. Brown & N. Briedis (1999)- Merah Besar and West Seno Field discoveries, Makassar Strait, East Kalimantan, Indonesia. AAPG Int. Conf. Exh. Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 83, 8, p. 1343.
(First Indonesia deep water discoveries by Unocal in 1996 and 1998 in toe-thrust anticlines with stratigraphic trapping components. Merah Besar in 1700' - 2700' of water, 40 km2, productive reservoirs between 4000-9500' TVD in Pliocene and Upper Miocene upper to mid-slope turbidite channel-levee sandstones. West Seno in 2400- 3200' of water, ~70 km2, with hydrocarbons between 7000' -9500' TVD, where Upper and M Miocene sandstones are faulted and stratigraphically trapped in updip position. Sandstones rel. continous and interpreted as amalgamated turbidite channels capped by hemipelagic shales. Porosity 24-32%, permeability 150-1500 md. Sandstones quartzose and mainly fine grained. Miocene oils and Pliocene and Miocene gases derived from similar source facies of land plant-dominated organic material. Oils API gravity 35-46 degrees)

Thompson, P., J.J. Hartman, M.A.A. Anandito, D. Kumar et al. (2009)- Distinguishing gas sand from shale/brine sand using elastic impedance data and the determination of the lateral extent of channel reservoirs using amplitude data for a channelized deepwater gas field in Indonesia. The Leading Edge 28, 3, p. 312-317.
(Chevron Sadewa Field 2002 discovery in Makassar Straits NE of Mahakam Delta, ~5 km from Kalimantan shelf edge in water depths of 1500-2500'. Reservoirs Late Miocene deep water channel sandstones. Nine wells drilled. Very expensive development. Propose using elastic impedance data for distinguishing gas sands)

Untung, M., J. Taruno, A. Maulana, P. Kridoharto & S. Sukardi (1985)- Explanatory note on preliminary aeromagnetic map of the Makassar Strait. Proc. 20th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1983, 2, Tech. Repts., p. 199-209.
(Aeromagnetic map over Makassar Straits shows two areas of different character, separated by Paternoster Arch: (1) high anomalies of quiet magnetization in North Makassar Basin (interpreted to be oceanic crust) and (2) low to high anomalies of noisy character in South Makassar Basin)

Van Gorsel, J.T. & E.C. Helsing (2014)- A Late Oligocene drowned pinnacle reef in deepwater Makassar Straits. Berita Sedimentologi 29, p. 116-122.
(online at: www.iagi.or.id/fosi)

(Carbonate seamount with 320-350m of relief in 2050m deep water of S Makassar Straits is Late Oligocene-age pinnacle reef, which drowned in latest Oligocene time, based on presence of Miogypsinoides cf. bantamensis near crest and Spiroclypeus and Neorotalia mecatepecensis deeper in section. Carbonate buildup with ferro-manganese cement, representing >20 Million years of deep water seafloor exposure and non-deposition)

Visser, K., R. Thunell & M.A. Goni (2004)- Glacial- interglacial organic carbon record from the Makassar Strait, Indonesia: implications for regional changes in continental vegetation. Quaternary Science Reviews 23, 1-2, p. 17-27.
(Climate in W Pacific Warm Pool 3-4°C colder during glacial periods. Core MD9821-62 from Makassar Strait suggests vegetation on Borneo and other islands did not significantly change from tropical rainforest during last two glacial periods. This supports hypothesis that winter monsoon increased in strength during glacial periods, allowing Indonesia to maintain high rainfall despite cooler conditions. Organic matter mixed marine-terrestrial; higher TOC during glacials due to enhanced erosion of continental shelves)

Wijaya, P.H. & D. Kusnida (2009)- Tinjauan geotektonik Selat Makassar Utara, implikasinya terhadap potensi hidrokarbon laut dalam cekungan Kutai, Kalimantan Timur. J. Geologi Kelautan 7, 3, p. 109-121.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/176/166)
('The geotectonic views of the North Makassar Straits, its implications for the potential of marine hydrocarbons in the Kutai basin, East Kalimantan'. Literature review of geotectonic evolution of Makassar Straits and potential for hydrocarbons in deepwater Makassar Straits in toe thrusts around Mahakam Delta. Seismic character, water depths, gravity modeling, etc. suggest much of Makassar Straits, including the Mahakam Delta, underlain by oceanic crust, as continuation of Eocene spreading in Celebes Sea)

Willacy, C., S. Oemar, A.E. Hermantoro & P. Gilleran (2000)- Prestack depth imaging within Makassar Straits, Eastern Kalimantan. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 457-466.
(Prestack depth migration of deepwater E Kalimantan seismic line with complex overthrusting)

Wissman, G. (1984)- Makassar Strait- Celebes Sea Survey- data compilation and interpretation of cruises VALDIVIA 16/1977 and SONNE 16/1981. In: Bundesanstalt Geowissenschaften Rohstoffe (BGR), Techn. Report 97210, Hannover, p. 1-210. *(Unpublished)*
(BGR 1977 and 1981 seismic surveys in Makassar Straits and Celebes Sea, part of SEATAR campaign)

Wissmann, G. (1984)- Is Sulawesi colliding with the Paleogene rifted margin of eastern Kalimantan? A hypothesis deduced from seismic reflection profiles in the Makassar Straits- Celebes Sea. In: Bundesanstalt Geowissenschaften Rohstoffe (BGR), Techn. Report 97210, Data compilation and interpretation of cruises, Valdivia, 16/1977 and Sonne 16/1981, p. . *(Unpublished)*

V. SULAWESI

V.1. Sulawesi

Abendanon, E.C. (1911)- De tektoniek van Midden Celebes. Handelingen XIII Nederlandsch Natuur- Geneeskundig Congres, Groningen 1911, Kleynenberg, Haarlem, p. 389-406.
(online read only at: http://babel.hathitrust.org/cgi/pt?id=uc1.b3093404;view=1up;seq=999)
('The tectonics of Central Sulawesi'. First summary of geology and tectonics of C Sulawesi after initial reconnaissance of Sarasin cousins. C Sulawesi mainly volcanics and metamorphic rocks. Presence of major faults)

Abendanon, E.C. (1912)- Zur Umrissform der insel Celebes. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 64, Monatsberichte 5, p. 266-277.
(online at: https://www.biodiversitylibrary.org/item/150869page/1036/mode/1up)
('On the outline of Sulawesi'. Early interpretation of tectonic zones and fault patterns of Sulawesi; partly critique of papers by Ahlburg and Von Staff)

Abendanon, E.C. (1912)- Eine Nachschrift ĂZur Umrissform von Celebes". Zeitschrift Deutschen Geol. Gesellschaft 64, Monatsberichte 11, p. 512-516.
(online at: https://www.biodiversitylibrary.org/item/150869page/1288/mode/1up)
(Follow-up of Abendanon (1912) paper on outline of Sulawesi. No figures)

Abendanon, E.C. (1915)- Celebes uit, of in de Tethys? Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 32, p. 358-365.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001661001:pdf)
(Scathing critique of observations and conclusions of Waterschoot van der Gracht 1915 paper on C Sulawesi)

Abendanon, E.C. (1915)- Midden Celebes Expeditie- Geologische en geographische doorkruisingen van Midden-Celebes (1909-1910). E.J. Brill, Leiden, vol. I, p. 1-451.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:100003010:pdf)
('Geologic and geographic traverses of Central Sulawesi (1909-1910)'. First of 4 volumes + Atlas of classic first geological reconnaissance traverses of C Sulawesi, sponsored by Royal Dutch Geographical Society. With 7 maps and 22 cross-sections in Atlas volume. Vol. I with reports of rock observations on 1909 traverses of Latimojong Mts, Saadang, Masupu and Mamasa Rivers, and Rante Pao- Palopo. Metamorphic rocks, M Eocene Nummulites limestones volcanics, etc.))

Abendanon, E.C. (1915)- Midden Celebes Expeditie- Geologische en geographische doorkruisingen van Midden-Celebes (1909-1910). E.J. Brill, Leiden, vol. II, p. 453-944.
(online at: https://resolver.kb.nl/resolve?urn=MMUBL07:000004749:pdf)
(Continuation of 1909- 1910 fieldwork report, with traverses of Malili River, Matana Lake, Kolonodale (areas with widespread 'peridotite plate', ~1000m thick, overlying Mesozoic?, also gabbro, some radiolarite, etc.). Also Poso Depression (metamorphics, incl. glaucophane schist), Koro to Lariang (common metamorphics, volcanics), Sarasin graben, Pare Pare, Donggala, etc. Folded schist in C Sulawesi commonly steeply dipping and strike in E-W direction. p. 823: Post-Eocene folding followed by Oligocene peneplanisation, followed by Neogene folding and uplift up to 2000m. With 6 maps and 21 cross-sections in Atlas volume)

Abendanon, E.C. (1917)- Midden Celebes Expeditie- Geologische en geographische doorkruisingen van Midden-Celebes (1909-1910). E.J. Brill, Leiden, vol. III, p. 953-1381.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:200000040:pdf)
(Volume with reports on palaeontology:(1) brief note by G.J. Hinde on radiolaria poorly preserved; ('reminescent of radiolarian cherts from U Kapuas region of N Kalimantan'; 'probably not older than Jurassic') and small foraminifera, (2) G.F. Dollfus on identifications of Cretaceous - Tertiary fossils (incl. M Eocene larger foraminifera Nummulites, Alveolina, Orthophragmina (= Discocyclina), Pellatispira and molluscs). Also extensive report on petrography of igneous and metamorphic rocks by W.F. Gisolf)

Abendanon, E.C. (1917)- Midden Celebes Expeditie- Geologische en geographische doorkruisingen van Midden-Celebes (1909-1910). E.J. Brill, Leiden, vol. IV, p. 1383-1902.
(online at: https://www.delpher.nl/nl/boeken/)
('Synthesis volume' on rock types and stratigraphy (incl. gneiss, thick series of ?Precambrian schists, >1000m thick ?Triassic peridotites with 'shell' of associated basic igneous gabbro, diabase, tuffsand deep marine red radiolarite, U Cretaceous claystones, granite laccoliths, M Eocene clastics with coal and Nummulites limestone, E Tertiary tuffs, E Miocene reefal limestones, Mio-Pliocene volcanics, etc.), and tectonics of Sulawesi. Final chapters on Recent freshwater molluscs and fishes, economic geology and historic maps)

Abendanon, E.C. (1916-18)- Voyages geologiques et geographiques a travers la Celebes centrale. Brill, Leiden. 3 vols. + Atlas, p. 1-1549.
('Geologic and geographic travels across Central Sulawesi'. French translation of above Dutch text)

Abendanon, E.C. (1916)- De oude beddingen der Beneden-Saadang River. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 33, 3, p. 429-449.
('The old courses of the Lower Sadang River'. Sadang River in SW Sulawesi now drains W into Makassar Straits, but river shifted 25 km N from old Sadang delta at Jampua 50 years ago. Diversion appears to point to ~5m of uplift in last 50 years)

Abendanon, E.C. (1916)- Schetskaart van Midden-Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 33, 2p.
('Overview map of Central Sulawesi'. Reprint of map IX in Abendanon 1915-1917))

Abendanon, E.C. (1916)- De geomorphologische beteekenis der basische stollingsgesteenten in het middendeel van den Ned.- Ind Archipel. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 33, 5, p. 742-749.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001662001:pdf)
('The geomorphologic meaning of the basic igneous rocks in the central part of the Netherlands Indies archipelago'. The 7000km2 large peridotite massif of Verbeek Mts in C Sulawesi enveloped by gabbroid rocks, then diabase, diabase breccias and diabase tuffs (peridotite-gabbro-basalt succession good observation of upper mantle- oceanic crust; HvG). Assumes pre-Triassic age. Similar relationships described from 5 other of peridotite cores with gabbro-diabase envelopes: Halmahera-Waigeo, Obi, Ambon- East Ceram, Timor-Moa and Sumba (latter problematic))

Abendanon, E.C. (1916)- Een palaeogeographische gevolgtrekking in verband tot de kristallijne schisten-formatie van Midden Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 3 (Molengraaff volume), p. 171-190.
(online at: https://ia601908.us.archive.org/30/items/verhandelingenva3191geol/verhandelingenva3191geol.pdf)
('A paleogeographic conclusion from the crystalline schist formation of Central Sulawesi'. C Sulawesi belt of metamorphic rocks between Bone Gulf and Tomini Bay interpreted as part of larger Precambrian Asian-Australian continent, with proposed name of 'Aequinoctia'. Started to break up in Permo-Carboniferous)

Abendanon, E.C. (1917)- Historische geologie van Midden-Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 34, p. 440-456 and p. 547-564.
('Historical geology of Central Sulawesi')

Abendanon, E.C. (1918)- Ontdekking van belangrijke delfstoffen-afzettingen in Nederl.-Indie (Midden-Celebes) op grond van een geologischen verkenningstocht. De Ingenieur, Delft, 1918, 7, p. 1-14.
('Discovery of important mineral deposits in Netherlands Indies (Central Sulawesi) based on a geological reconnaissance trip'. First to report presence of lateritic of iron, nickel and chrome deposits associated with peridotites in the 'Verbeek Mountains' near Matano and Towuti lakes)

Abendanon, E.C. (1919)- Midden-Celebes, een antikritiek. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 36, p. 49-97.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)

('Central Sulawesi, a reply'. Reply to critical discussion of Abendanon 1916-1918 Sulawesi volumes by Wing Easton, 1918, 'Rustig of dansend Celebes')

Abendanon, E.C. (1920)- Een jong-paleozoisch en een devonisch fossiel van Celebes? De Ingenieur, 31 Januari 1920, p. and 29 Januari 1921, p.
('A Late Paleozoic and a Devonian fossil from Sulawesi? Questions Sulawesi origin of Permian ammonite and Devonian brachiopod reported by Brouwer (1919) from Kalosi region of C Sulawesi)

Abendanon, E.C. & S.J. Vermaes (1915)- Nota's betreffende het voorkomen van nikkel- en ijzerertsen in het Verbeek-Gebergte tusschen Middel-Celebes en het Zuidoostelijke Schiereiland. The Hague, 45p.
('Reports on the occurrences of nickel and iron ores in the Verbeek Mountains between Central Celebes and the SE Peninsula'. Report by Abendanon on geology and by Vermaes on chemical analyses. Results suggests the likely presence of exploitable nickel and iron ore deposits in the drainage area of the Malili River)

Abimanyu, R. (1990)- The stratigraphy of the Sulawesi Group in the Tomori PSC, East Arm of Sulawesi. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung 1990, 1, p. 99-118.
(Union Texas overview of stratigraphy of (Latest Miocene?-) Pliocene -Pleistocene clastics-dominated, post-orogenic Kintam Fm in Tomori Basin. Documents latest Miocene or basal Pliocene (N17 or N18- N19/20) bathyal flysch-type fine clastics sedimentation reflecting deepening/flexural loading as result of collision between E Sulawesi ophiolite and Banggai Sula block. Followed by Biak Fm coarse clastics in latest E Pliocene (N20-?N21), reflecting post-orogenic uplift/ erosion in E Pliocene ('Sulawesi Molasse'))

Adam, J.W.H. (1922)- Over de resultaten eener proefontginning van nikkelertsafzetingen nabij Soroako (Celebes). Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 1, p. 201-249.
(Results of test exploitation of nickel ore deposits near Soroako on S side of Matano lake, central East Sulawesi. Nickel ore on weathered surface of large peridotite body (mainly dunite). Concentrations of nickel ore typically 3-4% Ni, some over 7%, not as high as New Caledonia)

Adhitiya, R., S.S. Angkasa, V. Oryzavica, A.R. Parinduri, D. Wirasatia & R. Adiarsa (2010)- Re-appraisal, tectonic and sedimentary control of Bone Basin and implication to Cenozoic multi hydrocarbon play. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-088, 12p. *(In Indonesian)*
(Literature summary of S Sulawesi Bone Basin, borrowing heavily from Yulihanto 2004)

Advokaat, E.L. (2015)- Neogene extension and exhumation in NW Sulawesi. Ph.D. Thesis Royal Holloway London University. p. *(Unpublished)*

Advokaat, E., R. Hall, L. White, R.A. Armstrong, B.P. Kohn & M. BouDagher-Fadel (2014)- Neogene extension and exhumation in NW Sulawesi. American Geophys. Union (AGU), Fall Mtg., San Francisco, T43A-4701, 1p. *(Poster Abstract)*
(Crustal extension important in Neogene development of Sulawesi. North Arm with Eocene- Lower Miocene basalts intercalated with radiolarian chert and volcaniclastics, intruded by granitoids with zircon ages from~9.4- 8.2 Ma. Beneath these rocks is Malino Metamorphic core complex quartzo-feldspathic schist-gneiss with zircon rim ages of ~15.4 Ma, surrounded by discontinuous greenschist carapace, intruded by granitoids with ages of 4.85- 3.78 Ma. Late stage exhumation by high angle oblique normal faults between ~3.3- 1.4 Ma. E Pliocene- E Pleistocene sediments crosscut by normal faults. Two phases of extension in N Sulawesi, M Miocene and Late Pliocene-Pleistocene)

Advokaat, E., R. Hall, L. White, I.M. Watkinson, A. Rudyawan & M.K. BouDagher-Fadel (2017)- Miocene to recent extension in NW Sulawesi, Indonesia. J. Asian Earth Sci. 147, p. 378-401.
(online at: http://searg.rhul.ac.uk/pubs/advokaat_etal_2017%20Extension%20North%20Sulawesi.pdf)
(Malino Metamorphic Complex (MMC) in W part of N Arm of Sulawesi previously thought to be metamorphic complex exhumed in E-M Miocene. New data suggest MMC metamorphic core complex underwent E-M Miocene extension, but no exhumation at this time: (1) Pliocene undeformed granitoids intrude MMC indicating complex still at depth and (2) Pliocene- Pleistocene cover sequences do not contain metamorphic

detritus. Second phase of extensional uplift with brittle faulting from Late Miocene-Pliocene onwards, with MMC exhumation (synchronous exhumation of adjacent Palu Metamorphic Complex in W Sulawesi, and rapid offshore subsidence in Gorontalo Bay). Linked to N-ward slab rollback of S-subducting Celebes Sea since Pliocene, and ongoing at present day)

Agard, P., P. Yamato, L. Jolivet & E. Burov (2009)- Exhumation of oceanic blueschists and eclogites in subduction zones: timing and mechanisms. Earth-Science Reviews 92, p. 53-79.
(Review of buoyancy-driven exhumation of continental rocks that converted to blueschist-eclogite in subduction zone exhumation. With brief discussion of Sulawesi Cretaceous Bantimala Complex, which represents exhumed wedge of Cretaceous subduction and is mainly made of mafic bodies and volcanoclastics, with eclogite blocks embedded in serpentinites. Ultramafic units occupy internal position)

Ahlburg, J. (1910)- Uber den geologischen Aufbau von Nordcelebes. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 62, Monatsberichte 3, p. 191-202.
(online at: https://archive.org/details/zeitschriftderd621910deut)
('On the geological structure of North Sulawesi')

Ahlburg, J. (1910)- Der Vulkan Soputan in der Minahassa (Nordcelebes). Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 62, p. 665-672.
('The Soputan volcano in the Minahassa (North Sulawesi)'. Manly reaction to critical comments by Wichmann. Ahlburg climbed Soputan in June 1909, observing changes in top of volcano after major 1838 eruption)

Ahlburg, J. (1911)- Zur Umrissform der insel Celebes. Einige Bemerkungen zu dem gleichlautenden Aufsatze des Herrn Von Staff. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 63, p. 399-405.
('On the outline of Sulawesi- some remarks on the paper of Mr. Von Staff of the same title'. Commentary on by Von Staff (1911) paper on tectonic zones and fault patterns of Sulawesi. No figures (see also Abendanon 1912))

Ahlburg, J. (1913)- Versuch einer geologischen Darstellung der Insel Celebes. Geol. Palaeont. Abhandlungen, Neue Folge 12, 1, p. 3-172.
(online at: http://archive.org/details/geologischeundpa12jena or www.zobodat.at/pdf/Geol-pal%C3%A6ontol-Abh_NF_12_0003-0172.pdf)
('Attempt of a geological description of Sulawesi island'. Early overview of Sulawesi geology, partly based on observations on North arm along Tomini Bay in 1909, partly compilation of published data. (S Sulawesi part criticized by Van Waterschoot van der Gracht 1915))

Ahmad, W. (1978)- Geology along the Matano Fault Zone, East Sulawesi. In: S. Wiryosujono & A. Sudradjat (eds.) Proc. Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 143-150.
(170km long, WNW-ESE trending Matano Fault Zone in N part of SE Arm of Sulawesi. Lake Matano graben-like structure between overstepping fault segments. Observed left-lateral offsets of old geologic contacts ~20km; several young stream offsets of 200-600m)

Andi Mangga, S. (2004)- Tinjauan lingkungan tektonik batupasir Formasi Kalumpang di daerah Kalumpang, Kabupaten Mamuju, Sulawesi Selatan. J. Sumber Daya Geologi 14, 2 (146), p. 26-36.
('Observations on tectonic setting of the Kalumpang Fm sandstone in the Kalumpang area, Mamuju District, S Sulawesi'. Eocene Kalumpang Fm clastics at Karama River, W Sulawesi, quartz sandstone and claystone with minor coal and limestone, with clasts derived from metamorphic, igeous and sedimentary terranes ('quartzose recycled orogen'))

Andi Mangga, S., Moh. Heri H.Z. & T. Sihombing (2005)- Tinjauan geologi dan potensi batubara daerah Sulawesi Selatan. J. Sumber Daya Geologi 15, 1 (148), p. 124-142.
('Observations on the geology and coal potential of the South Sulawesi area'. Tertiary basins of S Sulawesi Makassar Straits, Lariang, Karama Makasar and Bone Basins. Formed due to rifting between E Eocene and E

Miocene. Coal deposits in M-L Eocene of Mamuju (NW) and Enrekang (NE) and E-M Miocene in Barru-Bone Block (S))

Andreason, M.W., A.F. Chatfield, J.A. Curiale, M.V. Filewicz, E.D. Lumadyo et al. (2000)- Exploration in the gravity collapse rifts of the Salayar Basin, Indonesia. AAPG 2000 Ann. Mtg *(Abstract only)*
(Salayar Basin offshore SW Sulawesi (S end Makassar Straits) gravity collapse rift formed in M Cretaceous along SE Sunda shield margin. Salayar and SE Sunda margin basins differ from typical Indonesian back-arc basins due to Cretaceous main rift event and crustal thickening prior to Paleocene-Eocene source deposition. Sequence of events: (1) E Cretaceous accretion, thrusting, granite intrusion, low-angle subduction; (2) Mid-Cretaceous collapse due to Australian plate roll-back, deposition of deepwater flysch; (3) Late Cretaceous isostatic adjustment of rift blocks; (4) Paleocene-M Eocene rifting, deposition in alluvial, lacustrine, and fluvio-deltaic environments; (5) Late Eocene- Late Oligocene post-rift quiescence, carbonate platform development on basin margins, deepwater marls- shales in basin center; (6) Late Oligocene- M Miocene inversion; (7) M Miocene- present relative tectonic quiescence, sediment starved conditions, infill of lows)

Anggayana, K., T. Darijanto & S. Widodo (2003)- Studi mineral pirit sebagai salah satu sumber sulfur pada batubara: kasus batubara dari Kabupaten Barru Sulawesi Selatan. Jurnal Teknologi Mineral (ITB) X, 1, p. 3-14.
('Study of pyrite minerals as main source of sulfur in coal: case from the Barru regency, South Sulawesi')

Anonymous (1920)- Uitkomsten van mijnbouwkundige onderzoekingen in een gedeelte van Midden-Celebes (Sasak). Verslagen Meded Indische Delfstoffen en hare Toepassingen, Dienst Mijnwezen Nederlandsch Oost-Indie, 12, p. 1-64.
('Results of mining investigations in a part of Central Sulawesi (Sasak)'. Report on survey of copper and iron deposits in C Sulawesi between 1911-1917 by Mines department ingenieurs Van der Kloes, Reijzer, Macke and Wolvekamp. Surveys of terrains Sasak, Masupu and Bobokan in Toraja region did not lead to proving commercial deposits)

Apandi, T. (1977)- Geologic map of the Kotamobagu quadrangle, North Sulawesi, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(See 2nd edition 1993, below)

Apandi, T. & S. Bachri (1993)- Geologic map of the Kotamobagu quadrangle, North Sulawesi, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 2n Ed.
(Geologic map in eastern half of Sulawesi North Arm. Part of volcanic arc, above double subduction zone: Celebes Sea subduction from North (active since E Tertiary) and E Sangihe subduction zone to E (active since E Quaternary). Oldest rock Eocene (and older?) Tinombo Fm deep marine clastics, chert and red limestone with pillow basalts (50 Ma radiometric age reported in Villeneuve et al. 1990). Overlain by Miocene and younger clastics and volcanics and E-M Miocene limestones. Widespread Late Miocene Bone diorite/ granite intrusions. With E-W trending normal faults and NNW-SSE (right lateral) and NNE-SSW (left-lateral) strike slip faults. More than one compressional tectonic episodes: older isoclinal folding and younger open folding)

Ardiansyah R., I. Kusuma, H. Kamaruddin, R.R. Wibawa & M.R. Kamil (2015)- Geological prospect, resource and ore reserve estimation in Pomalaa, Kolaka, Southeast Sulawesi, Indonesia. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 67-76.
(Pomalaa nickel mine in SE Sulawesi in nickel laterite derived from ultramafic rocks (harzburgite, dunite, etc.) of E Sulawesi ophiolite. Slopes between 3°-15° produce ~2- 7 m thick nickel saprolite zone, with Ni grade of 1.8-2.2%)

Aridianto & N. Azman R. (1990)- Kajian geologi daerah Sulawesi tenggara dalam kaitannya dengan prospek hidrokarbon. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 136-148.
('Study of the geology of the Southeast Sulawesi region in relation to hydrocarbons prospectivity'. Tertiary section above metamorphics-ophiolite starts with 'Langkawala Fm' Eocene conglomeratic sandstones?. Not much detail)

Armandita, C., N. Pudyo, S.E. Saputra & Sumaryana (2011)- Exploration challenges and opportunities in deep water Makassar Strait Basins, Indonesia: review of carbonate play based on sequence stratigraphy and seismic characterization. Proc. SEG Ann. Meeting, San Antonio 2011, p. 1-5. *(Extended Abstract)*
(Evaluation of deepwater of Makassar Strait after 6 recent unsuccessful exploration wells. Geological factors of unsuccessful results include misinterpretation of age of carbonate reservoirs from seismic, inadequate evaluation of petroleum system, etc.)

Arosi, H.A. & M.E.J. Wilson (2015)- Diagenesis and fracturing of a large-scale, syntectonic carbonate platform. Sedimentary Geology 326, p. 109-134.
(Tonasa Limestone Fm of SW Sulawesi developed in extensional regime, with block faulting, tilt-block rotation, differential uplift and subsidence throughout Eocene- E Miocene history. Carbonate alteration in shallow to deeper burial depths by fluids with predominantly marine precursor origins)

Aryani, S.C. & R.Sinaga (2010)- Potential prospect of Au- base metal mineralization in Esang, Mamasa, West Sulawesi, Indonesia. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, 7p.
(Esang gold and base metal mineralization in W Sulawesi hosted in Cretaceous Latimojong Fm metasediments and Miocene- Pliocene andesites of Talaya Fm)

Ascaria, N.A. (1997)- Carbonate facies development and sediment evolution of the Miocene Tacipi Formation, South Sulawesi, Indonesia. Ph.D. Thesis, University of London, p. 1-397. *(Unpublished)*
(Tacipi Fm 300m thick Middle-Late Miocene reefal limestones, outcrops over 1500 km2 in eastern S Sulawesi. Tectonic activity controlled facies development in M-L Miocene)

Ascaria, N.A. (1999)- Control on carbonate sedimentation of Tacipi Formation, South Sulawesi, Indonesia. Berita Sedimentologi 10, p. 16-17.
(M Miocene- E Pliocene Tacipi Fm limestones of SW Sulawesi deposited in intra-arc or forearc setting. 300-700m thick, outcrops in area of 1500 km2, also in Sengkang basin subsurface (economic gas reservoir). Outcrops in N isolated knoll reefs with deeper water M Miocene shallowing upward into Late Miocene reef complexes. In S Bone region M Miocene shallow marine carbonates. Tectonic control on facies distribution)

Ascaria, N.A. & N.A. Harbury (1997)- Tacipi Limestone facies distribution and sequence development, Mio-Pliocene, South Sulawesi, Indonesia. Berita Sedimentologi 5, p.

Ascaria, N.A., N.A. Harbury & M.E.J. Wilson (1997)- Hydrocarbon potential and development of Miocene knoll-reefs, South Sulawesi. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), p. 569-584.
(Tacipi Fm M Miocene (Tf2-3)- E Pliocene (Tg) intra-arc or forearc carbonates. Thickness 300-700m. Subcrops in Sengkang Basin form economic gas reservoirs. Dominant lithologies reef facies, packstones and wackestones. Northern outcrops (N Bone Region) isolated knoll-reefs, displaying N-S trend, surrounded by deeper-water facies. Buildups composed of deeper-water M Miocene facies at base and shallow upwards into Late Miocene reef complexes. Differential subsidence resulted in variations in time of drowning of reefs. Fine grained clastics and volcaniclastics cover reefs and act as seals)

Ashton, P.R. (1976)- Miocene algal reef mounds, Sengkang province, Sulawesi. Proc. Carbonate Seminar, Jakarta 1976, Indon. Petroleum Assoc. (IPA), p. 122. *(Abstract only)*
(S edge of Sengkang Basin, S Sulawesi, well exposed outcrops of algal reef limestone. Numerous discrete biocherms, rooted in U Miocene limestone platform and covered by U Miocene- Pliocene pelagic calcareous mudstones. Bioherms mainly of calcareous algae; corals significant only at base)

Asmariyadi, R. Langkoke, A. Maulana, I. Nur & W. Astaman (2012)- Ore characteristics and fluid inclusion of the base metal vein deposit in Moncong Bincanai Area, Gowa, South Sulawesi, Indonesia. J. Geologi Indonesia 7, 4, p. 189-197.
(online at: http://jgi.bgl.esdm.go.id/index.php/JGI/article/view/43/32)

(Moncong Bincanai mineralization veins in basalt, consisting of galena, sphalerite, chalcopyrite, and pyrite, with Pb 47.9%, Cu 1.3%, Zn 1.0%, and Fe 9.5%. Fluid inclusion microthermometry indicate formation T of ~250°C. Categorized as low-sulfidation epithermal deposits, formed at 410-440m below paleosurface)

Asyiah, S., M.R. Suwondo & R. Waren (2010)- Eocene- Miocene plate tectonic habitats and structural style of Gorontalo Basin, Sulawesi. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-006, 13p. *(in Indonesian)*

Audley-Charles, M.G. (1974)- Sulawesi. In: Mesozoic-Cainozoic orogenic belts. Geol. Soc. London, Spec. Publ. 4, p. 365-378.
(Elegant, somewhat dated overview of Sulawesi geology)

Aziz, F. (1993)- Fosil fauna Sulawesi dan Batas Wallace. J. Geologi Sumberdaya Mineral 3, 21, p. 2-9.
('Fossil faunas of Sulawesi and the Wallace Line'. Makassar Straits believed to be major faunal boundary between Asian and Australian faunas, but presence of Asian elements like Celebochoerus, Elephas, Stegodon and Geochelone in Late Pliocene- Pleistocene Walanae Fm of SW Sulawesi shows some animals were able to cross Wallace Line)

Aziz, F. (1994)- Vertebrate faunal evolution of Sulawesi during the Late Neogene. In: R. Tsuchi (ed.) Pacific Neogene Events in Time and Space. Contributions to the West Pacific, IGCP-246, Shizuoka University, Japan, p. 79-85.

Aziz, F., G.D. van den Bergh et al. (1995)- The geology and stratigraphy of the vertebrate-bearing deposits in the Sengkang Basin: the terrestrial faunal evolution of South Sulawesi during the Late Pliocene and Quaternary. Geol. Res. Dev. Centre, Spec. Publ. 18, p. 1-112.
(At least three immigrations of large-sized terrestrial mammals into S Sulawesi in Late Pliocene-Quaternary. Vetebrate fauna localities in Walanae Depression/rift. East Walanae fault initiated as late M-early Late Miocene normal fault, but in Late Pliocene- Early Pleistocene compressional or left lateral strike slip faulting)

Aziz, M.C.A. & K.A.M. Syihab (1993)- Arah pengendapan batuan Tersier, daerah Silea, Kecamatan Sampara, Kabupaten Kendari, Sulawesi Selatan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1141-1150.
('Aspects of the deposition of Tertiary rocks in the Silea area, Sampara, Kendari district, S Sulawesi')

Bachri, S. (2006)- Stratigrafi lajur vulkano-plutonik daerah Gorontalo, Sulawesi. J. Sumber Daya Geologi 16, 2 (152), p. 94-106.
('Stratigraphy of the volcanic-plutonic belt of the Gorontalo area', N Sulawesi. N Sulawesi mainly Eocene-Pliocene volcanics and Neogene plutonics. Oldest unit Eocene-E Miocene Tinombo Fm, in volcanic and sedimentary facies. Overlain by M Miocene-E Pliocene marine volcanics and sediments, intruded by Bone Diorite. M Pliocene acid- intermediate volcanic rocks. Late Pliocene-E Pliocene molasse with tuffs and acidc-intermediate Pinogu Volcanics with Bumbulan Granodiorite. Plio-Pleistocene reef limestone in S coast area)

Bachri, S. (2011)- Structural pattern and stress system evolution during Neogene- Pleistocene times in the central part of the North Arm of Sulawesi. J. Sumber Daya Geologi 21, 3, p. 127-135.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/140/137)
(Five main trends of lineaments and faults, reflecting changes in stress system evolution during Neogene-Pleistocene, related to S-ward subduction of N Sulawesi Sea, which in Pleistocene weakened as Sangihe subduction in Molucca Sea to E commenced, resulting in change of stress field orientation)

Bachri, S. & Baharuddin (2001)- Geological map of the Majene-Malunda Quadrangle, Sulawesi, scale 1: 100,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Bachri, S. & Sidarto & (2013)- Tektonik Sulawesi. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 303-324.

('Tectonics of Sulawesi'. Chapter 13 in Geology of Sulawesi book. Brief review of regional tectonics of Sulawesi. No plate reconstruction)

Bachri, S., Sukido & N. Ratman (1994)- Geological map of the Tilamuta Quadrangle, Sulawesi, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map in western half of North Arm of Sulawesi. Oldest rocks Eocene- E Oligocene Tinambo Fm and gabbro, intruded by Miocene Bone Diorite/ granites. Overlain by Miocene and younger clastics and volcanics)

Baese, R. (2013)- Fluid-rock interaction processes during subduction and exhumation of oceanic crust: constraints from jadeitites in serpentinites, eclogite veins in blueschists and tectonic breccias formed during uplift. Doct. Thesis Christian-Albrechts University, Kiel, p. 1-129.
(online at: http://macau.uni-kiel.de/receive/dissertation_diss_00010505)
(Including chapters on eclogitisation, geochemistry and petrologyof eclogite veins and blueschists and repeated brecciation during exhumation of subducted oceanic crust at Bantimala Complex, SW Sulawesi. Eclogite protoliths mainly Mid-Ocean Ridge Basalts (N-MORB, some Oceanic Island Basalts and formed at depths of >90 km. Blueschists protoliths also similar to N-MORB. Exhumation/ uplift process led to dismembering of subducted crust. High-pressure rocks from slices of dismembered slab incorporated into accretionary wedge sediments during upward motion of continental fragment, resulting in alternating sequence of metamorphic and sedimentary rocks in Bantimala Complex. Brecciation at different levels during exhumation, between 10-80km))

Baese, R. & V. Schenk (2013)- Brittle deformation during exhumation of eclogites and blueschist of the Bantimala Complex, Sulawesi: evidence for intra-slab shearing. In: Symposium on tectonics, structural geology and geology of crystalline rocks, Kiel?, p. 23. *(Abstract only)*
(online at: http://oceanrep.geomar.de/14846/1/Baese.pdf)

Baharuddin & B.H. Harahap (2000)- Tinjauan kembali kerangka stratigrafi dan tektonik daerah Palopo, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 10 (110), p. 24-38.
('Review of the stratigraphic and tectonic framework of the Palopo area, S Sulawesi'. Palopo area in NE part of S arm of Sulawesi underlain by Latimojong phyllite (>4500m; originated from Cretaceous flysch, overlain by fluvio-deltaic Eocene Toraja Fm (>1500m), U Oligocene- M Miocene Makale Fm carbonates (>1500m) and U Miocene- Pliocene Sekala Fm clastics (1800m). Lamasi Volcanic Complex probably represents oceanic ophiolitic sequence of gabbro, dikes and pillow lavas and emplaced in M Miocene. Mio-Pliocene non-orogenic volcanism)

Baharuddin & B.H. Harahap (2003)- Lava Tersier dari Bonto Sarong Palopo, Sulawesi: ciri geokimia dan kaitannya dengan evolusi dan tektonika. In: Pros. Forum Penelitian dan Pengembangan Energi dan Sumberdaya Mineral, Badan Litbang Energi Sumberdaya Mineral, p. 377-388.
('Tertiary lavas from Bonto Sarong Palopo, Sulawesi; geochemical characteristics and relationships between its evolution and tectonics')

Baillie, P., H. Darman & T.H. Fraser (2004)- Deformation of Cenozoic basins of Borneo and Sulawesi. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia and Australasia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 443-461.

Barber, A.J. (1996)- Multiple collisions on the southeastern margin of Sundaland: the tectonic evolution of Sulawesi. Warta Geologi (Newsl. Geol. Soc. Malaysia) 22, 4, p. 300-301. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1996004.pdf)
(Sundaland constructed since Late Paleozoic by collisions of continental fragments. In E Cretaceous SE margin of Sundaland lay in Borneo; subduction and accretion added oceanic and micro continental material to this margin. In W Sulawesi oldest basement rocks are ocean floor materials in accretionary complex, with components carried down deep in subduction zone (eclogites, gneisses and glaucophane schists with cooling ages of 132-113 Ma (E Cretaceous). After uplift and erosion, Late Cretaceous subsidence and development of forearc basin over accretionary complex, with deposition of cherts and turbidites. In Eocene area stabilised as part of Sundaland continental margin, with development of rifts. C Sulawesi composed of rocks of oceanic and

continental origin now metamorphosed in amphibolite, greenschist and glaucophane schist facies, overlain by melange, then by major ophiolite complex of East Arm. Amphibolite and greenschist facies rocks formed by W-ward subduction of microcontinental fragment and metamorphosed in E Cretaceous, at same time as basement in W Sulawesi. Glaucophane schist metamorphism affects earlier metamorphic rocks and melange, which is overlain to E by high-T metamorphic sole beneath E Sulawesi Ophiolite. Melange formation and metamorphism due to mid-oceanic subduction towards E. Subduction ceased at 28 Ma (Oligocene), when Sundaland ran into subduction zone and ophiolite obducted onto continental margin. W-ward subduction then commenced beneath E margin of ophiolite, terminating in M Miocene when Banggai-Sula microcontinent ran into subduction zone. Banggai-Sula originated as fragment of Australia, separated in Jurassic, carried W along Sorong Fault Zone. Collision zone in E Arm is marked by imbrication of Banggai-Sula continental margin sediments with slices of ophiolite. Metamorphic rocks of C Sulawesi were thrust across W Sulawesi, and uplifted blocks of basement were thrust W-wards across Eocene-M Miocene carbonate platform. Downgoing continental rocks subducted beneath W Sulawesi gave rise to volcanic arc with volcanic rocks geochemical signature of Australian origin)

Barmi, O., F. Urip & E. Purnomo (2003)- The Donggi gas field discovery- a challenge for Pertamina for finding and developing new hydrocarbon reserves in the future. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA03-B-074, 16p.
(2001 Donggi discovery on Tomori/ Matindok Block, East arm of Sulawesi, may exceed 2.7 TCF gas. Reservoir Late Miocene carbonates of Mentawa Mb of Minahaki Fm, with 13-34% porosity. Oligo-Miocene Tomori Fm carbonates directly on 'Australian' granitic basement)

Bartstra, G.J. (1977)- Walanae Formation and the Walanae terraces in the stratigraphy of South Sulawesi (Celebes, Indonesia). Quartar 27, p. 21-30.
(online at: www.quartaer.eu/pdfs/1977/1977_02_bartstra.pdf)
(On Pliocene-Quaternary vertebrate-bearing clastics formation of SW Sulawesi. Paleolithic stone tools first found by Van Heekeren in fluvial terrace deposts probably younger than more cemented and more steeply dipping Pleistocene deposits of the Upper Walanae Fm with Archidiskodon-Celebochoerus fauna)

Beaudouin, T. (1998)- Tectonique active et sismotectonique du systeme des failles decrochantes de Sulawesi central. Doct. Thesis, Universite Paris-Sud, p. 1-343. *(Unpublished)*
('Active tectonics and seismotectonics of C Sulawesi fault zones')

Beaudouin, T., O. Bellier & M. Sebrier (2003)- Champs de contrainte et de deformation actuels de la region de Sulawesi (Indonesie): implications geodynamiques. Bull. Soc. Geologique France 174, 3, p. 305-317.
(online at: http://documents.irevues.inist.fr/handle/2042/263)
('Present-day stress and deformation field in the Sulawesi region; geodynamic implications'. High seismicity along N Sulawesi trench and Molucca Sea subduction zone, lower activity in C and S Sulawesi. Represents activity of NE, SW and SE arms thrusts and left-lateral C Sulawesi Fault System (Palu-Koro and Matano faults). System connects N Sulawesi subduction zone to Sorong fault through S Sula fault and Tolo thrust in N Banda Sea. Clockwise rotation of Sula block. C Sulawesi fault system fast slipping with low seismicity. Extensional stress in S part Tomini Gulf (9 mm/yr in N36°E direction), possibly back-arc spreading related to N Sulawesi subduction. Batui zone E-M Pliocene collision between NE arm and Banggai-Sula block, remains active, but mainly affected by strike-slip deformation. Tolo thrust off SE arm E coast absorbs N Banda Sea convergence to W. This allows to distinguish a N Banda block in SE Sulawesi. Tolo thrust and Hamilton fault move W at lower rate than Sula block. SW arm of Sulawesi compressional stress regime (Majene-Kalosi thrusts activity) and may represent W- most accommodation of Philippine/Sunda plates motion)

Beets, C. (1950)- On Lower Tertiary Mollusca from SW and Central Celebes. Leidsche Geol. Mededelingen 15, p. 282-290.
(online at: www.repository.naturalis.nl/document/549324)
(Sulawesi mollusc meterial collected by Sax (BPM) in 1931, comparable to material described by Dollfus (1915) from same area. Incl. Turritella krooni of probable Eocene age from SW Central Sulawesi and collection of shells from anticline W of Batoekoe-coalfield W of Ujung Lamuru, SW Sulawesi, where 250m thick

marl- limestone series contains Nummulites and molluscs with similarities to Nanggulan fauna of C Java, incl. Volutilithes and Cardita)

Bellier, O., T. Beaudoin, M. Sebrier, M. Villeneuve, I. Bahar et al. (1998)- Active faulting in central Sulawesi (eastern Indonesia). In: P. Wilson & G.W. Mitchell (eds.) The geodynamics of S and SE Asia (GEODYSSEA project). Geoforschungszentrum, Potsdam, Germany, p. 276-312.

Bellier, O., M. Sebrier, T. Beaudouin, M. Villeneuve, R. Braucher, D. Bourles, L. Siame, E. Putranto & I. Pratomo (2001)- High slip rate for a low seismicity along the Palu-Koro active fault in central Sulawesi (Indonesia). Terra Nova 13, 6, p. 463-470.
(C Sulawesi with complex left-lateral strike-slip fault zones in triple junction between Pacific, Indo-Australian and Eurasian plates. Low-magnitude shallow earthquakes related to NNW-trending Palu-Koro and WNW-trending Matano fault zones. N-ward increasing complexity of Palo-Kuro fault segmentation. Left-lateral displacements of streams. Slip rate 32±45 mm/yr. PKF is fast slipping fault with relatively low seismicity)

Bellier, O., M. Sebrier, D. Seward, T. Beaudouin, M. Villeneuve & E. Putranto (2006)- Fission track and fault kinematics analyses for new insight into the Late Cenozoic tectonic regime changes in West-Central Sulawesi (Indonesia). Tectonophysics 413, 3-4, p. 201-220.
(Left-lateral C Sulawesi Fault System composed of NNW Palu-Koro and ESE Matano faults in triple junction of Pacific, Indo-Australian and Eurasian plates. C Sulawesi three tectonic regimes: (1) Late Miocene- E Pliocene (5 Ma) WNW-trending transpression along PKF and compression in Poso area, resulting from collision of Banggai-Sula block with Sulawesi; (2) Pliocene collapse tectonics associated with W-trending extension, with coeval regional cooling and exhumation; (3) Quaternary transtension from C Sulawesi block N motion, and back-arc spreading behind N Sulawesi subduction (Tomini Gulf))

Bellon, H. & C. Rangin (1991)- Geochemistry and isotopic dating of Cenozoic volcanic arc sequences around the Celebes and Sulu Seas. Proc. Ocean Drilling Program (ODP), Scient. Results, 124, College Station, p. 321-338.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_23.pdf)
(K-Ar ages for>50 igneous rocks from onshore Philippines, N Borneo (Sabah) and N Sulawesi. Ages range from 32 Ma to near 0 Ma. Generally calc-alkaline affinity with some shoshonitic high-K basalts. Two types of island arcs (1) related to progressive closing of Celebes and Sulu marginal basins and (2) arcs of Philippine Sea Plate. Includes radiometric dates of Sabah Dent- Semporna Peninsula (9- 13 Ma), Sulu Sea/ Cagayan Ridge (ODP Sites 769/771: ~14-21 Ma), Kinabalu Intrusives (6.4- 6.8 Ma), N Sulawesi (Gorontalo area volcanics: 4.1- 8.9 Ma and 18.2- 22.3 Ma)

Bergman, S.C., D.Q. Coffield, J.P. Talbot & R.A. Garrard (1996)- Tertiary tectonic and magmatic evolution of western Sulawesi and the Makassar Strait, Indonesia: evidence for a Miocene continent-continent collision. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 391-429.
(W Sulawesi three Neogene N-S domains, from W to E: (1) active foldbelt with Pliocene- Miocene volcanogenic rocks in W-vergent thrusts, extending into Makassar Strait; (2) deformed submarine Miocene (av. age 8 Ma) arc, built on Oligocene-Eocene clastics and carbonate platform with Mesozoic basement thrust over E margin; (3) accreted pre-Eocene age ophiolite between Latimojong basement block and Bone Bay, obducted in Late Oligocene- Miocene. M Miocene- Pliocene (3-18 Ma) volcano-plutonic complex, with melts sourced from Late Proterozoic- E Paleozoic, tied to continent-continent collision of W-vergent Australian-New Guinea plate subducting under E-most Sundaland. Makassar Strait is foreland basin flanked by Neogene thrust belts, not Paleogene rift. E Sulawesi ophiolite extends into W Sulawesi, suggesting Bone Bay resulted from collapse of over-thickened Miocene orogen)

Berry, R.F. & A.E. Grady (1987)- Mesoscopic structures produced by Plio-Pleistocene wrench faulting in South Sulawesi, Indonesia. J. Structural Geol. 9, p. 563-571.
(Bantimala and Barru metamorphic complexes of S Sulawesi bounded in W by E-dipping thrust faults. Composed of glaucophane schists, serpentinites, etc., overlain by >750m of Cretaceous clastics. Area

dominated by Plio-Pleistocene NNW-striking sinistral wrench faults, result of N-ward movement of Banda Sea microplate with respect to W Indonesia)

Bohnke, M., M. Brocker, A. Maulana, R. Klemd, J. Berndt & H. Baier (2019)- Geochronology and Zr-in-rutile thermometry of high-pressure/low temperature metamorphic rocks from the Bantimala complex, SW Sulawesi, Indonesia. Lithos 324-325, p. 340-355.
(online at: https://www.sciencedirect.com/science/article/pii/S0024493718304419)
(Multipoint Rb–Sr mineral isochrons of highP/ low T eclogites and glaucophane-rich rocks from Bantimala Complex, SW Sulawesi narrow range of white mica ages (130-120 Ma), interpreted to postdate peak-HP conditions. Luk Ulo-Java ages of ~118 Ma slightly younger (Hoffmann et al. 2019), but may still be in same subduction complex. Rare zircons in glaucophane-rich rocks indicate Late Triassic- E Jurassic protolith ages (~205-185 Ma). Metamorphic zircon rims mostly 135-110 Ma ages. Older zircons (2.55-1.4 Ga, 400-260 Ma) probably from subducted sediments incorporated in mafic melts)

Bothe, A.C.D. (1927)- Voorlopige mededeeling betreffende de geologie van Zuid-Oost Celebes. De Mijningenieur 8, 6, p. 97-103.
('Preliminary note on the geology of SE Sulawesi'. Smaller islands Kabaena and Wawoni very similar to E Sulawesi. Larger islands Buton and Moena very different)

Bothe, A.C.D. & W.H. Hetzel (1932)- De geologie van Laiwoeni, Poleang, Roembia en Kolaka (Z.O. Celebes). Verslag Archief Dienst van den Mijnbouw, Bandung, p. 1-36. *(Unpublished)*
('The geology of Laiwui, Poleang, Rumbia and Kolaka islands (SE Sulawesi)'. Unpublished geological survey report)

Boudagher-Fadel, M.K. (2002)- The stratigraphical relationship between planktonic and larger benthic foraminifera in Middle Miocene to Lower Pliocene carbonate facies of Sulawesi, Indonesia. Micropaleontology 48, 2, p. 153-176.
(M Miocene- E Pliocene Tacipi Fm of Bone region of SW Sulawesi up to 300m thick, deposited in large area of shallow marine carbonates, with deeper water sediments deposited to N. Co-occurrences of planktonic and larger foraminifera : (1) M Miocene N11-N12, and Tf2 with Katacycloclypeus, Lepidocyclina (N); (2) Late Miocene N16-N17 and Tg with Planorbulinella) (samples from A.N. Ascaria))

Bromfield, K. & W. Renema (2011)- Comparison of 87Sr/86Sr isotope and biostratigraphic ages of uplifted fossil reefs in the Indo-Pacific: Indonesia, Papua New Guinea and Fiji. Australian J. Earth Sci. 58, p. 61-73.
(Dating of limestones from seven Neogene sites from Indo-Pacific, using foraminifera and 87Sr/86Sr isotopes: Salayar Lst on Salayar Island, S Sulawesi (Late Miocene-Pliocene/Pleistocene), Yalam Lst in E New Britain, PNG (M Miocene) and Tokelau Lst Gp on Vanua Balevu in Lau Group, Fiji (M-L Miocene). Salayar Lst 50-100m thick, contains Quasirotalia sp. and Calcarina spengleri and has Sr ages 5.8-3.4 Ma)

Brooks, R.R., E.D. Wither & L.Y.T. Westra (1978)- Biogeochemical copper anomalies on Salajar Island, Indonesia. J. Geochemical Expl. 10, 2, p. 181-188.
(20 species of plants from Salajar island, SW Sulawesi, have copper values >80 pg/g (max. 600pg/g) in their dried leaves. These values greatly exceed highest values found in other parts of SE Asia outside of Salajar)

Brouwer, H.A. (1918)- Studien uber Kontaktmetamorphose in Niederland.-Ostindien. V. Der Granodioritkontakt des Bolio-Hutu-Gebirges sudlich von Sumalatta (Nord-Celebes). Centralblatt Mineralogie Geologie Palaont. 1918, 19-20, p. 297-306.
('Studies on contact-metamorphism in the Netherlands East Indies, V. The granodiorite contact of the Bolio-Hutu Mountains South of Sumalatta (North Sulawesi)'. Study of rocks collected by Molengraaff in 1901)

Brouwer, H.A. (1919)- Fossielhoudende Palaeozoische afzettingen op Celebes. De Ingenieur, 8 Nov. 1919, p. 832-833.
('Fossiliferous Paleozoic beds on Sulawesi'. Permian ammonite Popanoceras timorense in collection of Colonel G.J. Verstege, reportedly from 'the Sadang and Mato Allo river basins and the mountains in-between, partly

found by myself, partly presented by the chiefs of Enrekang, Doeri and Maiwa in 1907 and 1910' (Kalosi region). This suggests presence of Late Paleozoic marine sediments in S-C Sulawesi, but localities never independently verified. Occurrences questioned by Abendanon (1920) and Von Koenigswald (1933), who believed they probably came from Timor, via a Chinese pharmacy (But cannot be dismissed completely?: Permian brachiopods also reported from E Sulawesi by others (Von Loczy 1934, Kutassy 1934; JTvG)

Brouwer, H.A. (1919)- Devonische afzettingen in den Oost-Indischen archipel. De Ingenieur, 1921, 48, 29 Nov. 1919, 2p.
('Devonian deposits in the East Indies Archipelago'. In addition to Permian ammonite in collection of Colonel G.J. Verstege from Kalosi region, C Sulawesi, also a grey limestone with Upper Devonian brachiopod Spirifer verneuili (NB: Spirifer also known from Permian of Timor; JTvG))

Brouwer, H.A. (1921)- Een jong-Paleozoisch en een Devonisch fossiel van Celebes? De Ingenieur, 1921, p. 138-
('A Late Paleozoic and a Devonian fossil from Sulawesi?'. Additional report of Upper Devonian brachiopod Spirifer verneuilli from collection of Colonel G.J. Verstege)

Brouwer, H.A. (1924)- Geologische beschrijving der omgeving van de Tertiaire fossielrijke lagen nabij Patoenoeang Asoe (Zuid-Celebes). Jaarboek Mijnwezen Nederlandsch Oost-Indie 52 (1923), Verhandelingen, p. 151-165.
('Geological description in the area of Tertiary fossil-rich beds near Patunuang Asu (S Sulawesi)'. Localities of thin-bedded marine fish-bearing lagoonal limestone in Miocene reefal limestone complex, SW Sulawesi. Eocene- Miocene limestones intruded by basalt-diabase sills (Foraminifera from this locality described by Rutten 1924, crab fossil by Van Straelen 1924, fish fossils by De Beaufort 1926))

Brouwer, H.A. (1930)- The major tectonic features of Celebes. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 33, 4, p. 338-343.
(online at: www.dwc.knaw.nl/DL/publications/PU00015894.pdf)
(Brief overview of Sulawesi geology, after 1929 expedition. C Sulawesi three zones: (1) eastern zone with abundant imbricated basic-ultrabasic igneous rocks, radiolarian cherts and Mesozoic limestones; (2) central zone dominated by crystalline schists, deformation strike mainly N-S; (3) western zone with abundant granitic rocks and with Mesozoic sediments of different facies from zone 1)

Brouwer, H.A. (1934)- Geologisch onderzoekingen op het eiland Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 10, p. 39-218.
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:041182000:pdf)
(Report on 1929 geological traverses in Central Sulawesi. With appendices on Mesozoic belemnites by Stolley, molluscs by Broili and Tertiary foraminifera by Van der Vlerk & Dozy. Occurrence of E-M Cretaceous limestone with coral and Orbitolina in isoclinally folded shales-sandstone-radiolarian?chert near Latimojong Mts, SW Sulawesi. At E coast of the norther SE Arm of Sulawesi Early Miocene (Te5) conglomeratic limestone with clasts of underlying, mainly W-SW dipping imbricated series with serpentinite and Cretaceous pelagic limestone with Globotruncana, etc.))

Brouwer, H.A. (1941)- Tektonik und Magma in der Insel Celebes und der indonesische Gebergstypus. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 44, 3, p. 253-261.
(online at: www.dwc.knaw.nl/DL/publications/PU00017559.pdf)
('Tectonics and magma of Sulawesi and the Indonesian mountain type'. C Sulawesi 3 N-S trending belts: (1) Eastern belt of ultrabasic rocks overlain by Mesozoic limestones and radiolarites; (2) central belt of regional metamorphic schists, age of which is debatable, and with decreasing metamorphism to East; (3) Western belt with common granodiorite, biotite-rich schist and Cretaceous-Tertiary sediments. No active volcanism in C Sulawesi today, but stopped only in Quaternary)

Brouwer, H.A. (1947)- Geological explorations in Celebes- summary of the results. In: H.A. Brouwer (ed.) Geological Explorations of the Island of Celebes, North Holland Publ. Co., p. 1-64.

(Summary of geology of C Sulawesi, mainly based on work of the 1929 Bandung Geological Survey expedition, results of which were first reported by Brouwer 1934). This summary also incorporates results of petrographic work by Willems (1937), Egeler (1947) and De Roever (1947))

Brouwer, H.A. (1949)- Sur un massif granodioritique et ses phenomenes de contact a l'ouest de Palopo (Celebes). Proc. Kon. Nederl. Akademie Wetenschappen 52, 6, p. 610-613.
(online at: www.dwc.knaw.nl/DL/publications/PU00018675.pdf)
('On a granodioritic massif and its contact phenomena W of Palopo, S part of Central Sulawesi'. Graniodiorite massif and contact aureole sampled along road Rante Pao and Palopo, 17-28 km E of Rante Pao)

Brouwer, H.A. & L.F. de Beaufort (1922)- Tertiaire afzettingen met fossiele visschen van Z-Celebes. Verslagen Kon. Akademie Wetenschappen, Amsterdam, Afd. Wis- en Natuurk., 32, p. 33-40.
('Tertiary deposits with fish fossils in S Sulawesi'; same as paper below)

Brouwer, H.A. & L.F. de Beaufort (1923)- On Tertiary marine deposits with fossil fishes from South Celebes. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 26, 3-4, p. 159-166.
(online at: www.dwc.knaw.nl/DL/publications/PU00014925.pdf)
(English version of paper above. Two fish fossils of probable Miocene age in fine-grained 'lithographic' limestone block from roadcut near Patoenoeang Asoe E, Maros district. Rocks probably lagoonal deposit in Eocene-Miocene reefal limestone complex. Fish identified as Clupea (Sardinella) brouweri n.sp. and Lutjanus)

Bucking, H. (1904)- Beitrage zur Geologie von Celebes. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 7, p. 29-205.
(online at: www.repository.naturalis.nl/document/552426)
('Contributions to the geology of Sulawesi', in 6 chapters. Early descriptions of SW Sulawesi igneous, metamorphic, sedimentary rocks. First description of (Bantimala) Cretaceous metamorphic complex in Pangkajene River area:mica-schist, glaucophane schist, etc. associated with serpentinites, and overlain by radiolarian cherts, Eocene coal-bearing clastics and Nummulites limestones and Miocene limestones)

Budiman, B., I. Hardjana & Hermadi (2011)- The geology and Au-mineralization system in the Totopo West Prospect, Gorontalo, Indonesia. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 189-200.
(see Budiman et al. 2012)

Budiman, B., I. Hardjana & Hermadi (2012)- The geology and Au-mineralization system in the Totopo West Prospect, Gorontalo, Indonesia. Majalah Geologi Indonesia (IAGI) 23, 3, p. 159-170.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/732)
(Same paper as Budiman et al. 2011). Totopo West gold prospect, W of Gorontalo, probable Miocene andesitic volcanics unconformably overlain by Pliocene-Pleistocene dacitic volcanics, all intruded by are intruded by contemporaneous diorite and dacite porphyry dykes. Additional exploration required)

Buskamal, M.T. Djunaedi & Nur Hasjim (1999)- Biostratigraphic study of Toraja Formation, Kalosi, South Sulawesi. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 3, p. 21-34.
(In Indonesian. Summary of biostratigraphy of marine Eocene Toraja Fm in area S and SW of Kalosi, in NE part of S Arm of Sulawesi. Planktonic foram zones P12-P16, nannofossil zones NP14-NP20. Rantepao limestone member with Late Eocene (Tb) larger forams Discocyclina, Nummulites, Pellatispira. Palynomorphs Proxapertitus cursus zone)

Caldwell, .G. & M. Lillie (2004)- Manuel Pinto's inland sea: using palaeoenvironmental techniques to assess historicalevidence from Southwest Sulawesi. In: S.G. Keates & J. Pasveer (eds.) Quaternary Research in Indonesia, Chapter 13, Modern Quaternary Research in Southeast Asia 18, Balkema, Leiden, p. 259-272.
(Discussion of historical Bugis accounts (La Galigo) suggesting expansion of Tempe, Sidenreng and Buaya lakes in SW Sulawesi and possible seaway across SW Arm of Sulawesi)

Calvert, S.J. (2000)- The Cenozoic geology of the Lariang and Karama regions, Western Sulawesi, Indonesia. Ph.D. Thesis, University of London, p. 1-353. *(Unpublished)*

Calvert, S.J. (2000)- The Cenozoic evolution of the Lariang and Karama basins, Sulawesi. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 505-511.
(W Sulawesi influenced by development of Makassar Straits to W and collision of continental, ophiolitic and island arc fragments to E (E Sulawesi ophiolite and Buton, Tukang-Besi and Banggai-Sula microcontinents). Ages attributed to collision events Early to Late Miocene. Collisions caused uplift, erosion and deposition of 'Celebes Molasse'. Lariang and Karama basins in central W Sulawesi ~10,000 km2)

Calvert, S.J. & R. Hall (2003)- The Cenozoic geology of the Lariang and Karama regions, Western Sulawesi: new insight into the evolution of the Makassar Straits region. Proc. 29th Ann. Conv. Indon. Petr. Assoc. (IPA), Jakarta, p. 501-517.
(W Sulawesi Lariang and Karama regions oldest sediments ?Paleocene non-marine coals, sandstones, mudstones. Rifting M- Late Eocene. Eocene sediments in graben/half graben in marine and marginal marine environments. Eocene Makassar Straits rift asymmetrical: Kalimantan margin twice width of Sulawesi margin. Start thermal subsidence in Late Eocene. By end-Oligocene most of W Sulawesi shelf carbonate and mudstone deposition. Carbonates- mudstones deposited throughout E Miocene and in places until M or Late Miocene. Little or no evidence of Miocene collisions in W Sulawesi. First evidence of orogenic deformation is Pliocene uplift and erosion, followed by deposition of coarse clastics from orogenic belt to E of study area)

Calvert, S.J. & R. Hall (2006)- The Cenozoic evolution of the Lariang and Karama regions, North Makassar Basin, Western Sulawesi: Indonesia. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., AAPG/ Indon. Petr. Assoc. (IPA), Jakarta06-PG-31, 5p.

Calvert, S.J. & R. Hall (2007)- Cenozoic evolution of the Lariang and Karama regions, North Makassar Basin, western Sulawesi, Indonesia. Petroleum Geoscience 13, p. 353-358.
(Similar to papers above. Main contractional deformation in W Sulawesi is mid-Pliocene, whereas in E Kalimantan it dates from E Miocene)

Camplin, D.J. & R. Hall (2013)- Insights into the structural and stratigraphic development of Bone Gulf, Sulawesi. Proc. 37th Ann. Conv. Indon. Petroleum Assoc., IPA13-G-079, p. 1-24.
(Bone Bay seismic stratigraphic study. Gulf can be divided into several transtensional sub-basins and highs, which are important strike-slip fault zones trending roughly WNW-ESE. Extension occurred since M Miocene, although may have started in E Miocene)

Camplin, D.J. & R. Hall (2014)- Neogene history of Bone Gulf, Sulawesi, Indonesia. Marine Petroleum Geol. 57, p. 88-108.
(Bone Gulf probably underlain by pre-Neogene volcanogenic, sedimentary, metamorphic and ultramafic rocks. Basin initiation probably in Miocene, by extension associated with strike-slip deformation. Main basin trend N-S, divided into several sub-basins. Carbonate deposits formed at margins while deeper marine sediments were deposited in axial parts. Early Pliocene unconformity marks major uplift of Sulawesi and subsidence of Bone Gulf, causing major influx of clastics from the north. Hydrocarbons indicated by seeps)

Carlile, J.C., S. Digdowirogo & K. Darius (1990)- Geological setting, characteristics and regional exploration for gold in the volcanic arcs of North Sulawesi, Indonesia. J. Geochemical Exploration 35, p. 105-140.
(N Sulawesi significant gold province in series of spatially overlapping Tertiary volcanic arcs. In W rhyodacitic volcanics overlie quartzo-feldspathic metamorphic basement. Oldest rocks in W part (Marisa region, same age as Palu granodiorite, ~31 Ma). In C and E areas submarine basaltic basement overlain by andesitic volcanics, centres of which migrated progressively E from E Miocene to present day. Four categories of gold mineralization: porphyry Cu-Au, gold and base metal breccia and high- and low sulpidation epithermal)

Carlile, J.C. & A.G. Kirkegaard (1985)- Porphyry copper-gold deposits of the Tombulilato district, North Sulawesi, Indonesia: an extension of the Philippine porphyry copper-gold province. In: M.P. Jones (ed.) Proc. Asian Mining ‗85 Conf., Manila, Inst. Mining Metallurgy, London, p. 351-363.

Carthaus, E. (1900)- Beobachtungen auf Celebes und Sumatra. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 6, p. 246-249.
(online at: www.repository.naturalis.nl/record/509505)
('Observations on Sulawesi and Sumatra'. Brief report with geological observations made during a trip to W Sulawesi, incl. leucite-bearing volcanics along coast S of Mamuju, etc.. No maps, figures)

C & C Reservoirs (1997)- Kampung Baru Field, East Sengkang Basin, Indonesia. Digital Analogs, Reservoir Evaluation Report, Far East, 15p.
(Late Miocene Tacipi Fm gas-bearing (350 GCF) reefal buildup on carbonate platform, encased in deep water shales in SW Sulawesi. Moldic porosity from fresh-water leaching)

Chaerul, M., L.O. Ngkoimani & S. Sadri (2017)- Limestone facies and diagenesis on Tondo Formation at Kaisabu Village Bau-Bau City Southeast Sulawesi Province. J. Geoscience Engin. Environment Techn. 2, 1, p. 9-13.

Charlton, T.R. (1996)- Correlation of the Salawati and Tomori basins, eastern Indonesia: a constraint on left-lateral displacements of the Sorong fault zone. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 465-481.
(Salawati Basin of W New Guinea and Tomori Basin of E Sulawesi may have formed single sedimentary basin before displacement on Sorong Fault system, implying left-lateral displacement of ~900 km, probably largely in latest Miocene-Quaternary, contemporaneous with deposition of clastic sediments)

Cipta, A., R. Robiana, J.D. Griffin, N. Horspool, S. Hidayati & P. Cummins (2016)- A probabilistic seismic hazard assessment for Sulawesi, Indonesia. In: P.R. Cummins & I. Meilno (eds.) Geohazards in Indonesia; Earth science for disaster risk reduction, Geol. Soc. London, Spec. Publ. 441, 20p.
(High seismic activity rates, both along fast-slipping crustal faults(Palu-Koro-Matano Fault) and in regions of distributed deformation, contribute moderate-high earthquake hazard over all but the SW part of Sulawesi)

Cita, A., H. Moechtar, U.M. Lumbanbatu, Subiyanto & S. Poedjoprajitno (eds.) (2014)- Geodinamika Kuarter daerah Sulawesi Utara. Pusat Survei Geologi (Badan Geologi), Bandung, Spec. Publ., p. 1-275.
('Quaternary geodynamics of the Sulawesi region'. Collection of papers on Quaternary of Sulawesi)

Coffield, D.Q., S.C. Bergman, R.A. Garrard, N. Guritno, N.M. Robinson & J. Talbot (1993)- Tectonic and stratigraphic evolution of the Kalosi PSC area and associated development of a Tertiary petroleum system, South Sulawesi, Indonesia. Proc. 22nd. Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 679-706.
(S Sulawesi basement imbricated, metamorphic Mesozoic sediments and ophiolites (SE Sundaland Cretaceous accretionary complex). Unconformably overlain by Paleo-Eocene volcanics and Eocene fluvial- lacustrine rocks, associated with extensional faulting. U Eocene- M Miocene Tonasa Fm platform carbonates reflect quiescence. Thick M Miocene- Pliocene N-S trending bimodal volcano- plutonic belt reflects E-M Miocene subduction beneath S Sulawesi and obduction of oceanic crust onto E Sulawesi micro-continent(s), followed by M-L Miocene collision. These are unconformably overlain by latest Miocene- earliest Pliocene Tacipi reef carbonates and Pliocene and younger synorogenic clastics. Continued Pliocene convergence formed W-vergent orogen in S Sulawesi, with thin-skinned thrusting in W and basement-involved thrusting in E. Oils from seeps typed to mature Eocene source rocks)

Coffield, D.Q., N. Guritno, M.E.J. Wilson & N.A. Ascaria (1997)- Petroleum systems of South Sulawesi, Indonesia (fieldtrip summary). In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 1001-1010.
(S Sulawesi dominated by W-verging Late Miocene- Pliocene foldbelt. Source rocks in deltaic coals of early transgressive sequences. Late Tertiary magmatism and subsequent Pliocene orogenesis resulted in formation of

multiple kitchen areas. Potential reservoirs throughout Late Tertiary section, although only Late Miocene-Pliocene (post-magmatic/ pre-orogenic) carbonates proven productive to date in S Sulawesi)

Coffield, D., N. Guritno, M. Wilson & A. Ascaria (1997)- Petroleum systems of South Sulawesi, Indonesia. Indon. Petroleum Assoc. Fieldtrip Guidebook, p. 1-81.

Collins J.S.H. & A.J. Barber (1998)- A new middle Eocene crab, *Lobocarcinus pentanodosus* sp. nov. (Crustacea, Decapoda) from Doi Doi, Barru, South Sulawesi, Indonesia. Bull. Mizunami Fossil Museum, Japan, 25, p. 97-101.
(New cancroid crab fossils from M Eocene of S Sulawesi. This is first record of genus from W Pacific)

Cool, H. (1910)- Een mijnbouwkundige en geologische onderzoekingsreis in Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap , p. 112-127.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001653001:pdf)
('A mining-geological survey trip in Sulawesi'. March-August 1909 trip to N part of SW Arm and part of C Sulawesi with J. de Koning Knijff. Mainly travel report of 1909 survey to Toraja lands; little or no geology. Baroko oil seep W of Kalosi)

Cornee, J.J., R. Martini, M. Villeneuve, L. Zaninetti, E. Mattioli, R. Rettori, F. Atrops & W. Gunawan (1997)- Jurassic pelagic deposits of East Sulawesi (Kolonodale Area, Indonesia): new biostratigraphic data based on calcareous nannofossils. In: Geoitalia, 1 Forum FIST, 2, p. 97-98 *(Abstract)*
(online at: http://archive-ouverte.unige.ch/unige:4764)
(E-M Jurassic (Toarcian- Bathonian) calcareous nannoplankton above Late Triassic limestones in dismembered succession in Kolonodale-Beteleme area of W margin of E Sulawesi Zone)

Cornee, J.J., R. Martini, M. Villeneuve, L. Zaninetti, E. Mattioli, R. Rettori, F. Atrops & W. Gunawan (1999)- Mise en evidence du Jurassique inferieur et moyen dans la ceinture ophiolitique de Sulawesi (Indonesie). Consequences geodynamiques. Geobios 32, 3, p. 385-394.
('Evidence of Lower and Middle Jurassic in the Sulawesi ophiolite belt: geodynamic consequences'. ~350m E-M Jurassic deep marine clays and carbonates over Latest Triassic reefal carbonates in E Sulawesi Kolonodale area, indicating major subsidence after Triassic carbonate deposition. Thin E Jurassic limestones with Involutina liassica. On W bank of Lambolo Gulf in thin Toarcian shale one ammonite of Hammatoceras moluccanum group. Ophiolite overrides rel. thin Late Cretaceous- Paleogene pelagic limestones. Prior to Neogene tectonics, which strongly dismembered E Indonesia, ophiolitic tectonic zone of E Sulawesi probably part of wide paleogeographic block which included some of Banda Sea continental fragments (Buru, Seram, Buton, Sinta Ridge))

Cornee, J.J., G. Tronchetti, M. Villeneuve, B. Lathuiliere, M.C. Janin, P. Saint-Marc, W. Gunawan & H. Samodra (1995)- Cretaceous of eastern and southeastern Sulawesi (Indonesia): new micropaleontological and biostratigraphical data. J. Southeast Asian Earth Sci. 12, p. 41-52.
(New outcrops of pelagic carbonates of Albian and Campanian-Maastrichtian age in strongly tectonized areas in E and SE Sulawesi. Species indicate no major difference in facies of E and SE arms of Sulawesi. Similar facies also in numerous places in E Indonesia and in distal Australian shelf during Late Cretaceous)

Cornee, J.J., M. Villeneuve, R. Martini, L. Zaninetti, D. Vachard, B. Vrielynck. W. Gunawan, H. Samodra & L. Sarmili (1994)- Une plate-forme carbonatee dǒage rhetien au centre-est de Sulawesi (region de Kolonodale, Celebes, Indonesie). Comptes Rendus Academie Sciences, Paris 318, Ser. II, p. 809-814.
(online at: https://archive-ouverte.unige.ch/unige:4767)
('A carbonate platform of Rhaetian age in Central-East Sulawesi (Kolonodale region'. Widespread outcrops of ~150m of white latest Triassic reefal carbonates S and SW of Kolonodale (below E Sulawesi ophiolite terrane?). Limestones range from boundstone to grainstone. Non-skeletal grains mainly peloids and some ooids and intraclasts. Skeletal grains molluscs, green algae (including dasycladaceans), echinoderms and benthic foraminifera (Aulotortus spp., Auloconus, Triasina hantkeni) and locally also brachiopods, coral clusters. Limestones can be correlated with U Triassic limestones of Tokala Mts of Sulawesi East Arm)

Costa, K.M., J.M. Russell, H. Vogel & S. Bijaksana (2015)- Hydrological connectivity and mixing of Lake Towuti, Indonesia in response to paleoclimatic changes over the last 60,000 years. Palaeogeogr. Palaeoclim. Palaeoecology 417, p. 467-475.
(Sediment geochemistry of cores from Lake Towuti in C Sulawesi records paleoclimate changes over last 60 ka. During Last Glacial Maximum no changes in sediment provenance, despite drier climate, but trace elements suggest decrease in weathering intensity, likely in response to decreased precipitation and temperature)

Cottam, M.A., R. Hall, M. Forster & M. Boudagher Fadel (2011)- Basement character and basin formation in Gorontalo Bay, Sulawesi, Indonesia: new observations from the Togian Islands. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 177-202.
(Togian islands stratigraphy includes Walea Fm pillow basalts and volcanic breccias of unknown age, overlain by late Middle Miocene Peladan Fm limestone, overlain by Late Miocene- E Pliocene Bongka Fm/ Celebes Molasse and uplifted ?Pleistocene reef terraces. Field relationships indicate latest Miocene- Pliocene age for inception of Gorontalo Bay basin. Young medium-K to shoshonitic volcanism in Togian Islands not due to subduction but reflects crustal thinning and extension in Pliocene- Pleistocene. Extension continuing today. Extension and subsidence driven by rollback of subduction hinge at N Sulawesi Trench.)

Crotty, K.J. & D.W. Engelhardt (1993)- Larger foraminifera and palynomorphs of the upper Malawa and lower Tonasa Formations, southwestern Sulawesi Island, Indonesia. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, p. 71-82.
(SW Sulawesi M Eocene coal-bearing Malawa Fm clastics with pollen Retitribrevicolporites matamanadhensis and dinoflagellates Muratodinium fimbriatum and Homotryblium floripes. Overlying clastics/ limestones Late Eocene with Verrucatosporites usmensis, Nummulites javanus (Ta3?) and Pellatispira- Biplanispira (Tb), Discocyclina and Asterocyclina. Overlain by ~120' thick basal dolomitic member of E Oligococene Tonasa Lst with Coskinolina, Praerhapidionina, arenaceous foraminifera and miliolids, overlain by thin Tc with Nummulites fichteli and Td with same + Eulepidina, Austrotrillina striata. Near top of Tonasa quarry Late Oligocene/ Te1-4 with Nephrolepidina, Spiroclypeus and Heterostegina borneensis. No miogypsinids seen)

Cucci, M.A., R.A. Garrard & M. Golborne (1994)- The Early Tertiary rift basins of offshore South Sulawesi, Indonesia. AAPG Ann. Mtg., Denver *(Abstract)*
(Offshore S Sulawesi Paleogene rift system activated and failed twice. Initial rifting Late Paleocene-E Eocene, with N-S oriented sags on Cretaceous platform with Langi Fm volcanics. By M Eocene rifting failed and uplift/ erosion formed major unconformity. Second rift event M Eocene, close to earlier 'sags'. N-S orientation, from off S Sulawesi to near Sabalana Island at intersection with E-W trending Kangean-Lombok rift system. M Eocene terrestrial-lacustrine Malawa/Toraja Fms overlain by fluvio-deltaic deposits. In Late Eocene rifting ceased, leaving extensive shelfal areas isolated from Sulawesi sediment supply. Transgression initiated vast Tonasa/ Makali Fm carbonate platform with localized reefal buildups. Late Miocene carbonates gave way to siliciclastics (Camba Fm), derived from establishment of major magmatic belt. Late Tertiary compressional tectonics inverted many Paleogene rifts to form classic 'Sunda- type' folds)

Dam, R.A.C., J. Fluin, P. Suparan & S. van der Kaars (2001)- Paleoenvironmental developments in the Lake Tondano area (N-Sulawesi, Indonesia) since 33,000 yr B.P.. Palaeogeogr. Palaeoclim. Palaeoecology 171, p. 147-183.
(Lake Tondano at 680m above SL. Lake levels rose and fell. Late Pleistocene phase with lower precipitation and lower temperatures. Progressive deforestation of Tondano upland)

Darman, H. (2011)- Seismic expression of North Sulawesi subduction zone. Berita Sedimentologi 22, p. 5-8.
(online at: www.iagi.or.id/fosi/files/2011/10/...)
(Seismic lines/ cross sections of recent subduction complex of Sulawesi Sea plate under Sulawesi North Arm)

Davies, I.C. (1990)- Geological and exploration review of Tomori PSC, eastern Indonesia. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 41-67.

(Tomori PSC, E Sulawesi, two tectonostratigraphic units: (1) Banggai-Sula microcontinent and (2) 'trapped' E Sulawesi Ophiolite Belt, thrust over Banggai-Sula microcontinental block in E Pliocene. Structural styles developed, firstly as Banggai- Sula moved W to present position, and secondly as it entered collision zone with E Sulawesi Ophiolite Belt. N area characterized by normal and wrench faults, S area by imbricate thrusts. Pre-collision Miocene sequence two carbonate reservoir units: (1) E Miocene platform limestones, with Tiaka oil field in complex thrust zone in S part of PSC; (2) Late Miocene mixed platform- reefal carbonate with Minahaki and Matindok gas fields. Source rocks for hydrocarbons in Miocene. Generation and migration in Pliocene/ Pleistocene, as prior to this, insufficient overburden to create mature source)

De Beaufort, L.F. (1926)- On a collection of marine fishes from the Miocene of South Celebes. Jaarboek Mijnwezen Nederlandsch-Indie 54 (1925), Verhandelingen 1, p. 115-148.
(Fish fossils collected by Brouwer in 1923 from lithographic (lagoonal?) platy limestone mear Patanuang Asi, Maros district, S Sulawesi Fifteen coastal marine fish species, including herring-like Sardinella brouweri and Lutjanus. Associated foraminifera identified by Rutten as Early Miocene age. No location or stratigraphy info)

De Beaufort, L.F. (1934)- On a fossil fish from Gimpoe (Central Celebes). Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap (KNGMG) 10, 2, p. 180-181.
(Brief description of fish fossils, probably fresh-water and of Neogene age, collected at Gimpoe basin, C Sulawesi, by Brouwer 1929 expedition)

De Klerk, L.G. (1983)- Zeespiegels, riffen en kustvlakten in Zuidwest-Sulawesi, Indonesia: een morfogenetisch- bodemkundige studie. Ph.D. Thesis University of Utrecht, p. 1-174.
('Sea levels, reefs and coastal plains of Southwest Sulawesi, Indonesia: a morphogenetic-pedological study'. On the Holocene evolution of the Spermonde Archipelago coral reefs and adjacent SW Sulawesi coastal region)

De Koning Knijff, J. (1914)- Geologische gegevens omtrent gedeelten der afdelingen Loewoe, Pare Pare en Boni van het Gouvernement Celebes en onderhoorigheden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 41 (1912), Verhandelingen 1, p. 277-312.
(Report on 1909 reconnaissance surveys in Luwu, Pare Pare and Bone districts (S and C Sulawesi), compiled by Brouwer. Not overly useful)

Delisle, G., H. Beiersdorf, S. Neben & D. Steinmann (1998)- The geothermal field of the North Sulawesi accretionary wedge and a model on BSR migration in unstable depositional environments. In: J.P. Henriet et al. (eds.) Gas hydrates: relevance to world margin stability and climate change, Geol. Soc., London, Spec. Publ. 137, p. 267-274.
(Distribution of heat flow in N Sulawesi accretionary wedge derived from depths of bottom simulating reflector (BSR) and nine in situ heat flow measurements. High heat flow of ~70-100mWm 2 near deformation front and systematic decrease to 30mWm-2 landwards)

De Man, J.G. (1904)- Beschreibung einiger brachyurer Krebse aus post-Tertiaren schichten der Minahassa, Celebes. Sammlungen Geol. Reichs-Museums Leiden, E.J. Brill, ser. 1, 7, 1, p. 254-278.
(online at: www.repository.naturalis.nl/document/552414)
(Description of Quaternary brachyurid crab fossils from marls near Kajoe ragi, along road from Menado to Kema, N Sulawesi, collected by Fennema. Incl. new species Metopoxantho martini and Macrophthalmus granulosus. Associated molluscs described by Schepman 1907)

De Roever, W.P. (1947)- Igneous and metamorphic rocks in Eastern Central Celebes. In: H.A. Brouwer (ed.) Geological explorations of the island of Celebes, North Holland Publ. Co., p. 67-173.
(Two main metamorphic facies in eastern C Sulawesi: older epidote-amphibolite facies and younger lawsonite-glaucophane blueschist facies. Many rocks polymetamorphic, affected by both facies. Epidote-amphibole facies over whole region, glaucophane facies in western half of eastern C Sulawesi only (Lake Poso, etc.))

De Roever, W.P. (1950)- Preliminary notes on glaucophane-bearing and other crystalline schists from Southeast Celebes, and on the origin of glaucophane-bearing rocks. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 53, 9, p. 1455-1465.
(online at: www.dwc.knaw.nl/DL/publications/PU00018892.pdf)
(Petrographic study of 170 crystalline schist samples from SE Sulawesi, collected by Bothe, Hetzel, etc. Two metamorphics groups, similar to Kabaena island (De Roever 1953): (1) Rumbia and Mendoke Mts mainly glaucophane-lawsonite schist facies (metamorphism of 'alpine orogene'; original material of Mesozoic age) and (2) lower La Solo River mainly amphibolite and greenschist-dynamometamorphic facies (probably Paleozoic or older original rock and pre-alpine age metamorphism). 'Paired metamorphic belt' of lawsonite-glaucophane schists and ultrabasites in East, andalusite-cordierite metamorphics and granites on W side of Sulawesi)

De Roever, W.P. (1951)- Ferrocarpholite, the hitherto unknown ferrous analogue of carpholite. Indonesia. American Mineralogist 36, p. 736-745.
(Ferrocarpholite new dark green prismatic mineral from cobble of metamorphic vein-quartz collected by Hetzel, W of Tomata, eastern Central Sulawesi (= part of high P/ low T blueschist metamorphic facies; JTvG))

De Roever, W.P. (1953)- Tectonic conclusions from the distribution of the metamorphic facies in the island of Kabaena near SE Celebes. Proc. 7th Pacific Science Congress, New Zealand 1949, 2, p. 71-81.
(Metamorphic facies map of Kabaena Island off SE arm of Sulawesi and W of Buton. Peridotites-serpentinites are uppermost tectonic unit. Separated by overthrust fault from underlying metamorphic schists of amphibolite and epidote-amphibolite facies. Below this another overthrust plane. Lowermost tectonic unit ?Mesozoic schists in glaucophane-lawsonite facies, thrusted 10's of km, Movements directed approximately to N)

De Roever, W.P. (1955)- Genesis of jadeite by low-grade metamorphism (Celebes). American J. Science 253, 5, p. 283-298.
(Jadeite-rich pyroxene occurs as zoned crystals in metamorphic quartzite of Salimoeroe and Koesek River regions, Sulawesi (petrographic descriptions in De Roever 1947). Formed by conversion of albite in psammitic sediments as extreme variety of low-grade metamorphism in glaucophane schist facies)

De Roever, W.P. (1956)- Some additional data on the crystalline schists of the Rumbia and Mendoke Mountains (SE Celebes). Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 16 (Brouwer volume), p. 385-394.
(Rumbia and Mendoke Mts in SE Sulawesi up to 1000m high and composed of metamorphic rocks. Two phases of metamorphism: (1) main phase of rel. deep garnet-lawsonite glaucophane schists, (2) younger 'Alpine' lower grade metamorphism, probably accompanied by large scale overthrusting)

De Roever, W.P. & C. Kieft (1971)- Additional data on ferrocarpholite from Sulawesi (Celebes), Indonesia. American Mineralogist 56, p. 1976-1982.
(Ferrocarpholite from N part of C Sulawesi, resembling actinolite. Most likely a product of metamorphism in glaucophane-schist and lawsonite-albite facies)

Dieckmann, W. (1919)- Nikkelhoudende lateritische ijzerertsen op Celebes. De Ingenieur 34, 43, p. 782-787.
('Nickel-bearing lateritic iron ores on Sulawesi'. Discussion of possibility of establishing iron industry in Netherlands Indies by German iron ore specialist Walter Dieckmann (died in 1922 in Martapura))

Dieckmann, W. & M.W. Julius (1925)- Algemeene geologie en ertsafzettingen van Zuidoost Celebes. Jaarboek Mijnwezen Nederlandsch-Indie 53 (1924), Verhandelingen, p. 11-65.
('General geology and ore deposits of SE Sulawesi'. Mainly valuation of iron, nickel, chromium deposits. With brief appendix on fossils by Van der Vlerk, reporting three groups of pelagic rocks: red radiolarian chert, red shales with 'Globigerina linneana (= Late Cretaceous Globotruncana; JTvG) and grey shale with Globigerina bulloides (Tertiary? JTvG). Followed by petrographic descriptions by Gisolf)

Dill, H.G., A. Fricke, K.H. Henning & H. Gebert (1995)- An APS mineralization in the kaolin deposit Desa Toraget from northern Sulawesi, Indonesia. J. Southeast Asian Earth Sci. 11, 4, p. 289-293.

(Two types of APS (Aluminium-phosphate-sulphate) minerals in Desa Toraget kaolin deposit on Pliocene Tondano Tuff at NE end of N Arm of Sulawesi. Genetic link between epithermal Au mineralization and high sulphidation kaolinitic alteration elsewhere, suggests area may be potential target for Au exploration)

Dirk, M.H.J. (2001)- Petrologi ofiolit lengan tenggara Sulawesi dan potensi sumber daya mineral yang berasosiasi. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 28, p. 11-26.
('Petrology of ophiolite of the SE arm of Sulawesi and potential of associated minerals')

Dirk, M.H.J. (2010)- Ofiolit di jalur Sulawesi Timur, Warta Geologi 5, 3, p. 40-43.
(online at: http://www.bgl.esdm.go.id/images/stories/warta_geologi/pdf/warta201003.pdf)
('Ophiolite in the East Arm of Sulawesi'. Brief review)

Djajadihardja, Y.S., A. Taira, H. Tokuyama, K. Aoike, C. Reichert, M. Block, H.U. Schluter & S. Neben (2004)- Evolution of an accretionary complex along the North arm of the island of Sulawesi, Indonesia. Island Arc 13, 1, p. 1-17.
(Well-developed accretionary prism at S side N Sulawesi Trench, formed as result of clockwise rotation and N ward movement of N Sulawesi arm after M Miocene Bangai-Sula collision in E. Greatest convergence and widest accretionary wedge in W part of trench/wedge. Growth of accretionary prism started at ~5 Ma)

Djuri, M., Sudjatmiko, S. Bachri & Sukido (1998)- Geologic map of the Majene and western part of the Palopo sheets, Sulawesi, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p.
(Second edition of 1974 W Sulawesi geologic map between 3-4°S (adjacent to Mandar block). Oldest rocks low-metamorphic Upper Cretaceous clastics, overlain by Eocene limestones-clastics, Oligocene and younger clastics, limestones and volcanics, Miocene- Pliocene granitic intrusives. M Miocene- Pliocene molasse unconformable over older sediments)

Dollfus, G.F. (1917)- Paleontologie du voyage a lõile de Celebes de M.E.C. Abendanon. In: E.C Abendanon, E.C. (1917) Geologische en geographische doorkruisingen van Midden-Celebes (1909-1910), E.J. Brill, Leiden, 3, p. 959-1016.
('Paleontology of the voyage to Sulawesi by Abendanon'. Brief descriptions of 'Jurassic' red radiolarian cherts, Upper Cretaceous marls with molluscs (Turritella, Thracia abendanoni, Cytherea verbeeki), hard, dark Eocene Nummulites- Discocyclina- Pellatispira limestone and Oligocene- Pliocene marine sediments with molluscs)

Dollfus, G.F. (1919)- L'Oligocene de l'ile de Celebes. Compte Rendu sommaire Seances Soc. Geologique France 1919, p. 13-15.
(online at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015035493991;view=1up;seq=23)
('The Oligocene of Sulawesi island'. Disagrees with Martin (1917) critique of Dollfus (1917), suggesting Dollfus' Oligocene molluscs from Sulawesi should be Neogene. Occurrence of Tympanotonus (Vicarya) verneuili)

Dzakirin, D.F., P.Y. Pratama, W.B. Raharjo, S. Hartanto, R. Armanda, Jaenudin et al. (2017)- Development and controlling factors of Miocene carbonate buildups: an example from the Senoro gas field, Central Sulawesi. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 3p.
(Senoro gas field in E Sulawesi divided into two carbonate reservoir areas: (1) N Senoro with Mentawa carbonate buildup facies, and (2) S Senoro with Minahaki platform carbonate facies)

Effendi, A.C. (1976)- Geologic map of the Manado quadrangle, North Sulawesi. Geol. Res. Dev. Centre (GRDC), Bandung.
(see also Effendi & Bawono, 1997; 2nd Edition)

Effendi, A.C. & S.S. Bawono (1997)- Geologic map of the Manado quadrangle, North Sulawesi, 2nd Ed.. Geol. Res. Dev. Centre (GRDC), Bandung.

(Geologic map of NE tip of North Arm of Sulawesi. Common E Miocene- Recent volcanics and volcanoclastics and associated limestones. Volcanic arc formed as response to subduction from N Sulawesi subduction zone and East (E Sangihe subduction zone))

Egeler, C.G. (1947)- Contribution to the petrology of the metamorphic rocks of Western Celebes. In: H.A. Brouwer (ed.) Geological Explorations of the Island of Celebes, North Holland Publishing Co., p. 177-346.
(Also Thesis University of Amsterdam, 1946, p. 1-165. Descriptions of metamorphic and igneous rocks from N Part of western Central Sulawesi and S part of Sulawesi 'neck', collected by Brouwer in 1929. Widespread young 'alpine' granodioritic intrusions of W Sulawesi caused intense plutonic contact metamorphism, which was superimposed over older regional metamorphism)

Egeler, C.G. (1949)- On amphibolitic and related rocks from western Celebes and the southern Sierra Nevada, California. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 51, 1, p. 100-105.
(On similarities between metamorphic rocks of Sulawesi and Sierra Nevada, California)

Egeler, C.G. (1949)- On metamorphic rocks from the island of Kabaena in the East-Indian Archipelago. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 52, 5, p. 551-562.
(online at: www.dwc.knaw.nl/DL/publications/PU00018668.pdf)
(Petrographic descriptions of metamorphic rocks collected by Brouwer in 1929: hornfels, mica-schists, gneiss, amphibolite, amphibolite schist and crystalline limestones. Kabaena high-grade regional metamorphic schists considered to be older than ophiolitic rocks, similar to SE Sulawesi, but not affected by younger glaucophanitic metamorphism as seen in E Sulawesi (but De Roever (1953) did report glaucophane schist from Kabaena; JTvG). No locality maps or geologic context)

Elburg, M. & J. Foden (1998)- Temporal changes in arc magma geochemistry, Northern Sulawesi, Indonesia. Earth Planetary Sci. Letters 163, p. 381-398.
(N Sulawesi Sangihe Arc Late Miocene- Recent volcanics geochemical change through time. Oldest suites mantle source with previous event of melt extraction. Modern lavas, especially volcanic centres far from trench indicate subduction zone component dominated by melt of sedimentary origin. Change from fluid-dominated to melt-dominated subduction zone component may be related to collision between Halmahera and Sangihe arcs. These changes appear superimposed on variable parent magma composition)

Elburg, M. & J. Foden (1999)- Sources for magmatism in Central Sulawesi: geochemical and Sr-Nd-Pb isotopic constraints. Chemical Geology 156, p. 67-93.
(M Miocene- Quaternary magmatism in C West Sulawesi distinct subduction signature. Isotopic signature of lamprophyres interpreted as mixed mantle source with contribution from old sub-continental lithospheric source, from sliver of Australian continent thrust under C Sulawesi. Felsic magmatism likely reflects high degrees of crustal contamination or intracrustal melting)

Elburg, M.A. & J. Foden (1999)- Geochemical response to varying tectonic settings: an example from Southern Sulawesi (Indonesia). Geochimica Cosmochimica Acta 63, p. 1155-1172.
(S arm Sulawesi active continental margin from ~60 to 10 Ma, when it collided with Buton microcontinent. Pre-collisional geochemical signature typical of arc volcanics. Syn-collisional samples more enriched isotopic signatures and K-rich, interpreted to reflect larger contribution from subducted sediments, added to mantle wedge as silicic melt. Magmatism that postdates 10 Ma collision reflects melting of subduction-modified mantle with significant contribution from subcontinental lithospheric mantle)

Elburg, M.A., V.S. Kamenetsky, I. Nikogosian, J. Foden & A.V. Sobolev (2006)- Co-existing high- and low-calcium melts identified by mineral and melt inclusion studies of a subduction-influenced syncollisional magma from South Sulawesi, Indonesia. J. Petrology 47, 12, p. 2433-2462.
(online at: https://academic.oup.com/petrology/article/47/12/2433/1564500)
(Mineral and melt inclusions in olivines from Late Miocene (6-9 Ma) mafic silica-undersaturated ultra-potassic volcanic rocks with 'continental' Sr isotopic characteristics from southern W Sulawesi Volcanic Province

indicate that two distinct melts contributed to its petrogenesis. High-CaO melt typical for subduction-related volcanic rocks, low-CaO melt does not have any obvious rock equivalent)

Elburg, M.A., T. Van Leeuwen, J. Foden & Muhardjo (2002)- Origin of geochemical variability by arc-continent collision in the Biru Area, Southern Sulawesi (Indonesia). J. Petrology 43, 4, p. 581-606.
(online at: https://academic.oup.com/petrology/article/43/4/581/1473969)
(Two main Tertiary volcanic episodes in SW Sulawesi: (1) M-L Eocene (~50 Ma) calc-alkaline Langi volcanics, (2) late Early Miocene calc-alkaline and M-L Miocene (15-6.3 Ma) potassic arc volcanics, both presumably related to W-dipping subduction. Also 1.8 Ma volcano farther S, not related to subduction? Miocene volcanics more heterogeneous after Buton microcontinent collision at ~15 Ma. Isotopic ratios more 'continental' 4 My after collision)

Elburg, M., T. van Leeuwen, J. Foden & Muhardjo (2003)- Spatial and temporal isotopic domains of contrasting igneous suites in western and Northern Sulawesi, Indonesia. Chemical Geology 199, p. 243-276.
(Paleocene- Pliocene magmatism in NW Sulawesi progression from Older Series with calc-alkaline/ tholeiitic signatures (51-17 Ma) to Younger Series of mafic-intermediate high-K magmas (~14-5 Ma) and felsic K-rich calc-alkaline magmas (9-2 Ma). Younger felsic magmatism reflects melting of Australian origin continental crust. Geochemical progression similar to C Sulawesi and explained by oceanic plate subduction followed by melting of underthrust sliver of Australian microcontinent, the size of which can be estimated from extent of low-Nd-isotope magma (~4°S to 1°N). Underthrusting must have happened prior to 14 Ma, indicating it cannot be equated to Sulawesi- Sula platform collision at 5 Ma. While subduction beneath W Sulawesi ceased prior to onset of potassic magmatism, it continued in N Sulawesi producing calc-alkaline suites)

Erlinghagen K.P. (1991)- Petrogenese und geodynamische Entwicklung der Subduktions-Metamorphite von Zentral-Sulawesi, Indonesien. Goettinger Arbeiten Geol. Pal. 52, 103p.
('Petrogenesis and geodynamic development of subduction metamorphics of Central Sulawesi'. Analyses of metamorphic rocks and minerals from NE of Lake Poso and W-NW of Poso town. High-pressure metamorphic rocks of C Sulawesi formed as result of oblique subduction in WNW-dipping subduction zone. Metamorphic grade increasing P and T from E to W: lawsonite-blueschist facies of Taripa belt grade W-ward into epidote-blueschist and eclogite facies of Tineba belt. Max. P-T conditions ~11 kbar/ 400-450°C (Taripa) and ~13 kbar/500-570°C (~45km depth; Tineba). Age of peak metamorphism ~60-65 Ma (Paleocene), followed by rapid cooling in Eocene. K-Ar cooling ages of phengite in garnet-mica schist 38.8 Ma (Late Eocene), silicate marble 50.2 Ma (E Eocene). Late metamorphic overprint of lawsonite-blueschist zone suggested by K-Ar ages around 19 Ma, tied to age of intrusives in W and onset of Banggai-Sula collision)

Endharto, Mac (2000)- Studi stratigrafi kaitannya dengan perkembangan struktur geologi di Kawasan Latimojong, lengan Barat Sulawesi. J. Geologi Sumberdaya Mineral 10, 107, p. 14-45.
('Study of stratigraphy and relation to development of geological structures in the Latimojong District, W arm of Sulawesi'.)

Endharto, M. & Surono (1991)- Preliminary study of Meluhu Complex related to terrane fomation in Sulawesi. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 340-353.
(Meluhu complex (microcontinent) of SE Sulawesi is NW-SE trending ~25km wide strip in SE Sulawesi, with Late Triassic-Jurassic fluvial clastics and marine limestone and black shale, separated from neighboring terranes by slivers of ophiolite melange. Review of Sulawesi tectonics and reconstructions of M-L Miocene collisions of Tukang Besi Platform and Banggai Sula with E Sulawesi. Meluhu Complex is. (Discussed in more detail in subsequent Surono papers; JTvG))

Ernowo, F.M. Meyer & A. Idrus (2019)- Hydrothermal alteration and gold mineralization of the Awak Mas metasedimentary rock-hosted gold deposit, Sulawesi, Indonesia. Ore Geology Reviews 113, 103083, p.
(Awak Mas epigenetic, orogenic gold deposit, hosted by phyllites and schists. Two types of Au-mineralizing veins: quartz-albite-ankerite and quartz-ankerite-siderite veins. Ore fluids possibly derived from metamorphic dewatering of organic-rich marine sedimentary rocks or input of magmatic hydrothermal fluids)

Evans, M.J. (1991)- Geological field survey of onshore PSC and adjacent areas, Sulawesi, Indonesia, with specific reference to Eocene reservoir quality and distribution. BP Petroleum Indonesia Report, p.
(Unpublished, but commonly used geological survey report of W Sulawesi basins)

Fadhlurrohman, I., A.F. Parma & C. Fitriani (2017)- Geological observation on Kabaena Island, Southeast Sulawesi: an implication of hydrocarbon occurrence in frontier area based on outcrop study. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-190-SG, 11p.
(Kabaena island off SE Sulawesi contains ultramafic rocks (peridotite), Pompangeo Complex low-medium grade metamorphics (amphibilite, schist) and metamorphosed, fractured Matano Fm limestone and some black shale. Ultramafic rocks thrusted over microcontinental rocks. Gas seepage in limestone unit tied to strike slip fault. Not much new)

Fahrudin, R.S. Wicaksono, J. Wahyudiono & W. Gunawan (2012)- Deformasi cekungan Banggai pada zaman Tersier di Kabupaten Banggai, Sulawesi Tengah. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-26, p.
('Deformation of the Banggai Basin in Tertiary time, Banggai District, C Sulawesi')

Farida, M., F. Arifin, R. Husain & I. Alimuddin (2013)- Paleoseanografi Formasi Tonasa berdasarkan Kandungan Foraminifera Daerah Barru, Sulawesi Selatan. In: Proc. 6th Seminar Nasional Kebumian, Teknik Geologi Universitas Gadjah Mada, Yogyakarta 2013, 12p.
('Paleoceanography of the Tonasa Formation based on foraminifera content in Barru area, South Sulawesi'. Outcrop section with M-L Eocene open marine calcareous shales and thin limestones with planktonic foraminifera (P9-P16), smaller benthics and larger forams)

Farida, M., A. Imran & F. Arifin (2014)- Lingkungan pengendapan purba satuan napal Formasi Tonasa berdasarkan kandungan foraminifera bentonik, studi kasus: Sungai Camming dan Sungai Palakka Kabupaten Barru, Provinsi Sulawesi Selatan. J. Penelitian Geosains (Hasanuddin University) 10, 2, p. 50-57.
(online at: http://repository.unhas.ac.id/bitstream/handle/123456789/15298/)
('Depositional environment of the marl unit of the Tonasa Formation based on benthic foraminifera, case studies: Camming River and River Palakka Barru, S Sulawesi Province'. Mainly middle-outer neritic facies ('30.48- 182.88m'), concluded from nodosarids-dominated benthic foram assemblages in Early-Late Eocene of Tonasa Marls in two outcrop sections)

Farida, M., Pratiwi & R. Husain (2014)- Paleotemperature of Middle Eocene Tonasa Limestone based on foraminifera at Palakka Area South Sulawesi. Int. J. Engineering and Science Applications (UNHAS) 1, 1, p. 77-84.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/137/93)
(Interbedded marl/limstone at Palakka section, Barru area (presumably basal Tonasa Lst) with lower M Eocene (P11) planktonic foraminifera and middle? neritic small benthic forams ('warm water= 0-27°C'))

Fauzia, R., R. Sari, A. Mulawardhani, M.I. Novian & T. Sihombing (2012)- Dinamika pengendapan batupasir Formasi Lamusa, Desa Salodik, Kecamatan Luwuk, Kabupaten Banggai, Propinsi Sulawesi Tengah. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-36, 4p. *(Extended Abstract; no figures)*
('Dynamics of Lamusa Formation sandstone deposition, Salodik Village, Banggai District, C Sulawesi'. E Arm of Sulawesi with U Cretaceous calcareous sst near Salodik village, probably middle-outer neritic facies. Facies A with U Cretaceous planktonic foraminifera (Coniacian- Santonian with Marginotruncana spp. Pseudotextularia, Dicarinella concavata, D. asymetrica); Facies B turbiditic Turonian-Santonian with Marginotruncana spp., Heterohelix, etc. Also Late Eocene- Oligocene P18/19 pelagic facies E-M Eocene Facies F with P11-P14 planktonics)

Ferdian, F. (2017)- Eastern Sulawesi basement: revelation from zircon data. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 3p. *(Extended Abstract)*
(Zircon ages from Banggai-Sula and E Sulawesi. Granites from Banggai-Sula region with mainly Permo-Triassic age zircons. Also one Banggai-Sula granitoid with 23-26 Ma zircons. Banggai and Taliabu

metamorphics mainly Proterozoic zircon ages. Sulabesi metasediments with Permo-Triassic zircons. SE Sulawesi Mekongga Fm metamorphics with Mesozoic-Paleozoic and Meso-Paleoproterozoic zircons, but youngest zircon ~170 Ma (M Jurassic) (similar distribution in Triassic-Jurassic Meluhu clastics))

Frantz, L.A., F.A. Rudzinski, A.M.S. Nugraha, A. Evin, J. Burton, A. Hulme-Beaman et 27 al. (2018)- Synchronous diversification of Sulawesiôs iconic artiodactyls driven by recent geological events. Proc. Royal Society (London) B 285, 20172566, p. 1-8.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5904307/pdf/rspb20172566.pdf)
(Paleogeographical reconstructions using genetic and morphometric datasets from Sulawesi's three largest mammals (babirusa, anoa, Sulawesi warty pig) indicate these likely colonized Sulawesi at different times (14 Ma to 2-3 Ma), and experienced near-synchronous expansion from central part of island at ~1-2 Ma. Endemic fauna of Sulawesi driven by geological events over last few million years)

Frenzel, A. (1877)- Mineralogisches aus dem Ostindischen Archipel. Jahrbuch Verhandlungen Kaiserlich Koniglichen Geol. Reichsanstalt, Vienna, Mineralogische Mitteilungen 27, 2, p. 297-308.
(online at: https://www.zobodat.at/pdf/MinMitt_1877_0297-0308.pdf)
(Descriptions of rocks collected by A.B. Meyer of Zoological Museum of Dresden in 1870-1873. Mainly from Borneo (incl. antimon minerals, arsenic and cinnaber from W Sarawak, etc.), Philippines, Ternate, Timor (incl. copper ores from Usu copper mine and other localities) and New Guinea. No figures)

Frenzel, A. (1881)- Mineralogisches aus dem Ostindischen Archipel, 8. Celebes. Tschermak Mineral. Petrogr. Mittheilungen. 3, 4, p. 289-300.
('Mineralogic data from the East Indies Archipelago- 8. Celebes'. Petrography of volcanic and other rocks from Sulawesi, collected by a Dr. Meyer. Incl. lavas from Sangi Islands, North Arm, Togian islands, etc. First(?) description of Eocene Nummulites limestone from mountains near Batubassi, S Sulawesi)

Fornasiero, M. (2001)- Eocene molluscs species known from Nanggulan (Java) newly found in Malawa (Sulawesi). Memorie Scienze Geol., Padova, 53, p. 57-60.
(Eight mollusc species in Malawa, NE of Makassar, SW Sulawesi, also occur in M Eocene of Nanggulan, C Java and are all Tethyan species not known from Australian Plate. Outcrops believed to be M Miocene chaotic deposits with large olistoliths of M Eocene marls, possibly part of accretionary prism)

Fu, W., M. Yang, X. Huang & Y. Zhang (2014)- Garnierite in a laterite-Ni deposit from Kolonodale area, Sulawesi, Indonesia: a preliminary study on mineralogy. Acta Geologica Sinica 88, Suppl. 2, p. 1451. *(Abstract)*

Fu, W., J. Yang, M. Yang, B. Pang, X. Liu, H. Niu & X. Huang (2014)- Mineralogical and geochemical characteristics of a serpentinite-derived laterite profile from East Sulawesi, Indonesia: implications for the lateritization process and Ni supergene enrichment in the tropical rainforest. J. Asian Earth Sci. 93, p. 74-88.
(Ni-laterite profile over weathered serpentinite in Kolonodale area of E Sulawesi three lithostratigraphic horizons, from bottom to top: saprolite horizon, limonite horizon and ferruginous cap. Highest concentration of Ni (up to 11.5% NiO) in saprolite horizon)

Fu, W., Y. Zhang, C. Pang, X. Zeng, X. Huang, M. Yang, Ya Shao & H. Lin (2018)- Garnierite mineralization from a serpentinite-derived lateritic regolith, Sulawesi Island, Indonesia: mineralogy, geochemistry and link to hydrologic flow regime. J. Geochemical Exploration 188, p. 240-256.
(On genesis of garnierite nickel ore, mainly in veins in lower saprolite of serpentinite-derived regolith. Ni preferentially enriched in talc-like phases rather than serpentine-like phases)

Fu, W., Y. Zhou, Y. Chen, Y. Hu, N. Chen, H. Niu et al. (2010)- Geological and geochemical characteristics of laterite nickel deposit and ore genesis; a case study of Kolonodale deposit in Indonesia Sulawesi, Southeast Asia. Earth Science Frontiers (China University of Geosciences, Beijing) 17, 2, p. 127-139.

Gani, M.U.A. (1997)- Karakteristik batu marmer di daerah Bulupanampu Kabupaten Maros, Sulawesi Selatan. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 899-912.

('Characteristics of marble rock in the area of Bulupanampu, Maros District, S Sulawesi')

Gani, M.U.A. & H. Soetjito (1999)- Coal ash characteristization of Tondongkurah coal, Pangkajene, South Sulawesi. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 293-300.

Gani, M.U.A., H. Soetjijo & S. Indro (1996)- Karakterisasi dan kualitas pemanfaatan batubara Tondongkurah, Pangkajene Sulawesi Selatan. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 313-324.
('Characterization and quality of Tondongkurah coal, Pangkajene, S Sulawesi')

Garrard, R.A., D. Silalahi, D. Schiller & P. Mahodim (1989)- Sengkang Basin, South Sulawesi. Indon. Petroleum Assoc., Post Convention Field Trip Guidebook, Jakarta, p. 1-46.
(SW Sulawesi fieldtrip guide book)

Garrard, R.A., G. Nusatriyo & D.Q. Coffield (1992)- The prospectivity of Early Tertiary rift sequences in the Neogene foldbelts of South Sulawesi. In: Eastern Indonesian Exploration Symposium, Jakarta, April 1992, Pertamina and Simon Petroleum Technology, 12p.

Garwin, S.L., D. Hendri & P.F. Lauricella (1995)- The geology of the Mesel sediment-hosted gold deposit, North Sulawesi, Indonesia. In: J.L. Mauk & J.D. St George (eds.) Exploring the Rim, Proc. PACRIM 1995 Congress, Auckland, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, Publ. Ser. 9/95, p. 221-226.
('Carlin-type' sediment-hosted Au-Ag deposit in extensional M Miocene basin in N Sulawesi volcanic arc (only one of this type in Indonesia?). Discovered in 1988. Gold in finely disseminated pyrite adjacent to andesite intrusive)

Girardeau, J., C. Monnier, R. Maury, M. Villeneuve, D. Soetisma & H. Samodra (1995)- Origin of the East Sulawesi ophiolite. Abstracts, Eighth Regional Conf. Geology Minerals and Energy Resources of SE Asia (GEOSEA 95), 8, p. 51-52.

Gisolf, W.F. (1917)- Beschrijving van een microscopisch onderzoek van gabbro's en amfibolieten, herkomstig van Midden-Celebes. Thesis Technical University of Delft, Immig, Rotterdam, p. 1-141. *(Unpublished)*
(Read online at: https://catalog.hathitrust.org/Record/100579912)
('Description of microscopic investigations of gabbros and amphibolites from C Sulawesi'. Incl. glaucophanites and eclogites from Latimojong Complex. Presumably same as Gisolf (1917) in Abendanon (1917))

Gisolf, W.F. (1917)- Petrografie van Midden-Celebes. Microscopisch onderzoek van de gesteenten der Midden-Celebes verzameling van E.C. Abendanon. In: E.C Abendanon, E.C. (1917) Geologische en geographische doorkruisingen van Midden-Celebes (1909-1910), E.J. Brill, Leiden, vol. 3, p. 1017-1381.
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:041967000:pdf)
(Petrography of rocks from C Sulawesi collected by Abendanon. Mainly igneous (granites, gabbros, peridotites, trachytes, andesites, etc.) and metamorphic (gneiss, eclogite, amphibolite, jadeite, quartzite, etc.) rocks)

Gisolf, W.F. (1920)- Lawsonite en epidoot in de schisten van het Latimojong gebergte, Celebes. Handelingen 17th Nederlandsch Natuur- Geneeskundig Congres, Leiden 1919, p. 422-424.
(Online read only at: http://babel.hathitrust.org/cgi/pt?id=uc1.b3093406;view=1up;seq=476)
('Lawsonite and epidote in the schists of the Latimojong Mountains, Sulawesi'. Lawsonite observed in epidote-chlorite schists collected by Abendanon near Bulu Palaka in Latimojong Mts, C Sulawesi)

Gisolf, W.F. (1923)- On the occurrence of diamond as an accessory mineral in olivine and anorthite bearing bombs, occurring in basaltic lava, ejected by the volcano Gunung Ruang (Sangir-Archipelago north of Celebes). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 26, 7-8, p. 510-512.
(online at: www.dwc.knaw.nl/DL/publications/PU00014971.pdf)
(Accessory diamonds in volcanic bomb from Gunung Ruang volcano in Sangir Archipelago, N Sulawesi)

Gisolf, W.F. (1924)- Mikroskopisch onderzoek van gesteenten uit Zuidoost Selebes. Jaarboek Mijnwezen Nederl.-Oost Indie 53, Verhandelingen, p. 66-113.
(‘Microscopic investigations of rocks from SE Sulawesi’. Brief descriptions of igneous (granites peroditites, serpentinites, volcanics), metamorphic (mica-schists, phyllites, gneiss, amphibolite, glaucophane schist, eclogite, quartzite) and sedimentary (sandstone, limestone, shales, radiolarian chert) rocks collected by Julius and other geologists. Localities poorly described, no locality maps)

Golightly, J.P. (1979)- Geology of Soroako nickeliferous laterite deposits. In: D.J.I. Evans et al. (eds.) International Laterite Symposium, New Orleans 1979, Soc. Mining Eng. American Inst. Min. Metall. Petrol. Eng. (AIMM & PE), New York, p. 38-56.
(Nickel mined by PT INCO from laterite overlying E Sulawesi ophiolite. In situ weathering of 20-50 thick column of ophiolite in last 10 My believed to have formed 5-30cm thick laterite)

Gomez, J.M., R. Madariaga, A. Walpersdorf & E. Chalard (2000)- The 1996 earthquakes in Sulawesi, Indonesia. Bull. Seismological Soc. America 90, 3, p. 739-751.
(1996 earthquakes in relay zone between N Sulawesi trench and Palu-Koro transcurrent fault. Slip vectors NNW orientation parallel to direction of convergence between N Sulawesi arm and Celebes Sea)

Graha, D.S. (1998)- Zonasi umur pada batuan granitik Polewali, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 8, 78, p. 9-19.
('Age zonation in granitic rocks of Polewali, S Sulawesi'. K-Ar ages of biotite in Polewali granite 3.1- 14.0 Ma suggest age zonation of ~3.1-3.5 Ma at outside, 6.1-9.8 Ma in middle and 14.0 Ma in center. Ages from hornblende and biotite from Riso syenite 4.5- 6.75 Ma)

Grainge, A.M. & K.G. Davies (1983)- Reef exploration in the East Sengkang Basin, Sulawesi. Proc. 12th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 207-227.
(East Sengkang Basin Late Miocene reefs in outcrop and as shallow gas-bearing Late Miocene reefs in N part of basin. Four accumulations with ~0.75 TCF of dry gas in place at average depth 700m. Kampung Baru is largest field and contains over half the total. Reservoir quality excellent. Gas probably generated in W Sengkang Basin and sub-sequently migrated into E Sengkang Basin)

Grainge, A.M. & K.G. Davies (1985)- Reef exploration in the East Sengkang Basin, Sulawesi, Indonesia. Marine Petroleum Geol. 2, p. 142-155.
(Shallow, gas-bearing Upper Miocene reefs in N part Sengkang basin, with Kampung Baru as largest field. Lower Miocene mudstones and limestones unconformable over Eocene volcanics acoustic basement. Two M Miocene periods of deformation and erosion. Late Miocene widespread carbonate deposition with platform limestones and pinnacle reef complexes. Reef growth ceased at end Miocene and clastic sedimentation covered irregular limestone surface. Walanae sinistral strike-slip fault zone separates E and W Sengkang Basins)

Gunawan, W. (1999)- Structure, stratigraphie et evolution de la partie centrale de Sulawesi (Indonesie orientale). Doct. Thesis Universite de Aix-Marseille, p. 1-283. *(Unpublished)*
(Sulawesi is area of collision between Eurasian and Gondwanan blocks. Three main events: (1) collision of Asia- Banda Blocks (= E Sulawesi) in Late Oligocene, (2) collision of Banda- Lucipara blocks in M Miocene and (3) collision of Banggai-Sula and Sulawesi in M Pliocene. C Sulawesi marks collision between Asia and Banda blocks, with obduction of ophiolite nappe of Asian origin over E Sulawesi block. E Sulawesi block sedimentary cover starts with Triassic reefal/ platform carbonates followed by Early Jurassic platform interior carbonates, Lower Cretaceous radiolarites and Upper Cretaceous-Oligocene pelagic limestones. High P- low T metamorphism during W-directed subduction in Early Oligocene. Western active margin has substrate metamorphosed in Aptian- Albian, overlain by Upper Cretaceous- Pliocene volcano-sedimentary formations, and deforemed by thrusting during Oligocene collision, possibly followed by a Middle Miocene event also known from Buton island)

Guntoro, A. (1996)- Seismic interpretation and gravity models of Bone Bay in relation to its evolution. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 3, p. 349-369.

Guntoro, A. (1997)- Stratigrafi dan evolusi tektonik Pulau Tanahjampea dan sekitarnya, Kabupaten Selayar, Sulawesi Selatan. Berita Sedimentologi 4, p. 9-17.
('Stratigraphy and tectonic evolution of Tanahjampea Island and surroundings, Selayar District, S Sulawesi'. Oldest rocks Eocene volcanic breccia (part of Langi volcanics of S Sulawesi?), overlain by E Miocene limestone with Lepicyclina (part of Tonasa Lst of Sulawesi?), Pleistocene volcanic breccia)

Guntoro, A. (1997)- Preliminary study of the geology and tectonics of the Flores Sea islands, South Sulawesi. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 291-313.
(Islands S of SW Sulawesi/ Flores Sea (Selayar, Bonerate and Kalaotoa groups) poorly known. Similar stratigraphy to SW Sulawesi. Extensive volcanic and tectonic activity since Eocene. Tanahjampea and Tanahmalala islands mainly SW Sulawesi-like granite, also Eocene and M-U Miocene calc-alkaline volcanics, possibly overlain by Batu Fm limestone with large Lepidocyclina. Suggesting W-dipping subduction zone E of W Sulawesi in E Tertiary continued to E of these islands. Kalao island uplifted coral reefs on andesite. Bonarate, Kalaotoa islands also with uplifted Quaternary reefal limestones)

Guntoro, A. (1999)- The effect of collision of the Banggai-Sula microcontinent to the tectonic development in Central Indonesian region. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ő98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 103-111.
(online at: www.gsm.org.my/products/702001-100829-PDF.pdf)
(Seismic interpretation shows presence of major faults indicating extensional, compressional and inversion tectonics in Makassar Strait, Sulawesi and Bone Bay. Gravity models indicate presence of oceanic crust in middle of Makassar Strait and Bone Bay and remnant subduction to S of Bone Bay. Origin of oceanic crust in Makassar Straits and Bone Bay due to rifting, with E-ward driving mechanism subduction roll-back of Pacific Plate eastward since E Tertiary. Bone Bay openings due to M Miocene collision of Banggai-Sula with Sulawesi, causing displacement and rotation of two Walanae and Palu-Koro faults. Banggai-Sula collisionalso caused inversion structures at E and W sides of N Makassar Basin by inverting Eocene extensional basin)

Guntoro, A. (2004)- The relationship between tectonic development of Central Indonesian region and collision of Banggai-Sula microcontinent to the east Sulawesi. Jurnal Teknologi Mineral (ITB) 11, 1, p.
(Central Indonesia with major faults indicating extension, compression and inversion. Gravity data indicate presence of oceanic crust in middle of Makassar Straits and Bone Bay, related to rifting. Driving mechanism of rifting in Makassar Strait is subduction roll-back of Pacific Plate E-ward since early Tertiary. Rifting in Bone Bay due to collision of Banggai-Sula Microcontinent against Sulawesi causing displacement and rotation of two major faults, Walanae and Palu-Koro)

Guritno, N., D.Q. Coffield & R.A. Cook (1996)- Structural development of central South Sulawesi, Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 253-266.
(S Sulawesi stratigraphy: pre-Tertiary basement, Eocene synrift, Oligo-Miocene post-rift, M Miocene syn-magmatic, and Late Miocene-Pliocene synorogenic sedimentary packages. E part hinterland of exposed Cretaceous basement in W-vergent thrust system. W of basement outcrops is basement-involved, W-vergent Kalosi fold-thrust, with exposed Paleogene sediments. Further W shortening thin-skinned Majene foreland fold-thrust belt. S Sulawesi is W-vergent orogen superimposed on M Miocene magmatic arc. Bone Bay is continent-continent suture recently disrupted by transtensional wrenching and collapse of orogen's eastern extremity. SE Sulawesi E-vergent portion of orogen with allochthonous ophiolite nappes from continent-continent suture. Leading edge of orogen along Banda Sea W margin)

Hadiwijoyo, S., D. Sukarna & K. Sutisna (1993)- Geology of the Pasangkayu Quadrangle, Sulawesi. (Quad. 2014), 1: 250,000, Geol. Res. Dev. Centre (GRDC), Bandung, 19p.
(W Sulawesi map between 1-2°S. Oldest rocks ?Triassic metamorphics (no data to support age), unconformably overlain by low-metamorphic Upper Cretaceous clastics. Overlain by Oligocene and E Miocene Lamasi andesitic-dacitic volcanics. Unconformably overlain by M-L Miocene Talaya andesitic-basaltic series and Late Miocene- Pliocene molasse. Oil seep at Doda. Unlike areas to S, no Eocene rocks present)

Haile, N.S. (1974)- An unusual unconformity of radiolarian chert on schist and gneiss west of Pangkajene, SW arm, Sulawesi (Celebes). Geol. Soc. Malaysia Newsletter 52, p. 21-22.
(Brief note on mid-Cretaceous unconformity in Sungai Dera (tributary of Sg Paring) ~22 km E of Pangkajene, SW Sulawesi. Brecciated gneiss and micaschists of Bantimala Complex are overlain, with horizontal unconformity, by slightly folded ~7m thick red chert sequence. Near base of chert are up to 30cm thick beds of m quartz-mica sandstone with up to 35% lithics of micaschists and altered ultrabasic rocks. (Age of radiolaria in chert Late Albian- E Cenomanian; Wakita 2000))

Haile, N.S. (1978)- Reconnaissance palaeomagnetic results from Sulawesi, Indonesia, and their bearing on palaeogeographic reconstruction. Tectonophysics 46, p. 77-85.
(SW Sulawesi Jurassic radiolarian chert rotated ~35° CCW since Late Mesozoic. E Cretaceous radiolarian chert formed at ~3° and may have formed single plate with Kalimantan and Malay Peninsula, which rotated ~35-50° CCW since Cretaceous. Jurassic cherts from SE Sulawesi formed at high latitude (61°S))

Haile, N.S., A.J. Barber & D.J. Carter (1979)- Mesozoic cherts on crystalline schists in Sulawesi and Timor. J. Geol. Soc. London 136, p. 65-70.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.820.2026&rep=rep1&type=pdf)
(Non-metamorphosed Jurassic or Early Cretaceous pelagic radiolarian chert deposited unconformably on brecciated gneiss of Bantimala Complex in Pangkajene valley, SW Sulawesi. Cherts associated with turbiditic lithic sandstones, with grains of mica schist, muscovite, altered ultramafic rock, rare garnet and tourmaline. Radiolaria deemed to be of Jurassic or E Cretaceous age by Ling (no details). Very similar rock succession on Timor (Miomaffo) suggest Sulawesi and Timor probably part of continuous terrain during deposition of radiolarian cherts (see also Harahap 2000))

Hakim, A.Y.A. (2017)- Genesis of orogenic gold in the Latimojong district, South Sulawesi, Indonesia. Dissertation Montanuniversitat Leoben, Germany, p. 1-355.
(online at: https://pure.unileoben.ac.at/portal/files/2214320/AC14527918n01.pdf)
(Awak Mas and Salu Bullo gold deposits in Latimojong Metamorphic Complex, S Sulawesi. Latimojong MC part of Late Cretaceous accretionary complex with high-P metamorphics, W of obducted Lamasi Complex (= E Sulawesi Ophiolite?). Gold hosted in quartz veins in pumpellyite- to greenschist-facies metasedimentary and metavolcanic rocks. Metamorphic reactions in metasedimentary rocks during retrogression stage considered main source of ascending fluids forming Au-mineralization)

Hakim, A.Y.A., F. Melcher, W. Prochaska, R. Bakker & G. Rantitsch (2018)- Formation of epizonal gold mineralization within the Latimojong Metamorphic Complex, Sulawesi, Indonesia: evidence from mineralogy, fluid inclusions and Raman spectroscopy. Ore Geology Reviews 97, p. 88-108.
(Gold deposits in Latimojong Metamorphic Complex, S Sulawesi (Awak Mas, Salu Bulo), in pumpellyite-greenschist facies metasedimentary and metavolcanic rocks. Gold in quartz veins in N-S normal faults and extensional fractures. Minerals dominated by pyrite, chalcopyrite, galena, minor tetrahedrite and sphalerite; gold is electrum with low silver content. Gold bearing fluids trapped in quartz at ~180-250 °C at depths <5 km. Isothermal decompression during retrogression stage mobilized large volumes of fluids, leading to significant gold mineralization)

Halim, A. & D. Heru (2003)- Successful extreme underbalance perforation in exploration well Donggi Gas Field, Sulawesi. In: SPE Asia Pacific Oil and Gas Conf. Jakarta 2003, 5p.

Handiwiria, Y.E. (1990)- The stratigraphy and hydrocarbon occurrences of the Salodik Group, Tomori PSC area, East Arm of Sulawesi. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), 1, p. 69-98.
(Rel. comprehensive overview by Union Texas of Late Eocene- Miocene carbonate-rich Salodik Group on Banggai-Sula Plate (Late Eocene- E Miocene Tomori Fm, M Miocene clastic Matindok Fm, M-L Miocene Minahaki Fm carbonates, still with Lepidocyclina). Eocene Tomori Fm in Tiaka wells with Lacazinella. Late Eocene- E Oligocene missing in northern area (Mantawa-Minahaki-Matindok). Latest Miocene- E Pliocene basin deepening and Kintom Fm flysch deposition. Basement penetrations metamorphic rocks. Tiaka 2 well TD in granite and schist, with K-Ar date of 224 ± 9 Ma = ~E Norian)

Harahap, B.H. (1995)- Petrology of the Neogene subvolcanic rocks from the western part of South Sulawesi. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 18, p. 68-85.
(Neogene K-rich volcanics in SW Sulawesi)

Harahap, B.H. (1999)- Asal lava bantal Salu Latupa, Latimojong, Sulawesi Selatan. Majalah Geologi Indonesia (IAGI) 15, 1-2, p. 25-38.
('Genesis of Salu Latupa pillow lava, Latimojong, S Sulawesi')

Harahap, B.H. (2000)- Petrologi lava basaltik dari jalan raya antara Palopo dan Rantepao, Sulawesi selatan. J. Geologi Sumberdaya Mineral 10, 101, p. 2-9.
('Petrology of basaltic lava from the main road between Palopo and Rantepao, S Sulawesi'. Basalts outcropping at km 376-379 intrude Eocene Toraja Fm equivalent rocks. Age unclear? Geochemistry suggest subduction-related lavas, probably from before M Miocene Banggai-Sula collision with Sulawesi)

Harahap, B.H. (2000)- Kejadian rijang di Sungai Paring Sulawesi Selatan. J. Geologi Sumberdaya Mineral 10, 105, p. 2-11.
('Genesis of chert in the Paring River of South Sulawesi'. Red, thin-bedded deep marine radiolarian chert Fm in Paring River near Bantimala, 22km E of Pangkajen. Unconformably overlies Bantimala melange complex, composed of schist, ultramafic rocks, clastic sediments, etc.. With slump structures; associated with sandstones and breccias with fragments of schist. Chert contains radiolaria indicative of U Albian- Lower Cenomanian age (~100 Ma; Wakita 1996; 7m of radiolarian cherts with some turbiditic sandstones on brecciated gneiss from same area also described by Haile et al. 1978))

Harahap, B.H. (2000)- Petrologi lava dan korok basalt dari Walenrang, Sulawesi. Proc. 29th Ann. Conv. Indonesian Assoc. Geol. (IAGI), Bandung, 4, p. 179-189.
('Petrology of lava and basalt of Walenrang, Sulawesi'. C Sulawesi Pliocene Lamasi volcanics chemistry comparable to Mid-Ocean Ridge Basalts)

Harahap, B.H. (2002)- Ofiolit di Pegunungan Latimojong Sulawesi bagian selatan dan implikasi geodinamika dalam tatanan tektonik dan stratigrafi regional Sulawesi. Buletin Geologi (ITB) 34, 1. p. 1-20.
('Ophiolite of the Latimojong Mts, S Sulawesi and geodynamic implications for the regional tectonic and stratigraphic history of Sulawesi')

Harahap, B.H. (2004)- Plio-Pleistocene volcanic rocks from Tanatoraja South Sulawesi. Majalah Geologi Indonesia (IAGI) 19, 2, p. 81-90.

Hardjadinata, K. (1992)- Beberapa aspek lapangan batuan vulkanik daerah Gorontalo, Sulawesi Utara. J. Geologi Sumberdaya Mineral 2, 6, p. 4-8.
('Some aspects of the volcanic rocks of the Gorontalo area, northern Sulawesi')

Hardjana, I. (2011)- The discovery, geology and exploration of the high sulphidation Au-mineralization system in the Bakan District, North Sulawesi. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 161-188.
(also in Majalah Geologi Indonesia 27, 3, p. 143-157)
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/731)
(Gold mineralization in Bakan, N Sulawesi, hosted by dacitic tuffs of Plio-Pleistocene Bakan Fm, which unconformably overlie Miocene basement units of andesitic lavas, feldspathic sandstones and diorite porphyry)

Harjanto, Ernowo (2017)- Hydrothermal alteration and gold mineralization of the Awak Mas gold deposit, Sulawesi Island, Indonesia. Ph.D. Thesis RWTH Aachen University, Germany, p. 1-177.
(Awak Mas metasedimentary-hosted gold deposit in Cretaceous metamorphic Latimojong Fm, S Sulawesi. Hosted by phyllites-schists representing metamorphosed shales derived from acidic arc volcanic rocks in continental island arc setting, and metamorphosed under low P-T conditions (greenschist-facies). Obduction

and thrusting of Lamasi Ophiolite Complex onto Latimojong Metamorphic Complex in Miocene led to ductile deformation, followed by crustal thickening that caused melting at base of crust and granitic magmatism at 5-8.1 Ma. Granodiorites of calc-alkaline magmatic affinity emplaced in transition between volcanic-arc and syn-collisional granite tectonic setting. Extensional collapse caused brittle deformation (normal faulting/ fracturing) and formation of veins controlled gold mineralization. Awak Mas epigenetic, orogenic gold deposit)

Harjanto, E., F.M. Meyer & A. Idrus (2015)- Geology and mineralization of Awak Mas gold deposit and challenges for new exploration targeting in the metamorphic rock terrain of eastern Indonesia. Proc. 13th Biennial Mtg Soc. Geology Applied to Mineral Deposits (SGA), Nancy, p. 103-106.
(Awak Mas metamorphic-rock hosted gold deposits in C Sulawesi Cretaceous Latimojong metamorphic belt. Dominant lithologies slate, phyllite and mica schist. Mineral assemblage reflects high P/ low T environment or greenschist facies metamorphic rocks. Extensional faults, shears and fractures control gold mineralization)

Harjanto, Ernowo, F.M. Meyer, A. Idrus, H. Widyanarko & N.L. Endrasari (2016)- An update of key characteristics of Awak Mas mesothermal gold deposit, Sulawesi Island, Indonesia. Proc. 8th Ann. Conv. Indonesian Soc. Economic Geol. (MGEI), Bandung, p. 72-75.
(Awak Mas gold deposit in metamorphic belt of Sulawesi. Hosted by low-metamorphic Cretaceous Latimojong Fm flysch sequence locally intruded by diorite dykes. Believed to have formed by hydrothermal fluids sourced from metamorphic dewatering reactions of marine sediments (mesothermal orogenic gold deposit))

Harju, H.O. (1979)- Exploration of P.T. INCO's nickel laterite deposits in Sulawesi, Indonesia. In: D.J.I. Evans et al. (eds.) Int. Laterite symposium, American Inst. Mining Metall. Petroleum Eng., New York, p. 292-299.

Haryono, A. Susilo, E. Purnomo & Tasiat (2002)- Donggi gas discovery of Matindok in Banggai Basin Sulawesi: a success story by using a new G & G approach. In: F.H. Sidi & A. Setiawan (eds.) Proc. Giant Field and New exploration concepts seminar, Indon. Assoc. Geol. (IAGI), Jakarta 2002, p. 6-18.
(On 2001 Donggi-1 gas discovery in Miocene carbonate buildup in Matindok Block, Banggai Basin, E Sulawesi. Net gas column 134m)

Hasan, K. (1990)- The Upper Cretaceous flysch succession of the Balangbaru Formation, Southwest Sulawesi, Indonesia. Ph.D. Thesis, University of London, p. 1-336. *(Unpublished)*
(Upper Cretaceous (Turonian-Maastrichtian) Balangbaru Fm ~3300m of deep marine flysch, unconformably over accretionary complex. Not internally deformed, only slight E tilt. Paleocurrent of gravity flows mainly from NW to SE and W to E. Provenance in lower part mainly metamorphic lithics and chert from accretionary complex, upper part influenced by magmatic arc provenance. Tectonic setting small fore-arc basin on trench slope. Basement complex uplifted from significant depth prior to deposition of Balangbaru Fm, thus preventing transport of volcaniclastics into basin)

Hasan, K. (1991)- The Upper Cretaceous flysch succession of the Balangbaru Formation, Southwest Sulawesi. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 183-208.
(Summary paper of above thesis on *Upper Cretaceous (Turonian-Maastrichtian) Balangbaru Fm 'flysch')*

Hasan, K., R. Garrard & P. Mahodim (1991)- SW Sulawesi, Post-convention field trip guidebook. Indonesian Petroleum Association (IPA), p. 1-61.
(Balangbaru area of SW Sulawesi Albian (111, 115 Ma) age metamorphics. Late Cretaceous (Turonian-Maastrichtian) Balangbaru flysch 3300m thick, unconformably over fractured ultrabasic rocks. Uplift/ erosion event followed by Eocene fluvio-deltaics and Nummulites limestones, overlain by up to 500m Late Eocene- E Miocene Tonasa Limestone)

Hasanusi, D., R. Abimayu, E. Artono & A. Baasir (2004)- Prominent Senoro gas field discovery in Central Sulawesi. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 177-197.
(Senoro gas field 1999 discovery in S part of E arm of Sulawesi. Reserves of 3.7 TCF gas and 65 MB condensate. Three play types in Tomori area: Miocene carbonate buildups, wrench-fault anticlines and thrust-

sheet anticlinal structures. Two potential hydrocarbon sources: Jurassic and Miocene marine shales and coals. Geochemical analyses indicate seeps and oils and gas from wells relate to E-M Miocene rocks. Hydrocarbon generation commenced in E-M Pliocene due to Pliocene sedimentation and loading by thrust sheets. Some remigration of hydrocarbons due to regional basin tilting caused by uplifting of fold belt in Pleistocene)

Hasanusi, D., E. Adhitiawan, A. Baasir, L. Lisapaly & R. van Eykenhof (2007)- Seismic inversion as an exciting tool to delineate facies distribution in Tiaka carbonate reservoirs, Sulawesi- Indonesia. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-008, 13p.
(Tiaka field produces oil from E Miocene Tomori limestone, while limited gas bearing zones can be found in M-L Miocene Minahaki limestone. Six oil wells and one dry well drilled. Seismic inversion confirmed dry well was drilled in tight limestone area, while oil wells were drilled in porous limestone area)

Hasanusi, D., D. Kurniawan, R.M. Iman Argakoesoemah & W. Darmawan (2012)- Fractured carbonate reservoir of Tiaka Field, Eastern Sulawesi, Indonesia (T-3 Carbonate Cores). In: AAPG Geoscience Technology Workshop (GTW) on reservoir quality of a fractured limestone reservoirs, Bali 2012, Search and Discovery Art. 20145, p. 1-23. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/20145hasanusi/ndx_hasanusi.pdf)

Hasanusi, D. & M. Petricola (2006)- A surprise discovery using cased hole logs in the Tiaka Field. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-VSL-05, 8p.
(Discovery of new gas sand behind casing in M-L Miocene Minahaki Fm ?Limestone in Tiaka Field)

Hasanusi, D. & A. Priyantoro (2011)- Diagenetic events as the controlling improvement reservoir quality of the carbonate reservoirs in the Senoro field and surrounding areas, Banggai-Sula basin, Central Sulawesi. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-028, 20p.
(On reservoir quality and diagenesis of M-U Miocene Mentawa Mb reefal build-ups (common recrystallization and dissolution, creating good porosity- permeability) and Minahaki Fm 'platform carbonate' (composed of deeper water globigerinid limestones; good porosity but low permeability))

Hasanusi, D., J. Sumarianto, R. Wijaya & D. Hendrian (2015)- The Tiaka-Tiara fault bend fold structures and its implication to control hydrocarbon entrapment within fracture carbonate reservoir in the Eastern Arm of Sulawesi, Indonesia. AAPG/SEG Int. Conf. Exhibition, Melbourne, p. 1-11. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2015/51213hasanusi/ndx_hasanusi.pdf)
(Tiaka-Tiara fault bend fold structures in tectonically complex area of Banggai Basin, offshore E arm of Sulawesi, formed by Late Miocene- Pliocene collision between Banggai Sula microcontinent and E Sulawesi ophiolite belt. SW-NE oriented major fault and series of SSE-NNW oblique minor fault bend folds, affectingMiocene Minahaki and Tomori fractured carbonate reservoirs)

Hasibuan, F. (2001)- *Ostrea (Turkostrea) doidoiensis* n.sp. from the Middle Eocene of Malawa Formation, South Sulawesi. Proc. 30th Ann. Conv. Indon. Assoc. Geol. (IAGI) and 10th GEOSEA Reg. Congress, Yogyakarta, p. 191-194.
(New oyster species from M Eocene Malawa Fm that unconformably overlie Late Cretaceous Balangbary flysch in Doidoi village, S of Ralla, S Sulawesi. O. (T.) doidoiensis) is from basal marine beds above the two coal beds of Malawa Fm and is associated with gastropods, solitary corals ond other bivalves)

Hasibuan, F. (2009)- Lingkungan pengendapan Formasi Malawa, Sulawesi Selatan berdasarkan kandungan makro fosil. J. Sumber Daya Geologi 19, 2, p. 95-106.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/196/188)
('Environment of deposition of the Malawa Fm, S Sulawesi based on macrofssils'. Malawa Fm with E-M Eocene palynomorphs and overlain by Tonasa Lst with Eocene Nummulites javanus. Four M Eocene stratigraphic units with molluscs, incl. Ostrea doidoiensis and Septifer. Environments mangrove swamp, fluvial, lagoon- sandbars and deltaic)

Hasibuan, F. & A. Kusworo (2008)- Umur Formasi Nambo di Sulawesi Tengah dengan acuan khusus fosil Moluska. J. Sumber Daya Geologi 18, 1, p. 43-54.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/226/216)
('Age of the Nambo Fm in C Sulawesi based on fossil molluscs'. Nambo Fm along Kali Nambo near Luwuk in E Arm of Sulawesi 50m thick calcareous shale of latest Jurassic (Tithonian) age with molluscs (Retroceramus haasti, Malayomaorica malayomaorica) and belemnites (Belemnopsis mangolensis, B. stolleyi, B. aucklandica simitis, B. moluccana, B. galoi). Similar to upper part of Buya Fm of Sula islands)

Hasibuan, F. & A. Limbong (2009)- Geologi dan paleontologi Formasi Balangbaru dan Formasi Marada berumur Kapur, Sulawesi Selatan. J. Sumber Daya Geologi 19, 6, p. 365-376.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/220/210)
('Geology and paleontology of the Cretaceous Balangbaru and Marada formations, S Sulawesi'. Balangbaru Fm Albian- Maastrichtian turbiditic series with macrofossils including echinoids, bivalve Inoceramus sp. and ammonite Grossouvreites sp.. Marada Fm partly distal equivalent of Balangbaru Fm, with Spirorhaphe trace fossil and Turonian- Late Maastrichtian nannofossil assemblages)

Hasibuan, F., Sudijono, A. Limbong, Suyoko & E.H. Nugroho (1996)- Data baru umur Formasi Nambo, Sulawesi Tengah. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 52-70.
('New data on the age of the Nambo Fm, E Sulawesi'. Late Jurassic deposits)

Hasria, A. Idrus, & I.W. Warmada (2017)- The metamorphic rocks-hosted gold mineralization at Rumbia Mountains prospect area in the Southeastern Arm of Sulawesi Island, Indonesia. J. Geoscience Engineering Environm. Technol. (JGEET) 2, 3, p. 217-223.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/434/376)
(On 'orogenic gold' in gold-bearing quartz veins in Pompangeo Metamorphic Complex of Permo-Carboniferous metasediments and mica schists at Rumbia Mountains, SE Sulawesi. Veins sheared/deformed and brecciated, 1- 15.7 cm thick. Associated with pyrite, chalcopyrite, hematite, cinnabar, stibnite and goethite. Gold also in derived placer deposits)

Helmers, H. (1991)- Sulawesi blueschists and subduction along the Sunda continent, an alternative view. In: Proc. Silver Jubilee Symposium on the dynamics of subduction and its products, Yogyakarta 1991, Indon. lnst. Science, Res. Dev. Centre for Geotechnology (LIPI), p. 220-223.
(Alternative scenario for development of 600 km long belt of blueschist (= high P- low T metamorphic continental rocks) in E Sulawesi. Blueschist metamorphism age ~28 Ma, cooling ages 22.5-16 Ma, and older than Banggai-Sula and Tukang Besi collisions. Tied to obduction related to Oligocene rotation of Borneo. Early Miocene extension enabled rise of blueschist and created Gulf of Bone- Lake Poso depressions)

Helmers, H., E.H. Hebeda & W.J. Lustenhouwer (1990)- The enigmatic relationship between subduction-caused metamorphism, ophiolite emplacement and collision in eastern Sulawesi, Indonesia. In: Orogenesis in Action: Tectonics and processes at the West Equatorial Pacific margin, Geological Society, London, p. 30. *(Abstract only)*

Helmers, H., P. Maaskant & T.H.D. Hartel (1990)- Garnet peridotite and associated high-grade rocks from Sulawesi, Indonesia. Lithos 25, p. 171-188.
(Garnet peridotite and associated granulite-facies contact rocks from along Palu-Koro strike-slip fault (uplifted lower crustal rocks))

Helmers, H., J. Sopaheluwakan, E. Surya Nila & S. Tjokrosapoetro (1989)- Blueschist evolution in southeast Sulawesi, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, p. 373-381.
(SE Sulawesi blueschists graphite-mica schists and metabasites of MORB-affinity, latter increasing to S and part of 600 km N-S belt of blueschists. After fast burial during subduction rocks recrystallized at high P (10.5 kbar)- low T ~400°C). Exhumation started immediately; rocks moved to 400°C/ 2-3 kbar on normal thermal gradient in few million years. Lack of radiometric age determinations prevents geotectonic modeling)

Hendrawan, D. (2015)- Exploration history and mineral inventory of Tombulilato Block, Gorontalo, Indonesia. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 27-33.
(*Gold-copper-silver belt of N Sulawesi Arm, an extension of Phillipine porphyry Cu-Au belt, has long exploration history since era of Dutch colonialism. Tombulilato Block I with discoveries in 3 complexes: Sungai Mak, Cabang Kiri and Pombolo. Three types of mineralization: porphyry Cu-Au, high sulphidation epithermal Cu-Au-Ag and low sulphidation epithermal Au-Ag)*

Hendrawan, D. & G.N. Putranto (2013)- The Tombulilato copper gold project in Sulawesi, Indonesia ôFacing the challenges and opportunitiesö. Proc. Symposium East Asia Geology, exploration technologies and mines, Bali, Australian Inst. Geoscientists p. 32-33. *(Extended Abstract)*
(Tombulilato district in N Sulawesi characterized by >3400m thick Late Miocene(?)- Pleistocene island arc-type volcano-sedimentary pile. Main compressional deformation event in Pliocene. Uplift and erosion removed ~2 km of rock in last 3 My and progressive unroofing of hydrothermal system. Intrusive bodies postdate folding/ thrusting. Three mineralization types in district: (1) porphyry Cu-Au (Cabang Kiri, Sungai Mak, Kayubulan Ridge, Cabang Kanan); (2) high-sulfidation epithermal Au-Cu-Ag (Motomboto, Mohutango, Ridho);(3) low-sulfidation epithermal Au-Ag (Kaidundu, Mamungaa, Pombolo, Hulapa, Ombulo, etc.))

Hendri, D. & M.C. Farmer (1997)- The discovery of the Mesel sediment hosted gold deposit, North Sulawesi, Indonesia. In: Proc. Conf. New Generation Gold Mines '99, case histories of discovery, Perth 1997, AMF, Adelaide, p. 5.1-5.13.
(Example of sediment-hosted, disseminated gold deposit in Mesel in Late Miocene limestone in N Sulawesi)

Hendri, D. & M.C. Farmer (1997)- The discovery of the Mesel sediment hosted gold deposit, North Sulawesi, Indonesia. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 119-131.
(Same as Hendri & Farmer (1997) above. Mesel sediment-hosted, disseminated gold deposit discovered by Newmont in 1988 in Ratatotok District, 70km S of Manado, N Sulawesi. Close to early 1900's Dutch alluvial gold mining operation (Mt. Totok). Gold mineralization in M Miocene limestone, intruded by porphyritic andesite, near-contemporaneous with sedimentation)

Hennig, J. (2015)- Age, origin and exhumation history of magmatic and metamorphic rocks of NW Sulawesi, Indonesia. Ph.D. Thesis, Royal Holloway, University of London, p. 1-589. *(Unpublished)*

Hennig, J., E. Advokaat, A. Rudyawan & R. Hall (2014)- Large sediment accumulations and major subsidence offshore; rapid uplift on land: consequences of extension of Gorontalo Bay and northern Sulawesi. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-304, 16p.
(Pliocene rollback of N Sulawesi subduction zone caused subsidence of Gorontalo Bay to water depths of up to 2 km and uplift of Neck and parts of C Sulawesi to 3 km. Late Miocene-Pliocene granitic and volcanic rocks in N Arm and in C Sulawesi all underwent rapid Pliocene exhumation. Neogene metamorphic core complexes in N Arm (Malino) and S of Gorontalo Bay in Tokorondo and Pompangeo Mts and suggest extensional setting. W part of Gorontalo Bay underlain by Australian continental crust added to Sundaland margin in Cretaceous. Metapelite schist and paragneiss from Palu Metamorphic Complex in S Neck of Sulawesi with Cretaceous and Eocene/Oligocene protolith ages and do not represent old Australian basement rocks. Age of deposition of Celebes Molasse at W side of Neck is Pleistocene)

Hennig, J., R. Hall & R.A. Armstrong (2016)- U-Pb zircon geochronology of rocks from west Central Sulawesi, Indonesia: extension-related metamorphism and magmatism during the early stages of mountain building. Gondwana Research 32, p. 41-63.
(online at: http://searg.rhul.ac.uk/pubs/hennig_etal_2016%20Sulawesi%20U-Pb%20zircons.pdf)
(Metamorphic and granitoid rocks from Palu Metamorphic Complex of W C Sulawesi with inherited Proterozoic-Paleogene zircons. Mesoproterozoic and Triassic inherited populations similar to New Guinea Birds Head region (and different from E Java). Some metamorphic rocks with Late Eocene zircons indicating metamorphism not older than Late Eocene, and metamorphosed in Neogene after Sula Spur collision and subsequent extension. Some metapelites of PMC with Cretaceous zircons, possibly from Sundaland (Schwaner

intrusions in Kalimantan). Widespread M Miocene- Pliocene magmatism in W C Sulawesi: (1) M Miocene-Late Miocene (~14-10 Ma?) K-rich shoshonitic suite; (2) Late Miocene-Pliocene shoshonitic to high-K calc-alkaline rocks with intermediate I-type granitoids mainly ~8.5- 5 Ma, felsic S-types ~5- 2.5 Ma. Many rims of metamorphic zircons ~3.8- 3.0 Ma (M Pliocene). Eocene zircons in some metamorphic rocks shows metamorphism of PMC metapelites younger than previously inferred; not Mesozoic or older Australian basement rocks. Co-occurrence of magmatism and metamorphism in M Pliocene during extensional phase)

Hennig, J., R. Hall, M.A. Forster, B.P. Kohn & G.S. Lister (2017)- Rapid cooling and exhumation as a consequence of extension and crustal thinning: implications from the Late Miocene to Pliocene Palu Metamorphic Complex, Sulawesi, Indonesia. Tectonophysics 712-713, p. 600-622.
(online at: http://searg.rhul.ac.uk/pubs/hennig_etal_2017%20Rapid%20cooling%20Palu%20Sulawesi.pdf)
(Metamorphic complexes form 1.5- 2km high mountains in W Sulawesi, and younger than previously thought. Some have Eocene sedimentary protoliths. Palu Metamorphic Complex strongly deformed and partially melted to migmatites. 40Ar/39Ar dating shows cooling in E Pliocene (~5.3-4.8 Ma) in N, and Late Pliocene (~3.1-2.7 Ma) in S. Intruded S-type granites similar Pliocene ages. Fast cooling and rapid exhumation in very young orogenic belt. Contemporaneous magmatism and deformation interpreted as consequence of decompressional melting due to extension. I-type magmatic rocks, separated from PMC by Palu-Koro Fault exhumed from upper crustal levels at moderate rates)

Hennig, J., R. Hall, I. Watkinson & M. Forster (2012)- Timing and mechanisms of exhumation in West Central Sulawesi, Indonesia. AGU Fall Meeting, San Francisco, T43E-2713, 1p. *(Abstract only)*
(online at: http://fallmeeting.agu.org/2012/eposters/eposter/t43e-2713/)
(Basement and intrusive rocks from NW Sulawesi record Neogene deformation, younger than expected, with rapid exhumation. C Sulawesi granitic orthogneiss with zircons with Proterozoic inherited cores and Devonian, Permo-Triassic and Jurassic zircon populations, suggesting Australian-derived terrane. Palu Metamorphic Complex basement rocks complex history of metamorphism. Pre-kinematic cordierite, etc., indicate regional high T-low P metamorphic event. Pliocene cooling age. Granites from Sulawesi Neck and mountain range W of Palu-Koro Fault mainly Late Miocene crystallisation ages (7.2 Ma, 6.4 Ma). Late-stage exhumation started in Neck in Pliocene (2.9 Ma). Magmatism, core complex exhumation and subsidence of Gorontalo Bay all related to crustal thinning due to extension driven by subduction rollback)

Hermanto, B. (2014)- Perkembangan kerangka tektonik Laut Maluku, Kepulauan Banggai-Sula dan lajur ofiolit Sulawesi Timur. J. Geologi Sumberdaya Mineral 15, 2, p. 69-74.
('Tectonic framework development of the Molucca Sea, Banggai-Sula islands and ophiolite belt in Eastern Sulawesi'. Brief review; not much new?)

Hermanto, B. (2015)- Usulan baru titik bor eksplorasi minyak dan gas bumi di lapangan Tiaka dan Senoro, cekungan Luwuk- Banggai. J. Geologi Sumberdaya Mineral 16, 1, p. 45-53.
('Proposed new oil and gas exploration drillings in Tiaka and Senoro fields, Luwuk-Banggai Basin'.)

Hermiyanto, M.H., S. Andi Mangga & Koesnama (2010)- Lingkungan pengendapan batubara Formasi Kalumpang di daerah Mamuju. J. Sumber Daya Geologi 20, 4, p. 179-187.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/171/167)
('Depositional environment of coal in the Kalumpang Formation, Mamuju area', SW Sulawesi. Kalumpang (Toraja) Fm syn-rift sediments of M-L Eocene age, with quartz sst, conglomerate, shale, claystone with alternations of coal and limestone. Coal caloric value 2480-7440 kal/gr, moisture 1.3- 6.7%, volatile matter 14.7 - 45%, sulphur 0.8-7.7%. Petrography shows vitrinite 91.6- 100%. Vitrinite reflectance (Rv-max) 0.32-0.62%. High vitrinite suggests Kalumpang coal derived from plants in humic condition (wet forest swamp))

Hetzel, W.H. (1927)- The geology of Kabaena island, Indonesia. Geol. Survey, Bandung, 24p.
(Unpublished geological survey report on island S of SE Arm of Sulawesi)

Hetzel, W.H. (1930)- Over de geologie der eilanden in de Flores-Zee. De Mijningenieur 11, 3, p. 53-56.

('On the geology of the islands in the Flores Sea'. On islands S of SW arm of Sulawesi. Jampea oldest rocks alkaline and calc-alkaline rocks, partly covered by limestone, etc.)

Hetzel, W.H. (1932)- De geologie van het eiland Wowoni. Geological Survey Bandung, p.
(Unpublished report)
('The geology of Wowoni Island'. Unpublished survey report on island off SE Arm of Sulawesi, N of Buton)

Hetzel, W.H. (1935)- Enkele kritische aantekeningen bij een recente publicatie over de geologie van den Oost arm van Celebes. De Ingenieur in Nederlandsch-Indie (IV), 4, p. 29-31.
(Brief critique of Von Loczy (1934) paper on E Sulawesi, noticing inconsistencies and unjustified conclusions)

Hinde, G. (1917)- Notes on specimens of organic rocks from Central Celebes collected by Mr. E.C. Abendanon. In: E.C. Abendanon (1917) Geologische en geographische doorkruisingen van Midden-Celebes (1909-1910), E.J. Brill, Leiden, 3, p. 953-958.
(Poorly preserved radiolaria from C Sulawesi, collected by Abendanon, interpreted as of Late Jurassic age)

Hirschi, H. (1911)- Lagerstatte von kristallisiertem Gold in einem Kalkmassiv zu Totok. Zeitschrift Praktische Geologie 29, p. 213-214.
('Deposits of crystallized gold in a limestone massif at Totok'. Gold-bearing quartz veins in Miocene limestones near Totok in the Minahassa district (NE-most N Sulawesi) caused by amphibole-andesite intrusion)

Hirschi, H. (1913)- Geologische Beobachtungen in Ost-Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 30, p. 611-618.
('Geological observations in E Sulawesi'. Summary of 1909 reconnaissance of part of Tomini Bay coastal area and traverse NW from Tomori Bay. Between Bongka Koi and Podi folded 'Celebes Molasse' with coral limestone breccias with well-preserved Lepidocyclina (suggests Celebes Molasse partly as old as Miocene, if not reworked?; JTvG). Molasse overlies serpentinized volcanics and diabase, with clasts including gabbro, serpentinite, etc.)

Hofstra, A.H. & O.D. Christensen (2002)- Comparison of Carlin-type Au deposits in the United States, China, and Indonesia: implications for genetic models and exploration. In: S.G. Peters (ed.) Geology, geochemistry and geophysics of sedimentary rock-hosted Au deposits in P.R. China, U.S. Geol. Survey (USGS) Open-File Report 02-131, Chapter 2, p. 62-94.
(online at: http://pubs.usgs.gov/of/2002/of02-131/chapters/OF02-131_chapter2.pdf)
(Includes data on Mesel Au deposit in N Sulawesi island arc setting, a 'Carlin-type' disseminated gold mineralization in M Miocene Ratatotok Limestone)

Hojnos, R. (1934)- Verslag over een micropalaeontologisch onderzoek van sedimentaire gesteenten uit Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 10, p. 291-294.
('Report on a micropaleontologic investigation of sedimentary rocks from Sulawesi'. Chapter in Von Loczy 1934 paper on thin sections DD21-DD33. White and reddish deep marine limestones from Tokala Mts/ N Boengkoe Mts in E arm of Sulawesi (called 'Boeroe Lst- Tokala Lst by Von Loczy; highly deformed, surrounding ophiolite massifs, with canaliculate belemnites in lower parts, and radiolaria of Late Jurassic and Early Cretaceous ages (NB: age interpretations questioned by Tan Sin Hok (1935), but species identified by Hojnos are indeed diagnostic of Late Jurassic- Early Cretaceous age; JTvG; (Sanfilippo and Riedel 1985, p. 576 suggest Cretaceous ages only (Neocomian and Senonian))

Hopper, R.H. (1941)- A geology reconnaissance in the east arm of Celebes and Island Peleng. Nederlandsche Pacific Petroleum Maatschappij (NNPM), p. *(Unpublished Report; 1947?)*.
(Cornee et al. 1999: Record of E Jurassic ammonite Harpoceras cf. toarcense in E Arm of Sulawesi)

Hornaday, W.T., R.A. de Boer, J.N. Grant, N. Nastiti & P. Astono (1996)- Sengkang Basin (SW Sulawesi). In: Pertamina/BPPKA (eds.) Petroleum geology of Indonesian basins, VII, Jakarta, p. 1-34.

(Overview of the mainly Neogene Sengkang Basin of SW Sulawesi. With series of Eocene- Pliocene paleogeographic maps of SW Sulawesi)

Hotz, W. (1913)- Vorlaufige Mitteilung uber geologische Beobachtungen in Ost-Celebes. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 65, Monatsberichte 6, p. 329-334.
(online at: https://www.biodiversitylibrary.org/item/37576page/337/mode/1up)
('Preliminary note on geological observations in E Sulawesi'. Summary of 1912 survey for 'Nederl. Maatschappij Mijnbouwkundige Werken' in southern coastal area of East arm of Sulawesi. First report of Mesozoic rocks in East arm of Sulawesi: probably Jurassic-age blue-grey marls with common belemnites near Lontio village, probably in core of anticline in area dominated by Tertiary beds. Upper Bongka River near drainage divide red cherty limestones and Nummulites limestones. Age of gabbro and peridotitic rocks relatively young?)

Hovig, P. (1918)- Contactmetamorfe ijzerertsen aan de Salo Talimbangan en de Salo Pebatoean (Centraal Celebes). Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 2, p. 25-38.
('Contactmetamorphic iron ores along Talambingan and Pebatoean rivers (C Sulawesi)'. Granodioritic intrusive into probably Eocene age interbedded shale-limestone, with magnetite-hematite mineralization in limestones of contact zone, 12 km from Rante Pao)

Hufenbach, C. (1992)- Petrogenetische und Tektonische Entwicklung des Ophiolith-Komplexes von Ost-Sulawesi, ein Beispiel fur die Obduktion ozeanischer Kruste. Doct. Thesis Georg-August University, Gottingen, Germany, p. 1-120. *(Unpublished)*
('Petrogenetic and tectonic development of the ophiolite complex of East Sulawesi; an example of obduction of oceanic crust')

Husein, S., M.I. Novian & D.H. Barianto (2014)- Geological structures and tectonic reconstruction of Luwuk, East Sulawesi. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-137, 16p.
(Luwuk area at E end of East Arm of Sulawesi, where E Sulawesi Ophiolite Complex thrusted S-ward over Banggai-Sula microcontinent in Neogene. C part of E Sulawesi Arm is compressional, Pliocene, thin-skinned NW-verging fold- thrust belt with common Eocene-M Miocene carbonates. In ophiolite complex at N side (facing Tomini Gulf) extensional, block-faulting tectonic regime (Plio-Pleistocene relaxation of earlier compressive phase) (NB: suggested NW vergence of thrust belt is opposite of suggested by all previous workers; No documentation for age control of stratigraphy and tectonic events; No mention of Kundig (1956) work in same area; JTvG))

Hutubessy, S. (2003)- Pola cekungan dan struktur bawah permukaan di Sulawesi dan sekitarnya berdasarkan analisis data gayaberat. J. Geologi Sumberdaya Mineral 13, 135, p. 24-39.
('Basin patterns and deep structure of Sulawesi and surroundings based on analysis of gravity data'. Gravity patterns interpretation of E Sulawesi.)

Iddings, J.P. & E.W. Morley (1915)- Contributions to the petrography of Java and Celebes. J. Geology 23, p. 231-245.
(Brief petrographic and geochemical analyses of lavas and crystalline rocks of Bulu Saraung (Maros Peak), SW Sulawesi and Pleistocene Muria volcano NE Java)

Iddings, J.P. & E.W. Morley (1917)- A contribution to the petrography of Southern Celebes. Proc. National Academy Sciences USA 3, 10, p. 592-597.
(Additional brief descriptions and chemical analyses of igneous rocks from SW Sulawesi)

Idrus, A., Fadlin, S. Prihatmoko, I.W. Warmada, I. Nur & F.M. Meyer (2012)- The metamorphic-rock hosted gold mineralization at Bombana, Southeast Sulawesi: a new exploration target in Indonesia. J. Sumber Daya Geologi 22, 1, p. 35-48.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/105/97)

(Placer gold discovered in Bombana, SE Sulawesi not associated with volcanic rocks, but possibly derived from quartz veins hosted by Mesozoic Pompangeo Metamorphic Complex of N Rumbia Mts mica schists, etc.. Three generations of veins identified. Gold mainly as 'free gold' among silicate minerals. May be called 'orogenic gold', and may have formed at 5km depth)

Idrus, I., A. Imai, A. Makkawaru, Kamrullah, I.W. Warmada, I. Nur & R. Langkoke (2009)- Preliminary study on orogenic deposit type as a source of placer gold at Bombana, Southeast Sulawesi, Indonesia. Proc. Int. Symp. on Earth Science and Technology, Fukuoka 2009, p. 569-572.
(Gold deposits in Indonesia generally in volcanic-related hydrothermal deposits, but recent SE Sulawesi placer gold discoveries tied to gold-bearing quartz veins in metamorphic rocks. Such veins recognized in metamorphic rocks at Wumbubangka Mt (N flank Rumbia Mts) and in Mendoke Mts. (N of Langkowala). These gold deposits classified as ‘orogenic gold type')

Idrus, A., S. Mansur, Ahmad, Rahmayuddin & Abdul (2016)- Occurrences and characteristics of gold mineralization in Rampi Block prospect, North Luwu Regency, South Sulawesi Province, Indonesia. J. Applied Geology (UGM) 1, 2, p. 63-70.
(online at: https://journal.ugm.ac.id/jag/article/view/26962)
(Quartz ± gold veins in Rampi block prospect mainly hosted by metamorphic and metasedimentary rocks of Latimojong Fm and Pompangeo metamorphic complex. Orientation and distribution of veins controlled by NW-SE and NE-SW trending structures. Orogenic/mesothermal gold type, with similarities to Awak Mas mesothermal prospect in Luwu district)

Idrus, A., I. Nur, I.W. Warmada & Fadlin (2011)- Metamorphic rock-hosted orogenic gold deposit type as a source of Langkowala placer gold, Bombana, Southeast Sulawesi. J. Geologi Indonesia 6, 1, p. 43-49.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/301)
(Same paper as Idrus, Warmada et al. 2010)

Idrus, A. & S. Prihatmoko (2011)- The metamorphic-hosted gold mineralization at Bombana, Southeast Sulawesi: a new exploration target in Indonesia. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 243-258.
(Bombana area 'orogenic' gold deposits, hosted in mica schists of Carboniferous-Permian Pompangeo Metamorphic Complex)

Idrus, A., S. Prihatmoko, E. Harjanto, F.M. Meyer, I. Nur, W. Widodo & L.N. Agung (2016)- The metamorphic rock-hosted gold mineralization at Bombana (Southeast Sulawesi) and Buru Island (Maluku): their key features and significances for gold exploration in Eastern Indonesia. Proc. 8th Ann. Conv. Indonesian Soc. Economic Geol. (MGEI), Bandung, p. 80-87.
(Examples of metamorphic rock-hosted 'orogenic' gold mineralization in Bombana (Rumbia Mts, SE Sulawesi; gold-bearing quartz veins in Pompangeo metamorphics) and NE Buru Island (quartz veins in Permo-Carboniferous Wahlua mica schists))

Idrus, A., S. Prihatmoko, E. Harjanto, F.M. Meyer, I. Nur, W. Widodo & L.N. Agung (2017)- The metamorphic rock-hosted gold deposit style at Bombana (Southeast Sulawesi) and Buru Island (Maluku): their key features and significances for gold exploration in Eastern Indonesia. J. Geoscience Engineering Environm. Technol. (JGEET) 2, 2, p. 124-132.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/291/130)
(same as Idrus et al. 2016)

Idrus, A., Sufriadin & I. Nur (2011)- Hydrothermal ore mineralization in Sulawesi: a view point of tectonic setting and metallogenesis. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-298, 12p.
(Review of the potential and metallogenesis of hydrothermal-related ore deposits, particularly along Neogene magmatic arc of W Sulawesi and Paleozoic metamorphics-hosted arm of SE-Central Sulawesi. W Sulawesi 3 magmatic provinces, each with different magmatic and mineralization characteristics: (1) S Sulawesi with K-alkaline shoshonitic affinity and mainly Pb-Zn-Cu base metal in epithermal veins; (2) C Sulawesi with high-K

calc-alkaline affinity and porphyry Mo mineralization; (3) N Sulawesi-Sangihe island arc with low-K-normal calc-alkaline affinity and porphyry Cu-Au and other Au deposits)

Idrus, A., I.W. Warmada, I. Nur, Sufriadin, A. Imai, S. Widasaputra, S.I. Marlia, Fadlin & Kamrullah (2010)- Metamorphic rock-hosted gold deposit type as a source of Langkowala placer gold, Bombana, Southeast Sulawesi, Indonesia. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-068, 7p.
(Placer gold discovered in 2008 in Langkowala area, SE Sulawesi, interpreted derived from 'orogenic gold': sheared gold-bearing quartz veins, hosted by metamorphic rocks (mica schist, metasediment of Pompangeo Complex in Wumbubangk- Rumbia Mts to S). At least two generations of veins. Similar quartz veins probably in Mendoke Mts at N side of Langkowala area)

Ilhami, A.S. (2012)- Provenance and sedimentology study of Mesozoic clastic sandstone of Meluhu Formation, Southeast Arm of Sulawesi, Eastern Indonesia. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-20, 5p.
(Late Triassic fluvial-deltaic Mehulu Sst of SE Sulawesi underlain by metamorphic rocks and unconformably overlain by Paleogene Tampakura Fm carbonates. Petrography shows litharenite, sublitharenite and quartz arenite with average composition of 65% monocrystalline quartz (some with metamorphic undulose extinction, but also likely volcanic provenance), 12% polycrystalline quartz, 16% rock fragments, 1.5% feldspar, some muscovite and heavy minerals (tourmaline, zircon). Lithics dominated by metamorphic rock fragments, indicating source area dominated by metamorphic basement)

Ilyas, A., K. Kashiwaya & K. Koike (2016)- Ni grade distribution in laterite characterized from geostatistics, topography and the paleo-ground water system in Sorowako, Indonesia. J. Geochemical Exploration 165, p. 174-188.
(Modeling of N-content suggests that highest grade zones are concentrated below slopes in 5-19° range)

Ilyas, A. & K. Koike (2012)- Geostatistical modeling of ore grade distribution from geomorphic characterization in a laterite nickel deposit. Natural Resources Res. 21, 2, p. 177-191.
(Modeling of Ni grade in laterite Ni deposit in Sorowako, East C Sulawesi. Maximum Ni grade in saprolite zone in areas of slight slope. Ni accumulation probably originates from deep weathering by groundwater infiltrating through rock fractures)

Imran, A.M. (2000)- Microfacies and diagenesis of the Tertiary Selayar Limestone (Walanae Formation), South Sulawesi, Indonesia. Doct. Thesis, University of Erlangen-Nurnberg, p. 1-187. *(Unpublished)*

Imran, A.M., M. Farida, M.F. Arifin & R. Husain, (2015)- Pleistocene coral reef facies in Bira, South Sulawesi. Int. J. Engineering and Science Applications (UNHAS) 2, 2, p. 183-189.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/163/118)
(Pleistocene raised reef terrace with reef front, reef core and back reef facies in Bira area at SE tip of S Arm Sulawesi. Part of complex of four seaward-young narrow terraces of U Miocene-Pleistocene 'Selayar Limestone', reflecting uplift of area (Bone Bay rift shoulder?; JTvG))

Imran, A.M., Kaharuddin M.S., D.A. Suriamihardja & H. Sirajuddin (2013)- Geology of Spermonde Platform. Proc. 7th Int. Conf. on Asian and Pacific Coasts (APAC 2013), Bali 2013, p. 1062-1067.
(online at: http://repository.unhas.ac.id/bitstream/handle/123456789/11699/171.CR%2003.pdf?sequence=1)
(Mainly review of setting for development of Quaternary reef complexes on Spermonde Platform along Makassar Straits, off SW Sulawesi since sea level rise of ~7000 years ago (mainly based on De Klerk 1982))

Imran, A.M. & R. Koch (2006)- Microfacies development of the Selayar Limestone, South Sulawesi. Proc. 35th Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-028, 8p.
(Four stages of development in Late Miocene- Pliocene Selayar Limestone in SE Bulukumba area of SW Sulawesi, ~200 km SE of Makassar. Oldest unit B1 is Late Miocene Amphistegina- Cycloclypeus foram limestone that forms knoll reefs. Three younger units (Pliocene- Pleistocene) form terraces, reflecting Plio-Pleistocene uplift, composed of coral reef and Halimeda algal grainstone facies)

Imran, A.M. & R. Koch (2008)- Marine diagenetic history of the Selayar Limestone, South Sulawesi. Jurnal Inform. Tekn. 14, 2, p. 109-117.
(Common marine radial fibrous calcite cement in Late Miocene- Pleistocene Selayar Limestone)

International Nickel Indonesia (1972)- Laterite deposits in the south-east arm of Sulawesi. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung 4, 1, p. 37-57.
(PT INCO review of principal occurrences of nickeliferous laterite in E Sulawesi, which coincide with two NW trending belts of ultrabasic rocks and derived sediments: (1) SW belt from Sua-Sua through Pomalaa and Torobulu to Wowoni Island and (2) NE belt from Malili and Kolonodale at N end of E Arrm to Lasolo on E Coast. Nickeliferous laterite on undulating, somewhat dissected plateaus of low relief; rugged areas have little or no laterite cover)

Irfan, U.R., M.S. Kaharuddin, Budiman & H. Umar (2014)- Analisis litofasies batuan vulkanik Pare-Pare di daerah Lumpue Sulawesi Selatan. Proc. 43st IAGI Ann. Conv. Exhib., Jakarta, 5p.
('Lithofacies analysis of Pare-Pare volcanic rocks in the Lumpue area of South Sulawesi'. Rock types of latest Miocene- earliest Pliocene (~4-7 Ma) Pare-Pare volcanic deposits)

Irfan, U.R., I. Nur & M. Kasim (2017)- Hydrothermal alteration mineralogy associated with gold mineralization in Buladu area, Northern Sulawesi, Indonesia. Int. J. Advanced Science Engineering Information Techn. 7, 6, p. 2244-2250.
(online at: http://www.insightsociety.org/ojaseit/index.php/ijaseit/article/view/3837/pdf_606)
(Gold-quartz veins in Buladu gold prospect, in Miocene Wobudu volcanic breccia in in N Sulawesi magmatic arc)

Irzon, R. (2017)- Pengayaan logam berat Mn, Co, dan Cr pada laterit nikel di Kabupaten Konawe Utara, Provinsi Sulawesi Tenggara. Bul. Sumber Daya Geologi 12, 2, p. 71-86.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
('Heavy metal enrichment of Mn, Co, and Cr in nickel laterite in North Konawe Regency, SE Sulawesi'. Weathering of ultramafic rock causes Mn, Co and Cr enrichment mostly in laterite, whilst Ni concentrated in transitional bedrock. Highest REE concentrations in lateritic horizon)

Irzon, R. & Baharuddin (2016)- Geochemistry of ophiolite complex in North Konawe, Southeast Sulawesi. Eksplorium 37, 2, p. 101-114.
(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/2868/pdf)
(Geochemistry of N Konawe ultramafic rocks suggest origin in arc tholeiitic tectonic environment setting. SiO2 38.5- 41%, etc. Emplaced in E Cretaceous, unconformably overlain by Late Cretaceous Matano Fm)

Jablonski, D., P. Priyono, S. Westlake & O.A. Larsen (2007)- Geology and exploration potential of the Gorontalo Basin, Central Indonesia- Eastern extension of the North Makassar basin? Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, G-083, p. 197-223.
(Seismic in Gorontalo basin S of N arm of Sulawesi suggests basin underlain by Eocene rift grabens. Active petroleum system suggested by E-W depocentres, locally >10 km thick, mostly S-ward focused hydrocarbon migration, onshore oil seeps along S edge of basin and AVO anomalies. Potential plays: (1) Older blocks associated with Australian plate rifting and Cretaceous collision with Borneo; (2) Eocene rift fault-blocks; (3) Oligocene-M Miocene platform carbonates; (4) Late Miocene-Pliocene build-ups; (5) Late Miocene- Recent lowstand deltas and turbidites; (6) Late Miocene-Recent compressional folds associated with collision of Sundaland with Australian plate)

Jaya, A. (2001)- Sequence stratigraphy of the Tonasa Limestone, Ralla Section, South Sulawesi. J. Penelitian Enjiniring (JPE), Hasanuddin University, 8, 1, p. 59-68.

Jaya, A. (2006)- Facies and sedimentary environment of Camba Formation, Dutungan area, South Sulawesi. J. Penelitian Geosains (Hasanuddin University, Makassar) 2, 3, p. 243-256.

Jaya, A. (2014)- Tectonic evolution of South Sulawesi, Indonesia: reconstructed by analysis of deformation structures. Doct. Engin. Thesis, Dept. Engineering and Resource Science, Akita University, Japan, p. 1-148.
(online at: air.lib.akita-u.ac.jp/dspace/bitstream/10295/2714/1/kouhakuotsu634.pdf)
(Biru Metamorphic Complex E of Makassar, S Sulawesi mainly epidote-amphibolite and amphibolite facies metamorphics from mid-oceanic ridge and calc-alkali basalts and island-arc tholeiite protoliths. E Cretaceous K-Ar age (109 ± 2.4 Ma) indicates metamorphism of Biru Complex coeval with Bantimala Complex and Barru Block. NE-SW striking/ S/SE-dipping schistosities also similar to Barru Block, despite different lithologic associations. Emplacement of Biru granodiorite in E-M Miocene. E Walanae Fault stress generated by collision of Sulawesi with Australian fragments since Late Miocene, continuing to present-day)

Jaya, A. & O. Nishikawa (2011)- Deformation microstructures of metamorphic rocks in the Biru area South Sulawesi. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-175, 10p.
(Biru metamorphic rocks in Biru area, S Sulawesi adjacent to W Walanae Fault (WWF). Rocks mainly metabasite, adjacent to Cretaceous Marada Fm sediments. Higher greenschist-amphibolite metamorphic grade. Multiple deformation phases. Schistosity dips 15-52° to SE. Two groups of fold structures: SSW trending tight fold (F1) and ENE-WSW trending gentle-open fold (F2)).

Jaya, A. & O. Nishikawa (2011)- Microstructure deformation of metamorphic rocks in the Biru area, South Sulawesi, Indonesia. Majalah Geologi Indonesia (IAGI) 26, 1, p. 19-28.
(online at: http://repository.unhas.ac.id/handle/123456789/12490)
(Small exposure of metamorphic rocks in Biru area, S Sulawesi, adjacent to prominent topographic lineament along W Walanae Fault and Cretaceous sedimentary rocks (Marada Fm). Mainly metabasite of higher greenschist- amphibolites metamorphic facies. Deformation in metamorphic rocks may be connected to W Walanae Fault or M Miocene regional extension during uplift of western mountain range)

Jaya, A. & O. Nishikawa (2013)- Paleostress reconstruction from calcite twin and faulteslip data using the multiple inverse method in the East Walanae fault zone: implications for the Neogene contraction in South Sulawesi, Indonesia. J. Structural Geol. 55, p. 34-49.
(Stress states caused by collision of SE margin of Sundaland with Australian microcontinents during Pliocene detected from combination of calcite-twin data and fault-slip data. Pliocene NE-SW to-E-W directed compression activated E Walanae fault zone in S. Sulawesi as reverse fault, with dextral component of slip with pervasive development of secondary structures in zone between Bone Mts and Walanae Depression)

Jaya, A. O. Nishikawa & Y. Hayasaka (2017)- LA-ICP-MS zircon U-Pb and muscovite K-Ar ages of basement rocks from the south arm of Sulawesi, Indonesia. Lithos 292-293, p. 96-110.
(Ages of detrital zircons in Bantimala Complex and muscovite K-Ar of amphibolite in Biru Complex 109-115 Ma. Youngest detrital zircon in schist from Barru Complex Triassic (243-247 Ma). Age data indicate protoliths of S Sulawesi basement complexes involved in subduction system and metamorphosed in late E Cretaceous. Felsic igneous intrusive rocks intruding of Late Cretaceous and Eocene ages, similar to Meratus Complex of S Kalimantan. Detrital zircon age distributions of basement rocks supporting W Sulawesi block origin from circum Bird's Head-Australia (Inner Banda block). Absence of Jurassic zircon age population in S Arm of Sulawesi. W Sulawesi composed of several blocks separated from Inner Banda block with different histories)

Jaya, A. & D.R. Salamba (2014)- Studi struktur makro (mesoscale structure) batuan metamorf daerah Barru Provinsi Sulawesi Selatan. Pros. 2014 Seminar Penelitian Teknologi Terapan 2014 (8), Hasanuddin University, Makassar, p. TG3-1- TG3-8.
(online at: http://repository.unhas.ac.id/handle/123456789/16802)
(' Study of the macrostructure (mesoscale structure) of metamorphic rocks in the Barru region, S Sulawesi'. Barru metamorphic block composed of low- moderate grade metamorphic rocks, with foliation generally NE-trending and tilting to SE. Two main stretching directions i.e., SE-NW-trending and NE-SW-trending, both plunging to W. Fault low angle dip-slip or thrust and horizontal movement or strike-slip. Locally high angle dip-slip faults. Folds formed earlier than faults)

Jaya, A., A.I.S. Simalango & A. Maulana (2015)- Struktur dan deformasi batuan metamorf daerah Paboya Provinsi Sulawesi Tengah. J. Penelitian Geosains (Hasanuddin University) 11, 1, p. 35-41.
(online at: http://repository.unhas.ac.id/handle/123456789/16801)
('Structure and deformation of metamorphic rocks in the Poboya region of Central Sulawesi province'. Poboya/ E Palu District in 'neck' of Sulawesi with outcrops of molasse sediments, gneiss and biotite schist. Folding and post-Tertiary horizontal faulting. Quartz crystal orientations and porphyroblasts in amphibolite-greenschist facies indicate formation at low-medium T (300-700°C) and P <1 Gpa, during syn-tectonic sinistral shear, related to Palu-Koro regional fault)

Jaya, A., Sufriadin & I. Nur (2011)- A short note on sedimentary rocks of the Barru Area, South Sulawesi. Berita Sedimentologi 22, p. 9-14.
(online at: www.iagi.or.id/fosi/files/2011/10/...)
(On Late Cretaceous-Tertiary stratigraphy of Barru area, SW Sulawesi, ~120km N of Makassar. Three measured sections at SE side of Barru basement complex, with M Eocene Malawa Fm fluvio-deltaic clastics, M-Late Eocene Tonasa Fm mixed clastics and redeposited carbonates, Mio-Pliocene Camba Fm deeper marine volcanoclastics)

Jezek, P.A., D.J. Whitford & J.B. Gill (1981)- Geochemistry of recent lavas from the Sangihe- Sulawesi arc. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 383-389.
(Sangihe Arc stretches from NE of Sulawesi to N, at W side Molucca Sea. 130-180 km above W dipping Benioff zone that extends to 650 km depth. S sector mainly olivine basalts and pyroxene andesite, N part more hornblende andesites. No evidence of involvement of sediments in lavas)

Jugovics, L. (1940)- Der granodiorit von Gorontalo auf Nordcelebes. Foldtani Kozlony 70, 7-9, p. 163-176 and p. 222-231.
(online at: http://real-j.mtak.hu/8885/4/Foldtani_Kozlony_1940_70_7-9.pdf)
('The granodiorite of Gorontalo on North Sulawesi'. Description of granodiorite collected by L. von Loczy in 1928 at the port of Gorontalo, N Sulawesi)

Jugovics, L. (1950)- Beitrage zur Kenntnis der Gesteine von Ost-Celebes. Geologica Hungarica, Ser. Geol. 8, p. 1-112.
(online at: http://epa.oszk.hu/02900/02986/00010/pdf/EPA02986_geologica_hungarica_ser_geol_1950_08_015-112.pdf)
('Contributions to the knowledge of rocks from East Sulawesi'. Descriptions of igneous rocks collected by Loczy in 1928. Mainly ophiolitic igneous rocks (gabbro, hartzburgite, serpentinite), some metamophics and volcanics)

Jurkovic, I. & I.B. Zalokar (1990)- The copper deposit of Batu Marupa in Central Sulawesi, Indonesia. Rudarsko Geol. Naftni Zbornik 2, Zagreb, p. 29-33.
(Brief description of small abandoned copper mines, exploited by Japanese in WWII in central West Sulawesi)

Kadar, A.P. & Sudijono (1993)- Biostratigrafi fosil nanno Tersier Tengah Formasi Tonasa (Penampang Rala), Sulawesi Selatan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1100-1113.
('Biostratigraphy of Middle Tertiary nannofossils in the Tonasa Formation (Rala Section), South Sulawesi'. Nannofossils from lower Tonasa Fm show Late Eocene (NP18-NP20)- Early Oligocene (NP21-NP23) ages. Calciturbidites in Late Eocene (NP20) with larger foraminifera Discocyclina, Pellatispira, etc.. In E Ologocene zone NP23 olistostrome bed with reworked Eocene larger forams)

Kadarusman, A. (2011)- Basement rocks of Sulawesi and their contribution to the metallogenic formation. In: N.I. Basuki (ed.) Proc. Sulawesi Minerals Resources, Manado 2011, Indon. Soc. Econ. Geol. (MGEI) - IAGI, p. 121-130.

(Sulawesi five basement types (1) accretionary-collision complex (Bantimala and Barru Complex in SW arm), (2) metamorphic rocks with continental margin parentage (metamorphic complexes in W, NW, C and SE Sulawesi), (3) ophiolitic rock and oceanic crust (E and N arm, respectively), (4) melange or broken formation (C part), (5) continental granitic basement (Banggai-Sula and Tukang Besi). All basements Mesozoic in age; some metamorphic rocks have Paleozoic protoliths)

Kadarusman, A., H.K. Brueckner, H. Yurimoto, C.D. Parkinson & S. Maruyama (2001)- Geochemistry and Sm-Nd dating of garnet peridotites from Central Sulawesi, and its implication to the Neogene collision complex in Eastern Indonesia. American Geophys. Union (AGU), Fall Meeting 2001, T52D-08, 1p. *(Abstract only)*
(Small garnet-bearing peridotites on Sulawesi in two regions in strike-slip fault zones: Palu-Koro fault zone and right-lateral Ampana fault in Bongka river valley juxtaposed against E Sulawesi ophiolite. P-T time plot suggests prograde subduction zone peridotite. Sm-Nd ages 27-20 Ma. 27 Ma probably peak metamorphism and 20 Ma cooling age. Ultramafic rocks most likely metamorphosed to garnet- assemblages during Late Oligocene- E Miocene continent-continent collision in C Sulawesi. Due to buoyancy peridotites uplifted within Neogene metamorphic complex)

Kadarusman, A., S. Miyashita, S. Maruyama & A. Ishikawa (2002)- The East Sulawesi Ophiolite: the accreted Cretaceous huge ophiolite massif formed by Southwest Pacific superplume. Abstract Superplume Workshop, Tokyo, 4p.
(online at: http://192.129.24.144/licensed_materials/10069/free/conferen/superplu/..)
(Ophiolite complexes of W and C Indonesia (i.e. Java, Kalimantan) of Tethyan provenance, those in E Indonesia probably parts of Circum-Pacific ophiolite belt. E Sulawesi Ophiolite tectonically dismembered, >15 km thick ophiolite sequence from mantle peridotite to mafic cumulate, gabbro, sheeted dolerites and basaltic volcanics. Geochemistry suggests oceanic plateau origin, may have originated in SW Pacific Superplume. Ages Paleogene (60-32 Ma; termination of generation of oceanic lithosphere?) and Cretaceous (79-137 Ma; first generation of oceanic lithosphere?). Obduction onto Sundaland ~30 Ma (age of metamorphic sole))

Kadarusman, A., S. Miyashita, S. Maruyama, C.D. Parkinson & A. Ishikawa (2004)- Petrology, geochemistry and paleogeographic reconstruction of the East Sulawesi ophiolite, Indonesia. Tectonophysics 392, p. 55-83.
(E Sulawesi Ophiolite (ESO) tectonically dismembered and widely distributed in C and E Sulawesi. Comprises, from base: mantle peridotite, gabbro, sheeted dolerites and basaltic volcanic rocks. Possible oceanic plateau origin (15 km thick). Possible Cretaceous origin of oceanic plateau component indicated on basis of calculated paleopositions using plate trajectory analyses together with published paleolatitude data)

Kadarusman, A. & C.D. Parkinson (2000)- Petrology and P-T evolution of garnet peridotites from Central Sulawesi, Indonesia. J. Metamorphic Geol. 18, 2, p. 193-209.
(Alpine-type garnet-bearing peridotites associated with E Cretaceous (140-115 Ma) quartzo-feldspathic gneisses of in two areas of Sulawesi (Palu-Koro fault and outcrops juxtaposed against gabbros and peridotites of E Sulawesi ophiolite in right-lateral Ampana fault). Final exhumation from upper crustal levels facilitated by entrainment in Neogene granitic plutons, and/or Oligocene transtension in deep-seated strike–slip fault zones)

Kadarusman, A., T. van Leeuwen & R. Soeria-Atmadja (2005)- Discovery of eclogite in the Palu region of Central Sulawesi and its implication for the tectonic evolution of Sulawesi. Majalah Geologi Indonesia (IAGI) 20, 2, Spec. Ed., p. 80-89.
(Eclogite and other high-grade metamorphic rocks in float in Palu-Koro fault valley. Proposed history: (1) Early Tertiary conversion of oceanic lithosphere into eclogite after subduction to ~60km below Sundaland; (2) Late Oligocene- Early Miocene collision between microcontinent and Sundaland margin incorporated eclogite fragments into upper plate; (3) latest Miocene- Pliocene rapid uplift after Banggai-Sula collision)

Kadarusman, A., T. van Leeuwen & J. Sopaheluwakan (2011)- Eclogite, peridotite, granulite and associated high-grade rocks from the Palu region, Central Sulawesi, Indonesia: an example of mantle and crust interaction in a young orogenic belt. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-379, 10p.
(Palu region of C Sulawesi part of collision zone with peridotites and high-grade metamorphic rocks (eclogite, granulite). Formed at great depth during collision event between Sundaland and underthrusted Australian

continental fragment sometime in Late Eocene- E Miocene. Radiometric ages of Palu Metamorphic Complex two groups: Mesozoic (144-73 Ma) and Late Miocene-Pliocene (6-2 Ma). Younger ages probably overprint of widespread young granite magmatism)

Kaharuddin, M. (2010)- Perkembangan tektonik dan stratigrafi Kompleks Bantimala, Sulawesi Selatan. Pros. Hasil Penelitian Fakultas Teknik Unhas 4, p. TG 5-1-TG5-9.
('Tectonic and stratigraphic development of the Bantimala Complex, South Sulawesi')

Kaharuddin M.S., A.M. Imran. C.I. Abdullah & A. Jaya (2017)- Olistostrome and the Mesozoic tectonic of the Bantimala Complex, South Sulawesi. Sriwijaya Int. Conf. Engineering Science Technology (SICEST), Bangka 2016, MATEC Web of Conferences 101, 04011, 6p.
(online at: www.matec-conferences.org/articles/matecconf/pdf/2017/15/matecconf_sicest2017_04011.pdf)
(On schist breccias between mid-Cretaceous radiolarian cherts and underlying Bantimala metamorphic rocks. Poorly sorted polymict olistholits (schist, gneiss, also serpentinite-jadeite) in sandy matrix. Interpreted as olistostrome deposited in subduction trench)

Kaharuddin M.S., A. Jaya & H. Sirajuddin (2015)- Olistostrome dan batu mulia kompleks tektonik Bantimala, Kabupaten Pangkajene dan kepulauan, Provinsi Sulawesi Selatan. Proc. 24th TPT and 9th Congress Assoc. Indonesian Mning Professionals (PERHAPI), Jakarta 2015, p. 65-76.
(online at: http://repository.unhas.ac.id/bitstream/ ....)
('Olistostrome and precious stones in the Bantimala tectonic complex, Pangkajene District, S. Sulawesi'. Bantimala Complex composed of metamorphic rocks such as glaucophane schist, hornblende mica schist, eclogite, granulite, phyllite and metaquartzite of Triassic age. Olistostrome components schist, quartzite, metachert, jadeite, Jurassic-Cretaceous metaperidotite and Cretaceous sediments (flysch, shale, sandstone, mudstone and radiolarian chert). Basement contains precious stones like agate, jade, turquoise, etc.)

Kaharuddin M.S., A. Tonggiroh & H. Sirajuddin (2014)- Olistostrome dan obduksi ofiolit Lasitae, Kabupaten Barru, Provinsi Sulawesi Selatan. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-075, 8p.
('Olistostrome and ophiolite obduction, Lasitae, Barru, S Sulawesi Province'. Polymict and limestone breccia olistostrome sediments exposed along Barru River (± 3 km), N of (and overthrust by?) schist-ophiolite complex. Composed of blocks of dacite, peridotite, Malawa sst, coal and silicified Eo-Oligocene Tonasa Lst with Nummulites. Four members in olistostrome, with tuffaceous marls in upper part. Formation of olistostrome most likely in Late Oligocene, at edge of shallow sea basin, and tied to obduction of Lasitae ophiolite)

Katili, J.A. (1970)- Additional evidence of transcurrent faulting in Sumatra and Sulawesi. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 3, 3, p. 15-28.

Katili, J.A. (1977)- Past and present geotectonic position of Sulawesi, Indonesia. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 317-332.
(Early plate tectonic model for Sulawesi, proposing Sulawesi- Kalimantan collision in Early Pliocene, followed by post-Pliocene Makassar Straits extension. Timing of various events described no longer current; JTvG)

Katili, J.A. (1978)- Past and present geotectonic position of Sulawesi, Indonesia. Tectonophysics 45, p. 289-322.
(Outdated overview of events shaping Sulawesi geology: Banda Sea= trapped old Indian Ocean crust, Sulawesi Sea= old trapped Pacific crust, opening of Makassar Straits in Quaternary, etc.)

Katili, J.A., L. Kartaadiputra & Surio (1963)- Magma type and tectonic position of the Una-Una Island, Indonesia. Bull. Volcanology 26, 1, p. 431-454.
(Una-Una rocks differ from other volcanoes in Indonesia: K-rich, medium alkaline, transitional between trachytes and andesites. Volcano lies outside orogenic belt, probably at intersection of two basement fissures of NE-SW and SE-NW directions. Extinct volcanism in Togean ridge. Known eruption in 1898, earthquake in 1960 (and major eruption in 1983; Katili & Sudradjat 1984))

Kavalieris, I. (1984)- The geology and geochemistry of the Gunung Pani gold prospect, North Sulawesi. M.Sc. Thesis, Australian National University (ANU), Canberra, p. 1-224 + Appendices
(online at: https://openresearch-repository.anu.edu.au/handle/1885/9263)
(Study of Gunung Pani gold prospect near Marisa village, N Sulawesi, initially surveyed in 1920's. Gold mineralization low grade, large tonnage gold resource, hosted in intrusive porphyritic rhyodacites and pyroclastics of Pliocene- Pleistocene Pani Volcanic Complex. Geochemically Pani Volcanics best compared to rocks from continental margin tectonic settings)

Kavalieris, I., T.M. van Leeuwen & M. Wilson (1992)- Geological setting and styles of mineralisation, North arm of Sulawesi, Indonesia. J. Southeast Asian Earth Sci. 7, p. 113-129.
(Sulawesi N arm Neogene island arc on Paleogene volcanic-sedimentary basement, underlain by oceanic crust. Sulawesi neck metamorphic rocks and felsic granitoids belong to Sundaland continental margin. N Sulawesi Arc two stages, separated by gap 13- 9.5 Ma, reflecting collision of N arm with Sula Platform microcontinent in M Miocene. E Miocene calc-alkaline arc due to W-directed subduction. Arc-continent collision resulted in back-arc thrusting, clockwise rotation of N arm, and inception of subduction along N Sulawesi Trench. Post-collisional magmatism in N Sulawesi Arc produced felsic-mafic volcanic suites related to rifting of former arc rather than subduction. Sulawesi Neck Dondo suite potassic granites of continental affinity. N arm rel. well mineralized. Porphyry Cu-Au mineralization at ~2-4 Ma in oceanic terrane following collision-related arc reversal and Mo mineralization in continental terrane that underwent lower crustal melting during extension following same collision. Cogenetic granites exposed over 5000 km2 and intruded in arcuate belt, more than 400 km long, parallel to Sula Platform collision zone)

Kavalieris, I., J.L. Walshe, S. Halley & B.P. Harrold (1990)- Dome-related gold mineralization in the Pani Volcanic complex, North Sulawesi, Indonesia: a study of geologic relations, fluid inclusions and chloritic compositions. Economic Geology 85, p. 1208-1225.
(Gold mineralization at Gunung Pani prospect near Marisa, N Sulawesi. related to Miocene or younger rhyodacitic volcanic center, which overlies and partly intrudes hornblende-biotite granodiorite and Eocene(?) basaltic volcanics)

King, J., A.E. Williams-Jones, V. van Hinsberg & G. Williams-Jones (2014)- High-sulfidation epithermal pyrite-hosted Au (Ag-Cu) ore formation by condensed magmatic vapors on Sangihe Island, Indonesia. Economic Geology 109, p. 1705-1733.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.855.9057&rep=rep1&type=pdf)
(Related Bawone and Binebase high-sulfidation epithermal Au (Cu-Ag) deposits on S Sangihe volcanic island hosted by altered andesitic rocks. Mineralization multiple generations of gold-bearing pyrite)

Koesnama (2014)- Pensesaran mendatar dan zona tunjaman aktif di Sulawesi: hubungganya dengan kegempaan. J. Geologi Sumberdaya Mineral 15, 2, p. 75-79.
('Strike-slip faults and active subduction in the Sulawesi area and their relationships with seismicity'. On Pulau-Koro, Walanae, Matano, Lawanopo and Gorontalo faults, mainly large strike-slip faults)

Koolhoven, W.C.B. (1930)- Verslag over een verkenningstocht in de Oostarm van Celebes en den Banggai Archipel. Jaarboek Mijnwezen Nederlandsch-Indie 58 (1929), Verhandelingen, p. 187-225.
('Reconnaissance survey of Sulawesi E arm and Banggai Archipelago'. E Sulawesi isoclinally folded (N-dipping) Eocene limestones-sst and E Miocene limestones-marls (Oligocene absent), overthrusted by ophiolites, both unconformably overlain by Pliocene 'Celebes molasse'. No crystalline basement. Small outcrops of underlying Jurassic? with belemnites (Cenomanian; Silver et al. 1983). In North ophiolites overlain by ?Miocene diabase, tuff, andesite. Several oil seeps in Pliocene Celebes Molasse, some with non-flammable H2S-bearing gas, and also in gabbro in S. Babason. Eocene Nummulites limestone with Lacazina and Alveolina wichmanni (p. 202 'known only from New Guinea and E Celebes'). Quaternary limestones along S coast of E arm up to 500m uplift, little or none along N coast)

Koolhoven, W.C.B. (1932)- De geologie van het Malili terrein (Midden Celebes). Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Verhandelingen 3, p. 127-153.
(Description of part of E Sulawesi ophiolite belt and pelagic cover in C Sulawesi Malili area. Peridotites (= pre-Cretaceous oceanic crust?), with top zone of 10's of m thick dynamometamorphic serpentinites with some metamorphic blocks (amphibolite, piemontite-quartzite, etc.). Overlain by Matano series of ?Late Jurassic- E Cretaceous? red deep sea clay with radiolarian cherts and Late Cretaceous Discorbina (=Globotruncana) pelagic limestones, interpreted to be deep sea deposits deposited directly on peridotite. No Tertiary sediments)

Koomans, C. (1935)- Die Trachyten und Andesiten der Togianinseln und Oena-Oena (Niederlandisch Ost-Indien). Leidsche Geol. Mededelingen 6, p. 119-122.
(online at: www.repository.naturalis.nl/document/549748)
('The trachytes and andesites volcanics of the Togian Islands and Una-Una', Tomini Bay E Sulawesi'. Brief petrographic descriptions of volcanic rocks collected by Molengraaff and Umbgrove. No ages or locality maps)

Koperberg, M. (1900)- Verslag omtrent de gedurende het jaar 1899 in de Residentie Menado gedreven geologisch-mijnbouwkundige onderzoekingen en mijnontginning. Jaarboek Mijnwezen Nederlandsch-Indie 29 (1900), p. 30-50.
('Report on geological-mining investigations in the Menado Residency for the year 1899'. Investigations from December 1898 by Koperberg, continuing survey work of area started by R. Fennema. Initial work was investigation of gold deposits at Totok mine, associated with Miocene limestones. Reporting on activity of many, mostly unsuccessful, private gold prospecting companies)

Koperberg, M. (1901)- Verslag van het geologisch en mijnbouwkundig onderzoek in de residentie Menado over het jaar 1900. Jaarboek Mijnwezen Nederlandsch-Indie 30 (1901), p. 115-121.
('Report on geological-mining investigations in the Menado Residency for the year 1900')

Koperberg, M. (1902)- Geologisch en mijnbouwkundig onderzoekingen in de residentie Menado gedurende het jaar 1901. Jaarboek Mijnwezen Nederlandsch-Indie 31 (1902), p. 147-161.
('Geological-mining investigations in the Menado Residency during the year 1901')

Koperberg, M. (1903)- Geologisch en mijnbouwkundig onderzoekingen in de residentie Menado gedurende het jaar 1902. Jaarboek Mijnwezen Nederlandsch-Indie 32 (1903), p. 170-178.
('Geological-mining investigations in the Menado Residency during the year 1902')

Koperberg, M. (1925)- Opmerkingen over de geologie van de residentie Menado. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 312-328.
('Remarks on the geology of the Menado Residency', N Sulawesi')

Koperberg, M. (1929)- Bouwstoffen voor de geologie van de Residentie Manado. Jaarboek Mijnwezen Nederlandsch-Indie 75 (1928), Verhandelingen 1, p. 1-397.
('Elements of the geology of the Manado Residency'. Part I of major compilation of geology of N and N Central Sulawesi: Minahasa, Bolaang, E Gorontalo, etc.)

Koperberg, M. (1929)- Bouwstoffen voor de geologie van de Residentie Manado. Jaarboek Mijnwezen Nederlandsch-Indie 75 (1928), Verhandelingen 2, p. 1-446.
('Elements of the geology of the Manado Residency'. Parts II (W Gorontalo, Bwool, Pageat, Maoeton, Una-Una) and III (Poso, Todjo areas) of major compilation of N and N Central Sulawesi region geology; incl. Una-Una volcano. With separate Atlas volume)

Koswara, A. & D.Z. Hayat (2002)- Batuan plutonik kaitannya dengan daerah mineralisasi Pulau Tanahjampea, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 12, 2002, p. 19-27.
('Plutonic rocks and their relation to mineralized areas Tanahjampea Island, South Sulawesi'. Tanahjampea Island S of Selayar/ S Sulawesi in East Java Sea. Intrusive rocks Eocene-Oligocene granite and monzonite and M Miocene diorite, andesite, basalt, etc. of calc-alkaline affinity. Sediments Late Oligocene- E Miocene Batu

Fm limestone, interfingering with Late Oligocene- E Miocene Kayuadi Fm 400m of volcanic breccias. M Miocene- Pliocene Kalao and Selayar Fms marine marls and limestones)

Koswara, A., H. Panggabean, Baharuddin & D. Sukarna (1994)- Geologic map of the Bonerate sheet, S Sulawesi. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of islands off S Sulawesi (Tambolongan, Kayuadi, Kalao, Bonerate, Madu, etc. Oldest rocks Cretaceous(?) ultramafics (pyroxenite, gabbro, basalt), Eocene- Oligocene granite. Overlain by E-M Miocene Kayuadi Fm andesitic volcanics and Batu Fm limestones, M Miocene- E Pliocene Kalao / Selayar/ Walanai Fms sst, marls, lst)

Kundig, E. (1932)- Versuch einer petrographischen Characteristik des kristallinen Grundgebirges von Celebes. Schweizerische Mineralogische Petrographische Mitteilungen 12, 2, p. 450-507.
(online at: https://www.e-periodica.ch/digbib/view?pid=smp-001:1932:12486)
('Attempt at petrographic characterization of the crystalline basement of Sulawesi'. Early paper on metamorphic rocks in various basement complexes of S, C and SE Sulawesi (gneiss, phyllite, glaucophane schist (mainly at Rumbia), etc. With map of Pajangkene Massif (= Bantimala?; metamorphics). Large parts of E and SE arm of Sulawesi viewed as alpine thrust belt. With one map)

Kundig, E. (1932)-Morphologie und Hydrographie der Toili-Ebene (Ostcelebes). Mitteilungen Geographisch-Ethnograph. Gesellschaft Zurich 32, 2, p. 105-134.
(online at: https://www.e-periodica.ch/digbib/view?pid=ghl-002:1931-1932:32124)
('Morphology and hydrography of the Toili plain (East Sulawesi). Geographic description of East Arm of Sulawesi. With 1: 200,000 topographic map of SE coast of East Arm)

Kundig, E. (1956)- Geology and ophiolite problems of East-Celebes. Verhandelingen Kon. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 16 (Memorial volume/Gedenkboek H.A. Brouwer), p. 210-235.
(Paper and map of Sulawesi E arm- Togian Islands, summarizing BPM work. Nice cross-sections of SE-directed imbricates of ophiolitic rocks and pelagic Upper Cretaceous limestones. Age of main orogenic phase is M Miocene (ophiolite debris in Upper Miocene 'Celebes Molasse'). Map shows ophiolite on Togian Islands where GRDC map shows young volcanoclastics)

Kurniawan, A.P., G.P. Adi, M. Arifin, A.S. Arifin, K. Sani, S. Pamungkas, A.D. Guntara & T. Suroso (2017)- Imaging Miocene duplex carbonate play beneath ophiolite belt zone using seismic synthetic modeling approach. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-60-G, 8p.
(Seismic suggestive of carbonate duplex structure under ophiolite in Banggai-Sula foreland basin imbricate thrust zone (Batui Thrust belt), E Sulawesi)

Kurniawan, A.P., G.P. Adi, M. Arifin, A.S. Ningrum & A.S. Arifin (2017)- Pliocene deep water carbonate turbidites play evaluation in the Banggai-Sula foreland basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-59-G, 14p.
(Banggai-Sula Foreland Basin in Matindok Block, E Sulawesi, is product of Late Miocene- E Pliocene collision between Banggai Sula microcontinent and E Sulawesi Ophiolite-magmatic arc of Sundaland. Onshore wells Matindok-7 and Penyu-1, and discovered gas-condensate in M-52 carbonate layer of Plio-Pleistocene Celebes Molasse. M-52 turbiditic carbonate 3 layers, with (reworked?) Miocene Lepidocyclina, poosity 10-20%)

Kurniawan, A.P., C.D. Ardianto, M.J. Panguriseng, M. Arifin, I. Firman & G.P. Adi (2016)- Possible Mesozoic graben system in the offshore Matindok Block: a new evaluation of prospective kitchen using 2D PSDM dataset. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-41-G, 7p.
(2D seismic dataset in Matindok Block, E Sulawesi, suggests possibility of NNE-SSW trending Mesozoic graben system in Tolo foredeep of Banggai-Sula foreland beneath Miocene platform carbonate. Several Mesozoic half-graben inversions. This may have consequences for distribution of Jurassic mature source rock (but crude oils tested so far with Tertiary biomarkers, probably tied to E-M Miocene Tomori Fm))

Kurniawan, A.P., M. Arifin, I. Firman & H. Budiarso (2015)- Regional vitrinite reflectance (Ro) trend for predicting kitchen area beneath Batui Thrust in the onshore area of Matindok Block, Eastern Sulawesi- Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-140, 4p.
(Vitrinite Reflectance modelling used to predict kitchen area beneath Batui Thrust, onshore E Sulawesi)

Kurniawan, A.P., M. Arifin, W.T. Sundari, Sardjito, N. Budi & H. Nurudin (2016)- Interval velocity modeling of Celebes Molasse as post collision in Banggai-Sula foreland basin, Eastern Sulawesi, Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-44-G, 7p.
(Banggai-Sula Foreland Basin product of Late Miocene- E Pliocene collision between Banggai-Sula microcontinent and E Sulawesi ophiolite-magmatic arc of Sundaland. Post-collisional Celebes Molasse deposited E-ward into basin in Plio-Pleistocene, with thickness 1500-2700m. Interval velocity modeling of molasse to improve interpretation of underlying Top Miocene carbonate surface)

Kurniawan, A.P., M. Arifin, R.A. Wibawa, H. Budiarso, N. Budi & H. Nurudin (2015)- Understanding imbricate thrust sequences of Miocene carbonate platform in the southwest offshore area of Mmatindok Block, Eastern Sulawesi- Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-346, 4p.
(Imbricate thrust zone in SW offshore area of Matindok Block area, Tolo Bay, E Sulawesi, product of Late Miocene- E Pliocene collision between Banggai-Sula microcontinent and E Sulawesi Ophiolite/magmatic arc. Unconformably overlain by Pliocene Celebes Molasse. Oilfield in Tiaka thrust, but dry holes in Kalomba-1 and Tolo-1 thrust prospects. NW-SE regional seismic line shows 6 thrust slices (38% shortening), in front of upthrust ophiolite (penetrated by Dengkala 1 well). Older imbricate thrust sequences lower porosity)

Kurniawan, A.P., I. Firman, E. Nurjadi, A. Prasetyo & I.G. Widyoseno (2018)- Unlocking potential plays of unexplored back-bulge in the Banggai-Sula foreland basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA41G, 17p.

Kurniawan, D., F.F. Baskaraputra, Sugiyanto, A. Baasir & D.H. Febrianto (2011)- Integrated reservoir modeling and characterization of 'SNR' Field. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-346, 15p.
(Reservoir model of SNR (= Senoro) gas field, discovered in 1999 in Late Miocene Mantawa Mb carbonate buildup, Senoro-Toili Block, E Sulawesi)

Kusnama & S. Andi Mangga (2007)- Hubungan lingkunan pengendapan Formasi Malawa dan keterdapatan batubara di daerah Soppeng, Sulawesi Selatan. J. Sumber Daya Geologi 17, 4, p. 218-232.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/291/262)
('Relationship of Malawa Fm depositional environment and coal beds in the Soppeng area, S Sulawesi' M Eocene (- Oligocene?) fluvial Malawa Fm m-c grained quartz sst, shale and claystone in lower part; mudstone and carbonaceous fine- grained sst in upper part. Thickness in Gatareng area ~100m. Detailed descriptions of several 50-120 cm thick sub-bituminous coal intercalations)

Kusnida, D. & Subarsyah (2008)- Deep sea sediment gravity flow deposits in Gulf of Tomini, Sulawesi. J. Geologi Indonesia 3, 4, p. 217-225.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20080404.pdf)
(Tomini/ Gorontalo Basin seismic interpretation)

Kusnida, D., Subarsyah & B. Nirwana (2009)- Basement configuration of the Tomini Basin deduced from marine magnetic interpretation. J. Geologi Indonesia 4, 4, p. 269-274.
(online at: www.bgl.esdm.go.id/dmdocuments/jurnal20090404.pdf)
(Magnetic survey in Tomini Basin (= Gorontalo Basin), E Sulawesi, shows elevated magnetic susceptibility values in centre of basin. Oceanic-like crust with nearly NE-SW symmetric lateral lineation of susceptibility values. At centre E-W trending basin axis, suggests rift-related graben)

Kusuma, R.A.I., H. Kamaruddin, R.R. Wibawa & M.R. Kamil (2015)- Geological prospect, resource and ore reserve estimation in Pomalaa Kolaka, Southeast Sulawesi, Indonesia. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 67-76.
(Pomalaa nickel mine/prospect in SE Arm of Sulawesi, 30km S of Kolaka, in N-Co laterite on East Sulawesi Ophiolite. Typical laterite profile: weathered, serpentinized ultramafic bedrock overlain by 2-7m thick saprolite layer with average 1.7-2.3% nickel (mainly garnierite), overlain by 3-7m thick yellow and red limonite zone with 0.4-1.2% nickel)

Kusumanto, D. & C.R.P. Swangga (2015)- Updated mineral inventory of Poboya prospect, Palu, Central Sulawesi, Indonesia. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 47-56.
(On Poboya low sulphidation epithermal gold-silver deposit in 'neck' of N Sulawesi, E of Palu-Koro fault system. Discovered by Rio Tinto in 1993. Three mineralization zones)

Kusumayudha, S., Suyoto & Sudarto (1997)- Geology and origin of the Southeast Sulawesi continental terrane, Indonesia. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 961-974.
(same as Surono 1998?)

Kutassy, A. (1934)- Het Paleozoicum en de Trias van Oost Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 10, 3, p. 295-305.
('The Paleozoic and Triassic of East Sulawesi'. Chapter in Von Loczy 1934 paper. Oldest rocks known from SE Sulawesi are deformed and partly metamorphosed Triassic-Jurassic Kendari Beds and Toeli Lst with Jurassic belemnites. Material collected by Von Loczy also contains dark grey marly bituminous limestone with probable Permian bivalve Oxytoma and brachiopods Productus and Streptorhynchus. Triassic Tokala Lst and sandstones with macrofossils include locally common Misolia spp., also known from Timor, Buru, Seram and Misool)

Kutassy, A. (1934)- Jong Tertiaire koralen en mollusken uit de molasse-afzettingen in Oost-Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 10, p. 306-317.
('Young Tertiary corals and molluscs from E Sulawesi molasse deposits'. Chapter in Von Loczy 1934 paper)

Kwartono, K.W.A., D. Hasanusi & R. Wijaya (2013)- Integrated reservoir characterization and static geomodeling of Senoro Field, Senoro-Toili Block, Sulawesi, Indonesia. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur 2013, 7p. *(Extended Abstract)*
(Miocene Minahaka Fm carbonate platform reservoir characterization study at Senoro gas field, C Sulawesi)

Kwong Hiu Jing (2011)- Paleomagnetic investigation of the Balangbaru Formation, SW Sulawesi, Indonesia. Masters Thesis, University of Hongkong, p. 1-121. *(Unpublished)*
(online at: http://hub.hku.hk/handle/10722/134043)
(Paleomagnetic study of 6 localities of Balangbaru Fm, an Upper Cretaceous (Turonian- Maastrichtian and older?) volcanoclastic marine turbiditic series of SW Sulawesi. No rock samples carry reversed polarity. Declination values show CCW rotation of ~15-20°, reflecting tectonic motion of Sunda Block since Late Cretaceous (similar to Sasajima et al. (1980) results on Marada Fm). Calculated paleolatitude for tilt-corrected inclination is 8.3° S (present-day latitude is ~4°45' S, indicating possible 3.5- 4° N-ward shift; JTvG)

Latorre, A.Q. (2001)- The discovery and geological setting of the Bima gold deposit; Minahasa Regency, north Sulawesi, Indonesia. M.Sc. Thesis, James Cook University, Townsville, p. *(Unpublished)*

Laurent, L. (1926)- Etude sur une plante fossile des depots du Tertiaire marin du Sud de Celebes. Jaarboek Mijnwezen Nederlandsch-Indie 54 (1925), Verhandelingen 1, p. 167-190.
('Study on a fossil plant from marine Tertiary deposits of S Sulawesi'. Plant fossils associated with fish fauna in Early Miocene lithographic limestone at Patanuang Asu, NE of Makassar, collected by Brouwer. Mainly shallow marine seaweed Cymodocea micheloti)

Lecuyer, F. (1998)- Relations entre le volcanism actif et la tectonique actuelle dans la region de Tondano au nord de Sulawesi (Indonesie). Doct. Thesis, Universite Blaise Pascal, Clermont-Ferrand, p. 1-163. *(Unpublished)*

Lecuyer, F., O. Bellier, A. Gourgaud & P.M. Vincent (1997)- Tectonique active du Nord-Est de Sulawesi (Indonesie) et controle structural de la caldeira de Tondano. Comptes Rendus Academie Sciences, Paris, Ser. IIA, Earth Planetary Sci. 325, p. 607-613.
('Active tectonics of NE Sulawesi and structural control on the Tondano caldera'. NE tip Sulawesi field study and SPOT image analyses show distributed active ENE-WSW sinistral strike-slip fault zone. Faulting accommodates N-S movement of Celebes Sea plate and represents transfer fault zone between E end of Celebes Sea subduction and Moluccas Sea subduction zone)

Lee, J.H.; I.J. Kim & J.M. Nassey(2011)- Olo-Oloho nickel laterite exploration in the Pakue District, North Kolaka Regency of the South-East Sulawesi Province, Indonesia. Econ. Environm. Geol. (Korean Soc. Economic Environmental Geol.) 44, 4, p. 329-336.
(online at: www.koreascience.or.kr/)
(Olo-Olohonickel laterite prospect in SE Sulawesi. Nickel ore derived from weathered, fractured ultrabasic rocks of U Mesozoic age, which overlies Carboniferous (?) schist)

Lelono, E.B. (2003)- Tropical Eocene palynomorphs from the Toraja Formation, Kalumpang, South Sulawesi. Lemigas Scientific Contr. 1, p. 8-23.

Leterrier, J., Y.S. Yuwono, R. Soeria-Atmadja & R.C. Maury (1990)- Potassic volcanism in Central Java and South Sulawesi, Indonesia. J. Southeast Asian Earth Sci. 4, p. 171-187.

Lowder, G.G. & J.A.S. Dow (1977)- Porphyry copper mineralization at the Tapadaa Prospect, northern Sulawesi, Indonesia. Trans. American Inst. Mining, Metallurgical and Petroleum Engineers (AIME) 262, p. 191-198.

Lowder, G.G. & J.A.S. Dow (1978)- Geology and exploration of porphyry copper deposits in North Sulawesi, Indonesia. Economic Geology 37, p. 628-644.
(N Sulawesi porphyry copper discoveries in two districts, with several centers of mineralization. Tombuililato district high-level quartz diorite porphyry stocks intrude Eocene- E Miocene island-arc sequence (Tinombo-Bilungala Fms), consisting mainly of andesite and rhyolite. Mineralization and alteration may have occurred at relatively low temperatures (350-400°C). Tapada district mineralization in M-U Miocene dioritic plutons, root zones of high-level stocks whose eroded parts were like deposits exposed at Tombuililato)

Lubis, H., S. Prihatmoko & L.P. James (1994)- Bulagidun prospect: a copper, gold and tourmaline bearing porphyry and breccia system in northern Sulawesi, Indonesia. J. Geochemical Exploration 50, p. 257-278.
(Bulagidun prospect in N Sulawesi characteristic of island-arc porphyry Cu-Au mineralization, although abundant tourmaline is unusual in SW Pacific. Mineralization tied to intrusions into widespread andesitic volcanic rocks (~9.4 Ma))

Lubis, H., S. Prihatmoko & F.E. Nugroho (2011)- Cu-Au porphyry mineralization at Bahumbung, North Sulawesi, Indonesia. J. Sumber Daya Geologi 21, 6, p. 307-320.
(Bahumbung is porphyry Cu-Au prospect in N Arm of Sulawesi. Miocene andesitic volcanics intruded by multiple diorites and post mineral dykes of aplite. Bahumbung system experienced deep level of erosion. Currently considered sub-economic)

Lubis, H., S. Prihatmoko & F.E. Nugroho (2011)- Cu-Au porphyry mineralization at Bahumbung, North Sulawesi, Indonesia. In: N.I. Basuki (ed.) Proc. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 145-160.
(Same paper as above)

Luthfi, A., E. Purnomo & S. Riadhy (2002)- Big fish discovery in Banggai Basin, Sulawesi, Indonesia- a success story using PSDM Technique. In: 64th EAGE Conference & Exhibition, Florence, G-07, 4p. *(Extended Abstract)*
(In 1998-2001 Pertamina drilled three wildcat wells in Banggai Basin, onshore E Arm of Sulawesi. Two wells hit gas-bearing zones in Miocene carbonates, with net pay of reservoir 140-207m)

Magetsari, N.A. (1984)- L'ile de Celebes, Indonesie orientale: analyse structurale par teledetection des grands lineaments, un exemple de collision. Thesis 3me Cycle, Universite de Chambery, p. 1-134. *(Unpublished)*
('Sulawesi island: structural analysis by remote sensing of large lineaments, an example of collision'. Several major lineaments from W to E: (1) Palu-Koro, 300km, sinistral strike slip zone; (2) Matano and Malili-Kendari, also sinistral; (3) Batui in NE, corresponding partly with ophiolite obduction over Sula islands, continuing offshore as 'Batui thrust'. Small Plio-Pleistocene pull-apart basins over large fault zones. Tectonics linked to NW-SE compression due to convergence of Australian plate and its split-off Sula fragment. Main collision in M Miocene, with obduction of peridotites and continental underthrusting of W side of Sula microcontinent. After that convergence accommodated along major fault zones and absorbed by accretionary prism of N Celebes Trough and Tolo zone at Banda Sea margin. At same time N arm of Sulawesi underwent 90° CW rotation)

Magetsari, N.A., P. Chotin & J.P. Rampnoux (1987)- Structural analysis by remote sensing of Sulawesi. The role of great lineament an example of Recent collision. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.

Marhum, F.A. & R.H.L. Djamaluddin (2012)- Rekonstruksi fasies dan lingkungan pengendapan berdasarkan analisis maseral pada batubara daerah Pasenrengpulu, Kecamatan Lamuru, Kabupaten Bone, Provinsi Sulawesi Selatan. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-28, 7p.
('Reconstruction of facies and depositional environment based on analysis of coal macerals in the Pasenrengpulu area, Bone District, S Sulawesi'. Petrographic analysis of Eocene Malawa Fm coals. Coal composition: vitrinite (48.6% -83.8%), inertinite (2.4-16.2%) and liptinite (0-9%), clay minerals (2.0-38.4%) and pyrite (1.4-11.8%))

Marrama, G., S. Klug, J. De Vos & J. Kriwet (2018)- Anatomy, relationships and palaeobiogeographic implications of the first Neogene holomorphic stingray (Myliobatiformes: Dasyatidae) from the early Miocene of Sulawesi, Indonesia, SE Asia. Zoological J. Linnean Society 184, p. 1142-1168.
(online at: https://academic.oup.com/zoolinnean/article/184/4/1142/4995574)
(Redescription of Trygon vorstmani De Beaufort 1926, a stingray fossil from latest E Miocene fish-bearing laminated limestones of Tonasa Fm near Patoenoeang Asoe, E of Maros, SW Sulawesi. Assigned to new genus Protohimantura. First holomorphic stingray specimen from Neogene)

Martin, K. (1890)- Notiz uber das Pliozan von Gorontalo. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 7, p. 275-277.
('Note on the Pliocene of Gorontalo', N Sulawesi. Brief note on some presumedly Pliocene gastropods from sandstones exposed between Gorontalo and Limbotto, collected by Van Schelle. No maps, no figures)

Martin, K. (1891)- Zur Geologie von Celebes, nach Anlass des Wichmann'schen Reiseberichtes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 8, p.
('On the geology of Sulawesi, referring to Wichmann's travel reports')

Martin, K. (1917)- Bemerkungen uber sogenannt Oligocane und andere Versteinerungen von Celebes. Sammlungen Geol. Reichs-Museums Leiden, N.F., II, 7, p. 299-308.
(online at: www.repository.naturalis.nl/document/552463)
('Remarks on so-called Oligocene and other fossils from Sulawesi'. Critical review of Tertiary molluscs from Sulawesi identified by Dollfuss (in Abendanon 1915))

Martin, K. (1918)- On some fossils from Celebes believed to belong to the Oligocene. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 20, p. 793-799.
(online at: www.dwc.knaw.nl/DL/publications/PU00012269.pdf)

(Fish fossils found by Abendanon near Enrekang along lower Saadang River, believed to be of Oligocene age by Dollfus, based on presence of Vicarya. However, this is misidentified and mollusc fauna more likely of Neogene age)

Martini, R., D. Vachard & L. Zaninetti (1995)- *Pilammina sulawesiana* n.sp. (Ammodiscidae, Pilammininae, n. subfam.), a new foraminifer from Upper Triassic reefal facies in E. Sulawesi (Kolonodale area, Indonesia). Revue Paleobiologie, Geneve, 14, 2, p. 455-460.
(online at: http://archive-ouverte.unige.ch/unige:35376)
(New small, complex agglutinated ammodiscid foraminifera species Pilammina sulawesiana from Norian-Rhaetian limestones of Kolonodale area, E Sulawesi, typical of Late Triassic reefal carbonates. Association with Triasina hantkeni and conodont Miskella posthernsteini suggests U Rhaetian age (species subsequently also found in Asinepe Lst of Seram, Sambosan accretionary complex in Japan, N Italy, Karakorum, Turkey, Cyprus, etc.))

Martini, R., D. Vachard, L. Zaninetti, S. Cirilli, J.J. Cornee, B. Lathuiliere & M.Villeneuve (1996)- Upper Triassic reefal facies in E Sulawesi, Indonesia. In: Sediment '96, 11th Meeting of Sedimentologists, Universitat Wien, Vienna 1996, p. 109. *(Abstract only)*
(online at: https://archive-ouverte.unige.ch/unige:4766)
(Widely outcropping Late Triassic reefal carbonate platform between Kolonodale and Tomata on W margin of Ophiolitic Zone of E and SE arms of Sulawesi. Late Norian-Rhaetian age based on rich benthic foraminifera, and also on youngest Mesozoic conodont Misikella posthemsteini. Two foraminiferal associations, lagoonal (Triasina hantkeni and other Aulotortidae) and reefal (porcelaneous foraminifers incl. Galeanella). Main framebuilders: branching coral Retiophyllia seranica, chaetetid sponge Blastochaetetes intabulata and solenoporacean algae (see also Cornee et al. 1994, Martini et al. 1997))

Martini, R., D. Vachard, L. Zaninetti, S. Cirilli, J.J. Cornee, B. Lathuiliere & M.Villeneuve (1997)- Sedimentology, stratigraphy, and micropaleontology of the Upper Triassic reefal series in Eastern Sulawesi (Indonesia). Palaeogeogr. Palaeoclim. Palaeoecology 128, p. 157-174.
(E Sulawesi Late Norian- Rhaetian 150m thick reefal carbonates are part of larger, dismembered carbonate platform. Shallowing-upward series: lower 100m micritic limestone, upper 150m massive 'reefal' limestones, dominated by foram packstones-grainstones, but also sponge-algal-coral boundstones and oolitic wackestones/ grainstones. Foram assemblages closest affinity to S Tethyan Seram and Wombat Plateau carbonates)

Martono, U.M. (1999)- Structural diversity of the layered rocks in the metamorphic complex of the western arc of Central Sulawesi. J. Geologi Sumberdaya Mineral 9, 92, p. 2-12.
(On layering in metamorphic rocks. Little regional geology info)

Maryanto, S. (1999)- Proses diagenesis batugamping Eosen di lintasan S. Nanggala, Tana Toraja, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 9, 94, p. 2-16.
('Diagenetic process in the Eocene limestone of the Nanggala River section, Tana Toraja, S Sulawesi'. Eocene-E Miocene Toraja Fm limestone of S Sulawesi 1000m thick or more. At Nanggala River section NE of Rantepao M-U Eocene bioclastic limestone ~80m thick, with larger foraminifera Nummulites javanus, Pellatispira, Discocyclina, Asterocyclina, Fasciolites and Heterostegina saipanensis. Descriptions of diagenetic features. Eocene limestone not feasible as hydrocarbon reservoir)

Maryanto, S. (2002)- Stratigrafi Tersier daerah Torajah, Sulawesi Selatan. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 734-768.
('Tertiary stratigraphy of the Toraja area, S Sulawesi'. General review of M Eocene- Pliocene stratigraphy. M-L Eocene Toraja Fm mixed clastics- carbonate facies, conformably overlain by latest Eocene- M Miocene Makale Fm platform carbonates. Overlain by M Miocene- E Pliocene Sekata Fm volcanoclastic turbidites)

Maryanto, S. (2002)- Lingkungan pengendapan Formasi Toraja di daerah Sekitat Rantepao, Sulawesi Selatan. Bull. Geol. Res. Dev. Centre 22, p. 63-84.

(Sedimentology of Eocene Toraja Fm in the Rantepao area, NE part of Sulawesi SW arm. Mixture of fluvial, lacustrine, intertidal and shallow marine facies)

Maryanto, S. & T. Sihombing (2004)- Stratigrafi dan sedimentologi batuan Paleogen di lintasan Sungai Ana, Kalumpang, Sulawesi Selatan. Geol. Res. Dev. Centre, Spec. Publ. 31, p. 269-282.
('Stratigraphy and sedimentology of Paleogene rocks in the Ana River section, Kalumpang, South Sulawesi')

Maryanto, S., E.E. Susanto & Sudijono (2004)- Sedimentologi Formasi Salokalupang di daerah Bone, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 14, 1 (145), p. 69-83.
('Sedimentology of the Salokupang Fm in the Bone area, S Sulawesi'. Salokalupang Fm deposited in Late Eocene- M Miocene SW-NE trending deepwater basin, deepening to NE. To W is Tonasa Fm carbonate platform, to S Eocene volcanics. No marked boundary to E, probably connected with open sea. Paleogeography of basin in Salokalupang Fm time shows alluvial plain in SW, whereas turbidity and deepwater depositional systems developed in NE)

Matasak, T. (2011)- Coal deposits in Sulawesi. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources, Manado 2011, MGEI/IAGI, p. 319- .

Maulana, A. (2009)- Petrology, geochemistry and metamorphic evolution of the South Sulawesi basement rock complexes, Indonesia. M. Phil. Thesis, Australian National University, Canberra, p. 1-188. *(Unpublished)*
(Two pre-Upper Cretaceous basement complexes in SW Sulawesi: (1) Bantimala block: ENE-dipping tectonic slices of metamorphic rocks (eclogites, blueschists, greenschist, some seafloor sediments and volcanics), overlain by ultramafic unit, emplaced from E (records subduction of cold ocean floor and exhumation of deeply subducted material, prior to collision with microcontinents to E and obduction of ultramafics); (2) Barru Block: smaller, 30 km to N, weakly metamorphosed sediments and volcanics, without high-P blueschist and eclogite. Metamorphism at higher geothermal gradients (quartzo-feldspathic gneisses, metabasic amphibolite) at sole of obducted ultramafics. Barru tectonic slices dip to NNW. Barru interpreted as roots of old island arc, subduction of some ocean floor with seamounts, and obduction of different ocean floor material from N. Barru intrusives indicate second arc formed on top of ultramafics as result of renewed subduction)

Maulana, A. (2013)- A petrochemical study of granitic rocks from Sulawesi Island, Indonesia. Doct. Engineering Thesis, Kyushu University, Fukuoka, p. 1-167.
(online at: http://repository.unhas.ac.id/handle/123456789/7116)
(Study of granitic rocks from 11 areas in W and N Sulawesi. Plutons classified as (1) high-K /shoshonitic (HK), mainly in S and CW part of W Sulawesi; (2) high-K calc-alkaline (CAK) in C and NW part of province; (3) low K- tholeiitic, dominant in N Sulawesi. Most granitoids metaluminous I-type granitic rocks. HK and CAK granitic rocks derived from partial melting of lower crustal sources with arc signature; low-K /tholeiitic granites from oceanic crust. Crystallization depths ~4-12 km. Rapid exhumations of granites in W Sulawesi triggered by Late Miocene- Pliocene collision of Banggai- Sula microcontinent with E Sulawesi (Ar-Ar cooling ages 9.5.1 Ma. Exhumation of granites in N Sulawesi attributed to Celebes Sea subduction)

Maulana, A. (2013)- Mineral chemistry of chromite from ultramafic rock in South Sulawesi, Indonesia. J. Penelitian Geosains (Hasanuddin University) 9, 2, p. 83-87.
(online at: http://repository.unhas.ac.id/handle/123456789/15016)
(Chromite occurs in chromitite as podiform lenses or layers 10-40 cm thick in depleted lherzolite and dunite from Bantimala and Barru blocks, S Sulawesi. Also other differences in mineral chemistry, suggesting chromitites originated in different settings, Bantimala from parental melt in island arc environment, Barru from boninitic lava)

Maulana, A. (2014)- Iron ore occurrence in Balanalu area Limbong District North Luwu South Sulawesi. J. Penelitian Geosains (Hasanuddin University) 10, 1, p. 38-49.
(online at: at: http://repository.unhas.ac.id/)
(C Sulawesi magnetite and hematite mineralization in weathered and brecciated andesitic-dacitic tuff)

Maulana, A., A.G. Christy & D.J. Ellis (2008)- The petrology of eclogites from Bantimala Complex, South Sulawesi, Indonesia. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 367-398.
(Eclogites tectonic block in E Cretaceous high-Pressure- low T blueschist facies rock of Bantimala basement complex, which consists mainly of high-P Triassic-Jurassic metamorphic rocks and late Albian- Cenomanian and younger sediments and ultramafics. Eclogites range of origins and formed at ~540-615 °C and 18-24 kbar)

Maulana, A., A.G. Christy & D.J. Ellis (2015)- Petrology, geochemistry and tectonic significance of serpentinized ultramafic rocks from the South Arm of Sulawesi, Indonesia. Chemie der Erde 75, 1, p. 73-87.
(Serpentinized ultramafic rocks of S Sulawesi in (1) Bantimala (harzburgite, dunite and clinopyroxenite, with lenses of podiform chromitite) and (2) Barru Block (harzburgite and podiform chromitite). Both derived from supra-subduction zone environment and obducted during closure of small back-arc basins. If no rotation of blocks, Bantimala ultramafics emplaced from ENE, Barru ultramafics from WNW. Ultramafic suites from juxtaposed with metamorphic assemblages and later intruded by younger volcanics. Different metamorphic histories and different directions of obduction, suggest ultramafics of two blocks emplaced in separate events)

Maulana, A., A.G. Christy, D.J. Ellis & M. Brocker (2019)- The distinctive tectonic and metamorphic history of the Barru Block, South Sulawesi, Indonesia: petrological, geochemical and geochronological evidence. J. Asian Earth Sci., p. 170-189.
(online at: https://www.sciencedirect.com/science/article/pii/S1367912018303912?dgcid=author)
(Barru Block in SW Sulawesi composed of tectonic stack of cherts, radiolarian mudstone, breccias, shales, phyllites, mica schist, gneisses, amphibolite and ultramafic rocks. Greenschist- to amphibolite-facies metasedimentary rocks represent detritus from nearby continental blocks redistributed by turbidity currents. Rb-Sr isochrons for mica schists indicate metamorphic ages of ~70.7 ± 2.4 Ma, 107.3 ± 0.7 Ma and 110 ± 2.4 Ma, confirming E Cretaceous (Albian) metamorphism, but also Late Cretaceous (Maastrichtian) metamorphic or deformational event at ~70 Ma. Overall, Barru rocks more felsic than Bantimala. Two blocks accreted at same time (E Cretaceous), but differences in protoliths and metamorphic P-T conditions)

Maulana, A., A.G. Christy, D.J. Ellis, A. Imai & K. Watanabe (2011)- The characteristic of serpentinised ultramafic rocks from South Sulawesi Indonesia: constraint from petrology and geochemistry data. Proc. Int. Symp. on Earth Science and Technology, Fukuoka 2010, p. 301-306.
(online at: http://repository.unhas.ac.id/.)
(Serpentinised ultramafic rocks with different characteristics in two basement complexes in S Sulawesi, Bantimala and Barru blocks)

Maulana, A., A.G. Christy, D.J. Ellis, A. Imai & K. Watanabe (2013)- Geochemistry of eclogite- and blueschist-facies rocks from the Bantimala Complex, South Sulawesi, Indonesia: protolith origin and tectonic setting. Island Arc 22, 4, p. 427-452.
(Bantimala Complex, SW Sulawesi., eclogites both glaucophane-rich and glaucophane-free; blueschists are albite-epidote glaucophanite and quartz-glaucophane schists. Eclogite protoliths include enriched and normal mid-oceanic ridge basalt (E-MORB and N-MORB) and gabbroic cumulates. Blueschists protolithsh include N-MORB, Oceanic Island Basalt (OIB) and Island Arc Basalt (IAB). All protoliths subducted, metamorphosed to blueschist/eclogite-facies and subsequently exhumed. Samples deduced to have come from thicker-crust environments (OIB, IAB) were subducted to shallower depths (blueschist facies) than MORB-derived samples, which reached eclogite-facies conditions.Geochemical data demonstrate variety of ocean floor types subducted under SE margin of Sundaland in Late Jurassic)

Maulana, A., A.G. Christy, D.J. Ellis, Kaharuddin M. & A. Tonggiroh (2009)- Petrology, geochemistry and tectonic significance of the South Sulawesi ultramafic, Indonesia. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PITIAGI2009-205, 26p.
(Ultramafic rocks in S Sulawesi Bantimala and Barru basement complexes of different origins. Barru lherzolite derived from supra-subduction zone environment, with no High-P metamorphics. Bantimala ultramafics are cumulates associated with High-P metamorphics (eclogite and blueschist). Stratigraphic position suggests Bantimala ultramafic emplaced onto Bantimala block from spreading of oceanic crust at E-NE part of block. At same time, those from Barru block obducted from back arc basin setting at W-NW part of blocks). Serpentinised

ultramafic rocks suggest different origins of two basement complexes in SW Sulawesi (Bantimala, Barru). Absence of gabbro, pillow basalt, sheeted dykes, etc., suggest incomplete ultramafic suites (dismembered ophiolite sequences). Barru ultramafics emplaced from N, Bantimala from E, suggesting obduction events not caused by W-ward thrust of Australian microcontinent or Pacific oceanic plate on Eurasian margin. Both complexes geochemical differences from ultramafic rocks of East Sulawesi Ophiolite)

Maulana, A., D.J. Ellis & A.G. Christy (2010)- Petrology, geochemistry and tectonic evolution of the South Sulawesi basement rocks, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA1-G-192, 26p.
(SW Sulawesi two Cretaceous basement outcrop complexes, with different ultramafic rocks and metamorphic histories. Bantimala block (in S) protoliths mainly oceanic basalts. Barru block (in N) quartzo-feldspathic gneisses more felsic and of arc affinity. Bantimala block records subduction of cold ocean floor and exhumation of deeply subducted material. Barru preserve roots of old island arc, subduction of some ocean floor, obduction of different ocean floor material from N, and too warm to preserve blueschist or eclogites. Two blocks derived from different sources and tectonic setting)

Maulana, A., D.J. Ellis & A.G. Christy (2013)- Geodynamic significance of the South Sulawesi Basement rocks, Indonesia: a petrochemical constraint. Pros. 6th Seminar Nas. Kebumian, Universitas Gajah Mada, Yogyakarta 2013, p.

Maulana, A., D.J. Ellis, A.G. Christy, K. Watanabe, A. Imai & Purwanto (2011)- Rare earth element in greenschist facies rock from Bantimala Complex, South Sulawesi, Indonesia. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, p. 1-7.
(online at: http://repository.unhas.ac.id/..)
(also in Majalah Geologi Indonesia 26, 2, p. 73-82. Moderate irregular Rare Earth Element pattern in E Cretaceous greenschist facies rock of Bantimala Complex, S Sulawesi. Greenschist facies rock (with epidote, albite, chlorite) derived from mid oceanic ridge basalt to upper continental crust rocks)

Maulana, A., A. Jaya & K. Sitha (2017)- Field characteristic of metamorphic-hosted gold deposit in Sulawesi, Indonesia: An insight into Awak Mas prospect, South Sulawesi. Int. J. Engineering and Science Applications (UNHAS) 4, 2, p. 105-111.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/1385/351)
(Metamorphic-hosted gold deposit in Awak Mas, S Sulawesi with two main styles of quartz vein mineralization. Gold mineralization considered as mesothermal deposit . Gold mainly hosted within Latimojong flysch sequence, also in basement schist associated with shear zones in Lamas ophiolitic sequences)

Maulana, A., A. Imai, T. Van Leeuwen, K. Watanabe, K. Yonezu, T. Nakano, A. Boyce, L. Page & A. Schersten (2016)- Origin and geodynamic setting of Late Cenozoic granitoids in Sulawesi, Indonesia. J. Asian Earth Sci. 124, p. 102-125.
(Late Cenozoic granitoids in 160 km belt in W and N Sulawesi. Three series: shoshonitic (HK; ~14- 4 Ma), high-K felsic calc-alkaline (CAK (~5-2 Ma), and normal calc-alkaline to tholeiitic (CA-TH). All granitoids I-type and metaluminous- peraluminous. Two K-rich series restricted to W Sulawesi, formed in extensional, post-subduction setting. Two parental magma sources (1) enriched mantle or lower crustal equivalent for HK magmas, and (2) Triassic igneous rocks in Gondwana-derived fragment thrust beneath C and N parts of W Sulawesi for CAK magmas. CA-TH granitoids mostly in N Sulawesi, formed in active subduction environment)

Maulana, A., A. Imai, K. Watanabe, T. Van Leeuwen, S. Widodo & Musri (2019)- Exhumation and tectonomagmatic processes of the granitoid rocks from Sulawesi, Indonesia: constrain from petrochemistry and geothermobarometry study. Indonesian J. Geoscience 6, 3, p. 153-174.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/536/284)
(Sulawesi granitoids classified as calc-alkaline, metaluminous I-type. Emplacement depths of Mamasa Pluton 3.2-4.3 km; Masamba Pluton 8.2-10 km, Lalos-Toli and Sony Plutons 11.3 and 11.6 km, Gorontalo Pluton at 9.3 km deep. Mamasa and Masamba Plutons exhumed at 0.37 and 1.6 mm/year, Lalos-Toli and Sony Plutons

at 1.4 and 2.7 mm/year. Gorontalo Pluton in N Sulawesi Province exhumed at 0.42 mm/year. Rapid exhumation of Sony Pluton attributed to active vertical movement of Palu-Koro Fault Zone since Pliocene)

Maulana, A., A. Jaya, U.R. Irfan & M. Farida (2019)- Field geological characteristic of Mesozoic Paremba Sandstone, Bantimala Complex, South Sulawesi, International Conf. Geoscience, Makassar 2018, IOP Conf. Series, Earth Environmental Science 279,) 012029, 5p.
(online at: https://iopscience.iop.org/article/10.1088/1755-1315/279/1/012029/pdf)

Maulana, A., A. Jaya & A. Imai (2018)- Study on gold and base metal occurrence in Uluwai prospect, Western Latimojong Mountain, South Sulawesi. Int. Conf. Nuclear Technologies and Sciences (ICoNETS 2017), Makassar, IOP Conf. Series, Journal of Physics Conf. Series 962, 9p.
(online at: http://iopscience.iop.org/article/10.1088/1742-6596/962/1/012011/pdf)
(Uluwai Cu-Au prospect in N part of South Arm of Sulawesi, along E part of Kalosi Fold Belt and Latimojong Mountain. Mineralization rel. simple sulphide ore mineral assemblage (pyrite, sphalerite, chalcopyrite) in metasediments and greenschist)

Maulana, A. & K. Sanematsu (2015)- Study on the critical metal and Rare Earth Element occurrences in Sulawesi. Int. J. Engineering and Science Applications (UNHAS) 2, 1, p. 41-46.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/145/101)
(Scandium-bearing laterite Ni deposits in Sulawesi could be dominant source of Sc resources in future)

Maulana, A. & K. Sanematsu (2015)- An overview on the possibility of scandium and REE occurrence in Sulawesi, Indonesia. In: ICG 2015, 2nd Int. Conf. and 1st Joint Conf. Faculty of Geology Universitas Padjaran and University of Malaysia Sabah, p. 151-156.
(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2016/02/An-overview-on-the-possibility-of-scandium-and-REE-occurrence-in.pdf)
(Lateritic soil of ultramafic rocks of Sulawesi may be potential source of scandium, while weathered I-type granitic rocks could be potential source of rare earth elements (but no actual data to support this?))

Maulana, A., K. Sanematsu & M. Sakakibara (2016)- An overview on the possibility of Scandium and REE occurrence in Sulawesi, Indonesia. Indonesian J. Geoscience 3, 2, p. 139-147.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/283/211)
(Similar to Maulana & Sanematsu 2015. Sc concentrated in lateritic limonite layers in Soroaka ultramafic complex)

Maulana, A., T. van Leeuwen, R. Takahashi, S.L. Chung, K. Sanematsu, Huan Li & U.R. Irfana (2019)- Geochemistry and geochronology of VHMS mineralization in the Sangkaropi district, central-West Sulawesi, Indonesia: Constraints on its tectono-magmatic setting. Ore Geology Reviews 114, 103134, 17p.
(Sangkaropi district at NE end of S Arm of Sulawesi one of few Volcanic hosted massive sulfide (VHMS) districts in Indonesia. Several small mineral occurrences (Sangkaropi, Billolo, Rumanga), some mined during Japanese occupation in 1942-1945. Mineralization hosted by felsic volcanics in bimodal association with basalt. Syngenetic banded massive and fragmented sulfides and epigenetic veins, stockwork and disseminations classified as 'Kuroko-type. Age of mineralization ~34 Ma (Eocene-Oligocene boundary), in continental margin arc setting, when stress regime changed from near-neutral to extensional and volcanism changed from being andesite dominated to bi-modal)

Maulana, A., K. Watanabe, A. Imai & K. Yonezu (2011)- Enrichment Rare Earth Elements (REE) contents in granitic rock from South Sulawesi, Indonesia. Proc. Int. Workshop and Conference on Earth Resources Technology 2011, p. 33-39.

Maulana, A., K. Watanabe, A. Imai & K. Yonezu (2011)- Geochemical composition variety of granitoid rocks from Sulawesi Island, Indonesia. Proc. Int. Symposium on Earth Science and Technology, Fukuoka 2011, p. 379-388.
(Geochemistry of 55 Tertiary granitoids from 9 areas in Sulawesi)

Maulana, A., K. Watanabe, A. Imai & K. Yonezu (2011)- Magnetic susceptibility of Sulawesi granitic rocks, Indonesia: implication for regional metallogenic genesis. Proc. 1st Asia Africa Mineral Resources Conference, Fukuoka 2011, P-06, p.

Maulana, A., K. Watanabe, A. Imai & K. Yonezu (2012)- Petrology and geochemistry of granitic rocks in South Sulawesi, Indonesia: implication for origin of magma and geodynamic setting. Int. J. Environm. Earth Sci. Engineering 6, 1, p. 1-6.
(online at: www.waset.org/journals/ijcee/v6/v6-1.pdf)
(Mio-Pliocene granitic rocks from Polewali, Masamba areas, SW Sulawesi dominated by granodiorite and granite. Calc-alkaline field with metaluminous affinity and typical of I-type granitic rock, produced from melting of upper continental crust in arc-related subduction environment, with later evidence of continent-continent between Australia-derived microcontinent and Sundaland to form continental arc)

Maulana, A., K. Watanabe, A. Imai & K. Yonezu (2013)- Origin of magnetite- and ilmenite-series granitic rocks in Sulawesi, Indonesia: magma genesis and regional metallogenic constraint. Procedia Earth Planetary Sci. 6, p. 50-57.
(Sulawesi granitic rocks dominated by ilmenite series granites, but ratio of ilmenite/ magnetite series granites decreases from S to N. Occurrence of ilmenite-series with I-type characteristic granitic rocks on Sulawesi may be explained by assimilation between magma and crustal material with reduced C- and S-bearing sediments)

Maulana, A., K. Watanabe, A. Imai & K. Yonezu (2013)- Petrochemical characteristic and geothermobarometry study of the granitic rocks from Sulawesi, Indonesia: Implication on exhumation and tectonomagmatic process J. Earth System Science, p. *(in press?)*
(online at: www.ias.ac.in/jess/forthcoming/JESS-D-12-00334.pdf)
(Analyses from 5 granite complexes in S and N Sulawesi suggests granitic rocks calc-alkaline character and I-type granite characteristics. Exhumation of granitic rocks in W Sulawesi Province commonly attributed to collision of Banggai-Sula microcontinent with E Sulawesi in Late Miocene- Pliocene)

Maulana, A., K. Watanabe and K. Yonezu (2016)- Petrology and geochemistry of granitoid from South Sulawesi, Indonesia: implication for Rare Earth Element (REE) occurrences. Int. J. Engineering and Science Applications (UNHAS) 3, 1, p. 79-86.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/280/164)
(Late Miocene- Pliocene calk-alkaline I-type granitoids at Polewali and Masamba, 300-400 km N of Makassar, W Sulawesi, with average REE content 249 and 194 ppm. REE-bearing minerals zircon, monazite and apatite)

Maulana, A., K. Watanabe, K. Yonezu, G. Zhang & T. van Leeuwen (2016)- Exhumation and tectono-magmatic process of granitic rock from Sulawesi. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 362-364.
(In C and N parts of W Sulawesi Late Miocene- Pliocene granite plutons rise to 3000m altitude. P-T data suggest increasing depth of emplacement of plutons from CW to NW Sulawesi (~2.1 to ~11km) and more rapid exhumation (0.37- 2.7 mm/year. Most rapid uplift tied to Palu-Koro fault activity)

Maulana, A., K. Yonezu & K. Watanabe (2014)- Geochemistry of rare earth elements (REE) in the weathered crusts from the granitic rocks in Sulawesi Island, Indonesia. J. Earth Science (China) 25, 3, p. 460-472.
(online at: http://en.earth-science.net/PDF/20140603042501.pdf)
(First study of geochemistry of rare earth elements in weathered crusts of I-type and calc-alkaline to high-K (shoshonitic) granites at Mamasa and Palu region, NW Sulawesi)

Maulana, J.P. (2011)- Source indication of oil seep from Paniki River, Kalukku, Mamuju, West Sulawesi based on geochemical characterization. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-030, 10p.

(Paniki River oil seep near Amberaro Village, 40km NE of Mamuju, SW Sulawesi, with oil that underwent heavy biodegradation. Common presence of bicadinane, oleanoids, oleanane, and taraxastane show oil probably derived from terrestrial higher plant source, probably from Eocene coals or carbonaceous clays)

Mawaleda, M., E. Suparka, C.I. Abdullah, N.I. Basuki, M. Forster, Jamal & Kaharuddin (2017)- Hydrothermal alteration and timing of gold mineralisation in the Rumbia Complex, Southeast Arm of Sulawesi, Indonesia. In: 2nd Int. Conf. Transdisciplinary research on environmental problems in Southeast Asia (TREPSEA), Bandung 2016, IOP Conf. Series, Earth Environm. Science, 71, 012030, p. 1-15.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/71/1/012030/pdf)
(Rumbia WNW-ESE trending high P-low T metamorphic schist complex of SE Sulawesi (mainly mica schist, some blueschist) with gold mineralization in two phases: (1) initial phase related to deformation and exhumation of HP metamorphic rocks (gold, silver, stibnite, chalcopyrite, galena, etc.; syn-tectonic, ~23 Ma; mainly in N and NW parts of Rumbia Complex); (2) hydrothermal mineralization associated with extensional phase at between ~15-7 Ma. Two possible tectonic scenarios(see also Musri et al. 2016)

Mayall, M.J. & M. Cox (1988)- Deposition and diagenesis of Miocene limestones, Sengkang Basin, Sulawesi, Indonesia. Sedimentary Geology 59, p. 77-92.
(Porosity evolution of Late Miocene knoll-reef carbonates of Kampung Baru gas field, SW Sulawesi)

McCaffrey, R., E.A. Silver & R.W. Raitt (1981)- Seismic refraction studies in the East Arm, Sulawesi- Banggai Islands region of Eastern Indonesia. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 321-325.
(online at: http://web.pdx.edu/~mccaf/pubs/mccaffrey_sulawesi_grdc_1981.pdf)
(Two seismic refraction lines in E Gorontalo basin and E of E arm of Sulawesi (lines not shown). Show block faulted basement stepping down in Gorontalo Basin oceanic lithosphere)

McCaffrey, R. & R. Sutardjo (1982)- Reconnaissance microearthquake survey of Sulawesi, Indonesia. Geophysical Research Letters 9, 8, p. 793-796.
Zone of microearthquakes dipping to N from Batui Thrust zone suggests leading edge of Banggai Island block was subducted to at least 100 km depth. E Gorontalo Basin earthquake zone may connect with deep seismic zone under Celebes Sea Basin. Beneath W Gorontalo Basin narrow zone of earthquakes dips S, probably within lithosphere of Celebes Sea Basin subducted at N Sulawesi Trench. Shallow earthquakes near Lake Matano in C Sulawesi, possibly on Matano Fault, suggest E-W extension)

McCaffrey, R., R. Sutardjo, R. Susanto, R. Buyung, B. Sukarman et al. (1983)- Micro-earthquake survey of the Molucca Sea and Sulawesi, Indonesia. Bull. Geol. Res. Dev. Centre 7, p. 13-23.
(Several hundred, mostly shallow, microearthquakes recorded below Molucca Sea and Tomini Gulf/Gorontalo)

McDonald, R.C. (1976)- Limestone morphology in South Sulawesi, Indonesia. Zeitschrift Geomorphologie 26, Karst processes, p. 79-91.

Meeren, J. (2009)- A geothermobarometric study on garnet peridotite and granulite from the Palu region, Central Sulawesi, Indonesia. M.Sc. Thesis, University of Utrecht, p. 1-101. *(Unpublished)*

Meeren, J. & H.L.M. van Roermund (2009)- A two stage exhumation model for HP rocks from the Palu Region, Central Sulawesi, Indonesia- a geothermobarometric study. In: 8th Int. Eclogite Conference (IEC), Xining, China 2008, 2p. *(Abstract only)*
(Garnet peridotite and granulite thin tectonic slices (< 10m) in Palu-Koro Fault zone, crosscutting Cretaceous Palu Metamorphic Complex. Palu garnet peridotite peak metamorphic conditions of ~1030°C/18 kbar and ~855 °C/ 10 2 kbar for retrograde assemblage. Palu granulite peak metamorphic conditions of ~655 °C/ 19 kbar. Palu granulite (microcontinental fragment) subducted in Cretaceous subduction system at Sundaland margin. After exhumation from 65 km to lower crustal levels, granulite stored in lower crust until Miocene upwelling asthenosphere invaded subcontinental lithosphere and caused heating in lower crust under C

Sulawesi. Palu garnet peridotite started ascent to lower crustal levels from ~65 km in E Miocene. Final exhumation of Palu HP rock facilitated by transpression along Palu-Koro fault. Occurrence of HP rock in C Indonesia cannot be explained by simple collision event in subduction system of Cretaceous age)

Mesdag, F.T. (1914)- De goudmijn "Totok" te Totok, Noord-Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Mijnbouwkundig Ser. 1, p. 191-203.
('The gold-mine 'Totok' at Totok, N Sulawesi'. Review of operations of Totok mine, active since 1900, after long history of small-scale local diggings. Gold-bearing quartz veins in foram-coral limestone in area dominated by andesitic volcanics)

Michaux, B. (1996)- The origin of Southwest Sulawesi and other Indonesian terranes: a biological view. Palaeogeogr. Palaeoclim. Palaeoecology 122, p. 167-183.
(Present-day distribution of birds and moths used for reconstruction of tectonic histories of Indonesian islands. Sulawesi highest endemism and appears to have been isolated from all other areas)

Milsom, J., Sardjono & A. Susilo (2001)- Short-wavelength, high-amplitude gravity anomalies around the Banda Sea, and the collapse of the Sulawesi Orogen. Tectonophysics 333, p. 61-74.
(Ophiolitic rocks around Banda Sea commonly associated with strong gravity anomalies and steep gradients, but relationships not always straightforward. Bouguer gravity levels and gradients over extensive E Sulawesi ophiolite generally low. Gravity variations and ophiolite distribution around Banda Sea compatible with extension in Sulawesi region following Oligo-Miocene collision with Australian-derived microcontinent)

Milsom, J., J. Thurow & D. Roques (2000)- Sulawesi dispersal and the evolution of the northern Banda Arc. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 495-504.
(Bituminous U Triassic and Lw Jurassic in Buton, Buru, Seram and E Sulawesi suggest these were parts of single microcontinent separated from Australia in Jurassic and collided with Eurasian margin to form Sulawesi orogen in Oligocene or E Miocene. Collision was followed by extension and dispersion, creating Banda Sea. Parts of former microcontinent became involved in new collision zones of Outer Banda arc)

Miyazaki, K., I. Zulkarnain, J. Sopaheluwakan & K. Wakita (1996)- Pressure-temperature conditions and retrograde paths of eclogites, garnet-glaucophane rocks and schists from South Sulawesi, Indonesia. J. Metamorphic Geol. 14, p. 549-563.
(High-P metamorphic rocks in Bantimala area 40 km NE of Ujung Pandang formed as Cretaceous subduction complex with fault-bounded slices of melange, chert, basalt, turbidite, shallow marine sedimentary rocks and ultrabasic rocks. Eclogites, garnet-glaucophane rocks and schists of Bantimala complex have estimated peak T of 580-630 °C and P=18-24 kbar, suggesting subduction to ~65-85 km and T gradient ~8°C/km)

Molengraaff, G.A.F (1902)- Rapport omtrent de concessie-terreinen der exploratie- en mijnbouw maatschappij Kwandang Soemalata. p. *(Unpublished consultant report)*
('Report on the concession areas of the Kwandang Soemalata exploration-mining company' Survey of gold-silver deposits in Sumalatta area, N Sulawesi)

Molengraaff, G.A.F (1902)- Ueber die Geologie der Umgegend von Sumalatta auf Nord-Celebes und uber die dort vorkommenden goldfuhrenden Erzgange. Zeitschrift Praktische Geologie 10, p. 249-257.
(online at: https://babel.hathitrust.org/cgi/pt?id=uc1.31822032651069;view=1up;seq=265)
('On the geology of the Sumalatta area on North Sulawesi and on the gold-bearing ore veins there'. On gold-bearing in Sumalatta coastal mountains of N Sulawesi. Highest parts of area mainly granites, intruded into steeply dipping, bedded metamorphosed greywacke-like rocks (Dolokapa series crystalline schists). Metalliferous veins associated with rel. young andesitic magmas (Wubudu volcanic breccia, etc.))

Monnier, C. (1996)- Mecanisme d'accretion des domaines oceaniques arriere-arc et geodynamique de l'Asie du sud-est. Petrologie et geochimie des ophiolites d'Indonesie (Sulawesi, Haute-Chaine Centrale, Cyclops, Seram et Meratus). Ph.D. Thesis, Universite de Bretagne Occidentale, Brest, p. 1-605. *(Unpublished)*

('Mechanism of accretion of oceanic forearc domains and geodynamics of SE Asia', Petrology and geochemistry of Indonesian ophiolites (Sulawesi, Central Range, Cyclops, Seram and Meratus)'. Indonesian ophiolites formed in back-arc setting, based on petrology and geochemistry. Most are dismembered but show normal succession from peridotites and gabbros to pillow basalts)

Monnier, C., H. Bellon & J. Girardeau (1994)- Datation K40-Ar40 de l'ophiolite de l'ile de Sulawesi. Comptes Rendus Academie Sciences, Paris 319, Ser. II, p. 349-356.
('K-Ar dating of the Sulawesi ophiolite'. Remnants of giant ophiolite nappe in Central E Sulawesi formed in M Eocene (44 ± 4 Ma). K/Ar ages for amphiboles in sample from SE Arm 47.4 and 41.2 Ma)

Monnier, C., J. Girardeau, R.C. Maury & J. Cotten (1995)- Back-arc origin for the East Sulawesi ophiolite (Indonesia). Geology 23, 9, p. 851-854.
(Ophiolites probably formed in Eocene Paleo-Celebes Sea backarc basin and emplaced by N to S obduction of Eurasia/ Celebes Sea over 'Australian' Eastern Sulawesi basement)

Moss, S.J. & M.E.J. Wilson (1998)- Biogeographic implications of the Tertiary palaeogeographic evolution of Sulawesi and Borneo. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys, Leiden, p. 133-163.
(Series of paleogeographic maps of Borneo- Sulawesi region, from 50- 4 Ma. W Sulawesi accreted onto Borneo by Late Cretaceous, then separated in M-Late Eocene. E Sulawesi collided with W Sulawesi in M-L Oligocene. Late Miocene accretion of Australia-derived microcontinents onto E Sulawesi (Buton, also Sula Spur ?))

Moyle, A.J., B.A. Wake, S.H. Tuckey & J. Ariti (1997)- The Toka Tindung Gold Project, northern Sulawesi, Indonesia. Proc. World Gold 1997 Conference, Singapore, 2, p. 27-34.
(On discovery of Toka Tindung, Pajajaran, Blambagan and Araren low-sulphidation quartz-adularia vein and stockwork gold-silver deposits on N Minahasa Peninsula, N Sulawesi. Mineralized veins in Late Pliocene basaltic andesite volcaniclastics and flows, part of E Miocene- Pleistocene Sulawesi-East Mindanao Arc)

Mubroto, B. (1988)- A palaeomagnetic study of the East and Southwest arms of Sulawesi, Indonesia. Ph.D. Thesis, University of Oxford, p. 1-253. *(Unpublished)*
(Including paleomagnetic work on E Sulawesi Ophiolite, suggesting formation in Late Cretaceous at 17-24°S and rotated CW about 60°)

Mubroto, B. (1994)- Palaeomagnetism of ophiolites of eastern Sulawesi; evidence for northward translation. In: J.L. Rau (ed.) Proc. 30th Sess. Committee Co ord Joint Prospecting Mineral Res Asian Offshore Areas (CCOP), Bangkok, 2, p. 179-189.
(Indo-Australian, Eurasian and Pacific plates all interact in Sulawesi region. Paleomagnetic analysis of Cretaceous basalts from E Sulawesi Ophiolite Complex at Batusamping and Binsil, suggests ophiolite was derived from N part of Indo-Australian oceanic plate, formed at spreading ridge at 17° ±4°S paleolatitude)

Mubroto, B., J.C. Briden, E. McClelland & R. Hall (1994)- Palaeomagnetism of the Balantak ophiolite, Sulawesi. Earth Planetary Sci. Letters 125, p. 193-209.
(Paleomag from Cretaceous-Paleogene lavas in Balantak Ophiolite on E tip of E Sulawesi indicates formation at 17±4° S and ~60° of CW rotation. Supporting evidence for paleolatitude and N-ward movement of E arm from other lavas and Boba Cherts. Contrast between these results and subequatorial origin of contemporary rocks on Halmahera consistent with subduction of Indian Ocean lithosphere beneath Sunda margin in Late Mesozoic- Early Tertiary. Large differences in declination in E Sulawesi rocks indicate large clockwise and anticlockwise rotations of tectonic blocks only tens of km across)

Muin, M.R., S. Pramumijoyo, I.W. Warmada & W. Suryanto (2017)- Neogene tectonics and paleomagnetism of the western and eastern of Palu Bay, Central Sulawesi, Indonesia. In: Southeast Asian Conference on Geophysics, Bali 2016, IOP Conf. Series, Earth Environm. Science 62, 012003, 6p.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/62/1/012003/pdf)

(Paleomagnetic work on 8 Neogene granites suggests similar rotation of both sides of Palu Bay during Neogene)

Muller, H.W., G. Riedmuller & B. Schwaighofer (1984)- Weathering products of andesitic rocks from Sulawesi, Indonesia. Clay Minerals 19, 1, p. 21-28.
(online at: http://www.minersoc.org/pages/Archive-CM/Volume_19/19-1-21.pdf)
(Weathered andesitic and overburden along Tondano river, N Sulawesi, indicate different weathering conditions. Andesite altered to 7A halloysite and allophane with some hematite, reflecting paleoclimate with more pronounced dry season and lower annual rainfall than today. Transported latosols of overburden with 10A- and 7A-halloysites, weathered under recent tropical climate)

Multan, R.A., B. Rochmanto & R. Langkoke (1999)- Analysis of sedimentary environment of chromite ore in Sawugi, Bengkulu Barat, Poso, Central Sulawesi. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 313-320.

Munasri (1995)- Cretaceous radiolarian biostratigraphy in the Bantimala and Barru areas, South Sulawesi, Indonesia. M.S. Thesis, University of Tsukuba, Japan, p. *(Unpublished)*

Munasri (2013)- Early Cretaceous radiolarians in manganese carbonate nodule from the Barru area, South Sulawesi, Indonesia. J. Riset Geologi Pertambangan (LIPI) 23, 2, p. 79-88.
(online at: www.geotek.lipi.go.id/riset/index.php/jurnal/article/view/92/52)
(E Cretaceous (Valanginian-Barremian) radiolaria from manganese carbonate nodule in dark reddish shale of Barru melange, 15 km SE of Barru. Assemblage with Pantanellium squinaboli, Cecrops septemporatus, Eucyrtidium parviporum, E. brouweri, Theocapsa laevis, Stichocapsa pseudodecora, Pseudodictyomitra lilyae, P. carpatica, Gongylothorax verbeeki, etc. Rocks accreted at subduction trench in M Cretaceous (Aptian). Albian- E Cenomanian assemblages in chert-siliceous shale of Bantimala Complex by Wakita et al. (1994). Barru and Bantimala Complexes may not be parts of single accretionary complex, as previously suggested)

Musri, M., E. Suparka, C.I. Abdullah, N.I. Basuki & M.A. Forster (2016)- 40Ar/39Ar geochronology of Rumbia schist complex: new implications for timing and hydrothermal activity in the Southeast Sulawesi gold prospect, Indonesia. Int. J. Engineering and Science Applications (UNHAS) 3, 2, p. 145-152.
(online at: pasca.unhas.ac.id/ojs/index.php/ijesca/article/download/1086/234)
(Rumbia Mountains with E-W oriented high-P/low-T, and medium-P/low-T metamorphic rocks (mica schist, glaucophane schist, greenschist). Host of gold deposits. Two periods of gold mineralization: (1) associated with tectonic deformation and metamorphic rocks exhumation (Ar/Ar age ~23 Ma); (2) related to post-tectonic hydrothermal activity (overprinting at ~6.8 Ma))

Musri, E. Suparka & B. Tambun (2011)- Geology model of alteration and hydrothermal mineralization Latuppa area, Palopo, South Sulawesi. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, p. .

Nainggolan, D.A. (2006)- Perkembangan struktur geologi bawah permukaan berdasarkan hasil analisis data gaya berat di utara Kendari, Sulawesi Tenggara; implikasinya terhadap kemungkinan terdapatnya sumber daya geologi. J. Sumber Daya Geologi 16, 5 (155), p. 270-284.
('The development of subsurface geological structure based on gravity data analysis in the north of Kendari, Southeast Sulawesi; implications for the possibility of the presence of geological resources'. Study area in SE Sulawesi mainly covered by ophiolite. Structure mainly NW-SE (also SW-NE?))

Nainggolan, D.A. & B.S. Widijono (2003)- Struktur kerak dan geodinamika daerah Luwuk dan sekitarnya Sulawesi Tengah berdasarkan analisis data gaya berat. J. Geologi Sumberdaya Mineral 13, 140, p. 18-29.
('Crustal structure and geodynamics of the Luwuk area, C Sulawesi, based on analysis of gravity data'. Gravity analysis of N part of E Arm of Sulawesi and S Tomini Bay. Gravity high over Togian Islands. Gravity low over Luwuk and adjacent areas, interpreted as Mesozoic sediments overlan by ophiolite sheets)

Natawidjaja, D.H. & M.R. Daryono (2015)- The Lawanopo Fault, central Sulawesi, East Indonesia. Proc.4th Int. Symposium on earthquake and disaster mitigation, Bandung 2014, AIP Conference Proc. 1658, 030001, p. 1-23.
(NW-SE trending Lawanopo fault of SE Sulawesi considered as active left-lateral strike-slip fault. Exposures of fault are clear, and it serves as tectonic boundary between different rock assemblages. Young fault, but no evidence of recent activity, consistent with lack of seismicity on fault)

Ndoasa, R.P., M.A. Amir, H.D. Asmuruf & Rudianto (1994)- Penempatan ofiolit Barru dan pembentukan Selat Makasar. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 291-299.
('Emplacement of the Barru ophiolite and the formation of Makassar Straits')

Neben, S., K. Hinz & H. Beiersdorf (1998)- Reflection characteristics, depth and geographic distribution of bottom simulating reflectors within the accretionary wedge of Sulawesi. In: J.P. Henriet & J. Meinert (eds.) Gas hydrate: relevance to world margin stability and climate change, Geol. Soc., London, Spec. Publ. 137, p. 225-265.
(Seismic profiles across subduction zone N of Sulawesi bottom simulating reflectors (BSRs) across accretionary wedge. BSR correlated with heat flow data and indicate that where heat flow is high and BSR interrupted, active venting of methane may occur at sea floor. BSRs limited to central part of N Sulawesi subduction zone (between 121°30'E and 123°30'E In W part of area only short BSR segments found, which may be result of slope instability and slumping of sediments. On E-most profile, no bottom simulating reflectors found at all)

Ngakan, A.A., B. Priadi, K. Hasan, Surono & T.O. Simanjuntak (2000)- Sulawesi. In H. Darman & F.H. Sidi (eds.) An outline of the geology of Indonesia, Chapter 8, Indon. Assoc. Geologists (IAGI), Spec. Publ., p. 101-120.

Niermeyer, J.F. (1909)- De onderzeese vorm van Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 26, p. 612-621.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001651001:pdf)
('The undersea shape of Sulawesi'. Early bathymetric map around Sulawesi. No landmass on earth is surrounded by seas and cut by and embayments that are this deep and steep, except perhaps Halmahera. With 1:2.5m scale color bathymetry map)

Nishimura, S., T. Yokohama & Herry (1980)- Gravity measurements at South Sulawesi. In: Physical geology of Indonesian island arcs, Kyoto University, p. 35-41.

Noack, O. (1926)- Vergleichende petrographische Studien an Gesteinen der Minahassa in Nord-Celebes. Thesis Hohen Naturw. Fakultat Vereinigten Friedrichs Universitat, Halle, p. 1-41. *(Unpublished)*
('Comparative petrographic studies of rocks of the Minahasa in N Sulawesi'. Petrographic descriptions and chemical analyses of young volcanic rocks collected by Rinne in 1900. No illustrations)

Noble, R.A., D.M. Jessup, D. Burt & Djumlati (2000)- Petroleum system of the Senoro-1 discovery, East Sulawesi, Indonesia. AAPG Int Conf. Exhibition, Bali 2000, American Assoc. Petrol. Geol. (AAPG) Bull. 84; 9, p. 1470. (*Abstract only)*
Senoro-1 1999 gas oil discovery in N Tomori petroleum system: U Miocene reefs, charged by E-M Miocene calcareous marine source rocks after burial by Pliocene synorogenic deposits of Tomori collision zone. Porous reefal facies of Mantawa Fm with gross gas-oil columns of 656' and 33'. Gas mixed thermogenic and biogenic; 89% methane, 2% CO2, ~1% H2S and wet hydrocarbon gases C2+)

Norvick, M.S. & R.L. Pile (1976)- Field report on the Lariang and Karama geological survey West Sulawesi. BP Petroleum Indonesia, Report JKT/EXP/0071, p. 1-72.
(Unpublished, but commonly used comprehensive field survey report of W Sulawesi basins for Gulf/ BP)

Novian, M.I., D.H. Barianto, V.D. Mardiana N. & T. Sihombing (2012)- Paleogeografi Miosen daerah Luwuk, Sulawesi Tengah berdasarkan keberadaan konglomerat batu gamping dari Formasi Kintom dan Formasi Bongka. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-29, p. 12. *(Abstract only)*
('Miocene paleogeography of the Luwuk area, C Sulawesi, based on presence of limestone conglomerates from the Kintom and Bongka Formations'. 'East Sulawesi Molasse' in N arm of Sulawesi with 65m thick conglomerate with mainly limestone clasts (sourced from Salodik Fm) and 5% ultramafic rocks. Age of conglomerate M-Late Miocene)

Novian, M.I., B.S. Astuti & D.H. Barianto (2012)- Stratigrafi formasi Poh pada jalur Sungai Bun, Desa Bondat, Pagiman, Sulawesi Tengah. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-35, 1p. *(Abstract only)*
('Stratigraphy of the Poh Formation in Bun River section, Bondat Village, Central Sulawesi'. ~140m thick setion of coarsening upward calcareous claystone-sandstone section of 'Poh Formation'. Sedimentary structures parallel lamination, some flute casts and ripples, trough cross bedding and hummocky cross stratification. Lithics consists of fragments of ultramafic rocks, limestone and mollusc shells. Foraminifera suggest M Oligocene- Pliocene age)

Nugraha, A.M.S. (2016)- Late Cenozoic history of Sulawesi, Indonesia: the Celebes Molasse. Ph.D. Thesis Royal Holloway London University, p. 1-.
(Celebes Molasse in SE Sulawesi unconformable over pre-Miocene rocks, post dating E Miocene Sula Spur collision. Three units: (1) serpentine-rich clastic unit (pre-Latest Miocene), (2) limestone unit (Latest Miocene-Holocene) and (3) quartz-rich clastic unit (Late Miocene-Pliocene).

Nugraha, A.M.S. & R. Hall (2017)- Late Cenozoic palaeogeography of Sulawesi, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 490, p. 191-209.
(New paleogeographic maps from E Miocene-Pleistocene (20-1 Ma), after Sula Spur- N Sulawesi volcanic arc collision. For most of Neogene Sulawesi shallow marine area with small islands surrounded by deeper marine areas. Onset of extension at ~15 Ma. Deep inter-arm bays began to form in Late Miocene and islands became larger. Pliocene increase in land area and elevation accompanied by major subsidence of inter-arm bays. Separate islands coalesced in Pleistocene to form distinctive K-shaped island known today)

Nugraha, A.M.S. & R. Hall (2017)- Light and heavy mineral constraints on the provenance of unconformity-bounded formations: an example from SE Sulawesi, Indonesia. American Geophys. Union (AGU) Fall Meeting, New Orleans, EP24B-06, 1p. *(Abstract only)*
(online at: https://agu.confex.com/agu/fm17/meetingapp.cgi/Paper/219367)
(Neogene sediments of Celebes Molasse in SE Arm of Sulawesi show unroofing series: (1) U Miocene Pandua Fm dominated by serpentinite and chrome spinel, less polycrystalline quartz and metamorphic, etc. lithics (mainly sourced from ultramafic rocks) and (2) latest Miocene-earliest Pleistocene Langkowala Fms poor in serpentinite and increasing metamorphic detritus including glaucophane/lawsonite (from exhumation of HP-LT metamorphic complexes). Two formations separated by angular unconformity)

Nugraha, A.M.S. & R. Hall (2018)- Late Cenozoic history of Sulawesi. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-27-G, 22p.
(Neogene stratigraphy of Sulawesi with five regional unconformities: (1) E Miocene (~23 Ma), (2) M Miocene (~15 Ma), (3) latest Miocene- earliest Pliocene (~ 6-5.3 Ma), (4) E Pleistocene (~1.8 Ma), and (5) M Pleistocene (~1 Ma). E Miocene collision between promontory of Sula Spur and N Sulawesi volcanic arc, causing ophiolite emplacement in E Sulawesi. M Pliocene unconformity in some areas of N Sulawesi. With 10 paleogeographic maps)

Nugroho, S., I. Hardjana, A.D. Susanto & C.C. Bautista (2005)- Notes on the discovery of the Riska deposit, North Sulawesi- Indonesia. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, IAGI Special Issues 2005, p. 31-44.
(On Riska high-sulphidation epithermal gold deposit 20 km SE of Kotamobagu, discovered by Newmont in 1998. Hosted by Plio-Pleistocene andesitic pyroclastics)

Nur, I., A. Idrus, S. Pramumijoyo, A. Harijoko & A. Imai (2011)- Mineral paragenesis and fluid inclusions of the Bincanai epithermal silver- base metal vein at Baturappe area, South Sulawesi, Indonesia. J. Southeast Asian Applied Geol. (UGM) 3, 1, p. 34-44.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-3/no-1/jsaag-v3n1p034.pdf)
(Baturappe prospect in S part of Sulawesi island, is hydrothermal mineralization district of >20 epithermal silver-base metal deposits, hosted in late M Miocene Baturappe Fm basaltic-andesitic volcanic rocks)

Nur, I., A. Idrus, S. Pramumijoyo, A. Harijoko, Y. Juyanagi & A. Imai (2009)- Characteristics of epithermal quartz veins at Baturappe area, Gowa, South Sulawesi: implication to base metal exploration. In: Proc. Int. Seminar on Geology of the Southern Mountains of Java, Yogyakarta 2009, 1, p. 179-186.

Nur, I., A. Idrus, S. Pramumijoyo, A. Harijoko, Sufriadin, A.H.S. Jaya & U.R. Irfan (2009)- Geologi endapan urat logam dasar Pb daerah Baturappe Kabupaten Gowa, Sulawesi Selatan. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, p. 629-637.
('Geology of the Baturappe area Pb deposits, Gowa Regency, S Sulawesi'. Quartz-Pb veins in M Miocene basaltic-andesitic volcanic- intrusion complex. Oldest rock unit in outcrop late Middle-Miocene basalt lava (K-Ar ages ~12.4-12.8 Ma))

Nur, I., A. Idrus, S. Pramumijoyo, A. Harijoko, K. Watanabe & A. Imai (2011)- Hydrothermal alteration zoning around the Baturappe epithermal silver-base metal deposit, South Sulawesi, Indonesia. Proc. Int. Symposium on Earth Science and Technology, Fukuoka 2011, p. 305-312.

Nur, I., A. Idrus, S. Pramumijoyo, A. Harijoko, K. Watanabe, A. Imai, Sufriadin, A. Jaya & U.R. Irfan (2012)- Elemental mass balance of the hydrothermal alteration associated with the Baturappe epithermal silver-base metal prospect, South Sulawesi, Indonesia. Jurnal Penelitian Enjinering, p.
(online at: http://repository.unhas.ac.id/handle/123456789/6138)

Nur, I., R.I. Irfan, Sufriadin & A. Ilyas (2016)- Mineralogical and geochemical characteristics of the volcanogenic massive sulfide deposits in Sangkaropi District, North Toraja, Indonesia. Int. J. Smart Material Mechatronics 3, 2, p. 236-241.
(Kuroko-type volcanogenic massive sulphide (VMS) deposits in Sangkaropi mineral district, N Toraja, S Sulawesi. Formed in Oligocene, ~35-22.5 Ma. Host rocks mainly altered tuff and dacitic volcanic breccia. Mineralizations mainly massive disseminated sulphides, with veins, vein stockworks, and sulphide stringers. Quartz and barite main gangue minerals. Ore minerals chalcopyrite, galena, sphalerite, etc., with azurite and malachite as supergene minerals. Hydrothermal alteration consistent with inner zones of Kuroko-type alteration zones)

Nur, I., Y. Jayanagi, A. Idrus, S. Pramumijoyo, A. Harijoko & A. Imai (2010)- Mineralogy and microthermometry of the epithermal base metal veins at Baturappe area, South Sulawesi, Indonesia. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, 7p.
(Baturappe area, S Sulawesi, hydrothermal quartz-Pb veins in basalt and porphyritic basalt host rocks. Microthermometric study of fluid inclusions in quartz indicates temperature formation of veins betweeen ~230°-280°C. Minimum formation depth about 300- 550m)

Oostingh, C.H. (1935)- Enige opmerkingen over A. von Kutassyộs beschrijving van jong-Tertiaire mollusken uit Oost-Celebes. De Ingenieur in Nederlandsch-Indie 1935, IV, 4, p. 30-31.
(Questions validity and notes inconsistencies of Mio-Pliocene age determinations based on molluscs from E Sulawesi sediments by Kutassy in Von Loczy (1934)

Osimo, G. (1908)- Di alcuni foraminiferai dell' Eocene di Celebes. Rivista Italiana Paleont. 14, 1-2, p. 28-54.
('On some foraminifera from the Eocene of Celebes'. Larger forams from marl near Dongala, N Sulawesi, collected by Italian BPM geologist Bonarelli. With Miogypsinoides complanata, Spiroclypeus and Baculogypsina; looks more like Late Oligocene assemblage?)

Otofuji, Y., F. Hehuwat, S. Sasajima, S. Nishimura & A. Dharma (1981)- Paleomagnetic evidence for clockwise rotation of the Northern arm of Sulawesi, Indonesia. Earth Planetary Sci. Letters 54, p. 272-280.
(North arm of Sulawesi clockwise rotation of >90°. Rotational motion began no later than M Miocene and probably terminated before initiation of Plio-Pleistocene volcanic activity)

Padmawidjaja, T. (2019)- Konfigurasi Cekungan Tomori berdasarkan data gayaberat. J. Geologi Sumberdaya Mineral 20, 1, p. 27-36.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/402/387)
('Tomori Basin configuration based on gravity data')

Paju, J.A., Y.S. Purnama, B.Nugroho, A. Bachtiar & F. Peera (2006)- Sedimentology of Mallawa clastics and its implication to hydrocarbon occurrences in western part of West arm Sulawesi. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, PITIAGI2006-012, p. 1-18.
(Eo-Oligocene Mallawa Fm (should be Malawa Fm of Sukamto 1982; JTvG) clastics with coal in S part of West Arm of Sulawesi up to 400m thick. Unconformably overlies flysch deposits of Balangbaru and Marada Fm and unconformably overlain by Tonasa Limestone and thick Camba Fm volcanics. Malawa Fm interfingers with volcanic sequence of Langi Fm to E. Mainly fluvial- tidal deposits. Probably equivalent of fluvio-deltaic Lower Toraja Fm in N of Sulawesi West Arm)

Panggabean, H. & Surono (2011)- Tektono-stratigrafi bagian Timur Sulawesi. J. Sumber Daya Geologi 21, 5, p. 239-281.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/150/146)
('Tectonostratigraphy of East Sulawesi'. Sulawesi four geological provinces: (1) W Sulawesi volcanic, (2) C Sulawesi metamorphic, formed since Cretaceous subduction; (3) E Sulawesi ophiolite, result of extension in Pacific Ocean in Cretaceous- Eocene and (4) fragments of microcontinents in E Sulawesi, which separated from N Australia margin. E and SE Sulawesi areas of latest Oligocene- M Miocene collision between continental and ophiolitic basement blocks)

Panjaitan, S. (2009)- Penelitian paleomagnetik dan gaya berat kaitannya dengan pembentukan formasi batuan di Sulawesi selatan serta hubungannya dengan selat Makasar dan Kalimantan. J. Sumber Daya Geologi 19, 5, p. 297-212.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/214/204)
('Paleomagnetic and gravity investigations tied to rock formations in S Sulawesi and its relations to Makassar Straits and Kalimantan'. Paleomagnetism and GPS analysis indicate CCW rotation and N-ward drift of S Sulawesi since Triassic: (1) Triassic Ultramafics (92° CCW rotation, paleolatitude -26.5°S); (2) Cretaceous melange complexes (30° CCW rotation, paleolatitude -16.1°S); (3) Eocene- M Miocene- Tonasa Limestone Fm (CCW rotation 80°, paleo latitude -14.8°S); (4) M-L Miocene Camba Fm (81° CCW rotation, paleolatitude -12.5°S; (5) M Miocene Tacipi Limestone (80° CCW rotation, paleo latitude 4.5°S); (6) Pleistocene Walanae Fm sandstone (0°- 2° CCW rotation, paleo latitude -3.5°S). Kalimantan derived from Asia in Triassic)

Panjaitan, S. & S. Hutubessy (2002)- Sifat fisik batuan di daerah Palopo dan Makale, Sulawesi Selatan. J. Sumber Daya Geologi 7, 124, p. 2-10.
(Physical properties of Pretertiary rocks in area of Palopo and Makale, NE part of SW Arm of Sulawesi)

Panjaitan S. & B. Mubroto (1993)- Indikasi tektonik berdasarkan data paleomagnetik di daerah Soppeng, Sulawesi selatan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 83-91.
('Tectonic indications from paleomagnetic data in the Soppeng area, S Sulawesi'. Miocene- Pliocene paleomagnetic data from Camba and Walanae formations in SW Sulawesi suggest N-ward movement of SW Sulawesi from 12.5° S to 3.3° S and ~60° CW (CCW?) rotation between M Miocene- Pleistocene)

Panjaitan, S. & J. Nasution (2004)- Potensi minyak bumi dan gas alam lepas pantai cekungan Sengkang, Sulawesi Selatan, tinjauan analisis gayaberat. J. Sumber Daya Geologi 14, 1 (145), p. 3-12.

('Oil and gas potential of the Sengkang basin S Sulawesi, from gravity analysis'. Gravity anomalies interpreted as anticlines and Tacipi limestone buildups)

Pardiana, D., M. Harayanto, D. Ramdani, F. Ginting, D. Setyandhaka et al. (2015)- Bakan gold mine and 2014 exploration results update. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 101-119.
(Bakan gold mine 200km SW of Manado in N Arm of Sulawesi operational since 2013. Cluster of epithermal high-sulphidation gold occurrences hosted by Plio-Pleistocene dacitic tuffs that are unconformable over Mioccene andesitic lavas and sandstones. Mineralization similar to North Lanut mine)

Parkinson, C.D. (1991)- The petrology, structure and geologic history of the metamorphic rocks of Central Sulawesi, Indonesia. Ph.D. Thesis, University of London, p. 1-337. *(Unpublished)*
(Includes description of metamorphic sole below obducted E Sulawesi ophiolite in C Sulawesi)

Parkinson, C.D. (1991)- Counterclockwise P-T-t paths from Sulawesi meta-basites: implications for subduction zone metamorphism. In: Proc. Symposium on the dynamics of subduction and its products, Res. Dev. Centre Geotechnology, Indonesian Inst. Science (LIPI), p. 225-226.

Parkinson, C.D. (1996)- The origin and significance of metamorphosed tectonic blocks in melanges: evidence from Sulawesi, Indonesia. Terra Nova 8, p. 312-323.
(Block-bearing melange ('knockers' in sheared mudstone) of C Sulawesi Peleru Melange Complex overlain by E Sulawesi ophiolite nappe, with Mowomba metamorphic sole sequence at base (formed at E-dipping subduction zone). Most blocks are ophiolite, also blueschist, etc. Matrix serpentinite and red phyllite. Direct genetic relationship between high-grade tectonic blocks in melange and amphibolites in metamorphic sole. High-grade tectonic blocks originated in thin, thermally zoned metamorphic sheet welded to oceanic hanging wall plate at inception of subduction. Break-up at depth by tectonic erosion led to dispersal of fragments into newly developed serpentinite melange wedge)

Parkinson C. (1998)- An outline of the petrology, structure and age of the Pompangeo Schist Complex of Central Sulawesi, Indonesia. The Island Arc 7, 1-2, p. 231-245.
(C Sulawesi Pompangeo Schist is metamorphosed accretionary complex, with phyllitic marble, phyllite, schist and quartzite, all of terrigenous- marine origin. Along E margin schists interthrust with unmetamorphosed Early Jurassic sandstone (may be Cretaceous?; JTvG), which may be parent material. Schists unconformably overlain by Albian-Cenomanian pelagic sediment. Synmetamorphic NNW-SSE striking and W dipping isoclinal folding. E-W metamorphic gradient, representing rel. low T gradient of 15°C/ km. K-Ar ages ~108-114 Ma. Correlative metamorphic rocks may underlie W Sulawesi Neogene magmatic province. Pompangeo and Bantimala schists probably generated in same subduction system responsible for C Kalimantan Mesozoic arc)

Parkinson, C.D. (1998)- Emplacement of the East Sulawesi ophiolite: evidence from sub-ophiolite metamorphic rocks. J. Southeast Asian Earth Sci. 16, 1, p. 13-28.
(Metamorphic sole at base E Sulawesi ophiolite composed of thin garnet and epidote amphibolite and basal greenschist metaclastics, with K/Ar ages ~30 Ma (= cooling age?). E-dipping tectonite fabrics in amphibolite and underlying basement mica schist and overlying peridotite indicate orthogonal E to W emplacement of ophiolite in C Sulawesi. Followed by W Sulawesi arc volcanism in E Miocene and collision of Banggai-Sula Platform in Late Miocene)

Parkinson, C.D. & T. Dooley (1996)- Basin formation and strain partitioning along strike-slip fault zones. Bull. Geol. Survey Japan 47, 8, p. 427-436.
(online at: https://www.gsj.jp/data/bull-gsj/47-08_02.pdf)
(On strike-slip fault zones, with example of Sulawesi: series of curvilinear sinistral strike-slip fault zones (Palo-Kuro, Poso, Matano and Lawanopo), formed after Late Miocene collision of Sula Platform and E Sulawesi Ophiolite)

Parkinson, C.D. & I. Katayama (1999)- Present-day ultrahigh-pressure conditions of coesite inclusions in zircon and garnet: evidence from laser Raman microspectroscopy. Geology 27, p. 979-982.
(Coesite is high-pressure polymorph of quartz and occurs as inclusions in deeply subducted, metamorphosed crustal rocks in several Eurasian collisional orogens, including in zircons in eclogites from Bantimala Complex, S Sulawesi. It is primary indicator mineral of ultrahigh-pressure metamorphism)

Parkinson, C.D. & I. Katayama (1999)- Metamorphic microdiamond and coesite from Sulawesi, Indonesia; evidence of deep subduction at the SE Sundaland margin. American Geoph. Union (AGU), 1999 Fall Mtg., EOS Transactions 80, 46, Suppl., p. 1181. *(Abstract only)*
(In situ diamond grains identified by laser Raman spectroscopy within quartz pseudomorphs after coesite in E Cretaceous (130-120 Ma) garnet in jadeite quartzite of Bantimala complex, C Sulawesi. Indicate ultrahigh-pressure conditions (>4 GPa) and subduction of continental crust to depths within diamond stability field, followed by rapid exhumation)

Parkinson, C.D., K. Miyazaki, K. Wakita, A.J. Barber & D.A. Carswell (1998)- An overview and tectonic synthesis of the Pre-Tertiary very-high pressure metamorphic and associated rocks of Java, Sulawesi and Kalimantan, Indonesia. Island Arc 7, p. 184-200.
(High-P metamorphics common in Cretaceous accretionary complexes of Java, Sulawesi, SE Kalimantan. Many occur as imbricate slices of carbonate, quartzose and pelitic schists, interthrust with subordinate basic schists and serpentinite. They are mainly low-intermediate metamorphic grade, with K-Ar ages of 110-120 Ma. Metamorphic rocks from depths >60 km sporadically exposed, usually as tectonic blocks. Many metamorphics probably recrystallized in N-dipping subduction zone at Sundaland craton margin in E Cretaceous. Exhumation possibly facilitated by collision of Gondwanan continental fragment with Sundaland margin at ~120-115 Ma)

Patria, A., A.H. Dewangga, R.S. Putranto & B. Priadi (2012)- Geochemistry of igneous rocks from Bintauna area, North Sulawesi: tectonic implication. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-11, 4p.
(Tinombo Fm, Wobudu Breccias and Dolokapa Fm outcrop in Bintauna-Labuanaki areas, N coast of Sulawesi N Arm. Samples ages ranging of 41.8- 13.9 Ma. Geochemistry indicates volcanics are Low-K volcanic arc basalts, related to Late Eocene- M Miocene subduction. No maps)

Pearson, D.F. & N.M. Caira (1999)- The geology and metallogeny of central North Sulawesi. In: G. Weber (ed.) Proc. PACRIM ô99 Congress, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, 4/99, p. 311-326.
(N Arm Sulawesi gold and base metal mineralisation styles: porphyry Cu-Au; porphyry-related gold and base metal veins; high-sulphidation Cu-Au-As; low-sulphidation epithermal Au; hydrothermal breccias; and sediment-hosted Au mineralisation. Different Miocene and Pliocene porphyry systems recognised whilst most remaining epithermal mineralisation Pliocene or later. Central N Arm of Sulawesi Miocene magmatic island arc on E Tertiary oceanic basaltic basement, overprinted by Pliocene arc. Structural fabric dominated by SSE arc-normal and ESE arc-parallel faults, established during Miocene under dextral wrench regime. Intersections of major fault sets favoured sites for Miocene porphyry Cu-Au)

Perdana, M.J. & H. Amijaya (2010)- Identification of geochemical degradation of oil seep from Paniki River, Kalukku, Mamuju, West Sulawesi. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-SG-036, 10p.
(Oil seeps in Paniki River, Kalukku, 40 km NE of Mamuju, W. Sulawesi, considered to have originated from Eocene coals or carbonaceous clays of Toraja Fm. GCMS work suggests severe biodegradation)

Perdana, M.J. & H. Amijaya (2011)- Source indication of oil seep from Paniki River, Kalukku, Mamuju, West Sulawesi, based on geochemical characterization. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-030, 10p.
(Many oil and gas seeps in W Sulawesi area. Paniki River seep oil biodegraded. Common bicadinane, oleanoids, oleanane, and taraxastane show oil probably derived from higher land plants. No gammaceranes)

Perello, J.A. (1994)- Geology, porphyry Cu-Au, and epithermal Cu-Au-Ag mineralization of the Tombulilato district, North Sulawesi, Indonesia. J. Geochemical Exploration 50, p. 221-256.
(N Sulawesi Tombulilato district island arc-type volcano-sedimentary pile with >3400m of Late Miocene(?) - Pleistocene volcanics, interbedded with marine and continental sediments. Sequence intruded by high-level stocks and dikes, cut by Late Pliocene- Pleistocene diatreme breccias, some associated with Cu mineralization. Main compressive deformation event in Pliocene. Mineralization between 2.9 - 0.9 Ma as part of district-scale hydrothermal system. Uplift and erosion removed ~2 km of rock in last 3 Myr)

Permana, H. (2013)- Kompleks batuan malihan. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 127-152.
('Metamorphic rock complexes'. Chapter 7 in Geology of Sulawesi book. Brief review of metamorphic rocks of Sulawesi. Nine main metamorphic complexes (Malino, Pompangeo, Mengkoka, Mendoke-Rumbia-Kabaena, Palu-Koro, Latimojong-Karossa, Matano, Bantimala-Barru and Buton), mainly of Cretaceous age, and associated with Triassic-age ultramafic rocks)

Permana, H., T. McConachy, B. Priadi, J. Parr, N.D. Hananto, S. Burhanuddin, M. Pirlo, I.S. Brodjonegoro & Sultan (2008)- Gunungapi dan kegiatan hidrotermal bawah laut di perairan Sulawesi Utara: mineralisasi dan implikasi tektonik. J.Geologi Kelautan 6, 2, p. 69-79.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/151/141)
(Volcanoes and subsea hydrothermal activities in North Sulawesi waters: mineralization and tectonic implications'. IASSHA 2003 expedition in Sangihe islands waters identified the submarine volcano of Kawio Barat and observed hydrothermal activities at Roa, Naung and Banua Wuhu. At Kawio Barat volcano polychaete 'tube worms' colony growth on rock at methane gas seep)

Permana, H. & Surono (2013)- Kompleks ofiolit. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 213-224.
('Ophiolite complexes'. Chapter 9 in Geology of Sulawesi book. Brief review of major ophiolite complexes of East and SE Arms of Sulawesi and peridotites in Palu-Koro zone and Bantimalu- Barru melanges. E Sulawesi ophiolite overlain by E Cretaceous radiolarian cherts (Valanginian- Cenomanian)

Permanadewi, S. & Baharuddin (2012)- Cooling of granitic rocks in the Palu region, Middle Sulawesi: zircon and apatite fission track constraints. J. Sumberdaya Geologi 22, 3, p. 131-136.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/112/104)
(Zircon and apatite FT data suggest two cooling episodes of Oligocene granitic rocks in Palu region, C Sulawesi: (1) in S cooling around 30 Ma, (2) in N ('neck' area) rapid cooling due to local uplift, possibly in response to overthrust at ~6 Ma (Late Miocene))

Permanadewi, S. & H. Utoyo (1994)- Perbandingan umur hasil pentarikhan kalium-argon batuan granitik, daerah Bora, Sulawesi tengah dengan horenblenda dan biotit sebagai mineral penentu. J. Geologi Sumberdaya Mineral 4, 36, p. 16-20.
('Results of K- Ar dating of granitic rocks in Bora area, C Sulawesi, comparing hornblende and biotite data'. K-Ar dates of granitic rocks from Bora area, S of Palu, using biotite ~16.2-16.4 Ma, hornblende ~16.5-16.9 Ma (near E-M Miocene boundary))

Pertamina/BPPKA (eds.) (1996)- Banggai Basin (E Sulawesi). In: Petroleum Geology of Indonesian basins, VI, Jakarta, p. 1-24.

Pezzati, G. (2016)- Basin development in Gorontalo Bay, Sulawesi. Ph.D. Thesis, Royal Holloway London University, p. *(Unpublished)*

Pezzati, G., R. Hall, P. Burgess & M. Perez-Gussinye (2014)- The Poso Basin in Gorontalo Bay, Sulawesi: extension related to core complex formation on land. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-297, 12p.

(Seismic analysis and literature research suggest possible E Miocene origin for Gorontalo Bay, following Sula Spur collision. In W part of Gorontalo Bay two subbasins, northern Tomini Basin and southern Poso Basin. Poso Basin much younger than Tomini Basin; its development may be related to extension associated with development of metamorphic core complexes onshore)

Pholbud, P., R. Hall, E. Advokaat, P. Burgess & A. Rudyawan (2012)- A new interpretation of Gorontalo Bay, Sulawesi. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-029, p. 1-23.
(online at: http://searg.rhul.ac.uk/pubs/pholbud_etal_2012%20Gorontalo%20Sulawesi.pdf)
(Interpretation of ages of seismic horizons of Gorontalo Bay difficult due to absence of wells. Two age scenarios for rifting-subsidence timing: Eocene- Recent or Miocene-Recent. Most of subsidence young and tied to slab rollback of N Sulawesi subduction zone)

Piccoli, G., E. Robba & S. Sartono (1994)- Mixed fossil molluscs from Tana Toraja (South Sulawesi, Indonesia). In: Studies on ecology and palaeoecology of benthic communities, Proc. 5th Paleobenthos Symposium, Rome 1992, Boll. Soc. Paleontologica Italiana, Modena, Spec. Vol. 2, p. 221-226.

PND- Patra Nusa Data (2009)- Opportunities (I), Bone Basin. Inameta J. 8, Sept. 2009, p. 23-27.
(online at: www.patranusa.com)
(Overview of Bone Basin, S Sulawesi, in conjunction with tender round)

Poedjoprajitno S. (2012)- Morphostructure control towards the development of Mahawu Volcanic Complex, North Sulawesi. J. Geologi Indonesia 7, 1, p. 39-54.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/365)
(Development pattern of N Sulawesi Mahawu, Linau, Tompusu and Kasurutan volcanic cones irregular, except Mahawu Volcano Complex showing linear pattern interpreted as NW-SE fault controlling rise of magma)

Polve, M., R.C. Maury, H. Bellon, C. Rangin et al. (1997)- Magmatic evolution of Sulawesi (Indonesia): constraints on the Cenozoic geodynamic history of the Sundaland active margin. Tectonophysics 272, p. 69-92.
(Paleocene magmatic activity limited to Ujung Pandang area (61-59 Ma). Major Eocene (50-40 Ma) event with tholeitic pillow lavas and basaltic dikes of back-arc basin affinity in all areas, possibly equivalent to Celebes Sea basaltic basement. Oligocene- Miocene island-arc tholeiites and calc-alkaline series (mainly 30-15 Ma) Widespread K-rich magmatic event between 13-10 Ma. Calc-alkaline activity resumed only in N Arm in Late Miocene (9 Ma) and still active in Manado region. K-rich activity continued in S until Pleistocene (0.77 Ma). Most recent event in C Sulawesi 6.5- 0.6 Ma granites and acid tuffs, probably strong continental imprint)

Polve, M., R.C. Maury, P. Vidal, B. Priadi, H. Bellon, R. Soeria-Atmadja, J.L. Joron & J. Cotten (2001)- Melting of lower continental crust in a young post-collision setting: a geochemical study of Plio-Quaternary acidic magmatism from central Sulawesi (Indonesia). Bull. Soc. Geologique France 174, p. 305-317.
(Acid, potassic, calc-alkaline magmas in C part of Sulawesi West arm from 6.5-0.6 Ma (dacites, rhyolites, granites. Chemical signatures consistent with Australian granulites and Indian Ocean sediments suggest magmas derived from anatexis of lower crust of Australian origin (Banggai-Sula) after M Miocene collision with W Sulawesi Sundaland margin and possibly breakoff of subducted Molucca Sea slab)

Pouyet, S. & G. Braga (1993)- *Thalamoporella sulawesiensis* n. sp. (Bryozoa, Cheilostomata) from the Eocene of Sulawesi. Neues Jahrbuch Mineral. Geol. Palaontologie, Monatshefte 1993, 2, p. 88-96.

Prasetyo, H. (1994)- Marine geoscientific survey of the West-East Indonesia back arc transition zone, Southeast Sulawesi margin. In: J.L. Rau (ed.) Proc. 29th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, Bangkok, 2, p. 127-146.
(Overview of backarc region between SE Sunda Shelf-SW Sulawesi- N Bali- N Flores. Four main tectonic phases: (1) Paleocene rifting; (2) Miocene inversion of rifts to create 'Sunda folds', tied to collision of Buton with Sulawesi Arc; (3) flexure of SE Sunda shield to S, under volcanic ridge and (4) post-Neogene formation of back-arc fold and thrust zone, associated with Australia- Banda Arc collision)

Prasetyo, H., Y.R. Sumantri, B. Situmorang & S. Wirasantosa (1995)- The ôDoang Borderland Systemô in Southwest Sulawesi margin: implications for hydrocarbon prospect in the Eastern Indonesian frontier region. Int. Seminar on the sea and its environments, Ujung Pandang 1995, p.

Priadi, B. (1993)- Geochimie du magmatisme de lôOuest et du Nord de Sulawesi: tracages des sources et implications geodynamiques. Doct. Thesis, Universite Paul Sabatier, Toulouse III, p. 1-293. *(Unpublished)*
('Geochemistry and magmatism of W and N Sulawesi'. Study of petrology and geochemistry of magmatic rocks of SW, C and N Sulawesi. S Sulawesi different history from rest of island, with Jurassic tholeitic magmatism. Calc-alkaline magmatism rel. rare, tholeitic and potassic magmatism more common. Old cycle in S only (55-60 Ma), calc-alkaline magmatism in S and C at 30 -17 Ma. In S-most sector highly potassic magmatism between 11-3 Ma and in C part acid calc-alkaline magmatism at 6-0.5 Ma. In N Sulawesi calc-alkaline magmatism continuation of Philippine Arc (incl. 22 Ma date) with ~15 Ma change from subduction to collision regime)

Priadi, B. (1996)- Kompleks granitoid Neogen di Sulawesi Tengah: tinjauan geokimia. Buletin Geologi (ITB) 26, 2-3, p.
('Neogene granitoid complex in C Sulawesi'. Neogene granitoid (5.5-3.2 Ma) along C Sulawesi Palu-Koro Fault associated with Late Miocene-Recent potassic calc alkaline (KCA) magmatism. Correlated with collision of Banggai-Sula micro-continent with Sulawesi in M Miocene, but details about genesis still limited)

Priadi, B. (2011)- Sulawesi magmatic arcs. In: N.I. Basuki (ed.) Proc. Seminar Sulawesi Mineral Resources 2011, Manado, MGEI/IAGI, p. 111-120.
(Magmatic arc products in Sulawesi mostly in W and N Arms. Oldest magmatism exposed in S part indicates Late Jurassic age (Lamasi Volcanics at E side of S arm; 159-137 Ma), with characteristics of back arc or marginal-basin magmatism (possibly part of dismembered E Sulawesi ophiolite). Paleogene- M Miocene mostly subduction-related magmatism, but W and N arms not connected until Eocene. Local Paleocene non subduction-related magmatism in N Arm may represent S-ward obducted parts of Sulawesi Sea. M Miocene-Recent magmatism different magmatic affinities, correlated with E-M Miocene collision of Banggai-Sula microcontinent, affecting melting of lower continental crust, producing magma with potassic calc-alkaline affinity in Palu-Tolitoli areas. Collision also halted subduction in S, with M Miocene- Recent alkaline/ shoshonitic post-subduction magmatism in Makassar-Toraja area)

Priadi, B (2013)- Magmatisme Sulawesi. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 113-126.
('Magmatism of Sulawesi'. Chapter 6 in Geology of Sulawesi book. Review of Sulawesi magmatism in Pre-Tertiary, Paleogene, Neogene and Quaternary)

Priadi, B., H. Bellon, R.C. Maury, M. Polve, R. Soeria-Atmadja & J.C. Philippet (1994)- Magmatic evolution in Sulawesi in the light of new 40K-40Ar age data. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 355-369.
(W Sulawesi volcanic episodes: Jurassic (~150 Ma) back arc basin magmatism, Paleocene subduction-related magmatism (~60 Ma), Oligocene- M Miocene (40-~15 Ma; well-developed in N Sulawesi; also in W and C Sulawesi) subduction-related magmatism and Miocene-Recent (~13-0 Ma) collision-related magmatism)

Priadi, B., R.C. Maury, R. Soeria-Atmadja, M. Polve & H. Bellon (1991)- Tertiary and Quaternary magmatism in Central Sulawesi: chronological and petrological constraints. In: Proc. Silver Jubilee Convention Dynamics of subduction and its products, Yogyakarta 1991, LIPI, p. 171-194.
(same title as Priadi et al. 1994)

Priadi, B., M. Polve, R.C. Maury, R. Soeria-Atmadja & H. Bellon (1993)- Geodynamic implications of Neogene potassic calc-alkaline magmatism in Central of Sulawesi: geochemical and isotopic constraints. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 59-81.
(Potassic calc-alkaline magmatism of C Sulawesi mostly acidic, ranging in age fom 6.5 Ma- Recent. Isotopic character similar to Australian blocks, suggesting result of collision between two 'Australian' blocks, Banggai

Sula in E and western block that is either microcontinent of Australian origin or ancient volcanic arc that incorporated large volume of sediment)

Priadi, B., M. Polve, R.C. Maury, H. Bellon, R. Soeria-Atmadja, J.L. Joron & J. Cotten (1994)- Tertiary and Quaternary magmatism in Central Sulawesi: chronological and petrological constraints. J. Southeast Asian Earth Sci. 9, p. 81-93.
(Four main magmatic events in C Sulawesi: (1) Late Eocene and Oligocene island arc tholeiites and calc-alkaline intrusions. (2) Lamasi Volcanics: 33-15 My K-Ar ages, but may not be magmatic ages. MORB-type affinity and anomalies indicative of BABB affinity. Origin still enigmatic. (3) Important shoshonitic affinity event at 10.1-11.9 Ma, probably post-subduction associations emplaced in S Sulawesi in Late Miocene and might derive from melting of mantle material after mantle metasomatised during former episode of subduction. (4) Last event 6.5- 0.6 Ma granitic rocks, rhyolites and widely distributed rhyolitic Barupu tuff pyroclastics (0.6 Ma). All magmatic rocks K-rich calc-alkaline composition, lacking basaltic and intermediate magmas (SiO2 >60%) and high enrichments in incompatible elements and radiogenic Sr isotopic signature. This is consistent with strong crustal imprint by melting of underthrusted continental crust in collisional context)

Priadi, B., R. Soeria-Atmadja, R. Maury, H. Bellon & M. Polve (1997)- The occurrence of back-arc magmatism in Sulawesi: geochemical constraints on geodynamic reconstruction. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 390-403.
(Two volcanic units along E edge of S arm of Sulawesi: (1) Kalamiseng Fm pillow lava-breccia, with Miocene (~17-22 Ma K-Ar ages), but may be older; (2) Lamasi Volcanics in NE part of S Sulawesi K-Ar ages suggest 3 episodes of activity, including oldest ages of Sulawesi volcanics: (1) 'Palopo ophiolite' 'back-arc' micro-gabbro cut by dikes; Late Jurassic-earliest Cretaceous (~159-137 Ma) and subduction-related (2) Oligocene Lamasi-Songka volcanics (~33-28 Ma) and (3) M Miocene Lamasi- Pohi Volcanics (~15.4 Ma) volcanics. In N part of W Sulawesi and N Sulawesi mainly Eocene (~34-50 Ma) Tinombo Fm mostly back arc basin chemistry and Paleogene K-Ar ages. Younger volcanics less common and subduction related)

Priadi, B., I.G.B.E. Sucipta & J. Sopaheluwakan (2009)- Post-collisional granitoids in Central Sulawesi, Indonesia. In: 11^{th} Reg. Congress Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA 2009), Kuala Lumpur, p. 45. *(Abstract only)*
(Neogene potassic calc-alkaline granitoids and dacitic-rhyolitic volcanics along Palu-Koro FZ of C Sulawesi)

Priadi, B., I.G.B.E. Sucipta, H. Utoyo, J. Sopaheluwakan & W. Sudarsono (1996)- Kompleks granitoid Neogen di Sulawesi Tengah, tinjauan geokimia. Buletin Geologi (ITB) 26, p. 129-141.
('Geochemistry of Neogene granitoid complexes in Central Sulawesi')

Priadi, B., I.G.B.E. Sucipta, H. Utoyo, J. Sopaheluwakan & Sudarsono (1999)- Distribution of Neogene granitoid along the Palu-Koro fault zone, Central Sulawesi. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 72-74.
(Late Miocene- Recent potassic calk-alkaline magmatism along left-lateral Palu-Koro fault zone, possibly tied to collision of Banggai-Sula collision. Three groups of granitoids aged between ~8.4- 1.7 Ma, with possible contributions of continental material (SiO2 >60%). Also gneissic granitoid of Cretaceous (96.4 Ma age))

Priadi, B., H. Utoyo, Sudarsono, Widiasmoro, J. Sopaheluwakan, A. Kadarusman & D. Sukarna (1995)- Petro-geochemical variations of granitoids along Palu-Koro Fault Zone, Central Sulawesi. Proc. 6th Int. Congress Pacific Neogene Stratigraphy and IGCP-355, PUSPITEK-Serpong, p. 34-36.

Pribadi, A. & N. Azman (1990)- Kajian geologi daerah Sulawesi Tenggara dalam kaitannya dengan prospek hidrokarbon. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), 1, p. 136-148.
('Study of the SE Sulawesi area and its relations with hydrocarbon prospectivity')

Prihatmoko, S. & H. Lubis (1992)- Porfiri Au-Cu pada tubuh breksi di prospek Bulagidun, Lengan Utara, Sulawesi. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 233-240.

(Au-Cu porphyry at breccia bodies in the Bulagidun prospect, North Arm Sulawesi')

Priyadi, A. & Sudijono (1993)- Biostratigrafi fosil nanno Tersier tengah formasi Tonasa (Penampang Rala), Sulawesi Selatan. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1100-1113.
('Mid-Tertiary nannofossil biostratigraphy of the Tonasa Fm, S Sulawesi')

Priyanto, B. & M.R. Fitriannur (2008)- Neogene tectonic and sedimentary control to hydrocarbon generation in Banggai Basin, Eastern Sulawesi. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 54-65.
(Literature review of Banggai Basin, formed as result of Miocene collision of Banggai-Sula microplate and E Sulawesi. Basin stratigraphy two distinct periods: (1) continental margin rift to collision, and (2) latest Miocene-Pliocene foreland basin molasse sequence. Numerous oil and gas seeps in NW Taliabu, wet gas seeps near Falabisahaya in Mangole, oil and gas from Dongkala-1, gas from Minahaki-1 and Matindok-1. Source, reservoir and seal rocks all within Miocene sequence. No new data)

Purawiardi, R. (2008)- Karakteristik bijih kromit Barru, Sulawesi Selatan. J. Riset Geologi Pertambangan (LIPI) 18, 1, p. 1-13.
(online at: http://id.portalgaruda.org/)
('Characteristics of Barru chromite ore, S Sulawesi'. Barru District asymmetric structural axes N-S and NW-SE trending. Chromite as podiform deposits in Triassic(?) serpentinitized ultrabasic rock, mostly at fault zones and around contact zone with dacitic rock)

Purnamaningsih, D. Sukarna & H. Panggabean (1995)- The geology, mineral and energy resources of northern West Sulawesi. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 20-35.
(N part of W Sulawesi recently re-mapped. Covers Lariang and Karama sub-basins. Basement of unnamed M Cretaceous or older high-grade metamorphics, possibly part of accretionary complex along Eurasian continent, overlain by thick flysch-type, low-metamorphic, Upper Cretaceous Latimojong Fm. Unconformably overlain by M-Lt Eocene clastics and Nummulites limestones and Oligocene- M Miocene Tonasa Lst carbonate platform, up to 2500m thick, in S of area. Late Oligocene- E Miocene (29-22 Ma) Lamasi island arc volcanics, etc. Plio-Pleistocene thin-skinned W-directed thrusting= Majene foldbelt. With 3 simple, hard-to-understand paleogeographic maps)

Purnomo, E., S.P. Tony & A. Luthfi (1999)- Relative age indicator of Sulawesi collision zone, eastern arm of Sulawesi. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 76-78. *(Extended Abstract)*
(Batui collision zone between S part of East Arm of Sulawesi and Banggai Sula microcontinent. Syn-collisional bathyal Poh Fm marls (between pre-collision Salodik Fm carbonates-clastics and post-rift Celebes molasse) with planktonic foraminifera of E Pliocene age)

Puspita, D., R. Hall & C.F. Elders (2005)- Structural styles of the offshore West Sulawesi fold belt, North Makassar Straits, Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 519-542.
(Offshore W Sulawesi Fold Belt (WSFB) three structural provinces, S, C and N, controlled by basement structures and differing in amount and character of Cenozoic sediment. Central High (with onlap of sediments from Kalimantan, little sediment from W Sulawesi, and fold-thrust belt extending short distance offshore) separates S and N provinces, which extend W into deep water and display different deformation styles, sediment thickness and sediment types. Palu-Lariang region likely source of sediments in N; Karama-Kalosi region probable source for S. Deformation propagating W from onshore Sulawesi and began in Pliocene. N Makassar Straits underlain by thinned continental crust)

Querubin, C.D. & S. Walters (2011)- Geology and mineralization of Awak Mas: a sedimentary hosted gold deposit, South Sulawesi, Indonesia. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado 2011, MGEI/IAGI, p. 211-229.
(See also updated version Querubin & Walters 2012)

Querubin, C.D. & S. Walters (2012)- Geology and mineralization of Awak Mas: a sedimentary hosted gold deposit, South Sulawesi, Indonesia. Majalah Geologi Indonesia (IAGI) 27, 2, p. 69-85.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/736)
(Awak Mas gold project in S part of C Sulawesi Metamorphic Belt, SSW of Palopo, explored since 1987. Hosted in intensely folded (WSW to SW-directed thrusting?, generally 15-50°N-dipping) Late Cretaceous Latimojong Fm flysch-type phyllites, slates, volcanics, limestones and schists, overlying basement metamorphic rocks and intruded by late diorite-monzonite plugs and stocks. T-P regime suggests either subduction or massive thrusting environment. ~N-S trending oblique normal faults and extensional fractures local controls to mineralization)

Radja, V.T. (1970)- Geothermal energy prospects in South Sulawesi, Indonesia. Geothermics 2, 1, p. 136-149.
(Indonesia geothermal potential large and genetically linked to volcanism. Preliminary appraisal of S Sulawesi suggests potential for 9 geothermal fields)

Rafianto, R.I. (2011)- Developing Indonesian nickel deposits: challenges and opportunities. Proc. 36th HAGI and 40th IAGI Ann. Conv, Makassar, p.

Rafianto, R., F. Attong, A. Matano & M.E. Syam Noor (2011)- The serpentine-related nickel sulfide occurrences from Latao, SE Sulawesi: a new frontier of nickel exploration in Indonesia. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 267-288.

Rafianto, R., F. Attong, A. Matano & M.E. Syam Noor (2012)- Kehadiran sulfida nikel yang berkaitan dengan serpentin di Latao, Sulawesi Tenggara: suatu frontier baru eksplorasi nikel di Indonesia. Majalah Geologi Indonesia (IAGI) 27, 2, p. 87-107.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/768)
(The presence of nickel sulfide related to serpentine in Latao, SW Sulawesi: a new frontier of nickel exploration in Indonesia'. Same as Rafianto et al. 2011)

Rafianto, R. & G.H. Tutuko (2010)- 40 years PT INCO exploration: evolution in method and understanding nickel mineralization in Sulawesi. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-095, 15p.
(History of Inco exploration and mining of nickel laterites since 1969 in East Sulawesi ultramafic ophiolite complex. Largest deposits highest nickel grades in Sorowako area in central part of E Sulawesi. Best nickel laterite deposits on crests and flanks of hills over ultramafic bedrocks)

Rahardiawan, R. & L. Arifin (2013)- Struktur geologi Teluk Bone- Sulawesi Selatan. J. Geologi Kelautan 11, 3, p. 141-147.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/238/228)
('Geologic structure of Bone Bay, South Sulawesi'. Bone Bay water depth 50-2000m. Seafloor morphology strongly influenced by active faults, incl. flower structures)

Rahardiawan, R., T. Naibaho & L. Arifin (2011)- Struktur dan stratigrafi Cekungan Spermonde, Sulawesi Selatan: studi pendahuluan seismik 2D. Majalah Geologi Indonesia (IAGI) 26, 2, p. 83-91.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/765))
('Structure and stratigraphy of the Spermonde Basin, offshore SW Sulawesi: preliminary study of 2D seismic'. Five seismic stratigraphic sequences assumed to be of Eocene- Pliocene age)

Raharjo, S., R. Seago, E.W. Jatmiko, F.B. Hakim & L.D. Meckel (2012)- Basin evolution and hydrocarbon geochemistry of the Lariang-Karama basin: implications for petroleum system in onshore West Sulawesi. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-135, p. 1-22.
(Lariang-Karama basins onshore W Sulawesi M Eocene extensional half-grabens. Mild basin inversion in M Miocene at ~12 Ma, but extension continuing until Plio-Pleistocene inversion/ uplift at ~2 Ma. Fine siliciclastic turbidites in M Miocene in Tike-1 well thought to be distal equivalents to sediments of Kutei in Kalimantan. Most shortening taken up by NW-SE oriented strike-slip faults, compartmentalizing series of folds and thrusts.

Oil-gas seeps over major fold structures and along faulted, E margin of coastal Karama basin, generated from M-L Eocene fluvio-deltaic coals and carbonaceous shale. Oils paraffinic, low sulfur, moderately low wax to waxy. Source of two oil seeps from Lariang Basin dominated by terrestrial higher plant material with minor algal input; seeps from Karama Basin mixed algal-terrestrial, probably open marine/deep lacustrine source)

Rangin C., R.C. Maury, M. Polve, H. Bellon, B. Priadi, R. Soeria-Atmadja et al. (1997)- Eocene to Miocene back arc basin basalts and associated island arc tholeiites from Northern Sulawesi (Indonesia): implications for the geodynamic evolution of the Celebes basin. Bull. Soc. Geologique France 168, 5, p. 627-635.
(Most of N arm of Sulawesi is on Eocene oceanic crust (back arc basin basalts), intruded by younger arc volcanics; N arm rotated clockwise 25°)

Ratman, N. (1976)- Geologic map of Tolitoli Quadrangle, North Sulawesi 2016-2116-2117, scale 1: 250, 000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of westernmost part of North Arm of Sulawesi. Oldest rocks ?Mesozoic Malino Metamorphic Complex, overlain by ?Eocene- E Oligocene Tinambo Fm clastics and volcanics, overlain by Miocene and younger clastics and volcanics. Several undated granitoid complexes)

Ratman, N. & S. Atmawinata (1993)- Geology of the Mamuju Quadrangle, Sulawesi. Scale 1: 250, 000. Geol. Res. Dev. Centre (GRDC), Bandung, 2n Ed., 25p.
(SW Sulawesi map between 2-3°S. Metamorphic basement overlain by low-metamorphic Upper Cretaceous clastics. Eocene clastics and limestone, Late Oligocene- Early Miocene andesitic volcanics, Mio-Pliocene volcanoclastics. Large Late Miocene- E Pliocene granitic intrusive)

Reminton, C.H. (1995)- The challenge of petroleum exploration in the Gorontalo frontier basin, North Sulawesi- Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 79, p. 81 *(Abstract only)*
(Gorontalo Basin untested frontier basin. Airborne Laser Fluorescence survey showed fluors on water surface in Tomini Bay. Oil and gas seeps onshore and offshore of Tomini Bay suggest mature Paleogene source rocks)

Reijzer, J. (1920)- Geologische aanteekeningen betreffende de Zuidelijke Toraja-landen, verzameld uit de verslagen der mijnbouwkundige onderzoekingen in Midden-Celebes. Jaarboek Mijnwezen Nederlandsch Oost-Indie 47 (1918), Verhandelingen 1, p. 154-209.
('Geologic notes on the southern Toraja lands, compiled from reports of mining investigations in Central Sulawesi'. Three areas with oil indications. Small Eocene coal-bearing basins)

Rinne, F. (1900)- Skizzen zur Geologie der Minahassa in Nord-Celebes. Zeitschrift Deutschen Geol. Gesellschaft, Berlin 52, 2, p. 327-347.
(online at: https://www.biodiversitylibrary.org/item/148377page/371/mode/1up)
('Notes on the geology of the Minahasa, North Sulawesi'. Early description of volcanics-dominated NE tip of Sulawesi (work done on behalf of Mijnbouw Maatschappij Oost Totok))

Rinne, F. (1900)- Beitrag zur Petrographie der Minahassa, Nord-Celebes. Sitzungsberichte Preussischen Akademie Wissenschaften, Berlin, 1900, 1, p. 474-503.
('Contribution to the petrography of the Minahassa, North Sulawesi'. Petrographic description of volcanics and plutonic rocks of NE Sulawesi: diorite, diabase, dacites, andesites, basalt. Also granite near Gorontalo)

Rivai, T.A., K. Yonezu, K. Watanabe, Syafrizal, K. Sanematsu & D. Kusumanto (2017)- Characteristics of a Se-rich low-intermediate sulphidation epithermal deposit in the River Reef, the Poboya prospect, Central Sulawesi, Indonesia. 14th Biennial Meeting Soc. Geology Applied to Mineral Deposits (SGA), Quebec, 5p.
(Se-bearing Au-Ag low-intermediate sulphidation epithermal mineralisation in River Reef Zone of Poboya prospect, 12 km NE of Palu, C Sulawesi. Hosted in metamorphic and igneous rocks)

Robinson, G.P., B.T. Setiabudi, D.N. Sunuhadi, J.M. Hammarstrom, S. Ludington, A.A. Bookstrom, S.A. Yenie & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7026, West Sulawesi, Indonesia. In: J.M.

Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rep. 2010-5090-D, Appendix G, p. 126-136.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(W Sulawesi magmatic arc part of 1200-km-long Sulawesi- Sangihe magmatic arc, active since M Miocene-Pliocene. W-dipping subduction zone. Displacement of W Sulawesi arc system over Makassar Straits/ Celebes Sea in response to Banggai-Sula microcontinent collision, resulting in Pliocene-Pleistocene uplift of composite arc system. No known porphyry copper deposits, but Malala porphyry molybdenum (4.14 Ma) in N)

Robinson, G.P., B.T. Setiabudi, D.N. Sunuhadi, J.M. Hammarstrom, S. Ludington, A.A. Bookstrom, S.A. Yenie & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7027, North Sulawesi-Sangihe-Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix H, p. 137-148.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Two known porphyry copper-gold deposits in S-C part of N Sulawesi tract: Tapadaa (3.75 Ma) and Tombulilato (3.0 Ma))

Rudyawan, A. (2015)- Neogene stratigraphy, structure and magmatism of the Central North Arm of Sulawesi, Indonesia. Ph.D. Thesis. Royal Holloway University of London, p. 1-484. *(Unpublished)*

Rudyawan, A., R. Hall & L. White (2014)- Neogene extension of the Central North Arm of Sulawesi, Indonesia. American Geophys. Union (AGU), Fall Meeting 2014, San Francisco, Abstract T43A-4681, 1p. *(Abstract + Poster)*
(Sulawesi North Arm more than simple oceanic arc. Paleogene granites suggest basement evolved arc crust or continental crust, but few inherited zircon ages. Neogene granites with Paleozoic and Proterozoic inherited zircon cores, suggesting melting of Australian continental crust. Two periods of sedimentation: M Miocene and Late Miocene-Pliocene. Two major fault trends: E–W Neogene basin-bounding faults and young NW-SE strike-slip faults. Record indicates arc-continent collision and underthrusting of Australian crust in E Miocene (~22 Ma), with later extensional episodes. Metamorphic core complex formed on land in M Miocene (~15 Ma), and later extension linked to initiation of S-ward subduction of Celebes Sea in latest Miocene- E Pliocene (~5 Ma))

Rusmana, E., A. Koswara & T.O. Simandjuntak (1993)- Geology of the Luwuk Quadrangle, Sulawesi. Map 1:250,000 scale, Geol. Res. Dev. Centre (GRDC), Bandung, 17p.
(NE part E arm of Sulawesi and Togian islands. Prior to Late Miocene- Pliocene overlap assemblage two distinct terranes (1) Banggai-Sula (Triassic-Jurassic clastics overlain by Eocene-M Miocene carbonates and clastics (reportedly with Nummulites, Lacazinella, Fasciolites; Strat. lexicon Indonesia) and (2) E Sulawesi (along N coast of E arm: S-directed thust imbricates of metamorphics, ultramafic rocks (supposedly Cretaceous oceanic crust), Late Cretaceous Matano Fm pelagic sediments). Oldest rocks on Togian Islands are supposedly Cretaceous-Paleocene Lamusa Fm brownish-red limestones)

Rusmana, E. & D. Sukarna (1985)- Tinjauan stratigrafi lengan tenggara Sulawesi dibandingkan dengan daerah sekitarnya. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta 1985, p. 61-70.
('Review of stratigraphy of SE arm of Sulawesi and comparison with surrounding areas'. SE Arm with rocks of Late Paleozoic- Holocene age. First paper to propose SE arm of Sulawesi is continental block of 'Australian' origin; Surono 1998)

Rusmana, E., Sukido, D. Sukarna, E. Haryanto & T.O. Simandjuntak (1993)- Geology of the Lasusua-Kendari Quadrangle, Sulawesi (2112-2212), 1:250 000, Geol. Res. Dev. Centre (GRDC), Bandung, 16p.
(E Sulawesi map between 3-4° S, E side Bone Bay. Two geologic provinces, separated by Lasalo fault. Tinondo Province in SW has ?Carboniferous metamorphics and intrusives, overlain by Triassic- Jurassic Meluku/ Tokala Fms sediments, unconformably overlain by Eocene- M Miocene calcilutes? Remnants of ophiolites along Bone Bay shoreline. Hialu oceanic province in NE is widespread ?Cretaceous ophiolite, overlain by Late Cretaceous Matano Fm pelagic deposits, unconformably overlain by Late Miocene- Pliocene Celebes Molasse)

Rustiadi (1985)- Unsur perak (Ag) di dalam beberapa mineral sulfida dai endapan jenis Kuroko di daerah Sangkaropi, Sulawesi. J. Riset Geologi Pertambangan (LIPI) 6, 1, p. 32-41.
(Sangkaropi sulphide ores in SW Sulawesi NE of Rantepao resemble Kuroko ore deposits of Japan (submarine volcanogenic massive sulphides). Sphalerite, galena, pyrite and chalcopyrite most common)

Rutten, L. (1914)- Studien uber Foraminiferen aus Ost-Asien, 5. Einige Foraminiferen aus dem Ostarm von Celebes. Sammlungen Geol. Reichs-Museums Leiden (1), 9, p. 307-320.
(online at: www.repository.naturalis.nl/document/552393)
('Studies on foraminifera from East Asia, 5. Some foraminifera from the East Arm of Sulawesi'. Including Eocene Alveolina limestones at Biak Poh and Toeny and Lengketeng with Alveolina wichmanni and Nummulites bagelensis. Footnote: 'it is remarkable that the Eocene fauna of Celebes is more similar to samples from New Guinea than Java and Borneo'. Lower part of Celebes Molasse includes marls with poor Globigerina and limestones without Lepidocyclina, Miogypsina, etc, suggesting Late Miocene or younger age)

Rutten, L. (1924)- Over de foraminiferenfauna en den ouderdom van kalksteenen uit Zuid-Celebes afkomstig uit de groep der vischresten-bevattende gesteenten. Jaarboek Mijnwezen Nederlandsch-Indie 52 (1923), Verhandelingen, p. 173-183.
(Larger forams from limestones associated with fish fossils in S Sulawesi (Brouwer 1924). Fish-bearing limestones with non-diagnostic Heterostegina only. Spiroclypeus and Lepidocyclina (N.) brouweri n.sp. in nearby samples suggest E Miocene age)

Rutten, L.M.R. (1927)- Chapters 33-39 on the geology of Celebes (Sulawesi). In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 520-635.
(Old review of geology of Sulawesi in Rutten's classic book of lectures)

Rutten, L. (1934)- Tertiaire foraminiferen van Oost Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 10, p. 286-289.
('Tertiary foraminifera from E Sulawesi'. Part of Von Loczy (1934) E Sulawesi mapping report)

Ryacudu, R., S. Tossin & E. Purnomo (1998)- Ampana strike-slip fault and its significance for hydrocarbon entrapment in the eastern arm of Sulawesi, Indonesia. In: J.L. Rau (ed.) Proc. 34th Sess. Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Taejon, Korea 1997, 2, Techn. Reports, p. 1-21.
(Ampana strike-slip fault is NW-SE trending fault, cutting across E arm of Sulawesi, probably linked to S Sorong fault)

Ryacudu, R., T. Wibodo & Y.E. Handiwiria (1993)- Exploration for carbonate reservoirs in the Banggai Sula microcontinent, eastern Indonesia. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 679-692.
(Widespread Miocene pre-collisional Salodik carbonate platform on Banggai-Sula Block. End-Miocene collision between Banggai-Sula block and E Sulawesi terminated carbonate deposition, changing to Plio-Pleistocene Celebes Molasse (with Tiaka oilfield))

Saefudin, I. (1994)- Umur apatit dan zirkon batuan granitik daerah Palu dan sekitarnya, Sulawesi Tengah. J. Geologi Sumberdaya Mineral 4, 36, p. 9-15.
('Ages of apatite and zircon in granitic rocks of the Palu area and surroundings, C Sulawesi'. Apatite and zircon age analyses from 5 granitic rocks in neck of Sulawesi area. Granodiorite near Palu town E Oligocene age from both zircon and apatite methods (~29.5 Ma). Granites in 'neck' further N gave different results for apatite and zircon methods: apatite ages ~6.2- 8.3 Ma (Late Miocene) zircon ages from same rock ~9.5- 11.8 Ma (late M Miocene). Differences in ages caused by annealing process of apatite)

Safruddim, A.M. Imran, U.R. Irfan, R. Amelia & A.L. Adlyansyah (2018)- Characteristics of Paremba Sandstones in Bantimala Complex: the implication of oil exploration in Eastern Indonesia. Int. J. Engineering and Science Applications (UNHAS), 5, 2, p. 117-126.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/1754/464)

(Jurassic? Paremba shallow marine sandstone in Bantimala tectonic complex, 60km NE of Makassar. In Bontorio River steeply dipping conglomerates, sandstones, siltstone, claystone and fosilliferous limestone. Conglomerates with clasts of schist and quartzite. Sandstones arkose and litharenite with load casts, sole marks, slump structure, parallel lamination and ripple lamination. Paremba sandstones low-grade metamorphic. Provenance recycled orogenic tectonic environment. Porosity <1%, indicating not suitable as oil and gas reservoirs)

Sahabuddin, A.M. Imran & M.F. Arifin (2012)- Biostratigrafi foraminifera planktonik satuan batupasir Formasi Pasangkayu, Kecamatan Pasangkayu, Kabupaten Mamuju Utaru, Sulawesi Barat. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-28, p.
('Planktonic foraminifera biostratigraphy of the sand member of the Pasangkayu Formation, Pasangkayu, W Sulawesi'. Study of N Lariang basin upper M Miocene- E Pliocene, consisting of three zones)

Sahabuddin, A.M. Imran, F. Arifin & A. Jaya (2013)- Biostratigrafi foraminifera planktonik satuan batupasir Formasi Pasangkayu Cekungan Lariang Sulawesi Barat. J. Penelitian Geosains (Hasanuddin University) 9, 2, p. 111-120.
(online at: http://repository.unhas.ac.id/handle/123456789/16805)
('Planktonic foraminifera biostratigraphy of the sandstone unit of the Pasangkayu Formation, Lariang Basin, West Sulawesi'. Pasangkayu Fm in W Sulawesi Pasangkayu area with upper M Miocene- E Pliocene planktonic foraminifera (N14-N19; G. nepenthes-Gr siakensis to Gr tumida- Sphaeroidinellopsis subdehiscens zones))

Santy, L.D. (2016)- The Mesozoic source rock identification in Tomori Basin, East Arm of Sulawesi and its implication for petroleum play. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 28-TS-16, p. 1-19.
(Tomori Basin at S side of East arm of Sulawesi is Miocene foreland basin in collision zone between Sundaland/ E Sulawesi Ophiolite and Banggai-Sula microcontinent. Source rock analysis of onshore E Sulawesi Mesozoic Tokala, Nanaka and Tetambahu shales show hydrocarbon source potential: TOC 0.32- 3.46% and mainly type III kerogen. Rock-eval Tmax measurements suggests immature to marginally mature (428- 432°C), but vitrinite reflectance Ro 0.56- 0.76%) and TAI data (2-2.5) suggest sediments early mature to peak mature)

Santos, F.R., P. Sulistiono & N.E.W. Litaay (1999)- Totopo West, a low sulphidation epithermal system in North Sulawesi. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 203-215.
(Totopo West 55km W of Gorontalo, with gold in epithermal vein system at NW margin of Pliocene rhyodacitic caldera, along regional NE-trending faults. Associated dacite porphyry K/Ar ages (2.1-2.4 Ma and 2.8-3.3 Ma))

Santoso, B. & Subagio (2016)- Pendugaan mineral kromit menggunakan metode Induced Polarization (Ip) di daerah Kabaena Utara, Bombana Sulawesi Tenggara. J. Geologi Sumberdaya Mineral 17, 3, p. 179-192.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/17/11)
('Prediction of chromite minerals using Induced Polarization (Ip) method in the area of North Kabaena, Bombana, SE Sulawesi'. In N Kabaena island chromite present in Cretaceous ultramafic peridotites and as alluvial deposits. Electric methods used to predict distribution)

Sapiie, B., M.A. Nugraha, R. K. Wardana & A. Rifiyanto (2017)- Fracture characteristics of melange complex basement in Bantimala Area, South Sulawesi, Indonesia. Indonesian J. Geoscience 4, 3, p. 121-141.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/405/242)
(Analysis of fractures in Pre-Tertiary melange complex of Bantimala area South Sulawesi, Indonesia. Common fracture orientations NW-SE, W-E, NNE-SSW and ENE-WSW, different in each lithology. Fracture intensity in schists higher than other lithologies)

Saputro, S.P. & B. Priadi (2016)- Penyebab serta sumber high-K pada batuan volkanik dan plutonik di Tana Toraja, Sulawesi Selatan bagian utara: terkait kerak, evolusi magma, dan rezim tektonik. In: R. Hidayat et al. (eds.) Proc. 9th Seminar Nasional Kebumian, Dept. Teknik Geologi, Gadjah Mada University, Yogyakarta, p. 412-420.
(online at: https://repository.ugm.ac.id/273523/)

('Causes and sources of high-K in volcanic and plutonic rocks in Tana Toraja, N part of South Sulawesi: associated crust, magma evolution and tectonic regime'. Mio-Pliocene high-K volcanics and plutonics in Tana Toraja area, S Sulawesi, formed in post-subduction tectonic regime, with magma interacting with crust, creating 'continental affinity')

Sarasin, P. & F. Sarasin (1898)- Materialien zur Naturgeschichte der Insel Celebes. C.W. Kreidel's Verlag, Wiesbaden, vol. 1. Die Susswasser-Mollusken von Celebes, p. 1-102.
(online at: www.archive.org/details/materialienzurna01sara)
('Materials for the natural history of the island of Sulawesi, 1. The fresh-water molluscs of Celebes island'. Volume 1 of 5 of classic work on late 1800's geographic- geological travels in Sulawesi by Swiss cousins Paul and Fritz Sarasin)

Sarasin, P. & F. Sarasin (1899)- Materialien zur Naturgeschichte der Insel Celebes. C.W. Kreidel's Verlag, Wiesbaden, 2. Die Land-Mollusken von Celebes, p. 1-244.
(online at: www.archive.org/details/materialienzurna02sara)
(Volume 2 of Sarasin work: 'The land molluscs of Celebes island')

Sarasin, P. & F. Sarasin (1901)- Materialien zur Naturgeschichte der Insel Celebes. C.W. Kreidel's Verlag, Wiesbaden, 3. Ueber die geologische Geschichte der Insel Celebes auf Grund der Thierverbreitung, p. 1-169.
(online at: www.archive.org/details/materialienzurna03sara)
(Volume 3 of Sarasin work: 'On the geological history of Celebes island based on the animal distribution')

Sarasin, P. & F. Sarasin (1901)- Materialien zur Naturgeschichte der Insel Celebes. C.W. Kreidel's Verlag, Wiesbaden, 4. Entwurf einer geographisch-geologischen Beschreibung der Insel Celebes, p. 1-344.
(online at: www.archive.org/details/materialienzurna04sara)
(Volume 4 of Sarasin work: 'Geographic- geologic description of Celebes island'. With appendix of rock descriptions by C. Schmidt)

Sarasin, P. & F. Sarasin (1905)- Reisen in Celebes ausgefuhrt in den Jahren 1893-1896 und 1902- 1903. C.W. Kreidel Verlag, Wiesbaden, vol. 1, p. 1-381 and vol. 2 p. 1-390.
(online at: http://resolver.staatsbibliothek-berlin.de/SBB00007B3500010000 and http://resolver.staatsbibliothek-berlin.de/SBB00007B3500020000)
('Travels in Sulawesi in the years 1893-1896 and 1902-1903'. Mainly geographic travel accounts across S Sulawesi by Sarasin cousins, with some geological observations)

Sarasin, P. (1912)- Zur Tektonik von Celebes. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 64, Monatsberichte, p. 226-245.
(online at: www.biodiversitylibrary.org/item/150869page/996/mode/1up)
('On the tectonics of Sulawesi'. No figures. See also critical discussion in Abendanon 1915)

Sardjono (2013)- Gayaberat. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 259-276.
('Gravity'. Chapter 11 in Geology of Sulawesi book)

Sardjono & E. Mirnanda (2007)- Gravity field and structure of the crust beneath the East Arm of Sulawesi and the Banggai Archipelago. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-024, 11p.
(Gravity modeling suggests Banggai- Sula Archipelago composed of blocks of severely attenuated continental crust. East arm of Sulawesi is predominantly continental, with thick Neogene sediment cover and thickened continental crustal block in middle part. Only E tip (Poh Head) may have deep-rooted ultramafic rocks)

Sarmili, L. (1998)- Formation of the Tolo accretionary prism in relation to reactivation of the Palukoro Fault, Sulawesi. In: J.L. Rau (ed.) Proc. 33rd Ann. Sess. Coord. Comm. Coastal and Offshore Geoscience Progr. East and Southeast Asia (CCOP), Shanghai 1996, 2, p. 104-113.

(New bathymetric map of N Banda Sea between Buru and SE Sulawesi. General NW-SE directions, e.g. Tampomas Ridge and Hamilton slope. To W of N Banda Sea, N-S trending, 150 km long Tolo prism, well developed in N and centre, possibly due to large amount of sediment from Sulawesi island (i.e. Celebes molasse). To S, width of prism decreases and disappears in Buton Trough. Recent sediments deformed, and upper and lower thrust units appear faulted. As consequence of convergence, prism seems oriented NW-SE parallel to Hamilton fracture zone which continues to join Lawanopo and Palu-Koro strike-slip faults on-land)

Sarmili, L. (2015)- Opening structure of the Bone Basin on South Sulawesi in relation to process of sedimentation. Bull. Marine Geol. 30, 2, p. 97-107.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/79/80)
(Seismic profiles show Bone basin bordered on both sides by uplifted basement highs and in middle by flat-lying young sediments, indicating opening of basin)

Sarmili, L., D. Indriati & T. Stiawan (2016)- Proses sedimentasi Cekungan Bone berdasarkan penafsiran seismik refleksi di perairan Teluk Bone, Sulawesi Selatan. J. Geologi Kelautan 14, 1, p. 37-52.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/338/267)
('Sedimentation processes in Bone Basin, based on interpretation of seismic reflection in waters of Bone Bay, South Sulawesi'. Deep marine Bone Basin between S and SE arms of Sulawesi formed in Paleogene-Neogene. Initial Bone Basin formed by Cretaceous subduction, then developed as intra-montane basin. May be underlain by oceanic crust in Paleogene. Quaternary deposits influenced by reactivation of Walanae Fault. Six main seismic sequences A-F. Unit B Oligocene limestone, Unit C Late Oligocene- E Miocene volcanics, etc.)

Sarsito, D.A., Susilo, W.J.F. Simons, H.Z. Abidin, B.Sapiie, W. Triyoso & H. Andreas (2017)- Newly velocity field of Sulawesi island from GPS observation. Proc. Int. 6th Symposium on Earth hazard and disaster mitigation (ISEDM) 2016, AIP Conf. Proc. 1857, 1, 040005, p. 1-6.
(New GPS velocity observations in agreement with previous results : CW rotation of North Arm, Tomini Gulf opening and left-lateral strike slip of Palu-Koro fault. SW Sulawesi moves as part of Eurasian-Sunda Block with some compression at Makassar Straits (6.25mm/yr to W). Palu-Koro Fault rapid strike slip faulting)

Sarsito, D.A., Susilo, W.J.F. Simons, H.Z. Abidin, B.Sapiie, W. Triyoso & H. Andreas (2017)- Rotation and strain rate of Sulawesi from geometrical velocity field. Proc. Int. 6th Symposium on Earth hazard and disaster mitigation (ISEDM) 2016, AIP Conf. Proc. 1857, 1, 040006, p. 1-6.
(Sulawesi characterized by rapid rotation in several different domains and compression-strain pattern varies depending on type and boundary conditions of microplate)

Sartono, S., K.A.S. Astadiredja & H. Murwanto (1991)- East Arm Sulawesi: Banggai microplate- Sunda subduction zone collision. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 376-395.
(Review of E Sulawesi stratigraphy and early tectonic scenario for Sulawesi. Accepts presence of Permo-Carboniferous rocks in E Sulawesi. Pretertiary rocks in E Sulawesi (with ophiolite) and Banggai Sula (with pink granites) similar age range, but seem to be of different origin. Several tectonic melange complexes (incl. Cretaceous) and olistostromes)

Sartono, S., I. Hendrobusono, B. Suprapto & H. Murwanto (1989)- Sedimen lengseran gravitasi Eosen-Miosen bawah di Tana Toraja, Sulawesi Selatan (Indonesia). Proc. 18th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.
('Eocene- Lower Miocene gravity sedimentation in Tana Toraja, South Sulawesi (Indonesia)')

Sasajima, S., S. Nishimura, K. Hirooka, Y. Otofuji, T. Van Leeuwen & F. Hehuwat (1978)- Paleomagnetic results and fission track ages obtained from the Western and Northern Sulawesi, East Indonesia. In: M. Kono (ed.) Rock magnetism and paleogeophysics, Tokyo, 5, p. 73-80.
(online at:
http://peach.center.ous.ac.jp/rprep/Rock%20Magnetism%20and%20Paleogeophysics%20vol5%201978.pdf)
(Reconnaissance paleomagnetic work combined with fission track age dating of U Cretaceous- Pliocene rocks mainly from Biru area, E of Makassar, SW Sulawesi. M Miocene and younger rocks similar position as present-

day. Probable 45° CCW rotation beween 63-13 Ma (authors suggest probably between 19-13 Ma, but no explanation why; JTvG), possibly in tandem with Malay Peninsula and W Borneo from which Haile (1978) reported similar 35-50° CCW rotations)

Sasajima, S., S. Nishimura, K. Hirooka, Y. Otofuji, T. Van Leeuwen & F. Hehuwat (1980)- Paleomagnetic reconnaissance from Northern arm of Sulawesi, Indonesia. In: S. Nishimura (ed.) Physical geology of Indonesian Island arcs, Kyoto University, p. 23-34.

Sasajima, S., S. Nishimura, K. Hirooka & Y Otofuji (1981)- Paleomagnetic studies combined with fission-track datings on the western arc of Sulawesi, east Indonesia. In: A.J. Barber & S. Wiryosujono (eds.)The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 305-311.
(Same as Sasajima et al. (1980). SW arm of Sulawesi 40° CCW rotation since Paleocene- E Miocene)

Sasajima, S., T. Van Leeuwen, F. Hehuwat, S. Nishimura, K. Hirooka & Y. Otofuji (1980)- Paleomagnetic studies combined with fission-track datings on the Western Arm of Sulawesi, East Indonesia. Tectonophysics 64, p. 163-172.
(Paleogene- E Miocene paleomagnetic pole for SW Sulawesi very different from that in M Miocene- Recent. This suggests possibly 19-13 Ma major tectonic event caused ~40-45° of CCW rotation. Postulated collision followed by welding of E and W Sulawesi in Pliocene (Katili, 1978) may be cause. Our data does not support hypothesis that W Sulawesi derived from dispersal of Gondwanaland)

Satyana, A.H. (2006)- Docking and post-docking tectonic escapes of Eastern Sulawesi: collisional convergence and their implications to petroleum habitat. Proc. Jakarta 2006 Int. Geosc. Conf., Indon. Petroleum Assoc. (IPA), PG-16, 4p. *(Extended Abstract only)*
(Summary of Sulawesi tectonic history of docking of microcontinents (Buton at 11 Ma, Sula at 5 Ma), followed by escape towards free edges, creating arc-polarity reversal, large strike slip faults, local extension, etc.)

Satyana, A.H. (2011)- Sulawesi: where two worlds collided- geologic controls on biogeographic Wallace's Line. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-065, 16p.
(On Cenozoic geological history controlling present-day Wallace's Line, which separates Asian and Australian fauna and flora. Sulawesi island shows mixture of Oriental and Australasian faunas)

Satyana, A.H., S. Damayanti & C. Armandita (2012)- Tectonics, stratigraphy and geochemistry of the Makassar Straits: recent updates of exploring West Sulawesi offshore, opportunities and risks, Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-156, p. 1-21.
(W part of Makassar Straits prolific petroleum province, sourced and reservoired by Miocene-Pliocene Mahakam deltaic sediments. E part of Makassar Straits very different. Makassar Straits extension began in M Eocene and formed graben/ half-graben above which is important unconformity of probable Late Eocene age, marking top of synrift sequence. Nature of basement still debated in areas. Onshore W Sulawesi seeps and offshore microseeps suggest terrestrial M-L Eocene coals and coaly shales are main source rocks)

Satyana, A.H., T. Faulin & S.N. Mulyati (2011)- Tectonic evolution of Sulawesi area: implications for proven and prospective petroleum plays. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-064, 30p.
(Substantial review of Cenozoic tectonic evolution, basins and hydrocarbons of Sulawesi. Sulawesi formed by collision between drifted part of SE Sundaland and drifted microcontinents of Indian-Australian Plate. The collision took place during Oligocene-early Pliocene)

Satyana, A.H. & M.E.M. Purwaningsih (2011)- Collision of microcontinents with Eastern Sulawesi: records from uplifted reef terraces and proven-potential petroleum plays. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-219, 25p.
(Sulawesi is assemblage of collided terranes. Buton-Tukang Besi micro-continent collided with SE Sulawesi/ Muna Block from E Miocene- Late Miocene. Collision overthrusted Kapantoreh ophiolitic suture (here

interpreted as oceanic crust originally located between Muna and Buton), shortened and uplifted Buton. Tukang Besi single microcontinent with Buton, and separated from Buton as response to post-collisional tectonics. Banggai-Sula microcontinent collided with Sulawesi E Arm in M Miocene- E Pliocene. Post-collisional uplifts exhumed micro-continents in Buton, Wakatobi (Tukang Besi), and Luwuk (Banggai) areas and uplift of Quaternary reef terraces)

Satyana, A.H. & S. Zaitun (2016)- Origin of oils and gases at Banggai-Sula microcontinent, Eastern Sulawesi-North Moluccas: constraints from biomarkers and isotope geochemistry- implications for further exploration of Cenozoic and Pre-Cenozoic objectives. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-575-G, 27p.
(Oils in Banggai Basin oil-gas fields (Tiaka, Senoro, Minahaki, etc.) and onshore seeps (Kolo, Dayuk, Toikli, etc.) with common oleanane and relatively high sulfur sourced from marine E Miocene Tomori Fm carbonates-shaly carbonates (type A oils) and M Miocene Matindok shales- calcareous shales (type B oils). No evidence of petroleum contribution from Jurassic- Cretaceous rocks in Banggai Basin, although gas seeps on Sula islands tied to Pre-Cenozoic source rocks in graben areas of offshore Taliabu-Mangole Shelf)

Schepmann, M.M. (1907)- Mollusken aus posttertiaren Schichten von Celebes. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 8, E.J. Brill, p. 153-203.
(online at: http://repository.naturalis.nl/document/552420)
('Molluscs from the post-Tertiary beds of Sulawesi'. Descriptions of molluscs from Kajoe ragi, Manado area, N Sulawesi, collected by Fennema. Mainly gastropods (15 species of Conus, 7 species of Pleurotoma, 10 species of Drillia, 6 species of Mitra, 19 species of Turricula, 11 species of Nassa, 13 speies of Cypraea, etc. spp.) and some pelecypods (Venus, Spondylus, Chlamys, etc.)

Schlaich, E.P. & J.R.J. Ten Berge (1941)- Rapport over het geologisch onderzoek van het Jong Tertiare Pompanoea bekken (ZW Celebes). BPM- Balikpapan Geological Report *(unpublished)*
(Report on geological survey and shallow core hole drilling in Young Tertiary of Pompanoea (= Sengkang) Basin, SW Sulawesi)

Schmidt, C. (1901)- Untersuchung einiger Gesteinssuiten, gesammelt in Celebes von P. und F. Sarasin. In: P.& F. Sarasin, Materialien zur Naturgeschichte der Insel Celebes, 4, Kreidel, Wiesbaden, Appendix, p. 1-28.
(Brief rock descriptions. No figures)

Schreuder, S. (1854)- Onderzoekingen naar steenkool in de afdeeling Maros of Noorderdistrikten van het gouvernement Celebes en onderhoorigheden. Natuurkundig Tijdschrift Nederlandsch-Indie 7, p. 388-395.
('Investigations of coal in the Maros district, (SW) Sulawesi'. Generally poor quality coal, associated with common limestone and volcanic rocks. Not much detail; no maps)

Schubert, R.J. (1913)- Beitrag zur fossilen Foraminiferenfauna von Celebes. Jahrbuch Kon. kaiserl. Geol. Reichanstalt 62 (1912), 4, p. 127-150.
(online at: www.landesmuseum.at/pdf_frei_remote/JbGeolReichsanst_063_0127-0150.pdf)
('Contribution to the fossil foraminiferal fauna of Sulawesi'. Foraminifera from North Arm and N part of East arm of Sulawesi, collected by Koperberg. Mainly young Miocene- Pliocene. Some E-M Miocene carbonates with Miogypsina spp., Lepidocyclina)

Sendjaja, P. (2013)- Petrologi dan geokimia batuan volkanik di Kepulauan Togean, Teluk Tomini, Propinsi Sulawesi Tengah: implikasinya terhadap tatanan tektonik Pulau Sulawesi. Ph.D. Thesis, Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('Petrology and geochemistry of volcanic rocks in Togean Islands, Tomini Bay, Central Sulawesi: implications for the tectonic structure of Sulawesi'. Volcanic rocks from Togean Islands 3 types:(1) Una-Una (adakitic subduction volcanics from partial melting of Celebes Sea slab at 70-85 km depth), (2) Togean (both adakites, basaltic-trachyandesite and result of partial melting of Sulawesi Sea slab in amphibole-eclogite zone) and (3) Walea (tholeitic basaltic-andesite and tholeite basalt, interpreted as upper part of ophiolite, formed around 6 Ma from seafloor spreading due to rollback of oceanic crust of Banggai-Sula microcontinent)

Sendjaja, P. & I.G.B.E. Sucipta (2008)- Adakite rock From Una-Una island, Central Sulawesi. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 212-228.
(Pyroclastics and lavas from Una-Una Island in Tomini Gulf adakitic geochemical signature: SiO2 >60%, MgO <3%, low Y and HREE relative to normal island arc volcanics, high Sr and Nb enrichment. Tectonically, adakites formed by partial melting of young oceanic crust. Crust presently subducted at nearby trench may be <25 Ma old)

Sendjaja, P., E. Suparka, C.I. Abdullah, E. Sucipta & T. Hasenaka (2011)- A petrology and geochemistry of the volcanic rocks from the Togean Islands, Central Sulawesi, Indonesia: estimation of subduction component at a complex tectonic regime. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-166, 13p.
(Togean Island in Tomini Gulf. Nearby Una-Una volcano typical adakitic rocks. Mio-Pliocene volcanics of Togean islands further toE quite different. Volcanic rocks from Walea Kodi and Walea Bahi Islands lower SiO2 and low Sr content than Una-Una. Compositions seems similar to volcanic rocks from Sangihe Region)

Setiawan, I., S. Indarto, A.F. Ismayanto & Sudarsono (2012)- Karakter dan tipe mineralisasi hidrotermal di wilayah Bombana berdasarkan studi mineralogi dan geokimia. J. Sumber Daya Geologi 22, 3, p. 155-168.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/115/107)
('Character and the type of hydrothermal mineralization in the Bombana area based on a study of mineralogy and geochemistry'. Bombana gold mineralization in metamorphic rocks of Rumbia Mts, with no obvious connection with magmatism. Area with metamorphic and ultramafic rocks (garnet- glaukophane- amphibole schist, peridotite, serpentinite, metasediments, etc.). Gold mineralization of epithermal-mesothermal type, resulting from hydrothermal processes, formed after metamorphism. Ore minerals gold, pyrite, chalcopyrite, goethite, lepidocrocite and cinnabar, commonly associated with quartz veins/ K-Ar age of plagioclase of meta-andesite 85± 2 Ma)

Setiawan, N.I., Y. Osanai, N. Nakano & T. Adachi (2014)- Metamorphic evolution of garnet-biotite-muscovite schist from Barru Complex in South Sulawesi, Indonesia. J. Southeast Asian Applied Geol. (UGM) 6, 2, p. 68-78.
(online at: http://jurnal.ugm.ac.id/jag/article/download/7219/5658)
(Mid-Cretaceous garnet-biotite-muscovite schist from Dengedenge River in Barru Complex, 30 km N of Bantimala, SW Sulawesi. Bordered in N by ultramafic rocks and in S by Late Cretaceous turbidites. Foliation of schist varies from N80°E to N30°E, dipping 30-60° to E (SE). Garnet, biotite, muscovite, quartz, rutile and plagioclase represent peak P-T condition of this rock, estimated at T= 501-562ºC and P= 0.89-0.97 GPa. Within geothermal gradient P-T path of eclogite from Bantimala Complex. Wakita 1994 K-Ar age ~106 Ma)

Setiawan, N.I., Y. Osanai, N. Nakano & T. Adachi (2013)- Jadeite jade from South Sulawesi in Indonesia and its geological significance. In: N.I. Setiawan et al. (eds.) Proc. Int. Conf. Geological Engineering, Gadjah Mada University, Yogyakarta 2013, ER05, p. 40-56.
(online at: http://lib.ugm.ac.id/digitasi/upload/4244_jhon-mu.140108-nugroho.pdf)
(Jadeite abundant in high-P garnet-jadeite-quartz metamorphic rock in E Cretaceous Bantimala subduction compex of S Sulawesi. Rock mainly jadeite, garnet, quartz, phengite, epidote, with minor glaucophane and rutile. Rock experienced peak P-T condition at 2.2-2.5 GPa and 500-540 ºC and subsequently retrogressed)

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi, K. Yonemura, A. Yoshimoto (2016)- Prograde and retrograde evolution of eclogites from the Bantimala Complex in South Sulawesi, Indonesia. J. Mineralogical Petrological Sci. 111, 3, p. 211-225.
(online at: https://www.jstage.jst.go.jp/article/jmps/111/3/111_150907/_pdf)
(Evolution of high-P metamorphic rocks from Bantimala Complex, S Sulawesi. Early Cretaceous K-Ar ages of 113-136 Ma probably reflect time of exhumation cooling. Eclogites and glaucophane occur as tectonic blocks in sheared serpentinites. Garnet rims in eclogite formed at peak P-T conditions of 2.3-2.7 GPa and 615-680 °C . Very low geothermal gradient during prograde path suggests subduction of old and cold oceanic crust)

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi, K. Yonemura, A. Yoshimoto, L.D. Setiadji, K. Mamma & J. Wahyudiono (2013)- Geochemical characteristics of metamorphic rocks from South Sulawesi, Central Java, and South and West Kalimantan in Indonesia. Proc. 5th AUNS/SEED-Net Regional Conf. Geological Engineering, p. 263-280.
(online at: www.seed-net.org/download/GeoE013_revised_060513.pdf)
(Metamorphic rocks in Cretaceous metamorphic complexes of C Java, S Kalimantan and S Sulawesi are mainly HP metamorphics. Protoliths are metabasics (basalts, andesite) and meta-sediments. Eclogites and blueschists from S Sulawesi with MORB and within-plate basalt signatures. Eclogites and blueschists from C Java mostly within-plate basalt signatures, amphibolites and garnet amphibolites are MORB. Metatonalites from Nangapinoh, Schwaner Mts of W Kalimantan are calc-alkaline rocks from volcanic-arc environment, some adakitic in nature, one sample of 233± 3Ma age (Late Triassic) (non-metamorphosed granites Cretaceous, 77-157 Ma))

Setiawan, N.I., Y. Osanai, N. Nakano, T. Adachi, K. Yonemura, A. Yoshimoto, L.D. Setiadji, K. Mamma & J. Wahyudiono (2013)- Geochemical characteristics of metamorphic rocks from South Sulawesi, Central Java, and South and West Kalimantan in Indonesia. Asean Engineering J. C, 3, 1, p. 107-127.
(online at: www.seed-net.org/wp-content/uploads/2015/12/GEOCHEMICAL-CHARACTERISTIC...)
(same paper as Setiawan et al. 2013)

Setyanta, B. & Subagio (2013)- Sinyal geomagnetik di Cekungan Sengkang implikasi terhadap pola struktur dan konfigurasi batuan alas cekungan. J. Sumber Daya Geologi 23, 2, p. 69-79.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/91/85)
'Geomagnetic signals in the Sengkang Basin and its implications for structural and basement configuration'. Intensity of magnetic anomalies at Sengkang Basin from -750- 400 nT. Sengkang Basin underlain by high magnetic ultrabasic rocks (especially E flank?). Geologic structures NE-SW fold, cut by NW-SE fault)

Setyoko, J., S. Hadipandoyo & S. Oemar (2000)- Hydrocarbon resources assessment of the Late Miocene Tacipi Formation in the Bone Basin, South Sulawesi, Indonesia. Proc. 36th Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Hanoi 1999, p. 35-49.
(Late Miocene Tacipi Fm reefal limestone gas producing in Kampung Baru Field, E Sengkang sub-basin of Bone Basin. Porosity generally 20-30% (moldic, vugular and fracture). Source rocks Eocene and Oligocene carbonaceous sediments. Unproven potential plays in Eocene Toraja Fm sst, Oligocene Toraja Fm carbonate and Pliocene Walanae Fm sst. Undiscovered resources in Tacipi play in Bone basin assessed as maximum 22.5 Gm3 and 5.3 million Tons of oil)

Shaban, G., F. Fadlin & B. Priadi (2016)- Geochemical signatures of potassic to sodic Adang Volcanics, Western Sulawesi: implications for their tectonic setting and origin. Indonesian J. Geoscience 3, 3, p. 197-216.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/344/226)
(Adang Volcanics ~400m thick series of (ultra-) potassic- sodic lavas and tuffs of mainly trachytic composition, part of widespread Late Cenozoic (latest Miocene- E Pliocene) high-K volcanics in W Sulawesi. Tectonic setting and origin debated. Major rock forming minerals leucite, diopside/aegirine and high T phlogopite. Geochemistry suggests formation in post-subduction, continental rift tectonic setting)

Siagian, H.P. & Widijono (2009)- The possibility of hydrocarbon trap and its potential in the North Bone Basin, based on geological and geophysical data. Jurnal Sumber Daya Geologi 19, 1, p. 63-76.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/194/186)
(Bone basin believed to have formed since Early Tertiary, as fore-arc basin, underlain by pre-Tertiary metamorphics, volcanics and metasediments (Latimojong and Pompangeo Complexes). Hydrocarbon presence demonstrated by gas seeps in Pongko and Malangke villages. Coarse clastic and limestone deposits such as fluvio-deltaic Toraja and Lamasi Fms may be potential reservoirs; shales in Lamasi and Toraja Fms potential petroleum source rocks. Gulf Oil 1972 BBA 1X well in N part of Bone Bay TD at 10,521' in M Miocene)

Siahaan, E.E., S. Ciptadi, D. Budihartanto & C.A.E. Pelmelay (1994)- Sistem panasbumi pada tektonik sesar Palu, di daerah Bora, Sulawesi Tengah. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 1001-1009.

('The geothermal system at the Palu fault, Bora area, C Sulawesi'. Granite in Palu area 15-16 Ma K/Ar ages)

Sidarto (2008)- Sesar barat laut- tenggara di daerah Mamuju dan sekitarnya dan hubungannya dengan pembentukan Cekungan Karama. J. Sumber Daya Geologi 18, 2, p. 89-105.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/241/220)
('NW-SE in the Mamuju area and surroundings and its relationship to the formation of the Karama Basin'. In SW Sulawesi four parallel NW-SE trending faults: Budong-budong, Talondo, Keang and Adang. Dextral faults in E Tertiary, but sinistral in Miocene-Pliocene. Karama Basin between Budong-budong and Talondo faults contains Eocene trangressive sedimentary rocks and probably step over basin of in E Tertiary)

Sidarto & S. Bachri (2013)- Struktur Geologi. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 277-302.
('Structural geology'. Chapter 12 in Geology of Sulawesi book. Brief reviews of major faults (Palu-Koro, Walanae, Matano, Balantak, etc.), Tertiary rifts (Makassar, Bone) and subduction zones)

Sidarto & U. Hartono (2009)- Identifikasi gunung api purba di daerah Sapaya, Sulawesi Selatan pada data inderaan jauh. J. Sumber Daya Geologi 19, 6, p. 351-363.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/219/209)
('Identification of ancient volcanoes in Sapaya, South Sulawesi, from remote sensing data '. S Arm of Sulawesi Island is Tertiary volcanic arc, represented by Camba Fm. Satellite imagery interpretation reveals two ancient volcanoes in Sapaya area and surroundings: (1) M Miocene- Pliocene Sapaya volcano eroded cone and (2) Pliocene Bantoloe volcano eroded cone. Sapaya Volcano may be controlled by Tethyan type subduction/ collision between Australian micro continental and Eurasian continent plates)

Sidarto & Wahyono (2001)- Kaitan antara struktur geologi dan endapan batubara di cekungan Karama, Sulawesi. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 26, p. 15-28.
('Link between structural geology and coal deposits in Karama basin, W Sulawesi'. Toraja Fm Late Eocene coal seams folded and thrusted in Late Miocene- Early Pliocene. Coal rank locally increases along fault zones. Above coal Late Eocene limestone with Discocyclina and Pellatispira)

Sidarto & Wahyono (2002)- Pemodelan geologi cekungan batubara di daerah Baraka, Enrekang, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 12, 130, p. 2-18.
('Geologic model of the coal basin in the Baraka area, Enrekang, S Sulawesi'. Eocene coals of Toraja Fm rift section in Toraja Basin, N part of S Sulawesi. Overlie U Cretaceous Latimojong Fm and overlain by Late Eocene limestone. Three seams, Titok, Sangbuah and Batunoni-Lapin. Exposure of coal after Late Miocene-Pliocene folding event (see also Wahyono and Sidarto 2002))

Silver, E.A. (1981)- A new tectonic map of the Molucca Sea and East Sulawesi, Indonesia, with implications for hydrocarbon potential and metallogenesis. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 343-347.
(New fault zones discovered during Scripps 1976-1979 cruises and land expeditions: (1) Sula Thrust at N side Banggai- Sula Platform, (2) W continuation of Sorong FZ and (3) E extension of Batui Thrust which bounds upthrusted E Sulawesi ophiolite (which also forms Gorontalo basin basement, and emplacement was complete in Pliocene or earlier). Also mapped recently active Tolo Thrust E of Sulawesi and Buton)

Silver, E.A., Y. Joyodiwiryo & R. McCaffrey (1978)- Gravity results and emplacement geometry of the Sulawesi ultramafic belt, Indonesia. Geology 6, p. 527-531. *(also in Geol. Res. Dev. Centre, Spec. Publ. 2, p. 313-319)*
(SE arm Sulawesi gravity highs at schist ultramafic contacts indicate thick ultramafic rocks there, possibly dipping under schist. Gravity effect of ultramafics decreases E away from schist)

Silver, E.A., R. McCaffrey, Y. Joyodiwiryo & S. Stevens (1983)- Ophiolite emplacement by collision between the Sula Platform and the Sulawesi arc, Indonesia. J. Geophysical Research 88, p. 9419-9435.

(Large ophiolite belt from Miocene collision of Sulawesi island arc and continental Sula Platform. Batui thrust separates ophiolite from deformed sedimentary rocks along edge of Sula Platform and continues E from Sulawesi along S margin of Gorontalo basin. Sulawesi ophiolite traced offshore to oceanic crust basement of Gorontalo basin. Ophiolite melange underlies harzburgites on SE Arm beneath low-angle thrusts. Melange several 100m thick thrust packets of serpentine and red shale matrix and N to NE dipping foliation, consistent with significant N-ward component of lower plate movement, probably Sula platform margin. Ophiolite emplaced by oblique convergence of Sula platform along S edge of Gorontalo basin. Gorontalo basin probably forearc basin with ophiolite basement. Presence of dunite in Colo volcanic products in Tomini Bay indicate magma went through through oceanic material, possibly part of E Sulawesi Ophiolite)

Silver, E.A., R. McCaffrey & R.B. Smith (1983)- Collision, rotation, and the initiation of subduction in the evolution of Sulawesi, Indonesia. J. Geophysical Research 88, p. 9407-9418.
(Sulawesi shaped as result of collision with Sula platform, resulting in rotation of N volcanic arm and accretionary wedge of N Sulawesi trench. N Sulawesi trench changes laterally from no active deformation in E to a wide accretionary wedge in W. Early thrusting produced steep frontal slope (8°-16°), indicative of high basal shear stress, more advanced (W) zone of thrusting produces gentle slope (2°). Paleomagnetic data suggest post-Late Eocene counter-clockwise rotation of N Arm. Convergence between N Banda Basin and SW Sulawesi documented by Tolo thrust. S end of thrust projects toward Buton, but structural relations not clear)

Simandjuntak, T.O. (1980)- Wasuponda melange. Proc. 8th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p.
(First description of C Sulawesi Wasuponda melange. Contains eclogite)

Simandjuntak, T.O. (1981)- Some sedimentological aspects of Mesozoic rocks in eastern Sulawesi, Indonesia. Proc. 9th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.

Simandjuntak, T.O. (1986)- Sedimentology and tectonics of the collision complex of the East arm of Sulawesi, Indonesia. M.Sc. Thesis, Royal Holloway and Bedford New College, University of London, p. 1-374.
(online at:https://core.ac.uk/download/pdf/78865712.pdf)
(Stratigraphic- tectonic study of Sulawesi East. M Miocene collision complex separates E Sulawesi Ophiolite belt from Banggai-Sula continental block slices of sediment cover. Pelagic cover of E Sulawesi ophiolite Cretaceous- E Tertiary age: E Cretaceous radiolarian chert with Thanarla conica (= T. brouweri Tan), Zipondium, Archaeodictyomitra apiaria, Pseudodictyomitra cosmoconica, Acanthoricus, Cryptocephalic, etc.)

Simandjuntak, T.O. (1986)- Struktur duplek (dwiunsur), sesar sungkup dan sesar jurus mendatar di lengan timur Sulawesi. Proc. 15th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.
('Duplex structures, thrust faults and wrench faults in the East arm of Sulawesi')

Simandjuntak, T.O. (1986)- New data on the age of ophiolitic rocks in Eastern Sulawesi. Proc. 15th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.

Simandjuntak, T.O. (1990)- Sedimentology and tectonics of the collision complex in the East Arm of Sulawesi, Indonesia. Geologi Indonesia 13, 1, p. 1-35.
(In E Arm of Sulawesi imbricated Mesozoic-Paleogene continental margin sediments of Banggai-Sula Platform juxtaposed with E Sulawesi Ophiolite Belt along Batui- Balantak Fault system. Three distinct sequences in E Arm: (1) Triassic- Paleogene continental margin; (2) Cretaceous pelagic chert and radiolaria-rich calcilutite (= upper part of ophiolite suite) and (3) overlap assemblage of Neogene post- orogenic clastics ('Sulawesi Molasse'), with clasts of (1) and (2). Collision zone marked by Kolokolo Melange with M Miocene calcareous mudstone matrix, locally with oil seeps. At least 3 raised coral reef terraces on S coast of East Arm show ongoing uplift)

Simandjuntak, T.O. (1992)- New data on the age of the ophiolite in Eastern Sulawesi. Geol. Res. Dev. Centre (GRDC), Bandung, Bull. 15, p. 38-44.

(K/Ar dating of gabbro from E Sulawesi ophiolite gave ages of 93-48 Ma (Late Cretaceous- E Eocene); pillow basalts ~53-38 Ma (Eocene). Peridotites could not be dated due to very low K content. Oldest cherts with manganese nodules above pillow basalts of ophiolite complex in Boba beds from E Arm of Sulawesi contain E Cretaceous (Valanginian- E Cenomanian) radiolaria, overlain by U Cretaceous calcilutites with Globotruncana. (K/Ar ages too young?))

Simandjuntak, T.O. (1992)- Sedimen Mesozoikum dan prospek hidrokarbon di Indonesia Timur (studi kasus penelitian geologi di lengan Timur Sulawesi). J. Geologi Sumberdaya Mineral 2, 7, p. 10-20.
('Mesozoic sediments and hydrocarbon prospects in E Indonesia, special study of E arm of Sulawesi'. Oil and gas seeps, probably sourced from Jurassic marls, in many places between Banggai-Sula microcontinent and E Sulawesi ophiolite belt. Tectonism before, during and after continent collision may stimulate oil migration)

Simandjuntak, T.O. (1993)- Neogene plate tectonic convergence in eastern Sulawesi. J. Geologi Sumberdaya Mineral 3, 25, p. 2-10.
(In M Miocene NW-ward moving microcontinental blocks incl. Banggai-Sula Platform, Tukang Besi- Buton Platform and Mekongga Platform, collided ('underplated') with E Sulawesi Ophiolite Belt, in 'Tethyan-type' convergence. Followed by deposition of Late Miocene- Pliocene post-orogenic 'molasse' of non-marine and shallow marine sediments. E Sulawesi Ophiolite overlain by U Cretaceous pelagic calcilutite with radiolaria (Matano= Boba Fm). C Sulawesi Metamorphic Belt formed in W-dipping Benioff zone in Cretaceous-Paleogene. Imbricated sedimentary cover of Banggai-Sula Plate with U Triassic (Tokala Lst Fm)- Jurassic (Nanaka quartz sst, Sinsidik Lst with belemnites) and U Cretaceous- Paleogene sediments)

Simandjuntak, T.O. (1993)- Struktur rangkap (duplex), sesar sungkup dan sesar jurus mendatar di Lengan Timur Sulawesi. Geol. Res. Dev. Centre (GRDC), Bandung, Bull. 16, p. 27-44.
('Duplex structure overthrusting and displacement in the eastern arm of Sulawesi'. Batui Thrust is M Miocene suture between Banggai-Sula Platform and E Sulawesi Ophiolite Belt. Consists of several thrusts, all dipping NW. NE portion subjected to dextral strike-slip with 150 km of displacement in Plio-Pleistocene (Balantak fault). Melanges related to tectonic diapyrism developed along Batui Thrust zone. Several duplex structures developed in sediments of Banggai-Sula Plate)

Simandjuntak, T.O. & M. Mubroto (1991)- Neogene Tethyan type convergence in eastern Sulawesi. In: Proc. Silver Jubilee Symp. Dynamics of subduction and its products, Yogyakarta 1991, Indonesian Inst. Sciences (LIPI), p. 274-277.

Simandjuntak, T.O., E. Rusmana, J.B. Supandjono & A. Koswara (1993)- Geology of the Bungku Quadrangle, Sulawesi. Quad. 2213, Map 1:250,000, Geol. Res. Dev. Centre (GRDC), Bandung, p. 1-13.
(E Central Sulawesi map sheet, mapped in 1980. Two terranes: (1) E Sulawesi ophiolite of Cretaceous ultramafics, overlain by Upper Cretaceous pelagic sediments (Matano Fm) and Late Miocene-Pliocene tuffaceous clastics and (2) 'Banggai-Sula terrane' of Triassic (-E Jurassic?) Tokala Fm limestones and clastics, Jurassic Nanaka Fm clastics with conglomerates with volcanics, red granite and metamorphic clast, J-K pelagic limestones and U Eocene- Lower Miocene Salofik Fm limestones. Various episodes of folding; last tectonic event in Pleistocene)

Simandjuntak, T.O., E. Rusmana, Surono & J.B. Supandjono (1991)- Geology of the Malili Quadrangle, Sulawesi. Quad 2113, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 35p.
(C Sulawesi map between 2-3°S, N end Bone Bay. Comprises W and E Sulawesi provinces, separated by Palu-Koro fault. W Sulawesi with Late Cretaceous flysch, Eocene- Miocene clastics, Oligocene- M Miocene volcanic arcs and Neogene granitic rocks, unconformably overlain by Late Miocene- Pliocene turbidites, followed by Plio-Pleistocene- Recent andesitic volcanics. C Sulawesi Pompangeo metamorphic belt, E Sulawesi ophiolite overlain by Cretaceous pelagic Matano Fm with common radiolarian cherts near base. Late Miocene- Pliocene post-orogenic molasse)

Simandjuntak, T.O., Surono & Sukido (1994)- Geology of the Kolaka Sheet, Sulawesi (Quadrangles 2111, 2210, 2211), 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 18p.

(SE Sulawesi map sheet between 4-5°S, mapped in 1983. Two juxtaposed terrains: (1) E Sulawesi ophiolite (E Cretaceous ultramafics overlain by Late Cretaceous pelagic limestone) and 'Pompangeo metamorphic complex' (incl. eclogites and glaucophane-bearing rocks) and (2) Buton- Tukang Besi continental terrane with ?Permo-Carboniferous? metamorphics and low-metamorphic Triassic Meluhu Fm clastics and Tokala Fm carbonates. Both overlain by M Miocene- Pliocene 'Sulawesi molasse'. Strong Paleogene deformation, M Miocene upthrust of E Sulawesi terrane onto Tukang Besi- Buton block and Plio-Pleistocene block faulting. (Panggabean & Surono 2011: Matano Fm (pelagic rock overlying E Sulawesi ophiolite?) contains E Cretaceous radiolaria Thanaria conica, Archaeodictyomitra apiaria, Pseudodictyomitra cosmoconica (= E Cretaceous), etc.)

Simandjuntak, T.O., Surono & J.B. Supandjono (1991)- Geologic map of the Poso Quadrangle, Sulawesi. Map 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p.
(C Sulawesi map between 1-2°S, S end Tomini Bay. Two terrains: W Sulawesi, E Sulawesi)

Socquet, A., W. Simons, C. Vigny, R. McCaffrey, C. Subarya, D. Sarsito, B. Ambrosius & W. Spakman (2006)- Microblock rotations and fault coupling in SE Asia triple junction (Sulawesi, Indonesia) from GPS and earthquake slip vector data. J. Geophysical Research 111, B08409, 3, p. 1-15.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2005JB003963/epdf)
(Current Sulawesi deformation described by small number of rapidly rotating blocks. SW Sulawesi (Makassar Block) rotates CCW at ~1.4°/Myr. NE Sulawesi (Bangai-Sula) 3 blocks: central N Sula Block moves NNW and rotates CW at ~2.5°/Myr, NE Manado Block rotates CW at ~3°/My; E Sulawesi pinched between N Sula and Makassar blocks. Along Makassar Block- Sunda Plate boundary, trench accommodates ~15 mm/yr of slip in Makassar Strait. N Sula-Manado blocks boundary is Gorontalo Fault, moving right laterally at ~11 mm/yr. 42 mm/yr relative motion between N Sula and Makassar blocks accommodated on Palu-Koro left-lateral fault zone. Data also indicate pull-apart structure in Palu area. Sulawesi example of collision accommodated by block rotation instead of mountain building)

Soehaimi, A & D. Muslim (2013)- Seismotectonics of the Palu-Kuro active fault and analysis of the disappearance of megalith cultures from central Sulawesi island. In: Proc. 49th Annual Session Coord. Comm. Geoscience Programmes E and SE Asia (CCOP), Sendai, p. 75-81.
(online at: www.ccop.or.th/download/as/52as2.pdf)

Soemarno, S. (1979)- Beberapa hasil penerapan cara terpadu pada batuan yang mengandung bijih khromit di daerah Lasitae (Barru), Sulawesi Selatan. J. Riset Geologi Pertambangan (LIPI) 2, 1, p. 32-44.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.2-No.1-2-2-.pdf)
('Some of the results of integrated study of rocks with chromite ore in the Lasitae (Barru) area, South Sulawesi'. Lasitae area mountains SE of Barru with ultramafic zones with two WSW-ENE belts of chromite ore deposits)

Soeria-Atmadja, R., J.P. Golightly & B.N. Wahju (1974)- Mafic and ultramafic rock associations in the East Arc of Sulawesi. Proc. Inst. Technology Bandung 8, 2, p. 67-85. *(also in 1972 Proc. Regional Conf. Geol. SE Asia)*
(E and SE arms of Sulawesi largely occupied by discontinous belts of ultramafic complexes, mainly hartzburgite, lherzolite with some dunite and pyroxenite. Presumably of Late Mesozoic- Early Tertiary age. Associated with gabbroic rocks. Contacts with surrounding rocks generally faults/ thrusts)

Soeria-Atmadja, R., B. Priadi, T.M. van Leeuwen & I. Kavalieris (1999)- Tectonic setting of porphyry Cu-Au, Mo and related mineralization associated with contrasted Neogene magmatism in the Western Sulawesi arc. Island Arc 8, 1, p. 47-55.
(Neogene W Sulawesi Arc three magmatic provinces: (1) South: K alkaline-shoshonitic, with leucite-bearing rocks, 13-2 Ma (2) Central: high-K calc-alkaline and (3) North low-K, normal calc-alkaline arc volcanics, mainly 22-13 Ma, also 9.5 Ma-present. Origin of magmatism in terms of subduction and collision processes contentious. Four widely spaced Cu-Au porphyry and one Mo porphyry district(s) along W Sulawesi Arc, with N Sulawesi province most mineralized. Porphyry Mo systems require involvement of continental crust in magma source, while Au-rich porphyry systems are derived from mantle source)

Soesilo, J. (1998)- Metamorfosa pada komplek Latimojong, Sulawesi Selatan dan makna tektonikya. Masters Thesis, Inst. Teknologi Bandung (ITB), p. 1-85. *(Unpublished)*
('Metamorphism in the Latimojong Complex, S Sulawesi and tectonic significance'. Metamorphic rocks of Latimojong Mts low- medium grade rocks derived from alternating siliciclastic, calcareous and volcanic rocks, intruded by basaltic-acidic, high K, calc alkaline and tholeiite rocks. W-ward imbrication dominant structure and involves metamorphic rocks, serpentinites, chert and island arc metabasites of accretionary complex. At least three deformational phases, including metamorphism at glaucophane greenschist facies. Supports formation of primitive island arc prior to its collision with Sundaland margin)

Soesilo, J. & J. Sopaheluwakan (1998)- Petrologi dan geokimia meta-batuan beku Pegunungan Latimojong, Sulawesi Selatan. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 3 (Geodin., Magmat. Volkanologi), p. 94-107.
('Petrology and geochemistry of metamorphics of Latimojong Mts, S Sulawesi'. Geochemistry of 10 metamorphosed igneous rock samples in Latimojong metamorphic complex: metabasites (former island arc basalt), meta-gabbros, dolerites, andesites and granite, presumably formed in active subduction environment)

Soesilo, J., E. Suparka, C.I. Abdullah & V. Schenk (2010)- Pemetaan inklusi di dalam garnet tekanan tinggi pada kompleks melange Bantimala, Sulawesi Selatan. Majalah Geologi Indonesia (IAGI) 25, 3, p. 143-159.
(On inclusions in garnet in Bantimala melange complex, S Sulawesi)

Sohma, K. (1973)- *Florschuetzia*, a fossil sonneratioid pollen genus, from Sulawesi, Indonesia. Sci. Rept. Tohoku Univ, 4th Ser. (Biology), 36, 4, p. 261-266.

Sopaheluwakan, J. (1979)- The evolution of Franciscan type melange in South Sulawesi, with special reference to the Barru area. J. Riset Geologi Pertambangan (LIPI) 2, 1, p. 45-55.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.2-No.1-2-2-.pdf)
(Early study of Barru- Bantimala melange/ metamorphic complexes of SW Sulawesi, and similarities with SE Kalimantan and C Java. Metamorphics include glaucophane schists, eclogites, amphibilite, marble, etc., unconformably overlain by E Cretaceous? deep-sea sediments, followed by U Cretaceous flysch. Associated with fault-bounded, chromite-bearing ultramafics with shear zones (but no pillow lavas))

Sopaheluwakan, J. (1994)- Do Karangsambung (Central Java) and Bantimala (SW Sulawesi) form a single subduction process? a provocative view. Proc. 30th Anniversary Symposium, Res. Dev. Centre for Geotechnology (LIPI), Bandung, 2, p. 7-8.
(Cretaceous subduction complexes of Ciletuh (W Java), Karangsambung and Bayat (C Java), Meratus (S Kalimantan), and Bantimala and Barru (S Sulawesi) may belong to same orogenic belt. Bantimala and Barru complexes may form single and intact Mesozoic basement, linked to Meratus Range prior to Makassar Strait opening.)

Sopaheluwakan, J. (1995)- The deep crustal processes of West Arm of Sulawesi and the evolution of Makassar Strait: evidences from Bantimala, Meratus Mountain and Palu Koro Fault Zone. In: Y. Kumoro et al. (eds.) Proc. Seminar Sehari Geoteknologi dalam indistrialisasi, Hasil-hasil Penelitian Puslitbang Geoteknologi LIPI, p. 216-217. *(Abstract)*.
(West Arm of Sulawesi was eastern margin of Sunda craton, now separated from mainland of Kailmantan by thinned continental crust of Makassar Straits. East Sunda crust exposed near Palu (Toboli complex schists and slates). Sunda continent rimmed by Late Mesozoic subduction/accretionary complex, exposed as tectonic windows in Bantimala and Barru areas, extending N to Palu and to SW in Karangsambung. Late Cretaceous accretion ended subduction. Long-standing subduction had enriched mantle wedge under continental margin; its buoyancy led to continental crustal stretching and opening of Makassar Straits in E Tertiary)

Sopaheluwakan, J., A. Kadarusman, B. Priyadi & H. Utoyo (1995)- The nature of basement rocks in the Palu Region, Central Sulawesi. The newly found ecoglite and its regional implications. Proc. 6th Int. Congress Pacific Neogene Stratigraphy and IGCP 335, Neogene evolution of Pacific: biotic, climatic, oceanographic and tectonic development, Puspitek Serpong 1995, Kyoto, p. 77-83.

Sopaheluwakan, J., K. Miyazaki, I. Zulkarnain & K. Wakita (1993)- Early Cretaceous Eastern Sunda subduction metamorphism and its tectonic implication: record of Karangsambung and Bantimala eclogites. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p.

Spencer, J.E. (2010)- Structural analysis of three extensional detachment faults with data from the 2000 Space-Shuttle Radar Topography Mission. GSA Today 20, 8, p. 4-10
(Large grooved surfaces on Space Shuttle Radar Topography images interpreted as exhumed footwalls of recently active extensional detachment faults. Examples include N Tokorondo Mts NW of Lake Poso and Pompangeo Mts E of Lake Poso in C Sulawesi. Linear landforms interpreted by Hamilton, etc., as thrust imbrication with thrusts striking parallel to ridges here interpreted as stretching lineations of exhumed footwall of detachment fault. Length of lineaments suggests 60-70 km of extension above Pompangeo complex)

Spencer, J.E. (2011)- Gently dipping normal faults identified with Space Shuttle radar topography data in Central Sulawesi, Indonesia, and some implications for fault mechanics. Earth Planetary Sci. Letters 308, p. 267-276.
(Topography data from C Sulawesi show two corrugated, domal landforms, covering 100s to 1000s of km2, bounded to N by abrupt transition to hilly to mountainous topography. Interpreted as metamorphic core complexes. N-ward transition interpreted as traces of extensional detachment faults, dipping 4°- 18°)

Stelbrink, B., C. Albrecht, R. Hall & T. von Rintelen (2012)- The biogeography of Sulawesi revisited: is there evidence for a vicariant origin of taxa on Wallaceȏs ȁanomalous islandȂ? Evolution 66, p. 2252-2271.
(Divergence time estimates for split of Sulawesi lineages from sister groups postdate relevant tectonic vicariant events, suggesting island predominantly colonized by dispersal. Speciation on Sulawesi not before Miocene, consistent with geological evidence for more land on island from that time)

Stevens, C., R. McCaffrey, Y. Bock, J. Genrich, Endang, C. Subarya, S.S.O. Puntodewo, Fauzi & C. Vigny (1999)- Rapid rotations about a vertical axis in a collisional setting revealed by the Palu fault, Sulawesi, Indonesia. Geophysical Research Letters 26, 17, p. 2677-2680.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1999GL008344/epdf)
(GPS measurements indicate left-lateral Palu fault in C Sulawesi slips at ~38 mm/yr. Palu and nearby faults accomodate rapid CW rotation of nearly 4°/Ma of E Sulawesi relative to E Sunda. Rotation of E Sulawesi transfers E-W shortening between Pacific- Eurasian plates to N-S subduction of Celebes basin under Sulawesi)

Stolley, E. (1943)- Uber Mesozoische Belemniten-fuhrenden Schichten von Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 10, p. 172-175.
('On Mesozoic belemnite-bearing beds from Sulawesi'. Appendix in Brouwer (1934), describing material collected in 1929 from Central Sulawesi. Upper Jurassic (Oxfordian?) belemnites, mainly Belemnopsis gerardi group (= Tithonian B. galoi- B. stolleyi of Challinor, 1990), from limestone with chert at Bahoempombini on Gulf of Tolo))

Subagio & B.S. Widijono (2012)- Interpretasi pola anomali gaya berat regional kaitannya terhadap potensi sumber daya geologi di lengan selatan Sulawesi. J. Sumber Daya Geologi 22, 1, p. 49-64.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/106/98)
('Interpretation of the regional gravity anomaly patterns related to the potential geological resources in the South arm of Sulawesi'. Geologic cross sections interpretation W-directed fold-thrusting)

Subandrio, A.S. (2006)- Diagenetic alteration in Late Miocene carbonate of Tacipi area, South Celebes. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru 2006, 10p.
(Tacipi reefal carbonate platform in Sengkang Basin, S Sulawesi mainy homogenous boundstones at top and packstones with local grainstones, and wackestones at bottom. Four reef facies identified: patch reef, barrier reef, fore reef and lagoon. Extensive freshwater leaching created biomoldic and vug pores)

Subandrio, A.S. & E. Usman (2011)- Diagenetic features of paleo lagoonal reef of Tacipi Area, South Celebes. Bull. Marine Geol. 26, 2, p. 95-104.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/37/38)
Late M Miocene- E Pliocene Tacipi Lst exposed in Tacipi area, Sengkang Basin, in lagoonal facies. Limestones mainly homogenous boundstones on top and packstones with local grainstones, and wackestones at base. Extensive freshwater leaching of fossil fragments and calcareous cement created moldic and vug porosity)

Subarsyah & Sahudin (2010)- Identifikasi sub-cekungan di cekungan Tomini bagian Selatan, berdasarkan penampang seismik 2D dan anomali gaya berat. J. Geologi Kelautan 8, 2, p. 95-104.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/190/180)
('Identification of sub-basins in the southern part of the Tomini basin, based on 2D seismic lines and gravity anomalies')

Subroto, E.A., B.Y. Afriatno & P. Sumintadireja (2007)- Prediction of the biogenic gas occurrences in Indonesia based on studies in East Java and Tomori (Central Sulawesi). Jurnal Teknologi Mineral (ITB), 14, 3, p. 115-124.
(online at: www.fttm.itb.ac.id/galeri/prediction.pdf)
(Biogenic gas dry (>99% methane), light carbon-isotopes (-61 to -67‰) and bacterial in origin. One of fields producing biogenic gas in E Java Basin. Sediments most likely producing biogenic gas from Plio-Pleistocene, characterized by high sedimentation rates, low geothermal gradients and high organic matter content)

Subroto, E.A., B. Priadi & B. Yulian (2004)- Study on gas samples collected from Tanjung Api and Tomori area, Sulawesi: abiogenic, biogenic, or thermogenic? Buletin Geologi (ITB) 36, 3, p. 117-124.
(Analysis of 3 gas samples from E Sulawesi. Two are from Donggi 1 well and are biogenic. Tanjung Api surface seep sample 53% hydrocarbon gas (98.2% methane, 1.5% ethane) and unusually heavy d13C isotopes. Origin is dubious: possibly abiogenic or post-mature or biodegraded)

Sudarmono (1999)- Tectonic and stratigraphic evolution of the Bone Basin, Indonesia: insights to the Sulawesi collision complex. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 531-534.
(Bone Basin is subduction complex/ suture between Sundaland and Gondwana-derived micro-continent that evolved into submerged intra-montane basin. Paleogene- E Miocene forearc stage with W-dipping subduction complex. M-L Miocene W-ward convergence of microcontinents toward subduction complex changed deposition and basin configuration. M Miocene collision with accretionary complex, followed by collision with W Sulawesi. Collision led to E-ward rotation of SE Sulawesi, with rifting and submergence of S part of basin. Compression from collision caused major back-thrust systems of W-verging Kalosi and Majene fold belts in W Sulawesi. Colliding plates began to lock in Pliocene, and continued plate convergence was accommodated by strike-slip along Walanae, Palu Koro and other faults. Bone Basin submerged into intra-montane basin setting. Clastic sediments from surrounding mountains to E, N and W prograded S to depocenter. Strike-slip still active)

Sudijono (2005)- Biostratigraphy and the depositional environment of the Toraja Limestone at the Nanggala river section, Toraja, South Sulawesi. J. Sumber Daya Geologi 15, 1 (148), p. 57-74.
(80m thick Toraja Fm limestone member at Nanggala River, 10km NE of Rantepao. Lower part Middle Eocene (Ta3) age, with Alveolina and Nummulites javanus. Upper ~10m Late Eocene (Tb) with Pellatispira madaraszi and abundant Discocyclina/ Asterocyclina. Overlying volcanic sst-claystone facies (Lamasi Volcanics?) with abundant Late Eocene (P15) planktonic foraminifera (Hantkenina, Gr. cerroazulensis, Pseudohastigerina micra). Toraja Fm underlain unconformably by Cretaceous Latimojong Fm metasediments)

Sudijono (2005)- On the age of the Makale Formation of the Makale-Totumbang Road section, Tana Toraja, South Sulawesi. J. Sumber Daya Geologi 15, 2 (149), p. 3-23.
(Makale Fm ~500-1000m thick marl-limestone formation, well exposed between Makale and Totumbang, in NE part of South Arm. Affected by N-S trending, West directed thrusting. Sampled part mainly zone Tf1, possibly also Te5 near base and Tf2 at top. Presence of Austrotrillina howchini, Cycloclypeus (Katacycloclypeus) annulatus, Flosculinella bontangensis, Miogypsina antillea, etc. Age late E Miocene- early M Miocene)

Sudradjat, A. (1982)- Geologi Lembah Palu Sulawesi Tengah dengan menggunakan teknik penginderaan jauh. Masters Thesis Inst. Teknologi Bandung (ITB), p. *(Unpublished)*
('Geology of the Palu valley, Central Sulawesi, using remote sensing techniques'. Palu-Koro Valley 250 km long, is reflection of sinistral Palu-Koro strike slip fault, with active movement estimated at 2-3.5mm to 14-17 mm/ year, totaling 3.25 km. Palu-Koro fault separates two different terranes)

Sufriadin (2008)- Comparative petrography of Paleogene and Neogene coal deposits from Southern Arm Sulawesi. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 672-681.
(Petrography of 18 coal samples from SW Sulawesi. Toraja Fm Paleogene coals higher vitrinite and liptinite than Neogene Fm coal, which have more inertinite and higher mineral matter (clay, iron sulfides, minor carbonate). Vitrinite reflectance wide range in Paleogene (0.35- 0.86%). Neogene coals narrower range (0.44-0.60%; lignite to HV Bituminous A coal). Maturity of some coals affected by igneous intrusions)

Sufriadin, K. Angayana & A. Sudarsono (2002)- Karakteristik mineralogi batubara daerah Tondongkurah, Kabupaten Pangkep, Sulawesi Selatan. In: Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, p. 185-192.
('Characteristics of coal mineralogy in the Tondongkurah area, Pangkep District, S Sulawesi')

Sufriadin, A. Idrus, S. Pramuwijoyo, I.W. Warmada & A. Imai (2011)- Study on mineralogy and chemistry of the saprolitic nickel ores from Soroaka, Sulawesi, Indonesia: implication for the lateritic ore processing. J. Southeast Asian Applied Geol. (UGM) 3, 1, p. 23-33.
(online at: https://journal.ugm.ac.id/jag/article/viewFile/7178/5618)

Sufriadin, A. Idrus, S. Pramuwijoyo, I.W. Warmada, A. Imai & Y. Yamauchi (2012)- Chromian spinel in peridotite of the Soroako ultramafic complex, Sulawesi, and its petrogenetic significance. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-M-03, 8p.
(Cr-spinels in Soroako peridotites of E Sulawesi (ultramafic complex with affinity to alpine-type peridotite, bounded in W by W-dipping thrust fault that separates it from Mesozoic limestone and red shales) occur as inclusions in olivine and orthopyroxene. Likely derived from upper mantle of suprasubduction zone or fore-arc setting and formed by high partial melting with low oxygen fugacity)

Sufriadin, A. Idrus, S. Pramuwijoyo, I.W. Warmada, I. Nur, A. Imai, A.M. Imran & Kaharuddin (2012)- Thermal and infrared studies of garnierite from the Soroako nickeliferous laterite deposit, Sulawesi, Indonesia. J. Geologi Indonesia 7, 2, p. 77-85.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/401)
(Mineralogical study of garnierite, a green material with high nickel content, from Soroako nickel laterite deposit of C Sulawesi)

Sufriadin, A. Jaya H.S. & A.M. Imran (2007)- Characteristic and the occurrence of coal deposits in Neogene Mandar Formation of West Sulawesi Province. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 387-394.
(Very thin layers (up to 15cm thick) and lenses of Late Miocene coals in Mandar Fm in Polaman Regency, westernmost Sulawesi. Mainly vitrinite (93.4-98.6 %), followed by inertinite (1.2- 3.0 %). Vitrinite refectance Rmax 0.56-0.60%, indicating high volatile bituminous coal rank)

Sufriadin, S. Ueno, A. Imai, A. Idrus, S. Pramumijoyo & I.W. Warmada (2010)- Characteristics and the occurrence of garnierite from the Soroako nickeliferous laterite deposits, Sulawesi. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, p.

Suherman, D., M.A. Isnandar, S. Damuar, A. Sukutjo & S. Soemardan (2008)- Reservoir characteristics of Donggi Field, Central Sulawesi, using inversion and AVO analysis methods. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-077, 12p.
(Donggi gas field in Matindok Block, C Sulawesi, reservoired in Miocene carbonate build-up, with satisfactory porosity at almost all intervals)

Sukadana, I.G., A. Harijoko & L.D. Setijadji (2015)- Tataan tektonika batuan gunung api di Komplek Adang, Kabupaten Mamuju, Provinsi Sulawesi Barat. Eksplorium 36, 1, p. 31-44.
(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/2769/pdf)
('Tectonic setting of the Adang Volcanic Complex in Mamuju Region, West Sulawesi Province'. Adang volcanic complex in W Sulawesi subdivided into seven complexes. K-Ar ages ~5.4 (sanidine)- 2.4 Ma (biotite). Basic-intermediate alkaline volcanics with high radioactivity. Volcanic center and several lava domes, composed of phonolite to dacite rock, with ultrapotassic affinity, formed in active continental margin and influenced by SW Sulawesi micro-continental crust (see also Shaban et al. 2016, suggesting rift volcanism))

Sukadana, I.G. & F.D. Indrastomo (2016)- Radioactive mineral occurrences on submarine alkaline volcanic rocks in West Tapalang, Mamuju, West Sulawesi, Indonesia. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 260-262.
(High concentrations of radiometric U and Th in Mamuju area, W Sulawesi, in ultrapotassic, leucite-bearing (Pliocene?) basaltic- intermediate Adang Volcanics. Three volcanic domes, probably submarine volcanism; submarine flanks of volcano dominated by erosive-depositional and mass-wasting features)

Sukamto, R. (1975)- Geological map of Indonesia, VIII, Ujung Pandang sheet, 1:1, 000, 000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Reprinted in 1989/1990. 1:1 million map covering most of Sulawesi and Banggai-Sula (not incl. North Arm))

Sukamto, R. (1975)- Perkembangan tektonik di Sulawesi dan daerah sekitarnya; suatu sintesis perkembangan berdasarkan tektonik lempeng. Geologi Indonesia (IAGI) 2, 1, p. 1-13.
('Tectonic development of Sulawesi and surrounding regions; a synthesis of the evolution of plate tectonics')

Sukamto, R. (1978)- The structure of Sulawesi in the light of plate tectonics. In: S. Wiryosujono & A. Sudradjat (eds.) Proc. Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA), Jakarta 1975, 2, Indon. Assoc. Geol. (IAGI), p. 121-142.
(Review of Sulawesi geology and interpretation in terms of plate tectonics. Glaucophane schists associated with ultrabasic rocks found along W part of the E Sulawesi province post-Cretaceous in age, but before intra-Miocene orogenetic phase. Glaucophane schist in SW Sulawesi older than mid-Cretaceous. M Miocene ntense folding, followed by overthrusting in E Arm and C part of W Sulawesi. E Sulawesi ophiolite emplacement pre-Triassic (?). In S Sulawesi E Tertiary W-dipping subduction zone which became inactive in M Miocene, then flipped to W side of Sulawesi, in Makassar Straits)

Sukamto, R. (1981)- Geological map of the Danau Tempe Sheet South Sulawesi,1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Probably same as Pangkajene- Watampone Quad map (Danau Tempe in N of this map sheet))

Sukamto, R. (1982)- The geology of the Pangkajene and Western part of Watampone Quadrangles, South Sulawesi, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p. 1-27.
(SW Sulawesi map between 4-5°S. With Bantimala basement complex of ultrabasics, metamorphics with NE-dipping foliation and 111 Ma K/Ar age and melange. Overlain by >2000m of Late Cretaceous Balangbaru Fm flysch. Paleocene volcanics, 3000m of Eocene- M Miocene Tonasa carbonates, E-M Miocene and Late Miocene- E Pliocene volcanoclastics. No sedimentation or volcanic activity after Late Pliocene)

Sukamto, R. (1986)- Tektonik Sulawesi Selatan dengan acuan khusus ciri-ciri himpunan batuan daerah Bantimala. Ph.D. Thesis, Inst. Teknologi Bandung (ITB), p. 1-364. *(Unpublished)*
('Tectonics of S Sulawesi, with special emphasis on rock associations in the Bantimala area'. Bantimala Melange includes tectonically mixed and imbricated Triassic- E Cretaceous rocks, including Kayubiti ultramafics, Bontorio metamorphics, Paremba sandstone (thought to have E Jurassic ammonites, but may be Cretaceous?; Grant-Mackie in Sukamto & Westermann 1992), Dengengdengeng basalt, schist breccia and Paring chert (Late Jurassic-E Cretaceous). Unconformably overlain by Late Cretaceous Balangbaru Fm

forearc flysch, Alla Fm Paleocene arc volcanics, Eocene Malawa Fm terrestrial clastics, Late Eocene-E Miocene Tonasa Fm carbonates and M-Late Miocene arc volcanics)

Sukamto, R. & N. Ratman (2013)- Batuan Pratersier. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 13-36.
('Pretertiary rocks'. Chapter 2 in Geology of Sulawesi book. Triassic or older rocks in Sulawesi mainly metamorphics. In S Sulawesi E-M Jurassic Paremba Sst, and Late Jurassic- E Cretaceous 'Paring Chert'. Mid-Cretaceous Bantimala melange overlain by Upper Cretaceous volcanics and Balangbaru Fm flysch, etc.)

Sukamto, R. & N. Ratman (2013)- Batuan Paleogen. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 37-63.
('Paleogene rocks'. Chapter 3 in Geology of Sulawesi book. M-L Eocene-Oligocene volcanics and clastics and Late Eocene- Oligocene limestones, widespread in W and N Sulawesi)

Sukamto, R. & N. Ratman (2013)- Batuan Neogen. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 65-92.
('Neogene rocks'. Chapter 4 in Geology of Sulawesi book. Miocene- Pliocene volcanics, clastics and limestones, widespread in W and N Sulawesi)

Sukamto, R. & N. Ratman (2013)- Batuan Kuarter. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 93-112.
(' Quaternary rocks'. Chapter 5 in Geology of Sulawesi book)

Sukamto, R. & T.O. Simandjuntak (1983)- Tectonic relationship between the geologic provinces of Western Sulawesi, Eastern Sulawesi, and Banggai-Sula in the light of sedimentological aspects. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 7, p. 1-12. *(also in Proc. 4th Regional Conf. Geology and Mineral Resources of SE Asia, GEOSEA IV, Manila 1981)*
(Three tectonic domains in Sulawesi: (1) W Sulawesi Late Cretaceous- Eocene flysch-type forearc sediments derived from volcanic arcs; (2) E Sulawesi oceanic environment of ophiolites overlain by Jurassic and Cretaceous pelagic sediments; (3) Banggai-Sula microcontinent with basement of Carboniferous metamorphics and Permo-Triassic plutonic rocks, overlain by Triassic-Cretaceous continent-derived shelfal sediments)

Sukamto, R. & S. Supriatna (1982)- The geology of the Ujung Pandang, Benteng dan Sinjai Quadrangles, Sulawesi, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p. 1-20.
(SW Sulawesi map. Oldest rocks U Cretaceous flysch over older metamorphics. Thick, folded Eocene marine clastics with Pellatispira and Nummulites in NE corner of map (Salokalupang Fm). Eocene- M Miocene Tonasa Fm carbonate platform 1750m thick or more. Early Miocene and Plio-Pleistocene volcanic activity)

Sukapti, W.S. (2001)- Palynological study of the Burecing member, Walanae formation, South Sulawesi. Jurnal Teknologi Mineral (ITB) 8, 1, p. 29-36.

Sukarna, D. (1998)- Tertiary geology of the West Arm Sulawesi and Southeastern Kalimantan. J. Geologi Sumberdaya Mineral 8, 78, p. 2-8.
(Stratigraphic successions in SE Kalimantan and SW Sulawesi suggest these were united in Late Cretaceous- E Tertiary, located in fore-arc/ accretionary complex of W-dipping Cretaceous subduction system. M Eocene-early M Miocene extension led to separation of W arm of Sulawesi. In W arm Sulawesi M Eocene clastics deposition changed to carbonate platform in Late Eocene- M Miocene, followed by inversion movements in late M Miocene due to collision of Banggai-Sula microcontinent)

Sukarna, D., Sudarsono, S. Indarto, H. Utoyo, J. Sopaheluwakan, B. Priadi & S. Pramumijoyo (2000)- Peridotit bergarnet dan batuan malihan berderajat menengah daerah Winatu-Wana, Kulawi, Sulawesi Tengah. J. Geologi Sumberdaya Mineral 10, 111, p. 2-16.
('Garnet peridotites and intermediate metamorphic rocks in the Winatu-Wana area, Kulawi, C Sulawesi'. Palu area of NW Sulawesi with garnet-bearing peridotite (xenoliths in Palu granite), Toboli Complex epidote-

amphibolite greenschist metamorphics (118.4 Ma) and U Cretaceous Latimojong Fm metasediments (parts of Sundaland margin basement) and acid-intermediate Plio-Pleistocene Palu granitoid. Palu Valley part of paleo-subduction complex from C Java to Bantimala-Barru))

Sukido, D. Sukarna & K. Sutisna (1993)- Geological map of the Pasangkayu Quadrangle, Sulawesi, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Sukmono, S., A. Baasir, R. Abimanyu & N. Pudyo (2005)- Tiaka Field, Sulawesi: a recognized potential thrusted anticline play type in Sulawesi- Indonesia. In: Proc. 66th EAGE Conf. Exhib., Paris, B043, 4p.
(Extended Abstract. Tiaka Field in Miocene carbonate in thrust anticline in E Sulawesi. NE-SW structure with Tiaka primary thrust faults at E side and Kalomba thrust faults in W. Porosity of Tomori carbonate 5-23%, Minahaki carbonate 10-29% and Matindok clastics 18-39%)

Suliantara & T. Susantoro (2015)- Hydrocarbon potential of Tolo Bay Morowali Regency: qualitative analysis. Scientific Contr. Oil and Gas, Lemigas, Jakarta, 38, 1, p. 13-24.
(online at: www.lemigas.esdm.go.id/publikasi/read/scientific/1/)
(Tolo Bay E of East Sulawesi, with water depth of up to 3500m. Part of Banggai Basin and within Late Cretaceous- M Miocene collision zone between Banggai-Sula Microcontinent and E Sulawesi. Drift phase sediment at front of Banggai-Sula Microcontinent is potential source and reservoir rock. Hydrocarbon exploration very risky)

Sumadirdja, H., T. Suptandar, S. Harjoprawiro & D. Sudana (1973)- Reconnaissance geological map of the Palu Quadrangle, Sulawesi, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(NW Sulawesi map between 0-1°S, 'neck' between Makassar Straits and Tomini Bay, incl. onshore adjacent to Suramana Block. Oldest rocks are metamorphics, overlain by Eocene Tinombo Fm and Celebes Molasse. Probably different ages granitic intrusions)

Sumartono, Sabtanto J.S. & Y.R. Ramli (2001)- Review on systematic geochemical mapping in Sulawesi-Indonesia. In: Proc. CCOP 37th Ann. Sess. Bangkok 2000, 2, Techn. Repts., p. 43-59.
(Results of systematic geochemical mapping of SW and SE arms of Sulawesi. Three provinces distinguished: (1) West: magmatic arc granitoid intrusives associated with epithermal gold, porphyry copper-gold, volcanogenic massive sulphide, manganese and iron mineralisations (2) Central: metamorphic rocks and melange with rare metallic mineral occurrences and (3) East: ophiolite nappe with nickel, chrome and iron mineralisations)

Suminto (1987)- Sedimentologi endapan molasa di daerah Taweli, Kabupaten Donggala. In: Kolokium hasil pemetaan dan penelitian Puslitbang Geologi 1992/1993, Geol. Res. Development Center, Bandung, Spec. Publ. 15, p. 1-16.
('Sedimentology of molasse deposits in the area of Tawaeli, Donggala District'. In: Colloquium results of mapping and research GRDC 1992/1993)

Suminto (1994)- Sedimentologi Formasi Tinombo di daerah Kecamatan Tinombo, Kabupaten Donggala, Sulawesi Tengah. J. Geologi Sumberdaya Mineral 4, 38, p. 2-8.
('Sedimentology of the Tinombo Formation in the Kecamatan Tinombo, Donggala area, C Sulawesi'. On Tinombo Fm Late Eocene- E Oligocene marine clastics and limestones (with Nummulites), incl. 'flysch-facies', in Tomini Bay side of NW 'neck' of Sulawesi. ~3900m thick measured section NW of Tinombo, in steeply NW dipping sediments, with two diorite intrusion ~30 and 100m thick. Deepening-upward succession (formation also contains Pellatispira according to Harahap et al. 2003; JTvG))

Suminto (1995)- Lingkungan pengendapan fasies sedimen klastika Formasi Walanae di daerah Lappariaja, Bone, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 5, 44, p. 8-11.
('Outline of clastic sediment facies of the Walanae Formation in the Lappariaja area, Bone, S Sulawesi'. Late Miocene- Pliocene Walanae Fm in E side of SW arm of Sulawesi. In Sungei Bengo section ~600m thick shallow marine clastics above limestone deposits and with terrestrial facies at top)

Sumosusastro, P.A., H.D. Tjia, A.R. Fortuin & J. Van der Plicht (1989)- Quaternary reef record of differential uplift at Luwuk, Sulawesi east arm, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 277-285.
(Luwuk area near E tip of Sulawesi E arm dominated by raised coral reef terraces, elevations of >400m. Lower group of 6- 10 terraces up to 30-100m. Middle group up to 250m, 18°- 22° seaward sloping surface bordered by coast-parallel faults. Upper group of terraces >400m above sea level. U/Th ages of four reef terraces at 410m, 62m, 19m and 6.6m range from 350 ka- 67 ka. Uplift rate of highest terrace 184 cm/ka)

Sunartadirdja, M.A. (1959)- Beitrage zur Geomorphologie von Sudwest Sulawesi. Doct. Thesis Johann Wolfgang Goethe Universitat, Frankfurt, p. 1-98. *(Unpublished)*
('Contributions to the geomorphology of SW Sulawesi')

Sunartadirdja, M.A. & H. Lehmann (1960)- Der tropische Karst von Maros und Nord-Bone in SW-Celebes (Sulawesi). Zeitschrift Geomorphologie, Suppl. 2, p. 49-65.
('The tropical karst of Maros and North Bone in SW Sulawesi'. Two types of karst on SW Sulawesi, steep-walled and rounded. Suggested explanations include differences in limestone type (Nummulites limestone versus coral limestone), age, and tectonic history, but thickness of limestone above valley floor is controlling factor)

Sunarya, Y., K. Judawinata & D.Z. Herman (1980)- Penelitian stratigrafi dan geokimia bijih tipe Kuruoka di daerah Sangkaropi, Kecamatan Sescan, Tana Toraja, Sulawesi. Proc. 15th Ann. Meeting Indon. Assoc. Geol. (IAGI), Yogyakarta, p.
('Study of the stratigraphy and geochemistry of ore of Kuruoka type in the area of Sangkaropi, District Sescan, Tana Toraja, Sulawesi')

Sunarya, Y., T. Yoshida, K. Yudawinata, R. Rinawan, Hartono & B. Sutopo (2011)- The Sangkaropi massive sulphide deposit district, South Sulawesi: its implications for genesis and exploration for Kuroko-type deposits. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 230-242.

Sunarya, Y., T. Yoshida, K. Yudawinata, R. Rinawan, Hartono & B. Sutopo (2012)- The Sangkaropi massive sulphide deposit district, South Sulawesi: its implications for genesis and exploration for Kuroko-type deposits. Majalah Geologi Indonesia (IAGI) 27, 2, p. 109-119.
(online at: bgl.esdm.go.id/publication/index.php/dir/article_download/769)
(Same paper as Sunarya et al. 2011. Sangkaropi massive sulphide deposits in near Rantepao in C part of SW Sulawesi. Deposits closely associated with Miocene submarine volcanism of W Sulawesi arc ('Green Tuff Fm/ Old Andesite Fm, and composed of 'Kuroko-type' stratiform and stockwork ore bodies, mostly covered with thin layer of barite. Sulfide minerals include sphalerite, galena, chalcopyrite, pyrite, tetrahedrite, bornite, etc. Temperatures of fluid inclusions in sphalerite and quartz 160- 346°C)

Supandjono, J.B. & E. Haryono (1993)- Geology of the Banggai Sheet, Sulawesi-Maluku. Map at scale 1:250,000, with brochure, Geol. Res. Dev. Centre (GRDC), Bandung.
(Geology of Banggai Islands, SE of East Arm of Sulawesi. Oldest rock Carboniferous? metamorphics (schist, gneiss, amphibolite, quartzite). (Permian-?) Triassic Banggai Granite and co-magmatic Mangole Fm volcanics (rhyolite, ignimbrite, etc.) (K-Ar ages of Banggai Granite ~224-240 Ma; Harahap et al. 2003). Unconformably overlain by Late Jurassic Bobong Fm conglomerate, sandstones with coal and Buya Fms shales and quartz sandstones, Cretaceous Tanamu Fm marls, Eocene- Miocene Salodik Fm limestones-marls)

Supardi, N., A.M. Imran & M. Farida (2014)- Lingkungan pengendapan batuan karbonat Formasi Tonasa pada daerah Karama Kecamatan Bangkala Kabupaten Jeneponto, Provinsi Sulawesi Selatan. J. Penelitian Geosains (Hasanuddin University) 10, 2, p. 58-67.
(online at: http://repository.unhas.ac.id/bitstream/handle/123456789/15298/)
('Depositional environment of Tonasa carbonate rock formations in the Karama area, District of Bangkala, Jeneponto, South Sulawesi Province'. Outcrop of M Eocene Tonasa Fm marl dominated section with limestone interbeds at S-most tip of S Sulawesi deemed to be deposited in middle shelf environment)

Suparka (1977)- Hubungan antara khromit dan bantuan ultramafik: dengan daerah Balambano-Karebe, Sulawesi Selatan; sebagai suatu tinjauan. J. Riset Geologi Pertambangan (LIPI) 1, 1, p. 17-33.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.1-No.1-22-.pdf)
('The relationship between chromite and ultramafic rocks: with Balambano-Karebbe area, S Sulawesi; a review')

Suratman (2000)- Geologi dan endapan Ni-laterit Soroako Sulawesi Selatan. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 37-44.
('Geology and Ni-laterite deposits at Saroako, S Sulawesi'. Review of nickel laterites with saprolite ore in weathering zone of East Sulawesi ophiolite, in E and W Soroakao blocks)

Suratman (2000)- Geology and nickel-laterite weathering deposit in the southeast arm of Sulawesi. Berita Sedimentologi 14, p. 12-15.
(Nickel laterite in E Sulawesi derived from chemical weathering of ultrabasic rocks)

Surjono, S.S. & P.N. Pamurty (2011)- Dynamic sedimentation of Mapi Formation in Majene area, West Sulawesi. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-169, 10p.
(Description of depositional environments in 3 traverses of M Miocene- Pliocene Mapi Fm (N16-N20) in SW Sulawesi controlled by tectonics of Sulawesi and volcanism. Overall shallowing-upward succession. Volcanism generated by subduction in both S and N arms of Sulawesi)

Surmont, J., C. Laj, C. Kissel, H. Rangin, H. Bellon & B. Priadi (1994)- New paleomagnetic constraints on the Cenozoic tectonic evolution of the North Arm of Sulawesi. Earth Planetary Sci. Letters 121, p. 629-638.
(Paleomagnetism of Sulawesi N arm between 120- 122°E suggests post-Miocene CW rotation of ~20-25° of W part, probably during N-ward drift of N Arm along Palu-Matano sinistral transcurrent fault. Oligocene- E Miocene CW rotation of same amplitude documented by Sasajima et al. (1979). Between 122.5- 124°E CW and CCW rotations from ±6° to 85°, likely corresponding to microblock rotation and consistent with complex fault system of Gorontalo/ Kotamobagu shear zones)

Surono (1989)- Molasa di lengan Timur Sulawesi. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 13, p. 39-45.
('The molasse in the East Arm of Sulawesi'. Widespread molasse deposits in E Sulawesi of M Miocene-Pliocene age, rich in ophiolite fragments. Also as 1981 IAGI Conference paper)

Surono (1989)- Hubungan stratigrafi antara Kepulauan Banggai-Sula dan lengan Timur Sulawesi. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 13, p. 46-60.
('Stratigraphic relationship between the Banggai-Sula Islands and Sulawesi's East arm'. Differerent types of basement and overlying rocks, but both overlapped by similar Late Miocene-Pliocene Celebes Molasse)

Surono (1994)- A sedimentologic investigation of the Southeast Arm of Sulawesi with special reference to the Kendari area. Ph.D. Thesis, University of Wollongong, Australia, p. 1-211 + Appendices, figures, tables.
(online at: http://ro.uow.edu.au/theses/1393/)
(Collision complex in SE Arm of Sulawesi consists of SE Sulawesi continental terrane, overthrust by ophiolite E Sulawesi Ophiolite Belt in Oligocene- M Miocene and overlain by synorogenic E Miocene Sulawesi Molasse. SE Sulawesi continental terrane consists of metamorphic basement unconformably overlain by clastics-dominated Late Triassic Meluhu Fm (basal part fluvial, grading upward into deltaic and marine facies) and carbonate-dominated Eocene- E Oligocene Tampakura Fm (incl. oolites). Paleolatitude of basin at time of Triassic Meluhu Fm deposition ~20°S. Basal Sulawesi Molasse unconformably over Paleogene, with Matarape conglomerate with ophiolite clasts, overlain by E Miocene limestone with Te5 larger forams (Miogypsinoides, Spiroclypeus, Lepidocyclina) (Sample 6A; identified by Chaproniere 1993) and NN3 nannofora)

Surono (1994)- Stratigraphy of the Southeast Sulawesi continental terrane, eastern Indonesia. J. Geologi Sumberdaya Mineral 31, 4, p. 4-11. *(also reprinted in Surono 2008)*

(SE Arm of Sulawesi continental terrane composed of Mesozoic metamorphic rocks, intruded by granites. Unconformably overlain by Late Triassic Meluhu Fm fluvial clastics (Carnian- Norian?; with Falcisporites), and U Jurassic- Lw Cretaceous marine deposits of Tetambahu Fm (with Tithonian- Hauterivian radiolaria incl. Archaeodictyomitra and Thanarla). Unconformably overlain by Paleogene Tampakura Fm oolitic- dolomitic carbonates with Nummulites. SE Sulawesi and Bangai-Sula block stratigraphy similar to central PNG. Paleomagnetic analysis suggest SE Arm part of continental terrane, deposited 20°S of present location in Late Triassic, at N Australian (PNG) continental margin. Emplacement of poorly-dated E Sulawesi Ophiolite complex over SE Sulawesi continental block margin in latest Oligocene (= collision of SE Sulawesi- Buton?). Post-collisional Sulawesi Molasse unconformable over molasse and older formations, with Pandua Lst interbeds with E Miocene larger foraminifera)

Surono (1995)- A petrographic study of an oolitic limestone succession of the Eocene-Oligocene Tampakura Formation, South-East Sulawesi, Indonesia. J. Geologi Sumberdaya Mineral 5, 50, p. 2-11. *(also reprinted in Surono 2008, p. 103-118)*
(?Eocene Tampakura Fm limestone unconformable between underlying Late Triassic Meluhu Fm and overlying Mio-Pliocene Sulawesi Molasse. Oolites dominant, minor lime mudstone locally rich in globigerinid planktonic foraminifera, some dolomite)

Surono (1995)- Sedimentology of the Tolitoli Conglomerate Member of the Langkowala Formation, Southeast Sulawesi, Indonesia. J. Geologi Sumberdaya Mineral 5, 46, p. 1-7.
(also reprinted in Surono 2008, p. 161-173. E-M Miocene Tolitoli conglomerates of SE Sulawesi unconformable on Triassic clastics and Paleogene limestone. Deposited in braided river/ alluvial fan environment, with general paleocurrent direction to West. Conglomerate clast mainly derived from Late Triassic Meluhu Fm sandstones, with minor contribution from Tampakura Fm. No fossils, but age derived from position unconformably over Oligocene and under Late Miocene-Pliocene Boepinang Fm)

Surono (1996)- A regional stratigraphic review of the South East Arm of Sulawesi, Indonesia. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 169-189.

Surono (1997)- A preliminary study on the origin of dolomite in the Tampakura Formation, Southeast Sulawesi, Eastern Indonesia. Bull. Geol. Res. Dev. Center, Bandung 21, p. 151-161.
(Dolomite in Eocene- E Oligocene oolitic Tampakura Fm in SE Sulawesi formed in intertidal- supratidal zones)

Surono (1997)- A petrographic study on sandstones from the Meluhu Formation, Southeast Sulawesi, Eastern Indonesia. Bull. Geol. Soc. Malaysia 40, p. 215-231.
(online at: www.gsm.org.my/products/702001-100878-PDF.pdf)
(Late Triassic Meluhu Fm sandstone 39-95% quartz (av. 68%). Polycrystalline quartz av. 12.7%. Undulose extinction common in monocrystalline quartz. Source area mainly metamorphic rocks, probably with thin cover of sedimentary and volcanic rocks. Thick cyclic channel deposits S of Tinobu with coarse clasts, probably deposited close to source area of high relief, forming alluvial fans along basin margin)

Surono (1997)- A provenance study of sandstones from the Meluhu Formation, Southeast Sulawesi, Eastern Indonesia. J. Geologi Sumberdaya Mineral 7, 73, p. 2-16.
(Same as Surono (1997) above. Also reprinted in Surono (2008). Late Triassic Meluhu Fm sandstones dominated by quartz (mainly monocrystalline, also common polycrystalline) and lithics (sedimentary and metamorphic; very minor volcanics). Most likely source low-grade metasediments at SW margin of block)

Surono (1997)- Geology and origin of the Southeast Sulawesi continental terrane, Indonesia. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 961-974.
(On SE Sulawesi Continental Terrane(s) in SE Arm of Sulawesi, overridden by E Sulawesi Ophiolite. Oldest unit pre-Carboniferous low-grade metamorphics, intruded by Permo-Triassic aplite and associated volcanics. Unconformably overlain by Late Triassic Meluhu Fm Triassic clastics, unconformably overlain by Eocene Tamborasi and 400m of Tampakura Fm Eocene-Early Oligocene carbonates. Similarities in stratigraphy suggest same origin as Banggai-Sula terrane; also similar to Kubor Anticline, PNG. Before collision with E

Sulawesi Ophiolite Belt in latest Oligocene (E Miocene age of basal Sulawesi molasse in SE Sulawesi), joined with Banggai-Sula Terrane. Three pre-collision tectonic events: Permian-Late Triassic pre-rift (pre-breakup), Jurassic breakup and Late Jurassic-Oligocene rift-drift)

Surono (1998)- A sedimentological study of the oolitic limestone succession of the Paleogene Tampakura Formation in Southeastern Sulawesi, Indonesia. In: J.L. Rau (ed.) Proc. 33rd Sess. Co-ord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Shanghai 1996, 2, p. 10-41. *(also in Surono 2008, p. 133-160)*
(Late Eocene- E Oligocene Tampakura Fm consists of oolite, lime mudstone, wackestone, packstone and framestone, and widely distributed in N part of SE Sulawesi. Underlain by U Triassic Meluhu Fm clastics and unconformably overlain by Miocene Sulawesi Molasse. Tampakura Fm deposited in tidal environment. Basin configuration was rimmed shelf)

Surono (1998)- Geology and origin of the Southeast Sulawesi continental terrane, Indonesia. Media Teknik (UGM) 20, 3, p. 33-42.
(Same paper as Surono 1997)

Surono (1999)- An organic petrology study on coal and carbonaceous rocks from the Triassic Meluhu Formation, Southeast arm of Sulawesi, Eastern Indonesia. Majalah Geologi Indonesia (IAGI) 15, 1-2, p. *(also reprinted in Surono 2008)*
(Two coal seams, 0.7 and 0.9m thick, in basal part of Triassic Meluhu Fm of SE Sulawesi. Vitrinite is dominant maceral. Average vitrinite reflectance Rv 0.69%)

Surono (2008)- Geology of the Southeast arm of Sulawesi. Geological Survey, Bandung, Spec. Publ. 35, p. 1-213.
(Reprint collection of 12 previously published papers on SE Sulawesi)

Surono (2013)- Geologi lengan Tenggara Sulawesi. Geological Survey (Badan Geologi), Bandung, Spec. Publ., p. 1-169.
(Review of the geology of SE Arm of Sulawesi)

Surono (2011)- Tektono-stratigrafi bagian Timur Sulawesi. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-054, 5p.
('Tectonostratigraphy of East Sulawesi'. Brief review; no figures)

Surono M. (2012)- Tectonostratigraphy of the eastern part of Sulawesi, Indonesia, in relation terrane origins. J. Sumber Daya Geologi 22, 4, p. 199-207.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/119/113)
(E Sulawesi mainly formed by two terranes, both unconformably covered by post-collisional Sulawesi molasse: (1) ophiolite complex and E Cretaceous Matano Fm pelagic sediment cover and (2) Banggai Sula and SE Sulawesi continental terranes (metamorphic basement, Late Triassic- Paleogene sediment cover), both overlain by E Miocene- Pliocene Sulawesi Molasse. Ophiolite and pelagic cover thrusted over continental terranes in Oligocene (~33-26 Ma). Ophiolite K-Ar ages 93.4- 26 Ma (all too young?; JTvG), formed in mid-ocean ridge within Pacific Plate. Continental terranes originated from N margin of Australian Continent)

Surono (2013)- Kepingan Benua. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 153-211.
('Continental fragments'. Chapter 8 in Geology of Sulawesi book. Brief review of continental blocks of Sulawesi: Banggai-Sula, Siombok, Tambayoli, Bungku, Mattarombeo, SE Sulawesi, Buton and Tukangbesi)

Surono (2013)- Batuan sedimen Neogen dan Kuarter. In: Surono & U. Hartono (eds.) Geologi Sulawesi, LIPI Press, Bandung, p. 225-257.
('Neogene and Quaternary sedimentary rocks'. Chapter 10 in Geologi Sulawesi book. E Sulawesi Molasse members suggest E Miocene- Pliocene age range)

Surono & S. Bachri (2002)- Stratigraphy, sedimentation and palaeogeographic significance of the Triassic Meluhu Formation, Southeast arm of Sulawesi, Eastern Indonesia. J. Asian Earth Sci. 20, p. 177-192.
(SE Sulawesi M-L Triassic Meluhu Fm fluvio-deltaic clastics unconformable on metamorphic basement and unconformably overlain by Paleogene carbonates. Source area rugged and composed of metamorphic rocks, overlain by sandstone and volcanic rocks. Meluhu Fm deposited in humid tropical region. Paleomagnetic study shows~25° clockwise rotation and paleolatitude of 20° S. Meluhu Fm early rift stage sediment on NW Australian continent. Continental fragment, including Meluhu Graben, separated from Australia to become allochthonous terrane before colliding with Sulawesi)

Surono, M. Endharto, A. Azis & D.M. Ali (1992)- Sedimentology of the Meluhu Formation, Southeast Arm of Sulawesi, Indonesia. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 833-852.
(Late Triassic- Jurassic Meluhu Fm widespread in SE Sulawesi. Underlain by metamorphic basement, overlain by Laonto Fm. Three members: (1) Lower part Toronipa Mb sand-rich fluvial deposits (max. 800m thick); (2) middle part Watuteluboto Mb tide-influenced deltaic deposits (max. thickness 200m); (3) upper part Tuetue Mb estuarine- shallow marine clastics with thin(Juassic?) limestone beds near top (110m, thickening to NW). With Halobia and Daonella molluscs. Paleocurrents generally to ESE. Provenance from volcanic, metamorphic and sedimentary rocks)

Surono & U. Hartono (eds.) (2013)- Geologi Sulawesi, 2nd Ed.. LIPI Press, Bandung, p. 1-348.
('The geology of Sulawesi'. Comprehensive overview in Indonesian of geology and stratigraphy of Sulawesi by Geological Survey personnel. 13 chapters)

Surono, T.O. Simandjuntak & E. Rusmana (1997)- Collision mechanism between the oceanic and continental terranes in the Southeast private arm of Sulawesi, Eastern Indonesia. Bull. Geol. Res. Dev. Center, Bandung, 21, p. 109-125. *(reprinted in Surono 2008, p. 193-213)*
(Banggai-Sula terrane originated from PNG and collided with W Sulawesi volcanic arc in Oligocene. Collision caused anticlockwise rotation of S arm and clockwise rotation of N arm. SE Sulawesi-Buton also allochthonous continental terrane now juxtaposed with E Sulawesi Ophiolite Belt. In SE Sulawesi highly deformed Eocene- E Oligocene carbonates unconformably overlain by gently deformed E Miocene Celebes molasse, suggesting major deformation near Late Oligocene)

Surono, T.O. Simandjuntak, R.L. Situmorang & Sukido (1994)- Geology of the Batui Quadrangle, Sulawesi. Quad 2114, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 38p.
(E Sulawesi map between 1 and 2°S, NW side of Tolo Bay, mapped in 1981. Two terranes: (1 Banggai-Sula Platform with Carboniferous metamorphics and Permo-Triassic granites and (2) E Sulawesi ophiolite belt, composed of E Cretaceous ultrabasics overlain by U Cretaceous Matano Fm deep marine pelagic cherts and calcilutites. Terranes collided in M Miocene, creating Late Miocene- Pliocene molasse. Quaternary uplift. Oil seeps in several places along Batui thrust, the collision zone between ES ophiolite and BS Platform. Miocene Kolokolo melange near Batui Thrust))

Surono & D. Sukarna (1993)- Geology of the Sanana Sheet, Maluku, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geology of eastern Banggai-Sula Islands, SE of E Sulawesi (E Taliabu, Mangole, Sanana). Oldest formation ?Carboniferous metamorphics and ?Permo-Triassic Banggai granite intrusives with >400m thick co-magmatic Mangole Fm volcanic breccias and tuffs. Small occurrence of ~50-100m thick Triassic? Nofanini Fm coral-mollusc limestone off S coast of Mangole. Unconformably overlain by thick M-L Jurassic Bobong and Buya Fms with common ammonites, and Late Cretaceous Tanamu Fm Globotruncana marl-limestone)

Surono & D. Sukarna (1995)- The Eastern Sulawesi Ophiolite Belt, Eastern Indonesia. A review of its origin with special reference to the Kendari area. J. Geologi Sumberdaya Mineral 5, 46, p. 8-16.
(Also in Ofiolit di Sulawesi, Halmahera, dan Kalimantan, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 28 (2001), p. 1-10 and reprinted in Surono 2008). Mafic-ultramafic rocks widespread in SE arm of Sulawesi. Peridotite dunite, etc. with gabbro and basalt characterize mid-oceanic ridge type ophiolite complex.

Ophiolite probably was thin widespread layer covering continental terrane. Late Cretaceous- Late Oligocene age (does not fit with reported E Cretaceous radiolaria in overlying sediments?; JTvG). Paleomagnetic results suggest formation at 17-24°S in Late Cretaceous and rotated CW about 60° (Mubroto). Ophiolite debris abundant in M Miocene and younger Sulawesi Molasse. SE arm ophiolite probably thrust over SE Sulawesi continental terrane in M-Late Oligocene, while in E arm it occurred in E Miocene)

Surono & D. Sukarna (1996)- Sedimentology of the Sulawesi molasse in relation to Neogene tectonics, Kendari area, Eastern Indonesia. Proc. 6th Int. Congress Pacific Neogene Stratigraphy, IGCP355, Serpong 1995, p. 57-72.
(Reprinted in Surono 2008, p. 175-192)
(Miocene- Pliocene Sulawesi Molasse post-collisional deposits, with E Miocene forams (Spiroclypeus) and nannofossils (NN3) in limestones in upper part of basal Matarape Fm conglomerates. Ophiolite-derived fragments dominant in lower molasse, decreasing in size upsection, and more detritus from SE Sulawesi continental terrane, suggesting ophiolite formed thin cover over SE Sulawesi terrane)

Surono & H.A. Tang (2009)- Batuan pembawa emas primer dari endapan emas sekunder di Kabupaten Bombana, Sulawesi Tenggara berdasarkan interpretasi inderaan jauh. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang 2009, 11p.
(SE Sulawesi secondary gold deposits in streams and in Miocene Langkowala Fm sandstones. Rivers draining from Mendoke and Rumbia Mts, formed by metamorphic and meta sediments, but igneous intrusion identified in W end of Mendoke Mountains)

Surono & H.A. Tang (2009)- Kemungkinan keterdapatan endapan emas primer di Kabupaten Bombana, Sulawesi Tenggara. J. Teknologi Mineral Batubara 5, 4, p. 163-170.
('Possible occurrences of primary gold deposits in Bombana District, SE Sulawesi')

Sutadiwiria, Y., Yeftamikha, A.H. Hamdani, Y. Andriana, I. Haryanto & E. Sunardi (2017)- Origin of oil seeps in West Sulawesi onshore, Indonesia: geochemical constraints and paleogeographic reconstruction of the source facies. J. Geol. Sciences Applied Geology (UNPAD) 2, 1, p. 10-15.
(online at: http://jurnal.unpad.ac.id/gsag/article/view/13420/7373)
(Numerous oil- gas seeps onshore W and S Sulawesi, but no discoveries so far in area. Biomarkers indicate coals and/or coaly shales as source, with some marine input in Karama region to S. Best candidate for source of oil seeps is Eocene Toraja or Kalumpang Fm. Maturities at generation equivalent with Ro 0.8-1.0 %)

Sutjipto, M. (1999)- The geology and development of the Limpoga epithermal sediment-hosted deposit, Ratatotok Districk, North Sulawesi. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 235-252.
(Limpoga gold deposit sediment-hosted epithermal deposit 70km S of Manado, 3km E of Mesel Mine)

Suyono & Kusnama (2010)- Stratigraphy and tectonics of the Sengkang Basin, South Sulawesi. J. Geologi Indonesia 5, 1, p. 1-11.
(online at: www.bgl.esdm.go.id/dmdocuments/jgi20100101.pdf)
(Neogene stratigraphy and tectonic evolution of Sengkang Basin, onshore SW Sulawesi. Formed by NNW-SSE trending Walanae Fault system, followed by formation of Pliocene-Pleistocene foreland basin with W-prograding syn-orogenic Walanae Fm deposits. Fault system separated E and W parts of S Sulawesi and influenced Late Miocene- Quaternary deposition. Lower part of unit with small Late Miocene Tacipi Mb carbonate reefs in E Sengkang Basin. Lamasi Ophiolite in W Sulawesi and analogous E Sulawesi ophiolite separated by deep Bone Bay, suggesting orogenic collapse may have occurred here)

Swamidharma, Y.C.A. (2011)- Nickel laterite contents and grades in Sulawesi. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, Indonesian Soc. Econ. Geol. (MGEI)/IAGI, p. 289-298.

Swift, L.R. & M. Alwan (1990)- The discovery of gold-silver mineralization at Binebase, Sangihe Island, Indonesia. Proc. Pacific Rim Congress 90, 2, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 533-539.

Syaefuddin (1997)- Preliminary study of the geology and tectonics of the Flores Sea islands, South Sulawesi. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 291-313.

Syafri, I. (2000)- Etude petrologique et geochimique des peridotites a grenat, eclogites et roches associees des parties Ouest et Centrale de lôile de Sulawesi, Indonesie. Ph.D. Thesis Universite de Paris 6, p. 1-455. *(Unpublished) ('Petrological and geochemical study of the garnet peridotites, eclogites and associated rocks in W and C parts of Sulawesi island'. Study of high-grade metamorphic rocks in Bantimala tectonic complex (E Cretaceous eclogites derived from Tethys ocean crust basalts in W-dipping subduction zone), Palu fault zone (granulites derived from arc volcanics; garnet peridotites exhumed from ~70km depth) and Wassupang melange (eclogites from oceanic gabbro subducted under W Sulawesi in Late Eocene- Early Oligocene)*

Syafri, I. (2002)- The eclogites and associated rocks from Wassupang melange in the eastern part of the Central Sulawesi metamorphic belt, Indonesia: P-T history and geodynamic implications. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 19p.

Syafri, I. (2004)- Komposisi kimia eklogit dan batuan bergarnet- berglaukofan dari kompleks Bantimala Sulawesi Selatan, Indonesia serta kemungkinan jenis- jenis batuan asalnya. Bull. Scientific Contr. (UNPAD) 2, 2, p. 50-60.
('The chemical composition of eclogite and garnet-glaucophane rocks of the Bantimala complex, S Sulawesi, Indonesia and their possible origin')

Syafri, I. (2014)- Ekoglit terubah dan batuan asosiasinya sebagai indikator subduksi purba selama Eosen Atas hingga Oligosen Bawah di sabuk metamorfik Sulawesi Tengah Bagian Timur- Indonesia. Bull. Scientific Contr. (UNPAD) 12, 3, p. 131-146.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8374/3890)
('Eclogite and associated rocks as an indicator of ancient subduction during the Upper Eocene to Lower Oligocene in the east part of the C Sulawesi metamorphic belt, East Indonesia'. Eclogites in several areas in Sulawesi: Bantimala, Palu valley, Bongka River and in Wasuponda melange complex. Wasuponda eclogites different from Bantimala or Palu and formed at different times. P-T conditions of ~21 kbar and 500°C of both Wasuponda and Bantimala eclogites indicate formation at 61-80 km depth. Eclogite from Wasuponda Melange underwent retrograde metamorphism to amphibolite/greenschist and originated from gabbroic oceanic crust. Bantimala eclogite formed during Cretaceous subduction, collision and microcontinent accretion; Wasuponda eclogite in NE dipping melange, formed during Eocene-Oligocene (intra-oceanic?) subduction and obduction)

Syafri, I., J.R. Kienast & J. Girardeau (1995)- New data on high-pressure rocks from Barru Complex, South-West Sulawesi, Indonesia: P-T history and geodynamic implications. Proc. 8th Regional Conf. Geology Mineral Energy resources of SE Asia (GEOSEA), Manila 1995, p.

Syafri, I., J.R. Kienast & R. Soeria-Atmadja (2005)- High-pressure granulite from Palu Valley, Central Sulawesi, Indonesia; P-T history and geodynamic implications. Majalah Geologi Indonesia (IAGI) 20, 2, Spec. Ed., p. 68-79.
(P-T conditions calculated from HP granulite at Palu suggest formed at ~65 km in upper mantle, while normally these form at 35-40 km depth. It may be derived from foreign (Australian?) material carried into subduction zone mantle wedge below continental crust of Sulawesi)

Syafrizal, K. Anggayana & D. Guntoro (2011)- Karakterisasi mineralogi endapan nikel laterit di daerah Tinanggea, Kabupaten Konawe Selatan, Sulawesi Tenggara. J. Teknologi Mineral 18, 4, p. 211-220.
('Characterization of mineralogy of a lateritic nickel deposit in the Tinanggea area, South Konawe Regency, Southeast Sulawesi'. Lateritic nickel from advanced weathering of Ni-silicate bearing ultramafic rock)

Syafrizal, T.A. Rivai, K. Yonezu, D. Kusumanto, K. Watanabe & A.N.H. Hede (2017)- Characteristics of a low-sulfidation epithermal deposit in the River Reef Zone and the Watuputih Hill, the Poboya gold prospect, Central Sulawesi, Indonesia: host rocks and hydrothermal alteration. Minerals 7, 124, p. 1-16.

(online at: www.mdpi.com/2075-163X/7/7/124/pdf-vor)
(Gold mineralization hosted in granite, biotite gneiss and biotite schist of Palu Metamorphic Complex)

Szentpeteri, K., G. Albert & Z. Ungvari (2015)- Plate tectonic and stress-field modelling of the North Arm of Sulawesi (NAoS), Indonesia, to better understand the distribution of mineral deposit styles. In: Proc. SEG 2015 Conf. World class ore deposits: discovery to recovery, Hobart. *(Abstract and Poster)*
(N Arm of Sulawesi with 4 active gold mines. Three oceanic plates subducting under N Arm. Molluca and Celebes plates dip opposite to each other, Sangihe plate at right angles to other two. Variations in subducting plates marked by breaks in morphology and earthquake intensity, corresponding to arc-transform structures in upper plate. N Arm and Tomini and Gorontalo Bays in extensional regime (incl. uplifts of metamorphic core complexes), possibly tied to slab detachment and/or rollback of Sulawesi Trench. Young (5-1 Ma) Au-Cu mineralized districts in N Arm related to extensional features and intersections with transtensional arc normal faults (which may extend as tear faults on lower, opening window to mantle))

Tan Sin Hok (1935)- Over ouderdomsbepalingen op grond van radiolarien van Oost-Celebes. De Ingenieur in Nederlandsch-Indie 1935, IV, 4, p. 31-33.
('On age determinations based on radiolarians of E Sulawesi'. The validity of Late Jurassic- Early Cretaceous age determinations of 12 E Sulawesi radiolarian-bearing samples by Hojnos in Von Loczy (1934) is questioned, but no suggestions for alternative ages are proposed (N.B. Hojnos' conclusions probably mostly correct; all species recorded are Late Jurassic- E Cretaceous forms (O'Dogherty 2009); Tan's skepticism derives from his not recognizing the mid-Cretaceous age of his radiolarian-rich samples from Roti (Tan 1927); JTvG))

Tatsumi, Y., M. Murasaki, E.M. Arsadi & S. Nohda (1991)- Geochemistry of Quaternary lavas from NE Sulawesi: transfer of subduction components into the mantle wedge. Contrib. Mineralogy Petrology 107, p. 137-149.
(Geochemistry of Quaternary Sangihe arc volcanics. Formed in intra-oceanic tectonic setting, not associated with backarc basin. All incompatible elements, except Pb, increase away from volcanic front)

Tatsumi, Y., M. Murasaki, E.M. Arsadi & S. Nohda (1991)- Geochemistry of Quaternary lavas from NE Sulawesi: transfer of subduction components into the mantle wedge. In: Proc. Silver Jubilee Symposium on Dynamics of subduction and its products, Yogyakarta 1991, LIPI, p. 144-170.
(same paper as above)

õT Hoen, C.W.A.P. & K.G.J. Ziegler (1917)- Verslag over de resultaten van geologisch-mijnbouwkundige verkenningen en opsporingen in Zuidwest Celebes. Jaarboek Mijnwezen Nederlandsch-Indie 44 (1915), Verhandelingen 2, p. 235-363.
('Results of geological-mining reconnaissance and investigations in SW Celebes'. First extensive SW Sulawesi survey, with focus on Eocene coal occurrences. Brief discussion of gas seeps; no oil seeps encountered. With 1:200,000 scale geologic map and 1:20,000 maps of coal fields Tondong Koerah, Podo, Batoekoe and Malawa)

Tjia, H.D. (1973)- Palu-Koro fault zone, Sulawesi. Berita Direktorat Geologi, Geosurvey Newsl. 5, p. 1-3.
(Suggests 750km of sinistral displacement along NNW trending Palu-Koro fault zone of C Sulawesi (subsequent authors estimates closer to 200-250km; JTvG))

Tjia, H.D. & P. Sumosusastro (1986)- Radiocarbon age of a 410-metre reef flat at Luwuk, Sulawesi. Warta Geologi (Newsl. Geol. Soc. Malaysia) 12, 3, p. 127-129.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1986003.pdf)
(Quaternary raised reef terraces at Luwuk Peninsula, E Sulawesi. Highest terrace at 410m asl, with radiocarbon age of Luwuk-6 sample of 35,000± 400 yr B.P. (at which time sea level was ~50m below present-day datum). More detail see Sumosusastro et al. 1989)

Tjia, H.D. & T.H. Zakaria (1974)- Palu-Koro strike slip fault zone, Central Sulawesi. Sains Malaysiana (Univ. Kebangsaan Malaysia), 3, p. 67-88.

Tonggiroh, A. & I. Nur (2019)- Geochemical correlation of gold placer and indication of Au-Cu-Pb-Zn-Ag mineralization at Parigi Moutong, Central Sulawesi, Indonesia. J. Physics Conf. Series 1341, 052003, p. 1-15.
(Parigi Moutong area in SW part of North Arm of Sulawesi area of small-scale gold mining. Sources of placer deposits from 4 types of hydrothermal deposits: Au-Cu, Au-Zn, Cu-PB and epithermal Au-Ag)

Trail, D.S., T.U. John, M.C. Bird, R.C. Obial, B.A. Pertzel, D.B. Abiog & S. Parwoto (1974)- The general geological survey of Block 2, Sulawesi Utara, Indonesia. PT Tropic Endeavour Indonesia, Report, 68p.
(Unpublished, but apparently widely circulated report that forms basis of much of knowledge of N Sulawesi Cenozoic arc-volcanic dominated geology)

Tsujimori, T., V.B. Sisson, J.G. Liou, G.E. Harlow & S.S. Sorensen (2006)- Very-low-temperature record of the subduction process: a review of worldwide lawsonite eclogites. Lithos 92, p. 609-624.
(Formation and preservation of lawsonite eclogites requires cold subduction to mantle depths and rapid exhumation. Glaucophane-bearing lawsonite eclogites together with serpentinite and garnet-quartz micaschists in Albian-age (106 Ma) accretionary complex in Barru complex, W Sulawesi. Mineralogy suggests peak conditions of P=~2.1 GPa and T=520°C)

Tuckey, S.H., N.M. Silvio & S.D. Potter (1998)- Geological modeling and resource estimation of the Toka Tindung epithermal gold deposit, North Sulawesi, Indonesia. In: S. Shedden (ed.) Seminar papers Gold & nickel ore reserve estimation practice seminar, Australasian Inst. of Mining and Metallurgy (AusIMM), Carlton, 10, p. 76-92.

Turner, S.J., P.A. Flindell, D. Hendri, I. Hardjana, P.F. Lauricella et al (1994)- Sediment-hosted gold mineralization in the Ratatotok District, North Sulawesi, Indonesia. J. Geochemical Exploration 50, p. 317-336.
(Gold mined in Ratatotok district in Minahasa Regency since at least 1850s. Newmont exploration delineated sediment-hosted replacement-style deposit at Mesel, in Late Miocene limestone in island arc environment. Later uplift resulted in karst development in limestone and erosion of adjacent volcanic arc with deposition of thick epiclastic unit, followed by shallow level andesite intrusion into sequence. Mineralisation synchronous with late-stage reactivation of strike-slip faults. Elsewhere in district mineralisation in permeable zones along limestone-andesite contacts, quartz-calcite veins and stockworks)

Turner, S.J., S.A. Garwin & A.H. Hofstra (2002)- Mesel SRHDG deposit and low-sulfidation gold veins in the Ratatotok District, North Sulawesi, Indonesia. Geol. Soc. America, 2002 Ann. Mtg., 1p. *(Abstract only)*
(N Arm of Sulawesi classic oceanic island arc with porphyry Cu and volcanic-hosted epithermal Au-Ag deposits. Ratatotok/ Mesel deposits hosted in Miocene carbonates deposited in NE-trending graben. Carbonate sequence deposited on and later covered by andesitic volcanics and volcaniclastics. Carbonates gently folded along E-W axes. Porphyritic andesite intrusions dated at 4.3 to 3.4 Ma)

Umbgrove, J.H.F. (1930)- Een tocht naar Tandjong Api, Oost Celebes. Onze Aarde 3, p. 282-286.
('A trip to Tanjung Api, East Sulawesi'. At N coast of E arm of Sulawesi serpentinitic rocks (lherzolite) from which self-igniting gases flow)

Umbgrove, J.H.F. (1939)- De atollen en barriere-riffen der Togian eilanden. Leidsche Geol. Mededelingen 11, 1, p. 139-187.
(online at: www.repository.naturalis.nl/document/549574)
('The atolls and barrier reefs of the Togian Islands'. Study of modern atolls and reefs in Tomini Gulf, N Sulawesi, with reconnaissance geology observations on Togian Islands. Oldest rocks are sediments, intruded by young volcanics (but no recent activity). Togian peak and nearby areas composed of andesite/ trachyte volcanic rocks. Raised reef terraces younger than Tf/ Miocene)

Umbgrove, J.H.F. (1942)- A revision of fossil corals from Celebes described by Dollfus. Geologie en Mijnbouw (N.S.) 5, p. 14-16.
(online at: https://drive.google.com/file/d/1gjHuDZR314U_cYFZxqglAkhjY4LtefVP/view)

(Brief note on identifications by Dollfus (1915) of fossil corals from Sulawesi, collected by Abendanon. Disagrees with most identifications of material from Saadang and Donggala. No figures)

Untung, M., J. Taruno, M. Ali, P. Kridoharto & S.S. Sukardi (1985)- Explanatory note on preliminary aeromagnetic map of the Makassar Strait. Proc. CCOP 20st Sess., Kuala Lumpur 1983, II, p. 199-209.
(Much of N Makassar Strait interpreted as probable oceanic crust)

Usman, E. & Panuju (2013)- Study of gas potency based on gravity anomaly modeling and seismic profile analysis at Banggai-Sula Basin. Bull. Marine Geol. 28, 2, p. 51-60.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/download/55/56)

Utama, H.W., W. Gheovani, N. Supardi & W. Mukhtar (2016)- Determination of facies depositional environment based on outcrop of carbonate rock and micro-forams of Tonasa Formation at Karama, South Sulawesi. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-285-SG, 6p.
(18m section in calcareous claystone in Tonasa Lst at Karama with M Eocene planktonic foraminifera (Globigerina senni, Globigerapsis kugleri, etc.), and open marine small benthics)

Utoyo, H., B. Priadi, A. Kadarusman & Sudarsono (1997)- K-Ar age of granitoids from Palu-Koro fault zone, Central Sulawesi. J. Geologi Sumberdaya Mineral 7, 71, p. 17-20.
(Granitic rocks in Palu-Koro fault zone with K/Ar ages between 8.4- 1.0 Ma. Categories: biotite-poor granite (2-5 Ma), mylonitized granite (5-7 Ma), biotite granite (6-8 Ma). Toboli gneissic granite 96 Ma (M Cretaceous))

Utoyo, H. (1998)- K/Ar dan Ar/Ar batuan granitik daerah Kulawi, Sulawesi Tengah. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 3, p. I 72-I 76.
('Radiometric ages of granitic rocks in the Kulawi area, C Sulawesi'. Kulawi area in Palu-Koro fault zone area. Ar/Ar dates of biotite from granitic rocks dated between 3.1- 3.5 Ma, hornblende 6.4 Ma. K/Ar ages from biotite generally higher: 3.8- 10.1 Ma, hornblende 5.5 Ma)

Utoyo, H. (2008)- Bijih besi di daerah Bonocani Kabupaten Bone, Sulawesi Selatan. J. Sumber Daya Geologi 18, 5, p. 309-317.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/251/231)
('Iron ore in Bontocani area, Bone district, South Sulawesi'. Iron ore in boulders; magnetite and hematite mineralization associated with granitoid intrusions)

Utoyo, H. & Subiyanto (2001)- Ofiolit Pegunungan Batui, Luwuk, Sulawesi Tengah. Geol. Res. Dev. Centre (GRDC), Bandung (GRDC), Spec. Publ. 28, p. 27-46.
('Ophiolite of the Batui Mountains, Luwuk, Central Sulawesi'. Batui Mts ophiolite incomplete upper part of ophiolite sequence, with gabbro-basalt in N, dominantly serpentinite in S. Eocene and Miocene K/Ar ages (too young?-JTvG). No evidence of mineralization)

Van Bemmelen, R.W. (1949)- Celebes. In: The geology of Indonesia, Government Printing Office, Nijhoff, The Hague, 1, p. 389-441.

Van den Bergh, G.D., U.M. Lumbanbalu, P.L. de Boer & F. Aziz (1995)- Lithostratigraphy of the West Sengkang Basin. In: The geology and stratigraphy of the vertebrate-bearing deposits in the Sengkang Basin: the terrestrial faunal evolution of South Sulawesi during the Late Pliocene and Quaternary. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 18, p. 14-27.

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Van der Vlerk, I.M. & J.J. Dozy (1934)- The Tertiary rocks of the Celebes-expedition- 1929. Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 10, p. 183-218.
(online at: (online at: https://resolver.kb.nl/resolve?urn=MMKB21:041182000:pdf)
(Appendix in Brouwer, 1934. Documentation of Eocene limestones with Pellatispira and Miocene limestones in different parts of Sulawesi. Several conglomeratic limestones from NE part of SE arm (Bahumpombini/ Bungku area) contain E Miocene larger foraminifera (Te5; Miogypsina, Spiroclypeus and Lepidocyclina (Eulepidina)), but also reworked clasts of U Cretaceous Globobotruncana pelagic limestone, radiolarian chert and serpentine (suggesting E Miocene or older uplift of E Sulawesi ophiolite terrane; JTvG))

Van Leeuwen, T. (1981)- The geology of southwest Sulawesi with special reference to the Biru area. In: A.J. Barber & S. Wiryosayono (eds.) The geology and tectonics of Eastern Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 277-304.
(SW Sulawesi Biru area E of Ujung Pandang (Makassar) almost complete U Cretaceous- U Miocene record. Basement is Bantimala Complex metamorphics (K/Ar age 111 Ma), ultrabasic rocks and tectonic melange with NE-dipping radiolarian cherts, clastics and igneous rocks. Metamorphics unconformably overlain by latest Jurassic-E Cretaceous sands, shale and radiolarian cherts. Sands near base with metamorphic and ultramafic clasts. Flysch-type U Cretaceous folded and uplifted before deposition of thick Langi Fm andesitic volcanics (Paleocene K/Ar age near base; upper part with Late Eocene coals and limestones with Pellatispira). Conformably overlain by ~400m U Eocene- M Miocene Tonasa Limestone (Tb- Lower Tf, but mid-Oligocene unconformity). Unconformably overlain by >1000m thick M and U Miocene Sopo-Walanae-Lemo Fm volcanics (~17- ~5 Ma?). Mid-M Miocene folding and uplift event, associated with 40° CCW rotation of area. Also unconformity at base of U Miocene Lemo andesitic volcanics and Plio-Pleistocene folding-uplift event)

Van Leeuwen, T., C.M. Allen, M. Elburg, H.J. Massonne, J.M. Palin & J. Hennig (2016)- The Palu Metamorphic Complex, NW Sulawesi, Indonesia: origin and evolution of a young metamorphic terrane with links to Gondwana and Sundaland. J. Asian Earth Sci. 115, p. 133-152.
(Young metamorphic core complexes of Palu (PMC) and Karossa, mainly in 'neck' of NW Sulawesi. N part mainly amphibolite (oceanic parentage?), S part mainly biotite schists (meta-sediments) with some gneiss (meta-granite). Local peridotite. Rocks resided at depths of 60-120 km during part of their histories. S part overlain by U Cretaceous Latimojong Fm clastics and volcanics (but parts of PMC also metamorphosed Latimojong Fm). Zircon ages of metamorphics suggest metamorphism event at 3-4 Ma of older protoliths (210-230 Ma/ Late Triassic and ~80-120 Ma/M Cretaceous). Rapid cooling exhumation in latest Miocene- M Pliocene (Ar/Ar cooling ages 6.0- 3.6 Ma). Composite terrane with (1) gneiss unit of Gondwana origin (but presence of Late Triassic meta-granitoids and recycled Proterozoic zircons suggest W Sulawesi Block origin in New Guinea region, not NW Australian margin, as suggested in recent reconstructions?), (2) schist unit composed of low-metamorphic turbidites deposited in Late Cretaceous- E Tertiary along SE Sundaland margin, and (3) slivers of amphibolite with oceanic crust characteristics)

Van Leeuwen, T., C.M. Allen, A. Kadarusman, M. Elburg, J.M. Palin, Muhardjo & Suwijanto (2007)- Petrologic, isotopic, and radiometric age constraints on the origin and tectonic history of the Malino metamorphic complex, NW Sulawesi, Indonesia. J. Asian Earth Sci. 29, p. 751-777.
(Malino Metamorphic Complex (MMC) at W end of Sulawesi N arm mica schists and gneisses from proximal turbidite and granitoid protoliths, with intercalations of greenschist, amphibolite, marble and quartzite. Devonian- Early Carboniferous age, Archean-Proterozoic inherited zircons, and isotopic signatures indicate terrane derived from New Guinea-Australian margin. Similarities with Birds Head basement suggests common origin. Greenschists around MMC from adjacent autochthonous Paleogene. Barrovian progression from greenschist through epidote-amphibolite to amphibolite. P-T estimations suggest 27-30 km burial. Cooling ages 23-11 Ma, and 7 Ma age for unconformably overlying volcanic rocks, indicate Miocene exhumation. Two tectonic scenarios: (1) continental fragment docked with Sulawesi in Mesozoic and exhumed as metamorphic core complex in Miocene; (2) subducted beneath N arm in Late Oligocene, then rapidly returned to surface)

Van Leeuwen, T.M. & Muhardjo (2005)- Stratigraphy and tectonic setting of the Cretaceous and Paleogene volcanic-sedimentary successions in Northwest Sulawesi, Indonesia: implications for the Cenozoic evolution of Western and Northern Sulawesi. J. Asian Earth Sci. 25, p. 481-511.

(W Sulawesi is rifted continental margin of E Sundaland. Metamorphic basement, partly of Australian origin, overlain by Late Cretaceous Latimojong Fm fore-arc turbidites. M Eocene- earliest Miocene transgressive cycle: syn-rift siliciclastics, nummulitic limestone and associated shelf sediments to deeper marine mudstones and turbidites (Budungbudung and Tinombo Fms). At same time N Sulawesi oceanic island arc, with bimodal Papayato volcanism on oceanic crust. Cretaceous- Paleogene volcanic and sedimentary suites contrasting tectonic setting of two provinces. Relationship between two domains not clear: probably formed continuous belt through Cenozoic, definitely connected by E Miocene. Paleogene deformation in N part of NW Sulawesi and unconformable relationship with overlying formations may be result of collision of N arm with Australian-derived continental fragment in E Miocene, or M Miocene formation of extensional metamorphic core complex. Second major tectonic event Pliocene-ongoing, affects entire region)

Van Leeuwen, T.M. & P.E. Pieters (2011)- Mineral deposits of Sulawesi. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 1-109.
(Major review of Sulawesi mineral deposits. Same as Van Leeuwen & Pieters (2013))

Van Leeuwen, T.M. & P.E. Pieters (2013)- Mineral deposits of Sulawesi. Geological Agency, Ministry of Energy and Mineral Resources, Bandung, p. 1-127.
(Extensive overview of mineral deposits of N, W and E Sulawesi Provinces, set in historic and geologic contexts. Sulawesi has complex geology with wide variety of mineralization styles, including porphyry Cu-Au, porphyry Mo, epithermal, metamorphic and sedimentary Au, lateritic nickel and Fe, etc.. Gold mining started in 1896, nickel in 1938. By world standards Sulawesi is underexplored)

Van Leeuwen, T.M., E.S. Susanto, S. Maryanto, S. Hadiwisastra, Sudijono, Muhardjo & Prihardjo (2010)- Tectonostratigraphic evolution of Cenozoic marginal basin and continental margin successions in the Bone Mountains, Southwest Sulawesi, Indonesia. J. Asian Earth Sci. 38, 6, p. 233-254.
(Bone Mts in SW Sulawesi composed of Oligocene- Lower Miocene transtensional marginal basin Bone Gp (MORB-like volcanics and interbedded hemipelagic mudstones), juxtaposed against Eocene- Miocene continental margin Salokalupang Gp. Latter: (1) M- U Eocene volcaniclastics with limestone intercalations in upper part, reflecting arc volcanism and carbonate development along Sundaland margin; (2) Oligocene calc-arenites, deposited on passive margin, and (3) Lower- M Miocene clastics- volcanics, formed in extensional regime without subduction. At ~14-13 Ma start of widespread extension in SW Sulawesi, with potassic volcanism (Camba Fm), reaching peak 1 Ma year later with juxtaposition of Bone Gp against Salokalupang Gp along Walanae strike-slip fault. Potassic volcanism continued to end Pliocene, locally to Quaternary)

Van Leeuwen, T.M., R. Taylor, A. Coote & F.J. Longstaffe (1994)- Porphyry molybdenum mineralization in a continental collision setting at Malala, Northwest Sulawesi, Indonesia. J. Geochemical Exploration 50, p. 279-315.
(Malala deposit in NW Sulawesi only known porphyry Molybdenum in Indonesia, associated with mainly granitic intrusives (Malala porphyries) as late differentiates in roof zone of Dondo batholith. Intrusives part of 600 km belt of granites and granodiorites, emplaced in continental margin ('W Sulawesi') in Late Miocene-Pliocene, during and following collisions between several microcontinents and Sulawesi western magmatic arc/eastern subduction complex. Granitoids from partial melting of lower crust (possibly underthrusted Precambrian- Paleozoic continental crust) due to lithospheric thickening in continental collision regime)

Van Schelle, C.J. (1889)- Verslag over het voorkomen van goudvoerende aderen bij Sumelatta (Residentie Menado). Jaarboek Mijnwezen Nederlandsch Oost-Indie 1889, Technisch Admin. Ged., Verhandelingen, p. 5-38.
('Report on the occurrence of gold-bearing veins near Sumelatta (Residency Menado)'. Early investigation of gold near Sumalata along the north coast of North Sulawesi, with potential concessionaire Parmentier in 1886. Gold mined by natives since 1813, directed by the Rajah of Limbotto, who claimed 20% of gold mined. Many small shafts up to 14m deep. By 1886 mine works were mostly abandoned)

Van Schelle, C.J. (1889)- Verslag van een onderzoek naar de waarde van bekende goudvindplaatsen in de afdeeling Gorontalo (Res. Menado). Jaarboek Mijnwezen Nederlandsch Oost-Indie 1889, Technisch Admin. Ged., Verhandelingen, p. 39-55.
('Report of investigation of the value of known gold occurrences in the district Gorontalo, Residency Manado'. Brief review of native mining sites at Patente, Banganite, Lantia, Popaja, Lanoeo, etc.)

Van Schelle, C.J. (1889)- Opmerkingen over de geologie van een gedeelte der afdeeling Gorontalo, Res. Menado. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1889, Wetenschappelijk Gedeelte 2, p. 115-158.
('Remarks on the geology of a part of the district Gorontalo, Residency Manado'. Results of 1886 survey. Presence of granite, diorite, andesite and Late Tertiary clastic sediments and limestones)

Van Straelen, V. (1924)- *Portunus brouweri*. Portunien nouveau du Tertiaire de l'Ile Celebes. Jaarboek Mijnwezen Nederlandsch Oost-Indie (1923), Verhandelingen p. 169-170.
('Portunus brouweri, a new portunid from the Tertiary of Sulawesi'. New species of crab fossil from probably Miocene-age lithographic limestones with fish fossils at Patunuang Asu, S Sulawesi (see also Brouwer 1924))

Van Vuuren, L. (1920)- Het gouvernement Celebes: proeve eener monographie. Encyclopedisch-Bureau, Weltevreden, 535p. + Atlas with 25 maps.
(Early geographic description of Sulawesi. Includes geology chapter, influenced by Wegener's continental drift theory)

Van Waterschoot van der Gracht, W.A.J.M. van (1915)- Voorloopige mededeeling in zake de geologie van Centraal-Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 32, p. 188-204.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001661001:pdf)
('Preliminary communication on the geology of Central Sulawesi'. Summary of 1913 fieldwork in Toraja lands, mainly to investigate stratigraphy. Widespread, thick, folded red Globigerina marls with thin limestone intercalations of E-M Eocene age, not Cretaceous as previously suggested. Overlain by several km thick volcanic series, probably Late Eocene- Miocene age. Mid-Tertiary granite intrusions. "Sulawesi more likely part of Tethys geosyncline than of Asian mainland'. Heavily criticized by Abendanon 1915 for proposing sweeping regional conclusions based on only 11 days of fieldwork in small part of C Sulawesi)

Van Waterschoot van der Gracht, W.A.J.M. (1915)- Bijdrage tot de geologie van Centraal-Celebes. Jaarboek Mijnwezen Nederlandsch Oost-Indie 43 (1914), Verhandelingen 2, p. 16-73.
('Contribution to the geology of Central Sulawesi'. Report on 2-week journey into C Sulawesi Toraja lands from Palopo at N end of Bone Bay. One of first to demonstrate that widespread red claystones are of E-M Eocene age (with interbeds of limestone with Nummulites, Assilina). Different from earlier interpretations of De Sarasin and Ahlburg (but disputed by Abendanon, whose Celebes books had not been published yet))

Vigny, C., H. Perfettini, A. Walpersdorf, A. Lemoine, W. Simons, D. van Loon, B. Ambrosius, C. Stevens, R. McCaffrey et al. (2002)- Migration of seismicity and earthquake interactions monitored by GPS in SE Asia triple junction: Sulawesi, Indonesia. J. Geophysical Research 107, B10, 2231, p. 7/1-7/11.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2001JB000377/epdf)
(GPS- detected coseismic and transient post-seismic deformation related to January 1996 earthquake on N Sulawesi (Minahassa) trench)

Villeneuve, M., J.J. Cornee, W. Gunawan, J. Girardeau, C. Monnier, J.P. Rehault, J. Malod, S. Burhanuddin et al. (1995)- Role of the Miocene extensional tectonic event in the blueschist exhumation and the molassic basin origin in the Sulawesi island (Indonesia). EUG 8, Terra Nova, Suppl., p. 119. *(Abstract only)*

Villeneuve, M., J.J. Cornee, W. Gunawan, M.C. Janin, J. Butterlin, P. Saint-Marc & H. Samodra (2000)- Continental block collision in the eastern arm of Sulawesi (Indonesia); structure and geodynamic interpretation. Comptes Rendus Academie Sciences, Paris, IIA, Earth Planetary Sci. 330, 5, p. 371-378.
(E arm of Sulawesi result of collision between two continental blocks: Tokala in W and Banggai-Sula in E. Tokala block results from Oligocene obduction of ophiolitic Asiatic basin onto passive margin of Gondwanan

block (Banda block), with collision with Asiatic active margin (W arm of Sulawesi) near end Oligocene or beginning of Miocene. Tokala Block then collided by Banggai-Sula block in E-M Pliocene or later)

Villeneuve, M., J.J. Cornee, W. Gunawan, R. Martini, G. Tronchetti. M.C. Janin, P. Saint-Marc & L. Zaninetti (2001)- La succession lithostratigraphique du bloc de Banda dans la region de Kolonodale (Sulawesi central, Indonesie). Bull. Soc. Geologique France 172, 1, p. 59-68.
(online at: https://archive-ouverte.unige.ch/unige:9820)
('Lithostratigraphy of the Banda Block in the Kolonodale area, C Sulawesi'. E and SE Sulawesi composed of two major continental blocks: (1) 'Banda block' (in later papers called Kolonodale Block; JTvG) including also Buru, Seram and Sinta Ridge, collided with Asian volcanic arc of W Sulawesi in Oligocene, then was dismembered during Late Neogene Banda Sea opening, and (2) Banggai-Sula block which drifted from Irian Jaya and collided with Banda block in Mid-Late Pliocene. Fragment of Banda block is in E Sulawesi, corresponding to the ophiolitic zone, where, in Kolonodale area, it is possible to reconstruct sedimentary succession under ophiolite, despite intensive deformations. Good overview of Late Triassic carbonates)

Villeneuve, M., W. Gunawan, O. Bellier, H. Bellon, J.J. Cornee, R. Martini & J.P. Rehault (2013)- Multiple collisions in Sulawesi Island and relationships with the geodynamical evolution of eastern Indonesia. In: 2nd Southeast Asian Gateway evolution Meeting (SAGE 2013), Berlin, p. 177. *(Abstract only)*
(Three small NE Gondwanan blocks from E or SE collided with W and N Arms of Sulawesi, at W-dipping subduction zone(s): (1) Late Oligocene- E Miocene 'Kolonodale Block', tectonically capped by large ophiolite; (2) M Miocene 'Lucipara Block' collision with Kolonodale Block; (3) M Pliocene 'Banggai-Sula Block'. Kolonodale Block strikingly similar to Timor; Lucipara and Banggai-Sula blocks similar to Birds Head)

Villeneuve, M., W. Gunawan, J.J. Cornee & O. Vidal (2002)- Geology of the Central Sulawesi belt (eastern Indonesia): constraints for geodynamic models. Int. J. Earth. Sci. (Geol. Rundschau) 91, 3, p. 524-537.
(Sulawesi four major tectonic events: (1) Mid-Cretaceous in W arm; (2) Oligocene Eastward ophiolite obduction and collision of 'Kolonodale Block' of Gondwana origin, producing metamorphic belt in C Sulawesi; (3) Middle Miocene collision of Banda Block and Tukang-Besi Platform and (4) Middle Pliocene collision between Kolonodale and Banggai-Sula blocks)

Von Koenigswald, R. (1933)- Over het zogenaamde voorkomen van *Spirifer verneuili* Murch. op Celebes. De Mijningenieur 1933, 1, p. 14-16.
('On the alleged occurrence of Paleozoic brachiopod Spirifer verneuili on Sulawesi'. Paleozoic brachiopod reported from Sulawesi by Brouwer is almost certainly from Chinese pharmacy, not from Sulawesi. Brachiopods like Spirifer Cyrthua and Orthis rel. common in Chinese pharmacies across Java and outer areas and were presumably all imported from China)

Von Loczy, L. (1934)- Geologie van Noord Boengkoe en het Bongka-gebied tusschen de Golf van Tomini en de Golf van Tolo in Oost-Celebes. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 10, p. 219-322.
(Report on BPM fieldwork in 1928 in Bongka River region, Sulawesi E arm. 70% of area covered by ophiolites (peridotite, serpentinite gabbro), thrust over Triassic- U Cretaceous sediments (local contact-metamorphism), incl. 300-500m dense yellow U Triassic (Norian) limestone rich in Misolia. Deep marine Late Jurassic belemnite limestone and white and red radiolarian-bearing Jurassic- Cretaceous limestones. Highly folded Late Eocene limestones with Discocyclina- Pellatispira. Celebes molasse 1200m thick, with Miocene Lepidocyclina limestone near base. Separate chapters on radiolaria (Hojnos; U Jurassic- Lw Cretaceous) and foraminifera (Van der Vlerk), Mesozoic macrofossils (Kutassy). Some of Von Loczy's conclusions debated by Hetzel (1935), Oostingh (1935), Tan Sin Hok (1935))

Von Staff, H. (1911)- Zum Problem der Entstehung der Umrissform von Celebes. Zeitschrift Deutschen Geol. Gesellschaft, Berlin 63, Monatsberichte, p. 180-186.
('On the problem of the origin of the outline shape of Sulawesi'. Followed by reply by Ahlburg, 1911, p. 399-405. Also discussed by Abendanon 1912 and Sarasin 1912)

Von Steiger, H. (1915)- Petrografische beschrijving van eenige gesteenten uit de onderafdeeling Pangkadjene en het landschap Tanette van het gouvenement Celebes en onderhoorigheden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 42 (1913), Verhandelingen, p. 171-227.
('Petrographic description of rocks from sub-district Pajangkane and Tanette region, SW Sulawesi'. Mainly igneous rocks, also glaucophane schist. With 1:150,000 scale geological map of departments Makassar and Bone by 'T Hoen)

Wahyono & Sidarto (2002)- Karakteristik kimia dan fisika serta pematangan batubari di daerah Baraka, Enrekang, Sulawesi Selatan. J. Geologi Sumberdaya Mineral 12, 132, p. 20-37.
('Chemical and physical characteristics and maturation of coal in the Baraka area, Enrekang, S Sulawesi'. Eocene Baraka coals NE of Enrekang high sulfur and ash, brown coal to medium volatile bituminous. Two groups: (1) Titok crushed and sheared with Rvmax 0.19-1.48% and Batunoni-Lapin with Rvmax 0.32-0.64%)

Wajdi, M.F., B. Santoso, D. Kusumanto & S. Digdowirogo (2011)- Metamorphic hosted low sulphidation epithermal gold system at Poboya, Central Sulawesi: a general descriptive review. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado 2011, MGEI/IAGI, p. 201-210.
(See also Wajdi et al. 2012)

Wajdi, M.F., B. Santoso, D. Kusumanto & S. Digdowirogo (2011)- Sistem emas epitermal sulfidasi rendah dalam batuan metamorf di Poboya, Sulawesi Tengah: tinjauan deskriptif umum. Majalah Geologi Indonesia (IAGI) 27, 2, p. 131-141.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/771)
('Low sulfidation epithermal gold systems in metamorphic rocks in Poboya, C Sulawesi: general descriptive review'. Same as Wajdi et al. 2010. On Poboya epithermal gold prospect 12 km NE of Palu, C Sulawesi, on E margin of pull-apart basin related to Palu Koro sinistral strike slip fault system)

Wake, B., N. Silvio, A. Lattore, A.S. Iswahyudi & A. Purwanto (1996)- Geology of the Toka Tindung epithermal gold deposit, North Sulawesi, Indonesia. In: Proc. Conf. Porphyry related copper and gold deposits of the Asia Pacific Region, Cairns 1996, Australian Mineral Found., Adelaide, p. 9.1-9.8.
(On Toka Tindung low sulphidation epithermal gold deposit on N tip of Sulawesi, 35km NE of Manado. Two vein systems in Pliocene andesitic volcaniclastics)

Wake, B.A., A.S. Iswahyudi, & M. Dadi Kuswandi (1997)- Epithermal gold-silver mineralization in a fossil hot spring system, Toka Tindung, North Sulawesi. Seminar Nasional Sumber Daya Geologi, Fakultas Teknologi Mineral, UPN 'Veteran' Yogyakarta, p.

Wakita, K. (2002)- Mystery man and mysterious unconformity in South Sulawesi, Indonesia. Chishitsu News 573, p. 48-68. *(in Japanese)*
(online at: www.gsj.jp/Pub/News/pdf/2002/05/02_05_05.pdf)

Wakita, K., Munasri, J. Sopaheluwakan, I. Zulkarnain & K. Miyazaki (1994)- Early Cretaceous tectonic events implied in the time-lag between the age of radiolarian chert and its metamorphic basement in Bantimala area, South Sulawesi, Indonesia. The Island Arc 3, p. 90-102.
(Bantimala Complex of S Sulawesi mainly melange, chert, basalt, ultramafic rocks and high-P metamorphics. Radiolarian assemblage from unconformably overlying chert Mid-Cretaceous (late Albian-early Cenomanian= around 100 Ma), while K-Ar ages from schist range from 132-114 Ma. This suggests brief tectonic event followed by quick waning tectonism during Albian-Cenomanian transgression)

Wakita, K., J. Sopaheluwakan, K. Miyazaki, I. Zulkarnain & Munasri (1996)- Tectonic evolution of the Bantimala Complex, South Sulawesi, Indonesia. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 353-364.
(Bantimala Complex NE-dipping tectonically stacked slices, composed mainly of high-P metamorphics and radiolarian chert, but also E-M Jurassic sandstones and overlain by mid-Cretaceous radiolarites and Late Cretaceous turbiditic series. Ages of metamorphics suggest oceanic plate subduction in Late Jurassic- earliest

Cretaceous. Subduction ceased in Albian. High-P schists exhumed due to collision of Gondwana-derived microcontinents)

Walpersdorf, A., C. Rangin & C. Vigny (1998)- GPS compared to long-term geologic motion of the North arm of Sulawesi. Earth Planetary Sci. Letters 159, p. 47-55.
(Paleomagnetic data from N arm of Sulawesi indicate ~20-25° rotation since 5 Ma, suggesting 200-250 km of left-lateral displacement along Palu-Koro fault. Similar Palu fault displacement derived from magnetic anomalies of Celebes seafloor, which implies 200- 250 km of oceanic crust subducted at N Sulawesi trench. Another marker for rotation derived from opening of Gulf of Tomini and NW migration of calc-alkaline subduction-related volcanism. GPS observation of 4 cm/year of left-lateral strike-slip across Palu fault fit well with N arm motion of 4-5 cm/year. Current rates from GPS approximate long-term rates)

Walpersdorf, A., C. Vigny, P. Manurun, C. Subarya & S. Sutisna (1999)- GPS observation of the Triple Junction, Indonesia. In: The GEODYnamics of S and SE Asia (GEODYSSEA) Project, GeoForschungs Zentrum, Potzdam, STR 98/14, p. 226-238.

Walpersdorf, A., C. Vigny, C. Subarya & P. Manurung (1998)- Monitoring of the Palu-Koro Fault (Sulawesi) by GPS. Geophysical Research Letters 25, 13, p. 2313-2316.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/98GL01799/epdf)
(5 years of GPS monitoring shows ~3.4 cm/yr left-lateral strike slip on Palu Fault)

Wanner, J. (1910)- Beitrage zur Geologie des Ostarms der Insel Celebes. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 29, p. 739-778.
('Contributions to the geology of the East Arm of Sulawesi Island'. Results of 2-month geological reconnaissance in 1905, mainly in SE side of E Arm, along Peleng Straits, near Toeli, Nambo, etc. In around Central Mountains describes (1) ultrabasic rocks, (2) rel. widespread Eocene limestones with Alveolina, Discocyclina and Nummulites, reminescent of Alveolina Limestone of Misool; (3) E Miocene shallow water carbonates with Lepidocyclina and Miogypsina; (4) Celebes molasse conglomerates 1200m thick or more (sandy marls and limestone near base with Pliocene planktonic and larger foraminifera, incl. Globorotalia tumida, no lepidocyclinids; JTvG), (5) Quaternary raised coral reef terraces up to 400m above s.l. Near Toeli also probably Jurassic-age 'Toeli Limestone', reminescent of Buru Limestone. Along N coast (Tomini Bay) common gabbro and peridotite, with oil seep in Babason creek, a tributary of Lobu River. Gabbro appear to be intrusives in U Oligocene- E Miocene limestone with Spiroclypeus, Lepidocyclina)

Wanner, J. (1914)- Eine Reise durch Ost-Celebes. Petermanns Geogr. Mitteilungen 60, 1, p. 78-81 and p. 133-136.
('A voyage through East Sulawesi'. Summary of 1905 traverse of East Sulawesi for Royal Dutch Petroleum Co. from Kintom. Mainly travel report with little geology (more in Wanner, 1910). In Babason creek near Dolong oil seep from fractures in gabbro, suggesting these overlie Tertiary sediments. With 1 map)

Wanner, J. (1919)- Die Geologie von Mittel-Celebes nach den neueren Forschungen E.C. Abendanons und anderer. Geol. Rundschau 10, 1, p. 45-62.
(online at: https://www.digizeitschriften.de/dms/img/?PID=GDZPPN000455245)
('The geology of Central Sulawesi after new investigations of E.C. Abendanon and others'. Review of Central Sulawesi investigations. No figures)

Wanner, J. (1923)- Die Geologie von Celebes, speciell vom okonomischen Gesichtspunkte. Vierde Koloniale Vacantiecursus voor Geografen, Comite voor Indische Lezingen en Leergangen, Amsterdam, p. 3-10.
('The geology of Sulawesi, especially from an economic point of view'. Brief summary of lecture on Sulawesi geology and indications of oil, coal and metals. No figures)

Wanner, J. & E. Jaworski (1931)- Liasammoniten von Jamdena und Celebes. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 66, B, p. 199-210.

('Liassic ammonites from Yamdena and Sulawesi'. Sulawesi ammonites from poorly known central part of East arm, collected by BPM geologist Weber. First records of E Jurassic ammonites from E Sulawesi (Arnioceras cf. seilaeve from dark grey sandy limestone as float in upper Balingara River, 20km SE of river mouth). Yamdena ammonites from Tasik Selwasa and Botenjahu mud volcano deposits include Echioceras wichmanni, Asteroceras sparsicostatum n.sp. and Arnioceras cf. arnouldi. Fauna and lithology very similar to 'grey cephalopod nodule marl' of Roti and Timor, described by Krumbeck (1922))

Watkinson, I.M. (2011)- Ductile flow in the metamorphic rocks of Central Sulawesi. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 157-176.
(Gneisses, amphibolites and schists exposed along Palu-Koro Fault of W-C Sulawesi are part of regionally metamorphosed Mesozoic-Precambrian basement. In Palu and Neck regions of Sulawesi, ductile shear fabrics record low-angle W-ward extension. Further south in Palu valley, extension directed towards SW. Cross-cutting granitic dykes show foliation in neck region of Sulawesi occurred before ~44-33.7 Ma. In Palu valley it occurred before 5-3.5 Ma, precluding origin as result of Palu-Koro Fault activity. Ductile flow during either Eocene-Miocene mid-crustal extension above metamorphic core complex, Cretaceous subduction-related deformation in over-riding plate, or intracontinental deformation within Gondwana)

Watkinson, I.M. & R. Hall (2011)- The Palu-Koro and Matano faults, Sulawesi, Indonesia: evolution of an active strike-slip fault system. Geophysical Research Abstracts 13, EGU2011-8270, EGU Gen. Assembly 2011.
(Abstract only. Palu-Koro and Matano faults of Sulawesi important active strike-slip faults. Palu-Koro fault slip rate 32-45 mm/yr and left-lateral displacement about 200 km. Shorter Matano fault SE continuation and now in process of coalescing with Palu-Koro fault. Faults probably did not initiate before ~5 Ma)

Werdmuller, J.O. (1926)- Petrographische Untersuchung von Eruptivgesteinen des Pik von Maros in Sud-West-Celebes. Schweizerische Mineralogische Petrographische Mitteilungen. 6, 2, p. 205-254.
(online at: https://www.e-periodica.ch/digbib/view?pid=smp-001:1926:6232)
('Petrographic investigation of volcanic rocks of the peak of Maros in SW Sulawesi'. Descriptions of rocks from volcanic Maros Peak (phonolite; 1375m high) and associated igneous rocks (incl. marosite, named after Maros Peak; also shonkinite, trachyte, etc.). Rocks collected between 1895-1902 by Sarasin cousins and in 1904 by Schmidt. With photomicrographs of thin sections)

White, L.T., R. Hall & R.A. Armstrong (2014)- The age of undeformed dacite intrusions within the Kolaka Fault zone, SE Sulawesi, Indonesia. J. Asian Earth Sci. 94, p. 105-112.
(Dacite intrusions in strand of Kolaka Fault that crosses SE Arm of Sulawesi and N Bone Bay. Kolaka Dacite undeformed, with zircon ages between ~4.4 and 7 Ma. Rare inherited zircons, with ages between 8- 1854 Ma, show SE arm of Sulawesi is underlain by Proterozoic or younger material)

White, L.T., R. Hall & R.A. Armstrong, A.J. Barber, M.K. BouDagher-Fadel, A. Baxter, K. Wakita, C. Manning & J. Soesilo (2017)- The geological history of the Latimojong region of western Sulawesi. J. Asian Earth Sci. 138, p. 72-91.
(online at: http://searg.rhul.ac.uk/pubs/white_etal_2017%20Latimojong.pdf)
(Latimojong Metamorphic Complex in C-W Sulawesi is accretionary complex of metamorphic rocks tectonically mixed with cherts and ophiolitic rocks, overlain(?) by unmetamorphosed U Cretaceous Latimojong Fm distal turbidites (accretionary complex). Aptian-Albian radiolaria in chert float sample in Latimojong Metamorphic Complex. Foraminifera ages from Toraja Group (56-23 Ma), Makale Fm (20.5-11.5 Ma) and Enrekang Volcanic Series (8.0-3.6 Ma). Magmatic zircons record ~38, ~25 and 8.0-3.6 Ma phases of volcanism. Late Miocene- E Pliocene high-K Enrekang Volcanics (~ 3.9-7.5 Ma) and Palopo Granite (6.6-4.9 Ma) may be tied to crustal extension/ slab rollback. Miocene-Proterozoic inherited zircons in Pliocene igneous rocks support Proterozoic-Phanerozoic (193, 38-34 Ma) basement or sediments derived from these. Little evidence for Oligocene-Pliocene thrusting in Latimojong region)

Whitten, A.J., M. Mustafa & G.S. Henderson (1988)- The ecology of Sulawesi. Gadjah Mada University Press, Yogyakarta, p. 1-777. *(Reprinted 2002, Periplus Edition, 727p.)*

Wibowo, S., M.F. Rosana & A.D. Haryanto (2017)- Implication of fracture density on unserpentinized ultramafic rocks toward characteristics of saprolite zone in Sorowako, South Sulawesi. Bull. Scientific Contr. (UNPAD) 15, 2, p. 101-110.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/13375/pdf)
(Nickel grades reach maximum in saprolite zones. Fracture density in ultramafic bedrocks played important roles during laterisation. In Sorowako ultramafic complex of East Sulawesi Ophiolite Complex high-medium fractured types of bedrock tied to thick saprolite zone)

Wichmann, A. (1893)- Uber Glaukophan-Epidot-Glimmerschiefer von Celebes. Neues Jahrbuch Mineral. Geol. Palaontologie 1893, 2, p. 176-178.
('On glaucophane-epidote-mica schists from Sulawesi'. Brief paper, first description of common glaucophane schist from SW Sulawesi, in float of Pajangkene River)

Wichmann, A. (1893)- Petrographische Studien uber den Indischen Archipel. I. Leucitgesteine von der Insel Celebes. Natuurkundig Tijdschrift Nederlandsch-Indie 53, 2, p. 315-331.
(online at: http://62.41.28.253/cgi-bin/...)
('Leucite-bearing rocks from Sulawesi island'. First description of Neogene leucite-bearing volcanic rocks, which are widespread across SW Sulawesi (Parang-Lowe near Makassar, Pajangkene, Tempe, Walanae, etc.). Previously known only from N Java and Bawean island)

Wichmann, A. (1895)- Petrographische Studien uber den Indischen Archipel. II. Zur Geologie der Insel Saleijer. Natuurkundig Tijdschrift Nederlandsch-Indie 54, p. 236-268.
(online at: www21.us.archive.org/details/mobot31753002489778)
('Petrographic studies on the Indies Archipelago, II. On the geology of Salayar Island', Mainly petrographic descriptions of rocks from Salayer, S of SW arm of Sulawesi, collected by M. Weber in 1889. In East mainly young volcanic rocks (mica trachyte, andesites and tuffs, basalt). In West quartz sandstone without andesitic detritus, white marl (with Late Miocene-Pliocene planktonic forams; reminiscent of E Java Kendeng zone and Timor) and Neogene coral limestone)

Wichmann, A. (1896)- Bemerkungen zur Geologie des Posso-Gebietes. Petermanns Geogr. Mitteilungen 42, p. 160-165.
('Remarks on the geology of the Poso area'. Rel. common serpentinized peridotitic rocks. In NE of Poso area, at Tanjung Api along Tomini Bay, serpentinized ultramafic rocks (with burning gas seep))

Wichmann, A. (1902)- Der Vulkan der Insel Una Una (Nanguna) im Busen von Tomini, Celebes. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 54, p. 144-158.
(online at: https://www.biodiversitylibrary.org/item/150077page/178/mode/1up)
('The volcano of Una-Una island in Tomini Bay, Sulawesi'. Erupted in 1898, with ash reaching W into E Kalimantan)

Widiasmoro, B. Priadi & R. Soeria-Atmadja (1997)- Granitoid Neogene tipe tumbukan di zona sesar Palu-Koro, Sulawesi Tengah. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 371-389.
('Neogene collision-type granitoids in the Palu-Koro fault zone, Central Sulawesi')

Widijono, B.S. & B. Setyanta (2000)- Model kerak dan implikasi geodinamika lajur sesar Palu-Koro sajian analisis data gayaberat, kegempaan dan kinematika. Geol. Res. Dev. Centre (GRDC), Geophys. Ser. 1, p. 21-34.
(Crustal model of area of Palu-Kuro fault zone from gravity-magnetic data)

Widodo, S., Sufriadin, A. Imai & K. Anggayana (2016)- Characterization of some coal deposits quality by use of proximate and sulfur analysis in the Southern Arm Sulawesi, Indonesia. Int. J. Engineering and Science Applications (UNHAS) 3, 2, p. 137-143.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/1085/233)

(SW Sulawesi coal deposits at Paluda, Padanglampe, Lamuru and Tondongkura. Lower moisture of Paluda coal might be affected by igneous intrusion. Coal samples generally high ash (29%) and sulfur(3.74.%). No vertical distribution trend for ash and sulfur)

Wijaya, P.H., Subarsyah, J. Widodo, N.A. Kristanto, Susilohadi & L.Arifin (2007)- Seismic stratigraphy and tectonic of Gorontalo Basin and its implication for hydrocarbon trap potential. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 963-969.
(Same as Wijaya et al. 2007, below)

Wijaya, P.H., J. Widodo, N.A. Kristanto, Subarsyah, Susilohadi & L. Arifin (2007)- Data baru Cekungan Gorontalo perairan Teluk Tomini, Sulawesi: integrasi data seismik dan magnetik untuk mengidentifikasi potensi hidrokarbon. Mineral dan Energi 5, 1, p. 42-49.
('New data from the Gorontalo Basin, Tomini Bay, Sulawesi: integration of seismic and magnetics for identification of hydrocarbon potential')

Wijbrans, J.R., H. Helmers & J. Sopaheluwakan (1994)- The age and thermal evolution of blueschists from South-East Sulawesi, Indonesia: the case of slowly cooled phengites. Mineralogical Magazine 58A (Goldschmidt Conf. 1994), p. 975-976.
(Abstract only. SE Sulawesi blueschist belt graphite-mica schists and metabasites of MORB affinity. Ar/Ar dates 20.8- 27.5 Ma)

Willems, H.W.V. (1937)- Contribution to the petrology of the crystalline schists of western Central Celebes (Netherlands East Indies). Doct. Thesis University of Amsterdam, p. 1-147. *(Unpublished)*
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:040175000:pdf)
(Descriptions of metamorphic rocks along two traverses collected by 1929 Celebes expedition (Brouwer, 1934). All are epi- to mesometamorphic grade, with general increase in metamorphism from E to W. Calcareous rocks more numerous in southern traverse)

Williamson, A. (2011)- Discovery and development of Toka Tindung low sulphidation epithermal gold project. In: N.I. Basuki (ed.) Proc. Conf. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 259-266.

Wilson, M.E.J. (1995)- The Tonasa Limestone Formation, Sulawesi, Indonesia: development of a Tertiary carbonate platform. Ph.D. Thesis University of London, p. 1-520. *(Unpublished)*

Wilson, M.E.J. (1996)- Evolution and hydrocarbon potential of the Tertiary Tonasa Limestone Formation, Sulawesi, Indonesia. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 227-240.
(Eocene- M Miocene Tonasa Lst of S Sulawesi started as transgressive sequence. By Late Eocene 100 km long Tonasa carbonate platform. Shallow-water sedimentation continuous until M Miocene on parts of platform, but active normal faulting caused basinal graben formation and subaerial exposure in other areas. Platform top mainly large benthic foraminifera facies. Facies belts trend E-W and relatively static through time. Tertiary exposure of shallow-water facies affected by block faulting. In grabens basinal marls interbedded with coarse redeposited carbonates. Lack of abundant aragonitic bioclasts and localized subaerial exposure result in little porosity development in platform top. Redeposited facies porous and permeable, and most likely to form hydrocarbon reservoirs)

Wilson, M.E.J. (1999)- Prerift and synrift sedimentation during early fault segmentation of a Tertiary carbonate platform, Indonesia. Marine Petroleum Geol. 16, 8, p. 825-848.
(Eocene- M Miocene Tonasa Fm carbonate platform in SW Sulawesi reflects Late Eocene- E Miocene rifting)

Wilson, M.E.J. (2000)- Tectonic and volcanic influences on the development and diachronous termination of a Tertiary tropical carbonate platform. J. Sedimentary Res. 70, p. 310-324.
(Sulawesi Eocene- M Miocene syntectonic Tonasa carbonate platform developed W of volcanic arc and overlain by M-U Miocene volcanics. Greatest extent Late Eocene. Tectonics and volcanism influenced evolution and diachronous termination in 4 ways: (1) Paleogene volcanic activity limited E-ward extent of platform but

had little effect in W S Sulawesi. (2) Late Eocene faulting resulted in platform segmentation, localized drowning in hanging wall areas and subaerial exposure on footwall highs. (3) E-M Miocene faulting around early stages of volcanism in W S Sulawesi resulted in localized tilting of fault blocks, formation of new graben, and exposure of footwall highs. (4) M Miocene volcaniclastics influx buried remaining areas of shallow-water carbonates. Carbonate production contemporaneous with volcanism in areas shielded from volcaniclastic input)

Wilson, M.E.J. & A. Ascaria (2000)- The Cenozoic carbonates and petroleum systems of South Sulawesi. IPA Field Excursion, October 2003, 55p.

Wilson, M.E.J., N.A. Ascaria, D.Q. Coffield & N. Guritno (1997)- The petroleum systems of South Sulawesi, Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 561-567.
(S Sulawesi early Tertiary transgressive sequences marginal marine clastics passing upwards into carbonates overlain by deeper marine sediments. In S Sulawesi, late Tertiary magmatism and subsequent Pliocene orogenesis resulted in the formation of multiple kitchen areas)

Wilson, M.E.J. & D.W.J. Bosence (1996)- The Tertiary evolution of South Sulawesi: a record in redeposited carbonates of the Tonasa Limestone Formation. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 365-389.
(Redeposited carbonate facies of Eocene- M Miocene Tonasa Limestone Fm reliable indicators of tectonic activity. Immaturity and provenance of clasts indicate redeposited facies derived from faulted N margin of Tonasa Carbonate platform. Three main faulting phases indicated by redeposited facies: Late Eocene- E Oligocene, M Oligocene and E-M Miocene)

Wilson, M.E.J. & D.W.J. Bosence (1997)- Platform-top and ramp deposits of the Tonasa carbonate platform, Sulawesi, Indonesia. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum geology of Southeast Asia. Geol. Soc. London, Spec. Publ. 126, p. 247-279.
(Facies analysis of shallow-water platform and ramp deposits of SW Sulawesi Late Eocene- M Miocene Tonasa carbonate platform. Platform dominated by foraminifera and had ramp-type S margin. Facies belts on platform trend E-W, remaining remarkably stable through time indicating aggradation of platform-top. Outer ramp deposits prograded S at intervals into basinal marls. Moderate- to high-energy platform top or redeposited carbonate facies may form hydrocarbon reservoirs)

Wilson, M.E.J., D.W.J. Bosence & A. Limbong (2000)- Tertiary syntectonic carbonate platform development in Indonesia. Sedimentology 47, p. 395-419.
(Evolution of syntectonic Eocene- M Miocene Tonasa Fm, SW Sulawesi. Deposited initially as part of transgressive sequence in backarc setting. By late Eocene shallow-water carbonates deposited over much of S Sulawesi forming 100-km long platform. Shallow-water sedimentation continued in parts of platform until M Miocene. Elsewhere, normal faulting created fault-block platforms, with local subaerial exposure of footwalls and formation of graben. Platform-top facies aggradational and dominated by larger foraminifera. Faults periodically active and formed steep escarpment margins. Regional subsidence and extension low on margins of backarc basin. Shallow-water accumulation rates for this foraminifera-dominated carbonate platform order of magnitude lower than those for modern warm-water platforms dominated by corals or ooids)

Wilson, M.E.J. & S.J. Moss (1999)- Cenozoic palaeogeographic evolution of Sulawesi and Borneo. Palaeogeogr. Palaeoclim. Palaeoecology 145, p. 303-337.
(Early Eocene- Pliocene paleogeographic maps on plate tectonic reconstructions illustrate evolution of Borneo and Sulawesi in Tertiary. Progressive accretion of continental and oceanic material from E onto E margin of Sundaland, with resultant development of volcanic arcs. Large tracts of W Sulawesi, E Borneo, E Java Sea and Makassar Straits formed extensive basinal area through much of Tertiary)

Wing Easton, N. (1918)- Rustig of dansend Celebes? Beschouwingen, studien en kritieken naar aanleiding van E.C. Abendanon's "Geologische en geografische doorkruisingen van Midden-Celebes". Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 35, p. 606-677.

('Quiet or dancing Sulawesi?' Lengthy, critical review of Abendanon 1915 classic books on Sulawesi fieldwork)

Witkamp, H. (1940)- Langs de Lariang rivier (West Celebes). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 47, p. 581-600.
('Along the Lariang River, W Sulawesi'. Report of travel up river, with some minor geological observations)

Wunderlin, W. (1913)- Beitrage zur Kenntnis der Gesteine von Sudost-Celebes. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 9, p. 244-280.
(online at: www.repository.naturalis.nl/document/552396)
('Contributions to the knowledge of rocks from SE Sulawesi'. Descriptions of rocks from SE Sulawesi and nearby islands Buton, Kabaena and Rumbia, collected by Elbert in 1909. Includes ultramafic rocks (hartzburgite, serpentinite, gabbro) from Buton, Rumbia and Kabaena, metamorphics (amphibolite, glaucophane schist) from Rumbia island and Mendoke Mts on SE Sulawesi. Six types of glaucophane-bearing rocks)

Yadi, V. (2011)- Successful geostatistical approach for a nickel ore deposit; a case study for nickel laterite deposit in central I pit, Kabaena nickel mine, Kabaena Island, southeast Sulawesi, Indonesia. In: Proc. 8th Int. Mining Geology conference, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, 8, p. 463-468.

Yamamoto, M., A. Maulana, K. Yonezu, K. Watanabe & A. Subehan (2015)- Geochemistry and mineralization characteristic of Sungai Mak deposit in Gorontalo, Northern Sulawesi, Indonesia. Int. J. Engineering and Science Applications (UNHAS) 2, 2, p. 99-105.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/154/109)
(Gold-copper mineralization associated with granodiorite of Sungei Mak in Gorontalo similar to other porphyry copper deposit(s) in Tombolilato District (>3400m thick Late Miocene- Pleistocene island arc-type volcano-sedimentary pile)

Yoshida, T., C. Hashullah & T. Ohtagaki (1982)- Kuroko-type deposits in Sangkaropi area, Sulawesi, Indonesia. Mining Geology 32, 175, p. 369-377.
(online at: www.journalarchive.jst.go.jp/...)
('Kuroko-type' deposits in Miocene (more likely Late Eocene- E Oligocene?; JTvG) rhyolitic pyroclastic arc volcanics in central part of W Sulawesi. Ore deposits in Sangkaropi area associated with submarine volcanism. Some deposits stratiform, covered with thin barite layer. Ore minerals include sphalerite, galena, chalcopyrite, pyrite, tetrahedrite, bornite, etc.)

Yulianto, I. (2003)- Neogene magmatic arc in the Minahasa Region, North Sulawesi, Indonesia. In: B. Ratanasthien et al. (eds.) Pacific Neogene paleoenvironments and their evolution, 8th Int. Congress on Pacific Neogene Stratigraphy, Chiang Mai, 2003, p.

Yulihanto, B. (2004)- Hydrocarbon play analysis of the Bone Basin, South Sulawesi. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia & Australasia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 333-348.
(Bone Basin of S Sulawesi between SW volcanic arc and SE collision complex. Rimmed by N-S faults. Tertiary sedimentation M-Late Eocene or older syn-rift deltaic-shallow marine sediments (Toraja/ Malawa Fm), followed by Oligo-Miocene marine carbonates and clastics (Tonasa/ Makale Fm). M Miocene- Pliocene clastic/volcanoclastic deposits with carbonates in parts of basin. Late Miocene shallow marine carbonates (Camba Fm, Tacipi Fm), laterally changing to deep marine sediments, followed by Late Miocene-Pliocene progradational sediments (Walanae Fm). M-Late Eocene deltaic-shallow marine syn-rift sediment potential source rock that reached maturity in M-Late Miocene. With facies maps for 5 time slices)

Yuwono, Y.S. (1987)- Contribution a l'etude du volcanisme potassique de l'Indonesie. Exemples du Sud-Ouest de Sulawesi et du volcan Muria (Java). Doct. Sci. Thesis, Universite de Bretagne Occidentale, Brest, vol. 1, p. 1-285, vol. 2, p. 1-166. *(Unpublished)*

('Contribution to the study of potassic volcanism of Indonesia; examples from SW Sulawesi and the Muria volcano (Java)')

Yuwono, Y.S. (1988)- G. Lompobotang, Sulawesi Selatan, petrologi dan mineralogi. Proc. 17th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.
('Lompobotang Mountain, S Sulawesi, petrology and mineralogy')

Yuwono, Y.S. (1989)- Petrologi dan mineralogi Gunung Lompobattang, Sulawesi Selatan. Geologi Indonesia (IAGI), 12, 1, p. 483-509.
('Petrology and mineralogy of Lompobattang Mountain, S Sulawesi'. Volcano in SE part of S Arm)

Yuwono, Y.S. (1990)- Produk volkanik Pare-Pare (Sulawesi Selatan): contoh deret shoshonitik di Indonesia. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2, p. 68-90.
('Volcanic products of Pare-Pare (S. Sulawesi): an example of a shoshonitic sequence in Indonesia')

Yuwono, Y.S., H. Bellon, R. Soeria-Atmadja & R.C. Maury (1985)- Neogene and Pleistocene volcanism in South Sulawesi. Proc. 14th Ann. Conv. Indon. Geol. (IAGI), Jakarta 1985, p. 169-179.
(S-most Sulawesi volcanics late M Miocene (12 Ma)- Pleistocene (1.2 Ma), not typical calc-alkaline subduction volcanics. Most rocks silica-undersaturated. Paleocene subduction responsible for arc volcanics. Second W-dipping subduction phase in E Miocene, terminating with collision of W and E arms and obduction of oceanic fragments. From end M Miocene- Pleistocene high K volcanism not linked to subduction, but developed in extensional intraplate context)

Yuwono, Y.S., S. Digdowirogo, J. Cotton, H. Bellon & B. Priadi (1995)- Petrology of some magmatic rocks from North Sulawesi, Indonesia. Jurnal Teknologi Mineral (ITB) 2, 3, p. 21-32.
(Fourteen magmatic rock samples from N Sulawesi, collected in 1989-1990. Four samples selected for K/Ar dating. Subduction-type magmatism with orogenic tholeiitic and calc alkaline affinities from Oligocene(?)- M Miocene. Post-M Miocene magmatic activity of shoshonitic affinity believed to be post subduction. Evolution of N Sulawesi similar to C portions of magmatic arc of W Sulawesi, with subduction ending in M Miocene, coinciding with start of collision between E and W Arms of Sulawesi)

Yuwono, Y.S., R.C. Maury, R. Soeria-Atmadja & H. Bellon (1988)- Tertiary and Quaternary geodynamic evolution of South Sulawesi: constraints from the study of volcanic units. Geologi Indonesia 13, 1, p. 32-48.
(S Sulawesi M Miocene and older volcanic rocks are of 'orogenic origin'. Volcanics younger than M Miocene not related to subduction)

Zaccarini, F., A. Idrus & G. Garuti (2016)- Chromite composition and accessory minerals in chromitites from Sulawesi, Indonesia: their genetic significance. Minerals 6, 46, p. 1-23.
(online at: www.mdpi.com/2075-163X/6/2/46/pdf)
(Chromite from S and SE Arms of Sulawesi varies from Cr-rich to Al-rich. Small platinum-group minerals (PGM) in chromitites mainly laurite. Accumulation of Cr-rich chromitites probably at deep mantle level, Al-rich chromitites close or above Moho-transition zone. All laurites considered to be magmatic in origin)

Zaitun, S., D.H. Amijaya, J. Setyowiyoto & A.H. Satyana (2016)- Oil classification and genetic type of gas in Tiaka, Matindok, Donggi, Senoro fields and surrounding area in Banggai Basin, Central Sulawesi. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 509-523.
(Tiaka offshore oil field and Matindok, Minahaki, Donggi and Senoro onshore gas fields Banggai Basin, E Sulawesi, sourced from Tertiary (high oleanane). Two oil types, A and B, generated from marine carbonate and shale source rocks. Senoro gas thermogenic, formed from secondary cracking. Matindok gas thermogenic, generated from mixed gas source and the most mature gas)

Zakaria, Z. & Sidarto (2015)- Aktifitas tektonik di Sulawesi dan sekitarnya sejak Mesozoikum hingga kini sebagai akibat interaksi aktifitas tektonik lempeng tektonik utama di sekitarnya. J. Geologi Sumberdaya Mineral 16, 3, p. 115-127.

(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/36/37)
('Tectonic activity in Sulawesi and surrounding areas since the Mesozoic to Recent as a result of the interaction of tectonic activity of the surrounding main tectonic plates'. Review of tectonic development of Sulawesi region')

Zhu, Z., C. Zhao & Z. Yang (2008)- Distribution and geochemical characteristics of adakites and adakite-like rocks in Sulawesi, Indonesia. J. Jilin University (Earth Science Ed.), 39, p. 80-88.
(In Chinese with English summary. Published information suggests 25 mid-acidic rock samples that may be considered as normal or adakite-like rocks in S, C, NW and N Sulawesi, forming Cenozoic adakite belt at Sundaland margin. Sulawesi adakites belong to tholeiitic, calc-alkaline and high K calc-alkaline series, characterized by low Y and Yb of heavy REE elements and high Sr. Two types: (1) oceanic island arc and/or continental margin arc and high K calc-alkaline series related to continental adakites)

Zulkarnain, I. (1994)- Lingkungan tektonik komplek Bantimala: implikasinya terhadap kualitas mineral garnet sebagai batu mulia. Proc. 30th Anniv. Symp., Res. Dev. Centre for Geotechnology (LIPI), p.
('Tectonic environment of the Bantimala complex: implications for quality of garnet minerals as gemstones')

Zulkarnain, I. (1999)- Cretaceous tectonic events of the Bantimala Area, South Sulawesi, Indonesia; evidence from rock chemistry. Jurnal Teknologi Mineral (ITB) 6, 2, p. 65-77.
(Bantimala Complex melange, Albian-Cenomanian chert, basalt, ultramafics and various grade metamorphic rocks, dated as 132-114 Ma. Wide SiO2 range (44-86%) in 36 metamorphic rocks precursor rocks vary from basaltic to granitic to sedimentary rock. Glaucophane indicates origin in subduction system, exhumed from different levels of Benioff zone. High-P metamorphic rocks granitic and sedimentary character indicating derivation from micro continent. Subduction system ceased when micro continent subducted in Mid-Cretaceous. Exhumation of metamorphic rocks just after metamorphism and before deposition of chert)

Zulkarnain, I. (2001)- Rock chemistry of Quarternary volcanics around Manado and Siau Island, North Sulawesi. Jurnal Teknologi Mineral (ITB) 8, 1, p. 37-52.
(Volcanic rocks around Manado two suites based on position in subduction zone: (1) trench-side (E of Manado; lower trace element content (Ba, Nb, Rb, Sr), and longer crystallization history, producing wide range in composition from basaltic to dacitic) and (2) backarc (N and W of Manado; more primitive with narrow range in composition (basaltic to andesitic) and higher content of trace elements). Volcanics from Siau classified as trench-side type)

Zulkarnain, I. (2002)- Geochemical signatures of volcanic rocks from Sangihe Island, North Sulawesi, Indonesia. Buletin Geologi (ITB) 34, p. 21-33.

Zulkarnain, I., J. Sopaheluwakan, K. Miyazaki & K. Wakita (1995)- Elements transfer during basalt metamorphism: the case of Bantimala eclogite. J. Riset Geologi Pertambangan (LIPI) 1, 1, p. 42-55.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.1-No.1-1995-.pdf)
(On transfer of elements during basalt metamorphism to greenschist, blueschist and eclogite in Triassic-Jurassic-age Bantimala Complex of SW Sulawesi (mainly introducing water, removing calcite))

Zulkarnain, I., J. Sopaheluwakan & E.T. Sumarnadi (1993)- Komplek Malihan Bontoria, daerah Mangilu, Kabupaten Pangkejene Kepulauan, Sulawesi Selatan. Seminar of Research results of R&D Centre for Geotechnology LIPI, p.
('Bontoria metamorphic complex, Mangilu area, Pangkajene Kepulauan District, S Sulawesi')

Zulkarnain, I., J. Sopaheluwakan, K. Wakita & K. Miyazaki (1993)- The origin of the Bantimala eclogite: a preliminary view. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 147-158.
(Bantimala complex 50km N of Makassar, SW Sulawesi, with Bontoria Fm high pressure metamorphics (glaucophane schist, eclogite) underlying Late Cretaceous Balangbaru Fm flysch. K/Ar date of muscovite in schist 132 Ma; exhumation probably several 10's of Myrs later. Precursor rock is trench greywacke sandstone (most other blueschists from basalt or oceanic crust), probably subducted to 10's of km to 350-520°C, 8-18 kb)

V.2. Buton, Tukang Besi

Ali, J.R., J. Milsom, E.M. Finch & B. Mubroto (1996)- SE Sundaland accretion: palaeomagnetic evidence of large Plio-Pleistocene thin skin rotations in Buton. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 431-444.
(Tukang Besi Platform docked with Sundaland/East Buton in Pliocene. Wide array of paleomagnetic results of surface sediments suggest thin-skinned block rotations)

Alviyanda, G.M.L. Junursyah, I.S. Gumilar & U. Mardiana (2014)- Interpretation of subsurface structure in Tersier sediment based on magnetotelluric data, South Buton Area. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-SG-0545, 13p.

Arifin, L. & T. Naibaho (2015)- Struktur geologi Pulau Buton Selatan. J. Geologi Kelautan 13, 3, p. 143-151.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/269/259)
('Geological structure south of Buton island'. Shallow reflection seismic lines in waters S of Buton and Muna)

Arisona, A., M. Nawawi, U.K. Nuraddeen & M. Hamzah (2016)- A preliminary mineralogical evaluation study of natural asphalt rock characterization, southeast Sulawesi, Indonesia. Arabian J. Geosciences 9, 272, 9p.
(Bitumen content of 'Asbuton' 10-40%. Geoelectrical resistivity survey and x-ray fluorescence shows Ca is dominant element in asphalt rock (40-90%), indicating limestone (surprise!))

Beets, C. (1943)- Beitrage zur Kenntnis der angeblich oberoligocanen Mollusken-Fauna der Insel Buton, Niederlandsch-Ostindien. Leidsche Geol. Mededelingen 13, p. 256-328.
('Contributions to the knowledge of the supposedly Oligocene-age mollusc fauna of Buton Island, Netherlands East Indies'. Description of molluscs from asphalt beds on Buton in collections in The Netherlands. Looks like diverse, but endemic faunas (51 new species and 11 species described by Martin 1933- 1935, 1937). Age of fauna uncertain, but possibly Late Oligocene as suggested by Martin (in Beets 1952 believed to be younger))

Beets, C. (1943)- On *Waisiuthyrina*, a new articulate brachiopod genus from the Upper Oligocene of Buton (S.E. Celebes), Dutch East Indies. Leidsche Geol. Mededelingen 13, p. 341-347.
(online at: www.repository.naturalis.nl/document/549268)
(Description of new species of terebratulid brachiopod Waisiuthyrina margineplicata from ?Miocene asphalt rocks of Buton. Brachiopods are generally very rare in Tertiary of Indonesia)

Beets, C. (1943)- Weitere Verwandtschaftsbeziehungen zwischen den Oberoligocaenen Mollusken von Buton (S.E. Celebes) und den Neogenfaunen des Ostindischen Archipels. Leidsche Geol. Mededelingen 13, p. 349-355.
(online at: www.repository.naturalis.nl/document/549308)
('Additional relationships between the Upper Oligocene molluscs from Buton (SE Sulawesi) and the Neogene faunas of the East Indies archipelago'. So-called 'Oligocene' Buton mollusc faunas mostly endemic in character, but most similarities with Late Neogene of Ceram and Nias)

Beets, C. (1952)- Reconsideration of the so-called Oligocene fauna in the asphaltic deposits of Buton (Malay Archipelago). 1. Mio-Pliocene mollusca. Leidsche Geol. Mededelingen 17, 1, p. 237-258.
(online at: www.repository.naturalis.nl/document/549592)
(Molluscs from asphaltic marls of Buton previously considered Oligocene- lowermost Miocene in age, but here re-interpreted as Mio-Pliocene, partly based on associated diatoms (Reinhold) and foraminifera (Keijzer). The low % of Recent species because this is deep water fauna, of which Recent representatives were poorly known)

Bothe, A.C.D. (1928)- De asfaltgesteenten van het eiland Boeton, hun voorkomen en economische betekenis. De Ingenieur 19, Mijnbouw 4, p. 27-45.
(online at: https://resolver.kb.nl/resolve?urn=dts:2945099:mpeg21:pdf)
('The asphalt rocks of Buton Island, distribution and economic significance'. Oldest rocks on Buton Triassic dark grey bituminous limestones and marls with plant debris, occurring in both N and S Buton. Contain Monotis salinaria, Halobia, etc. Older rocks unconformably overlain by 10 or more coral reef terraces, up to

400-500 above sea level. Intensely folded Cretaceous Rosalina (= Globotruncana) limestones. Oil and asphalt seeps partly in Triassic, partly in Tertiary sediments. Etc.)

Bothe, A.C.D. (1928)- Voorkomen en winning der asfaltgesteenten van Boeton. De Mijningenieur, 1928, p. 88.

Chamberlain, M.I., R.D. Seago, Soebardi & Sumitra (1990)- Hydrocarbon prospectivity of Buton Island, SE Sulawesi, Indonesia. Earth Resources Inst. (ESRI) Rept. EIB90-1, p. 1-232. *(Unpublished)*

Corne, C.P. & Soehartono (1989)- Utilization of Buton Island rock asphalt in road pavements. In: R.F. Meyer & E.J. Wiggins (eds.) Proc. 4th UNITAR/UNDP Int. Conf. on Heavy crude and tar sands, Edmonton 1988, 2, Alberta Oil Sands Technology and Research Authority, p. 397-412.

Davidson, J.W. (1991)- The geology and prospectivity of Buton island, southeast Sulawesi, Indonesia. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 209-234.
(Stratigraphy-structure Buton different from SE Sulawesi-Muna; more similar to Timor, Seram, Buru. Sedimentation controlled by four tectonic events: (1) 'Pre-Rift'- Permian(?) metasediments, unconformably overlain by E Triassic turbidites derived from Australia- New Guinea continent; (2) 'Rift-Drift'- Late Triassic rifting (turbidites), M Jurassic breakup, and Late Jurassic- Oligocene NW drift (deep marine calcilutites) from Australia- New Guinea; (3-4) 'Syn and Post-Orogenic'- E-M Miocene coarse clastics, Late Miocene fine clastics, and Pliocene marls-claystones. Coarse clastics deposited in intra-thrust basins, generated by E-M Miocene collision of Buton microcontinent with Muna/ SE Sulawesi. Pliocene sedimentation coincided with regional subsidence of Buton following accretion of island to Sulawesi, and E shift of subduction zone)

Emmerton, S., A.R. Muxworthy, M.Sephto, M. Aldana, V. Costanzo-Alvarez, G. Bayona & W. Williams (2013)- Correlating biodegradation to magnetization in oil bearing sedimentary rocks. Geochimica Cosmochimica Acta 112, p. 146-165.
(Study on relationship between biodegraded tar sands and magnetization. Includes analyses on tar sands of Tondo Fm at Kabungka and Lawele on Buton island)

Escher, B.G. (1920)- Atollen in den Nederlandsch-Oost-Indischen Archipel. De riffen in de groep der Toekang Besi-eilanden. Meded. Encycl. Bureau, Batavia, 22, 18p.
('Atolls in the Netherlands East Indies Archipelago: the reefs in the Tukang Besi Group'. Some of modern Tukang Besi reefs off SE Sulawesi true atolls up to 48km long, some small barrier reefs around islands up to 274m in height. Reefs arranged in four NW-SE trending rows, possibly controlled by two anticlinal axes (with barrier reefs) and two synclinal axes (with atolls))

Fortuin, A.R., M.E.M. De Smet, S. Hadiwasastra, L.J. van Marle, S.R. Troelstra & S. Tjokrosapoetro (1990)- Late Cenozoic sedimentary and tectonic history of south Buton, Indonesia. J. Southeast Asian Earth Sci. 4, 2, p. 107-124.
(Late Cenozoic deposition started at 11 Ma after main pre-Neogene deformation, presumably related to collision of Buton microplate with SE Sulawesi. Rapid Late Miocene- E Pliocene subsidence, initially with coarse clastic Tondo Fm gravity flows, followed by later Late Miocene Sampolakosa Fm pelagic deposition. Late Pliocene (3.5 Ma) start of uplift, probably caused by collision between Buton and Tukang Besi Platform submerged microcontinent, and causing 60° clockwise rotation of S Buton)

Hadiwisastra, S. (2009)- Kondisi aspal dalam Cekungan Buton. J. Riset Geologi Pertambangan (LIPI) 19, 1, p. 49-57.
(online at: http://download.portalgaruda.org/)
('Condition of asphalt in the Buton Basin'. Buton heavy asphalt in outcrop in S Buton. Reservoired in Neogene Sampolakosa and Tondo units in SW-NE trending Lawele Graben)

Hadiyanto, S.M. Tobing & H. Fujiono (2009)- Oil shale prospect in the Buton Island, Southeast Sulawesi, Indonesia. In: 29th Oil Shale symposium, Colorado School of Mines, Golden 2009, 47p.

(Abstract and presentation online at: www.costar-mines.org/oss/29/presentations/PRES_12-3_Hadiyanto_Fujiono_-_Hendro.pdf)
(Two types of oil shale on Buton: primary oil shale in Late Triassic Winto Fm and secondary asphalt rock/ tar sand in Mio-Pliocene Sampolakosa and Tondo Fms. Hypothetical resource of primary shale is 158 mT oil, secondary 3.6 billion tons asphalt (=226 MB Oil))

Hetzel, W.H. (1930)- Over de geologie der Toekang Besi eilanden. De Mijningenieur 11, 3, p. 51-53.
('On the geology of the Tukang Besi islands'. Uplifted islands of Tomea, Wangiwangi and Kaledupa mainly composed of late Neogene Globigerina limestones. Strike of folded Tertiary beds at right angles to NW-SE trend of rows of raised islands and atolls, suggesting earlier phase of folding, followed by later block-faulting)

Hetzel, W.H. (1936)- Verslag van het onderzoek naar het voorkomen van asfaltgesteenten op het eiland Boeton. Verslagen en Mededeelingen betreffende Indies delfstofkunde en hare toepassingen, Dienst Mijnbouw Nederlandsch-Indie, Batavia, 21, p. 1-56.
('Report of an investigation of the occurrence of asphalt-bearing rocks on Buton Island'. Detailed descriptions of surface asphalt deposits, probably originated from Triassic oil. Bitumen impregnations in Miocene sandstones and Pliocene Globigerina marls, unconformably overlying complexly folded, deep marine Triassic-Cretaceous (-Eocene?) sediment series. With 1:200,000 scale geologic map of Buton and detail maps of asphalt terrains)

Hetzel, W.H. (1936)- Boetoniet, een bijzonder gesteente van het eiland Boeton (ZO Celebes). De Ingenieur in Nederlandsch-Indie, IV, 5, 10, p. 151-155.
('Boetoniet, a peculiar rock type from Buton isand'. Dark, glassy rock found along margins of peridotite named 'Boetonite'. Mainly in S Buton, at W side of Kapantoreh Mountains. Commonly as veins in Triassic and Neogene. Contain chromite and marcasite. Possibly hydrothermal weathering product near ultrabasic rocks)

Horizon/ Robertson (2004)- Buton prospectivity screening study. Multi-client study, Jakarta, 118p. *(Unpublished)*

Janssen, A.W. (1999)- Euthecosomatous gastropods (Mollusca: Heterobranchia) from Buton (SE Sulawesi, Indonesia), with notes on species from Viti Levu, Fiji; systematics, biostratigraphy. Geologie en Mijnbouw 78, 2, p. 179-189.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0U0hWNzdiWjlUWnM/view)
(Revision of pteropoda from asphaltic deposits of Buton (Sampolakosa Beds?). Faunas first described by Martin (1935) and Beets (1943, 1950, 1953). Beets recognized this as deep marine fauna, of probable Mio-Pliocene age. With planktonic gastropods (pteropods), incl. Styliola subula, Cavolinia bituminata, C. mexicana. and Diacria mbaensis. Comparison with Fiji associations suggests Late Miocene age for Buton faunas (Tortonian- Messinian; fits with ages conluded from microfaunas by Fortuin et al. 1990; JTvG))

Kanehara, K. (1943)- Boeton Island (Dutch East Indies), its geology, asphalt and manganese ore. Chigaku Zasshi (= J. of Geography, Tokyo) 55, 653, p. 237-264.
(Review of Hetzel (1936) original report on geology of Buton island)

Keijzer, F.G. (1945)- Upper Cretaceous smaller foraminifera from Buton (D.E.I.). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 48, p. 338-339.
(online at: www.dwc.knaw.nl/DL/publications/PU00017937.pdf)
(Tertiary asphalt-bearing marls of Buton generally pure Globigerina-Globorotalia-marls, probably Neogene. One sample with angular white and grey pieces of limestone (resembling Cretaceous Globotruncana-limestones), grey and black pieces of chert, and common reworked Upper Cretaceous planktonic foraminifera, incl. Globotruncana arca, Gt. calcarata, Pseudotextularia varians, Planoglobulina acervulinoides, Bolivinoides seranensis, Globorotalia velascoensis (= Paleocene?; JTvG), etc.). Fauna very similar to U Cretaceous fauna from Seram, described by Van der Sluis (1949))

Keijzer, F.G. (1953)- Reconsideration of the so-called Oligocene fauna in the asphaltic deposits of Buton (Malay Archipelago). 2. Young-Neogene foraminifera and calcareous algae. Leidsche Geol. Mededelingen 17, p. 259-293.
(online at: www.repository.naturalis.nl/document/549557)
(Buton asphalt-bearing marls contain 333 species of deep marine benthic foraminifera, incl.many species of Bolivina, Cassidulina, Cristellaria, Dentalina, Lagena, Nodosaria, Planulina, Siphogenerina, Sphaeroidina, etc., Also planktonics, incl. Globorotalia tumida flexuosa and Gq. altispira, demonstrating Pliocene age, not Oligocene as previously postulated. Also: (1) breccia with reworked U Cretaceous clasts and Globotruncana planktonic forams (indicative of mud volcanism?); (2) sample W-10 from Wariti asphalt field with M Miocene larger forams Katacycloclypeus, Miogypsina, Lep. (T.) rutteni; (3) Halimeda. With appendix on sample from Bawean with E-M Miocene larger forams Lepidocyclina (N) and Miogypsina primitiva. (Amphimorphinella butonensis Keijzer indicator of hydrocarbon seepage?; Hayward et al. 2011))

Koswara, A. & D. Sukarna (1994)- Geological map of the Tukang Besi sheet, Southeast Sulawesi. Geol. Res. Dev. Centre (GRDC), Bandung. 14p.
(Tukang Besi islands mainly Quaternary coral reef limestone, unconformably over core of latest Miocene-Pliocene Ambeuwa Fm Globigerina marls, dipping 15-30°?. Wowoni Island N of Buton has juxtaposed ?Triassic metamorphics, Cretaceous? ultramafics overlain by M-L Miocene Lampeapi Fm conglomerate, sandstones with coals, overlain by Late Miocene- Pliocene Lansilowo Fms marls, limestone and sandstones)

Kuenen, P.H. (1928)- Geologische problemen in verband met de Toekang-Besi eilanden. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, ser. 2, 45, 2, p. 236-247.
('Geological problems associated with the Tukang Besi islands'. Tukang Besi islands SE of Sulawesi four rows of atolls, possibly all associated with young NW-SE trending anticlinal structures)

Kuenen, P.H. (1933)- The formation of the atolls in the Toekang-Besi-group by subsidence. Proc. Kon. Akademie Wetenschappen, Amsterdam 36, 3, p. 331-336.
(online at: www.dwc.knaw.nl/DL/publications/PU00016412.pdf)
(As described by Escher (1920), Tukang Besi islands are atolls and raised islands arranged along NW-SE fault trends. Post-Pleistocene subsidence produced atolls where reef growth kept up with subsidence)

Ling, H.Y. & R.B. Smith (1995)- Role of Eocene and Cretaceous radiolarians from Buton Island in the Eastern Indonesian collision tectonics. In: Proc. Int. Symposium Geology of SE Asia and adjacent areas, J. Geology, Geol. Survey Vietnam, Hanoi, 5-6, p. 160-161. *(Abstract only)*
(Pre-Neogene Wolio collision complex of N Buton includes samples with early M Eocene radiolaria (U Tobelo Fm of Turumbia Bay) and well-preserved Cretaceous Aptian- Albian radiolaria (Tobelo Fm at Rumu River section of SE Buton))

Martin, K. (1933)- Eine neue Tertiare Molluskenfauna aus dem Indischen Archipel. Leidsche Geol. Mededelingen 6, 1, p. 7-32.
(online at: www.repository.naturalis.nl/document/549740)
('A new Tertiary mollusc fauna from the Indies Archipelago'. Mollusc assemblage of 26 new species from Buton asphalt-bearing marls/ limestones, which are unconformable over folded Mesozoic sediments. Assigned Late Oligocene or E Miocene age (Later interpretations favor Late Miocene-Pliocene ages (e.g. Beets 1952, Keyzer 1953, Fortuin et al. 1990, Janssen 1999))

Martin, K. (1935)- Oligocaene Gastropoden von Buton. Leidsche Geol. Mededelingen 7, 2, p. 111-118.
(online at: www.repository.naturalis.nl/document/549589)
(‘Oligocene gastropods from Buton’. Molluscs from asphalt-bearing limestones of Buton 35 species, all extinct, suggesting pre-Neogene (Oligocene) age. Nine new gastropod species described here (since then age corrected as Mio-Pliocene; JTvG))

Martin, K. (1937)- Die oligocaenen Mollusken von Buton als Auswurflinge eines Schlammsprudels betrachtet. Leidsche Geol. Mededelingen 8, p. 311-314.

(online at: www.repository.naturalis.nl/document/549248)
('The Oligocene molluscs from Buton, interpreted as clasts of a mud volcano'. Molluscs from Buton originally dated as Oligocene, but Sampolakosa Fm now regarded as Late Neogene age by Hetzel (1936). Older material may be explained as mud volcano ejecta (see also Beets 1952, who argues for Miocene-Pliocene age of Buton molluscs)

Milsom, J. (1992)- Structure and collision history of the Buton continental fragment, Eastern Indonesia. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Abstract only)*
(Fragment of Australian continental margin now exposed on Buton, SE of Sulawesi. Asphalt reserves support significant local industry. Buton Terrane underwent significant relative rotations and extends beneath adjacent island of Muna. Tukang Besi platform E of Buton may be distinct, unrelated, unit. Ophiolitic rocks exposed on Buton not attached to deep roots and are thin overthrust sheets not marking terrane boundary)

Milsom, J., J. Ali & Sudarwono (1999)- Structure and collision history of the Buton continental fragment, Eastern Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 83, p. 1666-1689.
(Buton is Australian-derived continental terrane. Gravity defines present-day W limits of Buton terrane and suggests terrane includes Tukang Besi platform in E. Ophiolitic rocks on Buton no deep roots, but thin and isolated overthrust sheets, and do not mark terrane boundary. Buton separated from Australia in Jurassic or Late Triassic, and collided with Eurasian margin in SE Sulawesi in Oligocene or E Miocene. Extension dominated recent history of area, producing minor separation of Tukang Besi from Buton and dispersion of other fragments, some of which have been incorporated in collision zone in Outer Banda arc. Oil seeps and asphalt deposits of Buton show hydrocarbons can be sourced from these fragments)

Mubroto, B. & J. Ali (1998)- Tectonic rotations indicated by the late Cenozoic paleomagnetic rocks in Buton Island, Southeast Sulawesi, Indonesia. In: J.L. Rau (ed.) Proc. 33rd Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Shanghai 1996, 2, p. 246-258.
(Buton island continental fragment impacted, accreted and uplifted when Tukang-Besi platform began docking with SE Sulawesi in Pliocene (2-3 Ma). Two major structural orientations; N-S in N part, NE-SW in S part, suggesting 60° clockwise rotation of S Buton with respect to N Buton (Fortuin et al. 1989). Data from 41 paleomagnetic sites from Miocene-Pliocene Tondo and Sampolakosa Fms suggest N Buton rotations of ~30° CW and CCW, probably local, C Buton small rotations, and S Buton 30-60° CW rotation. Data imply thin-skinned sheets associated with collision)

Mujito, S. Hadipandoyo & T.H. Sunarsono (1998)- Hydrocarbon resource assessment of the micro continent Buton Basin, southeast Sulawesi, Indonesia. In: J.L. Rau (ed.) Proc. 33rd Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Shanghai 1996, 2, p. 1-9.
(Buton basin assessment of hydrocarbon potential. Primary source rock Late Triassic Winto Fm with up to 16% TOC. Main reservoir Miocene Tondo Fm sandstones. Oil potential max. 1.373 million tons, expected value 0.205 million tons. Gas potential max. 0.412 milliards m3, expected value 0.061 milliards of m3)

Nolan, S.C., M.E.M. de Smet, M. Chamberlain, S. Gafoer, S. Santosa & Soebardi (1989)- Hydrocarbon prospectivity of Buton Island, S.E. Sulawesi, Indonesia. Earth Resources Institute (ESRI) Report, p. 1-99. *(Unpublished)*

Okhotnikova, E.S., Y.M. Ganeeva, E.E. Barskaya, G.V. Romanov, T.N. Yusupova et al. (2016)- Composition and physicochemical properties of natural bitumen from the Pasar Wajo deposit (Indonesia). Petroleum Chemistry 56, 8, p. 677-682.
(Bitumen from Pasar Wajo, Buton island classified as asphalt. Low concentrations of sulfur and trace elements and lack of normal-chain hydrocarbons)

Pedoja, K., L. Husson, A. Bezos, A.M. Pastier, A.M. Imran, C. Arias-Ruiz, A.C. Sarr, M. Elliot et al. (2018)- On the long-lasting sequences of coral reef terraces from SE Sulawesi (Indonesia): distribution, formation, and global significance. Quaternary Science Reviews 188, p. 37-57.

(Late Cenozoic coral reef terraces identified on 23 islands of Tukang Besi and Buton archipelagos. Reef terrace sequences from Wangi-Wangi (Buton) and islands of Ular, Siumpu and Kadatua with terraces from last interglacial maximum (MIS 5e; ~122 ka) at elevations <20m, at 34m on W Kadatua. On SE Buton reef terraces up to 650m, with >40 undated strandlines. On Sampolawa Peninsula 18 strandlines up to 430m, possibly as old as 3.8 ± 0.6 Ma)

PT Elnusa Geosains (2005)- Hydrocarbon potential of Buton Basin. Petromin 31, 6, p. 14-20.

PT Robertson Research Utama Indonesia (1989)- A geochemical evalution of field samples (of rock, asphalt, water and gas) from Buton Island, S.E. Sulawesi. Report 139, p. *(Unpublished)*
(Triassic Winto Shale good oil source rock, but presence of gammacerane in widespread asphalts appears to preclude Winto Shale as source)

PT Robertson Research Utama Indonesia (1989)- Results of petrographic analyses Buton Island outcrop samples. Report 140, p. *(Unpublished)*
(Triassic Winto sandstones almost entirely lithic, derived from sediments and metamorphic rocks, and locally common igneous material)

PT Robertson Research Utama Indonesia (1989)- A petroleum geochemical evaluation of four asphaltic stained shallow cores from Lawele Pit, Buton Island. Report 197, p. *(Unpublished)*
(Asphalt analyses suggest degraded oil isotopically light and derived from terrestrial organic matter. Presence of gammacerane may indicate a hypersaline, marine carbonate or restricted lacustrine source)

Reinhold, T. (1952)- Reconsideration of the so-called Oligocene fauna in the asphaltic deposits of Buton (Malay Archipelago). 3. Report on diatoms. Leidsche Geol. Mededelingen 17, p. 294-297.
(online at: www.repository.naturalis.nl/document/549751)
(Diatoms from (Mio-Pliocene) asphaltic marls of Buton with species related to Upper Miocene Globigerina marls of Java: Actinodiscus, Coscinodiscus, Hemidiscus, etc.)

Rochmanto, B. & L.M. Adam (2007)- Sedimentary environment of Sampolakosa Formation at Gonda Baru, subdistrict Sorawolio, Bau-Bau, Southeast Sulawesi. Proc. Joint Conv. 32nd HAGI, 36th IAGI, and 29th IATMI, Bali, JCB2007-251, 3p.
(Studied 61m of outcrop of middle part of Sampolakosa Fm at Gonda Baru, Buton. Lithology marine marl with thin limestones and diatomites in middle and lower part. Age Early Pliocene (N18), environment middle shelf-lower slope. Not much detail, no figures)

Rochmanto, B. & Darwin (2007)- Depositional environment of the Tondo Formation at Wakoko River Pasar Wajo Area, District of Buton, Southeast Sulawesi. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-101, 6p.
(Student paper on 15m of late M Miocene (zone N14) Tondo Fm section at Wakoko River, S Buton. Coarsening-upward shale-sand packages, interpreted as deltaic depositional environment with tidal and fluvial dominance)

Sartono, S., I. Hendrobusono, H. Murwanto & B. Suprapto (1990)- Tektonik akresi di Buton: olistostrom dan melange diapir. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1-26.
('Accretion tectonics of Buton: olistostrome and melange diapyr'. Late Miocene- Pliocene collision complex on Buton with Sampolakosa sedimentary olistostrome with olistoliths including ophiolitic and igneous rocks (with zone N18-N19 planktonic foraminifera))

Satyana, A.H. (2011)- World-class asphalt deposits of Buton Island, SE Sulawesi, Indonesia: geology, geochemistry, mining status and problems. Proc. Sulawesi Mineral Resources Seminar, Manado 2011, Indonesian Soc. Economic Geology (MGEI), 15p.
(Review of asphalt deposits of Buton Island, known since 1920s and intermittently exploited since 1925. Reserves 100-132 MTonnes of asphalt. Asphalt sourced by Triassic Winto Fm marine shales. Originally

medium gravity oils migrated into uplifted and thrusted carbonates of Pliocene Sampolakosa or sandstones of Miocene Tondo Fm, now biodegraded)

Satyana, A.H., C. Irawan & W. Kurniawan (2013)- Revisit geology and geochemistry of Buton asphalt deposits, SE Sulawesi: implications for petroleum exploration of Buton Area. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-170, p. 1-18.
(Asphalt deposits of Buton Island, known since 1920's, contain 15-35% asphalt/ bitumen, mainly impregnations in Pliocene Sampolakosa Fm carbonates and Miocene Tondo Fm sandstones, in uplifted and intensively thrusted anticlines. Asphalt deposits biodegraded crude oils derived from marine Type II kerogen, tied to Triassic calcareous shales and bituminous limestones of Winto Fm. Sulfur content generally high (2.5- 9.3%.). Five exploration wells on Buton between 1976-2012, all dry, some with oil shows in Miocene. Nunu oil seep on W Buton contains oleanane, indicating Tertiary source)

Scheiber, R. (1932)- Der Boetonasphalt mit seine Foraminiferen. Asphalt und Teer, Strassenbautechnik 32, p. 659-661.
('The Buton asphalt with its foraminifera'. Obscure reference reporting presence of planktonic foraminifera Pulvinulina (=Globorotalia) menardii and Orbulina universa in asphalt-bearing rocks of Buton. This clearly suggests M Miocene or younger age, not Oligocene as originally suggested by Martin (1934), etc.)

Sikumbang, N., P. Sanyoto, R.J.B. Supandjono & S. Gafoer (1995)- Geologic map of the Buton Sheet, Southeast Sulawesi, 1:250, 000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map SE Sulawesi Buton/ Muna islands between 4.15 and 5.45° S. Oldest rocks pre-Triassic Mukito Fm metamorphics. Jurassic-Triassic low-metamorphic Doole Fm. Oldest sediments Triassic Winto Fm shale, ~750m thick sandstone and limestone, with bivalves Halobia, Daonella and Monotis salinaria, ammonite Juvavites ceramensis and radiolaria. Early Jurassic Ogena Limestone, pelagic, with ammonites Phylloceras, Psiloceras and Arietites and foraminifera Involutina liassica, Epistomina. Late Jurassic Rumu Fm ~150m red pelagic limestone-marl with manganese deposits and Belemnopsis gerardi, Malayomaorica, Stomiosphaera moluccana and Cadosina fusca. Cretaceous Tobelo Fm deep marine calcilutite with radiolaria, Globotruncana, Heterohelix, etc.. Unconformably overlain by 1300m Miocene Tondo Fm limestone and clastics with oil seeps-asphalt in S Buton (basal limestone latest Oligocene?; JTvG), Pliocene Sampolakosa Fm marls. Late Oligocene collision between Buton Block and SE Sulawesi caused folding-thrusting of Pre-Miocene rocks)

Smith, R.B. (1983)- Sedimentology and tectonics of a Miocene collision complex and overlying late orogenic clastic strata, Buton Island, Eastern Indonesia. Ph.D. Thesis University of California, Santa Cruz, p. 1-254. *(Unpublished)* *(Buton exposes M Miocene collision complex, overlain by clastics derived from erosion of uplifted complex. In Wolio Complex, lower part of ophiolite sequence juxtaposed with Triassic- Upper Eocene or Oligocene sediments in imbricate series of W-dipping thrust sheets with deep water limestones. Age of collision later in Sulawesi East Arm (Late Miocene) than in Buton (M Miocene). Buton- E Sulawesi collision zone evolved from W-dipping subduction zone. M- Late Miocene clastic strata (Tondo Fm) mostly bathyal marine sediments which accumulated in two separate basins. Lasalimu basin formed just E of uplifted ophiolite thrust front, which provided most of detritus to basin, forming coastal fan-deltas, slope and base-of-slope deposits. Langkalome basin turbidites accumulated W of uplifted ophiolite belt. (N.B.: post-orogenic Tondo Fm limestone member contains Spiroclypeus, signifying Early Miocene age?; suggesting collision older than E Miocene?; JTvG))*

Smith, R.B. (1987)- Diachronous Neogene microcontinent collision in Buton and Eastern Sulawesi, Indonesia. Geol. Soc. America (GSA) Ann. Mtg 1987 and Exposition, Abstracts with Programs 19, 7, p. 850. *(Abstract only)*

Smith, R.B. & E.A. Silver (1991)- Geology of a Miocene collision complex Buton, Eastern Indonesia. Geol. Soc. America (GSA) Bull. 103, p. 660-678.
(Buton part of Neogene collision zone along E margin of Sulawesi. Miocene collision of microcontinents with W-dipping subduction zone emplaced Tukang Besi Platform (TBP) against Buton. Buton Wolio collision complex imbricated W-dipping thrust sheets and overturned folds with later steep faults offsetting imbricate

stack and controlling present map patterns. Consists of (1) Turumbia Fm mainly Late Triassic- Late Eocene or Oligocene deep-water limestone in E, interpreted as deep-water facies of W TBP margin; (2) Massive peridotite in W, with full ophiolite succession suggested by clasts in overlying conglomerates; (3) Mukito Fm metabasite and metachert remnants of metamorphic sole at base of ophiolite. Pelitic phyllite and quartzite in NE Buton probably slice of TBP continental basement: similar rocks dredged from NE margin of TBP and also form pre-Mesozoic basement of SP. M-U Miocene Tondo Fm clastics derived from uplift and erosion of Wolio Complex, placing M Miocene upper limit on age of TBP collision. Oblique convergence continued into Late Miocene)

Smit Sibinga, G.L. (1928)- De geologische ligging der Boven-Triadische olie- en asfaltafzettingen in de Molukken. Natuurkundig Tijdschrift Nederlandsch-Indie 58, p. 111-121.
('The geological setting of the Upper Triassic oil and asphalt deposits in the Moluccas'. Triassic oil and asphalt deposits in Moluccas (in similar facies on Timor, Ceram, Buru, Buton, SE Sulawesi) formed at edge of Mesozoic Sundaland craton. No figures/ maps)

Soeka, S. (1988)- Late Jurassic (Upper Tithonian) radiolaria from Buton Island, Indonesia. In: Workshop on Radiolaria 1988, University of Auckland, 25p.

Soeka, S. (1991)- Radiolarian faunas from the Tobelo Formation of the Island of Buton, Eastern Indonesia, Ph.D. Thesis, University of Wollongong, Australia, p. 1-399.
(online at: http://ro.uow.edu.au/theses/1401/)
(Tobelo Fm of Buton with low-latitude Tethyan radiolarian faunas, ranging from E Cretaceous- Oligocene. 128 species described, incl 3 new genera (Butonastrum, Discoconocaryomma, Paraxitus) and 29 new species (Butonastrum perkinsi, Triactiscus tumidus, Zanola deweveri, Z riedeli, Praeconocaryomma sutrismani, Sphaerostylus lukmani, etc.). E Cretaceous (Valanginian)- Oligocene 5 interval zones, 1 range zone and 3 barren zones. Ten datum planes for local biostratigraphic correlations proposed. Paleolatitude interpretation of Buton E Cretaceous (Valanginian-Hauterivian; S Tethyan; 22-30°S) and E Jurassic (Pliensbachian-Toarcian Ogena Fm; S Austral >40°S). M Jurassic 'breakup unconformity between E Jurassic Ogena Fm and Late Jurassic Rumu Fm. Wani Fm with Late Eocene larger forams may be lateral equivalent of upper Tobelo Fm. E Miocene Basal Tondo Lst with peridotite debris unconformable over Late Oligocene? collision complex)

Soeka, S. & Mudjito (1992)- Early Cretaceous- Paleogene radiolarian biostratigraphy from the microcontinent of Buton, eastern Indonesia. Abstracts 29 Int. Geological Congress, Kyoto, p. 252. *(Abstract)*

Soeka, S., Mudjito & Sunarto (1991)- Jurassic-Paleogene paleolatitudes of Buton (Indonesia) as indicated by radiolaria. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 609. *(Abstract only)*
(Three different radiolarian assemblages in Jurassic- Paleogene of Buton: (1) South Austral assemblage in E Jurassic (Pliensbachian- Toarcian) Ogena Fm, indicating paleolatitude of >40°S; (2) South Tethyan assemblage in E Cretaceous Lower Tobelo Fm (20-30°S) and (3) Tropical assemblage in Tertiary. Support interpretation that Buton was part of Australian continent in Triassic- E Jurassic)

Soeka, S., O.S.R. Ongkosongo, M.N. Suhartati & Helfinalis (2008)- Biostratigrafi dan penelusuran evolusi posisi lintang Pulau Buton sejak Mesozoikum dengan radiolaria. In: S. Husein et al. (eds.) Prosiding Seminar Nasional Ilmu Kebumian 2008, Universitas Gadjah Mada, Yogyakarta, D11, p. 1-15.
('Biostratigraphy and investigation of the evolution of latitudinal position of Buton Island since the Mesozoic with radiolaria')

Sulistyani, L. & Surono (2006)- Facies analysis on the Limestone Member, the Tondo Formation, based on samples taken from Kaisapu Area, Buton, Southeast Sulawesi Province. Proc. Jakarta 2006 Int. Geosciences Conf. and Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-SPG-04, 5p.
(Extended abstract. With facies map of Early Miocene limestone member of Tondo Fm in area in S Buton. Limestone Mb underlain by ultramafic unit in N, interfingers with conglomerate of Tondo Fm Clastic Mb in W and with Sampolakosa Fm in E and S. At time of limestone deposition, land was situated to W, with open marine conditions E of study area. Four limestone facies: mudstone, boundstone, packstone and wackestone)

Tanjung, H., N. Sukarno, I.T. Mandiri & S.H. Sinaga (2009)- Understanding the genesis of Mukito metamorphics: sole metamorphism and geological consideration. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PITIAGI2009-085, 1p. *(Abstract only)*
(Mukito Fm metamorphics in Kapantoreh Mts in S Buton associated with Kapantoreh ophiolite. Metamorphics imbricated with Triassic Winto Fm to W and ophiolites to E. Predominance of amphibolite facies (hornblende schist, marble) towards ophiolite, rest in green-schist facies (epidotic calcite chlorite schist). Petrochemistry suggest calc-alkaline basalts protolith. Interpreted as metamorphic sole, due to ophiolite obduction, formed from metamorphosed Cretaceous-Paleocene Tobelo Fm limestones and basalt dykes)

Tanjung, H., N. Sukarno, Y. Yuskar, H. Hermawan, A.D. Zeiza et al. (2008)- Field observation of Southern Buton: an overview of hydrocarbon manifestation and geological setting. IPA08-SG-074, 18p.
(Literature review of Buton geology, with some field observations and geochemical analyses of source rocks)

Tanjung, H., A.D. Zeiza & I.T. Mandiri (2007)- Trend of petroleum exploration in Buton: an insight from tectonic, stratigraphic and geochemical aspects. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-SG-030, 13p.
(Literature review of Buton geology and hydrocarbon prospectivity. Buton is site of two collisions: (1) between Muna and Buton microcontinents in Miocene, (2) with Tukang Besi micro-continent from E in Plio-Pleistocene (this scenario not commonly accepted; JTvG)).

Thoenes, D. (1936)- Het ontstaan van asfalt-bitumen. Thesis Technical University Delft, p. 1-140. *(Unpublished) ('The origin of asphalt bitumen'. On chemistry and geology of bitumen and formation of natural asphalt, applied to Buton. Buton asphalt here thought to have formed directly from proto-bitumen, without crude oil as intermediate product (see also critical discussion by Ubaghs ans Zeijlmans, 1947))*

Tjia, H.D. (1968)- New evidence of Recent diastrophism in East Indonesia. Inst. Technology Bandung (ITB), Dept. Geol. Contr. 69, p. 71-76.
(Absence of two post-glacial sea levels in reef limestones of Tomea, Kaledupa and Wangi-wangi (Tukang Besi islands) interpreted to reflect warping of uplift after 3500-5000 BP)

Tobing, S.M. (2005)- Inventarisasi bitumen padat di daerah Sampolawa, Kabubaten Buton, propinsi Sulawesi Tenggara. Kolokium Hasil Lapangan DIM, 2005, p. 29/1- 29/10.
(online at: http://psdg.bgl.esdm.go.id/kolokium/Batubara/29.%20Prosiding%20SAMPOLAWA%20Buton_N0.8.pdf)
(Survey of oil shale seams in Late Triassic Winto Fm in S Buton. Thickness of seams 0.05- 1.5 m, alternating with lime-siltstone and fine-grained lime-sandstone. Only four oil shale seams >1 m. All samples contain lamalginite (0.5- 50%). Rocks seem immature (mean vitrinite Rv 0.2- 0.6%). Oil content in samples 5- 40 l/ton. Oil shale resources down to 100m depth in Winto Fm ~4.5 M ton, with 504k Barrels oil)

Triono, U. (2005)- The preliminary survey of solid bitumen accumulation of Kalisusu and surrounding area, Muna Regency, Southeast Sulawesi Province. Kolokium Hasil Lapangan, DIM, 2005, p. 31/1- 31/8.
(online at: http://psdg.bgl.esdm.go.id/kolokium/Batubara/31.%20Prosc%20Kalisusu_No.10.pdf)
(Brief evaluation paper on asphalt on North Buton. Bitumen contained in Late Triassic Winto Fm (resource estimates 2.8 MTons) and Miocene Tondo Fm (6.8 MTons). In Indonesian)

Ubaghs, J.G.H. & C.P.A. Zeylmans van Emmichoven (1947)- De genese der asfaltafzettingen op het eiland Boeton. Bull. Bureau Mines and Geol. Survey Indonesia 1, 1, p. 3-12.
('The genesis of the asphalt deposits on the island of Buton'. Authors dispute the dominant theory on formation of Buton asphalt deposits as impregnation of porous Tertiary strata by oil from Triassic (Zwierzycki 1925, Hetzel 1936, etc.). They prefer asphalt formed from Tertiary oil accumulation in definite stratigraphic zone (Tondo- Sampolakosa Fms), 500-800m above base Tertiary, not from isoclinally folded Triassic)

Umbgrove, J.H.F. (1943)- Corals from asphalt deposits of the Island Buton (East-Indies). Leidsche Geol. Mededelingen 13, 1, p. 29-37.

(online at: www.repository.naturalis.nl/document/549525)
(Pliocene corals from Buton asphalt deposits at Waisiu. 9 species, 8 of which still living species, incl. Caryophyllia, Stephanotrochus, Cyphastrea, Goniastrea, Favia, Coeloria, Platygyra and Porites Also illustration of fossil coconut)

Verstappen, H.Th. (1957)- Een en ander over het rifpantser van het eiland Muna (Z.O. Celebes). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 74, p. 441-449.
('On the reef cap of the island of Muna'. Reefal limestone over much of Muna island (W of Buton, SE Sulawesi), attributed to multiphase Quaternary uplift. Highest uplifted reefs on S sides of both Muna (445m) and Buton islands (700m); no elevated Quaternary reef cover in N. Muna island tilted WNW and cut by transverse faults and faults subparallel to Buton straits. Tilting cannot be attributed to horizontal shifting of geanticline, as postulated in literature)

Walley, C.D. & D.T. Moffat (1988)- A review of the geology and hydrocarbon potential of Buton Island, Indonesia. Earth Res. Inst. Report EB88-1, 125p. *(Unpublished study)*

Wiryosujono, S. & J.A. Hainim (1978)- Cenozoic sedimentation in Buton Island. In: S. Wiryosujono & A. Sudradjat (eds.) Proc. Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 109-119.
(Exposed Cenozoic on Buton island starts with basal conglomerate of M-L Miocene Tondo Fm (with reworked Cretaceous, Eocene, Oligocene forams and clasts of peridotites and Mesozoic limestones), after Late Oligocene- E Miocene folding. Grades upward into flysch-type shale-silt, passing upward into >800m thick latest Miocene- Pliocene (N18-N21) bathyal Sampolakosa Fm marls. Tondo Fm deposited in tectonic trench. Both formations folded in latest Pliocene- E Pleistocene time. Quaternary reefal limestones uplifted to >700m in S Buton. Mesozoic on Buton starts with Late Triassic flysch. Absence of E Jurassic and Lower Cretaceous; U Cretaceous- Eocene (with Hantkenina) Tobelo bathyal pelagic limestones. Late Eocene- Oligocene conglomeratic 'Wani Beds' folded with Mesozoic?)

Zwierzycki, J. (1925)- Olie in de Trias op Boeton. De Mijningenieur 6, 1, p. 15.
('Oil in the Triassic on Buton'. Isoclinally folded Upper Triassic platy limestones, mica-bearing sandstones, and dark claystones-marls with Late Triassic molluscs Halobia, Daonella and Monotis in S part of Buton with some asphalt (similar oil shale on Buru and E Timor?; JTvG). Also Jurassic red sandstone and shales with caniculate belemnites and Jurassic or Cretaceous light colored limestones with foraminifera)

VI. NORTH MOLUCCAS

VI.1. Halmahera, Bacan, Waigeo, Molucca Sea

Anderson, C.D. (1999)- Cenozoic motion of the Philippine Sea Plate; new paleomagnetic data from eastern Indonesia. Masters Thesis, University of California at Santa Barbara, p. 1-164. *(Unpublished*
(Halmahera, Waigeo and other islands constitute largest land area of Philippine Sea Plate. New paleomagnetic results from 24 sites. Halmahera region motion three segments: 0-25 Ma moved N and rotated 40° CW; no rotation or latitude translation 25-40 Ma; 50° CW rotation and slight S-ward translation 40-50 Ma. Two Cretaceous sites indicate another 90° CW rotation between ~73-50 Ma, but interpretation speculative)

Anonymous (1981)- Gag Island nickel outlook not promising. Mining Magazine 144, 4, p. 287-289.
(Study by Pacific Nickel of weathered ultrabasic laterite of Gag Island in N Moluccas suggests 160 Million metric Tons of ore at 1.64% Nickel, 0.12% Cobalt, 37% Iron (BHP dropped Gag Island project in 2008))

Apandi, T. & D. Sudana (1980)- Geologic map of the Ternate Quadrangle, North Maluku, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of central part of Halmahera, 1:250,000 scale. Includes large Pretertiary Ultrabasic complex, overlain by Paleogene conglomerates with ultrabasic clasts, Paleogene limestone and younger Tertiary sediments (in NE Halmahera ophiolite also overlain(?) by Upper Cretaceous sediments with Globotruncana))

Bader, A.G. (1997)- Deformation de la croute oceanique lors de la fermeture d'un bassin marginal. Exemple de la Mer des Moluques (Philippines-Indonesie). Doct. Thesis Universite Pierre et Marie Curie, Paris VI, p.
(Unpublished) ('Deformation of oceanic crust during the closing of a marginal basin. Example of the Molucca Sea (Philippines-Indonesia)')

Bader, A.G. & M. Pubellier (2000)- Forearc deformation and tectonic significance of the ultramafic Molucca Central Ridge, Talaud islands (Indonesia). The Island Arc 9, 4, p. 653-663.
(Molucca Sea basin S of Mindanao underlain by N-S ophiolitic ridge, representing outer ridge of Sangihe subduction zone, and outcrops on Talaud Islands. Forearc sediments uncomformably on (1) dismembered ophiolitic series and (2) thick melanges. Two deformation events. Earlier direction (N20°E) is thrusting event affecting ophiolitic basement associated with edge of Celebes Sea. Incipient Sangihe subduction around 15 Ma uplifted deformed crust and buried melanges beneath forearc sediments. Recent E-W shortening during subduction of Snellius Plateau reactivated melanges within thrusts cutting forearc series)

Bader, A.G., M. Pubellier, C. Rangin, C. Deplus & R. Louat (1999)- Active slivering of oceanic crust along the Molucca Ridge (Indonesia-Philippine): implication for ophiolite incorporation in a subduction wedge. Tectonics 18, 4, p. 606-620.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1999TC900004/epdf)
(Marine geophysical survey in N Molucca Sea shows structure of classic active convergent margin, from W to E: Sangihe volcanic arc, Molucca Ridge forearc basin resting on outer ridge, accretionary wedge, and Snellius Ridge- Philippine Sea composite downgoing plate. Strong negative gravity anomaly above wedge suggests basement deepening and rupture of 700 km-long subducting lithosphere. S Snellius Ridge separated recently from S Philippine Basin by incipient Philippine Trench, deforming forearc region with backthrusting)

Baillie, M.C. & G.C. Cock (2001)- Weda Bay nickel/cobalt project- resource definition and the development of a project concept. Proc. Indonesia Mining Conf. Exhibition, Jakarta, p. 2B1-2B22.

Baker, S.J. (1997)- Isotopic dating and island arc development in the Halmahera region, Eastern Indonesia. Ph.D. Thesis University of London, p. 1-316. *(Unpublished)*
(Halmahera area in zone of complex tectonics at junction between Eurasian margin, Philippine Sea and Australian plates. Continental metamorphic rocks of probable Paleozoic age, derived from New Guinea, are found on Bacan and Obi. Ophiolitic rocks from Halmahera, Obi, Gag are of Philippine Sea plate origin, formed an intra-oceanic forearc-arc-backarc system of Jurassic age. Intrusives into ophiolitic rocks on Halmahera and Obi two phases of arc-related plutonic activity in Middle to Late Cretaceous

Baker, S. & J. Malaihollo (1996)- Dating of Neogene igneous rocks in the Halmahera region: arc initiation and development. In: R.Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 499-509.
(K-Ar ages of igneous rocks from Halmahera show history of intra-oceanic arc development since late M Miocene, due to E-directed subduction of Molucca Sea plate under Philippine Sea plate. N-ward migration of volcanic activity in Late Miocene- E Pliocene. Arc volcanism began around 11 Ma on Obi, with subduction thought to have started around 15-17 Ma. No Neogene volcanism younger than 8 Ma in Obi area; on Bacan volcanism ceased at 2 Ma. Late Pliocene crustal deformation caused 30-40 km W-ward shift of volcanic front. Formation and propagation of Halmahera arc consequence of CW rotation of Philippine Sea plate)

Ballantyne, P. (1990)- The petrology of the ophiolitic basement rocks of eastern Halmahera, Indonesia. Ph.D. Thesis, University of London, p. 1-263. *(Unpublished)*

Ballantyne, P. (1991)- Petrological constraints upon the provenance and genesis of the East Halmahera ophiolite. J. Southeast Asian Earth Sci. 6, 3-4, p. 259-269.
(E Halmahera dismembered ophiolite petrology. Cumulus mineralogy comparable with cumulates of Papuan and Marum ophiolites of New Guinea. Ophiolitic rocks formed in supra-subduction zone environment. Volcanic rocks not abundant in E Halmahera, but distinct suites, of boninitic, island arc and oceanic island /seamount affinities)

Ballantyne, P. (1992)- Petrology and geochemistry of the plutonic rocks of the Halmahera ophiolite, eastern Indonesia; an analogue of modern oceanic forearcs. In: L.M. Parson, B.J. Murton & P. Browning (eds.) Ophiolites and their modern oceanic analogues, Geol. Soc., London, Spec. Publ. 60, p. 179-202.
(Halmahera ophiolite tectonically dismembered but all elements of complete ophiolite present, except sheeted dyke complex. Ophiolite formed in supra-subduction zone setting before Late Cretaceous and interpreted to represent forearc of Mesozoic arc whose remnants now found near margins of Philippine Sea Plate)

Ballantyne, P.D. & R. Hall (1990)- The petrology of the Halmahera Ophiolite, Indonesia; an early Tertiary forearc. In: J. Malpas et al. (eds.) Ophiolites; oceanic crustal analogues, Proc. Symposium 'Troodos 1987', Geol. Survey Cyprus, Nicosia, p. 461-475.

Bering, D. (1986)- The exploration of the Kaputusan copper-gold porphyry (Bacan Island, Northern Moluccas). Federal Inst. Geosciences Natural Resources (BGR), Hannover, Report 099386, p. 1-140.
(Kaputusan copper-gold porphyry mineralization discovered on Bacan during joint Indonesian-German (BGR) regional exploration program in late 1970's, with follow-up exploration work by BGR in 1983-1984. Hosted by Miocene tonalite porphyry stocks)

Bessho, B. (1944)- Geology of the Halmahera islands. J. of Geography, Tokyo, 56, 6, p. 195-203.
(online at: www.jstage.jst.go.jp/article/jgeography1889/56/6/56_6_195/_pdf)
(In Japanese. Brief review of Halmahera geology, with one geologic map and cross-section))

Brata, K. (1989)- Petrography and provenance of Neogene sandstones of South Halmahera, East Indonesia. M.Phil. Thesis, University of London, p. . *(Unpublished)*

Brouwer, H. (1921)- Geologische onderzoekingen op de Sangi-eilanden en op de eilanden Ternate en Pisang. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 2, p. 3-68.
('Geologic investigations on the Sangi islands and on the islands Ternate and Pisang'. Mainly descriptions of various active volcanoes of Sanghi islands (Ruang, Tagoelandang, Makalehi, Mahengetang), Ternate and Pisang (SE of Halmahera) islands)

Brouwer, H. (1923)- Geologische onderzoekingen op het eiland Halmaheira. Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen 2, p. 5-72.

('Geological investigations on Halmaheira Island'. Includes thin section photos of deep marine U Cretaceous Globotruncana limestones and shallow marine limestones of Eocene (Nummulites-Alveolina-Discocyclina) and Miocene (Lepidocyclina) ages (forams brief description by Douville 1923 in same volume))

Brouwer, H. (1923)- Bijdrage tot de geologie van het eiland Batjan. Jaarboek Mijnwezen Nederlandsch Oost-Indie, Verhandelingen 50 (1921), Verhandelingen 2, p. 73-106.
('Contribution to geology of the island of Bacan'. Bacan mostly schists and igneous rocks, including diorites, gabbros, peridotites and andesites. Also Miocene Lepidocyclina limestone, associated with coal fragments)

Burgath, K., M. Mohr & W. Simanjuntak (1983)- New discoveries of blueschist metamorphism and mineral occurrences in the Halmahera Gag ophiolite belt. Bull. Direct. Min. Res. Indonesia 13, 1, p. 1-19.

Carlile, J.C., G.R. Davey, I. Kadir, R.P. Langmead & W.J. Rafferty (1998)- Discovery and exploration of the Gosowong epithermal gold deposit, Halmahera, Indonesia. J. Geochemical Exploration 60, 3, p. 207-227.
(Gosowong epithermal gold deposit low-sulphidation epithermal quartz vein in Halmahera Neogene magmatic arc. Not much on geologic setting)

Chandra, J. & R. Hall (2016)- Tectono-stratigraphic evolution and hydrocarbon prospectivity of the South Halmahera Basin, Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-46-G, 19p.
(S Halmahera Basin influenced by Cretaceous- Oligocene and Pleistocene arc history, collision with Australian (New Guinea) continental margin in E Miocene from ~25 Ma, Neogene strike-slip faulting, etc. Rifting in Late Eocene formed W-E backarc basin with Late Eocene terrestrial-marginal marine clastic sediments, followed by limestone and deep marine turbidites. E Miocene arc-continent collision caused uplift and major unconformity above which widespread Miocene limestones were deposited. Two sub-basins formed in late Neogene, a response to formation of Halmahera volcanic arc to W and strike-slip movements along Sorong Fault Zone to S. Oil seep from Halmahera and similarities to productive Salawati Basin suggest petroleum potential)

Charlton, T.R., R. Hall & E. Partoyo (1991)- The geology and tectonic evolution of Waigeo Island, NE Indonesia. J. Southeast Asian Earth Sci. 6, 3-4, p. 289-297.
(Waigeo ophiolitic basement of possible Late Jurassic age, overlain by Paleogene forearc sediments. Basement and sedimentary cover deformed by Late Oligocene S-directed thrusting, probably collision of arc with continental block (New Guinea?))

Clark, L.V. (2012)- The geology and genesis of the Kencana epithermal Au-Ag deposit, Gosowong Goldfield, Halmahera Island, Indonesia. Ph.D. Thesis University of Tasmania, p. 1-260.
(online at: https://eprints.utas.edu.au/17493/2/Whole-Clark-_thesis.pdf)
(Kencana Au-Ag low-sulfidation epithermal deposit in Neogene magmatic arc of Halmahera is 2002 discovery in Gosowong goldfield on E side of NW arm of Halmahera, which is composed of four superimposed volcanic arcs (subduction of Molucca Sea plate beneath Halmahera since Paleogene). Epithermal mineralization hosted by U Miocene Gosowong Fm volcaniclastics andesitic flows and diorite intrusions. Andesite emplacement at 3.73 Ma followed by diorite intrusion at ~3.50 Ma. Epithermal mineralization with 40Ar/39Ar age of hydrothermal adularia of ~2.93 Ma)

Clark, L.V. & J.B. Gemmell (2018)- Vein stratigraphy, mineralogy, and metal zonation of the Kencana low-sulfidation epithermal Au-Ag deposit, Gosowong goldfield, Halmahera Island, Indonesia. Economic Geology 113, 1, p. 209-236.
(Kencana Au-Ag low-sulfidation epithermal deposit in Neogene magmatic arc of NW Arm of Halmahera, with resource of 4 Moz Au. Part of the Gosowong Goldfield, with Gosowong and Toguraci deposits. NW arm of Halmahera composed of four superimposed volcanic arcs. Epithermal mineralization in Pliocene Gosowong Fm of volcaniclastic rocks, ignimbrites, andesitic flows and diorite intrusions. Andesite emplacement at 3.73 Ma followed by diorite intrusion at ~3.50 Ma. Kencana epithermal mineralization at ~ 2.93 Ma)

Clor, L.E., T.P. Fischer, D.R. Hilton, Z.D. Sharp & U. Hartono (2005)- Volatile and N isotope chemistry of the Molucca Sea collision zone: tracing source components along the Sangihe Arc, Indonesia. Geochem. Geophys. Geosystems 6, 3, 20p.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2004GC000825)
(Volcanic gases from Sangihe Arc analyzed for trace chemistry and nitrogen isotope variations. Increased slab contribution in northernmost arc, possibly by slab melting as collision stalls progress of subducting plate)

Cock, G.C. & J.E. Lynch (1999)- Discovery and evaluation of the Weda Bay nickel/ cobalt deposits, central Halmahera, Indonesia. In: G. Weber (ed.) Proc. PACRIM '99 Congress, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, 4-99, p. 197-206.
(Weda Bay nickel- cobalt laterite deposits on Halmahera first drilled in 1996. Laterites have developed by weathering over pre-Cretaceous serpentinised harzburgites and dunites)

Coupland, T., D. Sims, V. Singh, R. Benton, D. Wardiman & T. Carr (2009)- Understanding geological variability and quantifying resource risk at the Kencana underground gold mine, Indonesia. Seventh Int. Mining Geology Conference, Australasian Inst. Mining Metallurgy (AusAIMM), Melbourne, p. 169-186.
(Kencana underground gold mine on Halmahera with two large epithermal vein deposits. Rel. simple planar geometry, dipping 25 to 45° to East and extend 400-600 m along strike and down dip. True width 1-20m)

Davey, G.R., J.C. Carlile, D.J. Olberg & R P, Langmead (1997)- Discovery of the Gosowong epithermal quartz-adularia vein gold deposit, Halmahera, eastern Indonesia: In: Proc. New generation gold mines ‚97 Conf., Perth, Australian Mineral Foundation, p. 3.1-3.15.
(see also Carlile et al. 1998)

Di Leo, J.F., J. Wookey, J.O. Hammond, J.M. Kendall, S. Kaneshima, H. Inoue, J.M. Yamashina & P. Harjadi (2012)- Deformation and mantle flow beneath the Sangihe subduction zone from seismic anisotropy. Physics Earth Planetary Interiors 194-195, p. 38-54.
(Sangihe subduction zone is where Molucca Sea microplate is subducting W beneath Eurasian plate. Anisotropic structure suggested by shear wave, probably caused by aligned cracks, possibly melt-filled beneath the volcanic arc, and fossil anisotropy in overriding plate. Three regions of anisotropy: (1) within overriding lithosphere, (2) along slab-wedge interface, (3) below subducting Molucca Sea slab)

Djaswadi, S., B. Tjahjono & T. Sudharto (1990)- Penjajagan mineral logam di Maluku Utara. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 302-324.
('Metallic minerals exploration in the North Moluccas'. Review of deposits of copper (Obi, Bacan, Halmahera), nickel (E Halmahera), chromite (E Halmahera), etc.)

Douville, H. (1923)- Sur quelques foraminiferes des Moluques orientales et de la Nouvelle Guinee. Jaarboek Mijnwezen Nederlandsch-Indie 50 (1921), Verhandelingen 2, p. 107-116.
('On some foraminifera from the eastern Moluccas and from New Guinea'. Brief description of Eocene larger forams in samples collected by Brouwer in Halmahera (Nummulites, Discocyclina, Alveolina), Roti (large Nummulites, Discocyclina), Seram (E Miocene Lepidocyclina in breccia with reworked angular clasts of Upper Cretaceous pelagic limestone), New Guinea, Kai Besar (rounded fragments of Eocene Lacazina in quartz sandstone, etc. No location info)

Electricia, K.S., M.F. Rosana, E.T. Yuningsih, I. Syafri & S.N. Viqnoriva (2017)- Quartz vein infill structure mode in Kencana deposit, Gosowong goldfield, Indonesia. Bull. Scientific Contr. (UNPAD) 15, 1, p. 35-44.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/11743/pdf)
(Gosowong gold-siver mine on Halmahera is low sulphidation epithermal veining system, hosted in Quaternary andesitic volcanics. Kencana epithermal vein system two main sub-parallel NW trending vein zones)

Evans, C.A., J.W. Hawkins & G.F. Moore (1983)- Petrology and geochemistry of ophiolitic and associated volcanic rocks of the Talaud Islands, Molucca Sea collision zone, northeast Indonesia. In: T.W.C. Hilde & S.

Uyeda (eds.) Geodynamics of the western Pacific-Indonesian region, American Geophys. Union (AGU), Geodynamic Series 11, p. 159-172.
(Much of Talaud islands tectonic melange with up to 5km wide blocks of ophiolite, preserving complete oceanic crustal sections. Pillow basalts associated with bedded chert and pelagic limestones with Eocene radiolaria. Miocene basaltic andesites not considered part of ophiolitic rocks.

Farrokhpay, S., M. Cathelineau, S.B. Blancher, O. Laugier & L Filippov (2019)- Characterization of Weda Bay nickel laterite ore from Indonesia. Journal of Geochemical Exploration 196, p. 270-281.
(Weda Bay nickel deposit in E Halmahera Nickel rich saprolites mainly several types of MgNi serpentines)

Fiddin, T. & A. Hendratno (2012)- Karakteristik batuan ultrabasa di Pulau Halmahera, Provinsi Maluku Utara. J. Teknik Geologi (UGM), 1, 4, 5p.
(online at: http://lib.geologi.ugm.ac.id/ojs/index.php/geo/article/view/18)
('Characteristics of ultrabasic rocks on Halmahera, North Moluccas'.Ultramafic rocks of Halmahera island belong to dunite, harzburgite and serpentinite types. Chemically part of tholeiite series, low in K2O and high in MgO, and formed in mid-ocean ridge setting (N-MORB), in depleted mantle ~60-80 km above upper mantle)

Finch, E.M. & S.J. Roberts (1993)- An integrated Tertiary biozonation scheme for the Halmahera region, Eastern Indonesia. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, p. 455. *(Abstract only)*
(Outcrop samples from Halmahera includes E-M Eocene volcanoclastics. Late M Eocene (45 Ma) regional unconformity, overlain by Late Eocene limestones and Oligocene volcanoclastics. Second regional unconformity at ~25 Ma, marking arc-Australian continent collision. Halmahera arc initiated in Late Miocene)

Fitzpatrick, N., A. Harris, F. MacCorquodale & D. Wardiman (2015)- The Gosowong goldfield- a world-class epithermal gold-silver district in Indonesia. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 235-242. *(Extended Abstract)*
(Gosowong epithermal Au-Ag deposits in NW arm of Halmahera discovered in 1994. With subsequent brownfields discoveries reserves of >6 Moz Au. Main deposits named Gosowong, Toguraci and Kencana. Epithermal mineralization in Pliocene andesitic-basaltic arc volcanics of Gosowong Fm (zircon ages 3.9-3.5 Ma) and Ar/Ar age for hydrothermal alteration of 2.9 Ma. Mineralisation in multistage veins, breccias and stockwork veins. Four major types of hypogene alteration)

Flett, D., R. Hall & N. Wagimin (2011)- The geology and hydrocarbon potential of the Weda Bay area, S.W. Halmahera, Eastern Indonesia. Proc. SE Asia Expl. Soc. (SEAPEX) Expl. Conf., Singapore 2011, Presentation 19, 31p.
(New seismic data over undrilled Weda Bay Basin, SE of Halmahera, indicates >7km of Tertiary sediment. Source rocks believed to be present, with potential to generate oil and gas. Hydrocarbon expulsion features on many lines. Basin flanks currently within oil and gas generative window. Potential play types both reefs and stacked clastics in compressional structures)

Forde, E.J. (1997)- The geochemistry of the Neogene Halmahera Arc, Eastern Indonesia. Ph.D. Thesis University of London, p. 1-268. *(Unpublished)*
(Halmahera arc is N-S intra-oceanic arc cutting across the islands of Halmahera and Bacan and is result of eastward subduction of Molucca Sea Plate. K/Ar dating revealed migration of volcanism along length of Halmahera arc. Oldest volcanics (~11 Ma) in S from Obi, where volcanism now extinct. To N in Bacan, ages from 7 Ma- Quaternary, in C Halmahera from 6- 2 Ma. Volcanic rocks from Obi, C Halmahera and N Bacan typical intra-oceanic arc lavas. Volcanic rocks from W and S Bacan suggest assimilation of continental component and supports hypothesis of overthrusting of Philippine Sea Plate ophiolitic and Australian plate continental material, due to collision in Early Miocene)

Gemmell, J.B. (2007)- Hydrothermal alteration associated with the Gosowong epithermal Au-Ag deposit, Halmahera, Indonesia; mineralogy, geochemistry, and exploration implications. Economic Geology 102, 5, p. 893-922.

(Gosowong epithermal Au-Ag deposit discovered in 1994 in NW arm Halmahera. Host rocks Miocene shallow marine, intermediate-basic volcanic and volcaniclastic rocks of Gosowong Fm. 40Ar/39Ar dating of adularia grains from vein zone yielded late Pliocene age (2.4-2.9 Ma))

Georgiades Bey, A. (1918)- Untersuchungen uber Eruptivgesteine der Insel Halmahera (Djilolo) im Archipel der Molukken. Inaugural Dissertation University of Zurich, p. 1-46. *(Unpublished)*
('Investigations of volcanic rocks of Halmahera Island (Djilolo) in the Moluccas Archipelago'. Petrographic study of basalts, diorites, trachydolerites, andesites, etc., collected by E. Gogarten in Halmahera. Little or no locality information. First geologic thesis by student from Turkey; Sengor 1988)

Gogarten, E. (1918)- Geologie van Noord-Halmahera; voorlopige mededeeling. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 2, p. 267-280.
('Geology of North Halmahera, preliminary communication'. Summary of 1911 geological reconnaissance along N coast of Halmahera. Not very useful, except for presence of belemnite in sandstone at SE Morotai island (but fossil lost in transport to Germany))

Gogarten, E. (1918)- Die Vulkane der nordlichen Molukken. Zeitschrift Vulkanologie 4, p. 211-305.
('The volcanoes of the northern Moluccas')

Hakim, A.S. (1989)- Tertiary volcanic rocks from the Halmahera Arc, Indonesia: petrology, geochemistry and low temperature alteration. M.Phil. Thesis, University of London, p. 1-292. *(Unpublished)*

Hakim, A.S. & R. Hall (1991)- Tertiary volcanic rocks from the Halmahera arc. J. Southeast Asian Earth Sci. 6, 3-4, p. 271-287.
(onine at: http://searg.rhul.ac.uk/pubs/hakim_hall_1991_halmahera.pdf)
(In W Halmahera Arc Quaternary and Late Neogene andesites and subordinate basalts. Probably no arc volcanic activity during most of Miocene: Neogene volcanic arc initiated at beginning of Late Miocene by E-ward subduction of Molucca Sea Plate at Halmahera Trench. Basalts of Oha Fm in SW belt older than Late Miocene (Late Cretaceous-Eocene suspected) and probably products of Late Mesozoic or E Tertiary subduction within Pacific, evolved by olivine, plagioclase and clinopyroxene fractionation. With extensive sub-greenschist facies alteration reflecting deep burial and/or high heat flows, producing zeolites, chlorites, smectites etc.)

Hall, R. (1987)- Plate boundary evolution in the Halmahera Region, Indonesia. Tectonophysics 144, p. 337-352.
(online at: http://searg.rhul.ac.uk/pubs/hall_1987%20Plate%20boundaries%20Halmahera.pdf)
(Halmahera stratigraphy links to E Philippines and records history of Molucca Sea subduction. Halmahera- E Mindanao basement part of Late Cretaceous-E Tertiary arc and forearc and part of single plate since Late Eocene- E Oligocene. No evidence of Oligo-Miocene arc: Pliocene arc on E Tertiary arc basement. Arc volcanism ceased briefly in Pleistocene and shifted W after deformation episode. Present arc built on deformed Pliocene arc. Diachronous collision at W edge Philippine Sea Plate which began in Mindanao in Late Miocene impeded Philippine Sea Plate movement and further motion achieved by strike-slip along Philippine Fault, subduction at Philippine Trench and subduction of Molucca Sea lithosphere under Halmahera)

Hall, R. (1999)- Neogene history of collision in the Halmahera region, Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, G014, 8p.
(Molucca Sea Plate almost entirely subducted remnant of double subduction system, with Sangihe Arc in W, Halmahera Arc in E. In N Molucca Sea Halmahera Arc entirely overridden by Sangihe forearc, and in few million years time entire Halmahera arc may have disappeared)

Hall, R., J.R. Ali & C.D. Anderson (1995)- Cenozoic motion of the Philippine Sea plate: palaeomagnetic evidence from eastern Indonesia. Tectonics 14, p. 1117-1132.
(online at: http://searg.rhul.ac.uk/pubs/hall_etal_1995%20Philippine%20Sea%20Plate%20palaeomagnetism%20Tectonics.pdf)

(New paleomagnetic data N and S of Sorong Fault record S-ward movement in Eocene and N-ward movement in Neogene. All sites N of Sorong Fault (Halmahera- Kasiruta- Waigeo) clockwise declinations. Neogene rocks small deflections, Oligocene- M Eocene rocks clockwise declination deflections of ~40°. Declinations of lower Eocene rocks indicate ~90° of CW rotation. Sorong Fault originated after Australia- Philippine Sea plate collision at ~25 Ma. Area N of Sorong Fault always part of Philippine Sea Plate)

Hall, R., J.R. Ali, C.D. Anderson & S.J. Baker (1995)- Origin and motion history of the Philippine Sea Plate. Tectonophysics 251, p. 229-250.
(Halmahera-Waigeo good Mesozoic- Tertiary stratigraphic record indicating long arc history for S part of plate. Regional unconformities in Middle Eocene and base Miocene (~25 Ma))

Hall, R., M.G. Audley-Charles, F.T. Banner, S. Hidayat & S.L. Tobing (1988)- The basement rocks of the Halmahera region, eastern Indonesia: a Late Cretaceous-Early Tertiary arc and fore-arc. J. Geol. Soc. London 145, p. 65-84.
(W Halmahera active volcanic arc. E Halmahera basement dismembered ophiolites with slices of Mesozoic and Eocene sediments, unconformably overlain by M Oligocene and younger sediments and volcanics. Mesozoic-Eocene sediments similar to Marianas fore-arc. E Halmahera basement interpreted as pre-Oligocene fore-arc lacking accretionary complex. Mesozoic- Tertiary sediments imbricated with igneous and metamorphic rocks represent deeper parts of fore-arc during Late Eocene plate reorganization. S Bacan basement continental metamorphic rocks associated with deformed ophiolitic complex, different from E Halmahera. Metamorphic rocks interpreted to be part of N Australian continental margin basement, separated from Halmahera by splay of Sorong Fault system. Deformed ophiolite complex of Bacan may represent magmatism in fault zone)

Hall, R., M.G. Audley-Charles, F.T. Banner, S. Hidayat & S.L. Tobing (1988)- Late Palaeogene- Quaternary geology of Halmahera, Eastern Indonesia: initiation of a volcanic island arc. J. Geol. Soc. London 145, p. 577-590.
(Halmahera rel. complete M Oligocene- Recent sedimentary section unconformable on ophiolitic complex, part of Late Cretaceous- E Tertiary forearc. After volcanic arc activity ceased in Eocene, former fore-arc terrane uplifted and eroded in Late Paleogene. Clasts of Eocene reefal limestone with Discocyclina in ?Oligocene- E. Miocene Jawati conglomerate. Widespread Late Oligocene- Miocene carbonates. No evidence of arc volcanism in C Halmahera between Eocene and Pliocene. Oligo-Miocene volcanism in nearby regions interpreted as related to Sorong Fault system. Rapid subsidence in E Pliocene (tied to initiation of subduction of Molucca Sea) lead to basinal marls deposition, followed by siliciclastic turbidites with increasing amounts of calc-alkaline volcanic debris from W Halmahera Pliocene arc. Deformation in Pleistocene at junction of E and W Halmahera. Third Halmahera arc (Quaternary) active in N part of the islands since 1 Ma)

Hall, R., P.D. Ballantyne, A.S. Hakim & G.J. Nichols (1996)- Basement rocks of Halmahera, eastern Indonesia: implications for the early history of the Philippine Sea. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 301-317.
(Oldest rocks on Halmahera are 'supra-subduction zone' ophiolites, overlain by Late Cretaceous and Eocene arc volcanics and sediments. Late Cretaceous- Eocene age plutonic rocks intrude ophiolites. Shallow marine Eocene limestones unconformably overlain by Neogene sediments. Halmahera basement many similarities to submarine plateaus and ridges of Philippine Sea and E Philippines basement terranes, suggesting existence of extensive Late Cretaceous and Eocene volcanic arc(?) systems on Mesozoic ophiolitic basement)

Hall, R., M. Fuller, J.R. Ali & C.D. Anderson (1995)- The Philippine Sea plate: magnetism and reconstructions. In: B. Taylor & J.H. Natland (eds.) Active margins and marginal basins: a synthesis of Western Pacific drilling results, American Geophys. Union (AGU) Monogr. 88, p. 371-404.
(online at: http://searg.rhul.ac.uk/pubs/hall_etal_1995%20Philippine%20Sea%20plate%20palaeomagnetism%20AGU%20Monograph.pdf)
(Paleomagnetic results from ocean drilling and from land on Philippine Sea Plate indicate progressive N-ward translation of plate during Tertiary. ODP Leg 126 showed large CW declination shifts of up to -90° since E Oligocene. Similar large declination shifts at land sites at E margin of plate, similar changes in inclination as

ocean drilling sites, and explained as result of entire plate rotation, marginal basin opening, and/or local tectonic deformation at plate edge. Propose plate rotated clockwise since E Tertiary by 5.5° between 0- 5 Ma, 34° between 5- 25 Ma, 50° between 40-50 Ma)

Hall, R. & G.J. Nichols (1990)- Terrane amalgamation in the Philippine Sea margin. Tectonophysics 181, p. 207-222.
(Philippine Sea plate includes plateaus of thickened crust, separated by thinner oceanic crust. Arrival of plateaus at subducting SW margin of Philippine Sea plate caused Philippine Trench to propagate S-ward in increments and caused transfer of terranes to Philippine margin. New data from the Halmahera region indicate plate boundaries strongly influenced by heterogeneous character of Philippine Sea plate. At present the Philippine Trench terminates at oceanic plateau which is structurally continuous with old forearc and ophiolite terrane on Halmahera. Position of this terrane caused Philippine Sea plate- Eurasia convergence to be transferred from subduction at Philippine Trench to Molucca Sea Collision Zone through NE-SW dextral transpressional zone across Halmahera)

Hall, R. & G. Nichols (1991)- Exploration in basins of the western Pacific margin: reducing the risk. In: J.W. Cosgrave & M.E. Jones (eds.) Neotectonics and resources, Belhaven Press, London, p. 243-256.
(Mainly on Halmahera geology)

Hall, R., G. Nichols, P. Ballantyne, T. Charlton & J. Ali (1991)- The character and significance of basement rocks of the southern Molucca Sea region. J. Southeast Asian Earth Sci. 6, p. 249-258.
(Pre-Neogene basement rocks in S Molucca Sea region include ophiolitic rocks, arc volcanics and continental rocks. Ophiolitic complexes, interpreted as oldest parts of Philippine Sea Plate, overlain by U Cretaceous and Eocene sediments and volcanics. Plutonic rocks of island arc origin intruding ophiolites yield Late Cretaceous radiometric ages; amphibolites with ophiolitic protoliths yield Eocene ages. Ophiolites speculated to have originated during mid-Cretaceous plate reorganization. Late Cretaceous-Paleogene arc volcanics in basement of Morotai, W Halmahera and Bacan overlain by shallow water Eocene limestones and Oligocene rift sequence with basaltic pillow lavas and volcaniclastic turbidites. Mid Eocene-Oligocene extension synchronous with opening of central W Philippine Basin)

Hammarstrom, J.M., B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7202, Halmahera Arc, North Molucca Islands- Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rep. 2010-5090-D, Appendix K, p. 175-185.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in ~400 km long Neogene Halmahera island arc, along western parts of Morotai, Halmahera, Bacan, Obi, etc. With Kaputusan porphyry copper deposit on Bacan (with 77 Mt at 0.33% copper and 0.25 g/t gold; exact age unknown))

Handayani, L. (2004)- Seismic tomography constraints on reconstructing the Philippine Sea plate and its margin. Ph.D. Thesis Texas A&M University, College Station, p. 1-144.
(online at: http://txspace.tamu.edu/bitstream/1969.1/1497/1/etd-tamu-2004C-GEOP-Handaya.pdf)
(High velocity mantle anomalies coincident with Wadati-Benioff zones. N-ward movement of Philippine Sea Plate, WNW subduction of Pacific Plate since Eocene (~50 Ma), and N-ward subduction of Indian/ Australian Plate best explain subducted slab anomalies. E plate boundary originated as transform zone that evolved into subduction zone a few million years before Pacific Plate movement change. Initiation of this subduction zone may be one of triggers of Pacific Plate motion changes. 90° rotation of Philippine Sea Plate suggested in Hall (2002) reconstruction not supported by slab distribution beneath Philippine Sea region. Minimal rotation of Philippine Sea Plate assumed in reconstruction model)

Hanyu, T., J. Gill, Y. Tatsumi, J.I. Kimura, K. Sato, Q. Chang, R. Senda, T. Miyazaki, Y. Hirahara, T. Takahashi & I. Zulkarnain (2012)- Across- and along-arc geochemical variations of lava chemistry in the Sangihe arc: various fluid and melt slab fluxes in response to slab temperature. Geochem. Geophys. Geosystems 13, 10, Q10021, p. 1-27.

(online at: http://onlinelibrary.wiley.com/doi/10.1029/2012GC004346/epdf)
(Sangihe oceanic arc N of NE Sulawesi 500km long, with >25 Quaternary volcanoes. Is W half of active arc-arc collision. In S arc, volcanic front lavas enriched in fluid-mobile elements, while rear arc lavas more enriched in melt-mobile elements. Proportion of sediment versus altered oceanic crust in slab component only ~20% but larger than other arcs in W Pacific, suggesting more subduction of thick sediments in narrowing Molucca Sea. Lavas from dormant N Sangihe arc similar to Quaternary rear arc rather than Quaternary volcanic front lavas in S arc, possibly related to advanced collision in N arc that could have slowed subduction)

Hartadi, E.T., R. Mjos, S.I. Midtbo, P.T. Allo, G. Toxopeus, S. Hay, N. Pickard et al. (2013)- Early insights into the exploration of the Halmahera Basin, East Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-092, p. 1-6.
(Preliminary results of geologic fieldwork on islands bordering S and E rim of Halmahera II basin prior to drilling (Kofiau, Boo, Klaarbeck; compared to other islands and sole exploration well in area, Bantanta A-1x))

Hase, T., K. Yonezu, T. Tindell, Syafrizal & K. Watanabe (2015)- Mineralization characteristics of the Kencana deposit, Gosowong mining area, Halmahera, Indonesia. Proc. IGC 2015 (2nd Int. Conf. and 1st Joint Conf. Fac. Geology Universitatas Padjadjaran and Fac. Sci. Nat. Res. University Malaysia Sabah), p. 205-212.
(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2016/02/Mineralization-Characteristics-of-the-Kencana-deposit.pdf)
(Gosowong gold mining area in N-C Halmahera with three deposits: Gosowong (1994), Togurachi (2000) and Kencana (2003). Kencana deposit three veins in Neogene andesites of Halmahera volcanic arc; classified as low-sulfidation Au-Ag epithermal deposit with chalcopyrite, electrum, Au-Ag-Te minerals, galena, sphalerite)

Jaffe, L.A., D.R. Hilton, T.P. Fischer & U. Hartono (2004)- Tracing magma sources in an arc-arc collision zone: Helium and carbon isotope and relative abundance systematics of the Sangihe Arc, Indonesia. Geochem. Geoph. Geosystems, AGU, 5, 4, p. 1-17.
(Sangihe Arc presently colliding with Halmahera Arc in NE Indonesia, forming only extant example of arc-arc collision zone. He and C data suggest variations in primary magma source characteristics along strike of arc, which may be caused by greater volumes of sediment subduction in N, variability in subducted sediment composition, or enhanced slab-derived fluid/melt production. Northern volcanoes high contribution of CO2 from carbonate associated with subducting slab)

Kanig, M., T. Soeprapto & G. Friedrich (1990)- Die Bindungsformen von Si, Mg, Fe, Al, Mn, Cr, Ni und Co in Saprolit und Laterit uber Serpentinit, Insel Gebe, Indonesien. Issue Zeitsch. Pflanzenernahrung und Bodenkunde 153, 6, p. 425-431.
('The fixation of Si, Mg, Fe, Al, Mn, Cr, Ni and Co in saprolite and laterite above serpentinite, Gebe island, Indonesia' Gebe Island part of Halmahera group. In laterite, most of extractable Si, Al, Cr and Ni bound to goethitic Fe-hydroxide. In saprolite and laterite Co bound to Mn-oxides)

Kraeff, A. (1954)- De geologie van de chrysotiel- asbest voorkomens van de Oost-arm van Halmaheira. Djawatan Geologi, Bandung. Report K54-1, p. 1-40. *(Unpublished)*
('The geology of chrysotile-asbestos occurrences in the East Arm of Halmahera')

Kuenen, P.H. (1932)- Een geologische verkenningstocht op Morotai. Tropisch Nederland 5, 18, p. 275-283.
('A geological reconnaissance on Morotai'. Notes on 1930 trip to Morotai Island N of Halmahera by geologist of Snellius Expedition. W coast rocks mainly composed of old volcanic rocks with enclosed blocks of limestone. Mainly travelog, not much on geology)

Kuenen, P.H. (1933)- Een geologische verkenningstocht op Morotai- II (Slot). Tropisch Nederland 5, 19, p. 291-294.
('A geological reconnaissance on Morotai- part 2 of 2'. Notes on 1930 trip to Morotai. No geology.

Kusnama (1989)- Petrography and provenance of Neogene sandstones of South Halmahera, East Indonesia. M.Phil. Thesis, University of London, p. *(Unpublished)*

Kusnama (2008)- Karakteristik batubara daerah Patani, Halmahera Timur, Maluku Utara. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 745-760.
('Characteristics of coal in the Patani area, E Halmahera, N Moluccas'. Around 1m thick Paleocene coals in Dorosagu Fm of Patani area in two blocks: Paniti Blocks autochthonous coal with vitrinite reflectance Rv 0.42-0.54%; Bicoli Block allochthonous deltaic coal deposits with clay partings and average Rv 0.36- 0.43)

Kusnama & D. Sukarna (1996)- The provenance of Neogene sandstones South Halmahera, East Indonesia. Bull. Geol. Res. Dev. Center, Bandung, p. 181-201.
(Two provenance areas in Late Neogene Weda Group: in W mainly derived from andesitic volcanics, in E mainly foraminiferal limestones?. With 3 paleogeographic maps for Late Miocene, E Pliocene, Late Pliocene)

Kusworo, A., L.D. Santy & A.J. Widiatama (2017)- Karakteristik ichnofosil pada endapan turbidit karbonat-silisiklastik Formasi Weda, Pulau Halmahera. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
('Characteristics of ichnofossil in carbonate-siliciclastic deposits of the Weda Formation, Halmahera Island'. Two deep marine trace fossils associations in 60m of Late Miocene Weda Fm turbiditic series in Lili River: Thalassinoides and Zoophycos-Chondrites)

Lallemand, S.E., M. Popoff, J.P. Cadet, A.G. Bader, M. Pubellier, C. Rangin, & B. Deffontaines (1998)- Genetic relations between the central and southern Philippine Trench and the Sangihe Trench. J. Geophysical Research 103, p. 933-950.
(On junction between C and S Philippine Trench and Sangihe Trench near 6°N. Model favors N extension of Halmahera Arc up to 8°N, with three segments offset left-laterally along NW-SE transform faults. Accretion of N segment to Mindanao Island at 4-5 Ma resulted in failure in Philippine Sea Plate. Sangihe deformation front recognized up to 7°N, but seems active only S of 6°N)

MacPherson, C.G., E.J. Forde, R. Hall & M.F. Thirlwall (2003)- Geochemical evolution of magmatism in an arc-arc collision; the Halmahera and Sangihe Arcs, eastern Indonesia. In: R.D. Larter & P.T. Leat (eds.) Intra-oceanic subduction systems; tectonic and magmatic processes, Geol. Soc. London, Spec. Publ. 219, p. 207-220.
(Molucca Sea Collision Zone site of collision of two active subduction systems. Both Halmahera subduction zone in E and Sangihe zone in W have subducted oceanic Molucca Sea Plate, now consumed. Both volcanic arcs active since Neogene and show increased evidence for sediment recycling as collision progressed)

Malaihollo, J.F.A. (1993)- The geology and tectonics of the Bacan region, East Indonesia. Ph.D. Thesis University of London, p. 1-406. *(Unpublished)*

Malaihollo, J.F.A. & R. Hall (1996)- The geology and tectonic evolution of the Bacan region, East Indonesia. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of SE Asia, Geol. Soc. London, Spec. Publ. 106, p. 483-497.
(Bacan near convergence Eurasian, Philippine Sea and Australian plates. Old? Sibela metamorphics with young isotope ages juxtaposed against Sibela ophiolite with Cretaceous isotope age with Oligocene-Miocene overprint. N Bacan oldest rocks low metamorphic U Eocene Bacan Fm arc volcanics and turbiditic volcaniclastics. Similar Lower Miocene sequence in S Bacan. Major Lower Miocene (~22 Ma) unconformity, representing Australian continent- Philippine Sea plate collision, overlain by shallow marine E-M Miocene limestones with interbeds of Amasing Fm volcaniclastic sands. U Miocene- Pleistocene Kaputusan Fm arc andesites from four eruption centres, shallow marine pyroclastic rocks and fringing coastal reef limestones. Volcanic rocks produced by E-ward subduction of Molucca Sea plate. Quaternary basalts related to movement along Sorong fault. Most of Bacan part of Philippine Sea plate since Cretaceous. Evidence for continental crust of Australian origin in Bacan area by E Miocene)

Matsuoka, K. (1981)- Dinoflagellate cysts and pollen in pelagic sediments of the northern part of the Philippine Sea. Bull. Fac. Liberal Arts, Nagasaki University Natural Science 21, 2, p. 59-70.

McCaffrey, R. (1982)- Lithospheric deformation within the Molucca Sea arc-arc collision- evidence from shallow and intermediate earthquake activity. J. Geophysical Research 87, p. 3663-3678.
(Local earthquake survey in Molucca Sea arc-arc collision zone. Concentration of earthquake foci in 10- 50km depth range in limited region under Talaud-Mayu Ridge suggests convergence between arcs proceeds by shortening within basement of intervening Molucca Sea plate)

McCaffrey, R. (1983)- Seismic-wave propagation beneath the Molucca Sea arc-arc collision zone, Indonesia. Tectonophysics 96, p. 45-57.

McCaffrey, R. (1991)- Earthquakes and ophiolite emplacement in the Molucca Sea collision zone, Indonesia. Tectonics 10, 2, p. 433-453.
(Earthquakes indicate high-angle (30-60°) thrust faults beneath Talaud-Mayu Ridge in Central Molucca Sea, penetrating at least 15 km into upper mantle and elevate pieces of crust and upper mantle at rapid rate. These pieces likely include thick ophiolites detached from Molucca Sea lithosphere. High seismic activity consistent with Molucca Sea accommodating much of Philippine-Eurasian convergence)

McCaffrey, R., E.A. Silver & R.W. Raitt (1980)- Crustal structure of the Molucca Sea collision zone, Indonesia. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands 1, American Geophys. Union (AGU), Geophys. Monograph 23, p. 161-178.
(online at: http://web.pdx.edu/~mccaf/pubs/mccaffrey_mol_sea_agu_1980.pdf)
(Scripps 1976-1977 Molucca Sea seismic refraction profiles showing thick low-velocity collision complex. Gravity models suggest steep upthrusted (up to 6 km) oceanic basement slab under Talaud- Mayu Ridge)

Micklethwaite, S., S. Feig, T. Falloon & S. Meffre (2012)- Subduction polarity reversal, complex slab interactions and rapid changes to arc extension: Halmahera island arc, Indonesia. In: Cause and effects of deformation in the lithosphere, Specialists Group in Tectonics and Structural Geology (SGTSG) Conf., Waratah Bay, Geol. Soc. Australia, v. 102, p. 89. *(Abstract only)*
(Active island arc of Halmahera located at polarity reversal between subducting Molucca and Philippines Sea Plates. Majority of active volcanic arc tied to subducting Molucca Sea Plate but in N arm of Halmahera arc diverges towards tip of Philippines subduction zone. Thrust faulting of Oligocene- Miocene rocks in S and C Halmahera, but not in N. Pliocene volcanism when subduction of Philippines Sea Plate initiated and interacted with subducting Molucca Sea Plate, also leading to high-grade epithermal gold deposits at Gosowong)

Micklethwaite, S. & D. Silitonga (2011)- Transient kinematic changes in epithermal systems: Toguraci deposit, Halmahera. In: Proc. 11th Biennial Conf. SGA, Townsville 2011, p.
(On Late Pliocene epithermal vein systems in Toguraci Au-Ag deposit of Gosowong goldfield, N Halmahera. Host rocks bimodal basaltic to andesitic volcanic lavas, volcaniclastics and diorites with zircon U-Pb isotopic ages of ~3.1-3.7 Ma. Epithermal mineralisation dated as 2.8-2.9 Ma)

Milsom, J., R. Hall & T. Padmawidjaja (1996)- Gravity fields in eastern Halmahera and the Bonin Arc; implications for ophiolite origin and emplacement. Tectonics 15, 1, p. 84-93.
(Classic large ophiolite bodies generally associated with large gravity anomalies. No large anomalies in ophiolitic fragmented terranes like E Halmahera-Waigeo terrane. Ophiolites probably Jurassic age and associated with Cretaceous- M Eocene island arc volcanics. Crust at least 20km thick, probably thickening in intra-oceanic island arc. Waigeo also has Oligocene volcanoclastics)

Milsom, J., L. Parson, D. Massom, G. Nichols, N. Sikumbang & B. Dwiyanto (1996)- Tectonics of the Palau-Halmahera- Waigeo triangle. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 385-395.
(Region E of Halmahera occupied by number of blocks of thickened island-arc crust and regions of deeper water underlain by oceanic crust. Geological history still obscure. East Philippine Sea Arc formed in Eocene; had E-W strike in Oligocene, now N-S alignment after rotation of Philippine Sea Plate. In earliest Miocene, a second arc terrane, which also included Eocene volcanics, welded onto New Guinea which at that time was 2000km S of present position)

Moore, G.F., D. Kadarisman, C.A. Evans & J.W. Hawkins (1981)- Geology of the Talaud Islands, Molucca Sea collision zone, northeast Indonesia. J. Structural Geol. 3, p. 467-475.
(Talaud Islands at N margin of collision zone between Sangihe and Halmahera island arc systems. Oldest rock units are dismembered ophiolites and Early Miocene(?) tectonic melange with blocks of serpentinite, M Eocene radiolarian chert, etc. Overlain by folded, W-verging M Miocene-Pleistocene marine sediments)

Moore, G.F., D. Kadarisman & Sukamto (1980)- New data on the geology of the Talaud Islands, Molucca Sea. Bull. Geol. Res. Dev. Centre 13, p. 5-12.
(Talaud islands at N end of Molucca Sea with E-dipping slabs of ophiolite in tectonic melange, associated with M Eocene cherts and limestones. Overlain by moderately deformed, very deep marine M Miocene- Pliocene sediments. Talaud ophiolites interpreted as fragments of Eocene or older oceanic crust and mantle, emplaced into forearc terrane in Early Miocene. Talaud Island block uplifted >2000m since Pliocene)

Moore, G.F. & E.A. Silver (1983)- Collision processes in the northern Molucca Sea. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands 2, American Geophys. Union (AGU), Geophys. Monograph 27, p. 360-372.
(Collision zone between two facing island arcs. W Mindanao Arc collided in mid-Tertiary with E Mindanao Arc. Thick sediments, presently being deformed in Molucca Sea collision zone, eroded from New Guinea and Halmahera in S and from collision zone in Mindanao. Substantial strike-slip motion during collision. Two new subduction zones at Cotabato and Philippine trenches are propagating S-ward)

Morrice, M.G. (1982)- Mineralogy, petrology and geochemistry of the Sangihe Arc; volcanism accompanying arc- arc collision in the Molucca Sea, Indonesia. Ph.D. Thesis University of California, Santa Cruz, p. 1-363.

Morrice, M.G. & J.B. Gill (1986)- Spatial patterns in the mineralogy of island-arc-magma series-Sangihe-Arc, Indonesia. J. Volcanology Geothermal Res. 29, p. 311-353.
(500km long Sangihe arc is W part of two colliding arcs in NE Indonesia. Andesites dominate. Plagioclase basalts at S volcanic front evolve to two-pyroxene andesites. Augite basalts behind volcanic front and to N where collision more complete, evolve to hornblende andesites. Percentage of mantle fusion highest at S volcanic front)

Morrice, M.G., P.A. Jezek, J.B. Gill, D.J. Whitford & M. Monoarfa (1983)- An introduction to the Sangihe arc: volcanism accompanying arc-arc collision in the Molucca Sea, Indonesia. J. Volcanology Geothermal Res. 19, p. 135-165.
(In Molucca Sea region Sangihe and Halmahera arcs presently colliding (earth's only example of collision between facing volcanic arcs). Collision more advanced in N Molucca Sea where back-arc thrusting occurs along Cotobato and Philippine trenches and volcanic centers are inactive and dissected. Sangihe Arc ~500 km long, from NE tip of Sulawesi to Mindanao, Philippines, with 25 Quaternary volcanic centers. Active volcanic belt 70 km wide, 100-180 km above top of W-dipping Benioff zone. Rockes range from basalt to rhyolite, mainly andesites. Tholeiitic suites confined to S volcanic front. Calc-alkaline suites throughout arc. S to N increase in LIL-elements without corresponding changes in Sr-isotopes interpreted as decreasing partial melting N-ward)

Morris, J.D., P.A. Jezek, S.R. Hart & J.B. Gill (1983)- The Halmahera island arc, Molucca Sea collision zone, Indonesia: a geochemical survey. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands, 2, American Geophys. Union (AGU), Geophys. Monograph 27, p. 373-387.
(W Halmahera volcanic arc above 45° E-dipping Benioff zone, present down to 230 km. Three regions with distinct chemistry and tectonic setting. Most volcanoes part of calc-alkaline oceanic segment. Continental suite on Bacan reflects intersection of oceanic arc with continental fragment. Origin of alkaline rocks on inactive volcanic islands along Sorong Fault zone unclear)

Nichols, G.S. & R. Hall (1991)- Basin formation and Neogene sedimentation in a backarc setting, Halmahera, eastern Indonesia. Marine Petroleum Geol. 8, p. 50-61.

(Halmahera Basin formed by subsidence of thickened crust of imbricated Mesozoic-Paleogene arc and ophiolite rocks. In Miocene basement complex formed thickened crust on which reef and reef-associated sediments were deposited, similar to Philippine Sea Plate plateaux and ridges. Late Miocene convergence between Philippine Sea Plate- Eurasian margin resulted in formation of Halmahera Trench to W. Subduction of Molucca Sea Plate at trench caused development of volcanic island arc. Subsidence in back-arc area produced sedimentary basin filled by clastics eroded from arc and uplifted basement and cover rocks. Basin asymmetric, thickest sediments on W side, against volcanic arc. Halmahera Basin modified by Plio-Pleistocene E-W compression as Molucca Sea Plate was eliminated by subduction).

Nichols, G., R. Hall, J. Milsom, D. Masson, L. Parson, N. Sikumbang, B. Dwiyanto & H. Kallagher (1990)- The southern termination of the Philippine Trench. Tectonophysics 183, p. 289-303.
(Philippine Trench in process of propagating S and some of ESE-WNW convergence is transferred via broad NE-SW zone of dextral strike-slip across N Halmahera into Molucca Sea Collision Zone. E Halmahera-Waigeo Ophiolite Terrane area of shallow water and islands underlain by ophiolitic basement between Halmahera and Sorong Fault Zone. Halmahera is in diffuse boundary zone at margin of Philippine Sea Plate)

Nichols, G., Kusnama & R. Hall (1991)- Sandstones of arc and ophiolite provenance in a backarc basin, Halmahera, eastern Indonesia. In: A.C. Morton, S.P. Todd & P.D.W. Haughton (eds.) Developments in sedimentary provenance studies, Geol. Soc., London, Spec. Publ. 57, p. 291-303.
(Late Neogene backarc basin on Halmahera distinctive detrital sandstones mineral assemblages. Quartz extremely rare, indicating no input from continental sources. Two provenance areas: volcanics in W half of basin and black sands of ultrabasic origin interbedded with carbonate mudstones in E of basin. These reflect nature of terrains which bordered Halmahera Basin)

Olberg, D.J. (2001)- Ore shoot targeting in the Gosowong vein zone, Halmahera, Indonesia. Masters Econ. Geol. Thesis, University of Tasmania, p. 1-227.
(online at: http://eprints.utas.edu.au/11602/2/Whole-Olberg%2C_2001_thesis.pdf)
(Gosowong gold mineralization in N arm of Halmahera low-sulfidation epithermal quartz vein deposit with strike length of ~400m, hosted in two S-plunging ore shoots in ?Late Miocene Gosowong Fm andesitic-dacitic volcanics, along E-dipping normal fault.)

Olberg, D.J., J. Rayner, R.P. Langmead & J.A.R. Coote (1999)- Geology of the Gosowong epithermal gold deposit, Halmahera, Indonesia. In: G. Weber (ed.) Proc. PACRIM '99 Congress, Bali 1999, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, Publ. 4/1999, p. 179-185.
(Gosowong deposit classic low-sulphidation epithermal copper-gold porphyry in Neogene Halmahera magmatic arc. Elongate dome formed by magma intrusion. Host rocks ?Late Miocene intermediate-basic volcanics and volcaniclastics. Multiphase epithermal quartz-adularia and quartz-chlorite fissure veins, breccias, and stockworks)

Palmer, M.R. (1991)- Boron- isotope systematics of Halmahera arc (Indonesia) lavas: evidence for involvement of the subducted slab. Geology 19, 3, p. 215-217.
(Sediments and altered oceanic crust are enriched in boron and cesium relative to uncontaminated mantle products. Combination of B-isotopes and Cs concentrations in Halmahera arc lavas suggests influence by fluids derived from dehydration or melting of subducted slab)

Permanadewi, S., J. Wahyudiono & A. Tampubolon (2017)- Cebakan nikel laterit di Pulau Gag, Kabupaten Raja Ampat, Provinsi Papua Barat. Bul. Sumber Daya Geologi 12, 1, p. 55-70.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
('Lateritic nickel deposit on Gag Island, Raja Ampat Regency, West Papua Province'. Lateritic nickel (Ni, Co, Fe) deposits cover 2/3 of Gag island, derived from weathering of ultramafic rocks (serpentinite, harzburgite and pyroxenite). Ophiolite complex oceanic crust tectonically emplaced onto continental margin and island arc. Secondary nickel ore garnierite. Lateritic zone with 1.2% Ni. Iron >30% Fe in limonitic layer)

Priadi, B., H. Permana, R. Binns & I. Zulkarnain (2006)- Maselihe Volcano: a new discovery submarine volcano in the Sangihe Arc, Eastern Indonesia. Volcano International Gathering, Yogyakarta 2006, p.

Priadi, B., I. Zulkarnain, R. Binns, H. Permana, I. Prasetyo et al (2004)- Oceanic-island alkaline volcanism among submarine volcanoes along the Sangihe Arc, Eastern Indonesia. Proc. Asia Oceania Geoscience Seminar, Singapore 2004, p.

Prihatmoko, S., H. Lubis & E. Suherman (2013)- Mineral district of Bacan Island, North Maluku: geology and gold-copper exploration status. In: Papua & Maluku Resources, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv., Bali, p. 65-88.
(Same paper as below)

Prihatmoko, S., H. Lubis & E. Suherman (2014)- Mineral district of Bacan Island, North Maluku: geology and gold-copper exploration status. Majalah Geol. Indonesia 29, 3, p. 199-224.
(Bacan islands SSW of Halmahera several tectonic domains and magmatic arcs since pre-Eocene. Incl. Eocene-E Miocene Bacan Fm volcanic arc (N-ward subduction of Australian Plate under Philippine Sea Plate). Collision of Australian continental fragment (Sibela Metamorphics) with volcanic arc in M Miocene. Late Miocene- Pliocene Kaputusan Fm arc volcanics, produced by E-ward subduction of Molucca Sea Plate under Halmahera, and Quaternary volcanics. Mineralization types in Bacan Fm include porphyry copper-gold, skarn metasomatism and polymetallic veins. High-sulphidation epithermal mineralization in Kaputusan Fm)

Prihatmoko, S. & F.E. Nugroho (1998)- Tertiary volcanic and intrusive rocks in Obi Island, Maluku Indonesia and related hydrothermal mineralization. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Sumberdaya Mineral Energi, Yogyakarta, p. I 29-I 45.
(Obi islands between two strands of Sorong Fault zone. Pre-Tertiary with Triassic- Jurassic micaceous sandstones with Pentacrinus and Eocene-Miocene volcanics more similar to W Papua Birds Head than to W Halmahera volcanic arc. Three mineralized prospects)

Pringle, I.J. (1989)- Exploration for epithermal gold mineralisation in West Halmahera- Bacan island area, North Maluku Province. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology Mineral and Hydrocarbon Resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 291-299.
(Stream sampling located 16 gold/ metal anomalies in W Halmahera and Bacan, hosted by Tertiary andesitic lavas. Bacan Island mainly Tertiary volcanics with uplifted core of Sibela Fm high-grade metamorphics)

Pubellier, M., A.G. Bader, C. Rangin, B. Deffontaines & R. Quebral (1999)- Upper plate deformation induced by subduction of a volcanic arc: the Snellius Plateau (Molucca Sea, Indonesia and Mindanao, Philippines). Tectonophysics 304, 4, p. 345-368.
(N Molucca Sea incipient subduction of composite oceanic- arc volcanic block (Snellius-Halmahera- SHB) beneath Sangihe Arc outer ridge. In Mindanao, convergence generated shortening of forearc basin and backthrusting of SHB. Classic system of paired subduction (Philippine Trench) and strike-slip fault (Philippine Fault) was installed. Transition from lithospheric subduction to crustal overthrusting where Philippine Trench s.s. begins, coinciding with offshore extension of Philippine Fault. Reversal of thrusts from E-ward vergence in Molucca Sea to W-ward vergence in Mindanao at latitude where forearc is uplifted and downgoing SHB crust deepens, resulting in strong gravity low above accretionary wedge)

Pudjowalujo, H. & D. Bering (1982)- Rock multi element geochemistry at the copper- gold anomaly in Kaputusan (Bacan Island), Moluccas, Indonesia. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, AAPG, p. 303-324.
(Gold-copper anomaly 12 km NE of Kaputusan village (Bacan Island, W of Halmahera) tied to presence of porhyry copper mineralization. Bacan Island composed mainly of Oligo-Miocene intermediate volcanics)

Pudjowaluyo, H. & N. Suryono (1982)- Mineralisasi logam tembaga di Hulu S. Kaputusan, P. Bacan, Maluku Utara. Geologi Indonesia (IAGI) 9, 1, p. 28-35.
(Copper mineralization at Kutusupan, Bacan island)

Purwanto, H.S. & S. Agustini (2014)- Lateritisasi nikel Pulau Pakal, Kabupaten Halmahera Selatan, Provinsi Maluku Utara. J. Ilmiah Magister Teknik Geologi (UPN) 7, 1, 15p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/268/231)
(Nickel lateritization of Pakal Island, South Halmahera Regency, North Maluku Province'. Nickel laterite study in weathered ultramafic rocks in S part of Pakal island. Weathering of non-serpentinized rocks faster than serpentinites. Enriched Ni >1.5 % in saprolite zone and transition zone)

Rangin, G., D. Dahrin, R. Quebral & The MODEC Scientific Party (1996)- Collision and strike-slip faulting in the Northern Molucca Sea (Philippines and Indonesia): preliminary results of a morphotectonic study. In: R. Hall & D. Blundell (eds.) Tectonic evolution of southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 29-46.
(N Molucca Sea survey reveals presence of almost complete Sangihe arc and forearc, etc.)

Richards, T.H. & B.D. Priyono (2004)- Discovery of the Toguraci epithermal Au-Ag deposits, Gosowong Goldfield, Halmahera Island, East Indonesia. In: Proc. PACRIM 2004 Conf., Adelaide 2004, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, 5/2004, p. 359-366.
(Toguraci low sulfidation epithermal gold vein deposits 2 km WSW of Gosowong mine, part of Gosowong Goldfield in Neogene magmatic arc on Halmahera)

Richards, T.H., I.K.G. Suyadnya, N. Tyasmudadi, D. Darmawan & A. Muryanto (2005)- The discovery of the Kencana low sulfidation epithermal deposit, Gosowong goldfields, Halmahera, Island, East Indonesia. In: Proc. NewGen Gold Conference, Perth, p. 151-167.

Roberts, S.J. (1993)- The foraminiferal biostratigraphy and biofacies of the Neogene sediments of the Halmahera region, NE Indonesia. Ph.D. Thesis University of London, p. 1-287. *(Unpublished)*

Roothaan, H.P. (1928)- Geologische en petrografische schets der Talaud en Nanusa eilanden. Jaarboek Mijnwezen Nederlandsch-Indie 54 (1925), Verhandelingen II, p. 174-220.
('Geologic and petrographic sketch of Talaud and Nanusa Islands'. Islands mainly composed of igneous core, of mainly gabbros and peridotites, with thin sediment cover (probably Mesozoic radiolarian chert, breccias, overlain by presumably Tertiary unfossiliferous sandstones and marls). With 1:200,000 map)

Ryan, M., H. Butcher, T. Halvorsen, L.W. Kuilman, J. Demichelis, Sayentika, A. Jansson et al. (2012)- An early look at the hydrocarbon prospectivity of the Halmahera Basin, Eastern Indonesia. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-078, p. 1-14.
(On Halmahera II PSC in Halmahera frontier basin acreage. Prospective plays Oligocene/Miocene carbonate reefal buildups and Miocene re-deposited carbonates. Potential source rocks source rock marine Miocene Klamogun and Klasafet-equivalent formations (but see also Yustiana et al. 2016))

Sartono, S. & S. Hadiwisastra (1989)- Ophiolitic melange in Gebe Island and its olistostromal origin. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 157-169.
(Gebe Island between Halmahera and Waigeo with nickel-chromite deposits. Chaotic basement complex overlain by U Miocene-Pliocene bioclastic limestones. Basement probably olistostrome, with ultrabasic and metamorphic clasts and probably Eocene- E Miocene age)

Setyanta, B. & I. Setiadi (2011)- Model struktur subduksi kerak di perairan Laut Maluku dan vukanisme berdasarkan analisis gaya berat dan kegempaan. J. Sumber Daya Geologi 21, 4, p. 213-223.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/148/144)
('Model of crustal subduction structure in Molucca Sea waters and volcanism by analysis of gravity and seismicity'. N-S Bouguer anomalies of -100 to 260 mGal. Gravity modelling indicates subducting slab under Halmahera steeply dipping E, while in W part (below N arm of Sulawesi) it is not visible)

Silitonga, D. (2013)- Characteristics of Gosowong goldfields epithermal deposits. Proc. Indonesian Soc. Econ. Geol. (MGEI) Annual Conv. 2013, Papua & Maluku Resources, Bali, p. 115-124.

Silitonga, P.H., H. Pudjowalujo & H. Mollat (1981)- Geological reconnaissance and mineral prospecting on Bacan Island (Moluccas, Indonesia). In: A.J. Barber & S. Wiryosujano (eds.) The geology and tectonics of eastern Indonesia, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 373-381.
(Bacan Island oldest rocks intensely deformed mica schists and amphibolites and associated ultrabasic rocks of unknown age and NNE-SSW foliation. Oldest dated rocks probably Late Oligocene- Early Miocene age submarine andesites intruded by granodiorites and with intercalated coral limestones. Volcanic series overlain byE-M Miocene marine clastics with common volcanic detritus, overlain by Late Tertiary- Quaternary Young volcanics. Recent coral reefs raised to 700m above sea level)

Silver, E.A. & J.C. Moore (1978)- The Molucca Sea collision zone, Indonesia. J. Geophysical Research 83, B4, p. 1681-1691.
(Same as Silver & Moore 1981. N- trending Sangihe and Halmahera volcanic arcs face each other and underlain by opposing Benioff zones. Talaud-Mayu Ridge between arcs consists exclusively of deformed rocks, and underlain by at least 8-10 km of low-density material. Length of lithosphere subducted by colliding arcs >1000 km (length of Benioff zones). Obduction of melange and ophiolite belts against island arcs or continental margins. Central part of mostly submarine Talaud-Mayu ridge 1-3 km higher than flanking troughs. Two opposing vergence directions in rocks of collision complex: (1) during subduction, verging away from arcs, (2) during present phase of collision, verging towards arcs)

Silver, E.A. & J.C. Moore (1981)- The Molucca Sea collision zone. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 327-340.
(Scripps 1977 seismic profiles across Molucca Sea. Molucca Sea zone of crustal collision bordered by N trending Sangihe and Halmahera volcanic arc underlain by opposite-dipping Benioff zones. Length of Benioff zones suggest at least 1000km of subducted lithosphere. At least 8-10 km of low-density collisional melange material, now exposed on Talaud, Mayu, Tifoe islands)

Sodik, A., M.G. Rukmiati & J. Purnomo (1993)- Hydrocarbon potential of frontier Weda Basin, South East Halmahera. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 653-663.
(Southernmost Halmahera metamorphic terrane is microcontinent derived from Irian Jaya (Kemum?), moved W along Sorong FZ. E arms of Halmahera are Jurassic-age ophiolite terrane. Up to 5000m of sediment in Weda basin, offshore SE Halmahera, with Miocene carbonates as main potential play)

Soeria Atmadja, R. (1981)- Ophiolites in the Halmahera paired belts, East Indonesia. In: A.J. Barber & S. Wiryosujano (eds.) The geology and tectonics of eastern Indonesia. Geol. Res. Dev. Centre Indonesia, Spec. Publ. 2, p. 363-372.
(Halmahera is connected double arc. N and S arms are W volcanic arc, mainly Quaternary volcanics, Neogene marine sediments and Oligo-Miocene volcanics. NE and SE arms large ophiolite belt (subduction zone ophiolite) with ultramafic rocks imbricated with Mesozoic deep water sediments and E Tertiary rocks)

Soeria-Atmadja, R. & R. Sukamto (1979)- Ophiolitic rock association on Talaud islands, East Indonesia. Bull. Geol. Res. Dev. Centre 1, p. 17-35.
(Ophiolite rocks as isolated blocks in melange complex, with scaly clay matrix)

Suasta, I.G.M. & G. Hartono (2011)- Kaputusan porphyry copper-gold project, Bacan island. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-096, 19p.
(Kaputusan copper-gold porphyry prospect on Bacan Island comprised of volcanic rocks intruded by three types of Neogene intermediate intrusive rocks)

Sukamto, R. (1980)- Tectonic significance of melange on the Talaud islands, Northeastern Indonesia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia 21, Symposium Tsukuba 1978, University of Tokyo Press, p. 291-302.
(Talaud Islands part of N-S trending non-volcanic outer arc between Sangihe and Halmahera island arcs in Molucca Sea N of E Sulawesi. Melange basement of intensely tectonized peridotites, gabbros, pillow basalts, metamorphic rocks, greywacked and red pelagic sediments (blocks in matrix of scaly clay). Overlain by M Miocene- Pliocene marine sediments)

Sukamto, R. (1989)- Halmahera, a typical Cainozoic volcanic island arc in eastern Indonesia. Geologi Indonesia (IAGI) 12, 1 (Katili volume), p. 177-191.
(Halmahera volcanic in W, related to subduction of Molucca Sea in W. Eastern province non-volcanic, characterized by common ophiolites imbricated with Late Jurassic- Cretaceous deep water sediments. Western arc three magmatic cycles: Late Oligocene- E Miocene, Plio-Pleistocene and Holocene.

Sukamto, R., T. Apandi, S. Supriatna & A. Yasin (1981)- The geology and tectonics of Halmahera Island and surrounding areas. In: A.J. Barber & S. Wiryosujano (eds.) The geology and tectonics of eastern Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 349-362.
(Halmahera area three sub-parallel N-S 'arcs': (1) E Halmahera- Waigeo non-volcanic arc with imbricated Jurassic-age ophiolites and Late Jurassic-Cretaceous deep sea sediments, overlain by Paleogene flysch-type rocks with ultramafic clasts and limestones with Eocene Ta-Tb forams. In SE arm also coal interbeds (2) W Halmahera- Obi volcanic arc, intermittently active since Oligocene and (3) Talaud- Tifore Ridge in Molucca sea composed of imbricated ?Eocene ophiolites and melange)

Sukamto, R. & N. Suwarna (1976)- Melange di daerah Kepulauan Talaud, Indonesia Timurlaut. Proc. 5th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, Geologi Indonesia 2, p. 19-27.
('Melange in the Talaud Islands region'. See also Sukamto 1980)

Sukamto, R. & N. Suwarna (1979)- Tectonic significance of melange on the Talaud Islands, Northeastern Indonesia. Bull. Geol. Res. Dev. Centre 2, p. 7-19.
(Talaud-Tifore Ridge is zone of collision between two island arc systems, Sangihe to W, Halmahera to E. Talaud island melange basement consists of blocks of serpentinized peridotite, gabbro, pillow basalt, metamorphic rocks, greywackes, chert, limestone, etc., all tectonized in pervasively sheared mass. Overlain by M Miocene- Pliocene marine sediments)

Sukamto, R. & N. Suwarna (1986)- Geologic map of the Talaud Quadrangle, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Also 2nd Edition, 1995. Geologic map of Talaud islands in Molucca Sea, NE of NE Sulawesi. Mainly intensely faulted Neogene sediments (ENE-dipping faults) and Karakelang melange, with large blocks of ultramafic rocks (Kabaruang Fm) (= uplifted accretionary prism?). Overlain by Oligo-Miocene Pampini Volcanics and E Miocene Tifore Fm marine sediments)

Suparan, P., R.A.C. Dam, S. van der Kaars & T.E. Wong (2001)- Late Quaternary tropical lowland environments on Halmahera, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 171, p. 229-285.

Supriatna, S. (1980)- Geologic map of the Morotai Quadrangle, North Maluku. Geol. Res. Dev. Centre (GRDC), Bandung, p.
(Geologic map of N part of Halmahera, 1:250,000 scale. NW Arm mainly Quaternary volcanics. NE Arm with Pretertiary Ultrabasic complex, overlain(?) by Upper Cretaceous sediments with Globotruncana and Oligo-Miocene Bacan Fm andesitic volcanics with limestones with Miogypsina)

Supriatna, S., T. Apandi & W. Simandjuntak (1977)- Geologic map of Waigeo Quadrangle, Irian Jaya, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p.

(Geologic map of Waigeo and Gebe islands, NW of West Papua Birds Head. Also as 1995 second edition. Intensely folded structure, with widespread Jurassic? ultramafic rocks, overlain by Late Jurassic? Tanjung Bomas Fm deep marine greywacke, shale and chert with Calpionella and Microglobigerina)

Sutisna, D.T., D.N. Sunuhadi, A. Pujobroto & D.Z. Herman (2006)- Perencanaan eksplorasi cebakan nikel laterit di daerah Wayamli Teluk Buli, Halmahera Timur sebagai model perencanaan eksplorasi cebakan nikel laterit di Indonesia. Bul. Sumber Daya Geologi 1, 3 p. 48-56.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/554)
(Planning of nickel laterite exploration in Wayamli area, Buli Bay, East Halmahera, as a planning model of laterite nickel exploration in Indonesia)

Swift, L.R. & M. Alwan (1990)- Discovery of gold-silver mineralization at Binabase, Sangihe Island, Indonesia. Proc. Pacific Rim Congress (PACRIM90), Australian Inst. Mining Metallurgy (AusIMM), Parkville, p. 533-540. *(Extended Abstract)*
(Gold prospect on Sangihe Island (see also Wisanggono et al. 2012))

Syafrizal (2009)- Morphology and geologic structure control of nickel laterite deposition: case study nickel laterite deposit in the Gee Island and Pakal Island, East Halmahera, North Maluku. In: L.D. Setijadi et al. (eds.) Int. Conf. Earth Science and Technology, Yogyakarta 2009, p. 219-226.
(Laterite is weathering product of ultramafic rocks. Maxumum thickness of soil on Gee Island 9m, on Pakal island up to 17m)

Syefriandi & W. Akhmad F. (2013)- Tertiary Halmahera carbonate outcrop and the implications for the Halmahera Basin petroleum system. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-031, p. 1-13.
(Limestone outcrops in SE arm of Halmahera, on Cretaceous peridotite basement. Two different ages: (1) Batugamping Fm Eocene reef limestones with Pellatispira, Nummulites, and (2) Weda Fm E-M Miocene detrital limestone with Miogypsina?)

Totok, D. & G. Friedrich (1988)- Chromite potential of the nickel laterite deposit of Gebe/ Mollucas (Indonesia). Erzmetall 41, 11, p. 564-569.
(Up to 19m thick laterite profile on ultramafic rocks of Gebe Island rich in Cr, Ni)

Umbgrove, J.H.F. (1938)- Corals from an elevated marl of Talaud (East Indies). Zoologische Mededelingen, Leiden, 20, p. 263-274.
(online at: www.repository.naturalis.nl/document/150648)
(Corals collected by Kuenen during Snellius expedition from marine marl near Mahammale, Talaud Island. Well preserved, 15 species, all still living, so young, probably Pleistocene- Holocene age)

Uneputty, H., S. Supriatna & F. Hehuwat (1991)- Evaluasi stratigrafi wilayah Halmahera dan kaitannya dengan potensi hidrokarbon. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung 1990, 1, p. 52-68.
('Evaluation of Halmahera stratigraphy and relation to hydrocarbon potential'. In East ?Jurassic-age ophiolitic rocks overlain by U Cretaceous carbonates and Paleo-Eocene clastics. Weda Bay possibly 6000m of sediments)

Van der Ent, A., A.J.M. Baker, M.M.J. van Balgooy & A. Tjoa (2013)- Ultramafic nickel laterites in Indonesia (Sulawesi, Halmahera): mining, nickel hyperaccumulators and opportunities for phytomining. J. Geochemical Exploration 128, p. 72-79.
(Sulawesi and Halmahera have some of largest surface exposures of ultramafic bedrock in world, with proven and potential for phytomining. Phytomining extracts residual nickel from stripped land)

Vening Meinesz, F.A. (1961)- Orogeny in the New Guinea, Palao, Halmaheira area (geophysical conclusions). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B64, p. 240-244.

(Mountain range of New Guinea not essentialy folded, but is huge block overthrust from N with some E-ward displacement. Deforming stress believed to mantle current rising under Asia, moving to ~N160°E), in New Guinea diverging to ~N135°E. No current radiating from Australian continent)

Verbeek, R.D.M. (1908)- Halmahera. In: Molukken Verslag, Jaarboek Mijnwezen Nederlandsch Oost-Indie 37 (1908), Wetenschappelijk Gedeelte, p. 154-176.
(First significant geologic survey of Halmahera in 1899, describing main patterns of island geology with abundant Mesozoic or older ultrabasics in C and E part of island, mainly andesitic volcanics in W. Presence of Eocene alveolinid limestone in float at E coast reported by Van Nouhuys (1903), Miocene Lepidocyclina limestone, etc.)

Verstappen, H.T. (1964)- Some volcanoes of Halmahera (Moluccas) and their geomorphological setting. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 81, p. 297-316.
(Brief descriptions of some of the active volcanoes in the N-S curved belt of NW and W Halmahera. NE and SE peninsulas part of non-volcanic arc)

Wanner, J. (1913)- Zur Geologie der Inseln Obimajora und Halmahera in den Molukken. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 36, p. 560-585.
('On the geology of Obi and Halmahera islands in the Moluccas'. Halmahera with many localities with ultrabasic rocks and andesitic volcanics. Little known Obi Island S of Halmahera with in SW corner along Akelamo River claystones with M Jurassic ammonites Phylloceras, Stephanoceras and Macrocephalites. Also Miocene limestone with Lepidocyclina and Miogypsina, gabbro and peridotites, granites, andesites, etc. Raised young coral reefs to ~300m)

Watanabe, T. (1960)- Report on the asbestos in Halmahera island. Geological Survey Indonesia, Unpublished Report 43/dm, p. .

Wicaksono, A., W.A. Faridsyah & F.D. Priasmara (2012)- Depositional facies and structural analysis based on field observation of Fritu Area, Halmahera Island. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-SG-010, p. 1-14.
(Fieldwork on SE Halmahera encountered peridotites and sediments, incl. M Eocene reefal limestone with Pellatispira and E Miocene(?) limestone)

Wichmann, A. (1898)- Petrographische Studien uber den Indischen Archipel. III. Gesteine von der Insel Gagi, IV. Gesteine von der Insel Banua Wuhu. Natuurkundig Tijdschrift Nederlandsch-Indie 57, 2, p. 196-220.
(online at: http://62.41.28.253/cgi-bin/)
('Rocks from the island Gagi and the island Banua Wuhu'. Gagi (Gag) island (E of Halmahera and W of Waigeo) with lherzolite/ serpentinite at SE coast and diabase. Banua Wuhu new andesitic volcano N of N Sulawesi)

Wichmann, A. (1921)- Die Vulkane der Sangi-Inseln. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam (2), 22, 1, p. 3-52.
(online at: https://dspace.library.uu.nl/handle/1874/298342)
('The volcanoes of the Sangi Islands', between Molucca Sea and Celebes Sea)

Widiwijayanti, C., V. Mikhailov, M. Diament, C. Deplus, R. Louat, S. Tikhotsky & A. Gvishiani (2003)- Structure and evolution of the Molucca Sea area: constraints based on interpretation of a combined sea-surface and satellite gravity dataset. Earth Planetary Sci. Letters 215, p. 135-150.
(online at: www.ifz.ru/fileadmin/user_upload/subdivisions/507/articles/Widiwijayanti-etal-EPSL.pdf)
(Gravity interpretation of Molucca Sea area, NE of Indonesia. Bouguer anomalies show extension of Sangihe Trench to N to 5.5°N, joining it to Pujada and Miangas ridge in S Mindanao. Also clear outline of Talaud Archipelago ophiolite body and bounding thrust zones. Results support hypothesis that Talaud Archipelago formed as uplifted Central Ridge block, partly caused by compression of docking of Snellius Plateau. Docking shifted Philippine Trench E-ward and underthrust slivers of forearc lithosphere below Talaud Islands)

Widiwijayanti, C., C. Tiberi, C. Deplus, M. Diament, V. Mikhailov & R. Louat (2004)- Geodynamic evolution of the northern Molucca Sea area (Eastern Indonesia) constrained by 3-D gravity field inversion. Tectonophysics 386, 3-4, p. 203-222.
(online at: http://www.gm.univ-montp2.fr/spip/IMG/pdf/tiberi2004tectono.pdf)
(N Molucca Sea dominated by interaction between ophiolitic ridges, sedimentary wedges and rigid blocks of Philippine Sea Plate. Large density variations in C part of N Molucca Sea. N-S trending density structures along C Ridge and W dipping thrust faults on W side of region clearly imaged. In E part of region several blocks, especially Snellius Plateau, split into two parts. We interpret this as oceanic plateau with thicker crust that previously belonged to Philippine Sea Plate, now trapped between Molucca Sea complex collision zone and Philippine Trench, due to development of new subduction zone at E side)

Widiyantoro, S. (2003)- Complex morphology of subducted lithosphere in the mantle below the Molucca collision zone from non-linear seismic tomography. Proc. ITB J. Engineering Science 35 B, 1, p. 1-10.
(online at: http://journal.itb.ac.id/index.php?li=article_detail&id=37)
(New tomographic P-wave model shows two opposing subducted slabs of Molucca Sea plate. W-ward dipping slab penetrates into lower mantle as folded slab, possibly caused by shift of whole subduction system in Molucca region toward Eurasian continent due to W-ward thrust of Pacific plate combined with left-lateral movement of Sorong fault)

Wisanggono, A., P. Abaijah, K. Akiro, D. Pertiwi & R.A. Sauzy (2011)- Supergene enriched, intrusion related low sulphidation deposit Binebase-Bawone, North Sulawesi, Indonesia. In: N.I. Basuki (ed.) Proc. Sulawesi Minerals Resources 2011, Manado, MGEI/IAGI, p. 131-144.

Wisanggono, A., P. Abaijah, K. Akiro, D. Pertiwi & R.A. Sauzy (2012)- Supergene enriched, intrusion related low suphidation deposit, Binebase-Bawone, North Sulawesi, Indonesia. J. Geologi Indonesia 7, 4, p. 241-253.
(online at: http://jgi.bgl.esdm.go.id/index.php/JGI/article/view/38/30)
(Same paper as Wisanggonono et al. 2011, above. Gold mineralization at Binebase Prospect on Sangihe Island similar to mineralization typical of other young Pacific Rim intrusion related low sulphidation systems)

Yasin, A. (1980)- Geologic map of the Bacan Quadrangle, North Maluku, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 9p.
(Bacan Island off S Halmahera with core of thick Sibela Fm metamorphics with NW-SE and W-E trending foliation. Unconformably overlain by Late Oligocene- earliest Miocene Bacan Fm volcanics and clastics and later Miocene- Pliocene clastics- volcanoclastics)

Yustiana, F., C. Zwach, D. Rahmalia & P.T. Allo (2016)- Halmahera Basin, Eastern Indonesia- hydrocarbon prospectivity in a frontier basin. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 34-TS-16, p. 1-23.
(Halmahera II PSC SE of Halmahera is in Tertiary deep water, undrilled frontier basin, now considered area with very high subsurface risk and lack of follow-up prospectivity. Basement most likely ophiolites and volcanics. Potential Miocene carbonate buildups now interpreted to be Oligocene thrust complexes. Clastic reservoir provenance likely dominated by volcanic rocks. No indications of active hydrocarbon system)

Zhang, Q., F. Guo, L. Zhao & Y. Wu (2017)- Geodynamics of divergent double subduction: 3-D numerical modeling of a Cenozoic example in the Molucca Sea region, Indonesia. J. Geophysical Research, Solid Earth, 122, 5, p. 3977-3998.
(Molucca Sea subduction zone in NE Indonesia in SE Asia is unique Cenozoic example of 'divergent double subduction' (DDS), under Halmahera and Sangihe arcs. Asymmetrical shape. DDS probably associated with closure of narrow and short oceanic plate; large-scale double subduction is rare in nature)

VI.2. Banggai, Sula, Taliabu, Obi

Agustiyanto, D.A. (1996)- The geology and tectonic evolution of the Obi region, Eastern Indonesia. M. Phil. Thesis, University of London, p. 1-220. *(Unpublished)*
(Obi located within strands of Sorong Fault system at Australian-Philippine Sea plate boundary. Oldest rocks metamorphic complex of phyllites, schists and gneisses, probably Paleozoic in age, in greenschist- amphibolite facies. Overlain by Triassic and Jurassic micaceous sandstones and black shales, considered derived from Australian continental margin. Ophiolitic rocks, of supposed Jurassic age, form basement of most of Obi region, are unconformably overlain by Cretaceous volcaniclastic rocks, limestones and mudstones. Juxtaposition of the ophiolitic and continental rocks in south Obi probably in Late Neogene)

Agustiyanto, D.A. (1998)- Geology of the Obi islands, Eastern Indonesia. J. Geologi Sumberdaya Mineral, 8, 81, p. 2-9.
(Obi islands consist of rocks from Australian (SW) and Philippine Sea (N)plates, juxtaposed in SW part of Obi Majora (in Oligocene or later?). Oldest rocks on Obi island Paleozoic or older 'Australian' Tapas metamorphic complex, regional metamorphic phyllites, mica- schists and gneisses in greenschist to amphibolite facies. Overlain by Triassic- Jurassic Soligi Fm (with Jurassic Pentacrinus) and Kumumu Fms micaceous sandstones and black shales (with Jurassic ammonites in float; Wanner 1913, M-U Jurassic palynomorphs). Most of Obi is 'Philippine Sea' plate with basement of?Jurassic ophiolite, unconformably overlain by U Cretaceous Leleobasso Fm deep water volcanoclastics, limestones and mudstones and Oligocene Anggai River Fm volcanoclastics. Unconformably overlain by E-M Fluk Fm limestone and unconformably overlain by Guyuti Fm M-L Miocene clastics and Woi Fm volcanics and clastics)

Ali, J.R. & R. Hall (1995)- Evolution of the boundary between the Philippine Sea plate and Australia: paleomagnetic evidence from eastern Indonesia. Tectonophysics 251, p. 251-275.
(Paleomagnetic data from Coniacian-Santonian pelagic limestones on Taliabu suggest paleolatitude at 19°± 6°, similar to Misool, suggesting Sula/Taliabu and Misool part of single microcontinent, >10° farther N than expected if attached to Australia, and implying region separated from Australia before Late Cretaceous)

Ali, J.R., R. Hall & S.J. Baker (2001)- Palaeomagnetic data from a Mesozoic Philippine Sea Plate ophiolite on Obi Island, Eastern Indonesia. J. Asian Earth Sci. 19, p. 535-546.
(Paleomag of Jurassic(?) age Halmahera ophiolite exposed on SW Obi Island suggest position close to equator in middle Mesozoic. K-Ar ages of ophiolite 96±10 Ma and 103±13 Ma regarded as minimum ages. Diorite intrusions Late Cretaceous ages)

Amiruddin (2000)- Peraluminous and metaluminous Permian-Triassic granitoids of the Banggai-Sula microcontinent and the Northern Australia continent in the Bird Head Papua. J. Sumber Daya Geologi 10, 110, p. 2-15.
(Permian- E Triassic granites on Banggai, Obi and Birds Head. Banggai granite (~225-245 Ma; Triassic) on Taliabu intruded into Carboniferous (~305 Ma) schists, gneiss amphibolite. Anggi granite (~225-295 Ma) in Kemum Terrane metasediments (metamorphosed at 222-258 Ma; Late Permian-Triassic. Netoni granite (225-245; M-L Triassic) in Sorong fault zone of Birds Head intruded low-middle metamorphic rocks. Banggai and Anggi granites mostly S-type, Netoni I-type. All are peraluminous and metaluminous and could be tin granites. Plutons part of magmatic arc extending from E Australia, PNG, W Papua to Banggai-Sula Archipelago)

Boehm, G. (1904)- Die Sudkusten der Sula-Inseln Taliabu und Mangoli. I. Grenzschichten zwischen Jura und Kreide. Palaeontographica, Suppl. IV, Beitrage Geologie Niederlandisch-Indien 1, p. 1-46.
('The South coast of the Sula islands Taliabu and Mangoli: 1- Transitional beds between Jurassic and Cretaceous'. First systematic descriptions of rich Sula islands ammonite-dominated Jurassic- Cretaceous macrofaunas. Incl. ammonites (Hoplites spp., Himalayites, Phylloceras strigile) and bivalves (Mytilus, Nucula). Noticed great similarities with 'Spiti-Fauna' Himalayan assemblages)

Boehm, G. (1907)- Die Sudkusten der Sula-Inseln Taliabu und Mangoli, 2. Der Fundpunkt am oberen Lagoi auf Taliabu. Palaeontographica, Suppl. IV, Beitrage Geologie Niederlandisch-Indien I, p. 47-58.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)

('The South coasts of the Sula islands Taliabu and Mangoli: 2- The fossil locality at the upper Lagoi on Taliabu'. Rich Late Jurassic belemnite assemblage of Belemnites gerardi group (B. alfuricus n.sp.))

Boehm, G. (1907)- Die Sudkusten der Sula-Inseln Taliabu und Mangoli. 3. Oxford des Wai Galo. Palaeontographica Suppl. Vol. IV, Beitrage Geologie Niederlandisch-Indien 1, p. 59-120.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
(*'The South coasts of the Sula islands Taliabu and Mangoli: 3- Oxfordian of the Galo River, Taliabu. Common ammonites (Phylloceras spp., Macrocephalites spp., Perisphinctes spp., Peltoceras), abundant belemnites (B. alfuricus, B. galoi, B. moluccanus, etc.), Inoceramus (I. galoi, etc.) and brachiopods (Rhynchonella))*

Boehm, G. (1912)- Die Sudkusten der Sula-Inseln Taliabu und Mangoli. 4. Unteres Callovien. Palaeontographica, Suppl. IV, Beitrage Geologie Niederlandisch-Indien 1, p. 121-179.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('The South coasts of the Sula islands Taliabu and Mangoli: 4- Lower Callovian. Belemnites mainly Dicoelites, ammonites mainly Macrocephalites (= Gondwanan-Tethyan or Himalayan bioprovince of later workers; JTvG))

Brouwer, H.A. (1915)- Over de geologie der Soela-eilanden (voorlopig reisbericht). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 32, p. 509-512
('On the geology of the Sula islands (preliminary travel report'. First, brief summary of 1915 survey, reporting widespread Jurassic outcrops, locally intensely folded, but not showing complicated thrust tectonics of Timor, Ceram, etc. Also granites and metamorphic rocks

Brouwer, H.A. (1921)- Geologische onderzoekingen op de Soela eilanden I. Jaarboek Mijnwezen Nederlandsch Oost-Indie, Verhandelingen 49 (1920), p. 69-158.
('Geological investigations on the Sula islands-1'. Intensely folded crystalline schists, unconformably overlain by M Jurassic quartz sandstones, at least partly derived from granitic rocks. Overlain by Callovian- Oxfordian marine shales with ammonites and Cretaceous pelagic limestones. Tertiary clastics with thin coaly beds and rare loose material of Miocene limestone. Also various types of granites, probably pre-Jurassic age.)

Brouwer, H.A. (1921)- Studien uber Kontaktmetamorphose, IX. Hornfelse von der Insel Taliabu (Sula-Inseln). Centralblatt Mineralogie Geologie Palaont. 1921, p. 417-422.
(online at: www.biodiversitylibrary.org/item/204060page/443/mode/1up)
('Studies on contact-metamorphism, 9. Hornfels from Taliabu Island, Sula Islands'. Granitic-dioritic rocks with biotite widespread in W and C Taliabu, with red feldspars similar to Banggai island granites, but not Mangoli granites. Many types of contact-metamorphic rocks: andalusite-, biotite-, epidote-, amphibole-, garnet-diopside-, etc. hornfels, possibly reflecting various Jurassic sedimentary protoliths, but actual contacts with granite not seen)

Brouwer, H.A. (1924)- Bijdrage tot de geologie der Obi-eilanden. Jaarboek Mijnwezen Nederlandsch-Indie 52 (1923), Verhandelingen, p. 5-62.
('Contribution to the geology of the Obi Islands'. Mesozoic rocks reminiscent of those from Sula, Buru, Misool. Possibly Triassic micaceous sandstones, M Jurassic phyllitic shales and marls with ammonites on SW Obi Besar, possibly Cretaceous pelagic limestones, E Miocene shallow carbonates, etc. Also serpentinites, crystalline schists and various igneous rocks)

Brouwer, H.A. (1926)- Geologische onderzoekingen op de Soela eilanden- II. Jaarboek Mijnwezen Nederlandsch Oost-Indie, Verhandelingen 54 (1925), 1, p. 3-11.
('Geological investigations on the Sula islands-2'. Brief descriptions of traverses on Taliabu and Mangoli islands. Outcrops mainly Jurassic- Lower Cretaceous, with common ammonites. Oldest rocks Upper Liassic. With table of macrofossil distribution at different localities by Kruizinga)

Challinor, A.B. & S.K. Skwarko (1982)- Jurassic belemnites from Sula Islands, Moluccas, Indonesia. Geol. Res. Dev. Centre, Seri Paleontologi 3, p. 1-89.

(17 belemnite species from M-L Jurassic of Sula Islands. Assemblages dominated by species of Belemnopsis, Dicoelites and Hibolithes, which, with absence of Tethyan genus Duvalia, suggest it is not low-latitude Tethyan, but higher latitude 'Austral'/'peri-Gondwanan' assemblage)

Ding, J., S.G. Zhang, Z.F. Xu & X.L. Qin (2011)- Geological and geochemical characteristics and genesis of the Sn-Fe polymetallic deposit in Taliabu Island, Indonesia. Acta Geoscientica Sinica 32, 3, p. 313-321. *(in Chinese, with English abstract)*
(online at: www.cagsbulletin.com/dqxbcn/ch/reader/create_pdf.aspx?file...)
(Large Sn-Fe polymetallic deposit in C Taliabu, Banggai-Sula islands, sourced from Triassic monzogranite derived from partial crustal melting. Mineralization in contact zone between granite and Carboniferous metasediments, including skarn type iron ore in contact with Carboniferous marble. Ore deposit belongs to E Australia metallogenic belt that moved to SE Asia)

Dipatunggoro, G. (2011)- Survey tinjau bahan galian nikel daerah Soligi, Kecamatan Obi Selatan, Kabupaten Halmahera Selatan, Maluku Utara. Bull. Scientific Contr. (UNPAD) 9, 2, p. 97-106.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8266/3813)
('Survey of nickel in Soligi area, South Obi, North Maluku'. Pretertiary ophiolite and metamorphics are oldest rock in W and S Obi Island. Nickel and cobalt-bearing laterite weathering zones at tops of hills)

Diria, S.A., W. Permono, J. Anwari, H. Purba & J.T. Musu (2017)- Uses of satellite gravity to map subsurface condition (case study : WK Sula II). Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(Gravity modeling of E Sula basin area suggests E Sula (Taliabu) island on continental crust, with oceanic crust to N and S. Basement depth in block from -954 to -10245m, gradually deepening to S. E-M Jurassic rift fill clastics (Bobong Fm) in N-S trending grabens)

Ferdian, F. (2015)- Frontier exploration using an integrated approach of seafloor multibeam, drop core and seismic interpretation- a study case from North Banggai Sula. Berita Sedimentologi 32, p. 27-34.

Ferdian, F., R. Hall & I. Watkinson (2010)- A structural re-evaluation of the North Banggai-Sula area, Eastern Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-009, 20p.
(2D seismic interpretation N of Banggai-Sula. No evidence of continuous E-W-trending N Sula-Sorong Fault)

Francis, G. & G.E.G. Westermann (1993)- The Kimmeridgian problem in Papua-New Guinea and other parts of the Indo-Southwest Pacific. In: G.J. & Z. Carman (eds.) Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 75-93.
(Sula Islands most complete Jurassic ammonite sequence in W Pacific. Oxfordian 3 zones. Lower zone in Wanaea spectabilis dinoflagellate zone, middle zone with upper W. spectabilis and upper zone with Wanaea clathrata dinozones. Ammonite-rich zone overlain by ammonite-poor zone, then latest Tithonian- earliest Berriasian assemblage with P. iehiense dinos. Uncertainties of correlation of Kimmeridgian due to scarcity of age-diagnostic Kimmeridgean ammonites)

Garrard, R.A., J.B. Supandjono & Surono (1988)- The geology of the Banggai-Sula microcontinent, Eastern Indonesia. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 23-52.
(Comprehensive overview of Banggai-Sula microcontinent stratigraphy and M Miocene- Pliocene collision with NE Sulawesi. Carboniferous-age metamorphic basement intruded by Late Permian- Triassic granite intrusives. Locally thick Mangole Fm Triassic volcanics affected by block faulting and unconformably overlain by Early Jurassic redbeds, then M Jurassic to Lower Cretaceous Buya Fm marine section and Late Cretaceous Tanamu Fm chalky pelagic marine sediments. Unconformably overlain by Eocene- M Miocene Salodik Fm platform carbonates. No record of Mio-Pliocene 'Sulawesi Molasse'. Raised Quaternary reefal carbonates up to 1000m. Wet gas seep in N Mangole, possibly tied to Jurassic coaly source)

Jaworski, E (1921)- Ein Beitrag zur Kenntnis des Untersten Doggers von Taliabu (Sula-Inseln). Jaarboek Mijnwezen Nederlandsch-Indie 49 (1920), Verhandelingen 2, p. 191-206.

('A contribution to the knowledge of the basal Dogger (= Middle Jurassic) of Taliabu, Sula islands'. Relatively poorly preserved molluscs (Rhynchonella, Pecten spp., Lima, Arca, etc.), Belemnites and ammonite fragment (Hammatoceras), indicative of Dogger/ Aalenian age)

Kadarusman, A., N.L. Basuki & R. Suria-Atmadja (1994)- Komplek batuan dasar Kepulauan Sula: sebuah studi pendahuluan. Proc. 30th Anniv. Symposium, R&D Centre for Geotechnology LIPI, V.1, p. 106-127.
('The basement complex of the Sula Islands: a preliminary study')

Kadarusman, A. & D.H. Natawidjaja (1995)- Komplek malihan di Kepulauan Sula, Maluku- suatu interpretasisi sejarah struktur dan metamorfisma. In: Proc. Seminar Sehari Geoteknologi dalam indistrialisasi, Puslitbang Geoteknologi LIPI, Bandung, p. 76-93
('The metamorphic complex in the Sula Islands, Moluccas; a historical interpretation of structure and metamorphism'. On Paleozoic(?) regional metamorphic rocks in outcrops on Mangole (amphibolite, granulite), Taliabu and Sulabesi (greenschist))

Khadafi, B.M., C. Danisworo & H.S. Purwanto (2013)- Potensi nikel sulphida daerah IUP Harita di Pulau Obi, Kabupaten Halmahera Selatan, Provinsi Maluku Utara. J. Ilmiah Magister Teknik Geologi (UPN) 6, 2, 8p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/262/224)
('Potential of nickel sulphides in the PT Harita area on Obi Island, S Halmahera, N Maluku Province')
(NW part of Obi Island mainly Mesozoic ultramafic rocks, overlain by Oligocene- E Miocene Bacan Fm andesitic volcanoclastics. Four areas on Obi Island with potential for nickel sulphide deposits and two for other mineralization)

Kholiq, A., R. Widiastuti, T. Bambang S.R. & I. Firdaus (2011)- Zonasi foraminifera plangtonik Kapur Akhir dari Formasi Tanamu, Desa Parigi, Taliabu Timur, Kepulauan Sula. Proc. Joint. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-108, 11p.
(Upper Cretaceous planktonic foraminifera zonation of the Tanamu Fm, Parigi Village, East Taliabu, Sula Islands'. Planktonic foraminifera zones in Tanamu Fm (unconformably on Upper Jurassic?) indicative of Lower Coniacian-Campanian: Dicarinella primitiva, D. concavata, D. asymetrica, Globotruncanita elevata and Globotruncana ventricosa zones. Good correlation with nannoplankton)

Klompe, T.H.F. (1954)- The structural importance of the Sula Spur (Indonesia). Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 110, p. 21-40.
(Summary of geology of N Moluccas, Ceram, Buru and Sula Spur (Banggai, Sula, and Obi islands region). Sula spur is remnant of western termination of Australian-New Guinea Variscan (Paleozoic) fold belt, which acted as obstacle during Tertiary crustal movements and caused the double loop in Banda fold arcs)

Klompe, T.H.F. (1956)- The structural importance of the Sula Spur (Indonesia). Proc. 8th Pacific Science Congress, Philippines 1955, 2A, p. 869-889.
(Same as Klompe 1954)

Koenadi, H.S. (1995)- Gempabumi tektonik di Selat Obi, Maluku Utara. J. Geologi Sumberdaya Mineral 5, 44, p. 12-24.
('Tectonic earthquakes in Obi Straits, N Moluccas')

Koolhoven, W.C.B. (1930)- Verslag over een verkenningstocht in den Oostarm van Celebes en de Banggai Archipel. Jaarboek Mijnwezen Nederlandsch-Indie 1929, Verhandelingen, p. 187-228.
(‘Report of a reconnaissance survey in the East arm of Sulawesi and the Banggai Archipelago’. Banggai islands basement crystalline schists intruded by granodiorites, unconformably overlain by E Miocene micaceous sandstones and limestones with Spiroclypeus and Miogypsina, unconformably overlain by ?Plio-Pleistocene Peling Limestone. M or Late Miocene folding event and up to 1000m Quaternary uplift)

Kruizinga, P. (1921)- De belemnieten uit de Jurassische afzettingen van de Soela eilanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 2, p. 161-189.

(The belemnites from the Jurassic deposits of the Sula Islands'. Jurassic belemnites collected by Brouwer, mostly float material. No confident age conclusions, possibly Callovian- Oxfordian. Mainly Belemnopsis gerardi Oppel (includes forms formerly described as Belemnites taliabicus, B soelarum, B. moluccanus and B. galoi by Boehm), Belemnopsis alfoericus, Belemnopsis indicus n.sp., Belemnopsis rumphii n.sp., Hibolites brouweri n.sp., H. lagoicus, H. verbeeki n.sp., Dicoelites sp.)

Kruizinga, P. (1926)- Ammonieten en eenige andere fossielen uit de Jurassische afzettingen der Soela eilanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 54 (1925), Verhandelingen 1, p. 13-85.
('Ammonites and some other fossils from the Jurassic deposits of the Sula islands'. M-L Jurassic cephalopods from Brouwer collection. Basal M Jurassic (Aalenian) in neritic facies, Bajocian- Tithonian in pelagic facies)

Kuenen, Ph.H. (1942)- Obilatoe, Kisar and Siboetoe. Contributions to the geology of the East-Indies from the Snellius Expedition II. Geologie en Mijnbouw 4, 11-12, p. 81-90.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0M0tDX2Uxbnh3cEE/view)
(Geological observations from short visits to islands of Obilatu, Kisar and Sibutu with 1929 Snellius Expedition. Obilatu composed mainly of basic-ultrabasic igneous rocks and some tuffs, similar to NW part of Obimajor. Evidence of recent submergence)

Kusnama (2008)- Fasies dan lingkungan pengendapan Formasi Bobong berumur Jura sebagai pembawa lapisan batubara di Taliabu, Kepulauan Sanana-Sula, Maluku Utara. J. Geologi Indonesia 3, 3, p. 161-173.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/229)
('Facies and depositional environment of the Jurassic Bobong Fm at the Taliabu coalfield, Sula islands, North Moluccas'. E-M Jurassic Bobong Fm lower part conglomerate facies, followed by fluvial quartz sandstone with claystones, changing to shallow marine claystone-mudstone. Upper section well exposed in W and N Taliabu Island. Coal beds in upper Bobong Fm of N Taliabu. Two seams 30-40 cm and 100-120 cm thick, sulfur 3-5%, fixed carbon 46-54%, ash 8-16%, subbituminous to high volatile bituminous rank)

Kusnama, E. Partoyo & Rusmana (2007)- Batubara Formasi Bobong Pulau Taliabu, Maluku Utara. Majalah Geologi Indonesia (IAGI) 21, p.
('Coal of the Bobong Formation, Taliabu Island, North Moluccas'. On E-M Jurassic coal of Sula Islands)

Lelono, E.B. & Nugrahaningsih (2012)- Australian palinomorphs from the Buya Formation of the Sula Island. Scientific Contr. Oil Gas, Lemigas, 35, 3, p. 115-127.
(online at: www.lemigas.esdm.go.id/id/pdf/scientific_contribution/…)
(Palynology of 1200m thick section of Jurassic marine Buya Fm of Mahigo River near Modafumi, Mangole Island, Sula Islands. Three microflora zones, from old to young: Contignisporites cooksoniae, Murospora florida and Retitriletes watheroensis zones. Four dinoflagellate zones, from old to young: Caddasphaera halosa, Wanaea clathrata- Wanaea indotata, Dingodinium swanense and Criboperidinium perforans zones. Omatia montgomeryi shown as ~Oxfordian-Kimmeridgean. Both zonations suggest age of Buya Fm Bathonian-E Tithonian, Middle- Late Jurassic. Palynomorph succession very similar to Australian NW Shelf)

Malod, J.A., J. Clermonte, J.P. Rehault, S. Burhanuddin, L. Sarmili, M. Villeneuve et al. (1993)- The South Sula fracture zone; a reactivated southern arm of the Sorong Fault (East Indonesia). In: 10th anniversary of the French-Indonesian cooperation in oceanography; ocean research, technology and maritime industry, Jakarta 1992, Ambassade de France en Indonesie, Adiwarna Citra, Bandung, p. 103-107

Martin, K. (1904)- Jungtertiare Kalksteine von Batjan und Obi. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, VII, p. 225-230.
(online at: www.repository.naturalis.nl/document/552413)
(Young Tertiary limestones from Bacan and Obi'. Occurrence of probably Early Miocene age limestone with common Lithothamnium, Lepidocyclina and Heterostegina in SW Bacan (associated with coal beds?). N-Central Obi limestones with same fauna (occurrences not reported by Verbeek 1899))

Nainggolan, D.A. (2015)- Pola anomali geomagnet daerah Pulau Taliabu dan Pulau Mangole, Maluku Utara. J. Geologi Sumberdaya Mineral 16, 2, p. 93-102.
(online at: http://kiosk.geology.esdm.go.id/artikel/pdf/pola-anomali-geomagnet-daerah-pulau-taliabu...)
('Geomagnetic anomaly pattern in the Taliabu and Mangole Islands, North Maluku'. Areas of unusually high magnetic anomalies in S)

Nasution, F.A., B. Nugroho, A. Krisyunianto & A. Bachtiar (2008)- Overview petroleum system of Taliabu-Mangole synrift in Sula sub basin. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 761-772.
(Triassic-Jurassic Taliabu-Mangole N-S trending synrift basin with gas seeps and oil odor indicating mature hydrocarbons. Surface mapping, seismic interpretation and evaluation of two wells suggest Jurassic Buya Shale and E-M Jurassic Bobong coal potential source rocks and mature, but dominantly gas prone. On Taliabu Shelf source rock is immature, offshore Mangole source is mature. Bobong sand and fractured basement potential reservoirs, Buya Shale is regional seal. Common thrust anticlinal structural traps. No figures?)

Natawidjaja, D.H. & A. Kadarusman (1994)- The structural natures of the Pre-Tertiary rock complexes of the Sula Islands and their tectonic significances: a preliminary view. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 433-446.
(Foliation in pre-Jurassic metamorphic rocks of Banggai-Sula islands variable with two or more deformation phases. Different orientations between Taliabu-Mangole Islands and Sulabesi may be due to 90° CCW rotation of Taliabu- Mangole. Most granitoids altered and brittle-fractured; Pre-Tertiary sediments only slightly folded. Tectonic events: (1) Paleozoic Pre-rift structures and metamorphism; (2) Triassic- Jurassic synrift (N-S?) extensional structures; (3) U Cretaceous- Miocene drift structures with rotations; (4) Late Miocene collisional structures; (5) post-colisional compressional deformation and uplift of Sula islands)

Ngadenin (2016)- Kajian geologi, radiometri, dan geokimia Granit Banggai dan Formasi Bobong untuk menentukan daerah potensial uranium di Pulau Taliabu, Maluku Utara. Eksplorium 37, 1, p. 13-26.
(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/2669/pdf)
('Geological, radiometrical and geochemical studies of Banggai granites and Bobong Formation to determine potential uranium areas in Taliabu Island, North Maluku'. Late Permian-Triassic Banggai granite is potential uranium source, E-M Jurassic fluvial-deltaic sandstone of Bobong Fm is potential host rock)

Oloriz, F. & G.E.G. Westermann (1998)- The perisphinctid ammonite *Sulaites* n. gen. from the Upper Jurassic of the Indo-Southwest Pacific. Alcheringa 22, p. 231-240.
(New genus Sulaites comprises Oxfordian group of 'Perisphinctes' sularus and moluccanus, described from Sula Islands, and Late Oxfordian-?E Kimmeridgian 'Pseudoparaboliceras aramaraii' group described from W Papua. Genus Sulaites also known from W Papua, PNG and probably New Zealand and Nepal)

Panjaitan, S. & Subagio (2014)- Pola anomali gayaberat daerah Taliabu- Mangole dan laut sekitarnya terkait dengan prospek minyak bumi dan gas. J. Geologi Kelautan 12, 2, p. 65-78.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/247/237)
('Gravity anomaly pattern of Taliabu- Mangole area and surrounding seas, related to oil and gas prospectivity')

Panuju (2011)- Pre-Tertiary nannoplankton biostratigraphy of Bobong, Buya and Tanamu Formations, Banggai-Sula basin. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-053, 12p.
(Nannoplankton from three M Jurassic- Cretaceous outcrop sections of Sula islands (no locality details), each through different formations. Bobong Fm contains zone NJ9 (Bajocian, M Jurassic; with Watznaueria brittanica, Diductius constans). Buya Fm zone NJ17 (Tithonian, Late Jurassic, with Zeugrhabdotus embergeri at bottom, Stepanolithion bigotii at top). Tanamu Fm zones CC13-CC17 (Coniacian- Campanian, Late Cretaceous, with Marthasterites furcatus at bottom, Quadrum gartneri at top))

Panuju, Irwansyah & E.B. Lelono (2011)- The Jurassic- Cretaceous paleogeography of the Sula area, North Maluku. Lemigas Scientific Contr. 34, 1, p. 67-83.
(7 depositional sequences in Jurassic-Cretaceous succession of Sula area. Sequences 1 (Bobong Fm), 2, 3 and 4 (Buya Fm) of Jurassic age, sequences 5, 6 and 7 (Buya Fm) attributed to Cretaceous. General deepening of

depositional environment to North. Deepest environment is outer neritic (100m-200m). Jurassic-Cretaceous depocenter in N part of study area)

Permana, H. (1987)- Ofiolit daerah Akelamo, Pulau Obi, Maluku Utara. J. Riset Geologi Pertambangan (LIPI) 8, 1, p. 13-24.
('Ophiolite in the Akelamo area, Obi Island, North Moluccas'. Melange complex of SW Obi (presumably post-Jurassic), with basic-ultrabasic rocks (peridotite, gabbro with dikes of plagiogranite and basalt), crystalline limestone, etc. Overlain by Oligocene volcanoclastics and younger sediments)

Pertamina/BPPKA (1996)- Petroleum geology of Indonesian basins, VI-IX Eastern Indonesian Basins, VI-Banggai, Jakarta, p. 1-24.

Pessagno, E.A. & D. Meyerhoff Hull (2002)- Upper Jurassic (Oxfordian) radiolaria from the Sula Islands (East Indies): their taxonomic, biostratigraphic, chronostratigraphic, and paleobiogeographic significance. Micropaleontology 48, 3, p. 229-256.
(L-M Oxfordian radiolarians from Buya Fm mudstones of Mangole Island with common Praeparvicingula and rare pantanelliids and association with Austral ammonites suggest assemblage from outside Central Tethyan Pantanellidae realm, but belongs to Northern Austral Province Parvicingula- Praeparvicingula Realm (>30°S paleolatitude), in keeping with Gondwana origin of Sula. New species Bigrumpta moluccaenis, Crucella capaluluensis, C. hamiltoni, C. taliabuensis, C. westermanni, Grumpta australis, Acanthocircus tansinhoki, A. waigaloensis, etc.)

Pigram, C.J., Surono & J.B. Supandjono (1985)- Geology and regional significance of the Sula Platform, East Indonesia. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 11, p. 1-13.
(Sula Platform basement Paleozoic slates-schists (K-Ar age 305 Ma) and Late Permian-Triassic granitoids-acid volcanics. Unconformably overlain by E Jurassic non-marine Kabauw Fm clastics, grading upward into fossiliferous Buya Fm M Jurassic- E Cretaceous bathyal black shale, overlain by Late Cretaceous Tanamu Fm calcilutites. Unconformably overlain by Miocene shallow marine limestones. Sula stratigraphy correlates poorly with W Irian Jaya stratigraphy, but most similar to central PNG. May be detached from PNG in Jurassic. Unlikely to be transported to E Indonesia by transcurrent faults, which in PNG did not develop before Late Oligocene)

Pigram, C.J., Surono & J.B. Supandjono (1985)- Origin of the Sula Platform, Eastern Indonesia. Geology 13, p. 246-248.
(Similar to paper above. Sula Platform stratigraphy closer to Central PNG between 141°-145° than to W New Guinea, implying E to W displacement of >2500 km. Sula stratigraphy characterized by Paleozoic low-grade metamorphics, Permo-Triassic granitoids and rel. complete marine Jurassic section, similar to PNG. Cretaceous on Sula is bathyal Late Cretaceous carbonates only, different from PNG which has more complete Cretaceous section, suggesting separation of Sula Platform in Early Cretaceous?)

Rahmalia, D., P.T. Allo, C. Zwach, R. Heggland & S.I. Midtbo (2017)- Hydrocarbon prospectivity in the South Obi Basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-119-G, 15p.
(Seismic data in deepwater basin between Obi and Bacan/ S Halmahera, formed as pull-apart basin along Sorong fault zone. Indications of Miocene Kais carbonate buildups and potential gas chimneys)

Rudyawan, A. & R. Hall (2012)- Structural reassessment of the South Banggai-Sula area: no Sorong fault zone. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-030, p. 1-17.
(New seismic data suggests strands of Sorong Fault can be traced from New Guinea towards Sula Islands, but no through-going Sorong Fault Zone traceable to S of Banggai-Sula block. Absence of through-going strike-slip fault zone along S Taliabu Shelf indicates Banggai-Sula block not transported to W by Sorong Fault Zone)

Rutten, L.M.R. (1927)- De noordelijke Molukken en de Radja-Ampat groep. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 761-782.

(Review of geology of Northern Moluccas (Sula Islands, Obi, Bacan, Misool) and Radja Ampat Group (Waigeo, Batanta, Salawati))

Ryacudu, R., T. Wibowo & Y.E. Handiwiria (1993)- Exploration for carbonate reservoirs in the Banggai-Sula microcontinent, Eastern Indonesia. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 679-692.
(Banggai-Sula microcontinent with carbonates in U Cretaceous (bathyal, tight), and Eocene-Miocene shallow marine carbonates with good reservoir potential)

Sardjono (1999)- Gravity field and structure of the crust of the Banggai Island region, Eastern Indonesia, implications for tectonics and hydrocarbon prospects. J. Geologi Sumberdaya Mineral 9, 99, p. 16-29.
(Rel. high gravity over Banggai Islands suggest attenuated continental crust (22km), thinning to 9km in Tomori Basin to S, and dipping gently to N, with drowned carbonate platforms. In E arm of Sulawesi gravity suggests exposed ultramafic rocks do not extend to any great depths (<1 km, except on Poh Head, where it may extend ~5km into root zone). In Molucca Sea tectonic melange up to 8km thick on oceanic crust)

Sardjono & E. Mirnanda (2007)- Gravity field and structure of the crust beneath the East Arm of Sulawesi and the Banggai Archipelago. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-024, 11p.
(Gravity suggests Banggai- Sula Archipelago composed of blocks of severely attenuated continental crust)

Sartono, S., K.A.S. Astadiredja, H. Mirwanto, K. Pontjomokono & B. Suprapto (1991)- Banggai microplate Sunda subduction zone collision. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 376-395.

Sato, T., G.E.G. Westermann, S.K. Skwarko & F. Hasibuan (1978)- Jurassic biostratigraphy of the Sula Islands, Indonesia. Geol. Res. Dev. Centre Bull. 4, 1, p. 1-28.
(Sula Islands Jurassic section rich in fossils, probably <1500m thick. Mainly calcareous shales, some conglomerate and sandstone. Typical 'Indo-Pacific' series with Lower Callovian Macrocephalites fauna, Oxfordian Mayaites, U Tithonian Blanfordiceras, etc. Age range Late Toarcian- Tithonian, but Aalenian and M-U Callovian missing)

Schmid, K. (1934)- Biometrische Untersuchungen an Foraminiferen (*Globorotalia menardii* (d'Orb.)- *Globorotalia tumida* (Brady) und *Truncatulina margaritifera* Brady- *Truncatulina margaritifera granulosa* Fischer) aus dem Pliocaen von Ceram (Niederl.-Indien). Eclogae Geol. Helvetiae 27, 1, p. 45-134.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1934:27::574&subp=hires)
('Biometric investigations on foraminifera (...) from the Pliocene of Seram'. Extensive measurements on selected planktonic and smaller benthic forams from ?Pliocene Fufa Beds foram marls from Wai Wahai hinterland of N Central Seram. Most of samples collected by Weber. (not overly useful))

Septriandi, I. Syafri, Y. Adriana S. & F. Ferdian (2012)- Jurassic sandstone characteristic of Bobong Formation in Taliabu Island, Eastern Indonesia: outcrop and petrography observations. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-SG-068, p. 1-13.
(E-M Jurassic Bobong Fm sandstone on Taliabu (Sula Islands) in alluvial fan, fluvial and beach facies. Provenance from continental block (Banggai granite and low grade metamorphics). Porosity 9-19%)

Silver, E.A. (1977)- The Sula Spur enigma. Geol. Soc. America (GSA), Abstracts with programs 9, 7, p. 1175-1176.

Smit Sibinga, G.L. (1933)- Heeft de Banggai-Archipel in Jongtertiairen tijd een afwijkende ontwikkeling gehad? Onhoudbaarheid der Pliocene Molukkenbrug? Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 50, p. 227-238.
('Did the Banggai Archipelago have a different development in Late Tertiairy time? Untenability of the Pliocene Moluccas land bridge?'. Discussion of Koolhoven (1930) conclusions on relation/ differences between Late Tertiary of the Banggai Archipelago and Sulawesi. S.S. argues in favor of zoogeograpic connection)

Soeria-Atmadja, R., M.E. Suparka & Y.S. Yuwono (1988)- Petrology of the Pre-Tertiary and Tertiary volcanic rocks from Obi, North Molucca. Majalah Geologi Indonesia (IAGI) 13, 1, 10p.
(Obi Island Pretertiary melange basement with blocks of ultrabasic rocks, basalts and Jurassic ammonite-bearing sediments in foliated clay matrix. Overlain by less-deformed Tertiary shallow marine clastics with intercalations of andesitic arc volcanics, and in upper part with reefal limestones)

Sudana, D., A. Yasin & K. Sutisna (1994)- Geological map of the Obi sheet, Maluku. Geol. Res. Dev. Centre (GRDC), Bandung, 1: 250,000.
(Obi Island composed of Triassic-Jurassic ultramafics and metamorphic rocks, overlain by Late Oligocene- E Miocene Bacan Fm andesitic volcanics and volcanoclastics and Miocene- Pliocene clastics-carbonates. Original mapping in 1975-1976)

Sukamto, R. (1975)- Geologi daerah Kepulauan Banggai dan Sula. Geologi Indonesia 2, 3, p. 23-28.
('Geology of the Banggai and Sula islands region'. Includes two broad K-Ar ages for Mangole Volcanics on Mangole Island: radiometric ages of 330± 90 Ma and 210± 25 Ma (?). Basal metamorphic complex radiometric age 305 ± 6 Ma (Late Carboniferous), Banggai granite radiometric ages 235 ± 10 Ma to 245 ± 25 Ma (Triassic))

Sukamto, R. & G.E.G. Westermann (1992)- Indonesia and Papua New Guinea. In: G.E.G. Westermann (ed.) The Jurassic of the Circum-Pacific, Cambridge University Press, p. 181-193.
(With summary of Jurassic stratigraphy of Banggai-Sula Platform: 1000-2500m thick Jurassic section exposed on Sula islands, with richest Jurassic ammonite faunas of Indonesia. Basal part terrestrial- shallow marine Kabauw, Bobong and Nanaka Fms, mainly coarse clastics with some coal. Overlain by open marine sediments, with Macrocephalites assemblages in M Jurassic, Mayatites- Perisphinctes in Late Jurassic, etc.)

Supandjono, J.B. & E. Haryono (1993)- Geological map of the Banggai Quadrangle, Sulawesi-Maluku, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 13p.
(Geologic map of Taliabu, Banggai and E Peleng islands (W part of Banggai Sula islands). With M-L Jurassic marine Buya Fm rich in macrofossils: ammonites (Irianites moermanni, Stephanoceras, Macrocephalites spp., Mayaites), belemnites (Belemnopsis spp.), and bivalves. Underlying E-M Jurassic Bobong Fm thick 'redbeds' with coal, unconformable on metamorphic and igneous basement (incl. Late Triassic Banggai granite; K/Ar ages ~225Ma))

Supandjono, J.B. & Surono (1987)- Stratigraphic correlation between Banggai- Sula Platform and Irian Jaya. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.

Surono & D. Sukarna (1993)- Geological map of the Sanana Quadrangle, Maluku, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of Manggole, Sanana and E Talibu islands (E part of Banggai Sula islands). Buya Fm M-L Jurassic rich in macrofossils: ammonites (Blanfordiceras, Himalayites, Stephanoceras, Macrocephalites), belemnites (Belemnopsis stolleyi, B. mangolensis), bivalves (Inoceramus, Malayomaorica))

Van Nouhuijs, J.W. (1910)- Bijdrage tot de kennis van het eiland Taliaboe der Soela groep (Moluksche Zee). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 27, p. 945-976 and p. 1173-1196.
('Contribution to the knowledge of Taliabu island of the Sula Group'. Report on first collections of famous Jurassic ammonites and belemnites in 1900 (with Boehm) and 1904, by navy officer Van Nouhuijs. Fossils from folded dark shales underlain by crystalline schist. Including famous Keeuw locality at Wai Miha River, described by Boehm (1912))

Walpersdorf, A., C. Vigny, P. Manurung, C. Subaraya & S. Sutisna (1998)- Determining the Sula block kinematics in the triple junction area in Indonesia by GPS. Geophysical J. Int. 135, p. 351-361.
(Triple junction of three major plate boundaries (Australia- Eurasia- Philippines) is transition zone that includes Sula domain, which shows clockwise rotation)

Wanner, J. (1913)- Zur Geologie der Inseln Obimajora und Halmahera in den Molukken. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 36, p. 560-585.
('On the geology of islands Obi Besar and Halmahera in the Moluccas' Along Akelamo River of SW Obi: (1) serpentinized peridotite, (2) Pliocene marine marls and (3) black shales with concretions with M Jurassic ammonites Phylloceras, Stephanoceras and Macrocephalites, similar to 'Coronatenschichten' of Sula. E-M Miocene limestone with Miogypsina and Lepidocyclina near S coast near Ngutenute. Also andesitic volcanics, etc. Young raised coral reef terraces up to 320m elevation along S coast)

Watkinson, I.M., R. Hall & F. Ferdian (2011)- Tectonic re-interpretation of the Banggai-Sula-Molucca Sea margin, Indonesia. In: R. Hall, M.A. Cottam & M.E.J. Wilson (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 203-224.
(New bathymetric and seismic data from area N of Banggai-Sula Islands provide new insight into boundary between E Sulawesi ophiolite, Banggai-Sula microcontinent and Molucca Sea collision zone. Previously interpreted major faults such as Sula Thrust and N Sula-Sorong Fault, are not seen. Gently dipping strata of Banggai-Sula microcontinent margin can be traced N-wards beneath younger rocks)

Westermann, G.E.G. & J.H. Callomon (1988)- The Macrocephalitinae and associated Bathonian and early Callovian (Jurassic) ammonoids of the Sula islands and New Guinea. Palaeontographica A, 203, p. 1-90.
(Five Bathonian- Early Callovian ammonite assemblages on S Taliabu. Also from Bathonian at PNG Strickland River. East Indian faunas dominated by Macrocephalitidae, many of which are species unknown outside Indonesia- New Guinea (one other SW Pacific occurrence in New Zealand). Because of high endemicity at species level in Macrocephalitinae and at genus level in Satoceras and Irianites, E Indonesia and PNG may be considered as separate ammonite faunal province or subprovince, perhaps part of Maorian/SW Pacific Province during Late Bajocian- E Callovian. Diversity and compositions of ammonite faunas suggest Sula was in warmer waters than Birds Head Peninsula)

Westermann, G.E.G., T. Sato & S.K. Skwarko (1978)- Brief report on the Jurassic biostratigraphy of the Sula Islands, Indonesia. Newsletters Stratigraphy 7, 2, p. 96-101.
(Classic ammonite localities on Taliabu and Mangole reexamined. U Toarcian sst with Hammatoceras overlain by thick Bajocian micaceous marly shales (Fontannesia, etc.). No evidence for Aalenian. Overlying thick marly claystones with E Callovian 'Keeuw fauna' (Macrocephalites, etc.) and 'Wai Galo fauna' with E-M Oxfordian ammonite assemblages (Mayaitidae, Perisphinctes, etc.). No new evidence for Bathonian or higher Callovian. Thick Kimmeridgian-M Tithonian argillaceous sequence in belemnite-bivalve facies (Belemnopsis, Inoceramus, Malayomaorica). Upper Tithonian claystones again rich ammonite fauna (Haplophylloceras, Blanfordiceras, etc.))

Wichmann, A. (1914)- On some rocks of the Island of Taliabu (Sula-Islands). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 17, 1, p. 226-239.
(online at: www.dwc.knaw.nl/DL/publications/PU00012640.pdf)
(Description of granites and other igneous rocks, metamorphics, Jurassic iron oolite with belemnites. Oldest rocks are highly folded phyllites. Also Dutch version in 1913)

VI.3. Seram, Buru, Ambon

Adlan, Q., S.M. Kartanegara. A.H.P. Kesumajana & E.A. Syaripudin (2016)- Explanation of Seram Islandôs more prolific oil potential compared to its offshore area using palinspastic and basin modeling approaches. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-294-G, 15p.
(Structural restoration of SW-NE seismic line in Seram Trough E of Seram. Compressional deformation in imbricated thrust belt began at ~5 Ma, with peak of shortening at 3.5 Ma. Some Lengkuas 1 well data)

Adlan, Q., A.H.P. Kesumajana & E.A. Syaripudin (2016)- Impacts of fold-thrust belt forming on hydrocarbon occurrence in Seram Trough: Outer Banda Arc foreland system. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-58-G, 14p.
(Basin modeling of petroleum systems in deepwater Seram fold-thrust belt and Seram Trough foreland basin, S of Misool-Onin-Kumawa Ridge. Hydrocarbon shows in Jurassic of Lengkuas-1 (SSW of South Onin 1 well) indicates oil accumulation before Plio-Pleistocene tectonic event)

Adlan, Q., J. Wahyudiono, A. Susilo, B. Salimudin, A.K. Gibran & E.S. Wiratmoko (2018)- Petroleum system potential of Lofin and Banggoi area, Seram Island. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-250-G, 6p.
(Brief review, showing highly variable porosity and TOC in Triassic Kanikeh Fm outcrop samples)

Al-Shaibani, S. (1983)- The micropalaeontology of the Middle Triassic to Upper Miocene sediments of Seram, Eastern Indonesia. Ph.D. Thesis Imperial College, University of London, p. 1-469.
(online at: https://spiral.imperial.ac.uk/handle/10044/1/36159)
(Planktonic foraminifera of Nief Beds indicate deposition during Cretaceous, Paleocene, Eocene and Miocene in deep bathyal environment. Corroded radiolaria in U Jurassic- Lower Cretaceous part of Nief Beds indicate deposition close to silica compensation depth at ~4000m. Fine grain-size and radiolaria-dominated microfauna of Saman Saman Lst indicate deposition in very deep marine water. Microfaunas of Late Triassic Asinepe Lst reveal deposition during Norian in reefal- sublagoonal environment)

Al-Shaibani, S., D.J. Carter & L. Zaninetti (1983)- Geological and micropaleontological investigations in Upper Triassic (Asinepe Limestones) of Seram, Outer Banda Arc, Indonesia. Archives Sciences Geneve 36, 2, p. 301-316.
(Foraminifera from U Triassic Asinepe Fm tropical-reefal carbonates of Seram show Norian- Rhaetian age. Two distinct foram facies associations: (1) muddy lagoonal facies dominated by Involutinidae, with Triasina hantkeni, Aulatortus spp., etc. and (2) near-reefal facies dominated by porcellaneous forams. No location maps, stratigraphy, etc.)

Al-Shaibani, S., D.J. Carter & L. Zaninetti (1984)- Microfaunes associees aux Involudinidae et aux Milioporidae dans le Trias superieur (Rhetien) de Seram, Indonesie: precisions stratigraphiques et paleoecologie. Archives Sciences Geneve 37, 3, p. 297-313.
(Upper Triassic microfaunas from Asinepe Fm reefal and lagoonal platform limestone, Seram with Rhaetian index foram Triasina hantkeni. Many similarities with U Triassic Tethyan faunas in Europe and Asia)

Aquantino, S., N. Nastiti & A.S. Dradjat (2012)- Penggunaan metoda "the look ahead VSP survey" untuk pencitraan target Formasi di bawa mata bor pada sumur pemboran eksplorasi Lofin 1. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-30, 5p.
('The use of the "look ahead VSP survey" method for imaging targets during drilling of exploration well Lofin 1'. Lofin-1 exploration well ~70km W of Oseil 2. Target Manusela Lst deeper than pre-drill predictions;not reached at TD of 10957' (in Upper Nief Fm). Look-ahead VSP used to help predict target depths (Lofin 1 ST penetrated ~500' of gas-oil bearing fractured Manusela Fm limestone below ~14000'; JTvG))

Audley-Charles, M.G. & D.J. Carter (1977)- Interpretation of a regional seismic line from Misool to Seram: implications for regional structure and petroleum exploration. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 3-12. *(also in Oil and Gas Journal 23, 1, p. 20-23)*

(Misool to Seram regional seismic shows imbricate zone at boundary of Seram island arc with New Guinea continental shelf. S wall of Seram Trough is like N wall of Timor Trough, interpreted as foothills-type fold belt. This may be regarded as an A-zone (Bally, 1975), representing margin between Banda Arc developing fold belt and Australian craton. Benioff subduction zone interpreted between non-volcanic Outer Banda arc and volcanic Inner Arc. A- and B-zones can be traced around Banda Arcs from Seram to Timor and beyond)

Audley-Charles, M.G., D.J. Carter, A.J. Barber, M.S. Norvick & S. Tjokrosapoetro (1979)- Reinterpretation of the geology of Seram: implications for the Banda arcs and northern Australia. J. Geol. Soc. London 136, p. 547-568. *(also in: Geology and Tectonics of eastern Indonesia, GRDC Spec. Publ. 2, 1981, p. 217-237).*
(online at: http://searg.rhul.ac.uk/pubs/audley-charles_etal_1979_seram.pdf)
(Remarkable similarities between Mesozoic-Miocene deep-water 'para-autochthonous' and shallow water 'allochthonous' successions of Seram and Timor. Triassic limestones in 'Australian facies' mostly planktonic facies Saman Saman Lst in 'para-autochthonous', structurally overlain by 'Asian facies'Asinepe Lst in 'allochthonous')

Bachri, S. (2011)- Tectonostratigraphy and structures of Eastern Seram. J. Geologi Indonesia 6, 2, p. 85-93.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/305)
(Seram geology re-interpreted in E Timor-analog tectonic complexes. Most of E Seram is 'Para-autochthonous complex', with Permian Kobipoto metamorphics, overlain by Triassic-Jurassic Kanikeh Fm flysch and age-equivalent Manusela Fm massive limestone, overlain by Cretaceous- Miocene pelagic deposits. 'Allochthonous' overthrusted sequence of ultrabasic rocks comparable to Timor Banda allochton (called Permian age in text, Jurassic-Cretaceous in Fig. 3; JTvG). Salas Complex is M Miocene- M Pliocene deep water olistostrome, similar to Timor Bobonaro Complex. Thrusting Neogene age and verging to NE)

Baroncini Turricchia, G. & and A. Benassi (2012)- Cave and karst prospecting within Seram Island (Maluku province) Indonesia), 23 May-22 June 2012. Rome, p. 1-31.
(online at: www.circolospeleologicoromano.it/csr/wp-content/uploads/2014/01/Seram2012.pdf)

Beckinsale, R.D. & S. Nakapadungrat (1979)- A Late Miocene K-Ar age for the lavas of Pulau Kelang, Seram, Indonesia. In: S. Uyeda, R.W. Murphy & K. Kobayashi (eds.) Geodynamics of the Western Pacific, Proc. Int. Conf. Geodynamics Western Pacific-Indonesian Region, J. Physics of the Earth 26, Suppl. 6, p. 199-202.
(K-Ar determinations for 10 samples of pillow basalts of Kelang island, W Seram (with paleomagnetic analysis by Haile) gave Late Miocene ages of 4.7- 10.6 Ma (average 7.6 Ma, Late Miocene))

Boehm, G. (1905)- Uber Brachiopoden aus einem alteren Kalkstein der Insel Ambon. Jaarboek Mijnwezen Nederlandsch-Indie 34, Wetenschappelijk Gedeelte (Verbeek Ambon report), p. 88-93.
('On brachiopods from an older limestone of Ambon Island'. Brachiopods from dark, mica-bearing, impure limestone in sandstone series in Batu Gantung River are all new species, probably of Early Paleozoic age, possibly Triassic. Probably same faunas determined as Late Triassic by Jaworski 1925)

Boehm, G. (1908)- Vorjurassische Brachiopoden von Ambon. In: Geologische Mitteilungen aus dem Indo-Australischen Archipel VI, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 25, 2, p. 293-303.
('Pre-Jurassic brachiopods from Ambon'. New species of Spiriferina, Athyris, Rhynchopora, Dielasma from Batu Gantung valley near town of Ambon. Age uncertain, probably Late Paleozoic- Triassic. (Deninger 1918, p. 30: similar to Late Triassic of Seram))

Boehm, G. (1910)- Zur neuen obertriadischen Fauna aus den Molukken. Centralblatt Mineralogie Geologie Palaont. 1910, 6, p. 161-163.
(online at: www.biodiversitylibrary.org/item/192869page/185/mode/1up)
('On the new Upper Triassic fauna from the Moluccas'. Brief note commenting on Krumbeck (1909) note on highly folded Upper Triassic asphalt beds near Fogi (W Buru) and Bara Bay (NW coast Buru), containing Daonella indica and ammonites. Buru U Triassic limestones in bivalve-cephalopod facies, different from 'athyrid facies' of Misool (mainly brachiopod-coral facies))

Brouwer, H.A. (1919)- Geologische onderzoekingen in Oost-Ceram. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 36, 6, p. 715-751.
(Geological survey of E Seram. Folded Late Triassic 'flysch-type', locally bituminous, calcareous sandstones-shales, with interbeds of 80-100m thick, dark brachiopod and coral limestones. Sandstones locally common plant fragments and muscovite (look like immature, delta-front turbidite sands, from granitic-metamorphic terrane; JTvG). These are thought to be thrusted over 'Nief Series' (as exposed in Wai Nief canyons). Nief series at base different Triassic limestone: massive, oolitic, poor in age-diagnostic macrofossils, similar to rocks from Timor (but not Misool), and overlain by ?Jurassic, Cretacous and Tertiary cherty pelagic limestones and foram marls. Mesozoic of Ceram succession remarkably poor in macrofossils compared to Misool. Gas and oil seeps in Triassic rocks near Bula and Wai Nief)

Brouwer, H.A. (1925)- Over insluitsels en cordierietgehalte van bronziet-dacieten van het eiland Ambon. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 73-80.
('On inclusions and cordierite content of bronzite-dacites on Ambon island'. Common inclusions of gneiss, some with cordierite phenocrysts)

Brouwer, H.A. (1927)- Over Mesozoische afzettingen en eenige vulkanische gesteenten van het eiland Ambon. Jaarboek Mijnwezen Nederlandsch-Indie 55 (1926), Verhandelingen III, p. 233-245.
('On Mesozoic deposits and some volcanic rocks of Ambon island'. Reinterpretation of Verbeek (1908) conclusions and reiterates similarities of Ambon with NE part of W Timor. Upper Triassic sandstones, similar to Seram, with common quartz, possibly derived from mix of granites and schists. Also Upper Triassic dark grey limestones with crinoids, sponges, foraminifera and 11 species of brachiopods (Jaworski 1927), similar to Seram. Radiolarites of uncertain age)

Charlton, T.R. & J.T. van Gorsel (2014)- The Manusela Limestone in Seram: Late Triassic age for a óJurassicô petroleum play. Berita Sedimentologi 31, p. 57-69.
(online at: www.iagi.or.id/fosi/files/2014/12/BS31-Biostratigraphy_SEAsia_Part3.pdf)
(No biostratigraphic evidence to support a Jurassic age for Manusela Limestone, which forms oil reservoir in the'Jurassic Limestone hydrocarbon play' of Oseil oilfield in NE Seram. Many paleontological studies on outcrops and wells instead document only Late Triassic macro- and microfaunas and microfloras)

Davies, G.R. & S. Tommasini (2000)- Isotopic disequilibrium during rapid crustal anatexis: implications for petrogenetic studies of magmatic processes. Chemical Geology 162, 2, p. 169-191.
(online at: https://flore.unifi.it/retrieve/handle/2158/224189/2816/2000ChemGeolv162_DisMelting.pdf)
(Rapid crustal anatexis may prevent full isotopic equilibration. Dating metamorphic rocks using mineral-whole rock or mineral-mineral pairs may yield erroneous ages, as observed in pre-Triassic metasediments of Seram where ages range from ~15 to 201 Ma, despite anatexis at 6 Ma. Consequently, some age estimates in literature may be incorrect)

Darman, H. & P. Reemst (2012)- Seismic expression of geological features in Seram Sea: Seram Trough, Misool-Onin Ridge and sedimentary basin. Berita Sedimentologi 23, p. 28-34.
(online at: www.iagi.or.id/fosi/)

De Jong, H. (1923)- Studien uber Eruptiv- und Mischgesteine des Kaibobogebietes (West Ceram). In: L. Rutten & W. Hotz (eds.) Geological, petrographical and palaeontological results of explorations 1917-1919 in the Island of Ceram, First Ser., Petrography, 1, Amsterdam, p. 1-87.
(Petrographic descriptions of igneous rocks from Kaibobo area, W Seram: granites/ gneissess (incl. cordierite granites), peridotites/ serpentinites, gabbros, etc.))

Deninger, K. (1914)- Morphologische Ubersicht der Insel Seran. Petermanns Geogr. Mitteilungen 60, 2, p. 16-18.
('Morphological overview of Seram island'. Brief geographic description with little or no geology)

Deninger, K. (1915)- Geographische Ubersicht vom West-Seran. Petermann Geogr. Mitteilungen 61, p. 385-388.
('Geographical overview of West Seram'. Mainly brief review of Seram population. Very little geology)

Deninger, K. (1918)- Zur Geologie von Mittel-Seran (Ceram). Palaeontographica, Suppl. IV, Beitrage Geologie Niederlandisch-Indien III, 2, p. 25-58.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('On the geology of Central Seram'. Report on four N-S traverses of C Seram during 'Second Freiburger Moluccas Expedition' of 1911. With geologic map, cross-sections. Pre-Triassic metamorphic rocks overlain by Late Triassic micaceous sands and shales with Monotis salinaria, Halorella, plant material, etc., becoming more sandy in W direction. Grade upwards into Late Triassic- M Jurassic limestones (~150m thick), with brachiopod Misolia, 'Pharetronen' (= calcareous sponges), corals and hydrozoans. Overlain by massive grey and white limestones, locally cherty, also with Misolia. Overlain by ~20m 'Fatjet-shale' with Inoceramus and belemnites, then (~100m) red-white Late Jurassic- Cretaceous 'Fatjet-limestone', rich in Inoceramus, forams (in upper part common 'Discorbinen' = U Cretaceous Globotruncana; JTvG), radiolarians and rare canaliculate belemnites. Overlain by ~100-150m Tertiary Globigerina marls. Seram Jurassic-Cretaceous deeper marine facies than comparable series on Misool. Overlain by ~400m Tertiary massive limestone with orbitoids, alveolinids)

De Smet, M.E.M. & A.J. Barber (1992)- Report on the geology of Seram. University of London SE Asia Research Group Report 109, p. 1-103. *(Unpublished)*
(Overview of early work and stratigraphy. Extensive metamorphic complexes probably mainly Permian- E Triassic age. Kabipoto Complex metamorphics of S/SW Seram associated with ultramafic rocks, may be result of 4-5 Ma ophiolites obduction of ophiolites that once may have covered large part of Seram. Late Triassic Manusela oolitic Lst facies is large lens-like bodies in Kanikeh Fm clastics sequence, not from separate terranes as argued by earlier authors. Seram is thrustbelt composed of material from microcontinent that collided with Banda Arc in Late Miocene-Pliocene)

De Smet, M.E.M., P.A. Sumususastro, I. Siregar, L.J. van Marle, S.R. Troelstra & A.R. Fortuin (1989)- Late Cenozoic geohistory of Seram, Indonesia. Geologie en Mijnbouw 68, p. 221-235.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0N1hmWGFtRUYxVm8/view)
(SW Seram Plio-Pleistocene basin on top of Paleozoic metamorphics records up to 1500m of Late Pliocene- E Pleistocene subsidence after Late Miocene compressional deformation and uplift. Subsidence followed by 1-2 km of Late Pleistocene (~1 Ma) uplift)

Djoehanah, S. (1997)- Foraminifera Pra-Tersier dan Paleogen di daerah Saleman- Sawai, Seram Utara. Jurnal Teknologi Mineral (ITB) 4, 1, p.
('Pre-Tertiary and Paleogene Foraminifera from Saleman- Sawai area, North Seram'. Triassic benthic foraminifera in Manusela Limestone: Glomospira, Glomospirella, Diplotremina, and Meandrospira. Upper Cretaceous Sawai Fm only planktonics: Globotruncana, Hedbergella, Heterohelix, Globotruncanella, Rugoglobigerina and Rotalipora sp. Lisabata Fm has Paleogene (Oligocene?; JTvG) planktonics such as Catapsydrax dissimilis, C. unicava, Globigerina eocenica, G. tripartita, G. venezuelana, G. selli, etc.)

Douville, H. (1923)- Sur quelques foraminiferes des Moluques orientales et de la Nouvelle Guinee. Jaarboek Mijnwezen Nederlandsch-Indie 50 (1921), Verhandelingen 2, p. 107-116.
('On some foraminifera from the eastern Moluccas and from New Guinea'. Brief description of Eocene larger forams in samples collected by Brouwer in Halmahera (Nummulites, Discocyclina, Alveolina), Roti (large Nummulites, Discocyclina), Ceram (E Miocene Lepidocyclina in breccia with reworked angular clasts of Upper Cretaceous pelagic limestone), New Guinea, Kai Besar (rounded fragments of Eocene Lacazina in quartz sandstone, etc. No location info)

Dradjat, A.S. & C.S. Patandung (2012)- Geomechanical approach for cores analysis of Jurassic Manusela carbonate fractured reservoir from Oseil Field. AAPG Workshop Fractured carbonate reservoirs, Bali 2012, Search and Discovery Art. 201489, p. 1-17.

(online at: www.searchanddiscovery.com/documents/2012/20149dradjat/ndx_dradjat.pdf)

Dradjat, A.S., X. Hu & R. Primasari (2012)- Application of pre-stack seismic anisotropy for fracture detection, in Oseil Field carbonate reservoir, Seram Island, Eastern Indonesia. Presentation AAPG Workshop Fractured Carbonate Reservoirs, Bali 2012, Search and Discovery Art. 20157, p. 1-17.
(online at: www.searchanddiscovery.com/documents/2012/20157dradjat/ndx_dradjat.pdf)
(Geophysical study of fracture intensity in Oseil field, East Indonesia, is fractured carbonate in Manusela Fm)

Dradjat, A.S. & C.S. Patandung (2012)- Geomechanical approach for rock strength and litholoy anisotropy of Jurassic carbonate Manusela fracture reservoir from Oseil field. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-EG43, p.
(On geomechanical relationship between lithology and rock strength in fractured limestone of Oseil field, Seram. Higher rock strength has fewer fractures and less porosity. In E Nief-1 well, compacted dolostone core has highest rock strength, is less fractured and non-reservoir, while oolitic limestone has lower rock strength, more fractures and good reservoir. In Oseil-1 and 4 wells oolitic limestone and dolostone both highly fractured and highly porous)

Dwijanto, B., T.A. Soeprapto & K. Budiono (1992)- Marine geology and geophysics of Ambon Bay. J. Sumber Daya Geologi Indonesia(GRDC) 2, 12, p. 1-16.

Everwijn, R. (1874)- Marmer op het eiland Amboina. Jaarboek Mijnwezen Nederlandsch Oost-Indie 3, 1, p. 172-173.
('Marble on Ambon Island'. Brief note on samples of light grey, grey and black marble. Age unknown)

Fischer, P.J. (1921)- Eine Pliocanfauna von Seran (Molukken). Centralblatt Mineralogie Geologie Palaont. 1921, 8, p. 242-251 and p. 278-286.
(online at: www.biodiversitylibrary.org/item/204060page/568/mode/thumb)
('A Pliocene fauna from Seram (Moluccas). Listings of marine molluscs (158 species of gastropods and bivalves) and smaller benthic foraminifera (54 species). Molluscs Indo-Pacific assemblages, 74 species still extant (47%); many new species. No figures? (see also Fischer (1927))

Fischer, P.J. (1927)- Beitrag zur Kenntniss der Pliozanfauna der Molukkeninseln Seran und Obi. Palaeontologie von Timor, Schweizerbart, Stuttgart, 15, 25, p. 1-179.
('Contribution to the knowledge of the Pliocene fauna of the Moluccan islands of Seram and Obi'. Mainly on molluscs from Fufa valley outcrop collected by Wanner in 1902 and from well near Bula, Seram. Also molluscs and foraminifera from Akalamo valley on Obi, incl. Amphistegina wanneriana n.sp.)

Flugel, E. (1981)- Paleoecology and facies of Upper Triassic reefs in the Northern Calcareous Alps. In: D.F. Toomey (ed.) European fossil reef models, SEPM Spec. Publ. 30, p. 291-359.
(Review of faunal and facies distributions of U Triassic reefs in Alps. Mentions Seram (p. 351): up to 150m limestone, many calcareous sponges corals, hydrozoans; believed to be of Late Norian age)

Fortuin, A.R., M.E.M. de Smet, P.A. Sumasusatro, L.J. Van Marle & S.R. Troelstra (1988)- Late Cenozoic geohistory of NW Buru, Indonesia and plate tectonic implications. Geologie en Mijnbouw 67, 1, p. 91-105.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0MVNjSTByNVVBYlk/view)
(Buru stratigraphy: Paleozoic? metamorphics overlain by >2500m Triassic clastics with bituminous shale near top, unconformably overlain (break-up ?) by Late Jurassic (with basaltic volcanics) and Cretaceous- Eocene pelagic marls, limestones, cherts. Oligocene unconformity (folding, uplift) overlain by deep water Late Oligocene and E Miocene. Andesitic lavas present in E Miocene. Mid-Late Miocene unconformity.

Gafoer, S., Suwitodirjo & Suharsono (1994)- Geological map of Bula and Watubela Islands Quadrangle, Seram, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 13p.
(Oldest rocks in Seram outcrops are presumably Permian age metamorphics, overlain by Triassic Kanikeh Fm flysch and Manusela Fm limestone, overlain by Cretaceous pelagic calcilutite/ shale. Salas melange complex

formed in Mio-Pliocene, and is unconformably overlain by Pliocene Wahai Fm marls and Pleistocene Fufa Fm coarser clastics)

Germeraad, J.H. (1946)- Geology of Central Seran. In: Geological, petrographical and palaeontological results of explorations carried out from September 1917 till June 1919 in the Island of Ceram by L. Rutten and W. Hotz, 3rd Ser., Geology, 2, Amsterdam, p. 1-135.
(The geology of Central Seram, compiled from notes and study of rocks collected by Rutten & Hotz 1918-1920. Metamorphic rocks overlain by Late Triassic greywacke/ flysch, Late Triassic platform carbonates, etc.)

Gerth, H. (1909)- Echte und falsche Hydrozoen aus Niederlandisch-Indien. Sitzungsberichte Niederrheinischen Gesellschaft Natur und Heilkunde, Bonn, 1909, A, p. 17-25.
('Real and fake hydrozoans from Netherlands Indies'. Includes first record from Indonesia of ?pelagic Late Triassic hydrozoan Heterastridium from Seram, collected by Verbeek from Teri Mountain, East Seram (also locally common on Timor, see Gerth 1915; JTvG). New Cretaceous coral genus from Langkat, N Sumatra: Actinacis sumatrensis)

Gerth, H. (1910)- Fossile Korallen von der Molukkeninsel Buru nebst Bemerkungen uber die polygenetischen Beziehungen der Gattung *Alveopora*. Neues Jahrbuch Mineral. Geol. Palaeont. 1910, 2, p. 16-28.
('Fossil corals from the Moluccas island of Buru, with remarks on the polygenetic relations with the genus Alveopora'. Descriptions of Late Triassic corals from Buru, incl. Alveopora deningeri n.sp. from Miocene. Also U Triassic Lovcenipora intabulata from Tifu at S coast (formerly described as Pachypora intabulata Wanner 1907 from Seram))

Godefroy, W. (1897)- Verslag van een onderzoek naar petroleum nabij de Boela-Baai op noordoostelijk Ceram. Kolff & Co, Batavia, p.
('Report of an investigation into petroleum near Bula Bay on NE Seram'. With map of oil and gas localities)

Grosch, P. (1910)- Zur Geologie des indo-australischen Archipels, VI. Uber eine riffbildenden Koralle aus Nord-Ost Serang (Ceram). Centralblatt Mineralogie Geologie Palaont. 1910, p. 391-395.
(online at: www.biodiversitylibrary.org/item/192869page/416/mode/1up)
('On a reef-building coral from NE Seram'. Colonial coral collected by Wanner in 1902 in float of Fufa River, 11 km from mouth, described as Prionastraea cf. verbeeki (=Favites?, species originally described by Dollfus (1908) from Verbeek collection from Plio-Pleistocene? of Daweloor Island, Babar islands; JTvG))

Guntoro, A. (2000)- Structural, sedimentary and tectonic evolution of the Buru Island, central Molucca, Indonesia; in relation to the hydrocarbon prospect. AAPG Int. Conf., Exhib., Bali 2000, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1432 *(Abstract only)*
(Buru Island part of non-volcanic outer Banda Arc and is microcontinent derived from Australian continent. Mesozoic sediments similar to Seram. Low gravity anomaly in center of island. Gravity models show deep crustal structure and provide a better understanding of basin evolution)

Hadiwisastra, S., S. Djoehanah, D. Mulyadi & D. Trisukmono (1996)- Sedimentasi batuan Pra-Tersier dan Tersier di daerah busur tektonik aktif, Seram Utara. In: Sampurno et al. (eds.) Pros. Seminar Nasional Geoteknologi III, LIPI, Bandung, p. 347-373.
('Sedimentology of Pretertiary and Tertiary rocks in the area of an active tectonic arc, North Seram'. Geology of Seram similar to Timor. Study of Triassic massive Manusela Limestone, Cretaceous calcilutites, etc.)

Haile, N.S. (1978)- Paleomagnetic evidence for the rotation of Seram, Indonesia. In: S. Uyeda et al. (eds.) Geodynamics of the Western Pacific, Proc. Int. Conf. Geodynamics of the Western Pacific- Indonesian Region J. Physics Earth 26, Suppl. 6, p. 191-198.
(Upper Triassic shale with Halobia spp. from near S coast of C Seram indicates paleolatitude 12 ± 7° S (= probably farther North than Australia NW Shelf and New Guinea at that time) and CCW rotation of 98° since Late Triassic. Late Miocene (~7.6 Ma) pillow basalt from Kelang Island, W of Seram, indicates paleolatitude 5°S and 74° CCW rotation since Late Miocene)

Hakim A.S. & B.H. Harahap (2003)- Review on the stratigraphy of Buru Island, Maluku Eastern Indonesia. Buletin Geologi (ITB) 34, 3, Special Ed. (Prof. Soejono Martodjojo volume), p. 141-156.

Hall R., A. Patria, R. Adhitama, J.M. Pownall & L.T. White (2017)- Seram, the Seram Trough, the Aru Trough, the Tanimbar Trough and the Weber Deep: a new look at major structures in the eastern Banda Arc. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-91-G, 19p.
(Seram Trough began to form in Late Pliocene due to loading by Seram fold-thrust belt. Tanimbar Trough originated in Late Miocene as elongate extensional structure within Australian continental margin. Weber deep is major young extensional feature. None of troughs are subduction zones. Etc.)

Hammarstrom, J.M., B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7201, Ambon Arc, Central Molucca Islands- Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rep. 2010-5090-D, Appendix J, p. 164-174.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in Pliocene-Quaternary Ambon island arc. Two suites of island-arc magmas: (1) 5- 3.2 Ma, low-K calc-alkaline basalts, andesites, dacites and rhyolites, evolved from basaltic magmatism from mantle melting above W Irian Jaya Plate as it subducts along Seram Trough; (2) 2.3-1 Ma, high-K calc-alkaline andesites, dacites, rhyolites and granites (incl. ambonites= cordierite-bearing dacites) and granites, representing magmas that assimilated continental crust. Hila porphyry Cu-Au prospect on Ambon Island (3.6 Ma))

Harahap, B.H. (2002)- Stratigraphy of the Duna River Buru Island, Maluku: hydrocarbon indications. Bull. Geol. Res. Dev. Centre 22, p. 1-18.
(Duna River section near NW coast of Buru shows ~1500m Triassic- Pleistocene sediments overlying Permian metamorphics. Rel. thick M-U Triassic, unconformably overlain by thin Jurassic Mefa Fm lavas, interbedded with belemnite-rich clastics, overlain by Late Cretaceous- Eocene Kuma Fm pelagic limestone, unconformably overlain by Plio-Pleistocene coarse clastics. Oil seeps from Triassic Geghan Fm calcilutite and shale)

Harahap, B.H. & S. Poedjoprajitno (2006)- The stratigraphy and lithology of the Kuma River area, Buru Island, Maluku. J. Sumber Daya Geologi 16, 2 (152), p. 62-74.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/354)
(Stratigraphy of Kuma River area, from old to young: (1) Triassic Dalan Fm well-bedded clay-sand turbidites; (2) Jurassic Duna Fm interbedded pelagic limestone and ammonites-belemnites-rich beds; (3) Upper Cretaceous- Eocene Kuma Fm well-bedded pelagic limestone with abundant planktonic forams, (4) Oligocene-Miocene Waeken Fm micaceous mudstone, (5) Wakatin Fm massive reefal limestone; (6) Pleistocene Leko Fm conglomerate. Structuring related to block faulting)

Helmers, H., J. Sopaheluwakan, S. Tjokrosapoetro & E. Surya Nila (1989)- High-grade metamorphism related to peridotite emplacement near Atapupu, Timor with reference to the Kaibobo peridotite on Seram, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2/3, p. 357-371.
(On metamorphism associated with ophiolites obduction on Seram and N coast of Timor.)

Henny, G. (1922)- Eerste verslagen der Boeroe Expeditie, A: Geologisch onderzoek. Maatschappij ter bevordering van het Natuurkundig Onderzoek der Nederlandsche Kolonien, Amsterdam, Bull. 78, p. 1-24.
('First reports of the Buru Expedition, A: geology investigation'. Brief report with first geological results of 1921-1922 expedition to Buru island, Moluccas. Mainly on traverses from S coast (Tifoe, etc.) to Rana Lake)

Henny, G. & L.J. Toxopeus (1922)- Eerste verslagen der Boeroe-expeditie. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 39, p. 42-64.

('First reports of the Buru Expedition'. Extract of Henny (1922) on travel, geological and biological observations during 1921 SW Buru Expedition. Not much detail on stratigraphy/ fossils. Interesting find of white Nummulites-Discocyclina limestone N of Wai Ekin, not reported on later GRDC geologic maps)

Hill, K.C. (2005)- Tectonics and regional structure of Seram and the Banda Arc. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 559-578.
(Tectonic reconstruction assuming Permian age of Banda Sea oceanic crust. Suggests Seram Triassic Kanikeh Fm flysch was sourced from E (New Guinea) (Conflicts with pre-WWII Rutten field observations suggesting Triassic more sandy and coarser to W, and derived from metamorphic/ volcanic arc terrane; JTvG))

Hill, K.C. (2012)- Tectonic and regional structure of Seram and the Banda Arc. Berita Sedimentologi 23, p. 5-16.
(online at: www.iagi.or.id/fosi/)
(Same paper as above)

Honthaas, C., R.C. Maury, B. Priadi, H. Bellon & J. Cotten (1999)- The Plio-Quaternary Ambon arc, Eastern Indonesia. Tectonophysics 301, 3-4, p. 261-281.
(Pliocene- Quaternary N Banda Arc at Ambon, S Seram, Kelang, Haruju, Saparua, Ambelau and Banda Api with low-K arc volcanics, but on Ambon also high-K cordierite dacites-granites, probably derived from low-K magmas with massive assimilation of overlying Seram-Ambon continental crust. Two magmatic pulses: 5- 3.2 Ma and 2.3- 1 Ma. Active subduction of New Guinea crust below Ambon-Seram supported by volcanism, earthquakes, etc., but N Banda slab not connected to S Banda Arc Wetar-Manuk segment)

Hummel, K. (1923)- Geologische Ergebnisse der Reisen K. Deninger's in den Molukken. II. Die Oxford-Tuffite der Insel Buru und ihre Fauna. Palaeontographica Suppl. IV, 4, p. 113-184.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('Geological results of K. Deniger's travels in the Moluccas, 2: The Oxfordian tuffites of Buru islands and its fauna'. Descriptions of Late Jurassic fossils from 9 localities at SW coast and NW Buru, collected by Boehm and Deninger in 1907, 1912. These are from reddish 'Mefa Beds tuffites', 200-300m thick?, most fossiliferous near top. Almost everywhere overlain by thick, latest Jurassic- Cretaceous deep water Buru Limestone, and probably directly overlying U Triassic Lovcenipora limestone or bituminous shale. Fossils mainly ammonites (Phylloceras spp., Harpoceras, Oppelia, Perisphinctes), rare belemnites (to be described by Stolley), thick-walled bivalves (Opis, Pecten, Alectryonia; no Inoceramus), ribbed brachiopods (Rhynchonella spp.), etc.. Age believed to be E Oxfordian. Facies rel. shallow marine compared to generally bathyal facies of age-equivalent rocks in Moluccas (Sula, Seram). Faunal affinities with Mediterranean-Caucasian Realm)

Idrus, A., Fadlin, I. Setiawan, S. Abdullah & B. Smith (2012)- Preliminary study on primary gold mineralization in Buru Island, Moluccas Province, Indonesia. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 233-242.
(Gold nuggets from quartz vein mineralization hosted by mica schist of Carboniferous-Permian Wahlua Metamorphic Complex, discovered in 2012 around Gunung Botak, E Buru Island. Two types: (1) early quartz veins, discontinous and low in gold; (2) Quartz veins in 'mineralized zone' ~100m wide and ~1000m long. Ore mineralization characterized by pyrite, native gold, pyrrhotite and arsenopyrite. Mineralizing hydrothermal fluid CO2-rich, Temperature 300-400 ºC and low salinity (0.36- 0.54% NaCl eq). Mineralization in Buru Island meets characteristics of 'mesothermal' gold deposit type or 'orogenic' gold deposit type)

Idrus, A., S. Prihatmoko, Ernowo & Franklin (2013)- Update of metamorphic rock-hosted gold mineralization in Buru Island, Moluccas Province. In: Proc. Papua and Maluku Resources, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv., Bali, p. 89-98.

Idrus, A., S. Prihatmoko, H.G. Hartono, Fadlin, Ernowo, Moetamar & I. Setiawan (2014)- Some key features and possible origin of the metamorphic rock-hosted gold mineralization in Buru Island, Indonesia. Indonesian J. Geoscience 1, 1, p. 9-19.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/172/172)

(Buru primary gold deposits mainly in 2 localities Gogorea and Gunung Botak in E half of island, Two types of gold-bearing quartz veins in micaschists of U Carboniferous- Lw Permian Wahlua Fm metamorphic complex (similar to Bombana in Pompangea complex, E Sulawesi).Mineralization may be controlled by N-S of NE-SW trending strike-slip faults)

Jaworski, E. (1927)- Obertriadische Brachiopoden von Ambon (Molukken). Jaarboek Mijnwezen Nederlandsch-Indie 55 (1926), Verhandelingen III, p. 201-229.
('Upper Triassic brachiopods from Ambon (Moluccas)'. Brachiopods from dark limestones (locally bituminous) intercalated in several 100m thick sandy-shales series. With Rhynchonella, Spiriferina spp., Spirigera, etc., indicating Late Triassic age)

Juhanah, S. (1987)- Foraminifera plankton Plio-Plestosen dari Pulau Ambon. LIPI/ IAGI? 13p.
(Plio-Pleistocene planktonic foraminifera from Ambon island')

Kemp, G. (1992)- The Manusela Formation- an example of a Jurassic carbonate unit of the Australian Plate from Seram, Eastern Indonesia. In: C.T. Siemers et al. (eds.) Carbonate rocks and reservoirs of Indonesia: a core workshop, Indon. Petroleum Assoc. (IPA), Jakarta, Core Workshop Notes 1, p. 11/1-11/31.
(Manusela Fm high energy skeletal and oolitic grainstones deposited on NW margin of Australian Plate in Pliensbachian-Bathonian (E-M Jurassic) (more likely U Triassic?; JTvG), before onset of Callovian breakup and sea-floor spreading. Subsequent N-ward movement of Australian plate and collision with Eurasian/ Pacific-Philippine Plates in Late Miocene, resulted in development of detached thrust belt and formation of Seram island. Matrix and fracture porosity in Manusela. East Nief-1 with uncommercial hydrocarbons)

Kemp, G., R. Barraclough, W. Mogg, E. Budhiman & N. Heriyanto (1996)- Seram Basin. In: Pertamina/BPPKA (eds.) Petroleum geology of Indonesian Basins VIII, p. 1-33.
(Review of Seram geology and hydrocarbons)

Kemp, G. & W. Mogg (1992)- A re-appraisal of the geology, tectonics, and prospectivity of Seram Island, eastern Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta), p. 499-520.
(Distinguish 'Australian' (Triassic- U Miocene) and 'Seram' Series (U Miocene-Recent). 'Australian' series E Triassic and older pre-rift), E Triassic- M Jurassic intracratonic syn-rift, latest M Jurassic- E Cretaceous continental breakup and E Cretaceous- Late Miocene post-breakup/ passive margin sequence. Late Miocene-Present Seram Series strongly influenced by interaction of Australian, Pacific-Philippine and Eurasian plates, which led to periods of thrusting, uplift and erosion and are reflected in structural style)

Kemp, G., W. Mogg & R. Barraclough (1995)- Exploration in the Mesozoic in the Seram PSC, eastern Indonesia: recent developments in geological knowledge. Symposium & Workshop on the Mesozoic of Eastern Indonesia, Jakarta 1995, Pertamina, 26p. (*Unpublished*).

Kendrick, D. & N. Nilandaroe (2004)- Fracture characterization from outcrop data, Manusela Formation, Seram Island, Indonesia. 7p.
(online at: www.3d-geo.com/publications)
(Well-developed fracturing in 'Jurassic' Manusela Fm in Nief Gorge outcrop is possible analog to fracture porosity in Oseil oilfield, ~10km to NW)

Koch, R. (1925)- Eine jungtertiaren Foraminiferenfauna aus Ost-Seran. Eclogae Geol. Helvetiae 19, p. 207-213.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1925-1926:19220)
'A Young Tertiary foraminifera fauna from East Seram'. Marl sample collected by M. Muhlberg of Royal Dutch/ BPM in 1902 along Kasama River in 9 km W of Waru in NE Seram contains rich Pliocene shallow marine foraminifera fauna with 85 species)

Kossmat, F. (1906)- Bemerkungen uber die Ammoniten aus den Asphaltschiefern der Bara-Bai (Buru). Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 22, p. 686-691.

('Remarks on the ammonites from the asphalt shales of Bara Bay, Buru'. Float collected by Boehm in Wai Sifu River at Bara Bay, NW coast of Buru, contains Jurassic 'Buru Limestone' with inoceramids and belemnites. Also common flat pieces of dark bituminous shales with numerous ammonites, incl. generally crushed Tissotia weteringi. This ammonite was interpreted by Kossmat to signify Upper Cretaceous age, but was subsequently re-identified as Neotibetites of Late Triassic (Norian) age by Krumbeck 1909, 1913)

Krumbeck, L. (1909)- Kurze vorlaufige Mitteilung uber eine neue obertriadische Fauna aus den Molukken. Centralblatt. Mineral. Geol. Palaont., 1909, p. 561-562.
('Brief preliminary communication on a new Upper Triassic fauna from the Moluccas'. Ammonites from Buru interpreted as Cretaceous Tissotia by Kossmat (1909) are Upper Triassic 'ceratiten')

Krumbeck, L. (1911)- Bemerkungen zu K. Deninger: Einige Bemerkungen uber die Stratigraphie der Molukken. Centralblatt. Mineral. Geol. Palaont., 1911, 1, p. 21-23.
(online at: https://www.zobodat.at/pdf/Centralblatt-Mineral-Geol-Palaeont_1911_0021-0023.pdf)
('Remarks on K. Deninger's 'Remarks on the stratigraphy of the Moluccas'. Objects to Deninger's interpretation of Triassic (Norian) Ceratiten (Neotibetites) ammonites from marls of SW Buru as Jurassic)

Krumbeck, L. (1913a)- Obere Trias von Buru und Misol. A. Die Fogi-Schichten West Burus. Palaeontographica Suppl. IV, 2, Beitrage Geologie Niederlandisch-Indien II, 1, p. 1-119.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('Upper Triassic of Buru and Misool. A. The Fogi Beds of West Buru'. Macrofaunas collected by Boehm and Wanner from the lower Norian? Fogi-Beds of W Buru. Distal, but not very deep marine dark marls and limestones with bituminous limestone interbeds (up to 19% bitumen). Rich in fossils: mainly bivalves (Pseudomonotis, Pinna, Lima, Pecten, Placunopsis, Alectryonia, Nucula, Myophoria, Cardita, ?Megalodon, Protocardia, Burmesia, etc.), also ammonites (Sibirites, Sagenites, Tibetites, Neotibetites weteringi) and brachiopods (Misolia). Faunas similar to Juvavites Beds of Spiti, N India Himalayas)

Krumbeck, L. (1913b)- Obere Trias von Buru und Misol. B. Die Asphaltschiefer am Sifu (N.W.-Buru). Palaeontographica, Suppl. IV, 2, Beitrage Geologie Niederlandisch-Indien II, 1, p. 120-127.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('Upper Triassic of Buru and Misool. B. The asphalt beds at Sifu (NW Buru)'. Macrofaunas collected by Boehm and Wanner from Triassic (Lower Norian?) asphalt beds of NW Buru: bivalves (Pecten), ammonites (Neotibetites weteringi), fish scales. Age similar to Fogi Beds)

Krumbeck, L. (1923)- Geologische Ergebnisse der Reisen K. Deninger's in den Molukken. III. Brachiopoden, Lamellibranchiaten und Gastropoden aus der oberen Trias der Insel Seran (Mittel-Seram). Palaeontographica, Suppl. IV, Beitrage Geologie Niederlandisch-Indien III, 5, p. 185-246.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('Geological results of Deniger's 1912 trip in the Moluccas, III. Brachiopods, bivalves and gastropods from the Upper Triassic of Seram island (Central Seram)'. On Carnian Halobia shales of Wai Isana near Manusela with Halobia spp., Norian Kanikeh Beds with Myophoria, Cardita, Trigonia, etc., and Monotis bed at Wai Ehana (typical Monotis limestone rich in Monotis salinaria). Also Misolia Limestone)

Krumbeck, L. (1923)- Zur Kenntnis des Juras der Insel Timor, sowie des Aucellen-Horizontes von Seran und Buru. In: J. Wanner (ed.) Palaeontologie von Timor 12, 20, Schweizerbart, Stuttgart, p. 1-120.
('On the knowledge of the Jurassic of Timor, as well as the Aucella horizon of Seram and Buru'. Includes first description of Upper Jurassic 'Aucella' (=Malayomaorica) malayomaorica from Seram, also known from Timor, Buru, etc.)

Kuenen, P.H. (1949)- Ambon and Haroekoe. Contributions to the geology of the East Indies from the Snellius Expedition III. Verhandelingen Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 15, p. 44-62.
(Brief description of parts of Ambon and Haruku Islands. Presence of folded Triassic sediments on crystalline schists, peridotites, granites and 'ambonites' volcanics)

Kusnida, D., T. Naibaho & Y. Firdaus (2016)- Depositional modification in Seram Trough, Eastern Indonesia. J. Geologi Sumberdaya Mineral 17, 2, p. 99-106.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/22/22)
(Seismic profiles at Seram Trough show avalanches of Pliocene- Quaternary base-of slopes material in front of Seram accretionary prism)

Lapulisa, A.K., R. Andrianto & A.S. Dradjat (2012)- Seismic to geological modeling workflow, an integrated approach to determine the reservoir quality of a fractured limestone: Oseil Field example. Berita Sedimentologi 23, p. 47-52.
(online at: www.iagi.or.id/fosi/)
(On the use of seismic attributes to predict fracture porosity in 'Jurassic' Manusela Lst heavy oil reservoir. Oolitic, partly dolomitized limestones with low matrix porosity. Early extensional faulting, followed by SW-NE directed compression)

Lopulisa, A.K., R. Andrianto & A.S. Dradjat (2012)- Seismic to geological modeling workflow, an integrated approach to determine the reservoir quality of a natural fractured limestone reservoir: Oseil Field example AAPG Workshop Fractured Carbonate Reservoirs, Bali 2012, Search and Discovery Art. 20144, p. 1-26.
(online at: www.searchanddiscovery.com/documents/2012/20144lopulisa/ndx_lopulisa.pdf)

Linthout, K. & H. Helmers (1994)- Pliocene obducted, rotated and migrated ultramafic rocks and obduction-induced anatectic granite, SW Seram and Ambon, Eastern Indonesia. J. Southeast Asian Earth Sci. 9, p. 95-109.
(SW Seram and Ambon ultramafics obduction minimum age ~4.4 Ma. Obducted oceanic lithosphere was created at ~14.5 Ma. Obduction probably simultaneous with strong anticlockwise rotation of Seram)

Linthout, K., H. Helmers & P.A.M. Andriessen (1991)- Dextral strike-slip in Central Seram and 3-4.5 Ma Rb/Sr ages in pre-Triassic metamorphics related to Early Pliocene counterclockwise rotation of the Buru-Seram microplate (E. Indonesia). J. Southeast Asian Earth Sci. 6, p. 335-342.
(Major WNW trending right-lateral strike slip fault in SW Seram. Pre-Triassic metamorphics show Pliocene radiometric ages, possibly resetting from ophiolite obduction. Structural analyses suggest 45° counter clockwise rotation and radiometric age resetting between 4.5- 3 Ma, and final ~30° rotation in last 3 Ma)

Linthout, K., H. Helmers, J. Sopaheluwakan & E. Surya Nila (1989)- Metamorphic complexes in Buru and Seram, northern Banda Arc. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2/3, p. 345-356.
(SE Buru Wahlua and C Seram Tehoru metamorphic complexes similar pre-Triassic metamorphic history, and probably originated in same belt. Mylonites in N Tehoru indicate right-lateral, N300E directed strike-slip along transcurrent fault between metamorphics in S and non-metamorphic block in N, caused by anticlockwise rotation of Seram since Late Triassic. Kaibobo metamorphics T up to 740°C, caused by overriding ultramafic sheet in Late Miocene- E Pliocene. K/Ar ages of 4-5 Ma of micas from Wahlua and Tehoru complex explained by re-heating of pre-Triassic mica due to overthrusting by hot mantle slabs, now largely eroded. Average uplift of ~0.1 cm/yr during last 4-5 Ma in SE Buru and C Seram. Thrusting of metamorphics over non-metamorphics in 'median' Seram and of ultramafic sheet in SW Seram also related to Seram anticlockwise rotation)

Linthout, K., H. Helmers, J.R. Wijbrans & J.D.A.M. van Wees (1996)- 40Ar/39Ar constraints on obduction of the Seram ultramafic complex: consequences for the evolution of the southern Banda Sea. In: R. Hall & D.J. Blundell (eds.) Tectonic Evolution of SE Asia. Geol. Soc. London, Spec. Publ. 106, p. 455-464.
(On Kaibobo (SW Seram) obduction of hot oceanic lithosphere produced high-grade metamorphism and granite in overthrust continental crust. Ages from sole 5.65- 6.0 Ma and 5.4 Ma. Post-emplacement exhumation began < 8 Ma ago. Undoing 8 Ma of migration back-tracks Kaibobo to site where obduction ended: near SE corner of Banda Sea plate. Similarities between Kaibobo and N Timor ophiolites suggests E Miocene slow spreading in oceanic lithosphere S Banda Sea, S of current volcanic arc)

Liu, Z.Y.C. & R.A. Harris (2013)- Discovery of possible mega-thrust earthquake along the Seram Trough from records of 1629 tsunami in eastern Indonesian region. Natural Hazards, February 2013, p. 1-18.

(online at: http://link.springer.com/content/pdf/10.1007%2Fs11069-013-0597-y.pdf)
(Most likely source of mega-thrust earthquake that caused 15m high tsunami in 1629 at Banda Islands is Seram Trough, ESE of Seram Island. Mega-thrust earthquakes of magnitude needed to produce tsunami observed in Banda Islands have rupture lengths of >500 km)

Martin, K. (1888)- Ein *Ichthyosaurus* von Ceram. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 2, p. 70-86.
(online at: www.repository.naturalis.nl/document/552431)
('An Ichthyosaurus from Seram'. Skull/ jaw fragment of large Mesozoic (Jurassic?) Ichthyosaurus ceramensis n. sp., probably collected at E Seram South coast)

Martin, K. (1888)- Ein *Ichthyosaurus* von Ceram. Jaarboek Mijnwezen Nederlandsch Oost-Indie 17 (1888), Wetenschappelijk Gedeelte, p. 3-18.
(*('An Ichthyosaurus from Seram'. Same as Martin (1888) paper above*)

Martin, K. (1901)- Over de geologie van West-Seran (Ceram). Handelingen 8e Nederlandsch Natuur-Geneeskundig Congres, Rotterdam 1901, p. 301-304.
('On the geology of West Seram'. Old, brief summary of W Seram. Widespread 'Archean' metamorphics, locally associated with peridotites, Paleozoic greywackes and limestones, steeply dipping Mesozoic chert-bearing globigerinid-radiolarian limestone, overlain by brightly colored Globigerina limestone. No maps or figures)

Martin, K. (1901)- Reise Ergebnisse aus den Molukken. Centralblatt Mineralogie Geologie Palaont. 1901, p. 460-464.
(online at: www.biodiversitylibrary.org/item/196149page/379/mode/1up)
('Travel results from the Moluccas'. Summary of geological observations on Seram. No figures. More detail in Martin (1903))

Martin, K. (1902)- Reise Ergebnisse aus den Molukken. 3. Ein Profil durch Buru. Centralblatt Mineralogie Geologie Palaont., 1902, 15, p. 460-464.
(online at: www.biodiversitylibrary.org/item/192789page/476/mode/1up)
('Travel results from the Moluccas, 3, a traverse through Buru'. Brief, early description of Buru stratigraphy across N-S traverse. No figures, fossils)

Martin, K. (1903)- Reisen in den Molukken, in Ambon, den Uliassern, Seran (Ceram) und Buru. Geologischer Teil. Brill, Leiden, p. 1-296.
(online at: http://resolver.staatsbibliothek-berlin.de/SBB0000778100030000)
('Travels in the Moluccas, in Ambon, the Uliassers, Seram and Buru- Geologic part'. Early reconnaissance of Moluccas islands. First N-S traverse through Buru Island, etc.)

Martin, K. (1904)- Over het eiland Boeroe. Jaarboekje Mijnbouwkundige Vereeniging Delft 1903-1904, p. 47-54
(online at: http://lib.tudelft.nl/mscans/mscans0071)
(Brief travel report on Martin's trip to previously unexplored parts of Buru island in 1891-1892. Locally intensely folded Buru Limestone with globigerinids and radiolaria already recognized as Mesozoic deep marine deposit)

Martini, R. L. Zaninetti, B. Lathuilliere, S. Cirilli, J.J. Cornee & M. Villeneuve (2004)- Upper Triassic carbonate deposits of Seram (Indonesia): palaeogeographic and geodynamic implications. Palaeogeogr. Palaeoclim. Palaeoecology 206, 1-2, p. 75-102.
(Seram Upper Triassic limestones of Gondwanian-Australian type in 'Parautochthonous' and of Laurussian-Asian type in 'Allochthonous'. Carnian-Norian to Rhaetian Asinepe Lst (=Manusela Fm) part of allochthonous series. Four reefal facies: (1) boundstone forming buildup cores with calcisponges and calcareous algae, <20% coral; (2) oncolitic grainstones; (3) foraminiferal packstone-grainstones; (4) foraminiferal-megalodont mudstones. Geochemical and geodynamic interpretations placed Seram-Buru Block as derived from New

Guinea. Palynology suggests Seram-Buru Block more tropical than Sulawesi/ Kolonodale Block, but cooler than Timor/ NW Shelf. Foraminifera suggest Seram, E Sulawesi, Wombat Plateau and Sinta Ridge all part of same N Australian margin marine bioprovince)

Menzie, W.D., D.A. Singer, N. Karangan & H. Tresnadi (1997)- The Hila Prospect: a recently discovered copper occurrence on Ambon Island, Republic of Indonesia. U.S. Geol. Survey (USGS) Open-File Rept. 97-86, p. 1-17.
(online at: http://pubs.usgs.gov/of/1997/0086/report.pdf)
(Mineral prospect in part of Indonesia with no previously reported mineralization. Hila Prospect, SE of Hila village, NW Ambon, with copper sulfide minerals in Pliocene (4.4 Ma) Ambon volcanics. Host rocks andesite, dacites, breccia and tuff locally intruded by biotite and biotite-cordierite granite. Geologic setting, alteration, sulfide minerals, and geochemistry suggest possible periphery of porphyry copper-gold deposit)

Milsom, J. (1979)- Preliminary gravity map of Seram, eastern Indonesia. Geology 5, p. 641-643.
(Steep gravity gradients in survey area, related to transition from continental to oceanic crust and existence of root zone of ultramafic thrust sheet S of islands. Positive anomaly over rel. small area of ultramafic outcrop near Kaibobo, mainland Seram)

Milsom, J.S. (1979)- Origin of the Uliasser Islands, Eastern Indonesia. J. Geol. Soc. 136, 5, p. 581-582.
(Seram segment of Banda Arc appears to conform to structure of typical arc, but geology of area reveals number of deviations. Late Tertiary or Quaternary volcanoes forming Uliasser Islands mark S margin of extensional zone, and intruded along localized transform fault. Interpretation of geology of Seram area simplified if Uliasser volcanics are not regarded as subduction-related)

Monnier, C., J. Girardeau, J.P. Rehault et al. (2002)- The Seram ophiolites complexe (Central Indonesia): geochemical evidences for Early Miocene arc-splitting, 19e RST Nantes, p. 181-182. *(Abstract)*

Monnier, C., J. Girardeau, J.P. Rehault, H. Permana & H. Bellon (2003)- Dynamics and age of formation of the Seram-Ambon ophiolites (Central Indonesia). Bull. Soc. Geologique France 174, 6, p. 529-543.
(online at: http://documents.irevues.inist.fr/handle/2042/282)
(Seram-Ambon peridotites-gabbros mostly back arc basin characteristics, with 20-15 Ma K/Ar ages. Formed in small Early Miocene transtensional basin, bordered in E by active margin and in W by passive continental margin over which it was later obducted towards SW, in Late Miocene, 9-7 Ma)

Morrison, K. & A. Gartrell (2019)- The Seram fold belt: an emerging high impact play in Eastern Indonesia. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2019, 27p *(Abstract and Presentation)*
(NE Seram foldbelt underexplored hydrocarbon play. , only six wells penetrated Manusela fractured limestone, all discoveries, with over 420 MMBOE found to date (incl. Lofin gas field, 2 TCF)

Moss, S.J., J. Milsom & M.E.J. Wilson (1996)- The geology of Buru Island, Eastern Indonesia. London University, Southeast Asia Research Group, Report 150, 22p. *(Unpublished)*
(Late Paleozoic metamorphics overlain by >1000m Triassic sediments. Two facies: sandy slope turbidites and carbonate/ bituminous shale with reefal facies. Triassic unconformably overlain by ~1000m deep water Late Jurassic- Paleogene calcilutes/ marls, with ~100m of Late Jurassic submarine basaltic volcanics. Late Oligocene marls overlain by thick, folded Early Miocene marine sediments with earliest Miocene arc volcanics. Pliocene NE- prograding fan-delta sediments above major unconformity. Quaternary reefs and terraces up to 750m above sea level. No complex thrusting like Seram. Buru-Seram microcontinent originally part of 'Greater Sula Spur', separated from N Australia margin (Bonaparte Gulf?) by mid-Jurassic)

Moyle, I.P., S. Dyer, D.G.S. Lamb & W.G. Mogg (2000)- Experiences in underbalanced drilling and testing low gravity oil from a high productivity reservoir in Seram Island, Maluku Province, Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-36.
(Oseil 2 and 4 wells drilling. Oseil 2 720' of oil column in Manusela Fm fractured carbonate, testing up to 650 BOD of 22°API oil. Oseil 4410' of oil pay, testing 2200 BOD of 16.1° API oil)

Muliani, R. (2005)- Haruku base metal deposits, Maluku. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI) Spec. Issue, p. 118-136.
(Haruku Island, between Ambon and Saparua, with some poorly known Cu-Pb-Zn-Ag-Au high-sulphide mineralization prospects, with galena, sphalerite, chalcopyrite, etc., hosted by U Miocene- Lower Pliocene? brecciated andesitic-dacitic volcanics)

Munasri, H. Permana & S. Siregar (1999)- Is Seram island the mirror image of Timor island? In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 51-61.
(In Indonesian. Many similarities in tectonostratigraphies of Seram and Timor. Cretaceous Sawai Fm of N Seram (Albian- Campanian) and Nakfunu Fm (Berriasian- Aptian) on Timor show differences in lithology and radiolaria biostratigraphy)

Munasri, S. Siregar & D. Mulyadi (1999)- Studi geodinamika sedimentasi satuan batuan sedimen di Pulau Seram dan korelasinya dengan yang di Pulau Timor. Laporan Penelitian Puslitbang Geoteknologi-LIPI, 1998/1999, p. 45-60.
('Study of geodynamics of sedimentation of sedimentary rock units of Seram Island and correlation with Timor'. Micropaleontological, petrographic and sedimentological analysis of Triassic- Tertiary series suggest Timor is mirror image of Seram)

Nilandaroe, N. (2005)- Relationship between facies and fracturing- a comparison of fractured carbonate reservoirs on Seram Island, Indonesia and Southern Italy. Indon. Petroleum Assoc. (IPA) Newsletter 2005, 11, p. 20-24.
(online at: www.ipa.or.id/download/news/IPA_Newsletter_11_2005_10.pdf)
(Brief comparison of fracturing in 'Jurassic' Manusela Fm in Seram fold-thrust belt and fractured carbonates in Apennines. Larger fractures better developed in coarser-grained facies (oolitic grainstones) than in muddier facies of Manusela Fm carbonates)

Nilandaroe, N., W. Mogg & R. Barraclough (2001)- Characteristics of the fractured carbonate reservoir of the Oseil Field, Seram Island, Indonesia. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 439-456.
(Oseil oil field reservoir is fractured 'E-M Jurassic' Manusela carbonate (recrystallised oolitic grainstone, dolomites, wackestones). Reservoir extensively fractured with pervasive, open, near-vertical fractures, preferentially striking in NNE-SSW orientation. Fracture porosity <5-8%; negligible matrix porosity due to complex diagenesis)

Noor, M.K., A. Tonggiroh & A. Maulana (2016)- Type of gold hydrothermal deposits on metamorphic rock, District Buru, Province Maluku. Int. J. Engineering and Science Applications (UNHAS) 3, 1, p. 39-45.
(online at: http://pasca.unhas.ac.id/ojs/index.php/ijesca/article/view/276/160)
(Gold-bearing quartz veins in greenschist facies metamorphic rocks (muscovite schist and phyllite; probably metasediments) at Gunung Botak, Buru, reflect epithermal- high sulphidation gold mineralization)

Oemar, S. & C.H. Remington (1993)- A new view on the petroleum geology of the Buru Island, Eastern Indonesia. Proc. 22nd Ann. Conv. Indon. Assoc. Geologists (IAGI), Bandung, 2, p. 693-703.
(Brief summary of Pertamina fieldwork on Buru. Main sedimentary basin in S part of island, but gravity study suggests W and N parts of island may also have enough sediments for hydrocarbon accumulation)

O'Sullivan, T.D., D. Pegum, & J. Tarigan (1985)- Seram oil search, past discoveries and future oil potential. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 3-20.
(Bula oilfield in E Seram discovered in 1897, produced >13 million barrels of oil have been produced, mainly form Pleistocene Fufa Fm. Seram is imbricate accretionary prism formed by subduction of Australian Plate. Shale diapirism and regional left-lateral wrenching important roles in structural development)

Panuju, J.S. Hadimulyono & J. Anwari (2015)- Hydrocarbons resource assessment of the eastern offshore area of Seram Island, Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-196, 15p.

Pairault, A.A., R. Hall & C.F. Elders (2003)- Tectonic evolution of the Seram Trough, Indonesia. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, IPA03-G-013, p. 1-16.

Pairault, A.A., R. Hall & C.F. Elders (2003)- Structural styles and tectonic evolution of the Seram Trough, Indonesia. Marine Petroleum Geol. 20, 10, p. 1141-1160.
(Study of recent 2D seismic lines across Seram Trough in N part of Banda Arc, between Birds Head of New Guinea and Seram Island. Formerly interpreted as (1) subduction trench, (2) intra-continental thrust zone and foredeep, and (3) strike-slip fault zone. E Pliocene inversion of Misool-Onin anticlinorium produced angular unconformity, which truncates sediments as old as M Jurassic, later folded and now dippping S towards Seram Trough. Contraction in Trough occurred after E Pliocene and continues to present day. This work suggests Seram Trough is not subduction trench but foredeep within Australian continental margin, produced in response to loading by Seram fold-thrust belt. (This ignores dipping subducting slab as imaged by tomography, earthquake epicenters, also >100km wide accretionary prism, etc.; JTvG))

Patria, A. & R. Hall (2017)- The origin and significance of the Seram Trough, Indonesia. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-19-G, p. 1-19.
(Seram Trough commonly interpreted as accretionary wedge/ subduction zone beneath Seram, but is shallower than typical subduction zone and marks deformation front of fold-thrust belt resulting from young oblique convergence between Outer Banda arc and Birds Head. Fold-thrust belt zone narrower in W (with thrusting cesing thrusting ceases at E edge of Buru oceanic basin) and widens to SE. Thrusting at the trough started in Late Pleistocene)

Pertamina/BPKKA (1996)- Petroleum geology of Indonesian basins, vols. VI-IX Eastern Indonesian Basins, VIII- Seram, p. 1-33.

Pia, J. (1924)- Einige Dasycladaceen aus der Ober-Trias der Molukken. Jaarboek Mijnwezen Nederlandsch Oost-Indie 52 (1923), Verhandelingen, p. 137-149.
(First record from Indonesia of U Triassic (probably Norian) dasyclad algae from (1) NE Seram: Bula river, Macroporella sondaica n.sp. from limestone breccia interbed in Monotis-bearing flysch-like Upper Triassic series; (2) SW Buru: S of Tifu, massive U Triassic limestone with Lovcenipora and Macroporella irregularis n.sp.; (3) NW Buru: Wai Tina 'Fatu Lst', possibly Jurassic. Few species, all new)

PND- Patra Nusa Data (2006)- Northern offshore Seram. Inameta J. 2, p. 26-29.
(online at: www.patranusa.com)
(Brief overview of Seram geology and prospectivity)

PND- Patra Nusa Data (2006)- Misool and Seram Basin. In: Indonesia Basin Summaries (IBS), PT Patra Nusa Data, Inameta Series, Jakarta, p. 392-409.
(Brief summary of hydrocarbon system elements of Misool-Seram region. Saman Saman- Manusela Limestone Fms of Seram shown as Late Triassic- Middle Jurassic in age)

Pownall, J.M. (2014)- Neogene tectonometamorphic evolution of Seram, eastern Indonesia. Ph.D. Thesis, Royal Holloway, University of London, p. 1-538. *(Unpublished)*

Pownall, J.M. (2015)- UHT metamorphism on Seram, eastern Indonesia: reaction microstructures and P-T evolution of spinel-bearing garnet-sillimanite granulites from the Kobipoto Complex. J. Metamorphic Geol. 33, 9, p. 909-935.
(Seram Kobipoto Metamorphic Complex with Mio-Pliocene granulite facies migmatites and less common granulites. Migmatites associated with ultramafic rocks of lherzolitic composition, exhumed by lithospheric extension beneath low-angle detachment faults. Post-peak evolution of granulites may be related to published

U-Pb zircon and 40Ar/39Ar ages of ~16 Ma. Kobipoto Complex granulites demonstrate how UHT conditions may be achieved by extreme lithospheric extension, in this case driven by slab rollback of Banda Arc)

Pownall, J.M., R.A. Armstrong, I.S. Williams, M.F. Thirlwall, C.J. Manning & R. Hall (2018)- Miocene UHT granulites from Seram, eastern Indonesia: a geochronological-REE study of zircon, monazite and garnet. In: S. Ferrero et al. (eds.) Metamorphic geology: microscale to mountain belts, Geol. Soc. London, Spec. Publ. 478, p. 167-196.
(online at: http://searg.rhul.ac.uk/pubs/pownall_etal_2018%....)
(Ultra-high T (>900°C) garnet-sillimanite granulites of Seram formed by extensional exhumation of hot mantle rocks behind rolling-back Banda Arc. Miocene age confirmed by ~16 Ma zircons and monazites U-Pb ages. These geochronometers date retrograde overprints. Zircons shielded within garnet with 216-173 Ma ages (Late Triassic- E Jurassic. UHT conditions very short-lived and very rapid exhumation of granulite complex)

Pownall, J.M., M.A. Forster, R. Hall & I.M. Watkinson (2017)- Tectonometamorphic evolution of Seram and Ambon, eastern Indonesia: insights from 40Ar/39Ar geochronology. Gondwana Research 44, p. 35-53.
(Two main phases in Seram Neogene tectonic evolution: (1) 16 Ma episode of extreme extension that exhumed hot lherzolites from subcontinental lithospheric mantle and drove UHT metamorphism and melting of adjacent continental crust (kyanite-grade metamorphic event of Tehoru Fm across W and C Seram); and (2) 5.7, 4.5 and 3.4 Ma episodes of extensional detachment faulting and strike-slip faulting that further exhumed granulites and mantle rocks across Seram and Ambon. Events interpreted to be result of W Seram ripping off from SE Sulawesi, extended, and dragged E by Banda Slab subduction rollback)

Pownall, J.M. & R. Hall (2014)- Neogene extension on Seram: a new tectonic model for the northern Banda Arc. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-305, 17p.
(Neogene tectonic evolution of Seram not dominated by thrusting and shortening due to collision of N Banda Arc with Australian passive continental margin, but peridotites represent subcontinental lithospheric mantle rapidly exhumed beneath low-angle detachment faults during extreme crustal extension. KobipotoMts of C Seram with peridotites intimately associated with granulite facies migmatite, recording ultrahigh P/T of 25-30 km depth. Granitoids emplacement across Seram and Ambon from 16 Ma (Kobipoto Mts) until 3.5 Ma (Ambon). Seram experienced extreme extension by detachment faulting best explained by E-ward rollback of Banda slab since 16 Ma)

Pownall, J.M., R. Hall & R.A. Armstrong (2017)- Hot lherzolite exhumation, UHT migmatite formation, and acid volcanism driven by Miocene rollback of the Banda Arc, eastern Indonesia. Gondwana Research 51, p. 92-117.
(N Banda Arc (Seram) exposes upper mantle lherzolites and lower crust granulite facies migmatites of 'Kobipoto Complex'. Granulites experienced ultrahigh-T (> 900˚C) at 16 Ma due to heat supplied by lherzolites exhumed during slab rollback in Banda Arc. Ages of detrital zircons from Kobipoto Complex 3.4 Ga- 216 Ma, suggesting W Papua/ W Australian Archean protolith and post-Late Triassic metamorphism. Zircons in granulites three later growth episodes: 215-173 Ma (= subduction beneath Birds Head and Sula Spur?), 25-20 Ma (collision between Sula Spur and N Sulawesi?), and ~16 Ma. 16 Ma zircon rims grew during M Miocene metamorphism and melting of Kobipoto complex rocks beneath Seram under HT-UHT conditions. Extension during continued slab rollback exhumed both lherzolites and adjacent granulites beneath extensional detachment faults in W Seram at 6.0-5.5 Ma, and on Ambon at 3.5 Ma. Ambonites and dacites sourced mainly from melts generated in Kobipoto Complex migmatites erupted on Ambon from 3.0-1.9 Ma.)

Pownall, J.M., R. Hall, R.A. Armstrong & M.A. Forster (2014)- Earthôs youngest known ultra high temperature granulites discovered on Seram, eastern Indonesia. Geology 42, 4, p. 279-282.
(late Early Miocene (16 Ma) ultrahigh-T (≥900 °C) granulite metamorphics in Kobipoto Mountains, Seram, youngest at Earth surface. Slab rollback-driven lithospheric extension caused metamorphic core complex-style exhumation of hot subcontinental lithospheric mantle)

Pownall, J.M., R. Hall & I.M. Watkinson (2013)- Extreme extension across Seram and Ambon, eastern Indonesia: evidence for Banda slab rollback. Solid Earth 4, 2, p. 277-314.

(online at: www.solid-earth.net/4/277/2013/se-4-277-2013.pdf)
(Seram island in N part of Banda Arc previously interpreted as fold-and-thrust belt formed during arc-continent collision, with ophiolites intruded by granites. New geological mapping and re-examination of field relations suggest recent N-S extension caused high-T exhumation of mantle peridotites and granites (Kobipoto Complex) beneath low-angle lithospheric detachment faults)

Price, P.L., T. OöSullivan & R. Alexander (1987)- The nature and occurrence of oil in Seram, Indonesia. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 141-172.
(First Seram oilfield Bula in 1897, with oil produced from Pleistocene clastics and Late Triassic- E Jurassic carbonates. Oil from carbonat source, probably Late Triassic, but no source rock identified)

Priem, H.N.A., P.A.M. Andriessen, N.A.I.M. Boelrijk et al. (1978)- Isotopic evidence for a Middle to Late Pliocene age of the cordierite granite on Ambon, Indonesia. Geologie en Mijnbouw 57, 3, p. 441-443.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0aXVNVFJuSnAxVlk/view)
(Rb-Sr dating of cordierite-biotite granite from Ambon yields age of 3.3 ± 0.1 Ma and K-Ar age of biotite of 3.8 ± 0.2 Ma, both suggesting Middle-Late Pliocene age for associated 'ambonite' basaltic magmatism. Initial 87Sr/ 86Sr = 0.7221. Geology of Ambon related to SW subduction from Seram Trough)

Rittmann, A. (1931)- Gesteine von Kellang und Manipa. Geological, Petrographic and Palaeontological results of explorations carried out from September 1917 till June 1919 in the Island of Ceram by L. Rutten and W. Hotz, First Ser., Petrography, 2, De Bussy, Amsterdam, p. 1-135.
(Petrographic descriptions of rocks from Manipa and Kellang Islands between Buru and Seram. Primarily igneous (peridotites/ serpentinites, gabbros, basalts) and metamorphic rocks (primarily contact metamorphism from ultramafics and gabbro intrusions). Sediments ony in central syncline of Kellang: Triassic sandstones rich in feldspars, muscovite and plant remains and shales and grey-red limestone lenses with corals and brachiopods, all similar to those found in W Seram)

Roques, D. (1999)- The metamorphic core of Buru. University of London SE Asia Research Group, Report 204, p. 1-49. *(Unpublished)*
(Buru phyllites/ schist/quartzites usually interpreted as Late Carboniferous-E Permian metamorphosed flysch. Amphibolite facies corresponds to burial depth of 20-25 km. Metamorphics overlain by unmetamorphosed Triassic. Young cooling ages reflect uplift/ exhumation between 5- 2.5 Ma, removing >6 km of sediment)

Rutten, L.M.R. (1918)- Uit het eerste verslag over de geologische expeditie naar Ceram. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 35, p. 112-121.
(First of series of ten reports by Rutten-Hotz on the geological expedition to Seram from August 1917- June 1919, sponsored by 'Maatschappij tot Bevordering van Natuurkundig Onderzoek der Nederlandse Kolonien' and the Netherlands Geographic Society. Mainly summaries of travel, but with geological observations. Unfortunately, no other documentation from this extensive fieldwork was published, except in the Rutten (1927) chapter on Seram and in in late 1940's theses by Rutten's Ph.D. students Germeraad, Valk and Van der Sluis)

Rutten, L.M.R. (1918)- De geologische expeditie naar Ceram- tweede verslag (13 Aug.- 11 Sept. 1917). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 35, p. 228-234.
('The geological expedition to Seram- Report 2')

Rutten, L.M.R. (1918)- De geologische expeditie naar Ceram- derde verslag (12 Sept.-11 Nov. 1917). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 35, p. 368-378.
('The geological expedition to Seram- Report 3')

Rutten, L.M.R. (1918)- De geologische expeditie naar Ceram- vierde verslag (12 Nov. 1917- 4 Jan. 1918). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 35, p. 547-555.
('The geological expedition to Seram- Report 4')

Rutten, L.M.R. (1919)- De geologische expeditie naar Ceram- vijfde verslag (4 Jan.- einde Maart 1918). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 36, p. 36-42.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)
('The geological expedition to Seram- Report 5')

Rutten, L.M.R. (1919)- De geologische expeditie naar Ceram- zesde verslag (April- Mei 1918). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 36, p. 42-48.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)
('The geological expedition to Seram- Report 6'. Traverses in East Ceram. Visit to Nief Gorge, the only place where Rutten observed oil seeps on Seram)

Rutten, L.M.R. (1919)- De geologische expeditie naar Ceram- zevende verslag (Juni- Juli 1918). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 36, p. 199-207.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)
('The geological expedition to Seram- Report 7'. Brief report in June-July 1918 travels. No figures)

Rutten, L.M.R. (1919)- De geologische expeditie naar Ceram- achtste verslag. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 36, p. 460-466.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)
('The geological expedition to Seram- Report 8'. With map of Piroe area in West Ceram)

Rutten, L.M.R. & W. Hotz (1919)- De geologische expeditie naar Ceram- negende verslag (medio September- medio December 1918). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 36, p. 559-579.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)
('The geological expedition to Seram- Report 9'. With 3 maps and cross-sections)

Rutten, L.M.R. & W. Hotz (1920)- De geologische expeditie naar Ceram- tiende verslag (medio September- medio December 1918). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 37, p. 17-31.
('The geological expedition to Seram- Report 10')

Rutten, L.M.R. (1920)- De geologische expeditie naar Ceram- elfde (laatste) verslag. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, Ser. 2, 37, p. 32-42.
('The geological expedition to Seram- Report 11 (final)')

Rutten, L.M.R. (1927)- Ceram, Ambon, Boeroe en de kleinere eilanden in hunne omgeving. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 716-749.
(Review of geology of Seram, Ambon, Buru and adjacent small islands)

Sachse, F.J.P. (1906)- Toelichtingen bij de schetskaart van de afdeelingen Wahai en West-Seran op het eiland Seran. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 23, 3, p. 439-450.
('Explanatory notes with sketch-map of the districts of Wahai and West Seram on Seram island'. Early geographic description)

Sapiie, B. & M. Hadiana (2014)- Analogue modeling of oblique convergent strike slip faulting and application to the Seram Island, Eastern Indonesia. Indonesian J. Geoscience 1, 3, p. 121-134.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/189/181)
(Sandbox modeling to understand deformation of Seram Island. Best matched as oblique convergent strike-slip transpressional regime)

Sapiie, B., M. Hadiana, M. Patria, A.C. Adyagharini, A. Saputra, P. Teas & Widodo (2012)- 3D structural geology analysis using integrated analogue sandbox modeling: a case study of the Seram thrust-fold belt. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-045, p. 1-14.
(Offshore+onshore Seram fold-thrust belt broad deformation zone >400 km long, ~100 km wide. Peak deformation in last 3 My. Fault pattern changes along strike (trends in W mainly E-W, middle NW-SE, and E

(SE) mainly N-S), accompanied by change in dip of faults from NE to SW. Large amounts of shortening. Left-lateral strike-slip component in deformation, suggesting oblique convergent system)

Schneider, C.F.A. (1852)- Geognostisch uitstapje naar de zuidkust van Ceram. Natuurkundig Tijdschrift Nederlandsch-Indie 3, 1, p. 101-107.
(online at: http://62.41.28.253/cgi-bin/)
('Geognostic excursion to the south coast of Seram'. Early description of rock types encountered along S coast of Seram. Not much detail, no maps)

Schroeder van der Kolk, J.L.C. (1895)- Mikroskopische Studien uber Gesteine aus den Molukken. 1. Gesteine von Ambon und den Uliassern. Jaarboek Mijnwezen Nederlandsch-Indie 24 (1895), p. 1-57.
('Microscopic studies of rocks from the Moluccas, I. Rocks from Ambon and the Uliasser islands')

Schroeder van der Kolk, J.L.C. (1900)- Mikroskopische Studien uber Gesteine aus den Molukken, 2. Gesteine von Seran. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 6, p. 1-39.
(online at: www.repository.naturalis.nl/document/552397)
('Microscopic studies of rocks from the Moluccas, 2. Rocks from Seram'. Petrographic descriptions of rocks collected by K. Martin, incl. granite (with and without cordierite), diorite, peridotite, Augite-andesite, cordierite gneiss, amphibolite, mica schist, greywacke and breccia))

Schroeder van der Kolk, J.L.C. (1902)- Mikroskopische Studien uber Gesteine aus den Molukken, 3. Gesteine von Buru. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 6, p. 77-127.
(online at: www.repository.naturalis.nl/document/552389)
('Microscopic studies of rocks from the Moluccas, 3. Rocks from Buru'. Petrographic descriptions of rocks collected by K. Martin, incl. granite from N coast near Waepote, andesites from 2 localities, gneiss from Batubua and Lumaiti, mica schists, phyllites and quartz schists from several localities, graywackes, conglomerate and limestone)

Setyanta, B. & I. Setiadi (2007)- Anomali gaya berat dan tataan tektonik sekitar perairan Laut Banda dan Pulau Seram. J. Sumber Daya Geologi 17, 6 (162), p. 408-419.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/319/287)
(Gravity anomalies of Banda Sea and Seram Island used to build crust structure model. Banda Sea mainly composed of basaltic crust. Banda Sea basaltic crust under volcanic Banda Island, while granitic crust is under Pre-Tertiary sediments at Seram)

Setyanta, B. & I. Setiadi (2010)- Pola struktur dan geodinamika Cekungan Bula, berdasarkan anomali gaya berat. J. Sumber Daya Geologi 20, 1, p. 41-55.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/161/156)
('Structure and geodynamics of the Bula Basin, based on gravity anomaly data'. Seram. Gravity shows two regional fault structures, horizontal faults trending NE-SW and E-W)

Setyawan, W.B., B. Wijaya & A. Guntoro (2000)- Mengurai perkembangan tektonik Pulau Seram dan Ambon. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 33-45.
('Analysis of the tectonic development of Seram and Ambon islands'. Mainly literature review)

Siagian, H.P., B.S. Widijono, J. Nasution, B. Setyanta, Nurmaliah, K. McKenna & A. Noetzli (2016)- High resolution magnetic anomaly modelling and its implication for petroleum prospectively on Seram Island, Maluku, Indonesia. Proc. 25th Geophys. Conf. Exhib. ASEG-PESA-AIG 2016, Adelaide, p. 207-210.
(online at: http://www.publish.csiro.au/ex/pdf/ASEG2016ab173)
(Airborne magnetic survey over Seram- Buru in 2012 shows high anomalies mainly in W part of survey area and small anomalies in SE of island, interpreted as Paleozoic Taunusa Fm. Medium anomaly range in E, NE and WNW of Seram reflects occurrence of Mesozoic rocks from Kanikeh Fm. Low magnetic anomalies in C and NE reflect 'Jurassic' Manusela Fm. Modelling of magnetic anomalies indicates folds, thrust fault structures, basement fractures and thickness of (Triassic) Kanikeh Fm source (~2623m), Jurassic seal rocks (~1166m))

Sopaheluwakan, J. (1994)- Basement evolution of the Buru- Seram microplate and its bearing on hydrocarbon occurrences. In: J.L. Rau (ed.) Proc. 30th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bali 1993, 2, p. 17-32.
(Two types of metamorphic rocks comprise Buru- Seram crystalline basement: (1) Paleozoic low-grade schist of continental character on Buru and S Seram; (2) W Seram low- to high-grade (greenschist to granulite) metamorphic sole at base dismembered ophiolite is Neogene re-metamorphism of Paleozoic during obduction of hot Weber Deep materials)

Sopaheluwakan, J., K. Linthout, H. Helmers & H. Permana (1992)- Peridotite- metamorphite relation in West Seram: constraints to vertical movements of the North Banda Arc. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 599-609.
(W Seram Three or 4 metamorphic complexes (Kobipoto, Saku, Tehuru, Taunusa). Paleozoic low-grade metamorphics overthrusted in Pliocene from ESE by peridotite, a hot mantle slab of NW Weber Deep origin, forming metamorphic sole with granulite-facies mylonite near contact. Surprisingly young Rb-Sr age of 3-4.5 Ma (K-Ar 4-6 Ma). Same age as cordierite granite on Ambon (3.3Ma), which may be product of melting of continental crust below peridotite)

Supandjono, R.J.B. (1994)- Geologi daerah Lofin, Seram Tengah. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 112-122.
('Geology of the Lofin area, C Seram'. Most of area ~1500m M-L Triassic Kanikeh Fm sands, shale and coaly beds. Overlain by ~500m Late Triassic- E Jurassic Manusela Lst (with Halobia, Montivaltia, Lovcenipora= Triassic? JTvG) bedded, nodular calcilutites with radiolaria and bituminous lenses. In S unconformably overlain by ~300m latest Oligocene-E Miocene Lisabata Lst (with Spiroclypeus, Miogypsina). In N ~250m of latest Miocene- Pliocene (N18-N19, NN11) marine Wahai Fm clastics directly on folded Triassic Kanikeh clastics. Two major N-directed thrust faults)

Susilo, A., I. Budiman, I. Setiadi & T. Padmawijaya (2006)- High gravity anomaly around the Kelang Island, Maluku. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc., Jakarta06-PNS-07, 4p. *(Abstract)*
(High gravity anomaly around Kelang Island, W of Seram, is expression of N end of Banda Sea basaltic ultra-basic crust and it continues to peak to S and SW (S of Buru)).

Sykora, J.J. (2000)- The buried fold-thrust belt of offshore Seram. AAPG Int. Conf. Bali 2000, AAPG Bull. 84, p. 1502. *(Abstract only)*

Tjokrosapoetro, S. (1977)- The regional structure of Seram island as interpreted from satellite imagery. Proc. 13th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur, p. 366-377.

Tjokrosapoetro, S., A. Achdan, K. Suwitodirdjo, E. Rusmana & H.Z. Abidin (1993)- Geological map of the Masohi quadrangle, Maluku, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geological map of Central Seram. N part of island folded Kanikeh Fm Triassic/Jurassic 'flysch' interfingering with Manusela Fm limestones, overlain by pelagic limestones and red shale (Nief Beds of older authors?) of Upper Cretaceous (Sawai Fm) and Paleo-Eocene age (Hatuolo Fm) and Oligo-Miocene Lisabata shallow marine limestone with Spiroclypeus, Miogypsina, etc. Unconformably overlain by Miocene-Pliocene Salas Complex 'block clay' and Plio-Pleistocene Wahai and Fufa sediments. South part of island mainly ?Permian-Triassic Tehoru-Saku metamorphic complexes, commonly associated with ?Jurassic-Cretaceous ultramafics, all thrusted to N over Triassic rocks)

Tjokrosapoetro, S. & T. Budhitrisna (1982)- Geology and tectonics of Northern Banda Arc. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, 6, p. 1-17.
(Comparison of Buru, Seram and Misool, mainly based on stratigraphy. Buru geology similar to Misool in Late Paleozoic- Miocene. Seram more complicated with overthrusts, mantle rocks, etc., and similarity with Timor. In

M Miocene- Present Buru displaced SW along Buru Fracture between Buru and Seram. Pliocene S-dipping subduction below Seram terminates in W by Buru Fracture)

Tjokrosapoetro, S., T. Budhitrisna & E. Rusmana (1993)- Geology of the Buru Quadrangle, Maluku, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 24p. + map.
(Second edition of 1981 map. Buru much less structured than Seram. Widespread outcrops of probable Late Carboniferous- Permian metamorphics. Unconformably overlain by Triassic turbiditic clastics of Dalan Fm (with clasts of quartz and metamorphics), probably overlain by up to 2000m of Ghegan Fm (limestones and bituminous marls with Triassic Halobia, etc.= Fogi beds of Wanner 1922). Unconformably overlain by Late Jurassic- Paleo-Eocene Kuma Fm deep water calcilutites. Near contact Ghegan-Kuma rel. small outcrops of ~100m Mefa Fm basalts and marly tuffs with (Late?) Jurassic ammonites. In S Buru Kuma Fm and Triassic rocks ?unconformably overlain by sandy-marly Waeken Fm of latest Oligocene- E Miocene age. Folded Oligo-Miocene sediments unconformably overlain by Pliocene marine sediments. Pliocene andesites (dated as 4.5 Ma) similar to Ambon)

Tjokosapoetro, S., E. Rusmana & Suharsono (1994)- Geology of the Ambon Sheet, Maluku, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 15p. + map.

Umbgrove, J.H.F. (1924)- Report on Pleistocene and Pliocene corals from Ceram. In: L. Rutten & W. Hotz (eds.) Geological, petrographical and palaeontological results of explorations, carried out from September 1917 till June 1919 in the island of Ceram, 2nd ser., Palaeontology, p. 1-22.
(Corals collected by Rutten from 13 localities in C and E Seram. 25 species identified, about 80 Recent species, probably all Late Pliocene or younger age)

Usna, L. (1977)- Note on a seismic reflection profile across the Seram Trough. Newsl. Indonesian Geol. Survey 9, 16, p. 193-194.

Valk, W. (1945)- Contributions to the geology of West Seran. Doct. Thesis University of Utrecht. In: Geological, petrographical and palaeontological results of explorations carried out from September 1917 till June 1919 in the Island of Ceram by L. Rutten and W. Hotz, De Bussy, Amsterdam, 3rd ser., Geology, 1, p. 1-109.
(Geology of W Seram, compiled from notes and study of rocks collected during Rutten & Hotz (1918-1920) Seram fieldwork. Pre-Upper Triassic metamorphics (folded schist, phyllite, gneiss, amphibolite) more common than in E Seram. Upper Triassic more sandy than in C and E Seram: greywacke sandstones composed mainly composed of detritus of schists, phyllites and andesites and are probably of Norian- Carnian age. Overlying shales Upper Norian. Also U Triassic coralline limestone, U Eocene conglomerates with Discocyclina, non-metamorphic peridotites, etc.)

Van der Sluis, J.P. (1950)- Geology of East Seran. Doct. Thesis University of Utrecht. In: Geological, petrographical and palaeontological results of explorations carried out from September 1917 till June 1919 in the Island of Ceram by L. Rutten and W. Hotz, De Bussy, Amsterdam, 3rd ser., Geology, 3, p. 1-71.
(The geology of East Seram, compiled from notes and study of rocks collected during Rutten & Hotz (1918-1920) Seram fieldwork. Mainly listings of rock types and faunas (crystalline schists and phyllites, Triassic limestone, Upper Cretaceous-Paleocene cherty limestone, Eocene marl, Plio-Pleistocene marls, etc.) (Upper Triassic Lovcenipora limestone was re-interpreted as being to Late Jurassic age, a suggestion accepted by Van Bemmelen (1949) but disputed by Wanner (1952) and subsequent authors; JTvG))

Van Gogh, F.A.A. (1913)- Geologisch onderzoek in Noord Oost Ceram van 15 Juni tot 15 September, 1913. BPM Report 4575, p. *(Unpublished)*
('Geological investigations in NE Seram, from 15 June to 15 September 1913'. Unpublished BPM report)

Van Gogh, F.A.A. (1914)- Geologische beschrijving der vergunningen tot het verrichten van mijnbouwkundige opsporingen Nos. 101, 102, 103, 104, Exploratieterreinen Boela Bai en Nief, Oost Ceram. BPM Report No. 4623, p. *(Unpublished BPM report)*

('Geologic description of the permits to carry out mining exploration numbers 101, 102, 103, 104, exploration areas Bula Bay and Nief, East Ceram' (Price et al. 1986: oils from Triassic Nief /Manusela carbonate sequence of different origin from that of Fufa oils)

Van Marle, L.J. (1989)- Recent and fossil benthic foraminifera and late Cenozoic palaeobathymetry of Seram, Eastern Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 445-457.
(Two M Pliocene- Pleistocene (N19-N22) outcrop sections in SW Seram, directly on Paleozoic metamorphics, suggest paleobathymetries between 400- 1100m (probably 600-900m) and >2 km of post E Pleistocene uplift)

Verbeek, R.D.M. (1899)- Kort verslag over de aardbeving te Ambon op 6 januari 1898. Bijvoegsel Javasche Courant 1899, 6, Landsdrukkerij, Batavia, p. 1-28.
(online at: https://books.google.com/books/...)
('Brief report on the earthquake at Ambon on 6 January 1898')

Verbeek, R.D.M. (1899)- Over de geologie van Ambon- I. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, sect. 2, 6, 7, p. 3-26.
(online at: www.dwc.knaw.nl/DL/publications/PU00011831.pdf)
('On the geology of Ambon-1'. Ambon composed of two peninsulas, Hitoe and Leitimor. Complex geology, including granites, perodotites, metamorphic rocks, Triassic sandstone- limestone interbeds, younger volcanics and Pliocene or younger reefal limestone terraces up to 500m above sea level, etc.)

Verbeek, R.D.M. (1900)- Over de geologie van Ambon- II. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, sect. 2, 7, 5, p. 3-9.
(online at: www.dwc.knaw.nl/DL/publications/PU00011896.pdf)
('On the geology of Ambon-2'. Continuation of paper above. Age of Banda Sea is Early Miocene or younger)

Verbeek, R.D.M. (1905)- Geologische beschrijving van Ambon. Jaarboek Mijnwezen Nederlandsch Oost-Indie 34, Wetenschappelijk Gedeelte, p. 1-308.
('Geological description of Ambon'. On geology and rock types of Ambon. With four maps, cross sections)

Von Huene, F. (1931)- Ichthyosaurier von Seran und Timor. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 66, B, p. 211-214.
('Ichthyosaurus fossils from Seram and Timor'. Collected by BPM geologist Weber: vertebrae of Eurypterygius from E Jurassic? of Bula, NE Seram, and material from Triassic? of Basleo, W Timor)

Von John, C. (1906)- Ueber die chemische Beschaffenheit der Asphaltschiefer der Bara Bai (Buru). Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 22, p. 691-692.
('On the chemical properties of Bara Bai asphalt shales of Buru'. Ammonite-rich Late Triassic bituminous shales from Bara Bai, NW Buru, with 23% organic matter)

Von Rosenberg, H. (1860)- Aardolie van Ceram. Natuurkundig Tijdschrift Nederlands-Indie 21, p. 336, (also vol. 22, p. 366 and 412.
('Petroleum from Seram'. Short communication on bottle of oil, collected from active seep at N coast of Seram, E of Wahai. First report on oil from Seram. No locality details or map)

Wahyudiono, J., R. Adlan, S. Permanadewi & A.K. Gibran (2018)- Karakteristik minyak bumi di Blok Bula dan Blok Oseil, Pulau Seram, Maluku. J. Geologi Sumberdaya Mineral 19, 4, p. 233-241.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/384/365)
('Oil characteristics in the Bula and Oseil Blocks, Seram Island Maluku'. Oil samples taken from Bula and Oseil Blocks on NE Seram have same source, from Type II marine algal organic matter)

Wahyudiono, J., A. Susilo, R. Adlan, B. Salimudin, A.K. Gibran & E.S. Wiratmoko (2018)- Integrated field mapping, organic chemistry and subsurface geological interpretation of Kanikeh Formation as potential source rock in Seram Island. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-247-G, 6p.
(Outcrop samples of Kanikeh Fm clastics on Seram with Triassic (Carnian-Norian) Halobia spp. and gas-prone Type III kerogen. Analysis of seven oil samples from Oseil and Bula oil fields suggest no terrestrial organic source material; hydrocarbons from Type II marine algae in carbonate rocks deposited in reducting conditions)

Wanner, J. (1907)- Zur Geologie und Geographie von West-Buru. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 24, 1907, p. 133-160.
(Summary of 3-week reconnaissance geological survey in Fogi region of West Buru in 1904. Various types of Mesozoic deep marine rocks. Also limestone breccia with clasts of white Buru Limestone with chert (= Cretaceous?; HvG) and with Eocene alveolinids and Discocyclina in matrix)

Wanner, J. (1907)- Triaspetrefakten der Molukken und des Timorarchipels. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 24, p. 159-220.
('Triassic fossils from the Moluccas and Timor Archipelago'. Late Triassic molluscs, corals, ammonites faunas from Misool (Carnian dark shales with Daonella), Seram (typical Tethys-Mediteranean Norian molluscs Monotis salinaria, Amonotis and brachiopod Halorella). From Seram limestone come corals Thecosmilia aff. clathrata and Montlivaltia molukkana and Pachypora intabulata (= Lovcenipora). Also Triassic fossils from Timor-Roti- Savu (generally deeper water facies, but potentially similar 'alpine' character with mainly Halobia, Daonella, but also 'Pacific' mollusc Pseudomonotis ochotica). Timor/Roti/ Savu Triassic reminiscent of North Sumatra Upper Triassic described by Volz, 1899. First author to recognize Alpine/ Tethyan affinities of Late Triassic bivalves and ammonites of Seram and Timor- Roti)

Wanner, J. (1923)- Geologische Ergebnisse der Reisen K. Deninger's in den Molukken. I. Beitrage zur Geologie der Insel Buru, nach den Tagebuchern und Sammlungen K. Deniger's. Palaeontographica Suppl. IV, Beitrage Geologie Niederlandisch-Indien III, 3, p. 59-112.
('Geological results of the travels of K. Deninger in the Moluccas, I. Contributions to the geology of Buru island'. Summary of field notes of Deninger's 1912 Second Freiburg University Moluccas expedition. NE half of Buru mainly schists and phyllite, overlain by Triassic flysch. Overlain by Fogi Beds bituminous limestones and marls, rich in molluscs and ammonites (Lower Norian), grey Misolia limestone and Norian massive limestones/ dolomites with Lovcenipora. E-M Jurassic appears to be missing. Oldest Jurassic rocks red-brown marine tuffites (Sasifu beds; upper Callovian or Lower Oxfordian), overlain by Oxfordian Mefa Beds green-brown tuffites rich in ammonites, with age-equivalent volcanics at W coast. Youngest Jurassic beds probably Oxfordian dense Kartina limestone with chert lenses. Cretaceous represented by pelagic limestones with red-brown chert. Rare Eocene limestone with Discocyclina, Nummulites, alveolinids, etc., and also reworked Cretaceous carbonate clasts near Fogi near W coast. More widespread E-M Miocene clastics and limestone)

Wanner, J. (1928)- Ueber einige Juvaviten von Ceram (Molukken). Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 10, Bandung, p. 37-42.
('On some Juvavites from Seram (Moluccas)'. Description of 'Tethyan' ceratitid ammonites collected by Weber from Late Triassic flysch of Wai Sabora in SE Seram. Probably of Norian age. Incl. Juvavites ceramensis n.sp. and J. aff. continuus)

Wanner, J. (1949)- Lebensspuren aus der Obertrias von Seran (Molukken) und der Alpen. Eclogae Geol. Helvetiae 42, p. 183-195.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1949:42::702&subp=hires)
('Trace fossils from the Upper Triassic of Seram (Moluccas) and the Alps'. On deep-water Palaeodictyon seranense n.sp., Chondrites gonidioides n.sp. and other trace fossils from Norian flysch of E Seram)

Wanner, J. & H.C.G. Knipscheer (1951)- Der Lias der Niefschlucht in Ost-Seran (Molukken). Eclogae Geol. Helvetiae 44, 1, p. 1-18.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1951:445)

('The Liassic of the Nief Gorge in East Seram'. In Nief Gorge very thin (60 cm) glauconitic limestone with Middle Liassic diverse brachiopods (Rhynchonella spp., Spririferina spp., Terebratula), cephalopods (Oxynoticeras, Phylloceras, Lytoceras, Dactylioceras, etc.), bivalves and gastropods (Pleurotomaria, etc.), overlying (Triassic?) massive oolitic limestone. Most species related to European Tethys faunas)

Wanner, J., H.C.G. Knipscheer & E. Schenk (1952)- Zur Kenntnis der Trias der Insel Seran (Indonesien). Eclogae Geol. Helvetiae 45, 1, p. 53-84.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1952:45::440&subp=hires)
('On the knowledge of the Triassic of Seram'. Good documentation of NE Seram Late Triassic (Carnian-Norian) 'flysch', limestones and macrofossils. Carnian dominated by clays, marls, quartz sandstones with plant debris; Norian more platy limestones, marly limestones and calcareous sandstones. Upper Norian with lenses of massive Lovcenipora- Halorella limestone. Lovcenipora coral limestones erroneously interpreted as Late Jurassic in age by Van der Sluis (1949) and Van Bemmelen (1949). Similar Upper Triassic limestones in C Seram, S Buru and Timor. Triassic macrofaunas dominated by Tethyan elements like Monotis salinaria, Halobia spp. and Juvavites. Triassic overlain by Jurassic- Cretaceous deep water marls and limestones. Rare loose fossil material suggests limited presence of E-M Jurassic. Upper Jurassic represented by marly calcareous shales with Aucella malayomaorica and Belemnopsis gerardi)

Weber, F. (1926)- Eindrapport omtrent het geologisch onderzoek en den vooruitzichten van Oost Ceram. BPM Report 9611, p. *(Unpublished)*
('Final report on the geological survey and the prospectivity of East Seram'. Unpublished BPM report. Sediment series of E Seram starts with Upper Triassic; no older sediments present. Carnian-Norian flysch is poor in fossils. On S coast of Seram Triassic sequence is locally complete and includes~100m thick late Norian limestone, the base of which is bitumen-impregnated and has asphaltic joint fillings. In E part of S Mountains 300-400m thick oolitic limestone. E Seram folded/uplifted above sea level in E Eocene: in narrow strip N of the S mountains is pink coarse lime-sandstone with Eocene Nummulites and Alveolina, and Cretaceous is missing. Main folding-thrusting in Seram is towards end of Miocene)

Welter, O.A. (1923)- Bemerkungen uber die von Deninger gesammelten Ammoniten und Nautilidenreste von Seran. Palaeontographica, Suppl. 4, III, 4, p. 245.
('Remarks on the ammonite and nautilid fossils collected by Deninger from Seram'. Appendix in Krumbeck (1923) Seram brachiopod/mollusc paper. Fragments of Upper Triassic ammonites (Choristoceras, Anatomites, Juvavites) and nautilids (Phoioceras) from C Seram resemble species known from Timor and of 'alpine' affinity)

Wichmann, C.E.A. (1898)- Der Wawani auf Amboina und seine angeblichen Ausbruche (parts 1-2). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 15, p. 1-20 and p. 200-218.
('The Wawani on Ambon and its reported eruptions, parts 1-2)')

Wichmann, C.E.A. (1899)- Der Wawani auf Amboina und seine angeblichen Ausbruche (part 3). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 16, p. 109-142.
('The Wawani on Ambon and its reported eruptions, part 3'. Wawani mountain on Ambon with diabase and porphyric igneous rock, but is not a volcano)

Wilckens, O. (1937)- Korallen und Kalkschwamme aus dem obertriadischen Pharetronenkalk von Seran (Molukken). Beitrage zur Palaontologie des Ostindischen Archipels 14, Neues Jahrbuch Mineral. Geol. Palaeont., Beilage Band B77, p. 171-211.
('Corals and calcareous sponges from the Upper Triassic Pharetronen-limestone of Seram'. Triassic corals and sponges of Seram and Timor have 'alpine' character. Includes new coral species Thecosmilia alfurica, Isastrea seranica, etc., and new calcareous sponge genera Deningeria, Seranella, Cryptocoelia. Flugel (2002, p. 420) suggested W Seram Late Triassic corals and sponges mostly endemic taxa or taxa known from Timor, but Martini et al. (2004) found no endemic fauna, only species of Tethyan affinity. Flugel also suggests close similarities with Timor Fatu Limestone)

Xi, Z., X. Hu, Y. Fang, X. Yin & H. Du (2016)- Tectonic evolution of North Seram Basin, Indonesia, and its control over hydrocarbon accumulation conditions. China Petroleum Exploration 21, 6, p. 1-8.
(online at: www.cped.cn/CN/item/downloadFile.jsp?filedisplay=20161230153808.pdf)
(N Seram Basin evolution interpreted as four stages: E Triassic initial rifting, M Triassic- M Jurassic rifting, Late Jurassic- M Miocene passive continental margin and Late Miocene-Quaternary thrusting of foreland foldbelt (Seram and Birds Head viewed here as part of same continental block; no subduction/collision))

Zillman, N.J. & R.J. Paten (1975)- Geology and petroleum prospects of Seram island, eastern Indonesia. Australian Petrol. Explor. Assoc. (APEA) J. 15, p. 73-80.
(Two main Pliocene- E Pleistocene basins in N and NE Seram (Bula and Wahai) with up to 1400/ 2800m of sediment. Oil seeps common in Bula but not in Bahai basin. Bula field 1897 discovery in Pleistocene clastics; producing horizons ~80-280m below SL. Folded Pre-Tertiary rocks regarded as basement by BPM and AAR. Middle or Late Miocene folding preceded Early Pliocene renewed subsidence. Early Pleistocene uplift created rel. subtle regional unconformity.

Zillman, N.J. & R.J. Paten (1975)- Petroleum prospects, Bula Basin, Seram, Indonesia. Proc. 4th Ann. Conv. Indon. Petroleum Assoc. (IPA), 2, p. 129-148.
(Plio-Pleistocene Bula Basin with Early Pleistocene unconformity. Bula field 1897 BPM discovery below surface oil seep in shallow Pleistocene sands, producing since 1913. Limited hydrocarbons and potential in Mesozoic Nief limestone)

VII. BANDA SEA, LESSER SUNDA ISLANDS

VII.1. Banda Sea, East Banda Arc (incl. Tanimbar, Kai, Aru)

Abimanyu, R., J. Bates, J. Boast et al. (1996)- Tanimbar Basin. In: Pertamina/BPPKA (ed.) Petroleum geology of Indonesian Basins IX, p. 1-32.

Achdan, A. & T. Turkandi (1982)- Geologic map of the Kai and Tayandu Islands, Maluku, Quadrangle 2810, 2910, scale 1:250,000. Geol. Res. Dev. Centre Indonesia, Bandung.
(Second edition of 1982 map. ?Pre-Cambrian metamorphic rocks on Kur and Fadol Islands (biotite schist and granitic gneiss). Oldest rocks on Kai M Eocene Yamtimur Fm marls with planktonic foraminifera and 700m thick M-U Eocene Elat Fm limestones with Lacazinella wichmanni, Discocyclina, Nummulites, Alveolina; unconformably overlain by Late Oligocene Tamingil Lst and Oligocene- M Miocene Meduar Lst)

Agustiyanto, D.A, M. Suparman, E. Partoyo & D. Sukarna (1994)- Geological map of the Moa, Damar and Bandanaira sheets, Maluku, Quadrangles 2607, 2707, 2708, scale 1:250.000. Geol. Res. Dev. Center, Bandung.
(Geology of outer arc islands E of Timor: Kisar, Leti, Moa. Also active Banda Sea volcanoes Damar, Serua, Nila. South Leti with Permian sandstones; most of island Permian? metamorphics and ultrabasics)

Agustiyanto, D.A, M. Suparman, E. Partoyo & D. Sukarna (1994)- Geological map of the Babar sheet, Southeast Maluku, scale 1:250.000. Geol. Res. Dev. Center, Bandung.
(Most of Babar island Mio-Pliocene melange with blocks of ?Permian metamorphics, Permo-Triassic limestone, Jurassic shales, ophiolite (equivalent of Bobonaro Complex of Timor). Also minor Jurassic shales with ammonites and belemnites) (equivalent of Wailuli Fm of Timor). Sermata Island with ?Permian metamorphic rocks only)

Bowin, C., G.M. Purdy, C. Johnston, G. Shor, L. Lawver, H.M.S. Hartono & P. Jezek (1980)- Arc-continent collision in Banda Sea region. American Assoc. Petrol. Geol. (AAPG) Bull. 64, p. 868-915.
(Elaborate, key paper on E Indonesia tectonic history. The Banda Outer Arc of Timor, etc., contains fragments of Australian crust that probably rifted off in Jurassic time, collided with Sulawesi and split off and collided with Australian continental margin in last 3 My. Water depths of 5km and low heatflow values (1.1. HFU average) suggest ages of Banda Sea basins >60 Ma)

Bowin, C. & C. Johnston (1981)- Arc-continent collision in Banda Sea region: reply. American Assoc. Petrol. Geol. (AAPG) Bull. 65, p. 867.
(Response to Crostella (1981). Reiterate they regard all Timor rocks N of Kolbano thrust belt as originally part of pre-collision Banda Arc outer arc ridge)

Brouwer, H.A. (1923)- Geologische onderzoekingen op de Tenimbar eilanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen, p. 117-142.
('Geological investigations on the Tanimbar Islands')

Brouwer, H. (1923)- Bijdrage tot de geologie van Groot Kei en de kleine eilanden tussen Ceram en de Kei-eilanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen 2, p. 143-168.
(ó*Contribution to the geology of Kai Besar and small islands between Ceram and the Kai islands'*).

Brown, B.J., R.D. Muller, C. Gaina, H.I.M. Struckmeyer, H.M.J. Stagg & P.A. Symonds (2003)- Formation and evolution of Australian passive margins: implications for locating the boundary between continental and oceanic crust. Geol. Soc. America (GSA) Spec. Paper 372, p. 223-243.

Burhanuddin, S. (1994)- Geologie des bassins de la Mer de Banda (Indonesie). Ph.D. Thesis, Universite de Bretagne Occidentale, Brest, p. 1-197. *(Unpublished)*
('Geology of the Banda Sea basins'. Grab samples from North Banda Basin seafloor suggest crust of NE Banda Basin is oceanic to transitional, and is a Late Miocene backarc basin dated as 7-10 Ma. Exact age of South Banda Basin remains unknown. Triassic platform carbonate and island arc volcanics sampled from the N part

of Banda Ridges. Volcanic arc remnants successively younger in southern direction. Banda Sea domain currently under compression)

Burhanuddin, S., J.A. Malod, Ulva R., F. Hinschberger & Sultan (1999)- A new morphology and discovery of sea mount in the basin between Ambon and Buru islands: result of Image IV Expedition. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 43-49.
(New submarine volcano between Buru and Ambon in small 4000m deep E Buru basin. Seamount water depth range from -3600m- -200m. Dredge samples andesitic volcanics. Part of Pliocene- Quaternary Ambelau-Ambon volcanic arc of Honthaas et al. 1998)

Burhanuddin, S., L. Sarmili, J.P. Rehault, J.A. Malod, R.C. Maury, H. Bellon, Y. Anantasena & Syaefuddin (1994)- Cekungan Laut Banda Utara (Indonesia Timur): suatu sketsa baru punggungan Tampomas dan batuan dasar samuderanya. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 509-519.
('The North Banda Sea Basin (E Indonesia): a new sketch of the Tampomas ridge and oceanic basement'. New bathymetric map confirms oceanic nature of North Banda Sea. Main morphological feature in N Banda Sea is NW-SE trending Tampomas Ridge, SW of Buru, interpreted as remnant strike-slip fault. Pillow lavas dredged from E flank indicate Late Miocene (9 ±3Ma) back-arc basin floor (cross-section looks like big rotated fault block with 2 sec of relief; JTvG))

Burollet, P.F. & C.L. Salle (1985)- Tectonic significance of the Banda Sea. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 477-490.
(Geological reconnaissances in Kai and Tanimbar Archipelagoes show E-W succession of: (1) folded Paleogene-Miocene of Australian borderland and accretionary wedges; (2) Neogene basins with overpressured shales and mud volcanoes; (3) melange olistolites or nappes overthrusting part of Neogene basins; (4) Pre-Tertiary basement terranes in W part. Banda Sea represents stretched internal sea)

Bursch, J.G. (1947)- Mikropalaontologische Untersuchungen des Tertiars von Gross Kei (Molukken). Schweizerische Palaontol. Abhandlungen, 65, 3, p. 1-69.
('Micropaleontological investigations of the Tertiary of Kai Besar'. Well-illustrated descriptions of limestones with Eocene (incl. Lacazina; should be Lacazinella; JTvG) and Early Miocene larger forams)

Callomon, J.H. & G. Rose (2000)- Middle Jurassic ammonites from the island of Babar in the southern Moluccan forearc, Indonesia. Revue Paleobiologie, Geneve, Spec. Vol. 8, p. 53-64.
(M Jurassic ammonites from outcrops on Babar. Fauna dominated by Satoceras satoi (=Macrocephalites group), a bioprovincially Austral sphaeroceratid genus, unknown in W Tethys, but characterizes Late Bajocian-Early Callovian, and known also from Sula and W Irian Jaya)

Charlton, T.R., M.E.M. de Smet, H. Samodra & S.J. Kaye (1991)- The stratigraphic and structural evolution of the Tanimbar islands, eastern Indonesia. J. Southeast Asian Earth Sci. 6, 3-4, p. 343-358.
(Stratigraphy of Tanimbar islands comparable to other Banda forearc islands like Timor, with Australian continental margin sequences added to forearc/collision complex by accretionary processes. Oldest rocks M-Late Triassic sandstones and E-M Jurassic grey shales, found only in ejecta of mud volcanoes. Oldest rocks in normal outcrop is Ungar Fm sandstone of probable Late Jurassic-E Cretaceous age. Major unconformity cut out Late Cretaceous-Paleogene. Miocene siliciclastic Tangustabun Fm and succeeding carbonate clastic Batimafudi Fm deformed in Pliocene, and unconformably overlain by E Pleistocene-Recent post-orogenic sediments. Structurally Tanimbar comparable to W Timor)

Charlton, T.R., M.E.M. de Smet, H. Samodra & S.J. Kaye (1991)- Stratigrafi dan perkembangan struktur di Kepulauan Tanimbar, Indonesia Timur. Bull. Geol. Res. Dev. Centre 16, p. 45-69.
(Indonesian version of above paper)

Charlton, T.R., S.J. Kaye, H. Samodra & Sardjono (1991)- Geology of the Kai Islands: implications for the evolution of the Aru Trough and Weber Basin, Banda Arc, Indonesia. Marine Petroleum Geol. 8, 1, p. 62-69.

(E Kai islands dominated by normal faults, downthrowing to Aru Trough, with no sign of earlier compressive forearc deformation. Aru Trough extensional feature, in direct bathymetric continuity with compressional Timor-Tanimbar Trough. Banda Arc thrust front steps W-ward as result of extension in Aru Trough. Thrust front runs N-S through Kai group, separating inactive accretionary complex to W from active extension in E. Weber Basin results from E-W extension, with pre-existing thrust faults probably reactivated in extension as low-angle normal faults. Both compressional and extensional deformation since Pliocene)

Charlton, T.R., S.J. Kaye, H. Samodra & Sardjono (1991)- Geologi kepulauan Kai dan implikasinya terhadap perkembangan Palung Aru dan Cekungan Weber, Indonesia Timur. J. Geologi Sumberdaya Mineral 3, 18, p. 2-11.
('Geology of the Kai islands...' Indonesian version of Charlton et al. 1991, above)

Cornee, J.J., J. Butterlin, P. Saint-Marc, J.P. Rehault, C. Honthaas et al. (1998)- An Early Miocene reefal platform in the Rama Ridge (Banda Sea, Indonesia). Geo-Marine Letters 18, p. 34-39.
(Early Miocene reefal carbonate with Lepidocyclina (N) dredged from Rama Ridge, indicating Banda Sea ridges were present in Early Miocene, with major tectonic subsidence between M Miocene and E Pliocene. (Age assignment may be questioned; could also be Late Oligocene or Middle-Late Miocene; JTvG))

Cornee, J.J., M. Villeneuve, M. Ferrandini, F. Hinschberger et al. (2002)- Oligocene reefal deposits in the Pisang Ridge and the origin of the Lucipara Block (Banda Sea, Eastern Indonesia). Geo-Mar Letters 22, p. 66-74.
(M-L Oligocene reefal deposits with Pararotalia mecatepecensis and pelagic E Pliocene muds dredged from Pisang Ridge in Banda Sea, confirming it is part of continental/ continental arc Lucipara Block (incl. Tukang Besi, Lucipara and Rama ridges). Lucipara Block drifted from N Irian Jaya in M Miocene and collided with Kolonodale Block in Late Miocene. A late Early Oligocene volcanic arc developed in Weber Trough area, then uplifted to shallow-water position at Early-Late Oligocene boundary in Pisang Ridge. Late Oligocene- E Miocene metamorphism subsequently developed, prior to deposition of E Miocene coral reefs in Rama Ridge. Locally, Late Miocene metamorphism identified in Lucipara Ridge, prior to latest Miocene-Pliocene drowning and splitting of Lucipara Block into several small blocks throughout Banda Sea region)

Cornee, J., M. Villeneuve, J.P. Rehault, J. Malod, J. Butterlin, P. Saint-Marc, G. Tronchetti et al. (1997)- Stratigraphic succession of the Australian margin between Kai and Aru islands (Arafura Sea, eastern Indonesia), interpreted from Banda Sea II cruise dredge samples. J. Asian Earth Sci. 15, 4-5, p. 423-434.
(Dredges in Aru Trough E of Kai Besar recovered fairly complete Australian margin section, 3000-4000m thick, from ?Carboniferous- Permian to Jurassic- Miocene. Displaced Eocene carbonate with Lacazinella)

Cox, L.R. (1924)- Some Late Kainozoic pelecypoda from the Aru Islands. Geol. Magazine 61, 2, p. 56-63.
(Brief descriptions of ?Mio-Pliocene pelecypods, incl. Ostrea, Pecten spp., Clementia, etc.)

Cummins, P.R., I.R. Pranantyo, J.M. Pownall, J.D. Griffin, I. Meilano & S. Zhao (2020)- Earthquakes and tsunamis caused by low-angle normal faulting in the Banda Sea, Indonesia. Nature Geoscience, March 2020, doi.org/10.1038/s41561-020-0545-x, p. 1-7.
(Past destructive earthquakes in Banda Sea not caused by supposed megathrust of Banda outer arc, but due to vast submarine normal fault system recently discovered along Banda inner arc. Tsunamis likely caused by earthquake-triggered submarine slumping along fault's massive scarp, the Weber Deep)

Currie, E.D. (1924)- On fossil Echinoidea from the Aru Islands. Geol. Magazine 61, 2, p. 63-72.
(Brief descriptions of small collection of ?Mio-Pliocene echinoids from limestones and sandy limestones of Aru Islands. Believed to be of probable Pliocene age)

De Marez Oyens, F.A.H. Weckherlin (1913)- De geologie van het eiland Babber. Handelingen XIVe Nederlandsch Natuur- Geneeskundig Congres, Delft 1913, p. 463-468.
(online, read only at: http://babel.hathitrust.org/cgi/pt?id=uc1.b3093404;view=1up;seq=999)

(‘The geology of the island Babar’. Rocks-fossils similar to Timor: Permian pink crinoidal limestone and marl (100m tall 'fatu' in middle course of Jer Lawi river, believed to be part of nappe over Triassic-Jurassic sediments), Triassic sandstones-claystones with Daonella, Jurassic marls rich in ammonites and molluscs (Arietes, Phylloceras, Stephanoceras, Lytoceras, Posidonia; Liassic- Callovian; Wanner 1931). Sandstones with plant remains, mica-bearing and probably Triassic. Associated with volcanics (diabase). Complex thrust structural style similar to nearby Timor. Left bank of Jer Lawang river composed of serpentinized peridotite. Distinct young coral limestone terraces at 150, 210, 260, 550, 615 and 650m, highest in NE. No figures)

De Smet, M.E.M., A.R. Fortuin, S. Tjokrosapoetro & J.E. van Hinte (1989)- Late Cenozoic vertical movements of non-volcanic islands in the Banda Arc area. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 263-275.
(Late Cenozoic sections on non-volcanic outer arc islands Timor, Buton, Buru, Seram and Kai suggest vertical movements were intermittent and differed widely in arc. Short periods of uplift alternated with longer periods of tectonic rest or subsidence. Deformation has character of tilting or doming of whole islands or parts of islands)

De Smet, M.E.M., T.R. Charlton, S.J. Kaye, S.R. Troelstra & L.J. Van Marle (1989)- Late Cenozoic history of the island of Yamdena, Tanimbar archipelago, eastern Indonesia. In: L.J. van Marle (1989) Benthic foraminifera from the Banda Arc region, Indonesia, and their paleobathymetric significance for geologic interpretations of the Late Cenozoic sedimentary record, Free University Press, Amsterdam, p. 145-162.
(Yamdena mostly folded Miocene slope sediments, with large amounts of reworked Late Cretaceous, Paleogene and Early Miocene fauna. Angular unconformity between Late Miocene and Pleistocene records Pliocene folding and uplift event. Mud volcanoes along Yamdena Strait common ferro-manganese nodules, ?Triassic sst, ?Cretaceous calcilutite, serpentinite, metabasites)

Douville, H. (1908)- Sur les Lepidocyclines dôun calcaire de lôîle Grand-Kei. In: R.D.M. Verbeek, Molukkenverslag. Geologische verkenningstochten in het oostelijke gedeelte van den Nederlandsch Oostindische Archipel. Jaarboek Mijnwezen Nederlandsch Oost-Indie 37 (1908), Wetenschappelijk Gedeelte, p. 690-693.
('On the Lepidocyclinas from a limestone from Kai Besar island'. Description of Aquitanian Lepidocyclina (Eulepidina) from Tamangil, Kai Besar, collected by Verbeek)

Dwiyanto, B. (1985)- Marine geology and geophysics of the Northern Banda Sea. M.Sc. Thesis University College London, p. 1-94. *(Unpublished)*

Fakhruddin, R. (2019)- Facies associations of Early Cretaceous Arumit Formation and Early to Late Cretaceous Ungar Formation in Vulmali and Ungar Islands, Tanimbar (Indonesia). Indonesian J. Geoscience 6, 2, p. 185-208.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/527/286)
(Cretaceous sediments in Tanimbar area. E Cretaceous Arumit Fm progradational open-coast tidal flat depositional environment. Mid- to Late Cretaceous Ungar Fm in open-coast wave dominated environment)

Fitriannur, M.R. (2015)- New insights into the development of the Timor- Tanimbar Trough based on 3D seismic data. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2015, 4.3, 6p. *(Extended Abstract)*
(Seismic interpretation of BP West Aru I-II PSC blocks, NE of Tanimbar. Australia- Indonesia collision in Miocene heralded onset of Neogene transpressions, local uplift and flexural extension. Sedimentary cover forming accretionary wedge uplifted and exposed in Timor during collision and fore-deep known as Timor-Tanimbar Trough developed)

Fitriannur, M.R. (2017)- A future play in a frontier area: deltaic systems of the Late Cretaceous play in the West Aru area at the Indonesia-Australia continental margin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-106-G, 15p.

(Late Cretaceous (Campanian-Maastrichtian) progradational package in Barakan-Tanimbar (W Aru) margin. Late Cretaceous ('Ekmai') delta top sands without hydrocarbons penetrated by Barakan-1 and Koba-1 wells. Potential new hydrocarbon play)

Fujimoto, M., Y. Guo, A. Fatwa & Y. Sasaki (2014)- Challenges of sub-thrust imaging using broadband three-dimensional seismic data: a case study in the outer Banda Arc, Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-122, 15p.
(Seismic imaging and processing of Timor Trough- accretionary prism S of Babar; little geology interpretation)

Fujimoto, M., Y. Sasaki, Y. Guo & M. Ohara (2014)- Broadband seismic imaging of thrust belt along the Outer Banda Arc in Indonesia. Proc. 77th EAGE Conf. Exhib., Madrid, WS04-C02, 5p.
(Seismic techniques in Babar Selaru PSC block SW of Yamdena (Tanimbar))

Granath, J.W., J.M. Christ, P.A. Emmet & M.G. Dinkelman (2010)- Insights into the tectonics of Eastern Indonesia from ArafuraSPAN, a long-offset long-record 2D seismic reflection dataset. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-063, 9p.
(Examples of deep seismic images in Seram- Aru Trough- Arafura shelf- Bonaparte Basin. Seram thrust believed to initiate with obduction of ophiolites in hinterland at ~9 Ma and frontal deformation continues today with interaction of thrust front with young Tarera-Aiduna left-lateral fault system. Seram thrust wedge detached above Cretaceous. Timing of extension in Aru Trough Late Pliocene-Quaternary. Weber Deep large normal offset on edge of shelf cross-cutting Banda accretionary prism, with young oceanic crust in deepest parts)

Gregory, J.W. (1923)- The Banda Arc: its structure and geographical relations. The Geographical J. 62, p. 20-30.
(Early overview of geology of Banda island, including description of Kai Besar, Aru Islands)

Gregory, J.W., L.R. Cox & E.D. Currie (1924)- The geology of the Aru Islands. Geol. Magazine 61, p. 52-72.
(Aru Archipelago group of some eighty low islands, probably extension of SW New Guinea. According to Verbeek (1908) consist of almost horizontal limestone plateau, broken by uplift into more than 80 pieces. Probably with core of Mio-Pliocene? limestone with quartz sand)

Hadiwisastra, S. (1995)- Revisi umur Formasi Batilembuti, Tanimbar, Maluku: implikasi umur dan biostratigrafi nannoplangton. J. Riset Geologi Pertambangan (LIPI) 1, 1, p. 12-19.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.1-No.1-1995-.pdf)
('Revision of the age of the Batilembuti Formation, Tanimbar, Moluccas: implications for age and nannoplankton biostratigraphy'. Upper Tertiary calcarenites-shales of Batilembuti Fm of Yamdena Island with E Pliocene NN14-NN15 nannofossils)

Hantoro, W.S., E. Sibowo, M.S. Hadiwisastra and S. Shofiyah (1993)- Upper Pleistocene vertical tectonic activity of Tanimbar Island, South East Maluku: coral reef study. In: Proc. Seminar Role and Quaternary geology development in Indonesia, Inst. Tekn. Bandung (ITB), p.

Harris, R.A. (1992)- Peri-collisional extension and the formation of Oman-type ophiolites in the Banda Arc and Brooks range. In: L.M. Parsons et al. (eds.) Ophiolites and their modern oceanic analogues. Geol. Soc. London, Spec. Publ. 60, p. 301-325.
(Banda orogen ophiolites internal structure shows extensional strains. High-T metamorphic sole with continental protoliths locally preserved. Savu and Weber basins provided modern analogues of peri-collional extension processes, which open small ocean basins that may be obducted shortly after they form)

Hartono, H.M.S. (1990)- Late Cenozoic tectonic development of the Southeast Asian continental margin in the Banda Sea area. Tectonophysics 181, p. 267-276.
(Assumes Banda Sea underlain by old oceanic crust, compatible with low heat flow, and allochthonous units on Timor are of Australian origin. Data from N Banda microcontinents, dredged samples from Banda/ Lucipara ridges, etc., support interpretation of microcontinents translated left-laterally westward from Irian Jaya)

Hartono, H.M.S. (1990)- Terbentuknya busur volkanik Banda. Geologi Indonesia 13, 2, p. 105-112.
('Formation of the Banda volcanic arc')

Hartono, H.M.S. (1990)- Origin and emplacement of allochthonous terranes in the Banda outer arc. Bull. Marine Geol. Inst. 5, 1, p. 24-33.

Hartono, H.M.S. (1996)- Initial development of the Banda volcanic arc. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 155-161.
(Oldest age of E Sunda magmatic arc is 19 ± 2 Ma, (E Miocene) from Flores (FT dating of zircons of andesites by Nishimura et al. 1979). Minimum age for initiation of Banda Arc volcanism is age of Metan Volcanics of Timor, Eocene, 39-56 Ma (but questionable if these are part of Banda Arc?; most other ages latest Miocene and younger; JTvG))

Hartono, H.M.S., C.S. Hutchison, S. Tjokrosapoetro & B. Dwiyanto (1991)- Studies in East Asian Tectonics and Resources (SEATAR) Crustal Transect 4- Banda Sea. Committee for Co-ordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP) and IOC, 30p.

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(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1942:35::400&subp=hires)
'Active diapirs/ mud volcanoes in the SE Moluccas'. Tanimbar and Kei islands are active diapirs. On mud volcanoes on Tanimbar and Kai islands. About 30 young diapyrs identified on Tanimbar islands. With brief descriptions of geologic setting)

Hinschberger, F., J.A. Malod, J. Dyment, C. Honthaas, J.P. Rehault & S. Burhanuddin (2001)- Magnetic lineations constraints for the back-arc opening of the Late Neogene South Banda Basin (Eastern Indonesia). Tectonophysics 333, p. 47-59.
(New analysis of magnetic lineations E part of S Banda (Damar) Basin infers opening in Late Miocene- E Pliocene, 6.5- 3.5 Ma. Cessation of spreading probably arc-continent collision at ~3 Ma. Damar basin began as intra-arc basin, separating Banda arc in S from incipient Lucipara arc to N)

Hinschberger, F., J.A. Malod, J.P. Rehault, J. Dyment, C. Honthaas, M. Villeneuve & S. Burhanudin (2000)- Origine et evolution du bassin Nord-Banda (Indonesie): apport des donnees magnetiques. Comptes Rendus Academie Sciences, Paris, Earth Planetary Sci. 331, p. 507-514.
(N Banda Sea Basin opened in Late Miocene in back arc setting. Magnetic, bathymetric data and radiometric dates from dredges of its basement used to depict basin evolution. Sea floor spreading occurred from 12.5- 7.15 Ma directed by three large NW-SE transform faults, West Buru, Tampomas and Hamilton fracture zones)

Hinschberger, F., J.A. Malod, J.P. Rehault & S. Burhanuddin (2003)- Apport de la bathymetrie et de la geomorphologie a la geodynamique des mers de lŒst-Indonesien. Bull. Soc. Geologique France 174, 6, p. 545-560.
(online at: http://documents.irevues.inist.fr/bitstream/handle/2042/283/019-034.pdf?sequence=1)
(N and S Banda Seas and Weber Trough formed in Neogene by back-arc spreading and slab roll-back. Magnetic anomalies define ages of 12.5- 7.1 Ma for N Banda Basin and 6.5- 3.5 Ma for S Banda Basin. Weber Trough >7300m deep, remains enigmatic. N Banda Basin SE rifted margin morphology preserved along Sinta Ridges. Basin presently in compression and crust subducted W under E Sulawesi. N border N Banda Basin

reactivated into sinistral transcurrent motion in S Sula Fracture Zone. S Banda Sea two parts (Wetar, Damar), separated by NNW-SSE volcanic Gunung Api Ridge, interpreted as sinistral strike-slip zone. Dredging of Triassic limestones and metamorphic basement suggests Sinta and Rama Ridges are continental block fragments. Banda Ridges fringed to S by Nieuwerkerk- Emperor of China- Lucipara volcanic chains with andesites and basalts of 8- 3.5 Ma. New volcanic seamount SE of Buru and volcano on Pisang Ridge with sub-aerial volcanic morphology and subsidence evidenced by reefal limestones on flank, now at ~3000m depth. Basement depths ~1000m below age-depth curve for back-arc basins and ~2000m below curve for oceanic crust. Except for one M Eocene (46-Ma) N-MORB type basalt (from ophiolitic complex?), Basalts-andesites dredged from Banda Sea ridges of Neogene ages (Tukang Besi ~10 Ma, Nieuwerkerk- Emperor of China 8-7 Ma, Lucipara 7-3 Ma). Lucipara- Nieuwerkerk- Emperor of China and Wetar segment of Banda Arc were part of single volcanic arc at 8-7 Ma, with subduction of Indian Ocean continental crust below continental blocks of Australian origin, followed by back-arc rifting/ spreading. End of magmatic activity at 3 Ma result of collision of Timor with Wetar segment of Sunda arc)

Honthaas, C., J.P. Rehault, R.C. Maury, H. Bellon, C. Hemond, J.A. Malod, J.J. Cornee, M. Villeneuve et al. (1998)- A Neogene back-arc origin for the Banda Sea basins: geochemical and geochronological constraints from the Banda ridges (East Indonesia). Tectonophysics 298, p. 297-317.
(Except for one M Eocene (46-Ma) N-MORB type basalt (thought to belong to ophiolitic complex), volcanics dredged from Banda Sea ridges all Neogene age: ~10 Ma for Tukang Besi back-arc basalts, 8-7 Ma for Nieuwerkerk–Emperor of China calc-alkaline andesites and 7-3 Ma for Lucipara OIB-type transitional basalts and cordierite-bearing andesites. Isotope signatures suggest assimilation of continental crust. Lucipara- Nieuwerkerk- Emperor of China Ridges and Wetar segment of Banda Arc parts of single volcanic arc at 8-7 Ma, with subduction of Indian Ocean continental crust below continental blocks of Australian origin, followed by back-arc rifting/ spreading. End of magmatic activity on both volcanic segments at 3 Ma thought to result from collision of Timor with Wetar segment of Sunda arc.

Honthaas, C., M. Villeneuve, J.P. Rehault, H. Bellon, J.J. Cornee et al. (1997)- Kur island: geology of the Eastern flank of the Weber Trough (Eastern Indonesia). Comptes Rendus Academie Sciences, Paris 325, 11, p. 883-890.
(Data from Kur Island and nearby dredgings show unknown events on E margin of Weber basin: (1) E Oligocene magmatic arc; (2) E Miocene metamorphism event between 24-17 Ma; and (3) E Pliocene deformation, related to Australian plate- Banda arc collision. Weber basin was created in Pleistocene with uplift of E margin)

Huang, Y.S., T.Q. Lee, S.K. Hsu & T.N. Yang (2009)- Paleomagnetic field variation with strong negative inclination during the Brunhes chron at the Banda Sea, equatorial southwestern Pacific. Physics Earth Planetary Interiors 173, p. 162-170.
(Analysis of paleomagnetic variation of last 820 kyr in core from Banda Sea)

Hutchison, C.S. (1977)- Banda Sea volcanic arc: some comments on the Rb, Sr and cordierite contents. Warta Geologi (Newsl. Geol. Soc. Malaysia) 3, 2, p. 27-35.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1977002.pdf)
(Unusually high Rb/Sr ratios in volcanic rocks and cordierite in rhyolite at Tanjong Illipoi (Wetar) indicate strong continental crustal influence in source of volcanic rocks. Romang also with higher Rb/Sr ratios than active volcanic arc. Wetar different from other islands of Banda Arc because of abundant light grey rhyolite and dacite. This extinct, eroded and uplifted portion of Banda volcanic arc N of Timor affected by subducted Australian continental Plate. Cordierite in rocks of Ambon also imply continental crustal basement in N part of Banda Arc)

Hutchison, C.S. & P.A. Jezek (1978)- Banda Arc of eastern Indonesia: petrography, mineralogy and chemistry of the volcanic rocks. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, Asian Inst. Techn., p. 607-619.

(Four distinct volcanic rock series in Neogene Banda arc: High-K alkaline andesites (Gunung Api, Damar, etc.), calcalkaline andesites (Serua, Manuk), tholeitic basalts (Ambon, Banda Neira, Kelang), cordierite-bearing dacites and rhyolites (Ambon))

Irwansyah & Panuju (2012)- Integrated microfossil analysis of Pre-Tertiary sediments in the Bubuan Island, Tanimbar, Maluku. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-SS-26, 1p. *(Abstract only)*
(In Indonesian. Biostratigraphy analysis of outcrop samples of Pre-Tertiary sediments from mud volcano deposits on Bubuan island, Tanimbar group, shows Late Triassic (with early nannofossils Obliquipithonella prasina and Cassianospica), Jurassic and Late Cretaceous ages)

Jacobson, R.S., L.A. Lawver, K. Becker & G.G. Shor (1977)- Anomalously uniform heat flow in the Banda Sea. EOS, Trans. American Geophys. Union (AGU) 58, p. 515. *(Abstract)*

Jacobson, R.S., G.G. Shor, R.M. Kieckhefer & G.M. Purdy (1979)- Seismic refraction and reflection studies in the Timor-Aru Trough system and Australian continental shelf. In: J.S. Watkins et al. (eds.) Geological and geophysical investigations of continental margins, American Assoc. Petrol. Geol. (AAPG), Mem. 29, p. 209-222.
(Timor-Tanimbar-Aru Trough system of Banda Sea not deeper than 3.6 km, and is E extension of Java Trench. Seismic profiles strongly suggest it is surface trace of subduction zone, with downwarping of continental crust into subduction zone)

Jasin, Basir & N. Haile (1996)- Uppermost Jurassic- Lower Cretaceous radiolarian chert from the Tanimbar Islands (Banda Arc), Indonesia. J. Southeast Asian Earth Sci. 14, p. 91-100.
(Two radiolarian assemblages from deep marine cherts on Ungar Island: (1) Upper Tithonian- Berriasian Archaeodictyomitra apiara Assemblage, with mixture of Tethyan and non-Tethyan species (incl. Archaeodictyomitra brouweri A Tan, Pantanellium lanceola, Cyrtocapsa, etc.)) and (2) Late Valanginian-Barremian (Cerops septemporatus assemblage) (similar to Argo Abyssal Plain assemblages decribed by Baumgartner 1993?; JTvG))

Jongsma, D., T. Sumantri, A.J. Barber, W. Huson, J.M. Woodside & S. Suparka (1989)- Bathymetry and geophysics of the Snellius-II triple junction and tentative seismic stratigraphy and neotectonics of the northern Aru Trough. In: Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 231-250.

Jongsma, D., J.M. Woodside, W. Huson, S. Suparka & D. Kadarisman (1989)- Geophysics and tentative late Cenozoic seismic stratigraphy of the Banda Arc-Australian continent collision zone along three transects. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 205-229.
(Three marine geophysical regional transects across Banda Arc- Australian continent collision zone, East of Timor, North of Tanimbar and SE of Seram)

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('Study of geodynamics of Banda Sea by interpretation of magnetic and gravity data')

Karta, K. (1986)- Penentuan umur kerak samudera di Laut Banda dengan metode kontaminasi anomali magnetik pada kecepatan ekspansi yang rendah. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta 1985, p. 35-47.
('Determination of the age of oceanic crust in the Banda Sea from magnetic anomaly contamination at low expansion speeds'. Age of Banda Sea oceanic crust Lower- Upper Cretaceous, 140-100 Ma (no longer accepted; HvG)))

Koesoemadinata, R.P., Humbarsono & B. Riyanto (1983)- Sekitar munculnya pulau baru di Kepulauan Kai, busur kepulauan Banda. Proc. 12th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 53-59.

('The emergence of a new island in the Kai islands', Banda arc')

Lapouille, A., H. Haryono, M. La Rue, S. Pramumijoyo & M. Lardy (1985)- Age and origin of the seafloor of the Banda Sea (eastern Indonesia). Oceanologica Acta 8, 4, p. 379-389.
(Magnetic anomalies of Banda Sea oceanic crust tied to Cretaceous, suggesting plate is piece of trapped Indian Ocean floor crust. (More recent work suggests Miocene age of oceanic crust; JTvG))

Lee, C.S. & R. McCabe (1986)- The Banda-Celebes-Sulu Basin: a trapped piece of Cretaceous-Eocene oceanic crust? Nature 322, 6074, p. 51-54.
(Banda, Celebes and Sulu basins poorly understood marginal seas. Banda basin possibly trapped oceanic basin once continuous with Late Jurassic Argo abyssal plain. Celebes and Sulu basins also underlain by oceanic crust. Celebes and Sulu Seas may have been continuous with Banda basin. (NB: most of suggested Cretaceous ages proven wrong by subsequent ODP wells, dredge results, etc.; Hutchison 1992, etc.))

Leybourne, B.A. & N.B. Adams (1999)- Modeling mantle dynamics in the Banda Sea triple junction:exploring a possible link to El Nino Southern Oscillation. OCEANS 99 MTS/IEEE. Riding the Crest into the 21st Century 2, 2, p. 955-966.
(Evaluation of mantle depths from gravity and seismic studies indicates upwelling of mantle from ~30-40 km under continental shelf of Australia to 21 km in Banda Arc. From here mantle rises to 14 km in Weber Deep and reaches depth of 7 km in N Banda Sea. Seismic epicenter data delineate spatial boundaries of flow regimes and define magmatic migration routes. Epicenter magnitudes are visualized in 3 dimensions by color-coding. Animation portrays upwelling and divergence of mantle flow structures (geostreams) underlying tectonic trends of region and resulting counterflow in volcanic arcs based on 'surge tectonic' hypothesis)

Linthout, K., H. Helmers & J. Sopaheluwakan (1997)- Late Miocene obduction and microplate migration around the southern Banda Sea and the closure of the Indonesian Seaway. Tectonophysics 281, 1-2, p. 17-30.
(Ultramafites on Timor N coast, on smaller islands in S Outer Banda Arc and on SW Seram are fragments of M Miocene oceanic lithosphere, obducted in Late Miocene. Cool sole rock metamorphosed by overriding oceanic lithosphere. Kaibobo lherzolitic complex (SW Seram) obduction started ~9.5 Ma, emplacement completed at ~8 Ma and fast vertical movements continued until ~7 Ma. Obduction of lherzolite on N Timor also at 8 Ma and cooling to 300° C at 5.5 Ma. Oceanic lithosphere formed in E Miocene (~6 Ma prior to start of obduction). Obducted ultramafites formed close to passive margin by slow spreading in short-lived interarc Timor Plate (16-9.5 Ma). Model good agreement with 9.9-7.5 Ma history of shallowing and closure of Indonesian Seaway, as inferred from biogeographic patterns and thermal evolution of Miocene equatorial Pacific waters)

Martin, K. (1890)- Die Kei-Inseln und ihr Verhaltniss zur Australisch-Asiatischen Grenzlinie, zugleich ein Beitrag zur Geologie von Timor und Celebes. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 7, p. 241-280.
('The Kai islands and their relevance to the Australian-Asian boundary'. Study of rocks from Kai islands collected by Wertheim in 1889. Miocene larger foram limestone from Kai Besar up to 2000' elevation with large orbitoids. Also Eocene limestones with alveolinid (re-identified as Lacazinella by Verbeek 1908). No figures; not overly useful)

McCaffrey, R. (1989)- Seismological constraints and speculations on Banda Arc tectonics. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 141-152.
(Australian continent- Banda Arc collision shortens overriding Indonesian plate in N-S direction and elongates it in E-W direction by combination strike-slip and thrust faulting. Two plates subduct beneath Banda Arc: (1) Australia-Indian Ocean plate N-ward beneath Java Trench-Timor Trough-Aru Trough, and (2) Birds Head SW-ward beneath Seram Trough. Slab of Indian Ocean plate forms W-ward plunging synform beneath Banda Basin. Birds Head lithosphere subducted under Seram Trough down to 300 km depth. At surface decoupling between Australian and Birds Head by left-lateral strike slip at Tarera-Aiduna fault zone and convergence in New Guinea foldbelt. Seismic quiescence 50-380 km beneath Timor and inactive volcanic arc, but S-wave propagation suggests continuous lithospheric slab)

McCaffrey, R. & G.A. Abers (1991)- Orogeny in arc-continent collision: the Banda arc and western New Guinea. Geology 19, p. 563-566.
(Shallow earthquakes show crustal deformation in Banda Arc and W New Guinea dominated by thrust and strike-slip faulting. Tarera- Aiduna left-lateral strike slip zone (~20mm/year) and New Guinea thrust belt accommodate WSW motion of Birds Head with respect to Australia. Left-lateral Sorong- Yapen fault zone accommodates main part of Australia -Pacific relative motion (~80mm/year). Possible E-ward extrusion of Banda Arc may be 40mm/yr. Seismic zone of Seram subduction zone beneath Seram at least 600km long)

Merton, H. (1910)- Forschungsreise in den sudostlichen Molukken (Aru- und Kei-Inseln) im Auftrage der Senckenbergischen Naturforschenden Gesellschaft. Abhandl. Senckenberg Naturforschenden Gesellschaft, Frankfurt, p. 1-208.
('Expedition to the SE Moluccas (Aru and Kai islands) on behalf of the Senckenberg Natural History Society'. On natural history, geography and geology of Aru- Kai islands from 1907-1908 expedition)

Michael-Leiba, M.O. (1984)- The Banda Sea earthquake of 24 November 1983: evidence for intermediate depth thrust faulting in the Benioff zone. Physics Earth Planetary Interiors 36, 2, p. 95-98.
(24 November 1983, major earthquake at 180 km depth beneath Banda Sea. Shear failure took place within NNW dipping Benioff zone by thrust faulting along S-dipping plane. Focal mechanism solution does not conform to usual pattern and could not caused by down-dip tension or compression within sinking slab)

Milsom, J. (1999)- The Banda Sea: continental collision at the eastern end of Tethys. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 41-47.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999005.pdf)
(Banda Sea is Late Neogene post-collisional collapse basin, similar to Tyrrhenean and Alboran Seas in Mediterranean (arcuate orogenic belts with outward-directed thrusts enclosing rapidly expanding extensional regimes). New oceanic basins produced by rollback have depths typical of much older crust. Timor and Seram may have been part of M Miocene Sulawesi orogen prior to Banda Sea extensional collapse (This and Milsom 2000, 2001 papers are first to propose Banda Sea creation by Late Neogene slab rollback extension, before similar models were proposed in Hinschberger et al. (2003, 2005) and Spakman and Hall (2010))

Milsom, J. (2005)- The Vrancea seismic zone and its analogue in the Banda Arc, Eastern Indonesia. Tectonophysics 410, p. 325-336.
(Comparison of Carpathian orogenic belt with Banda Arc. Intermediate depth earthquakes define subducted slab that dips N, S and W beneath Banda Sea, a configuration explained as consequence of rapid expansion of Banda Sea during roll-back subduction)

Milsom, J., M.G. Audley-Charles, A.J. Barber & D.J. Carter (1983)- Geological-geophysical paradoxes of the Eastern Indonesian collision zone. In: T.W.C. Hilde & S. Uyeda (eds.) Geodynamics of the Western Pacific-Indonesian region, American Geophys. Union and Geol. Soc. America (GSA) Geodyn. Ser. 11, p. 401-412.

Milsom, J., S. Kaye & Sardjono (1996)- Extension, collision and curvature in the eastern Banda arc. In: R. Hall & D. Blundell (eds.) Tectonic Evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 85-94.
(Discussion of compressional deformation front between Kai Besar- Kai Kecil islands. Eocene- Pleistocene sediments on Kai Besar never deeply buried or imbricated but experienced large-scale extensional faulting. Associated gravity high requires upfaulting of accretionary complex, attenuated Australian continental crust on which it rests and underlying mantle at W side of Aru Trough. Deformation front in Aru Trough is SE of Kai Islands but entirely to W further N. Instead of continuing NNE to offset near New Guinea coast, collision trace passes through strait between Kai Besar and other islands, and mimics smooth curve of gravity contours, rather than discontinuities of bathymetric troughs. Continuity in deep and shallow structures is evidence for existence of outer arc as single geological unit prior to present phase of arc-continent collision)

Milsom, J., Sardjono & A. Susilo (2001)- Short-wavelength, high-amplitude gravity anomalies around the Banda Sea, and the collapse of the Sulawesi Orogen. Tectonophysics 333, p. 61-74.

(Ophiolitic rocks around Banda Sea commonly associated with strong gravity anomalies and steep gradients, but relationships not always straightforward. Bouguer gravity levels and gradients over E Sulawesi ophiolite generally low. In Banda Arc, most positive ophiolite anomalies on steep regional gradient but in W Seram distinct spatial separation. On Buru >10 mGal/km gradient suggests dense rocks near surface, despite absence of ophiolites in outcrop. Gravity variations and ophiolite distribution around Banda Sea compatible with extension in Sulawesi following Oligo-Miocene collision with Australian-derived microcontinent. Association of ultramafic rocks and local strong regional gravity gradient is largely coincidental)

Nasution, A., I. Takashima, H. Takahashi, K. Matsuda, H. Akasako, H. Muraoka, D. Kusnadi, F. Nanlohi & M. Futagoishi (2000)- The geology and geochemistry of Mataloko-Nage-Bobo geothermal areas, Central Flores, Indonesia. In: Proc. World Geothermal Congress, Kyushu- Tohoku 2000, p. 2165-2170.
(online at: www.geothermal-energy.org/pdf/IGAstandard/WGC/2000/R0766.PDF)
(Geothermal features of Bajawa prospect on Flores associated with NW-SE, SW-NE and N-S trending fracture systems in Quaternary andesitic-basaltic volcanics)

Norvick, M.S. (1979)- The tectonic history of the Banda Arcs, eastern Indonesia: a review. J. Geol. Soc. London 136, p. 519-527.
(Banda Sea is small marginal oceanic plate, formed in early Tertiary. Complexity result of Late Miocene- E Pliocene collision and obduction of Banda island arc over leading edge of Australian-lrian continental plate. Transcurrent faulting on N limb of collision zone may have accentuated curvature of arc. Subduction and volcanism ceased after collision in Timor and Seram sectors, but still active at E extremity of arc)

Noya, Y., O. Effendhy, H.Z. Abidin & Y. Pakaya (2009)- Geological background and economic prospect of the Soripesa deposit, eastern Sumbawa. Proc. 38th IAGI Ann. Conv. Exh. Indon. Assoc. Geol. (IAGI), Semarang, PIT IAGI 2009-002, p. 1-9.
(Sumbawa island part of Cenozoic Banda Arc. Regional fault structures trend NW-SE and NE-SW. E Sumbawa underlain by Lower Miocene andesitic- basaltic lavas with intercalations of tuff and limestone. Soripesa epithermal-porphyry type gold-copper prospect hosted in Miocene volcanic sequences)

Ogierman, J. (2016)- Discovery, geology and origin of the Lakuwahi volcanogenic Au-Ag-Pb-Zn deposit, Romang Island, eastern Indonesia. Proc. 8th Ann. Conv. Indonesian Soc. Economic Geol. (MGEI), Bandung, p. 76-79.
(Lakuwahu cluster of mineral deposits hosted by andesitic Lakuwahi Volcanics on S Romang near Wetar. Formed in shallow submarine caldera, subsequently covered by reefal limestones. Dominant Pb-Zn mineralization. Uplift in past 1-2Myr caused emergence of Romang Island)

Ohara, M., K. Nakamura & Y. Sasaki (2015)- The structural evolution of Babar- Selaru region in the southern Banda outer arc, Eastern Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-180, 17p.
(Review of Outer Banda Arc area from E Timor to Tanimbar Island, surrounding Inpex Babar Selaru PSC in Timor-Tanimbar Trough, N of Abadi Field. Part of N margin Australian continent and affected by: (1) Jurassic-E Cretaceous N-S extension, with opening of Tethys Ocean; overlain by Cretaceous- Paleogene deposits of thermal subsidence phase; (2) deepening of Timor Trough and thrusting in Pliocene, characterized by onlapping sequence onto Top Late Miocene horizon; (3) Today thrusts common in N and N-dipping normal faults dominant in S of Trough)

Ohara, M., L.A. Perdana, A. Saputra, M. Fujimoto & B. Sapiie (2016)- Neogene to Quaternary structural evolution in the offshore Tanimbar region in the southern Banda Outer Arc: implications for petroleum system in Eastern Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-545-G, 15p.
(Tectono-stratigraphic framework for Babar Selaru and Masela blocks in Timor-Tanimbar Trough/ N Bonaparte Basin. Normal fault-dominated domain in S formed by extension on Australian continental margin, and S-vergent Pliocene-Recent thin-skinned fold-thrust belt in N (= accretionary prism of Outer Banda Arc))

Ohara, M., L.A. Perdana, A. Saputra, A. Himsari & M. Fujimoto (2016)- Neogene hydrocarbon prospectivity of the frontier offshore Tanimbar region in the southern Banda Arc, Eastern Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-544-G, 16p.
(On hydrocarbon prospectivity in accretionary prism thrust structures in Timor Sea S of Babar)

Okal, E.A. & D. Reymond (2003)- The mechanism of great Banda Sea earthquake of 1 February 1938: applying the method of preliminary determination of focal mechanism to a historical event. Earth Planetary Sci. Letters 216, p. 1-15.
(Large 1938 Banda Sea earthquake ranks among 10 largest moments ever published. Resulted from mostly thrust-faulting mechanism (strike 276°; dip 63°; slip 70°). Took place in region of sparse seismicity, away from presumed block boundaries. The 1938 event shares compressional axis with smaller and deeper 1963 shock to SW, showing coherence in regional contortion of subducting Australian plate lithosphere)

Osada, M. & K. Abe (1981)- Mechanism and tectonic implications of the Great Banda Sea earthquake of November 4, 1963. Physics Earth Planetary Interiors 25, 2, p. 129-139.
(Banda Sea earthquake of 1963 (h = 100 km, mB = 7.8) large intermediate-depth shock within subducting plate of Banda Arc. Estimated fault area of 90×70 km2, average dislocation of 7m. Represents oblique thrust movement on plane with dip direction N170°E, dip 48° and rake 52°. Faulting took place within subducted plate and offset it. Further repetition of such faulting might eventually break subducted plate)

Papp, Z. (1980)- A three-dimensional model of the seismicity in the Banda Sea region. Tectonophysics 69, p. 63-83.
(Tectonic earthquake data from 1918-1965, between 120°. -134°E and 0- 10'S, used to build 3-D model of hypocenters in Banda Sea)

Papp, Z. (1981)- Temporal variation of elastic strain release in the Banda Sea region. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 4, p. 13-17.

Pertamina/BPPKA (1996)- Petroleum geology of Indonesian basins, vols. VI-IX Eastern Indonesian Basins, IX-Tanimbar, Jakarta, p. 1-32.

Pigram, C.J. & H. Panggabean (1983)- Age of the Banda Sea, eastern Indonesia. Nature 301, 5897, p. 231-234.
(Banda Sea floor probably trapped Jurassic Indian Oceanc crust (recent work favors Mio-Pliocene age; JTvG))

Porritt, R.W., M.S. Miller, L.J. O'Driscoll, C.W. Harris, N. Roosmawati & L.T. da Costa (2016)- Continent-arc collision in the Banda Arc imaged by ambient noise tomography. Earth Planetary Sci. Letters 449, p. 246-258.
(Interpretation of structure of Australia- Banda Arc collision zone from broadband seismic noise)

Pownall, J.M., R. Hall & G.S. Lister (2016)- Rolling open Earthôs deepest forearc basin. Geology 44, 11, p. 947-950.
(Weber Deep 7.2-km-deep forearc basin in Banda Sea is deepest point of Earth's oceans not within trench. Formed by forearc extension driven by E-ward subduction rollback. Lithospheric extension in upper plate accommodated by major low-angle normal fault system named 'Banda detachment'. Bathymetry data reveal Banda detachment fault is450km long, and exposed on Weber Deep floor. Slip along detachment fault >120 km)

Prasetyo, H. (1984)- Contribution on the marine geology and geophysics of the Banda Sea and adjacent regions. Marine Geol. Inst. (MGI), Bandung, Atlas, p. 1-41.

Prasetyo, H. (1988)- Marine geology and tectonic development of the Banda Sea region, Eastern Indonesia: a model of an 'Indo-Borderland' marginal basin. Ph.D. Thesis, University of California Santa Cruz, p. 1-475. *(Unpublished)*
(Study of origin of Banda Sea using single channel seismic profiles, bathymetry, SeaMARC II sonographs, marine gravity data, dredge and piston core samples and geologic investigations of surrounding islands of Misool, Sumba. Buton and Sawu. Banda Sea region neither young spreading basin or trapped piece of oceanic

crust, but collage of oceanic and continental fragments displaced from N Australian continental margin and trapped within Banda basin, prior to 7 Ma, similar to S California 'Borderland')

Prasetyo, H. (1989)- Marine geology and tectonic development of the Banda Sea region, Eastern Indonesia: a model of an 'Indo-borderland' marginal basin. Marine Geol. Inst. Indonesia Spec. Publ. 1, p. 1-427.
(Same as Prasetyo 1988)

Prasetyo, H. (1991)- From California borderland to Eastern Indonesia collision zone. Proc. 16th Ann. Conv. Indon. Assoc. Geoph. (HAGI), p.

Prasetyo, H. (1998)- Peningkatan pemahaman terhadap tatanan geologi kelautan kawasan Indonesia. Marine Geol. Inst., Bandung, p.
('Increase of understanding of the marine geology of the Indonesian region')

Prasetyo, H. (1999)- Marine geology and tectonic development of the Banda Ridges system, eastern Indonesia; implication for Banda marginal basin formation. In: Proc. 35th Session Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Subic Bay 1998, 2, Techn. Repts., p. 11-38.
(Banda Sea neither young spreading basin nor trapped piece of oceanic crust, although N (Sula) and S (Banda) basins appear to be trapped Pre-Tertiary oceanic crust. Banda Ridges in central part composed of continental borderland formed in Irian Jaya and emplaced in present position by Late Miocene. Basement rock dredged from Banda Ridge can be correlated with similar lithologies on Irian Jaya, Misool, Buru and PNG. Banda Ridge Terrane overlain by Upper Miocene- younger sediments that consist of pelagic limestones and Miocene volcanic rocks in the Lucipara Islands)

Purdy, G.M. & R.S. Detrick (1978)- A seismic refraction experiment in the Central Banda Sea. J. Geophysical Research 83, p. 2247-2257.
(Seismic refraction experiment in C Banda Sea suggests oceanic crustal structure, with velocities typical of oceanic layers 2, 3A, and 3B and mantle. Layer 3B unusually thick (2.5-4.6 km); greater than normal depths to Moho of 9-10 km below sea floor. These and earlier results from S Banda basin indicate that entire Banda Sea is underlain by oceanic type crust)

Rehault, J.P., J.A. Malod, M. Larue, S. Burhanuddin & L. Sarmili (1991)- A new sketch of the central North Banda Sea, eastern Indonesia. J. Southeast Asian Earth Sci. 6, p. 329-334.
(New bathymetric map of oceanic North Banda Basin. NW-SE structural pattern appears to be result of orientation of large NW-SE strike-slip faults and present direction of NE-SW convergence. Faulting and underthrusting of N Banda Sea crust beneath E Sulawesi along active Tolo accretionary prism)

Rehault, J.P., R. Maury, H. Bellon, L. Sarmili, S. Burhanuddin, J.L. Joron, J. Cotten & J.A. Malod (1994)- La mer de Banda Nord (Indonesie): un bassin arriere-arc du Miocene superieur. Comptes Rendus Academie Sciences, Paris 318, p. 969-976.
(Pillow-lavas dredged from basement of N Banda Sea are transitional basalts and trachyandesites with negative Nb-Ta anomalies similar to lavas from back-arc basins. K-Ar ages 9 and 6.9 Ma. Oceanic basement now subducting beneath E Sulawesi not trapped piece of Indian Ocean, but Late Miocene back-arc basin floor. (one of first papers after Hamilton (1979) to suggest Late Miocene back arc basin interpretation)

Richardson, A. (1993)- Lithosphere structure and dynamics of the Banda Arc collision zone, Eastern Indonesia. Bull. Geol. Soc. Malaysia 33, p. 105-118.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1993008.pdf)
(Reconstruction of Australian continental subducting slab from earthquake data. Vertical and lateral discontinuities, some reflecting slab separation during previous microcontinental collision event at ~10-7 Ma)

Richardson, A.N. (1994)- Lithospheric structure and dynamics of the Banda Arc, Eastern Indonesia. Ph.D. Thesis, University of London, p. 1-348. *(Unpublished)*

Richardson, A.N. & D.J. Blundell (1996)- Continental collision in the Banda arc. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 47-60.
(Two deep seismic profiles E of Timor show Australian continental crust bent down to N. Overriding upper plate too much volume to be only sediments accreted from Australian Plate: must include continental crustal material, like microcontinent or outer margin high. Micro-continental fragment collided with subduction zone at ~8 Ma (age of Aileu Fm metamorphism) and caused Late Miocene Banda allochton uplift)

Ritsema, A.R. (1953)- New seismicity maps of the Banda Sea. Journ. Scient. Res. Indonesia 2, p. 48-54.

Ritsema, A.R. (1986)- Subduction in the Banda Arc. Gerlands Beitrage Geophysik 95, 5, p. 414-417.

Ritsema, A.R., R.P. Sudarmo & I. Putu Pudja (1989)- The generation of the Banda Arc on the basis of its seismicity. In: Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 165-172.
(Seismicity of Banda Sea region suggests Banda Arc originated as Pacific Ocean subduction zone, Banda basin originally started as backarc spreading centre. Deformation of Banda Arc with strong curvature caused by adoption of northern slivers of N-moving Australian plate by W-moving Pacific plate. S-N stress influence up to region of N Banda Arc, etc.)

Roberts, G., C. Ramsden, T. Christoffersen, N. Wagimin & Y. Muzaffar (2011)- East Indonesia: plays and prospectivity of the West Aru, Kai Besar and Tanimbar Area- identified from new long offset seismic data. AAPG Ann. Conv., Houston 2011, Search and Discovery Art. 10348, 15p. *(Expanded abstract)*
(online at: www.searchanddiscovery.com/documents/2011/10348roberts/ndx_roberts.pdf)
(Observations from recent seismic survey of SE Arafura Platform/Basin, Tanimbar and Aru Troughs and E part of Banda Arc collision zone)

Rutten, L.M.R. (1927)- De eilanden tussen Timor en Ceram. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 705-716.
('The islands between Timor and Seram'. Brief reviews of geology of Leti, Moa, Babar, Kai islands, etc.)

Rynn, J.M.W. & I.D. Reid (1983)- Crustal structure of the western Arafura Sea from ocean bottom seismograph data. J. Geol. Soc. Australia, 30, 1-2, p. 59-74.
(Refraction data taken from ocean bottom seismograph recordings in W Arafura Sea indicate continental-type structure: ~2 km of sediments, with velocities of 2-4 k/s, over two layer crust. Moho is at depth of 34 km)

Sandiford, M. (2008)- Seismic moment release during slab rupture beneath the Banda Sea. Geophysical J. Int. 174, 2, p. 659-671.
(Differential vertical stretching of downgoing slab along Damar Zone (largely submerged segment of Banda arc E of Roma) consistent with slab rupture front ~100-200 km under Roma propagating E at ~100 km/ Myr. Detached lower slab sinking at ~60-70 km/Myr. Anomalous trends beneath Damar, where subhorizontal constriction suggests extreme stress ~100 km ahead of slab rupture front. Stress concentrations may explain anomalously deep ocean gateways in region)

Saputra, A. & M. Ohara (2016)- Basin and petroleum system modeling of offshore Tanimbar Region: implications of structural development history. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-546-G, 17p.
(Petroleum system modeling of offshore SW Tanimbar and N Bonaparte Basin. Abadi gas field sourced from Masela Deep and Malita Graben. Offshore Tanimbar region mostly charged by potential northern kitchen)

Sarmili, L. (1993)- A new tectonic framework in the North Banda basin. Bull. Marine Geol. Inst. Indonesia 8, 3, p. 1-19.

Sarmili, L., N. Sukmana & A. Saripudin (2000)- Indication of a manganese crust on volcanic rocks within the North Banda Sea (East Indonesia). Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 79-86.

(N Banda Sea up to 6000m deep. Dredge samples of U Miocene volcanics, representing young oceanic crust. Rocks from 3500-4000m water depth have iron-manganese coating)

Schluter, H.U. (1983)- Geology and tectonics along the convergent Australian and Banda Sea margins from the Tanimbar Trench to the Aru Trough: results of geophysical investigations with the R/V Sonne Cruise SO-116 in 1981. BGR Rept. 94605, Hannover, 37p.

Schluter, H.U. & J. Fritsch (1985)- Geology and tectonics of the Banda Arc between Tanimbar Island and Aru Island (Indonesia). Results of R/V Sonne Cruise SO-16, Geol. Jahrbuch E30, p. 3-41.
(BGR 1981 seismic and gravity-magnetics program between Australian continental shelf and Tanimbar and Kai Island groups, with examples of Tanimbar-Kai trench-accretionary prisms, young normal faulting on shelf and slope, etc.)

Sentani, E.A. & A. Nugraha (2009)- Opportunities (III), Kai- Tanimbar. Inameta J. 7, p. 28-31.
(online at: www.patranusa.com)
(Brief overview of Kai- Tanimbar foldbelt area, W of Arafura Sea, in conjunction with tender round offering. Note similarities to Timor- Seram foldbelts)

Setiadi, I. & A.R. Riyanda (2016)- Delineasi cekungan sedimen dan interpretasi geologi bawah permukaan cekungan Tanimbar berdasarkan analisis data gayaberat. J. Geologi Sumberdaya Mineral 17, 3, p. 153-169.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/14)
('Delineation of sedimentary basin and subsurface geological interpretation of the Tanimbar basin based on analysis of gravity data'. Gravity survey on and around Yamdena Island suggest six sub-basins. NE-SW trending basement high)

Setyanta, B. (2010)- Medan gaya berat dan model geodinamika di sekitar Kepulauan Kai dan Kepulauan Aru, Maluku. J. Sumber daya Geologi 20, 6, p. 305-316.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/181/177)
('Gravity field and geodynamic models around the Kai and Aru Islands, Moluccas'. Kai- Aru area underlain by continental crust. Kai islands formed by thrusting, Aru islands by rifting)

Silver, E.A., J.B. Gill, D. Schwartz, H. Prasetyo & R.A. Duncan (1985)- Evidence for a submerged and displaced continental borderland, North Banda Sea, Indonesia. Geology 13, p. 687-691.
(Banda Sea two oceanic fragments (S and N Banda basins), separated by Banda Ridges submerged and displaced continental borderland. Dredged andesitic volcanics from Banda Ridges mainly Late Miocene, 7-9 Ma. Suggest origin from Birds Head between 5-10 Ma)

Situmorang, M. (1989)- Lithofacies and depositional pattern of sea floor sediments in the North Banda Sea, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 405-413.
(On N Banda Sea Quaternary terrigenous and volcanogenic deposits)

Situmorang, M. (1992)- Sedimentology and marine geology of the Banda Arc, Eastern Indonesia. Ph.D. Thesis University of Utrecht, Geologica Ultraiectina 84, p. 1-191.
(online at: http://igitur-archive.library.uu.nl/geo/2012-0426-200502/Situmorang-Mangatas-84-1992.pdf)
(Collection of papers on Quaternary sediments and heavy minerals of E Indonesia Seas, followed by synthesis)

Situmorang, M. (1993)- The forms and characteristics of detrital heavy minerals in Banda Sea and the adjacent areas. Bull. Marine Geol. Inst. Indonesia 8, 1, p. 9-31.
(Detrital heavy minerals in Banda Sea seafloor sediments predominantly mafic volcanic and sedimentary minerals with some metamorphic minerals)

Situmorang, M. & L. Sarmili (1997)- Composition, morphometry, dispersal patterns of gravel clasts and basement rocks in the Banda Arc sea floor, eastern Indonesia. Bull. Marine Geol., Bandung, 12, 1, p. 1-26.

(Gravel on Banda Arc seafloor includes clasts of sediments (limestone, sandstone, coral, claystone, marl), volcanics (pyroxene andesite, pumice) and minor metamorphics. Seram, Timor, and Gorong Islands supplied majority of clasts. Volcanic clasts on Bandaneira and Serua volcanic arcs, and in Weber Deep likely derived from Banda volcanic arc and Manuk, Serua, Nila and Teon volcanoes. Part of metamorphic clasts derived from basement cropping out at sea floor)

Snyder, D.B. & A.J. Barber (1997)- Australia- Banda Arc collision as an analogue for early stages in Iapetus closure. J. Geol. Soc. London 154, p. 589-592.
(Comparison of structures formed across Banda Arc since Pliocene during Australia- Arc collision with structures in central British Isles)

Snyder, D. & R. Hobbs (1999)- BIRPS Atlas II: a second decade of deep seismic reflection profiling. Geol. Soc. London, MPB 42, 3 CDôs.
(Deep seismic sections from different parts of world, including across Banda Arc. Data quality rel. poor)

Snyder, D.B., J. Milsom & H. Prasetyo (1996)- Geophysical evidence for local indentor tectonics in the Banda arc east of Timor. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 61-73.
(Seismic reflection profiles and gravity across Banda arc E of Timor. Reflectors beneath Sahul Platform indicative of extensional rift structures overprinted by recent shortening. Negative Bouguer gravity associated with S parts of accretionary complex unusually broad and deep. Further N, forearc basin narrow near E Timor and little sediments, mostly undeformed. Backarc region to N has N-S trending line of seamounts culminating in active Gunung Api volcano, 400 km above Benioff zone. Anomalously thick, bouyant crust beneath Banda Arc E of Timor either local promontory in irregular boundary of Australian craton was underthrust 50-70 km beneath volcanic arc and forearc, or Paleozoic basin similar to nearby Bonaparte underthrust and former crustal structure inverted and thickened to form buoyant crust)

Snyder, D.B., H. Prasetyo, D.J. Blundell, C.J. Pigram, A.J. Barber, A. Richardson & S. Tjokosaproetro (1996)- A dual doubly vergent orogen in the Banda arc continent-arc collision zone as observed on deep seismic reflection profiles. Tectonics 15, 1, p. 34-53.
(Interpretation of deep seismic lines across Banda Arc E of Timor (BIRPS 1992). Crustal thicknesses inferred from seismic velocities, reflectors, and gravity anomalies are consistent with merging of thinned continental shelf margin with oceanic lithosphere to form orogenic belt near Timor. W of Timor oceanic lithosphere subducts beneath oceanic crust south of the arc islands from Flores to Bali)

Stevens, G.R. (1964)- A new belemnite from the Upper Jurassic of Indonesia. Palaeontology 7, 4, p. 621-629.
(online at: www.palass-pubs.org/palaeontology/pdf/Vol7/Pages%20621-629.pdf)
(Belemnopsis stolleyi n.sp. for Belemnopsis aucklandica specimens collected by Weber in variegated Upper Oxfordian marls of the 'Belemnitenbach' (belemnite creek), 6 km from W coast of North Yamdena, Tanimbar. First described by Stolley (1929))

Sukardi, T. & Sutrisno (1990)- Geologic map of the Tanimbar Islands Quadrangle, Maluku, scale 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Tanimbar Islands SW-directed thrust faults. NE edge of Yamdena and offshore islands tectonically complex melange and/or mud volcanoes ('Molu Complex') with Triassic and Jurassic sandstones and limestones, also metamorphic and volcanic rock types

Suparka & D. Jongsma (1987)- Snellius-II. triple junction. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.

Taib, M.I.T., M.T. Zen, M. Untung & F. Hehuwat (1997)- Dilema Banda. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 354-370.
('The Banda dilemma'. Discussion of nature and age of crust below Banda Sea)

Tissot van Patot, J.W. (1908)- Een viertal tochten door het eiland Terangan (Aroe Eilanden) in Maart en April 1907. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 25, p. 77-93.
(‘Four trips through Terangan, Aru Islands, in 1907’)

Tjia, H.D. (1977)- Fracture systems near Dobo, Aru Islands, Indonesia. Sains Malaysiana 6, 2, p. 185-193.

Tjokosapoetro, S. & T. Budhitrisna (1982)- Geology and tectonics of the Northern Banda Arc. Bull. Geol. Res. Dev. Centre Bandung 6, p. 1-17.

Untung, M. (1985)- Subsidence of the Aru Trough and the Aru Island, Irian Jaya, Indonesia. Tectonophysics 112, 1-4, p. 411-422.
(Aru Trough isostatic anomalies show region is in subsidence. Crustal extension may be active in zone E of Aru Trough, resulting in graben formation. Root of Aru Island pulled downward to E. Crustal extension indicates separation of block of Australian continental crust from Australian platform)

Usna, I., S. Tjokrosapoetro & S. Wiryosujono (1977)- Geological interpretation of a seismic reflection profile across the Banda Sea between Wetar and Buru Islands. Geol. Res. Dev. Centre (GRDC), Bandung, Bull. 1, p. 7-15.

Van Bemmelen, R.W. (1979)- Crustal convergence or divergence in the Banda Sea region of Indonesia? In: W.J.M. van der Linden (ed.) Fixism, mobilism or relativism: Van Bemmelenǿs search for harmony, Geologie en Mijnbouw 58, 2, p. 101-106.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0YW80b3Q5MEhSUUU/view)
(Supposed to be a review of manuscript of Bowin et al. (1980) paper 'Arc-continent collision in the Banda Sea region', but mainly vanB's hard-to-understand alternative interpretation of dynamics of Banda Sea region, in terms of undations, etc. (vanBemmelen was not a supporter of plate tectonics; HvG) No figures)

Van der Kaars, S., X. Wang, A.P. Kershaw, F. Guichard & D.A. Setiabudi (2000)- A late Quaternary palaeoecological record from the Banda Sea, Indonesia; patterns of vegetation, climate and biomass burning in Indonesia and northern Australia. Palaeogeogr. Palaeoclim. Palaeoecology 155, p. 135-153.
(Banda Sea core SHI-9014 palynological and carbon isotope analyses provide a regional vegetation, fire and climate history for Banda Sea in last 180,000 years. During last two glacial periods drier climates in both E Indonesia and N Australia and lower montane forests expanded in E Indonesia indicating cooler climatic conditions. Before 37,000 yr BP. Dipterocarpaceae important part of lowland vegetation of E Indonesia. Subsequent demise likely related to increased human impact)

Van der Vlerk, I.M. (1966)- *Miogypsinoides*, *Miogypsina*, *Lepidocyclina* et *Cycloclypeus* de Larat, Moluccas. Eclogae Geol. Helvetiae 59, 1, p. 421-429.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1966:59571
(Three limestone samples from central part of Larat Island (=Kai Besar?), collected by Weber (BPM), with miogypsinids already described by Drooger (1953). Type locality of Miogypsinoides dehaartii Van der Vlerk 1924. No locality map or local stratigraphy. Miogypsinoides dehaartii and Miogypsina borneensis suggest Aquitanian age. No locality descriptions or local stratigraphy)

Van Gool, M., W.J. Huson, R. Prawirasasra & T.R. Owen (1987)- Heat flow and seismic observations in the northwestern Banda arc. Proc. 23rd Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Madang 1986, 2, p. 1-15.
(Heat flow measurements in deep N Buru and Lucipara basins, N Banda Sea, during Snellius II expedition in 1985 all show high values, interpreted to be result of recent E-W strike-slip movement in NW Banda Arc)

Van Gool, M., W.J. Huson, R. Prawirasasra & T.R. Owen (1987)- Heat flow and seismic observations in the northwestern Banda Arc. J. Geophysical Research 92, B3, p. 2581-2586.

(High heat flow values in centers of three basins in NW Banda Arc. Average in N Buru basin 161 mW/m2. Two small, N-S to NW-SE elongated subbasins in Lucipara basin 175 and 134, mW/m2, respectively. High heat flow in N Buru and Lucipara basins interpreted to be result of recent E-W strike-slip movement in NW Banda Arc)

Van Marle, L.J. & M.E.M. de Smet (1990)- Notes on the Late Cenozoic history of the Kai Islands, Eastern Indonesia. Geologie en Mijnbouw 69, p. 93-103.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0QmlrdXZacGpTZ0E/view)
(Kai Besar large anticlinorium with Eocene rocks in center. M Eocene- M. Miocene in bathyal calcilutite facies, recording deep water passive margin fill; common shallow water carbonate debris in older literature interpreted as shallow marine. Kai Islands emerged in Late Miocene- Pliocene, with ~2 km of uplift in last 10 My. Kai Besar no elevated coral reefs, suggesting it is subsiding; Kai Kecil 4-5 elevated reefs unconformable over Pleistocene core)

Vening Meinesz F.A. (1951)- A third arc in many island arc areas. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B54, 5, p. 432-442.
(see also Westerveld 1954)

Verbeek, R.D.M. (1901)- Geologische beschrijving van de Banda-eilanden. Jaarboek Mijnwezen Nederlandsch Oost-Indie 29 (1900), p. 1-29.
('Geological description of the Banda islands'. Banda Neira/ Gunung Api and Run composed of young volcanics and coral limestones. With 1:20,000 scale map of Banda Neira and Gunung Api)

Verbeek, R.D.M. (1908)- Residentie Amboina. In: Molukkenverslag, Jaarboek Mijnwezen Nederlandsch Oost-Indie 37 (1908), Wetenschappelijk Gedeelte, p. 428-655.
(Early descriptions of islands of Banda arc, from E of Timor to Seram-Buru. Includes descriptions and cross-sections of Kai Besar and illustrations of Eocene Discocyclina- Asterocyclina from Kai. Oldest beds on Kai Besar weakly folded Eocene marly limestones, dipping 10° W. Overlain by horizontal limestone terraces, oldest with Lepidocyclina (Miocene), younger ones post-Miocene)

Villeneuve, M., J.J. Cornee, R. Martini, L. Zaninetti, J.P. Rehault, S. Burhanudin & J. Malod (1992)- Upper Triassic shallow-water limestones in the Sinta Ridge (Banda Sea, Indonesia). Geo-Marine Letters 14, p. 29-35.
(online at: https://archive-ouverte.unige.ch/unige:26438)
(10 dredge samples from N slope Sinta Ridge (separates N and S Banda basins). Some are shallow marine limestones with Upper Norian- Rhaetian? benthic foraminifera, (incl. Aulatortus, Triasina oberhauseri, Duostominidae). Similarities with E Sulawesi, Buru and Seram consistent with independent Upper Triassic block. Origin of Banda Sea microcontinents questionable)

Villeneuve, M., J.P. Rehault, J.J. Cornee, J.A. Malod, J. Clermonte, J.M. Auzende, L. Sarmili, S. Burhanuddin, G. Glacon, G. Tronchetti, L. Zaninetti & R. Martini (1993)- Plio-Quaternary evolution of the North Banda Sea and East Sulawesi margin. In: M.T. Zen (ed.) 10th anniversary of the French-Indonesian cooperation in oceanography; ocean research, technology and maritime industry, Jakarta 1993, Adiwarna Citra, Bandung, p. 109-118.
(online at: https://archive-ouverte.unige.ch/unige:26392)
(Cruise of vessel Baruna Jaya III provided new seismic data and dredge samples from W part of Sinta Ridge (incl. Triassic limestones). Late Miocene age of opening of North Banda Sea (6-9 Ma basalts). Continental Sinta Ridge went down from surface to 3000m during creation of N Banda Sea oceanic crust. General compressive regime in whole N Banda Sea)

Von Der Borch, C.C. (1979)- Continent-island arc collision in the Banda Arc. Tectonophysics 54, p. 169-193.
(Timor-Tanimbar-Ceram troughs and adjacent outer Banda Arc very similar to arcs subducting oceanic lithosphere and sediments, despite fact that outer Banda Arc is underlain by continental crust(??). Alignment with oceanic Indonesian Arc, gravity anomalies, and persistence of morphological and structural entities around arc favour subduction in Timor-Tanimbar-Ceram Troughs rather than gravity sliding towards troughs. Outer Banda Arc is accretionary prism of subduction zone which was formerly in ocean-crust setting but since

Pliocene has been interacting with continental lithosphere. This model for Banda Arc differs from other structural interpretations of Timor island, which is emergent outer arc)

Wandel, G. (1936)- Beitrage zur Kenntnis der Jurassischen Molluskenfauna von Misol, Ost Celebes, Buton, Seran und Jamdena. In: J. Wanner (ed.) Beitrage zur Palaeontologie des Ostindischen Archipels 13, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 75B, p. 447-526.
('Contributions to the knowledge of Jurassic molluscs from Misool, East Sulawesi, Buton, Seram and Yamdena'. Description of Mollusca, mainly collected by F. Weber. Misool faunas include upper Liassic Harpoceraten beds, lower Dogger Hammoceraten beds, Oxfordian Aucella malayomaorica marls (also in E Sulawesi), etc.)

Wanner, J. & E. Jaworski (1931)- Liasammoniten von Jamdena und Celebes. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 66, B, p. 199-210.
('Liassic ammonites from Yamdena and Sulawesi'. Sulawesi ammonites from poorly known central part of East arm, collected by BPM geologist Weber, are first records of Early Jurassic ammonites from E Sulawesi (Arnioceras cf. seilaeve from dark grey sandy limestone as float in upper Balingara River, 20km SE of river mouth). Yamdena ammonites from Tasik Selwasa and Botenjahu mud volcano deposits include Echioceras wichmanni, Asteroceras sparsicostatum n.sp. and Arnioceras cf. arnouldi. Fauna and lithology very similar to Krumbeck (1922)'s 'grey cephalopod nodule marl' of Roti and Timor)

Wahab, A., Susanto & R. Nyak Baik (1991)- Seismic expression across Tanimbar trough, Eastern Indonesia. Proc. 16th Ann. Conv. Indon. Assoc. Geophys. (HAGI), Bandung, p.

Wallace, A.R. (1857)- On the natural history of the Aru Islands. Annals Magazine Natural History, ser. 2, 20, p. 473-485.

Weber, F. (1923)- Rapport omtrent het geologisch onderzoek van Klein Kei. Unpubl. BPM Report, p.
('Report of geological investigation of Kai Kecil island'. Unpublished BPM report at GRDC library No. H 23-2/(H5) 55)

Weber, F. (1924)- Rapport omtrent het geologisch onderzoek van het eiland Groot Kei of Noehoe Tjoet. BPM report, p. *(Unpublished)*
('Report of geological investigation of Kai Besar island'. Unpublished BPM report at GRDC library No. H 24-2/(H5) 55)

Weber, F. (1925)- Verslag omtrent het geologisch onderzoek der eilandgroep van Koer en Tajando (Westelijke Kei eilanden). BPM report, p. *(Unpublished)*
('Report of geological investigation of island group of Kur and Tajando'. Unpublished BPM report at GRDC library No. H 25-3/(H4) 55)

Weber, F. (1925)- Verslag omtrent het geologisch onderzoek der Z.W. Tanimber eilanden. BPM Report, p. *(Unpublished)*
('Report of geological investigation of the SW Tanimbar islands'. Commonly quoted report at Geological Survey, Bandung. Weber's macrofossil collections described by Wanner, Stolley, Wandel, etc.)

Welc, J.L. & T. Lay (1987)- The source rupture process of the Great Banda Sea earthquake of November 4, 1963. Physics Earth Planetary Interiors 45, p. 242-254.
(1963 Banda Sea earthquake one of largest (Mw=8.3) intraplate events. Involved oblique thrusting at intermediate depth within subducted lithosphere near abrupt bend in SE Banda arc (6.86° S, 129.58° E). Rupture initiated at 120 km depth and expanded over vertical extent of ~50 km. Along-strike rupture length only ~100 km. Tied to slab rupture at edge of subducting Australian continental lithosphere?)

Westerveld, J. (1955)- The Lucipara Islands Ridge and a third arc in the Banda Sea. Geologie en Mijnbouw 17, 3, p. 84-88.

(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0dkduRDNOejUyT2s/view)
(Existence of third arc in Banda Sea N of modern volcanic arc at Lucipara Islands, as suggested by Vening Meinesz (1951), not supported by geological and bathymetric evidence)

Wiryosujono, S. (1976)- Melange assemblage in Babar Islands. Berita Dit. Geol. (Geol. Survey Indonesia Newsletter) 9, 6, p. 71-75.
(Wiryosujono & Tjokrosapoetro 1978: large blocks of pillow basalt and diabase in valley of main river on surface of Triassic and Jurassic flysch deposits)

Woodside, J.M., D. Jongsma, M. Thommeret, G. Strang van Hees & Puntodewo (1989)- Gravity and magnetic field measurements in the eastern Banda Sea. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 185-203.
(Magnetic anomalies may indicate volcanic material associated with topographic features in Aru and Weber Troughs. Discontinuity along W extension of Tarera-Aiduna Fault between Seram subduction zone and Aru Trough/ Kuenen Bank (larger variations of gravity to S and change in magnetic trends) although both gravity and magnetic anomalies exhibit NE-SW trend obliquely across SE section of Seram Trough. Seram Trench accretionary complex over dynamically-depressed crust of subducting plate. Weber Basin crust excessively depressed and thinned. Positive gravity anomalies suggest outer part of Timor-Tanimbar accretionary complex either above rising or shallower subducting plate, or contains substantial denser material. Major strike-slip feature may be present NE of Tanimbar, cutting accretionary complex obliquely)

Zaim, Y., B. Ernawan & Fachrizal (2012)- Mud volcanoes in SE Maluku: evidence for netectonics in East Indonesia. Berita Sedimentologi 24, p. 18-23.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-24-timor-and-arafura-sea.html)
(On active mud volcanoes on Babar, Tanimbar and Kai islands, generally associated with accretionary complexes)

Zwierzycki, J. (1927)- Geologische overzichtskaart van den Nederlandsch-Indischen Archipel. Toelichting bij blad XX (Aroe-, Kei- en Tenimbereilanden). Jaarboek Mijnwezen Nederlandsch-Indie 56 (1927), Verhandelingen 1, p. 309-336.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/814661)
('Geological overview map of the Netherlands Indie. Explanatory notes of sheets XX (Aru, Kai and Tanimbar islands').

VII.2. Lesser Sunda- West Banda Volcanic Arc (Bali-Lombok- Flores- Wetar)

Abbott, M.J. & F.H. Chamalaun (1981)- Geochronology of some Banda Arc volcanics. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Geol. Res. Dev. Centre, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Bandung, Spec. Publ. 2, p. 253-268.
(E Indonesia K/Ar geochronology program at Flinders University. Banda Arc volcanism ceased in Alor-Wetar sector and on Ambon at ~3 Ma, reflecting minimum age of Timor/ Seram collisions. Inactive parts of arc characterized by rapid uplift. Wetar volcanism may have started 12 Ma. N Timor Oecusse pillow basalts island-arc tholeite with wide radiometric age range, but ~6-4 Ma most likely)

Ali, E. (1997)- Batu Hijau porphyry copper-gold deposit, exploration and evaluation. Proc. 26th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 193-205.
(Batu Hijau porphyry copper-gold deposit, discovered by Newmont in 1990 in SW Sumbawa, in Banda volcanic arc. Geometry of deposits resembles upright cylinder with high grade ore in multiple tonalite porphyries, intruded into E Tertiary diorite and andesite wall rocks. Chalcopyrite and bornite main Cu minerals)

Alzwar, M. (1981)- A structural discontinuity with associated potassic volcanism in Indonesian island arc: first results of the CNR-CNRS-VSI mission to the island of Sumbawa. Soc. Geol. Ital. Rendicanti 4, p. 275-288.

Arif, J. & T. Baker (2004)- Gold paragenesis and chemistry at Batu Hijau, Indonesia: implications for gold-rich porphyry copper deposits. Mineralium Deposita 39, p. 523-535.
(Sumbawa Batu Hijau world-class porphyry copper-gold deposit. Neogene volcanism progressive change from calc-alkaline to shoshinitic affinities with time. E- M Miocene andesitic volcaniclastic rock succession dips gently in W direction, cut by several phases of M- Late Miocene intrusions (5.9-3.7 Ma; hypabyssal andesites, equigranular quartz diorite plutons, late-stage tonalite- granodiorite dikes))

Arif, J., D. Setyandhaka & J. Proffett (2008)- Characteristic of the root of Cu-Au porphyry system: results of study from Batu Hijau Cu-Au porphyry deposit. Proc. PACRIM 2008 Conference, Australian Inst. Mining Metallurgy (AusIMM), Melbourne, p. *(Extended Abstract)*
(Copper and gold mineralisation at Batu Hijau related to quartz veining and wall rock alteration associated with multiple tonalite porphyry intrusions. Batu Hijau comparatively minor late alteration and mineralisation overprints. This paper summarises results of cores from deeper sections of Batu Hijau)

Arifin, L. (1998)- Stratigrafi seismik perairan Lombok Barat. J. Sumber Daya Geologi 8, 80, p. 17-26.
('Seismic stratigraphy of W Lombok area')

Armstrong, J.T. (2012)- Deciphering the evolution of ore fluids at the Batu Hijau copper-~gold porphyry deposit, Sumbawa, Indonesia. M.Sc. Thesis, University of Nevada, Las Vegas, p. 1-165.
(online at: http://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=2533&context=thesesdissertations)
(Four types of fluid inclusions recognized at Batu Hijau Cu-Au deposit, SW Sumbawa, suggesting ore fluids at Batu Hijau formed in two stages:(1) initial high T fluid precipitating only minor Cu and (2) cooler, denser, but compositionally similar fluid that contributed significantly to mineral precipitation)

Aswan, Y. Zaim, Y. Rizal, I.N. Sukanta, S.D. Anugrah, A.T. Hascaryo, I. Gunawan, T. Yatimantoro et al. (2017)- Age determination of paleotsunami sediments around Lombok Island, Indonesia and identification of their possible tsunamigenic earthquakes. Earthquake Science 30, 2, p. 107-113.
(online at: https://link.springer.com/content/pdf/10.1007%2Fs11589-017-0179-2.pdf)
(210Pb age dating method of young paleotsunami sediments of W and SW Lombok. Gawah Pudak sediments deposited 37 and 22 years ago (1977 and 1992). Three paleotsunami sediments from Gili Trawangan deposited 149, 117 and 42 years ago. Tied 1857 Bali Sea earthquake, 1897 Flores Sea or Sulu Sea earthquake, 1975 Nusa Tenggara earthquake, 1977 Sumba earthquake and 1992 Flores earthquake)

Audley-Charles, M.G. (1974)- Banda Arcs. In: A.M.Spencer (ed.) Mesozoic-Cenozoic orogenic belts, Geol. Soc., London, Spec. Publ. 4, p. 349-363.

(Review of structural zones in Banda Arcs, E Indonesia)
Audley-Charles, M.G. (2004)- Ocean trench blocked and obliterated by Banda forearc collision with Australian proximal continental slope. Tectonophysics 389, 1-2, p. 65-79.
(online at: www.uvm.edu/~lewebb/Geol240/Timor/Audley-Charles%202004%20Timor.pdf)
(E end of Java Trench now blocked SE of Sumba by Australian continental margin forming Roti-Savu Ridge. Present position of defunct Banda Trench buried below foothills of S Timor. Large part of Banda forearc carried over Australian margin during subduction between ~12- 3.5 Ma. Collision deformed forearc with part of unsubducted Australian lower plate cover, now forming exposed Banda orogen with parts of forearc basement. Forearc overrode Australian continental slope. Parts of proximal forearc prism and proximal continental slope cover detached and thrust N over Java-Banda Trench and forearc up to 80 km along S-dipping Savu Thrust and Wetar Suture. Reinterpretations explain absence of discernible subduction ocean trench in S Banda Arc and narrow forearc (30 km at Atauro, N of E Timor))

Aye, M.T., A. Imai, N. Araki, S. Pramumijoyo, A. Idrus, L.D. Setijadji & J. Arif (2010)- Copper-gold bearing skarn mineralization at the Batu Hijau deposit, Sumbawa Island, Indonesia. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-057, 6p.
(Batu Hijau copper-gold skarn in SW Sumbawa Island resulted from interaction of hydrothermal fluids associated with E-M Pliocene tonalite porphyry intrusion into E-M Miocene andesitic volcaniclastic rocks and limestones)

Aye, M.T., A. Imai, N. Araki, S. Pramumijoyo, A. Idrus, L.D. Setijadji & J. Arif (2011)- Mineralisasi skarn pembawa tembaga dan emas pada cebakan Batu Hijau, Pulau Sumbawa, Indonesia. Majalah Geologi Indonesia (IAGI) 26, 3, p. 191-198.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/762)
('Copper and gold bearing skarn mineralization at the Batu Hijau deposit, Sumbawa Island, Indonesia'. Same as Aye et al. 2010)

Aye, M.T., S. Pramumijoyo, A. Idrus, L.D. Setijadji, A. Imai, N. Araki & J. Arif (2011)- The mineralogy of gold-copper skarn related porphyry at the Batu Hijau deposit, Sumbawa, Indonesia. J. Southeast Asian Applied Geol. (UGM) 3, 1, p. 12-22.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-3/no-1/jsaag-v3n1p012.pdf)
(Gold-copper bearing skarn mineralizations found during 2003 drilling program at deep level of deposit (-450m to -1050m) in Batu Hijau porphyry deposit, W Sumbawa Island)

Aye, M.T., Subagijo, A. Idrus, L.D. Setijadji & A. Imai (2010)- Ore mineral sssemblages of skarn at the Batu Hijau porphyry Cu-Au deposit, Sumbawa Island, Indonesia. Proc. 3rd Reg. Conf. Geological Engineering Research in ASEAN 'Sustainable Geological Education', Siem Reap 2010, p. 71-75.

Aziz, F., M.J. Morwood & G.D. van den Bergh (eds.) (2009)- Pleistocene geology, palaeontology and archaeology of the Soa Basin, Central Flores, Indonesia. Geol. Survey, Bandung, Spec. Publ. 36, 146p.
(Geology and vertebrate paleontology of Soa Basin, Flores. Surrounded by volcanics. Late Pliocene andesitic volcanics, Pleistocene pumice tuff and lacustrine tuffaceous sediments with 'island' mammal faunas like giant tortoise, komodo dragon and pygmy Stegodon)

Barbieri, F., B. Bigioggero, A. Boriani, M. Cattaneo, A. Cavallin et al. (1987)- The island of Sumbawa: a major structural discontinuity in the Indonesian Arc. Boll. Soc. Geol. Ital. 106, p. 547-620.
(Multidisciplinary paper. Scarce sediments: thin E-M Miocene carbonates/clastics on older volcanics, overlain by Pliocene-Recent volcanics; 4 volcanic phases: pre-Early Burdigalian, Pliocene 4.9- 3.1 Ma, Pleistocene 1.8-1.1 Ma and Holocene (large Tambora caldera 43 ka))

Breen, N.A., E.A. Silver & S. Roof (1989)- The Wetar backthrust belt, eastern Indonesia: the effects of accretion against an irregularly shaped arc. Tectonics, 8, p. 85-98.
(N-vergent thrust belt N of Wetar is result of Australia-Indonesian arc collision. Four main thrust segments: Wetar, Liran Atauro and Alor faults, probably controlled by presence of small rigid blocks in collision zone)

Brouwer, H.A. (1919)- On the non-existence of active volcanoes between Pantar and Dammer (East Indian archipelago) in connection with the tectonic movements in this region. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 21, 2, p. 795-802.
(Online at: www.dwc.knaw.nl/DL/publications/PU00012047.pdf)
(Early paper noticing absence of active volcanism in Banda Arc N of Timor, between Alor-Wetar Romme, where non-volcanic outer arc is closest to volcanic inner arc (In plate tectonic terms it can now be understood as locking of subduction zone after collision of Australian Plate and Banda Arc at Timor)

Brouwer, H.A. (1938)- The tectonic evolution of the Lesser Sunda Islands near Australia. Quart. J. Geol. Soc. London 1349, p. 3-6. *(wrong reference?)*

Brouwer, H.A. (1940)- Geological and petrological investigations on alkali and calc-alkali rocks of the islands Adonara, Lomblen and Batoe Tara. In: H.A. Brouwer (ed.) Geological expedition of the University of Amsterdam to the Lesser Sunda Islands, II, Noord Hollandsche Uitgevers Mij, Amsterdam, p. 1-94.
(On three volcanic islands of Banda Arc, East of Flores. All rocks are relatively young volcanics, dominated by andesites and basalts, overlain by uplifted coral reef terraces (up to ~250m elevation on Lomblen). Batu Tara volcano in Flores Sea North of main line of volcanoes and has potassic, leucite-bearing basanitic lavas)

Brouwer, H.A. (1942)- Granodioritic intrusions and their metamorphic aureoles in the Young-Tertiary of Central Flores. In: H.A. Brouwer (ed.) Geological expedition of the University of Amsterdam to the Lesser Sunda Islands 4, Noord Hollandsche Publ. Co., Amsterdam, p. 291-317.
(Granodioritic intrusions outcropping across Flores have distinct metamorphic contact aureoles in what looks like Neogene globigerinid-bearing sediments, and are therefore young intrusions)

Brouwer, H.A. (1943)- Leuciethoudende en leucietvrije gesteenten van den Soromandi op het eiland Soembawa. Verslagen Nederl. Akademie Wetenschappen, Amsterdam, 52, p. 303-307.
('Leucite-bearing and leucite-free rocks of Soromandi volcano on Sumbawa island'. Descriptions and chemical compositions of young volcanic rocks of Soromandi volcano near N coast of Sumbawa)

Brouwer, H.A. (1944)- Over vulkanische gesteenten van Oost-Flores. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 14 (Tesch volume), p. 95-103.
(On young volcanic rocks from East Flores'. Mainly young pyroxene andesites)

Brouwer, H.A. (1954)- Evolution magmatique et tectonique des Petites Iles de la Sonde. C.R. Congres Geol. Int. (Int. Geological Congress), Algeria 1952, XV, XVII, p. 63-70.
('Magmatic and tectonic evolution of the Lesser Sunda Islands')

Charlton, T.R. (1997)- Backthrusting on the BIRPS deep seismic reflection profiles, Banda Arc, Indonesia, a response to changing slab inclination? J. Geol. Soc. London 154, p. 169-172.
(BIRPS deep seismic profiles across Banda arc-continent collision complex indicate backthrusting in volcanic arc and between arc- forearc ridge. This differs from W Timor-Savu Sea and Tanimbar sectors of arc where backarc thrusting is absent and interarc region is extensional. Structural styles controlled by whether subducted slab is steepening or straightening through time. Straightening through buoyant post-collisional rebound induces extension normal to arc, steepening of slab is associated with arc-normal compression)

Clode, C., J. Proffett, P. Mitchell & I. Munajat (1999)- Relationships of intrusion, wall-rock alteration and mineralisation in the Batu Hijau copper-gold porphyry deposit. In: G. Weber (ed.) Proc. PACRIM '99 Congress, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, 4-99, p. 485-498.
(Batu Hijau world-class island arc porphyry copper-gold deposit in SW corner of Sumbawa, related to quartz veining and wall rock alteration associated with multiple tonalite porphyry intrusions. Island underlain by Early Tertiary low-K calc-alkaline volcanics and intrusives)

Crostella, A. (1977)- Geosynclines and plate tectonics in Banda Arcs, Eastern Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 61, 12, p. 2063-2061.
(Obsolete 'expanding earth/ geosynclinal' tectonic model for Timor, Banda Arc. See also discussion by Audley-Charles et al. (1979))

Curray, J.R., G.G. Shor, R.W. Raitt & M. Henry (1977)- Seismic refraction and reflection studies of crustal structure of the eastern Sunda and western Banda Arcs. J. Geophysical Research 82, 17, p. 2497-2489.
(Seismic refraction profiles S of C Java and Bali, Flores, Banda and Arafura Seas and in Timor Trough. Outer ridge, along gravity minimum, consists primarily of sedimentary rocks, in N-dipping imbricate thrust sheets. Layer 2 jumps upward ~5 km under crest of ridge. From here to islands crust is probably oceanic but intermediate in thickness, probably thickened old oceanic crust and mantle trapped here by seaward jump in subduction zone in E Tertiary. N and E of Bali, behind volcanic arc, crustal structure intermediate between oceanic and continental. Farther E in Flores Basin thickness decreases, suggesting this is transitional edge of cratonization of Sunda Shelf, and typical thin oceanic crust is farther E in S Banda Sea)

Darman, H. (2012)- Seismic expression of tectonic features in the Lesser Sunda Islands, Indonesia. Berita Sedimentologi 25, p. 16-25.
(online at: www.iagi.or.id/fosi/files/2012/12/BS25-Lesser_Sunda_Final_small.pdf)

Das, S. (2004)- Seismicity gaps and the shape of the seismic zone in the Banda Sea region from relocated hypocenters. J. Geophysical Research 109, B12303, p. 1-18.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2004JB003192/epdf)
(>800 relocated earthquakes >50 km deep along Banda arc. Distribution non-uniform, with gaps in hypocenters along depth in most places. Seismic zone between 129-131°E and 100-200 km deep is widest along arc both in strike and downdip. This region, near highest arc curvature, has highest seismic activity and is only part of arc with continuous earthquakes down to >600 km. Very deep earthquakes under Sulawesi part of W-SW dipping Seram slab. In W-most part of Banda arc slab under downdip tension between 50-250 km, with deepest portion of slab under compression. From 128-131°E slab between 100-200 km under horizontal compression. Study supports 'two-slab' model for Banda arc. Depth of Wadati-Benioff zone below volcanoes 60-100 km for five volcanoes between 128- 130°E and 150 km for 23 volcanoes between 118- 124°E)

De Azeredo Leme, J.de & J. Bailim Pisarra (1962)- Notas sobre a geologia e a petrografia da ilha de Atauro (Timor portugues). In: Carrington da Costa Festschrift, p. 325-348.
(Notes on the geology and petrography of Atauro island Portuguese Timor)'. Atauro N of Timor Leste, composed of volcanic rocks and terraces of emergent coral reefs)

De Jong, J.D. (1941)- Geological investigations in West Wetar, Lirang and Solor (Eastern Lesser Soenda Islands). Thesis University of Amsterdam, p. 1-136. *(Unpublished)*
(See also in H.A. Brouwer (ed.) Geological expedition of the University of Amsterdam to the Lesser Sunda Islands, III, p. 241-380. Reconnaissance of currently inactive volcanic islands of Sunda arc N of Timor. Wetar composed of lavas, breccias and tuffs with interbedded Globigerina marls, probably submarine formations of Neogene age. Facies, raised coral reefs and terrace at 820m suggests at least this amount of late uplift. Lirang Island different, with granodiorite and dacite, probably also Young Tertiary and possibly uplifted even more than Wetar. Solor multiple eroded volcanic complexes with pyroxene andesites and basalts, with raised coral reefs up to 180m)

De Jong, J.D. (1942)- Hydrothermal metamorphism in the Lowo-Ria region, Central Flores. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1937, 4, Noord Hollandsche Publ. Co., Amsterdam, p. 319-343.

De Neve, G.A. (1950)- Subsurface geology of Ampenan (West Lombok) and the Bay of Bima (East Sumbawa). De Ingenieur in Indonesie 5, 2, p. IV.17- IV.23.
(Mainly on young sediments in water wells; nothing on older rocks)

Dirk, M.H.J. (1994)- Petrologi dan geokimia unsur utama intrusi Wolowaru, Ende, Flores. J. Geologi Sumberdaya Mineral 4, 38, p. 26-36.
('Petrology and major element geochemistry of the Wolowaru intrusion, Ende, Flores'. Wolowaru intrusion quartz diorite at exterior, granodiorite and granite in interior. High Al content and size ~15 x 10 km. Classified as subalkaline tholeiite of volcanic arc (with Late Miocene fission track ages; Saefudin 1995))

Dirk, M.H.J. (1996)- Mekanisme penzonaan dan petrogenesis intrusi Wolowaru, Ende, Flores. J. Geologi Sumberdaya Mineral 6, 54, p. 12-16.
('Mechanism of zoning and petrogenesis of the Wolowaru intrusion, Ende, Flores')

Drescher, F. (1921)- Eruptivgesteine der Insel Flores. Dissertation Universitat Basel, Stein (Argau), p. 1-49.
('Volcanic rocks from the island Flores'. Petrographic descriptions of dacites, andesites and basalts, collected by Pannekoek van Rheden in 1910-1911))

Edwards, C.M.H. (1990)- Petrogenesis of tholeiitic, calc alkaline and alkaline volcanic rocks, Sunda Arc, Indonesia. Ph.D. Thesis, University of London, p. 1-373. *(Unpublished)*

Ehrat, H. (1928)- Geologische mijnbouwkundige onderzoekingen op Flores. Jaarboek Mijnwezen Nederlandsch Oost-Indie (1925), Verhandelingen II, p. 221-315.
(Reconnaissance geological and mining investigations of Flores with 1:250k scale map of island. Mainly young andesitic volcanics. Oldest rocks exposed on NW Flores folded Miocene sediments, possibly 2000m thick, with locally thick Lepidocyclina limestone with interbedded volcanics and Globigerina marls)

Ehrat, H. (1928)- Die Tiefengesteine der kleinen Sunda Inseln. Neues Jahrbuch Mineral. Geol. Palaontologie, Abhandl., Beilage Band 58, A, 3, p. 433-452.
('The plutonic rocks of the Lesser Sunda islands'. Descriptions of granites, granodiorites, diorites, etc.)

Elbert, J. (1911)- Meteorologische und geologische Untersuchungen auf der Insel Lombok. In: Die Sunda-Expedition des Vereins fur Geographie und Statistik zu Frankfurt am Main 1, p. 78-87 and 112-120.
('Meteorological and geological investigations on Lombok Island'. On weather and Rinjani and Sembalun volcanic massifs. Lombok formations and mountain ranges similar to Java zones)

Elbert, J. (1912)- Die geologisch-morphologischen Verhaltnisse der Insel Sumbawa. In: Die Sunda-Expedition des Vereins fur Geographie und Statistik zu Frankfurt am Main, Frankfurt, 2, p. 132-174.
('The geological- morphological relationships of Sumbawa island'. Mainly description of young volcanoes and volcano ruins)

Elburg, M.A., J.D. Foden, M.J. van Bergen & I. Zulkarnain (2005)- Australia and Indonesia in collision: geochemical sources of magmatism. J. Volcanology Geothermal Res. 140, p. 25-47.
(Alor, Lirang, Wetar and Romang in extinct section of Sunda-Banda arc, where collision with Australia brought subduction to halt. Pb isotopes reflect mixing from subducting Australian crust)

Elburg, M.A., V.S. Kamenetsky, J.D. Foden & A. Sobolev (2007)- The origin of medium-K ankaramitic arc magmas from Lombok (Sunda arc, Indonesia): mineral and melt inclusion evidence. Chemical Geology 240, p. 260-279.
(Quaternary high-Ca, nepheline-normative ankaramitic basaltic lavas from Rinjani volcano, Lombok, with phenocrysts of clinopyroxene and olivine with inclusions of spinel. Melts probably formed from water-poor, clinopyroxene-rich mantle source)

Elburg, M.A., M.J. van Bergen & J.D. Foden (2004)- Subducted upper and lower continental crust contributes to magmatism in the collision sector of the Sunda-Banda arc, Indonesia. Geology 32, 1, p. 41-44.
(Pb isotopes in igneous rocks from Banda-Sunda arc show increase in 206Pb/204Pb ratios toward zone of collision with Australian continent, reflecting input of subducted upper-crustal material. Maximum values coincide with anomalously radiogenic 3He/4He ratios, earlier attributed to involvement of continental margin.

New interpretation does not call for involvement of ocean-island basalt (OIB) -type mantle or Australian subcontinental lithospheric mantle, as suggested previously)

Elburg, M.A., M. van Bergen, J. Hoogewerff, J. Foden et al. (2002)- Geochemical trends across an arc-continent collision zone: magma sources and slab-wedge transfer processes below the Pantar Strait volcanoes, Indonesia. Geochimica Cosmochimica Acta 66, 15, p. 2771-2789.
(Volcanoes in Pantar Strait (W part of extinct sector of E Sunda arc) across-arc variation in isotopic and trace element ratios best explained by modification of MORB-type source by subducted continental material (SCM). Frontal volcano highest proportion of fluid component. Source of rear-arc volcano influenced by partial melt of SCM that underwent previous dehydration event. Unique Pantar Strait volcanoes properties reflect magma generation where edge of Australian continent, rather than subducted sediment, contributes to magma source)

Ely, K.S. (2006)- The rise of Atauro Island, Banda Arc, East Timor. AESC 2006, Melbourne, Abstract, 2p.
(Quaternary coral uplifted to ~700m above sea level on Atauro. Brecciated dacite lavas dominate most of island; SW part of island contemporaneous basaltic andesite lavas. Volcanism ceased at ~3 Ma, linked to collision and end of subduction)

Ely, K.S., M. Sandiford, M.L. Hawke, D. Phillips, M. Quigley & J.E. dos Reis (2011)- Evolution of Atauro Island: temporal constraints on subduction processes beneath the Wetar zone, Banda Arc. J. Asian Earth Sci. 41, 6, p. 477-493.
(Atauro island in Banda Arc N of Timor. Bi-modal subaqueous volcanism with basaltic andesite and dacite-rhyolite continued until 3.3 Ma, followed by uplift of coral reef terraces to 700m elevation. Continuity of terraces at constant elevations reflects regional-scale uplift, most likely linked to slab detachment. Subduction of Australian lithosphere until near 3.3 Ma consistent with extent of Wetar seismic gap to depth of 350 km, suggesting slab breakoff started at 4 Ma)

Esenwein, P. (1930)- Petrographische Untersuchungen an Gesteinen von Paloeweh. Vulkanologische Seismologische Mededeelingen, Dienst Mijnbouw Nederlandsch-Indie, Bandung, 11, p.
('Petrographic investigations of rocks from Paluweh', Paluweh Island 10 km N of Flores, with active Rokatenda volcano)

Esenwein, P. (1931)- Verdere onderzoekingen van eruptiefgesteenten van Paloeweh. De Mijningenieur 7, p. 116-118.
('Additional studies on volcanic rocks from Paloeweh'. Young volcanics from Paluweh island N of Flores)

Eva, C., M. Cattaneo & F. Merlanti (1988)- Seismotectonics of the central segment of the Indonesian Arc. Tectonophysics 146, 1-4, p. 241-259.
(On seismicity between 110° and 126° (E Java- W Timor). Sumbawa-Flores-Wetar sector different from adjacent sectors)

Farmer, F. (2011)- Wetar copper project: a bugs life- 5 million years and counting? Proc. Joint 36th HAGI and 40th IAGI Ann. Conv. Exh., Makassar, 14p.
(Wetar comprises Miocene-Pliocene lavas (incl. pillow basalts), overlain by Pliocene deep marine Globigerina limestone and Quaternary dacitic-andesitic volcanics. Hydrothermally altered andesite lavas and basalts are host to economic mineralization. Deposits at Kali Kuning, Lerokis and Meron characterized by Au-Ag bearing unconsolidated barite sands onlapping pyritic massive sulphide mounds with Cu-Zn-Pb)

Ferneyhough, A.B. & I.A. Qarana (1999)- Case history study over the Batu Hijau copper-gold porphyry in SW Sumbawa, Indonesia. SEG Technical Program, 1999, 15, 1, p. 1159-1162. *(Extended Abstract)*
(History of large 1990 Batu Hijau copper-gold porphyry discovery on SW Sumbawa by Newmont in 1990. Typical island arc porphyry deposit, hosted within tonalite intrusive complex in diorite and andesitic metavolcanics wallrock)

Fichtner, A., M. De Wit & M. van Bergen (2010)- Subduction of continental lithosphere in the Banda Sea region: combining evidence from full waveform tomography and isotope ratios. Earth Planetary Sci. Letters 297, p. 405-412
(Subduction of old continental lithosphere to >100 km under Banda arc suggested by tomographic images and isotope signatures in arc volcanics. Late Jurassic ocean lithosphere N of N Australian craton was capable of entraining large volumes of continental lithosphere. Timor tomographic images indicate island not directly above N margin of N Australian craton. Possible explanation involves delamination within continental crust, separating upper from lower crustal units, consistent with massive accretionary complex on Timor island, with evidence from Pb isotopes for lower-crust involvement in arc volcanism)

Fiorentini, M.L. & S.L. Garwin (2010)- Evidence of a mantle contribution in the genesis of magmatic rocks from the Neogene Batu Hijau district in the Sunda Arc, South Western Sumbawa, Indonesia. Contrib. Mineralogy Petrology 159, p. 819-837.
(Sumbawa island is E Miocene- Holocene volcanic arc built on oceanic crust. Low-K calc-alkaline magmatic suite of Sunda arc in Batu Hijau district with juvenile signature and minimal involvement of sediment component in arc petrogenesis. Arc-transverse fault system facilitated rise of mantle-derived melts above kink or tear in subducting Indian Ocean Plate under Sunda arc. De-hydrogenation of tonalite plutons may have been crucial to genesis of Cu-Au porphyry mineralization and development of Pliocene Batu Hijau deposit)

Franchino, A., E. Bellini & A. Brizio (1988)- Geological notes on the age of the limestones of the Island of Lombok. Indonesia. Memorie Scienze Geol., Padova, 40, p. 335-368.
(Lombok mainly composed of Tertiary volcanics, in S part associated with limestones and marls. At Sekotong Barang on SW coast isolated hills of Late Oligocene limestone (Te1-4; with Spiroclypeus, Eulepidina, etc.). Central southern hills limestones with Late Oligocene- E Miocene (Te4-Te5; Miogypsinoides) and M Miocene ages (Tf1; Lepidocyclina, Miogypsina) (limestone ages on Lombok partly older than Wonosari Limestone of S Java and Nusa Dua/ S Bali?; JTvG))

Garwin, S.L. (2000)- The setting, geometry and timing of intrusion-related hydrothermal systems in the vicinity of the Batu Hijau porphyry copper-gold deposit, Sumbawa, Indonesia. Ph.D. Thesis, University of Western Australia, Nedlands, p. 1-320. *(Unpublished)*
(~1500m thick E-M Miocene low-K calc-alkaline andesitic volcanoclastics of Sunda-Banda arc, with thin limestone interbeds, and cut by several phases of Mio-Pliocene intrusions. Sumbawa segment of arc overlies oceanic crust. Felsic magmatism and related hydrothermal systems between ~7.1- 3.7 Ma probably related to collision with microcontinent or leading edge of Australian Shelf and Banda Arc near Timor. Subduction of buoyant Roo Rise oceanic plateau, S of Sumbawa, inferred to have caused kink or tear in downgoing slab, which enhanced delivery of mantle-derived melts to overlying arc)

Garwin, S. (2002)- The geologic setting of intrusion-related hydrothermal systems near the Batu Hijau porphyry copper-gold deposit, Sumbawa, Indonesia. In: R.J. Goldfarb & R.L. Nielsen (eds.) Global Exploration in the 21st Century, Colorado, Soc. Economic Geol. (SEG), Spec. Publ. 9, p. 333-366.

Garwin, S. (2012)- District-scale expression of intrusion-related hydrothermal systems near the Batu Hijau porphyry copper-gold deposit, Sumbawa, Indonesia. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 133-158.

Garwin, S.L. & Herryansyah (1992)- Geological setting, style and exploration of gold-silver mineralisation on Romang Island, Moluccas province, East Indonesia. In: M. Simatupang & N. Wahju Beni (eds.) Indonesian mineral development 1992, Indonesian Mining Association, p. 258-274.

Gerteisen, C.N. (1998)- Volcanic stratigraphy of the Batu Hijau porphyry copper-gold deposit, southwest Sumbawa, Indonesia. M.Sc. Thesis, Curtin University, Western Australia School of Mining, Kalgoorlie, p. 1-58. *(Unpublished)*
(Batu Hijau porphyry copper-gold deposit in SW Sumbawa in Sunda-Banda volcanic arc, but also affected by S-dipping subduction N of Sumbawa (more recent arc polarity reversal), a configuration conducive to porphyry

type mineralization. Copper-gold mineralization associated with tonalite intrusive, which intruded older quartz diorite and low K, calc-alkaline andesites. Volcanic rocks generally SW dipping, with 4 major units, formed on flanks of stratovolcano: (1) volcaniclastic sandstone and breccia/conglomerate; (2) volcaniclastic breccia; (3) volcaniclastic mudstone, sandstone, breccia; (4) basal hypabyssal andesite)

Guzman-Speziale, M. & J.F. Ni (1996)- Seismicity and active tectonics of the Western Sunda Arc. In: A. Yin & M. Harrison (eds.) The tectonic evolution of Asia, Cambridge University Press, p. 63-84.

Halbach, P., L. Sarmili, M. Karg, B. Procejus, B. Melchert, J. Post, E. Rahders & Y. Haryadi (2003)- The break-up of a submarine volcano in the Flores-Wetar Basin (Indonesia); implications for hydrothermal mineral deposition. InterRidge News 12, 1, p. 18-22.
(online at: https://www.interridge.org/files/interridge/IR_news_12a.pdf)
(BANDAMIN I cruise in 2001 examined SE trending submarine ridge in tectonically active Flores-Wetar Basin, extending to Komba (Batu Tara) volcano. Seamount cross-cut by left-lateral NW-SE faults, with intervening z-shaped plain (pull-apart structure). Rock samples K-rich porphyritic volcanics (trachyandesites, trachydacites), locally impregnated with sulphides (epithermal low-sulphidation metal deposits))

Halbach, P., L. Sarmili, B. Procejus, M. Karg, B. Melchert, J. Post et al. (2003)- Tectonics of the ñKomba-ridgeò area in the Flores-Wetar Basin (Indonesia) and associated hydrothermal mineralization of volcanic rocks. Bull. Marine Geol. (MGI, Bandung) 18, 3, p. 1-27.
(In Flores-Wetar basin N of Lomblen NW-SE trending submarine hills extending to Komba Island (Batu Tara). Hills cut by several NW-SE faults. Samples mainly porphyritic K-rich basaltic trachyandesite and trachydacite. With epithermal-type mineralization halo)

Hantoro, W.S. P.A. Pirazzoli, C. Jouannic, H. Faure, C.T. Hoang, U. Radtke, C. Causse, M. Borel Best, R. Lafont, S. Bieda & K. Lambeck (1994)- Quaternary uplifted coral reef terraces on Alor Island, East Indonesia. Coral Reefs 13, 4, p. 215-223.
(Alor Island in Banda Arc N of Timor has six major coral reef terraces, up to 580m in altitude, up to 500 ka old. Radiometric dates of terraces correspond to Holocene oxygen-isotope stages 5c, 5e and 7. Mean rate of uplift 1.0-1.2 mm/y. Extrapolation to whole sequence of terraces reveals good correlation between major terraces and interglacial stages corresponding to up to oxygen isotope stage 13)

Harahap, B.H., H.Z. Abidin, H. Utoyo, D. Djumhana & R. Yuniarni (2014)- Prospect of mineral deposits in the Central Flores Island, Eastern Indonesia. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-068, 22p.
(Sikka and Ende Regencies of C Flores with unexploited gold, base metal, iron ore and manganese deposits. With potential for commercial mineral deposits in Miocene and younger volcanics, including epithermal, porphyry, skarn and volcanogenic massive sulfide of Kuroko type)

Harahap, B.H., H.Z. Abidin, H. Utoyo, D. Djumhana & R. Yuniarni (2015)- Prospect of mineral deposits in the Central Flores Island, Eastern Indonesia. J. Geologi Sumberdaya Mineral 16, 1, p. 1-13.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/46/48)
(Same paper as Harahap et al. 2014, above)

Heering, J. (1942)- Geological investigations in East Wetar, Alor and Poera Besar. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 4, Noord Hollandsche Publ. Co., Amsterdam, p. 1-129.
(Geological survey of islands of Banda Arc, North of Timor)

Hendaryono (1998)- Contribution a lôetude geologique de lôile de Flores. Doct. Thesis Universite de Savoie, Chambery, p. 1-200. *(Unpublished)*
(Abstract at http://edytem.univ-savoie.fr/archives/lgham/hendaryono-r-eng.html)
('Contribution to the geological study of Flores island'. Flores has 13 active volcanoes. Two cycles of volcanism. Oldest exposed lavas Late Oligocene (radiometric ages 25.7-27.7 Ma), 17 other lavas with M-L

Miocene ages (16-8.4 Ma). Latest Miocene- Quaternary calc-alkaline andesites-dacites (6.7-1.2 Ma) in S coastal areas. Associated sediments with reworked microfaunas. From base to top: turbiditic tuffaceous M Miocene Nangapanda Fm, M-U Miocene Bari Fm reef limestone, U Miocene Laka Fm chalky tuffaceous beds with pumice)

Hendaryono, J.P. Rampnoux, H. Bellon, R.C. Maury, C.I. Abdullah & R. Soeria-Atmadja (2001)- New data on the geology and geodynamics of Flores Island. Eastern Indonesia. Proc. 30th IAGI and 10th GEOSEA Reg. Congress, Yogyakarta, p. 195-199. *(Extended Abstract)*

Herman, D.Z. (2008)- Mineralisasi pada batuan induk batugamping di daerah Lepadi, Dompu, Nusa Tenggara Barat. J. Geologi Indonesia 3, 3, p. 175-182.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/230)
('Mineralization in limestone rocks near Lepadi, Dompu' (Sumbawa). Limestones (supposedly Miocene age and looking like pelagic biomicrite and associated with Miocene volcanics) with hydrothermal quartz veins with galena and other metallic minerals)

Herrington, R.J., P.M. Scotney, S. Roberts, A.J. Boyce & D. Harrison (2011)- Temporal association of arc-continent collision, progressive magma contamination in arc volcanism and formation of gold-rich massive sulphide deposits on Wetar Island (Banda arc). Gondwana Research 19, 3, p. 583-593.
(Sr, O and He analyses of volcanic rocks and sulphides- sulphates from mineralized rocks on Wetar indicate increased continental contamination in Pliocene during distinct magmatic events between 5-4 Ma, and at 2.4 Ma when 87Sr/86Sr ratios in unaltered lavas increase from 0.707484 to extreme radiogenic values of 0.711656. (highest crustal assimilation in region). Magmatic events of 5- 4 Ma with volcanogenic massive sulphide/ gold-barite deposits near N coast of Wetar. Event at 2.4 Ma (coincident with arrival of Australian continental margin at subduction zone along Banda arc))

Hoschke, T. (2012)- Geophysics of the Elang Cu-Au porphyry deposit, Indonesia, and comparison with other Cu-Au porphyry systems. In: 22nd ASEG Int. Geophys. Conf. Exhib., Brisbane 2012, p. 1-3. *(Extended Abstract)*
(online at: http://www.publish.csiro.au/ex/pdf/ASEG2012ab178)
(Elang large porphyry Cu-Au deposit ~70 km E of Batu Hijau on SE Sumbawa. Associated with tonalite porphyry intrusions hosted by andesitic volcanics. Elang typical of number of Cu-Au porphyry systems where magnetite associated with mineralisation and produces strong magnetic anomaly)

Hunerwadel, F.M. (1921)- Die Eruptivgesteine von Nord-Mittel Soembawa (Niederlandisch-Indien). Inaugural Dissertation Universitat Basel, p. 1-28.
('The volcanic rocks of North-Central Sumbawa'. Petrographic descriptions of andesites, dacites, basalts collected by Pannekoek van Rheden)

Hutabarat, J., A.D. Haryanto & L. Sarmili (2006)- Petrografi batuan beku volkanik bawah laut kompleks Gunung Komba, Laut Flores, Indonesia. Bull. Scientific Contr. (UNPAD) 4, 1, p. 62-67.
(online at: http://jurnal.unpad.ac.id/bsc/article/viewFile/8115/3691)
('Petrography of submarine volcanic rocks of the Mount Komba complex, Flores Sea, Indonesia'. Dredge samples from water depths 130-900m of Gunung Komba submarine volcano complex, NE of Flores, composed of andesite-basaltic lava flows. Varying degrees of propylitic or sericitic alteration)

Idrus, A. (2006)- Petrology, geochemistry, and compositional changes of diagnostic hydrothermal minerals within the Batu Hijau porphyry copper-gold deposit, Sumbawa Island, Indonesia: Ph.D. Thesis RWTH Aachen University, p. 1-351. *(Unpublished)*

Idrus, A. (2006)- P-T conditions and oxygen fugacity of the intrusion emplacement at the Batu Hijau porphyry copper gold deposit, Sumbawa Island: a constraint from geothermobarometric data. Media Teknik (UGM) 28, 2, p. 11-18.

(Large Batu Hijau porphyry copper-gold deposit in SW Sumbawa. Tonalite porphyries emplaced at~5.5 km depth (764°C, 1.5 kbar). Hornblende and plagioclase crystallized at 540°C. Uplift rate since 3.7 Ma 1.2 mm/yr)

Idrus, A. (2008)- Transport and deposition of copper and gold in porphyry deposit: a constraint from microthermometry and hydrothermal biotite chemistry. Media Teknik (UGM) 30, 3, p. 276-283.
(On deposition of copper and gold in Batu Hijau porphyry deposit, SW Sumbawa)
(online at: http://isjd.pdii.lipi.go.id/admin/jurnal/3308276283.pdf)

Idrus, A. (2018)- Petrography and mineral chemistry of magmatic and hydrothermal biotite in porphyry copper-gold deposits: a tool for understanding mineralizing fluid compositional changes during alteration processes. Indonesian J. Geoscience 5, 1, p. 47-64.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/402/254)
(On magmatic and hydrothermal biotite in Batu Hijau porphyry copper-gold deposit, Sumbawa)

Idrus, A. (2018)- Halogen chemistry of hydrothermal micas: a possible geochemical tool in vectoring to ore for porphyry copper-gold deposit. J. Geoscience Engineering Environm. Technol. (JGEET) 3, 1, p. 30-38.
(online at: journal.uir.ac.id/index.php/JGEET/article/download/1022/797/)
(On hydrothermal micas in alteration zone of Batu Hijau porphyry copper-gold deposit, Sumbawa)

Idrus, A., J. Kolb & F.M. Meyer (2006)- Physicochemistry and evolution of ore-related hydrothermal fluids at the Batu Hijau porphyry copper-gold deposit: a constraint from mineral composition and microthermometry. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, 15p.
(Changes in mineral chemistry in Batu Hijau porhyry copper deposit document progressive chemical fluid evolution, with predominance of magma-derived fluids in central deposit and increasing degree of mixing with less saline, cool meteoric water from towards the distal deposits)

Idrus, A., J. Kolb & F.M. Meyer (2007)- Chemical composition of rock-forming minerals in copper-gold-bearing tonalite porphyry intrusions at the Batu Hijau deposit, Sumbawa Island, Indonesia: implications for crystallisation conditions and fluorine-chlorine fugacity. Resource Geology 57, 2, p. 102-113.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1751-3928.2007.00010.x/epdf)
(Batu Hijau copper-gold porphyry deposit on Sumbawa related to emplacement of multiple stages of Pliocene (~3.7 Ma) tonalite porphyries into Late Oligocene- M Miocene andesitic volcanics. Tonalites emplaced at ~764°C and hornblende and plagioclase phenocrysts crystallized at depths of ~5.5 km)

Idrus, A., J. Kolb, F.M. Meyer, J. Arif, D. Setyandhaka & S. Kepli (2009)- A preliminary study on skarn-related calcsilicate rocks associated with the Batu Hijau porphyry copper-gold deposit, Sumbawa Island, Indonesia. Resource Geology 59, 3, p. 295-306.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1751-3928.2009.00097.x/epdf)
(Deep drilling at Batu Hijau porphyry Cu-Au deposit on Sumbawa indicates several intervals of calcic-exoskarn near contact with copper-gold-bearing tonalite porphyries. Massive magnetite-chalcopyrite-pyrite assemblages formed by contact metasomatism of andesitic volcaniclastic rocks)

Idrus, A., F.M. Meyer & J. Kolb (2009)- Mineralogy, lithogeochemistry and elemental mass balance of the hydrothermal alteration associated with the gold-rich Batu Hijau porphyry copper deposit, Sumbawa Island, Indonesia. Resource Geology 59, 3, p. 215-230.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1751-3928.2009.00092.x/epdf)
(Hydrothermal alteration and mineralisation at Batu Hijau porphyry copper-gold deposit developed in four stages. Early central biotite alteration associated with highest copper-gold grades and originated by magmatic hydrothermal fluid. Emplacement of tonalite porphyry intrusions at ~3.7 Ma)

Idrus, A. & E.B. Pramutadi (2008)- Mineralisasi bijih dan geokimia batuan samping vulkanoklastik andesitik yang berasosiasi dengan endapan tembaga- emas porfiri Elang, Pulau Sumbawa, Nusa Tenggara Barat. Seminar Nasional Aplikasi Sains dan Teknologi 2008, IST AKPRIND, Yogyakarta, p. 29-37.
(online at: http://repository.akprind.ac.id/sites/files/conference-paper/2008/idrus_21165.pdf)

('Ore mineralization and geochemistry of volcanoclastic andesitic rocks associated with the deposition of copper-gold porphyry of Elang, Sumbawa, West Nusa Tenggara'. Elang porphyry copper-gold deposit in Late Oligocene-M Miocene andesitic volcaniclastic rocks with multiple Miocene-Pleistocene (mainly at ~3.7 Ma) tonalite intrusions)

Iksan Bin Matrais, D. Pfeiffer, R. Soekardi & L.W. Stach (1972)- Hydrogeology of the island of Lombok. Beihefte Geol. Jahrbuch, 123, p. 1-23.
(Summary of 1969-1970 hydrogeological survey of Lombok. S Lombok mainly E Miocene ('Old Andesite') andesite-dacite volcanics, overlain by 150m of S-dipping U Miocene limestones. Mainly Quaternary volcanics in northern mountains. With 1:400k scale hydrogeologic map)

Imai, A. & Y. Nagai (2009)- Fluid inclusion study and opaque mineral assemblage at the deep and shallow part of the Batu Hijau porphyry Cu-Au deposit, Sumbawa, Indonesia. Resource Geology 59, 3, p. 231-243.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1751-3928.2009.00093.x/epdf)
(Batu Hijau mine on SW Sumbawa is only porphyry type deposit in production in Sunda-Banda arc, Indonesia. Sumbawa island formed by E Miocene- Recent volcanism on ~14-23 km thick oceanic crust. Quartz veins classified into four types. Bornite and chalcopyrite inclusions in coarse magnetite grains in quartz veins indicates hydrothermal activity initially deposited magnetite and copper sulfides at depth)

Imai, A. & S. Ohno (2005)- Primary ore mineral assemblage and fluid inclusion study of the Batu Hijau porphyry Cu-Au deposit, Sumbawa, Indonesia. Resource Geology 55, 3, p. 239-248.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1751-3928.2005.tb00245.x/epdf)
(Batu Hijau porphyry Cu-Au deposit associated with tonalitic intrusive complex. Bornite and chalcopyrite are major copper ore minerals associated with quartz veins. Temperature and pressure during hydrothermal activity at Batu Hijau deposit ~300 °C and 50 bars)

Irianto (1990)- Geologi gunungapi Sangeanapi, Bima- Nusatenggara Barat. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 214-219.
('Geology of the Sangeanapi volcano, Bima, West Nusatenggara'. Quaternar active volcano at NE side of Sumbawa island)

Irianto, B. & G.H. Clark (1995)- The Batu Hijau porphyry copper-gold deposit, Sumbawa Island, Indonesia. In: J.L. Mauk & J.D. St. George (eds.) Proc. Pacific Rim Congress 95, Auckland 1995, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 9-95, p. 299-304.

Johnstone, R.D. (2005)- Contrasting geothermal fields along the magmatic Banda Arc, Nusa Tenggara, Indonesia. Proc. World Geothermal Congress, Antalya, Turkey, 2005, 8p.
(online at: http://iga.igg.cnr.it/geoworld/pdf/WGC/2005/0627.pdf)

Kadar, D. (1972)- Upper Miocene planktonic foraminifera from Bali. Jahrbuch Geol. Bundesanstalt, Vienna, Sonderband 19, p. 58-70.
(Descriptions of planktonic foraminifera from small outcrops of open marine marls of latest Miocene age in SW Bali and calcareous sandstone from SE Bali)

Kadar, D. (1973)- Notes on the age of the limestones in the southern peninsula, Bali Island. Direkt. Geologi Indonesia, Publ. Teknik, Seri Paleontologi, p. 13-15.
(Samples from 500-600m thick, S-dipping Selatan Fm limestones of southern peninsula of Bali, with Lepidocyclina (looks like radiate type; JTvG), Cycloclypeus and some planktonic foraminifera including Orbulina. Good evidence for Middle-Late Miocene age)

Kadar, D. (1978)- Upper Pliocene and Pleistocene planktonic foraminiferal zonation of Ambengan drill hole, southern part of Bali island. In: Proc. 2nd Working Group Mtg., Biostratigraphic datum-planes of the Pacific Neogene IGCP Project 114, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 1, p. 137-158.
(Planktonic foraminifera zones N21-N23 in 201 m deep Ambengan core hole)

Katili, J.A. & A. Sudradjat (1989)- A short note on the birth of a volcano in Flores Island. Geologi Indonesia (IAGI), Spec. Vol. 60 (Katili volume), p. 397-411.
(Birth of Anak Ranakah in W Flores)

Kemmerling, G.L.L. (1927)- Les volcans actifs de lôÎle de Flores. Bull. Volcanologique 4, 1, p. 50-68.
('The active volcanoes of Flores Island')

Kepli, S., A. Bastian, H. Sulistyo & D. Hendri (2015)- Exploration significance of Elang porphyry Cu-Au deposit, Sumbawa, Indonesia. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 35-46.
(Elang deposit is large Cu-Au orebody 60 km E of Batu Hijau mine on S Sumbawa. Discovered in 1991. Multiple diorite-tonalite intrusive complexes in andesitic volcanic unit. Resources 1476 Mt at 0.34% copper, 0.35 g/t gold and 1.0 g/t silver. Mineralization mainly chalcopyrite and minor bornite, related to multiple tonalite porphyry intrusions in andesitic volcanics)

Kant, W., I.W. Warmada, A. Idrus, L.D. Setijadji & K. Watanabe (2012)- Ore mineralogy and mineral chemistry of pyrite, galena, and sphalerite at Soripesa prospect area, Sumbawa Island, Indonesia. J. Southeast Asian Applied Geol. (UGM) 4, 1, p. 1-14.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-4/no-1/jsaag04-art01-WinKant.pdf)
(Soripesa prospect area in E Sumbawa in lithic-crystal tuff of andesitic and dacitic composition and bedded limestone. Polymetallic epithermal quartz veins hosted by (Lower Miocene?) andesitic volcaniclastic rocks)

Kant, W., I.W. Warmada, A. Idrus, L.D. Setijadji & K. Watanabe (2012)- Fluid inclusion study of the polymetallic epithermal quartz veins at Soripesa prospect area, Sumbawa Island, Indonesia. J. Southeast Asian Applied Geol. (UGM) 4, 2, p. 77-89.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-4/no-2/jsaag04-art03-WinKant.pdf)

Khant, W., I.W. Warmada, A. Idrus, L.D. Setijadji & K. Watanabe (2013)- Geochemical characteristics of host rocks of polymetallic epithermal quartz veins at Soripesa Prospect area, Sumbawa Island, Indonesia. Procedia Earth Planetary Sci. 6, p. 30-37.
(Soripesa prospect area in Wawo district, Bima region, E Sumbawa Island, five main polymetallic epithermal quartz veins. Host rocks dominant lithology is lithic-crystal tuff of andesitic and dacitic composition (formed in volcanic arc basalt and island arc basalt tectonic setting) and bedded limestone)

Khant, W., I.W. Warmada, A. Idrus, L.D. Setijadji & K. Watanabe (2013)- Host rocksô geochemistry and mineralization potential of polymetallic epithermal quartz veins at Soripesa Prospect Area, Sumbawa Island, Indonesia. J. Southeast Asian Applied Geol. (UGM) 5, 1, p. 30-40.
(online at: http://geologic-risk.ft.ugm.ac.id/fresh/jsaag/vol-5/no-1/jsaag05-art04-WK.pdf)
(Soripesa prospect in Bima region, E Sumbawa, with five main polymetallic epithermal quartz veins. Dominant lithology andesitic- dacitic lithic-crystal tuff and bedded limestone. E Sumbawa underlain by Lower Miocene andesitic- basaltic lava and breccia, with intercalations of tuff and limestone, overlain by M Miocene dacitic tuff and bedded limestone. Units intruded by numerous small-medium bodies in M-U Miocene. Formation of quartz veining, alteration and mineralization at Soripesa related to N-S faulting. Host rocks of veins formed in volcanic arc basalt and island arc basalt tectonic settings)

Koesoemadinata, S., Y. Noya & D. Kadarusman (1994)- Geological map of the Ruteng Quadrangle, Nusa Tenggara, 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Western Flores island map. Among oldest formations is M Miocene Nangapanda Fm, >1000m thick, mainly pelagic clastics at base, sands and limestones towards top (~16.2-10.2 Ma; Muraoka et al. 2002). Unconformably overlain by Late Miocene- Pliocene Waihekang tuffaceous sediments and Wangka Andesite (K-Ar ages 4.13, 2.96 Ma; Muraoka et al. 2002)

Komazawa, M., K. Matsukubo, Z. Nasution & Sundhoro (2002)- Gravity anomalies of the central Flores Island, Indonesia. Bull. Geol. Survey Japan 53, 2/3, p. 231-238.
(online at: https://www.gsj.jp/data/bulletin/53_02_15.pdf)

Kusnida, D., I.N. Astawa & A. Wahib (1992)- Preliminary results of marine geophysical surveys in the Bali Sea, eastern Madura Strait. J. Geologi Sumberdaya Mineral 2, 13, p. 2-7.
(Seismic and magnetic anomalies in series of profiles from N of Bali/ E Madura Straits. Late Neogene folding event shown along S flank of Madura-Kangean High. -200mgal contour on steep slope of Total Magnetic Anomaly contour map (close to 150m bathymetric contour) indicates E-W trending boundary between SE passive margin of Sunda Shelf in N and W-most tip of Flores backarc basin in S)

Kusnida, D. (2001)- Results of a marine geophysical survey in the Bali basin, Indonesia. In: Proc. CCOP 37th Ann. Sess. Bangkok 2000, 2, Techn. Repts., p. 122-128.
(Marine geophysical survey in deep water Bali Basin, between East Java and Flores basins. Back arc basin developed on SE Sunda shelf margin, underlain by thinned transitional to continental like crusts. Present tectonic activity governed by Late Pliocene collision of Indian-Australian and Eurasian plates. Three Late Pliocene-Recent deep-water seismostratigraphic sequences, probably indicating three stages of differential tectonic uplift of surrounding highs)

Kusnida, D., M.E.R. Suparka & M.I.T. Taib (2000)- Basement rocks interpretation of the Bali backarc basin: deduced from marine geomagnetic data. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 227-234.
(Marine magnetic survey data from deep basin N of Bali-Lombok suggest underlain by 6-9.5km thick gabbroic-basaltic oceanic or transitional crust)

Kusnida, D., M.T. Zen, M.I.T. Taib & M. Bayuargo (2000)- A preliminary appraisal of the magnetic anomalies over the Bali backarc basin- Indonesia. Proc. 36th Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Hanoi 1999, p. 73-81.
(Marine geomagnetic survey data from deep water Bali backarc basin N of Bali and Madura Straits show different character. Madura Straits and Madura-Kangean high total magnetic intensity anomalies and underlain by dioritic rocks, Bali Basin low magnetic intensity and interpreted to be underlain by basaltic rocks)

Liang, Y., X. Sun, W. Zhai, A. Li, Li Xu, Q. Tang & J. Liang (2009)- Geochemistry of ore-forming fluids and genesis of Soripesa Cu-polymetallic deposit in Indonesia. Geology and Exploration 45, 1, p. 41-45.
(Soripesa epithermal hydrothermal Cu-polymetallic deposit on Sumbawa with three types of fluid inclusions)

Luschen, E., C. Muller, H. Kopp, M. Engels, R. Lutz, L. Planert, A. Shulgin & Y.S. Djajadihardja (2011)- Structure, evolution and tectonic activity of the eastern Sunda forearc, Indonesia, from marine seismic investigations. Tectonophysics 508, p. 6-21.
(Study of forearc structures of E Sunda Arc. Seismic profiles show high along-strike variability of subducting oceanic plate, accretionary wedge, outer arc high, forearc basins, etc.. Images of large-scale duplex formation of oceanic crust and mud diapyrs. Wrench fault system in E Lombok forearc basin decouples subduction regime of Sunda Arc from continent-island arc collision regime of W Banda Arc)

Mangga, S.A., S. Atmawinata, B. Hermanto, B. Setyogroho & T.C. Amin (1994)- Geologic map of Lombok, Nusatenggara, sheet 1807, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Lombok Island oldest rocks along S coast, composed of latest Oligocene- E Miocene Pengulung Fm volcanic breccias and lavas, overlain by Miocene Ekas Fm limestone and with Miocene dacite/basaltic intrusives (= 'Old Andesites'; continuation of Southern Mountains of Java - S Bali). N part of island mainly covered by Late Pliocene- Recent volcanics from Rinjani volcano complex)

Maryono, A. (2015)- Overview of the tectonic setting and geology of porphyry copper-gold deposits along the Eastern Sunda magmatic arc, Indonesia. In: World-class ore deposits: discovery to recovery, SEG 2015 Int. Conf., Hobart, 1p. *(Abstract only)*

(online at: www.segweb.org/SEG/_Events/Conference_Archives/2015/Conference_Proceedings/files/pdf/Oral-Presentations/Abstracts/Maryono.pdf)
(E Sunda arc major porphyry metallogenic belt (Tumpangpitu/ Tujuh Bukit Au-Ag-Cu deposit in E Java, Batu Hijau and Elang on Sumbawa). Porphyry mineralization confined to E segment (E Java to Sumbawa), where Roo Rise subducting beneath island arc. Subeconomic porphyry prospects at Selogiri, Ciemas, Cihurip with low sulfidation epithermal deposits (Pongkor, Cikotok, Cibaliung, Cikondang, Arinem) along W segment of Sunda arc, developed on thick continental crust on S Sundaland margin,d associated with 'normal' Indian oceanic crust subduction. Porphyry deposits typically with large lithocaps (>20 km2), with high sulfidation epithermal gold-silver veins within lithocaps at Elang, Selodong, Brambang and Tumpangpitu)

Maryono, A. & R. Harrison (2013)- Porphyry copper-gold mineralization styles along the Eastern Sunda magmatic arc, Indonesia. In: Proc. Symp. East Asia: Geology, exploration technologies and mines, Bali 2013, Australian Inst. Geoscient., Bull. 57, p. 58-59. *(Extended Abstract)*
(E Sunda magmatic arc with three world class porphyry Cu-Au deposits: Batu Hijau, Elang, Tujuh Bukit. All mineral deposits tied to magmatic arc intrusions of Late Miocene- Pliocene age: 3.7 Ma at Batu Hijau, 2.7 Ma at Elang, 7.5 Ma at Selodong, 2.5 Ma at Pongkor and 3.0 Ma at Arinem)

Maryono, A., R.L. Harrison, D.R. Cooke, I. Rompo & T.G. Hoschke (2018)- Tectonics and geology of porphyry Cu-Au deposits along the eastern Sunda magmatic arc, Indonesia. Economic Geology 113, 1, p. 7-38.
(E Sunda arc hosts three premier porphyry Cu-Au deposits between E Java and Sumbawa: Batu Hijau, Elang, and Tumpangpitu. Built on island-arc crust where Roo Rise is being subducted. Along W Java segment of arc major epithermal deposits associated with poorly endowed porphyry prospects, on thick continental crust of S margin of Sundaland, associated with subduction of thin Indian oceanic crust. Porphyry Cu-Au deposits associated with small, nested, dioritic-tonalitic intrusive complexes, with mineralization during three main events. Large (>20 km2) lithocaps with high-sulfidation epithermal systems. Porphyry deposits formed between 2-2.5 Ma, suggesting important change in metallogeny of arc at this time)

Maryono, A., R. Harrison, I. Rompo, E. Priowasono & M. Norris (2016)- Successful techniques in exploring the lithocap environment of the Sunda magmatic arc, Indonesia. In: Proc. 8th Ann. Conv. Masyarakat Geologi Ekonomi Indonesia (MGEI), Bandung, p. 7-13.
(On exploration techniques of large Cu-Au porphyry deposits under barren or mineralized lithocaps. Five major discoveries in last 15 years in E Java and Sumbawa)

Maryono, A., H. Lubis, A. Perdanakusumah & W. Hermawan (2005)- The Elang porphyry copper and gold mineralization style Sumbawa. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI), Jakarta, Spec. Issue, p. 1-17.
(Elang porhyry copper-gold mineralization of SW Sumbawa, 60km E of similar Batu Hijau Cu-Au deposit. First discovered in 1991. Wall rocks Late Oligocene- M Miocene andesitic volcanics, with numerous M Miocene-Pliocene intrusions. Mineralization associated with Pliocene (2.7Ma) tonalite intrusions. Central Cu-Au+Mo zone, proximal As-Ag zone, distal Pb-Zn zone)

Maryono, A., L.D. Setijadji, J. Arif, R. Harrison & E. Soeriaatmadja (2012)- Gold, silver and copper metallogeny of the eastern Sunda magmatic arc, Indonesia. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv., Malang 2012, p. 23-38.
(Same as Maryono et al. 2014)

Maryono, A., L.D. Setijadji, J. Arif, R. Harrison & E. Soeriaatmadja (2014)- Gold, silver and copper metallogeny of the eastern Sunda magmatic arc, Indonesia. Majalah Geologi Indonesia (IAGI) 29, 2, p. 85-99.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/847)
(Same as Maryono et al. 2012) (Recent discovery of large porphyry gold-silver-copper deposit at Tujuh Bukit Project in Banyuwangy Regency of E Java. E astSunda Magmatic Arc built on thin island arc crust, bounded by margin of Sundaland to W and by Australian continental crust to E. Five different ages of Cenozoic magmatic belts. Overwhelming number of gold, silver, and copper deposits associated with Late Miocene- Pliocene

intrusions. E Sunda magmatic arc dominated by gold, silver, and copper, in porphyry and epithermal deposits. Mineralization styles similar to those in typical island arc settings, e.g. the Philippines)

Masturyono (1994)- Seismicity of the Bali region from a local seismic network; constraints on Bali back arc thrusting. Masters Thesis, Rensselaer Polytechnic Institute, Troy, NY, p. 1-92. *(Unpublished)*
(Locations of 513 microearthquakes near Bali island. Deepest events at 200 km depth, associated with N-dipping Wadati-Benioff zone of subducting Indian ocean lithosphere. Two prominent belts of shallow micro earthquakes (1) S belt along boundary of Sunda- Indian ocean plates and (2) opposite-dipping zone along island arc, showing back-arc thrusting N of Bali, dipping 15 -20° S. Back arc thrusting extends to 30km depth below S coast of Bali island)

Maula, S. & B.K. Levet (1996)- Porphyry copper-gold signatures and the discovery of the Batu Hijau deposit, Sumbawa, Indonesia. In: Proc. Conf. Porphyry-related copper and gold deposits of the Asia Pacific Region, Cairns 1996, Australian Mineral Foundation, Glenside, p. 8.1-8.13.

McBride, J.H. (1987)- Arc-continent collision in the Banda Arc: new gravity observations integrated with geological and geophysical data. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 887-890.
(New marine gravity data and gravity models of transect across Timor- Savu Sea. Main issue is major negative anomaly over Savu Sea)

McBride, J.H. & D.E. Karig (1987)- Crustal structure of the outer Banda Arc; new free-air gravity evidence. Tectonophysics 140, p. 265-273.
(Gravity analysis of Timor- Sumba region. Mass deficit below Savu Sea may be subducted lighter continental crust, downward flexing of upper crustal plate in forearc area or anomalous low-density upper mantle. Gravity high over N Sumba Ridge in Savu Sea may be E-M Tertiary volcanic arc between present arc and Timor. Crust under N Savu Basin appears nearly oceanic, but thickens beneath modern arc)

McCaffrey, R. (1988)- Active tectonics of the eastern Sunda and Banda arcs. J. Geophysical Research 93, p. 15163-15182.
(E Sunda arc and S Banda arc and forearc respond to collision by shortening in direction of convergence, elongating normal to convergence, and thrusting over back arc basin. Shallow thrust and strike-slip earthquakes beneath Banda Basin demonstrate deformation in back arc accommodating some of N-ward motion of Australia. N-S shortening of upper plate near Timor ~20% of predicted Australia- SE Asia convergence. Strike-slip faulting in Banda Basin results in E-ward motion of Banda arc, with thrusting at Aru Trough. Weber forearc basin on subducting lithosphere, without intervening asthenosphere, so subsides in response to sinking of subducting lithosphere. Birds Head subducts beneath Seram, is decoupled from Australian plate in W New Guinea and probably moves W or SW with respect to Australia)

McCaffrey, R. (1989)- Seismological constraints and speculations on Banda Arc tectonics. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Geology and geophysics of the Banda Arc and adjacent areas, Jakarta 1987, Netherlands J. Sea Research 24, 2/3, p. 141-152.
(Shallow earthquakes show collision of Australian continent- Banda Arc shortens overriding Indonesian plate in N-S and elongates it in E-W direction by strike-slip and thrust faulting. Two plates subduct beneath Banda Arc: Australia-Indian Ocean plate N-ward and Birds Head SW-ward. Bird's Head subducted lithosphere beneath Seram Trough now reaches 300 km depth. At surface decoupling between Australia and Bird's Head probably by left-lateral strike slip at Tarera-Aiduna fault zone and convergence in New Guinea fold-and-thrust belt. Seismic quiescence at 50-380 km beneath Timor may result from removal of part of Australian continental crust prior to subduction of lower lithosphere; crust stacked up to form Timor Island)

McCaffrey, R., P. Molnar, W. Roecker & Y.S. Joyodiwiryo (1985)- Microearthquake seismicity and fault plane solutions related to arc-continent collision in the eastern Sunda arc. J. Geophysical Research 90, B6, p. 4511-4528.

(Microearthquakes used to model subducting Australian continental plate under Timor. Suggest leading edge of Australian continental lithosphere now at 150 km depth (at 45° slab angle that means subducted slab length = ~300km; at ~75km/My of convergence Australian margin continental crust arrived at Timor Trench at ~4 Ma). Fault plane solutions of several events show nearly vertical nodal planes trending parallel to strike of seismic zone, with down-to-NW displacement. These suggest subducted lithosphere presently detaching in 50-100 km depth range beneath E Savu Sea)

McCaffrey, R. & J. Nabelek (1984)- The geometry of backarc thrusting along the eastern Sunda arc, Indonesia: constraints from earthquake and gravity data. J. Geophysical Research 89, B7, p. 6171-6179.
(online at: http://web.pdx.edu/~mccaf/pubs/mccaffrey_flores_jgr_1984.pdf)
(1978 earthquake N of Flores first seismic evidence for active backarc thrusting behind E Sunda arc)

McCaffrey, R. & J. Nabelek (1986)- Seismological evidence for shallow thrusting North of the Timor Trough. Geophysical J. Int. 85, 2, p. 365-382.
(online at: https://academic.oup.com/gji/article/85/2/365/727679)
(In E Sunda Arc infrequent, large earthquakes near volcanic arc within upper plate rather than as interplate events under forearc. 1977 event E of Alor and N of C Timor indicates nearly pure thrust mechanism at depth of 10 km, along S- dipping plane, probably related to Wetar thrust zone at S margin of Banda Sea backarc basin. Suggest most of plates convergence accommodated by thrusting of Banda Sea marginal basin S-ward beneath Sunda arc. Present geometry represents initial stage of reversal of arc polarity)

McCaffrey, R. & J. Nabelek (1987)- Earthquakes, gravity, and the origin of the Bali Basin: an example of a nascent continental fold-and-thrust belt. J. Geophysical Research 92, B1, p. 441-459.
(Bali Basin is downwarp in Sunda Shelf crust produced by thrusting along Flores back-arc zone. Early foreland basin flanked by Tertiary Java Basin to W and oceanic Flores Basin to E)

McKechnie, K.R., I. Saracik & D.M. Sewell (1992)- Development of the Lerokis gold-silver-barite mine in Indonesia; challenges of a unique project. In: M. Simatupang & B.N. Wahju (eds.) Indonesian mineral development 1992, Indonesian Mining Association, p. 404-414.
(On discovery and development of Wetar Island barite deposits (See also Scotney et al. 2014))

Metrich, C., M. Vidal, J.C. Komorowski, I. Pratomo. A. Michel, N. Kartadinata, O. Prambada, H. Rachmat & Surono (2017)- New Insights into magma differentiation and storage in Holocene crustal reservoirs of the Lesser Sunda Arc: the Rinjani-Samalas volcanic complex (Lombok, Indonesia). J. Petrology 58, 11, p. 2257-2284.
(Mineralogy and chemistry of magmas erupted over last ~12 kyr at Rinjani-Samalas volcanic complex on Lombok. Calc-alkaline series, moderately rich in K2O. Pre-caldera stage bimodality of magmas (basalt-trachydacite); post-caldera magmatism basaltic andesites. Possibly result of mixing between basalt and trachydacite melts. AD 1257 caldera-forming eruption large volume of trachydacitic magma)

Meijer, H.J.M., I. Kurniawan, E. Setiabudi, A. Brumm, T. Sutikna, R. Setiawan & G.D. van den Bergh (2015)- Avian remains from the Early/Middle Pleistocene of the So'a Basin, central Flores, Indonesia, and their palaeoenvironmental significance. Palaeogeogr. Palaeoclim. Palaeoecology 440, p. 161-171.
(Soa Basin in C Flores with 16 late E to early M Pleistocene terrestrial fossil localities with insular endemic faunas. Remains of 6 bird species birds from Mata Menge and Bo'a Leza include a swan (Cygnus sp.) and eagle owl (Bubo sp.), indicative of open environment with open freshwater and nearby grasslands)

Meldrum, S.J., R.S. Aquino, R.I. Gonzales, R.J. Burke, A. Suyadi, B. Irianto & D.S. Clarke (1994)- The Batu Hijau porphyry copper-gold deposit, Sumbawa Island, Indonesia. In: T.M. van Leeuwen et al. (eds.) Mineral deposits in Indonesia, Discoveries of the past 25 years, J. Geochemical Exploration 50, p. 203-220.
(Batu Hijau porphyry in SW Sumbawa world-class porphyry Cu deposit in island arc setting. Mineralisation hosted in tonalite intrusive complex, and diorite and metavolcanic wall rocks. Not much on regional geology)

Minarwan (2012)- Tectonic models of the Lesser Sunda islands. Berita Sedimentologi 25, p. 8-15.

(online at: www.iagi.or.id/fosi/files/2012/12/BS25-Lesser_Sunda_Final_small.pdf)
(Review of tectonic setting of Lesser Sunda islands, East of Java)

Monk, K.A., Y. de Fretes & G. Reksodiharjo-Lilley (1997)- The ecology of Nusa Tenggara and Maluku. The Ecology of Indonesia 5, Periplus Editions, Singapore, p. 1-966.

Muller, C., U. Barckhausen, A. Ehrhardt, M. Engels, C. Gaedicke, H. Keppler, R. Lutz, E. Luschen & S. Neben. (2008)- From subduction to collision; the Sunda-Banda Arc transition. EOS Transactions American Geophys. Union (AGU) 89, 6, p. 49-50.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2008EO060001/pdf)
(Sunda-Banda part of Indian Ocean subduction zone has received less attention from the earthquake studies than the Sumatra segment, but may be just a hazardous. Overriding lithosphere is continental along Sumatra and Java, but oceanic crust farther E, along Lombok and Sumbawa)

Muraoka, H. & A. Nasution (2004)- En echelon volcanic arc as a key to recognize mantle diapirs in the Lesser Sunda Arc, Eastern Indonesia. J. Geothermal Res. Soc. Japan 26, 3, p. 237-249.
(online at: www.journalarchive.jst.go.jp/...) (In Japanese with English summary)
(Flores to Alor segment of Lesser Sunda arc characterized by en echelon shaped volcanic islands, reflecting NNW-SSE left-lateral shear between N-moving Australian continent in East and relatively fixed Sundaland in West. Each element of 'en echelon volcanic islands is elongated dome consisting of anticline of volcanic basement units and rows of young volcanoes. Coexistence of both structures in same area can be explained when mantle diapirs are assumed)

Muraoka, H., A. Nasution, J. Simanjuntak, S. Dwipa, M. Takahashi, H. Takahashi, K. Matsuda & Y. Sueyoshi (2005)- Geology and geothermal systems in the Bajawa volcanic rift zone, Flores, Eastern Indonesia. In: Proc. World Geothermal Congress 2005, Antalya, Turkey, p. 1-13.
(online at: www.geothermal-energy.org/pdf/IGAstandard/WGC/2005/0629.pdf)
(Setting of Bajawa geothermal field, Flores, characterized by NNW-SSE left-lateral shear between N-moving Australia and rel. stable Sundaland in W, creating inner Lesser Sunda volcanic arc of en echelon volcanic islands. En echelon elements are ENE-WSW trending elongated domes, ~90 x 30 km, composed of culmination of cluster of young volcanoes. Oldest exposed unit M Miocene (~16.2-10.2 Ma) Nangapanda Fm submarine clastics, chert, limestone and pumice tuff. After hiatus subaerial volcanism of Wangka Andesite and Maumbawa Basalt at 4-3 Ma. Bajawa volcanic rift zone 60 monogenetic breccia cone volcanoes)

Muraoka, H., A. Nasution, M. Urai, M. Takahashi & I. Takashima (2002)- Geochemistry of volcanic rocks in the Bajawa geothermal field, central Flores, Indonesia. Bull. Geol. Survey Japan 53, p. 147-159.
(online at: https://www.jstage.jst.go.jp/article/bullgsj/53/2-3/53_147/_pdf)
(Volcanic rocks from Bajawa geothermal field, C Flores, include common tholeiitic basalt to dacite, but Bajawa rift zone volcanics calc-alkaline andesite)

Muraoka, H., A. Nasution, M. Urai, M. Takahashi, I. Takashima, J. Simandjuntak, H. Sundhoro, D. Aswin et al. (2002)- Tectonic, volcanic and stratigraphic geology of the Bajawa geothermal field, Central Flores, Indonesia. Bull. Geol. Survey Japan 53, p. 109-138.
(online at: https://www.jstage.jst.go.jp/article/bullgsj/53/2-3/53_109/_pdf)
(Evaluation of geothermal resources around Bajawa, Flores. Since 4 Ma, volcanic activity in C Flores and S coast. 800m uplift in both terranes in past 2.5 million years. Bajawa Cinder Cone Complex more than 60 cones aligned 20 km along NNW-SSE trending Bajawa rift zone rift zone, which formed after 0.8 Ma, related to left-lateral shear between N- moving Australian accretion block in E and relatively fixed Sundaland block in W)

Musper, K.A.F.R. (1928)- Over den ouderdom der intrusie-gesteenten van Flores. De Mijningenieur 9, p. 163-
('On the age of the intrusive rocks of Flores'. Brief note on age relationships between granitoid outcrops and surrounding Neogene sediments. Lack of well-documented contact-metamorphic zones allows possibility of pre-Neogene ages of granite)

Mutaqin, B.W., F. Lavigne, Y. Sudrajat, L. Handayani, P. Lahitte, C. Virmoux, Hiden, D. S. Hadmoko et al. (2019)- Landscape evolution on the eastern part of Lombok (Indonesia) related to the 1257 CE eruption of the Samalas Volcano. Geomorphology 327, p. 338-350.

Nebel, O., P.Z. Vroon, W. van Westrenen, T. Iizuka & G.R. Davies (2011)- The effect of sediment recycling in subduction zones on the Hf isotope character of new arc crust, Banda arc, Indonesia. Earth Planetary Sci. Letters 303, p. 240-250.
(In Banda Arc systematic decrease in Hf-Nd isotopes, suggesting along-arc increase in involvement of subducted continental material in arc magma source from <2% in NE to >2% in SW)

Nebel, O., P.Z. Vroon, D.F. Wiggers de Vries, F.E Jenner & J.A. Mavrogenes (2010)- Tungsten isotopes as tracers of core- mantle interactions: the influence of subducted sediments. Geochimica Cosmochimica Acta 74, 2, p. 751-762.
(Incl. Th, W and U abundance data for E Indonesian sediments across Banda Arc, potentially useful to determine presence of subducted sediments in arc volcanics)

Nishimura, S., Y. Otofuji, T. Ikeda, E. Abe, T. Yokoyama, Y. Kobayashi, S. Hadiwisastra, J. Sopaheluwakan & F. Hehuwat (1981)- Physical geology of the Sumba, Sumbawa and Flores islands. In: A.J. Barber & S. Wiriyusono (eds.) The geology and tectonics of Eastern Indonesia, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 105-113.
(Evidence of E Miocene 'Old andesite' arc volcanics from 19 ± 2 Ma zircon fission track age in Kiro Fm andesite of E Flores. Imply presence of Jurassic mudstones on Sumba without mentioning evidence for age. Paleomag data from Sumba suggests 60° CW rotation of Sumba between Jurassic-Miocene)

Noya, Y., G. Burhan & S. Koesoemadinata (1993)- Geology of the Alor and West Wetar quadrangle, Nusa Tenggara. 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p.

Noya, Y. & S. Koesoemadinata (1990)- Geology of the Lomblen quadrangle, East Nusatenggara. 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, 17p.

Padmawidjaja, T. (2010)- Kondisi geologi daerah Ruteng ditafsir pada data gaya berat. Jurnal Sumber Daya Geologi 20, 5, p. 251-260.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/177/173)
('Geological condition of the Ruteng area as interpreted from gravity data'. C Flores gravity survey shows locations of basement high and intermontane basins)

Pannekoek van Rheden, J.J. (1912)- Eenige geologische gegevens omtrent het eiland Flores. Jaarboek Mijnwezen Nederlandsch Oost-Indie 39 (1910), Verhandelingen, p. 132-138.
('Some geologic data on Flores Island'. Brief visit noticed volcanoes, young coral limestone terraces up to 50-80m above sea level and fossiliferous marls and tuffs of unspecified age)

Pannekoek van Rheden, J.J. (1913)- Overzicht van de geographische en geologische gegevens, verkregen bij de mijnbouwkundig-geologische verkenning van het eiland Flores in 1910 en 1911. Jaarboek. Mijnwezen Nederlandsch Oost-Indie. 40 (1911), Verhandelingen, p. 208-226.
(Reconnaissance geological/ mining survey of Flores Island)

Pannekoek van Rheden, J.J. (1915)- Voorloopige mededeelingen over de geologie van Soembawa. Jaarboek. Mijnwezen Nederlandsch Oost-Indie 42 (1913), Verhandelingen, p. 15-21.
('Preliminary notes on the geology of Sumbawa'. Mainly young volcanics. Also older volcanics with associated sandstones and limestones, suggested to be of Miocene age by Elbert)

Pannekoek van Rheden, J.J. (1918)- Geologische Notizen uber die Halbinsel Sanggar, Insel Soembawa (Niederlandisch-Ost-Indien). Zeitschrift Vulkanologie 4, p. 85-192.

(‘Geological notes on the Sanggar Peninsula, Sumbawa Island’. Results of 'Mijnwezen' geological survey work in 1911-1913. Main fearute of Sanggar Peninsula of N Sumbawa is historically active Tambora volcano. With appendix by Tobler on Late Neogene foraminifera from 10 samples, incl. Baculogypsina noetetraedra n.sp.)

Pannekoek van Rheden, J.J. (1920)- Einige Notizen uber die Vulkane auf der Insel Flores. Zeitschrift Vulkanologie 5, p. 109-163.
(‘Some notes on the volcanoes of Flores island’)

Pannekoek van Rheden, J.J. (1941)- Een merkwaardige grintbank in den Brang Enek (Eiland Soembawa, Ned.-Indie). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 58, 2p.
('A remarkable gravel bank in the Brang Enek (Sumbawa island)')

Planert, L., H. Kopp, E. Lueschen, C. Mueller, E.R. Flueh, A. Shulgin, Y. Djajadihardja & A. Krabbenhoeft (2010)- Lower plate structure and upper plate deformational segmentation at the Sunda-Banda arc transition, Indonesia. J. Geophysical Research, Solid Earth 115, B8, B08107, p. 1-25.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2009JB006713)
(On effects of lower plate variability on upper plate deformational segmentation at Sunda-Banda arc transition. Incoming plate 8.6-9.0 km thick oceanic crust, progressively faulted and altered when approaching trench. Oceanic slab can be traced over 70-100 km beneath fore arc. Shallow serpentinized mantle wedge at ~16 km depth offshore Lombok is absent offshore Sumba. Thickness of fore-arc crust below Lombok Basin generally 9-11 km suggesting oceanic-type velocity structure, which precludes possible continuation of accreted Gondwana continental fragment from NW Australia into this area)

Polhaupessy, A.A. (2001)- Vegetation and environment of the Soa Basin, Central Flores. Majalah Geologi Indonesia (IAGI) 16, 3, p. 135-145.

Poorter, R.P.E. (1989)- Geochemistry of hot springs and fumarolic gases from the Banda arc. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 323-331.

Poorter, R.P.E., R. Kreulen, J.C. Varekamp, R.J. Poreda & M.J. Van Bergen (1991)- Chemical and isotopic compositions of volcanic gases from the East Sunda and Banda arcs, Indonesia. Geochimica Cosmochimica Acta 55, 12, p. 3795-3807.
(E Sunda Arc and Banda Arc represent continent-arc collision zone, with magma genesis influenced by subducted continent-derived material. Volcanic gases provide information on sources of volatiles in arc magmas. Abundant He and high He/Ar ratios consistent with subduction of terrigenous components in local sediments (or slivers of continental crust))

Pratomo, I. & H. Rachmat (2011)- ôFosilô gunungapi bawah laut, Tanjung Aan- Kuta, Lombok Selatan, Nusa Tenggara Barat. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-218, 9p.
('Fossil submarine volcano, Kuta, S Lombok'. Submarine volcanic edifice recognized in Late Oligocene- E Miocene 'Old andesite' Pengulung Fm, S coast of Lombok)

Priowasono, E. & A. Maryono (2002)- Structural relationships and their impact on mining at the Batu Hijau mine, Sumbawa, Indonesia. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 2, p. 943-953.

Purbo-Hadiwidjoyo, M.M. (1971)- Geological map, Bali, scale 1:250,000. Geol. Survey Indonesia, Bandung.
(Also 2nd Edition in 1998. Most of Bali Late Miocene- Recent volcanics. Oldest rocks are Late Oligocene- E Miocene volcanics of Ulakan Fm in SE of island (= continuation of 'Old Andesites' belt of South Java). Overlain by Late Miocene-Pliocene? reefal limestones of Selatan Fm in S (Nusa Dua, Nusa Pendida; should be M-L Miocene; Kadar 1973; = continuation of Wonosari Lst of S Java?; JTvG))

Puspito, N.T. & K. Shimazaki (1995)- Mantle structure and seismotectonics of the Sunda and Banda arcs. Tectonophysics 251, p. 215-228.

(P-wave tomography and earthquake focal points show subducted slab down to ~500 km below W Sunda Arc, but no seismicity >250 km. In E Sunda arc seismic gap between 300-500 km, but slab continuous into lower mantle. Banda arc seismicity down to ~650 km, slab dips gently and does not penetrate into lower mantle. Positive gravity anomaly along E Sunda arc larger than in W Sunda and Banda arcs. Along back-arc side of Sunda and Banda arcs, heat flow decreases from W to E. W Sunda Arc characterized by normal earthquakes along trench and back-arc thrust earthquakes N of volcanic line. In W and E Sunda arcs down-dip extensional earthquakes dominant down to 200 km, down-dip compression earthquakes below 500 km. Banda arc deep earthquakes extensional to 500 km; deeper state of stress not clearly defined)

Rachmat, H., M.F. Rosana, A.D. Wirakusumah & G.A. Jabbar (2016)- Petrogenesis of Rinjani post-1257-caldera-forming-eruption lava flows. Indonesian J. Geoscience 3, 2, p. 107-126.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/311/209)
(Catastrophic 1257 caldera-forming eruption of Old Rinjani on Lombok followed by appearance of Rombongan and Barujari Volcanoes within caldera, composed of calc-alkaline and high K calc-alkaline porphyritic basaltic andesite)

Rack, G. (1912)- Petrographische Untersuchungen an Ergussgesteinen von Soembawa und Flores. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 34, p. 42-84.
('Petrographic studies on volcanic rocks of Sumbawa and Flores'. Descriptions of rocks collected by Elbert 1909-1910: andesites, dacites, leucite tephrite)

Ratman, N. & F. Agustin (2005)- Stratigrafi daerah Sumbawa Besar dan sekitarnya, Sumbawa. J. Sumber Daya Geologi 15, 4 (150), p. 3-16.
('Stratigraphy of the Sumbawa Besar area and surroundings'. Rocks range in age from E Miocene- Holocene. Unfossiliferous E-M Miocene Pontotanu Fm volcanics interfinger with Airbeling Fm clastics and Batutering Fm limestone (with Lepidocyclina sumatrensis, Flosculinella bontangensis, Cycloclypeus). Three formations unconformably overlain by Mio-Pliocene Parateh Fm tuffs and Plio-Pleistocene Moyo Fm coralline limestone. M Miocene andesite intrusions and basalt. All units overlain by Quarternary volcanics)

Ratman, N. & I. Pratomo (2001)- Geologi Gili Trawangan, Gili Meon dan Gili Air (Nongol) lepas pantai barat laut P. Lombok. J. Geologi Sumberdaya Mineral 12, 122, p. 2-12.
('Geology of Gili Trawangan, Gili Meno and Gili Air (Nongol) off the NW coast of Lombok Island'. Gili Trawangan with Plio-Pleistocene basaltic pillow lavas, suggesting submarine eruption and Pleistocene uplift of island)

Ratman, N. & I. Pratomo (2002)- Tinjauan kembali stratigrafi Tersier, P. Lombok bagian selatan. J. Geologi Sumberdaya Mineral 12, 127, p. 2-14.
('Review of the Tertiary stratigraphy of the southern part of Lombok island'. Late Oligocene- Holocene clastics, limestones and volcanics)

Ratman, N. & A. Yasin (1978)- Geologic map Komodo Quadrangle, Nusatenggara, 1: 250 000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of E Sumbawa- Komodo- W Flores islands, part of modern western Banda volcanic arc. Oldest rocks 'Old Volcanics' andesites- basalts (incl. pillow lavas and red cherts), associated E Miocene limestones. Overlain by M Miocene limestone (with Flosculinella bontangensis) and younger volcanics-dominated deposits. NW-SE trending normal faults on Sumbawa (Late Miocene?). Late Miocene intrusives associated with mainly dacitic volcanics and with mineralization (Au, Ag, Pb))

Robba, E., A. Franchino, G. Piccoli, M.P. Bernasconi & D. Kadar (1986)- Notes on the limestones of Bukit southern peninsula of Bali Island (Indonesia). Memorie Scienze Geol., Padova, 38, p. 79-89.
(Planktonic and larger foraminifera from ~400m thick 'Selatan Fm' limestones on Bukit Peninsula of S Bali suggest lower Rembangian age (M Miocene): N9-N10 planktonic foram zones, Lower Tf larger foram zone. Samples of cliff near Ulawatu temple with Miogypsina (Lepidosemicyclina), Katacycloclypeus annulatus, etc. (=equivalent of Wonosari Lst of South Java?; JTvG))

Rompo, I., A. Rowe & A. Maryono (2012)- Porphyry Cu-Au and epithermal Au-Au mineralization systems in South West Lombok. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 283-
(On Selodong, etc., porphyry and high-sulfidation prospect in Late Oligocene-E Miocene andesitic arc volcanics of SW-most Lombok)

Saefudin, I. (1995)- Pentarikhan jejak belah tajur granitik daerah Wolowaru, Ende, Flores. J. Geologi Sumberdaya Mineral 5, 50, p. 29-38.
('Fission track analyses of Wolowaru area granites, Ende, Flores'. Late Miocene FT ages of hornblende granite and granodiorite from E Flores, NE of Ende, between ~7.5-10 Ma, with granodiorite ~1-2 Myr older)

Sarmili, L. & J. Hutabarat (2014)- Indication of hydrothermal alteration activities based on petrography of volcanic rocks in Abang Komba submarine volcano, East Flores Sea. Bull. Marine Geol. (MGI, Bandung) 29, 2, p. 91-100.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/download/69/70)
(Mineral alteration on Abang Komba submarine volcano, Flores Basin, caused by hydrothermal solutions)

Sarmili, L. & M.A. Suryoko (2012)- The formation of submarine Baruna Komba Ridge on Northeast Flores waters in relation to low anomaly of marine magnetism. Bull. Marine Geol. (MGI, Bandung) 27, 2, p. 67-75.
(online at: ejournal.mgi.esdm.go.id/index.php/bomg/article/download/46/47)
(Three submarine ridges off NE Flores waters: Baruna Komba (S of Komba/Batutara active volcano), Abang and Ibu. Magnetic data suggest Baruna Komba Ridge not volcanic, but possibly volcanic detritus. Abang and Ibu Komba ridges related to submarine magmatism)

Scotney, P.M. (2002)- The geology and genesis of massive sulphide, barite-gold deposits on Wetar Island, Indonesia. Ph.D. Thesis, University of Southampton, p. 1-220. *(Unpublished)*
(Pliocene volcanic hosted massive sulphide mounds ('black smoker deposits') at Wetar Island, with flanking Au-Ag-Hg-barite ore bodies. Island composed of Oligocene-Recent volcanics and minor oceanic sediments with mineralisation centers at Kali Kuning and Lerokis, ~3 km inland at 400-500m elevation. Orebodies adjacent to rhyodacite domes. 40Ar/39Ar age of biotite of syeno-granite intrusion 4.7 ± 0.2 Ma, from overlying dacitic flow 2.4 ± 0.3 Ma. Massive sulphides mainly pyrite with some chalcopyrite. Mining removed Au-Ag-bearing barite sands at Lerokis and Kali Kuning. Ore bodies covered by post-mineralisation Globigerina bearing limestone, submarine debris flows and pyroclastics. K-Ar illite age of altered footwall volcanics gives mineralisation age of 4.7 ± 0.16 Ma; 40Ar/ 39Ar age of same sample 4.5 ± 0.2 Ma)

Scotney, P.M., S. Roberts, R.J. Herrington, A.J. Boyce & R. Burgess (2005)- The development of volcanic hosted massive sulfide and barite-gold orebodies on Wetar Island, Indonesia. Mineralium Deposita 40, 1, p. 76-99.
(Wetar Island, Banda Arc, composed of Neogene volcanic rocks and minor oceanic sediments. Wetar volcanic edifice formed at ~12 Ma by extensive rifting and associated volcanism within oceanic crust. Youngest dated volcanic rock dacite of ~2. 4 Ma. 'Kuroko-type' volcanogenic precious metal-rich massive sulfide (mainly pyrite) overlain by barite deposits, which produced ~17 tonnes gold. Ages of hydrothermal alteration around ore bodies ~4.7-4.9 Ma. Sr isotopes of unaltered volcanic rocks suggest contributions from subducted continental material. Mineral deposits formed on flanks of volcano at water depth of ~2 km. Ore bodies covered by post-mineralization cherts, gypsum, Globigerina limestone, subaqueous debris flows and pyroclastics)

Self, S., M.R. Rampino, M.S. Newton & J.A. Wolff (1984)- Volcanological study of the great Tambora eruption of 1815. Geology 12, 11, p. 659-663.
(Tambora 1815 eruption one of largest explosive volcanic events of past 10,000 yr, with ~175 km3 of nepheline-normative trachyandesitic pyroclastic material was erupted in 24 hours. Plinian and co-ignimbrite ash fall >1 cm thick covered >500,000 km2 of Java Sea and surrounding islands)

Seran, H. & C. Farmer (2012)- Scratching at the surface: hidden mineralization at Wetar? In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 217-232. *(also in Majalah Geologi Indonesia (2013),28, 1, p. 51-63)*
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_download/720)
(Ongoing exploration for deeper metal prospects on Wetar Island. High sulfidation epithermal alteration may suggest presence of deeper porphyry style deposits that are related to known massive sulfides and extensive unexplored anomalies on island)

Setyandhaka, D. & J. Arif (2006)- Characteristics of the root of Cu-Au porphyry system: results of study from Batu Hijau Cu-Au porphyry deposit. Proc. 35th Ann. Conv. Indon. Assoc. Geol. (IAGI), Pekanbaru, 11p.

Setyandhaka, D., J. Proffett, S. Kepli & J. Arif (2008)- Skarn mineralization in Batu Hijau Cu-Au porpyry system. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 664-671.
(Sumbawa Batu Hijau deposit classic Cu-Au porphyry system. Several intervals of calc-silicate rock and skarn interbedded with volcanics. Potential to find significant skarn-type mineralizations)

Sewell, D.M. & C.J.V. Wheatley (1994)- Integrated exploration success for gold at Wetar, Indonesia. In: T.M. van Leeuwen et al. (eds.) Mineral deposits of Indonesia; discoveries of the past 25 years, J. Geochemical Exploration 50, 1-3, p. 337-350.
(Wetar island gold discovery. Most significant Au values associated with barite-rich rocks in basinal structures)

Sewell, D.M. & C.J.V. Wheatley (1994)- The Lerokis and Kali Kuning submarine exhalative gold-silver-barite deposits, Wetar Island, Maluku, Indonesia. In: T.M. van Leeuwen et al. (eds.) Mineral deposits of Indonesia; discoveries of the past 25 years, J. Geochemical Exploration 50, 1-3, p. 351-370.
(Wetar Island (Banda Arc, N of Timor) composed of submarine volcanics, with oldest exposed rocks dated at 12 Ma. Basaltic andesite pillow lavas and volcaniclastics overlain by felsic volcanics and sediments. Gold-silver mineralization on N coast in stratiform barite sand, clay or silt. Sediments underlain by Cu-rich pyrite in volcanic breccias and overlain by limestone dated at ~4 Ma. Formed in submarine volcanic environment at 600m water depth in sea floor caldera. Now at 400m asl, suggesting 1000m of young uplift)

Shulgin, A., H. Kopp, C. Muller, E. Lueschen, L. Planert, M. Engels, E.R.Flueh, A. Krabbenhoeft & Y. Djajadihardja (2009)- Sunda-Banda arc transition: incipient continent-island arc collision (northwest Australia). Geophysical Research Letters 36, L10304, p. 1-6.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2009GL037533)
(E Sunda arc in early stages of continent-arc collision. Australian margin colliding with Banda island arc, causes back arc thrusting. New composite structural model reveals deep geometry of collision zone. Changes in crustal structure encompass 10-12 km thick Australian basement in S and 22-24 km thick Sumba Ridge in N, where backthrusting of 130 km wide accretionary prism is documented)

Silitonga, F. (1994)- Gravity profiles of the back arc thrust zone, north offshore Sumbawa, Indonesia. In: J.L. Rau (ed.) Proc. 30th Sess. Comm. Co-ord. Joint Prospecting Mineral Res. Asian Offshore Areas (CCOP), Bali 1993, 2, p. 33-42.
(Major linear gravity low N of Sumbawa modeled as backarc accretionary prism, possibly with common shale diapyrism, on oceanic crust)

Silver, E.A., N.A. Breen, H. Prasetyo & D.M. Hussong (1986)- Multibeam study of the Flores backarc thrust belt, Indonesia. J. Geophysical Research 91, B3, p. 3489-3500.
(online at: http://bpls.go.id/bplsdownload/library/paper/Silver-Flores-MB-JGR-86.pdf)
(SeaMARC II seafloor bathymetry and seismic reflection profiles used to map segment of Flores back arc thrust zone. Mud diapirs formed throughout accretionary wedge, but concentrated at ends of thrust faults. Overall orientation of deformation front of accretionary wedge is 100°)

Silver, E.A., D. Reed, R. McCaffrey & Y. Joyodiwiryo (1983)- Back arc thrusting in the eastern Sunda Arc, Indonesia: a consequence of arc-collision. J. Geophysical Research 88, B9, p. 7492-7448.

(Eastern Sunda arc backarc dominated by large N-directed thrusts, Wetar and Flores thrusts, which may represent early stages of subduction polarity reversal. Mechanism of backarc thrusting not clear)

Simon, A. (1913)- Beitrage zur Petrographie der kleinen Sunda-Inseln Lombok und Wetar. Dissertation Marburg, p. 1-74.
('Contributions to the petrography of the Lesser Sunda islands Lombok and Wetar'. Petrography of volcanic rocks collected by 1909-1910 Sunda-expedition of Elbert)

Soepri, W., P.A. Pirazzoli, C. Jouannic, H. Faure et al. (1992)- Differential vertical movement along the Sunda-Banda arc, Indonesia. In: M. Flower, R. McCabe & T. Hilde (eds.) Symposium Southeast Asia structure, tectonics and magmatism, Texas A&M, College Station, 3p. *(Extended abstract only)*

Soeprihantoro, W. (1992)- Etude des terrasses recifales Quaternaires soulevees entre le detroit de la Sonde et l'ile Timor, Indonesie; mouvements verticaux de la croute terrestre et variations du niveau de la mer. Doct. Thesis University Aix-Marseille II, p. 1-922. *(Unpublished)*
('Study of the uplifted Quaternary reef terraces between Sunda Strait and Timor island; vertical movements of earth crust and variations of sea level')

Soeria Atmadja, R., Y. Sunarya, Sutanto & Hendaryono (1998)- Epithermal gold-copper mineralization associated with Late Neogene-magmatism and crustal extension in the Sunda-Banda Arc. Bull. Geol. Soc. Malaysia 42, p. 257-268.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1998021.pdf)
(Majority of gold-copper mineralization along Sunda-Banda arc low-sulfidation epithermal, related to Late Neogene fine silicic pyroclastics of calc-alkaline to potassic calc-alkaline affinity)

Stothers, R.B. (1984)- The Great Tambora eruption in 1815 and its aftermath. Science 224, 4654, p. 1191-1198.

Subarsyah, D. Kusnida & L. Arifin (2014)- Interpretasi struktur bawah permukaan berdasarkan atribut anomali magnetik perairan Wetar, NTT. J. Geologi Kelautan 12, 1, p. 5-23.
(online at: ejournal.mgi.esdm.go.id/index.php/jgk/article/download/242/232)
('Subsurface structure interpretation based on magnetic anomaly attributes of Wetar waters, East Nusa Tenggara'. Identification of back-arc frontal thrust and submarine volcano edifices from magnetic and shallow seismic data in E Flores Sea/ S Banda Sea, N of Banda Arc islands Alor- Wetar)

Subarsyah & R. Rahardiawan (2016)- Geological structures appearances and its relation to mechanism of arc-continent collision, northern Alor-Wetar Islands. Bull. Marine Geol. 31, 2, p. 55-66.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/326/274)
(Shallow seismic lines in S Banda Sea, N of Alor- Wetar, in zone of back-arc thrusting. Delineation of Alor Thrust and Wetar Thrust, offset by N-S left-lateral strike-slip fault. Also possible submarine volcano structures)

Sudijono (1997)- On the age of the limestone in the island of Lombok, West Nusatenggara. J. Geologi Sumberdaya Mineral 7, 72, p. 14-34.
(Limestones in S Mountains of Lombok. Limestones generally in isolated outcrops, 36m or less thick. Three separate units, formerly all grouped in Ekas Fm: (1) Sekotong Lst in SW: latest Oligocene (Te1-4), with larger forams Miogysinoides complanatus and Spiroclypeus, and associated with 'Old Andesites' volcanics (2) C-S Lombok, near Orokgendang dam and Lawang Gua, E-M Miocene (upper Te5-Tf1-2) with Katacycloclypeus, Flosculinella bontangensis, Miogypsina, etc., associated with marls with zone N8 planktonic forams (looks like equivalent of Wonosari Lst of S Java; JTvG) and (3) SE Lombok, N of Ekas and Serewe, Late Miocene (Tf3/ N16) with Lep. (Trybliolepidina) rutteni and Radiocycloclypeus (see also Franchino et al. (1988)).

Sudradjat, A., S. Andi Mangga & N.Suwarna (1998)- Geologic map of the Sumbawa Quadrangle, Nusatenggara, scale 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of West and C Sumbawa. Miocene- Recent volcanic rocks, with E and M Miocene limestone lenses. With Tambora volcano in N)

Sulaeman, C., S. Hidayati, A. Omang & I.C. Priambodo (2018)- Tectonic model of Bali Island inferred from GPS Data. Indonesian J. Geoscience 5, 1, p. 81-91.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/389/257)
(GPS campaign shows horizontal displacements between 1.9 and 22.5 mm/yr, dominantly to NE. Deformation in Bali mostly controlled by subduction in S and East Flores back-arc thrust in N)

Suwarno, N. & Y. Noya (1985)- Stratigrafi regional wilayah busur bergunungapi Nusatenggara. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta 1985, p. 71-79.
('Regional stratigraphy of the central part of the Lesser Sunda Islands volcanic arc'. Stratigraphy of Bali-Alor sector of Sunda- Banda volcanic arc. Oldest rocks basaltic-andesitic volcanics, interfingering with E-M Miocene sediments ('Old Andesites'?; JTvG). Overlain by late Middle or Late Miocene- Pliocene sediments (mainly limestones)and volcanics, unconformably overlain by Pleistocene- Holocene andesitic basaltic volcanics)

Suwarno, N., S. Santosa & S. Keosoemadinata (1989)- Geological map of the Ende Quadrangle, East Nusatenggara, Quadrangle 2207, 2208, 2307, 2308, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of most of Flores Island. Oldest rock E-M Miocene Kiro and M Miocene Tanahau arc volcanics, some with pillow structures intruded by M Miocene granodiorites. Overlain by Late Miocene Waihekang Fm tuffaceous limestones with Lepidocyclina, Alveolinella and tuffaceous marine Loka Fm. With 21p. report)

Takashima, I., A. Nasution & H. Muraoka (2002)- Thermoluminescence dating of volcanic and altered rocks in the Bajawa geothermal area, central Flores Island, Indonesia. Bull. Geol. Survey Japan 53, 2/3, p. 139-146.
(online at: https://www.gsj.jp/data/bulletin/53_02_07.pdf)
(Ages of young basalts-andesites around Bajawa geothermal area of C Flores, determined by thermoluminescence dating, range from 32-160 ka)

Tampubolon, B.T. & Y. Saamena (2009)- Savu Basin: a case of frontier basin area in Eastern Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, IPA09-SG-078, p. 337-347.
(Review of deepwater (3km deep) Savu forearc basin, based on gravity, seismic and bathymetry data (no wells). Basin underlain by thin (12-14km) crust, probably oceanic. Relatively undeformed forearc basin fill unconformably on block-faulted pre-Late Miocene basement)

Tobler, A. (1918)- Notiz uber einige foraminiferenfuhrende gesteine von der Halbinsel Sanggar (Soembawa). Zeitschrift Vulkanologie 4, p. 189-192.
('Notes on some foraminifera-bearing rocks from the Sanggar Peninsula (Sumbawa)'. Appendix in Pannekoek van Rheden (1918) paper. Incl. first description of Schlumbergerella neotetraeda in Quaternary? limestones)

Umbgrove, J.H.F. (1939)- Miocene corals from Flores (East-Indies). Leidsche Geol. Mededelingen 11, 1, p. 62-67.
(online at: www.repository.naturalis.nl/document/549421)
(Corals from limestone at N coast of Flores near Papang, collected by Kuenen. 9 species, probably Miocene age, incl. Cyphastrea monticulifera, Progyrosmilia vacua, Fungophyllia spp., Leptoseris, Goniopora planulata)

Van der Vlerk, I.M. (1922)- Studien over Nummulinidae en Alveolinidae. Haar voorkomen op Soembawa en haar betekenis voor de geologie van Oost-Azie en Australie. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, p. 329-464.
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:031771000:pdf)
('Studies on Nummulinidae and Alveolinidae. Their occurrence on Sumbawa and significance for the geology of East Asia and Australia'. Limestone samples from Sumbawa with Miocene larger foraminifera, incl. Lepidocyclina spp., Alveolinella, Miogypsina, Cycloclypeus (incl. C. annulatus), etc. (Looks like mainly M Miocene, equivalent of Wonosari Lst of S Java?. With discussions of Indonesia larger foram species and distribution. With locality map. Little stratigraphic info; JTvG))

Van der Werff, W. (1996)- Variation in forearc basin development along the Sunda Arc, Indonesia. J. Southeast Asian Earth Sci. 14, 5, p. 331-349.
(Includes details on fore-arc areas off Sumba)

Van der Werff, W., H. Prasetyo & T.C.E. van Weering (1991)- The Bali-Lombok forearc region: trapped forearc basin of rifted continental origin ? Proc. Int. Seminar Geodynamics, Indon. Assoc. Geophys. (HAGI), p. 14-22.
(Geologic development of Sumba analogous to Doang borderland at leading edge of Sunda shield margin?)

Van Heek, J. (1910)- Bijdrage tot de geologische kennis van het eiland Lombok. Jaarboek Mijnwezen Nederlandsch Oost-Indie 38 (1909), Wetenschappelijk Gedeelte, p. 1-82.
('Contribution to the geological knowledge of Lombok Island'. Most of Lombok composed of young volcanic rocks. Narrow range of hills along S coast ?E Miocene volcanics, overlain by ?M Miocene Lithothamnium-rich limestone with Lepidocyclina, looking like continuation of Java S Mountains. (Fig. 11 also shows Miogypsina and advanced Lep. (N), suggesting M Miocene age, similar to Wonosari Lst of S Java; JTvG). With geologic map 1:200,000)

Van Heek, J. (1911)- Onderzoek van een looderts voorkomen in Zuid-Lombok. Jaarboek Mijnwezen Nederlandsch Oost-Indie 38 (1909), Technisch Admin. Ged., p. 177-201.
('Investigation of a lead ore occurrence in South Lombok'. Survey confirms older reports on presence of lead deposits (galena in quartz veins, with minor Ag, Cu) at Sukadana hill and at Bukit Pedjere near Lentek in S Central Lombok, but not deemed to be extensive. Hosted in (Early Miocene?) diagenetically altered andesitic volcanics, which are overlain by (Late?) Miocene limestones (geologically looks like continuation of Southern Mountains of Java)

Verbeek, R.D.M. (1914)- De eilanden Alor en Pantar, residentie Timor en onderhoorigheden. Tijdschrift Kon. Nederl. Aardr. Gen. 32, 33p.
('The islands of Alor and Pantar' (Banda Arc))

Von Koenigswald, G.H.R. (1958)- A tektite from the island of Flores, Indonesia. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 61, p. 44-46.

Wawryk, C.M. & J.D. Foden (2017)- Iron-isotope systematics from the Batu Hijau Cu-Au deposit, Sumbawa, Indonesia. Chemical Geology 466, p. 159-172.
(Iron isotope values of andesite and quartz diorite and coeval hypogene ore minerals from Batu Hijau porphyry copper-gold deposit in Sumbawa)

Wichmann, A. (1891)- Bericht uber eine im Jahre 1888-89 im Auftrag der Niederlandischen Geographischen Gesellschaft ausgefuhrte Reise nach dem Indischen Archipel, Part 2, III. Flores. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 1891, p. 188-293.
('Report on a voyage carried out for Netherlands Geographic Society in 1888-1889 to the Indies Archipelago, part 2- III. Flores'. Part 2 of Wichmann geographic narrative of expedition to Indonesia)

Wichmann, A. (1892)- Ueber das angebliche Tertiar der Insel Adonara. Neues Jahrbuch Mineral. Geol. Palaontologie 1892, 1, p. 61-64.
('About the alleged Tertiary age of the island Adonara'. Debate between Wichmann and Martin on whether presence of silicified corals Clementia papyracea, Coeloria singularis Martin and Hydnophora astraeoides Martin in limestone of W coast of Adonara represent Miocene age (as preferred by Wichmann) or something younger (N.B. latter two coral species also reported from latest Oligocene Rajamandala Limestone of W Java by Gerth 1921, supporting Miocene or older age; JTvG))

Wichmann, C.E.A. (1914)- On the tin of the island of Flores. Proc. Kon. Akademie Wetenschappen, Amsterdam, 17, 2, p. 474-490.

(online at: digitallibrary.nl)
(Reports of tin occurrences at Rokka Mts of Flores by Freyss (1860) could not be confirmed by subsequent investigations. Tin is associated with old granites, and older rocks gradually disappear E of Java. Outcrops on Flores limited to Tertiary volcanics and sediments, and Mt. Rokka is a volcano.)

Wichmann, C.E.A. (1919)- On tin-ore in the Island of Flores. Proc. Kon. Akademie Wetenschappen, Amsterdam, 21, 1, p. 409-416.
(online at: digitallibrary.nl)
(Repeats 1914 conclusion that no tin is present on Flores, despite new paper by Vermaes suggesting presence)

Widiyantoro, S. & Fauzi (2005)- Note on seismicity of the Bali convergent region in the eastern Sunda Arc, Indonesia. Australian J. Earth Sci. 52, 3, p. 379-383.
(Recent earthquakes around Bali show seismic activity concentrated down to ~200 km, along forearc and in backarc. Stress field dominated by N-S compression. Thrust events in backarc N of Bali likely due to W continuation of backarc thrust fault of Sumbawa and Flores. Local earthquake hypocentres form image of S-ward subduction of Java Sea oceanic crust, in opposite direction of main subduction of Indo-Australian Plate)

Wilkinson, J.J., Z. Chang, D.R. Cooke, M.J. Baker, C.C. Wilkinson, S. Inglis, H. Chen & J.B. Gemmel (2015)- The chlorite proximitor: a new tool for detecting porphyry ore deposits. J. Geochemical Exploration 152, p. 10-26.
(Major, minor and trace element chemistry of chlorite evaluated as tool for mineral exploration in propylitic environment of Batu Hijau Cu-Au porphyry deposit, SW Sumbawa)

Wong, H.K. & U. Salge (1992)- Seismic facies, sedimentary structures and tectonics around Sumbawa island in East Indonesia. In: E.T. Degens, H.K. Wong & M.T. Zen (eds.) The sea off Mount Tambora, Mitteilunge Geol.-Palaont. Inst. Universitat Hamburg 70, p. 37-57.

Yeh, H., F. Imamura, C. Synolakis, Y.Tsuji, P. Liu & S. Shi (1993)- The Flores Island tsunamis. EOS Transactions American Geophys. Union (AGU) 74, 33, p. 369, 371-373.
(December 12, 1992 Ms 7.5 earthquake and tsunami off N Flores with epicenter 50km NW of Maumere, hypoceneter depth 15km. Considered to reflect activity in N Flores backarc thrust zone. Tsunami runup height up to 26m, inundation distance ~600m)

Zardi D, A., T. Sihombing, A. Purba & N.I. Basuki (2012)- Resource of Pangulir lode deposit, Sumbawa, Indonesia. Proc. Banda and Eastern Arcs, MGEI Annual Convention 2012, Malang, p. 159-179.
(Pangulir newly discovered Au-Ag-Cu epithermal quartz-sulfide vein breccia lode in S Sumbawa Island. Hosted in Tertiary arc volcanics)

Zen, M.T., S. Soemarno & F. Ilyas (1992)- Structural pattern and tectonic position of Sumbawa Island in East Indonesia. In: E.T. Degens, H.K. Wong & M.T. Zen (eds.) The sea off Mount Tambora, Mitteilunge Geol.-Palaont. Inst. Universitat Hamburg 70, p. 21-35.

Zubaidah, T. (2010)- Spatio-temporal characteristics of the geomagnetic field over the Lombok Island, the Lesser Sunda Islands region: New geological, tectonic, and seismo-electromagnetic insights along the Sunda-Banda Arcs transition. GoeForschungsZentrum, Potsdam, Scient. Techn. Report STR10/07, p. 1-115.
(online at: http://ebooks.gfz-potsdam.de/pubman/item/escidoc:10278:3/component/escidoc:10279/1007.pdf)

Zubaidah, T., M. Korte, M. Mandea, Y. Quesnel & M. Hamoudi (2014)- New insights into regional tectonics of the Sunda-Banda Arcs region from integrated magnetic and gravity modelling. J. Asian Earth Sci. 80, p. 172-184.
(Lombok Island lies between zones characterized by large intensity magnetic anomalies. Geomagnetic ground surveys and modelling suggest two active Quaternary normal faults and a magmatic arc related to subduction region. Magnetic anomalies and gravity models suggest extension of Flores Thrust zone (reaching NW off

Lombok Island). Flores Thrust zone may be considered as mature subduction in back arc region, showing tendency of progressive subduction during last decades)

Zubaidah, T., M. Korte, M. Mandea, Y. Quesnel & B. Kanata (2010)- Geomagnetic field anomalies over the Lombok Island region: an attempt to understand the local tectonic changes. Int. J. Earth Sciences (Geol. Rundschau) 99, 5, p. 1123-1132.
(Magnetic survey of SW Lombok. Magnetic high tied to large igneous intrusive body)

VII.3. Sumba, Savu, Savu Sea

Abdullah, C.I. (1994)- Contribution a lôetude geologique de lôisle de Sumba: apports a la connaissance de la geodynamique de lôarchipel indonesien orientale. Doct. Thesis Universite de Savoie, Chambery, p. 1-255.
('Contribution to the geological study of Sumba island and relevance to the geodynamics of the east Indonesian archipelago')

Abdullah, C.I. (2010)- Evolusi magmatisme Pulau Sumba. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-049, 3p.
('Magmatic evolution of Sumba Island'. Short paper describing three periods of calk-alkaline island arc magmatism in Cretaceous- Paleogene of Sumba: (1) U Cretaceous (Santonian- Campanian; 85.4- 78.6 Ma), (2) Maastrichtian- Thanetian (71.7- 56.6 Ma), (3) M Eocene- Oligocene (Lutetian- Rupelian; 42.3- 31.4 Ma)

Abdullah, C.I., J.P. Rampnoux, H. Bellon, R.C. Maury & R. Soeria-Atmadja (2000)- The evolution of Sumba Island (Indonesia) revisited in the light of new data on the geochronology and geochemistry of the magmatic rocks. J. Asian Earth Sci. 18, 5, p. 533-546.
(online at: http://directory.umm.ac.id/Data%20Elmu/jurnal/J-a/Journal%20of%20Asian%20Earth%20Science/Vol18.Issue5.2000/383.pdf)
(Sumba continental crustal fragment, with 3 Cretaceous-Paleogene arc volcanic episodes: Late Cretaceous (86-77 Ma), Maastrichtian- Thanetian (71-56 Ma) and Lutetian- Rupelian (42-31 Ma). W-ward shift of volcanism through time. No Neogene volcanism (considered reworked!?). Very similar to SW Sulawesi. Sumba was part of 'Andean' magmatic arc near SW Sulawesi magmatic belt and SE Kalimantan coast at margin of Asian Plate)

Abdullah, C.I., J.P. Rampnoux & R. Soeria-Atmadja (1996)- Data baru geochronologi, analysis kimia dan tinjauan geodinamik Pulau Sumba. In: Sampurno et al. (eds.) Pros. Seminar Nasional Geoteknologi III, LIPI, Bandung, p. 324-346.
('New data on geochronology, chemical analysis and review of geodynamics of Sumba Island'.Similar to above?. Sumba Block started to separate from Sundaland margin by oceanic rifting in Sumba Strait in Oligo-Miocene?)

Abdullah, C.I., E. Suparka & V. Isnaniawardhani (2008)- Sedimentary phases of Sumba Island (Indonesia). Proc. 37th Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 66-79.
(Stratigraphy of Sumba continental block slightly to unmetamorphosed Cretaceous sediments, unconformably overlain by less deformed Tertiary-Quaternary deposits. Four sedimentary phases: (1) Late Cretaceous-Paleocene marine turbidites with Santonian-Campanian (86-77 Ma) and Maastrichtian- Thanetian (71-56 Ma) magmatic episodes; (2) Paleogene neritic sedimentation with Lutetian-Rupelian magmatic episode (42-31 Ma); (3) Neogene rapid sedimentation in deep sea environment; (4) Quaternary uplift of terraces. Sumba never subjected to intense deformation, implying never been involved in collision between Indian- Australian and Asiatic plates, except during minor compressive episode in Paleogene)

Audley-Charles, M.G. (1975)- The Sumba fracture: a major discontinuity between Eastern and Western Indonesia. Tectonophysics 26, p. 213-228.
(Sunda-Banda Arc not a continuous subduction system. Major tectonic discontinuity separates E Indonesia (Sumba, Banda Arcs, E Sulawesi) from W Indonesia (W Sulawesi and islands west of Sumba). Sumba fracture initially a Late Jurassic wrench fault that became Cretaceous and Cainozoic transform. Sumba detached from N Australia; Timor, etc., represent deformed Australian continental margin. Overthrust Asian elements also present. No subduction has taken place between Outer Banda Arc islands and Australia since Early Permian)

Audley-Charles, M.G. (1985)- The Sumba enigma: is Sumba a diapiric fore-arc nappe in process of formation? Tectonophysics 119, 1-4, p. 435-449.
(online at: http://searg.rhul.ac.uk/pubs/audley-charles_1985_Sumba%20enigma.pdf)

(Sumba Cretaceous-Miocene stratigraphy similar to Timor allochthonous Palelo-Cablac series and both with Cretaceous forearc deposits on thin continental crust. Postulated Sumba nappe not yet thrust onto Australian margin and may be diapyric dome)

Bard, E., C. Jouannic, B. Hamelin, P. Pirazzoli, M. Arnold, G. Faure, P. Sumosusastro & Syaefudin (1996)- Pleistocene sea levels and tectonic uplift based on dating of corals from Sumba Island, Indonesia. Geophysical Research Letters 23, 12, p. 1473-1476.
(Quaternary tectonic uplift rate calculated from uplifted reef terraces at Cape Laundi, NE coast Sumba, 0.2-0.5m/ 1000 yrs)

Beiersdorf, H. & K. Hinz (1980)- Active ocean margins in SE Asia. In: H. Cloos et al. (ed.) Mobile Earth: International Geodynamics project, p. 121-125.
(Savu Basin underlain by 12-14 km thick oceanic crust, probably oceanic)

Boehm, G. (1911)- *Posidonomya becheri* in Niederlandisch-Indien? Centralblatt Mineralogie Geologie Palaont. 1911, 11, p. 350-352.
(online at: www.biodiversitylibrary.org/item/192769page/374/mode/1up)
(On possible occurrence of bivalve Posidonomya, collected by Witkamp in 1910 in dark grey sandy shales from Lobewi village, near S coast of W Sumba (this identification implies Carboniferous age, but re-identified by Roggeveen (1929) as Jurassic or Cretaceous Inoceramus; JTvG))

Breen, N.A, E.A. Silver & D.M. Hussong (1986)- Structural styles in an accretionary wedge south of the island of Sumba, Indonesia, revealed by SeaMARC II side scan sonar. Geol. Soc. America (GSA) Bull. 97, 10, p. 1250-1261.
(Accretionary wedge S of Sumba in early stages of continent-island arc collision. Australian continental shelf sediments accreted to Sunda arc at Timor trough. Deformation concentrated on lower slope of accretionary wedge, within 15-25 km of thrust front, above which strain rate appears to decrease. Three structural styles developed in area. W part of accretionary wedge is being indented and redeformed by basement ridge)

Brouwer, H.A. (1943)- Leuciethoudende en leucietvrije gesteenten van den Soromandi op het eiland Soembawa. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 52, 6, p. 303-307.
('Leucite-bearing and leucite-free rocks of the Soromandi volcano on Sumbawa Island')

Budiharto, R. (2002)- Oblique divergent wrench fault movement between the islands of Sumba and Timor. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 315-326.

Burollet, P.F. & C. Salle (1981)- A contribution to the geological study of Sumba (Indonesia). Proc. 10th Ann. Conv. Indon. Petroleum. Assoc. (IPA), Jakarta, p. 331-344.
(Basement exposed along S coast of Sumba is folded, low metamorphic Late Cretaceous deep marine sediments. ?Early Paleocene calk-alkaline volcanics and intrusives. Early Miocene carbonates unconformable over Eocene; thick E Miocene tuffs. Paleomag suggests 60° clockwise rotation since Cretaceous. Quaternary reef terraces 500m above sea level)

Burollet, P.F. & C. Salle (1982)- Histoire geologique de l'ile de Sumba (Indonesie). Bull. Soc. Geologique France 24, 3, p. 573-580.
('Geologic history of Sumba Island'. Marine turbiditic and pelagic Cretaceous sediments strongly folded at end of Cretaceous and cut by numerous intrusions of a 66-59 Ma major volcanic phase. Unconformably overlain by gently folded Paleogene, including M-L Eocene limestones rich in larger forams and M Eocene andesitic volcanics (39-42.5 Ma, deepening upward into radiolarian clays. E Miocene carbonates- marls unconformable over all older formations. Total Neogene limestone-marl thickness ~500-600m; slightly dipping to NE)

Caudri, C.M.B. (1934)- Tertiary deposits of Soemba. Doct. Thesis, Leiden University, p. 1-225.
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:029044000:pdf)

(Eocene carbonates (zones Ta2 and Tb) with Nummulites spp., Assilina, Discocyclina, Asterocyclina, alveolinids (Fasciolites), Pellatispira (= Sundaland genus; not known from Australia/ New Guinea; JTvG), unconformably over folded and intruded Mesozoic (Jurassic?). Oligocene angular unconformity separates Late Eocene-earliest Oligocene (Tb-Tc) limestones with dips of 30°, from more horizontal Earliest Miocene (zone Te5) sediments with Lepidocyclina (N.), Spiroclypeus and Miogypsina)

Chamalaun, F.H., A.E. Grady, C.C. von der Borch & H.M.S. Hartono (1981)- The tectonic significance of Sumba. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 5, p. 1-20.

Chamalaun, F.H., A.E. Grady, C.C. von der Borch & H.M.S. Hartono (1982)- Banda Arc tectonics: the significance of the Sumba Island (Indonesia). In: J.L. Watkins & C.L. Drake (eds.) Studies in continental margin geology, American Assoc. Petrol. Geol. (AAPG), Mem. 34, p. 361-375.
(Sumba no subduction tectonics of Sunda Arc to W, nor collision tectonics of Banda Arc system. Sumba is continental fragment from Australia or from Sundaland (Flores Basin), that became trapped behind E Java Trench. Data not convincing, but appears to favor Australian origin)

Chamalaun, F. H. & W. Sunata (1982)- The paleomagnetism of the Western Banda Arc System-Sumba. In: Paleomagnetic Research in Southeast and East Asia, Proceedings of a CCOP Workshop, Kuala Lumpur 1982, p. 162-194.

Djoehanah, S. & S. Hadiwisastra (1984)- Korelasi umur nannoplangton dan foraminifera Paleogen di daerah Wanokaka, Sumba Barat. J. RISET Geologi Pertambangan (LIPI) 5, 1, p. 1-8.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.5-No.1-2.pdf)
(Samples from S coast of W Sumba, S of Waikabukak, with common Late Eocene (zone NP19) nannoplankton, incl. Discoaster barbadiensis, D. saipanensis, etc. From same horizon planktonic foraminifera of zone P16 (Hadiwisastra 1980) and zone Tb larger foraminifera (Caudri 1934))

Djumhana, N. & D. Rumlan (1992)- Tectonic concept of the Sumba continental fragment, Eastern Indonesia. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 585-598.
(Sumba island fragment of continental crust. Structure rel. simple. Seismic data suggest continuity with N part of Timor, from which it separated in M-L Miocene (11-10 Ma) and rotated 60° CW))

Effendi, A.C. & T. Apandi (1994)- Geology of the Waikabubak and Waingapu sheets, Nusatenggara. Geol. Res. Dev. Centre (GRDC), Bandung.
(1:250,000 geologic map of Sumba Island, originally completed in 1981. Oldest rocks recognized in outcrops is >1000m thick series of Upper Cretaceous deep marine flysch/greywacke with Globotruncana, associated with lavas and volcanic breccias and tuffs (Masu Fm). Intruded by Paleocene granodiorites (61.5 Ma) and andesitic volcanics, overlain by Eocene greywackes, Eocene and Lower Oligocene limestones and E Miocene andesitic volcanics (Jawila Fm.) Uplifted coral reefs suggest rapid recent uplift along N coastal areas (not in S))

Ely, K.S. & M. Sandiford (2010)- Seismic response to slab rupture and variation in lithospheric structure beneath the Savu Sea, Indonesia. Tectonophysics 483, 1-2, p. 112-124.
(Banda Arc earthquake focal mechanisms suggest subducting slab under W Savu Sea in down-dip compression at 70-300 km, while down-dip tension typifies intermediate depth Sunda slab to W and Banda slab to E. Compression reflects subduction of transitional crust of Scott Plateau. Enhanced magma flux indicated by narrower volcano spacing in overlying arc. E of Savu Sea, near complete absence of intermediate depth seismicity attributed to slab window where Australian continental crust has collided with arc. Differences in seismic moment release around this slab window indicate asymmetric rupture, propagating to E faster than W. Volcano spacing from Bali-Sumbawa average 68 km, in E Banda Arc average of 72 km)

Fleury, J.M. (2005)- De la subduction oceanique a la subduction continentale deformations associees et heritage structural: l'exemple du bloc Sumba-Savu, terminaison orientale du fosse de la Sonde. Thesis Universite Pierre & Marie Curie, Paris, p. 1-278. *(Unpublished)*

(East of 120ºE abrupt change in style of subduction deformation of upper plate. Fieldwork on Sumba demonstrated volcanic activity from Upper Cretaceous until Oligocene, followed by well-developed carbonate sedimentation. Miocene paleogeography shows E-W oriented platform- basin configuration. Currently Sumba is extensional regime. Savu Basin is marine extension of Sumba structure. Internal part is little deformed and acts as rigid buttress and transfers convergence to backarc. Arrival of Australian margin at subduction zone forms, at end of Mio-Pliocene orogeny in Timor, a rigid block composed of Sumba island in W, Timor in E and the little deformed Savu Basin in middle. W limit of this block unknown)

Fleury, J.M., M. Pubellier, M. de Urreiztieta & N. Chamot-Rooke (2006)- Crustal erosion and subduction of continental asperity: Sumba Island and forearc, Indonesia. Geophysical Res. Abstracts 9, 06054, 2007, European Geosc. Union, EGU2007-A-06054 *(Abstract only)*

Fleury, J.M., M. Pubellier & M. de Urreiztieta (2009)- Structural expression of forearc crust uplift due to subducting asperity. Lithos 113, p. 318-330.
(Sumba Island presently undergoing extension, associated with regional uplift. Crustal uplift may have been created by major thrust emerging in S of island, associated with NE tilt of island. The consequent anomalous positive topography along S coast compensated by significant tectonic erosion along large-scale curvilinear normal faults in SE half of island. Expression of this gravitational collapse at receding side of an advancing circular dome striking similarities with accretionary wedges being affected by seamount subduction. Savu Basin moderately deformed and acts as rigid buttress in convergence between Banda Arc and Australian plate)

Fortuin, A.R., Th.B. Roep & P.A. Sumosusastro (1994)- The Neogene sediments of east Sumba, Indonesia- products of a lost arc? J. Southeast Asian Earth Sci. 9, 1-2, p. 67-79.
(M Miocene- Pliocene deep water sediments overly Oligocene- Early Miocene carbonate platform, overlying Paleogene volcanics and Late Cretaceous turbidites. Common arc volcanic debris in Mid-Late Miocene sourced from SSW, but present-day arc is to N!)

Fortuin, A.R., Th.B. Roep, P.A. Sumosusastro, T.C.E. van Weering & W. van der Werff (1992)- Slumping and sliding in Miocene and Recent developing arc basins, onshore and offshore Sumba (Indonesia). Marine Geology 108, p. 345-363.
(Neogene slidemasses in E Sumba compared to analogues in seismic profiles off Lombok and Savu basins. Onshore examples were deposited in deep marine base-of slope environments, within reach of large amounts of clastics derived from volcanic arc. Tectonically induced oversteepening considered main cause of failure)

Fortuin, A.R., W. van der Werff & H. Wensink (1997)- Neogene basin history and palaeomagnetism of a rifted and inverted forearc region, on- and offshore Sumba, eastern Indonesia. J. Asian Earth Sci. 15, 1, p. 61-88.
(online at: http://dspace.library.uu.nl/handle/1874/19036)
(Sumba island is emerged part of SE Asian terrane, with angular unconformity between Paleogene platform carbonates and Mid-Late Miocene volcanoclastic submarine fan representing break-up stage. At least 3 km subsidence in M Miocene. High volcanic supply in M Miocene and E-M Tortonian, waning in late Tortonian and renewed supply during Messinian.Volcanoclastics sourced from S. Possible start of >4 km Sumba uplift at ~7 Ma, but most of uplift Pliocene- Recent. Emergence of Sumba probably not before 3 Ma)

Hadiwisastra, M.S. (1980)- Biostratigrafi Tersier Bawah daerah Wanokaka, Sumba Barat. J. Riset Geologi Pertambangan (LIPI) 3, 2, p. 18-26.
(online at: http://pustaka.geotek.lipi.go.id/wp-content/uploads/2016/02/Riset-Vol.3-No.2-2.pdf)
'Early Tertiary stratigraphy of the Wanokaka area, Sumba'. Late Eocene Tb shallow marine larger foraminifera (incl. Nummulites, Pellatispira) and 32 species of planktonic foraminifera (zone P16; incl. Globigerinatheka semiinvoluta, Pseudohastigerina micra, Globorotalia cerroazulensis, etc.) in marls/ limestones along road Waikabukak and Padedewatu, 2km N of Padedewatu)

Hantoro, W.S. (1993)- Neotektonik dan kurva variasi paras muka laut Pleistosen: studi teras terumbu koral terangkat di Pulau Sumba, Nusa Tenggara Timur, Indonesia. Proc.22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 159-180.

('Neotectonics and Pleistocene sea level variation curve: study of uplifted coral reef terraces on Sumba Island, East Nusa Tenggara, Indonesia'. NE Sumba island with 6 main uplifted Pleistocene reef terraces up to 475m elevation. Radiometric dating and correlation to oxygen isotope curves suggest ages up to ~1.0 Ma)

Hantoro, W.S., C. Jouannic & P.A. Pirazzoli (1989)- Terrasses coralliennes Quaternaires soulevees dans lôile de Sumba (Indonesie). Photo-Interpretation 28, 1, p. 17-34.
(‘Quaternary uplifted coral reef terraces on Sumba Island (Indonesia)’)

Inamoto, A. & M. Sayama (1993)- Hydrogeology of Sumba Island, Nusa Tenggara Timur, Indonesia. J. Japan Soc. Engin. Geol. 34, 4, p. 178-193.
(online at: www.journalarchive.jst.go.jp...) (in Japanese)

Jouannic, C.R., W.S. Hantoro, C.T. Huang, M. Fournier, R. Lafont & M.L. Ichram (1988)- Quaternary raised reef terraces at Cape Laundi, Sumba, Indonesia: geomorphological analysis and first radiometric age determinations. In: Proc. 6th Int. Coral Reef Symposium, Australia 3, p. 441-447.
(Quaternary reef terraces uplifted up to 500m in N and C Sumba (see also Pirazzoli et al. 1991, Nexer 2015)

Karmini, Mimin (1985)- Paleontological analysis of the Sawu basin, Lombok basin and Argo abyssal plain. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 205-221.
(Foraminifera from Recent seafloor box core samples collected during Snellius II expedition in Savu and Lombok basins (2000-3500m water depth) and Argo Abyssal Plain. Lysocline depth between 4500-5000m in Savu-Lombok, at ~5300m in Argo Plain)

Keep, M., I. Longley & R. Jones (2003)- Sumba and its effect on Australia's northwestern margin. In: R.R. Hillis & R.D. Muller (eds.) Evolution and dynamics of the Australian Plate. Geol. Soc. America (GSA), Spec. Paper 372 and Geol. Soc. Australia Spec. Publ. 22, p. 309-318.
(Suggest 8 Ma collision of Sumba forearc and promontory of Australian continent, resulting in Sumba uplift)

Kruizinga, P. (1939)- Two fossil Cirripedia from the Pleistocene marls of Sumba. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 12, p. 259-264.
(On barnacles on Spondylus mollusc collected by Verbeek in 1899 from Pleistocene marls near N coast Sumba)

Kusnida, D. (1992)- Stratigraphic break of the Sawu forearc basin. Bull. Marine Geol. Inst. Indonesia 7, 1, p. 1-14.
(Interpretation of shallow seismic profiles of Savu Basin, acquired by Snellius II expedition)

Laufer, F. & A. Kraeff (1957)- The geology and hydrology of West and Central Sumba and their relationship to the water-supply and rural economy. Publ. Keilmuan 33, Ser. Geol., Geol. Survey, Bandung, p. 1-48.
(Report thick, intensely folded Pre-Tertiary (Cretaceous of later authors) flysch-type slates and quartzites with possible NNW strike in S mountains of W Sumba. Cut by pre-Eocene basalt and gabbros and probably also large granodiorite massif. Unconformably overlain by Late Eocene limestones with larger forams including Pellatispira. Miocene and younger limestones probably with minor unconformity over Paleogene limestones. E Miocene Jawila volcanics. Quaternary reefal limestone terraces up to 300m above sea level)

Lytwyn, J., E. Rutherford, K. Burke & C. Xia (2001)- The geochemistry of volcanic, plutonic and turbiditic rocks from Sumba, Indonesia. J. Asian Earth Sci. 19, p. 481-500.
(Sumba underlain by Late Cretaceous- Early Oligocene volcanic arc rocks and associated turbiditic sediments, and is fragment of an oceanic island arc, not piece of Sundaland continent)

Meiser, P., D. Pfeiffer, M. Purbohadiwidjojo & Sukardi (1965)- Hydrogeological map of the isle of Sumba, scale 1:250,000. Indonesia Geol. Survey, Bandung.

Nexer, M. (2015)- Etude conjointe des reseaux de drainage et des paleocotes plio-quaternaires soulevees: exemples de lôIndonesie et du golfe Normand Breton. Doct. Thesis Universite de Caen Normandie, p. 1-365.

(online at: https://tel.archives-ouvertes.fr/tel-01258570/document)
('Joint study of the drainage systems and uplifted Pliocene-Quaternary paleocoasts: examples from Indonesia and the Gulf of Normandy-Brittany'. In French. With chapters on raised coral reef terraces of Sumba (E Indonesia) and Huon Peninsula (PNG))

Nexer, M., C. Authemayou, T. Schildgen, W.S. Hantoro, S. Molliex, B. Delcaillau, K. Pedoja, L. Husson & V. Regard (2015)- Evaluation of morphometric proxies for uplift on sequences of coral reef terraces: a case study from Sumba Island (Indonesia). Geomorphology 241, p. 145-159.
(Study of uplifted Pleistocene coral reef terraces, preserved along 2/3 of coast of Sumba island (not along most of S coast). Six main terraces, up to 30 km wide. Maximum elevations of 470m along NE coast. Uplift rates variable, between 0.10- 0.63 mm/yr)

Nishimura, S., Y. Otofuji, T. Ikeda, E. Abe, T. Yokoyama et al. (1981)- Physical geology of the Sumba, Sumbawa and Flores islands. In: A.J. Barber & S. Wiriyusono (eds.) The geology and tectonics of Eastern Indonesia, CCOP-SEATAR Mtg., Bandung 1979, Geol. Res. Dev. Centre, Spec. Publ. 2, p. 105-113.
(Major tectonic discontinuity between Sumbawa and Flores. Paleomag suggests about 60° clockwise rotation of Sumba island between Jurassic and Early Miocene. No stratigraphy/age control for their 'Jurassic mudstones' from SW Sumba (more likely Cretaceous?; HvG))

Otofuji, Y., S. Sasajima, S. Nishimura, S. Hadiwisastra, T. Yokoyama & F. Hehuwat (1980)- Palaeoposition of Sumba Island, Indonesia. In: S. Nishimura (ed.) Physics and geology of the Indonesian island arcs, Kyoto University Press, Kyoto, p. 59-66.

Otofuji, Y., S. Sasajima, S. Nishimura & F. Hehuwat (1979)- Paleomagnetic evidence for the paleoposition of Sumba Island, Indonesia. Rock magnetism and paleogeophysics, Tokyo, 6, p. 69-74.
(online at: http://peach.center.ous.ac.jp/rprep/Rock%20Magnetism%20and%20Paleogeophysics%20vol6%201979.pdf)
(Paleomagnetic work on 15 site, ranging in age from Jurassic (more likely Upper Cretaceous?; HvG) to Miocene, during which Sumba rotated CW by 59.2°. Late Jurassic paleolatitude of 25.9°S, suggests Sumba formed part of Australian continent)

Otofuji, Y., S. Sasajima, S. Nishimura, T. Yokoyama, S. Hadiwisastra & F. Hehuwat (1981)- Paleomagnetic evidence for the paleoposition of Sumba Island, Indonesia. Earth Planetary Sci. Letters 52, p. 93-100.
(Sumba underwent 59.2° CW rotation since Jurassic and 79 4 ° relative to Timor since Jurassic (Cretaceous?). Until Jurassic, Sumba and Timor situated at Australian continental margin; Sumba at paleolatitude of ~26°S ('Jurassic' rocks analyzed more likely Cretaceous?; JTvG) (similar paper to Otofuji et al. 1979, 1980))

Permanadewi, S. & I. Saefudin (1994)- Umur mutlak batuan tuf daerah pegunungan Tanadaro dan sekitarnya, Sumba, Nusa Tenggara Timur: berdasarkan metoda pentarikhan jejak belah. J. Sumber Daya Geologi 4, 34, p. 20-26.
('Absolute ages of tuffs in the Tanadaro Mts area, Sumba, E Nusa Tenggara, using fission track method'. Zircon fission track ages of 3 andesitic tuff samples from Masu Fm of C Sumba: (1) 57.3± 5.4 Ma (= ~Paleocene-Eocene boundary), (2) 49.3± 2.9 Ma (= ~E-M Eocene boundary) and (3) 45.3 ± 5.7 Ma (= M Eocene))

Pfeiffer, D. & P. Meiser (1968)- Geologische, hydrogeologische und geoelectrische Untersuchungen auf der Insel Sumba (Indonesia). Geol. Jahrbuch 86, p. 885-918.
('Geological, hydrogeological and geoelectrical investigations on the island of Sumba, Indonesia')

Pirazzoli, P.A., U. Radtke, W.S. Hantoro, C. Jouannic, C.T. Hoang, C. Causse & M. Borel Best (1993)- Quaternary raised coral reef terraces on Sumba island, Indonesia. Science 252, p. 1834-1836.
(Sequence of coral-reef terraces (6 main steps >500m wide and many substeps) near Cape Laundi, Sumba Island, between 475m elevation and sea level. Uplift rate 0.5 mm/yr. Most terraces correspond to specific interglacial stages, with oldest terrace formed 1 million years ago)

Pirazzoli, P.A., U. Radtke, W.S. Hantoro, C. Jouannic, C.T. Hoang, C. Causse & M. Borel Best (1993)- A one million-year-long sequence of marine terraces on Sumba Island, Indonesia. Marine Geology 109, p. 221-236.
(11 Pleistocene coral reef terraces at N coast Sumba Island, <1 million years old, up to 475m above sea level)

Prasetyo, H. (1994)- The tectonics of the óSunda-Bandaô forearc transition zone, eastern Indonesia. Bull. Marine Geol. Inst. Indonesia 9, 1, p. 23-47.
(Marine geophysical and geological studies of forearc area between Sumba and Timor, including field studies of accretionary wedge of Sawu Island and uplifted portion of forearc basement (Sumba Ridge) of Sumba Island. Region of transition from conventional Andean-type Indian Ocean subduction along E Sunda Trench in W to arc-continent collision along Timor Trough in E. Several major problems remain unresolved)

Reed, D.L. (1985)- Structure and stratigraphy of the eastern Sunda forearc, Indonesia. Geologic consequences of arc-continent collision. Ph.D. Thesis, Scripps Inst. Oceanography, La Jolla, University of California, p. 1-235. *(Unpublished)*
(Study of marine seismic profiles and piston cores in E Sunda fore-arc, with geologic fieldwork on Late Miocene- E Pliocene accretionary complex on Savu island. Savu with imbricated, well-indurated U Triassic-Jurassic quartzose turbidites/ deep water limestones (mainly ENE trending and WNW-dipping?) and more intensely deformed, sheared, poorly consolidated Cretaceous- Tertiary pelagic sediments (with scaly clays). Sumba Ridge best described as continental landmass (crustal thickness 24km), trapped in forearc during Miocene initiation of E Sunda arc-trench system, but rel. undeformed in Neogene. Between Sumba and Savu outflow of Pacific Ocean deep from Savu Basin water caused significant (up to 1000m?) submarine erosion on crests of ridges, with material re-deposited along Savu Thrust and Sumba Basin (mainly as muddy contourites/ drifts). Triassic limestones on Savu with Monotis salinaria, Halobia and radiolaria. U Jurassic with blocks of pillow basalts. Deformed strata on Savu never deeply buried. Blocks ('boudins'?) and scaly matrix formed by common deformation process. Opposite sense of imbrication along N and S coasts? Rel. undeformed U Miocene-Pliocene marls overlie U Miocene scaly clay of deformed section of Savu; uplifted >2km. N-directed backthrust N of Savu separates forearc basin from accretionary wedge. Refraction line across Savu Basin indicates oceanic crust)

Reed, D.L., A.W. Meyer, E.A. Silver & H. Prasetyo (1987)- Contourite sedimentation in an intraoceanic forearc system: Eastern Sunda Arc, Indonesia. Marine Geology 76, p. 223-241.
(Sedimentation in E Sunda forearc strongly influenced by vigorous deep- and bottom-water circulation. Sumba Ridge and Savu-Timor Ridge together form barrier to outflow of Pacific Ocean Deep Water from Savu Sea to E Indian Ocean. Outflow bottom currents eroded gap in sill at 1150m between Sumba and Savu. SW of gap, exposure of consolidated M Miocene- Pliocene foraminiferal chalks and oozes along Sumba Ridge suggests up to 1 km of overburden removed by currents. Eroded sediments re-deposited as muddy contourites in >1 km sediment drift in adjacent Sumba Basin. Drift forms elongated mound of reworked calcareous ooze and is bounded by moat-like channels)

Reed, D.L., E.A. Silver, H. Prasetyo & A.W. Meyer (1986)- Deformation and sedimentation along a developing terrane suture: Eastern Sunda forearc, Indonesia. Geology 14, p. 1000-1003.
(Discussion of Savu thrust, a S-dipping reverse fault thrusting Savu-Timor terrane Neogene accretionary wedge towards Sumba Ridge terrane, which is part of Banda forearc)

Rigg, J.W.D. & R. Hall (2011)- Structural and stratigraphic evolution of the Savu Basin, Indonesia. In: R. Hall et al. (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision. Geol. Soc. London, Spec. Publ. 355, p. 225-240.
(Savu Basin located in Sunda-Banda forearc at change from oceanic subduction to continent-arc collision. Interpreted to be underlain by continental crust, added to Sundaland margin in mid-Cretaceous. Before M Miocene Sumba and Savu Basin close to sea level and subsided rapidly in late M Miocene in response to extension induced by subduction rollback at Banda Trench)

Rigg, J.W.D. & R. Hall (2012)- Neogene development of the Savu Forearc Basin, Indonesia. Marine Petroleum Geol. 32, p. 76-94.

(Savu Basin records M Miocene initiation of subduction of Banda oceanic embayment, subsequent arc volcanism and Pliocene- Recent collision of Australian continent and Banda forearc. Four Neogene units: Unit 1 underlain by continental crust and Cretaceous-Paleogene arc rocks, capped by Oligocene- Lower Miocene shallow water carbonates. Subduction rollback-induced extension in M Miocene caused subsidence to depths of several km. Units 2-4 include M Miocene-Pliocene arc-derived volcaniclastic turbidites and deep water carbonates. Savu Basin little deformed, except near Savu and Roti Thrusts. Sumba Ridge elevated as Australian margin continental crust underthrust forearc to form broad flexure, tilting older units. Savu- Roti Ridge is pre-collision Banda forearc accretionary complex and Australian margin sedimentary cover and has risen >2 km since 2 Ma)

Roep, T.B. & A.R. Fortuin (1996)- A submarine slide scar and channel filled with slide blocks and megarippled *Globigerina* sands of possible contourite origin from the Pliocene of Sumba, Indonesia. Sedimentary Geology 103, p. 145-160.
(Early Pliocene deep-water sequences (~1-2 km deep) near Kambatatana, Sumba island, include slide scar which evolved into channel, >120m wide, 20m deep. Origin of the megarippled planktonic foraminiferal sand-units uncertain, but they may have been by contour currents)

Roggeveen, P.M. (1928)- Jura op het eiland Soemba. Verhandelingen Kon. Nederl. Akademie Wetenschappen, Amsterdam, 32, p. 674-676.
('Jurassic on Sumba Island'. Dutch version of paper below)

Roggeveen, P.M. (1929)- Jurassic in the island of Sumba. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 32, p. 512-514.
(online at: www.dwc.knaw.nl/DL/publications/PU00015738.pdf)
(English version of paper above. Inoceramus molluscs and fragment of an aegoceratid ammonite from S coast of W Sumba in rocks collected by Witkamp. In opinion of Kruizinga this could be Hammatoceras molukkanum, as known from Jurassic of Sula islands. Tentatively placed in U Liassic by Wanner (1931)(Other specialists deem the ammonite fragment indeterminate and the Inoceramus more likely a Cretaceous species (Van Gorsel 2012). More likely age of beds is Cretaceous according to Von der Borch et al. (1983)). Folded Mesozoic intruded by igneous rocks and unconformably overlain by Eocene (Caudri, 1934))

Roggeveen, P.M. (1932)- Abyssische und hypabyssische Eruptivgesteine der Insel Soemba. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 35, 6, p. 878-890.
(online at: www.dwc.knaw.nl/DL/publications/PU00016297.pdf)
('Abyssal and hypabyssal igneous rocks of Sumba island'. Petrographic descriptions of outcrop samples of igneous rocks collected mainly by Witkamp in Central Sumba: granite, granodiorite, diorite, porphyrite, hornfels, etc.. Igneous rocks unconformably overlain by marls and limestones with Eocene larger forams (Discocyclina; Rutten 1912), and may be of Late Mesozoic age)

Rutherford, E., K. Burke & J. Lytwyn (2001)- Tectonic history of Sumba Island, Indonesia, since the Late Cretaceous and its rapid escape into the forearc in the Miocene. J. Asian Earth Sci. 19, 4, p. 453-479.
(In Late Cretaceous- Early Oligocene Sumba was part of Great Indonesian Volcanic arc system (~86- 31 Ma). At 16 Ma Sumba torn away from relict arc and moved WSW, moving ~450 km until present position at ~7 Ma)

Rutten, L. (1912)- On orbitoids of Sumba. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 15, 1, p. 461-467.
(online at: www.dwc.knaw.nl/DL/publications/PU00012991.pdf)
(Presence of Eocene Orthophragmina (= Discocyclina) javana and O. dispansa in samples collected by Witkamp at S coast Sumba. No detailed localities, pictures (see also Caudri (1934))

Rutten, L.M.R. (1927)- Soemba, Rendjoewa, Savoe en Rotti. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 666-679.
(Review of geology of Sumba, Renjuwa, Savu and Roti islands)

Satyana, A.H. & M.E.M. Purwaningsih (2011)- Sumba area: detached Sundaland terrane and petroleum implications. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-009, p. 1-32.
(Sumba Island is microcontinental fragment in forearc of Sunda-Banda volcanic arc, here believed to be detached from SE/E Sundaland. Paleogene stratigraphy of Sumba similar to S Sulawesi, with arc volcanics, Eocene low-latitude Pellatispira larger foram fauna, etc.)

Satyana, A.H. & M.E.M. Purwaningsih (2011)- Multidisciplinary approaches on the origin of Sumba terrane: regional geology, historical biogeography, linguistic-genetic coevolution and megalithic archaeology. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-018, 28p.
(Sumba continental terrane came from E/SE margin of Sundaland based on stratigraphy, geochronology-geochemistry of magmatic rocks, paleomagnetism, and isotope geology. Sumba Paleogene stratigraphy similar to S Sulawesi, magmas characteristic of island arc at Sundaland margin. Late Cretaceous Lasipu Fm volcanics with Pb-Nd isotope characteristics suggesting affinities with Sundaland. Sumba Eocene with low-latitude 'Assilina-Pellatispira' Sundaland larger forams, no higher latitude Australian 'Lacazinella', suggesting Sumba shared closer biotic relationship with Sundaland before dispersal)

Satyana, A.H. & M.E.M. Purwaningsih (2012)- New look at the origin of the Sumba Terrane: multidisciplinary approaches. Berita Sedimentologi 25, p. 26-34.
(online at: http://www.iagi.or.id/fosi/files/2012/12/BS25-Lesser_Sunda_Final_small.pdf)
(Extensive review of geology of Sumba island)

Simandjuntak, T.O. (1993)- Tectonic origin of Sumba Platform. J. Geologi Sumberdaya Mineral 3, 22, p. 10-19.
(Geology of Sumba different from adjacent Neogene Banda volcanic arc islands and allochthonous Paleozoic microcontinents in Banda Sea region. Cretaceous- Miocene stratigraphy of Sumba most similar to SW arm of Sulawesi. Oldest sediments in outcrop are thick U Cretaceous flysch with volcanics series, very similar to Latimojong Fm of S Sulawesi and Pitap Fm of SE Kalimantan. Sumba probably detached from Sulawesi, possibly from N part of Bone Bay or from Walanae Depression and displaced S before development of Banda volcanic arc. May also have been detached from SE margin of Sundaland. Deepening of facies suggest detachment of Sumba took place in M Miocene)

Siregar, D.A. & D. Setyagraha (1995)- Pentarikhan radiokarbon terhadap teras batugamping Waingapu, Sumba, Nusatenggara Timur. J. Geologi Sumberdaya Mineral 5, 51, p. 16-22.
('Radiocarbon analysis of the Waingapu limestone terraces, Sumba, E Nusatenggara'. Sumba NE coast near Waingapu with 14 Quaternary uplifted coral reef terraces. Radiocarbon dating suggests ages between 5660 ± 260 BP and 1650 ± 130 BP. During this time two phases of marine transgression and regression)

Soeria-Atmadja, R., S. Suparka, C. Abdullah, D. Noeradi & Sutanto (1998)- Magmatism in western Indonesia, the trapping of the Sumba Block and the gateways to the east of Sundaland. J. Asian Earth Sci. 16, 1, p. 1-12.
(Similarities in Late Cretaceous-Paleogene stratigraphy and calc-alkali magmatism between Sumba, S Sulawesi and SE Kalimantan suggest Sundaland origin for all these areas. Southward migration of Sumba to frontal arc position of Sunda-Banda arc since Late Cretaceous-Paleocene)

Spence, W. (1986)- The 1977 Sumba earthquake series: evidence for slab pull acting at a subduction zone. J. Geophysical Research 91, p. 7225-7239.
(Focal mechanism analysis of 1977 earthquake data under Sumba suggest normal faulting in oceanic lithosphere, probable evidence for slab pull of subducting plate)

Toothill, S. & D. Lamb (2009)- Hydrocarbon prospectivity of the Savu Sea Basin. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-013, p. 657-668.
(Seismic surveys in Savu basin suggest potential for hydrocarbons. Up to 4.8 km of sediment; no wells drilled. Basin origin complex: four to five phases of rifting and uplift and erosion in region, and overprinted in recent geological time by collision tectonics. Significant number of gas chimneys and bright amplitudes)

Umbgrove, J.H.F. (1946)- Tertiary corals from Sumba (East Indies). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 13, p. 393-398.
(Miocene and Eocene corals (mainly solitary species; Phyllangia, Hydnophyllia, Goniastrea, Diploastaea) from Witkamp collection from W Sumba)

Van der Werff, W. (1995)- Cenozoic evolution of the Savu Basin, Indonesia: forearc basin response to arc-continent collision. Marine Petroleum Geol. 12, 3, p. 247-262.
(Savu Basin initial E Miocene subsidence of outer forearc basin and development of M-Late Miocene volcanic 'proto' arc in S of basin resulted from Late Oligocene-E Miocene E-ward propagation of Java-Timor Trench. N of accretionary prism, forearc basement flexed down and reshaped into trenchward- dipping backstop that facilitates backthrusting of accretionary prism. Southern forearc basement probably acted as barrier against compression. Thickness of continental basement critical in response of forearc- continent collision. Savu Basin responded to underthrusting of continental crust by reactivation of basement ridges. This resulted in differentiation of forearc basin into extinct and uplifted Miocene S Savu Basin and Pliocene-Recent active N Savu Basin. Late Miocene-Recent uplift of large segments of outer forearc and subsidence of N Savu Basin)

Van der Werff, W. (1995)- Structure and morphotectonics of the accretionary prism along the Eastern Sunda-Western Banda Arc. J. Southeast Asian Earth Sci. 11, p. 309-322.
(Forearc region near Sumba- Savu variation in structure related to incipient collision with Australia. Arc-trench system changes from ridged S of Bali- Lombok- Sumbawa to sloped S of Sumba. E of Sumba, accretionary wedge backthrust over forearc basin, incorporating forearc sediments and basement. Accretionary wedge probably little of sediment subducted. Decrease in width of prism from Bali to Sumbawa corresponds to E-ward younging trend of arc-trench system from Late Oligocene to E Miocene. S of Sumba width of prism increases considerably, due to accretion of thick continental margin carbonates which deform by thrust-bounded folds. Buoyancy of partially subducted marginal Scott plateau increases basal shear stresses, adding to growth of large accretionary wedge. Further E, subduction of thick continental crust results in even higher basal shear stresses distributed through accretionary wedge, causing backthrusts and internal deformation, leading to shortening and thickening of wedge)

Van der Werff, W. (1996)- Forearc development and early orogenesis along the eastern Sunda/ western Banda arc (Indonesia). Ph.D. Thesis Vrije Universiteit, Amsterdam, pp. 1-311. *(Unpublished)*
(Collection of 7 previously published 1992-1996 papers, mainly on Snellius II seismic and land program in E Sunda- W Banda fore arc areas)

Van der Werff, W., D. Kusnida, H. Prasetyo & T.C.E. van Weering (1994)- Origin of the Sumba forearc basement. Marine Petroleum Geol. 11, 3, p. 363-374.
(Basement structures in E Sunda/ W Banda forearc suggests continuity between Sumba and N Timor. Structures trend E-W in W, gradually change into NE-SW trends in E. Major NE-SW trending discontinuity W of Sumba between 117° 30' and 118° 30' E marks transition between intraoceanic volcanic arc system in W and volcanic arc-continent collision zone in E. Extent of Sumba basement suggests either common (Late Jurassic) rift/drift history for Sumba and N Timor or (E Miocene) magmatic welding of two continental fragments of different origin, resulting in structural continuity between two microplates)

Van der Werff, W., H. Prasetyo & T.C.E. van Weering (1991)- The accretionary wedge South of Sumba Timor: an accreted terrane in the process of slivering? Proc. Int. Seminar on Geodynamics of fore-arc sliver plate, Indon. Assoc. Geophys. (HAGI), p. 55-60.

Van der Werff, W., H. Prasetyo, D. Kusnida, & T.C.E. van Weering (1994)- Seismic stratigraphy and Cenozoic evolution of the Lombok forearc basin. Marine Geology 117, p. 119-134.
(Lombok Basin probably underlain by thinned rifted continental crust. Five Cenozoic seismostratigraphic sequences (1) Paleogene synrift deposits, predating initiation of convergent margin; (2) and (3) two phases of evolution of accretionary prism, between Late Oligocene and M Miocene; (4) and (5) slope front fill deposits reflecting volcanic activity and tectonic uplift of magmatic arc from M Miocene onwards. By Late Miocene, increased convergence between subducting Indian and overlying Asian plates resulted in stronger mechanical

coupling, expressed in southern forearc basin by folding of oldest basin fill. Present activity governed by Late Pliocene collision of accretionary prism with Scott marginal and Roo Rise oceanic plateaus, resulting in uplift of outer-arc ridge and southern part of forearc basement)

Van Gorsel, J.T. (2012)- No Jurassic rocks on Sumba? Berita Sedimentologi 25, p. 35-37.
(Identification of an ammonite fragment from SW Sumba as M Jurassic Hammatoceras by Roggeveen (1929) is highly questionable, and Cretaceous age is more likely. Oldest proven rock age on Sumba is thus Cretaceous)

Van Weering, T.C.E., D. Kusnida, S. Tjokrosapoetro, S. Lubis, P. Kridoharto & S. Munadi (1989)- The seismic structure of the Lombok and Savu forearc basins, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 251-262.
(Four seismic sequences in Lombok and Savu forearc basins, separated by unconformities (Late Oligocene, mid-Miocene and Pliocene S of Java). Upper Miocene- Pleistocene forearc fill turbidite-dominated. Faulting strongest in E Lombok Basin; growth faults, shale diapirs and mud volcanoes reflect intensity of deformation caused by merge of Sunda and Banda Arc collision systems. Tilted and uplifted basement ridges W of Sumba separate turbidite filled sub-basins from forearc basin. Sumba was in present position before onset of Sunda - Banda Arcs subduction system and initial Lombok and Savu forearc basins were connected)

Von der Borch, C.C., A.E. Grady, S. Hardjoprawiro, H. Prasetyo & S. Hadiwisastra (1983)- Mesozoic and Late Tertiary submarine fan sequences and their tectonic significance, Sumba, Indonesia. Sedimentary Geology 37, p. 113-132.
(Sumba Cretaceous with tropical Tethyan mollusc fauna, volcanoclastic component and andesite dykes. Part of major submarine fan complex with turbidite flow directions to N240°, suggesting paleoslope to SW (restoring ~90° of clockwise rotation (Wensink 1997) would become paleodip to SE, which would fit well with Cretaceous position at SE margin of Sunda Shelf; JTvG)

Vorkink, M. (2004)- Incipient arc-continent collision: structural analysis of Savu Island, Indonesia. Masters Thesis, Brigham Young University, Utah, p. 1-87.
(online at: www.geology.byu.edu/wp-content/uploads/2013/03/2004-Vorkink-Michael-W.pdf)
(Savu island is uplifted part of Banda fore-arc accretionary wedge, W of Timor. Consists of N and S verging thrust sheets of Late Triassic- M Jurassic Australian continental margin sediments, rimmed by discontinuous melange belt. Pillow basalts in Jurassic Wai Luli Fm. Detachment probably in Triassic Lower Babulu/ upper Aitutu Fm, at depth of ~2600m. Foraminifera in syn-orogenic deposits of Savu suggest water depths of 1-1.5 km at 1.8 Ma)

Vorkink, M.W. & R.A. Harris (2004)- Tectonic development of the incipient Banda Arc-continent collision: geologic and kinematic evolution of Savu Island, Indonesia. Abstracts with Programs Geol. Soc. America 2004 Annual Mtg., Denver, 36, 5, p. 319. *(Abstract only)*
(Savu both N and S-verging thrust sheets of Late Triassic- M Jurassic distal NW Australian continental margin units, rimmed by discontinuous melange of forearc basement fragments and synorogenic units. Pillow basalt in Jurassic Wai Luli Fm. N-verging folds move back of accretionary wedge over S Savu forearc basin. S-verging thrust sheets are bulk of island and well-exposed in S Savu. Detachment for thrust sheets in Triassic Lower Babulu or upper Aitutu Fms at ~2600m depth. Maximum age for initiation of collision 4.0 Ma. Foraminifera in syn-orogenic units indicate outer arc was at 1.0-1.5 km below sea level at 1.8 Ma, a surface uplift rate of ~1 mm/yr. At this rate, it takes 3.2-5.0 Ma to uplift these from pre-collisional depth of 3.5-4.0 km)

Wensink, H. (1991)- The paleoposition of the island of Sumba, derived from paleomagnetic data. In: E.P. Utomo, H. Santoso & J. Sopaheluwakan (eds.) Proc. Silver Jubilee Symposium on the Dynamics of subduction and its products, Yogyakarta 1991, Indonesian Inst. Sciences (LIPI), p. 238-244.

Wensink, H. (1994)- Paleomagnetism of rocks from Sumba: tectonic implications since the Late Cretaceous. J. Southeast Asian Earth Sci. 9, p. 51-65.
(online at: https://dspace.library.uu.nl/handle/1874/19116)

(Overview of Sumba geology. In Late Cretaceous Sumba was at 8° (not sure if N or S, but both demonstrate Sumba was not part of Australia at that time). In this paper concluded to various CCW rotations between Late Cretaceous and Miocene, but re-interpreted to more reasonable CW rotations in Wensink 1997)

Wensink, H. (1997)- Palaeomagnetic data of Late Cretaceous rocks from Sumba, Indonesia; the rotation of the Sumba continental fragment and its relation with eastern Sundaland. Geologie en Mijnbouw 76, p. 57-71.
(Paleomagnetic studies on Sumba continental fragment. Tanadaro granodiorite (65 Ma) paleolatitude 8.3° S. E Sundaland with Borneo, W and S Sulawesi, and Sumba formed one continental unit in Late Mesozoic, most likely attached to SE Asian mainland. Borneo and W and S Sulawesi large CCW rotations since Jurassic (45° in Cretaceous, 45° in Paleogene). Sumba microcontinent detached from E Sundaland soon after Late Cretaceous. Paleomagnetic data show Sumba underwent CW rotations of up to 96° (CW 53° between 82-65 Ma; 38° between 65-37 Ma; 9° between Late Eocene-Late Miocene and ~4° CCW since Late Miocene- E Pliocene). E Sundaland and Sumba close to equator since Jurassic)

Wensink, H. & M.J. van Bergen (1995)- The tectonic emplacement of Sumba in the Sunda-Banda Arc: paleomagnetic and geochemical evidence from the Early Miocene Jawila volcanics. Tectonophysics 250, p. 15-30.
(online at: http://dspace.library.uu.nl/handle/1874/19118)
(Paleomag of E Miocene Jawila arc volcanics suggests very similar position to present-day Sumba. Original position of Sumba in Late K- Paleocene probably 18° N; drift and rotation completed before Mid Miocene? Early Miocene arc volcanics on Sumba suggest island arc and imply older arc S of modern arc (= same as Java 'Old Andesites'?; JTvG), or was within E Sunda arc between Sumbawa and E Flores and drifted S. (NB: Fortuin et al. (1997) and Abdullah et al. (2000) suggest Jawila Volcanics Late Eocene- E Oligocene age)

Witkamp, H. (1912)- Een verkenningstocht over het eiland Soemba- part 1. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 29, p. 744-775.
('A reconnaissance trip across the island of Sumba'. First of four parts of geographic-geologic reconnaissance of Sumba island, which previously had only been visited by Verbeek (1908) in 1899. Not much on geology)

Witkamp, H. (1913)- Een verkenningstocht over het eiland Soemba- part 2. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 30, p. 8-27.
('A reconnaissance trip across the island of Sumba'; part 2)

Witkamp, H. (1913)- Een verkenningstocht over het eiland Soemba- part 3. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 30, p. 484-505.
('A reconnaissance trip across the island of Sumba'; part 3)

Witkamp, H. (1913)- Een verkenningstocht over het eiland Soemba- part 4. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 30, p. 619-637.
('A reconnaissance trip across the island of Sumba'; part 4)

VII.4. Timor, Roti, Leti, Kisar *(incl. Timor Leste)*

Aben, F.M. M.J. Dekkers, R.R. Bakker, D.J.J. van Hinsbergen, W.J. Zachariasse, G.W. Tate, N. McQuarrie, R. Harris & B. Duffy (2014)- Untangling inconsistent magnetic polarity records through an integrated rock magnetic analysis: a case study on Neogene sections in East Timor. Geochem. Geophys. Geosystems 15, 6, p. 2531-2554.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2014GC005294/epdf)
(Magnetic polarity analysis of latest Miocene-Pliocene deep-marine siliciclastics and limestones at Viqueque and Cailaco Rivers, Timor Leste, shows (1) magnetic carriers mainly greigite and magnetite; (2) paleomagnetic directional analysis yields magnetic polarity patterns inconsistent with biostratigraphic constraints. Detrital magnetite suite yields largely viscous remanence signals and deemed unsuited; greigite suites more reliable and giving revised polarity pattern of Viqueque latter section more consistent with biostratigraphy)

Archbold, N.W. & S.T. Barkham (1989)- Permian brachiopoda from near Bisnain village, West Timor. Alcheringa 13, p. 125-140.
(Permian brachiopoda from outcrops of calcarenites-shales attributed to Maubisse Fm near Bisnain, W Timor. Assemblage correlative to late Sakmarian (E Permian), temperate climate, Callytharra Fm of W Australia)

Archbold, N.W. & P.R. Bird (1989)- Permian brachiopoda from near Kasliu Village, West Timor. Alcheringa 13, p. 103-123.
(Permian brachiopoda from outcrops of Maubisse Fm volcanoclastics near Kasliu, W Timor. Assemblage probably Chidruan age and correlative of classic Late Permian 'Tethyan' Basleo and Amarassi faunas)

Astjario, P. & S. Tjokrosapoetro (1986)- Kecapatan pengangkatan Pulau Timor di zaman Kuarter. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta 1985, p. 31-34.
('Uplift rates of Timor island in the Quaternary'. Uplift rates 2-3mm/ year. No figures)

Ati, E.M. (2012)- Geologi dan karakteristik endapan mangan tipe sedimen di daerah Supul, Kab. Timor Tengah Selatan, Provinsi Nusa Tenggara Timur. Thesis S2, Gadjah Mada University, Yogyakarta, p. 1-197. *(Unpublished; see also Imam et al., 2012)*
('Geology and characteristics of sedimentary-type manganese deposits in the Supul area, south Central Timor district, …'. Sedimentary manganese layers in Supul area interbedded with red-brown deep sea claystone. Spatial linkage with mud volcano intrusion. Manganese layers 2mm- 4cm thick and highly deformed. Primarily manganite, also pyrolusite, lithiophorite, etc. Manganese ores as nodules and manganese layers)

Audley-Charles, M.G. (1965)- The geology of Portuguese Timor. Ph.D. Thesis Imperial College, University of London, p. 1-401.
(online at: https://spiral.imperial.ac.uk/bitstream/10044/1/17036/2/Audley-Charles-MG-1965-PhD-Thesis.pdf)
(Published in 1968. Detailed descriptions of field geology of East Timor. Lolotoi Metamorphic Complex is considered to be 'klippen', resting everywhere on a thrust plane and strongly eroded surface of folded Permian and Mesozoic rocks; age of thrusting possibly Early Eocene ('Timorean orogeny'). Base Lower Miocene Cablac Lst major unconformity. Bobonaro Scaly Clay of M-L Miocene (Tf) age, not tectonic unit but huge gravity slide, associated with overthrusting of large masses of mainly Permian strata. Major orogenic phase Middle Miocene. Etc.)

Audley-Charles, M.G. (1965)- A Miocene gravity slide deposit from East Timor. Geol. Magazine 102, p. 267-276.
(E Timor formation of unbedded scaly bentonitic clay with scattered exotic blocks and smaller fragments formed by submarine sliding of unstable clay mass from area N of Timor under influence of gravity, associated with the emplacement of large overthrusts. Proposed to call it Bobonaro Scaly Clay)

Audley-Charles, M.G. (1965)- A geochemical study of Cretaceous ferromanganiferous sedimentary rocks from Timor. Geochimica Cosmochimica Acta 29, p. 1153-1173.

(*Manganese nodules nodules from Cretaceous Wai Bua Fm in W Timor very similar to Pacific deep sea nodules; nodules from E Timor perhaps shallower ? M Eocene Seical Fm ferromanganiferous, radiolarian-bearing pelagic limestones from N coast E Timor also look 'oceanic')*

Audley-Charles, M.G. (1965)- Some aspects of the chemistry of Cretaceous siliceous sedimentary rocks from Eastern Timor. Geochimica Cosmochimica Acta 29, 11, p. 1175-1192.
(Chemical analysis of Cretaceous chert and radiolarites from E Timor indicate deposition in bathypelagic environment, paucity of land derived detritus, and analogy with modern biogenous deep-sea radiolarian ooze)

Audley-Charles, M.G. (1967)- Greywackes with a primary matrix from the Viqueque formation, Upper Miocene-Pliocene, Timor. J. Sedimentary Petrology 37, 1, p. 5-11.
(Silt-clay matrix of post-orogenic Mio-Pliocene Viqueque Fm is primary detrital deposit, not result of diagenesis of sand grains. Basal conglomerates contain metamorphic and volcanic rocks as well as Triassic limestone)

Audley-Charles, M.G. (1967)- Petrology of a Lower Miocene polymict intracalcirudite from Timor. Sedimentary Geology 1, p. 247-257.
(Base E Miocene Cablac Limestone is unconformity: polymict conglomerate, incl. variety of carbonate rocks, volcanics, Cretaceous deep water carbonates and cherts, Triassic sandstones, etc.)

Audley-Charles, M.G. (1968)- The geology of Portuguese Timor. Mem. Geol. Soc. London 4, p. 1-76.
(Originally Ph.D. Thesis University of London, 1965. Classic E Timor study. Oldest dated rocks Lower Permian age. Metamorphic rocks interpreted as probably pre-Permian. Most formations autochthonous. Four formations completely allochthonous: Lolotoi Complex, Aileu Fm, Maubisse Fm and Bobonaro Scaly Clay. Bobonaro Scaly Clay emplaced as submarine gravity slide, and unlike other allochthonous formations does not rest on thrust-plane. 'Autochthonous' Aitutu Fm up to 1000m thick with rich, mainly Carnian-Norian faunas)

Audley-Charles, M.G. (1972)- Cretaceous deep-sea manganese nodules on Timor: implications for tectonics and olistostrome development. Nature Physical Sci. 240, 102, p. 107-139.
(Cretaceous manganese nodules of W Timor, first described by Molengraaff, resemble deep-sea nodules of modern oceans. Occur with micronodules in red clay similar to deep-sea red clays. Chemistry and physical characters suggest deposition on ocean floor, now at ~480m above sea level ('Maubisse seamounts' of Tethys Ocean, incorporated in Bobonaro melange))

Audley-Charles, M.G. (1973)- Paleoenvironmental significance of chert in the Franciscan Formation of western California: discussion concerning the significance of chert in Timor. Geol. Soc. America (GSA) Bull. 84, p. 363-368.
(Discussion of Chipping (1971) paper, who argued that cherts in Timor (following Grunau 1965) are 'important constituent' of melange and reflect subduction of oceanic crust beneath continental crust. However, chert is relatively insignificant in Timor melange and no evidence of subduction of oceanic crust below continental crust in Timor region since Early Permian. Chert in Timor reflects lack of supply of coarse terrigenous detritus and formed above sedimentary sequence on continental crust close to outer margin of continental slope)

Audley-Charles, M.G. (1981)- Geometrical problems and implications of large-scale overthrusting in the Banda arc- Australian margin collision zone. In: K. McClay & N.J. Price (eds.) Thrust and nappe tectonics, Geol. Soc. London, Spec. Publ. 9, p. 407-416.
(Geometrical problems in structural history interpretion of Australia-Banda Arc collision zone (mainly Timor area): (1) apparent absence of subduction trench and accretionary arc-trench gap in Banda Arc; (2) location of surface trace of Benioff zone before collision; (3) history of Benioff zone after Pliocene oceanic trench was destroyed; (4) relationship of developing fold- thrust belt to pre-collision geometry of Australia-New Guinea continental margin; (5) apparent absence of continental slope and rise in N Australia collision zone; (6) relationship of crystalline basement of Outer Banda Arc to cover rocks and (7) tectonic significance of apparent continuity of stratigraphically and structurally different Sunda and Banda Arcs. Australia- Banda arc collision associated deformation, represented by folding-imbrication of Australian continental rise sediments of Outer

Banda Arc with emplacement of overthrust exotic sheets, was accomplished in 2 My. Geometrical considerations suggest Benioff zone and most of ~200 km wide arc-trench gap were overridden by Australian lithospheric plate during continued plate convergence of last 3 My. Banda Arc fold-thrust belt developed in proximal continental rise deposits at foot of Australian continental slope)

Audley-Charles, M.G. (1986)- Timor-Tanimbar Trough: the foreland basin to the evolving Banda orogen. In: P.A. Allen & P. Homewood (eds.) Foreland Basins, Int. Assoc. Sedimentologists (IAS), Spec. Publ. 8, p. 91-102.

Audley-Charles, M.G. (1986)- Rates of Neogene and Quaternary tectonic movements in the Southern Banda arc based on micropalaeontology. J. Geol. Soc. London 143, p. 161-175.
(Outer Banda Arc composed of highly deformed sediments that accumulated at Australian continental margin. Dating of onset of folding/uplift of Timor, from deep submarine position at end Neogene nappe emplacement, to mountains now 3 km high, indicates post-collision uplift rate initially 3 mm/yr, then slowed to ~1.5 mm/yr. Where Australian continental margin meets E end of present Java Trench Australian margin has overridden Trench in Timor region by 240 km. After nappe emplacement shortening of continental crust migrated towards Australian continent and shelf became involved in imbrication with shortening of cover rocks between nappes and present shelf edge amounting to ~40 km during last 2 Ma)

Audley-Charles, M.G. (1990)- Triassic Aitutu Formation of Timor, Indonesia. In: Triassic biostratigraphy and paleogeography of Asia, ESCAP Atlas of Stratigraphy IX, Min. Res. Dev. Ser. 59, U.N., New York, p. 11-15.
(Shortened version from Audley-Charles (1968). Due to structural complexity and generally poor fossils, hard to do detailed stratigraphic studies. Deep marine Carnian- Norian Aitutu Fm thickness ~1000m, probably unconformable over Permian limestones. Basal series dark Tallibellis Mb mudstones, probably Norian age, overlain by Aitutu Fm radiolarian calcilutites (80%)/ shales (15%)/ calcarenites (5%), radiolarites, bituminous rocks with Halobia and Daonella. Top Aitutu Fm unconformable below E Jurassic Wai Luli Fm)

Audley-Charles, M.G. (2011)- Tectonic post-collision processes in Timor. In: R. Hall et al. (eds.) The SE Asian gateway: history and tectonics of Australia-Asia collision, Geol. Soc. London, Spec. Publ. 355, p. 241-266.
(Australian continental margin collided with Asian fore-arc at 4 Ma, transforming Banda Trench into Timor fold-thrust belt. Tectonic Collision Zone (TCZ) progressively filled by two Australian continental upper crust mega-sequences. Slowing subduction of Australian sub-crustal lithosphere after ~2.5 Ma led to uplift of TCZ that raised Timor 3 km above sea level. Asian Banda fore-arc deformation linked to ~30 km SE-wards rollback of subducting Australian lithosphere. Two Asian fore-arc nappes (Banda, Aileu-Maubisse) thrust S-wards from Banda fore-arc onto older of two highly deformed Australian continental margin upper crust mega-sequences. Wetar Suture created as thrust at base of Australian partially detached continental lower crust propagated into Asian fore-arc)

Audley-Charles, M.G. & A.J. Barber (1976)- The significance of the metamorphic rocks of Timor of the Banda arc, Eastern Indonesia. Tectonophysics 30, p. 119-128.
(All metamorphic rocks in Timor allochthonous. Three groups: lustrous slate, amphibolite-serpentinite, and granulite-amphibolite-greenschist complex. Granulite facies meta-anorthosite in Timor must have originated near continental mantle-crust boundary and may represent slices of ancient Asian continental basement. Metamorphic rocks of Seram remarkably similar to those of Timor. Overthrust directions of metamorphic rocks in Timor is S-ward, in Seram N-ward. Opposite thrusts may be explained in terms of Banda Arc acquiring sinuosity after emplacement of metamorphic rocks)

Audley-Charles, M.G., A.J. Barber & D.J. Carter (1979)- Geosynclines and plate tectonics in Banda Arcs, Eastern Indonesia: Discussion American Assoc. Petrol. Geol. (AAPG) Bull. 63, p. 249-252.
(Discussion of Crostella (1977) paper on Timor geology)

Audley-Charles, M.G. & D.J. Carter (1972)- Palaeogeographical significance of some aspects of Palaeogene and Early Neogene stratigraphy and tectonics of the Timor Sea region. Palaeogeogr. Palaeoclim. Palaeoecology 11, p. 247-264.

(‘Autochthonous’ Early Miocene Cablac limestones unconformable on folded Early Eocene carbonates, which unconformably overlie metamorphic schists, implying Paleocene and ?Late Eocene- Oligocene? orogenic phase on Timor. Four Eocene facies on Timor, incl. Late Eocene limestones with Pellatispira and deep-water facies and volcanoclastics, all different from NW Australian Shelf and Timor Trough, where most of Tertiary is deepwater carbonate. Cretaceous- M Miocene paleogeography)

Audley-Charles, M.G. & D.J. Carter (1974)- Petroleum prospects of the southern part of the Banda Arc, eastern Indonesia. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Techn. Bull. 8, p. 55-70.
(Mainly overview of geology of Timor, with comments on oil seeps and prospectivity of island)

Audley-Charles, M.G. & R. Harris (1990)- Allochthonous terranes of the Southwest Pacific and Indonesia. Philos. Trans. Royal Soc. London 331, p. 571-587.
(Timor is deformed Australian margin, overridden by allochthonous nappes. Lowest is ‘Lolotoi metamorphics’- ‘Palelo Arc’ (basal metamorphics, Cretaceous-Eocene arc volcanics and marine sediments, unconformably overlain by mid-Eocene-Early Miocene carbonates; similar succession in Sumba; thrusted over Australian margin in latest Miocene). Second exotic terrane is Maubisse Permo-Triassic limestone with pillow basalts; supposedly most distal part of rifted Australian margin. Third terrane is ‘supra-subduction zone’ Ocussi ophiolite, now being thrust over N Timor margin)

Audley-Charles, M.G. & R. Harris (1990)- Allochthonous terranes of the Southwest Pacific and Indonesia. Philos. Trans. Royal Soc. London A331, p. 571-587.
(Mainly on Timor island. Deformed Australian margin, overridden by three allochthonous nappes)

Audley-Charles, M.G. & J.S. Milsom (1974)- Comment on ôPlate convergence, transcurrent faults, and internal deformation adjacent to southeast Asia and the western Pacificö. J. Geophysical Research 79, 32, p. 4980-4981.
(online at: http://searg.rhul.ac.uk/pubs/audley-charles_milsom_hamilton_1974%20discussion%20of%20Fitch%20Weber%20deep.pdf)
(A&M suggest Timor Trough and its eastward extensions are 'downbuckle in continental crust, with limited underthrusting', not surface trace of subduction zone. See also reply by Fitch and Hamilton (1974), who still do interpret this as subduction zone that continues East uninterrupted from Java Trench, based in part on Shell Group seismic profiles across N side of Timor Trough showing large-scale S-ward directed overthrusts and imbrications)

Aulia, D., S.H. Sinaga, R. Adiarsa, F. Alôayubie, I.B. Arindra, F. Nikmata & I. Rodelian (2011)- Petrology and provenance of sandstone from Mesozoic sequence Soe-Kapan Block, West Timor, NTT. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11- SG-034, 12p.
(Sandstones (lithic arenites) from Soe-Kapan Block, SW Timor: Permian Bisane Fm (quartz 45-57%, feldspar 9-13%, lithic fragments 9-19% (andesite, diorite, carbonate, sandstone, chert, schist and phyllite) and Triassic Aitutu Fm (quartz 31-72%, feldspar 9-39%, lithics 5-21%). Most likely provenance recycled orogen. Flute casts in Aitutu Fm indicate dominant NW to SE transport directions)

Bachri, S. (1995)- The origin of the Aileu and Maubisse Formations in the East Timor area, Indonesia. In: J. Ringis (ed.) Proc. 31st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Kuala Lumpur 1994, 2, p. 232-241.
(Aileu Fm metamorphics at N coast of E Timor decrease in metamorphic grade in S direction and grade into both Permian Maubisse Fm and Jurassic Wai Luli Fm, suggesting it is composed of metamorphosed Permian and Jurassic NW Australian passive margin sediments)

Bachri, S. (2004)- The relationships between the formation of the multi-genesis chaotic rocks and the Neogene tectonic evolution in Timor. J. Sumber Daya Geologi 14, 3, p. 94-100.
(Chaotic rocks of Bobonaro Complex of Timor occupy 40% of Timor island. Composed of scaly matrix with exotic blocks of Permian- Quaternary(?) age. Scaly clay matrix rich in deep marine foraminifera, varying in age from Triassic, Mesozoic and Late Cretacous. Generated in multiple ways: mainly sedimentary olistostrome,

less common tectonic melange and shale diapirs. Tectonic melange formed since N-dipping subduction in Paleogene. Arc-continent collision since E Neogene, with shale diapirs and olistostrome at beginning of collision. Olistostrome may have covered most of tectonic melange, which is probly older. After subduction ceased in post-Neogene shale diapirism continued)

Bachri, S. (2008)- Formasi Maubisse dan Aileu di bagian Barat Timor Leste dalam kerangka tektonostratigrafi Pulau Timor. J. Sumber Daya Geologi 18, 5, p. 281-289.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/254/234)
('The Maubisse and Aileu Formations in the west of East Timor, in the framework of Timor tectonostratraphy'. Position of Maubisse and Aileu Fms in Timor Leste controversial, but tendency to place them in para-autochthonous sequence. Formations transitional relationships with overlying para-autochthonous Wailuli Fm. Paleontological evidence indicates Maubisse Fm derived from Australian continent, and related Aileu Fm was located on NW flank of Australia until Neogene arc-continent collision event)

Bachri, S. (2011)- Tektonostratigrafi Busur Banda dengan referensi bagian barat Timor Leste dan bagian timur Pulau Seram. J. Sumber Daya Geologi 21, 2, p. 53-62.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/135/132)
('Tectonostratigraphy of the Banda Arc, with reference to the western part of Timor Leste and the eastern part of Seram'. Timor and Seram similar parts of Banda Outer Arc collision zone between Australia NW Shelf and Banda Arc subduction system. Three tectonostratigraphic sequences of differents origins: (1) para-autochthonous sequence, derived from Australia; (2) Banda forearc sequence (allochthonous sequence), nappe structures overthrust on para-autochthonous sequence; (3) autochthonous sequence unconformably over previous sequences. Bobonaro olistostrome unit of Timor Island can be compared with Salas Complex on Seram. Lolotoi metamorphic complex on Timor Island can be correlated with Kobipoto Complex on Seram Island, forming basement of para-autochthonous sequence)

Bachri, S., B. Hermanto & E. Partoyo (1995)- Genesa kompleks Bobonaro di Timor Timur. J. Geologi Sumberdaya Mineral 5, 45, p. 17-22.
('Genesis of the Bobonaro Complex in East Timor'. Bobonaro Complex of Timor multiple genesis:(1) mainly deep marine M Pliocene olistostromal deposits, (2) minor tectonic melange, and (3) minor part formed by shale diapirism and mud volcano activity. Matrix with planktonic foraminifera suggest age range within Late Miocene- E Pliocene (zones N14-N19) and in deep marine setting based on benthic foraminifera like Planulina wuellerstorfi, Favocassidulina, etc. Overlying Viqueque Fm marls with Late Pliocene- E Pleistocene (N21-N22) planktonics)

Bachri, S. & A.K. Permana (2015)- Tektonostratigrafi cekungan Timor di bagian barat Pulau Timor. J. Geologi Sumberdaya Mineral 16, 2, p. 79-91.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/43)
('Tectonostratigraphy of Timor Basin in Western Timor'. Brief review of W Timor tectonostratigraphy)

Bachri, S. & R.L. Situmorang (1994)- Geological map of the Dili Sheet, East Timor, Scale: 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of western part of Timor Leste, With Late Miocene (Bobonaro complex)- Pliocene-Pleistocene Autochthonous, E Miocene Allochthonous (Cablac Lst, on Lolotoi Metamorphics and Maubisse Fm) and Permian- Eocene 'Australia margin' Para-autochthonous units. Area S of Dili mainly Permian Aileu Fm metamorphics over Permian Maubisse Fm)

Baik, R.N. & K. Sahudi (1993)- Play concepts of hydrocarbon exploration in East Timor. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 913-924.

Bakhtiar, A. (1984)- Geologi daerah Kapan, Kabupaten Timor Tengah Selatan, Nusa Tenggara Timur. Ph.D. Thesis, Inst. Teknologi Bandung (ITB), p. 1-425. *(Unpublished)*
(The geology of the Kapan area, Kapubaten S Central Timor, NTT province)

Bakker, R.R. (2011)- Surface uplift in worldôs youngest orogen, can crustal thickening explain the uplift in Timor? M.Sc. Thesis, University of Utrecht, p. 1-32.
(online at: http://dspace.library.uu.nl/handle/1874/208928)
(Recent uplift of Timor may be explained by buildup of fold-and-thrust belt. Age model and paleobathymetry using benthic foraminifera used to reconstruct uplift history of syn-orogenic Viqueque Fm basin. Timor uplifted in two phases: (1) very low rates during deposition of lower Viqueque Fm; (2) followed by rapid uplift, up to ~3 mm/yr. Homogeneous thickening of fold-and-thrust belt not enough to explain rapid uplift. Slab detachment unlikely cause because there is no evidence that slab has broken off. Delamination most likely process)

Bando, Y. & K. Kobayashi (1981)- Upper Triassic cephalopods from Eastern Timor (Paleontological Study of Eastern Timor 6). Mem. Fac. Education Kagawa University, II, 31, 1, p. 57-142.

Barber, A.J. (1978)- Structural interpretations of the island of Timor, Eastern Indonesia. SEAPEX Proc. 4, Singapore 1977/1978, p. 9-21.
(Timor evolution model with 'Lolotoi microcontinent' breaking off Australia in Jurassic, colliding with Sundaland in Early K, separating from Sundaland in Late K- Paleocene, colliding with Australia in Pliocene)

Barber, A.J. (1981)- Structural interpretations of the island of Timor, eastern Indonesia. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, Bandung, p. 183-197.
(online at: http://searg.rhul.ac.uk/pubs/barber_1981%20Timor%20structure.pdf)
(Reprint of Barber (1978) SEAPEX paper. Three interpretations of structure of Timor: imbricate melange model of Hamilton 1979, overthrust model of Audley-Charles et al., upthrust model of Chamalaun & Grady (1978). New model incorporates elements of all three models: Late Jurassic breakup of piece of Australia, Cretaceous collision with Sundaland, Eocene breakup of Sundaland margin during Banda Sea opening and Pliocene collision of 'Lolotoi microcontinent' with Australia)

Barber, A.J. (1991)- The origin of melange in the Timor collision complex. Proc. Silver Jubilee Symposium on the dynamics of subduction and its products, Yogyakarta, LIPI, p. 53-61.

Barber, A.J. & M.G. Audley-Charles (1976)- The significance of the metamorphic rocks of Timor in the development of the Banda Arc, eastern Indonesia. Tectonophysics 30, p. 119-128.
(All metamorphic massifs on Timor are allochthonous. Various grade metamorphic rocks on Timor. Three distinct metamorphic grade groups: lustrous slate, amphibolite-serpentinite and granulite- amphibolite-greenschist complex. Highest grade metamorphic rocks (granulite facies) in Booi massif. Amphibolite facies in many massifs through Timor. Many high-grade metamorphic rocks affected by subsequent lower grade (greenschist) metamorphism. High-grade metamorphic rocks interpreted as fragments of ancient continental crust, perhaps from Asia/ Sundaland)

Barber, A.J., M.G. Audley-Charles & D.J. Carter (1977)- Thrust tectonics in Timor. J. Geol. Soc. Australia 24, p. 51-62.
(Reply to Grady (1975) who argued structure of Timor can be interpreted without major overthrusting. Reasons for major overthrusting restated here and tied to collision between Australian continental margin and detached portion of Asiatic continental margin. Timor is series of overlapping thrust slices, resting on folded sediments of Australian continental shelf. Kolbano lowest thrust sheet, composed of deformed deep-water calcilutites. Followed to N by Lolotoi thrust sheet (metamorphics with unmetamorphosed ophiolites, clastic sediments and massive Miocene limestones). Overlying this group to N is Maubisse-Aileu thrust sheet (with Permian crinoidal limestones and volcanics in S, passing N into shales and sandstones, with increase in deformation and metamorphism from S to N. Slates in S pass into amphibolite facies on N coast of E Timor. A further thrust-slice composed of ophiolites rests on this thrust unit on N coast of W Timor between Wini and Atapupu. Mesozoic cherts sandwiched between metamorphic thrust sheets and 'autochthonous' Bisane Fm Permian clastics suggest ocean floor separated this from Maubisse Fm Permian carbonates)

Barber, A.J. & K. Brown (1988)- Mud diapirism: the origin of melanges in accretionary prisms? Geology Today 4, p. 89-94.
(Chaotic melange deposits, mixed blocks in clay matrix, commonly attributed to submarine slumping, but in accretionary complexes shale diapirism produces large volumes of melange. With examples from Timor mud volcanoes and associated deposits of Bobonaro scaly clay with blocks)

Barber, A.J., S. Tjokrosapoetro & T.R. Charlton (1986)- Mud volcanoes, shale diapirs, wrench faults and melanges in accretionary complexes, Eastern Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 70, p. 1729-1741.
(Timor mud volcanoes. Bobonaro scaly clay commonly interpeted as melange or olistostrome, but more likely product of shale diapyrism)

Barkham, S.T. (1993)- The structure and stratigraphy of the Permo-Triassic carbonate formations of West Timor, Indonesia. Ph.D. Thesis University of London, p. 1-379. *(Unpublished)*
(Detailed study of Permian (Maubisse)- Triassic (Aitutu) carbonates of W Timor. Focus areas: SW of Soe (Late Triassic Aitutu Fm pelagic radiolarian-mollusc (Halobia- Monotis) limestones-marls in Noil Meto), Bisnain and Laktitus areas. Includes reports of E Permian fusulinids from Maubisse Fm)

Bassler, R. (1929)- The Permian bryozoa of Timor. In: Palaontologie von Timor, Schweizerbart, Stuttgart, 16, Lieferung 28, p. 37-90.
(Principal (and only?) work on Permian bryozoa of Timor from Wanner and Molengraaff collections. Faunas generally poorly preserved. Artinskian Bitauni Beds sparse bryozoan fauna, early Late Permian Basleo beds more abundant, overlying Amarassi beds sparse bryozoan. Some species, like Fistulipora timorensis, rel. widespread in M-U Permian of Tethys region. Also Ulrichotrypa, Rhombopora, Streblotrypa, Fenestella, Polypora, etc.)

Bather, F.A. (1920)- Reviews: Echinoid or crinoid? Geol. Magazine 57, 8, p. 371-372.
(Discusses genus Timorocidaris described by Wanner (1920, Uber einige Palaeozoische Seeigelstacheln, etc. from Permian of Timor. Believed to be echinoid radiole by Wanner, but may be crinoid fragments)

Bather, F.A. (1929)- Triassic echinoderms of Timor. In: J. Wanner (ed.) Palaeontologie von Timor, Schweizerbart, Stuttgart, 16, 30, p. 214-272.
(Description of probably Upper Triassic crinoid fragments (incl. pentacrinids Isocrinus spp.) and echinoids (Miocidaris timorensis n.sp.)

Belford, D.J. (1960)- Micropalaeontology of samples from Ossulari No. 1 and No. 1A bores, Portuguese Timor. Bureau Mineral Res., Canberra, Record 1960/33, p. 1-2.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10621)
(Summary of analysis of cutting samples from well Ossulari 1 (2840'-3010') and Ossulari 1a (2960'-3100'). All contain mixed Permian, Jurassic-Cretaceous and ?Miocene fauna)

Belford, D.J. (1960)- Micropalaeontology of samples from Portuguese Timor. Bureau Mineral Res., Canberra, Record 1960/98, p. 1-6.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10686)
(Biostrat of 76 outcrop samples collected by Timor Oil Co in Timor Leste. Oldest rocks with Permian foraminifera and one sample with mollusc Atomodesma exarata. Tertiary samples M-U Eocene (with Nummulites and planktonics and reworked U Cretaceous plankton), Lower Miocene (Te with Spiroclypeus and reworked U Cretaceous Globotruncana limestone) and pelagic U Miocene (more likely Plio-Pleistocene; JTvG). Also several samples rich in radiolaria, probably Mesozoic. No locality maps))

Belford, D.J. (1961)- Micropalaeontology of samples from Portuguese Timor. Bureau Mineral Res., Canberra, Record 1961/6, p. 1-5.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10733)

(Biostrat of 56 outcrop samples collected by Timor Oil Co. Oldest samples are of Permian age (foraminifera). Radiolarian-rich sediments are probably of Triassic age (probable Halobia). Also Eocene limestone with Alveolina and planktonics-rich U Miocene sediments (more likely Pliocene?; JTvG; one sample with reworked Permian). No locality maps)

Belford, D.J. (1961)- Micropalaeontology of samples from Matai No. 1 bore, Portuguese Timor. Bureau Mineral Res., Canberra, Record 1961/31, p. 1-3.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10758)
(Summary of biostratigraphy of Matai 1 cuttings (370'- 2000'). Interval 370-760' regarded as 'block clay' of Upper Miocene age (but faunal lists include Pleistocene Gr. truncatulinoides and Hyalinea balthica; JTvG) with reworked Upper Cretaceous and Eocene forams. Eocene limestone with Discocyclina and Alveolina rel. common at 760-830'. Also limestone chips between 880-1000' with Late Eocene Discocylina and Pellatispira, but not sure if in situ. Sample gap between 1040-1300', and no microfossils observed between 1300-2000')

Benincasa, A. (2009)- The geology of Mount Mundo Perdido, Timor Leste. Thesis University of Western Australia, Perth, p. 1-169. *(Unpublished)*
(Mt Mundo Perdido 1750m high massif, originally interpreted as coherent block of Lower Miocene Cablac Limestone, but is complex of rock types of different ages and tectonostratigraphic affinities, including 'Gondwanan affinity' Triassic-Jurassic carbonates, Cretaceous- Oligocene pelagites (pink-white Cretaceous, red shaly Eocene), 'Banda-Terrane' earliest Miocene limestones on Barique Fm mafic island arc volcanics and associated with gabbros and schists, and Plio-Pleistocene synorogenic(?) deposits. Dominant structures late stage, high-angle, oblique-slip faults, probably in sinistral strike-slip zone)

Benincasa, A. (2015)- The 'fatus' of East Timor: stratigraphy and structure. Ph.D. Thesis University of Western Australia, Perth, p. 1-504.
(online at: http://research-repository.uwa.edu.au/files/5338890/Benincasa_Aaron_2015.pdf)
(Studies of isolated limestone peaks ('fatus') of Timor Leste, incl. Mt Mundo Perdido, Laritame, Builo, Bibileu, Paitchau, Matebian, etc. Many previously mapped as mainly Miocene Cablac Lst, but cores of all fatus contain Late Triassic- E Jurassic shallow water limestones associated with Triassic- Jurassic rift deposits, Cretaceous-Oligocene pelagic limestones, Asian-affinity Tertiary limestones and volcanics, etc. Many fatus are pop-up structures, with recent high-angle oblique slip and strike-slip faults (map suggests all are associated with Banda Terrane?))

Benincasa, A., M. Keep & D. Haig (2012)- A restraining bend in a young collisional margin: Mount Mundo Perdido, East Timor. Australian J. Earth Sci. 59, 6, p. 859-876.
(With Appendix 1 online at: www.gsa.org.au/pdfdocuments/AJES_Supplementary%20Papers/59-6%20supp%20papers_Benincasa%20et%20al%20AJES%20.pdf)
(Mt Mundo Perdido 1 km NW of Ossu. Like Mt Cablac, originally mapped as Miocene 'Cablac Lst', but has core of highly deformed (Late Triassic?)- E Jurassic oncoidal- ooid limestone, overlain by bathyal latest Jurassic- E Cretaceous calpionellid/ Inoceramus wackestone and mid-Cretaceous-Oligocene pelagic limestones. It is surrounded (looks like overlain?; JTvG) by less-deformed latest Oligocene- earliest Miocene (N4) Booi Limestones and Pleistocene bathyal limestones. Structure dominated by high angle, oblique-slip and strike-slip faults that were active into Pleistocene, comparable to pop-up structures at restraining bends within E-W zone of sinistral strike-slip. Appendix 1 documents E Jurassic age of 'Perdido Limestone' algal limestone (incl. Thaumatoporella ?parvovesiculifera and agglutinated forams (Siphovalvulina, Duotaxis))

Berry, R.F. (1979)- Deformation and metamorphism of the Aileu Formation, East Timor. Ph.D. Thesis, School of Earth Sciences, Flinders University of South Australia, p. 1-393.
(online at: http://eprints.utas.edu.au/11496/2/Whole-Berry,_R.F.,_PhD_(Flinders),_1979.pdf))
(Aileu Fm along N coast of E Timor composed of metamorphosed shales, siltstones and arenites with minor limestones and basites. Greater proportion of coarser and quartz-rich sediment towards N coast. Fossils rare, dominated by crinoid ossicles, probably Permian age. Metamorphic grade lower greenschist facies in SW, almandine-amphibolite facies in NE. Amphibolite and schists with marble close in composition to Permian Maubisse Fm. On N coast of E Timor is Hili Manu peridotite, faulted against Aileu Fm in S; lherzolite and

serpentinite abut Aileu Fm at highest metamorphic grade (p. 239). Five structural phases recognised. K/Ar ages of hornblendes from amphibolites 7.7- 16.5 Ma, mean 11.3 Ma. Geology of Timor consistent with evolution as rift valley in Late Paleozoic-Early Mesozoic and trailing margin from Cretaceous- E Miocene, Late Miocene arc-continent collision followed by uplift and minor Plio-Pleistocene deformation)

Berry, R.F. (1981)- Petrology of the Hili Manu lherzolite, East Timor. J. Geol. Soc. Australia 28, 4, p. 453-469.
(Spinel lherzolite outcrop on N coast of E Timor. Most common rock-type clinopyroxene-poor lherzolite, but also clinopyroxene-rich lherzolite and harzburgite. Three events indicated by geothermometry (1) coarse exsolution lamellae of orthopyroxene in clinopyroxene porphyroclasts (1250°C); (2) granoblastic texture equilibrated at 1100°C; and (3) rocks mylonitised at 800-1000°C. Peridotite probably oceanic upper mantle trapped between Java Trench and Inner Banda Arc)

Berry, R.F., C. Burrett & M. Banks (1984)- New Triassic faunas from East Timor and their tectonic significance. Geologica et Palaeontologica 18, p. 127-137.
(Conodonts from red ammonoid-bearing limestone 6 km W of Manatuto, previously assigned to Permian Maubisse Fm, contains Upper Smithian (E Triassic), Tethyan conodonts. Area previously interpreted as thrusted, with inverted ages (Permian on Triassic), but probably simple Triassic stratigraphic succession and structure mainly steeply dipping normal faults. Conodonts well-preserved with CAI of 1, suggesting rel. low paleotemperatures <100°C)

Berry, R.F. & A.E. Grady (1981)- Deformation and metamorphism of the Aileu Formation, North coast, East Timor and its tectonic significance. J. Structural Geol. 3, p. 143-167.
(Aileu Fm at N coast of Timor probably metamorphosed Permian (+ Jurassic?) flysch. Metamorphism increasing from low greenschist facies in SW to upper amphibolite facies in E. Five deformation phases; second phase post-dates metamorphic maximum (Jurassic?), produced tight folds and may be Late Miocene. Metamorphic maximum occurred before 11 Ma)

Berry, R.F. & A.E. Grady (1981)- The age of the major orogenesis in Timor. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia. Proc. CCOP-IOC Working Group Meeting, Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung (GRDC), Spec. Publ. 2, p. 171-181.
(Radiometric dates of N coast E Timor Aileu Fm metamorphic rocks suggest metamorphism peak before Late Miocene (8-9 Ma; possibly even before 70 Ma; Harris & Long 2001), with most intense deformation probably between 11-6 Ma)

Berry, R.F. & G.A. Jenner (1982)- Basalt geochemistry as a test of the tectonic models of Timor. J. Geol. Soc. 139, 5, p. 593-604.
(Geochemistry of metamorphosed Permo-Triassic basic volcanics on Timor from both 'allochthonous' and parautochthonous' formations are all consistent with rift or ocean floor setting; no calc-alkaline arc volcanics)

Berry, R.F. & I. McDougall (1986)- Interpretation of 40Ar/39Ar and K/Ar dating evidence from the Aileu Formation, East Timor, Indonesia. Chemical Geology 59, p. 43-58.
(Aileu Fm-Maubisse metamorphics retrograde metamorphism (=collision?) at 8 Ma. Cooling to 300°C by 5.5 Ma)

Berry, R., J. Thompson, S. Meffre & K. Goemann (2016)- U-Th-Pb monazite dating and the timing of arcï continent collision in East Timor. Australian J. Earth Sci. 63, 4, p. 367-377.
(Metamorphic age of highest-grade rocks formed in Timor arc-collision collision remains controversial. U-Th-Pb dating of monazite from Aileu Fm amphibolite-grade schists suggests peak metamorphism at 5.5-4.7 Ma)

Beyrich, E. (1862)- Gebirgsarten und Versteinerungen von Koepang auf Timor. Zeitschrift Deutschen Geol. Gesellschaft 14, p. 537.
(online at: https://archive.org/details/zeitschriftderd141862deut)
('Mountain types and fossils from Kupang on Timor'. First brief note on Late Paleozoic fossils of Timor (brachiopods, crinoids), collected by Dr. Schneider and being studied by Beyrich))

Beyrich, E. (1865)- Uber eine Kohlenkalk-Fauna von Timor. Abhandl. Konigl. Akad. Wissensch. Berlin, 1864, p. 59-98.
('On a Carboniferous fauna from Timor'. First description of 'Carboniferous' (now accepted as Late Permian) limestone fauna from Timor, collected in Kupang area by Dr. Schneider. Includes mollusc genus Atomodesma, solitary rugose coral Zaphrentis, new brachiopod species Spirifer kupangensis (= Arcullina; Waterhouse 2004), Rhynchonella timorensis (assigned to Uncinunellina timorensis by later authors; JTvG), etc.)

Bird, P.R. (1987)- The geology of the Permo-Triassic rocks of Kekneno, West Timor. Ph.D. Thesis, University of London, p. 1-264. *(Unpublished)*
(Structure, stratigraphy and sedimentology of 'parautochthonous' mainly fine clastic Permo-Triassic in Kekneno area. Sandstone petrography shows Timor Permian sands less mature than those of NW Shelf of Australia. Paleocurrents mainly towards WSW, suggesting source from E (Arafura) and/or N (terrane removed in Jurassic rifting), not from NW Shelf. Slice of Banda fore-arc basement obducted over parautochthonous, with fossiliferous Permian Maubisse carbonates and volcanics very different from parautochton)

Bird, P.R., K. Brata & I. Umar (1989)- Sedimentation and deformation of the Permo-Triassic of Kekneno, West Timor: from intracratonic basin to accretionary complex. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral and hydrocarbon resources of SE Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 3-23.
(Permian and Triassic turbiditic marine clastics in Kekneno area of Timor considered deposited in intra-cratonic basin near NW margin of Gondwana. Thickness hard to estimate due to common imbrication along mainly N-dipping thrust planes. Oldest formation Atahoc Fm, >600m thick, with common ammonites of Sakmarian Properrinites zone; in E with pillow lavas near top. Overlain by Kungurian Cribas Fm with Atomodesma, 400m thick, current ripple directions to SE. Sandstones petrologically much less mature than age-equivalent rocks of NW Australia Shelf, indicating Timor sediments not derived from Australian hinterland. Paleocurrents show sediment transport predominantly to WSW secondary transport to SE. Northerly source removed by Jurassic rifting. Kekneno Permo-Triassic overthrusted by Mutis allochthon (W-ward thrusting?))

Bird, P.R. & S.E. Cook (1991)- Permo-Triassic successions of the Kekneno area, West Timor: implications for palaeogeography and basin evolution. J. Southeast Asian Earth Sci. 6, 3-4, p. 359-371.
(Permian sandstones less mature and different heavy mineral assemblages from Bonaparte/Timor Sea equivalents. This and Permian paleocurrent data suggests mainly northerly provenance of Timor Permian. Late Triassic Babulu Fm turbidites dominant sediment transport directions NE to SW or E to W)

Bless, M.J.M. (1987)- Lower Permian ostracodes from Timor (Indonesia). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B, 90, 1, p. 1-13.
(Lower Permian (Sakmarian- Artinskian) ostracodes from Bitauni, Mutis, Nono Ofien and Noil Toensieh in W Timor. Diverse 'Thuringian-type' assemblages with 40 species, usually interpreted as deep marine, as also suggested by Grundel & Kozur 1975)

Boehm, G. (1908)- Jura von Rotti, Timor, Babar und Buru. In: G. Boehm (ed.) Geol. Mitteilungen Indo-Australischen Archipel VIc, Neues Jahrbuch Mineral. Geol. Palaeont., Beilage Band 25, p. 324-343.
('The Jurassic of Roti, Timor, Babar and Buru'. Descriptions of Jurassic brachiopods (Rhynchonella) and ammonites (Phylloceras, Perisphinctes from Buru; Aegoceras, Harpoceras, Stephanoceras, Macrocephalites from Batu Berketak Roti; Stephanoceras from Babar and Perisphinctes from Timor), all collected by Verbeek)

Boehm, G. & F.A. Bather (1908)- Jungeres Palaozoikum von Timor. In: G. Boehm (ed.) Geol. Mitteilungen Indo-Australischen Archipel VIb, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 25, p. 303-323.
('Young Paleozoic of Timor'. First description of two Permian blastoids from Timor, collected by Verbeek in 1899 from Bisano Hill S of Baung (Schizoblastus (now called Deltablastus), Schizoblastus timorensis and S. delta). Associated with Spirifer lineatus, Nautilus, ammonoid Agathiceras timorense n.sp., trilobite Phillipsia)

Boger, S.D. (2012)- The Aileu Formation of Timor Leste. First Int. Geological Congress of Geology of Timor-Leste, Dili 2012, p. 85. *(Abstract only)*

Boger, S.D., L.G. Spelbrink, R.I. Lee, M. Sandiford, R. Maas & J.D. Woodhead (2017)- Isotopic (U-Pb, Nd) and geochemical constraints on the origins of the Aileu and Gondwana sequences of Timor. J. Asian Earth Sci. 134, p. 330-351.
(Detrital zircon U-Pb age data from Aileu Complex and 'Gondwana Sequence' of Timor, indicate both derived from common source with 200-600 Ma, 900-1250 Ma and 1450-1900 Ma zircons. Most significant age population ~260 Ma. Similar spectrum of ages along E active margin of Pangea, today best exposed along NE coast of Australia. Mudstones of Aileu Complex more siliceous and other chemical differences from 'Gondwana Sequence', so possibly eroded from different sections of margin and deposited in separate basins. Present proximity result of Pliocene- Recent collision between N Australia plate and Banda Arc)

Boutakoff, N. (1965)- Geological investigations in Portuguese Timor. Report for Timor Oil Ltd, R05372, p..
(Unpublished; mainly discussion of some drilled and undrilled anticlines; no maps, good cross-sections)

Boutakoff, N. (1968)- Oil prospects of Timor and the Outer Banda Arc, SE Asia. Australian Oil and Gas Review 14, p. 44-55.

Boz, A., M. Bakhrudin, P. Bernardelli, F. Coraggio, A. Ardjuna & A. Radityo (2014)- Potential field data acquisition and interpretation supporting exploration activities in The West Timor PSC area. Proc. 38th Ann. Conv., Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-0547, 20p.
(Potential fields data acquired over parts of W Timor. No details on geo-structural interpretation)

Breimer, A. & D.B. Macurda (1965)- On the systematic position of some blastoid genera from the Permian of Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B68, p. 209-217.

Breimer, A. & D.B. Macurda (1972)- The phylogeny of the fissiculate blastoids. Verhandelingen Kon. Nederl. Akademie Wetenschappen, Amsterdam, ser. 1, 26, 3, p. 1-390.
(online at: www.dwc.knaw.nl/DL/publications/PU00011028.pdf)
(Monograph on Paleozoic fissiculate blastoids (echinoderms). Mainly taxonomy, anatomy and phylogeny, also discussions of geographic distribution (worldwide), stratigraphic distribution (Silurian- Permian) and paleoecology (open marine, attached to limy-muddy seafloors). Most extensive development of Permian fissiculates is on Timor, associated with tuffs (12 genera; all in allochthonous blocks). Main collecting area Basleo, with many endemic species. Some also in other areas, e.g. Pterotoblastus gracilis in Thailand)

Broili, F. (1915)- Permische Brachiopoden der Insel Letti. Jaarboek Mijnwezen Nederlandsch Oost-Indie 43 (1914) Verhandelingen 1, p. 187-207.
(‘Permian brachiopods from Leti Island’ (E of Timor). Small brachiopod fauna collected by Molengraaff. With Productus spp., Chonetes strophomenoides, Spirifer spp., Martinia nucula, Retzia, Dielasma and Notothyris)

Broili, F. (1916)- Die Permischen Brachiopoden von Timor. In: J. Wanner (ed.) Palaeontologie von Timor, Schweizerbart, Stuttgart, VII, 12, p. 1-104.
(‘The Permian brachiopods of Timor’. Descriptions of 46 species in material from numerous localities in W and some from E Timor, collected by Wanner and Molengraaff (mainly from Basleo= late M Permian?; JTvG). Many are long-ranging and widely distributed Tethys forms, incl. Productus, Spirifer, Spirigera, Retzia, Camarophoria, Dielasma, etc. Rare Lyttonia (Leptodus) cf. tenuis from Basleo and Amarassi/ Niki-Niki areas)

Broili, F. (1922)- Permische Brachiopoden von Rotti. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 3, p. 223-227. (Nederlandsche Timor expeditie 1910-1912).
(Brief description of Permian brachiopods from Roti island, W of Timor, sampled by Brouwer in 1912. Species rel. long-ranging, incl. Derbya beyrichii, Productus waageni, Productus cf. semireticulatus, Spirifer fasciger, Spirigera timorensis, Retzia radialis, Camarophoria purdoni, Notothyris, etc.)

Broili, F. (1931)- Mixosauridae von Timor. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 17, p. 3-10.

(Vertebrae collected from clays with manganese nodules and ammonites by Jonker in 1873 in NE part of W Timor near E Timor border ('Wai Loelik/ Ramea, Beloe district'). Looks like primitive Ichtyosaurus group and described as Mixosaurus timorensis n.sp.. Age probably Triassic (manganese nodules known in Timor-Roti from Upper Triassic, Jurassic and Upper Cretaceous; JTvG; see also Zammit, 2010))

Brouwer, H.A. (1913)- Neue Funde von Gesteinen der Alkalireihe auf Timor. Centralblatt Mineralogie Geologie Palaont. 1913, p. 570-576.
(online at: www.biodiversitylibrary.org/item/192907page/594/mode/1up)
('New discoveries of rocks of the alkali series on Timor'. Descriptions of basic igneous-volcanic rocks collected during Molengraaff Timor Expedition. Some associated with Permian sediments. No figures)

Brouwer, H.A. (1914)- Neue Funde von Gesteinen der Alkalireihe auf Timor (Zweite Mitteilung). Centralblatt Mineral. Geol. Palaont. 1914, p. 741-745.
(online at: https://babel.hathitrust.org/cgi/pt?id=uc1.b4291847;view=1up;seq=767)
('New finds of rocks of the alkali series on Timor'- Part 2. Brief note on reddish alkalirhyolites SW of Sufa collected during Molengraaff West Timor Expedition. (No figures or details on geologic setting))

Brouwer, H.A. (1914)- Voorlopig overzicht der geologie van het eiland Roti. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 31, p. 611-617.
('Preliminary overview of the geology of Roti island'. December 1911-January 1912 visit found 'Timor-like' intensely folded Permian- Eocene section. Permian marls with brachiopods, coral, etc., on basaltic rock. Upper Triassic deep water Halobia-Daonella limestone with radiolarian chert and mica-sandstones. Jurassic dark marls with some belemnites, ammonites, locally rich in manganese nodules. One locality of Eocene Nummulites-alveolinid limestone. Unconformably overlain by young reefal limestones, some elevated to over 400m. Active mud volcanoes)

Brouwer, H.A. (1915)- Gesteenten van het eiland Letti. Nederlandsche Timor Expeditie, I, Jaarboek Mijnwezen Nederlandsch Oost-Indie 43 (1914), Verhandelingen, p. 89-160.
('Rocks from Leti Island', E of Timor)

Brouwer, H.A. (1918)- Gesteenten van het eiland Moa. In: Nederlandsche Timor-expeditie, II. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 1, p. 13-34.
('Rocks from Moa Island'. Petrographic descriptions of gabbros, diorites, lherzolites, phyllites and crystalline limestones from Moa island E of Timor)

Brouwer, H.A. (1918)- Geologie van een gedeelte van het eiland Moa. In: Nederlandsche Timor-expeditie, II. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 1, p. 37-56.
('Geology of a part of the island of Moa'. Island with broad, low rim of young raised reefal limestone. Older rocks in hills in center include folded metamorphics (phyllites, crystalline limestone; probably metamorphic Permian, with more limestone than on Leti), ultrabasic rocks (peridotites, serpentinite, gabbro), reddish limestones and radiolarian cherts, poorly bedded crystalline limestone (Triassic?) and mica-bearing sandstones with conglomerates (similar to Triassic of Timor-Seram). With 1: 200,000 geological sketch map)

Brouwer, H.A. (1918)- Gesteenten van Oost-Nederlandsch Timor. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 1, p. 67-260.
('Rocks from East Netherlands Timor'. Petrographic descriptions of igneous, metamorphic and sedimentary rocks from W Timor. Sandstones and conglomerates rich in feldspars and lithics of schists and andesites)

Brouwer, H.A. (1921)- Geologische onderzoekingen op het eiland Rotti. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen, p. 33-106.
('Geological investigations on the island Roti' (W of Timor))

Brouwer, H.A. (1921)- Geologische onderzoekingen op de eilanden Loeang en Sermata. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 2, p. 207-222.

('Geological investigations on the islands Luang and Sermata'. Two small islands NE of Timor. Luang mostly intensely folded Permian marls and crinoidal limestone. Also quartzose and calcareous sandstones, which may be Permian or Triassic. Strike directons highly variable: NW-SE in W of island, more or less E-W in East. On Sermata only crystalline schists representing metamorphosed sediments and basic volcanics)

Brouwer, H.A. (1928)- On the age of alkaline rocks from the island of Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 31, p. 56-58.
(online at: www.dwc.knaw.nl/DL/publications/PU00015549.pdf)
(Permian sediments of Timor mainly tuffs, marls with tuffaceous material, marls, limestones and volcanics. Also locally conglomerates with pebbles of volcanics. Conglomerate studied from near path Sufa-Maubesi. Clasts of syenite and trachyte up to several cm, probably also of Permian age)

Brouwer, H.A. (1938)- Preliminary remarks on geological investigations in the Lesser Sunda islands near Australia. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 41, 4, p. 334-335.
(online at: www.dwc.knaw.nl/DL/publications/PU00017173.pdf)
(Summary of preliminary results of 1937 University of Amsterdam expedition to Timor and nearby islands. Age of 'flysch' on Timor is Ladinian- Norian (Late Triassic). Overthrusting superposes two very different units of Permian rocks, separated by intensely crushed and squeezed zone)

Brouwer, H.A. (1939)- Exploration in the Lesser Sunda islands. Geographical J. 94, 1, p. 1-10.
(Review of lecture on recent geologic work on Lesser Sunda islands, particularly Timor- Wetar: distribution of volcanics, uplifted young coral reef terraces, older and younger thrusting directed towards Australian continent, etc.))

Brouwer, H.A. (ed.) (1940)- Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands in the South Eastern part of the Netherlands East Indies 1937, I, Noord-Hollandsche Uitgevers Mij., Amsterdam, p. 1-348.
(Collection of 2 Ph.D. theses (Tappenbeck, Simons) and papers by Wanner on Permian blastoids, De Marez Oyens on Permian crinoids)

Brouwer, H.A. (ed.) (1940)- Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands in the South Eastern part of the Netherlands East Indies 1937, II., Noord-Hollandsche Uitgevers Mij., p. 1-395.
(Collection of two Ph.D. theses by De Roever and Van Voorthuysen, also papers by Brouwer on volcanics of Adonara, etc., and Wanner on Permian bivalves)

Brouwer, H.A. (ed.) (1941)- Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands in the South Eastern part of the Netherlands East Indies 1937, III. Noord-Hollandsche, Amsterdam, p. 1-380.
(Collection of 3 Ph.D. theses by Van West and De Bruyne on Timor and De Jong on Wetar, Lirang and Solor)

Brouwer, H.A. (ed.) (1942)- Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands in the South Eastern part of the Netherlands East Indies 1937, IV. Noord-Hollandsche, Amsterdam, p. 1-401.
(Collection of Ph.D. theses by Heering on Wetar- Alor, and papers by Brouwer, Wanner, De Roever, De Jong)

Brouwer, H.A. (1942)- Summary of the geological results of the expedition. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands in the South Eastern part of the Netherlands East Indies 1937, 4, p. 345-402.
(Overview of geology of northern (Flores, Pantar, Alor, Wetar, etc.) and southern row of islands (Timor). Timor structure characterized by large overthrusts, formed mainly in pre-Miocene, also younger movements. 'Kekneno series' Permian-Triassic flysch facies derived from metamorphic and feldspar-rich volcanic rock. Upper Cretaceous Palelo clastics with Globotruncana and conglomerates rich in volcanics, metamorphics and Lower Palelo ('other rocks in neighbourhood apparently not exposed' Early Miocene unconformable over older rocks, etc.)

Brown, K.M. (1987)- Structural and physical processes in accretionary complexes: the role of fluids in convergent margin development. Ph.D. Thesis, Durham University, p. 1-500.
(online at: http://etheses.dur.ac.uk/7186/1/7186_4368.PDF)
(General study on accretionary prisms and mud volcanoes, with chapters on North Borneo and Timor)

Brown, M. & M.M. Earle (1983)- Cordierite-bearing schists and gneisses from Timor, eastern Indonesia. P-T conditions of metamorphism and tectonic implications. J. Metamorphic Geol. 1, p. 183-203.
(Mutis Complex in W Timor Boi Massif composed of basement schists and gneisses and dismembered remnants of ophiolite. Mineral assemblages sugggest P-T path of rocks started with initial metamorphism at P= 10 kbar and T=>750°, followed by decompression probably during rifting and syn-metamorphic ophiolite emplacement resulting from processes during initiation and development of convergent plate junction located in SE Asia in late Jurassic- Cretaceous)

Brunnschweiler, R.O. (1978)- Notes on the geology of Eastern Timor. BMR Bull. Australian Geol. Geophysics 192 (Crespin volume), p. 9-18.
(online at: https://d28rz98at9flks.cloudfront.net/68/Bull_192.pdf)
(Mainly critical review of E Timor mapping by Audley-Charles (1968). Much of what was mapped as Bobonaro melange is Late Triassic mudstone. Late Jurassic rocks also common. At least 3 different ages of 'block clays'; much of what was mapped as olistostrome is complexly thrusted sediment. Two types of Eocene limestones: (1) Early Eocene 'Coinassa Lst' with Orbitolites and Alveolina (= Same series of Gageonnet and Lemoine 1958), (2) late Middle-Late Eocene Dartollu Lst. Lower and Upper Tertiary thrusting phases in Timor, etc.)

Buckman, D. (1971)- Timor oil search enters crucial phase. Oil & Gas Int. 11, 7, p. 28-30.

Burck, H.D.M. (1923)- Overzicht van de onderzoekingen der 2de Nederlandsche Timor-expeditie. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 4, p. 1-55.
(Overview of W Timor localities studied by 1916 Jonker-led expedition. Main purpose was to collect Permian and Triassic fossils. Good documentation of fossil localities (Baoen/Baung, Niki Niki, Basleo, Kapan, Noil Toko, Bitauni, Sufa, Atambua), but little geology/ stratigraphy context)

Burke, J.J. (1966)- On the occurrence of *Oklahomacrinus* in Ohio and Timor. Ohio J. Science 66, 5, p. 464-468.
(Delocrinus expansus Wanner from M Permian of Basleo, W Timor, re-assigned to Oklahomacrinus)

Carter, D.J., M.G. Audley-Charles & A.J. Barber (1976)- Stratigraphical analysis of island-arc-continental margin collision in eastern Indonesia. J. Geol. Soc. London, 132, p. 179-198.
(Stratigraphic analysis of collision zone in Timor reveals pre-Pliocene deformation in allochthon elements before M Pliocene overthrusting onto Australian margin. Australian para-autochthon below thrust sheets not involved in pre-Pliocene deformations. Distinction of elements with different structural histories and opposite facies polarity permits identification of plate margin. Lowest thrust sheet part of Asian outer arc ridge, overthrust by fragments of continental margin metamorphic basement and volcanic-sedimentary cover. Model interprets progressive Mio-Pliocene collision between Australian margin and island arc migrating from SE Asia by spreading of Banda Sea. Asian arc was underthrust by Australian continental margin but buoyancy restricted process to overthrusting slivers of rocks from trench and trench-arc gap)

Chamalaun, F.H. (1977)- Paleomagnetic evidence for the relative positions of Timor and Australia in the Permian. Earth Planetary Sci. Letters 34, 1, p. 107-112.
(Paleomag suggests pole from Cribas Fm redbeds very close to Australian P-Tr poles, so'autochthonous' Timor was part of Australia. Magnetic inclination places Timor at 34°)

Chamalaun, F.H. (1977)- Paleomagnetic reconnaissance result from the Maubisse Formation, East Timor and its tectonic implication. Tectonophysics 42, 1, p. T17-T26.
(Paleolatitude of 'allochthonous' Permian Maubisse Fm is 26°, indistinguishable from 'autochthonous' Permian Cribas Fm red beds, therefore not supporting Asian origin of Maubisse. Conclusions deemed unjustified by Wensink 1990, 1994)

Chamalaun, F.H. & A.E. Grady (1978)- The tectonic development of Timor: a new model and its implications for petroleum exploration. Australian Petrol. Explor. Assoc. (APEA) J. p. 102-108.
(Preferred tectonic model for Timor intermediate between Audley-Charles overthrust model and Hamilton accretionary wedge model: (1) initial collision/trench downwarp at ~15-10 Ma, creating Bobonaro melange; followed by (2) slab breakoff causing rapid uplift)

Chamalaun, F.H. & A.E. Grady (1978)- Timor tectonic development: new model and exploration implications. Oil and Gas J. 76, 42, p. 114-116.
(Tectonic model without major allochthonous terranes and overthrusts would predict simpler structural geology and stratigraphic continuity between Timor and NW Shelf)

Chamalaun, F.H., K. Lockwood & A. White (1976)- The Bouguer gravity field and crustal structure of eastern Timor. Tectonophysics 30, p. 241-259.
(N-S gravity traverse from Betano to Dili in Timor Leste Strong 6 mGal/km gravity gradient at N coast, which is part of significant geophysical trend along Outer Banda Arc. Interpreted to be fault, separating oceanic in NW from continental crust in SE)

Chappell, J. & H.H. Veeh (1978)- Late Quaternary tectonic movements and sea level changes at Timor and Atauro Island. Geol. Soc. America (GSA) Bull. 89, p. 356-368.
(Atauro Island N of Timor has raised Quaternary coral reefs up to 500m)

Charlton, T.R. (1987)- The tectonic evolution of the Kolbano-Timor Trough accretionary complex, Indonesia. Ph.D. Thesis University London, p. 1-374. *(Unpublished)*

Charlton, T.R. (1988)- Tectonic erosion and accretion in steady-state trenches. Tectonophysics 149, p. 233-243.
(Analysis of relations between rate of plate convergence, sedimentation rates and angle of decollement in subduction zones. Tectonic accretion where decollement steeper than outer trench slope, tectonic erosion where decollement shallower than outer slope dip. Applied to Timor Trough to demonstrate subduction has ceased)

Charlton, T.R. (1989)- Geological cross-section through the Timor collision complex, Eastern Indonesia. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 93-104.
(Cross-section across Timor collision zone with characteristics of subduction-accretion complex, but Timor Trough subduction trench has recently become inactive. Plate convergence being transferred to young zone of thrusting N of volcanic arc, with reverse sense of polarity. Accretionary complex morphology modified by sinistral wrench faulting. Kolbano area thrust-bounded repetitions of Cretaceous- Miocene of sediments accumulated at outermost edge of Australian NW Shelf (up to 9 imbricates onshore?))

Charlton, T.R. (1989)- Stratigraphic correlation across an arc-continent collision zone: Timor and the Australian Northwest Shelf. Australian J. Earth Sci. 36, p. 263-274.
(Facies of Triassic- Neogene series of imbricate stack of Kolbano foldbelt, SW Timor, is deep to very deepwater, suggesting it represents outermost edge of pre-collisional Australian margin. Similarities include ?Early Jurassic redbeds, Oxfordian 'breakup unconformity' with Early Cretaceous missing, etc. Implication is that N Timor is either block that rifted off Australia, then collided in Pliocene (Barber 1979) or partly rifted marginal plateau off NW shelf)

Charlton, T.R. (2001)- The petroleum potential of West Timor. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 303-317.
(Timor island has numerous oil and gas seeps, and contains high-quality hydrocarbon source rocks, but island widely considered to have only moderate petroleum potential due to its structural complexity, but complexity is limited to shallow structural levels, and below this simpler structural style predominates. Kolbano area of SW Timor interpreted to be underlain by large, simple inversion anticline. Banli-1 penetrated flank of this structure, below prospective crest)

Charlton, T.R. (2002)- The petroleum potential of East Timor. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 42, p. 351-369.
(Hydrocarbon prospectivity of E Timor widely considered to be only moderate due to Timor island's complex structure, but here interpreted as having higher potential in large, simple inversion structures below shallow complexly folded thrust/ melange terain)

Charlton, T.R. (2002)- The structural setting and tectonic significance of the Lolotoi, Laclubar and Aileu metamorphic massifs, East Timor. J. Asian Earth Sci. 20, 7, p. 851-865.
(Two types of metamorphic complexes on Timor: (1) Australian continental basement (Lolotoi, Lachlubar), (2) allochthonous basement derived from Banda forearc (Mutis in W Timor, Aileu in E Timor; with inverted metamorphic gradients))

Charlton, T.R. (2003)- The petroleum potential of sub-thrustbelt inversion anticlines in the Banda forearc. Indon. Petroleum Assoc. (IPA) Newsl., March 2003, p. 22-27.

Charlton, T.R. (2004)- The petroleum potential of inversion anticlines in the Banda Arc. American Assoc. Petrol. Geol. (AAPG) Bull. 88, 5, p. 565-585.
(Mainly on structural style of Timor. Banda forearc is fold- thrust belt, with imbricated outer edge of Australian continent, overlain locally by fragments of precollisional oceanic forearc, and is established petroleum province in Seram. Structural complexity overstated. Basement-involved inversion structures in deeper parts of collision complex. Inverted graben basins filled with Permian-Jurassic continental margin sequences, including Late Triassic- E Jurassic source rocks and potential reservoirs, sealed by M-L Jurassic shales. Jurassic shales decollement separates shallow-level structural complexity from deeper simpler structural style of large inversion anticlines)

Charlton, T.R., A.J. Barber & S.T. Barkham (1991)- The structural evolution of the Timor collision complex, Eastern Indonesia. J. Structural Geol. 13, 5, p. 489-500.
(New Timor structural evolution model combining element of previous three Timor models; foldbelt as rel. simple progressive thrusting of Australian crustal elements, starting in N at 8 Ma)

Charlton, T.R., A.J. Barber, R.A. Harris, S.T. Barkham, P.R. Bird, N.W. Archbold, N.J. Morris, R.S. Nicoll, H.G. Owen, R.M. Owens, J.E. Sorauf, P.D. Taylor, G.D. Webster & J.E. Whittaker (2002)- The Permian of Timor: stratigraphy, palaeontology and palaeogeography. J. Asian Earth Sci. 20, p. 719-774.
(Extensive compilation of Timor Permian stratigraphy and paleontology, with specialist reviews of brachiopods, bryozoans, cephalopods, conodonts, corals, echinoderms, foraminifera, molluscs, trilobites, etc. Permian sequences deposited on Australian continental basement which was undergoing extension, with basaltic volcanism. Carbonates of Maubisse Fm deposited on horst blocks and volcanic highs, clastic sediments of Atahoc and Cribas Fms deposited in grabens)

Charlton, T.R., A.J. Barber, A.J. McGowan, R.S. Nicoll, E. Roniewicz, S.E. Cook, S.T. Barkham & P.R. Bird (2009)- The Triassic of Timor: lithostratigraphy, chronostratigraphy and palaeogeography. J. Asian Earth Sci. 36, p. 341-363.
(Overview of Triassic successions of Timor, exposed in fold-and-thrust belt and melange complex. Three formal lithostratigraphic units defined previously (Niof, Aitutu and Babulu Fms), with a fourth, Wai Luli Fm, primarily Jurassic in age but extending down into Triassic. Triassic extension not associated with major volcanism, unlike Early Permian extension)

Charlton, T.R. & D. Gandara (2012)- Structural-stratigraphic relationships at the boundary of the Lolotoi Metamorphic Complex, Timor-Leste: field evidence against an allochthonous origin. First Int. Geological Congress of Geology of Timor-Leste, Dili 2012, p. 41-44. *(Extended Abstract)*
(Results of new fieldwork at several Lolotoi Complex massifs ofTimor Leste suggests Australian continental basement origin for complex. S front of Lolotoe metamorphic massif controlled primarily by down-to-S normal faults, not N-dipping thrust front, and metamorphics extend to depth of 2805m at TD in Cota Taci-1 well, Suai

Basin. Stratigraphic contacts observed between Lolotoi Complex and Eocene Dartollu Fm, but also between Lolotoi Compex and Permian Maubisse Fm. One outcrop of Dartollu Fm with reworked fragments of Maubisse Fm crinoid limestone clasts and porphyritic volcanics. Similar relationships at Legumau Range)

Charlton, T.R. & D. Gandara (2014)- The petroleum potential of onshore Timor-Leste. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-017, 7p.
(Brief review of petroleum prospectivity in Mesozoic of 6 areas of onshore Timor Leste. Two new lithostratigraphic units recognized: (1) Foura Sst, thick-bedded but fine-grained sandstone of probable E Jurassic age; appears to interdigitate with shales of Wai Luli Fm and possibly correlative to 'Plover Sst' in Banli 1 well of SW Timor; (2) Late Jurassic Tchinver Shale, 100-200m thick shale section, with Belemnopsis-type belemnites, disconformably over shales-thin sandstones of Wai Luli Fm; with source rock/seal potential)

Charlton, T.R., D. Gandara & N. da Costa Noronha (2017)- TIMOR GAPȏs onshore Block: a preliminary assessment of prospectivity in onshore Timor-Leste. In: SEAPEX Exploration Conference 2017, Singapore, Session 4, 30p. *(Abstract + Presentation)*
(Onshore block in SW part of Timor Leste now held by national oil company Timor Gap EP. 18 exploration wells drilled between 1960-1973: ten with hydrocarbons, two (Matai-1/-1A and Cota Taci-1) tested oil in subcommercial quantities. At least 37 surface hydrocarbon seeps (14 oil, 23 gas) across block. Gas from seeps both high-mature thermogenic (from Permian?) and biogenic. Triassic calcareous restricted marine shale likely source for all Timor oils. Likely subthrust inversion anticlines of Permo-Triassic rifts)

Charlton, T.R., D. Gandara, D. Freitas, M. Guterres & N. da Costa Noronha (2018)- TIMOR GAPȏs onshore Block: a preliminary assessment of prospectivity in onshore Timor-Leste. In: PEGSB SEAPEX Asia Pacific E&P Conference, London, 8p.
(Review of 3 onshore oil exploration blocks in SW Timor Leste: A- Suai (Suai Late Miocene - Recent syn-orogenic basin in 'Banda Terrane' basement), C- Betano-Same, and Block B)

Charlton, T.R. & Suharsono (1990)- Mesozoic-Tertiary stratigraphy of the Kolbano area, southern West Timor. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 14, p. 38-58.
(Kolbano complex interpreted as accretionary complex. Late Jurassic- Miocene accumulated on outermost edge of Australian NW Shelf. Possible unconformity at base Ofu Fm deepwater marls, with Eocene planktonics but also abundant reworked Cretaceous and Paleocene planktonics)

Charlton, T.R. & D. Wall (1994)- New biostratigraphic results from the Kolbano area, southern West Timor: implications for the Mesozoic-Tertiary stratigraphy of Timor. J. Southeast Asian Earth Sci. 9, p. 113-122.
(On Kolbano area Late Jurassic- Neogene stratigraphy and dinoflagellate, forams, nannofossil contents of selected samples. Youngest sediments involved in Kolbano foldbelt thrusting N18-N19/20, latest Miocene-earliest Pliocene (but nothing younger than N15 suggested by Keep and Haig 2010))

Chiang, H.W., R.A. Harris, C. Prasetyadi, C.C. Shen, T.C. Chiu, N.L. Cox & Y.G. Chen (2010)- Th-230 dates of MIS 5e coral terraces in Kisar Island, Eastern Indonesia. EGU General Assembly, Vienna, Conf. Abstracts 12, p. 13467.
(online at: http://adsabs.harvard.edu/abs/2010EGUGA..1213467C)
(New 230Th dates raised Quaternary coral terraces at Kisar suggest ages of ~122 ka and minimum uplift rate of 0.1 m/kyr On N coast of Timor-Leste MIS 5e terraces reach 55m high, with uplift rate of ~0.4 m/kyr. No remnant Holocene fringe reefs around Kisar Island, also suggesting rel. low activity tectonics at Kisar)

Clowes, E. (1997)- Micropalaeontological analysis of the Kolbano sequence (Jurassic to Pliocene), West Timor and its radiolarian fauna. Ph. D. Thesis, University College London, London, p. 1-443. *(Unpublished)*
(Detailed descriptions of SW Timor Kolbano foldbelt Early Cretaceous- E Miocene radiolarian-rich deep-water pelagic facies. Nakfunu Fm dated as Valanginian-Aptian. Albian-Coniacian hiatus. Ofu Fm mainly Santonian-Maastrichtian. Early Cretaceous species dominated by endemic species known only from high S latitudes, but Tethys species present as well. Aptian-Albian more common Tethys species)

Cockcroft, P., C. Kenyon & W. Spencer (2005)- A journey into East Timorȏs exploration history. Proc. 2005 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 64p. *(Abstract + Presentation)*
(Five phases of oil-gas exploration in Timor Leste since 1893)

Cook, S.E. (1984)- Geochemical evaluation of outcrop samples from Timor, Indonesia with geological notes. University of London, Geol. Research in SE Asia, Report 27, p. 1-37. *(Unpublished)*
(16 outcrop samples from Permian and Triassic of Kekneno window analyzed for TOC (generally lean, woody and inertinite) and thermal maturation (generally immature- mature))

Cook, S.E. (1986)- Triassic sediments from East Kekneno, West Timor. Ph.D. Thesis, University of London, p. 1-384. *(Unpublished)*
(Facies trends and current directions suggest Triassic turbiditic sediments in NW Timor derived from easterly source. Sandstone composition less mature than in most age-equivalent Australia NW shelf well samples. Heavy mineral assemblages suggest some similarities with two samples from Sahul Shoals 1 well; may be from similar source)

Cook, S.E., K. Hasan, A. Said & S. Hidayat (1989)- Stratigraphic sequences in deep-water Triassic sediments from Timor. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of SE Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 25-41.
('Para-autochthonous' deep-water M-L Triassic in E Kekneno area, W Timor. Three parallel sequences of same age, dut different stratigraphies. New formation names: Niof Fm for fine-grained slope deposits, Babulu Fm for base-of-slope turbidites.With bivalves Halobia and Daonella. Turbidite sole marks suggest dominant flow direction from ENE to WSW. Main deformation NNE-to-SSW low-angle thrusting)

Cook, S.E., K. Hasan, A. Said & S. Hidayat (1990)- Stratigraphic sequences in deep-water Triassic sediments from Timor. J. Southeast Asian Earth Sci. 4, p. 74 *(Abstract only)*
(E Kekneno area of W Timor with 11 units in Triassic, representing 3 separate sequences, all deep water. Sediment source predominantly from NNE)

Cotelo Neiva, J.M. (1955)- Alguns marmores do Timor portugues. Garcia de Orta 3, 2, p. 205-209.
('Some marbles from Portuguese Timor'. With some chemical analyses)

Cox, N. (2009)- Variable uplift from Quaternary folding along the Northern coast of East Timor based on U-series age determinations of coral terraces. M.Sc. Thesis, Brigham Young University, p. 1-135.
(online at: https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=2680&context=etd)
(Mapping of uplifted Pleistocene marine coral reef terraces along ~180 km of N coast of E Timor. Highest terrace/platform elevation of ~600m asl. Above Miocene synorogenic material. Mean uplift of 0.6m/ ka for last 150,000 yrs. Uplift likely associated with folding above N-directed thrust faults)

Cox, N., R. Harris & D. Merritts (2006)- Quaternary uplift of coral terraces from active folding and thrusting along the northern coast of Timor-Leste. EOS Transactions AGU, 87, 52, Fall Mtg. Suppl., p. *(Abstract only)*
(Number of major emergent coral terraces along N coast Timor-Leste increases from 2 to 25 over 150 km from C to E Timor-Leste. Vertical displacement increases from < 0.3 in W to 1.0-1.5 mm/yr in E. Both erosional (regressional) and depositional terraces. Active uplift associated with N-ward movement along retro-wedge thrust faults)

Crespin, I. (1956)- Micropalaeontological examination of rock specimens from Portuguese Timor. Bureau Mineral Res. Geol. Geophysics, Canberra, Record 1956/65, p. 1-3.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10139)
(Brief report on 8 samples from Timor Leste (presumably Timor Oil Ltd outcrop samples). Include Late Eocene larger foram limestone with common Pellatispira, Biplanispira, Discocyclina from localities Suai and Ranuc)

Crespin, I. (1959)- Micropalaeontological report on rock samples from Portuguese Timor. Bureau Mineral Res. Geol. Geophysics, Canberra, Record 1959/92, p. 1-3.

(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10523)
(Report on 6 samples from Timor Leste (Timor Oil Ltd outcrop samples). Samples from tuffaceous breccia near base of fatu/ ophiolite at Mota Cena (Barique) contains limestone boulders with M-U Eocene larger forams (Nummulites, Discocyclina). Sample from matrix of Bibileu block clay N of Fatu Lulic, below Viqueque Fm, is of M Eocene age)

Crespin, I. & D.J. Belford (1959)- Micropalaeontology of further rock samples from Portuguese Timor. Bureau Mineral Res. Geol. Geophysics, Canberra, Record 1959/118, p. 1-3.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10548)
(Report on 7 more samples from Timor Leste (Timor Oil Ltd outcrop samples). Mainly Cretaceous (Albian-Turonian) deep water shale and radiolarite from E of Betano Landing)

Cross, I. (1990)- Hydrocarbon potential of Timor laid bare. Petromin, October 1990, p. 40-44.

Cross, I. (2000)- The search for oil and gas on East Timor. Petrol. Expl. Soc. Great Britain Newsl., Feb. 2000, p. 62-66.

Crostella, A.A. & D.E. Powell (1975)- Geology and hydrocarbon prospects of the Timor area. Proc. 4th Ann. Conv. Indon. Petroleum Assoc., 2, p. 149-171.
(Exploration history, etc. Consider Timor sediments all parts of Australian margin)

Da Costa Monteiro, F. (2003)- Late Triassic strata from East Timor: stratigraphy, sedimentology and hydrocarbon potential. M.Sc. Thesis, Auckland University, p. 1-115. *(Unpublished)*
(With palynogy analyses by R. Helby)

Da Costa Monteiro, F., J.A. Grant-Mackie, B. Ricketts & B. Woods (2003)- Some Late Triassic rocks in Timor Leste. In: Int. Conf. Opportunities and challenges for oil & gas & mining sectors in Timor-Leste, Dili 2003, 31p.

Da Costa Monteiro, F., B. Ricketts, J.A. Grant-Mackie & B. Woods (2002)- Late Triassic strata from East Timor- stratigraphy, sedimentology and hydrocarbon potential. Geol. Soc. New Zealand, Ann. Conf. Abstracts, p. 17.
(E Timor Late Triassic flysch-like interbedded sandstone- shale in lower part; upper part mainly calcarenites, massive sandstones and polymict conglomerates. Locally, Wailuli Fm, a name applied to E-M Jurassic rocks based on ammonites and belemnites, extends down into Late Triassic. Much of Wailuli Fm is Late Triassic, with Carnian- Norian age ammonites (Juvavites, etc.) and Halobia in marls and limestones. Babulu Fm, defined in W Timor as Late Triassic flysch facies, can be extended into E Timor to cover most rocks previously mapped as Wailuli Fm. Abundant organic matter may be source for hydrocarbons)

Davydov, V.I., D.W. Haig & E. McCartain (2013)- A latest Carboniferous warming spike recorded by a fusulinid-rich bioherm in Timor Leste: implications for East Gondwana deglaciation. Palaeogeogr. Palaeoclim. Palaeoecology 376, p. 22-38.
(online at: http://scholarworks.boisestate.edu/cgi/viewcontent.cgi?article=1150&context=geo_facpubs)
(Lensoidal limestone body of Maubisse Fm near Kulau village in central highlands of Timor Leste is bioherm with massive lower unit, including reef framework at base, and bedded grainstone upper unit. Bioherm developed on basalt substrate in warm shallow water. Fusulinid foraminifera including Schwagerina spp. and Eostaffella suggest latest Carboniferous (-earliest Permian) age. Kulau bioherm is oldest unit recognized in Maubisse Fm of Timor. Also suggest subtropical environment at paleolatitude of ~40° S, at N margin of Gondwana (where E Permian is glacial-dominated) (Authors do not consider previous interpretations that Maubisse Fm may be 'allochthonous' and not part of Australian margin; JTvG))

Davydov, V.I., D.W. Haig & E. McCartain (2014)- Latest Carboniferous (late Gzhelian) fusulinids from Timor Leste and their paleobiogeographic affinities. J. Paleontology 88, 3, p. 588-605.

(Uppermost Gzhelian (possibly lowermost Asselian) 9-24m thick bioherm on basalt near Kalau, 6 km WNW of Maubisse, in highlands of Timor Leste. With abundant foraminifera belonging to 17 genera (incl. fusulinids Ozawainellidae, Schubertellidae, Schwagerinidae, etc. Two new Schwagerina species: S. timorensis and S. maubissensis in oldest carbonate unit recorded frome Maubisse Fm. Also Eostaffella spp., Schellwienia spp. Timor was in N part of N-S East Gondwana rift system along which W margin of Australia later developed. Timor fauna most closely related to faunas from S China and Changning-Menlian region of Yunnan)

De Azeredo Leme, J. (1963)- The eastern end geology of Portuguese Timor (a preliminary report). Garcia de Orta (Lisboa) 11, 2, p. 379-388.

De Azeredo Leme, J. (1968)- Breve ensaio sobre la geologia da provincia de Timor. Junta de Investigacoes do Ultramar, Curso de Geologia do Ultramar 1, p. 105-161.
('Brief overview of the geology of the province of Timor'. Principal publication on geology of East Timor during Portuguese colonial time. In Portuguese)

De Azeredo Leme, J. & A.V.P. Coelho (1962)- Sombre una rocha granitoide da parte oriental da Ilha de Timor. Garcia de Orta (Lisboa) 10, 2, p. 407-410.
('On a granitoid rock from the eastern part of Timor island')

De Azeredo Leme, J. & A.V.P. Coelho (1962)- Geologia do enclave de Oecusse (Provincia de Timor). Garcia de Orta (Lisboa) 10, 3, p. 553-566.
('Geology of the Ocussi enclave, Timor'. Occurrence of U Triassic and Tertiary sediments and igneous rocks)

De Beaufort, L.F. (1923)- On a collection of Upper Cretaceous teeth and other vertebrate remains from a deep sea deposit in the island of Timor. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 4, p. 57-70.
(Decalcified Elasmobranchii shark teeth and reptile teeth from Cretaceous oceanic red clays with manganese nodules from Niki Niki area, SW Timor, originally described by Molengraaff, 1920. Overlie thin-bedded Late Triassic limestone with Halobia. Locality is at NW margin of Kolbano foldbelt)

De Bruijn, H. (1869)- Ontwerp van kopermijn-ontginning op het eiland Timor, 2nd Ed. De Breuk & Smits, Leiden, p. 1-74.
('Design of copper mine exploitation on the island Timor'. On (vague unconfirmed reports of) occurrences of copper ore (malachite) reported by Macklot (1828 trip with S. Muller; 1830 unpublished report). Concession for copper mining issued to J.S. Crawfurd in 1868 in Timor Leste near Atapupu. Author looking for investors (copper occurrences on Timor confirmed by Jonker (1873) and Hoen and Van Es (1928), but deemed non-commercial; associated with serpentinites)

De Bruyne, D.L. (1941)- Sur la composition et la genese du basin central de Timor. Ph.D.Thesis University of Amsterdam, p. 1-98. *(Also in H.A. Brouwer (ed.) Geological expedition of the University of Amsterdam to the Lesser Sunda Islands, III, p. 135-238)*
('On the composition and genesis of the Central basin of Timor'. Mainly on the Neogene deposits of Central Basin of W Timor. Small outcrops of Late Eocene reefal limestones with Discocyclina, Nummulites and Pellatispira. Early Miocene calcareous conglomerates with schist fragments and Spiroclypeus (probably latest Oligocene 'Cablac Limestone' equivalent; see also Marks 1954, JTvG). Pliocene Globigerina marls)

De Marez Oyens, F.A.H. Weckherlin (1933)- On *Paralegoceras sundaicum* Haniel and related forms. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 36, 1, p. 88-98.
(online at: www.dwc.knaw.nl/DL/publications/PU00016378.pdf)
(Six species of Permian ammonite Paralegoceras proposed by Smith (1927) from Jonker collection from Timor are all variations of P. sundaicum Haniel)

De Marez Oyens, F.A.H. Weckherlin (1938)- Preliminary note on the occurrence of a new ammonoid fauna of Permian age on the island of Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 41, 10, p. 1122-1126.
(online at: www.dwc.knaw.nl/DL/publications/PU00017273.pdf)
(Brief listing of 23 Permian ammonite species from tuffaceous marls of new locality Tae Wei, 5 km NE of Basleo. Thought to be stratigraphically transitional between known Basleo and Bitauni faunas (probably Roadian/ Wordian= early Middle Permian). Incl. Agathiceras brouweri, A. cf. sundaicum, Popanoceras, Metalegoceras, Sicanites, Parapronorites, etc.)

De Marez Oyens, F.A.H. Weckherlin (1940)- Neue Permische Krinoiden von Timor, mit Bemerkungen uber deren Vorkommen im Basleogebiet. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands, etc., 1937, Noord Hollandsche Publ., Amsterdam, 1, p. 285-348.
('New Permian crinoids from Timor, with remarks on their occurrence in the Basleo area'. NW of Basleo Permian limestones generally thin lenses, associated with marls and common diabase with tuffs, coarse conglomerates with brachiopods. Marls locally rich in crinoids. In some areas this Permian adjacent to deep marine Cretaceous with manganese nodules and fish teeth)

De Marez Oyens, F.A.H. Weckherlin (1940)- *Platycrinus tuberculatus* Oyens, a correction. Geol. Magazine 77, 3, p. 253-254.
(Proposes to replace name Platycrinus tuberculatus Oyens for a Permian crinoid, from Basleo, Timor, with Platycrinus wrighti nov. nom, as P. tuberculatus has already been used)

De Marez Oyens, F.A.H. Weckherlin (1941)- Over het voorkomen van *Fusulina*-kalken in het Basleo gebied. Handelingen 28th Nederlandsch Natuur- Geneeskundig Congres, Utrecht, p. 240-242.
('On the occurrence of Fusulina limestones in the Basleo area'. Loose blocks of fusulinid limestones in Noil Boenoe river deposits. In Noil Toeke in Permian limestones that are probably remnants of once more widely distributed thrust sheet over Mesozoic rocks. Timor island has two drainage divides, a northern one over Fatu Leo, Mutis Mt, etc., and southern one along Kolbano thrust belt, which may have formed two parallel island chains like Tanimbar Islands today)

De Roever, W.P. (1940)- Geological investigations in the Southwestern Moetis Region (Netherlands Timor). Ph.D. Thesis University of Amsterdam, p. 1-244.
(also in H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1937, 2, Noord Hollandsche Publ., Amsterdam, p. 97-344) (Detail maps and descriptions of SW Mutis Mts region. Distinguishes tectonically juxtaposed rock series of similar ages, but different facies. Rock types Pre-Permian(?) crystalline schists, Kekneno series (Permian-Triassic flysch), Sonnebait series (= 'Maubisse Fm'; Permian crinoid/brachiopod limestones with basic volcanics, Triassic cephalopod- limestones, Jurassic marls with cherts and radiolarites, U Cretaceous Globotruncana limestone and marls with cherts), Fatoe series (Triassic oolitic limestones and Liassic Mytilus limestones) and ophiolite-spilite complex. Major thrust plane between Kekneno and Sonnebait series. Fatoe series youngest nappe complex overlies ophiolite-spilite complex which may belong to same nappe as crystalline schists. Main strike direction NW-SE, dipping NE)

De Roever, W.P. (1940)- Description of some Permian ammonoids from F. Koekatoe, Lidak. Palaeontological Appendix to Simons (1940), in H.A. Brouwer (ed.) (1940) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1937, 1, p. 206-210.
(New species of cyclolobid ammonite Waagenoceras lidacense from Lower Permian of NE West Timor)

De Roever, W.P. (1940)- Uber Spilite und verwandte Gesteine von Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 43, 5, p. 630-634.
(online at: www.dwc.knaw.nl/DL/publications/PU00017447.pdf)
('On spilites and related rocks from Timor'. W Timor Mutis area with complex of Pre-Tertiary spilite, dolerite, basalt, gabbro, lherzolite and serpentinite. Associated with crystalline schists and Palelo series (= Banda Terrane of later authors). Also common below Triassic 'Fatu limestones'. Common albitization in spilite)

De Roever, W.P. (1941)- Die permischen Alkaligesteine und die Ophiolite des Timorischen Faltengebirges. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 44, 8, p. 993-995.
(online at: www.dwc.knaw.nl/DL/publications/PU00017655.pdf)
('The Permian alkaline rocks and ophiolites of the Timor foldbelt'. Permian Sonnebait series (= Maubisse Fm of later authors; JTvG) mainly marine, highly fossiliferous crinoidal limestones with volcanic rocks (mainly olivine basalts, trachybasalts, alkali trachytes and alkali rhyolites, also spilites and poeneites). Present both N and S of Plio-Pleistocene Central Basin. No similar volcanics observed in Permian- Triassic flysch facies of the Kekneno series. Post-Permian igneous rocks mainly ophiolites)

De Roever, W.P. (1941)- De prae-Miocene tektoniek van het ZW Moetis gebied (Timor) in verband met het karakter der oudere eruptiefgesteenten. Handelingen 28e Nederlandsch Natuur- Geneeskundig Congres, 1941, p. 242-244. *(Abstract)*
('The pre-Miocene tectonics of the SW Mutis area, Timor, in relation to the nature of older volcanic rocks')

De Roever, W.P. (1942)- Olivine-basalts and their alkaline differentiates in the Permian of Timor. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1937, 4, Noord Hollandsche Publ. Co., Amsterdam, p. 209-289.
(Descriptions of basic volcanics of 'Sonnebait series' (=Maubisse complex; JTvG), associated with shallow marine Permian crinoidal limestones. Triassic-Jurassic-Cretaceous of Sonnebait series all pelagic sediments)

De Roever, W.P. (1959)- Schwach alkalischer fruhgeosynklinaler Vulkanismus in Perm der insel Timor. Geol. Rundschau 48, p. 179-184.
('Weakly alkaline, early geosynclinal volcanism in the Permian of Timor'. Permian basic volcanics of Timor (of Maubisse Terrane) mainly olivine basalts, also trachybasalt, alkali-trachyte. Do not belong in cratonic setting, but are similar to oceanic basalts and here called 'early geosynclinal')

De Smet, M.E.M, A.R. Fortuin, S.R. Troelstra, L.J. Van Marle, Mimin Karmini, S. Tjokrosapoetro & S. Hadiwisastra (1990)- Detection of collision-related vertical movements in the Outer Banda Arc (Timor, Indonesia), using micropaleontological data. J. Southeast Asian Earth Sci. 4, p. 337-356.
(Timor Central Basin fill Late Pliocene pelagic calcilutites with vitric tuffs (Batu Putih Fm), unconformably over Bobonaro scaly clay and imbricated Early Pliocene- older rocks. Batu Putih carbonates change to submarine fan clastics at ~2.2 Ma (Noele Fm). Source of turbidites was from N Timor and include serpentinite fragments. Two rel. short uplift periods: (1) >600m uplift at 2.2- 2.0 Ma, associated with creation of Central Basin and emergence of N Timor and (2) >1500m of uplift starting at 0.2 Ma and still ongoing)

De Waard, D. (1954)- Contributions to the geology of Timor. I. Geological research in Timor. Indonesian J. Natural Science (Majalah Ilmu Alam Indonesia) 110, p. 1-8.
(Summary of 1953 Timor expedition of University of Indonesia, Bandung)

De Waard, D. (1954)- Contributions to the geology of Timor, II. The orogenic main phase in Timor. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 110, p. 9-20.
(Lalan Asu area, SW Timor, typical Palelo Series of schists overlain by Cretaceous flysch, with unconformities at base of shallow marine Eocene and Base Miocene limestones. Basal Miocene conglomerate has Miogypsinoides complanata (= Aquitanian age according to Marks 1954, but signifies zone Te4/Chattian/ latest Oligocene; JTvG). Structural analysis suggests thrusting to S and SSW. Strike directions of Cretaceous, Eocene and Miocene similar, suggesting rel. minor overthrusting in pre-Lower Miocene, main phase in Late Miocene; Sonnebait overthrusts Palelo complex)

De Waard, D. (1954)- Contributions to the geology of Timor, V. Structural development of the crystalline schists in Timor. Tectonics of the Lalan Asu Massif. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 110, 4-6, p. 143-153.
(Structural analysis of foliation in Lalan Asu schists suggests 2 main structural events; (1)'Pre-Permian?' event caused E-W striking foliation and low-medium grade metamorphism and (2) Late Miocene folding/thrusting,

with minor tectonic events in-between. Serpentine masses, occasionally with gabbro, along border of massif between schist and overthrust series)

De Waard, D. (1954)- Contributions to the geology of Timor, VI. The second geological Timor expedition, preliminary results. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 110, 4-6, p. 154-160.
(Tectonics of Timor very complex; overthrusting present, but not like rel. coherent and flat alpine nappes. Crystalline massifs and associated ophiolites probably lenticular masses in overthrust succession. Chaotic structures in Sonnebait series suggest gravity tectonics)

De Waard, D. (1955)- Contributions to the geology of Timor, VII. On the tectonics of the Ofu series. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 111, 4-6, p. 137-143.
(Ofu series in mountainous area near S coast of W Timor (later called Kolbano foldbelt = young accretionary prism of distal Australian NW margin rocks; JTvG) consists of Jurassic-Cretaceous marly limestones, highly folded with E-W orientation of fold-axes and dominantly N-ward dips. Ofu series may be thrust over more marly Permo-Triassic 'parautochthonous' Kekneno series)

De Waard, D. (1955)- Contributions to the geology of Timor, VIII. Tectonics of the Sonnebait overthrust unit near Nikiniki and Basleo. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 111, 4-6, p. 144-150.
(SW Timor Sonnebait overthrust unit in Nikiniki- Basleo region with famous Permian-Triassic fossil localities. Mainly composed of 500-750m of Permian shales and reddish limestones with common pillow basalt flows, subordinate Triassic cephalopod limestones and U Cretaceous deep-sea clays with manganese nodules. Structurally not as complex as previously reported: NW-SE trending open folds with wavelength of 1.5- 2 km. Tectonically thrusted over Ofu series in S, which is separate overthrust sheet with different stratigraphy (Jurassic-Cretaceous deep-water marly limestones) and with E-W trending fold axes. Different orientations suggest two separate fold-thrust events))

De Waard, D. (1956)- Contributions to the geology of Timor, IX. Geology of a N-S across Western Timor. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 112, 2, p. 1-13.
(W Indonesian Timor northern and southern zones of overthrust structures, separated by central basin with latest Miocene-Pleistocene sediments and bordered on S by major (~2000m of throw) Nikiniki fault. Overthrusting completed in Early Miocene. Orogenic movements continued with faulting, tilting of blocks, and formation of central depression. Position of Tertiary volcanic rocks along N coast not yet clear)

De Waard, D. (1957)- Contributions of the geology of Timor, XII. The third Timor geological expedition, preliminary results. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 113, p. 7-43.
(1957 Timor Expedition. Name Mutis unit proposed for tectonic unit composed of crystalline basement overlain by Palelo (+U Jurassic?+ Cretaceous greywackes and volcanics), Eocene limestone and volcanics and Lower Miocene reefal limestones and volcanics, all folded (=Banda Terrane of Harris). Fatus, previously assumed to be separate tectonic units, now considered to be bioherms in Permian, Triassic and Jurassic of Sonnebait overthrust unit. Only one overthrust sheet of importance: Sonnebait overthrust, which overlies all other tectonic units, incl. Mutis and parautochthonous Kekneno unit)

De Waard, D. (1957)- Zones of regional metamorphism in the Lalan Asu Massif, Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 60, p. 383-392.
(Five metamorphic zones ranging from muscovite-chlorite subfacies to amphibolite facies in crystalline schists of Lalan Asu massif, W Timor. Massif surrounded by marly sediments of Sonnebait overthrust sheet)

De Waard, D. (1959)- Anorthite content of plagioclase in basic and pelitic crystalline schists as related to metamorphic zoning in the Usu massif. Timor. American J. Science 257, p. 553-562.
(Sampling of schists in Usu massif yielded detailed pattern of isopleths based on An values of plagioclase. An10 isopleth marks isograd separating greenschist facies from almandine amphibolite facies. Grade of metamorphism probably responsible for plagioclase equilibrium values)

Dias, R. (2012)- Strike-slip tectonics in arc-continent collision: The Timor-Leste example. First Int. Geological Congress of Geology of Timor-Leste, Dili 2012, p. 53-58. *(Extended Abstract)*
(online at: www.rdpc.uevora.pt/bitstream/10174/8173/1/Dias_2012_Strike-slip%20tectonics%20in%20arc-continent%20collision.pdf)
(Recent detailed structural mapping in Cribas region led to new data on submeridian sinistral strike-slip fault system and relation with E-W Cribas anticline)

Diener, C. (1923)- Ammonoidea trachyostraca aus der mittleren und oberen Trias von Timor. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 4, p. 75-276 + Atlas.
(Descriptions of >300 species of M-U Triassic ammonoids from W Timor collected by Jonker 1916 expedition. Assemblages from blocks very rich in well preserved ammonites, resembling 'Halstatt Limestones' in Alps, with species of both Alpine-Mediterranean and Himalayan affinities. Dominated by Haloritids. Different blocks different ages, mainly Carnian- Norian or mix of these, but also Anisian and Ladinian faunas. Upper Norian-Rhaetian faunas not demonstrated. Total thickness of M-U Triassic may be only 2 meters)

Dinis, P.A., C. Tassinari & M.M.S. Cabral Pinto (2013)- Geochemistry and detrital geochronology of stream sediments from East Timor: implications for the origin of source units. Australian J. Earth Sci. 60, 4, p. 509-519.
(Geochemistry and detrital zircon geochronology of Recent stream sediments in E Timor. Zircons with ages of 2150-1500 Ma and 365-210 Ma most common populations in all samples. Sampling sites with Banda Terrane units in watersheds have common Triassic zircons, also common in Sula Spur. Significant component of zircon in allochthonous units of Timor probably inherited from crustal fragments that drifted from Sula Spur. These were carried S as Banda Arc progressed towards Australian continent and emplaced in Timor with Banda Terrane. Geochem interpretation: 'none of the studied sediments plot in the fields of passive margins')

Djohor, D.D. & J. Sopaheluwakan (2006)- Studi batuan metamorf dalam mempelajari evolusi geologi (studi kasus di daerah Komplek Miomaffo- Timor). MINDAGI (Trisakti) 10, 1, p. 1-10.
(online at: www.journal.trisakti.ac.id/index.php/MINDAGI/article/view/101/109)
('Study of metamorphic rocks in the study of geological evolution (case study in the area of the Miomaffo-Complex, Timor)'. Brief descriptions of low-grade metamorphic rocks, incl. metatuff, schist (no locality maps: not sure if samples actually from Miomaffo Massif or Mutus Complex? Mainly summary of Sopaheluwakan 1989 data?; JTvG))

Donovan, S.K. & G.D. Webster (2013)- Platyceratid gastropod infestations of *Neoplatycrinus* Wanner (Crinoidea) from the Permian of West Timor: speculations on thecal modifications. Proc. Geologists Assoc. 124, 6, p. 988-993.
(Distinctive traces on camerate crinoid Neoplatycrinus from Permian of Timor reflect infestation by coprophagous platyceratid gastropods)

Donovan, S.K. & G.D. Webster (2016)- A Permian *Barycrinus*? Wachsmuth (Crinoidea, Cladida) from Timor. Alcheringa 40, p. 216-218.
(A crinoid pluricolumnal from Noil Simaam, Timor, identified as Barycrinus? sp., youngest member of this otherwise E Carboniferous genus)

Donovan, S.K., G.D. Webster & J.A. Waters (2016)- A last peak in diversity: the stalked echinoderms of the Permian of Timor. Geology Today 32, 5, p. 179-185.
(One of the most notable sites for the marine Permian is Timor island, where thick, olistostromic blocks of limestone have yielded 1000+ shelly species. Over a third of these are stalked echinoderms, both crinoids and blastoids, two diverse Palaeozoic groups that would be devastated by the end-Permian mass extinction)

Dropkin, M.J., R.A. Harris & P.K. Zeitler (1993)- An Oligocene forearc crustal flake exposed in a contemporary arc continent collision, Timor, Indonesia. Geol. Soc. America (GSA), Mtg. Abstracts, 25, 6, p. A-482. *(Abstract only)*

(Harris et al. 2000: Banda Terrane of Timor from continental and oceanic protoliths, and reached thermal peak at or before 35-40 Ma)

Ducrocq, S. (1996)- The Eocene terrestrial mammal from Timor, Indonesia. Geol. Magazine 133, 6, p. 763-766.
(Discussion of skull of Eocene http://ro.uow.edu.au/cgi/viewcontent.cgi?article=3379&context=smhpapers e Anthracothema/ Anthracotherium verhoeveni (= extinct ancestral Hippopotamus relative) from N West Timor. First described by Von Koenigswald (1967), and Laurasiatic affinities. Can not be autochthonous, unless part of Timor is Asian continental microplate that migrated S and collided with Timor (Late Eocene anthracotheres common in mainland SE Asia, also known from W Kalimantan (Stromer 1931), also W Sulawesi? (Villeneuve et al. 2010); JTvG))

Duffy, B. (2012)- The structural and geomorphic development of active collisional orogens, from single earthquake to million year timescales, Timor Leste and New Zealand. Ph.D. Thesis, University of Canterbury, Christchurch, p. 1-221.
(online at: www.ir.canterbury.ac.nz/bitstream/10092/7527/1/thesis_fulltext.pdf)
(Geomorphology and structural geology of Timor records lateral extrusion of orogenic wedge that developed by underthrusting of Australian continental terrace below Banda forearc)

Duffy, B., J. Kalansky, K. Bassett, R. Harris, M. Quigley, D.J.J. van Hinsbergen, L.J. Strachan & Y. Rosenthal (2017)- Melange versus forearc contributions to sedimentation and uplift, during rapid denudation of a young Banda forearc-continent collisional belt. J. Asian Earth Sci. 138, p. 186-210.
(Along Timor sector of Banda Arc synorogenic piggy-back basins formed above melange unit, exhumed to sea floor in latest Messinian. Following deep marine marl sedimentation, increasingly muddy sediment flux indicates emergence of Timor 4.5 Ma. Sediment source probably 50-60 km to N. Sedimentation between 4.5-3.2 Ma probably derived from mudstone-dominated landscape with geochemical affinities to Triassic-mudstone-rich synorogenic melange, which overlies and surrounds Banda Terrane. After 3.2 Ma, sedimentation dominated by hard rock lithologies of Banda Terrane, and accompanied by rapid uplift)

Duffy, B., M. Quigley, R. Harris & U. Ring (2013)- Arc-parallel extrusion of the Timor sector of the Banda arc-continent collision. Tectonics 32, 3, p. 641-660.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/tect.20048/epdf)
(New structural and geomorphic evidence for syn-collisional extension in converging plate boundary zone between Australian Plate and Banda Arc. Dominantly NW-SE dextral normal faults and NE-SW sinistral normal faults. Extension resulted from collision of outlying plateau that arrived S of Wetar and was bounded by ocean crust to both W and E)

Dun, W.S. & E. David (1922)- Notes on the occurrence of *Gastrioceras* at the Irwin River Coalfield, W. Australia, and a comparison with the so-called *Paralegoceras* from Letti, Dutch East Indies. J. Proc. Royal Soc. New South Wales, Sydney, 56, p. 249-252.
(W Australia Permian cephalopod Gastrioceras very similar to Paralegoceras sundaicum Haniel of Leti island, E of Timor)

Earle, M.M. (1979)- Mesozoic ophiolite and blue amphibole on Timor and the dispersal of eastern Gondwanaland. Nature 282, p. 375-378.
(Timor Lolotoi unit dismembered metamorphosed ophiolite formed during Jurassic rifting of Australia NW shelf. Rift developed into ocean basin which carried rifted microcontinental block N-wards, which accreted to SE Asia in M-Late Cretaceous and experienced low grade metamorphism with crossitic amphibole)

Earle, M.M. (1981)- A study of Boi and Molo, two metamorphic massifs on Timor, Eastern Indonesia. Ph.D. Thesis University of London, p. 1-240. *(Unpublished)*

Earle, M.M. (1981)- The metamorphic rocks of Boi, Timor, Eastern Indonesia. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, Bandung, p. 239-251.

(In W Timor Boi Massif 'Mutis' metamorphics isoclinally folded pelitic gneiss at base, amphibolite and metamorphosed gabbroic rocks and serpentinite at top. Late Cretaceous radiometric age. Boi metamorphics overlain by Eocene and Miocene carbonates. In other similar massifs on Timor metamorphics overlain by Palelo Group radiolarian cherts (E-M Cretaceous) and Eocene and Miocene carbonates. Regional foliation E-W strike, S dip. Boi and Lalan Asu massifs part of larger metamorphic overthrust sheet, emplaced from N)

Earle, M.M. (1983)- Continental margin origin for Cretaceous radiolarian cherts in western Timor. Nature 305, p. 129-130.
(Deep water Cretaceous radiolarian cherts interpreted as deep sea deposits, in both 'autochthonous' (Wai Bua, Kolbano) and 'allochthonous' (Noni Fm of Palelo Series in Molo and Miomaffo massifs) parts of Timor. Palelo Group was derived from SE Asia)

El Wakeel, S.K. & J.P. Riley (1961)- Chemical and mineralogical studies of fossil red clays from Timor. Geochimica Cosmochimica Acta 24, p. 260-265.
(Manganese nodules from Cretaceous red clay from Noil Tobe, W Timor, chemically very similar to Pacific-Indian oceanic deep sea nodules, providing strong confirmation of deep sea origin)

Ely, K.S. (2009)- Geochronology of Timor-Leste and seismo-tectonics of the southern Banda Arc. Ph.D. Thesis, University of Melbourne, p. 1-262.
(online at: https://minerva-access.unimelb.edu.au/handle/11343/35296)
(Detrital zircons from N Timor Leste Aileu Metamorphic Complex of N Timor Leste show age modes at 270-425 Ma, 860-1180 Ma and 1460-1870 Ma, favoring sediment source from E Malaya- Indochina and maximum depositional age of 270 Ma (E-M Permian). Aileu Complex cooling ages of 6-10 Ma, implying metamorphism started by at least ~12 Ma. Metamorphism attributed to arc setting rather than collision of Australian continent with Banda Arc. Atauro island N of Timor bi-modal subaqueous volcanism ceased by ~3 Ma, followed by uplift of coral reef terraces to 700m around island. N of Timor absence of intermediate depth seismicity attributed to slab window down to 350 km depth. Slab under W Savu Sea in down-dip compression at ~70-g 300 km, beneath region of arc with closest spacing of volcanoes in Sunda-Banda arc system. Unusual state of stress attributed to subduction of N extension of Scott Plateau)

Ely, K.S., M. Sandiford, D. Phillips & S.D. Boger (2014)- Detrital zircon U-Pb and 40Ar/39Ar hornblende ages from the Aileu Complex, Timor-Leste: provenance and metamorphic cooling history. J. Geol. Soc., London, 171, p. 299-309.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.875.2812&rep=rep1&type=pdf)
(Detrital zircons from metasediments of Permian Aileu Complex of N Timor Leste have major U-Pb age modes at 275-440 Ma (peak at 290 Ma, reflecting nearby E Permian magmatism?), 860-1240 Ma and 1460-1870 Ma, most compatible with sediment source from now fragmented Sula Spur. 40Ar/39Ar cooling ages of hornblende show W parts cooling through hornblende closure temperature by 10 Ma and central parts by 6 Ma, consistent with variable exhumation history. Onset of cooling by 10 Ma implies metamorphism was probably coeval with initiation of Banda Arc. Aileu Complex cooling ages record deformation related to fragmentation of Sula Spur and early development of Banda Arc, rather than collision between Australian continent and Banda Arc)

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(online at: www.publish.csiro.au/ex/pdf/ASEG2018abP031)
(Review of Mesozoic of W Timor and comparisons to Australian NW Shelf, suggesting similar hydrocarbon plays)

Ezzoubair, F. (2000)- Recherches sur les Tabules permiens de Timor et sur les affinities des Spongiomorphides du Trias d'Autriche: importances des donnees microstructurales, geochimiques et biochimiques. Ph.D. Thesis Universite Libre Bruxelles, Fac. Sciences, p. 1-346. *(Unpublished)*
('Research on the Permian tabulate corals of Timor and on the affinities of the spongiomorphs of the Triassic of Austria; importance of microstructural, geochemical and biochemical data')

Falloon, T.J., R.F. Berry, P. Robinson & A.J. Stolz (2006)- Whole-rock geochemistry of the Hili Manu peridotite, East Timor: implications for the origin of Timor ophiolites. Australian J. Earth Sci. 53, p. 637-649.
(Geochemistry of Hili Manu peridotite on N coast E Timor similar to Oecussi peridotite of N coast of W Timor, and suggesting supra-subduction origin. Therefore more likely to be part of Banda upper plate, not Australian subcontinental lithosphere. This supports interpretation that Miocene collision between Banda Arc and Australian continental margin produced widespread 'Cordilleran'-style ophiolites on Timor)

Fay, R.O. (1961)- The type species of *Pterotoblastus*, a Permian blastoid from Timor. Oklahoma Geol. Notes 21, 11, p. 298-300.
(Blastoid genus Pterotoblastus from Permian of Timor, with type species, P. gracilis from Basleo beds)

Fay, R.O. (1961)- *Deltoblastus*, a new Permian blastoid genus from Timor. Oklahoma Geol. Notes. 21, 2, p. 36-40.
(New genus Deltoblastus, with type species D. elongatus, for blastoids from Permian of Timor)

Fedorowski, J. (1986)- Permian rugose corals from Timor (remarks on Schouppe and Staculôs collections and publications from 1955 and 1959). Palaeontographica A 191, 4-6, p. 173-226.

Felix, J. (1887)- Untersuchungen uber fossile Holzer, III. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 39, 3, p. 517-528.
(online at: https://www.biodiversitylibrary.org/item/141360page/549/mode/1up)
('Research on fossil woods, III'. Incl. brief descriptions of silicified wood as float in Koinino River, Timor, collected by Martens and Schneider (p. 519-520; 'Araucarioxylon martensi n.sp.' ; not figured). Age unknown (Wichmann 1892, p. 194 assumes Tertiary age; Roggeveen 1932 noted similarities with Triassic wood from Riau Archipelago, Sumatra) (case of misidentication or wrong location (Timor mainly marine)?; JTvG))

Felix, J. (1915)- Jungtertiare und quartare Anthozoen von Timor und Obi- I. In: J. Wanner (ed.) Palaeontologie von Timor 2, 2, Schweizerbart, Stuttgart, p. 1-45.
('Late Tertiary and Quaternary anthozoans from Timor and Obi- part 1. Mainly taxonomic descriptions of corals collected by Wanner, Molengraaff 1909, 1911 expeditions)

Felix, J. (1920)- Jungtertiare und Quartare Anthozoen von Timor und Obi-II. In: J. Wanner (ed.) Palaeontologie von Timor 8, 13, Schweizerbart, Stuttgart, p. 1-40.
('Late Tertiary and Quaternary anthozoans from Timor and Obi- part 2'. Second part of descriptions of Pliocene- Pleistocene molluscs and corals from Timor and Obi)

Ferreira, V. (2011)- The Aitutu Formation and associated units at Soibada, Timor Leste: the potential source rocks for Timor Leste petroleum system. Hon. Thesis University of Western Australia, Perth, p. *(Unpublished)*
(Stratigraphic succession of Triassic Aitutu Fm and associated units in Sahem River near Soibada, Timor Leste. Eight lithostratigraphic units, mainly basinal facies marls, radiolarian wackestone, bedded wackestone with chert nodules, etc.. Ages mainly Late Triassic (Aitutu Fm), some E Jurassic (Wailuli Fm). Lowest unit is M Triassic (Late Anisian- E Carnian) deltaic quartz sst-sandy shale, and correlates to Babulu Fm)

Ferreira, V. (2011)- Cartografia e estrutura da regiao Oeste do anticlinal de Cribas. Implicacoes para a genese de hidrocarbonetos. M.Sc Thesis, Evora University, Portugal, p. 1-69. *(Unpublished)*
('Mapping and structure of the region West of the Cribas anticline; implications for hydrocarbon generation')

Finch, J. (1994)- Late Triassic and Early Jurassic calcareous nannofossils from Timor. M.Sc. Thesis, University College, London, p. *(Unpublished)*
(Rose 1994: rel. poor Norian- Rhaetian nanno assemblages in Aitutu Fm, rel. rich ?Sinemurian-Pliensbachian-lower Toarcian nannos in Wai Luli Fm)

Flugel, E. (2002)- Triassic reef patterns. In: W. Kiessling et al. (eds.) Phanerozoic reef patterns, Soc. Sedimentary Geology (SEPM) Spec. Publ. 72, p. 391-463.
(p. 419-420: Timor Norian 'allochthonous' reefal limestones: corals mixture of W Tethys and 47% endemic taxa. Conclusion disputed by Martini et al. (2000), who argue that bulk of Timor Triassic macrofauna is 'Tethyan')

Frech, F. (1908)- Untere Trias in Timor und Obertrias der Molukken. Nachtrag zu Trias Asiens. In: Lethaea Geognostica, 2, Das Mesozoicum, p. 541-542.
('Lower Triassic of Timor and Upper Triassic of the Moluccas; appendix to the Triassic of Asia'. Brief review of records of Triassic fossils reported by Wanner (1907))

Furnish, W.M. & B.F. Glenister (1971)- The Lower Permian Somohole fauna of Timor. In: W.B. Saunders, The Somoholitidae: Mississippian to Permian Ammonoidea. J. Palaeontology 45, p. 100-118.
(Somohole Horizon of the Kekneno series, NW slope of Mount Somohole ~3 km SW of village at Fatu Bena, Mutis region, N West Timor is one of oldest Permian horizons, probably of Sakmarian age. With Neopronorites timorensis, Somoholites beluensis, Metalegoceras involutum, Juresanites somoholensis, Agathiceras, Waagenina dieneri, Propopanoceras boesei, Properrinites, etc. New species Somoholites deroeveri n.sp.)

Fyan, E.C. (1916)- Some young-Pliocene ostracods of Timor. Proc. Kon. Akademie Wetenschappen, Amsterdam, 18, 2, p. 1205-1216.
(online at: https://archive.org/details/proceedingsofsec182koni)
(First description of SE Asian Tertiary ostracodes: nine species from Pliocene clay along Mota Talau near Atambua, based on samples collected by Molengraaff Timor expedition of 1910-1912. Includes Paracypris zealandica, Nesidea molengraaffi, N. mulleri, Loxoconcha australis, L. alata, Cytheridea (now called Neocyprideis) timorensis n.sp.), C. spinulosa, etc.)

Gageonnet, R. & M. Lemoine (1957)- Note preliminaire sur la geologie du Timor portugues. Garcia de Orta, Lisbon, 5, 1, p. 153-163.
('Preliminary note on the geology of Portuguese Timor'. Descriptions of stratigraphies of 'Autochthonous' (Permian - Quaternary) and 'Nappe complex' (Permian- Eocene and metamorphics). Discussion of nappe structures. Multiple structural events: main one between Oligocene-M Miocene, lesser one in Pleistocene)

Gageonnet, R. & M. Lemoine (1957)- Composition et subdivisions du complexe charrie au Timor portugais. Comptes Rendus hebd. Academie Sciences Paris 244, p. 2246-2249.
('Composition and subdivisions of the nappe complex of Portuguese Timor'. Three units in overthrust complex above autochthonous series in Portuguese Timor: lower (Permian Maubisse series shales, volcanics, pink crinoidal limestones), intermediate (crystalline and volcanic rocks mainly in North) and upper complex composed largely of late Cretaceous Fatu- Eocene Same Fm massive limestones)

Gageonnet, R. & M. Lemoine (1957)- Sur la stratigraphie de lôautochtone au Timor Portugais. Comptes Rendus hebd. Academie Sciences Paris 244, p. 2168-2171.
('On the stratigraphy of the autochthonous of Portuguese Timor'. Deepest unit of E Timor called 'autochthonous'. Composed of Permian Cribas shales and thick Triassic- E Jurassic flysch, overlain by Eocene pelagics. Cretaceous appears to be absent. Unconformably overlain by weakly deformed Neogene Viqueque series marls, sands and conglomerates)

Gageonnet, R. & M. Lemoine (1957)- Sur l'age et les modalites des phenomenes de charriage au Timor portugais. Comptes Rendus hebd. Academie Sciences Paris 244, 19, p. 2407-2410.
(Principal tectonic events of E Timor: major overthrusting before Middle Miocene, followed by formation of simple folds in Plio-Pleistocene and uplift. Displacement driven by gravity played an important role)

Gageonnet, R. & M. Lemoine (1958)- Contribution a la connaissance de la geologie de la province Portuguese de Timor. Junta Investig. Ultramar, Lisboa, 134p.
('Contribution to the knowledge of the geology of Portuguese Timor'. Classic early work on E Timor)

Gageonnet, R., M. Lemoine & D. Trumpy (1959)- Problemes petrolifiers dans la province Portugaise de Timor. Revue Inst. Francais Petrole 14, 4-5, p. 466-473.
('Petroleum problems in Portuguese Timor'. W Indonesia commercial hydrocarbon accumulations mainly Neogene age, thick and rel. little deformed. Timor numerous oil and gas shows tied to Permian- Mesozoic geosynclinal series, that underwent alpine nappe tectonics in Miocene, complicating the presence of reservoirs and commercial traps)

Gerth, H. (1909)- *Timorella permica* n.g., n.sp., eine neue Lithistide aus dem Perm von Timor. Centralblatt Mineralogie Geologie Palaont. 1909, p. 695-700.
(online at: www.biodiversitylibrary.org/item/192781page/717/mode/1up)
('Timorella permica, new genus, new species, a new lithistid from the Permian of Timor'. New sponge species from Permian crinoid limestone and shale, collected by Verbeek at Ajer Mati river near Kupang)

Gerth, H. (1915)- Die Heterastridien von Timor. Palaontologie von Timor, Schweizerbart, Stuttgart, 2, p. 63-69.
('The Heterastrids from Timor'. Late Triassic small, globular, possibly pelagic colonial hydrozoans, named Heterastridium conglobatum, similar to those originally described from Halstatter Limestone in Austrian Alps. Over 1000 specimens collected by Wanner and Molengraaff expeditions, mainly from Bihati (near Baung, Amarassi), some from Nifoekoko near Niki Niki. Appear to be restricted to blocks of pelagic, deep water 'Halstatt' cephalopod facies with Norian ammonites. Some layers composed exclusively of heterastrids, covered with black iron-manganese coating)

Gerth, H. (1921)- Die Anthozoen der Dyas von Timor. Palaontologie von Timor, Schweizerbart, Stuttgart, 9, 16, p. 65-147.
('The corals from the Permian of Timor'. First and still principal monograph on Permian corals from Timor. 15 species of solitary rugose corals (Timorphyllum, Pterophyllum, Carcinophyllum, Verbeekiella, Amplexus, etc.) and 3 species of 'waagenophyllid' colonial rugose corals (Lonsdaleia, Michelinia, Favosites))

Gerth, H. (1921)- Der palaeontologische Character der Anthozoenfauna des Perms von Timor. Nederl. Timor Expeditie 1910-1912, Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen III, 1, p. 1-30.
('The paleontological character of the Permian coral fauna of Timor'. Dominated by solitary corals (Timorphyllum wanneri, Verbeekiella, Carcinophyllum from Artinskian- Roadian of Bitauni, Basleo). New colonial corals Lonsdaleia timorica n.sp. (= Ipciphyllum timoricum) from Fatu Oinino on road to Nenas and Favosites permica from Basleo)

Gerth, H. (1926)- Die Korallenfauna des Perm von Timor und die Permische Vereisung. Leidsche Geol. Mededelingen 2, 1, p. 7-14.
(online at: www.repository.naturalis.nl/document/549627)
('The coral fauna of the Permian of Timor and the Permian glaciation'. Timor Permian marine fauna rich in corals, crinoids and fusulinids and is typical warm water fauna. It is contemporaneous with glaciations in nearby Australia, suggesting these areas were farther apart in Permian time. With world map showing distribution of Permian floras and faunas)

Gerth, H. (1927)- Ein *Heterastridium* mit eigenartiger Oberflachen Skulptur aus dem Perm von Timor. Leidsche Geol. Mededelingen 2, p. 223-225.
(online at: www.repository.naturalis.nl/document/549577)
('A Heterastridium with unusual surface sculpture from the Permian of Timor'. New species of Triassic hydrozoan described as Heterastridium (Stoliczkaria) rugosum from Noil Boewan, presumably from Triassic limestones of Nifoekoko area)

Gerth, H. (1927)- Ueber einige Pliozan-Quartare Echiniden von Timor. Palaeontologie von Timor, Schweizerbart, Stuttgart, 15, 26, p. 181-184.
('On some Pliocene- Quaternary echinoids from Timor'. Rare echinoids in young raised coral reef limestones, incl. Cidaris, Pleurechinus, Pericosmus timorensis, Breynica sundaica)

Gerth, H. (1929)- Die Spongien aus dem Perm von Timor. Palaontologie von Timor, Schweizerbart, Stuttgart, 27, p. 1-36.
(('The sponges from the Permian of Timor'. At least 25 species of siliceous sponges in Permian, collected by Molengraaff, Wanner and Jonker Timor across W Timor, mainly Basleo near Niki-Niki and Nifoetassi near Sufa. Sponges not as abundant and diverse as some other fossil groups. 25 species identified, most of them new. Timorella, Hindia spp., Pemmatites timorensis, etc. Rather endemic assemblage of lithistids)

Gerth, H. (1929)- Die Spongien aus dem Perm von Timor. In: H.A. Brouwer (ed.) 2e Nederlandsche Timor-Expeditie VI, Jaarboek Mijnwezen Nederlandsch-Indie 55 (1926), Verhandelingen 1, p. 93-132.
('The sponges from the Permian of Timor'. At least 25 species of siliceous sponges in Permian. 25 species, most of them new. Rather endemic assemblage of lithistids. Same paper as Gerth (1929))

Gerth, H. (1931)- Coelenterata. In: Onze palaeontologische kennis van Nederlandsch Oost Indie. Leidsche Geol. Mededelingen 5 (K. Martin volume), p. 120-151.
(online at: www.repository.naturalis.nl/document/549311)
('Our paleontological knowledge of the Netherlands Indies: Coelenterata'. Includes Timor corals)

Gerth, H. (1936)- The occurrence of isolated calicular plates of *Dinocrinus* in the Permo-Carboniferous of Australia and India and its stratigraphical significance. Proc. Kon. Akademie Wetenschappen, Amsterdam, 39, 7, p. 865-870.
(online at: http://www.dwc.knaw.nl/DL/publications/PU00016941.pdf)
(Crinoid Dinocrinus cornutu, described from E Permian of Timor by Wanner, probably junior synonym of Calceolispongia hindei Etheridge known from W Australia (not from India, but Netherlands Indies; JTvG))

Gerth, H. (1942)- Formenfulle und Lebensweise der Heterastridien von Timor. Palaeont. Zeitschrift 23, p. 181-202.
('Shapes and mode of living of the Heterastrids of Timor'. On Late Triassic hydrozoan fossil Heterastridium conglobatum, also known from other Tethyan regions from Austrian Alps to Seram to New Zealand. Usually associated with Norian fauna)

Gerth, H. (1944)- Eine neue Art der Spongiengattung *Mortieria* des belgischen Kohlenkalkes aus dem Perm von Timor. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 14 (Tesch volume), p. 199-203.
('A new species of the sponge genus Mortieria from the Belgian Carboniferous from the Permian of Timor'. Mortieria permica from Tai Wei near Basleo)

Gerth, H. (1950)- Die Ammonoiden des Perm von Timor und ihre Bedeutung fur die stratigraphische Gliederung der Perm-Formationen. Neues Jahrbuch Mineral. Geol. Palaontologie, Abhandl. B, 91, 2, p. 233-320.
('The ammonoids from the Permian of Timor and significance for zonation of Permian formations'. Key paper on Timor Permian ammonite zonation and correlations with Sumatra, China, Japan, Alps, etc. Five ammonoid zones in Permian, from old to young: Properrinites (Sakmarian), Perrinites (Artinskian), Waagenoceras (Sosio stage), Timorites (Basleo stage) and Cyclolobus (Chidru stage))

Gheyselinck, R. (1934)- Zur Systematik der Aulacoceraten. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 37, 3, p. 173-180.
(online at: www.dwc.knaw.nl/DL/publications/PU00016371.pdf)
('On the systematics of the aulacocerates'. Study of >3000 specimens of ribbed belemnite Aulacoceras from Triassic of W Timor (probably Late Triassic 'Halstatter facies'-equivalent), collected by Jonker Timor expedition. Timorese aulacocerates, originally described as Asteroconites savuticus (Boehm) 1907 and Aulacoceras timorense Wanner 1911, may be varieties of alpine species Aulacoceras sulcatum Von Hauer)

Gheyselinck, R.F.C.R. (1937)- Permian trilobites from Timor and Sicily. Doct. Thesis University of Amsterdam, Scheltema & Holkema, Amsterdam, p. 1-108. *(Unpublished)*
(Comprehensive study of (generally rare) trilobites from Permian of Timor. About 100 specimens, 7 species, mainly from Basleo. Most common species is Neoproetus indicus Tesch. No locality maps or stratigraphic info)

Giani, L. (1971)- The geology of the Belu District of Indonesian Timor. Masters Thesis, Imperial College, University of London, p. 1-122.
(online at: https://spiral.imperial.ac.uk/handle/10044/1/35410)
(Reconnaissance study of easternmost district of Indonesian Timor. Stratigraphy-structure similar to adjacent TimorLeste: (1) highly deformed Autochthonous units (Permian Cribas Fm turbidites with plant material, Triassic Aitutu Fm radiolarian calcilutite with Halobia and thin bituminous shales (no benthic fauna) and younger? Babulu Mb siliciclastic flysch; possible Jurassic Wai Luli Fm); (2) three overthrust allochthonous units (klippen of Maubisse Fm Permian crinoid limestones with thin chert layers and olivine pillow basalts, Aileu Fm metamorphosed Permian, Lolotoi quartz-mica schists). Emplacement of overthrust sheets during Ramelauean orogeny, dated as M Miocene in E Timor. Lolotoi Complex was emplaced before arrival of Maubisse Fm?. (3) Fatu Mondeo is E Miocene Cablac Limestone (Miogypsina, Spiroclypeus); (4) All deformed autochthonous and overthrust units overlain unconformably by Bobonaro olistostrome of exotic blocks in scaly (slickenside) clay matrix with Permian-Pliocene? foraminifera; (5) Olistostrome overlain by little deformed Late Miocene- Quaternary Viqueque Fm; (6) Quaternary coral reef terraces uplifted to 300m. With mud volcanoes, Oetfo gas seep and small Roti Mutin oil seep.)

Glasby, G.P. (1978)- Deep-sea manganese nodules in the stratigraphic record: evidence from DSDP cores. Marine Geol. 28, p. 51-64.
(Core records of first 370 holes of DSDP Project shows manganese nodules relatively uncommon in stratigraphic column and >42% of nodules are from Pleistocene. Onset of high ocean bottom current velocities at ~3.5 Ma may have favored nodule growth through much of Pacific Ocean. Manganese nodules from pelagic red clay on Timor formed in Cretaceous when Antarctic circumpolar current was deflected N of Australia)

Glenister, B.F. & W.M. Furnish (1987)- New Permian representatives of ammonoid superfamilies Marathonitaceae and Cyclolobaceae. J. Paleontology 61, 5, p. 982-998.
(New species Eohyattoceras gerthi and Cardiella martodjojoi from late Early Permian (Roadian) of Basleo and Bitauni, Timor. Demarezites oyensi (Gerth, 1950 from Tae Wei, Basleo) and D. lidacensis (de Roever, 1940, from Lidak district), formerly assigned to Waagenoceras, ancestral to Waagenoceras-Cyclolobus lineage, redescribed from Roadian of Timor)

Glenister, B.F. & W.M. Furnish (1988)- Patterns in stratigraphic distribution of Popanocerataceae, Permian Ammonoids. Senckenbergiana Lethaea 69, 1-2, p. 43-71.
(With descriptions of Propopanoceras boesei (Smith) from Somohole and Epitauroceras soewarnoi n.sp. from Amarassian beds at Kuafeu, Baun area, Timor)

Glenister, B.F., W.M. Furnish & Z. Zhou (2004)- *Paedopronorites*, a new Upper Permian (Wuchiapingian) ammonoid from Indonesia (Timor). J. Paleontology 78, 5, p. 1014-1015.
(New Permian ammonoid from Amarassi Beds, Kuafeu (Koeafeoe), Baun area, Amarassi Province, W Timor. Associated with cyclolobid genera Timorites and Cyclolobus. No strat info)

Glenister, B.F., D.L. Windle & W.M. Furnish (1973)- Australasian Metalegoceratidae (Lower Permian Ammonoids). J. Paleontology 47, 6, p. 1031-1043.
(Taxonomy of Lower Permian Juresanites- Metalegoceras- Pseudoschistoceras ammonoid lineage, based on collections from W Australia, Timor and Oman. Names Paralegoceras sundaicum form. evoluta and form. involuta replaced by genera Metalegoceras and Pseudoschistoceras. Descriptions of Sakmarian Juresanites somoholense (Haniel) and J. hanieli (Smith) (both formerly Gastrioceras). Australian species M. clarkei Miller conspecific with senior Indonesian synonym, M. australe (Smith). Metalegoceratidae are distinctive element of Lower Permian 'Boreal' ammonoid realm)

Grady, A.E. (1975)- A reinvestigation of thrusting in Portuguese Timor. J. Geol. Soc. Australia 22, p. 223-228.
(Field relations from Maubisse region of Portuguese Timor fail to support hypothesis of S-ward overthrusting of Permian rocks or postulate that Maubisse Fm represents a mid-Tethys island group (This 'autochthonous' model has been widely criticized in other papers; JTvG))

Grady, A.E. & R.F. Berry (1977)- Some Palaeozoic-Mesozoic stratigraphic-structural relationships in East Timor and their significance in the tectonics of Timor. J. Geol. Soc. Australia 24, p. 203-214.
('Autochthonous' model suggested for development of Timor, with essentially no allochthonous pre-Cenozoic material)

Grady, A.E. & R.F. Berry (1980)- The significance of blue amphibole in Timor. Inst Australasian Geodynamics (Flinders University) Publ. 80, 5, p.

Grunau, H.R. (1953)- Geologie von Portugiesisch Osttimor. Eine kurze Ubersicht. Eclogae Geol. Helvetiae 46, 1, p. 29-37.
(online at: http://dx.doi.org/10.5169/seals-161692)
('Geology of Portuguese East Timor: a brief overview'. Two tectonic complexes in East Timor (1) essentially autochthonous unit of Permian, Triassic, Jurassic and Upper Cretaceous- Tertiary geosynclinal sediments, and (2) overthrust complex with crystalline schists, diabases and spilites, Permian crinoidal and massive limestones and Fatu limestones. Main period of nappe emplacement probably post-Aquitanian)

Grunau, H.R. (1956)- Zur Geologie von Portugiesisch Osttimor. Mitteilungen Naturforschenden Gesellschaft, Bern, N.F. 13, p. 11-18.
('On the geology of Portuguese East Timor'. Summary of presentation for Bern Nature Research Society)

Grunau, H.R. (1957)- Neue Daten zur Geologie von Portugesisch Osttimor. Eclogae Geol. Helvetiae 50, p. 69-98.
(online at: http://dx.doi.org/10.5169/seals-162207)
('New data on the geology of Portuguese Timor'. Aspects of East Portuguese Timor geology based on observations of 1947-1948 oil company fieldwork with Escher, mainly in southern part. With 10 cross sections. 'Autochthonous' flysch-type Permian clastics similar to Kekneno series of W Timor. Ophiolites common in nappe complex, usually associated with thin Permian crinoid/ fusulinid limestones, believed to be of Cretaceous age, similar to E Sulawesi ophiolites. Triassic in multiple facies: flysch, radiolarian limestone and Fatu limestone with Lovcenipora and Misolia. Jurassic Chondrites marls and marls with Aucella malayomaorica. Upper Cretaceous limestones with Globotruncana. E Miocene Te limestones with Spiroclypeus, probably same time as main thrusting. Timor good example of mountain building by gravitational gliding)

Grunau, H.R. (1957)- Geologia da parte oriental do Timor Portugues. Garcia de Orto 5, 4, p. 727-737.
('Geology of the eastern part of Portuguese Timor'. Portuguese translation of Grunau 1953 paper)

Grundel, J. & H. Kozur (1975)- Psychrospharische Ostracoden aus dem Perm von Timor. Freiberger Forsch.-Hefte C 304, p. 39-49.
(Permian ostracodes in samples from Mutis area, W Timor, collected by De Roever in 1937, interpreted as deepwater Early Permian)

Gurich, G. (1893)- Uber ein Vorkommen von Lias und oberem Jura auf der Insel Rotti bei Timor in Ostindien und.... 70th Jahresbericht Schlesise Gesellschaft vaterlandische Kultur, II, Naturw. Abt., Breslau, p. 16-18.
('On an occurrence of Lias and Upper Jurassic on the island Roti near Timor in the East Indies..'. First? (brief) report of Jurassic fossils in Indonesia, from Roti Island near Timor: Lower Jurassic ammonites (Arieticeras, Lytoceras) and Upper Jurassic belemnites (Belemnites gerardi group). Collected by German Dr. Schneider from Surabaya and sent to Ferd. Roehmer in Germany. No figures (see also Rothpletz 1892))

Hadimuljono, J.S., D. Yensusminar, A.B. Wicaksono & S. Suliantara (2016)- Rembesan migas di daerah Timor Barat. Lembaran Publikasi Minyak dan Gas Bumi (Lemigas) 50, 3, p.

(?online at: http://www.journal.lemigas.esdm.go.id/ojs/index.php/LPMGB/article/view/2/1)
('The oil and gas seepages in West Timor'. Many oil and gas seeps in W Timor, generally associated with mud volcanoes. Gas seeps in all mud volcanoes in W Timor; oil seeps only at mud volcanoes in S part of W Timor. Gas mainly methane (CH4) and minor ethane (C2H6) with high N2 content. Gas chromatography of oil seeps suggest oil probably originated from lacustrine or marine-transition environments)

Hadiwisastra, S. (1987)- Plio-Plistocen nannofosil biostratigrafi dari daerah Soe, Timor. Proc. 15th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta 1986, 14p.
('Plio-Pleistocene nannofossil biostratigraphy of the Soe area, Timor')

Haig, D.W. (2004)- Stratigraphic reconstruction of Timor Leste and correlation to the Bonaparte Basin. PESA Newsletter 73, p. *(Geology in Timor Symposium Abstract)*
(Wai Luli Formation type area clastics ranges in age from Late Permian- M Jurassic. Stratigraphic succession similar to Bonaparte Basin)

Haig, D.W. (2012)- Palaeobathymetric gradients across Timor during 5.7-3.3 Ma (latest Miocene-Pliocene) and implications for collision uplift. Palaeogeogr. Palaeoclim. Palaeoecology 331-332, p. 50-59.
(Paleobathymetry analysis of oldest post-collision deposits in Timor, from distributions of planktonic and benthic foraminifera in chalk, marl and mudstone successions that accumulated during 5.7-3.3 Ma. Paleo water depths between 500-2500m, deepening from N to S, E and W)

Haig, D.W. (2018)- Key stratigraphic horizons for assembling a revised tectonostratigraphic framework for Timor-Leste. In: Proc. 4th IPG Int. Geosciences Conference on Timor-Leste, Dili 2018, p. 19-27.
(online at: http://ipg.tl/wp-content/uploads/2018/10/PROCEEDING-4th-Int.-Conference-2018.pdf)
(Major rock associations on Timor: (1) Synorogenic (latest Miocene- Holocene, between Australian continent and volcanic Banda Arc, accumulated as present-day island of Timor formed; (2) Timor- Scott Plateau (Late Jurassic- early Late Miocene); (3) East Gondwana Interior Rift (Late Carboniferous/Cribas- M Jurassic/ Wailuli; represent deposits of pre-collision Late Miocene Australian continental margin); (4) Overthrust Terrane (includes Gondwanan/island arc/ocean crustal fragments, emplaced in Late Miocene over NW Australian continental margin during collision)

Haig, D.W. & A.N. Bandini (2013)- Middle Jurassic radiolaria from a siliceous argillite block in a structural melange zone near Viqueque, Timor Leste: paleogeographic implications. J. Asian Earth Sci. 75, p. 71-81.
(Large thin-bedded siliceous argillite block in Bobonaro melange at Viqueque, S Timor Leste, associated with blocks of pillow basalts, near contact with post-orogenic Viqueque basin deposits. Contains M Jurassic (late Bathonian- E Callovian) radiolarian assemblage of 55 species. Fauna little similarity to other Jurassic radiolarian assemblages known from Timor or from Roti, Sumatra, S Kalimantan and Sula. Interpreted as part of Noni Gp, originally described as lower part of Palelo Series in W Timor. Age close to that of continental breakup in area, suggesting deposition in newly rifted Indian Ocean (new 'Indian Ocean Megasequence'))

Haig, D.W. & E. McCartain (2007)- Carbonate pelagites in the post-Gondwana succession (Cretaceous-Neogene) of East Timor. Australian J. Earth Sci. 54, 6, p. 875-897.
(Upper parts of Permian- M Jurassic 'Gondwana Megasequence' structurally juxtaposed against Aptian- Late Miocene carbonate pelagites. Pelagites probably several 100m thick, bathyal, deposited unconformably above Gondwana succession after continental breakup. Cementation, stylolitisation and vein formation after early Late Miocene (after 10.9- 9.8 Ma). Deformed succession overlain by relatively undeformed Plio- Pleistocene Viqueque Megasequence (N18-N23). First distal turbidites were from 4.2-3.35 Ma; proximal turbidite deposition from ~3.35 Ma, with clasts from emerging Timor island to N. M bathyal continental terrace setting continued from Cretaceous- Paleogene to E Pliocene. Soft-sediment mixing in deformed pelagites and Bobonaro Melange under Viqueque Gp suggests Late Miocene (9.8-5.6 Ma) tectonic mobilisation of sedimentary units, with mud volcanoes erupting on seafloor)

Haig, D.W. & E. McCartain (2010)- Triassic organic-cemented siliceous agglutinated foraminifera from Timor-Leste: conservative development in shallow marine environments. J. Foraminiferal Research 40, 4, p. 366-392.

(49 species of agglutinated foraminifera in 11 facies associations in Triassic basinal deposits of Timor Leste. One genus and five species new. Fauna cosmopolitan composition. Coherent stratigraphic sections not preserved and stratigraphic reconstruction is based on correlations using conodonts, palynomorphs and other forams. Most samples Upper Triassic, some Lower Triassic. Facies associations range from those influenced by sediment from nearby carbonate banks to prodelta and delta-front associations)

Haig, D.W. & E. McCartain (2012)- Intraspecific variation in Triassic ophthalmidiid Foraminifera from Timor. Revue Micropaleontologie 55, 2, p. 39-52.
(Four ophthalmidiid species from Triassic mudstones and wackestones. In Timor Leste, A. bandeiraensis, K. atsabensis and S. grunaui found with Carnian conodonts, at another locality K. atsabensis occurs with conodonts suggestive of M Triassic)

Haig, D.W., E. McCartain, L. Barber & J. Backhouse (2007)- Triassic- Lower Jurassic foraminiferal indices for Bahaman-type carbonate-bank limestones, Cablac Mountain, East Timor. J. Foraminiferal Research 37, 3, p. 248-264.
(Peloidal- oolitic limestones on Cablac Mountain in E Timor contain Triassic or Lower Jurassic small foraminifera, not Lower Miocene as previously mapped. E Jurassic (Sinemurian-Pliensbachian) age indicated by Meandrovoluta asiagoensis, Everticyclammina praevirguliana and palynomorphs. Other limestones Late Triassic- Early Jurassic, based on Duotaxis metula. Basinal facies of nearby Wai Luli Valley indicate Late Triassic (Carnian) transported carbonate-bank foraminiferal assemblage. This suggests carbonate banks developed locally on topographic highs in seas that flooded interior-rift basins in this part of Gondwana and complex facies array of deep-water muds, deltaic sands, and carbonate shoals)

Haig, D.W., E.W. McCartain, M. Keep & L. Barber (2008)- Re-evaluation of the Cablac Limestone at its type area, East Timor: revision of the Miocene stratigraphy of Timor. J. Asian Earth Sci. 33, p. 366-378.
(Cablac Limestone supposedly a Lower Miocene shallow marine carbonate, but is of Late Triassic- E Jurassic age at Cablac Mountain type locality. Crush breccia at N flank Cablac Mountain formerly regarded as basal conglomerate of Cablac Lst reinterpreted as breccia along high angle fault between 'Asian' Banda Terrane and overthrust limestone)

Haig, D.W., E. McCartain, A.J. Mory, G. Borges, V.I. Davydov, M. Dixon, A. Ernst, S. Groflin, E. Hakansson, M. Keep, Z. Dos Santos, G.R. Shi & J. Soares (2014)- Postglacial Early Permian (late Sakmarian-early Artinskian) shallow-marine carbonate deposition along a 2000 km transect from Timor to West Australia. Palaeogeogr. Palaeoclim. Palaeoecology 409, p. 180-204.
(Late Sakmarian- E Artinskian carbonate deposition widespread in marine intracratonic rift basins from Timor to N Perth Basin, spanning ~20° of paleolatitude (35-55°S). Type section of Maubisse Lst in Timor-Leste compared to sections in Canning Basin, S Carnarvon Basin (Callytharra Fm) and N Perth Basin (Fossil Cliff Mb). Carbonate units have no glacial influence, overlie glacially influenced strata in S. Limestone deposition under very shallow marine conditions, and similar grain composition, dominated by bryozoan and crinoidal debris. Tubiphytes, gastropod and bivalve shell debris, echinoid spines, solitary rugose corals and trilobite elements rare. Lack of tropical elements such as fusulinid foraminifera, colonial corals or dasycladacean algae indicate temperate marine conditions with only small increase in temperature to N. Carbonate deposits represents warmer phase than preceding glacially influenced Asselian- E Sakmarian interval and subsequent cool phase of 'mid' Artinskian that is followed by significant warming during late Artinskian- E Kungurian)

Haig, D.W., A.J. Mory, E. McCartain, J. Backhouse, E. Hakansson, A. Ernst, R.S. Nicoll, G.R. Shi, J.C. Bevan, V.I. Davydov, A.W. Hunter, M. Keep et al. (2017)- Late Artinskian- Early Kungurian (Early Permian) warming and maximum marine flooding in the East Gondwana interior rift, Timor and Western Australia, and comparisons across East Gondwana. Palaeogeogr. Palaeoclim. Palaeoecology 468, p. 88-121.
(U Artinskian- Kungurian deposits in Timor-Leste and Canning, S Carnarvon and N Perth basins of W Australia formed between 35- 55°S paleolatitude in East Gondwana interior rift, a precursor to rift that 100 My later formed Indian Ocean in region. Timor lay near main axis of E Gondwana rift. Main depocentres developed by faulting initiated in latest Carboniferous. Cool conditions in early Late Artinskian (water T 0-4 °C), followed by rapid warming in late Artinskian and maximum marine flooding near Artinskian-Kungurian

boundary. Carbonate mounds,with larger fusulines and algae developed in N part of rift; Tubiphytes, conodonts, and brachiopods with Tethyan affinities to migrate into marginal-rift basins. Bua-bai Lst (= 'upper Maubisse Gp) locally rich in Late Artinskian? fusulinid Praeskinnerella. Similar pattern of climate change in Carboniferous- E Permian between E Gondwana rift and Lhasa and Sibumasu terranes)

Haig, D.W., Z.K. Mossadegh, J.H. Parker & M. Keep (2019)- Middle Eocene neritic limestone in the type locality of the volcanic Barique Formation, Timor-Leste: microfacies, age and tectonostratigraphic affinities. J. Asian Earth Sci. X, 1, 20p.
(online at: https://www.sciencedirect.com/science/article/pii/S2590056018300033)
(Occurrences of Eocene Alveolina-Nummulites- Discocyclina limestones in mainly volcanic Barique Fm. Ages of limestone using planktonic and benthic foraminifers late M Eocene (~37.8-43.6 Ma). Similar Eocene limestone-volcanic association widespread in Timor, but not known along NW Shelf of Australia. Usually found in coherent areas of outcrop with Late Mesozoic Palelo Group, oceanic facies (radiolarites to carbonate pelagites), E Jurassic carbonate-bank deposits, etc.. This is Overthrust Terrane Association. Cretaceous- E Miocene units of Overthrust Terrane Association (incl. Barique Group) similar to coeval units in Sumba and considered fragments of fore-arc of Banda Arc ('Banda Terrane'))

Haile, N.S., A.J. Barber & D.J. Carter (1979)- Mesozoic cherts on crystalline schists in Sulawesi and Timor. J. Geol. Soc. London 136, p. 65-70.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.820.2026&rep=rep1&type=pdf)
(Chert-bearing deep water Jurassic-Cretaceous, unconformable on metamorphics of continental origin in SW Sulawesi and Timor, suggesting Sulawesi and Timor probably part of continuous terrain during deposition of radiolarian cherts. Description of Noil Toko section of Miomaffo complex where Late Jurassic- E Cretaceous radiolarian cherts overlie Mutis-Miomaffo metamorphics)

Hamlet, B. (1928)- Permische Brachiopoden, Lamellibranchiaten und Gastropoden von Timor. In: H.A. Brouwer (ed.) 2e Nederlandsche Timor-Expeditie VI, Jaarboek Mijnwezen Nederlandsch-Indie 56 (1927), Verhandelingen 2, p. 1-115.
(Permian brachiopods and molluscs from W Timor, collected by 1911 Molengraaff and 1915-1917 Jonker expeditions. Incl. Leptodus from Fatu Kuat. Little or no stratigraphy or locality information)

Haniel, C.A. (1915)- Ammoniten aus dem Perm der Insel Letti. Jaarboek Mijnwezen Nederlandsch Oost-Indie 43 (1914) Verhandelingen 1, p. 161-165.
('Ammonites from the Permian of Leti Island' (E of Timor). Brief descriptions of presumably Early Permian ammonites Paralegocereas sundaicum (= Metalegoceras), Agathiceras sundaicum n.sp. and Propinacoceras sp. from greywacke shale at S slope of 'small Woerlawan' Mountain, Leti. Similar to Bitauni fauna from W Timor)

Haniel, C.A. (1915)- Die Cephalopoden der Dyas von Timor. In: J. Wanner (ed.) Palaontologie von Timor, Schweizerbart, Stuttgart, 3, 6, Schweizerbart, Stuttgart, p. 1-153.
('The cephalopods from the Dyas (= Permian) of Timor'. First and only monograph on Permian ammonites from 35 localities on W and E Timor, expanding on brief earlier papers by Beyrich (1865), Rothpletz (1892) and Boehm (1907). Incl. species of Agathiceras, Cyclolobus, Popanoceras, Paralegoceras, etc. New genera Timorites and Sundaites. New species incl. Sundaites levis. Also straight nautiloids Orthoceras spp.)

Hantoro, W.S. (1994)- Batugamping terumbu koral Kuarter terangkat di Timor. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 192-207.
('Uplifted Quaternary reefal limestones of Timor')

Hantoro, W.S., A. Sofian & Z. Abidin (1994)- Geologi dan sumberdaya air wilayah pesisir utara lintasan Liquica- Los Palos, Propinsi Timor Timur. In: Proc. hasil-hasil penelitian Puslitbang Geoteknologi-LIPI 1993/1994, 1, p. 464-488.
('Geology and water resources of the northern coastal area of Liquica- Los Palos, East Timor')

Harahap, B.H. (2003)- Melange and broken formation on the road from Baucau to Manatuto, Timor Leste. Buletin Geologi (ITB) 35, 1, p. 25-42.
(Melange and broken formation along Baucau- Manatuto road. Melange with scaly mudstone matrix and clasts of crinoidal limestone, pelagic limestone, oolitic limestone, radiolarian chert, sandstone, serpentinite, pillow lava and volcanic rock, fragments of manganese. Broken formation composed mainly of Triassic Aitutu Fm and Permian Maubisse and Atahoc Fms. Most clasts, except serpentinite and radiolarian chert same as broken formation units (also occur as more coherent, mappable units in Central Range of Timor Leste). Serpentinite, radiolarian chert and possibly some pillow lavas thought to be derived from Flores Sea Basin to N. Melange and broken formation may have formed during Australian continent- Banda Arc collision in Pliocene)

Harjanto, A. & C. Danisworo (2013)- Karakteristik mangan (Mn) di daerah Sipul dan sekitarnya, Kecamatan Niki-Niki, Kabupaten Soe, Propinsi Nusa Tenggara Timur. J. Ilmiah Magister Teknik Geologi (UPN) 6, 1, 14p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/250/212)
'(Characteristics of manganese (Mn) in Sipul and surrounding area, Niki-Niki, District Soe, West Timor'. Manganese in Late Cretaceous- Eocene Ofu Fm pelagic sediments N of Sipul. Mineralization of pyrolusite and psilomelane as 2-15 cm thin layers in calcilutite and chert series, with Mn content up to 52%. Manganese deposition probably related to hydrothermal processes)

Harloff, C.E.A. (1936)- Vondst van een Radiumhoudend uraniumerts in de Timorcollectie van den Dienst van den Mijnbouw. De Ingenieur in Nederlandsch-Indie (IV) 3, 4, p. 64-70.
('Presence of a radium-bearing uranium ore in the Timor collection of the Mines Department'. Radioactive mineral labeled from Timor, but not clear if this is really from Timor)

Harper, K. (2004)- Constraining the uplift history of the Banda arc. Geology in Timor 2004 Symposium abstract, PESA Newsletter 73, p. 32
(Apatite analysis from Aileu metamorphic complex suggest slow cooling between 16.4- 4.6 Ma, with no significant subsequent denudation)

Harris, R.A. (1989)- Processes of allochton emplacement with special reference to the Brooks Range ophiolite, Alaska and Timor. Ph.D. Thesis, University of London, p. 1-514. *(Unpublished)*

Harris, R.A. (1991)- Temporal distribution of strain in the active Banda orogen: a reconciliation of rival hypotheses. J. Southeast Asian Earth Sci. 6, 3-4, p. 373-386.
(On the Australian continental margin- Banda arc collision zone, mainly around Timor- Savu- Sumba. Collision began in C Timor at end of Miocene)

Harris, R. (2006)- Rise and fall of the Eastern Great Indonesian Arc recorded by the assembly, dispersion and accretion of the Banda Terrane, Timor. Gondwana Research 10, 3-4, p. 207-231.
(online at: http://geology.byu.edu/Home/sites/default/files/2006-banda-terrane-gr.pdf)
(Banda Terrane is remnant of Jurassic-Eocene arc-trench system that formed E part of Great Indonesian Arc. Arc rifted apart during Eocene- Miocene supra-subduction zone spreading, which dispersed ridges of Banda Terrane embedded in young oceanic crust as far S as Sumba and Timor. In Timor Banda Terrane high-level thrust sheets, detached from Banda Sea upper plate and uplifted by collision with NW Australia margin. Thrust sheets contain medium grade metamorphics overlain by Cretaceous- Miocene forearc deposits. Igneous zircons <162 Ma with clusters of ages at 83 Ma and 35 Ma. Ar/Ar plateau ages from metamorphics cluster at 32-38 Ma. Cooling curves show exhumation from ~550 °C to surface between 36-28 Ma; after this time no evidence of metamorphism. Banda Terrane rocks and events similar to E edge of Sunda Shelf and Banda Sea floor)

Harris, R. (2011)- The nature of the Banda Arc-continent collision in the Timor region. In: D. Brown & P.D. Ryan (eds.) Arc-continent collision, Frontiers in Earth Sciences 2, Springer Verlag, Heidelberg, p. 163-211.
(online at: http://geology.byu.edu/Home/sites/default/files/2011-nature-of-banda-a-c.pdf)
(Extensive review of oblique collision of Banda arc- Australian continent in Timor region)

Harris, R. (2012)- Free at last: new data helps Timor Leste redefine the processes of arc-continent collision. First Int. Geological Congress of Geology of Timor-Leste, Dili 2012, Abstract Book, p. 63-66.
(Extended Abstract)

Harris, R.A. & M.G. Audley-Charles (1987)- Taiwan and Timor neotectonics: a comparative review. Mem. Geol. Soc. China 9, p. 45-61.
(Taiwan and Timor both thrust belts formed by Pliocene- Recent convergence between passive continental margin and volcanic arc. Taiwan greater rate of uplift, thicker deforming sedimentary wedge and well-defined seismically active suture zone)

Harris, R.A., J.S. Kaiser, A.J. Hurford & A. Carter (2000)- Thermal history of Australian passive margin cover sequences accreted to Timor during Late Neogene arc-continent collision, Indonesia. J. Asian Earth Sci. 18, 1, p. 47-69.
(online at: http://geology.byu.edu/home/sites/default/files/2000-thermal-history-harris-et-al.pdf)
(Paleotemperature and apatite fission track analysis of Australian continental margin cover sequences accreted to active Banda arc-continent collision indicate little to no heating during late Neogene uplift and exhumation. Thrust stacking of rise, slope and shelf units produces inverted vertical profile of increasing apatite fission track age with depth. Lack of any long confined track lengths in apatite from all units requires rapid and recent exhumation of thrust stack, coincident with rapid phases of Plio-Pleistocene exhumation These data preclude pre-Late Miocene tectonic burial or pre-Pliocene exhumation of NW Australian continental margin)

Harris, R.A. & T. Long (2000)- The Timor ophiolite, Indonesia: model or myth? Geol. Soc. America (GSA), Spec. Paper 349, p. 321-330.
(Only parts of ophiolite sequence of Timor are small bodies of spinel lherzolite and volcanic rocks. Lherzolite mostly as blocks in Bobonaro melange, and similar to peridotites from abyssal and passive-margin settings. E Timor lherzolite associated with Aileu metamorphic complex, with Mesozoic prograde metamorphism increasing toward lherzolite bodies via Barrovian zonation. Aileu complex and lherzolites similarly affected by Late Neogene collisional (retrograde) metamorphism. W Timor Atapupu and Nefomasi lherzolites indistinguishable from those of E Timor. Position of lherzolite indicates affinity to thrust sheets accreted from distal edge of Australian continental margin (lower plate) rather than forearc basement. Lherzolite and volcanics in Ocussi region different and may represent parts of young, SSZ ophiolite, emplaced less than few Myr of birth).

Harris, R.A., R.K. Sawyer & M.G. Audley-Charles (1998)- Collisional melange development: geologic associations of active melange-forming processes with melange facies in the western Banda orogen, Indonesia. Tectonics 17, 3, p. 458-479.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/97TC03083/pdf)
(Bobonaro melange facies include (1) broken formation, (2) matrix-rich mud injections, (3) mixed block-in-clay facies. Most important control is whether formed beneath or in front of upper plate Banda forearc Terrane. Kolbano Mts (Pliocene fold- thrust wedge of S Timor, structurally contiguous with Timor Trough deformation front) melange mostly broken formation and matrix-rich injections of mud from Jurassic- Cretaceous. Mud diapirs rise from near decollement along fault conduits. Melange in hinterland of orogenic wedge dominantly block-in-clay facies with large blocks from roof thrust sheets of Banda Terrane and Maubisse Fm units. At base of thrust sheets is Sonnebait Disruption Zone (SDZ), the initial suture between Banda Terrane and Australian margin sequences in Late Miocene- E Pliocene. Thickest accumulations of block-in-clay melange at S edge of SDZ, near Central/ Viqueque basins. Extent of block dispersion and mixing in SDZ indicative of intense shear strains perhaps induced by oversupply of accretable material when suture zone clogged by underthrusting of Australian continental margin)

Harris, R.A., M.W. Vorkink, C. Prasetyadi, E. Zobell, N. Roosmawati & M. Apthorpe (2009)- Transition from subduction to arc-continent collision: geological and neotectonic evolution of Savu, Indonesia. Geosphere 5, p. 152-171.
('Savu melange' product of Sunda/Banda arc- Australian continent collision. Blocks of Permian- Paleogene indurated sandstone, limestone and metamorphic and igneous rocks floating in muddy matrix, correlated with

Bobonaro melange of Timor and associated with recent mud diapyrism. Previously unrecognized units of pillow basalt interlayered with Jurassic beds. Savu 1 well TD at 1227m in Cretaceous clastics (=different from Scott Plateau, but similar to Sumba). Includes detailed geological map and cross sections of S-C Savu. Island emergence documented by uplifted coral terraces encrusting highest ridges to 338m elevation: U/Th ages of uplifted coral yields ages of 122 ka, indicating slow uplift rates of 0.2 mm/yr)

Harris, R.A. & S. Wu & T.R. Charlton (1992)- Comment and Reply on "Postcollisional extension in arc-continent collision zones, eastern Indonesia". Geology 20, 1, p. 92-94.
(Discussion of Charlton 1991 paper on post-collisional isostatic rebound of Timor area)

Harsolumakso, A.H. (1993)- Etude lithostratigraphique et structurale le long du transect Wini-Kolbano a Timor Ouest (Indonesie). Doct. Thesis, University of Nice- Sophia-Antipolis, Valbonne, p. 1-256. *(Unpublished)*
('Lithostratigraphic and structural study along the Wini-Kolbano transect on West Timor'. Structure and stratigraphic studies across W Timor show two principal deformation phases: (1) pre-Miocene, probably corresponding to emplacement of allochthonous nappes and (2) intense thrusting phase at Early- Middle Pliocene boundary)

Harsolumakso, A.H., B. Sapiie, A. Rudyawan, H. Tiranda, E. Reski & R. Fauziah (2019)- Understanding structural style of onshore Timor Basin from detailed fieldwork. Modern Applied Science 13, 4, p. 123-136.
(online at: http://www.ccsenet.org/journal/index.php/mas/article/view/0/38998)

Harsolumakso, A.H. & M. Villeneuve (1993)- Structural section of Timor: lithostratigraphical and structural study from central part of West Timor. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 82. *(Abstract only)*
(Two main tectonic phases responsible for structuring of Timor: (1) pre-Miocene, corresponding to allochthonous nappes emplacement; (2) E-M Pliocene intensive thrusting)

Harsolumakso, A.H., M. Villeneuve, J.J. Cornee, P. De Wever, G. Tronchetti, J. Butterlin, G. Glacon & P. Saint-Marc (1995)- Stratigraphie des series para-autochtones du Sud de Timor occidental (Indonesie). Comptes Rendus Academie Sciences, Paris 320, IIa, p. 881-888.
(online at: http://geologie.mnhn.fr/PDW/HARSOLUMAKSO%20%20et%20al%201995.pdf)
('Stratigraphy of the para-autochthonous series in the South of West Timor'. New Late Triassic- Pleistocene reconstruction of stratigraphy of 'para-autochthonous' series of Kolbano area in SW Timor)

Hartmann, E. (1916)- Kurze Mitteilung uber Uberschiebungen auf Niederlandisch Timor. Private print, Batavia, 4p.
('Brief communication on thrusts on Netherlands Timor'. With map and cross-sections of Ayer Mati- Soengei Kokilah area S of Kupang. Shows autochthonous Jurassic sediments, over which Permian limestones with serpentinite and diabase porphyrite and Triassic 'Halstatter' cephalopod limestone were thrusted from NE. All overlain by Late Tertiary)

Hartono, H.M.S., S. Tjokrosaputro, K. Suwitodirdjo & H.M.D. Rosidi (1978)- Some notes on the geologic map of Timor. In: S. Wiryosujono & A. Sudradjat (eds.) Proc. Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 69-76.
(Two overthrust units recognized: (1) Oligocene overthrusting of allochthonous ?Carboniferous Mutis metamorphic Complex, and overlying U Cretaceous Palelo Complex, Eocene Manamas Fm volcanics/ limestones, unconformably overlain by Late Oligocene-E Miocene Noil Toko/Cablac Lst; (2) M Miocene overthrusting of Bobonaro (melange) complex and embedded Kiupukan Fm (Maubisse Lst- volcanics). Authochthonous formations Permian- Triassic Kekneno (Aitutu) Halobia shale and Bisane (Cribas-Atahoc) flysch of Australian origin. Youngest formation Batuputih/Viqueque Fm up to 800m thick and late M Miocene-E Pleistocene age)

Hasan, K. (1984)- A study on heavy minerals from the Kekneno Area, West Timor, Indonesia. Certificate of Chelsea College, Chelsea College, University of London, p. *(Unpublished)*

Hasibuan, F. (1994)- Fauna Gondwana dari Formasi Maubisse, Timor Timur. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 104-111.
("Gondwana fauna from the Maubisse Formation, E Timor'. Occurrence of 'Gondwanan' cool-climate brachiopods (Globiella foordi) and bivalves (Atomodesma and Eurydesma) in E Permian red limestones-shales of Maubisse Fm in central part of Timor Leste, 75 km S of Dili. From S Tethys part of Tethys, at N margin of Gondwana)

Hasibuan, F. (2007)- Penelitian biostratigrafi Mesozoikum Pulau Rote, Nusa Tenggara Timur. J. Sumber Daya Geologi 17, 3, p. 126-144.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/285/256)
('Research on Mesozoic biostratigraphy of Rote Island, East Nusatenggara'. Distribution of Triassic, Jurassic and Cretaceous rocks on Roti broader than previously mapped. Paleozoic not exposed, but Permian ammonite Timorites possibly came up in mud volcano. Aitutu/ Kekneno Fm with Carnian- E Norian Halobia spp. (H. austriaca, H. styriaca, H. charlyana). Presence of Monotis salinaria in Norian Aitutu Fm. Jurassic Wailuli Fm with Perisphinctes, Belemnopsis moluccana, B. galoi, Irianites. Nakfunu Fm rich in radiolaria of Albian age)

Hasibuan, F. (2009)- Geological and paleontological investigation of Rote island, Indonesia. Acta Geologica Sinica 30, Suppl. 1, p. 13. *(Abstract only)*
(Rote Island Permian not exposed, but ammonite Timorites in float indicates Permian, brought to surface by mud volcanoes. Well exposed fossiliferous Mesozoic. Carnian-Norian Aitutu Fm thin-bedded marl with Halobia and Monotis. Bathonian-Berriasian Wailuli Fm fine sandstones and sandy limestone with Perisphinctes timorense, Belemnopsis moluccana, B. galoi, B. stolleyi, etc.. Cretaceous Nakfunu Fm calcilutite with chert interbeds and radiolarians such as Dictyomitra sp., indicating Albian age. Aitutu Fm probably overturned. Mesozoic overlain by Bobonaro Complex)

Hayasaka, I. (1939)- On a piece of *Fusulina*-limestone found in the Niki-Niki region, Timor. Kwagaku (Science) 9, p. 86-87.

Hayasaka, I. (1953)- *Hamletella*, a new Permian genus of brachiopoda, and a new species from the Kitakami Mountains, Japan. Trans. Proc. Palaeontological Soc. Japan, N.S. 12, p. 89-95.
(online at: www.jstage.jst.go.jp/article/prpsj1951/1953/12/1953_12_89/_pdf)
(Hamletella n.gen. proposed for Permian brachiopod from Timor described as ?Streptorhynchus altus by Hamlet (1928))

Hayasaka, I. & S. Gan (1940)- A note on *Camarophoria 'purdoni'* from the Permian of Timor. J. Geol. Soc. Japan 47, 558, p. 127-132.
(online at: www.jstage.jst.go.jp/article/prpsj1935/1940/17/1940_17_19/_pdf)
(Permian brachiopod Camarophoria 'purdoni' of Broili (1916; presumably from Basleo area) includes several species. New species proposed Camarophoria timorensis (now usually called Stenoscisma timorense and viewed as peri-Gondwanan, anti-tropical species; JTvG))

Hayasaka, I. & M. Hosono (1951)- A new Permian *Spirifer* from Timor. Short Papers Inst. Geol. Paleontology, Tohoku University, Sendai, 3, p. 25-28.
(Short paper describing new Permian brachiopod species Spirifer basleoensis from Basleo, Timor)

Hayasaka, I. & K. Ishizaki (1939)- On the occurrence of Eocene foraminifera in the neighbourhood of Besleo, Timor. Mem. Fac. Science Agric., Taihoku Imp. University, 22, 2, Geol. 15, p. 9-17.
(online at: http://twgeoref.moeacgs.gov.tw/star/1939/19390077/0009.PDF)
(Eocene limestone blocks found in Basleo area, Niki-Niki region, SW Timor, otherwise known mainly for its abundant Permian fossils and Cretaceous manganese-bearing beds with abundant shark teeth. Descriptions of alveolinids (Fasciolites timorensis, F. wichmanni) and Nummulites cf. perforata)

Hehenwarter, E. (1951)- Erganzungen zur Tabulatenfauna des Perm von Timor und zur Stellung des Genus *Trachypsammia* Gerth. Palaeontographica Suppl. IV, Beitr. Geologie Niederl.-Indien V, 2, p. 57-94.
('Observations on Timor Permian tabulate coral faunas')

Helmers, H., J. Sopaheluwakan, F.F. Beunk & S. Tjokrosapoetro (1991)- Metasomatism in basal amphibolite of ophiolite complexes around the Banda Sea, exemplified by the Atapupu outcrops of North Timor, Indonesia. In: Proc. Silver Jubilee Symposium on the dynamics of subduction and its products, Yogyakarta 1991, Indonesian Inst. Sciences (LIPI), p. 302-314.

Helmers, H., J. Sopaheluwakan, S. Tjokrosapoetro & E. Surya Nila (1989)- High-grade metamorphism related to peridotite emplacement near Atapupu, Timor with reference to the Kaibobo peridotite on Seram, Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2/3, p. 357-371.
(Peridotites from Seram and Atapupu, Timor show cooling and deformation history starting at ~1050°C Metamorphic conditions in pelitic-mafic rocks below Atapupu peridotite >800°C at 6- 7 kbar. Prograde metamorphism nearly obliterated. Mylonitization accompanied metamorphic re-equilibration. Granitic to trondjemitic melt formed from metamorphites above 750°C. Displaced part of this melt is included in late granitic bodies cross-cutting peridotite. Axial directions of four successive folding phases at Atapupu consistent with N-S shortening during subduction. Folding and mylonitization are simultaneous.)

Henrici, H. (1934)- Foraminiferen aus dem Eozan und Altmiozan von Timor. In: J. Wanner (ed.) Beitrage zur Geologie von Niederlandisch-Indien, Palaeontographica Suppl. IV, 1, p. 1-56.
('Foraminifera from the Eocene and Early Miocene of Timor'. Larger foraminifera of M Eocene (Nummulites, Fasciolites = Alveolina), Late Eocene (Nummulites, Pellatispira, Discocyclina) and Early Miocene age (Spiroclypeus, Miogypsina, Lepidocyclina (Nephrolepidina)) from W and E Timor)

Heritsch, F. (1937)- Rugose Korallen aus dem Salt Range, aus Timor und aus Djoulfa, mit Bemerkungen uber die Stratigraphie des Perms. Sitzungsberichte Akademie Wissenschaften, Wien, Math.-Naturw. Kl. Abt. 1, 146, p. 1-16.
('Rugose corals from the Salt Range (Himalaya), from Timor and from Djoulfa, with remarks on the stratigraphy of the Permian'. Brief descriptions of some Permian rugose corals)

Hinde, G.J. (1908)- Radiolaria from Triassic and other rocks of the Dutch East Indian Archipelago. In: R.D.M. Verbeek, Molukkenverslag. Geologische verkenningstochten in het oostelijke gedeelte van den Nederlandsch Oostindische Archipel. Jaarboek Mijnwezen Nederlandsch Oost-Indie 37 (1908), Wetenschappelijk Gedeelte, p. 694-736.
(Radiolaria from Timor, Savu, Ceram, Sulawesi, Buru and Mangoli in Verbeek's Moluccas report. Probably mainly of Late Triassic-Jurassic age. 83 species identified, including 74 new species. Richest assemblages from Triassic Halobia-Daonella-bearing cherty limestones from Roti, Savu and Timor (Cenosphaera, Dictyomitra, etc.). Fewer, but similar species in loose chert pebbles collected at Seram and E Sulawesi)

Hirschi, H. (1907)- Zur Geologie und Geographie von Portugiesisch Timor. Neues Jahrbuch Mineral. Geol. Palaontologie Beilage Band 24, 2, p. 460-474.
('On the geology and stratigraphy of Portuguese Timor'. First observations on geology and stratigraphy of Portuguese East Timor along traverses made in 1904 during investigation of oil potential for BPM. With two traverse maps (No geologic map, cross-sections))

Hirschi, H. (1933)- Eine geologische Expedition in Portugiesisch Timor; aus Tagebuchnotizen vor 29 Jahren. Mitteilungen Naturwissenschaftlichen Gesellschaft Thun, N.F. 13, p. 25-41.
('A geological expedition in Portuguese East Timor, from 29-year old diary notes'. Mainly travel notes on two traverses of Timor Leste in January- February 1904 on oil company reconnaissance. Very little on geology)

Hoffmann, R. & H. Keupp (2010)- The myth of the Triassic lytoceratid ammonite *Trachyphyllites* Arthaber, 1927, in reality an Early Jurassic *Analytoceras hermanni* Gumbel, 1861. Acta Geol. Polonica 60, 2, p. 219-229.

(online at: https://geojournals.pgi.gov.pl/agp/article/view/9830/8363)
(Trachyphyllites costatum Arthaber (1927) described from single specimen from limestone boulder in Tertiary melange in Bihati River, Timor and presumed to be of Late Triassic (Norian) age. However, 'Hallstatt facies' limestones ranges in age from Triassic- E Jurassic (Hettangian). New collections from other erratic boulders in type locality confirmed observations (Tozer 1971, Krystyn 1978) that age of original boulder is E Jurassic (Hettangian). 'Trachyphyllites costatum Arthaber' is junior synonym of Analytoceras hermanni (Gumbel, 1861))

Howell, D.G. (1989)- Tectonics of suspect terranes, mountain building and continental growth. Chapman and Hall, London, p. 1-232.
(Includes chapter 'Taiwan to Timor' (p. 159-167) on collisions of island arcs and continental margins)

Hunter, D.C. (1993)- A stratigraphic and structural study of the Maubisse area, East Timor, Indonesia. Masters Thesis, West Virginia University, Morgantown, p. 1-214. *(Unpublished)*
(Geologic mapping around Maubisse village in E Timor. Two Permian and one Triassic formations identified: (1) Permian Maubisse Fm of volcaniclastics, limestones and pillow basalts, (2) Permian Cribas Fm, dominated by turbiditic clastics, and (3) Triassic Aitutu Fm, composed mostly of carbonates. Maubisse Fm has been thrust along unconformable contact between Cribas and Aitutu Fm resulting in zone of tectonic melange)

Hutubessy, S. (1998)- Analisis data gayaberat dan seismologi dalam upaya memahami proces gempabumi Dili, Timor Timur. J. Geologi Sumberdaya Mineral, 8, 82, p. 14-27.
('Gravity and seismological data analysis in an attempt to understand the process of the Dili earthquake, East Timor'. E Timor dominant strike-slip faults in N-S direction, secondary fault pattern in E-W direction)

Idrus, A., E.M. Ati & A. Harijoko (2012)- Preliminary study on the occurrence of mud-volcano-related sedimentary manganese layers at South Central Timor Regency, Timor Island, Indonesia. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-M-16, p.
(Sedimentary manganese layers in S Central Timor 2-10 cm thick and interbedded with (Jurassic?) Cretaceous-Eocene deep sea sedimentary rocks of Ofu and Nakfunu Fms., incl. red-brown claystone, radiolarian chert, slate, marl and white-pink calcilutite. Rock formations underlain by Bobonaro Fm (?; JTvG). Significant manganese layers mostly found ~50- 1000m from margin of mud-volcanoes. Manganese layers strongly deformed. Ore mainly composed of pyrolusite (MnO_2), groutite, feitknechtite, manganite and less hematite. Manganese minerals interpreted as alteration products of hydrothermal processes induced by mud-volcanoes)

Idrus, A., E.M. Ati, A. Harijoko & F.M. Meyer (2012)- Occurrences and characteristics of sedimentary-related manganese layers in Timor island, Indonesia. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 201-216.
(Similar to paper above on sedimentary manganese in folded bathyal Cretaceous sediments of Kolbano thrust belt, S Central Timor. Manganese nodules (mainly manganite MnO(OH) interpreted to be precipited on deep sea floor. Manganese layers are formed by Mn remobilization in seawater column, precipitated and deposited on deep sea floor. Probably influenced by 'hydrothermal process' of mud-volcanoes)

Idrus, A., E.M. Ati, A. Harijoko & F.M. Meyer (2013)- Characteristics and origin of sedimentary-related manganese layers in Timor Island, Indonesia. J. Geologi Indonesia 8 4, p. 191-203.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/169/169)
(Manganese layers of 2-10 cm thick interbedded with deformed deep sea reddish claystone, radiolarian chert, slate, marl and white and pinkish calcilutite of (Jurassic) Nakfunu Fm. Stratigraphically underlain by Bobonaro Fm(?). Two types of manganese ores: mainly layers but also manganite nodules)

Ikegami, T. (1942)- Oil reserve in Portuguese Timor. J. Mining Inst. Japan 58, 685, p. 320-331.

Imdahl, H. (1922)- Beitrage zur Petrographie von West-Timor. Centralblatt Mineralogie Geologie Palaont., p. 65-76.
(online at: www.biodiversitylibrary.org/item/203797page/91/mode/1up)

('Contributions to the petrography of West Timor'. Petrographic descriptions of rocks collected by Wanner (1909, 1911) in W Timor. Igneous (diorite, gabbro, peridotite, lherzolite, serpentinite), volcanics (quartz keratophyr, andesite, diabase) and metamorphics (amphibolites, chlorite schist, mica schist and epidote schist). No figures)

Ishikawa, A., Y. Kaneko, A. Kadarusman & T. Ohta (2007)- Multiple generations of fore-arc mafic-ultramafic rocks in the Timor- Tanimbar ophiolite, Eastern Indonesia. In: M. Santosh & S. Maruyama (eds.) Island arcs past and present, Gondwana Research 11, p. 200-217.
(Mafic-ultramafic rocks in Timor-Tanimbar region suggest uplift of fragments of mantle-crust by buoyant subduction of Australian continent. Peridotite masses in Timor (Mutis, Atapupu, Dili) mostly fertile (lherzolitic) in compositions. Overlying Ocussi volcanics resemble island-arc tholeiite, inconsistent with genetic relationship with Timor lherzolites. In eastern islands (Moa, Dai) ophiolitic rocks island-arc affinities. Petrological and geochemical variations best explained by combination of (1) temporal change of igneous activity possibly associated with development of forearc basin and (2) emplacement of spatially different forearc regions in each locality. Fertile lherzolite in forearc setting, high-Mg andesite magmatism, inverted metamorphic grade in associated metamorphics and formation of marginal basins may be linked to injection of high-T asthenospheric materials into mantle wedge)

Ishikawa, A., Y. Kaneko, T. Ohta & Y. Isozaki (2011)- Ophiolites in the non-volcanic Banda outer arc of East Indonesia. Journal of Geography (Chigaku Zasshi) 120, 1, p. 52-64.
(In Japanese; online at: www.jstage.jst.go.jp/article/jgeography/120/1/52/_pdf)
(Looks like summary of Ishikawa et al. 2007)

Jacobson, M.I. & K. Sani (1993)- Post-convention fieldtrip 1993- West Timor, Nusa Tenggara Timur. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-95.

Jafar, S.A. (1975)- Calcareous nannoplankton from the Miocene of Rotti, Indonesia. Verhandelingen Kon. Nederl. Akademie Wetenschappen, Afd. Natuurkunde, Amsterdam, ser. 1, 28, p. 1-99.
(online at: www.dwc.knaw.nl/DL/publications/PU00010962.pdf)
(Calcareous nannoplankton from single chalk sample 168 from Bebalain, Roti, collected by Molengraaff 1910 and previously studied by Tan Sin Hok (1927) and Kamptner (1955). Seventy-four recognizable autochthonous species of calcareous nannoplankton belonging to 18 genera. Age of sample upper NN9, Discoaster hamatus zone (= early Late Miocene; ~10 Ma). Also common reworked E Cretaceous- E Miocene nannoplankton)

Jafar, S.A. (1975)- Some comments on the calcareous nannoplankton genus *Scyphosphaera* and the neotypes of *Scyphosphaera* from Rotti, Indonesia. Senckenbergiana Lethaea 56, p. 365-379.

Jansen, H. (1934)- Die Variationsstatistische Methode angewandt auf ein groszes Material von *Schizoblastus* aus dem Perm von Timor und einige neue Anomalien dieser Gattung. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, 37, 10, p. 819-825.
('Variation statistics method applied to a large collection of Schizoblastus from the Permian of Timor and some new anomalies of this genus'. Permian blastoids from Basleo and Niipol, W Timor)

Jell, P.A. (1999)- A monasterid starfish from the Permian of Timor. Mem. Queensland Museum, Brisbane, 43, 1, p. 340.
(Brief first description of two arms of small Permian starfish from Noil Tonino I, SE of Basleo, from Macurda collection)

Johnston, C.R. (1981)- A review of Timor tectonics with implications for the development of the Banda Arc. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, p. 199-216.
(Australia- Timor collision started ~3Ma, but almost all continental rocks in Timor formed part of Banda forearc. Jurassic and older continental rocks of Timor have N Australian affinity, but probably rifted off in Late

Jurassic, collided with SE Asia subduction zone in Cretaceous and was reunited with Gondwanaland when Australian continent arrived at this subduction zone)

Johnston, C.R. & C.O. Bowin (1981)- Crustal reactions resulting from the mid-Pliocene to Recent continent island arc collision in the Timor region. BMR J. Australian Geol. Geophysics 6, p. 223-243.
(online at: www.ga.gov.au/corporate_data/81078/Jou1981_v6_n3_p223.pdf)
(DSDP-262 data suggest continental edge of Australia first entered subduction zone in Timor region at ~3 Ma. With map of position of pre-collisional continental margin of Australia)

Jonker, H.J.W. (1873)- Rapport van het voorloopig onderzoek naar de aanwezigheid van kopererts op het eiland Timor. Jaarboek Mijnwezen Nederlandsch-Indie 1873, 1, p. 157-186.
('Report of the preliminary investigation of presence of copper ore on Timor Island'. Earlier reports on presence of copper minerals (malachite, lazurite) in N coastal area of Timor could partly be confirmed, but nowhere in commercially significant quantities. Areas investigated in regions of Harneno and Beboki dominated by serpentinitic rock, Fialarang and Niti copper-bearing claystones, etc.)

Jouannic, C., C.H. Hoang, W.S. Hantoro & R.M. Delimon (1988)- Uplift rate of coral reef terraces in the area of Kupang, West Timor; preliminary results. Palaeogeogr. Palaeoclim. Palaeoecology 68, p. 259-272.
(In Kupang area seven uplifted Quaternary coral reef terraces. Fifth step at +44m dated at 152,000 yrs, giving mean uplift rate of 0.3 mm/yr since last interglacial; faster uplift rates in other parts of Timor)

Juliansyah, M.N. & R.D. Putrohari (2014)- Identifying the amount of uplifting of Timor Island using pressure data in Banli-1 well, Bonaparte Basin, southern Banda Arc. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-060, 5p.
(Banli-1 well drilled in 1993 in S edge of W Timor. Overpressure interval indicates uplift event of Timor. Depth of Jurassic on Timor Island 2296' higher than on Ashmore Platform. Minimum amount of uplift of Timor Island identified from difference between actual pressure data and hydrostatic pressure curve is ~1800', suggesting position of Timor Island prior to late uplift is already higher than Ashmore Platform of NW Australian margin)

Kadarusman, A., S. Maruyama, Y. Kaneko, T. Ota, A. Ishikawa, J. Sopaheluwakan & S. Omori (2010)- World's youngest blueschist belt from Leti Island in the non-volcanic Banda outer arc of Eastern Indonesia. Gondwana Research 18, 1, p. 189-204.
(Timor-Tanimbar non-volcanic outer Banda Arc with world's youngest 'A'-type high-P metamorphic belt, outcropping with different stages of evolution. Advanced domal uplift in Timor, still in first stage of tectonic extrusion on Kisar, Leti, Moa, Sermata and Laibobar. Metamorphics on Leti tectonically juxtaposed against overlying ultramafic rocks and underlying unmetamorphosed continental shelf sediments, bound by normal and reverse faults, respectively. Leti metapelites and metabasite units progressive metamorphic zones; highest grades in structurally intermediate levels. Protoliths of Leti metamorphics originally Permo-Triassic. Sediments and igneous rocks at margin of advancing Australian continent entered subduction zone immediately prior to commencement of Banda Arc-Australia collision in Pliocene. Burial reached 30-35 km. Slab-breakoff at depth in collision zone facilitated rapid uplift by wedge extrusion and active erosion during exhumation)

Kadarusman, A., S. Maruyama, Y. Kaneko, T. Tsujimori, T. Ohta & J. Sopaheluwakan (1997)- On-going exhumation of blueschist belt in the Timor-Tanimbar Region, Eastern Indonesia. Abstracts, Japan Earth and Planetary Science Joint Meeting 1997, p.

Kamptner, E. (1955)- Fossile Coccolithineen-Skelettreste aus Insulinde; eine mikropalaeontologische Untersuchung. Verhandelingen Kon. Nederl. Akademie Wetenschappen, Amsterdam, ser. 2, 50, 2, p. 1-105.
(online at: www.dwc.knaw.nl/DL/publications/PU00011530.pdf)
('Fossil coccolith skeletal remains from Indonesia: a micropaleontological investigation'. Study of coccolithophores from Jurassic-Cretaceous and Upper Tertiary marls of Timor and Roti, from same samples as studied by Tan Sin Hok 1927 and later also by Jafar 1975. Paleontological study without maps or stratigraphic context. Numerous new species)

Kaneko, Y., S. Maruyama, A. Kadarusman, T. Ota, M. Ishikawa, T. Tsujimori, A. Ishikawa & K. Okamoto (2007)- On-going orogeny in the outer-arc of the Timor-Tanimbar region, Eastern Indonesia. Gondwana Research 11, p. 218-223.
(Timor-Tanimbar one of youngest high P/T metamorphic belts in world. Deformation and metamorphic grade increase towards centre of 1 km thick crystalline belt. Metamorphics extruded as thin sheet between ophiolites and underlying shelf sediments. Central crystalline unit Barrovian-type overprint of high P/T metamorphics during wedge extrusion, and metamorphic grade pumpellyite-actinolite to upper amphibolite facies. Quaternary uplift of ~1260m in Timor in W, decreasing toward Tanimbar. Exhumation of metamorphics started in Late Miocene in W Timor, migrating/younging to E. Deep-seated high P/T metamorphic belt extruded into shallow levels, followed by doming. 'Mountain building' restricted to second stage. Quaternary uplift due to rebound of subducting continental crust due to oceanic slab break-off. Tanimbar not yet affected by later doming)

Kanmera, K. & K. Nakazawa (1973)- Permian- Triassic relationship and faunal changes in the eastern Tethys. In: Permian-Triassic systems and their mutual boundary. Mem. Canadian Petroleum Geol. 2, p. 100-119.
(Description of stratigraphy and faunal sequences of Upper Permian- Lower Triassic from sections in Japan, S China and Indochina. Timor 'allochthonous' shallow marine Asinepe Limestone close affinities to Asian facies and faunas; Audley-Charles et al. 1979)

Karig, D.E., A.J. Barber, T.R. Charlton, S. Klemperer & D.M. Hussong (1987)- Nature and distribution of deformation across the Banda Arc-Australian collision zone at Timor. Geol. Soc. America (GSA) Bull. 98, 1, p. 18-32.
(Profiles near Timor show Banda Arc-Australia collision zone similar to typical oceanic subduction system. Present deformation most intense at foot of Timor Trough inner slope. Deformation front discontinuously advancing S as new thrust slices develop in subducting Australian margin strata. Present deformation negligible in Savu fore-arc basin, N of Timor. Back-arc thrusting N of volcanic arc, but convergence minor compared with Timor Trough deformation. Along-strike variations in Timor Trough- Savu Basin deformation may be related to variable degree of involvement of Australian continental margin along arc)

Kato, M., K. Takeuchi, A. Hendarsyah & D. Sundari (1999)- On the occurrence of the Permian brachiopod genus *Leptodus* in Timor. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 9, p. 43-51.
(Brachiopod Leptodus probably from Permian Maubisse Fm, now embedded in Tertiary clay, indicates Timor was in Tethyan faunal realm (but Kato et al. also quote Leptodus occurrence in W Australia; JTvG). Timor Permian marine faunas closer affinity to SE Asian Permian faunas than to Australian Gondwana)

Kaye, S.J. (1989)- The structure of eastern Indonesia: an approach via gravity and other geophysical methods. Ph.D. Thesis, University College, University of London, p. 1-239.
(online at: www.bandaarcgeophysics.co.uk/Thesis/Thesis-kaye.pdf)
(Study of tectonics of Timor and Tanimbar-Kai regions incorporating gravity data. With discussions of obducted ophiolite terrains and comparisons to PNG and Taiwan. Assumes most of material on Timor belongs on NW Australian margin, and prior to collision Timor region was probably promontory or plateau composed of sedimentary and volcanic units)

Kaye, S.J. & J.S. Milsom (1988)- A new Bouguer anomaly map of Timor eastern Indonesia. University College London Gravity Research Group, 31p. *(Unpublished)*

Keep, M., L. Barber & D. Haig (2009)- Deformation of the Cablac Mountain Range, East Timor: an overthrust stack derived from an Australian continental terrace. J. Asian Earth Sci. 35, 2, p. 150-166.
(Cablac Mountain Range in E Timor S-directed thrust stack of mainly Triassic- E Jurassic carbonates, in structural contact with underlying Lolotoi Fm metamorphics. Lolotoi Fm and overlying Gondwanan thrust stack structurally emplaced on M Eocene units to S. Cablac thrust stack bound to N by high-angle fault along which crush breccia with clasts from Gondwana Megasequence and Asian Banda Terrane. Previously Cablac Lst suggested to be massive E Miocene limestones in depositional contact with underlying units)

Keep, M., L. Beck & P. Bekkers (2005)- Complex modified thrust systems along the southern margin of East Timor. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 2005, p. 297-310.
(Study of Plio-Pleistocene accretionary wedge along S coast of East Timor)

Keep, M. & D.W. Haig (2010)- Deformation and exhumation in Timor: distinct stages of a young orogeny. Tectonophysics 483, p. 93-111.
(E Timor data suggest major break between deformed pre-collisional strata and relatively undeformed overlying deposits in Late Miocene (9.8-5.5 Ma). Three distinct phases of orogenic development: initial collision and emplacement of early nappes creating loading and diapirism (9.8-5.5 Ma), tectonic quiet interval (5.5 Ma- 4.5 Ma), which may represent time of locking of subduction system, and post 4.5 Ma uplift, unroofing and further diapirism in response to isostatic rebound. First emergence above sea level ~3.1 Ma))

Keep, M. & D.W. Haig (2010)- Timor collision: deformation and tectonic implications. 20th Australian Geological Convention, Canberra 2010, Geol. Soc. Australia, Abstracts 98, p. 205. *(Abstract only)*
(New biostratigraphic dating places collision between Australian Plate and Banda Arc at 10.9- 9.8Ma. Collision produced complex intercalation of thrust slices from Australian Plate and Banda Arc sides of plate boundary. Initial thrust emplacement between 9.8-5.5 Ma. Intercalation of Australian-derived material with material from Banda Terrane complicated by over-folding of Banda Terrane thrust slices. Young high-angle strike-slip faults control much of present-day topographic expression of island)

Kenyon, C.S. (1974)- Stratigraphy and sedimentology of the Late Miocene to Quaternary deposits of Timor. Ph.D. Thesis, University of London, p. 1-291. *(Unpublished)*
(Stratigraphy of W Timor includes late M Miocene- Quaternary (N15-N23) Viqueque group sediments above Bobonaro olistostrome. Viqueque group subdivided into 6 formations, 26 members. Several phases of uplift and subsidence. Paleogeographies showing uplifted area to N, deep water sediment transport to South)

Kenyon, C.S. (1999)- The exploration of Timor. In: R.W. Murphy (ed.) The silver years- 25 years of SEAPEX, SE Asia Petroleum Expl. Soc. (SEAPEX), Singapore, p. 77-83.
(Personal history of Ph.D. fieldwork in Central Basin of West Timor in 1969-1970. Little or no geology)

Keupp, H. (2009)- Timor: Bonanza nicht nur fur Triasfossilien. Fossilien, 4/2009, p. 214-220.
(Well-illustrated report on 2008 fossil collecting trip to Baun area, SW Timor. Large erratic, generally reddish color Permian- Lower Jurassic limestone blocks in olistostrome in Late Tertiary marl-radiolarite-tuff succession. Triassic- Early Jurassic limestones open ocean facies, locally rich in ammonites and aulocerate belemnites, commonly coated by manganese layer. Also found 1-5 cm big globular hydrozoans Heterastridium conglobatum, of Norian age and possibly pelagic hydrozoan colony)

Kieslinger, A. (1924)- Die Nautiloideen der mittleren und oberen Trias von Timor. Jaarboek Mijnwezen Nederlandsch Oost-Indie 51 (1922), Verhandelingen, p. 51-145.
('The nautiloids from the Middle and Upper Triassic of Timor', by student of Carl Diener in Vienna Mainly taxonomic descriptions of nautiloid ammonites collected by 1916 Jonker expedition. Mainly from isolated blocks of 'Halstatter facies' condensed Triassic section (other classic works on Triassic ammonites are by Welter 1914, 1915 and Diener 1922))

Koesmono, M (1975)- Rekonstruksi palinspastik dan evolusi geologi daerah Tubuh Bokon, Timor. Thesis, Geol. Dept. UNPAD Padjadjaran University, Bandung, p. 1-199. *(Unpublished)*
('Palinspastic reconstruction and geologic evolution of the Tubuh Bokon area, N Central Timor')

Koesnama & A.K. Permana (2015)- Sistem minyak dan gas di cekungan Timor, Nusa Tenggara. J. Geologi Sumberdaya Mineral 16, 1, p. 23-32.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/48/50)
('Petroleum system in the Timor Basin, Nusa Tenggara'. Brief review of Permian- Jurassic potential source and reservoir rocks of Timor)

Koevoets, M J., A.S. Schulp & S.R. Troelstra (2014)- The age and provenance of the *Globidens timorensis* holotype. Berita Sedimentologi 30, p. 59-62.
(online at: www.iagi.or.id/fosi)
(Three fossil marine reptile teeth from U Cretaceous of W Timor are only known fossils of Mosasaurus-type reptiles in E Tethys region. However, there is some uncertainty about exact locality of origin of these fossils)

Koker, E.M.J. (1924)- Anthozoa uit het Perm van het eiland Timor. I. Zaphrentidae, Pterophyllidae, Cystiphyllidae, Amphiastreidae. Jaarboek Mijnwezen Nederlandsch Oost-Indie 51 (1922), Verhandelingen, p. 1-50.
(Permian corals from Timor, collected by 1916 Jonker expedition, from Wesleo, Nefotassi, Bitauni, etc.. Mostly from reddish tuffaceous marls of Wesleo region and associated with rich crinoid, blastoid and brachiopod faunas. Descriptions of probably deeper water solitary rugose assemblages of Zaphrentis spp., Amplexus, Polycoelia, Pterophyllum, Cystiphyllum, Prosmilia. Mixture of cosmopolitan and endemic species)

Koperberg, E.J. (1931)- Jungtertiare und Quartare Mollusken von Timor. In: H.A. Brouwer (ed.) 2e Nederlandsche Timor-Expeditie VII, Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Verhandelingen 1, p. 1-165.
(Late Tertiary and Quaternary marine molluscs from W Timor, collected by 1915-1917 Jonker expedition. Little or no stratigraphy or locality information)

Kossovaya O.L. (2009)- Artinskian-Wordian antitropical rugose coral associations: a palaeogeographical approach. Palaeoworld 18, p. 136-151.
(Antitropical rugose corals distributed in temperate zones of Boreal and Perigondwanan realms. E-M Permian antitropical associations represented by 'Cyathaxonia fauna'. Roadian-Wordian in S Hemisphere Perigondwanan temperate zone (Australia, Timor, SE Pamirs) predominance of Verbeekiella- Wannerophyllum assemblage. Timor Basleo Fm fauna with 'typical deep-water Peri-Gondwanan' Wannerophyllum, Verbeekiella, Timorphyllum, etc.. Through time gradually replaced by Cathaysian faunas)

Kristan-Tollman, E. (1988)- I. Coccolithen aus den aelteren Allgauschichten (Alpiner Lias, Sinemur) von Timor, Indonesien. Geol. Palaeont. Mitteilungen Innsbruck 15, p. 71-83.
(online at: www2.uibk.ac.at/downloads/c715/gpm_15/15_071-083.pdf)
('Coccoliths from the Alpine Liassic, Sinemurian, from Timor'. First description of Early Jurassic (Sinemurian) nannofossils, from Aitutu Fm at SW edge of Soe town and Meto River, SW of Soe, W Timor. Rel. low diversity assemblage, dominated by Timorhabdus timorensis. Associated with common ostracode Ptychobairdia neokristanae)

Kristan-Tollman, E. (1988)- II. Coccolithen aus dem Pliensbach (aelteren Allgauschichten, Alpiner Lias) von Timor, Indonesian. Geol. Palaeontol. Mitteilungen Innsbruck 15, p. 109-133.
(online at: www2.uibk.ac.at/downloads/c715/gpm_15/15_109-133.pdf)
('Coccoliths from the Alpine Liassic, Pliensbachian, from Timor'. Early Jurassic (Pliensbachian) nannofossils from Aitutu Fm at Meto River, SW of Soe, W Timor. Single sample with 20 species, dominated by Biscutum novum, Lotharingius haufforum and Discorhabdus ignotus)

Kristan-Tollmann, E. (1991)- Mikrocrinoiden aus der Obertrias der Tethys. Geol.-Palaont. Mitteilungen Innsbruck 17, p. 51-100.
(online at: www2.uibk.ac.at/downloads/c715/gpm_17/051_100_17.pdf)
('Microcrinoids from the Upper Triassic of the Tethys'. With descriptions of new taxa from Alpine Late Triassic of Eastern Alps (Austria), Taurus Mts (Turkey) and Norian 'Hallstatt Limestone' at Bihati near Baun, W Timor, incl. Leiocrinus krystini, L. gracilis, Bihaticrinus manipalus, etc.)

Kristan-Tollman, E., S. Barkham & B. Gruber (1987)- Potschenschichten, Zlambachmergel (Hallstatter, Obertrias) und Liasfleckenmergel in Zentraltimor, nebst ihren Faunenelementen. Mitteilungen Osterreichischen Geol. Gesellschaft 80, p. 229-285.
(online at: http://geologie.or.at/index.php/downloads2/category/7-archiv-mitteilungen)

('Potschen beds, Zlambach marl (Hallstatter, Upper Triassic) and Lias flecken-marl in Central Timor, along with their faunal elements' Upper Triassic (Norian- Rhaetian)- E Jurassic thin-bedded marls-limestones and faunas from deep marine 'Aitutu Fm', mainly along Meto River, SW part of W Timor, SW of Soe. Close faunal and lithological similarities with age-equivalent 'Hallstatt facies' rocks in E Alps (W Tethys), with no Pacific faunal elements. With descriptions of U Triassic and Liassic ostracod assemblages and Liassic calcareous nannofossils by Kristan-Tollman, and revision of U Triassic mollusc genera Halobia (H. rugosa, H. fascigera, H. radiata, etc.) and Monotis salinaria by Gruber)

Krumbeck, L. (1921)- Die Brachiopoden, Lamellibranchiaten und Gastropoden der Trias von Timor. I. Stratigraphischer Teil. In: J. Wanner (ed.) Palaeontologie von Timor 10, 17, Schweizerbart, Stuttgart, 142p.
('Triassic brachiopods, bivalves and gastropods from Timor- part 1, Stratigraphic part'. Extensive overview of Triassic occurrences on Timor, Savu, Roti, etc., with distribution of ages and facies and comparisons to Triassic in other regions. Based on collections from 1911 Wanner and Molengraaff Timor expeditions. Five main facies: 1. Klippen/ Fatu coral reefal limestone, often oolitic; 2. Bituminous platy limestone and marls; 3. Brachiopod Limestone (rel. rare); 4. Cephalopod Limestone, condensed 'Halstatter facies'; 5. Halobia limestone and shales)

Krumbeck, L. (1922)- Zur Kenntnis des Juras der Insel Rotti. Jaarboek Mijnwezen Nederlandsch Oost-Indie 49 (1920), Verhandelingen 3, p. 107-220.
('On the knowledge of the Jurassic of Roti Island'. Descriptions of 44 species of Liassic amonites from grey cephalopod nodule marls, but also some Middle Jurassic ammonites (Macrocephalites). Most species similar to Alpine- Mediterranean species, with, unlike Timor Permian-Triassic, few new species. Assemblages dominated by Dactylioceras spp. and Arietites spp., also Arnioceras, Lytoceras rotticum, Arietites wichmanni, Aegoceras subtaylori, etc. All Jurassic facies on Roti deep marine)

Krumbeck, L. (1923)- Zur Kenntnis des Juras der Insel Timor, sowie des Aucellen-Horizontes von Seran und Buru. In: J. Wanner (ed.) Palaeontologie von Timor 12, 20, Schweizerbart, Stuttgart, p. 1-120.
('On the knowledge of the Jurassic of Timor, as well as the Aucella horizon of Seram and Buru'. Jurassic of Timor mainly in brachiopod-bivalve facies, while in Roti dominated by ammonites. Jurassic of Timor four different facies types: (1) Liassic red cephalopod limestones; (2) M Liassic 'Lithiotis fauna' of thick-shelled molluscs with Mediterranean affinities in 'Fatu Limestones' at Lelefoei Pass (Bonleo, Mutis Mts.) and Fatu Nimassi (where underlain by U Triassic limestone) and Fatu Kenapa: Lithiotis timorensis n.sp., with Pachymegalodus, Myophoria, etc. from brown-grey Mytilus limestone (= typical Tethyan; Geyer 1977, Hayami 1984, Krobicki & Golonka 2009); (3) E Malm Aucella malayomarica at several localities on W and E Timor, often 'rock-forming' and generally asociated with Inoceramus cf. haasti (also known from Roti, Seram, Buru); (4) M Liassic dark grey bituminous platy limestone of Ramelau Mts, E Timor, with Rhynchonella, Spiriferina)

Krumbeck, L. (1924)- Die Brachiopoden, Lamellibranchiaten und Gastropoden der Trias von Timor II. Palaeontologischer Teil. In: J. Wanner (ed.) Palaeontologie von Timor 13, 22, Schweizerbart, Stuttgart, p. 1-275.
(Triassic brachiopods, bivalves and gastropods from Timor- part 2, Paleontological part)

Krystyn, L. & M. Siblik (1983)- *Austriellula robusta* n. sp. (Brachiopoda) from the Upper Carnian Hallstatt limestones of Timor (Indonesia). Osterreich. Akademie Wissenschaften, Schriftenreihe Erdwissensch. Komm. 5, p. 259-266.
(New rhynchonellid brachiopod species from Carnian (U Triassic) of Baun, Timor. From 'Halstatt facies' ammonite-rich limestone blocks in Tertiary olistostrome in SW Timor)

Krystyn, L. & J. Wiedmann (1986)- Ein *Choristoceras* Vorlaeufer (Ceratitina, Ammonoidea), aus dem Nor von Timor. Neues Jahrbuch Geol. Palaont., Monatshefte 1986, 1, p. 27-37.
('A Choristoceras ancestor (Ceratitina, Ammonoidea) from the Norian of Timor'. Norian ammonites from 'Halstatt-facies' Norian cephalopod limestone of Timor)

Kuenen, Ph.H. (1942)- Obilatoe, Kisar and Siboetoe. Contributions to the geology of the East-Indies from the Snellius Expedition II. Geologie en Mijnbouw 4, 11-12, p. 81-90.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0M0tDX2Uxbnh3cEE/view)
(Geological observations from short visits to islands of Obilatu, Kisar and Sibutu with the 1929 Snellius Expedition. Kisar (NE of Timor) consists of crystalline schists (incl. amphibolite) with thin cover of elevated Quaternary coral reef terraces that are tilted to East)

Kummel, B. (1968)- Scythian ammonoids from Timor. Breviora, Museum Comparative Zoology, Harvard University, 283, p. 1-21.
(online at: www.biodiversitylibrary.org/page/4294222page/308/mode/1up)
(Description of Lower Triassic ammonites from Wanner, Jonker, etc. collections, all from isolated blocks from extremely condensed sections. Many specimens manganese-coated. Mainly addendum to Welter (1922) monograph. Incl. Owenites, Prosphingites)

Kutassy, E. (1930)- Triadische Fossilien vom Portugiesischen Timor. Foldtani Kozlony 60, Budapest, p. 200-209.
(online at: http://epa.oszk.hu/01600/01635/00383/pdf/EPA01635_foldtani_kozlony_1930_60_01-12.pdf)
('Triassic fossils from Portuguese Timor'. Same paper as Kutassy 1931)

Kutassy, A. (1931)- Triadische Fossilien vom Portugiesischen Timor. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 9, p. 49-56.
(Triassic fossils from Von Loczy 1922 expedition in S part of Portuguese Timor near Suai. Mostly from folded deep-water marly limestones. With ammonites, belemnites (Aulacoceras striatus) and pelagic molluscs (Daonella indica, Halobia styriaca))

Kwon, C.W., S.W. Kim, S.I. Park, J. Park, J.H. Oh, B.C. Kim, H.J. Koh & D.L. Cho (2014)- Sedimentological characteristics and new detrital zircon SHRIMP U-Pb ages of the Babulu Formation in the Fohorem area, Timor-Leste. Australian J. Earth Sci. 61, 6, p. 865-880. *(with supplementary data)*
(Zircon ages from Triassic Babulu Fm deep marine clastics in Fohorem area, Timor-Leste, Neoarchean-Triassic, with main age pulses Paleozoic- Triassic (329-256 Ma). Proterozoic major peak at 1878-1857 Ma, also at ~1560, 1750, 1830 Ma (results similar to Zobell 2007 data from Savu). Maximum deposition age indicated by youngest zircon age peak (~256-238 Ma) is post- early U Triassic. Babulu Fm in Fohorem area initiated as submarine fan lobe and represents distal Gondwana Sequence of Australian margin. Zircon age for M Permian trachyandesite in Maubisse Fm (270 ± 3 Ma= E Guadalupian))

Lakeman, R. (1950)- On the crinoid nature of *Timorocidaris sphaeracantha* Wanner. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 53, 1, p. 100-108.
(Timorocidaris sphaeracantha one of most common fossils in Permian of Timor. Hemispherical fossil, here believed to be axillary primibranch of unknown poteriocrinoid, not an echinoid)

Lay, A., I. Graham, D. Cohen, J.M. Gonzalez-Jimenez, K. Privat, E. Belousova & S.J. Barnes, (2014)- Platinum Group Minerals in ophiolitic chromitites of Timor Leste. In: E.V. Anikina et al. (eds.) 12th Int. Platinum Symposium, Inst. Geology and Geochemistry UB RAS, Yekaterinburg, p. 179-180. *(Abstract)*
(online at: http://conf.uran.ru/12IPS/12%20IPS%20ABSTRACTS.pdf)
(Hili Manu peridotites in Manatuto District on N coast of Timor Leste, ~50km E of Dili with ultramafic rocks(serpentinised dunites, harzburgites and lherzolites associated with rare rodingites and gabbros) in two massifs, separated by amphibolite block. With chromitite bodies and Platinum-Group mineralisation. Preliminary PGM Re-Os ages from 0.05 Ga (Subao Highway) to 0.21 Ga (Kerogeol Hill))

Lay, A., I. Graham, D. Cohen, K. Privat, J.M. Gonzalez-Jimenez, E. Belousova & S.J. Barnes (2017)- Ophiolitic chromitites of Timor Leste: their composition, platinum group element geochemistry, mineralogy, and evolution. Canadian Mineralogist 55, 5, p. 875-908.
(Ultramafic rocks at Hili Manu, ~50 km E of Dili , two ultramafic massifs separated by amphibolite. Chromitite bodies at Hili Manu small lenses few m in size. Chromites both high-Cr and high-Al types. Platinum-group

minerals (laurite, etc.) as inclusions and in fractures in chromite or serpentinite matrix. Peridotite geochemistry and chemistry of chrome-spinels suggest formation of Hili Manu peridotite in upper mantle in supra-subduction zone setting, part of young oceanic lithosphere from Banda Arc)

Lelono, E.B. (2016)- Palynology of the Permian freshwater deposit in West Timor. J. Geologi Sumberdaya Mineral 17, 4, p. 231-239.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/18/16)
(Permian Bisane Fm of W Timor dominated by calcareous sandstone with abundant marine crinoid fossils. Intercalation of non-calcareous dark shale-siltstone with papery structure, 5m thick, with Permian striate-bisaccate pollen, incl. Protohaploxypinus samoilovichii and other species (associated with Glossopteris flora), Striatopodocarpidites phaleratus, Pinuspollenites globosaccus, Lunatisporites pellucidus, etc. and lack marine dinoflagellates. Possibly syn-rift lacustrine deposit)

Lelono, E.B. (2017)- Pollen record of the Permian marine sediments from West Timor. Lemigas Scientific Contributions Oil and Gas 40, 2, p. 75-84.
(online at: http://journal.lemigas.esdm.go.id/ojs/index.php/SCOG/article/view/42/pdf)
(Permian calcareous shale and sandstone at 50m thick Lilana river outcrop (Bisane Fm) with moderate pollen recovery (mostly consists of striate and non-striate bisaccates as well as trilete monosaccates). Permian age taxa Protohaploxypinus samoilovichi, Lunatisporites pellucidus, Falcisporites australis, Plicatipollenites malabarensis and Cannanoropollis janakii. Common marine dinoflagellates Dapsilidium langii and Veryhachim reductum and abundant crinoid macrofossils confirm shallow marine paleoenvironment. Common Tasmanites green algae in lower part of section suggest potential hydrocarbon source rock)

Lelono, E.B. (2019)- The Gondwanan green alga *Tasmanites* sp. in the Permian lacustrine deposits of West Timor. Indonesian J. Geoscience 6, 3, p. 255-266.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/434/290)
(Permian lacustrine sediments of W Timor 5m thick non-calcareous black shale with papery structures and part of Bisane Fm. Rich but low diversity palynomorphs indicate non-marine environment. >80% of pollen assemblages green alga Tasmanites sp., also striate/ non-striate bisaccate pollen and trilete spores, indicating Permian age. Tasmanites believed to be source for tricyclic terpanes, a primary source of hydrocarbons)

Lelono, E.B., P. Bohemi, A. Bachtiar, P. Suandhi, B.H. Utomo, H. Ibadurrahman, M. Arifai, A. Yusliandi & Z. Lesmana (2016)- Paleozoic lacustrine sediment at West Timor and tectonic implication for Timor Island, new exploration concept of hydrocarbon. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-642-G, 12p.
(Discovery of 5m thick non-calcareous black shale with papery structure at Ajobaki Village, Fatunausus High, Kapan, Soe (in mud volcano?). Consisting of algae layered with sulphur content. With Late Permian(?) fresh water pollen species (incl. Permian Plicatipollenites malabarensis and P. janakii (=Cannanoropollis janakii?) and Triassic Protohaploxypinus samoilovichi and Falcisporites australis) and interpreted as lacustrine deposits. High maturity (Ro>0.9), TOC up to 24% (NB: Possibly Triassic bituminous shale?: Falcisporites australis, Cannanoropollis janakii, P. samoilovichi may occur in Late Permian but primarily Triassic markers. Little info on geological context of sample; JTvG))

Lelono, E.B., D. Kurniadi, K.D. Anggritya & Saidah (2017)- Palynological review of the Permian lacustrine sediment in the West Timor. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(Palynology of new locality of 4m thick non-calcareous black 'paper shale' in central W Timor interpreted as Late Permian lacustrine deposit. High abundance but low diversity of palynomorphs. Tasmanites-green algae >80% of pollen assemblage; rest assemblage striate and non-striate bisaccate and trilete spore, characterising Permian age. Tasmanites blooms interpreted as lake supplied with meltwater from surrounding glaciers. Tasmanites algae potential hydrocarbon source (NB: Tasmanites commonly viewed as pelagic marine algae, common in higher latitudes? (e.g. Barentsz Sea M Triassic marine oil shales with Tasmanites blooms and common Daonella bivalves; Vigran et al. 2008; JTvG). No details on locality)

Lelono, E.B., L. Nugrahaningsih & D. Kurniadi (2016)- Permo-Triassic palynology of the West Timor. Scientific Contr. Oil and Gas, Lemigas, Jakarta, 39, 1, p. 1-13.
(online at: www.lemigas.esdm.go.id/public/publikasi/scientific/14778917121993082162.pdf)
(Bisane Fm sandstones-shales in W Timor outcrops with mica and abundant crinoids and up to 5m thick non-calcareous dark shale-siltstone with papery structure and rich in sulfur. Permo-Triassic ages indicated by striate-bisaccate pollen, incl. Protohaploxypinus samoilovichii, P. fuscus, P. goraiensis (= from Glossopteris plants), Striatopodocarpidites phaleratus, Pinuspollenites globosaccus, Lunatisporites pellucidus, also non-striate Falcisporites australis, Samaropollenites speciosus, etc. Trilete-monosaccate spores of Plicatipollenites malabarensis and Cannanoropollis janakii in non-calcareous shale samples Permian or older age. Marine dinoflagellates in calcareous samples (incl. Dapsilidinium langii, Dingodinium jurassicum) suggest marine influence, and not present in non-calcareous samples. Possibly new petroleum system in Paleozoic of W Timor? (NB: dinoflagellates include latest Triassic-Jurassic species?; JTvG))

Lelono, E.B., L. Nugrahaningsih, D. Kurniadi, P.A. Suandhi & B.H. Utomo (2016)- Palynological investigation of the Permian sediment in the on-shore West Timor. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 401-404.
(Abbreviated version of Lelono et al. 2016, above, on freshwater synrift facies in Permian Bisane Fm with 44 palynomorph species of Falcisporites superzone)

Lelono, E.B., D. Sunarjanto & A. Kholiq (2016)- Potensi hidrokarbon sedimen Pra-Tersier daerah Atambua, Timor Barat. Lembaran Publikasi Minyak dan Gas Bumi (Lemigas) 50, 2, p.
(online at: www.journal.lemigas.esdm.go.id/index.php/LPMGB/article/view/455)
('Hydrocarbon potential of Pre-Tertiary sediments of the Atambua area, West Timor'. Atambua area with many hydrocarbon seeps. Permian shale of Bisane Fm and Triassic clay of Aitutu Fm are considered to be source rocks, Permian and Jurassic sandstone potential reservoirs, Jurassic of Wailuli Fm clay potential seal)

Lemoine, M. (1959)- Un example de tectonique chaotique: Timor. Essai de co-ordination et d'interpretation. Revue Geogr. Physique Geol. Dynamique 2, 4, p. 205-230.
('Timor, an example of chaotic tectonics'. Complex thrust tectonics on Timor not well understood. Thrusting mainly in Miocene, essentially completed by M or Late Miocene)

Lockwood, W.L. (1975)- A geophysical assessment of the Outer Banda Arc with emphasis on gravity measurements in Eastern Timor. M.Sc. Thesis, Flinders University, Adelaide, p. 1-83. *(Unpublished)*

Macurda, D.B. (1972)- The type species of the Permian blastoid *Calycoblastus*. J. Paleontology 46, 1, p. 94-98.
(On discovery of second specimen of large blastoid Calycoblastus tricavatus Wanner from Lower Permian of Baun-Amarasi near Kupang, W Timor)

Major, J.R. (2011)- Pleistocene hinterland evolution of the active Banda Arc: surface uplift and neotectonic deformation recorded by coral terraces at Kisar, Indonesia *and* Hinterland emergence of the active Banda arc-continent collision: metamorphism, geochronology, and structure of the uplifted Kisar Atoll, Indonesia and related rocks of Timor. M.Sc. Thesis, Brigham Young University, Utah, p. 1-165.
(online at: http://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=3945&context=etd)
(Metamorphic rocks of Kisar island correlate with Aileu Metamorphic Complex of E Timor. Protoliths mostly psammitic with minor basaltic and felsic igneous material. Mafic meta-igneous rocks show rift affinities, likely related to rifting of Gondwana. Collision of N margin of Australia with Banda Arc in latest Miocene caused metamorphism of distal edge of continental margin rocks at depths of 25-30 km, followed by rapid uplift and exhumation. U-Pb analysis of detrital zircons show main populations of ~300 Ma and ~1850 Ma. Youngest grains are ~286/ 295 Ma in age (earliest Permian). Timing of metamorphism poorly constrained by previous studies; mica cooling age of 5.36 Ma reliable. Domal geometry expressed by pinnacle shape of island and by metamorphic foliations parallel to coastline, possibly caused by diapirism into hinge of active thrust anticline)

Major, J.R. & R. Harris (2009)- The tectonic evolution and regional significance of Kisar Island, Indonesia. Geol. Soc. America, Rocky Mount. Sect. 61st Ann. Mtg., May 2009, Paper 13-11. *(Abstract only)*

(Kisar Island, NE of Timor, emerges from small ridge in forearc suture zone 3 km deep. Consists of metamorphic rocks encircled by Quaternary uplifted coral terraces. Terraces gently warped and correlated to known sea-level highstands. Metamorphic rocks among youngest in world, range from phyllite to amphibolites)

Major, J.R., R.A. Harris, H. Chiang, C. Prasetyadi & C. Shen (2009)- Variation in deformational mechanisms in the Banda Arc: uplift and tectonic implications of Kisar, Indonesia. EOS Transactions AGU 90, 52, Fall Meet. Suppl., Abstract T33B-T1915. *(Abstract only)*

Major, J.R., R.A. Harris, H.W. Chiang, N. Cox, C.C. Shen, S.T. Nelson, C. Prasetyadi & A. Rianto (2013)- Quaternary hinterland evolution of the active Banda Arc: surface uplift and neotectonic deformation recorded by coral terraces at Kisar, Indonesia. J. Asian Earth Sci. 73, p. 149-161.
(Coral terrace ages yield surface uplift rate of ~0.5 m/ka for Kisar Island in hinterland of active Banda arc-continent collision. Based on this rate, Kisar first emerged from ocean as recently as ~450 ka. Uplifted terraces gently warped in E-W striking folds. Pinnacle shape of Kisar and protrusion of its metamorphic rocks through forearc basin sediments also suggest component of extrusion along shear zones or active doming)

Margolis, S.V., T.L. Ku, G.P. Glasby, C.D. Fein & M.G. Audley-Charles (1978)- Fossil manganese nodules from Timor: geochemical and radiochemical evidence for deep-sea origin. Chemical Geology 21, p. 185-198.
(Cretaceous-age Mn nodules from exotic blocks in Miocene Bobonaro scaly clay 4.5 km ENE of Niki Niki are similar to nodules now found at ~3500-5000m in Pacific and Indian Oceans)

Mariotti, N. & J.S. Pignatti (1995)- *Claviatractites*, a new xiphoteuthidid cephalopod from the Upper Triassic of Timor. Palaeopelagos 5, p. 45-52.
(New genus name Claviatractites proposed for belemnite originally described as Atractites claviger by Von Bulow (1915) from Late Triassic of Timor, because Atractites has ventral furrows, waist is narrower, etc.)

Marks, P. (1954)- Contributions to the geology of Timor. III. An occurrence of *Miogypsina (Miogypsinella) complanata* Schlumberger in the Lalan Asu area, Timor. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 110, p. 78-80.
(Lalan Asu area polymict basal conglomerate above amphibolite, originally described by Tappenbeck 1939, contains latest Oligocene larger forams Miogypsinoides complanata (with >21 spiral chambers) and Spiroclypeus. Probably equivalent of Base Cablac Limestone in E Timor (Called Aquitanian by Marks, but age should be Late Chattian, latest Oligocene; JTvG))

Marks, P. (1961)- The succession of nappes in the western Miomaffo area of the island of Timor; a possible key to the structure of Timor. Proc. 9th Pacific Science Congress, Bangkok 1957, Geol. Geophys. 12, p. 306-310.
(Diagram of stratigraphies in W Miomaffo area, W Timor, depicting succession of overthrusts)

Martin, K. (1881)- Die versteinerungfuhrenden Sedimente Timors. Nach Sammlungen von Reinwardt, Macklot und Schneider. Sammlungen Geol. Reichs-Museums Leiden 1, 1, p. 1-64.
(online at: www.repository.naturalis.nl/document/552422)
('The fossil-bearing sediments of Timor, from collections of Reinwardt, Macklot and Schneider'. Early description of Timor fossils, now in Leiden Naturalis collections, collected in 1821 (Reinwardt), 1823-1829 (Macklot and Muller, Kupang area) and 1863 (Schneider). Mainly solitary corals (Amplexus, Lophophyllum, Lithostrotion) and brachiopods (Spirifer, Spirigera) from Permian. With 3 plates)

Martin, K. (1882)- Die versteinerungfuhrenden Sedimente Timors. Nach Sammlungen von Reinwardt, Macklot und Schneider. Jaarboek Mijnwezen Nederlandsh Oost-Indie 11 (1882), Wetenschappelijk Gedeelte, p. 71-136.
('The fossil-bearing sediments of Timor, from collections of Reinwardt, etc.'... Same as Martin 1881)

Martini, R.L., M. Zaninetti, J. Villeneuve, J.J. Cornee, L. Krystin, S. Cirilli, P. De Wever, P. Dumitrica & A. Harsolumakso (1999)- New sedimentological and biostratigraphic data on the Triassic of West Timor (Indonesia). 7th Congr. Francais sedimentlogie, Nancy, 2p. *(Abstract)*

(U Triassic Carnian- U Carnian/Rhaetian basinal carbonate series with radiolaria, ammonites and conodonts. 6 lithostratigraphic units: A-B Carnian; C Norian with Gliscopollis meyeriana and Granulatoperculatipollis rudis; E with U Norian Monotis salinaria, etc. Adherance of Allochthonous of Timor to Australian margin highly questionable)

Martini, R.L., M. Zaninetti, J. Villeneuve, J.J. Cornee, L. Krystin, S. Cirilli, P. de Wever, P. Dumitrica & A. Harsolumakso (2000)- Triassic pelagic deposits of Timor: palaeogeographic and sea-level implications. Palaeogeogr. Palaeoclim. Palaeoecology 160, p. 123-151.
(online at: http://geologie.mnhn.fr/PDW/Martini%20et%20al%202000.pdf)
(W Timor Triassic deposits in 'Parautochthonous Complex and Allochthonous Sonnebait series. Late Triassic at rear end Kolbano thrust belt in W Timor shows deep water organic-rich Carnian shales overlain by Norian-Rhaetian radiolarian-bearing pelagic carbonates. Ammonites typical Tethyan, low paleolatitude. Carnian palynomorphs incl. rare Ovalipollis pseudoalatus. Triassic sedimentary evolution in Timor different from NW Australian margin, but similar to Banda Sea microcontinents like E Sulawesi, Buru, Seram. Data suggest Allochthonous complex, classically interpreted as tectonic melange of Banda Arc accretionary prism, is tectonically dismembered Triassic lithostratigraphic succession)

Maryanto, S. & A.K. Permana (2013)- Mikrofasies dan diagenesis batugamping berdasarkan data petrografi pada Formasi Nakfunu di daerah Timor Tengah Selatan. J. Sumber Daya Geologi 23, 3, p. 143-157.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/87/81)
('Limestone microfacies and diagenesis based on petrographic data of the Nakfunu Formation in the area of South Central Timor'. Lower Cretaceous pelagic limestones from Kolbano foldbelt underwent cementation, replacement, silicification, recrystallization, dolomitization, compaction, fracturing and dissolution. Locally rich in radiolaria (also in HAGI-IAGI 2017 (Malang) convention))

Maryanto, S., A.K. Permana & J. Wahyudiono (2018)- Aspek petrografi batugamping di daerah Timor Tengah Selatan. J. Geologi Sumberdaya Mineral 19, 2, p. 83-97.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/396/340)
('Aspects of the petrography of limestones in the South Central Timor Area'. Petrography of limestones from N and E of Soe: Triassic Aitutu Fm (rich in phylloid algae (= Halobia-type bivalves?; HvG)), E Cretaceous Nakfunu Fm (rich in radiolaria), Late Cretaceous Menu Fm (with planktonic foraminifera) and Paleogene Ofu Fm (with benthic foraminifera and terrigenous material))

Masson, D., G.J. Milsom, A.J. Barber, N. Sikumbang & B. Dwiyanto (1991)- Recent tectonics around the island of Timor, eastern Indonesia. Marine Petroleum Geol. 8, 1, p. 35-49.
(Holocene deformation around Timor from GLORIA sidescan sonar system and single-channel seismic data)

McCartain, E. (2004)- A reconstructed stratigraphic succession for the Gondwana sequence of Timor-Leste, forming the type area of the Wailuli Formation. B.Sc. Thesis University of Western Australia, p. *(Unpublished)*
(Abstract in PESA Newsletter 73, 2004, p. 29. Wai Luli Fm type area clastics range in age from Late Permian-M Jurassic; paleoenvironments inner-outer neritic (commonly with turbidites= deeper marine? JTvG))

McCartain, E., J. Backhouse, D. Haig, B. Balme & M. Keep (2006)- Gondwana-related Late Permian palynoflora, foraminifers and lithofacies from the Wailuli Valley, Timor Leste. Neues Jahrbuch Geol. Palaont., Abhandl. 240, 1, p. 53-80.
(Palynomorphs from Cribas Fm turbidites from Wailuli Valley, E Timor, are of latest Permian age and of Gondwanan affinity. Diverse Dulhuntyispora assemblage with 6 species, incl. D. dulhuntyi, D. parvithola, etc., also Didecitrelites eriacanus, etc.. Assemblage similar to Cape Hay Fm in Bonaparte Basin of NW Australia)

Mei, S. & C.M. Henderson (2001)- Evolution of Permian conodont provincialism and its significance in global correlation and paleoclimate implication. Palaeogeogr. Palaeoclim. Palaeoecology 170, p. 237-260.
(Early Permian Gondwana Cool Water Province with Vjalovognathus in Canning, Carnarvon and W Timor. Permian conodont provincialism not distinct until Kungurian)

Meijer, H.J.M., S.K. Donovan & W. Renema (2009)- Major Dutch collections of Permian fossils from Timor amalgamated. J. Paleontology 83, 2, p. 313.
(Short note reporting that large collections of macrofossils from Permian, etc., of Timor, originally kept in Amsterdam, Delft and Leiden, are now combined in Leiden Naturalis Museum)

Milsom, J. & M.G. Audley-Charles (1986)- Post-collisional isostatic readjustment in the southern Banda Arc. In: M.P. Coward & C. Ries (eds.) Collision tectonics, Geol. Soc. London, Spec. Publ. 19, p. 353-364.
(Timor area considerable departures from isostatic equilibrium suggested by gravity. In some cases isostatic anomalies accords well with observed vertical movement. In other areas, such as N Timor and inner (volcanic) arc, uplift where gravity data suggest there should be subsidence. Possible explanation is contribution to high gravity made by cold, dense subducted slab now sinking after rupture near continental margin. Ruptured sinking slab no longer exerts downward pull on overlying lithosphere, freed to rebound isostatically.)

Milsom, J. & A. Richardson (1976)- Implications of the occurrence of large gravity gradients in N Timor. Geologie en Mijnbouw 55, p. 175-178.
(online at: https://drive.google.com/open?id=0B7j8bPm9Cse0b3hDbTV1SUpySGs)
(Steep gravity gradient along N coast of Timor suggests dense rocks rise close to surface, and analogies can be drawn with large anomalies associated with ophiolitic thrusts in New Guinea and New Caledonia, where high gravity anomalies caused by concealed roots of exposed ultramafic masses. Timor may well be built up of series of thrust slices resting ultimately on continental basement)

Minato, M. & M. Kato (1965)- Waagenophyllidae. J. Faculty Science Hokkaido University, Sapporo, ser. 4, 12, 3-4, p. 1-241.
(online at: http://eprints.lib.hokudai.ac.jp/dspace/handle/2115/35941)
(Monograph on taxonomy and geographic distributions of Permian waagenophyllid colonial and solitary corals, widely distributed in tropical Tethyan (Cathaysian) region. Lonsdaleia frechi Volz 1904 from Bukit Bessi, Padang Highlands, W Sumatra, recombined as Polythecalis frechi. Waagenophyllids from M Permian of Timor: Lonsdaleiastraea vinassai, L. molengraaffi, Ipciphyllum timoricum (first described by Gerth 1921))

Molengraaff, G.A.F. (1912)- De jongste bodembewegingen op het eiland Timor en hunne beteekenis voor de geologische geschiedenis van den O.I. Archipel. Verslagen Vergadering Wis-Natuurk. Afd. Kon. Akademie Wetenschappen, Amsterdam, Juni 1912, p.
(Dutch version of paper below)

Molengraaff, G.A.F. (1912)- On recent crustal movements on the Island of Timor and their bearing on geological history of the East Indian Archipelago. Proc. Kon. Akademie Wetenschappen, Amsterdam 15, p. 224-235.
(online at: www.dwc.knaw.nl/DL/publications/PU00012969.pdf)
(After post-Eocene main folding event on Timor horsts and grabens formed, on which Mio-Pliocene Globigerina limestones were deposited. Plio-Pleistocene coral reefs on Timor now elevated up to 1283m above sea level, proving significant young uplift of Timor)

Molengraaff, G.A.F. (1913)- Overschuivingen en overschuivingsbladen op de eilanden Timor en Letti. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 30, p. 273-274.
('Thrusts and nappes on the islands of Timor and Leti'. Major post-Eocene and pre-Pliocene folding event on Timor)

Molengraaff, G.A.F. (1914)- De Fatoes van Timor. Verslagen Geol. Sect., Geologisch Mijnbouwkundig Genootschap I, 1912, p. 117-119.
(The 'fatus' (limestone cliffs) of Timor. Summary of 1912 presentation for Dutch geological society on isolated limestone hills of W Timor, locally named fatus. Composed of different rock types, most commonly Triassic oolitic limestone, but also Permian crinoid limestone, serpentinite, Tertiary orbitoidal limestone or igneous rocks. Often rise from areas with different geology. One explanation may be intense folding of island, probably

in 'young Miocene', with disharmonic response by more rigid and more thin-bedded, viscous rocks, followed by differential erosion. Major nappes may also be a factor)

Molengraaff, G.A.F. (1915)- Dekbladenbouw in den Timor archipel. Verslagen Geol. Sect., Geologisch Mijnbouwkundig Genootschap 1, p. 140-141.
('Nappe structure in the Timor archipelago'. Early paper on nappe tectonics on Timor.)

Molengraaff, G.A.F. (1915)- L'expedition neerlandaise a Timor en 1910-1912. Archives Neerlandaise Sciences Exactes et Naturelles, Ser. 3 B, 2, p. 395-404.
('The Netherlands Timor expedition in 1910-1912')

Molengraaff, G. (1915-1922)- Nederlandsche Timor-Expeditie 1910-1912. Jaarboek Mijnwezen Nederlandsch Oost-Indie, volumes 1-3, p. 1-732.
(Vol. II online at: https://archive.org/details/nederlandschetim00mole)
(Vol. II online at: https://archive.org/details/nederlandschetim02mole)
(Vol. III online at: https://archive.org/details/nederlandschetim03mole)
('Netherlands Timor Expedition 1910-1912'. Collection of papers previously published in 'Jaarboek van het Mijnwezen' published between 1915-1922 on Timor, Leti, Roti, Moa, etc.. Contributions by Brouwer on geology of Leti, Roti, etc., and paleontological papers by Gerth, Haniel, Broili, Krumbeck, etc.)

Molengraaff, G.A.F. (with H.A. Brouwer) (1915)- De geologie van het eiland Letti, Geographische en geologische beschrijving. Jaarboek Mijnwezen Nederlandsch Oost-Indie 43 (1914), Verhandelingen 1, p. 1-87.
(Text online at: http://openlibrary.org/books/OL24343736M/Nederlandsche_Timor-expeditie_1910-1912)
('Geographic and geological description of the island Letti'. Detailed description of geology of Leti, E of Timor, showing many similarities with Timor geology. Isoclinally folded, mainly N-dipping Permian clastic sediments with thin crinoid-fusulinid limestones become gradually more metamorphic to North (first documentation of post-Permian metamorphism in Indonesia). Overlain in North by ultrabasics and melange mixture of rock types, including reworked Upper Cretaceous pelagic limestone with Globotruncana aff. linneana in latest Oligocene- E Miocene limestone breccia. With studies of Permian brachiopods by Broili, Permian ammonites by Haniel and Permian fusulinid foraminifera by Schubert)

Molengraaff, G.A.F. (1915)- Over mangaanknollen in Mesozoische diepzee-afzettingen van Borneo, Timor en Rotti, hun beteekenis en hun wijze van ontstaan. Verslagen Kon. Akademie Wetenschappen, Amsterdam, Wis-Natuurk. Afd., 23, p. 1058-1073.
('On manganese nodules in Mesozoic deep-sea deposits of Borneo, Timor and Roti, their significance and mode of formation'. Dutch version of Molengraaff 1916, below)

Molengraaff, G.A.F. (1916)- On the occurrence of nodules of manganese in Mesozoic deep-sea deposits from Borneo, Timor and Rotti, their significance and mode of formation. Proc. Kon. Akademie Wetenschappen, Amsterdam 18, p. 415-430.
(online at: www.dwc.knaw.nl/DL/publications/PU00012518.pdf)
(Manganese nodules in Triassic and Jurassic deposits of C-E Kalimantan, Timor and Roti, often associated with radiolaria, interpreted as abyssal oceanic deposits, 'deposited in deepest parts of Mesozoic Tethys geosyncline')

Molengraaff, G.A.F. (1917)- De Timorexpeditie en hare palaeontologische resultaten. Handelingen 16th Nederlandsch Natuur- Geneeskundig Congres, 's-Gravenhage 1917, p. 245-256.
(online read only at: http://babel.hathitrust.org/cgi/pt?id=uc1.b3093405;view=1up;seq=885)
('The Timor Expedition and its paleontological results'. Summarizing results of expeditions by Molengraaff and Wanner 1911-1912 and Jonker in 1915. Collected well-preserved, rich, mainly shallow marine Permian faunas, particularly rich in crinoids and blastoids, and also ammonites. Also thin Triassic and Jurassic deep sea deposits on Timor and Roti with manganese nodules and radiolarians, formed in very deep water, very far from landmasses. Upper Triassic faunas remarkably similar to rocks from Alps and Himalyas)

Molengraaff, G.A.F. (1920)- Mangaanknollen in Mesozoische diepzee-afzettingen van Nederlandsch Timor. Verslagen Kon. Akademie Wetenschappen, Amsterdam, Wis- Natuurk. Afd., 29, p. 677-692.
('Manganese nodules in Mesozoic deep-sea deposits of Dutch Timor, etc.. Dutch version of Molengraaff (1921))

Molengraaff, G.A.F. (1921)- On manganese nodules in Mesozoic deep-sea deposits of Dutch Timor with a preliminary communication on fossils of Cretaceous age in those deposits by L.F. de Beaufort. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 23, 7, p. 997-1012.
(Online at: www.dwc.knaw.nl/DL/publications/PU00014760.pdf)
(Several meters of deep-marine red clays with manganese nodules sampled by Jonker in 1916 from Noil Tobee river, 4.5 km ENE of Niki-Niki. Red clays conformably overlie thin-bedded Late Triassic limestone with Halobia. Partly dissolved Elasmobranchii shark teeth similar to English Chalk species, suggesting Cretaceous age (not clear if contact is tectonic or represents Jurassic hiatus in condensed deep water series; JTvG))

Morgan, R.F. (2015)- Three new species of *Deltoblastus* Fay from the Permian of Timor. PLoS One 10, 6, e0127727, p. 1-9.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4465186/)
(Review of15 species of blastoid genus Deltoblastus, with introduction of 3 new species, based on material from Basleo, etc. (now in Waco and London museum collections))

Muhammad, F., I G.B.E. Sucipta & M.G Sagara (2017)- Origin and tectonic emplacement of mylonitized peridotite in Hili Manu Area, Timor Leste. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(Hili Manu peridotite body in Timor Leste is spinel lherzolite peridotite with mylonitic structures. Geothermobarometry from exsolution lamellae of pyroxenes indicate peridotite formed at 1190°C and 8.5 kb (850 MPa). Rocks mylonitized at 964- 1092°C and 4.9-5.7 kb (490-570 MPa). Metamorphism of underlying Permian Aileu Fm increases toward base of peridotite; sole metamorphism during peridotite emplacement)

Mulder, E. & J.W.M. Jagt (2019)- *Globidens(?) timorensis* E. Von Huene, 1935: not a durophagous mosasaur, but an enigmatic Triassic ichthyosaur. Neues Jahrbuch Geologie Palaontologie, Abhandl. 293, 1, p. 107-116.
(Three isolated sauropsid tooth crowns described in 1935 by E. von Huene from Timor, tentatively attributed them to new species of Late Cretaceous mosasaurid Globidens(?) timorensis not Late Cretaceous mosasaurs, but Triassic ichthyosaur)

Mulhadiono & B. Simbolon (1988)- Preliminary account of the petroleum potential of Timor Island. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 89-110.
(Overview of Timor geology, accepting Asian origin of Mutis-Palelo, Maubisse and N Coast thrust complexes. Main deformation phase between Late Eocene- earliest Miocene. 21 wells drilled in E Timor, Metai 1 and Taci with minor oil tests. Various source formations present, but reservoir quality may be poor)

Muller, S. (1844)- Bijdragen tot de kennis van Timor en enige andere naburige eilanden. In: Temminck, C.J. (ed.) Verhandelingen over de natuurlijke geschiedenis der Nederlandsche overzeesche bezittingen door de leden der Natuurkundige Commissie in Indie en andere schrijvers, 1, Land en Volkenkunde, Leiden, p. 129-320.
(online at: https://ia802907.us.archive.org/2/items/verhandelingeno00temm/verhandelingeno00temm.pdf)
('Contributions to the knowledge of Timor and some neighboring islands'. Early naturalist descriptions of West Papua from Muller's 1828-1830 Triton Expedition)

Munasri (1998)- Early Cretaceous radiolarian biostratigraphy of the Nakfunu Formation, the Kolbano area, West Timor, Indonesia. Ph.D. Thesis, University of Tsukuba, Japan, No. 1869, p. *(Unpublished)*
(Berriasian-Aptian cherts and mudstone from Kolbano area of SW Timor contain radiolarians from two different climates: southern high latitudes and tropics)

Munasri & A.H. Harsolumakso (2020)- Late Cretaceous radiolarians from the Noni Formation, West Timor, Indonesia. Berita Sedimentologi 45, p. 5-18.
(online at: https://www.iagi.or.id/fosi/files/2020/05/FOSI_BeritaSedimentologi_BS45-May_2020.pdf)

(Late Cretaceous (Cenomanian-Turonian) radiolarian fauna from chert sample of Noni Fm in Miomaffo District, which is generally viewed as part of the allochthonous 'Banda Terrane'. Radiolarian fauna close resemblance to S Sulawesi and very different from age-equivalentfaunas in 'autochthonous' southern foldbelts of West Timor (Kolbano) and Timor Leste (Viqueque))

Munasri & K. Sashida (1999)- Tethyan and non-Tethyan Early Cretaceous radiolarian fauna from West Timor, Indonesia. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 88-91.
(Radiolaria in E Cretaceous Nakfunu Fm of Kolbano accretionary complex of southern W Timor indicate trend of increasing number of Tethyan species, reflecting N-ward motion of N Australian continental slope: (1) Berriasian- E Valanginian mainly non-Tethyan taxa of Parvicingula, Crytocapsa, etc. (Circum-Arctic cold-water faunas); (2-3) Late Valanginian- E Barremian both Tethyan and non-Tethyan taxa; (4) E Aptian Tethyan taxa only (Dictyomitra pseudoscalaris, Stichomitra spp., etc.))

Munasri & K. Sashida (2018)- Tethyan and non-Tethyan Early Cretaceous radiolarian faunas from West Timor, Indonesia: paleogeographic and tectonic significance. Earth Evolution Sciences (University of Tsukuba) 12, p. 3-12.
(Abundant and well-preserved E Cretaceous radiolaria in calcilutites and shales of Nakfunu Fm, Kolbano area, southern W Timor, in part of accretionary complex. Radiolarian faunas similar to ODP Leg 123- Site 785 from Argo Abyssal Plain. Four assemblages of Berriasian- E Aptian age, with trend from non-Tethyan to Tethyan affinities in progressively younger strata. Frequent and random repetition of radiolarian assemblages reflect imbrication of beds. Faunas derived from S paleolatitude origin, influenced by Circum-Antarctic current)

Nakazawa, K. & Y. Bando (1968)- Lower and Middle Triassic ammonites from Portuguese Timor (Paleontological study of Portuguese Timor 4). Mem. Fac. Science, Kyoto University, Ser. 4, Geol. Mineralogy, 34, 2, p. 83-114.
(online: http://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/186548/1/mfskugm%20034002_083.pdf)
(First report on E-M Triassic (U Scythian- Lw Anisian) ammonites from Timor Leste. from cephalopod limestones in 3 localities: (1) in N (W of Manatuto; area of mixed Triassic and Permian 'Fatu Limestones', SE of area of amphibolites/ serpentinite); (2) in S (N and SE of Pualaca= near Nogami 1963 Permian fusulinid locality; with M and Late Triassic 'Fatu limestones') and (3) in E (Tutuala; Late Triassic). Sixteen species incl. Dieneroceras dieneri, Anasibirites multiformis, Meekoceras spp., Procarnites, Leiophyllites timorensis, etc. With listings of associated conodonts)

Nguyen, N., B. Duffy, J. Shulmeister & M. Quigley (2012)- Rapid Pliocene uplift of Timor. Geology 41, 2, p. 179-182.
(Palynology of 34 samples of Pliocene turbidites-marls from type section of 200m thick Viqueque Fm of E Timor. From ~4.5- 3 Ma palynomorphs mainly from Australia and New Guinea (Casuarina, Eucalyptus, etc.), with increasing swamp and mangrove elements from emerging proto-Timor. After ~3.1 Ma pollen and charcoal track rapid uplift of Timor with progressive appearance of montane and dry, lee-side floristic elements. E-M Pliocene uplift rates of 0.5-0.6 mm/yr increased to 2-5 mm/yr in latest Pliocene)

Nicoll, R.S. (1999)- Triassic conodont faunas from Australia and Timor. In: H. Yin & J. Tong (eds.) Proc. Int. Conf. Pangea and the Paleozoic- Mesozoic transition, Wuhan 1999, China Univ. Geoscience Press, p. 140-141.
(Abstract only)
(Conodonts at various horizons in Timor Triassic similar to Australia NW shelf margin)

Nicoll, R.S. & C.B. Foster (1998)- Revised biostratigraphic (conodont-palynomorph) zonation of the Triassic of Western and northwestern Australia and Timor. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2. Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, 2, p. 129-139.
(Studies of relationships between conodont faunas and spore-pollen and dinocyst palynofloras from W Australian margin and Timor have revised calibration of Australian Triassic palynomorph zones and stage terminology. Wombat-Timor Trough (newly defined) is axis of sedimentation on NW Shelf in Triassic)

Niermann, H.T. (1975)- Polycoeliidae aus dem Oberperm von Basleo auf Timor. Munstersche Forsch. Geol. und Palaont. 37, p. 131-225.
(Taxonomic revision of Polycoeliidae family of solitary rugose corals from lower Upper Permian of Basleo, Timor, based on 490 specimens collected by Ehrat in 1927, and mainly building on work of Gerth (1921) and Koker (1924). 25 species, 13 new species, 10 new subspecies. No stratigraphy or locality information)

Nieuwenkamp, W.G.J. (1919)- Bezoek aan eenige slijkvulkanen op Kambang en Semaoe (West-Timor). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 36, p. 488-492.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001665001:pdf)
('Visit to some active mud volcanoes on Kambang and Semau, West Timor'. Over 150m high composite mud volcanoes. Nothing on rock inclusions)

Niko, S., T. Nishida & K. Nakazawa (2000)- Orthoconic cephalopods from the Lower Permian Atahoc Formation in East Timor. Paleontological Research, Japan, 4, 2, p. 83-88.
(online at: www.palaeo-soc-japan.jp/download/PR/PR4-2.pdf)
(Three species of orthoconic cephalopods described from Lower Permian Atahoc Fm in Cribas area, E Timor (Mooreoceras sp., Atahococeras timorense), signifying Late Paleozoic non-ammonoid cephalopod fauna at N margin of Gondwana near Sakmarian-Artinskian boundary)

Nogami, Y. (1963)- Fusulinids from Portuguese Timor (Palaeontological study of Portuguese Timor 1). Mem. College of Science, Kyoto University, Series Geol. Min., B30, 2, p. 59-68.
(Four Early Permian fusulinid species (incl. Schwagerina nakazawae n.sp., Codonofusiella weberi, Parafusulina) described from limestone lens in basic tuffs in Fatu Auveon near Pualaca in C East Timor and N of Hato-Builico in W part of E Timor. Samples collected by Nakazawa in 1961)

Nogami, Y. (1968)- Trias-Conodonten von Timor, Malaysien und Japan (Palaeontological study of Portuguese Timor 5). Mem. Fac. Science, Kyoto University, Ser. Geol. Min. 34, 2, p. 115-136.
('Triassic conodonts from Timor, Malaysia and Japan'. Seven conodont faunas recognized in Triassic of Malaysia, Timor and Japan. Conodonts from Timor from samples collected by Nakazawa of ammonoid-bearing limestone of Lacon River, Manatuto District, Timor Leste, mainly Middle Triassic age. Includes description of new species Gondolella timorensis (now assigned to Chiosella; JTvG), a worldwide marker species for Lower Anisian, base of M Triassic. Malaysian material from Kodiang Lst probably all Late Triassic in age (specimen of Pl. 8, fig. 8 assigned to late Carnian Epigondolella primitia by Mosher (1973))

Nutzel, A. (2007)- Cephalopoden (Ammoniten, Nautiliden und *Aulacoceras*) aus der Trias von Timor (Indonesien). Freunde Bayerischen StaatsSammlungen Palaont. Hist. Geol., Munchen, Jahresbericht 2006 und Mitteilungen 35, p. 32-34.
('Cephalopods (ammonites, nautilids and Aulacoceras) from the Triassic of Timor, Indonesia')

Oliveira, G. (2011)- Cartografia e estrutura da regiao Este do anticlinal de Cribas. Implicacoes para a genese de hidrocarbonetos. M.Sc. Thesis, Evora University, Portugal, p. 1-94. *(Unpublished)*
('Mapping and structure of the region East of the Cribas anticline; implications for hydrocarbon generation')

Orchard, M.J. (1994)- Conodont biochronology around the Early-Middle Triassic boundary: new data from North America, Oman and Timor. Memoires de Geologie (Lausanne) 22, p. 105-114.
(online at: www.unil.ch/)
(Includes discussion of Triassic conodonts in matrix around ammonites from 'Hallstatt-facies' limestone block of Timor, from which Tozer (1994) described ammonites. Common Chiosella timorensis and fewer Gladiogondolella tethydis, suggest E Anisian (M Triassic) age, simillar to assemblages from Oman and Chios (Base C. timorensis (Nogami) appears to be reliable conodont marker for E-M Triassic boundary; JTvG))

Ormeling, F.J. (1957)- The Timor problem: a geographical interpretation of an underdeveloped island. Wolters, Groningen, 284p.

(General geographic study of Timor)

Osberger, R. (1954)- Contribution to the geology of Timor. IV. Notes on Plio-Pleistocene corals of Timor. Indonesian J. Natural Science 110, p. 80-82.
(On corals from uplifted Plio-Pleistocene reef terraces near Lalan Asu, collected by De Waard expedition. Material generally poorly preserved)

Ota, T. & Y. Kaneko (2010)- Blueschists, eclogites, and subduction zone tectonics: insights from a review of Late Miocene blueschists and eclogites, and related young high-pressure metamorphic rocks. Gondwana Research 18, 1, p. 167-188.
(Review of formation and exhumation of Late Miocene blueschist and eclogite belts, including Timor-Tanimbar blueschist belt and world's youngest coesite- bearing eclogite in PNG)

Pakuckas, C. & G. von Arthaber (1928)- Nachtrag zur Mittel- und Obertriadischen Fauna der Ammonoidea trachyostraca C. Dieners aus Timor. In: H.A. Brouwer (ed.) 2e Nederlandsche Timor-Expeditie VI, Jaarboek Mijnwezen Nederlandsch-Indie 56 (1927), Verhandelingen 2, p. 143-218.
(Addendum to Diener (1922) work on thousands of M- Late Triassic ammonites, by student and associate of C. Diener in Vienna. Ammonites collected from loose blocks in W Timor by 1916 Jonker expedition. Anisian-Carnian and probable Rhaetian assemblages, most of them similar to 'Halstatter Facies' of Mediterranean Province)

Panjaitan, S. & S. Hutubessy (1997)- Analisis tektonik berdasarkan paleomagnetik di daerah Timor-Timur. J. Geologi Sumberdaya Mineral, 7, 70, p. 19-27.
('Tectonic analysis of East Timor area based on paleomagnetic data'. Declination/ inclination results from 'allochthonous' and 'parautochthonous' outcrops mainly along traverse S of Dili rather variable: (1) Permian Aileu Fm 6°/-31° and 126°/48° (interpreted as deposited at latitude 29°N), (2) Late Permian Cribas Fm 150°/ 50 (deposited at 30.7°N), (3) Permian- Triassic Maubisse Fm 220°/44° (deposited at 25.7°N), (4) Late Triassic Aitutu Fm 295°/-54°(deposited at 34.5°S) and (5) Jurassic Wailuli Fm 18°/-22° (deposited at 11.4°S). In Late Triassic Timor was still close to Australian continent, in Jurassic already started to make move to N)

Panjaitan, S. & S. Hutubessy (2004)- Pembentukan formasi batuan di Pulau Timor ditinjau dari data paleomagnet dan gayaberat. J. Sumber Daya Geologi 14, 1 (145), p. 55-68.
('Formation of Timor island rock formations as observed from magnetic and gravity data'. Contribution to Asian vs. Australian origin of Timor rock units: Permian Aileu Fm formed at paleolatitude 48º N, Cribas Fm at ~31º N, Maubisse Fm at 25º N, all far N of equator and at S edge of Asian continent. Plate moved S since Triassic to form thrust sheets in Timor Island. Triassic Aitutu Fm formed at ~34º S and Jurassic Wailuli Fm at ~11º S, both far S of equator and part of Australian continent. Collision between Allochthon and Para-Autochthon rocks seen on 150 mgal negative Bouguer anomaly, in which Australian continent plate with density of 3.0 gr/cm³ subducted and depressed under Banda Sea plate)

Park, S.I., H.J. Koh, S.W.Kim, Y.H. Kihm (2014)- The occurrence and origin of a syn-collisional melange in Timor. Economic Environmental Geol. 47, 1, p. 1-15.
(online at: http://ocean.kisti.re.kr/downfile/volume/kseeg/JOHGB2/2014/v47n1/JOHGB2_2014_v47n1_1.pdf)
(In Korean, with English abstract. Bobonaro melange syn-collisional melanges formed during collision between Australian continental margin and Banda arc. In Suai area melange matrix of unmetamorphosed red-green clay with scaly texture, with allochthonous blocks. Melange classified into 1) diapiric; 2) tectonic; and 3) broken formation. Melange intruded all pre-collisional units including lower Australian margin unit (Gondwana megasequence) and Banda arc unit. Interpreted to be mainly formed as diapiric melange originated from Gondwana megasequence)

Park, S.I., S. Kwon & S.W. Kim (2014)- Evidence for the Jurassic arc volcanism of the Lolotoi complex, Timor: tectonic implications. J. Asian Earth Sci. 95, p. 254-265.
(SHRIMP U-Pb zircon ages from two andesitic metavolcanic rocks in Lolotoi complex, Timor Leste, yield permissible range of M Jurassic extrusion from 177-174 Ma (~late E Jurassic; Toarcian). Inherited grains age

cluster of 242 ± 4 Ma and oldest grain of 1848 Ma. Basaltic-andesitic metavolcanics products of prolonged oceanic crust and arc magmatism, respectively. Parts of Banda forearc basement are pieces of allochthonous oceanic basalts and Jurassic arc-related andesites accreted to Sundaland during closure of Mesotethys, and incorporated later into Great Indonesian Volcanic Arc system along SE margin of Sundaland (NB: suggests Lolotoi Metamorphics younger than 'Gondwana sequence' of Timor; JTvG))

Partoyo, E., B. Hermanto & S. Bachri (1995)- Geological map of the Baucau Quadrangle, East Timor, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of NE part of Timor Leste. 'Para-autochthonous' with E Permian Maubisse and Atahoc and Late Permian Cribas as oldest units, and 'Autochthonous' units. No 'Allochthonous'.)

Peloschek, H.P. (1956)- Contributions to the geology of Timor. XI. Reports on magnetic observations and radioactive measurements in lndonesian Timor. Majalah llmu Alam Indonesia (Indonesian J. Natural Science) 112, p. 175-186.

Penecke, K.A. (1908)- Uber eine neue Korallengattung aus der Permformation von Timor. Jaarboek Mijnwezen Nederlandsch Oost-Indie 37, Wetenschappelijk Gedeelte, p. 657-659.
('On a new coral genus from the Permian of Timor'. Description of new genus of solitary coral collected by Verbeek: Verbeekia permica n.gen., n.sp. from Ayer Mati, Basleo area. Later renamed Verbeekiella)

Permana, A.K., A. Kusworo & A.H. Prastian (2014)- Characteristics of the Triassic source rocks of the Aitutu Formation in the (West) Timor Basin. Indonesian J. Geoscience 1, 3, p. 165-174.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/198/184)
(Triassic marine fine-grained clastics and carbonates of W Timor considered to be most promising source rocks in basin. Geochemical and petrographic data from Aitutu Fm carbonate outcrops in Niki-Niki and other localities near Kolbano show TOC up to 9.2% and kerogen dominated by Type II with minor Type III. Organic matter mainly oil and gas prone. Thermal maturity from Tmax, TAI and Vitrinite Reflectance shows immature-early mature stage. Biomarkers indicate mixed source facies of algal debris and higher plant terrestrial origin)

Permana, A.K., A. Kusworo & A.H. Prastian (2014)- Characteristics Triassic source rocks in the (West) Timor Basin. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-026, 6p.
(Similar to Permana et al. 2014, above. Mainly study of two 22-27m thick outcrop sections of folded deeper marine limestones and shales of Triassic Aitutu Fm along Noil Fatu and Toeheum, Kolbano Area, SW Timor. With open marine bivalves Monotis salinaria (E Carnian-M Norian) and Halobia spp. Locally high TOC (up to 8.1%). Vitrinite reflectance of Noe Fatu section 0.67- 0.73% (early peak maturity for oil generation), Toeheum section 0.43- 0.57% (immature to early dry gas generation))

Permana, A.K. & A.H. Prastian (2013)- Fasies kipas bawah laut bawah laut pada batuan berumur Perem-Trias daerah Kekneno, Cekungan Timor. J. Geologi Sumberdaya Mineral 14, 1 (199), p. 3-18.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/74/73)
(‘Submarine fan facies of the Permian-Triassic rocks in the Kekneno area, Timor basin’. Sedimentological study of Permian-Triassic turbiditic clastics in Kekneno area, Nenas, NW Timor. Permian Atahoc- Cribas Fms in slope submarine fan facies. Cribas Fm >300m thick, feldspathic litharenites with polycrystalline quartz, plagioclase and volcanic rock fragments. Triassic Niof Fm greywacke (400m) and Babulu Fm also with various submarine fan facies)

Petroconsultants (1992)- Timor Island. Southeast Asia basin opportunities. Petroconsultants (Far East) Pte. Ltd. Singapore, Non-exclusive Report. *(Unpublished)*

Poynter, S., A. Goldberg & D. Hearty (2013)- Sedimentary and structural features of the Plio-Pleistocene Timor accretionary wedge. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 1-23.

Praptisih (1996)- Facies batugamping terumbu koral Kuarter di daerah Kupang dan sekitarnya, Timor. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 233-241.
(Facies of Quaternary coral reefal limestone in the area of Kupang and surroundings)

Prasetyadi, C. (1995)- Structure and tectonic significance of the Aileu Formation, East Timor. Masters Thesis, West Virginia University, p. 1-144. *(Unpublished)*

Prasetyadi, C. & R.A. Harris (1996)- Structure and tectonic significance of the Aileu Formation, East Timor, Indonesia. Proc. 25th Conv. Indon. Assoc. Geol. (IAGI), Bandung, 3, p. 144-173.
(online at: www.geology.byu.edu/wp-content/uploads/2010/06/1996-Aileu-Pras-Harris.pdf)
(Structural analysis of C Timor Aileu Fm, which is metamorphised sandstone, shale, limestone and intrusives. In S transitional to unmetamorphosed Permian- Jurassic Maubisse Fm. Metamorphic grade increases from sub-greenschist in S to amphibolite along N coast. At least 3 deformation phases: (D1) Mesozoic?- extensional, (D2) tight folding, tied to arc-continent collision, (3) youngest: compressional stack cut down to N by normal faults along N coast of Timor)

Prastian, A.H., Y. Aribowo & A.K. Permana (2014)- Analisis fasies batuan Perm-Trias dan prospeksi batuan induk dan reservoir di cekungan Timor, Nusa Tenggara Timur. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-030, 17p.
('Facies analysis of Permian-Triassic rocks and prospecting of source rock and reservoir in the Timor basin, East Nusa Tenggara'. Permian and Triassic clastics in Kekneno- Nenas area mainly of deeper marine fan facies. Black shale of Niof Fm with high vitrinite (65-87%) and >95% gas-prone kerogens. Sandstones generally poor reservoir quality (porosity 2-6%))

Quigley, M. C., B. Duffy, J. Woodhead, J. Hellstrom, L. Moody, T. Horton, J. Soares & L. Fernandes (2011)- U/Pb dating of a terminal Pliocene coral from the Indonesian Seaway. Marine Geology 311-314, p. 57-62.
(Platygyra coral from exhumed syn-orogenic marine sediments on Timor (Late Pliocene turbiditic upper part of Viqueque Fm in Cuha River N of Viqueque) dated with U-Pb techniques as 2.66 ± 0.14 Ma. Age supported by 87Sr/86Sr chemostratigraphy and foraminiferal biostratigraphy. Onset of turbiditic deposition with Banda Terrane-derived detritus mark Timor's emergence from beneath waters of Indonesian Seaway is within planktonic foram zone N20, timed at ca. 3.35-2.66 Ma)

Ramos-Horta, J. & P. Vickers-Rich (2009)- O Mundo Perdido Timor-Leste. Monash University Science Center, Clayton, Melbourne, 32p.
(online at: www.geosci.monash.edu.au/precsite/docs/educational/o-mundo-perdido-english.pdf)
('The Lost World of Timor-Leste'. Portuguese and English editions. Children's book on the geological history of Timor Leste)

Rau, J.L. (2002)- Mineral-hydrocarbon database and bibliography of the geology of East Timor. United Nations (UNESCAP), Bangkok, p. 1-284.
(online at: https://www.laohamutuk.org/OilWeb/RDTLdocs/ESCAP/Rau.pdf)
(Review of geology and mineral occurrences of Timor Leste, and 74-page bibliography on Timor and surrounding areas)

Reed, T.A., M.E.M. de Smet, B.H. Harahap & A. Sjapawi (1996)- Structural and depositional history of East Timor. Proc. 25th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 297-312.
(Report on 1994 Mobil-GRDC fieldwork in E Timor. Propose mid-Eocene age for collision/ ophiolite obduction event of 'allochthonous' Banda terrane and Australian continent. Second pulse of thrusting and partial Australian Plate subduction latest Miocene- today)

Renz, C. (1906)- Uber Halobien und Daonellen aus Griechenland nebst asiatischen Vergleichsstucken. Neues Jahrbuch Mineral. Geol. Palaontologie, 1906, 1, p. 27-40.

('On Halobia and Daonella from Greece, with comparison of Asian specimens'. Includes revisions of Rothpletz (1892, 1894) identifications of Triassic bivalves, and descriptions of Pseudomonotis and Daonella from Roti (collected by Wichmann), and Daonella from Sumatra (collected by Volz 1899; assigned to D. styriaca). Monotis salinaria of Rothpletz should be assigned to Pseudomonotis ochotica var. densistriata)

Renz, C. (1909)- Die Trias von Rotti und Timor im Ostindischen Archipel. Centralblatt Mineralogie Geologie Palaont., 1909, p. 355-361.
(online at: www.biodiversitylibrary.org/item/192781page/377/mode/1up)
('The Triassic of Roti and Timor in the East Indies archipelago'. U Triassic thin-bedded limestones on Roti island with common bivalves, incl. Monotis salinaria. Discussion on use of genus name Daonella vs. Halobia and Monotis. Halobia cassiana described by Rothpletz (1892) = Daonella styriaca. With illustrations of Daonella styriaca and D. wichmanni from Roti)

Retgers, J.W. (1895)- Gesteenten van Timor en onderhoorigheden. In: Mikroskopisch onderzoek van gesteenten uit Nederlandsch Oost-Indie, Jaarboek Mijnwezen Nederlandsch-Indie 1895, Verhandelingen, p. 139-148.
('Rocks from Timor and dependent areas'. Brief petrographic descriptions of rocks from Junilo District (serpentinite, andesite, diabase, gabbro, hornblende schist. Also similar rocks from other parts of W Timor. No locality maps, no plates)

Riding, R. & S. Barkham (1999)- Temperate water *Shamovella* from the Lower Permian of West Timor, Indonesia. Alcheringa 23, p. 21-29.
(Problematic sponge-like calcareous fossil generally called Tubiphytes is common in Permian- Triassic reefs. Here called Shamovella obscura and locally abundant in Late Sakmarian Hoeniti Mb of Maubisse Fm near Bisnain, eastern W Timor, associated with brachiopods of temperate water affinity)

Riedel, W.R. (1953)- Mesozoic and late Tertiary Radiolaria of Rotti. J. Paleontology 27, 6, p. 805-813.
(Re-examination of the radiolarian fauna described by Tan Sin Hok (1927) from calcareous sediments from Bebalain, Rotti Island. Fauna previously assigned probably Pliocene age, but contains reworked(?) Cretaceous forms (Spongosaturnalis, Stylosphaera, Tricolocapsa, Stichomitra etc.). Radiolaria from nearby locality probably of Pliocene- Pleistocene age))

Ritsema, L. (1951)- Description de quelques Alveolines de Timor: resultat dûune elaboration de la methode des courbe dôindice de Reichel. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B54, 2, p. 174-182.
('Description of some alveolinids from Timor'. Eocene Alveolina limestones collected by Van West in Miomaffo region, W Timor, contain five species)

Ritsema, A.R. (1956)- Gravity measurements on Timor Island. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 112, 2, p. 171-174.
(Highest positive gravity anomalies in area of young volcanic rocks on N coast. Strip of small negative values in Central basin probably related to Nikiniki fault. Good correspondence of anomalies with geologic units)

Ritsema, A.R. (1956)- Two gravity profiles across Timor Island. Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 16 (Gedenkboek Brouwer), p. 380-385.
(Two N-S gravity profiles across W Timor: Kupang- Buan and Ocussi- Kolbano, Surveyed in 1954. All Bouguer anomalies of Timor island are positive, with highest values near N coast. Lowest and possibly negative Bouguer anomaly in narrow strip around Nikiniki and Central Depression)

Robba, E., S. Sartono, D. Violanti & E. Erba (1989)- Early Pleistocene gastropods from Timor (Indonesia). Memorie Scienze Geol., Padova, 41, p. 61-113.
(Rich marine gastropod fauna (56 species) and foraminifera from E Pleistocene marl (Batuputih Fm) from Oe Sapi creek, Tinu, 1 km NE of Atambua town, W Timor, collected during 1954-1957 ITB expeditions. Lyellian percentage of living species 56%. Associated with rich marine foraminiferal fauna (85% planktonics, incl. Globorotalia tosaensis, but no G. truncatulinoides). Common Neogloboquadrina dutertrei and presence of

Neogloboquadrina pachyderma suggesting upwelling of cold currents. Interpreted to be deposited in 150-250m of water, influenced by cold currents)

Rocha, A. Tavares & M. de Lourdes Ubaldo (1964)- Foraminiferos do Terciario Superior e do Quaternario da provincia Portuguesa de Timor. Mem. Junta de Investigacoes do Ultramar 51, Lisboa, p. 1-180.
('Foraminifera of the Late Tertiary and Quaternary of the Portuguese province of Timor'; in Portuguese)

Rocha, A. Tavares & M. de Lourdes Ubaldo (1964)- Contribuicao para o estudo foraminiferos do Terciario superior de Timor. Garcia de Orta: Revista da Junta de Investigacoes do Ultramar 12, 1, p. 153-158.
('Contribution the the study Late Tertiary foraminifera of Timor')

Romariz, C. (1962)- Notas sobre rochas sedimentares Portuguesas. V. Um cherte do 'complexo argiloso' de Timor. In: Estudos Oferecidos em homenagem ao Prof. J. Carrington da Costa, Junta Investigacoes do Ultramar, Lisbon, p. 287-290.
('Notes on Portuguese sedimentary rocks, V. On chert of the argillaceous complex of Timor')

Romariz, C. & J. de Azeredo Leme (1967)- Subsidios para a petrografia timorense. Calcarios de fato. Garcia de Orta: Revista da Junta de Investigacoes do Ultramar 15, 1, p. 111-122.
('Contributions to Timor petrography: Fatu limestones')

Roniewicz, E. & G.D. Stanley (2009)- *Noriphyllia*, a new Tethyan Late Triassic coral genus (Scleractinia). Palaeont. Zeitschrift, DOI 10.1007/s12542-009-0030-8, p. 467-478.
(Noriphyllia new genus of solitary coral, with two new E Norian and one Carnian species. Widely distributed in E Norian reef facies of Tethys region and occurs in Carnian of Timor. Noriphyllia monatutoensis n.sp. type locality is Saututun, Manatuto, Timor Leste, in Carnian limestone (exotic boulders?) in Babulu Fm)

Roniewicz, E., G.D. Stanley, F. Da Costa Monteiro & J.A. Grant-Mackie (2005)- Late Triassic (Carnian) corals from Timor-Leste (East Timor): their identity, setting and biogeography. Alcheringa 26, 2, p. 287-303.
(Four coral taxa from Late Triassic limestone in Babulu Fm sst-shale sequence at Manatuto, E Timor N coast (incl. Paravolzei, Craspedophyllia, Margarosmilia confluens). Affinities to Carnian faunas from Italy. Previously, only Norian corals known from Timor Triassic. Carnian faunas help confirm paleogeographic affinities with W Tethys (NB: stratigraphically above Norian dinoflagellate Wanneria listeri (Da Costa Monteiro 2003 in Charlton et al. (2009), suggesting possible Norian age for these corals?; JTvG))

Roosmawati, N. (2005)- Long-term surface uplift history of the active Banda Arc-continent collision: depth and age analysis of foraminifera from Rote and Savu Islands, Indonesia. M Sc. Thesis, Brigham Young University, p. 1-120.
(online at: http://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=1558&context=etd.)
(Foraminifera documentation of Pliocene age and deep water facies of Batu Putih Fm marls on Rote and Savu)

Roosmawati, N. & R. Harris (2009)- Surface uplift history of the incipient Banda arc-continent collision: geology and synorogenic foraminifera of Rote and Savu Islands, Indonesia. Tectonophysics 479, p. 95-110.
(Synorogenic pelagic units of Rote and Savu show rapid uplift of Banda arc-continent collision in past 1.8 Myr. Synorogenic Batu Putih Fm unconformably over accreted units, aged N18- N22 (5.6- 1.0 Ma), deposited at depths of ~3000m and unconformably overlain by uplifted coral terraces. Highest coral terraces in Savu 300m above sea level; in Roti up to 200m. Collision of Australian margin with Banda Arc earlier in Timor, propagated W to Roti (initial stages of accretionary wedge emergence). Collision of Scott Plateau propagated SE from Sumba (2-3 Ma) to Savu (1.0- 0.5 Ma), then to Roti (0.2 Ma). Average uplift of Batu Putih Fm pelagics in past 2 Myr in Roti and Savu ~1.5 and 2.3 mm/yr. Rise of islands is clogging Indo-Pacific seaway)

Roosmawati, N., R.A. Harris, H. Nugroho et al. (2004)- Long-term surface uplift history of the active Banda arc-continent collision: depth and age analysis of foraminifera from Rote and Savu Islands, Indonesia. Abstract Geol. Soc. America(GSA) 2004 Denver Ann. Mtg., Paper No. 152-15.

(Synorogenic deposits in W Roti outcrops are of Late Pliocene age (zone N21; 3.1-1.8 Ma) with paleowater depths deeper than 2500m. Banda arc-continent collision arrived in Roti after ~3 Ma, possibly later in Savu)

Rose, G. (1994)- Late Triassic and Early Jurassic radiolarians from Timor, Eastern Indonesia. Ph.D. Thesis, University of London, p. 1-384. *(Unpublished)*
(Rich Upper Carnian- Rhaetian radiolarian faunas from Aitutu and Wai Luli Fms in River Meto sections, central W Timor. Additional material collected from presumed Triassic on Buton, Leti, Moa, Babar, but no radiolarians recovered. Timor Triassic radiolarian assemblages differ from European Tethys, Philippines and Japanese assemblages. E Jurassic assemblages closer to Japan than other areas. Apparent Late Rhaetian- E Sinemurian time gap at Triassic-Jurassic boundary (Carter 2007: Rhaetian radiolarian faunas from W Timor with some cosmopolitan taxa, but others have stronger affinities with those in Japan and Philippines)

Rosidi, H.M.D., S. Tjokosapoetro, S. Gafoer & K. Suwitodirdjo (1979)- Geologic map of the Kupang-Atambua Quadrangles, Timor, 1: 250,000. Geol. Res. Dev. Center, Bandung.
(1:250,000 surface geology of westernmost Timor, and Roti and Savu islands; see also 2nd edition- 1996))

Rothpletz, A. (1891)- The Permian, Triassic and Jurassic formations in the East Indian Archipelago (Timor and Rotti). American Naturalist 25, p. 959-962.
(Early summary of 'new' Timor- Roti fossils, based on examination of Wichmann collection. Timor Late Paleozoic fossils here regarded as Permian in age, not Carboniferous as previously thought)

Rothpletz, A. (1892)- Die Perm, Trias- und Jura-Formation auf Timor und Rotti im Indischen Archipel. Palaeontographica 39, 2-3, p. 57-106.
(online at: https://www.biodiversitylibrary.org/item/103958page/69/mode/1up)
('The Permian, Triassic and Jurassic formation on Timor and Roti in the Indies Archipelago'. Descriptions of many new Permian- Jurassic macrofossils from Indonesia, mainly collected by Wichmann 1888-1889. Permian-Triassic material from mud Ayer Mati area, SE of Kupang, W Timor, includes Permian brachiopods (Spirifer spp., Productus spp., Spirigera, Lythonia (=Leptodus), Rhynchonella), bivalve Atomodesma, coral Zaphrentis, ammonites Arcestes and Cyclolobus persulcatus and crinoids. From Roti some Permian fossils in mud volcano material. Also white-red thin-bedded limestones with 'alpine' U Triassic Monotis salinaria and Halobia spp. Also in mud volcano material 'Tethyan' Early Jurassic ammonites Arietites spp. and Stephanoceras (Coeloceras) and M Jurassic Belemnites gerardi)

Rothpletz, A. (1894)- Die Perm, Trias- und Jura-Formation auf Timor und Rotti im Indischen Archipel. Jaarboek Mijnwezen Nederlandsch Oost-Indie 23 (1894), Wetenschappelijk Gedeelte, p. 5-98.
('The Permian, Triassic and Jurassic formation on Timor and Roti in the Indies Archipelago'. Reprint of Rothpletz (1892) Palaeontographica paper. Descriptions of many new Permian- Jurassic macrofossils from Indonesia)

Rutten, L.M.R. (1927)- Geologie van Timor. In: L.M.R. Rutten (1927) Voordrachten over de geologie van Nederlandsch Indie, Wolters, Groningen, p. 679-704.
(Review of geology of Timor in Rutten's classic lecture series)

Sahudi, K. & R.N. Baik (1993)- Play concept of hydrocarbon exploration in East Timor. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung 1993, 2, p. 913-924.
(In Indonesian. Brief overview of E Timor hydrocarbon exploration and plays. Exploration in E Timor since 1908. By mid-1970's 21 wells drilled. Oil tested in Matai 1 (180 BOPD) and Cota Taci (1974, 200 BOPD). Two main plays: (1) pre-collision thrusted anticlines, with reservoirs in Permian- Jurassic rocks; (2) post-collision: Late Miocene Viqueque sandstones in rollover anticlines and downthrown blocks of listric faults)

Sampurno & B. Brahmantyo (1991)- Geologi batuan marmer Gunung Fatufutik, Kabupaten Manatuto, Propinsi Timor Timur. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 591-604.
('Geology of marble rocks at Fatu Futik Mountain, Manatuto District, Tmor Leste')

Sani, K., M.I. Jacobson & R. Sigit (1995)- The thin-skinned thrust structures of Timor. Proc. 24th Ann. Conv. Indon. Petroleum Assoc., p. 277-293.
(Amoseas fieldwork and Banli 1 well data. Kolbano foldbelt series of thrusts of Triassic-Tertiary Australian shelf sediment. Restorations suggest shortening of ~45 km (65%) mainly between 2.2- 1.6 Ma, after which main deformation jumped S to present-day Timor Trough. Total shortening, excluding shortening under Timor Trough, may be 208 km. Onset of collision probably ~3.7 Ma; subduction locked up ~1.6 Ma)

Santy, L.D. & A.J. Widiatama (2017)- Perbandingan provenance Formasi Babulu dan Formasi Oebaat Pulau Sabu, NTT. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
('Comparison of provenance of the Babulu and Oe Baat Formations of Savu Island, NTT'. Sandstone petrography of (1) Late Triassic Babulu Fm (quartz 21-54%, feldspar 3-18%, and mainly metamorphic rock fragments 1-28%; recycled orogen) and earliest Cretaceous Oe Baat Fm (quartz 72-99%, feldspar 1-4%, rock fragments 0-5%; craton interior))

Sartono, S. (1964)- Cretaceous foraminiferal fauna from the Kekneno tectonic unit of Bokon area in Timor, Indonesia.Proc. 22nd Int. Geol. Congress, New Delhi 1964, 8, Palaeontology and Stratigraphy, p. 407-416.

Sartono, S. (1975)- The age of Kekneno Formation in Timor, Indonesia. Geologi Indonesia 2, 2, p. 29-37.
(Limestone samples from Bokon area, E of Ocussi in NE part of W Timor, from banded limestones and cherty shales in upper Kekneno Fm (= tectonically lowest 'para-autochthonous' unit; mainly Permo-Triassic clastics), with middle-upper Cretaceous planktonic forams (Globotruncana appeninica, Gumbelina, Ventilabrella). No evidence of Jurassic sediments here)

Sartono, S. (1980)- The Ofu Series in West Timor (East Indonesia). Bull. Dept. Geol. Inst. Teknologi Bandung 1, p. 1-10.

Sartono, S. & T. Djubiantono (1982)- Pengembangan potensi airtanah cekungnan Kuarter Atambua, Timor Barat. Riset Inst. Tekn. Bandung (ITB) 1981-1982, p.
('Potential development of groundwater in the Quaternary Atambua basin'. Recognized four main Pleistocene river terraces in Atambua area)

Sartono, S. & M. Koesmono (1975)- Recognition of the geological units in Timor; a bimodal approach. Geologi Indonesia 2, 3, p. 29-34.
(Proposal for another mixed lithostratigraphic- tectonic scheme for geologic units of Timor)

Sartono, S., B. Suprapto, K. Poncomoyono & I. Hendrobusono (1992)- Kerangka tektonostratigrafi Timor, Indonesia Timur. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 547-563.
('Tectonostratigraphic framework of Timor, East Indonesia'. Timor situated in accretionary zone. Tectonic melange wedges formed during Laramide (= End Cretaceous) tectonization. Olistostromes of late E Miocene form largest part of island (Bobanaro scaly clay in Timor Leste= Sonnebait tectonic unit in West). Eocene- E Miocene gravity tectonics important; normal sedimentary units from Late Miocene- Quaternary. Comparison tables of formation names and tectonic units in E and W Timor)

Sashida, K. (2001)- Status of Paleozoic and Mesozoic radiolarian study in Thailand and Timor Island, Indonesia. In: A. Matsuoka (ed.) Paleoceanography of the Panthalassa-Tethys, Invitation to global field science topics in paleontology, Paleontological Soc. Japan, 2, p. 25-30.

Sashida, K., S. Adachi, K. Ueno, Y. Kamata, & Munasri (1998)- Triassic radiolarian faunas from West Timor, Indonesia. Abstracts Interrad VIII Conference, Paris, Radiolaria 16, 1p. *(Abstract only)*
(Allochthonous blocks of Aitutu Fm fine-grained radiolarian limestone in Bobonaro melange. Four different localities and radiolarian faunas: (A) Late Anisian, (B) Carnian, (C) Norian and (D) Rhaetian. All are Tethyan-Panthalassa faunas and suggest rel. warm water conditions in Triassic)

Sashida, K., S. Adachi, K. Ueno & Munasri (1996)- Late Triassic radiolarians from Nefokoko, west Timor, Indonesia. H. Noda & K. Sashida (eds.) Professor H. Igo Commemorative volume on Geology and Paleontology of Japan and Southeast Asia, Gakujyutsu Tosho Insatsu, Tokyo, p. 225-234.
(Siliceous bedded limestone block ('Aitutu Fm') embedded in Bobonaro melange in NW part of W Timor with radiolarians and conodonts interpreted as Carnian age)

Sashida, K., Y. Kamata, S. Adachi & Munasri (1999)- Middle Triassic radiolarians from West Timor, Indonesia. J. Paleontology 73, 5, p. 765-786.
(Block of probably allochthonous Aitutu Fm radiolarian calcilutite from Bobonaro melange 3 km W of Kefamenau contains abundant E Ladinian typical low-latitude Tethyan forms, similar to European Tethys. Aitutu Fm deposited in warm-water, oceanic environment, far from land area, in low latitude Tethyan realm)

Sashida, K. & Munasri (1999)- Tethyan and non-Tethyan Early Cretaceous radiolarian faunas from the Nakfuna Formation, Kolbano Area, West Timor, palaeogeographic and tectonic implication. In: H. Darman & F.H. Sidi (eds.) Proc. Tectonics and sedimentation of Indonesia seminar, Bandung 1999, Indon. Sedim. Forum Spec. Publ. (Abstracts volume), 1, p. 88-91.

Sashida, K., Munasri, S. Adachi & Y. Kamata (1999)- Middle Jurassic radiolarian fauna from Rotti Island, Indonesia. J. Asian Earth Sci. 17, 4, p. 561-572.
(Folded 'Wai Luli Fm' calcareous shale near Baa at NW coast of Roti with Late Bajocian- Early Bathonian low-latitude 'Tethyan' radiolarian assemblage of Tricolocapsa plicarum Zone. Believed to be deposited in deep ocean, far from land. In same areas also Late Triassic and Early Cretaceous thin-bedded limestones with radiolarians Assemblage of 15 species of 7 genera, dominated by Tricolocapsa spp., Stichocapsa spp., Archaeodictyomitra spp. and Cyrtocapsa. New species Tricolocapsa multispinosa and T. matsuokai)

Sashida, K., Munasri, S. Adachi & K. Ueno (1996)- Early Cretaceous radiolarian faunas from the Nunleo area in southwest Timor, Indonesia. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symposium on Geology and Environment, Chiang Mai, Thailand, p. 223. *(Abstract only)*
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1996/)
(Well-preserved E Cretaceous radiolaria assemblages in abyssal calcilutite of Nunleo area of Kolbano Complex, SW Timor: (1) late Berriasian- Valanginian, with non-Tethyan general Parvicingula, Eucyrtis, Eusyringium and Spongocapsula; (similar to NE Indian Ocean faunas); (2) Hauterivian- Barremian Dibolachras tytthopora assemblage, with Tethyan and non-Tethyan species)

Sawyer, R.K., K. Sani & S. Brown (1993)- The stratigraphy and sedimentology of West Timor, Indonesia. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 533-574.
(Amoseas W Timor fieldwork, stratigraphy overview. Three main packages in Permian-Neogene outcrops on West Timor: (1) E Permian- E Pliocene sediments deposited on Gondwana and Australian continental- oceanic crust (Kekneno and Kolbano Sequences), (2) Neogene syn- and post-orogenic sediments (Viqueque Sequence) and (3) Lower Cretaceous-Neogene volcanic arc and forearc basin sediments of Banda Terrane. Age of Oe Baat Fm glauconitic sandstone of Kekneno seriesof SW Timor revised to Tithonian- Berriasian (equivalent of Flamingo Gp of NW Shelf, Buya Fm of Sula, Woniwogi Fm of W Papua, etc.))

Schneider, C.F.A. (1863)- Bijdrage tot de geologische kennis van Timor. Natuurkundig Tijdschrift Nederlandsch-Indie 25, p. 87-107.
('Contribution to the geological knowledge of Timor'; in Dutch. One of first geological descriptions of Timor (Kupang area), by German physician Schneider. Young coral limestone terraces, oolitic limestones, manganese beds, dark clays green sandstone-marl with brachiopods (Spririfer, Orthis, Terebratula, etc.), believed to be of Jurassic age. Also near Bakoelnassi bright-colored marls and sandstones with Gervillea and Trigonia, crinoid limestones, Cretaceous chalk, basaltic diorite near Tabeno, etc. According to locals skeleton of giant fish was found near Ikafoti (= Ichthyosaurus?; JTvG). No maps or figures)

Schubert, R. (1915)- Die Foraminiferen des jungeren Palaozoikums von Timor. Palaontologie von Timor, Schweizerbart, Stuttgart, 2, 3, p. 47-60.

('The foraminifera of the younger Paleozoic of Timor'. First paper on Timor Permian fusulinids and smaller foraminifera from many localities, collected by Wanner, Molengraaff and Weber expeditions (no maps). (Thought to be Late Carboniferous age, but placed in Early Permian by later workers. Four species described. Parafusulina wanneri is type species of Monodiexodina wanneri; JTvG)

Schubert, R. (1915)- Uber Foraminiferengesteine der Insel Letti. Jaarboek Mijnwezen Nederlandsch Oost-Indie 43 (1914), Verhandelingen 1, p. 169-187.
('On the foraminifera-bearing rocks of the island of Leti'. Abundant, rel. large elongate Permian fusulinids in loose limestone blocks, described as Doliolina lepida var. lettensis (Thompson 1948: small fauna of verbeekinids described here from Leti is different from Timor faunas). Also Upper Cretaceous Globotruncana linneana and E Miocene Lepidocyclina and Heterostegina (= Spiroclypeus; JTvG))

Shimizu, D. (1966)- Permian brachiopod fossils of Timor (Palaeontological study of Portuguese Timor 3). Memoirs College Science, Kyoto University, Ser. B, Geol. Min., 32, 4, p. 401-427.
(17 brachiopod species from E Timor localities suggest Early Permian age. At some localities in part of autochthonous complex of reddish or purplish brown tuffaceous shale; in others associated with purplish tuffaceous, occasionally argillaceous limestones and shales (characterized as 'Bitauni fauna by Waterhouse (1973)= Artinskian?; JTvG))

Sieverts, H. (1933)- *Jouannetia cumingi* (Sowerby) aus den Pliocan von Timor nebst Bemerkungen uber andere arten dieser Gattung. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 71, p. 267-307.
('Jouannetia cumingi from the Pliocene of Timor, with remarks on other species of this genus'. Detailed description of pholadid boring bivalve from Late Pliocene- Pleistocene raised coral reefs, now at 500-700m above sea level, in Basleo region of W Timor. This near-spherical shell species is known from Recent coral reefs of Indo-Pacific, drilling into coral bodies)

Simons, A.L. (1939)- Geological investigations in N.E. Netherlands Timor. Ph.D. Thesis University of Amsterdam, p. 1-110. *(Unpublished)*
(online at: https://resolver.kb.nl/resolve?urn=MMKB21:038250000:pdf)
(NE part of W Timor (S of Atapupu, W of Atambua) common serpentinites and associated amphibolite schists and undeformed Tertiary andesitic volcanics (incl. pillow lavas), overlain by Late Miocene and/or Pliocene 'Batu Putih' Globigerina marls with siliceous tuff interbeds near N coast. Permo-Triassic flysch, bathyal Mesozoic 'Sonnebait series' and massive Permian and Triassic 'Fatoe complex' limestones in S. Fig. 17 suggests serpentinites and diabase overlie Triassic Kekneno clastics, in turn overlain by Permo-Triassic Sonnebait and Fatoe limestones. Triassic sandstones rich in micas, tourmaline, zircon and garnet and derived from crystalline schists. Late Tertiary marly limestones with hornblende, augite, hyperstene, pointing to erosion of young volcanic deposits. Permian and Triassic in 3 different facies-tectonic types: Kekneno, Sonnebait and Fatoe. Folded pelagic Late Jurassic and Late Cretaceous sediments also present. Tectonic complexity and incomplete exposures prohibit stratigraphic colums or detailed cross-sections)

Simons, A.L. (1940)- Geological investigations in N.E. Netherlands Timor. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1937, 1, Noord Hollandsche Publ. Co., Amsterdam, p. 107-214.
(Same as Simons (1939))

Simamora, W.H. & M. Untung (1983)- Preliminary Bouguer anomaly gravity map of West Timor, 1:250,000. GRDC, Bandung.

Sinaga, S.H., R. Adiarsa, F. Alĉayubie, D. Aulia, I.A. Arindra, I.R. Sialagan & H. Tanjung (2011)- Geological observation of Soe, Kuanfatu, Kualin area and its implications for petroleum system of West Timor. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 16p.
(Outcrop observations on W Timor. Some samples analyzed for geochemistry. Highest TOC 0.75-1.0% in Triassic-Jurassic Aitutu and Wailuli Fms)

Siwindono, T., B. Manumayoso, D. Priambodo & R.P. Yudantoro (1997)- Mesozoic exploration target in East Timor, Indonesia. 15th World Petroleum Congress, Beijing 1997, p. *(Abstract only*
(Suai-Betano block in S part of Timor Leste. Permian- E Miocene generally in thrust structures, post-collision M Miocene-Pleistocene sediment deposited in suspended basin pond. Bobonaro Fm melange deposits in many areas of Suai-Betano block, with exotic blocks of Permian age. Some nappe structures present. Between 1914-1974 23 exploration wells drilled in Timor Basin. Cota Taci-1 tested 200 BO/D and Matal-1 180 BO/D from Bobonaro exotic blocks. Suailoro-1 oil show (also in Bobonaro exotic block?). Many oil seeps in Mesozoic reservoirs: Fatuberliu oil seep (Wailuli Fm sst) and Bemetane oil seep (Waibua Fm sst))

Smith, J.P. (1927)- Permian ammonoids of Timor. In: H.A. Brouwer (ed.) 2e Nederlandsche Timor-Expeditie 1916, IV, Jaarboek Mijnwezen Nederlandsch-Indie 55 (1926), Verhandelingen 1, p. 1-58.
(Ammonoid material from 1916 Jonker expedition to Timor. Richest Permian ammonoid fauna in world, in both species and abundance. Especially rich in Cyclolobidae and Medlicottiidae and rel. poor in Ceratitoidea. Successive Permian age faunas: (1) E Permian Somohole (common Marathonites, Gastrioceras, Paralegoceras, Pronorites), Bitauni (Perrinites, Agathiceras sundaicum, Paralegoceras spp.) and Basleo (with Waagenoceras, increase in Haloritidae); (2) Late Permian? Amarassi/ Ajer Mati fauna (still with Cyclolobus). Latest Permian faunas not seen in Timor)

Sopaheluwakan, J. (1990)- Ophiolite obduction in the Mutis complex, Timor, eastern Indonesia. An example of inverted, isobaric, medium-high pressure metamorphism. Ph.D. Thesis Free University, Amsterdam, VU University Press, p. 1-226.
(Mutis and Miomaffo metamorphic complexes have inverted metamorphic gradients and formed by obduction of hot, young ophiolite over oceanic rocks in Early Cretaceous. K-Ar age of 37 Ma corresponds to cooling below 300° C of terrane after mild reheating, up from depth of 5-6 km, suggestings major uplift in Late Eocene. This is then interpreted as Eocene collision onto Australian craton (possibly Sundaland margin event?; JTvG))

Sopaheluwakan, J. (1991)- The Mutis metamorphic complex of Timor: a new view on the origin and its regional consequences. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 301-315.
(Mutis and Miomaffo complexes metamorphics in W Timor formed from MOR Basalt and continent-derived greywacke. Structurally overlain by peridotite, with inverted metamorphic gradient (granulite near base of peridotite through amphibolite to greenschist- blueschist at base of sequence. Interpeted as metamorphic sole below ophiolite, formed during intra-oceanic thrusting. Crustal extension terminated Mutis Complex deformation. K-Ar age of ~37 Ma of mica in metapelite reflects Late Eocene cooling/uplift)

Sopaheluwakan, J., H. Helmers, S. Tjokrosapoetro & E. Surya Nila (1989)- Medium pressure metamorphism with inverted thermal gradient associated with ophiolite nappe emplacement in Timor. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, p. 333-343.
(Mutis and Miomaffo Massifs metamorphosed pelitic and basic rocks associated with serpentinized peridotites. Decrease in metamorphic grades below and away from peridotites, with Mutis Massif slightly higher-grade metamorphism than Miomaffo. P-T-D plots of Mutis samples yield T gradient of 300 °C/·km in 1 km thick metamorphite below basal peridotite. Invertedly zoned metamorphites and other indications suggest Mutis and Miomaffo Massifs represent metamorphic aureoles below ophiolite slab)

Sorauf, J.E. (1978)- Original structure and composition of Permian rugose and Triassic scleractinian corals. Palaeontology 21, 2, p. 321-339.
(Study of Permian solitary coral structure based on exceptionally well-preserved material in Wanner collection from Guadalupian of Basleo 23 locality, SW Timor (Polycoelia angusta, Timorophyllum wanneri, Lophophyllidium spinosum))

Sorauf, J.E. (1983)- Primary biogenic structures and diagenetic history of *Timorophyllum wanneri*, Rugosa, Permian, Timor, Indonesia. Assoc. Australasian Pal. Mem. 1, p. 275-288.

Sorauf, J.E. (1984)- Upper Permian corals from Timor and diagenesis. Palaeontogr. Americana 54, p. 294-302.

(Description of phraetic cements in well-preserved Permian rugosan fauna from Basleo, supposedly from blocks in 'Tertiary deep water wildflysch' (= 'Bobonaro melange')).

Sorauf, J.E. (2004)- Permian corals of Timor (Rugosa and Tabulate): history of collection and study. Alcheringa 28, 1, p. 157-183.
(History of collection and study of corals in Permian of Timor began in 1911 with Wanner, Molengraaff and Weber. Biostratigraphy of faunas uncertain, partly because of collection from tectonic melange sequence in Baun to Basleo region, and purchase of fossils from indigenous people. Permian corals from Timor need restudy from stratigraphic sequences in northern 'Fatu' belt of outcrops)

Sousa Torres, A. & J. Pires Soares (1952)- Quelques contributions geologiques sur le Timor portugais. Report 18th Sess. Int. Geological Congress, Great Britain, 1948, 13, p. 238-239.
('Some contributions to the geology of Portuguese Timor')

Spencer, C.J., R.A. Harris & J.R. Major (2016)- Provenance of Permian-Triassic Gondwana Sequence units accreted to the Banda Arc in the Timor region: constraints from zircon U-Pb and Hf isotopes. Gondwana Research 38, p. 28-39.
(online at: http://geology.byu.edu/Home/sites/default/files/2015_spencer_et_al_-_gr_-_timor_upbhf.pdf)
(Zircons from Permian-Triassic 'Gondwana sequence' of Timor yield age distributions with large age peaks at 230-400 Ma and 1750-1900 Ma, similar to zircon age spectra from NE Australia and similar to terranes of N Tibet and Malaysia. 1750-1900 Ma zircon peak also very common in other terranes in SE Asia. Hf analysis of zircon from Aileu Complex in Timor and Kisar shows bimodal distribution at ~300 Ma, probably from bimodal magmatic event, and ties to presence of interbedded Permian mafic and felsic rocks. Similar rock types and isotopic signatures also in Permian-Triassic igneous units throughout Cimmerian continental block. Permian-Triassic of Timor region fill syn-rift intra-cratonic basins that successfully rifted in Jurassic to form NW margin of Australia. This margin first entered Sunda Trench in Timor region at ~7-8 Ma, causing Permo-Triassic rocks to accrete to edge of Asian Plate and emerge in young Banda collision zone)

Springer, F. (1918)- A new species of fossil *Pentacrinus* from the East Indies. In: Nederlandsche Timor-expeditie, II. Jaarboek Mijnwezen Nederlandsch Oost-Indie 45 (1916), Verhandelingen 1, p. 59-64.
(New crinoid species Pentacrinus rotiensis from Jurassic of Roti, collected by Brouwer in 1911 from grey shale-marl-limestone succession at Toempa Sili, NW of Bebalain)

Springer, F. (1926)- Unusual forms of fossil crinoids. Proc. United States Nat. Museum 67, 5, p. 1-137.
(online at: https://repository.si.edu/handle/10088/15695)
(Includes discussions of Timor's diverse crinoid faunas with 189 named species by Wanner (1924). Many species abundant on Timor not known elsewhere. Most crinoid fossils broken up. Timor crinoids with remarkably reduced arms. Timorocrinus, most prominent crinoid of Timor with 11 species, now included in Familiy Poteriocrinidae)

Sprinkle, J. & J.A. Waters (2013)- New ridged, conical, fissiculate blastoid from the Permian of Timor. J. Paleontology 87, 6, p. 1071-1076.
(Recent collections in Permian of N slope of Sonmahole (Somohole) Mountain, 3.5 km NE of Manufui, NE part of W Timor, produced first new genus of blastoid described from Timor in 70 years. Corrugatoblastus savilli n.gen., n.sp, is ridged and furrowed, conical, fissiculate blastoid with unusual thecal morphology mimicking small, solitary, rugose coral. Placed in Family Codasteridae)

Standley, C.E. (2007)- Banda forearc metamorphic rocks accreted to the Australian continental margin: detailed analysis of the Lolotoi Complex of East Timor. M.Sc. Thesis, Brigham Young University, Utah, p. 1-137.
(online at: http://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=2303&context=etd)

Standley, C.E. & R.A. Harris (2006)- Banda forearc metamorphic rocks accreted to the Australian continental margin in Timor: detailed analysis of the Lolotoi Complex of East Timor. EOS Transactions AGU, 87, 52, Fall Mtg. Suppl. *(Abstract only)*

(E Timor Lolotoi Complex part of group of thin metamorphic klippe, detached from Banda forearc and accreted to NW Australian margin during Late Miocene-Present arc-continent collision. Metamorphic protolith compositions similar to overlying unmetamorphosed tholeiitic basalt and andesite with oceanic arc affinities, and turbidites conglomerates and limestone (=also same as underlying rock?; JTvG). Dominant structure low-angle folding/thrusting to SE. Metamorphic terrain in thrust contact with underlying Gondwana sequence rocks. Mostly unmetamorphosed volcanic and sedimentary cover units found locally in fault contact on edges of the klippen. Ar/Ar ages from amphibolite in W Timor yield ages of 34-39 Ma, interpreted as metamorphism age. Lolotoi Complex part of eastern Great Indonesian Arc, which collapsed in Eocene, incorporated into Banda Arc in Miocene, and accreted to Australian margin in Pliocene- Present)

Standley, C.E. & R.A. Harris (2009)- Tectonic evolution of forearc nappes of the active Banda arc-continent collision: origin, age, metamorphic history and structure of the Lolotoi Complex, East Timor. Tectonophysics 479, 1-2, p. 66-94.
(online at: http://geology.byu.edu/home/sites/default/files/2009-lolotoi-cmplx.pdf)
(Lolotoi metamorphic complex of E Timor part of Banda forearc, metamorphosed and exhumed in Eocene and accreted to NW Australian continental margin in Late Miocene-Present. Greenschist, graphitic phyllite, quartz-mica schist, amphibolite and pelitic schist dominant metamorphics. Protoliths tholeiitic basalt and basaltic andesite with mixed MORB-oceanic arc affinities. Metapelite schist mostly metasedimentary units with volcanic arc provenance. Peak metamorphism at ~45.4 Ma indicated by Lu-Hf analyses of garnet. Detrital zircon U/Pb age spikes at 663, 120 and 87 Ma, typical of Great Indonesian Arc, distinct from Australian affinity units and indicating deposition and metamorphism after 87 Ma. Deformation phases: 1-4 pre-Oligocene, 5 and 6 related to latest Miocene- Pliocene nappe emplacement deformation. Lolotoi Complex in thrust contact with underlying Gondwana Sequence rocks. 'Asian' volcanic and sedimentary cover units mostly in normal fault contact with metamorphic rocks. Lolotoi Complex of Timor Leste correlative with Mutis Complex of W Timor, both part of Banda Terrane and dispersed fragments of E Great Indonesian Arc)

Stolley, E. (1929)- Uber Ostindische Jura-Belemniten. Palaontologie von Timor, Schweizerbart, Stuttgart, 16, 29, p. 91-213.
('On East Indies Jurassic belemnites'. Belemnites from Molengraaff, Jonker and Weber collections from Timor and Roti, with comparisons to belemnites from Misool, Sula Islands, Seram and Yamdena/ Tanimbar. Includes reports of Belemnopsis aucklandica from Timor (Ofu) and Roti (re-assigned to Belemnopsis uhligi-jonkeri group by Stevens, 1964; B. aucklandica from Yamdena, re-described as Belemnopsis stolleyi by Stevens, 1964)

Suardy, A., Mulhadiono & F. Hehuwat (1987)- Application of remote sensing for hydrocarbon exploration in Timor island, Indonesia. Proc. ACRS, Jakarta, 17, p. 1-15.

Sunarjanto, D. & M.B. Wismaya (1994)- Potensi sumberdaya mineral dan energi di Timor Timur. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), 2, Jakarta, p. 1118-1127.
(Potential for mining of minerals and energy in East Timor'. Brief review)

Suwitodirdjo, K. & S. Tjokrosapoetro (1975)- Geologic map of the Atambua Quadrangle, Timor, 1: 250,000. Geol. Res. Dev. Center, Bandung.
(See also second edition, 1996. Geologic map of eastern part of West Timor)

Swantry, N. (1989)- Geologi dan struktur geologi daerah Oeolo dan sekitarnya, Kecamatan Miomafo Barat, Kabupaten Timor Tengah Utara, NTT. Ph.D. Thesis, Inst. Technology Bandung (ITB), p. 1-253.
('Geology and geologic structure in the Oeolo and surrounding areas, W Miomafo, North central Timor')

Sy, E. (1958)- Die Gattung *Stromatoporidium* Vinassa de Regny aus der Obertrias der Insel Timor (Hydrozoa). Anzeiger Akademie Wissenschaften, Math.-Naturw. Kl., October 1958, p. 163-168.
('The genus Stromatoporidium Vinassa de Regny from the Upper Triassic of Timor island (Hydrozoa)')

Tan Sin Hok (1926)- On a young Tertiary limestone on the isle of Rotti with coccoliths, calci and manganese peroxide spherulites. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 29, 8, p. 1095-1105.

(online at: www.dwc.knaw.nl/DL/publications/PU00015375.pdf)
(Early description of Late Tertiary calcareous nannofossils and radiolaria in pelagic limestone with radiolaria and small manganese nodules from S part of Roti island, collected by Brouwer (but radiolaria-manganese limstones probably Cretaceous; Riedel 1953))

Tappenbeck, D. (1939)- Geologie des Mollogebirges und einiger benachbarter Gebiete (Niederlandisch Timor). Ph.D. Thesis University of Amsterdam, p. 1-105.
(also in: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1940, 1, Noord Hollandsche Publ., Amsterdam, p. 1-105. 'Geology of the Mollo Mountains and some adjacent areas'. Good documentation and map of 'Banda terrane' stratigraphy in Mollo mountains area. Pre-Upper Cretaceous crystalline schists mainly in greenschist facies, intensely folded and brecciated in higher parts. Overlying Palelo series Cretaceous 'flysch' (with basal conglomerate with schist fragments andesitic volcanics; sandstones are greywackes with common volcanic detritus) and Eocene Nummulites limestones with Pellatispira. NW of Mollo metamorphic massif Permian-Triassic Kekneno series in flysch facies, probably sourced from metamorphic terrane. In SE part of Mollo Mts isoclinally folded 'Sonnebait Series' Mesozoic in bathyal facies, incl. U Cretaceous pelagic Globotruncana limestone and marls. Also Triassic 'Fatu Limestones', etc.)

Tappenbeck, D. (1940)- Geologie des Mollogebirges und einiger benachbarter Gebiete (Niederlandisch Timor). In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1940, 1, Noord Hollandsche Publ., Amsterdam, p. 1-105.
(Same as Tappenbeck, 1939)

Tate, G. (2014)- Structural deformation, exhumation and uplift of the Timor fold-thrust belt. Ph.D. Thesis, Princeton University, p. 1-251.
(online at: http://dataspace.princeton.edu/jspui/handle/88435/dsp01bk128d120)
(Thermochronology and micropaleontology reveal extreme heterogeneity in uplift and exhumation across Timor fold-thrust belt. Before synorogenic basins experienced uplift from >1 km below sea level at 3.4-3.0 Ma, other areas a few 10's of km away were emergent and exhuming rapidly. Balanced cross-sections document at least 326-362 km of shortening of Timor since at least 7.3-7.8 Ma, and 215-229 km of buoyant Australian continental margin subducted below Banda forearc)

Tate, G., N. McQuarrie, R.R. Bakker, D.J.J.van Hinsbergen & R.A. Harris (2010)- Active arc-continent accretion in Timor-Leste: new structural mapping and quantification of continental subduction. AGU 2010 Fall Meeting, San Francisco, Abstract T51A1996T, 1p. *(Abstract only)*
(New mapping in Timor-Leste provided view of structural repetition of 'Australian' continental sedimentary units below overriding Banda Arc material. Transect Laclo-Barique exposes deep erosional level, showing 3 regional NNE-striking thrust faults with ~3 km spacing, repeating Aitutu-Cribas stratigraphy. Jurassic Wailuli shales and Bobonaro melange act as upper decollement between this duplex and Lolotoi metamorphic basement of Banda Arc. New balanced structural cross-section produces minimum shortening of 320km)

Tate, G.W., N. McQuarrie, D.J.J. Hinsbergen, R.R. Bakker, R. Harris & H. Jiang (2015)- Australia going down under: quantifying continental subduction during arc-continent accretion in Timor-Leste. Geosphere 11, 6, p. 1860-1883.
(online at: http://www.pitt.edu/~nmcq/Tate_etal_2015_geosphere.pdf)
(Timor island is uplifted accretionary complex of collision of Banda arc with Australian continental margin. Duplexing of 2-km-thick Australian continental strata built majority of structural elevation of Timor orogen. Balanced cross sections suggest 326-362 km of shortening across Timor and 215-229 km of subduction of continental lithosphere below Banda forearc, showing considerable amounts of continental lithosphere can be subducted while accreting only thin section of uppermost crust. Continental subduction may have been favorable because of fast subduction rates and old oceanic crust at Australian margin)

Tate, G.W., N. McQuarrie, D.J.J. Hinsbergen, R.R. Bakker, R. Harris, S. Willett, P.W. Reiners, M.G. Fellin, M. Ganerod & J.W. Zachariasse (2014)- Resolving spatial heterogeneities in exhumation and surface uplift in Timor-Leste: constraints on deformation processes in young orogens. Tectonics 33, 6, p. 1089-1112.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2013TC003436/epdf)
(In Timor-Leste exhumed metamorphic rocks and piggyback deepwater synorogenic basins only 10's of km apart. Foraminifera in two deepwater synorogenic basins suggest basin uplift from depths of 1-2 km to 350-1000m between 3.35 and 1.88 Ma. Thermochronologic sampling in mountains between these basins: (1) reset age of ~7.13 Ma in Aileu high-grade belt suggests ~9-16 km of exhumation since that time; (2) zircon (U-Th)/He samples reset ages in Aileu Complex 4.4- 1.5 Ma, suggesting exhumation rates of 1-3 mm/yr with 2.7-7.8 km of exhumation since these ages; (3) Apatite (U-Th)/He ages in Gondwana Sequence 5.5- 1.4 Ma, suggesting 1-2 km of exhumation. Distinct increase in amount of exhumation in E Timor, from ~1-2 km in south to 3-6 km in North. Variability in surface uplift and exhumation possibly caused by ongoing subsurface duplexing driven by subduction and underplating of Australian continental crust)

Tate, G.W., N. McQuarrie, H. Tiranda, D.J.J. Hinsbergen, R. Harris, W.J. Zachariasse, M.G. Fellin, P.W. Reiners & S.D. Willet (2017)- Reconciling regional continuity with local variability in structure, uplift and exhumation of the Timor orogen. Gondwana Research 49, p. 364-386.
(New constraints on history of uplift, exhumation and shortening of W Timor. Foreland thrust stack of Jurassic-Miocene Australian margin strata and hinterland antiformal stack of Permo-Triassic Australian continental units duplexed below Banda Arc lithosphere. Piggyback Central Basin with deepwater synorogenic deposition from 5.57-5.53 Ma, uplift from lower-m bathyal depths at 3.35-2.58 Ma, and uplift from m-u bathyal at 2.58-1.30 Ma. Hinterland Permo-Triassic with apatite (U-Th)/He ages of 0.33-2.76 Ma, apatite FT ages of 2.19-3.53 Ma. Youngest or most reset in center of antiformal stack. Minimum of 300km of shortening including 210km of Australian continental subduction below Banda forearc. Timor-Leste similar timing of collision, etc.)

Tatzreiter, F. (1980)- Neue trachyostrake Ammonoideen aus dem Nor (Alaun 2) der Tethys. Verhandlungen Geol. Bundesanstalt Wien 1980, 2, p. 123-159.
(online at: www.geologie.ac.at/filestore/download/VH1980_123_A.pdf)
('New trachyostrake ammonoids from the Norian of the Tethys'. New Late Triassic (columbianus Zone) ammonites from exotic, pink blocks of 'Hallstatt Limestone' from Bihati River Baun, SE of Kupang, W Timor)

Tatzreiter, F. (1981)- Ammonitenfauna und Stratigraphie im hoheren Nor (Alaun, Trias) der Tethys aufgrund neuer Untersuchungen in Timor. Denkschrift Akademie Wissenschaften, Math.-Naturw. Kl. 121, p. 1-142.
(online at: www.landesmuseum.at/pdf_frei_remote/DAKW_121_0001-0142.pdf)
('Ammonite fauna and stratigraphy of the upper Norian (Alaun, Triassic) of the Tethys, based on new investigations in Timor'. Revision of abundant Norian ammonoids from blocks of condensed, pelagic U Triassic limestone in Bobonaro olistostrome at Bihati River, Baun, SW Timor. Common genera Arcestes, Rhacophyllites, Cladiscites, etc.. Columbianus zone 1m thick. M Norian fauna 90 species, 29 genera. Two subzones: Himavites hogarti (Alaun2) and Halorites macer (Alaun 3). Looks like typical 'Hallstatt facies' of European Alps; probably seamount deposit)

Tatzreiter, F.R. (1983)- Die trachyostraken Ammonoideen der *Himavatites columbianus*-zone (hoheres Mittelnor) von Timor (Indonesien). Doct. Thesis, University of Wien, p. *(Unpublished)*
('The trachyostrace ammonoids of the Himavites columbianus Zone (upper M Norian) from Timor, Indonesia')

Teixeira, C. (1952)- Notas sobra la geologia e la tectonica de Timor. Estudios Coloniais, Revista Escola Sup. Colonial, Lisbon, 3, p. 85-154.
('Notes on the geology and tectonics of Timor'. On Portuguese Timor; in Portuguese)

Tesch, P. (1916)- Jungtertiare und quartare Mollusken von Timor- I. In: J. Wanner (ed.) Palaeontologie von Timor 5, Abhandl. 9, Schweizerbart, Stuttgart, p. 1-70.
('Late Tertiary and Quaternary molluscs from Timor- part 1'. Mainly taxonomic descriptions of molluscs collected by Wanner, Molengraaff 1909, 1911 expeditions. Faunas dominated by gastropods, 113 species, 17 new. With table listing localities; no map)

Tesch, P. (1920)- Jungtertiare und quartare Mollusken von Timor-II. In: J. Wanner (ed.) Palaeontologie von Timor 8, 14, p. 41-121.
('Late Tertiary and Quaternary molluscs from Timor- part 2'. Continuation of above monograph, species 114-233. In stratigraphic conclusions samples grouped in 3 categories: Late Miocene?-Early Pliocene, Late Pliocene- Early Pleistocene and Pleistocene)

Tesch, P. (1923)- Trilobiten aus der Dyas von Timor und Letti. Palaeontologie von Timor 12, 21, p. 123-132.
(Trilobites from the Permian of Timor and Leti'. Phillipsia sp. and Neoproetus indicus n.sp., collected by Wanner, Molengraaff, Jonker et al. Trilobites relatively rare and poorly preserved in Timor Permian)

Tharalson, D.B. (1984)- Revision of the Early Permian ammonoid family Perrinitidae. J. Paleontology. 58, 3, p. 804-833.
(Includes descriptions of Timor Permian perrinitid ammonoids. Species described by De Roever from Timor as Perrinites waageni was renamed Properrinites deroeveri by Gerth (1950) here called Properrinites cumminsi (U Sakmarian). Also description of Artinskian Paraperrinites subcumminsi (Haniel) (originally Cyclolobus subcumminsi) from Bitauni)

'T Hoen, C.W.A.P. & L.J.C. van Es (1928)- De opsporingen naar delfstoffen op het eiland Timor. Jaarboek Mijnwezen Nederlandsch-Indie 54 (1925), Verhandelingen 2, p. 1-80.
(Multi-year mineral exploration project in W Timor with negative results, except for some subeconomic copper deposits associated with serpentinites. Also minor chromite in peridotites, gold near crystalline schists (Lalan Asu, Miomaffo) and manganese in deep marine pelagic sediments. With chapter on mud volcanoes, present across most of W Timor but particularly common in areas of Triassic flysch. Some cones up to 90m high and some with flammable gas seepage. Clasts in mud volcanoes include virtually all Timor formations, incl. Permian, Triassic, Jurassic and crystalline schists. Includes 1:250,000 geological overview map of W Timor by Van Es and petrographic descriptions by W.F. Gisolf)

Thompson, M.L. (1949)- The Permian fusulinids of Timor. J. Paleontology 23, 2, p. 182-192.
(Fusulinid limestones collected by Brouwer expedition in 1937 in W Timor contain five species of fusulinids, incl. Schwagerina brouweri n. sp. All appear to indicate Early Permian, Leonardian or older age. Fusulinids of Timor not similar to widespread complex fusulinid faunas in other parts of E Hemisphere)

Tichy, G. (1979)- Gastropoden aus den Triassischen Hallstatterkalk-Blocken von West-Timor (Indonesien). Beitr. Palaontologie Osterreich. 6, p. 119-133.
(online at: www.zobodat.at/pdf/Beitr-Palaeontologie_6_0119-0133.pdf)
('Triassic Gastropods from exotic Halstatt limestone blocks of West Timor'. SW Timor Bihati River limestones with abundant ammonites and rare gastropods. Gastropods interpreted as deep water, of M-U Norian and Carnian ages. Incl. Pleurotamaria, Epulotrochus strobiliformis, Naticopsis, Hologyra, Neritopsis, Natica klipsteini and Allocosmia. Species identical to Hallstat Limestone in Austria)

Tjia, H.D. (1961)- *Anatomites brochiiformis* Welter var. *rotundata*. Proc. Inst. Teknologi Bandung 1, 1, p. 5-23.
(online at: http://journals.itb.ac.id/index.php/jmfs/article/view/9820/3778)
(Brief description of Carnian ammonite from Triassic cephalopod limestone of Basleo, ~5km NE of Niki-Niki)

Tjokrosapoetro, S. (1978)- Holocene tectonics on Timor Island, Indonesia. Bull. Geol. Survey Indonesia 4, 1, p. 49-63.
(Active Holocene tectonism. Uplift at W end of island 1 mm/yr, higher in central part. >15 active mud volcano fields mapped in West Timor, mainly associated with young Central Basin or Kolbano Complex accretionary prism. Some mud volcanoes produce saline water, others have flammable gas)

Tjokrosapoetro, S. (1983)- Late volcanic activity in Timor Island. Geol. Res. Dev. Centre (GRDC), Bandung, 10p.

Tjokrosapoetro, S. (1993)- Indication of initial stage of volcanic activity on Timor. Bull. Marine Geol. Inst. Indonesia 8, 2, p. 23-44.
(Hot sulphuric smoke near Ajobaki (2 km NW of Kapan, 30 km N of Soe) in January 1983 and fumaroles and sulphuric hot springs may suggest early stage of volcanic activity. Timor is part of non-volcanic Outer Banda Arc, with last volcanic activity of inner Banda Volcanic Arc in Late Miocene (5.9-6.2 Ma). Eight million years from now Timor will probably be active volcanic island, due to subduction N of Wetar since 3 Ma)

Tjokrosapoetro, S. & H.D. Tjia (1978)- Gejala-gejala tektonik Kwarter di Timor. Geologi Indonesia 5, 1, p. 11-26.
('Quaternary tectonic activity on Timor')

Tobing, S.L. (1989)- The geology of East Timor. M. Phil. Thesis, London University, p. 1-129. *(Unpublished)*
(Mainly revised geologic map of E Timor, based on photogeologic studies)

Torre de Assuncao, C. (1956)- Notas da petrografia timorense. Garcia de Orta 4, 2, p. 265-278.
('Notes on the petrography of Timor'. In Portuguese)

Tozer, E.T. (1994)- Significance of Triassic stage boundaries defined in North America. In: J. Guex & A. Baud (eds.) Recent developments on Triassic stratigraphy. Memoires de Geologie (Lausanne) 22, p. 155-170.
(online at: www.unil.ch/)
(Includes record and description of M Triassic (E Anisian) ammonites Keyserlingites angustecostatus, Paracrochordiceras welteri n.sp. and Leiophyllites from block of 'Hallstatt Limestone' facies in olistostrome on Timor(Fatoe Nefakoko near Soeli, collected by Molengraaff Timor Expedition 1911, now in Delft University collection) (first described by Welter 1915). Associated with conodonts Chiosella timorensis and Gladiogondolella tethydis (Orchard 1994))

Ueno, K. (2006)- The Permian antitropical fusulinoidean genus *Monodiexodina*: distribution, taxonomy, paleobiogeography and paleoecology. J. Asian Earth Sci. 26, p. 380-404.
(Review of 'subtropical', late E Permian fusulinid genus Monodiexodina from 33 areas, incl. several Timor occurrences, all in middle part of Maubisse Fm. Type species of Monodiexodina is Schwagerina wanneri Schubert 1915 first described from Timor. Monodiexodina-bearing areas can be restored to either N or S middle latitudes, suggesting genus is paleobiogeographically anti-tropical taxon. Generally found in monotypic, crowded manner in sandy sediments with uni-directionally aligned shells. Long-ranging 'mid-Permian', Artinskian- E Midian (=Capitanian))

UN ESCAP (2003)- Geology and mineral resources of Timor-Leste. Atlas of Mineral Resources of the ESCAP region 17, United Nations, p. 1-143.

UN ESCAP (2003)- Geology of Timor-Leste. In: Atlas of Mineral Resources of the ESCAP region 17, United Nations, p. 11-27.
(online at: www.unescap.org/esd/water/publications/mineral/amrs/vol17/)
(Rather general East Timor geology overview)

Untung, M., Sudarwono & T. Padmawijaya (1991)- Gravity anomalies of Timor Island, Indonesia and the Australian continental margin. Proc. Ann. Conv. Indon. Assoc. Geoph. (HAGI), p.

Utoyo, H. & S. Permanadewi (1994)- Perbandingan pentarikhan K-Ar pada hornblende dan biotit dalam batuan malihan Formasi Aileu, Timor Timur. J. Geologi Sumberdaya Mineral 4, 32, p. 13-18.
(' Comparison of K-Ar dating results in hornblende and biotite from Aileu Fm metamorphic rocks, E Timor'. Radiometric dating of samples from Aileu Fm along coast E of Dili, E Timor. Age of peak metamorphism based on hornblende from amphibolite (3 samples) is 7.7 Ma. Age of biotite from biotite schist is 5.7 Ma, reflecting time of cooling)

Van Andel, T. (1948)- Some remarks on *Nummulites javanus* Verb. and *Nummulites perforatus* de Montf. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 51, 8, p. 1013-1023.
(online at: www.dwc.knaw.nl/DL/publications/PU00018566.pdf)
(Study of Nummulites perforatus from Mollo, W Timor, collected by Tappenbeck. Nummulites javanus (Verbeek) considered to be younger synonym of N. perforatus)

Van den Boogaard, M. (1987)- Lower Permian conodonts from western Timor (Indonesia). Proc. Kon. Nederl. Akademie Wetenschappen, ser B, 90, 1, p. 15-39.
(Lower Permian conodonts from samples collected by Jonker expedition near Bitauni in 1916 and SW Mutis region by De Roever in 1937. Important constituent of fauna is Vjalovognathus shindyensis)

Van Doorninck, N.H. (1940)- Over een rapport van een exploratie in Portugueesch Timor. Geologie en Mijnbouw 2, 7, p.145-148.
('On a report of an exploration in Portuguese Timor'. Discussion of Allied Mining Corporation (1937) report on East Timor. No figures, maps)

Van Es, L.J.C. (1921)- Inlandsche kopererts ontginningen op Timor. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 38, p. 808-810.
('Copper ore exploitation by natives on Timor'. Small occurrences of copper (native copper, cuprite) from red and grey shales and Cretaceous limestone in area of Noil Toko, several localities of Amanubang and in N Belu)

Van Eykeren, H. (1942)- *Microblastus* gen. nov. und einige andere neue permische Blastoideen von Timor. Neues Jahrbuch Mineral. Geol. Pal., Beilage-Band. 86B, p. 282-298.
('Microblastus new genus and other new Permian blastoids from Timor'. In German. New species of blastoids from the Brouwer/ University of Amsterdam Timor collection)

Van Gorsel, J.T. (2012)- Ophiolite obduction on Leti Island, as described by Molengraaff and Brouwer (1915): implications for age and genesis of metamorphic complexes in the Outer Banda Arc, Eastern Indonesia. Berita Sedimentologi 24, p. 24-38.
(online at: www.iagi.or.id/fosi/files/2012/07/FOSI_BeritaSedimentologi_BS-24_July2012_S1.pdf)
(Descriptions of geology of Leti Island, NE of Timor by Molengraaff et al. (1915) suggest 'ophiolite obduction', (metamorphism of continental crustal material below ultrabasic mantle material in subduction zone). Folded E-M Permian sediments and basic volcanics in S of island gradually increase in metamorphic grade towards serpentinite massif in N. Serpentinite massif is overlain by Latest Oligocene shallow marine limestone with reworked serpentinite and metamorphics, suggesting metamorphism/ophiolite obduction on Leti island took place in post-Early Permian (therefore not Australian continental crust basement) but before latest Oligocene (i.e. too old to be connected with Late Neogene Banda arc- NW Australian continent collision). Metamorphic complexes on Timor and other islands of Outer Banda Arc may all have similar origin, possibly representing single, extensive Cretaceous-age collisional/ subduction zone, formed along Sundaland margin)

Van Marle, L.J. (1991)- Late Cenozoic palaeobathymetry and geohistory analysis of Central West Timor, Eastern Indonesia. Marine Petroleum Geol. 8, 1, p. 22-34.
(W Timor Central Basin with ~550m or more Mid-Pliocene- E Pleistocene deep marine clastics over E Pliocene pelagic calcilutites ('Batu Putih Fm'). E Pliocene paleo water depth probably ~2000m. Two uplift episodes(1) 2.4- 1.6 Ma, corresponding to arrival of Australian continental slope in subduction system; (2) Late Pleistocene- Recent larger uplift of 1500-2000m, reflecting arrival of Australian continental shelf at Outer Banda Arc thrust belt)

Van Voorthuysen, J.H. (1940)- Geologische Untersuchungen im Distrikt Amfoan (Nordwest Timor). In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1937, 2, Noord Hollandsche Publ. Co., Amsterdam, p. 345-367.
('Geological investigations in the Amfoan District, NW Timor'. Reports a.o. common dark grey Eocene limestone with Nummulites, unconformable on crystalline schists of Mosu and Nefoneu (incl. Eocene conglomerate with rounded schist and volcanic clasts), closely associated with widespread Eocene andesitic

volcanics. Also blocks of Lower Miocene reefal limestone with Spiroclypeus and Miogypsina, always found in proximity to crystalline schists, and with clasts of schists and volcanics)

Van West, F.P. (1941)- Geological investigations in the Miomaffo Region, Netherlands Timor. Ph.D. Thesis University of Amsterdam, p. 1-130. *(Unpublished)*
(Miomaffo Massif of W Timor structurally complex area, with 3 tectonic units: (1) 'Schist-Palelo Complex' of amphibolite-dominated metamorphics associated with ultrabasic lherzolites, serpentinites, gabbros, etc., overlain by Cretaceous 'Lower Palelo' radiolarian cherts, U Cretaceous U Palelo greywackes-volcanoclastics with pebbles of schists and serpentinite, E-M Eocene Alveolina-Nummulites limestones associated with volcanics, Late Eocene Pellatispira limestones without volcanics, unconformably overlain by E Miocene limestones with Spiroclypeus and Miogypsina (with basal conglomerate with metamorphics, etc.), Globigerina limestone and increasing volcanic rocks upsection (Schist-'Palelo' stratigraphy resembles that of SE Kalimantan, SW Sulawesi, Sumba); (2) 'Fatu Complex' U Triassic reefal-oolitic limestones, some rich in Norian brachiopod Misolia aspera (with conglomeratic beds with igneous rocks); (3) 'Sonnebait Series' Cretaceous pelagic Globotruncana limestones and radiolarian cherts. Young Tertiary Globigerina limestones and tuffs unconformable over all older formations. Large overhrusts formed in pre-Miocene time, with mountain-building forces peaking in Oligocene, but fault deformation continuing to recent time)

Van West, F.P. (1941)- Geological investigations in the Miomaffo Region, Netherlands Timor. In: H.A. Brouwer (ed.) Geological expedition of the University of Amsterdam to the Lesser Sunda Islands in the eastern part of the Netherlands East Indies 1937, III, p. 1-131.
(Same as Van West (1941) above)

Villeneuve, M., H. Bellon, R. Martini, A. Harsolumakso & J.J. Cornee (2013)- West Timor: a key for the eastern Indonesian geodynamic evolution. Bull. Soc. Geologique France 184, 6, p. 569-582.
(W Timor not simple accretionary prism, but five superimposed structural units. Present-day structure result of three main tectonic events in Late Oligocene, Late E Pliocene and Late Pliocene-E Pleistocene. Geodynamic evolution: (1) block detached from Gondwana (unit 2) and drifted to Asiatic margin until Late Oligocene when it collided with Asiatic active margin (unit 3); (2) New block formed by units 2 and 3 drifted S in Miocene- E Pliocene until collision with Australian margin in Late E Pliocene; (3) Australian and Timor blocks moved together to NNE in Late Pliocene until collision with Banda fore-arc (unit 4); (5) In Pleistocene Timor island capped by 'autochthon' (unit 5) and (5) Quaternary? N thrusting of Banda volcanic arc over S Banda basin. Timor key area for building this geodynamical scenario of Indonesia)

Villeneuve, M., J.J. Cornee, A. Harsolumakso, R. Martini & L. Zaninetti (2005)- Revision stratigraphique de l'Ile de Timor (Indonesie orientale). Eclogae Geol. Helvetiae 98, 2, p. 297-310.
(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:2005:98316)
('Stratigraphic revision of Timor island'; in French. Many stratigraphic scales proposed for Timor due to tectonic complexity and facies variability. Timor comprises 6 units, linked to episodes of geological history. Evolution starts with Jurassic break-up of block from Gondwana (para-allochthonous unit), followed by Oligo-Miocene collision with Asian volcanic arc (allochthonous and sub-autochthonous units). By Late Miocene this assemblage of blocks separated from Asia during S Banda Sea opening (sub-autochthonous unit), then collided with N Australian margin in M Pliocene (Australian platform and Kolbano Group). Since then Timor Island part of Australian N margin).

Villeneuve, M., J.J. Cornee, R. Martini & L. Zaninetti (2004)- Nouvelle hypothese sur l'origine des formations geologiques de l'ile de Timor (Sud-Est Asiatique). Comptes Rendus Geoscience 336, 16, p. 1511-1520.
(Stratigraphy/ tectonics suggest Timor and S Sulawesi part of same continental block. Main deformation on Timor and Sulawesi is Oligocene. Timor separated in Late Miocene during opening of S Banda Basin and became part of Late Miocene arc that collided with Australia at end of E Pliocene, 3.5 Ma)

Villeneuve, M., A.H. Harsolumakso, J.J. Cornee & H. Bellon (1999)- Structure of West Timor (East Indonesia) along a north-south cross section. Geologie Mediterraneenne 26, p. 127-142.

(Structural transect of C part of W Timor suggests tow main tectonic events: (1) Oligocene thrusting of allochton units over Australian continental margin; (2) E Pliocene collision between Banda island arc and previous Timor forearc units, and responsible for present imbricated structures. Two extensional periods: Late Oligocene or earliest Miocena and Late Pliocene)

Vinassa de Regny, P. (1915)- Triadische Algen, Spongien, Anthozoen und Bryozoen aus Timor. Palaontologie von Timor, Schweizerbart, Stuttgart, 4, 8, p. 75-118.
(Late Triassic algae (Solenopora), sponges (Molengraaffia regularis, Steinmannia), corals (incl. species of Thecosmilia, Isastraea, Montlivaltia), pachyporidae (Lovcenipora), calcareous algae (Solenopora triasina = Parachaetes according to Flugel 1975), stromatoporidae (Stromatoporidium) and bryozoa, mainly from reefal 'Fatu Limestones' from westernmost Timor and Pualaca area, E Timor (Nine coral species in common with alpine Zlambachschichten; Diener 1916 (=Rhaetian; JTvG))

Vita-Finzi, C. & S. Hidayat (1991)- Holocene uplift in West Timor. J. Southeast Asian Earth Sci. 6, 3-4, p. 387-393.
(Holocene uplift rates <0.3mm/yr, i.e. much lower than Late Pliocene rates, suggesting rapid, but short-lived uplift of Timor in Late Pliocene)

Von Arthaber, G. (1926)- Ammonoidea leiostraca aus der oberen Trias von Timor. Jaarboek Mijnwezen Nederlandsch-Indie 55 (1926), Verhandelingen 2, p. 1-173.
('Leiostraca ammonites from the Upper Triassic of Timor'.110 species of Carnian- Norian ammonites described from Timor (66% endemic, 57 species in common with Mediterranean/ Tethys bioprovince). Mainly collected by Jonker 1916 expedition)

Von Bulow, E. (1915)- Orthoceren und Belemnitiden der Trias von Timor. In: J. Wanner (ed.) Palaontologie von Timor 4, 7, Schweizerbart, Stuttgart, p. 1-72.
('Orthocerids and belemnites from the Triassic of Timor'. Mainly on taxonomy of straight nautiloids (Orthoceras spp.) and belemnites (Carnian-Norian Aulacoceras, Atractites spp. and Dictyoconites spp.) from Molengraaff, Wanner 1909-1911 expeditions. Triassic belemnites known from Timor, Savu and Roti. Carnian-Norian belemnites in bright limestones, commonly with manganese coating)

Von Huene, E. (1935)- Mosasaurier-Zahne von Timor. Zentralblatt Mineralogie Geol. Palaont., B, 10, p. 412-416.
('Mosasaurus teeth from Timor'. U Cretaceous Mosasaurus teeth Globidens? timorensis n.sp. from red clays above Triassic Halobia Limestone in Noil Tobe near Nikiniki (collected by Wanner) and Oe Batok II near Baoen (Baung, SW Timor (from Jonker 1916 Expedition collection Delft; not sure if correct; Oe Batok II is ~2m large block of Triassic cephalopod/ heterastrid limestone). Both from 'Niki Niki- Baung zone' of Wanner (1913). The only known Mosasaurus teeth from Indonesia)

Von Huene, E. (1936)- Ichthyosaurierreste aus Timor. Zentralblatt Mineralogie Geol. Palaont. 1935, B 8, p. 327-334.
('Ichthyosaur remains from Timor'. Description of ichthyosaur marine reptile remains from E-M Triassic of Noil Bunu, Basleo, W Timor, collected by Jonker Expedition1916 (possibly Cymbospondylus; Sander & Mazin 1993))

Von Huene, F. (1931)- Ichthyosaurier von Seran und Timor. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 66, B, p. 211-214.
(Triassic or Jurassic Ichthyosaurus vertebrae from Bula, E Seram, and Basleo, W Timor)

Von Koenigswald, G.H.R. (1967)- An Upper Eocene mammal of the family Anthracotheriidae from the island of Timor. Proc. Kon. Nederl. Akademie Wetenschappen B70, 5, p. 529-533.
(Description of Eocene Hippopotamus-like skull fragment and upper molar from W of Laharus, W Timor, named Anthracothema verhoeveni n. sp.. Genus also known from Eocene of Birma, S China and W Borneo and

is first indication of Eocene mammalian fauna in E Indonesia. (Belongs in genus Anthracotherium; Ducrocq 1996). It is of Asian affinity, suggesting proximity of this part of Timor to SE Asia/Sundaland in Eocene)

Von Schouppe, A. & P. Stacul (1955)- Die Genera *Verbeekiella* Penecke, *Timorphyllum* Gerth, *Wannerophyllum* n. gen., *Lophophyllidium* Grabau aus dem Perm von Timor. Palaeontographica Suppl. IV, Beitrage Geologie Niederlandisch-Indien 5, 3, p. 95-196.
(Descriptions of Permian solitary corals, mainly from Basleo area, W Timor, from where 12,000 specimens were collected in 1927. Distinguished 17 species, 10 of which new (Assemblages now generally regarded as M Permian, deeper water and cooler climate 'Cyathaxonia faunas' or 'Lytvolasma faunas'; JTvG))

Von Schouppe, A. & P. Stacul (1959)- Saulchenlose Pterocorallia aus dem Perm von Indonesisch Timor (mit Ausnahme der Polycoelidae). Eine morphogenetische und taxonomische Untersuchung. Palaeontographica Suppl. IV, Beitrage Geologie Niederlandisch-Indien 5, 4, p. 197-359.
(Paleontological descriptions of Timor Permian solitary corals)

Wahyudiono, J., I. Safri, A. Sudradjat & H. Panggabean (2016)- Geokimi batuan gunungapi di Pulau Timor bagian Barat dan implikasi tektonikya. J. Geologi Sumberdaya Mineral 17, 4, p. 241-252.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/24/21)
('Geochemistry of the volcanic rocks of West Timor and its tectonic implications'. Geochemistry of basaltic rocks from Fatu River (interfinger with Permian Maubisse Fm limestone) suggests Oceanic Island Basalt. Oligo-Miocene metabasalt from Mutis Complex calk-alkaline, island arc volcanics. Metan River and Atauro Island (Banda Arc) subalkaline/ tholeitic volcanics)

Wang, H.C. (1947)- Notes on some Permian rugose corals from Timor. Geol. Magazine 84, 6, p. 334-344.
(Description of Permian solitary corals from 4 W Timor localities (Soempek, Neoepantoekak, Toenioen Eno, Basleo) in collection of British Museum of Natural History (Lytvolasma, Amplexicarina, Timorphyllum, Lophophyllidium, Verbeekiella, etc.) Excellent preservation. Mainly review of works of Gerth, Koker, Schindewolf)

Wanner, C. (1922)- Die Gastropoden und Lamellibranchiaten der Dyas von Timor. In: J. Wanner (ed.) Palaeontologie von Timor, Stuttgart, 11, 18, p. 1-82.
('The gastropods and bivalves from the Permian of Timor'. Description of Permian bivalve material collected by Wanner and Molengraaff in 1909-1911, mainly from Basleo area. High diversity faunas (61 gastropod, 25 bivalve species), but low abundance compared to other fossil groups. Timor richest in Capulids of all known Permian faunas. Includes presence of Atomodesma spp. from various localities (genus often regarded as cold-water 'Gondwanan'; JTvG))

Wanner, C. (1940)- Neue Permische Lamellibranchiaten von Timor. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands 1937, 2, Noord Hollandsche Publ. Co., Amsterdam, p. 369-395.
('New Permian bivalves from Timor'. Addendum to 1922 paper, based on new material collected by Ehrat in 1927 and Brouwer/ De Roever 1937 expedition, mainly from Basleo area, W Timor. Incl. Atomodesma in flysch W of Kasleo in Kekneno area)

Wanner, C. (1942)- Neue Beitrage zur Gastropoden fauna des Perm von Timor. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands, etc., 1937, 4, Noord Hollandsche Publ. Co., Amsterdam, p. 137-203.
(Permian gastropods from Timor 70 species, one of richest in world. Almost all new species, only 3 species known from elsewhere (Pakistan, Sicily, China))

Wanner, J. (1907)- Triaspetrefakten der Molukken und des Timorarchipels. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 24, p. 159-220.
('Triassic fossils from the Moluccas and Timor Archipelago'. Late Triassic molluscs, corals, ammonites faunas from Misool, Seram and Timor-Roti-Savu (generally deeper water facies, but potentially similar 'alpine'

character with mainly Halobia, Daonella, but also 'Pacific' mollusc Pseudomonotis ochotica). Timor/Roti/ Savu Triassic reminiscent of N Sumatra Upper Triassic described by Volz, 1899. First author to recognize Alpine/ Tethyan affinities of the Late Triassic bivalves and ammonites of Seram and Timor)

Wanner, J. (1910)- Uber eine merkwurdige Echinodermenform aus dem Perm von Timor. Zeitschrift Induktive Abstammungs Vererbungslehre 4, p. 123-142.
('On a remarkable echinoderm from the Permian of Timor'. Detailed description of anatomy of Permian blastoids Timorechinus spp. from E of Nikiniki and comparison to Schizoblastus permicus)

Wanner, J. (1911)- Triascephalopoden von Timor und Rotti. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 32, p. 177-196.
('Triassic cephalopods from Timor and Roti'. Early paper on Upper Triassic ammonites (Meekoceras indoaustralicum n.sp., M. timorensis n.sp., Flemingites timorensis n.sp., Cladiscites) and ribbed belemnite Aulacoceras (A. timorense n.sp.))

Wanner, J. (1912)- *Timorocrinus* nov. gen. aus dem Perm von Timor. Zentralblatt Mineralogie Geol. Palaont. 19, p. 599-605.
('Timorocrinus new genus from the Permian of Timor'. New genus name for Timorechinus miriabilis from Molengraaff collection. No locality information, presumably Basleo)

Wanner, J. (1913)- Geologie von West Timor. Geol. Rundschau 4, 2, p. 136-150.
(online at: https://www.digizeitschriften.de/dms/img/?PID=GDZPPN000450677)
(First overview of geology and stratigraphy of western part of West Timor, based on Wanner, Welter and Haniel 1909 and 1911 fieldwork. Probably first paper to suggest large-scale, Alpine-type overthrusting on Timor (Molengraaff idea around same time))

Wanner, J. (ed.) (1914-1929)- Palaontologie von Timor. Schweizerbart Verlag, Stuttgart, 16 vols.
('Paleontology of Timor'. Series of beautifully illustrated paleontological monographs on Timor fossils by German paleontologists, published over 15 year period. Some issues still available from original publisher)

Wanner, J. (1916)- Die permischen Echinodermen von Timor I. In: J. Wanner (ed.) Palaontologie von Timor 6, 11, Schweizerbart, Stuttgart, p. 1-329.
('The Permian echinoderms from Timor-1'. Major monograph on crinoids of Timor, collected in 1909 and 1911. Total 123 species (105 new) of 44 genera (28 new))

Wanner, J. (1920)- Ueber armlose Krinoiden aus dem jungeren Palaeozoikum. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 5, 2, p. 21-36.
('On arm-less crinoids from the Late Paleozoic'. Among rich Permian crinoid assemblages of Timor are 'armless' forms like Indocrinus, Sundacrinus, Embryocrinus, Hypocrinus, etc.. Also one-armed species Monobrachiocrinusgranulatus n.sp.))

Wanner, J. (1920)- Ueber einige palaeozoische Seeigelstacheln (*Timorocidaris* gen. nov. und *Bolboporites* Pander). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 22, 7-8, p. 696-712.
(online at: www.dwc.knaw.nl/DL/publications/PU00012020.pdf)
('On some Paleozoic sea urchin spines (Timorocidaris gen. nov. and Bolboporites Pander)'. In German. Timorocidaris material from Permian of Basleo, Timor)

Wanner, J. (1923)- Die permischen Krinoiden von Timor. In: H.A. Brouwer (ed.) 2e Nederlandsche Timor-Expeditie 1916, II, Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen 3, p. 1-348.
('The Permian crinoids of Timor'. Second of Wanner's major monographs on Timor crinoids. Number of species increased to 239 in 75 genera. Half of all crinoid species are poteriocrinids, with dominant genera Timorocrinus, Ceriocrinus, Parabursacrinus, etc. Most Timor crinoids are from reddish marls and red brown tuffs and interbedded limestones (=Maubisse Fm), with richest occurrences in M Permian of Basleo area near Niki-Niki. Different assemblages in Amarassi region of SW Timor suggesting slightly younger age)

Wanner, J. (1924)- Die permischen Echinodermen von Timor-II. Palaeontologie von Timor 14, 23, p. 1-81.
('The Permian echinoderms of Timor- II'. Monograph of Permian blastoids)

Wanner, J. (1924)- Die permischen Blastoiden von Timor. Jaarboek Mijnwezen Nederlandsch Oost-Indie 51 (1922), Verhandelingen 1, p. 163-233.
('The Permian blastoids of Timor'. Timor Permian blastoid faunas richest in world, both in species and numbers, with many species unknown elsewhere. Many localities, probably representing different stages of Permian. Character of faunas more European (Tethys) than American (NB: taxonomy of blastoids revised by Breimer & Macurda (1972); JTvG))

Wanner, J. (1926)- Die marine Permfauna von Timor. Geol. Rundschau 17a, Sonderband (Steinmann Festschrift), p. 20-48.
('The marine Permian fauna of Timor'. Timor Permian faunas richest of all known marine Permian faunas (~600 species) and of Tethyan affinity. Crinoids (191 species) and blastoids (32 species) particularly common. Corals dominated by solitary taxa (Timorphyllum, Verbeekiella), with rel. rare colonial taxa (Lonsdaleia, Zaphrentis, Polycoelia, Amplexus, Pachypora). Ammonites (37 species, incl. Agathiceras, Paralegoceras, Popanoceras) and brachiopods (49 species, incl. Productus, Spirigera, Retzia, Chonetes, Camarophoria, Lyttonia) mostly genera already known from elsewhere. Gastropods 60 species, bivalves 20 species, incl. Atomodesma. Four species of fusulinids, but no complicated types. Most of Permian faunas from red-brown crinoid limestones interbedded with diabase volcanic. No signs of Permian glaciations in faunas or sediments)

Wanner, J. (1929)- Neue Beitrage zur Kenntnis der Permischen Echinodermen von Timor. I. *Allagecrinus*, II. *Hypocrinites*. Dienst Mijnbouw Nederlandsch-Indie, Wetenschappelijke Mededeelingen 11, p. 1-116.
('New contributions to the knowledge of Permian echinoderms from Timor, I. Allagecrinus and II. Hypocrinites'. New crinoid species, mainly based on material from Basleo. First of long series; in German)

Wanner, J. (1930)- Neue Beitrage zur Kenntnis der Permischen Echinodermen von Timor, III. Hypocrininae, *Paracatillocrinus* und *Allagecrinus*. Dienst Mijnbouw Nederlandsch-Indie, Wetenschappelijke Mededeelingen 13, p. 1-31.
('New contributions to the knowledge of Permian echinoderms of Timor 3- Hypocrininae, Paracatillocrinus and Allagecrinus'. New crinoid species from Ehrat collection from Basleo and Niki-Niki)

Wanner, J. (1930)- Neue Beitrage zur Kenntnis der Permischen Echinodermen Von Timor, IV. Flexibilia. Dienst Mijnbouw Nederlandsch-Indie, Bandung, Wetenschappelijke Mededeelingen 14, p. 1-61.
('New contributions to the knowledge of Permian echinoderms of Timor 4- Flexibilia'. New 'flexibilia'-group crinoid descriptions and species. In German)

Wanner, J. (1931)- Das Alter der permischen Basleo-Schichten von Timor. Zentralblatt Mineralogie Geol. Palaont., B, p. 539-549.
('The age of the Permian Basleo beds of Timor'. Basleo beds believed to be Upper Permian (later authors more commonly view Basleo fauna as ~Mid Permian; JTvG). With map of fossil localities)

Wanner, J. (1931)- Neue Beitrage zur Kenntnis der permischen Echinodermen von Timor, V. Poteriocrinidae, Pt. 1, VI. Blastoidea. Dienst Mijnbouw Nederlandsch-Indie, Wetenschappelijke Mededeelingen 16, p. 1-77.
('New contributions to the knowledge of Permian echinoderms of Timor 5- Poteriocrinidae part 1')

Wanner, J. (1931)- Neue Beitrage zur Kenntnis der Permischen Echinodermen von Timor. VII. Die Anomalien der Schizoblasten. Dienst Mijnbouw Nederlandsch-Indie, Wetenschappelijke Mededeelingen 20, p. 5-37.
('New contributions to the knowledge of the Permian echinoderms of Timor- VII. The anomalies of the Schizoblasts')

Wanner, J. (1932)- Zur Kenntnis der permischen Ammonoideen-fauna von Timor. Beitrage Palaeontologie des Ostindischen Archipels III, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 67, B, p. 257-278.

('On the knowledge of the Permian ammonoid fauna from Timor. Descriptions of Permian ammonites from Basleo, W Timor, collected by Ehrat, Molengraaff, etc. No stratigraphy, biogeography)

Wanner, J. (1932)- Anisische Monophylliten von Timor. Beitrage Palaeontologie des ostindischen Archipels IV, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 67, B, p. 279-286.
('Anisian Monophyllites from Timor'. New species of M Triassic ammonite Monophyllites from Oe Masih, Basleo area, from Ehrat collection)

Wanner, J. (1937)- Neue Beitrage zur Kenntniss der permischen Echinodermen von Timor VIII- XIII. Palaeontographica, Suppl. IV, Beitrage zur Geologie Niederl.-Indien IV, 2, p. 57-212.
('New contributions to the knowledge of Permian echinoderms of Timor 8-13'. Systematic descriptions of 19 new genera and 43 new species of crinoids)

Wanner, J. (1940)- Neue Beitrage zur Kenntnis der permischen Echinodermen von Timor XIV. Poteriocrinidae, 3 Teil. Palaeontographica, Suppl. 4, Beitrage zur Geologie Niederl.-Indien IV, 3, p. 213-242.
(*'New contributions to the knowledge of Permian echinoderms of Timor 14'. More systematic descriptions of new species of crinoids)*

Wanner, J. (1940)- Neue Blastoideen aus dem Perm von Timor, mit einem Beitrag zur Systematik der Blastoiden. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands, etc., 1937, 1, Noord Hollandsche Publ. Co., Amsterdam, p. 215-277.
('New blastoids from the Permian of Timor, with a contribution to the systematics of the blastoids'. New Permian blastoid species, mainly from De Marez Oyens and Brouwer 1937 collections from Basleo, W Timor. Basleo area contains commeon microblastoids and microcrinoids. Of the 13 Permian blastoid genera known from Timor only two or three (Schizoblastus, Orbitremites) also occur outside Timor (But: Timoroblastus and Deltoblastus also in North Oman; Webster 2007; JTvG)

Wanner, J. (1940)- Neue Permische Lamellibranchiaten von Timor. In: H.A. Brouwer (ed.) Geological Expedition of the University of Amsterdam to the Lesser Sunda Islands, etc., 1937, 2, Noord Hollandsche Publ. Co., Amsterdam, p. 370-395.
(Permian bivalves collected by Ehrat in 1927 and Brouwer1937 expedition. Most from Basleo area, and are species of Atomodesma, already known from earlier Timor papers)

Wanner, J. (1941)- Neue Beitrage zur Kenntnis der permischen Echinodermen von Timor XV. Echinoidea. Palaeontographica, Suppl. 4, Beitr. Geologie Niederl.-Indien IV, 5, p. 295-314.
('New contributions to the knowledge of the Permian echinoderms of Timor 15- echinoids')

Wanner, J. (1941)- Neue Beitrage zur Kenntnis der permischen Echinodermen von Timor XVI. Poteriocrinidae 4 Teil. Palaeontographica, Suppl. 4, Beitr. Geologie Niederl.-Indien V, 1, p. 297-314.
('New contributions to the knowledge of the Permian echinoderms of Timor 16- Poteriocrinidae part 4')

Wanner, J. (1942)- Beitrage zur Palaontologie des Ostindischen Archipels XIX, Die Crinoidengattung *Paradoxocrinus* aus dem Perm von Timor. Zentralblatt Mineralogie Geol. Palaont., B, 7, p. 201-214.
('Contributions to the paleontology of the East Indies Archipelago 19- The crinoid genus Paradoxocrinus from the Permian of Timor'. In German)

Wanner, J. (1951)- Uber die Crinoidengattung *Timorocidaris*. Neues Jahrbuch Geol. Palaont., Monatshefte 1950, 12, p. 360-370.
('On the crinoid genus Timorocidaris')

Wanner, J. (with F. Weber) (1956)- Zur Stratigraphie vom Portuguesisch Timor. Zeitschrift Deutsche Geol. Ges. 108, p. 109-140.

('On the stratigraphy of Portuguese Timor'. Comprehensive discussion of Permian and Triassic facies in 'pseudoautochthonous'(flysch facies) and in nappe complexes (limestones, basic volcanics) of Timor Leste. Jurassic marine marls and limestones (with Buchia malayomaorica in nappe complex?).)

Wanner, J. & H. Sieverts (1935)- Zur Kenntnis der permischen Brachiopoden von Timor. 1. Lyttoniidae und ihre biologische und stammesgeschichtliche Bedeutung. Beitrage Palaeontologie des ostindischen Archipels 12, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 74, B, p. 201-281.
('On the knowledge of the Permian brachiopods of Timor: 1. Lyttoniidae and their biological and evolutionary significance'. Descriptions of Lyttoniidae (incl. Leptodus, Oldhaminella, Poikilosakos) from Permian of Timor (mainly Basleo), and reconstruction of lifestyle (mostly attached to other fossils, like crinoid stems, etc.). With Lyttonia catenata n.sp., Paralyttonia transiens n.gen., n.sp., P. permica n.sp, Paralyttonia girtyi, etc.))

Ware, P. & L.O. Ichram (1997)- The role of mud volcanoes in petroleum systems: examples from Timor, the South Caspian and the Caribbean. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 955-970.
(Main mud volcano fields on Timor-Roti associated with Bobonaro Complex which consists of matrix of extruded scaly clays derived from Kekneno Series. Mud volcanoes common in front of thrust zones)

Warwick, D.J. (1970)- The Mesozoic geology of the area between the Ira Bere and Namalutun Rivers, Portuguese Timor. Timor Oil Ltd. Report, 11p.
(Brief report on S coast of East Timor mapping; some photos, but no maps in report ?)

Waters, J.A. (1990)- The palaeobiogeography of the Blastoidea (Echinodermata). In: W.S. McKerrow & C.R. Scotese (eds.) Palaeozoic palaeogeography and biogeography, Geol. Soc., London, Mem. 12, p. 339-352.
(Permian blastoids widespread but most diverse in SE Asia and Australia. Timor faunas Sakmarian-Asselian and Kazanian, and most diverse and abundant. Paleoecology and stratigraphy poorly understood. Some common species between Timor and Australia, but others conspicuously absent: Angioblastus, Deltoblastus not in Australia; Australoblastus not in Timor. Reasons for local endemism unclear. Kazanian Timor fauna is last successful blastoid community before going extinct)

Webster, G.D. (1998)- Distortion in the stratigraphy and biostratigraphy of Timor; a historical review with an analysis of the crinoid and blastoid faunas. In: G.R. Shi, N.W. Archbold & M. Grover (eds.) Strzelecki Int. Symp. Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources. Proc. Royal Soc. Victoria. 110, 1-2, p. 45-72.
(Rich Permian Timor fossils poorly constrained stratigraphically. Two-thirds of Timor crinoid and blastoid genera unknown outside Timor)

Webster, G.D. (1998)- Palaeobiogeography of Tethys Permian crinoids. In: G.R. Shi, N.W. Archbold & M. Grover (eds.) Strzelecki Int. Symposium on Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources, Proc. Royal Soc. Victoria 110, 1-2, p. 289-308.
(No Permian crinoid fauna in world as diverse and abundant as Timor. Five horizons between Sakmarian-Wuchiapingian. Australian faunas generally considered as cooler water faunas, >35°S. Timor warm-water shelf. In Artinskian greater similarity beween W Australia and Timor than between W and E Australia)

Webster, G.D. (2012)- A canted-cup Permian crinoid *Exotikocrinus* n. gen. (Crinoidea, Dichocrinidae) from Timor with comments on canted or inclined radial summits. Palaeoworld 21, p. 64-68.
(New canted-cup crinoid from W Timor described as Exotikocrinus dochmos n.gen. and n.sp.)

Webster, G.D. & S.K. Donovan (2012)- Revision of two species of ?*Ulocrinus* and a new pelecocrinid crinoid from West Timor. Palaeoworld 21, 2, p. 108-115.
(Two cladid crinoid species of ?Ulocrinus described by Wanner (1924, 1937) reinterpreted as cladid crinoid and renamed as Katerocrinus indicus n. gen., n. comb. and Dochmocrinus conoideus n. gen., n. comb.)

Webster, G.D. & S.K. Donovan (2012)- Before the extinction- Permian platyceratid gastropods attached to platycrinitid crinoids and an abnormal four-rayed *Platycrinites* s.s. *wachsmuthi* (Wanner) from West Timor. Palaeoworld 21, 3-4, p. 153-159.
(Examples of gastropods attached to Permian platycrinitid camerate crinoids from W Timor)

Webster, G.D. & S.K. Donovan (2015)- Review and revision of the West Timor Permian *Graphiocrinus* species of Johannes Wanner. Palaeoworld 24, p. 497-522.
(26 species of crinoid Graphiocrinus described from Permian of Timor by Wanner (1916-1949), but 12 belong to other genera, many others considered indeterminate members of several families. New taxa introduced)

Weiler, W. (1932)- Uber Fischreste aus der Kreide von Timor. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 67, p. 287-304.
('On fish remains from the Cretaceous of Timor'. Shark teeth, believed to be of Late Cretaceous age, from red clays above Triassic Halobia Limestone in Noil Tobee, collected by Ehrat. Incl. Strophodus, Lamna, Scapanorhynchus raphiodon, Odontapsis, etc.. Branson 1937 suggested possible Permian elements(?))

Wells, N. (2005)- Redefining the Lolotoi Formation, Timor-Leste. PESA News, 12/2004, p. 36 *(Abstract only; Geology in Timor Symposium)*
(Greenschist-epidote facies metamorphism in E Timor Lolotoi Fm. Mafic precursor basalts oceanic crust? Three stages of ductile deformation and three types of brittle deformation. Fault trends 100º, 050º and N-S. Basal contact of Lolotoi Fm is >100m fault gouge with underlying Eocene units. Ductile shear zone separates Lolotoi Fm from overlying Cablac Fm. Lolotoi Fm significantly deformed prior to juxtaposition with Cablac Fm. Slivers of Lolotoi Fm involved in ductile shear zone and intercalated with base Cablac Fm suggest these two units were structurally juxtaposed. Lolotoi Fm and Aileu Fm not similar, but Mutis Complex of W Timor broadly similar)

Welter, O.A. (1914)- Die Obertriadischen Ammoniten und Nautiliden von Timor. In: J. Wanner (ed.) Palaeontologie von Timor, Schweizerbart, Stuttgart, 1, 1, p. 1-258.
(online at: http://mmtk.ginras.ru/pdf/welter1914_t3_timor.pdf)
('The Upper Triasic ammonites and nautiloids from Timor'. Monograph of ammonites collected by Molengraaff 1910-1912, Wanner 1911 and Weber 1911 W Timor expeditions. Rich assemblages with 205 Carnian-Norian species, mainly from blocks of 'Halstatter Facies' red limestone (~2m thick fossil accumulation without terrigenous sediment) from S half of W Timor. Incl. Sirenites malayicus n.sp. Some ammonites with black manganese staining. Remarkable similarities to Mediterranean and Himalayan ammonites. In N of Timor age-equivalent Norian 'Fatu' coral limestones (Both these U Triassic carbonate facies considered part of 'allochthonous' nappe complex by Wanner 1956 and others; JTvG))

Welter, O.A. (1915)- Die Ammoniten und Nautiliden der Ladinischen und Anisischen Trias von Timor. In: J. Wanner (ed.) Palaontologie von Timor 5, 10, Schweizerbart, Stuttgart, p. 71-136.
('The ammonites and nautiloids from the Ladinian and Anisian Triassic of Timor'. Rich assemblage of Middle Triassic ammonites (>27 genera) from blocks of thin, reddish, bathyal Triassic cephalopod limestones called 'Halstatt Facies' from various Timor localities, collected by Wanner and Molengraaff 1909-1911 expeditions. Associated with white tuffs and ammonites commonly with black iron-manganese coating. Ammonite assemblages more 'Alpine' than 'Asian' in character)

Welter, O.A. (1922)- Die Ammoniten der unteren Trias von Timor. In: J. Wanner (ed.) Palaeontologie von Timor 11, 19, Schweizerbart, Stuttgart, p. 83-154.
('The ammonites from the Lower Triassic of Timor'. Monograph on high-diversity (26 genera, 71 species) Lower Triassic ammonites from various Timor localities, collected by Wanner and Molengraaff 1909-1911 expeditions. Oldest horizon is yellow Meekoceras limestone from Kapan and Nifoekoko near Niki-Niki (overlying dark red Permian limestone). Other blocks are limestones with Owenites egrediens from Bihati, Anasiberites multiformis from Noil Saban and Ophiceras crassecostatum from Fatu Toekoenenu. All blocks of condensed 'Hallstatt facies' with tuffs and black manganese coating. Many similarities with Himalayan-Mediterranean Triassic faunas. No locality maps)

Welter, O.A. (1922)- Nachtrag zu den obertriadischen Ammoniten von Timor. In: J. Wanner (ed.) Palaeontologie von Timor 11, 19, Schweizerbart, Stuttgart, p. 155-159.
('Supplement to the Upper Triassic ammonites from Timor'. Descriptions of 4 additional Early Triassic ammonoid species. Genus Amarassites first described from Timor now also found in Alps. Timor 'Bihati C' fauna has more Mediterranean than Asian elements)

Wensink, H. & S. Hartosukohardjo (1990)- The paleomagnetism of Late Permian- Early Triassic and Late Triassic deposits on Timor: an Australian origin? Geophysical J. Int. 101, p. 315-328.
(Paleomagnetic work on non-recrystallized Permian Maubisse Fm red limestones from Kelamenanu and Suanae suggest paleolatitude of ~39° (averages of two localities 37.7° and 43.2°) and 55° clockwise rotation. Late Triassic Aitutu radiolarian calcilutites from Maubesi River and Sabau with Halobia and quartz arenites: paleolatitude ~33° and clockwise rotation of 25°. Results suggest presence of displaced terrane of Australian origin on Timor island)

Wensink, H. & S. Hartosukohardjo (1990)- Paleomagnetism of younger volcanics from Western Timor, Indonesia. Earth Planetary Sci. Letters 100, 1-3, p. 94-107.
(Eocene Metan volcanics from Mutis Massif, W Timor (= allochthonous Banda Terrane), formed at ~17°N, possibly on continental fragment that broke away from Gondwana in Mesozoic, shifted to SE Asia, broke away in Eocene and collided with Australia at ~3 Ma. Late Miocene obducted Manamas Fm of NW coast (=Oecussi volcanics?) pillow lavas and arc volcanics suggest paleolatitude of 8° and 45° CCW rotation of Timor in last 3 My)

Wensink, H., S. Hartosukohardjo & K. Kool (1987)- Paleomagnetism of the Nakfunu Formation of Early Cretaceous age, western Timor, Indonesia. Geologie en Mijnbouw 66, 2, p. 89-99.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0V3liNFNEeW9NdDg/view)
(Early Cretaceous (Albian?) Nakfunu Fm bathyal red clays in S Central Timor Kolbano accretionary prism probable paleolatitude of ~19-21°, probably in S Hemisphere. Today at 10°S, suggesting original site of deposition of Nakfunu sediments were 10° S of present position on Timor and sediments moved ~1200 km N since deposition in an oceanic environment. but Australian NW Shelf was closer to 30-40° S at that time, so probably formed well N of Australian Shelf)

Wichmann, A. (1882)- Gesteine von Timor nach Sammlungen von Macklot, Reinwardt und Schneider. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 2, E.J. Brill, Leiden, p. 1-172.
(online at: www.repository.naturalis.nl/document/552382)
(Also reprinted in three parts in Jaarboek Mijnwezen 1882, Wetenschappelijk Gedeelte, p. 181-252, 1884, Wetenschappelijk Gedeelte, p. 231-284 and 1887, Wetenschappelijk Gedeelte, p. 46-93)
('Rocks from Timor and some adjacent islands' Descriptions of rocks collected by Macklot, Reinward and Schneider)

Wichmann, A. (1887)- Gesteine von Pulu Samauw und Pulu Kambing. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 2, E.J. Brill, Leiden, p. 173-182. *(also in Jaarboek Mijnwezen 1887, Wetenschappelijk Gedeelte, p. 94-103)*
(online at: www.repository.naturalis.nl/document/552401)
('Rocks from Samauw and Kambing Islands'. Small islands W of Kupang, W Timor. Pulau Kambing hill composed of sandstone and mud volcano Samauw also with sandstones, Tertiary limestones and also small mud volcanoes. No maps, figures)

Wichmann, A. (1887)- Gesteine von der Insel Kisser. Sammlungen Geol. Reichs-Museums Leiden, Ser. 1, 2, E.J. Brill, Leiden, p. 183-208.
(online at: www.repository.naturalis.nl/document/552441)
('Rocks from Kisar Island'. Kisar NE of Timor, sampled by Reinwardt in 1821, has core of metamorphic rocks, (phyllite, mica schist, amphibolite), surrounded by Late Tertiary limestone terraces)

Wichmann, A. (1887)- Gesteine von der Insel Kisser. Jaarboek Mijnwezen Nederlandsch Oost-Indie 1887, Wetenschappelijk Gedeelte 3, p. 104-128.
('Rocks from Kisar Island', NE of Timor. Same as paper above)

Wichmann, A. (1892)- Bericht uber eine im Jahre 1888-89 im Auftrag der Niederlandischen Geographischen Gesellschaft ausgefuhrte Reise nach dem Indischen Archipel, part 4, Timor. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap ser. 2, 9, p. 161-221.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001625001:pdf)
(Part 3 of Wichmann geographic narrative of 1888-1889 trip for Netherlands Geographic Society (Timor, Rotti Kambing and Samau). Mainly geographic descriptions, with some of earliest observations on Timor geology. First significant collection of Permian- Jurassic fossils from E Indonesia(Timor, Roti), described by Rothpletz 1891, 1892. Also report of crystalline schists from Lakan, which Wichmann believes to be part of belt of metamorphic rocks that continues to islands of Kisar, Leti, Babar, etc. to Buru (p. 217))

Wichmann, A. (1892)- Bericht uber eine im Jahre 1888-89 im Auftrag der Niederlandischen Geographischen Gesellschaft ausgefuhrte Reise nach dem Indischen Archipel, part 5. Rotti. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap, ser. 2, 9, p. 222-276.
(Final part of Wichmann geographic narrative of 1888-1889 trip for Netherlands Geographic Society (Rotti Kambing and Samau))

Wichmann, A. (1892)- Die Insel Rotti. Petermanns Geogr. Mitteilungen 38, p. 97-103.
('The island Rotti'. Early geographic and geological observations of Roti island, SW of Timor. Geologically Roti is relatively simple, and mainly a clump of Triassic, covered by Neogene foraminifera marl. Triassic sandstones overlain by Upper Triassic limestone with 'alpine' Monotis salinaria, Halobia spp. (described by Rothpletz 1891). Mud volcanoes on Landu Peninsula in NE Roti with sedimentary rock clasts and Permian, Triassic and E-M Jurassic (Arietites, Harpoceras, Belemnites gerardi) macrossils.)

Wichmann, A. (1892)- Over het voorkomen van Alpine Trias op Timor (volgens fossielen verzameld door H.F.C. ten Kate). Natuurkundig Tijdschrift Nederlandsch-Indie 51, p. 446-447.
('On the occurrence of Alpine Triassic on Timor'. Brief note on the discovery of Triassic Halobia mollusc limestone from Timor, in float from Halemea River or Mota Muruk, Fialarang SSE of Atapupu, collected by Ten Kate. With abundant thin Monotis salinaria, a characteristic species of Norian stage in Alpine Triassic (= first record of Triassic sediments in Indonesia))

Winkler Prins, C.F. (2008)- Some spiriferid brachiopods from the Permian of Timor (Indonesia). In: G.R. Shi et al. (eds.) A memorial issue in honour of Professor Neil W. Archbold, Proc. Royal Soc. Victoria 120, 1, p. 389-400.
(online at: http://repository.naturalis.nl/document/544734)
(Revision of Permian neospiriferine and spiriferidine brachiopods from Timor in Leiden collections: Spirifer (Crassispirifer) timorensis Martin 1881 and Crassispirifer broilii Waterhouse 2004. New species Latispirifer archboldorum (ex-Spirifer fasciger) from near Noki-Niki. New genus Archboldiella based on aberrant species Spirifer basleoensis Hayasaka & Hosono 1951)

Wittouck, S.F. (1937)- Exploration of Portuguese Timor. Report of Allied Mining Corporation to Asia Investment Company, Ltd., Asia Investment Company, Ltd., Kolff & Co., Batavia, p. 1-107.
(Monograph on geology of Portuguese Timor, and the account of mineral and oil exploration work by Allied Mining. With 22 full-page maps and sketch-maps and two 1:250,000 scale maps of topography and geology)

Wittouck, S.F. (1938)- Exploration of Portuguese Timor. The Geographical J. 92, 4, p. 343-350.
(Mainly geographic summary of Timor Leste, compiled during 1936-1937 survey by Belgian mining engineer Wittouck. Oil and gas seeps in S coastal area in Aliambata, Iriamo, Suete and Suai districts)

Yamagiwa, N. (1963)- Some Triassic corals from Portuguese Timor (Palaeontological study of Portuguese Timor, I). Mem. Osaka University, Lib. Arts Educ. Branch, Nat. Sci. Mem. 12, p. 83-87.

(Short paper on U Triassic corals collected in 1961 from Fatu Laculequi near Pualaca in C Timor Leste)

Yensusnimar, D., J. Setyoko & L. Ginting (2017)- Biomarker characterization of mud volcano seepage (oil seep) and sediment samples from Atambua Field. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 2p. *(Extended Abstract)*
(Biomarker compositions of oils from Masin Lulik mud volcano seep and surface sediments from the Atambua area, onshore Timor, show signatures of marine source facies (Pr/Ph 1.30- 1.83, absence of land plant biomarker signatures such as bicadinanes and oleananes). Low thermal maturity of oils (early mature) and surface sediments (immature). No information on sample locations or ages of rocks)

Zobell, E.A. (2007)- Origin and tectonic evolution of Gondwana sequence units accreted to the Banda Arc: a structural transect through Central East Timor. M.Sc. Thesis Brigham Young University, p. 1-83. *(Unpublished)* *(online at: http://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=1897&context=etd)*
(Petrographic analyses of Permian- Jurassic 'Gondwanan sequence' in E Timor. Detrital zircons from 'Asian' Banda unit as young as 80 Ma. Zircons from Triassic 'Gondwana sequence' no younger than ~234 Ma and with peak ages at 301 Ma and 1873 Ma, also some Archean ages. QFL ratios of Triassic greywacke of Timor suggest proximal, syn-rift, intracratonic or recycled orogen source, from NE. Mount Isa region to E has most similar peak U/Pb zircon ages, but extension of this terrane to W, which would have rifted away during Jurassic breakup, is required to account for immaturity of sandstones)

Zobell, E.A. (2007)- New insights into the stratigraphic and structural evolution of the active Banda orogen. GSA Rocky Mountain Section, 59th Ann. Mtg, 2007, p. *(Abstract only)*
(Banda arc-continent collision comprised of Australian passive margin cover sequences and portions of uplifted Banda forearc. Uplifted Banda forearc units indicate Asian affinity with maximum age of 80 Ma. Detrital zircons from sandstones of Australian continental margin sequences have peak ages at 237-353 Ma and 1788-1895 Ma. Provenance analysis of Triassic Australian-affinity greywacke consistent with proximal syn-rift intracratonic or recycled orogen source, probably from N. Structural measurements indicate N-NW to S-SE vergence direction and 30-40% shortening. Banda forearc is 200 km wide N of Savu, and completely over ridden by retro-wedge thrusting north of E Timor. Structural models constructed to test different geometries)

VII.5. Timor Sea, Indonesian Sahul Platform

Akutsu, T. (2009)- Abadi gas field, Masela PSC block, West Arafura Sea, Indonesia. SEAPEX Exploration Conference, Singapore 2009, p.

Ambrose, G.J. (2004)- The ongoing search for oil in the Timor Sea, Australia. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 3-22.

Aswan, A., Y. Zaim, K. Kihara & K. Hadianto (2012)- Depositional facies of Plover Formation in the Abadi Field, Eastern Indonesia based on core sedimentology. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art 50729, 6p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2012/50729aswan/ndx_aswan.pdf)
(Summary of poster on core sedimentology study of M Jurassic Plover Fm gas reservoirs of Abadi Field. Cores quartzoze sandstone, siltstones, and claystones, generally rich in ichnofossils. Estuarine- shoreface facies)

Audley-Charles, M.G. (1966)- The age of the Timor Trough. Deep Sea Research 13, 4, p. 761-763.
(Timor Trough persisted as deep water zone between Timor and Australia since Lower Eocene)

Baillie, P.W., G. Duval & C. Milne (2013)- Geological development of the western end of the Timor Trough. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2013, p. 1-46. *(Abstract + Presentation)*
(online at: www.seapex.org/im_images/pdf/Simon/11%20Peter%20Baillie%20Timor%20Trough%20SEC2013.pdf)
(Examples of regional seismic lines over W Timor Trough, here interpreted as foredeep produced by loading following arrival of Banda Arc and is topographic expression of down-flexed/ thrust-loaded Australian margin, not subduction trench. 'Accretionary prism' of S Timor/ N Timor Trough explained as gravitational collapse)

Baillie, P.W., T.H. Fraser, R. Hall & K. Myers (2004)- Geological development of eastern Indonesia and the northern Australia collision zone: a review. In: G.K. Ellis et al. (eds.) Timor Sea Symposium, Darwin 2003, Northern Territory Geol. Survey, p. 539-550.
(N margin Australia divergent margin over most of time. Continental fragments separated in E. Devonian (opening of Paleo-Tethys), late E Permian (opening of Meso-Tethys) and Late Triassic- Late Jurassic (opening of Ceno-Tethys ocean). Passive margin, facing open ocean since end-Jurassic. Late Triassic Carnian-Norian succession of NW Shelf was deposited following regionally extensive period of tectonism, erosion and uplift along edges of craton (Fitzroy Movement), related either to breakup events along Gondwanan margin or to docking of continental blocks along New Guinea subduction margin)

Baillie, P. & C. Milne (2014)- New insights into prospectivity and tectonic evolution of the Banda Arc: evidence from broadband seismic data. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-100, 5p.
(On new seismic data from Timor Trough, S of Timor island. Timor Trough is recently downflexed Australian continental margin)

Barber, P.M., P.A. Carter, T.H. Fraser, P. Baillie & K. Myers (2003)- Palaeozoic and Mesozoic petroleum systems in the Timor and Arafura seas, Eastern Indonesia. Proc. 29th Ann. Conv. Indon. Petroleum Assoc., p. 485-500.
(On hydrocarbon prospectivity in Paleozoic- Mesozoic S of Babar- Tanimbar. New seismic links Australian gas discoveries of Sunrise and Evans Shoal with Abadi accumulation and open acreage in Indonesian waters. Malita and Calder Grabens charge kitchens from mature E-M Jurassic Plover Fm source rocks. Paleozoic Basins could contain mature oil-prone source rocks of Cambrian, Devonian and Carboniferous age)

Barber, P.M., P.A. Carter, T.H. Fraser, P. Baillie & K. Myers (2004)- Under-explored Palaeozoic and Mesozoic petroleum systems of the Timor and Arafura Seas, northern Australian continental margin. In: G.K. Ellis et al. (eds.) Timor Sea Symposium, Darwin 2003, Northern Territory Geol. Survey, p. 143-154.
(Similar to Barber et al. (2003), above)

Bolli, H.M. (1977)- Paleontological-biostratigraphical investigations, Indian Ocean Sites 211-269 and 280-282, DSDP Legs 22-29. In: J.R. Heirtzler et al. (eds.) Indian Ocean geology and biostratigraphy, AGU Spec. Publ. 9, Chapter 13, p. 325-338.
(Review of 73 papers on biostratigraphy of six DSDP holes in SE Indian Ocean/ Timor Sea)

Brooks, D.M., A.K. Goody, J.B. OöReilly & K.L. McCarty (1996)- Bayu/Undan gas-condensate discovery: western Timor gap zone of cooperation, Area A. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 1996, p. 142-160.

Brown, S. (1992)- The Mesozoic stratigraphy of the Timor Gap and its bearing on the hydrocarbon potential of Eastern Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 553-574.
(Discussion of Timor Gap Mesozoic stratigraphy and comparisons to E Indonesia islands stratigraphy. Not much detail)

Castillo, D.A., D.J. Bishop & M. de Ruig (2001)- Fault seal integrity in the Timor area: prediction of trap failure using well-constrained stress tensors and fault surfaces interpreted from 3D seismic. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 261-288.
(In Laminaria High and Nancar Trough areas many hydrocarbon traps underfilled or breached. Ability of fault to behave as seal controlled in part by the principal stress directions and magnitudes and fault geometry. Regional stress analysis indicates non-uniform strike-slip stress regime, with orientation of maximum principal horizontal stress (SHmax) varying from N-S compression in N to NE-SW farther S)

Castillo, D.A., R.R. Hillis, K. Asquith, M. Fischer (1998)- State of stress in the Timor Sea area, based on deep wellbore observations and frictional failure criteria: application to fault-trap integrity. In: Proc. The sedimentary basins of Western Australia II, Petroleum Expl. Soc. Australia (PESA), p. 325- 340.
(SHmax stress direction NE-SW to N-S, subparallels convergence direction between Australia and Indonesia)

Ciftci, N.B. & L. Langhi (2012)- Evolution of the hourglass structures in the Laminaria High, Timor Sea: implications for hydrocarbon traps. J. Structural Geol. 36, p. 55-70.
(Hourglass structure is older horst block with superimposed younger graben. Bounding faults of horst and graben blocks separate conjugate fault systems formed by two episodes of extension: (1) Late Jurassic–Early Cretaceous and (2) M Miocene- Pliocene)

Cunneen, J.P. (2005)- Cenozoic tectonics of the Timor Sea, northwest Australia. Ph.D. Thesis University of Western Australia, Perth, p. 1- 249. *(Unpublished)*

Curry, J.S., J.M. Lorenzo & G.W. O Brien (2000)- Polarity of continent-island arc collision since Late Miocene; Timor Sea, N.W. Shelf, Australia. In: AAPG 2000 Ann. Meeting, Expanded Abstracts, p. 35.
(Late Miocene-to-Recent collision of NW Australian shelf with Banda Island Arc results in downward flexing of Australian lithosphere toward arc. Vertical extent of normal faulting on shelf from SW of Timor to S of Tanimbar indicates collision began W of Timor in Late Miocene, progressed E during Pliocene, and continues eastward. Normal faults W of 124.5°E terminate vertically in Miocene section. Normal faults from 124.5°E to 125.5 °E terminate at Miocene-Pliocene boundary. from 125.5°E to 128°E, faults terminate in E Pliocene, from 128°E to 131°E terminate at or near sea floor)

Darman, H. (2012)- Seismic expression of the Timor-Tanimbar Trough, Eastern Indonesia. Berita Sedimentologi 24, p. 39-47.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-24-timor-and-arafura-sea.html)
(Examples of seismic lines across Timor-Tanimbar Trough, showing subducting Australian Plate and Banda forearc accretionary wedge complexes)

Ellis, G. (2007)- Hydrocarbon entrapment in Triassic to Late Jurassic reservoirs in the Timor Sea, Australia- new insights. Australian Petrol. Explor. Assoc. (APEA) J. 47, p. 37-51.

(Oil-filled fluid inclusions at quartz overgrowth/ detrital quartz boundaries and in fractures cutting quartz grains used as evidence of paleo-oil columns in Triassic- Late Jurassic. Other indications of paleo-oil include sample fluorescence, elevated resistivity and reservoir diagenesis. Structures in Timor Sea have undergone more than one phase of oil entrapment and leakage, with each oil phase potentially from different oil source)

Gartrell, A.P. & M. Lisk (2002)- Stress history analysis from 3d restoration of faults: initial results and implications for fault reactivation and hydrocarbon leakage in the Timor sea region, Australia. AAPG Hedberg Research Conference, S Australia 2002, AAPG Search and Discovery Art. 90009, p. 97-99.
(online at: www.searchanddiscovery.com/abstracts/pdf/2002/hedberg_australia/images/ndx_gartrell.pdf)
(Fault reactivation related to late Tertiary collision of Australian continent with Banda Arc responsible for common occurrence of breached hydrocarbon traps in Timor Sea. Two stages of collision at Timor: (1) Late Miocene (8 Ma) when transitional Australian continental crust reached subduction system; (2) true continental crust entered subduction system in M Pliocene, and Timor Trough evolved as foredeep basin in response to imbricate thrust loading on Australian margin)

George, S.C., P.F. Greenwood, G.A. Logan, R.A. Quezada, L.S.K. Pang, M. Lisk et al. (1997)- Comparison of palaeo oil charges with currently reservoired hydrocarbons using molecular and isotopic analyses of oil-bearing fluid inclusions: Jabiru oil field, Timor Sea. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 37, p. 490-504.

George, S.C., M. Lisk, P.J. Eadington & R.A. Quezada (2002)- Evidence for an early, marine-sourced oil charge to the Bayu gas-condensate field, Timor Sea. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium 3, p. 465-474.
(Oil inclusions in Bayu 1 Jurassic sandstones suggest paleo-oil column of at least 20m below 46-53m paleo-gas cap (currently 155m gas column). FI oil from marine-influenced, less clay-rich source rock. FI oil maturity mid-oil window (Ro ~0.75%), condensate higher maturity (~0.9%). Compositions and maturity data consistent with early expulsion from marine organic matter in Echuca Shoals Fm, followed by expulsion of condensate from more terrestrial Elang/ Plover Fms)

George, S.C., M. Lisk & P.J. Eadington (2004)- Fluid inclusion evidence for an early, marine-sourced oil charge prior to gas-condensate migration, Bayu-1, Timor Sea, Australia. Marine Petroleum Geol. 21, p. 1107-1128.

George, S.C., T.E. Ruble, H. Volk, M. Lisk, M.P. Brincat et al. (2004)- Comparing the geochemical composition of fluid inclusion and crude oils from wells on the Laminaria High, Timor Sea. In: G.K. Ellis et al. (eds.) Timor Sea Petroleum Science, Proc. Timor Sea Symposium, Darwin 2003, Northern Territory Geol. Survey, Spec. Publ. 1, p. 203-230.

Hardjono, W. Satoto & R. Gunawan (1996)- New concept for hydrocarbon exploration in the "Zone C" Timor Gap and surroundings, Timor Sea Indonesia. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 346-384.

Harrowfield, M., J. Cunneen, M. Keep & W. Crowe (2003)- Early-stage orogenesis in the Timor Sea region, NW Australia. J. Geol. Soc. London 160, p. 991-1001.
(Neogene collision between Australian, Eurasia and Pacific plates coeval with growth of depocentres in Timor Sea. Distortion of pre-tectonic (Aptian- Oligo-Miocene) sequences indicates trough subsidence coupled to uplift of outboard highs, amplifying basement topography and no structural inversion. At shallow levels, normal faulting accommodated flexure. Shortening of NW Shelf accommodated oblique convergence between Australia and Banda arc and transcurrent component of this deformation was partitioned outboard. No details on timing)

Honda, H., H. Kobayashi, T. Ando, K. Kihara & H.M. Banjarnahor (2006)- History of the Timor Through, West Arafura Sea and movement of the Australian Plate. Proc. Jakarta 2006 Int. Geosc. Conf., Indon. Petroleum Assoc., Jakarta06-PG-15, 6p. *(Extended Abstract)*

Hughes, B.D., K. Baxter, R.A. Clark, & D.B. Snyder (1996)- Detailed processing of seismic reflection data from the frontal part of the Timor Trough accretionary wedge, eastern Indonesia. In: R. Hall & D. Blundell (eds.) Tectonic Evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 75-83.
(DAMAR deep seismic line across Banda arc E of Timor shows normal faulting and deepening into Timor Trough of Australian margin. Overriding imbricated thrust slices of accretionary wedge of S slope of Timor island composed of coherent thrust slices from subducting Australian margin, not incoherent melange)

Jones, W., A. Tripathi, R. Rajagopal & A. Williams (2011)- Petroleum prospectivity of the West Timor Trough. Petroleum Expl. Soc. Australia (PESA) News 114, p. 61-65.
(Petroleum prospectivity of W Timor Sea, S of W Timor Island. Potential for Triassic- Jurassic source kitchens. Main risks likely to be charge issues and reservoir quality (particularly for Permian carbonate reservoirs). Also possible trapping mechanisms of Jurassic sandstones within accretionary prism on Timor side of Trough)

Keep, M., M. Clough & L. Langhi (2002)- Neogene tectonic and structural evolution of the Timor Sea region, NW Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2. Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, p. 341-352.
(Neogene deformation in Timor Sea flexure-dominated in NE, transtension-dominated to SW. Cretaceous and Upper Jurassic ductile shales and claystones cause detachment of basement from Neogene. Two major and one minor Neogene structural reactivation events: Earliest Miocene (25-23 Ma; rel. minor; =New Guinea collision?), Late Miocene (11- 5.5 Ma; related to Sumba collision/ uplift or New Guinea collision/ folding; 8 Ma seems widespread Indo-Australian event) and late E Pliocene (~3 Ma- present-day; =Timor collision). Late Miocene event widespread, with synchronous deformation through Indo-Australian plate. Dominantly right-lateral transpression in Browse, left-lateral transtension in Timor Sea)

Kihara, K., R. Feraldo, K. Chalik, T. Naito & N. Morita (2012)- Paleozoic to Mesozoic tectonostratigraphy of the Abadi gas feld, Eastern Indonesia. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. IPA, Jakarta, IPA12-G-057, p. 1-12.
(Abadi area of Timor Sea tectonostratigraphic elements oriented NNW-SSE in Paleozoic, NNE-SSW in Upper Triassic- Jurassic and NE-SW in Upper Jurassic-Cretaceous. Main sediment supply in Triassic-Jurassic from N of Abadi field, with major turnover of direction E Cretaceous due to continental breakup. U Triassic- Jurassic syn-rift sequences in rift basins with NE-SW trend (Malita Graben to SW) or NNE-SSW trend (Calder Graben))

Kihara, K., H. Nagura & H. Honda (2007)- Jurassic coastal to shallow marine sandstone reservoir in present deep water; an example from the Abadi gas field, Indonesia. In: Exploration and exploitation in deep water. J. Japanese Assoc. Petroleum Technologists 72, 1, p. 65-75.
(online at: /www.jstage.jst.go.jp/article/japt/72/1/72_1_65/_pdf)
(In Japanese, with English summary. Coastal to shallow-water Plover Fm sandstone in Abadi gas-field reservoir now in deep water. Plover Fm M Jurassic (partly lowermost U Jurassic), subdivided into upper and lower sandstones by Bathonian MFS. Upper unit main reservoir. Plover Fm two remarkable, rapid deepening events in Late Cretaceous (thick, muddy deltaic succession) and Pleistocene (deepening of Timor Trough))

Londono, J. & J.M. Lorenzo (2004)- Geodynamics of continental plate collision during late Tertiary foreland basin evolution in the Timor Sea: constraints from foreland sequences, elastic flexure and normal faulting. Tectonophysics 392, p. 37-54.
(Modeling of flexure of Australian NW margin as result of Timor collision. Late Tertiary (~6.5-1.6 Ma) foreland basin subsidence of Australian lithosphere propagates from SW to NE in Timor Sea, as consequence of oblique collision between Eurasian and Australian plates. Normal faulting related to bending implies some inelastic yielding. Flexural models indicate at least 570 km of Australian plate was flexed, primarily by tectonic loading of Timor Island and at least 100 km of plate subducted. Modeled forebulge uplift ~300m between ~200-400 km away from Timor Trough trench)

MacDaniel, R.P. (1988)- The geological evolution and hydrocarbon potential of the western Timor Sea region. Australian Petrol. Explor. Assoc. (APEA) J. 28, p. 270-284.

Mantle, D.J. (2005)- New dinoflagellate cyst species from the upper Callovian- lower Oxfordian *Rigaudella aemula* Zone, Timor Sea, northwestern Australia. Review Palaeobotany Palynology 135, 3, p. 245-264.
(Four new late Callovian- earliest Oxfordian dinocyst species from Bayu Undan and Challis fields)

Mantle, D. (2006)- Palynology, sequence stratigraphy and palaeoenvironments of Middle to Late Jurassic strata, Bayu-Undan Field, Timor Sea region. Ph.D. Thesis, University of Queensland, p. 1-210. *(Unpublished)*
(Palynoly of U Plover, Elang, and lower Frigate Fms in Bayu-Undan Field, Timor Sea. Palynostratigraphic sequence previously assessed as latest Bathonian- E Oxfordian. Dinoflagellate acme events coincident with marine flooding surfaces and enable precise correlation across field. Elang Fm three third order sequences)

Mantle, D.J. (2009)- Palynology, sequence stratigraphy, and palaeoenvironments of Middle to Upper Jurassic strata, Bayu-Undan Field, Timor Sea region, Part One. Palaeontographica B280, 1-3, p. 1-86.
(Palynology of latest Bathonian- E Oxfordian uppermost Plover, Elang and Lower Frigate Fms in Bayu-Undan field. 96 spore-pollen and 32 dinoflagellate (Microdinium-Voodooia) species)

Mantle, D.J. (2009)- Palynology, sequence stratigraphy, and palaeoenvironments of Middle to Upper Jurassic strata, Bayu-Undan Field, Timor Sea region, Part Two. Palaeontographica B280, 4-6, p. 87-212.
(Continuation of Mantle 2009 above. Descriptions of 55 dinoflagellate species (Rigaudella to Woodinia), 17 acritarch, and prasinophyte phycomata taxonomy, Jurassic biostratigraphy, sequence stratigraphy, and paleoenvironments. Elang Fm three 3rd-order sequences. Systems tracts with distinctive palynomorph or palynodebris assemblages. Microphytoplankton diversity increases through transgressive systems tracts to peak diversity at maximum flooding surface. Ternia balmei, Meiourogonyaulax group, Ctenidodinium group and Rigaudella group represent approximate gradation from very nearshore to offshore environments or possibly an increase in salinities from euryhaline to stenohaline conditions)

Mantle, D.J. & J.B. Riding (2012)- Palynology of the Middle Jurassic (Bajocian-Bathonian) *Wanaea verrucosa* dinoflagellate cyst zone of the North West Shelf of Australia. Review Palaeobotany Palynology 180, p. 41-78.
(Marine and terrestrial palynomorphs from M Jurassic Wanaea verrucosa dinoflagellate cyst zone in Perseus-3A, Sunrise-2 and Sunset W1 wells in N Carnarvon and Bonaparte basins. Three subzones. Late Bajocian- E Bathonian age (slightly older than previous Helby and Partridge age calibrations). Associated spore-pollen assemblages transitional from upper Dictyotosporites complex to lower Contignisporites cooksoniae zones)

Matsui, R., E. Shinbo, M. Omokawa & T. Zushi (2009)- Quartz cementation and reservoir quality of the Plover Sandstone in the Abadi gas field. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc., Jakarta, IPA09-G-157, 10p.
(Quartz overgrowths main cause for porosity and permeability reduction of M Jurassic Plover Fm sandstones in Abadi Field. Best porosities 15-20%)

Matsuura, S. (2009)- Rock physics modeling optimizing well log and core data for the Abadi gas field. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-028, 14p.
(Rock physics of Abadi 2000 gas discovery in M Jurassic Plover Sst. Seven wells by 2008)

Matsuura, S., S. Saito, Y. Ishii, H. Honda, A. Kato & T. Yagi (2005)- Seismic reservoir characterization of the Abadi gas field, Masela PSC Block, West Arafura Sea, Eastern Indonesia. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 505-514.
(Seismic inversion work on 2000 Abadi gas discovery. Deltaic to shallow marine Plover Fm sandstone primary reservoir. Seismic inversion provides high resolution lithological contrasts that correspond to stratigraphic boundaries. Reserve estimates and uncertainty repeatedly updated)

McKirdy, D.M. & P.J. Cook (1980)- Organic geochemistry of Pliocene-Pleistocene calcareous sediments DSDP Site 262, Timor Trough. American Assoc. Petrol. Geol. (AAPG) Bull. 64, p. 2118-2138.
(Late Pliocene- Holocene calcareous pelagic sediments of Site 262, S of SW Timor, 442m thick and rel. rich in organic matter (up to 1.5% TOC) of mixed marine- continental origin. Progressive uphole increase of TOC and of terrigenous vascular plant material. Biogenic methane probably present as solid methane hydrate)

McLennan, J.M., J.S. Rasidi, R.L. Holmes & G.C. Smith (1990)- The geology and petroleum potential of the western Arafura Sea. Australian Petrol. Explor. Assoc. (APEA) J. 30, 1, p. 91-196.
(N Bonaparte basin and Arafura- Money Shoals basins)

Montecchi, P.A. (1976)- Some shallow tectonic consequences of subduction and their meaning to the hydrocarbon explorationist. In: M.T. Halbouty et al. (eds.) Proc. Circum-Pacific energy and mineral resources Conf., Honolulu 1974, Amer. Assoc. Petrol. Geol. (AAPG) Mem., p. 189-202.
(Includes early Gulf Oil seismic profiles across Timor Sea showing frontal thrusting/ scraping off of sediment cover and piled on smaller surface to form S Timor- Tanimbar accretionary prism. Etc.)

Nagura, H., I. Suzuki, T. Teromato, Y. Hayashi, T. Yoshida, H.M. Bandjarnahor, K. Kihara, T. Swiecicki & R. Bird (2003)- The Abadi gas field. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 451-466.
(Gas field in Jurassic 'Plover Fm' sandstone reservoirs in Indonesian part of Timor Sea)

OœBrien, G.W. (1993)- Some ideas on the rifting history of the Timor Sea from the integration of deep crustal seismic and other data. Petroleum Expl. Soc. Australia (PESA) Journal 21, p. 95-113.

OœBrien, G.W., M. Lisk, I.R. Duddy, J. Hamilton, P. Woods & R. Cowley (1999)- Plate convergence, foreland development and fault reactivation; primary controls on brine migration, thermal histories and trap breach in the Timor Sea, Australia. Marine Petroleum Geol. 16, 6, p. 533-560.
(latest Miocene- E Pliocene (~ 5.5 Ma) collision of Australian and Eurasian plates resulted in proto-foreland development and structural reactivation in Timor Sea. Flexural extension caused by down-warping of Australian plate into developing Timor Trough, resulted in dilatation of major Jurassic and older extensional faults and formation of shallow Mio-Pliocene fault arrays. Dilatation allowed hot, highly saline brines from deep Paleozoic evaporites to migrate up reactivated faults, causing local Late Tertiary heating spikes, isotopically light carbonate cementation and hydrocarbon leakage from traps)

Perdana, L.A., A. Fatwa, M. Ohara, A. Saputra & M. Fujimoto (2016)- 3D seismic geomorphology interpretation of Cenozoic carbonate succession in offshore Tanimbar region, Eastern Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-547-G, 20p.
(Offshore SW Tanimbar region of S Banda Outer Arc with Australian passive margin sequences. Paleo-depositional environment interpreted from 3D seismic data as basinal- slope facies during Paleocene- Eocene, shallowing to shelf environment in Oligocene- Miocene. Possible Late Miocene reefal facies also in frontal thrust of Banda Outer Arc)

Perdana, L.A. & M. Ohara (2017)- Oligo-Miocene carbonate depositional model in the offshore Tanimbar region as a key to unlock Oligo-Miocene paleogeography map in the Eastern Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 7p.
(Probable Miocene carbonate pinnacle reef on 3D seismic of Babar Selaru Block, Timor Sea off SW Tanimbar)

PT Robertson Utama Indonesia (1998)- Timor Sea: Mesozoic source rock distribution and palaeoenvironments. Multiclient study, p. *(Unpublished)*

Robinson, P. (2012)- Exploration opportunities in the Timor Sea region. Petroleum Expl. Soc. Australia (PESA) News 116, p. 67-72.
(Review of N Bonaparte Basin, Australian Timor Sea, hydrocarbon province. Large gas-condensate fields at Bayu-Undan and Sunrise-Sunset-Loxton Shoals-Troubadour complex; oil pools at Laminaria, Corallina, Elang-Kakatua- Kakatua North, Buffalo and Kitan fields. Three petroleum systems: Carboniferous, Permian and Mesozoic)

Rogl, F. (1974)- The evolution of the *Globorotalia truncatulinoides* and *Globorotalia crassaformis* group in the Pliocene and Pleistocene of the Timor Trough, DSDP Leg 27, Site 262. In: J.J. Veevers et al. (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 27, p. 769-771.
(online at: www.deepseadrilling.org/27/volume/dsdp27_37.pdf)

(Documentation of evolution of planktonic foraminifera in DSDP Site 262. Globorotalia tosaensis evolved in E-M Pliocene from G. crassaformis. Branching off from Globorotalia tosaensis tenuitheca Globorotalia truncatulinoides develops at Pliocene-Pleistocene boundary)

Saqab, M.M. & J. Bourget (2015)- Structural style in a young flexure-induced oblique extensional system, north-western Bonaparte Basin, Australia. J. Structural Geol. 77, p. 239-259.
(Neogene-Recent flexure-induced extension in NW Bonaparte Basin/ Timor Trough superimposed obliquely over Mesozoic rift structures. Distribution of new extensional en-echelon faults partly controlled by pre-existing Mesozoic structures)

Saqab, M.M. & J. Bourget (2016)- Seismic geomorphology and evolution of early-mid Miocene isolated carbonate build-ups in the Timor Sea, North West Shelf of Australia. Marine Geology 379, p. 224-245.
(Seismic data show ~60 isolated carbonate build-ups of E-M Miocene age over wide area of NE Bonaparte Basin. Individual build-ups ~100m thick with average diameter of 3 km. Typical stratigraphic architecture: (1) M Burdigalian initiation (Tf1/CN2), (2) late Burdigalian lateral expansion (CN3), and (3) Langhian (Tf2/CN4) backstepping and drowning. Followed by (3) sub-aerial exposure during major Serravallian sea-level fall. Only small patch reefs developed afterwards during Late Miocene. Observed growth phases correlate with global sea-level fluctuations and major changes in global climate/ oceanography; role of local tectonics minimal)

Saqab, M.M., J. Bourget, J. Trotter & M. Keep (2017)- New constraints on the timing of flexural deformation along the northern Australian margin: implications for arc-continent collision and the development of the Timor Trough. Tectonophysics 696-697, p. 14-36.
(Numerous extensional faults in passive margin strata of N Bonaparte Basin, related to lithospheric flexure of descending Australian Plate in convergent setting, coincident with creation of Timor Trough as foreland basin and Cartier Trough. Onset of extensional deformation in latest Miocene (~6 Ma), coincident with onset of arc-continent collision in Timor Sea and development of Timor Trough. Second episode of increased tectonic activity around Pliocene- Quaternary boundary (~3 Ma), continuing intermittently to today)

Seggie, R.J., R.B. Ainsworth, P. Arditto, F. Burns, D.A. Johnson, J.P.M. Koninx, P.M. Stephenson & J. Thompson (2000)- Capturing depositional uncertainty: Sunrise-Troubadour giant gas-condensate fields. In: SPE Asia Pacific Conf. Integrated modelling for asset management, Yokohama 2000, SPE 59406, p. 1-10.
(Three interpretations of possible depositional models of M Jurassic Plover Fm sandstone gas reservoirs)

Seggie, R.J., R.B. Ainsworth, D.A. Johnson, J.P.M. Koninx et al. (2000)- Awakening of a sleeping giant: Sunrise- Troubadour gas-condensate field. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 2000, p. 417-434.
(Large gas field in Jurassic sandstones in ZOCA, Timor Leste- Australia joint operating zone)

Seggie, R.J., R.B. Ainsworth, D.A. Johnson, J.P.M. Koninx, N. Marshall, A. Murray et al. (2003)- The Sunrise-Troubadour gas-condensate fields, Timor Sea, Australasia. In: M.T. Halbouty (ed.) Giant oil and gas fields of the decade 1990-1999, American Assoc. Petrol. Geol. (AAPG), Mem. 78, p. 189-209.
(Sunrise/Troubadour Field (1974) with 8-20 Tcf of gas in 80m M Jurassic sandstones in fault-bounded structural closure with 180m of relief. Sandstones VF-C quartz arenites- sublitharenites, in brackish- open marine shales. Upward increase in marine influence. Two main reservoirs forced regressive delta-front to shoreface sheet sand complex and incised valley system. Faulting mostly Pleistocene, producing closure and recent entrapment. Mature (1.3-1.4% Vr) M Jurassic marine kerogen source. Pressure analysis indicates tilted contact and dynamic aquifer)

Sekiguchi, W., K. Matsui, T. Juhatta & D. Rahmalia (2011)- Seismic attributes correlated with drilling difficulties in Tertiary carbonate, Abadi Field, Eastern Indonesia. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-186, 16p.

Shuster, M.W., S. Eaton, L.L. Wakefield & H.J. Kloosterman (1998)- Neogene tectonics, Greater Timor Sea, offshore Australia: implications for trap risk. Australian Petrol. Prod. Expl. Assoc. (APPEA) J. 38, p. 351-378.

(Tectonic model invoking wrench-related deformation and strike-slip reactivation of structures in Greater Timor Sea from Neogene- Present, associated with convergence between Australian and SE Asian plates)

Sitompul, N., S. Wijanto & J. Purnomo (1993)- Tectonic evolution of frontier Indonesian Timor Sea. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 92-102.

Sjahbuddin, E. & B. Puspoputro (1993)- Hydrocarbon source rock potential in the Timor Gap zone of cooperation and surrounding area. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 759-769.
(E Jurassic- E Cretaceous considered major hydrocarbon source in Timor Sea. Peak oil generation between ~2000-6000m))

Smith, G.C., L.A. Tilbury, A. Chatfield, P. Senycia & N. Thompson (1996)- Laminaria- a new Timor Sea discovery. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 36, p. 12-28.

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(online at: https://journal.ugm.ac.id/jag/article/view/26959/16601)
(Upper Plover Fm in Abadi Field not produced due to reservoir issues. Seven parasequences, in transgressive systems in coastal environments with coarsening upward patterns during M-L Jurassic. Porosity 1-19%, permeability 0.01- 1300 mD)

Surjono, S.S., R. Hidayat & N. Wagimin (2018)- Triassic petroleum system as an alternative exploration concept in offshore western Timor Indonesia. J. Petroleum Expl. Production Technology 8, p. 703-711.
(online at: https://link.springer.com/content/pdf/10.1007/s13202-017-0421-4.pdf)
(In NW Bonaparte Basin, off W Timor discovery of Abadi gas feld, but classic Jurassic petroleum play did not develop due to severe erosion during Valanginian event. Likely Triassic petroleum system in area, with Scythian Mt Goodwin shales as gas-prone source rock and potential reservoir rocks in Anisian Pollard and Ladinian-Carnian Challis sandstones)

Takayama K., K. Kihara & T. Zushi (2009)- Integrated geological modeling and volumetric uncertainty evaluation for the Abadi gas field. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-156, 10p.
(3D geological model of Jurassic Upper Plover Fm in Abadi Field)

Tripathi, A., W.B. Jones & R. Rajagopal (2012)- Insights into the petroleum potential of the Australian North West Shelf and Arafura Sea revealed by regional 2D seismic data. In: Proc. Int. Petroleum Techn. Conf. (IPTC), Bangkok 2012, IPTC 15302, 10p.
(Examples of new 2D seismic across Exmouth Plateau, Timor Trough, Seram accretionary prism, etc.)

Van Andel, T.H. & J.J. Veevers (1967)- Morphology and sediments of the Timor Sea. Bureau Mineral Res. Geol. Geophysics, Bull. 83, p. 1-173.
(online at: www.ga.gov.au/corporate_data/163/Bull_083.pdf)
(Timor Sea region covers Sahul Shelf and Timor Trough (max. depth 1750 fathoms) between 123-130°E. Bottoms and slopes of Timor Trough covered with silty clay with planktonic foraminifera; below 1000 fathoms (1830m) rich in radiolaria. During last glacial maximum Sahul Shelf shoreline was at 60-70 fathoms (~110-130m) near shelf edge. Most of shelf was exposed and abundant calcareous concretions formed by soil processes)

Veevers, J.J. (1971)- Shallow stratigraphy and structure of the Australian continental margin beneath the Timor Sea. Marine Geology 11, p. 207-249.
(Shallow seismic sections of outer shelf and upper slope of Timor Sea, tied to stratigraphic section in Ashmore Reef 1 Well. Main feature is Late Miocene- E Pliocene unconformity, probably extending through series of young down-faulted blocks into Timor Trough. Following uplift, erosion, and downfaulting of Timor Trough in Late

Miocene carbonates built out over subsiding shelf edge and uppermost slope to maximum thickness of 2000', and coral reefs developed on structural hinges and anticlines. Upper slope subsided at least 2400' since Miocene)

Veevers, J.J. (1974)- Sedimentary sequences of the Timor Trough, Timor and the Sahul Shelf. Initial Reports Deep Sea Drilling Project (DSDP) 27, p. 567-568.
(online at: http://deepseadrilling.org/27/volume/dsdp27_28.pdf)

Veevers, J.J., D.A. Falvey & S. Robins (1978)- Timor Trough and Australia: facies show topographic wave migrated 80 km during the past 3 M.y.. Tectonophysics 45, p. 217-227.
(Incl. results of DSDP Hole 262 in Timor Sea, where >2.4 Ma/Pliocene shallow marine sediments are overlain by deeper marine nannofossil oozes and clays)

Warris, B.J. (1973)- Plate tectonics and the evolution of the Timor Sea. Australian Petrol. Explor. Assoc. (APPEA) J. 13, 1, p. 13-18.
(Timor uplifted as Tertiary melange of Australian sediments behind N-dipping subduction zone along Timor Trough. Timor Sea remained relatively stable and was site of carbonate shelf sedimentation)

Wheller, D., G.K. Ellis, Y. Suhardiman, R. Yokote, D. Selvaggi, J. Derrij & G. Maniscalco (2013)- Discovery to development; a subsurface case history of the Kitan oil field, Timor Sea. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p.
(Kitan oil field 2008 discovery in in N Bonaparte Basin in Joint Timor Leste- Australia Petroleum Development Area. Structure Jurassic E-W trending tilted fault block, reservoir M Jurassic shallow marine sandstone of Laminaria Fm)

Wu, L. (2016)- Foreland flexural extension and saltdiapir reactivation in oblique extensional systems. Ph.D. Thesis Colorado School of Mines, Golden, p. 1-157.
(online at: https://dspace.library.colostate.edu..)
(Study of Late Miocene- Present flexural normal faulting in NW Shelf- Timor Trough foreland basin. Also reactivation of Swan salt diapir in Vulcan basin in oblique extensional system)

Yokoyama, Y., A. Purcell, K. Lambeck & P. Johnston (2001)- Shore-line reconstruction around Australia during the Last Glacial Maximum and Late Glacial Stage. Quaternary Int. 83-85, p. 9-18.
(Australian continental shelf largely exposed during Last Glacial Maximum)

Zaklinskaya, E.D. (1978)- Palynological information from Late Pliocene-Pleistocene deposits recovered by deep-sea drilling in the region of the island of Timor. Review Palaeobotany Palynology 26, p. 227-241.
(Late Pliocene-Pleistocene cores of pelagic oozes from DSDP Site 262, Timor Trough, 75 km S of W Timor island, with palynomorphs of 52 genera of higher land plants. Three-fold change in palynoflora composition: (1) Late Pliocene tropical flora of mixed Indian-Malayan type; (2) M Pleistocene Phase IV with rel. common Pinaceae (Pinus, Picea, Abies), not characteristic of tropical flora and may be evidence of cooler climatological conditions; (3) Late Pleistocene phase V flora similar to recent flora of Timor)

Zushi, T., S. Takano & I. Suzuki (2009)- Reservoir architecture of the Abadi Field. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-027, 12p.
(Abadi field 2000 gas discovery with >200m column in M Jurassic Plover Fm sandstone, unconformably overlain by Valanginian- Hauterivian marine claystone. Reservoir facies mainly coarsening-upward sand packages. Progradation direction W to E)

VIII. WEST PAPUA (WEST NEW GUINEA)

VIII.1. New Guinea General and West Papua

Adhitama, R., R. Hall & L. White (2016)- Structural styles of Adi Basin and the implications of Tarera- Aiduna Fault. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 383-392.
(Adi Basin narrow, deep water (1-3.5km) offshore basin E of Seram accretionary complex, N of Kai Island and Aru basin and SW of Lengguru foldbelt. Basin formation started in Late Miocene (after deposion of New Guinea Limestone; no wells?) and still active today. Adi-Aru Basin structures dominated by normal faults with NNE-SSW strike direction. Multiple episodes of subsidence, marked by unconformities in syn-extension units. Basin development influenced by sinistral movement of Tarera-Aiduna Fault, visible at N side of basin showing normal fault offset. Subsidence driven by slab pull of Australian subducting plate)

Adhitama R., R. Hall & L.T. White (2017)- Extension in the Kumawa block, West Papua, Indonesia. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-125-G, 16p.
(Kumawa and Aru basins part of narrow N-S trending extensional system in Aru Trough, E of Kai Besar island-Kai Arch and E of Seram accretionary prism. Basin formation started in Late Miocene, with several periods of subsidence, marked by unconformities within syn-extension units. Tarera-Aiduna fault zone dies out to W, S of Lengguru fold belt)

Adisaputra, Mimin K. (2000)- Umur batugamping Waripi dan Yawee di Wamena dan Formasi Faumai dan Ainod di Timika, Papua, berdasarkan foraminifera besar. J. Geologi Sumberdaya Mineral 10, 108, p. 16-27.
('Age of the Waripi and Yawee limestone in Wamena and the Faumai and Ainod Formations in Timika, Papua, based on larger foraminifera'. New Guinea limestone in Wamena area include Late Eocene (Tb) with Nummulites djokdjakartae, E Oligocene (Tcd) with Nummulites fichteli, Late Oligocene (Te1-4) with Heterostegina borneensis, Spiroclypeus and Lepidocyclina (Eulepidina), E Miocene (Te5) with Miogypsinoides dehaarti and E-M Miocene (Te/Tf1) with Miogypsina thecidaeformis, Lep. (N) sumatrensis. Sample from Ainod Hit Road N near Tembagapura with Late Oligocene (Te 1-4) with Miogypsinoides bantamensis, Spiroclypeus)

Ajam, S.O., L.A. Henzell, J. Wang, A. Syarif & H. Soedirja (1982)- Well-site log evaluation of the Miocene carbonates in Salawati Basin. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 357-378.
(Mainly log analysis methodology)

Akhmad, F. (2002)- Stratigraphy and structural analysis in the Gunung Bijih (Ertsberg) mining district, Irian Jaya. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 335-343.
(Analysis of fractures suggests NE-SW shortening, NW-SE extension in Ertsberg District, W Papua)

Alam, S. & D.J. Setiadi (2019)- Tertiary sequence stratigraphy of Bird Head Area, Eastern Indonesia. Indonesian J. Geoscience 6, 3, p. 267-278.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/371/291)

Allen, J.M., G.J. Artmont & K. Palmer (1995)- Application of alluvial gold mineralogy to exploration of the Central Ranges, Irian Jaya, Indonesia. Proc. PACRIM '95 Conf., Auckland, Australasian Inst. of Mining and Metallurgy (AusIMM), Carlton/Melbourne, 9/95, p. 7-12.
(Alluvial gold ideal exploration tracer to bedrock source and mineralisation style. Mineralogy of gold in ophiolite, skarn, porphyry, mesothermal vein and possible VHMS environments is characterised from alluvial and bedrock samples, and use of gold mineralogy in prospecting is demonstrated)

Allison, I. (1975)- Morphology and dynamics of the tropical glaciers of Irian Jaya. Zeitschrift Gletscherkunde Glazialgeologie 10, 1-2, p. 129-152.

Allison, I. & P. Kruss (1977)- Estimation of Recent climate change in Irian Jaya by numerical modeling of its tropical glaciers. Arctic and Alpine Research 9, 1, p. 49-60.
(On climatic change from retreat of tropical Carstensz Glacier and Meren Glacier in W Papua Central Range)

Allison, I. & J.A. Peterson (1976)- Ice areas on Mt. Jaya: their extent and recent history. In: G.S. Hope et al. (eds.) The Equatorial glaciers of New Guinea. Results of the 1971-1973 Australian Universities Expedition to Irian Jaya: survey, glaciology, meteorology biology and paleoenvironments, Balkema, Rotterdam, p. 27-38.
(online at: http://papuaweb.org/dlib/bk/hope1976/03.pdf)
(Area covered by perennial ice and snow in Carstenz (Puncak Jaya) area 6.9 km2 at end 1972)

Allison, I. & J.A. Peterson (1989)- Glaciers of Irian Jaya, Indonesia. In: Glaciers of Irian Jaya, Indonesia, and New Zealand, U.S. Geol. Survey (USGS) Prof. Paper 1386-H, 48p.
(online at: http://pubs.usgs.gov/pp/p1386h/indonesia/indonesia.html)

Alviyanda, G.M.L. Junursyah & R. Saragih (2019)- Reservoir potential of Neogene rocks in The Biak Island and its surrounding areas. Berita Sedimentologi 42, p. 33-41.
(online at: www.iagi.or.id/fosi/files/2019/01/FOSI_BeritaSedimentologi_BS42_January2019.pdf)

Amiruddin (1998)- Proterozoic- Cenozoic lithology sequence of the Central Range, Irian Jaya. J. Geologi Sumberdaya Mineral, 8, 79, p. 10-24.
(Review of Precambrian- Cenozoic stratigraphy of Australian continental margin exposed in Central Range of W Papua (most complete in Indonesian region). Precambrian Karim Fm of >2500m of low-metamorphic mudstones with dolerites and diorite (K-Ar ages ~820-1160 Ma). Neoproterozoic Nerenip/ Awitagoh Fm low metamorphic fine clastics, marbles and pillow basalts, possibly marine rift section, with Langda diorite dated as 847 Ma. E Paleozoic includes Kora Fm clastics with Ordovician graptolites (Nemagraptus gracilis zone) and Silurian- Devonian Modio Dolomite with Frasnian and older corals. Unconformably overlain by Permian Aiduna Fm deltaic-marine clastics with thin calcarenites and high-rank coal. Tipuma Fm commonly assigned to Triassic but palynomorphs only show Late Permian and M Jurassic ages. M Jurassic Mapanduma and Kopai Fms deep marine M Jurassic shales- sandstones. Etc. Eilanden Metamorphics in E believed to be of Permo-Triassic age. Late magmatism/volcanism (7.1- 2.6 Ma), geochemically more shoshonitic than calk-alkaline)

Amiruddin (1998)- Geologi dan geokimia kerabat granit Anggi Permo-Trias di Blok Kemum, Kepala Burung, Irian Jaya. J. Geologi Sumberdaya Mineral, 8, 83, p. 11-24.
('Geology and geochemistry of the Permo-Triassic Anggi granite in the Kemum Block, Birds Head, Irian Jaya'. Permian- Triassic Anggi Granite along NE/ E margin of exposed Kemum Block. Associated with Kemum Fm metamorphosed Silurian-Devonian sediments (age metamorphism ~222-258 Ma), with contact aureole several 100m to 2 km wide. Mainly S-type granite, peraluminous adamellite, probably from partial melting of pelitic sediments. Also some quartz diorite. Associated with tin/ cassiterite mineralization (see also Amiruddin 2000))

Amiruddin (1999)- Characteristics of allochronous and autochronous suites with relation to the possibility of tin mineralization in Birds Head Region, Irian Jaya. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 121-130.
(Two (Permian-) Triassic granite suites in Birds Head: Netoni Suite (I-type; allochthonous Tamrau Block, 225-245 Ma, post-tectonic?)) and Anggi Suite (S-type; autochthonous Kemum Block, 225-295 Ma, collision-volcanic arc?. Sn-W bearing pegmatitic float in Kemum Block points to presence of tin granite))

Amri, C., B.H. Harahap, P.E. Pieters & G.M. Bladon (1990)- Geology of the Sorong Sheet area, Irian Jaya. 1:250,000. Explanatory Notes. Geol. Res. Dev. Centre (GRDC), Bandung, 70p.
(Explanatory notes with map sheet of western Birds Head/ Salawati-Batanta Islands region)

Amri, C., P. Sanyoto, B. Hamonangan, S. Supriatna, W. Simanjuntak & P.E. Pieters (1990)- Geological map of the Sorong Sheet, Irian Jaya, 2814, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of westernmost part of Birds Head and Salawat, Batanta, Kofiau and Gag islands. With Kofiau-Batanta islands Late Eocene- E Miocene island arc volcanics and Sorong Fault tectonic melange zone in N. In S Salawati Late Miocene- Pliocene foreland basin with oil fields. Gag SW of Waigeo composed of ?Late Jurassic- Cretaceous? Gag ophiolite)

Anonymous (1920)- Verslag van de militaire exploratie van Nederlandsch Nieuw Guinee 1907-1915. Departement van Oorlog in Nederlandsch-Indie, Landsdrukkerij, Weltevreden, p. 1-440.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02A:000030818:pdf)
('Report of the military exploration of Netherlands New Guinea 1907-1915'. Book summarizing general reconnaissance and topographic mapping expeditions by Netherlands Indies military detachments into various parts of the then unexplored territories of W Papua. Including summary observations on geology from published and unpublished reports by Van Gelder, Feuilleteau de Bruijn, Hubrecht and Heldring)

Anshori, R. (2018)- Chemostratigraphy of the Permian sediments in Bintuni area, Papua Barat Province. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-77-G, 17p.
(Permian sediments penetrated by several wells in Bintuni area mainly non-marine and deltaic facies, with gas in Vorwata-1 and Mogoi Deep-1 wells. Chemo-stratigraphy aids in stratigraphic correlation. Sediments likely sourced from acid-intermediate provenance)

Anshori, R., E.V. Yudhanto, D. Pasaribu, M.S. Wulansari, S.F. Konyorah & R. Mardani (2010)- Tertiary petroleum system elements overview in the Onin Peninsula, Papua. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-036, 11p.
(Outcrop traverse of Onin Peninsula. Two types of E Oligocene- M Miocene limestone: (1) well-bedded argillaceous globigerinid limestones and thin marls (Onin Lst) in S and (2) karst limestone (Ogar Lst) in N. Thickness of exposed Oligocene shale >5m in center and N, but poor source rock)

Aquantino, S., A. Muhartanto & T. Purwanto (2014)- Analisis fasies batugamping pada Formasi Kais berdasarkan data core, well log dan seismik pada lapangan KTR, Blok Walio, Papua Barat. MINDAGI (Trisakti University) 7, 1, p. 45-56.
('Limestone facies analysis of the Kais Formation based on core, well log and seismic data of KTR field, Walio Block, W Papua'. Study of Miocene carbonate buildup of oil field in Salawai Basin. 59 wells, 5 growth phases)

Archbold, N.W. (1981)- Permian brachiopods from western Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 2, p. 1-25.
(Early Permian (Latest Artinskian- early Kungurian) brachiopods in Aifat Fm in Taminabuam area, Birds Head. Assemblage 'remarkably similar to age-equivalent faunas in Ratburi Lst of (Peninsular) Thailand), suggesting geographic proximity of (Peninsular) Thailand and West Papua')

Archbold, N.W. (1981)- *Quinquenella magnifica* sp. nov. (Chonetidina, Brachiopoda) from the Permian of Irian Jaya, Indonesia: a study of the ontogeny of a chonetid brachiopod. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 2, p. 2, 27-34.

Archbold, N.W. (1981)- New Permian trilobite from Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 2, p. 35-41.
(New species of Early Permian trilobite)

Archbold, N.W. (1991)- Late Paleozoic brachiopod faunas from Irian Jaya, Indonesia. In: D.I. McKinnon, D.E. Lee & J.D. Campbell (eds.) Brachiopods through time. Proc. Second Int. Brachiopod Congress, Dunedin 1990, Balkema, Rotterdam, p. 347-353.
(M Carboniferous- Permian brachiopods from Aifam- Aifat Formations of Birds Head)

Archbold, N.W. (1991)- Early Permian brachiopoda from Irian Jaya. BMR J. Australian Geol. Geophysics 12, p. 287-296.
(online at: https://d28rz98at9flks.cloudfront.net/81296/Jou1991_v12_n4_p287.pdf)
(New E Permian (E Artinskian) brachiopod fauna from Aiduna Fm, from float boulder in upper Mapia River, S flank of Charles Louis Mountains, SW West Papua. New species of Neochonetes, Chonetinella, Aulostege, etc.. Significant links with E Permian faunas of W Australia and Peninsular Thailand)

Archbold, N.W., C.J. Pigram, N. Ratman & S. Hakim (1982)- Indonesian Permian brachiopod fauna and Gondwana-South-East Asia relationships. Nature 296, p. 556-558.
(First description of late E Permian articulate brachiopods in Birds Head. Assemblage similar to Peninsular Thailand Rat Buri Limestone, suggesting geographical proximity of Thailand and Irian Jaya in E Permian)

Archbold, R., A.L. Rand & L.J. Brass (1942)- Results of the Archbold Expeditions No. 41. Summary of the 1938/1939 New Guinea expedition. Bull. American Museum Natural History 79, 3, p. 197-288.
(Report on geographic-biological expedition to Central Range of West Papua. First westerners to visit Baliem valley. Little or no geology)

Argakoesoemah, R.M.I. (2017)- Foldbelt exploration play in East Papua, Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 6p.
(Brief review of under-explored fold-thrust belt of West Papua. Not much new. Proven hydrocarbon system, but, unlike in adjacent Papua New Guinea, no commercial discoveries)

Argakoesoemah, R.M.I. (2018)- Paleogeography of Early Cretaceous Woniwogi and Toro sandstones, and Late Jurassic Kopai sandstone in Papua region (Indonesia) and Papua New Guinea. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-257-G, 23p.
(Review of E Cretaceous Woniwogi and Toro Sst and Late Jurassic Kopai Sst as crucial hydrocarbon reservoir targets. All are products of regression pulses during E Triassic- Late Cretaceous overall transgression. Valanginian Woniwogi (Alene) Sst well-developed in Birds Body and extends E into PNG. Berriasian Toro Sst only present in Digul region and PNG. Sediment provenance from Kemum and Arafura landmasses)

Argakoesoemah, R.M.I. & J.D.E. Hughes (2017)- A review of Mesozoic exploration plays in the southern part of onshore East Papua. In: Petroleum systems of the Eastern Indonesia region- Guidance for hydrocarbon exploration in Eastern Indonesia, SKK Migas Memoir 1, Jakarta, p. 427-474.
(Review of Mesozoic hydrocarbon plays in Central Range foldbelt and foreland of eastern West Papua and Papua New Guinea. No commercial oil in Indonesian part of main New Guinea island, but oil shows in Cross Catalina 1 and oil-gas in Kau 2 foreland basin well prove working Mesozoic petroleum system)

Arifin, A.S., A. Fakhri, R.P. Putra, Soffan M.H. & N. Hayati (2017)- The important of new petroleum system developing in mature basin : a preliminary study of Pre Tertiary petroleum system in Salawati Basin. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(Kawista 1 well (2013) in W Salawati basin tested oil in Eocene Faumai Lst different from oils in shallower horizons: very low in oleanane, and probably derived from Pre-Tertiary source (e.g. Fusulina-bearing Permian in Orba 1, Jurassic- Cretaceous in Sele 39 and Klamogun 1)

Aswan, N.I. Basuki & Thaw Zin Oo (2017)- Jurassic and Paleocene ichnofossil study of core camples from Bintuni Basin- Eastern Indonesia- comparison between shallow and deep marine ichnofossil associations. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 4p.
(Study of ichnofossils in neritic Jurassic and deep marine Paleocene reservoir sandstones of unnamed wells in Bintuni basin)

Atmawinata, S., A.S. Hakim & P.E. Pieters (1989)- Geological map of the Ransiki Sheet Area, Irian Jaya, 1:250,000 Scale. Geol. Res. Dev. Center, Bandung.
(Geologic map of E part of Birds Head. Most of sheet Kemum Paleozoic continental terrane with E Triassic Anggi granite intrusive. Kemum Block bordered in NE by Arfak Volcanics, separated by Ransiki Fault. In SE corner NE termination of Lengguru foldbelt and Bintuni Basin)

Atmawinata, S. & N. Ratman (1982)- Struktur geologi Pulau Yapen dan hubunganya dengan Lajur sesar Sorong. Proc. 11th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 1-6.
('Geological structure of Yapen Island and its relation with the Sorong fault'. Yapen island on Yapen fault zone)

Atmawinata, S., N. Ratman & P.E. Pieters (1989)- Geology of the Yapen Sheet Area, Irian Jaya, Explanatory notes and Geological map, 1:250,000 scale, Yapen Sheet, Quadrangles 3114 and 3214, Geol. Res. Dev. Center, Bandung, 33p.

Atmawinata, S., N. Ratman & P.E. Pieters (1989)- Geological map of the Yapen Sheet Area, Irian Jaya, Geological map, 1:250,000 scale, Geol. Res. Dev. Center, Bandung.
(Yapen Island outcrops dominated by Late Eocene- E Miocene Yapen Fm arc volcanics, underlain by basic ?Cretaceous-Paleocene? basic volcanics, and overlain by E-M Miocene Wurui Limestone. Young WNW-ESE fault systems; Jobi Fault system in NE with ophiolitic breccia with serpentinite, gabbro, basalt)

Atmoko, P.W., S. Chandrahayat & R. Avianto (2014)- Identification of geological structures and its implication for hydrocarbon opportunities in Semai III Block, West Papua. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-005, 10p.
(Semai III offshore block between Onin Island in NE and Seram Trough in SW. 2D seismic shows NW-SE trending anticline and thrust fault resulting from sinistral strike-slip system of Sorong Fault Zone. Crest of anticline in Semai III blocks higher than surrounding blocks in offshore Semai area)

Audley-Charles, M.G. (1991)- Tectonics of the New Guinea Area. Annual Review Earth Planetary Sci. 19, p. 17-41.
(Review of New Guinea tectonic/ geology. With little or no new data)

Audretsch, F.C. de, R.B. Kluiving, & W. Oudemans (1965)- Economic geological investigation of the N.E. Vogelkop (New Guinea). Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Serie 23, p. 1-151.
(NE Birds Head geological survey. Arfak Mountains with Oligocene- E Miocene Auwewa Fm volcanics)

Axelrod, D.I. & P.H. Raven (1982)- Paleobiogeography and origin of the New Guinea flora. In: J.L. Gressitt (ed.) Biogeography and ecology of New Guinea, Junk, The Hague, p. 919-941.

Babault, J., M. Viaplana-Muzas, X. Legrand, J. Van Den Driessche, M. Gonzalez-Quijanoe & S.M. Mudd (2018)- Source-to-sink constraints on tectonic and sedimentary evolution of the western Central Range and Cenderawasih Bay (Indonesia). J. Asian Earth Sci. 156, p. 265-287.
(Cenderawasih Bay contains >8 km thick series undated sediments. Suggest sediments started to accumulate in Cenderawasih Bay and onshore Waipoga Basin in Late Miocene since inception of growth of Central Range (12 Ma), resulting in up to 12.2 km sediment accumulation. Basin fill probably mainly siliciclastics from Ruffaer Metamorphic Belt and equivalent in Weyland Overthrust, with minor contributions from ophiolites, volcanic arc rocks and diorites. Local transtensional tectonics may explain unusually high rates of sedimentation in overall sinistral oblique convergence setting)

Bachri, S. (2014)- Kontrol tektonik dan struktur geologi terhadap keterdapatan hidrokarbon di daerah Papua. J. Geologi Sumberdaya Mineral 15, 3, p. 133-141.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/53/55)
('Tectonic and structural geological geological controls on the occurrence of hydrocarbon in the Papua region')

Bachri, S. & Surono (2002)- Identification of the active Rombebai fault zone, Papua (Irian Jaya) and its sedimentological aspects. Bull. Geol. Res. Dev. Centre 22, p. 41-48.
(Left-lateral Rombebai Fault zone is onshore continuation of E-W trending Yapen fault zone)

Bachri, S., Surono & S.S. Bawono (1997)- A Pliocene deltaic- tidal flat succession of the Kurudu Formation in Irian Jaya, Eastern Indonesia. J. Geologi Sumberdaya Mineral 7, 68, p. 11-20.
(Outcrop study of Pliocene Kurudu Fm sands-shales at S coast of Kurudu Island near Yapen, off NW New Guinea mainland coast. Kurudu Fm unconformably overlies ?Miocene Jobi Ophiolite Breccia, Miocene Wurui

Lst and Late Eocene- E Miocene Yapen Volcanics. Provenance 'Recycled Orogen', probably from Yapen Volcanics and Mesozoic- E Tertiary Rosburi Schist)

Baharuddin (2007)- Ciri petrologi dan geokimia batuan gunungapi Yapen, Papua. J. Sumber Daya Geologi 17, Spec. Issue (163), p. 3-10.
('Petrology and geochemistry of volcanic rocks of Yapen, Papua'. Volcanic rocks exposed on Yapen mainly basalt-andesites of Tertiary Arfak Volcanic complex. Geochemistry of island arc type, inferred to be related to subduction of Pacific Plate beneath Papua continental crust)

Bailey, S.W., J.F. Banfield, W.W. Barker & G. Katchan (1995)- Dozyite, a 1:1 regular interstratification of serpentine and chlorite. American Mineralogist 80. p. 65-77.
(Dozyite new mineral involving interstratification of serpentine and chlorite units. Occurs as colorless crystals in altered skarn adjacent to Ertsberg East copper-gold mine in W Papua. Named after J.J. Dozy, Dutch Shell geologist who discovered and named Ertsberg ore province in 1936)

Bailly, V., M. Pubellier & J.C. Ringenbach (2008)- Structure of the Lengguru fold-and-thrust belt, New Guinea island: consequence of rapid kinematic changes. Abstracts 33rd Int. Geol. Congress, Oslo 2008 *(Abstract)*
(Main structures of Lengguru Foldbelt controlled by Late Miocene- E Pliocene NE-SW compression against ophiolitic or arc backstop. Thin-skinned thrusting of Mesozoic and Tertiary sediments over previously structured basement followed by thick-skinned thrusting. Late Pliocene-Quaternary deformation (still active) is extensional with exhumation of Wandamen Metamorphic Complex in internal zone and NE-SW collapses along high-angle normal faults (Triton Bay) cross-cutting folds in external zone. Structuring of LFTB over short time; NE-SW compression in Late Miocene-E Pliocene and Late Pliocene-Quaternary extension in whole range)

Bailly, V., M. Pubellier, J.C. Ringenbach, J. de Sigoyer & F. Sapin (2009)- Deformation zone ójumpsô in a young convergent setting; the Lengguru fold-and-thrust belt, New Guinea Island. Lithos 113, p. 306-317.
(online at: http://www.geologie.ens.fr/spiplabocnrs/IMG/pdf/Bailly_et_al-_2009.pdf)
(Lengguru foldbelt young orogen. Shortening ceased recently and now under extension. Two superimposed prisms of stacked Mesozoic marine sediments of Australian margin against crustal buttress, formed after 11 Ma. Internal part of Lengguru fold belt active E-W extension, coeval with transition from compressive to transtensional regime in C Range, and onset of Tarera-Aiduna and Paniai left-lateral faults. Late Miocene NE-SW compression linked to subduction. Evolution of belt reflects rapid changes in accommodation of oblique shortening, with isolated orogenic wedge of Lengguru fold-and-thrust belt left to collapse. At lithospheric scale, deformation remains rooted at suture zone, but at surface shortening spread over large area in short time span prior to being transferred to other plate boundary)

Bailly, V., J. de Sigoyer, M. Pubellier & J.C. Ringenbach (2011)- The Bird's Neck: new data, new interpretation. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-229, 7p.
(Lengguru foldbelt formed by Late Miocene- E Pliocene NE-SW compression linked to subduction, followed by Late Pliocene- Quaternary extension in whole range and exhumation of high pressure metamorphic rocks. Last stage linked to deformation zone jump to S onto Seram wedge. Wandamen Peninsula metamorphics new high P and T estimates (S1 high P schistosity ~12 kbar, 600°C, followed by S2 N-S stretching at 6-8 kbar, 680-730°C). Zircon metamorphic rims in samples characterized by high P paragenesis ages of ~8-7 Ma, zircon ages from more retrogressed samples ~5- 6 Ma. Zircon cores ages of 388±27 Ma, 636±32, 736±30 Ma and 1484±49 Ma)

Baker, G. (1955)- Basement complex in the Cycloop Ranges-Sentani Lake region of Dutch New Guinea. Part 1. Distribution, nature and chemical composition. Nova Guinea 6, 2, p. 307-328.
(Cyclops Ranges of N New Guinea metamorphic rocks with dominant amphibole minerals actinolite-glaucophane. With serpentinites (derived from harzburgite and dunite), gabbro, tholeiitic dolerite)

Baker, G. (1956)- Basement complex in the Cycloop Ranges-Sentani Lake region of Dutch New Guinea. Part II: Opaque minerals in the basement complex rocks. Nova Guinea 7, 1, p. 15-31.

Baker, G. (1956)- Basement complex in the Cycloop Ranges-Sentani Lake region of Dutch New Guinea. Part III: Comparisons, suggested origin and formational history of the basement complex rocks. Nova Guinea 7, 1, p. 31-39.

Baldwin, S.L., P.G. Fitzgerald & L.E. Webb (2012)- Tectonics of the New Guinea Region. Annual Review Earth Planetary Sci. 40, p. 495-520.
(online at: http://www.uvm.edu/~lewebb/papers/Baldwin%20et%20al%202012%20New%20Guinea.pdf)
(New Guinea region evolved in obliquely converging Australian-Pacific plate boundary zone, with microplate formation and rotation, lithospheric rupture to form ocean basins, arc-continent collision, subduction polarity reversal, collisional orogenesis, ophiolite obduction and exhumation of high-pressure metamorphic rocks)

Baline, L.M. (2007)- Hydrothermal fluids and Cu-Au mineralization of the Deep Grasberg porphyry deposit, Papua, Indonesia. Master's Thesis University of Texas, Austin, p. 1-269. *(Unpublished)*
(Deep Grasberg is deepest explored part of Grasberg Igneous Complex (GIC) at elevations between 2450-3050m (>1100m below pre-mining surface). Copper-gold deposit hosted by three quartz-monzonite to diorite units, emplaced at ~3 Ma)

Bar, C.B., H.J. Cortel & A.E. Escher (1961)- Geological results of the Star Mountains (Sterrengebergte) expedition (Central Range, Netherlands New Guinea). Nova Guinea (Geology) 4, p. 39-99.
(Central Range characterized by block faulting rather than folding, is bordered to N by intensely folded metamorphic complex and to S by relatively stable zone. Basic igneous intrusive and extrusive rocks overlain by hard, silicified fine-grained probably lower Paleozoic clastics, Mesozoic Bon and Kembelangan Fms and thick Upper Tertiary deposits)

Bar, C.B. & K.A. Rijsterborgh (1958)- Geological survey of the East Digoel hinterland. Nederlands Nieuw Guinea Petroleum Maatschappij (NNGPM), Geol. Report 441, p. . *(Unpublished)*

Bartstra, G.J. (ed.) (1998)- Bird's Head approaches. Modern Quaternary Research in Southeast Asia 15, Balkema, Rotterdam, p. 1-258.
(Symposium volume with geologic overviews of Birds Head, followed by archeology papers)

Beets, C. (1986)- Neogene Mollusca from the Vogelkop (Bird's Head Peninsula), West Irian, New Guinea. Scripta Geologica 82, p. 101-134.
(online at: www.repository.naturalis.nl/document/148746)
(Description of molluscs collected by BPM in Klasaman Fm of West Birds Head in 1930. Subsequently dated as 'Late Miocene- Plio-Pleistocene' on basis of foraminifera by NNGPM. 35 species identified. Age determination difficult. Some species belong to genera whose living species are restricted to Australian waters)

Belford, D.J. (1974)- Foraminifera from the Ilaga valley, Nassau Range, Irian Jaya. Bureau Mineral Res. Geol. Geophysics Bull. 150, p. 1-26.
(online at: www.ga.gov.au/corporate_data/116/Bull_150.pdf)
(Foraminifera from rocks collected by Dow on way to Carstensz peak include Late Eocene (Discocyclina, Nummulites, Lacazinella, etc.), Late Oligocene and E-M Miocene larger forams from Carstensz limestone and Late Oligocene N3 planktonics from marly interbeds)

Belford, D.J. (1989)- Early Eocene planktonic foraminifera, Irian Jaya. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 5, p. 22-49.
(Description of rich Early Eocene zone P9 planktonic foram fauna from deep water calcareous siltstones in Lengguru foldbelt, Birds Neck, W Papua)

Bemelmans, J.L.H. (1955)- Verslag van een geologisch onderzoek in de oostelijke Vogelkop, Nieuw Guinea- Slotrapport. IIe Technische Hogeschool Expeditie 1953, Delft, TH Geol. Lab. Rapport 10, p. 1-39.
('Report on a geological investigation of the eastern Birds Head- Final report of 2nd geologic expedition of Delft Technical University')

Bemelmans J.L.H. (1956)- Uebersicht der Ergebnisse der II geologischen Expedition der Technischen Hochschule nach Niederlandisch Neu Guinea in 1953. Nova Guinea, n.s., 7, 2, p. 147-152.
('Overview of the results of the 2nd geologic expedition of Delft Technical University to Netherlands New Guinea in 1953'. Investigated economically unimportant Plio-Pleistocene lignite bed S of Sorong and possible ore deposits in granite contact zones of Anggi lake and Ransiki regions. Evidence of pegmatitic- pneumatolytic processes, but no economically significant ore deposits found)

Bensaman, B., R. Al Furqan, M.F. Rosana & E.T. Yuningsih (2015)- Hydrothermal alteration and mineralization characteristics of Gajah Tidur Prospect, Ertsberg Mining District, Papua, Indonesia. In: ICG 2015, 2nd Int. Conf. and 1st Joint Conf. Faculty of Geology Universitas Padjaran and University of Malaysia Sabah, p. 17-25.
(online at: http://seminar.ftgeologi.unpad.ac.id/wp-content/uploads/2016/02/Hydrothermal-Alteration-and-Mineralization-Characteristics-of-Gajah-Tidur-Prospect-Ertsberg-Mining-District-Papua-Indonesia.pdf)
(Gajah Tidur prospect deepest explored part of Grasberg Igneous Complex at 1600- 3000m elevation, almost 2.5 km below pre-mining surface. Bottom of Grasberg Cu-Au porphyry ore body at ~2750m elevation)

Benz, H.M., M. Herman, A.C. Tarr, G.P. Hayes, K.P. Furlong, A. Villasenor, R.L. Dart & S. Rhea (2013)- Seismicity of the Earth 1900-2012, New Guinea and vicinity. U.S. Geol. Survey (USGS) Open File Report 2010-1083-H, 1p.
(online at: http://pubs.usgs.gov/of/2010/1083/h/)
(Earthquake distributions from Sulawesi/Sumba in W to New Hebrides Trench in E)

Bernadi, B., A. Reksahutama, I.G.A.N.Intan, Sarah, D.K. Duha, E.S. Silalahi & D. Miraza (2018)- Revitalization of Walio mature oil fields by identifying untapped oil in low quality reservoirs. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-158-E, 28p.
(Walio oil field 1973 discovery in Salawati Basin, mainly producing from Miocene-Kais reefal limestone. Producing since 1975 from >300 wells, with oil production peak at 57,800 BOPD in 1977-1978. Current oil production ~2200 BOPD with >99% water-cut. Oil API 33.1°. Strong aquifer support contributed to rel. high reservoir recovery factor (~44%). Poor-quality reservoir intervals may still be untapped))

Bertoni, C. & J.A. García (2012)- Interplay between submarine depositional processes and recent tectonics in the Biak Basin, Western Papua, Eastern Indonesia. Berita Sedimentologi 23, p. 42-46.
(online at: www.iagi.or.id/fosi/)
(Bathymetry and seismic data suggest offshore Biak Basin, between Biak and Yapen Islands, is transtensional pull-apart basin. Deposition along basin margins is strongly influenced by young, active faulting)

Biantoro, E. & A. Luthfi (1999)- The pre-collision basin configuration in Bintuni area, Irian Jaya: an alternative idea of hydrocarbon potential in Pre-Tertiary sediments. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc.Geol. (IAGI), Jakarta, 1, p. 17-32.
(Bintuni Basin three tectonic phases: Permo-Triassic pre-rift, Jurassic- E Tertiary synrift (NW-SE half-grabens and re-activated folds) and Tertiary syntectonic phase. Latest tectonic phase Plio-Pleistocene (Sorong FZ, Lengguru foldbelt))

Bijlmer, H.J.T. (1938)- De Mimika-expeditie 1935-1936 naar centraal Nieuw Guinea. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2), 54, p. 240-260.
(Summary of (mostly anthropological) Mimika Expedition to W part Central Range of West Papua)

Biq, C.C. (1978)- Taiwan vis-a-vis New Guinea: a comparison of their continent-arc collisions. Acta Oceanographica Taiwanica 8, p. 22-42.
(online at: tao.wordpedia.com/pdf_down.aspx?filename=JO00001053_8_22-42)
Taiwan and New Guinea collisional belts represent comparable continental platform- foldbelt- arc (ocean) successions. Sutures on both islands are zone of ophiolitic melange)

Birt, C., B. Boyd & A. Nugraha (2015)- Evolution and karstification of the Eocene-Miocene carbonates overlying the Tangguh gas fields in Western Papua- observations from 3D seismic and impact on drilling operations. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-302, 17p.
(Tangguh structures NW-SE trending anticlines formed in Late Eocene- Oligocene due to collision between Australian and Pacific plates, modified by Late Miocene-Pliocene transpression, when Lengguru Foldbelt and Bintuni foreland basin developed. Eocene-Miocene Faumai and Kais karsted carbonates overlie Jurassic-reservoired gas fields of Tangguh area and present significant drilling challenges. E-M Eocene Faumai Fm with angular unconformity below E-M Miocene Base Kais (missing time-gap ~14 Myrs) (not recognized as significant time-gap elsewhere in Birds body of Papua?)

Birt, C., S. Dee, S. Wospakrik & M. Fitriannur (2017)- Estimating the amount of lateral movement on re-activated strike slip faults at the Tangguh gas fields- implications for reservoir mapping and structural compartmentalization. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-389-G, 24p.
(Bintuni Bay area with Tangguh gas fields with 3-way and 4-way closures formed by late strike-slip movement. Long tectonic history: (1) Permian extension generated NW-SE grabens; (2) Inversions in Late Triassic, causing truncations at Base Jurassic unconformity and onlapping E-M Jurassic, thickening to S and E;(3) ?M-L Eocene-Oligocene ENE-WSW left-lateral strike-slip faults, with ~2 km or more displacement, and truncation at Base Oligocene unconformity (base Kais carbonate); (4) Late Miocene- E Pliocene tilting due to flexural loading of Lengguru FB, and (5) Late Pliocene-Pleistocene left-lateral strike slip after Lengguru FB lockup, with several 100m of displacement)

Bladon, G.M. (1988)- Catalogue, appraisal and significance of K-Ar isotopic ages determined for igneous and metamorphic rocks in Irian Jaya. Geol. Res. Dev. Centre (GRDC), Bandung, Prelim Geol. Report, p. *(Unpublished)*
(2.2-2.9 Ma intrusions in Birds Head, Enarotali, Waghete, etc., areas (Pigram & Sukanto 1989). Netoni granite in N Birds Head hornblende K-Ar ages between 241-208 Ma, but younger ages from biotite, plagioclase. Anggi Granite 243-225 Ma, Wariki Granodiorite (258-226 Ma, etc.)

Boehm, G. (1913)- Unteres Callovien und Coronaten-Schichten zwischen MacCluer Golf und Geelvink-Bai. Nova Guinea- Resultats des expeditions scientifiques a la Nouvelle Guinee en 1903, 6, Geologie, 1, Brill, Leiden, p. 1-20. *(online at: https://ia800301.us.archive.org/10/items/novaguinearsulta61913nede/novaguinearsulta61913nede.pdf)*
('Lower Callovian and Coronatus beds between MacCluer Gulf (Bintuni Bay) and Geelvink (=Cenderawasih) Bay' M Jurassic (Bajocian- Lower Callovian) ammonites collected from Upper Aramasa River, S of Bintuni Bay, and by Wichmann from Mamapiri and Papararo rivers in Wendesi area on W side Cenderawasih Bay. Most common species Macrocephalites keeuwensis and Phylloceras mamapiricum)

Boro, H. & B. Sapiie (2003)- Structural geology of Ertsberg intrusion and its relationship to Papua foldbelt in the Guning Bijih mining district, Papua. Proc. 29^{th} Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-12.
(Two deformation events around Ertsberg mine: (1) Mio-Pliocene NW trending foldbelt, (2) Pliocene left-lateral strike-slip deformation, with emplacement of Ertsberg Intrusion)

Boureau, E. & W.J. Jongmans (1955)- *Novoguineoxylon lacunosum* n.gen., n.sp., bois fossile de cycadophyte de la Nouvelle-Guinee hollandaise. Revue Generale Botanique 62, p. 720-734.
('Novoguineoxylon lacunosum n.gen., n.sp., new cycadophyte fossil wood from Netherlands New Guinea'. New wood species of supposedly Jurasssic age, collected by NNGPM geologists from fluvial 'Jass Fm' in Kamundan River area of central Birds Head (wood reportedly similar to Australoxylon mondii described from U Permian of East Antarctica; Permian age more likely according to Bamford & Philippe 2001))

Brash, R.W., L.F. Henage, B.H. Harahap, D.T. Moffat & R.W. Tauer (1991)- Stratigraphy and depositional history of the New Guinea limestone group, Lengguru, Irian Jaya. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 67-84.

(Mobil field program in Lengguru Foldbelt. Extensive Paleocene- early Late Miocene carbonate platform, 1000-1600m thick. 6-7 zones distinguished. Middle-Late Eocene limestone in backreef facies with with Lacazinella wichmanni. In most places Early Oligocene unconformable over M Eocene. After Rupelian erosion (with reworked Eocene clasts) carbonate deposition resumed by latest E Oligocene with deposition of Sirga Fm with Nummulites fichteli and Lepidocyclina (Eulepidina) (zone Td))

Broili, F. (1924)- Zur Geologie des Vogelkop (N.W. Neu-Guinea). Dienst Mijnbouw Nederlandsch Oost-Indie, Wetenschappelijke Mededeelingen 1, p. 1-15.
('On the geology of the Birds Head (NW New Guinea)'. Early paper on Birds Head geology, recognizing Permo-Carboniferous with brachiopods (Chonetes, Martinia) and solitary coral (Amplexus coralloides) from Kamoendan River area, Late Jurassic (Oxfordian) with belemnites (Belemnites gerardi) and molluscs (Inoceramis galoi, Posidonomya) from Itegere River, NE Birds Head, etc. Good cross-section)

Brouwer, H.A. (1924)- Bijdrage tot de geologie der Radja Ampat eilanden-groep (Waigeoe, Salawati, etc.). Jaarboek Mijnwezen Nederlandsch Oost-Indie, Verhandelingen 52 (1923), p. 63-136.
('Contribution to the geology of the Raja Ampat islands'. Early paper on geology of Waigeo, N Salawati, Pulau Snapan, Batang Pale and Jen islands)

Bulman, O.M.B. (1964)- Lower Palaeozoic plankton. Quart. J. Geol. Soc. London 120, p. 455-476.
(General review of graptolites, with mention of Late Silurian Monograptus turriculatus from Kemum Fm of North Central Birds Head, collected by NNGPM geologists)

Casarta, L.J., J.P. Salo, S. Tisnawidjaja & S.T. Sampurno (2004)- Wiriagar Deep: the frontier discovery that triggered Tangguh LNG. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 137-157.
(Wiriagar Deep-1 first commercial pre-Tertiary gas discovery in Indonesia (1994). Five subsequent gas discoveries combined in Tangguh LNG Project, with reserve potential of 24 TCF. Two main M Jurassic reservoir horizons, sourced from Late Permian coals. Unconformity between Late Permian- Jurassic, with Triassic sediments generally absent or thin redbeds. Jurassic sands shallow marine in transgressive systems tract, onlapping 'Permo-Triassic Rift Unconformity' in N direction. Cretaceous uplift, Late Cretaceous subsidence, Oligocene early compression phase, Miocene NW-SE trending anticline formation. Late Miocene-Pleistocene Bintuni Basin foreland creation lead to maturation)

Challinor, A.B. (1989)- Early Cretaceous belemnites from the central Bird's Head, Irian Jaya, Indonesia. Publ. Geol. Res. Dev. Center, Bandung, Seri Paleontologi 5, p. 1-21.
(Description of belemnites from central Birds Head collected by Skwarko from Jass Fm calcareous mudstone and sandstone, assigned Hauterivian age)

Charlton, T.R. (1991)- Evolution of the Sorong Fault Zone, Northeast Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 75, 3, p. 75.
(Abstract only; Sorong FZ zone of left-lateral shear at triple junction of three plates, with fragments of New Guinea margin detached and translated W until collision with E margin of Eurasia in Sulawesi. Recent investigations suggest less mobilist interpretation. Closest inter-island geological correlations are between geographically closest islands (e.g. Banggai-Sula-S Obi; N Obi-Bacan; W Halmahera-E Halmahera-Waigeo; Misool-Buru-Seram), favoring more conservative reconstructions. Although arc-continent collision started in New Guinea in M Oligocene and slightly later in Sulawesi, SFZ did not develop before Late Miocene)

Charlton, T.R. (1996)- Correlation of the Salawati and Tomori basins, eastern Indonesia: a constraint on left-lateral displacements of the Sorong fault zone. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 465-481.
(Birds Head Salawati Basin and E Sulawesi Tomori Basin similar Mesozoic-Tertiary stratigraphies and may have formed one single basin prior to the development of the Sorong Fault Zone)

Charlton, T.R. (1998)- Yapen island: a right-lateral paradox in the left-lateral ôNorth New Guinea megashearö: implications for the biogeography and geological development of the Bird's Head, Irian Jaya. In: J. Miedema et al. (eds.) Perspectives on the Bird's Head of Irian Jaya, Indonesia, Editions Rodopi, Amsterdam, p. 783-796.
(Early movement along Yapen Fault Zone (M-L Miocene- E Pliocene); left lateral, since later E Pliocene. Proposes Pliocene anticlockwise rotation of Birds head as mechanism for opening of Cenderawasih Bay)

Charlton, T.R. (2000)- Late Cretaceous evolution of the Birdôs Head, Irian Jaya: a failed rift ? AAPG Int. Conf., Bali 2000 *(Abstract)*
(Late Cretaceous Jass Megasequence bathyal succession with local volcanics varies in thickness and developed above Intra-Cretaceous unconformity. Sediments above unconformity onlap onto structural high near Kalitami-1, C Bintuni Basin. Late Cretaceous Birds Head was site of N-S extension, probably related to separation of continental terrane from N of E Irian Jaya/PNG. Extension started in ~Turonian and continental margin terrane separated from Greater Australia in Maastrichtian. By end-Cretaceous C and S Bird's Head formed subsiding block-faulted terrane, with emergent Kemum block high to N. Oligocene initiation of arc-continent collision produced structures in Mesozoic section and structural ridges on which Miocene Kais reefs nucleated)

Charlton, T.R. (2010)- The Pliocene-Recent anticlockwise rotation of The Bird's Head, the opening of the Aru Trough- Cendrawasih Bay sphenochasm, and the closure of the Banda double arc. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-008, 18p.

Chevallier, B. & M.L. Bordenave (1986)- Contribution of geochemistry to the exploration in the Bintuni Basin. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 439-460.
(Late Tertiary clastics and carbonates in Bintnui Basin marginal source potential and mostly immature. Oils from Wasian, Mogoi, Wiriagar thermally mature. Mogoi and Wasian oils may be sourced by Permian Aifat Fm, Wiriagar oil from M Jurassic)

Cloos, M. (1997)- Anatomy of a mine: the discovery and development of Grasberg. Geotimes Jan. 1997, p. 16-20.

Cloos, M. (1997)- Geology and the Grasberg: a model for joint industry and academic research. Geotimes, Sept. 1997, p. 19-22.

Cloos, M. (2008)- Grasberg porphyry copper-gold deposit, Papua, Indonesia- structural setting and hydrothermal system. In: The Pacific Rim: mineral endowment, discoveries and exploration frontiers, Proc. Pacrim 2008 Conference, Gold Coast, p. 3-6.

Cloos, M. (2013)- Origin of the giant Cu-Au ore bodies of the Ertsberg District in Papua, Indonesia: collisional delamination, a bubbling magma chamber, and throttling cupolas. In: N.I. Basuki (ed.) Proc. Papua and Maluku Mineral Resources, Indon. Soc. Econ. Geol. (MGEI) Ann. Convention, Kuta, Bali, p. 151-158.

Cloos, M. & T.B. Housh (2008)- Collisional delamination in New Guinea: implications for porphyry-type Cu-Au ore formation. In: J.E. Spencer & S.R. Titley (eds.) Ores and orogenesis: Circum-Pacific tectonics, geologic evolution and ore deposits, Arizona Geol. Soc. Digest 22, p. 235-244.

Cloos, M. & B. Sapiie (2013)- Porphyry copper deposits: strike-slip faulting and throttling cupolas. Int. Geology Review 55, 1, p. 43-65.
(Continuation of Sapiie & Cloos (2013) paper of Grasberg C-Au deposit in Central Range of W Papua. Porphyry copper ore deposits form where strike-slip movements are concurrent with early stages of deep-seated bubbling (6 km) along walls of rapidly cooling stock of magma. Supergiant deposits form where bubbling front extends into top of parent batholith)

Cloos, M., B. Sapiie, A. Quarles van Ufford, R.J. Weiland, P.Q. Warren & T.P. McMahon (2005)- Collisional delamination in New Guinea: the geotectonics of subducting slab breakoff. Geol. Soc. America (GSA), Spec. Paper 400, p. 1-51.

(Central Range began to form when Australian passive margin entered N-dipping subduction zone in M Miocene, 15-12 Ma. Jamming of subduction zone at ~8 Ma initiated thick-skinned deformation (Mapenduma anticline basement-involved block). Magma generation between 7.5-3 Ma. Contractional deformation in W Highlands ends at ~4 Ma. Rupturing of subducting lithosphere caused short-lived magmatic event and up to 2.5 km of vertical uplift, starting at ~8 Ma and propagating from W to E at ~150 km/ My)

Cockcroft, P.J., D.A. Gamber & H.M. Hermawan (1984)- Fracture detection in the Salawati basin of Irian Jaya, Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 125-151.
(Wireline logging responses in fractured carbonate reservoirs of Salawati Basin)

Colijn, A.H. (1939)- Naar de eeuwige sneeuw van tropisch Nederland. Scheltens & Giltay, Amsterdam, p. 1-286.
('To the eternal snow of tropical Netherlands'. Travel book on first succesful expedition to climb the snow-capped Carstensz peaks in Nieuw Guinea, with geologist Dozy discovering world-class Ertsberg porphyry copper deposit en route to the top)

Collier, B., N. Sabirin; S. Sirait, F.B. Widodo et al. (eds.) (2011)- Tembagapura: the mining community, the uniqueness, and the natural beauty of our surroundings. PT Freeport Indonesia, p.

Collins, J.L. & M.K. Qureshi (1977)- Reef exploration in the Bintuni Basin and Bomberai Trough. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 43-67.
(Bintuni Basin over 22,000' of Tertiary marine carbonates and shales. In SUN contract blocks E Tertiary broad carbonate platform over most of Bomberai Peninsula. Basinal pelagic limestones E of platform. End Oligocene downwarp of platform margin resulted in W-ward migration of basin and transgression by Klasafet shales and marls. Further subsidence in Plio-Pleistocene time, with deposition of thick shallow marine clastics. Portion of platform likely area for pinnacle reefs development)

Courteney, S., P. Cockcroft, R.S.K. Phoa & A.W.R. Wight (1989)- Indonesia-Oil and Gas Fields Atlas, VI, Eastern Indonesia. Pertamina, p.

Coutts, B P., H. Susanto, N. Belluz, D. Flint & A.C. Edwards (1999)- Geology of the Deep Ore Zone, Ertsberg East Skarn System (EESS), Irian Jaya. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 181-202.
(In Indonesian. Similar to Coutts et al. (1999) below)

Coutts, B P., H. Susanto, N. Belluz, D. Flint & A.C. Edwards (1999)- Geology of the Deep Ore Zone, Ertsberg East Skarn System, Irian Jaya. In: G. Weber (ed.) Proc. PACRIM '99 Congress, Bali, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 539-547.
(Deep Ore Zone in Tertiary Waripi and Faumai Fms carbonates in lower portion of Ertsberg East Skarn System. Ertsberg Mining District underlain by folded Jurassic-Tertiary siliclastic-carbonate formations. Intrusion of igneous bodies post-dates folding and faulting. Formation of skarn system by contact metamorphism during intrusion of Ertsberg Diorite)

Crespin, I. (1961)- Foraminiferal rocks from the Nassau Range, Netherlands New Guinea. Bureau Mineral Res., Canberra, Record 1961/104, p. 1-5.
(online at: www.ga.gov.au/corporate_data/10831/Rec1961_104.pdf)
(Micropaleontology of rocks collected by D. Dow in W Papua Central Range. Localities of Eocene limestone with larger forams (Lacazinella, Nummulites, Asterocyclina, etc.). Meleri River sample near Tiom E Miocene limestone with reworked 'Asian-Pacific' Eocene Pellatispira-Biplanispira. Marls from Ilaga valley with E Miocene planktonic forams)

Crick, R.E. & A.I. Quarles van Ufford (1995)- Late Ordovician (Caradoc-Ashgill) ellesmerocerid *Bactroceras latisiphonatum* of Irian Jaya and Australia. Alcheringa 19, 3, p. 235-241.

(Ordovician nautiloid originally described as Irianoceras antiquum Kobayashi 1971 from Irian Jaya is synonym of Bactroceras latisiphonatum Glenister, described from Late Ordovician of SE Australia. New material extends geographic range and documents presence of U Caradoc- Lower Ashgill strata in W Papua. (Fossils in nodules, purchased in Karubaga in N part of Central Range; locality unknown; appear to be found near Jurassic-Cretaceous outcrops where no E Paleozoic rocks are known; see also Van Gorsel 2014))

Dam, R.A.C. (1998)- Cenozoic geological development and environmental settings of the Birdôs Head of Irian Jaya. In: J. Miedema et al. (eds.) Perspectives on the Birdôs Head of Irian Jaya, Indonesia. Proc. Conf., Leiden October 1997, Editions Rodopi, Amsterdam, p. 757-781.
(Mainly literature review of Birds Head geological history, contrasting reconstructions of Hall 1996 and Pigram et al. 1985/ Struckmeyer et al. 1993)

Dam, M.A.C. & T.E. Wong (1998)- The environmental and geologic setting of the Bird's Head, Irian Jaya. In: G.J. Bartstra (ed.) Bird's Head approaches; Irian Jaya studies; a programme for interdisciplinary research. Modern Quaternary Research in Southeast Asia 15, Balkema, Rotterdam, p. 1-28.
(Brief review of Quaternary geography and environmental setting and geology of Birds Head peninsula)

Davies, H.L. (2009)- New Guinea, Geology. In: R.G. Gillespie & D.A. Clague (eds.) The encyclopedia of islands, University of California Press, Berkeley, p. 659-665.
(Brief review of geology of New Guinea island)

Davies, H.L. (2010)- Shallow-dipping subduction beneath New Guinea and the geologic setting of the Grasberg, Ok Tedi, Frieda River and Porgera mineral deposits. In: 20th Australian Geol. Convention, Canberra 2010, Geol. Soc. Australia, Abstracts 98, p. 249. *(Abstract only)*
(Late Cenozoic igneous activity in C Range of New Guinea associated with large copper-gold deposits at Grasberg, Ok Tedi, Frieda River, Porgera, etc. May be related to S-ward shallow-dipping subduction of oceanic lithosphere from plate boundary at New Guinea Trench. Slab interpreted from tomography by Tregoning and Gorbatov (2004). S-ward progress of slab beneath island would explain S-ward migration of igneous activity through Late Cenozoic and transfer of stress from N to S front of Papuan Fold Belt)

Davies, H.L. (2012)- The geology of New Guinea - the cordilleran margin of the Australian continent. Episodes 35, 1, p. 87-102.
(online at: www.episodes.co.in/contents/2012/march/p87-102.pdf)
(Elegant overview of West Papua and Papua New Guinea geology. Fold and thrust belt marks outer limit of Australian craton. To N, E and W is aggregation of continental and oceanic volcanic arc terranes that accreted since Late Cretaceous, driven by oblique convergence between Pacific and Indo-Australian plates and include two great ophiolites. Plate boundary is complex system of microplates. In E opening of Woodlark Basin causes extension of continental crust and exhumation of Pliocene eclogite. Similar extensional structures and exhumation of Pliocene eclogite in W New Guinea Wandamen Peninsula. Flat and shallow oblique subduction at New Guinea Trench caused deformation of Plio-Quaternary sediments in Mamberamo Basin, deformation and Pliocene igneous activity in Central Range, and SW motion of Bird's Head)

De Boer, A.J. & J.P. Duffels (1996)- Historical biogeography of the cicads of Wallacea, New Guinea and the West Pacific. Palaeogeogr. Palaeoclim. Palaeoecology 124, p. 153-177.
(Cicadas species distribution explained as result of plate tectonic evolution of E Indonesia/ New Guinea)

Decker, J., S.C. Bergman, P.A. Teas, P. Baillie & D.L. Orange (2009)- Constraints on the tectonic evolution of the Birdôs Head, West Papua, Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA-G-139, p. 491-514.
(M Jurassic Tangguh reservoir sandstones in Bintuni Basin interpreted as incised valley that was attached to Australian NW Shelf. Birds Head and translated N at least 500 km and rotated CCW by 50º-90º along dextral strike slip fault system during Late Neogene to current position)

De Graaff, W.P.F.H. (1960)- Tertiary foraminifera from Northwest Dutch New Guinea. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 63, p. 368-373.
(On foraminifera in samples of Miocene (Te-Tf) limestone from western Birds Head and adjacent islands)

De Groot, P.F. (1940)- Kort verslag over de werkzaamheden van de IIIde expeditie der N.V. Mijnbouwmaatschappij Nederlands Nieuw Guinea in 1938-1939. De Ingenieur in Nederlandsch-Indie (IV), 7, 9, p. 123-135.
('Brief report on the activities of the Third expedition of the Netherlands New Guinea Mining company in 1938-1939'. Minerals exploration expedition in Upper Digul, Birim, Moejoe Rivers areas in W Papua, S of Central Range between ~140-141°E near PNG border and in Keerom-Bewani area around Lake Sentani NE West Papua. 'Mijnbouw Maatschappij Nederlandsch Nieuw-Guinea' was consortium lead by Billiton. Locally traces of gold in river alluvium. Not much geology detail. Rock samples described in Van Bemmelen (1940), comments by Terpstra (1941))

De Jong, G., W. Sunyoto & M. Cloos (2015)- Composition, lithochemistry and radiogenic isotopes of porphyritic and equigranular intrusions in the Ertsberg mining District, Papua, Indonesia. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 347-356. *(Extended Abstract)*
(Ertsberg Mining District with at least six major prophyry intrusions identified (Grasberg, Karume, Lembah Tembaga, Ertsberg, Kay, Wanagon), plus new discovery of hidden porphyry Gajah Tidur. Igneous activities in short time span (3.4- 2.7 Ma zircon ages))

De Jong, G., S. Widodo, B. Antoro, N. Wiwoho, A. Perdana & P.Q. Warren (2008)- Geological review of Broken Limestone surrounding the Cu-Au Grasberg open pit- Papua, Indonesia. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 813-826.
('Broken Limestone' zones of fractures and karst in mineralized Oligo-Miocene Kais Limestone in NE and SW areas of Grasberg mine, trending parallel to regional NW-SE faults. Kais Fm surrounding Grasberg cut by steep dipping regional NW-SE trending faults (also in 38th Conv. 2009))

De Koning, G. & R.K. Steup (1959)- Geological reconaissance survey of the Meervlakte. Nederlandsch Nieuw Guinea Petroleum Maatschappij (NNGPM), Report 31803, p. *(Unpublished)*
(Geological reconnaissance and gravity survey along Idenburg River)

De Neve, G.A. (1985)- The Ayu and Asia Islands North of Waigeo (Irian Jaya). Buletin Geologi (ITB) 15, p.

De Sigoyer, J., M. Pubellier, V. Bailly, F. Sapin & J. Ringenbach (2007)- First discovery of eclogite in West Papua (Wandamen Peninsula). EOS Transactions AGU 88 (52), AGU Fall Mtg. Suppl., San Francisco, p.
(Poster Abstract. Boulders of fresh eclogites and large garnets in schist in Wandamen Peninsula, in zone of oblique Pacific- Australian plates convergence. E-W metamorphic gradient from unmetamorphosed Lengguru sedimentary prism to metamorphic Wandamen Peninsula. Peninsula may represent inner part of Lengguru belt and may be continuation of inner part of C Range of Papua farther East. Eclogite occurs as lenses in metasedimentary rocks. Sediments look like Cenozoic of internal zone of Lengguru FTB. Migmatites and leucogranite cross cut eclogite, indicating later HT event. Miocene pebbles in conglomerate overlying E flank of Wandamen massif without metamorphic/ magmatic pebbles, suggesting eclogite exhumation after Miocene)

De Sigoyer, J., C. Francois, A. Cocherie, M. Pubellier, V. Bailly & J.C. Ringenbach (2011)- Very young and fast exhumation, between 8 and 5 Ma, for the high pressure metasediments of Lengguru prism, W Papua. Geophysical Res. Abstracts, 13, EGU2011-6601-1, 2011, 1p. *(Abstract only)*
(High-pressure metasediments with retrogressed eclogites and migmatites in internal part of Lengguru foldbelt (Wandamen Peninsula). Lengguru prism built between 11-2 Ma. Metasediments from N Wandamen show high-P metamorphism, followed by second stage related to N-S stretching. Zircons from metagreywackes show metamorphic rims around inherited cores. Rims sugggest high P event ages of ~8-7 Ma, associated with subduction, followed by exhumation associated with migmatisation only 1-2 Ma after burial (fastest exhumation ever documented for high P rocks))

Dickins, J.M. & S.K. Skwarko (1981)- Upper Palaeozoic pelecypods and gastropods from Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 2, p. 43-52.
(Early Permian (Artinskian or Kungurian) Aimau Fm pelecypods from Birds Head)

Dipatunggoro, G. (2007)- Nikel lateritik di daerah Tanah Merah, Tablasufa dan Ormo, Kabupaten Jayapura, Propinsi Papua. Bull. Scientific Contr. (UNPAD) 5, 3, p. 173-181.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8150/3723)
('Lateritic nickel in the Tanah Merah, Tablasufa and Ormo regions, Jayapura Regency, Papua Province'. Up to 6% nickel (associated with Fe, Co and Cr) in laterites on weathered ultramafic rocks around Jayapura. Pretertiary ultramafic and metamorphic rocks of uplifted and exposed since E Miocene- present tectonics)

Djoehanah, S., S. Indarto & M.S. Siregar (1996)- Penyebaran foraminifera besar dalam batugamping di daerah Wamena, Irian Jaya. In: Sampurno et al. (eds.) Pros. Seminar Nasional Geoteknologi III, LIPI, Bandung, p. 462-472.
('Distribution of larger foraminifera limestones in the Wamena area, Irian Jaya'. Eocene- Miocene New Guinea Limestone in Wamena area ~240m thick. Basal part with Eocene Nummulites, Discocyclina, Pellatispira. Oligo-Miocene part with Lepidocyclina, Miogypsina, Spiroclypeus, etc. No plates)

Djuharlan, J. (1993)- Structural control of Ertsberg East orebody, Tembagapura, Irian Jaya. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 906-912.
(Ertsberg East skarn mineralization in Eocene-Oligocene limestone, associated with Pliocene (3.1 Ma) biotite-hornblende diorite. Orebody continuous for ~1.5 km from surface (~4100-2890m))

Djumhana, N. & A.M. Syarief (1991)- Pliocene carbonate build-ups a new play in the Salawati Basin, Irian Jaya. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 119-135.
(Traditional Salawati Basin play is Miocene Kais Fm carbonate, but additional detrital limestone play in overlying Pliocene Klasafet and buildups in Late Pliocene Klasaman Fms. Terumbu 1 well, in NW Salawati basin 1.8 km W of Klalin 1, tested 17.5 MMCFD of biogenic gas in 758' thick coralline Pliocene buildup)

Dolan, P.J. & Hermany (1988)- The geology of the Wiriagar field, Bintuni Basin, Irian Jaya. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 53-87.
(1981 oil discovery in Upper Miocene Kais Limestone. Trap combination of structural, stratigraphic and diagenetic processes. Reefs probably developed on local highs, produced by Late Oligocene folding. Subsequent E-W directed compression in Pliocene created structural trap. Most likely source of oil is Jurassic Kembelangan Fm, although more than one source suggested by fluid inclusions and geochemical analysis)

Douglas, E.A. (1913)- Korte beschrijving van eenige rolstenen uit de Digoelrivier verzameld door den mijningenieur O.G. Heldring. Jaarboek Mijnwezen Nederlandsch Oost-Indie 40 (1911), Verhandelingen, p. 199-202.
('Brief descriptions of float from Digul river, collected by Heldring': granite, syenite, diorite, gabbro, andesite)

Douglas, E.A. (1913)- Korte beschrijving van eenige rolstenen uit de Eilanden-rivier verzameld door den mijningenieur O.G. Heldring. Jaarboek Mijnwezen Nederlandsch Oost-Indie 40 (1911), Verhandelingen, p. 203-204.
('Brief descriptions of float from Eilanden river, collected by mining engineerHeldring'. Description of rock types in Eilanden River, S of Central Range, incl. diorite, diabase, etc.)

Douglas, E.A. (1913)- Korte beschrijving van eenige rolstenen uit de Setakwa-rivier verzameld door den mijningenieur O.G. Heldring. Jaarboek Mijnwezen Nederlandsch Oost-Indie 40 (1911), Verhandelingen, p. 205-206.
('Brief descriptions of float from Setakwa river, collected by mining engineer Heldring': diorites)

Douville, H. (1923)- Sur quelques foraminiferes des Moluques orientales et de la Nouvelle Guinee. Jaarboek Mijnwezen Nederlandsch-Indie 50 (1921), Verhandelingen 2, p. 107-116.
('On some foraminifera from the eastern Moluccas and from New Guinea'. Brief description of Eocene larger forams in samples collected by Brouwer in Halmahera (Nummulites, Discocyclina, Alveolina), Roti (large Nummulites, Discocyclina), Seram (E Miocene Lepidocyclina in breccia with reworked angular clasts of Upper Cretaceous pelagic limestone), New Guinea, Kai Besar (rounded fragments of Eocene Lacazina in quartz sandstone, etc. No location info)

Dow, D.B. (1968)- A geological reconnaissance in the Nassau Range, West New Guinea. Geologie en Mijnbouw 47, 1, p. 37-46.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0UTVnaWlrNVh3LVk/view)
(1961 reconnaissance of N side of W Papua Nassau Range (NE of Carstenz Peak/ Puncak Jaya) found clean quartz sandstone of probable Mesozoic age below U Eocene- E Miocene Tertiary Carstensz Limestone. Sedimentation punctuated, probably in Lower Miocene, by andesitic volcanism. Well-preserved erosion features and moraine deposits due to extensive late Pleistocene glaciation above ~12,000'. Tertiary rocks generally only gently folded. Present-day erosion almost entirely due to dissolution of limestone. Long, slightly curved, faults of considerable vertical displacement show many feature characteristic of transcurrent faults)

Dow, D.B. & B. Hamonangan (1981)- Preliminary geological map of the Enarotali quadrangle, Irian Jaya, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(see also 'final' map of Harahap et al. 1990)

Dow, D.B., B. Harahap & S. Hakim (1990)- Geology of the Enarotali Sheet area, Irian Jaya, 1:250,000 (Quad. 3112). Geol. Res. Dev. Centre, Indonesia, Bandung, 57p.
(see also Harahap et al. 1990)

Dow, D.B. & U. Hartono (1982)- The nature of the crust underlying Cendrawasih (Cendrawasih) Bay, Irian Jaya. Proc. 11th Ann. Conv. Indon. Petroleum Assoc., p. 203-210. (also in Bull. Geol. Res. Dev. Centre 6, p. 30-36.
(Much of Cenderawasih Bay is oceanic crust and Pacific Plate island arc volcanics. SW margin Wandamen zone Paleozoic crystalline basement, rocks of continental affinity extending on islands over 50 km into bay. Hydrocarbon potential in bay limited to Neogene sediments which may include thick carbonates. Clastics likely mostly poorly sorted, immature sediments with limited oil source potential)

Dow, D.B. & U. Hartono (1984)- The mechanism of Pleistocene plate convergence along Northeastern Irian Jaya. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 145-150.
(Main structures along N edge Irian Jaya are probably M Pleistocene, resulting from SW directed relative convergence of Pacific and Australian plates)

Dow, D.B., G.P. Robinson, U. Hartono & N. Ratman (1986)- Geological map of Irian Jaya, 1:1,000,000 scale, Geol. Res. Dev. Center, Bandung.

Dow, D.B., G.P. Robinson, U.B. Hartono & N. Ratman (1988)- Geology of Irian Jaya. Preliminary geological report. GRDC/BMR Irian Jaya Mapping Project Report, Geol. Res. Dev. Center, Bandung, 298p.
(Overview of Irian Jaya geology. See also published version in 2005)

Dow, D.B., G.P. Robinson, U.B. Hartono & N. Ratman (2005)- Geology of Irian Jaya. Geol. Res. Dev. Center, Bandung, Spec. Publ. 32, p. 1-208.
(Printed publication of 1988 GRDC ‘preliminary report’)

Dow, D.B., G.P. Robinson & N. Ratman (1985)- Large-scale overthrusting during the Pliocene in western Irian Jaya. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 11, p. 29-41.
(Main structural elements of W Irian Jaya formed in Pliocene. K-Ar cooling ages of Wandamen Metamorphics 6.9 and 5.0 Ma. Stratigraphic similarities suggest Birds Head was probably not far removed from Irian Jaya-

Australian continent during most of Tertiary. Cenderawasih Bay probably underlain by E Tertiary island arc volcanics originating on Pacific Plate. Weyland Range of Derewo metamorphics, ophiolite and large M Miocene Utawa Diorite intrusion S-directed thrust with 25 km S-ward displacement and 4-5 km of uplift)

Dow, D.B., G.P. Robinson & N. Ratman (1985)- A new hypothesis for formation of Lengguru foldbelt, Irian Jaya, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 69, 2, p. 203-214. *(also in Bull. Geol. Res. Dev. Centre 11, p. 14-28, 1985)*
(Lengguru foldbelt is slab of folded platform sediments at N margin Australian continent and was thrust SW ward, rotated 30-35°, and dragged along transcurrent faults to S)

Dow, D.B. & R. Sukamto (1984)- Western Irian Jaya: the end-product of oblique plate convergence in the Late Tertiary. Tectonophysics 106, 1-2, p. 109-139.
(Late Miocene- Recent tectonic history of Birds Head- Cenderawasih Bay- W Papua area. Birds Head assumed to have been in approximately same relative position since Late Paleozoic. Late Miocene collision of Australia-New Guinea with Pacific arc caused clockwise rotation. Cenderawasih Bay underlain by Pacific domain crust)

Dow, D.B. & R. Sukamto (1984)- Late Tertiary to Quaternary tectonics of Irian Jaya. Episodes 7, 4, p. 3-9.
(online at: www.episodes.co.in/www/backissues/74/ARTICLES--3.pdf)
(Review of 1978-1982 Indonesian-Australian Irian Jaya mapping project. Melanesian Orogeny, started in latest Miocene and continues today, involving underthrusting of Australian continent by Pacific Plate)

Dow, D.B. & R. Sukamto (1984)- Western Irian Jaya: the end-product of oblique plate convergence in the Late Tertiary-Reply. Tectonophysics 121, 2-4, p. 348-350.
(Reply to critique by Pigram (1986) Discussion of Dow & Sukamto (1984) paper, who argued that Birds Head and W Irian Jaya are separate crustal fragments. D&S doubt this as lithologies of Late Paleozoic- mid-Tertiary shelfal sediments in both areas is almost identcal)

Dow, D.B., D.S. Trail & B. Harahap (1984)- Geological data record Enarotali 1:250,000 sheet. GRDC/BMR Irian Jaya Mapping Project Report, p. 1-133.

Dozy, J.J. (1937)- Geologie, topografie. In: A.H. Colijn (1937) Naar de eeuwige sneeuw van tropisch Nederland, Scheltens & Giltay, Amsterdam, p. 231-253.
(Brief description of geology and topography of area traversed during first successful ascent of the previously unexplored Carstensz Peak (Puncak Jaya) by Colijn mountaineering expedition. First report of Ertsberg copper deposit)

Dozy, J.J. (1939)- Geological results of the Carstensz expedition 1936. Leidsche Geol. Mededelingen 11, 1, p. 68-131.
(online at: www.repository.naturalis.nl/document/549782 (text) and at:
www.repository.naturalis.nl/document/549783 (plates)
(Geology along traverse from Timika to Carstensz Peak (Puncak Jaya), W Papua, by NNGPM geologist. Paleozoic- Miocene rocks, generally dipping to N. Oldest rocks Simpang series slates.U Paleozoic sandstones with brachiopods Spirifer and Chonetes cf. variolata. Alpine zone of Carstensz Mts entirely composed of folded Eocene (with Fasciolites, Spiroclypeus)- Miocene (with Lepidocyclina, Miogypsinoides, etc.) limestones. Also discovery of Ertsberg world-class porphyry copper-gold deposit. With chapter by Erdman on fossil molluscs)

Dozy, J.J. (2002)- Vom hochsten Gipfel bis in die tiefste Grube. Entdeckung und Erschliessung der Gold- und Kupfererz- Lagerstatten von Irian Jaya, Indonesien. Bull. Angewandte Geologie 7, 1, p. 67-80.
(online at: www.angewandte-geologie.ch/Dokumente/Archiv/Vol71/7_1Dozy-Erz.pdf)
('From the highest peak to the deepest valley: discovery and development of the copper ore deposits of Irian Jaya'. Large gold-bearing copper-ore deposits of W Papua discovered (by this author) during mountaineering expedition to Carstensz-mountains (4884 m) in fall of 1936. Exploitation of Ertsberg deposit at altitude of 3700m began in 1973, followed by Grasberg at >4000m in 1988. Ore bodies are metasomatic replacement deposits related to magmatic intrusions, pipes and skarn in Tertiary limestones)

Druif, J.H. (1954)- Voorlopig rapport inzake de resultaten der Geologisch Mijnbouwkundige Expeditie der Technische Hogeschool in 1953. Nieuw Guinea Rapport Geol. Lab. Technische Hogeschool Delft 6, p.
('Preliminary report on the results of the geological-mining expedition of Delft Technical University in 1953')

Edwards, P. (1992)- Hydrocarbon exploration in the Central Fold Belt of Irian Jaya. In: Eastern Indonesia Exploration Symposium, IPC, Jakarta 1992, 3p.
(Summary of results of Esso- Pertamina Joint study fieldwork in Central Range of West Papua)

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Ellison, J. (2005)- Holocene palynology and sea-level change in two estuaries in Southern Irian Jaya. Palaeogeogr. Palaeoclim. Palaeoecology 220, p. 291-309.
(SW New Guinea extensive tidal deltas on low gradient equatorial coastline. Palynology of cores in Ajkwa and Tipoeka estuaries showed mangroves at levels well below present tidal range, with tectonic subsidence in recent period, with Late Holocene relative sea-level rise of 0.67 mm/year)

Eloni, Riangguna, M.R.H. Sahidu, I. Panggeleng, C.S. Birt & T. Manning (2016)- From chaos to caves- an evolution of seismic karst interpretation at the Vorwata Field. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-165-G, 21p.
(Vorwata giant gas field in Bintuni Bay in M Jurassic sands, with 15 wells drilled from 2 offshore platforms. Overburden complex and includes thick, karstified carbonate of Kais and Faumai Fms. At Vorwata field angular unconformity between folded Eocene carbonates overlain by gently dipping platform carbonates of Kais Fm. Lost-circulation almost always at one of significant sequence boundaries in Faumai unit, although partial losses often start in Oligocene Unconformity or within overlying Kais platform carbonates. New reprocessing better imaging of karst features)

Endharto, M. (1990)- Pola struktur dan tanan tektonik Irian Jaya serta kaitannya dengan kemungkinan keterdapatan hidrokarbon. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 91-104.
('Structural geology and tectonic setting of Irian Jaya related to hydrocarbon prospectivity')

Endharto, M.A.C. (1996)- Mendala struktur geologi regional Irian Jaya, implikasi terhadap perangkap hidrokarbon. J. Geologi Sumberdaya Mineral 6, 53, p. 17-26.
('Regional geological structure of Irian Jaya and implications for hydrocarbon traps'. Brief review of W Papua regional geology)

ERI (Earth Resources Institute) (1990)- Geological data from NE Warim, Irian Jaya, Indonesia: results of the 1989/90 fieldwork program. CONOCO, 129p.

Faber, F.J. (1955)- The first geological expedition (1952) of the Technical University at Delft in Netherlands New Guinea. Nova Guinea, New Ser. 6, 1, p. 177-183.
(Summary of survey work in N New Guinea Cyclops Mountains by Delft Technical University in 1952. Mainly evaluation of residual Ni-cobalt ores in laterite cover developed on harzburgite of Cyclops mountains)

Fachri, M., B. Sapiie, W. Sunyoto, S. Widodo, Yudihanri & W. Margotomo (2005)- Analogue fractured reservoir characterization in Grasberg Igneous Complex (GIC) and New Guinea Limestone Group, Papua. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 543-558.
(Study of fractures in limestone and igneous rocks exposed in Grasberg open pit. Numerous shear fractures, interpreted as a result of a left-lateral Riedel shear system trending ~N60°W)

Fearne, M.C. (1985)- Exploration drilling in the Mamberamo Region of Irian Jaya: an operations review. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 582-603.

Felix, J. (1912)- Uber eine pliocane Korallenfauna aus Hollandisch Neu-Guinea. Berichte Verhandlungen Konigl. Sachsischen Gesellschaft Wissenschaften, Math.-Phys. Klasse, Leipzig, 64, 6, p. 429-445.
(online at: https://babel.hathitrust.org/cgi/pt?id=njp.32101078345475;view=1up;seq=469)
('On a Pliocene coral fauna from Netherlands New Guinea'. Material from Mamberamo River/Van Rees Mountains, North New Guinea. Additional coral species from this area described in Felix (1921, p. 60-61) paper on Borneo corals)

Feuilleteau de Bruyn, W.K.H. (1921)- De Schouten- en Padaido eilanden. Mededeelingen Encyclopaedisch Bureau 21, Batavia, p. 1-193.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02A:000030687:pdf)
(Geographic- ethnographic description of Schouten and Paidadioe islands, N of West Papua, with some geologic observations and preliminary geologic map. Much young coral limestone, also serpentinite and slate with quartz veins, unconformably overlain by sandstones. Coral limestone on Supiori 100m above sea level, in Biak up to 600m above s.l.)

Feuilleteau de Bruyn, W.K.H. (1921)- Contribution a la geologie de la Nouvelle Guinee. Dissertation, Universite de Lausanne, Bull. Lab. Geol., Geogr. Phys. Min. Pal. Universite Lausanne 30, p. 1-172.
(Early work on New Guinea geology as part of 'Military Exploration of New Guinea' expeditions. Descriptions of N New Guinea (Mamberamo area), S New Guinea and Schouten and Padaido Islands. Identified Late Devonian brachiopods, etc., from Noordwest River float)

Feuilleteau de Bruyn, W.K.H. (1936)- Komen er in het Arfak Gebergte vulkanen voor? Tijdschrift Nieuw Guinea 1, p. 1-6.
('Are there volcanoes in the Arfak Mountains?' On possible presence of active volcanoes in NE Birds Head. Rejected by Tjia (1980) and others)

Fink, D., M. Prentice & J. Peterson (2003)- The last glacial maximum and deglaciation events based on Be-10 and Al-26 exposure ages from the Mt. Trikora region, Irian Jaya, Indonesia. In: 16th INQUA Congress, Shaping the Earth; a Quaternary perspective, Reno, USA, p. 231.
(Paired 10Be and 26Al exposure ages from high altitude Mt. Trikora (~3500m). Five major moraine systems in lower valley section sampled. Last Glacial Maximum in Irian Jaya started at least 21.5 ka ago, reaching peak at ~18 ka. Inner moraine system formed at 15.2 ± 1.2 ka during last deglaciation and represents youngest glacial feature here)

Flint, D.E. (1972)- Geology of the Ertsberg copper deposit, Irian Barat, Indonesia. Bull. Nat. Inst. Geol. Mining (NIGM), Bandung 4, 1, p. 23-28.
(Ertsberg copper deposit is black hill at E side of Aghawagon River valley at 3460m elevation in W Papua Central Range (remnant of glacial erosion). First discovered by Dozy in 1936 on mountain climbing expedition. Revisited in 1960 by Freeport party, followed by 1967-1968 drilling campaign. Paleozoic-Mesozoic rel. simple structure, dipping 20-50° N. Exposed ore body 140m above valley floor, extends down 360m)

Fortey, R.A. & L.R.M. Cocks (1986)- Marginal faunal belts and their structural implications, with examples from the Lower Palaeozoic. J. Geol. Soc. London 143, p. 151-160.
(New record of Ordovician (Llanvirn) graptolites in shale from Heluk River, E Irian Jaya (4°25'S, 139°17'E). Assigned to isograptid biofacies and taken as evidence of Ordovician ocean margin here. Also record of early Ordovician graptolites from centre of N Borneo?)

Francois, C., J. de Sigoyer, M. Pubellier, V. Bailly, A. Cocherie & J.C. Ringenbach (2016)- Short-lived subduction and exhumation in Western Papua (Wandamen peninsula): co-existence of HP and HT metamorphic rocks in a young geodynamic setting. Lithos 266-267, p. 44-63.
(Lengguru fold-thrust wedge of W Papua younger than 10Ma and result of oblique and fast subduction of Birds Head under Melanesian Arc. High P rocks in core of wedge in Wandamen peninsula, with metabasic eclogites and amphibolites observed as sheared 'knockers' in Mesozoic metasediments. Metasediments HP (~13-17 kbar; burial depth ~32-44 km); metabasic rocks peak pressure 17-23 kbar and 700-800 °C (burial depth 43-66 km?).

U-Pb dating of zircons shows some magmatic cores with ages >300 Ma (= Australian craton margin volcanic arc). Most zircons metamorphic origin and Late Miocene age (5.6- 8.1± 1.1 Ma). N- S normal faults cross cut limb of anticline associated with present-day E-W extension. Young metamorphic ages suggest rapid subduction and exhumation event)

Franssen Herderschee, A. (1911)- De wetenschappelijke uitkomsten der Mamberamo-expeditie 1909-ô10. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 28, p. 448-461.
('The scientific results of the 1910-1911 Mamberamo expedition')

Fraser, T.H. (2015)- A hydrocarbon exploration history of Papua. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2015, 4.2, p. 1-16.
(History of geological and hydrocarbon exploration in W Papua, PNG and Seram. In W Papua two main and 2 minor plays: Permian gas (Mogoi Deep; non-commercial), M Jurassic sandstones gas (Vorwata), Miocene Kais Fm reefal limestones (Jaya, Kasim, Walio) and Plio-Pleistocene gas (Niengo))

Fraser, T. (2016)- Risk and (possible) reward in West Papua: a tale of two PSC's. In: 2016 Technical Symposium Where from, where to, Indon. Petroleum Assoc. (IPA), Jakarta, p.

Fraser, T.H., J. Bon & L. Samuel (1993)- A new dynamic Mesozoic stratigraphy for the West Irian micro-continent, Indonesia, and its implications. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 707-761.
(Thorough overview of Mesozoic stratigraphy on and around Birds Head- Bintuni Bay, W Papua. Jurassic-basal Cretaceous subdivided into three 'polysequences', separated by stratigaphic breaks: Inanwatan (Toarcian- Bajocian), Roabiba (Callovian- E Kimmeridgean) and Sebyar (mid-Tithonian- E Valanginian). Cretaceous Jass sequence mainly Coniacian and younger; E -M Cretaceous rocks probably deposited, but eroded probably in Aptian or Albian (or later?))

Friehauf, K.C., S.R. Titley & S.L. Gibbins (2005)- Porphyry-style mineralisation in the Ertsberg Diorite, Gunung Bijih (Ertsberg/Grasberg) District, West Papua, Indonesia. In: T.M. Porter (Ed.) Super porphyry copper and gold deposits - a global perspective, PGC Publishing, Adelaide, 2, p. 357-366.

Froidevaux, C.M. (1977)- Tertiary tectonic history of the Salawati area, Irian Jaya, Indonesia. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 199-220.
(Same paper as Froideveax 1978)

Froidevaux, C.M. (1978)- Tertiary tectonic history of Salawati area, Irian Jaya, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 62, p. 1127-1150.
(Salawati Island was attached to Irian Jaya during Miocene-E Pliocene reef development, and separated in M Pliocene- Pleistocene, by opening of Sele Strait rift zone, after creation of left-lateral Sorong fault zone. Island moved 17.5 km SW after ~13° CCW rotation. Motion triggered during widespread magmatic intrusion of Sorong fault zone, when basalt infiltrated right-lateral fault system in Sele Strait area. Rifting along three parallel left-lateral strike-slip faults, later site of down-to-NW normal faulting, accommodating subsidence from Pliocene-Pleistocene load from northern basaltic mountains. If Salawati is placed in former Irian Jaya frame, and N compartment of left-lateral Sorong fault zone moved back E, Miocene landscape appears characterized by widespread carbonate development with reefs thriving at edge of early New Guinea landmass facing open sea on W. Original distribution of reefs different from present)

Froidevaux, C.M. (1980)- Radar, an optimum remote sensing tool for detailed plate tectonic analysis and its application to hydrocarbon exploration (an example in Irian Jaya, Indonesia). In: Radar geology; an assessment report of the Radar geology workshop, Jet Propulsion Lab. (JPL), Pasadena, Publ., p. 457-501.
(Geometric, geomorphic, and structural information derived from radar imagery and combined with geologic and geophysical evidences strongly indicates that Salawati Island was attached to Irian Jaya mainland at time of Miocene-lower Pliocene reef development, and that it was separated in M Pliocene- Pleistocene time,

opening Sele Strait rift zone. Island moved 17.5 km SW after initial 13° CCW rotation. Rift zone is subsequent to creation of left lateral Sorong fault zone)

Fugro (2007)- Offshore Semai hydrocarbon prospectivity study. Multi-client study, 6 vols. *(Unpublished)*
(Petroleum evaluation study of SW Bintuni Basin between onshore Bintuni/Onin and Seram thrust belt)

Gafoer, S. & T. Budhistrisna (1995)- Geological map of the Sarmi and Bufareh sheets, Irian Jaya, 3313-3314, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of central West Papua, N of Central Range and Meervlakte. Part of the 'Pacific Oceanic Domain', with common folding-thrusting as young as Pliocene. Incl. Gauttier Mts, cored by Eocene?- E Miocene Auwewa Fm volcanics, associated with Eocene-Oligocene Biri Fm limestones, shales and pillow basalts and Late Oligocene- E Miocene Darante Fm reefal limestones interbedded with volcanics. Overlain by folded M-L Miocene Makats Fm flysch-type clastics with ultramafic detritus, Mamberamo Gp clastics and widespread Quaternary? chaotic, sheared rock. Locally common mud volcanoes. Oil seep at Teer River in NE)

Gandler, L.M. (2006)- Calc-silicate alteration and Cu-Au mineralization of the Deep MLZ skarn, Ertsberg District, Papua, Indonesia: M.S. Thesis, University of Texas at Austin, p. 1-273. *(Unpublished)*

Gandler, L.M. & J.R. Kyle (2008)- Stratigraphic controls of calc-silicate alteration and copper-gold mineralization of the Deep Mill Level Zone skarn, Ertsberg District, Papua, Indonesia. In: The Pacific Rim: mineral endowment, discoveries and exploration frontiers, Proc. PACRIM 2008 Conf., Gold Coast, p. 313-317.

Garwin, S. (2013)- The tectonic and geological framework of New Guinea and the relationships to gold copper metallogeny. In: Proc. Papua & Maluku Resources, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv., Bali, p. 125-138.

Garwin, S. (2015)- The tectonics, geology and gold-copper metallogeny of New Guinea. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 151-164.
(Since Eocene, New Guinea tectonics driven largely by SW-directed collision of accreted arc terranes with N margin of Australian Craton, and subsequent W-directed transport of these exotic terranes by left-lateral strike-slip fault systems. Two major magmatic belts, both with world-class Cu-Au mineralisation: (1) M-L Miocene Maramuni arc (Frieda River, Nena, Wafi-Golpu, etc. deposits), tied to subduction of Solomon Sea plate beneath NE New Guinea; (2) Medial New Guinea magmatic belt (Grasberg, Ok Tedi, Porgera porphyry and epithermal deposits) localised by dilational zones formed at intersections of NE-trending reactivated basement faults and N-dipping reverse faults related to S-ward progression of Papuan fold belt in Late Miocene- Pleistocene. These deposits probably formed during short mantle-derived magmatic episodes in zones of regional isostatic uplift, attributed to delamination of lithospheric mantle beneath New Guinea)

Gautama, A.B. (1982)- Geologi daerah Carstensz Pyramide- Platen Spitz, Pegunungan Jayawijaya, Irian Jaya. Proc. 11th Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 31-54.
(Geology of the Carstensz peaks region (+4884m) near Freeport copper mine, Central Range of West Papua. Outcrops from U Cretaceous- Recent. Paleocene-Oligocene Faumai Lst >2000m thick, with Lacazinella, Alveolina, etc. in lower part. Kais Lst Oligocene- E Miocene. Plio-Pleistocene Birim Fm volcanics)

Gealey, W.K. (1980)- Ophiolite obduction mechanism. In: A. Panayiotou (ed.) Ophiolites, Proc. Int. Ophiolite Symposium, Cyprus 1979, Geol. Survey Dept. Cyprus, Nicosia, p. 228-243.
(Good discussion of ophiolite obduction model. Includes discussion of New Guinea main ophiolite belt along N margin of Central Range of W Papua and PNG and continuing into New Caledonia, where 'ophiolite obduction' is result of Oligocene collision between N Australian passive continental margin and Auwewa volcanic arc. K-Ar ages on gabbros in E New Guinea 147 and 150 Ma (latest Jurassic)

Gerth, H. (1927)- Ein neues Vorkommen der bathyalen Cephalopoden Fazies des mittleren Jura in Niederlandisch Neu Guinea. Leidsche Geol. Mededelingen 2, 3, p. 225-228.

(online at: www.repository.naturalis.nl/document/549577)
('A new occurrence of the bathyal cephalopod facies of the Middle Jurassic in Netherlands New Guinea'. Small collection of M Jurassic ammonites supposedly from Birds Head (but unlikely from there?; Visser and Hermes 1962, p. 54), donated to Leiden Museum by government official from Fakfak. Reportedly from Wairor River and its Weriangki tributary, presumably near Fak Fak. Ammonites in geodes from hard black limestone, similar to those from Cenderawasih Bay and Sula islands. From Werianki River: Macrocephalites keeuwensis, Sphaeroceras cf. bullatum and Peltoceras, probably Callovian age. From Wairori River two Stephanoceras species, probably Bajocian age)

Gerth, H. (1927)- Eine *Favosites* Kolonie aus dem Palaozoikum von Neu-Guinea. Leidsche Geol. Mededelingen 2, 3, p. 228-229.
('A Favosites colony from the Paleozoic of New Guinea'. Brief report on discovery of Paleozoic tabulate coral in dark limestone float in Noord River, S of Central Range, W Papua. Age range of genus is Silurian-Permian (but in Australia most common in U Silurian- M Devonian; JTvG))

Gerth, H. (1965)- Ammoniten des mittleren und oberen Jura und der altesten Kreide von Nordabhang des Schneegebirges in Neu Guinea. Neues Jahrbuch Geol. Palaont., Abhandl. 121, 2, p. 209-218.
('Middle and Upper Jurassic and lowermost Cretaceous ammonites from the North flank of the Snow Mountains in New Guinea'. Callovian- Berriasian ammonites collected by Faber from two 'Kembelangan Fm' localities, Lambek in W and Amarai 100 km to E. Callovian Macrocephalites keeuwensis, Oxfordian Mayites, Perisphictes and Inoceramus galoi, etc. similar to Sula Islands ammonites. Berriasian with Blanfordiceras, incl. B. novaguiense n.sp., Berriasella)

Getty, T.A. (1967)- Jurassic and Cretaceous ammonites from the Kemaboe Valley, West Irian (West New Guinea). Masters Thesis, McMaster University, Hamilton, p. 1-111.
(online at: https://macsphere.mcmaster.ca/handle/11375/17830)
(Ammonites from Kembelangan Fm black calcareous mudstones, collected by LeRoux in 1939-1940 near Kemabu, NE of Paniai Lakes, NW Central Range of W Papua. Fauna from M Jurassic sowerbyi Zone to U Valanginian. Ammonites most closely related to faunas of Pacific Realm and Ethiopian province of Tethyan Realm. Half of material is new genus Sulaites (E Jurassic?); also M Jurassic Fontannesia, Bullatimorphites and Macrocephalites, Late Jurassic Himalayites and Blanfordiceras and Valanginian Olcostephanus)

Gheyselinck, R.F.C.R. (1953)- Petroleum. In: W.C. Klein (ed.) Nieuw Guinea: de ontwikkeling op economisch, sociaal en cultureel gebied in Nederlands en Australisch Nieuw Guinea, I, Staatsdrukkerij (Dutch Govt. Printing Office), The Hague p. 311-350.
(Overview of pre-1949 Netherlands New Guinea petroleum activities. Oil exploration since 1905 by BPM (Hirschi fieldwork) and after 1935 by NNGM consortium (BPM 40%/ Stanvac 40%/ Caltex 20%). First discovery Klamono field in W Birds Head, in shallow hole drilled in 1936 near surface oil seep, followed by Mogoi and Wasian in 1939-1940 in SE Birds Head. All discoveries to date in Miocene 'Klasafet Limestone' reefs. First systematic use of gravity surveys and aerial photo geology in oil exploration?)

Gibbins, S.L. (2006)- The magmatic and hydrothermal evolution of the Ertsberg intrusion in the Gunung Bijih (Ertsberg) mining district, West Papua, Indonesia. Ph.D. Thesis University of Arizona, Tucson, p. 1-384.
(online at: http://arizona.openrepository.com/arizona/handle/10150/195874)
(Ertsberg complex in W Papua intrusion- and carbonate-hosted mineralization associated with 3.28-2.97± 0.54 Ma multi-phase intrusive complex)

Gibbins, S., S. Titley & K. Friehauf (2003)- Age, origin, petrology and petrography of the Ertsberg Diorite, West Papua, Indonesia. Geol. Soc. America, 2003 Ann. Mtg., Boulder, Abstracts with Programs 35, 6, p. 400.
(Abstract only. Ertsberg Diorite hosts several major copper-gold-bearing skarns in sediments along margins and in roof pendants. U-Pb dates on zircons indicate crystallization age of ~3 Ma. Biotite-clinopyroxene assemblage suggests depths <2 km, similar to formation of adjacent Grasberg. Mineralization at Ertsberg soon after crystallization of main igneous body)

Gibson-Robinson, C., N.M. Henry, S.J. Thomson & H.T. Raharjo (1990)- Kasim and Walio Fields-Indonesia Salawati Basin, Irian Jaya. In: E.A. Beaumont & N.H. Foster (eds.) American Assoc. Petrol. Geol. (AAPG), Treatise of Petroleum Geology, Stratigraphic traps I, Atlas of Oil and Gas Fields, p. 257-295.
(Walio and Kasim, discovered in 1973 are two largest fields in Salawati Basin. Main production from Late Miocene Kais Fm reefal limestones, minor production from 'U' and 'Textularia 2' limestones above Kais Fm)

Gibson-Robinson, C. & H. Soedirdja (1986)- Transgressive development of Miocene reefs, Salawati Basin, Irian Jaya. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 377-403.
(Salawati Basin Miocene reefs grew on extensive carbonate platform during transgressive episodes in Miocene. Three main stages of transgressive reef growth, followed by regressive phases of termination)

Giddings, J.W., W. Sunata & C.J. Pigram (1993)- Reinterpretation of paleomagnetic results from the Birdôs Head, Irian Jaya: new constraints on the drift history of the Kemum terrane. Exploration Geophysics 24, p. 283-290.
(Paleomag sampling of Permian- Tertiary sediments in central Birds Head of W Papua supports derivation of Kemum terrane from East, from NE Australian margin near ~150° E. Large-scale Neogene clockwise rotation can be ruled out. Sometime between Late Triassic? and Eocene 55° CCW rotation (most likely latest Cretaceous- E Tertiary rifting from Australia N margin). After Eocene Kemum Terrane rafted W-ward. Amalgamation of Kemum and Misool terranes took place in latest Oligocene; then amalgamated with Australian cration in M Miocene, causing composite terrane to rotate 10° CCW)

Giddings, J.W., W. Sunata & C.J. Pigram (1993)- Palaeomagnetic results from the Bird's Head, Irian Jaya: a new look at old data. In: C. Klootwijk (comp.) Paleomagnetism in Australasia, Seminar Abstracts, Australian Geol. Survey Org. (AGSO) Record 1993/20, p. 76-79.
(online at: www.ga.gov.au/corporate_data/14623/Rec1993_020.pdf)
(Extended Abstract. see also Giddings et al. 1993 above)

Ginting, C.S.P. & S.F. Baok (2008)- Hydrocarbon exploration trend at Akimeugah Basin Papua based on structural and tectonostratigraphic control. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 463-475.
(Summary of Tertiary Akimeugah foreland basin S of W Papua Central Range. No new data)

Gisolf, W.F. (1923)- On the rocks of Doorman top in Central New Guinea. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 24, p. 191-198.
(online at: www.dwc.knaw.nl/DL/publications/PU00014930.pdf)
(Petrographic description and chemical analysis of rocks from Doorman peak, W Papua Central Range, collected by Hubrecht during the Central New Guineaa/ Mamberamo expedition in 1920 or 1921: dark green peridotite, rich in magnetite, olivine, but without pyroxene or serpentine)

Gisolf, W.F. (1923)- Over het gesteente van den Doormantop in Centraal Nieuw Guinea. Verslagen Afd. Natuurkunde, Nederl. Akademie Wetenschappen, Amsterdam, 32, p. 160-167.
('On the rocks of the Doorman peak in central New Guinea'. Dutch version of paper above)

Gisolf, W.F. (1924)- Microscopisch onderzoek van gesteenten van Noord-Nieuw-Guinea. Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen 1, p. 133-161.
('Microscopic investigations of rocks from North New Guinea'. Descriptions of igneous and metamorphic rocks collected by Zwierzycki in Cyclops Mountains, etc.)

Glenister, B.F., L.M. Glenister & S.K. Skwarko (1983)- Lower Permian cephalopods from western Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 4, p. 74-85.
(Late Early Permian (Artinskian) cephalopods from Aifam B (Aifat) Fm mudstones in Aifam River, Tamiabuan sheet, Birds Head, associated with rich brachiopod fauna described by Archbold (1982). Incl. ?Gzheloceras and Pseudoschistoceras irianense n.sp. from Aifat Fm (also known from Timor?))

Gochioco, L.M., I.R. Novianti & R.V. Pascual (2002)- Resolving fault shadow problems in Irian Jaya (Indonesia) using prestack depth migration. The Leading Edge 21, 9, p. 911-912.
(Geophysics paper with little or no geology)

Goenadi, R.M., U. Pamuntjak & N. Surdhana (1977)- Geology and mining of the Gunung Bijih ore, Irian Jaya, Indonesia. In: A. Prijono et al. (eds.) Proc. First Indonesian mining symposium; the Indonesian mining industry, its present and future, Indonesian Mining Assoc., Jakarta, p. 288-312.

Gold, D.P. (2018)- The effect of meteoric phreatic diagenesis and spring sapping on the formation of submarine collapse structures in the Biak Basin, Eastern Indonesia. Berita Sedimentologi 41, p. 23-37.
(online at: http://www.iagi.or.id/fosi/files/2018/09/FOSI_BeritaSedimentologi_BS41_September_2018.pdf)
(Neogene carbonate units that extend offshore into Biak Basin SW of Biak and Supiori islands, with pockmarks, headless canyons and semi-circular collapse structures, identified in multibeam bathymetric imagery)

Gold, D.P., P. Burgess & M. Boudagher-Fadel (2017)- Carbonate drowning successions of the Birdôs Head, Indonesia. Facies 63, 25, p. 1-23.
(online at: https://link.springer.com/content/pdf/10.1007%2Fs10347-017-0506-z.pdf)
(Anggrisi River section in E Birds Head of W Papua shows E Miocene (Te) Kais Lst platform carbonates overlain by ~20m thick heterolithic Burdigalian- Serravallian drowning sequence of progressively upward-deepening marine units. Uppermost brown packstone bed with Katacycloclypeus annulatus and Miogypsina antillea. Drowning sequence overlain by Tortonian Klasafet/ Klamogun marine clastics. Cause of platform drowning attributed to reduction in rates of carbonate accumulation due to excess nutrients. Duration of drowning event across Birds Head region ~9.5 My (18.0- 8.6 Ma))

Gold, D., R. Hall, P. Burgess & L. White (2014)- The Biak Basin and its setting in the Birdôs Head region of West Papua. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-298, 13p.
(Seismic and multibeam data across Sorong Fault Zone E of Birds Head. Drowning of Kais Limestone platform in Biak Basin may be linked to initiation of strike-slip movements on Fault Zone and parts of Biak Basin sequences may be deposits of Mamberamo River delta now displaced W)

Gold, D., R. Hall & P. Burgess (2014)- Neogene structural history of Biak and the Biak Basin, Eastern Indonesia. American Geophys. Union (AGU), Fall Mtg., San Francisco, T53C-4705, 1p. *(Poster Abstract)*
(Biak Basin between Biak and Yapen underlain by Paleogene intra-oceanic island arc basement. Structural history three stages: (1) E Miocene compression, tied to collision of arc with N edge of Australian continental margin, with E Miocene carbonate deposition following collision; (2) M-L Miocene rifting and (3) Pliocene-Pleistocene strike-slip, tied to initiation of major regional faults that accommodated convergence between Pacific and Australian plates and uplifted Miocene carbonates as pop-up structures)

Gold, D.P., L. White, I. Gunawan & M. Boudagher-Fadel (2017)- Relative sea-level change in western New Guinea recorded by regional biostratigraphic data. Marine Petroleum Geology 86, p. 1133-1158.
(Paleogeography of W New Guinea from Carboniferous- Present. Biostratigraphic data suggests two major transgressive-regressive cycles in regional relative sea-level, with highest sea levels in Late Cretaceous and Late Miocene and terrestrial deposition prevalent in Late Paleozoic and E Mesozoic. Sea levels dropped between Late Cretaceous and Paleogene, with widespread shallow water carbonate platform development in the M-L Eocene. Minor transgressive event in Oligocene. E Miocene collision marked by regional unconformity. Carbonate drowning event in M Miocene, etc.)

Gouwentak, C.J. (1939)- De exploratie naar goud in Nederlands Zuidwest Nieuw Guinea. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 56, 2, p. 220-235.
('The exploration for gold in Netherlands SW New Guinea'. Travel account of 1937 expedition up Lorentz/ Noordoost/ Van der Sande Rivers area S of Central Range by 'Mijnbouwmaatschappij Nederlandsch Nieuw Guinea' expedition. Limited geology info: occasional outcrops of marine sediment, further upstream Eocene-Miocene Nummulites- Lepidocyclina limestones, coal and older rocks. One flammable gas seep along Noordoost River. Frequent earthquakes. Very little or no traces of gold in surveyed area)

Gow, P.A & J.L. Walshe (2005)- The role of preexisting geologic architecture in the formation of giant porphyry-related Cu ± Au deposits: examples from New Guinea and Chile. Economic Geology 100, 5, p. 819-833.
(Development of giant porphyry copper/ gold deposits in New Guinea and Chile during Tertiary magmatic events that overprinted earlier extensional tectonic settings. During collision deeply detached listric faults inverted and focused uplift, exhumation and fluid flow. Steep transverse faults activated to form wrench systems, pathways for magma or fluid. Ore deposits commonly in hanging wall of thrusts. Competent flat-lying packages formed plates, like Darai/Mendi Limestone or equivalents in New Guinea, overlying folded, weaker units underneath. These plates appear impeded magma ascent and formed cap)

Graham, S., N. Pearson, S. Jackson, W.Griffin & S.Y. O'Reilly (2004)- Tracing Cu and Fe from source to porphyry; in situ determination of Cu and Fe isotope ratios in sulfides from the Grasberg Cu-Au deposit. Chemical Geology 207, 3-4, p. 147-169.
(Cu and Fe isotope variations occur within Grasberg porphyry and skarn sulfides, showing isotopes can be important tool for interpretation of hydrothermal processes)

Granath, J.W. & R.M.I. Argakoesoemah (1989)- Variations in structural style along the eastern Central Range thrust belt, Irian Jaya. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 79-89.
(Warim block in E part of West Papua Central Ranges part of S-vergent thin-skinned fold and thrust belt. East of 140°E thick-skinned structures, which persist into PNG. Structures in thin-skinned part of belt appear to be in process of overprinting by major strike-slip zone)

Granath, J.W. & S.A. Hermeston (1993)- Relationship of the Toro formation and the Alene Sands of Papua New Guinea to the Woniwogi Formation of Irian Jaya. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 201-206.
(Central Irian Jaya unconformity between M Jurassic Kopai clastics and Late Valanginian. Woniwogi sst mainly of Hauterivian- E Barremian age, and equivalent of PNG Alene sst of PNG, not Berriasian- Valanginian Toro sst)

Granath, J.W., T.O. Simanjuntak & M.S. Gage (1992)- Cretaceous stratigraphy of Eastern Irian Jaya. Abstracts AAPG Int. Conf. Sydney 1992, American Assoc. Petrol. Geol. (AAPG) Bull. 76, 7, p. 1103. *(Abstract only)*
(C Irian Jaya U. Valanginian-Lw Hauterivian Woniwogi sst transgressive over M Jurassic clastics, with more complete Jurassic- Lw Cretaceous section in E Irian Jaya. Coniacian- Campanian Ekmai sst marks abrupt downward shift in relative sea level, followed by transgression. Angular unconformity in Maastrichtian-Paleocene Waripi Fm suggest Late Cretaceous tectonics overprinting passive margin subsidence)

Granath, J.W., K.A. Soofi & J.B. Mercer (1991)- Applications of SAR in structural modeling of the Central Ranges thrust belt, Irian Jaya, Indonesia. In: R.H. Rogers (ed.) Proc. 8th Conf. Geologic remote sensing; exploration, engineering and environment, Denver, p. 105-116.

Gregory, C.H. (2004)- Subsurface meso-scale structural geology and petrology near Big Gossan ore body, Ertsberg (Gunung Bijih) mining district, Irian Jaya, Indonesia. M.Sc. Thesis University of Texas, Austin, p. 1-213. *(Unpublished)*

Gunawan, I., R. Hall, C. Augustsson & R. Armstrong (2014)- Quartz from the Tipuma Formation, West Papua: new insights from geochronology and cathodoluminescence studies. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-303, 14p.
(Triassic or Jurassic-age Tipuma Fm sandstones of E Birds Head with common quartz of volcanic and low-grade metamorphic origin. Zircons mainly Permo-Triassic age (205-275 Ma; peak ~230-250 Ma). Also Proterozoic populations of ~975 Ma, 1.4-1.6 Ga and 1.8-2.0 Ga; few Archean grains (2.8-3.2 Ga). Two main sources: (1) volcanoes at active N New Guinea margin, N of Tasman Line, and (2) Precambrian basement of N Australia (or nearby Kemum Terrane provenance?; JTvG). Detrital zircon ages in 'Tipuma Fm' sample from Birds Body (Tembagapura area) differ from Birds Head: absence of Late Permian-Triassic, but with common

Permian-Devonian grains (292-412 Ma) and few Silurian- Ordovician grains, suggesting sample is either older(E Permian?), or was deposited further from Permo-Triassic N Andean type volcanic arc)

Gunawan, I., R. Hall & M.A. Cottam (2011)- Age, character and provenance of the clastic Tipuma Formation, West Papua, Indonesia: new insights from detrital zircon dating. In: Conf. Sediment provenance studies in hydrocarbon exploration & production, Geol. Soc., London, 2011, p. 30 *(Abstract only)*
(Tipuma Fm of Birds Head poorly dated fluvial deposits between Permian- Cretaceous, 90-150m thick. Detrital zircon age populations from Lower Mb Triassic, Permian and Carboniferous and Proterozoic peaks. Ages in Middle Mb mainly Triassic-Carboniferous with few Ordovician grains. Upper Mb has important M Triassic and Late Permian populations, also Carboniferous, Devonian, Silurian and Ordovician. Maximum depositional ages for Tipuma Fm Late Triassic (Lower Mb ~214 Ma, Middle Mb 229 Ma, Upper Mb 205 Ma). No strong evidence for rifting event. Common Late Triassic subhedral zircons in Upper and Lower Members suggest volcanic activity in Birds Head)

Gunawan, I., R. Hall & B. Sapiie (2014)- Triassic reservoir characteristics of the Bird's Head, New Guinea, Indonesia: new insight from provenance study. Int. Petroleum Techn. Conference (IPTC), Kuala Lumpur, 9p.
(Triassic- Jurassic Tipuma Fm sandstones and conglomerates sourced from acid volcanic, metamorphic and recycled sedimentary rocks to N and from N Australian Craton. Quartz provenance dominated by low-T metamorphics and volcanics with little plutonic origin. Youngest zircon ages indicate deposition in Triassic. Recycled zircon populations Permo-Triassic (205-275 Ma) and Proterozoic (~975 Ma, 1.4-1.6 Ga and 1.8-2.0 Ga) populations), with few grains of Archean age (2.8-3.2 Ga). Tipuma Fm probably not deposited in simple continental setting. Decline of volcanic quartz and increase in Carboniferous-Proterozoic zircons in Middle Member indicate reduced contribution of sediment from arc and increased contribution from N Australia)

Gunawan, I., R. Hall & B. Sapiie (2015)- Late Neogene history of the Bird's Head area, West Papua, Indonesia: an insight from detrital zircon. AAPG/SEG Int. Conf. & Exh., Melbourne 2015, Search and Discovery Art. 51245, 44p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/51245gunawan/)
(Detrital zircon age groups in M Miocene clastic Klasafet, E Pliocene Steenkool/ Klasaman Fms and Pleistocene fluvial quartz-rich Konjah Fm (formerly mapped as Sirga Sst?): Pliocene (~3 -5 Ma; only in Konjah Fm), Miocene (~12-20 Ma; from Lembai diorite?), and Permian-Triassic (~205-275 Ma) and Proterozoic (~0.9-1.2 Ga, ~1.4-1.6 Ga, ~1.8-2.0 Ga). Increase in Precambrian zircons from M Miocene-Lower Pliocene, probably reflecting unroofing of NE Birds Head (Kemum High). Second phase of acid igneous activity in Pliocene reflected by E-M Pliocene zircons in Konjah Fm and may derive from nearby dacite intrusions (~3.5 Ma). M Pliocene unconformity in Bird's Head, continuing offshore, probably related to Sorong Fault and predating Seram Trough development)

Gunawan, I., R. Hall & I. Sevastjanova (2012)- Age, character and provenance of the Tipuma Formation, West Papua: new insights from detrital zircon dating. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-027, p. 1-14.
(SHRIMP U-Pb ages of detrital zircons from 11 Tipuma Fm sandstone samples show Permo-Triassic (234-280 Ma), Mesoproterozoic (1.4-1.6 Ga) and Paleoproterozoic (1.8-2.3 Ga) age peaks. Maximum age of deposition of Tipuma Fm Late Triassic (~202 Ma). Tipuma Fm immature lithic sandstone; lithic fragments mainly sedimentary and metamorphic rocks. Fresh volcanic quartz and zircon suggest acid igneous activity in Birds Head during deposition in M-L Triassic)

Haberle, S.G., G.S. Hope & Y. Defretes (1991)- Environmental change in the Baliem Valley, montane Irian Jaya, Republic of Indonesia. J. Biogeography 18, p. 95-40.

Hadipandoyo, S., Mujito & T. Wibowo (1996)- Hydrocarbon resource assessment of carbonate and coarse clastic sediment plays, Cenderawasih Bay area, Irian Jaya, Indonesia. In: S.Y. Kim et al. (eds.) Proc. 32nd Ann. Sess. Coord. Comm. Coastal Offshore Geoscience Program. E and SE Asia (CCOP), Tsukuba 1995, p. 69-78.
(Cenderawasih Bay area belongs to W part of Waipoga- Waropen- Mamberano basin, N New Guinea. Assumed to be underlain by Pre-Tertiary volcanics and metamorphics, part of Pacific Plate. Tertiary clastic middle

wedge play and carbonate basal wedge plays present. Oil potential as high as 126 M Tons, expected value 43 MTons (risked values 52 and 8.4 MTons resp.). Total gas potential 1,060 Gm3, expected value 505 Gm3)

Hakim, A.S., Baharuddin & E. Susanto (1995)- Geological map of the Gunung Doom Quadrangle, Irian Jaya, 3213, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of Rouffaer Mts in NW part of West Papua. E-W trending young anticlines, mainly cored by M-L Miocene Makats Fm, overlain by Late Miocene- Pleistocene clastics. Oldest formation is ~Oligocene Auwewa Volcanics, in SW corner of map only)

Hakim, A.S. & B.H. Harahap (1993)- Geologi Lembar Waren (Pulau Ratewa). Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 14, p. 42-53.
('Geology of the Lembar Sheet (Ratewa Island')

Hakim, A.S. & B.H. Harahap (1994)- Geological Map of the Waren Quadrangle Irian Jaya, 3113, 1:250,000 Scale. Geol. Res. Dev. Center, Bandung.
(Map sheet at E side of Cenderawasih Bay. Mainly Pliocene and younger rocks. Offshore Moor Island with Eocene Moor Limestone with Pellatispira and Nummulites. Small outcrop of (Late) Oligocene marine sandstone-limestone at G. Sanoringga near W coast (odd?))

Hakim, A.S., Harahap, B.H. & N. Ratman (2003)- Neotektonik Papua (Irian Jaya). In: Pros. Forum Penelitian dan Pengembangan Energi dan Sumberdaya Mineral, Badan Litbang Energi Sumberdaya Mineral, p. 500-517.
('Neotectonics of Papua (Irian Jaya)')

Hall, R. (2001)- Extension during Late Neogene collision in East Indonesia and New Guinea. J. Virtual Explorer 4, p. 17-24.

Hall, R., J. Ali, C. Anderson, S. Baker et al. (1992)- The Sorong Fault Zone. Processes and rates of terrane amalgamation. University of London SE Asia Research Group, Rept. 111, 211p. *(Unpublished)*
(Stratigraphy, paleomagnetism, volcanism, etc. of Halmahera, Obi, Sula, Waigeo, etc. Regional unconformity at 45 Ma-Mid Eocene. Collision of Philippine Sea arc and Australian continent at ~25 Ma ends volcanism and starts strike slip zone)

Hammarstrom, J.M., B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7205, Moon-Utawa-Ular Merah Areas-Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix L, p. 186-196.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in M Miocene Moon Arc along N margin of Birds Head and coeval rocks in Utawa Arc (SE Birds Neck) and Ular Merah areas N of western Central Range (age-equivalent to Maramuni Arc in Mobile Belt of PNG). May have formed in N-facing arc along passive continental margin prior S-directed thrusting in Late Miocene (Melanesian orogeny). Ular Merah area centered on late E Miocene (17.4-16.6 Ma) porphyry system that intruded allochthonous Central Ophiolite Belt. No known deposits)

Hammarstrom, J.M., B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7203, Western Medial New Guinea Magmatic Belt- Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix M, p. 197-211.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in Central Highlands of West Papua. Tract represents western part (W of Tasman Line) of 1800km long Medial New Guinea magmatic belt, an, E-W belt of discontinuous exposures of late Miocene- Pliocene igneous rocks in foldbelt of central New Guinea Island (incl. Central Birds Head) ('post-Maramuni Arc', more alkaline magmatism). No well-defined subduction zone associated with belt, although seismic tomography suggests existence of old subduction slabs in mantle under New Guinea. Includes Grasberg supergiant porphyry copper-gold deposit (~3 Ma))

Hammarstrom, J.M., B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7204, Rotanburg-Taritatua Area- Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix N, p. 212-218.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in poorly-known Late Miocene to Pliocene-Pleistocene intrusive rocks N of Central Range. No mines, prospects, or known copper or gold occurrences in this segment)

Hammarstrom, J.M., B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 142pCu7208, Inner Melanesian arc terranes I- Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix R, p. 261-267.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in 1000 km-long Inner Melanesian Arc, a calc-alkaline arc that developed in Eocene- E Oligocene from SW-ward subduction of Pacific Plate. Corresponds with Melanesian Arc terrane of Cloos et al. (2005). In Indonesia in Birds Head/ N Coastal Irian Jaya Arc (incl. Waigeo, Yapen, Cycloops Mts?). Age-equivalent to accreted terranes in Adelbert-Finisterre area of PNG and New Britain Island. No known porphyry copper deposits or prospects)

Hampton, O.W. (1997)- Rock quarries and the manufacture, trade, and uses of stone tools and symbolic stones in the Central Highlands of Irian Jaya, Indonesia: ethnoarchaeological perspectives. Ph.D. Thesis Texas A & M University, College Station, p. 1-887. *(Unpublished)*
(online at: http://anthropology.tamu.edu/papers/Hampton-PhD1997.pdf)
(Mainly anthropological study of stone tool usage in highlands of W Papua. Stone tools from 4 main quarry areas. In West: two quarry areas in metamorphics-ophiolite belt along N side of Central Range, Yeineri (glaucophane schist, epidote amphibolite, epidote chlorite schist) and Tagime (meta-argillite). In East: Sela and Langda (lighter colored basalts-andesites and meta-basalts))

Hanafi, B.R. & B. Priadi (2010)- Indikasi keberadaan endapan melange di wilayah Kotaraja dan sekitarnya, Kota Jayapura, Papua. Proc. 39th Ann. Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-036, 4p.
('Indications for the occurrence of melange deposits in the Kotajaya district, Jayapura, Papua'. Outcrops of chaotic, sheared rocks with fragments of peridotite, gabro, sandstone, limestone, schist, gneiss, quartzite, ranging in size from 2cm- 15m or more, floating in greenish grey scaly clay matrix. Related to Late-Miocene (subduction) tectonic activity)

Handyarso, A. & T. Padmawidjaja (2017)- Struktur geologi bawah permukaan Cekungan Bintuni berdasarkan data gaya berat. J. Geologi Sumberdaya Mineral 18, 2, p. 53-65.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/125/284)
('Subsurface geological structures of the Bintuni Basin based on gravity data analysis'. Identification of NW-SE trending folds onshore southern Birds Head)

Handyarso, A. & H.M. Saleh (2017)- Strike-slip fault identification beneath the of the Wiriagar oil field. Lemigas Scientific Contributions Oil and Gas 40, 3, p. 133-144.
(online at: http://journal.lemigas.esdm.go.id/ojs/index.php/SCOG/article/view/51/pdf)
(Gravity, seismic and well data indicate SW-NE trending left-lateral strike-slip fault under Wiriagar anticline)

Hanzawa, S. (1947)- Note on *Lacazina wichmanni* Schlumberger from New Guinea. In: Recent progress of natural sciences in Japan, Nihon Shizen Kagaku Shuho (Japanese J. Geology Geography), 20, 2-4, p. 1-4.
(Descriptions of Eocene larger foram Lacazina wichmanni from subsurface limestone of Birds Head region, New Guinea (now generally assigned Lacazinella Crespin; JTvG))

Harahap, B.H. (1996)- New age results from the Tertiary succession of the Yera anticline, south Central Range of Irian Jaya. J. Geologi Sumberdaya Mineral 6, 63, p. 2-9.

(Yera Anticline in Waghete map sheet in SW part of W Papua Central Range contains ~2500m of folded Pre-Permian- Cretaceous clastic sediments, overlain by Tertiary New Guinea Limestone. Permian Aiduna Fm (~1300m) sandstones-shales with up to 40cm thick coals with common palynomorphs incl. Protohaploxypinus limpidus, P. amplus, Cordaitina, etc. ?Triassic Tipuma Fm (280m) reddish mudstones-sandstones barren of fossils. No fossil evidence for Triassic or Jurassic ages. Kembelangan Gp entirely of Cretaceous age: (1) Kopai Fm (90m) glauconitic quartz sst with Late Berriasian- Barremian palynomorphs (Muderongia spp., etc.), (2) M-L Barremian Woniwogi Sst (60m) 'orthoquartzite' with Ovodinium cinctum, Muderongia mcwhaei, M. australis, etc. (= E Aptian?), (3) Late Aptian- E Albian Pinya Fm (565m) with Muderongia tetracantha, Dingodinium cerviculum and (4) Santonian- Maastrichtian Ekmai Fm (380m) glauconitic sst)

Harahap, B.H. (1997)- The metamorphic complex of the Central Range of Irian Jaya, with special reference to Enarotali Quadrangle. J. Geologi Sumberdaya Mineral 7, 67, p. 16-25.
(Derewo metamorphic complex of Central Range of W Papua located between deformed Australian margin platform sediments in S and ultramafic Irian Jaya ophiolite in N. Metamorphics mainly low T and low P black slate, phyllite and schist, with some metavolcanic intercalations and quartzite. Metamorphic increases gradually from S to N. Original rocks Mesozoic and possibly also E Tertiary-age fine marine slope deposits. Complex isoclinally folded structures suggest at least two phases of deformation. Initial metamorphism during Pacific Plate obduction, probably in Oligocene (in PNG Late Eocene foraminifera in slightly metamorphosed rocks, Late Oligocene- E Miocene forms in unmetamorphosed rocks; Dow 1977). In M Miocene local intrusions by Utawa diorite, then deformed by Late Miocene- Pleistocene Melanesian orogeny)

Harahap, B.H. (1997)- Central Range of East Irian Jaya: review of gold exploration. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 21, p. 63-77.
(Gold mineralization associated with Plio-Pleistocene calc-alkaline and alkaline intrusives and volcanics. At least 25 intrusive bodies identified in Central Range of E Irian Jaya)

Harahap, B.H. (1997)- Konstruksi penampang kesetimbangan antiklin umar Irian Jaya Barat. GRDC Geosurvey Newsletter 17, p. 16-19.
('Construction of balanced cross-sections of the Umar anticline, W Irian Jaya')

Harahap, B.H. (2009)- Tectonostratigraphy of the Phanerozoic continental province succession in Southern Papua, Eastern Indonesia. In: 11th Reg. Congress Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA 2009), Kuala Lumpur, p. 55-56. *(Abstract)*
(online at: www.gsm.org.my/products/702001-101669-PDF.pdf)

Harahap, B.H. (2010)- Tectonostratigraphy of the Phanerozoic continental province succession in Southern Papua, Eastern Indonesia. Meeting IGCP Project 507, Paleoclimates in Asia during the Cretaceous, Yogyakarta 2010, p. 67-71. *(Abstract only)*
(online at: http://igcp507.grdc.esdm.go.id/abstracts/74-..)

Harahap, B.H. (2012)- Tectonostratigraphy of the southern part of Papua and Arafura Sea, Eastern Indonesia. J. Geologi Indonesia 7, 3, p. 167-187.
(online at: http://jgi.bgl.esdm.go.id/index.php/JGI/article/view/33/25)
(Review of Paleozoic- Cenozoic stratigraphy of S Papua, tied to tectonic events)

Harahap, B.H., A.S. Hakim & D.B. Dow (1990)- Geological map of the Enarotali sheet, Irian Jaya,1:250,000 (Quad. 3112). Geol. Res. Dev. Centre (GRDC), Bandung.
(Map of west part of Central Range and area to North. Complex geology with three domains: (1) New Guinea Platform in SE, with folded Triassic- Miocene; (2) Oceanic Realm in N, with ultramafic rocka and amphibolite, overlain by Eocene- E Miocene Auwewa Gp basaltic-andesitic arc volcanics with E Oligocene Nanamajiro Nummulites Limestone, LateMiocene Nabire Volcanics; (3) 'Transitional zone' of Oligocene? Derewo Metamorphics intruded by ~100km long M Miocene Utawa Diorite, etc.)

Harahap, B.H., A.S. Hakim & U. Hartono (1998)- Upper Paleozoic- Lower Mesozoic magmatic intrusions in

Western Irian Jaya. J. Geologi Sumberdaya Mineral 8, 87, p. 2-14.
(Suite of granitoids in N and NE Birds Head and E side of 'Birds Neck', fringing Kemum Block and intruded into folded Silurian-Devonian Kemum Gp 'flysch' and metasediments. K-Ar dating suggests two age groups: (1) E Carboniferous (Melaiurna; 324, 328 Ma) and (2) Permian- Triassic (Kwatisore-197 Ma, Maransabadi- 231, 278 Ma, Netoni -158-241 Ma, Anggi-227-295 Ma, Wariki- 226-258 Ma and Warjori- 294, 295 Ma). Possibly related to Permian- Triassic granitoids in PNG (Kubor granite/ 224 Ma, Kimil diorite). Group 2 of potassic affinity, rel. high Nb, etc., not typical calk-alkaline, but more likely tied to extensional periods along N part of Australian- New Guinea Gondwana margin?)

Harahap, B.H. & Y. Noya (1995)- Geological map of the Rotanburg (Idenburg Barat), Irian Jaya (Quad 3312). Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of central part of West Papua: N part of Central Range and 'Meervlakte' of Idenburg River. Central Range mainly folded Jurassic- Cretaceous continental margin deposits, along N side overthrust by isoclinally folded Derewo Metamorphics with glaucophane schist and ultramafic rocks, overlain by Auwewe volcanics. Pliocene Timepa granodiorite Intrusives (~3-5 Ma) possibly genetically associated with Ilaga volcanics and Ertsberg- Grasberg Intrusives in Central Range and suggestive of Pliocene S-directed subduction episode)

Harahap, B.H. & H. Panggabean (2003)- Potensi hidrokarbon dengan acuan khusus terhadap singkapan batuan di daerah Aiduna dan Taporomay, Kabupaten Mimika, Papua. In: Pros. Forum Penelitian dan Pengembangan Energi dan Sumberdaya Mineral, Badan Litbang Energi dan Sumberdaya Mineral, p. 358-376.
('Hydrocarbon potential with special reference to rocks in the Aiduna and Tapomay areas, Timika, Papua')

Harahap, B.H. & U. Sukanta (1996)- Tectonostratigraphy of the Mesozoic- Cenozoic Pacific Province succession in northeastern Irian Jaya, Eastern Indonesia. J. Geologi Sumberdaya Mineral 6, 57, p. 17-31.
(NE Irian Jaya part of N New Guinea Mobile Belt, part of Pacific Province. Basement Jurassic ophiolites, associated with glaucophane-bearing metamorphics, obducted in Oligocene and exposed in Irian Ophiolite Belt, Cyclops Mts and Sorong-Yapen Fault Zone. Overlain by >10,000m of Cenozoic volcanic and non-volcanic sediments. Paleocene- Oligocene- E Miocene Auwewa Gp volcanics with pillow lavas, tuffs and limestone lenses, >4000m thick (island arc deposits above N dipping subduction zone; equivalent of Bliri Volcanics in PNG). Around paleo-highs up to 850m of U Oligocene- M Miocene Darante Fm reefal limestones, with impressive reef outcrops in Gauttier Mts. Unconformably overlain by ~1850m thick Makats Fm of late E Miocene- early Late Miocene flysch-type clastics, with limestone lenses and conglomerates with reworked Cretaceous claystone clasts. Overlain by >5000m of Late Miocene-Pleistocene Mamberamo Fm flysch)

Harahap, B.H. & U. Sukanta (1996)- Tectonostratigraphy of the Mesozoic- Cenozoic Pacific province succession in northeastern Irian Jaya, Eastern Indonesia. In: Sampurno et al. (eds.) Pros. Seminar Nasional Geoteknologi III, LIPI, Bandung, p. 518-538.
(Same paper as Harahap & Sukanta (1996))

Harahap, B.H. U. Sukanta & E. Rusmana (1994)- Structure of West Irian Jaya identified from Landsat imagery. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 17, p. 13-21.

Harahap, B.H., J.B. Supandjono, Sukido, U. Margono & Y. Noya (1996)- Geology of the Rotanburg region. J. Geologi Sumberdaya Mineral 6, 55, p. 17-28.
(In Rotanburg map sheet of NE part of West Papua, N of Wamena area, Central Range. Three belt, from S to N: (1) 'Irian Jaya Platform' (= Central Range foldbelt): M Jurassic- Miocene sediments deformed in Late Miocene-Pliocene; (2) E-W trending belt of low-grade Oligocene? Derewo metamorphics thrust S-ward, probably continental slope sediments (in PNG with E Miocene cooling ages); (3) Ophiolite belt/ ultramafic complex, representing obduction zone. Metamorphic and ultramafic belts intruded by 8 stocks of Pliocene Timepa monzonite dioritic batholiths (probably subduction-related volcanic arc, similar to Ilaga Volcanics of Dow et al. 1986). ~500m thick Awewa Fm island arc volcanics on ultramafic rocks on N slope (= Pacific Plate). Also on N slope Miocene flysch-type deposits of Makats Fm)

Hardjono, T.S. Asikin & J. Purnomo (1998)- Heat flow estimation from seismic reflection anomalies in a frontier area of the Sebakor Sea, Irian Jaya, Indonesia. In: J.L. Rau (ed.) Proc. 33rd Sess. Co-ord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Shanghai 1996, 2, p. 56-83.
(Bottom-simulating seismic reflector in deep water between Seram and Onin Peninsula related to presence of gas hydrate. Sub-seafloor depth of hydrate (300-600m in water depth 1100-1600m) used to estimate heat flow in frontier area without well data. Calculated heat flow values 0.83-1.43 ucal/cm2/sec (average 1.14); average geothermal gradient 3.9°C/ 100m)

Harrington, L., S. Zahirovic, N. Flament & D. Muller (2017)- The role of deep Earth dynamics in driving the flooding and emergence of New Guinea since the Jurassic. Earth Planetary Sci. Letters 479, p. 273-283.
(In New Guinea area periods of flooding and emergence since Jurassic inconsistent with magnitudes of global sea level changes, and suggest long-wavelength dynamic topography changes driven by subduction-driven mantle flow. Subduction at E Gondwana margin locally enhanced high eustatic sea levels from E Cretaceous (~145 Ma) to generate long-term regional flooding. Miocene dynamic subsidence associated with subduction of Maramuni Arc caused long-term inundation of New Guinea during period of global sea level fall)

Hartono, O. Verdiansyah & I.M. Surata (2011)- Porphyry and skarn copper-gold discovery in Pegunungan Bintang, Papua. Proc. 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-023, 16p.
(On a 2009 copper-gold discovery in Star mountains, Central Range near PNG border. In Indonesian)

Hartono, U., C. Amri & P.E. Pieters (1989)- Geological map of the Mar sheet, Irian Jaya, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of N part of Birds Head. Two main domains, separated by E-W trending Sorong Fault. In S Paleozoic Kemum terrane with folded Silurian- Devonian turbiditic metasediments (Permian absent here), overlain by ?Triassic Tipuma Fm, Late Oligocene Sirga Fm and Miocene Kais Lst N of Sorong FZ melange is Tamrau Block with Tamrau Fm Jurassic- Cretaceous metasediments, overlain by Miocene Koor Fm limestone and M Miocene Moon Volcanics. Farther N Tosem Mts with Late Eocene- E Miocene Mandi volcanics (= part of 'Auwewa Arc?))

Hartono, U., U. Sukanta & N. Ratman (1989)- Pre- and post-Late Tertiary collision magmatic activity in Irian Jaya, Indonesia. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 61-71.
(Eo/Oligocene-E Miocene island arc volcanics associated with Pacific Plate (result of N-ward subduction of Australian Plate found) in Birds Head, N coast of body, small outcrops in Gauttier Mts and N flank Central Range. M Miocene and Plio-Pleistocene volcanics and intrusives in Birds Head, Neck and Central Range may be associated with M-L Miocene S-ward subduction)

Heads, M. (2001)- Birds of paradise, biogeography and ecology in New Guinea: a review. J. Biogeography 28, 5, p. 893-925.
(Biogeographic distributions of birds of paradise and other biota compatible with New Guinea accreted terrane tectonic model of Pigram & Davies (1987), including massive lateral strike-slip movement)

Heads, M. (2002)- Regional patterns of biodiversity in New Guinea animals. J. Biogeography 29, 2, p. 285-294.
(Distribution of 622 modern animal species analysed. Centres of diversity in various groups of animals related to three main geological regions: Australian craton, accreted terranes and Cenozoic volcanic arcs)

Hefton, K.K., G.D. MacDonald, L.C. Arnold, A.L. Schappert & A. Ona (1995)- Copper-gold deposits of the Ertsberg (Gunung Bijih) Mining District, Irian Jaya. In: D. Mayes & P.J. Pollard (eds.) Geology and copper-gold deposits of the Ertsberg (Gunung Bijih) Mining District, Irian Jaya, Indonesia. 17th Int. Geochem. Expl. Symp., James Cook University, Townsville, EGRU Contr. 53, p. 1-43.
(Overview of Freeport copper-gold mining project in W Papua. World's highest grade porphyry Cu-Au deposit, associated with Pliocene diorite intrusions)

Heim, A. (1953)- Geological observations in the Wisselmeer region. Eclogae Geol. Helvetiae 46, p. 23-27.

(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1953:46::479&subp=hires)
(Geological observations along traverse from Uta on S coast to Enarotali on Paniai Lake. Common Eocene limestones. Eroded anticlinal structures with Paleocene and Eocene outcrops Thick Eocene limestones with Lacazinella and other large forams. Above end-Eocene discontinuity abundant Upper Oligocene larger forams. Also Paleocene and U Tertiary marls and sandstones)

Heldring, O.G. (1912)- De Zuidkust van Nieuw-Guinea. Jaarboek Mijnwezen Nederlandsch Oost-Indie 38 (1909), p. 83-203.
('The South coast of New Guinea'. Early reconnaissance survey of S coast of W Papua, as part of the Military Exploration program)

Heldring, O.G. (1913)- Verslag over Zuid Nieuw-Guinea. Jaarboek Mijnwezen Nederlandsch Oost-Indie 40 (1911), Verhandelingen, p. 40-207.
(Report on geological observations during 1909-1910 ‘military expedition’ along S New Guinea rivers Digul, Eilanden, Setakwa, etc. Did not reach Central Range and stayed mostly in Tertiary and younger sediments. Most observations of rocks on loose material in river banks: Eocene limestones, igneous rocks, etc. Fossils from expedition described by K. Martin)

Helmcke, D., K.W. Barthel & A. von Hillebrandt (1978)- Uber Jura und Unterkreide aus dem Zentralgebirge Irian Jayas (Indonesian). Neues Jahrbuch Geol. Palaont., Monatshefte 1978-11, p. 674-684.
('On Jurassic and Lower Cretaceous from the Central Range of Irian Jaya'. Late Jurassic- E Cretaceous ammonites mainly as loose float from dark shaly beds in N part Irian Jaya foldbelt. Ages mainly Oxfordian (Perisphinctes, Epimayaites), also Bajocian, Callovian, Tithonian and Early Cretaceous (incl. Blanfordiceras wallichi, Kilianella, Berriasella). U Jurassic ammonite faunas similar to Himalayan faunas of Spiti, Nepal)

Henage, L. (1993)- Mesozoic and Tertiary tectonics of Irian Jaya: evidence for non-rotation of Kepala Burung. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 763-792.
(Rather unique interpretation of New Guinea tectonics)

Hendarjo, K.S. & R.E. Netherwood (1986)- Palaeoenvironmental and diagenetic history of Kais Formation, K.B.S.A., Irian Jaya. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 423-438.

Hendro H.N., D, Andi K., B.D.H. Sasmita, Suwondo, Sapto H.W., A. Bachtiar, W. Utomo, Fatchur Z., N. Witasta & Y. Wijaya (2016)- Facies model of Upper Kais Member; a case study of the Miocene carbonates reservoir in Bintuni Basin, West Papua. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-644-G, 13p.
(U Miocene Upper Kais Lst reservoir study in area of Mogoi-Wasian fields, Bintuni Basin. Fields carbonate buildups on Oligocene NW-SE trending anticlines, initially discovered in 1939-1941. Kais Lst subdivided into (1) lower Kais-Porous (~80m), (2) middle Wasian Lst (~45m) and Sekau Shale and (3) upper Mogoi Lst (70m). Main units subdivided into sequences. Porosity-permeability controlled by matrix porosity and fractures)

Henley, R.W., F.J. Brink, P.L. King, C. Leys, J. Ganguly, T. Mernagh, J. Middleton, C.J. Renggli et al. (2017)- High temperature gas-solid reactions in calc-silicate Cu-Au skarn formation; Ertsberg, Papua Province, Indonesia. Contrib. Mineralogy Petrology 172, 11-12, 106, 19p.
(On 2.7-3.0 Ma Ertsberg East Skarn System, adjacent to Grasberg diorite intrusion and 2.5 km from giant 3.3 Ma Grasberg porphyry copper deposit. Formed through flux of magma-derived fluid through carbonate rock sequences at T> 600° C and P<50 MPa (~2 km depth?))

Henry, C. & S. Das (2002)- The Mw 8.2, 17 February 1996 Biak, Indonesia, earthquake: rupture history, aftershocks, and fault plane properties. J. Geophysical Research 107, B11, 2312, doi:10.1029/2001JB000796, 20p.
(Large earthquake E of Biak on shallow dipping thrust fault (strike 109°, dip 9°). Rupture propagated bilaterally on fault extending 180 km W and 50 km E of hypocenter)

Herdiyanti, A.N.A., A. Moris, A. Fakhri, R.P. Putra & I. Oktafirman (2015)- Evaluation of underexplored *Textularia* layer in the Salawati Basin, Eastern Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-348, 3p.
(Thin (5-10m) limestone bed in clastic U Miocene Klasafet Fm, formerly called Textularia II marker bed, is secondary oil producer in Walio area of Salawati Basin. Also proven oil in Kasuari, Payao, etc. Greatest thickness in S. Potential underexplored hydrocarbon play)

Hermes, J.J. (1968)- The Papuan geosyncline and the concept of geosynclines. Geologie en Mijnbouw 47, 2, p. 81-97.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0Rmd5ay1rcmhNR3c/view)
('Pre-plate tectonics' review of geologic history of W Papua, in 'Papuan geosyncline' is described in terms like miogeosyncline and eugeosyncline. Deformed by collision between Asian and Australian continent, during which segment of the Papuan geosyncline was torn loose, bent and broken, leading to present sinuous shape of W part of New Guinea island. Sorong fault zone recognized as major up- to-10km- wide, left-lateral fault zone with gigantic tectonic breccias)

Hermes, J.J. (1974)- West Irian. In: A.M. Spencer (ed.) Mesozoic-Cainozoic orogenic belts. Geol. Soc. London, Spec. Paper 4, p. 475-490.
(Overview of W New Guinea geology/ stratigraphy, using geosynclinal terminology. Age of metamorphism in N Central Range most likely Late Oligocene. Also Late Oligocene 'Sirga phase' of deformation. Deformation in Mamberamo basin is Pleistocene)

Hermes, J.J. (1982)- On the alleged rotation of the island of New Guinea. Pacific Geology 16, p. 53-57.
(No major rotations between New Guinea and Australia, but good evidence for transcurrent movement between North New Guinea and Central New Guinea provinces. M Miocene Makats Fm in N New Guinea has detritus from apparently metamorphosed and uplifted Central Range)

Hermes, J.J. & F.C. Schumacher (1961)- Summary of stratigraphy of New Guinea. Proc. 9th Pacific Science Congress Bangkok 1957, 12, p. 318-324.
(Overview of Silurian- Pliocene stratigraphy of W New Guinea. Kemum Fm in Birds Head contains Lower Silurian Monograptus. Permo-Carboniferous rel. widespread clastics and sandy limestones with spiriferid brachiopods and Glossopteris flora, etc.)

Hidayati, S., A. Cipta, A. Omang, R. Robiana & J. Griffin (2013)- Earthquake hazard map of Papua, Indonesia. In: Proc. 49th Annual Session Coord. Comm. Geoscience Programmes E and SE Asia (CCOP), Sendai, p. 61-72.
(online at: www.ccop.or.th/download/as/52as2.pdf)
(Probabilistic seismic hazard model, based on recognition of 9 tectonic plates, 14active thrust and strike-slip faults,2-3 subduction segment, and 9 zones for diffuse earthquakes (from historic earthquakes))

Hill, K.C. & R. Hall (2003)- Mesozoic- Cenozoic evolution of Australia's New Guinea margin in a West Pacific context. In: R.R. Hillis & R.D. Muller (eds.) The evolution and dynamics of the Australian Plate. Geol. Soc. America (GSA), Spec. Paper 372 and Geol. Soc. Australia Spec. Publ. 22, p. 265-290.
(Island of New Guinea at N Australian margin. Complex evolution, largely masked by Mio-Pliocene orogenesis. In Paleozoic, New Guinea contained boundary ('Tasman Line') between Late Paleozoic active margin in E and extensional margin in W. Permian- Early Triassic active margin with widespread M Triassic granite intrusions. Triassic-Jurassic rifting followed by Cretaceous passive margin subsidence and renewed rifting in Late Cretaceous- Paleocene. Rapid N-ward movement of Australian Plate since Eocene resulted in Mio-Pliocene collision with Philippine-Caroline Arc, which commenced in Late Oligocene and orogenesis continues today. Change in character of New Guinea lithosphere from thick and strong in W to thin and weak N and E of Tasman Line important influence on style and location of Mesozoic and Cenozoic deformation)

Hill, K.C., N. Hoffman, P. Lunt & R. Paul (2002)- Structure and hydrocarbons in the Sareba Block, 'Birdôs Neck', West Papua. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 227-248.

(E Birds Neck- W Cenderawasih Bay NE- trending Sareba Graben, originated in Late Jurassic- Early K. Cretaceous- M Miocene starved basinal facies. Adjacent Lengguru foldbelt formed by collision of Weyland Terrane with Birds Neck, consuming Paleocene oceanic crust of Cenderawasih Bay. Thin-skinned thrusting in Late Miocene, thick-skinned thrusting/ uplift in Pliocene, Pleistocene orogenic collapse into Cenderwasih Bay Pliocene oceanic crust, leaving <2 Ma metamorphic core compex on Wandamen Peninsula)

Hill, K.C., J.T. Keetley, R.D. Kendrick & E. Sutriyono (2004)- Structure and hydrocarbon potential of the New Guinea foldbelt. In: K.R. McClay (ed.) Thrust tectonics and hydrocarbon systems, American Assoc. Petrol. Geol. (AAPG), Mem. 82, p. 494-514.
(Papuan Fold Belt structures inverted extensional faults and asymmetric detachment folds that break through overturned forelimb. Previous fault-bend foldmodel flawed. PNG deformation front has not yet impinged on strong Australian lithosphere, so low fold belt occupies its own foreland basin. W PNG Fold Belt gas-condensate province just impinged on strong lithosphere, developing foreland basin and basement-cored anticlines. Irian Jaya Fold Belt deformation front encountered strong Australian lithosphere, causing 15km-thick Paleozoic- Mesozoic sequence thrust to surface along previously extensional basin-margin fault. Focusing deformation on one fault created mountains 5km high and adjacent foreland basin. Birds Neck Lengguru Fold Belt resembles oil province in Papuan Fold Belt, but Pleistocene extensional faulting may cause breaching)

Hill, K.C., R.D. Kendrick, P.V. Crowhurst & P.A. Gow (2002)- Copper-gold mineralisation in New Guinea: tectonics, lineaments, thermochronology and structure. Australian J. Earth Sci. 49, 4, p. 737-752.
(Late Miocene-Pliocene copper-gold deposits tied to intrusives (of mantle origin, not subduction-related). Richest deposits at intersections of N-NE trending transfer faults and inverted Mesozoic extensional faults. Mineralisation during inversion of these faults and correlates with propagation of orogenesis from NE to SW)

Hill, K.C., P.B. O'Sullivan, K. Lumbanbatu et al. (1998)- Tectonics and hydrocarbons in Irian Jaya, constraints from zircon fission track analysis. Proc. 26th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. *(Poster Abstract)*
(Zircons ages reflecting ages of volcanism: U. Miocene- Pliocene, Paleocene, M Cretaceous, Late Triassic- E Triassic, Late Carboniferous- E Permian and Proterozoic-E Paleozoic)

Hirschi, H. (1908)- Reisen in Nordwest Neu-Guinea. Jahresbericht Geographisch-Ethnogr. Gesellschaft, Zurich 1907-1908, Von Lohbauer, Zurich 1908, p. 71-106.
(online at: https://www.e-periodica.ch/digbib/view?pid=ghl-001:1907-1908:887)
('Travels in NW New Guinea'. Mainly travel log of traverses from Fakfak to Cenderawasih Bay by BPM geologist. Collected M Jurassic ammonites at Wendesi, Cenderawasih Bay, described by Boehm 1913)

Hobson, D.M., A. Adnan & L. Samuel (1997)- The relationship between Late Tertiary basins, thrust belt and major transcurrent faults in Irian Jaya: implications for petroleum systems throughout New Guinea. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australasia Conf., Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 261-284.
(Irian Jaya fold-thrust belt two Tertiary uplift phases. Older structures formed ahead of oceanic crustal slabs during obduction onto N Australian Plate margin. Younger structures formed after oceanic obduction ceased, and since Late Pliocene. Folds and thrusts controlled by restraining bends in NE-SW dextral, transcurrent fault system. Extensional basins along releasing bends. Younger structures formed after hydrocarbon generation ceased. Two ages of compressive structures also in Papuan Thrust Belt, but formed ahead of discrete accreted terranes. In most of Thrust Belt only one generation of folds. In PNG plate-bounding, transcurrent fault systems well N of Thrust Belt, and deformation affects only N Papuan basins)

Hope, G.S. (1983)- The vegetation changes of the last 20,000 years at Telefomin, Papua New Guinea. Singapore J. Tropical Geography 4, p. 25-33.

Hope, G.S., J.A. Peterson, U. Radok & I. Allison (eds.) (1976)- The equatorial glaciers of New Guinea. Results of the 1971-1973 Australian Universities Expedition to Irian Jaya: survey, glaciology, meteorology biology and paleoenvironments, A.A. Balkema, Rotterdam, p. 1-256.

(online at: http://papuaweb.org/dlib/bk/hope1976/)
(Results of 1971-1973 Australian Universities Expedition to Carstensz glaciers, W Irian Jaya. No geology)

Hope, G.S. & J. Tulip (1994)- A long vegetation history from lowland Irian Jaya, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 109, p. 385-398.
(Pollen analysis of 10m core from mire at 780m altitude and 2°S latitude on ultrabasic soils on N coastal range of W Papua, believed to cover ~60,000 yr B.P. Montane forest grew around site continously through Late Pleistocene with increases in higher-altitude taxa from 25- 10.5 ka, the time of glacial maxima. Fine charcoal record after 10.9 ka, probably anthropogenic disturbance)

Hopping, C.H. & R.H. Wagner (1962)- In: W.A. Visser & J.J. Hermes, Geological results of the exploration for oil in Netherlands New Guinea, Kon. Nederl. Geologisch Mijnbouwkundig Genootschap (KNGMG), Geol. Serie 20, Enclosure 17, Photographs of fossils, p. 1-11.
(Identifications and photos of Early Permian plant fossils from Birds Head outcrops and well cores (Poeragi 1). Both Gondwanan (Glossopteris spp.) and Cathaysian (Taeniopteris, Pecopteris, Sphenophyllum) elements)

Housh, T. & T.P. McMahon (2000)- Ancient isotopic characteristics of Neogene potassic magmatism in Western New Guinea (Irian Jaya, Indonesia). Lithos 50, 1-3, p. 217-239.
(Collision-related Central Range Late Miocene- Pleistocene intrusives and volcanics with unique isotope compositions, probably reflecting interaction of mantle derived parent magma, Proterozoic or Archean lower crust and possibly younger crust. Some of the ~3 Ma zircons with Proterozoic-age cores (1295-1773 Ma))

Hovig, P. (1937)- Mijnbouw en geologie van Nieuw Guinea. In: W.C. Klein (ed.) Nieuw Guinea, Molukken Instituut, Amsterdam, II, p. 547-589.
('Mining and geology of New Guinea')

Hubrecht, P. (1913)- Beknopt geologisch verslag der derde Zuid-Nieuw Guinea expeditie 1912-1913. Maatschappij Bevordering Natuurhistorisch Onderzoek Nederland Kolon., Bull. 68, p. 37-51.
('Brief geological report of the Third South New Guinea Expedition 1912-1913'. Expedition from S coast, up Lorentz/ Noord River to Wilhelmina / Trikora Peak in Central Range)

Hubrecht, P.F. (1918)- Rapport over Nieuw Guinea. Typescript at Bureau of Mines office, Jayapura, p. 1-25.
(Geological observations in New Guinea and 1913 traverse from S Coast to Wilhelmina peak in Central Range)

Hubrecht, P.F. (1921)- Beknopt geologisch verslag van de wetenschappelijke Noord Nieuw-Guinea expeditie. Publ.?
('Brief geological report of the scientific North New Guinea Expedition')

Hughes, S. & N. Wiwoho (2005)- The discovery, geology, alteration and mineralization of the Deep MLZ deposit, Papua. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI) Spec. Issue, p. 18-30.
(Deeper level of Cu-Au mineralization in East Ertsberg skarn system, identified in 2004. Associated with Ertsberg Diorite intruded into Paleogene limestone)

Hutasoit, L.M. & Y. Ashari (1998)- The origin of saline spring water in Baliem Valley, Irian Jaya based on its isotopic composition. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 114-120.

Hutubessy, S. (1998)- Konfigurasi struktur geologi bawah permukaan hasil analisa data gayaberat dan seismologi di dataran tinggi Wamena, Irian Jaya. J. Geologi Sumberdaya Mineral 8, 85, p. 12-23.
('Deep structural configuration from gravity and seismological data analysis in Wamena high valley, Irian Jaya')

Idris, R., Tasiyat & N. Djumhana (2002)- Geological reservoir of the Matoa Field Salawati Basin, Irian Jaya. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 236-264.

(Matoa field NNE-SSW trending anticlinal structure discovered in 1991. Producing from Late Miocene Kais Limestone reservoir, with larger foraminifera Marginopora vertebralis and Alveolinella quoyi. Both reefal facies (porosity 18-22%, perm 10-40 mD) and non-reefal (platform) facies (porosity 15-20%, perm 10-30 mD). Reef reservoir not connected to platform facies reservoir. Cum. production from 30 wells ~12.3 MMBO)

Ikhwanudin, F. & C.I. Abdullah (2015)- Indication strike slip movement a part of Sorong Fault Zone in Yapen Island, Papua, Indonesia. GSTF J. Geol. Sciences (JGS) 2, 1, p. 25-33.
(online at: http://dl6.globalstf.org/index.php/jgs/article/view/1224/1515)
(Major NE-SW stress produced NW-SE Jobi sinistral-slip fault on Yapen, interpreted as part of E-W Sorong strike slip fault zone. Yapen stratigraphy: Late Eocene- earliest Miocene Yapen Fm tuffaceous sst (deep marine island arc volcanoclastics), E-M Miocene Wurui Fm Lst, Late Miocene cataclastic breccia with basalt, gabbro clasts, E Pliocene Kurudu Fm Sst)

Ikhwanudin, F. & C.I. Abdullah (2015)- Stratigraphy, facies and diagenesis of limestone in Wurui Formation, Yapen Island, Papua, Indonesia. In: 77th EAGE Conf. Exhib., Madrid, Tu N110 06, 5p. *(Extended Abstract)*
(Study of Wurui Fm limestone in Dawai Village, E part of Yapen Island. Age of limestone Te5-Tf2 (E-M Miocene). Depositional environment inner-middle neritic, diagenesis mixed marine-phreatic)

Ikhwanudin, F. & C.I. Abdullah (2016)- The connection between ophiolite occurance and Yapen-Sorong Fault Zone (YSFZ), Papua, Indonesia. In: 78th EAGE Conf. Exh., Vienna 2016, Th P5 08, 5p.
(Sheared and brecciated ophiolitic rocks on NE Yapen island, unconformable over Wurui Limestone Fm (M Miocene?). Drifted and brecciated mainly in Late Miocene-Pliocene. Ophiolite is carried by Yapen-Sorong Fault Zone in strike-slip compressional regime)

Indarto, S. (1996)- Potensi batupasir kuarsa di daerah Aikimia, Wamena, Irian Jaya. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 56-66.
('Quartz-sand potential of the Aikimia area, Wamena, Irian Jaya'. (probably on quartz-rich (95-99%) Upper Cretaceous Ekmai sandstone outcrops in Baliem Valley, Central Range of W Papua; JTvG)

Indarto, S., N. Sumawijaya, A. Bukit & N. Sastra (1987)- Geologi daerah Wamena dan Depapre Jayapura Irian Jaya. Pusat Penelitian Geoteknologi LIPI, K87-2, p. 1-24.
('Geology of the Wamena and Depapre Jayapura areas, Irian Jaya'. Lithologic analysis of sandstones and dolomitic limestones in Wamena area, Central range. Petrographic analysis of (Cretaceous?; JTvG) sandstone in Aikima area 95-99% quartz. Depapre-Sentani-Jayapura in NE Irian Jaya common harzburgite, lateritized, overlain by limestone)

Indarto, S., M. Syafei, Praptisih & S. Djoehanah (1999)- Provenance study of shaly-sandy unit of Kembelengan Formation, Wamena, Irian Jaya. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 3, p. 75-82.
(U Cretaceous Kembelangan sandstones in Wamena area, Central Range, 20-30 cm thick beds and thinning upward. Petrography shows quartz (58-70%), clay (10-12%), feldspar (6-8%), calcite, muscovite (3-7%), glauconite, and is classified as quartz wacke of recycled orogen provenance)

Insley, M. & M. Tocher (1999)- Comparison of field development in the frontal regions of the fold and thrust belts of PNG/Irian Jaya and Pakistan. In: C.A. Caughey & J.V.C. Howes (eds.) Proc. Conf. Gas habitats of SE Asia and Australasia, Jakarta 1998, Indon. Petroleum Assoc. (IPA), p. 225-236.

Jablonski, D. (2007)- Geology and exploration potential of the offshore S.W. Bintuni Basin, Semai-Gorong Basin, Eastern Indonesia. Proc. SE Asia Petrol. Soc. (SEAPEX) Conf., Singapore, 2p. *(Abstract only)*
(No wells in SW Bintuni Basin, but large structures. Three provinces: Seram Thrust Belt in W, Seram Trough in centre and Seram Fold Belt in E. Area underlain by older extensional regime, overprinted by latest Miocene-Recent compressional pulses, younging to NE. W part of area imbricate thrusts, E area gentle folds. Source rocks may include Permian paralic shales and coals, M-U Triassic restricted marine claystones, and L-M Jurassic paralic coals and clays. Plays: (1) Paleozoic rift fault blocks, (2) Triassic limestone build-ups, (3) Triassic-M Jurassic rift fault blocks, (4) Callovian-Oxfordian fractured limestone, (5) Upper Cretaceous-

Lower Tertiary sandstones associated with M Palaeocene Coral Sea rifting, (6) Miocene build-ups (Kais Fm-equivalent); (7) Imbricate thrusts in Seram Thrust Belt and (8) Gentle folds in Seram Fold Belt in E)

Jackson, J.E. (2010)- Neogene intrusions in the Western Central Range, Papua, Indonesia: petrologic, geochemical, and isotopic comparison of the Miocene Ular Merah and Pliocene Komopa Magmatic Districts. M.Sc. Thesis University of Texas at Austin, p. 1-360. *(Unpublished)*
(Two belts of Neogene igneous rocks in New Guinea Central Range, with Miocene (20-10 Ma) belt outcropping N of Pliocene (7-3 Ma) belt. Miocene magmatic rocks in PNG (Maramuni Volcanic Arc) intruded Australian continental rocks; those in W Papua intruded allochthonous arc/forearc terranes. Pliocene magmatic rocks young from W to E, and emplaced into Australian continental crust at highest elevations in C Range. Two magmatic districts in W Central Range studied here: (1) Komopa Pliocene (3.9-2.9 Ma) quartz monzodiorites, granodiorite and monzogranites, emplaced into Australian passive margin strata, shoshonitic, similar to intrusions from Minjauh Volcanic Field, Ertsberg Mining District and Etna Bay (products of collisional delamination tectonism as leading edge of Australian continental lithosphere jammed N-dipping subduction zone beneath Irian Ophiolite) and (2) Ular Merah late E Miocene (17.4-16.6 Ma) calc-alkaline, porphyritic diorites and monzodiorites, emplaced into allochthonous Irian Ophiolite Belt. Adakite-like characteristics sugges partial remelting of garnet-bearing plutons emplaced into mantle beneath allochthonous ophiolite)

Jongmans, W.J. (1940)- Beitrage zur Kenntnis der Karbonflora von Niederlandisch Neu Guinea. Mededelingen Geol. Stichting 1938-1939, p. 263-274.
('Contributions to the knowledge of the Carboniferous flora of Netherlands New Guinea'. Description of mixed 'Cathaysian' flora (Taeniopteris, Pecopteris spp.) and Gondwanan 'Glossopteris' fauna from two localities in Otakawa River, Central Range foothills, S of Carstensz Peaks. Here believed to be of Late Carboniferous age, but regarded as Permian by Hopping and Wagner (in Visser & Hermes, 1962), or Late Permian by McLoughlin (1993), based on correlation with Bowen Basin (Glossopteris, etc.; Identifications re-evaluated by Rigby (1997)and Playford & Rigby (2007); JTvG) (JWJ, p. 265-266 also mentions several occurrences of possible Carboniferous or Permian wood (Calamites, Dadoxylon) and plant fossils (Pecopteris arborescens) from NW Kalimantan and Sarawak; not published elsewhere?))

Jongmans, W.J. (1941)- Elementen der *Glossopteris* flora in het Carboon van Nieuw Guinea. Handelingen 28e Nederlandsch Natuurkundig Geneeskundig Congres, C, p. 267-271.
('Elements of the Glossopteris flora in the Carboniferous of New Guinea'. Plant fossils from two localities collected by BPM in Akimeugah area, SW Papua, of Carboniferous age (now deemed to be Permian; HvG). Two localities, one with Gondwanan flora (Vertebraria only) and one with rel. rich Asian flora (Cathaysian; Pecopteris, Taeniopteris; also Euramerican elements), proving the two floras lived in close proximity (not necessarily 'mixed floras' as often suggested; HvG))

Jordan, L. (1931)- Foraminifera from the Pliocene of New Guinea. M.S. Thesis, Dept. of Geology, Massachussets Institute of Technology (MIT), p. *(Unpublished)*

Jost, B.M., M. Webb & L.T. White (2018)- The Mesozoic and Palaeozoic granitoids of north-western New Guinea. Lithos 312-313, p. 223-243.
(Late Paleozoic and E Mesozoic granitoids of NE Birds Head mainly small-medium size intrusions of Late Devonian- E Carboniferous (363-328 Ma) and latest Permian-Triassic (257-223 Ma) ages, intruding Silurian-Devonian Kemum Fm metasediments. Most peraluminous and derived from partial melts of metasedimentary continental crust. Minor mantle-derived material, especially in Permian-Triassic. Devonian-Carboniferous granitoids (Mariam Ngemona, Wasiani, etc. granites/granodiorites) and volcanics locally restricted. Late Permian-Triassic intrusions (Sorong, Anggi, Maransabadi, Kwatisore, Netoni, Sorong, etc.) likely part of long active continental margin subduction system spanning length of New Guinea, E Australia and Antarctica)

Kamaruddin, C.H. (2012)- Deliniasi zona ubahan porfiri Cu-Au di daerah Orion, Pegunungan Bintang, Papua. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-M-10, p.
('Delineation of Cu-Au porphyry alteration in the Orion area, Star Mountains, Papua')

Kambu, M.R. (2014)- Geologi dan karakteristik batuan beku ultramfik sebagai bahan baku konstruksi di daerah Lembah Sunyi, Kelurahan Angkasapurah, Kota Jayapura, Provinsi Papua. J. Ilmiah Magister Teknik Geologi (UPN) 7, 1, 6p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/265/227)
('Geological characteristics and ultramafic igneous rocks as a raw material in the construction at the Lembah Sunyi area, Angkasapurah Village, Jayapura, Papua Province'. Widespread serpentinized ultramafic rocks)

Kambu, Y. & W. Permana (2008)- Permian- Cretaceous hydrocarbon prospectivity at Berau- Papua. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IP08-SG-080, 9p.
(Small Permian, Triassic, Jurassic, Cretaceous paleogeographic maps of Berau area, offshore S side Birds Head, most of them showing NW-SE trending facies belts, becoming more marine to SW)

Kamtono, E. Soebowo & Praptisih (1991)- Geologi daerah Pass Valley, Irian Jaya. J. Riset Geologi Pertambangan (LIPI) 10, 1, p. 29-36.
('Geology of the Pass Valley area, Irian Jaya'. Pass Valley area NE of Wamena with outcrops of folded Cretaceous Kembelangan Fm and Tertiry New Guinea Limestone Gp)

Katchan, G. (1982)- Mineralogy and geochemistry of Ertsberg (Gunung Bijih) and Ertsberg East (Gunung Bijih Timur) skarns, Irian Jaya, Indonesia and the Ok Tedi skarns, Papua New Guinea. Ph.D. Thesis, University of Sydney, NSW, p. 1-498. *(Unpublished)*

Kato, M., D. Sundari & S.K. Skwarko (1999)- First description of Carboniferous corals from Western Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 9, p. 9-41.
(Two new species of rugose corals from central Birds Head float samples in area of Aimau Fm and Aifat mudstone outcrops reportedly suggest Late Carboniferous age and Eurasian affinity)

Keho, T. & D. Samsu (2002)- Depth conversion of Tangguh gas fields. The Leading Edge 21, 10, p. 966-971.
(Depth maps for Top Kais Lst and Base Cretaceous. Adding Late Jurassic shale isopach -derived from wells to seismically derived Base Cretaceous depth map created Top Roabiba Reservoir Sand depth map)

Keijzer, F.G. (1941)- Fossielen van het Palaeozoicum van Zuidelijk Centraal Nieuw-Guinea. Handelingen 28e Nederlandsch Natuur- Geneeskundig Congres 28, Utrecht, 4, p. 271-272.
('Fossils from the Paleozoic of South Central New Guinea'. Summary of macrofossils reported from >1500m thick Paleozoic section. Includes Devonian-to Permian brachiopods and rugose and tabulate corals of Silurian (Halysites), Devonian (Heliolites barrandei, Favosites reticulatus, Cyathophyllum anisactis, C. douvillei, etc.) and Permian (Lonsdaleia) ages)

Kemmerling, G.L.L. (1919)- De geologie van Nederlandisch Noord Nieuw Guinea. Handelingen 1st Nederl.- Indisch Natuurwetenschappelijk Congres, Weltevreden 1919, p. 230-237.
('The geology of North Netherlands New Guinea'. Brief review of early geologic reconnaissance geological reconnaissance work in W Papua northern coastal regions (reported in more detail by Zwierzycki 1921))

Kemmerling, G.L.L. (1928)- Eenige jaren mijnbouwkundig-geologische exploratie op Nederlandsch Nieuw Guinea. Jaarboek Mijnbouwkundig Vereeniging Delft, 1926-1928, p. 166-204.
('A few years of mining-geological exploration on Netherlands New Guinea'. Brief review of 1917-1922 expeditions, of which very little was published elsewhere)

Kendrick, R.D. (2000)- Structure, tectonics and thermochronology of the Irian Jaya fold belt, Irian Jaya, Indonesia. Ph.D. Thesis La Trobe University, Melbourne, p. 1-379. *(Unpublished)*

Kendrick, R.D. & K.C. Hill (2002)- Hydrocarbon play concepts for the Irian Jaya fold belt. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 353-367.

(Irian Jaya foldbelt common oil shows and two non-commercial discoveries. Three new play concepts proposed: young structures in foreland, Ekmai sst in thrust contact with Miocene marls, inverted Paleozoic rifts in western foldbelt. Central Range foldbelt cooling ages 10-12 Ma))

Kendrick, R.D., K.C. Hill, S.W. McFall, Meizarwin, A. Duncan, E. Syafron & B.H. Harahap (2003)- The East Arguni Block: hydrocarbon prospectivity in the Northern Lengguru foldbelt, West Papua. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 467-483.

Kendrick, R.D., K.C. Hill, P.B. O'Sullivan, K. Lumbanbatu & I. Saefudin (1997)- Mesozoic to Recent thermal history and basement tectonics of the Irian Jaya fold belt and Arafura platform, Irian Jaya, Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australia Conf., Jakarta, Indon. Petroleum Assoc. (IPA), p. 301-306.
(Lengguru foldbelt wells Suga 1 and Kamakawala 1 poor quality Cretaceous- Paleocene reservoir sands. Zircons? suggest 2 source terranes for U Cretaceous Ekmai sands: from N (Silurian- Devonian Kemum Terrane) in N Lengguru (E Arguni Block outcrops), from S in S Oeta 1 well, with mainly M Cretaceous and Triassic ZFT grain ages. Irian Jaya foldbelt deformation- cooling started in M Miocene, earlier than PNG)

Kendrick, R.D., K.C. Hill, K. Parris, I. Saeffudin & P.B. OôSullivan (1995)- Timing and style of regional deformation in the Irian Jaya foldbelt. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 249-261.
(Apatite fission track analyses from W Irian foldbelt indicate two cooling events related to tectonic uplift: ~20-25 Ma and 2-5 Ma. NE-SW trending lineaments, at high angle to trend of thrust belt may be deep-seated basement structures. From PNG border in E to Weyland overthrust in W, lateral changes in Late Permian- M Jurassic sequence indicate transition from granites and high-grade metamorphics to widespread clastic graben-fill deposits and corresponds to change in trend in thrust belt from WNW to E-W at ~139° E. Pre-existing extensional faults influenced initiation of basement inversion, and may have acted as lateral ramps to compartmentalize inverted blocks and separate them from areas of thin-skinned thrusting)

Kitazaki, U. (1948)- Tertiary limestones from Japen Island, New Guinea. Miscell. Rept. Res. Inst. Nat. Resources Tokyo 11, p. 25-26 *(in Japanese)*.

Klein, W.C. (1938)- Luchtverkenning en luchtverkeer in Nederlandsch en Australisch Nieuw Guinee. In: W.C. Klein (ed.) Nieuw Guinee, Molukken Instituut,Amsterdam, 3, p. 1039-1161.
('Aerial reconnaissance and air traffic in Netherlands and Australian New Guinea')
(online at: https://resolver.kb.nl/resolve?urn=MMKB05:000044110:pdf)

Kobayashi, T. & C.K. Burton (1971)- Discovery of ellesmereoceroid cephalopods in Irian, New Guinea. Proc. Japanese Academy 47, 7, p. 625-630.
(online at: https://www.jstage.jst.go.jp/article/pjab1945/47/7/47_7_625/_pdf)
(Orthoconic cephalopods from dark shales that look like Jurassic Kembelangan Fm in Star Mountains near PNG border, collected by Kennecott. Look like E-M Ordovician nautiloids and may be from Kariem Fm. If correct, these are oldest fossils known from Indonesia. Propose new genus-species name Irianoceras antiquum (re-assigned to Bactroceras latisiphonatum Glenister by Crick and Quarles van Ufford (1995))

Kochem, E.J. (1976)- Diagenesis of the subsurface Miocene pinnacle reefs of Irian Jaya, Indonesia; a petrographic study. Masters Thesis, Rensselaer Polytechnic Inst., Troy, p. 1-106. *(Unpublished)*

Koesoemadinata, R.P. (1976)- Tertiary carbonate sedimentation in Irian Jaya with special reference to the northern part of the Bintuni Basin. Proc. Carbonate Seminar Jakarta 1976, Indon. Petroleum Assoc., p. 79-92.
(Summary of well and outcrop work in Birds Head. Two main Miocene carbonate platforms in New Guinea: Arafura and Ayumara in Birds Head)

Koopmans, B.N. (1986)- Satellite radar interpretation of the Bintuni Basin area, Eastern Vogelkop Peninsula, West Irian, Indonesia. Geologie en Mijnbouw 65, 3, p. 197-204.

(Interpretation of 1981 Shuttle Imaging Radar strip of E Birds Head (NE edge of Bintuni Basin, Lina Mts.). Abutment of E-W central Vogelkop monocline against NNW-SSE running Lengguru fold belt appears to be fault-controlled. Also Bintuni Basin controlled by faults that parallel C Birds Head monocline in N and S. Anomalous fold direction of Imskin anticline is surface expression of block movements along these faults)

Koswara, A. (1995)- Geological map of the Taritatu (Kerom) Quadrangle, Irian Jaya (Quad 3412). Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of NE part of West Papua (N-most part of Central Range and Pacific Ocean Plate to N. In SW corner typical N Central Range folded Jurassic- Cretaceous Kembalangan Fm overthrust by ultramfic rocks and Derewo Metamorphics. In East relatively widespread Permo-Triassic? Cycloops Metamorphic Group with minor ultramafic rocks, apparently overlain by Eocene Ubrug Limestone. With numerous young diorite intrusives)

Koswara, A. (1996)- Lithostratigrafi daerah Taritau, Pegunungan Tengah, Irian Jaya berdasarakan penafsiran citra radar. J. Geologi Sumberdaya Mineral 6, 56, p. 2-9.
('Lithostratigraphy of the Taritau area, Irian Jaya Central Range, based on radar imagery'. Remote sensing interpretation of Taritau area in N part of Central Range in W Papua- PNG border area)

Krause, D.C. (1965)- Submarine geology North of New Guinea. Geol. Soc. America (GSA) Bull. 76, p. 27-42.
(Interpretation of offshore structural features from new bathymetric maps N of West Papua and PNG)

Kruizinga, P. (1957)- Palaeozoische lei aan de Wesan Rivier op Nieuw Guinea? Nova Guinea, E.J. Brill, Leiden, new ser. 8, 1-2, p. 1-4.
('Paleozoic slate at the Wesan River on New Guinea?'. Highly folded phyllitic rock collected by Bemelmans in 1955 just N of Wesan River mouth, NW Birds Head. Contains molds of Orthoceras-like fossils, suggesting Paleozoic age. East of this locality different, Late Jurassic (Oxfordian) folded shale with Inoceramus and Belemnopsis. Rocks look different from Silurian low- metamorphic graptolite shale from Kamundan in C Birds Head)

Kurniawan, A.P., B.N. Suwardi, F. Bahesti, S.M. Hadi, Hendarsyah & A.Prasetyo (2018)- Defining Kofiau sub-basin as the deepest part of Salawati Basin using satellite gravity interpretation approach. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-30-G, 19p.
(Deep, offshore Kofiau sub-basin W of Salawati basin is deepest part of Salawati Basin)

Kusnama (2008)- Stratigrafi daerah Timika dan sekitarnya, Papua. J. Sumber Daya Geologi 18, 4, p. 205-222.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/244/224)
('Stratigraphy of the Timika area, Papua'. Description of Timika- Tembagapura road section, W Central Range foothills. Precambrian Nerewip Fm pillow lavas and basalts with foliated meta-sediments unconformably overlain by Precambrian-Cambrian Otomona Fm slate and sandstone. Overlain unconformably by Ordovician? Tuaba Fm sst and red mudstone. Siluro-Devonian Modio Fm dolomite and clastics unconformably overlain by Permian Aiduna Fm shallow marine- deltaic sst, carbonaceous mudstone, with calcarenite and coal beds. Triassic- E Jurassic Tipuma Fm red beds unconformably overlain by M Jurassic- Cretaceous Kembelangan Gp quartz sst and mudstone with ammonites. Paleocene- E Miocene New Guinea Lst overlain by Late Miocene-Pliocene Buru Fm conglomeratic clastics. Late Tertiary Diorite intrusions with Au/Cu mineralization N Timika)

Kusnama & H. Panggabean (1998)- Stratigraphy and tectonic evolution of the Beoga area, Central Range, Irian Jaya. J. Geologi Sumberdaya Mineral 8, 83, p. 2-10.
(Beoga area in W part of Central Range in W Papua. Oldest sedimentary rocks Cretaceous Kembelangan Gp with 600m thick E Cretaceous mudstone-dominated Pinya Fm with ammonites, belemnites, overlain by 200m thick U Cretaceous Ekmai Sst. glauconitic quartz sandstones. Overlain by thick Paleogene- E Miocene New Guinea Limestone Group with ~600m thick Paleocene Waripi Fm and ~1000m Eocene- Oligocene Yawee Fm limestones with quartz sst member in mid-Oligocene. Etc. In N of area Derewo Metamorphics, which represent Kembelangan Gp sediments metamorphosed during ophiolite obduction)

Kusnida, D., T. Naibaho & R. Rahardiawan (2014)- Late Neogene seismic structures of the South Batanta Basin, West Papua. Bull. Marine Geol. 29, 1, p. 11-19.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/61/62)
(Seismic lines across offshore S Batanta Basin W of Salawati/ Birds Head reflect young transtensional and transpressional structuring along Sula-Sorong Fault Zone. M-L Pliocene extensional event and Late Pleistocene-Recent inversion sediments. Water depths 200-1500m)

Kusnida, D., Subarsyah, E. Saputro & A. Ali (2016)- Initial studies of the marine geophysical survey in the offshore Waigeo, West Papua. J. Geologi Sumberdaya Mineral 17, 3, p. 171-177.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/16)
(Offshore N Waigeo in zone of oblique convergence of Australian and Pacific plates, and bound by left-lateral transform Sorong Fault Zone (SFZ) in S. Total magnetic intensities +200 nT to -150 nT indicate area with rocks of oceanic origin with highs (terranes) and lows (basins). Deep SE-NW trending Waigeo Trough with up to 1000m of (Pliocene- Quaternary?) sediment is tectonic contact between island-terranes of Waigeo and Ayu islands and Pacific Oceanic crust)

Kyle, J.R., L. Gandler, H. Mertig, J. Rubin & M. Ledvina (2014)- Stratigraphic inheritance controls of skarn-hosted metal concentrations: ore controls for Ertsberg-Grasberg District Cu-Au skarns, Papua, Indonesia. Acta Geologica Sinica (English Ed.), 88, Suppl. 2, p. 529-531.
(Ertsberg-Grasberg district in W Papua hosts two giant porphyry and skarn-hosted Cu-Au systems that formed between 3.3 and 2.5 Ma in Central Range. Cu-Au systems are associated with two dioritic intrusive centers, Grasberg and Ertsberg. High grade Cu-Au ore concentrations locally controlled by host lithology (carbonates). Paleocene Waripi Fm limestone principal host of Big Gossan and Kucing Liar Cu-Au skarn ore zones. Ertsberg and Dom Cu-Au skarns developed in lower part of Late Oligocene- Lower Miocene Kais Fm)

Kyle, J.R., A.S. Mote & R.A. Ketcham (2008)- High-resolution X-ray computed tomography studies of Grasberg porphyry Cu-Au ores, Papua, Indonesia. Mineralium Deposita 43, 5, p. 519-532.
(X-ray method for scanning ore core samples)

Lacey, W.S. (1975)- Some problems of ómixedô floras in the Permian of Gondwanaland. In: K.S.W. Campbell (ed.) Gondwana Geology, Australian Nat. University (ANU), Canberra, p. 125-134.

Lambert, A.L. (2008)- Petrology of the southwest margin of the Grasberg igneous complex, Papua, Indonesia. M Sc. Thesis, University of Texas at Austin, p. 1-398. *(Unpublished)*
(3 Ma Grasberg Igneous Complex super-giant porphyry copper-gold deposit shallowly emplaced into folded and faulted limestones as young as Late Miocene. The Heavy Sulfide Zone is pyrite-rich shell surrounding complex, and grades into Marginal Breccia. Initial Dalam intrusion phase generated ~5 m of skarn)

Lambert, C.A. (2000)- Subsurface meso-scale structural geology of the Kucing Liar and Amole Drifts and petrology of the heavy sulfide zone, South Grasberg Igneous Complex, Irian Jaya, Indonesia. M.Sc. Thesis University of Texas at Austin, p. 1-. *(Unpublished)*

Lasarimba, D.S Djohor & B Bensaman (2008)- Penentuan batuan batupasir Formasi Sirga pada tambabg terbuka Grasberg, Kec. Tembagapura, Kab. Mimika, Provinsi Papua. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 654-677.
('Sirga Fm sandstone provenance analysis on Grasberg open pit, Tembagapura, Mimika District, Papua province'. Measured sections of mid-Oligocene Sirga Fm from Grasberg mine area and in cores. Thickness ~10-31m?. Samples are lithic arenite, feldspathic wacke and lithic wacke. Provenance interpreted as 'recycled orogen'. Transport directions from S to N suggested by intercalated claystone in N of study area)

Ledvina, M.D. & J.R. Kyle (2014)- Investigating the pathways and P-T-X conditions of hydrothermal fluid flow responsible for Cu-Au mineralization in the Ertsberg East skarn system, Papua, Indonesia. Acta Geologica Sinica (English Ed.), 88, Suppl. 2, p. 578-579. *(Abstract)*
(online at: http://onlinelibrary.wiley.com/doi/10.1111/1755-6724.12374_38/epdf)

Lelono, E.B. (2008)- Pleistocene palynology of the Waipona Basin, Papua. Lemigas Scientific Contr. 31, 2, p. 7-18.
(Well in W Papua drilled >3000m of mainly Pleistocene sediments, with minor section of Late Pliocene at base. Good pollen recovery, with mixture of Australian and Asian elements. Existence of Asian palynomorphs indicates dispersal of Asian flora into New Guinea following arrival of Australian plates at around end-Oligocene. Palynological assemblages from upper interval indicate climate changes, from dry to wet. Low pollen recovery in lower interval, possibly due to deposition in deep marine environment, far from continent)

Lelono, E.B., M. Firdaus & T. Bambang S.R. (2010)- Palaeoenvironments of the Permian- Cretaceous sediments of the Bintuni Bay, Papua. Lemigas Scientific Contr. 33, 1, p. 71-83.
(online at: www.lemigas.esdm.go.id/en/semua-scientific.html)
(Paleoenvironments of Late Permian-Cretaceous of Bintuni Bay: Permian-Triassic Ainim Fm non-marine (shale primary gas source rock for area). E Jurassic non-deposition. M Jurassic Lower Kembelangan Fm fluvial sandstone (main reservoir). Overlain by Late Jurassic deeper marine shale. E Cretaceous absent, suggesting erosion. Late Cretaceous Jass Fm deep marine shale. With paleogeographic maps)

Le Roux, C.C.F.M. (1926)- Expeditie naar het Nassau-gebergte in Centraal Noord Nieuw Guinee. Tijdschrift Bataviaasch Genootschap Kunsten Wetenschappen 66, p. 447-513.
('Expedition to the Nassau Mts in central North New Guinea'. On the1926 Dutch-American 'Stirling' N New Guinea ethnographic expedition up Mamberamo- Rouffaer rivers and into Central Range. Not much geology)

Leys, C.A., M. Cloos, B.T.E. New & G.D. MacDonald (2012)- Copper- gold ± molybdenum deposits of the Ertsberg- Grasberg District, Papua, Indonesia. In: J.W. Hedenquist et al. (eds.) Geology and genesis of major copper deposits and districts of the world: a tribute to Richard H. Sillitoe, Soc. Economic Geol. (SEG), Spec. Publ. 16, p. 215-235.
(Review of Ertsberg-Grasberg district in Central Range of W Papua that hosts two giant Cu-Au (± Mo)-rich porphyry and skarn-hosted Cu systems, formed between 3.3- 2.5 Ma, associated with two separate K-rich dioritic intrusions. Economic mineralization in each system vertically continuous over >1500 m. Grasberg system two deposits: Grasberg porphyry and Kucing Liar skarn. Ertsberg system four deposits: Ertsberg skarn, Ertsberg East skarn, Dom skarn and Big Gossan)

Lie, H.S., S.D. Puspita, R. Krisnandar & K. Ferari (2018)- Unlocking Mesozoic petroleum system potential of underexplored southern Bintuni Basin. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-575-G, 15p.
(Chevron discussion of petroleum potential of undrilled Mesozoic section in S Bintuni West Papua I and III blocks. Not much new)

Ling, H.Y. & R. Hall (1995)- Note on an age of the basal sedimentary sequence of Waigeo Island, eastern Indonesia. J. Southeast Asian Earth Sci. 11, p. 53-57.
(Basal sedimentary unit on Waigeo is Tanjung Bomas Fm and contains late M Eocene radiolarian assemblage. Overlies ?Late Jurassic-Early Cretaceous ophiolite complex and thin volcaniclastic Kapadiri Fm with Early Cretaceous calpionnelids)

Ling, H.Y., R. Hall & G.J. Nichols (1991)- Early Eocene radiolaria from Waigeo Island. Eastern Indonesia. J. Southeast Asian Earth Sci. 6, p. 299-305.
(Well-preserved Early Eocene radiolarian assemblages confirm presence of Eocene marine sediments on Waigeo Island, NW of Birds Head)

Livingstone, H.J. (1992)- Hydrocarbon source and migration, Salawati Basin, Irian Jaya. In: Eastern Indonesia Exploration Symposium, Simon Petroleum Technology/Pertamina, p.

Livingstone, H.J., B.W. Sincock, A.M. Syarief, Sriwidadi & J.N. Wilson (1992)- Comparison of Walio and Kasim Reefs, Salawati Basin, Western Irian Jaya, Indonesia. In: C.T. Siemers et al. (eds.) Carbonate rocks and reservoirs of Indonesia: a core workshop, Indon. Petroleum Assoc. Core Workshop Notes 1, p. 4/1- 4/40.
(Kasim and Walio fields reservoirs Miocene Kais Fm reefal carbonates. Walio field producing 98.5% water, Kasim 99.4% water. Walio on N rim of extensive carbonate bank or shelf, Kasim part of elongate pinnacle reef complex. Reservoir rocks mainly of skeletal/coral wackestones and packstones Dolomite commonly replaced original argillaceous mud matrix; on reef flanks much of original texture destroyed. Porosity mainly from leaching of aragonitic fragments. Reservoirs highly stratified and divided into five units)

Lloyd, A.R. (1994)- A review of the geology, biostratigraphy and hydrocarbon potential of Irian Jaya. Alan R. Lloyd and Associates, Duncraig, 630p. *(Unpublished)*

Lootens, D.J. (ed.) (1972)- P.T. Kennecott Indonesia final report on Irian Barat reconnaissance (Blocks 8, 9, 10). Kennecott Report, 41p. *(Unpublished)*

Loth, J.E. (1925)- Verslag over de geologische-mijnbouwkundige verkenning van West Nieuw Guinea. Jaarboek Mijnwezen Nederlandsch-Indie 53 (1924), p. 114-147.
('Geological-mining reconnaissance of W New Guinea' Geologic survey of Birds Head/ Bintuni Basin area, with investigation of oil seeps and coal occurrence, etc.)

Luck, R.B. (1999)- Structural geology of the Grasberg Lime quarry and Amole Drift: implications for emplacement of the Grasberg Igneous Complex, Irian Jaya, Indonesia. M.A. Thesis University of Texas at Austin, p. 1-552. *(Unpublished)*
(Pliocene Grasberg Igneous Complex in C Range of W Papua one of world's largest copper-gold porphyry-type systems. Diameter of 1.7 km at 4000m level. Two structural regimes (1) Miocene contractional episode that resulted in km-scale folding, concurrent with arc-continent collision inN-dipping subduction zone; (2) more subtle regime of NE-SW left-lateral strike-slip faulting, with 5 strike-slip faults with 10's-100's m of displacement, lasting from ~4 Ma to ~2 Ma)

Luck, R.B., B. Sapiie & M. Cloos (1999)- Pull-apart history for emplacement of the Grasberg igneous complex, Irian Jaya, Indonesia. Geol. Soc. America 1999 Ann. Mtg., Abstracts with Programs 31, 7, p. 92-93. *(Abstract only. Granodioritic Grasberg Igneous Complex three-phase intrusion with major copper and gold reserves. Early Dalam intrusive phase can not be dated. Main Grasberg Intrusive and Late Kali Intrusive phases Ar isotopic ages of ~3 Ma. Ten-step cross-sectional model for GIC emplacement. Tens of km of regional shortening followed by few km of left-lateral displacement contemporaneous with GIC intrusion in pull-apart between two strike-slip faults. Model does not require stratovolcano for copper-porphyry formation)*

Lumbanbatu, K. (1998)- Zircon fission track dating of the Arafura platform and Central Range up-thrust zone, Irian Jaya, Indonesia. J. Geologi Sumberdaya Mineral 8, 87, p. 14-36.
(Zircon fission track and Apatite fission track analyses of Permian- Miocene rocks in SW part of W Papua Central Range (Omba, Waghete, Timika map sheets) suggest folding-uplift in latest Miocene- Pliocene. Tipuma Fm found to be younger than generally accepted: wide range of ages, mean 148 Ma, latest Jurassic- E Cretacous instead of Triassic (see also Kendrick et al. 1995))

Lunt, P. & R. Djaafar (1991)- Aspects of the stratigraphy of Western Irian Jaya and implications for the development of sandy facies. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 107-124.
(Stratigraphic observations on W New Guinea. Permian fusulinid distribution and Gondwanan- Cathaysian plants, etc.. Late Cretaceous (Late Turonian- E Santonian) oceanographic event towards more calcareous deep marine deposits, Late Cretaceous volcanism of Birds Head, etc.)

MacDonald, G.D. & L.C. Arnold (1994)- Geological and geochemical zoning of the Grasberg Igneous Complex, Irian Jaya, Indonesia. J. Geochemical Exploration 50, 1-3, p. 143-178.
(Grasberg Igneous Complex is high grade porphyry Cu-Au deposit in central highlands of New Guinea. Mineralization confined to intrusive rocks emplaced in tightly folded Tertiary carbonates. Mineralization

extends from surface at 4200m elevation to deepest drill penetrations at 2700m elevation. Two-three distinct intrusion stages produced two porphyry orebodies with different mineralization as well as sulfide-rich skarn at margin of igneous complex. Intrusives and mineralization radiometrically dated at 2.7- 3.3 Ma)

MacDonald, G.D. & L.C. Arnold (1995)- Factors responsible for extreme concentration of Cu and Au in the Grasberg deposit. A comparative look at the porphyry copper systems of the Ertsberg District, Indonesia. In: A.H. Clark (ed.) Giant ore deposits II, Queens University, Kingston, Ontario, p. 314-333.

Malensek, G.A. (1997)- Economic evaluation of the Wanagon gold deposit, Irian Jaya, Indonesia. Masters Thesis, Colorado School of Mines, p. 1-142. *(Unpublished)*
(Low grade pyrite-gold mineralization at Wanagon near Ertsberg, Irian Jaya, in hornfelsed, altered Cretaceous Kembelangan Gp siliciclastic rocks, near contact with Tertiary New Guinea Limestone. Deposit ~300m long, up to 200m wide and 300m deep. Origin of deposit is unclear but characteristics of calcic gold skarn)

Mamengko, D.V., Y.B. Sandjadja, B. Mulyana, H. Panggabean, I. Haryanto, E.B. Lelono, J.T. Musu & Panuju (2019)- Perkembangan fasies sedimen Formasi Mamberamo berumur Miosen Akhir- Pliosen di cekungan Papua Utara. J. Geologi Sumberdaya Mineral 20, 1, p. 37-47.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/399/377)
('Sedimentary facies development of the Upper Miocene-Pliocene Mamberamo Fm in the North Papua Basin'. N Papua fore arc basin in northern coastal of W Papua filled by M-U Miocene turbidite sediments (Makats Fm?), overlain by U Miocene-Quaternary 'syn-orogenic molasse-type' marginal- non marine clastics of Mamberamo Fm)

Mamengko, D.V., I.B. Sosrowidjojo, B. Toha & D.H. Amijaya (2012)- Geokimia batuan induk Formasi Mamberamo dan Makats di Cekungan Papua Utara. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-E-34, 5p.
('Geochemistry of source rocks of the Mamberamo and Makats Formations, North Papua Basin'. Makats and Mamberamo 'B' Fms near N coast of W Papua with abundant Type III kerogen (TOC up to 4.8%) and are potential hydrocarbon source rocks. 2D basin modeling indicates Makats Fm generated oil since 3.35 Ma, Mamberamo since 2.25 Ma. Hydrocarbon resources formed from Makats source rocks estimated at about 24,487.38 BCF Gas and 635,889.54 MMB Oil (amazing precision!; JTvG))

Mamengko, D.V., H. Susanto, J.T. Musu & A. Yusriani (2014)- Potensi hidrokarbon cekungan Papua Utara berdasarkan karakteristik rembesan minyak Sungai Teer. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-139, 6p.
('Hydrocarbon potential of the North Papua basin based on the characteristics of Teer River oil seepage'. N Papua frontier basin with oil seeps on Teer River. Two samples from oil seepage show biodegradation based on n-alkane distribution. Pristane/phytane ratio indicates source rocks shaly coal with low reducing conditions. Oleanane and bicadinane peaks suggest Cenozoic-age source rocks with Type III kerogen)

Marcou, J.A., D. Samsu, A. Kasim et al. (2004)- Tangguh LNGôs gas resource: discovery, appraisal and certification. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 159-176.
(Tangguh complex 6 gas fields: Vorwata, Wiriagar deep, Roabiba, Ofaweri, Ubadari and WOS. Proven 1998 reserves 14.4 TCF, may grow to 24 TCF. 77% of gas in high-quality M Jurassic sst (av. porosity 12.3%, perm 250 mD), rest in in lesser-quality Paleocene turbidite sst (porosity 11-14.5%, perm 2-30 mD). Well data from Wiriagar Deep 1, 2, 5, 7 and Vorwata 2 wells)

Mardani, R. & P. Butterworth (2016)- Palaeocene reservoir depositional systems of the WD Field, Papua Barat Province: a play fairway opening discovery. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 43-TS-16, p. 1-19.
(Wiriagar Deep (WD) gas field in Birds Head/ Bintuni Bay first discovered by ARCO in 1994, with gas in stacked Waripi Fm Paleocene shallow marine and deep marine turbidite sandstone reservoirs (and M Jurassic sandstones). Three main reservoir depositional systems in 'classic' passive margin overall progradational (SE-

directed?) Paleocene series, from basin floor lobes at base, through slope channel complexes to shelf edge deltas, and overlain by Eocene evaporites and Faumai Lst).)

Martin, B.A. & S.J. Cawley (1991)- Onshore and offshore petroleum seepage: contrasting a conventional study in Papua New Guinea and airborne laser fluorosensing over the Arafura Sea. Australian Petrol. Expl. Assoc. (APEA) J. 31, p. 333-353.
(Onshore seeps in PNG Aure Thrust Belt mapped with use of local people. Analyses suggest oil-prone source rock of probable Jurassic age. Seeping petroleum liquids are gas condensates in subsurface, and in this uplifted region likely from accumulations only. Offshore Airborne Laser Fluorosensor (ALF) data over W Arafura Sea indicate active oil seepage. Distribution compatible with understanding of subsurface Paleozoic- Mesozoic source kitchens. Goulburn Graben seepage likely from Paleozoic-(?)Triassic (with possible contribution from other Mesozoic sources), and migrating through largely unfaulted Mesozoic seal. Evidence for liquid petroleum seepage from Mesozoic in Calder Graben via faults through regional seal along Lynedoch Bank Fault System)

Martin, K. (1881)- Eine Tertiaerformation von Neu-Guinea und benachbarten Inseln nach Sammlungen von Macklot und v. Rosenbergĝs. Sammlungen Geol. Reichsmuseum Leiden, ser. 1, 1, p. 65-83. *(also in Jaarboek Mijnwezen 11 (1882), Wetenschappelijk Gedeelte, p. 137-156)*
(online at: www.repository.naturalis.nl/document/552374)
('A Tertiary formation from New Guinea and adjacent islands, from collections of Macklot and Von Rosenberg'. Descriptions of Tertiary fossils from W Papua (incl. Eocene Alveolina limestone), Kur, Kai Besar and Aru islands (post-Tertiary mollusc breccia))

Martin, K. (1911)- Palaeozoische, Mesozoische und Kaenozoische Sedimente aus dem sud-westlichen Neu-Guinea. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 9, 1, E.J. Brill, p. 84-107.
(online at: www.repository.naturalis.nl/document/552433)
('Paleozoic, Mesozoic and Cenozoic sediments from SW New Guinea'. Brief review of fossils collected in foothills South of Central Range by Heldring in 1907-1909 expeditions. Flanks of Wilhelmina (=Trikora) peak composed of Eocene Nummulites and Alveolina limestones. Float in Setakwa (Otakwa) river with Mesozoic limestone with ammonite (Coeloceras?) and Eocene Lacazina limestone. In Noordwest River hard quartz sandstone with brachiopods Rhynconella and Spiriferina (Permian?). In Noord/ Lorentz River Paleozoic grey limestone with trilobite fragments, also blue gray rock with orthoceratid, probably Actinoceras. In B-River (upper tributary of Eilanden R.) Jurassic ammonites (Macrocephalites?), belemnites, also Eocene Nummulites and Alveolina limestones, E Miocene Lepidocylina limestone, etc. No plates)

Martodjojo, S., D. Sudradjat, E. Subandrio & A. Lukman (1975)- The geology and stratigraphy along the roadcut Tembagapura, Irian Jaya (Indonesia). Inst. Teknologi Bandung, Rept., 51p. *(Unpublished)*
(First description of thick Paleozoic- Mesozoic section along newly built road from Tembagapura town to Freeport Ertsberg mine. Stratigraphic interpretation revised by Oliver et al. 1995)

Maryono, A. & D. Power (2013)- Gold endowment and metallogeny of the island of Papua. Proc. Indonesian Soc. Econ. Geol. (MGEI) Annual Convention 2013, Papua and Maluku Resources, Bali, p. 143-150.

Masduki, D. & H. Sugiharto (1993)- The geology and hydrocarbon aspects of the frontier Central Range of Irian Jaya. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 627-637.
(Review of W Papua Central Range geology. Primarily summary of Esso 1991 field survey in Central Range of West Papua. Thrusting to S/SW of ~6000m thick Paleozoic- E Jurassic continental series and M Jurassic-Tertiary Australian continental margin sequence. Large WNW-ESE trending surface anticlines, mainly formed in Late Miocene- E Pliocene. Oil seeps and stains at Tiom (Yereka), Wamena, Magi and Oro)

Masria, M., N. Ratman & K. Suwitodirdjo (1981)- Geologic map of the Biak Quadrangle, Irian Jaya, 1:250,000, Quadrangle 3115. Geol. Res. Dev. Center, Bandung.
(Geologic map of Biak and Supiori Islands. Oldest rocks Korido meta-sediments, Unconformably overlain by Late Eocene- E Oligocene Auwewe island-arc volcanics, unconformably overlain by Late Oligocene?

Wainukendi Fm limestone, overlain by earliest Miocene Wafordori Fm marine marls and Miocene Napisendi Fm limestones and marls)

Mathur, R., J. Ruiz, S. Titley, S. Gibbins & W. Margotomo (2000)- Different crustal sources for Au-rich and Au-poor ores of the Grasberg Cu-Au porphyry deposit. Earth Planetary Sci. Letters 183, 1-2, p. 7-14.
(Grasberg is porphyry copper deposit, cut by second stage mineralization enriched in gold. Porphyry-type event 2.9 Ma age and crustal component for source of base metals. Secondary event different crustal sources for ore-forming elements and suggest gold may be derived from sedimentary protoliths)

Mathur, R., S. Titley, J. Ruiz, S. Gibbins & K. Friehauf (2005)- A Re-Os isotope study of sedimentary rocks and copper-gold ores from the Ertsberg District, West Papua, Indonesia. Ore Geology Reviews 26, p. 207-226.
(Ertsberg orebody is copper-gold, roof-pendant of sedimentary strata in diorite. Grasberg and Kucing Liar molybdenites mineralization ages of 2.88 and 3.01 Ma, Ertsberg Molybdenite younger age of 2.54 Ma, similar to Ar chronologies of Pollard and Taylor (2000))

Matsuda, F., Y. Indra, D. DesAutels & B.Y. Chua (2002)- Integration of geological and geophysical data to reconstruct depositional models of Miocene carbonate reservoirs from Southeast Asia. AAPG Ann. Conv. Abstracts. *(Abstract only)*
(Reservoir section in Miocene Upper Kais Fm in E Walio field, Irian Jaya, subdivided into seven shallowing upward cycles. In lower four cycles, reef cores developed in N and E to SE margins, and back reef environment developed in central and W part. In upper three cycles, reef cores present in S area and Walio Reef backstepped in N part. Reservoir section of F6 field was subdivided into lower, middle and upper units)

Matsuda, F., Y. Matsuda, M. Saito & R. Iwahashi (1999)- A computer simulation model facies-3D for the reconstruction of the carbonate sedimentary process. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 407-415.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999041.pdf)
(Simulation study of deposition of Upper Kais Fm reefal carbonates in, Walio Field, Salawati Basin. Upper Kais deposited during third-order cycle (5.5-4.2 Ma). Eight carbonate facies. Simulation describes backstepping and facies change at major flooding events)

Matsuda, F., Y. Matsuda, M. Saito, R. Iwahashi, Y. Indra & D. DesAutels (1997)- A computer simulation for the reconstruction of the carbonate sedimentary process in the Miocene Kais Formation, eastern Indonesia. Proc. ASCOPE ô97 Conf., 1, p. 79-98.

Matsuda, F., M. Saito, R. Iwahashi, H. Oda, Y. Indra & D. DesAutels (2000)- Facies 3D- a computer simulation model for reconstruction of sedimentary processes: a case study for Miocene carbonate reservoirs. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 653-661.
(Simulation model of U Miocene reefal carbonate reservoirs of Kais Fm in Walio Field, Salawati Basin)

Matsuda, F., M. Saito, R. Iwahashi, H. Oda & Y. Tsuji (2004)- Computer simulation of carbonate sedimentary and shallow diagenetic processes. In: Integration of outcrop and modern analogs in reservoir modeling, American Assoc. Petrol. Geol. (AAPG), Mem. 80, p. 365-382.
(Simulation models Pleistocene Ryukyu Group, SW Jaopan, and U Miocene reefal carbonate reservoirs of Kais Fm in Walio Field, Salawati Basin, W Papua)

McAdoo, R.L. & J.C. Haebig (1999)- Tectonic elements of the North Irian Basin. Proc. 27th Ann. Conv. Indon. Petroleum Assoc., p. 545-562.
(Waropen Basin between C Ranges and New Guinea Trench forearc basin and one or two subduction-related accretionary prisms. Subduction stopped and relative plate motion now oblique. Plate boundary is sinistral Yapen Fault Zone, on mainland a line of mud volcanoes, extending W along N coast of Yapen Island and may connect to Sorong Fault system. N Irian Basin >25,000' Tertiary sediments in Waropen, Teer River, Waipoga and Meervlakte intermontane sub-basin depocenters. Rapid subsidence created asymmetric basin fills

dominated by turbidites. Potential reservoir distribution problematical with good quality turbidite reservoirs near margins. Large reef complexes evident. Terrigenous-derived kerogens serve as potential petroleum source. Low thermal gradient of 1.67° F/100'. Since 1950's, 12 wells drilled, resulting in two gas and one gas/oil discoveries. Four wells abandoned before reaching target due to overpressure)

McCaffrey, R. & G.A. Abers (1991)- Orogeny in arc-continent collision; the Banda Arc and western New Guinea. Geology 19, 6, p. 563-566.

McConachie, B., H. King & M. Keyang (2000)- Old fault controlled foldbelt structures and the petroleum systems of Warim in West Papua. AAPG Int. Conf. Bali 2000 *(Extended abstract)*
(Series of NW-SE trending "3KB trend" faults cross-cutting foldbelt, variously active in Triassic-Jurassic, Oligocene and Plio-Pleistocene; summary of Conoco Warim Block exploration)

McConachie, B., E. Lanzilli, D. Kendrick & C Burge (2000)- Extensions of the Papuan Basin foreland geology into eastern Irian Jaya (West Papua) and the New Guinea fold belt in Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaôs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 219-237.
(Comparison of PNG Papuan foreland basin and adjacent Akimeugah Basin/Warim area of West Papua. W Papua part sparsely explored; several wells with oil shows. Quartz cementation important in deeper foreland basin in W)

McCue, K.F. (1987)- The plate boundary North of Australia. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 827-830.
(Epicenters of shallow earthquakes used to identify active seismic zones, signifying present-day plate boundaries, particularly across New Guinea)

McDowell, F.W., T.P. McMahon, P.Q. Warren & M. Cloos (1996)- Pliocene Cu-Au-bearing igneous intrusions of the Gunung Bijih (Ertsberg) district, Irian Jaya, Indonesia: K-Ar geochronology. J. Geology 104, p. 327-340.
(Nine potassic intermediate intrusives in Ertsberg area, aged 2.6-4.4 Ma. Do not appear related to subduction. A more northerly Miocene belt (10-20 Ma; PNG Maramuni Arc and extension to W) does represent a subduction-related arc above a SW dipping Benioff zone)

McMahon, T.P. (1994)- Pliocene intrusions in the Ertsberg (Gunung Bijih) Mining District, Irian Jaya, Indonesia: petrography, geochemstry, and tectonic setting. Ph.D. Thesis, University of Texas at Austin, p. 1-298. *(Unpublished)*
(16 Pliocene (3-4 Ma) intrusions crop out in Ertsberg Mining District, mainly small (<4 km3), hypabyssal dikes and plugs, but Ertsberg 10-20 km3. Intrusions high-K (latites, trachytes, trachydacites) and low-K (andesites, dacites) and equigranular (Ertsberg) to porphyritic (others). Plagioclase dominant mineral, most also with amphibole and biotite. Differences in type of ore deposits of Ertsberg (large body of crystal-poor magma cooling slowly, forming peripheral calc-silicate skarns) and Grasberg (periodic tapping of magmas and fluids from cupola of deeper magma chamber led to porphyry Cu mineralization) related to magmatic evolution. Younger magmatism in W Papua result of lithospheric delamination)

McMahon, T.P. (1994)- Pliocene intrusions in the Gunung Bijih (Ertsberg) mining district, Irian Jaya, Indonesia; petrography and mineral chemistry. Int. Geology Review 36, 9, p. 820-849.
(Part 1 of 2 papers. At least 16 Pliocene hypabyssal intrusions crop out within Gunung Bijih (Ertsberg) Mining District, W Papua, with several associated Cu-Au ore deposits. Most skarns associated with quartz monzonite Ertsberg Intrusion. Intrusions emplaced at < 2 km depth into deformed sedimentary rocks that originally were deposited on N margin of Australian continent. Emplacement of at least one intrusion controlled by cross-cutting NW- and NE-trending fault sets. Intrusions can be divided into high-K group of latites, trachydacites, and trachytes (volumetrically more important), and low-K andesites and dacites)

McMahon, T.P. (1994)- Pliocene intrusions in the Gunung Bijih (Ertsberg) mining district, Irian Jaya, Indonesia; major- and trace-element chemistry. Int. Geology Review 36, 10, p. 925-946.

(Gunung Bijih (Ertsberg) Mining District is group of small, hypabyssal Pliocene intrusions with Cu-Au ore deposits, near highest parts of Central Range of W Papua. Several skarn orebodies around margins of Ertsberg Intrusion. All but Big Gossan deposit related genetically to Ertsberg Intrusion. Nearby supergiant Grasberg porphyry copper deposit related to first two stages of intrusions in Grasberg Complex. Intrusions intermediate in composition, with high-K latite- trachydacite-trachyte, and low-K andesite and dacite. Chemical variation product of combined fractionation, assimilation, and recharge prior to emplacement in shallow crust, derived from same lower crustal magma chamber)

McMahon, T.P. (1999)- The Ertsberg intrusion and the Grasberg Complex: contrasting styles of magmatic evolution and Cu-Au mineralization in the Gunung Bijih (Ertsberg) Mining District, Irian Jaya, Indonesia. Buletin Geologi (ITB) 31, 3, p. 123-132.

McMahon, T.P. (2000)- Magmatism in an arc-continent collision zone: an example from Irian Jaya (western New Guinea), Indonesia. Buletin Geologi (ITB) 32, 1, p. 1-22.

McMahon, T.P. (2000)- Origin of syn- to post-collisional magmatism in New Guinea. Buletin Geologi (ITB) 32, 2, p. 89-104.

McMahon T.P. (2001)- Origin of a collision-related ultrapotassic to calc-alkaline magmatic suite: the latest Miocene Minjauh volcanic field, Irian Jaya, Indonesia. Buletin Geologi (ITB) 33, p. 47-77.

Mealey, G.A. (1996)- Grasberg. Mining the richest and most remote deposit of copper and gold in the world, in the mountains of Irian Jaya, Indonesia. Freeport-McMoRan Inc., New Orleans, 370p.
(History of discovery and development of one of worlds largest Cu-Ag mines in high mountains of W Papua, wriitten by executive of Freeport McMoRan mining company)

Meinert, L.D., K.H. Hefton, D. Mayes & I. Tasiran (1997)- Geology, zonation, and fluid evolution of the Big Gossan Cu-Au skarn deposit, Ertsberg District, Irian Jaya. Economic Geology 92, 5, p. 509-534.
(Big Gossan Cu-Au skarn deposit highest grade copper deposit Ertsberg district. Mineralization associated with 3-4 Ma granodioritic dikes, intruded close to steep fault contact between shale of Cretaceous Ekmai Fm and overlying Paleo- Eocene Faumai Fm. Most mineralization in purer carbonate rocks of Waripi Fms)

Meizarwin (2002)- Discovery and future exploration potential Tangguh gas fields, Bintuni Basin, Papua-Indonesia. In: Giant Field and New exploration concept seminar, IAGI, Jakarta 2002, p. 19-21. *(Abstract only)*

Memmo, V., C. Bertoni, M. Masini, J. Alvarez, V. Memmo, Z. Imran, A. Echanove & D. Orange (2013)- Deposition and deformation in the Recent Biak Basin (Papua Province, Eastern Indonesia). Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-122, p. 1-12.
(Plio- Pleistocene Biak Basin, between Biak- Yapen islands and N of Sorong- Yapen strike-slip system, probably transtensional pull-apart basin in oblique collision zone of Australian and Pacific Plates. Oceanic or transitional basement of basin postulated. Basin fill appears to be dominated by slope and deep water clastics.)

Mernagh, T.P. & J. Mavrogenes (2019)- Significance of high temperature fluids and melts in the Grasberg porphyry copper gold deposit. Chemical Geol. 508, p. 210-224.

Mertig, H.J. (1995)- Geology and ore formation of the Dom copper skarn deposit, Ertsberg (Gunung Bijih) District, Irian Jaya, Indonesia. M.A. Thesis, University of Texas, Austin, p.

Mertig, H.J., J.N. Rubin & J.R. Kyle (1994)- Skarn Cu-Au orebodies of the Gunung Bijih (Ertsberg) District, Irian Jaya, Indonesia: J. Geochemical Exploration 50, p. 179-202.
(Ertsberg major Cu-Au skarn deposits products of hydrothermal systems associated with Pliocene magma emplacement. Orebodies in Cretaceous- Tertiary sedimentary sequence, deformed as Australian continental margin entered N-dipping subduction zone at 12 Ma. Intrusions K-Ar ages 2.7-4.4 Ma. Skarn orebodies in Tertiary New Guinea Limestone. Differences among skarn orebodies related to protolith composition. Oligo-

Miocene Ainod Fm likely protolith for GB and Dom orebodies. GBT and upper IOZ orebodies probably hosted by Eocene Faumai Fm. DOZ and lower IOZ orebodies in dolomitic unit, probably Paleocene Waripi Fm)

Miedema, J., C. Ode & R.A.C. Dam (eds.) (1998)- Perspectives on the Birdôs Head of Irian Jaya, Indonesia. Proc. Conference, Leiden 1997, Rodopi, Amsterdam, p. 1-982.
(Conference proceedings. Includes invited papers on geology by Ratman and Dam)

Milsom, J. (1991)- Gravity measurements and terrane tectonics in the New Guinea region. J. Southeast Asian Earth Sci. 6, p. 319-328.
(Interpretation of gravity data in 7 areas of W Papua and PNG. In some areas gravity conforms to geological models like in Papuan Ultramafic belt. Others, like Weyland Terrane in W Papua more complicated, where Dow et al. (1986) is not compatible with gravity data. Main gravity high located over large M Miocene diorite batholith, possibly emplaced after overthrusting)

Milsom, J., D. Masson, G. Nichols, N. Sikumbang, B. Dwiyanto, L. Parson & H. Kallagher (1992)- The Manokwari Trough and the western end of the New Guinea Trench. Tectonics 11, p. 145-153.
(New Guinea Trench seafloor depression parallel to N coast of New Guinea for 700 km. W end lies 600 km E of Philippine Trench; intervening region series of N- trending ridges and troughs. Ayu Trough and Tobi and Mapia ridges most prominent. Trench marks site of subduction, but present-day activity disputed. W termination at ridge system culminating in Mapia Island. Trench with 1 km undisturbed sediments and S slopes extensively channeled, suggesting lack of recent deformation. 400 km W of W end of trench, N coast of New Guinea is flanked, at distance of only few tens of km, by deep trough. Sonar imagery of 'Manokwari Trough' suggests recent convergence and transcurrent movement. Trough and abrupt termination of New Guinea Trench are consequences of seafloor spreading in Ayu Trough after subduction ceased at trench)

Moerman, C. (1908)- Verslag over een geologische verkenningstocht door het terrein beoosten der Etna Baai (19 Nov. 1904- 16 Febr. 1905). In: G.P. Rouffaer et al., De Zuidwest Nieuw Guinea Expeditie van het Kon. Nederlands Aardrijkskundig Genootschap 1904/5, Brill, Leiden, p. 401-416.
('Report of a geological reconnaissance trip through the area East of Etna Bay 1904-1905'. SW New Guinea Expedition 1904-1905'. Etna Bay (Lahakia Bight), SE of Lengguru foldbelt, is surrounded by massive Eocene Discocyclina-Nummulites-alveolinid limestone, locally with andesite intrusions. Also quartz sandstones, probably underlying limestones, and float of diorite and andesite. Area E of Etna Bay mainly dark slates, locally steeply dipping, with one deformed ammonite, possibly of Late Jurassic age according to G. Boehm (first record of Mesozoic marine sediments in SW New Guinea))

Moffat, D.T., L.F. Henage, R.A. Brash et al. (1991)- Lengguru, Irian Jaya: prospect selection using field mapping, balanced cross-sections and gravity modeling. Proc. 20th Ann. Conv. Indon. Petroleum Assoc., p. 85-106.
(Balanced cross-sections through Lengguru foldbelt. Plio-Pleistocene thrust-fold belt with inversion and non-inversion imbricate thrust structures. External zone detached, ramp anticlines, dominantly thin-skinned and no basement-involvement. Sub-thrust extensional systems which offset basement suggested by regional gravity at boundary with internal zone. Platform carbonates of New Guinea Lst form competent unit. Internal zone closely spaced imbricates, many of which breached to Kembelangan Gp. Close thrust spacing reflects lithological change from platform to distal facies carbonates; boundary with external zone represents paleo-shelf margin)

Moig, N.A.W. (1994)- High resolution aeromagnetics as an aid to structural interpretation over the Muturi PSC, Irian Jaya. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc., p. 417-438.
(1993 'High Resolution' aeromagnetic survey allowed resolution of lineaments and domains in basement and sedimentary section. NE-SW and NW-SE trends fundamental structural elements controlling distribution of features in Mesozoic and younger sections)

Molengraaff, G.J.H. (1960)- Over het voorkomen van ertsen in economische hoeveelheid op Nederlands-Nieuw-Guinea. De Ingenieur 72, 52, A, p. 677-682.
('On the occurrence of ores in commercial quantities in Netherlands New Guinea')

Molengraaff, G.J.H., G.A. Hermans & J.A.J. Kaptein (1959)- Rapport over het geologisch-mijnbouwkundig onderzoek van het eiland Salawati (Nieuw Guinea) in 1958. Report Technical University Delft, p. *(Unpublished)*
(Report of geological-mining investigations of Salawati island. Part of series of late 1950's survey reports of parts of Birds Head and nearby Salawati, Batanta and other islands by G. Molengraaff and TH Delft students)

Monnier, C., J. Girardeau, M. Pubellier & H. Permana (2000)- Lôophiolite de la chaine centrale dôIrian Jaya (Indonesie): evidences petrologiques et geochimiques pour une origine dans un bassin arriere-arc. Comptes Rendus Academie Sciences, Paris, Series IIA, Earth Planetary Sci. 331, 11, p. 691-699.
('The ophiolite of the Irian Jaya Central Range (Indonesia): petrological and geochemical evidence for a back-arc origin'. Central Range ophiolite belt with peridotites, gabbros, dolerites and basalts outcrops over 450 x 50 km area. Chemistry suggests it formed in backarc environment rather than oceanic domain. Probable age Jurassic. Obduction age Tertiary, but exact age still to be determined)

Monnier C., J. Girardeau, M. Pubellier, M. Polve, H. Permana & H. Bellon (1999)- Petrology and geochemistry of the Cyclops ophiolites (Irian Jaya- East Indonesia): consequences for the evolution of the North Australian margin during Cenozoic. Mineralogy and Petrology 65, p. 1-28.
(Cyclops Massif ophiolitic sequence with peridotites, gabbros, dolerites, mid-oceanic ridge basalts and minor boninitic lavas. Tectonically overlies high T-high P mafic rock, metamorphosed in E Miocene. Basalts and cumulate rocks typical of back-arc magmas. K/Ar ages from basalts (29 Ma) and boninites (43 Ma) combined with geochemical signatures indicate Cyclops Mts formed in single suprasubduction environment. This implies S-ward subduction of Australian oceanic lithosphere beneath N Australian margin. Ultramafic rocks and related lavas (boninites) likely formed in Eocene in forearc, before S-ward obduction onto island arc in E Miocene. Pliocene back-thrusting event led to slicing of backarc basin series onto arc and fore-arc sequences)

Montgomery, S.L. & J. Wold (2001)- E. Indonesian gas- 1: Irian Jaya's Waropen basin could hold more giant gas reserves. Oil and Gas J. 99, 25, p. 34-42.
(NW New Guinea Waropen Basin up to 10 km mainly Plio-Pleistocene turbidite clastics. Proven gas potential in 1958 Niengo 1 gas test. Potential plays deep water sands and Miocene-Pliocene carbonates)

Mujito (1994)- Hydrocarbon resource assessment of the Miocene carbonate play, Kepala Burung, Irian Jaya, Indonesia. In: J.L. Rau (ed.) Proc. 29th Ann. Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, 2, p. 61-66.
(Assessment of Miocene Kais carbonate buildups and platform play in Salawati and Bintuni basins. Remaining hydrocarbons in Salawati Basin 1.02 M Tons oil, 1.48 Gm3 gas, Bintuni 0.78 M Tons oil, 0.54 Gm3gas)

Muller, S. (1844)- Bijdragen tot de kennis van Nieuw-Guinea. In: Temminck, C.J. (1839-1844) Verhandelingen over de natuurlijke geschiedenis der Nederlandsche overzeesche bezittingen door de leden der Natuurkundige Commissie in Indie en andere schrijvers, Land en Volkenkunde, Leiden, p. 1-80.
(online at: https://ia802907.us.archive.org/2/items/verhandelingeno00temm/verhandelingeno00temm.pdf)
('Contributions to the knowledge of New Guinea'. Early naturalist descriptions of West Papua from Muller's 1828-1830 Triton Expedition)

Musper, K.A.F.R. (1938)- Over het voorkomen van *Halysites wallichi* Reed op Nieuw Guinea. De Ingenieur in Nederlandsch-Indie, IV. Mijnbouw en Geologie, 5, 10, p. 156-158.
('On the occurrence of Halysites wallichi Reed on Nieuw Guinea'. Second record of tabulate coral Halysites since Teichert (1928), from limestone, collected by Terpstra in pebbles of Penanggi River, a tributary of the Oesak R. in headwaters of Noord or Lorentz River of Central Range foothills). Probably of Silurian age, although E Devonian can not be excluded)

Musu, J.T., H. Sutanto, D.V. Mamengko, A. Yusriani, A Mannappiang & A.H. Satyana (2015)- Opportunities in frontier North Papua Basin, Indonesia: constraints from oil seep of the Teer River and its expected petroleum system. Poster presentation AAPG/ SEG Int. Conf. Exhib. (ICE), Melbourne.

(Underexplored North Papua Basin with famous oil seep of Teer River. Biomarker study of oil shows minor biodegradation. Pristane/ phytane ratio >3 indicates oil generatio from shaly to coaly source rocks, deposited in oxidizing environment. High oleanane and appearance of bicadinanes suggest Miocene or younger age. Oil generated from maturity equivalent with Ro of 0.9 (top oil window) in area at ~4000m. Main candidates for active source rocks in M-L Miocene Makats Fm or E Pliocene Memberamo B Fm)

Nash, C., G. Artmont, M.L. Gillan, D. Lennie, G. O'Connor & K.R. Parris (1993)- Structure of the Irian Jaya mobile belt, Irian Jaya, Indonesia. Tectonics 12, p. 519-535.
(Freeport paper on Irian Jaya Mobile belt/ Central Range. Seven structural domains, from N to S: (1) N Coast region: Tertiary volcanics and sediments overlain by Pliocene-Pleistocene successor basin (2) allochthonous terrane of ophiolites and high-grade metamorphics; (3) Derewo metamorphic assemblage, displaying polyphase deformation; (4) marginal zone within Mesozoic-Paleogene miogeoclinal sediments with steep duplex structures and remnant klippen; (5) 40-50 km-wide partly inverted synclinorium composed of miogeoclinal sediments; (6) regional S- vergent overturned anticlinorium formed by incompetent Paleozoic sediments; (7) foreland thrust domain involving both Mesozoic-Cenozoic miogeoclinal cover and deformed Neogene foreland molasse basin sequence. Late Oligocene-Miocene docking of metamorphics, island arc assemblages and ophiolites produced tectonically stacked E-W trending structures thrust onto N margin of Australian continent. Late Miocene-Pliocene collision with Melanesian Arc brought accreted Australian margin into contact with W-moving Pacific Plate and instituted regime of oblique transpression. Resulting structures E-W sinistral wrenching and NW thrusts along lateral E-W ramps)

Nauw, M., M. F. Riza, R. Mardani & P. Butterworth (2017)- Compartmentalization of Paleocene-aged deep water reservoirs at Wiriagar Deep, Papua Barat Province. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-392-G, 15p.
(Paleocene basin floor fan and slope channel sandstones of Wiriagar Deep field with gas trapped in large NW-SE closure, created during Oligocene compression and reactivated during Plio-Pleistocene. Reservoir compartmentalisation by combination of depositional facies and strike slip faults)

New, B.T.E. (2005)- Controls of copper and gold distribution in the Kucing Liar deposit, Ertsberg mining district, West Papua, Indonesia. Ph.D. Thesis James Cook University, Townsville, p. 1-235.
(online at: http://eprints.jcu.edu.au/2083)
(Kucing Liar large sediment-hosted Cu-Au deposit in Ertsberg District in Central Ranges of W Papua. High sulphidation ore continuous with porphyry-skarn chalcopyrite, both formed from mixing of magmatic with meteoric waters in fault zone in calcareous shale and limestone adjacent to Grasberg Igneous Complex)

Newton, R. Bullen (1916)- Notes on some organic limestones, etc., collected by the Wollaston expedition in Dutch New Guinea. In: Reports on the collections made by the British Ornithologists Union Expedition and the Wollaston Expedition in Dutch New Guinea 1910-1913, 2, 20, p. 1-20.
(Mainly on larger foraminifera from limestones collected by Wollaston Expedition in 1912-1913 along Utakwa River, on way to Carstensz Peaks. Dominated by Lepidocyclina spp (Nephrolepidina and Eulepidina types) and Spiroclypeus (not Cycloclypeus; latest Oligocene- Early Miocene age; JTvG). Also occurrence of Jurassic mollusc Ctenostreon cf. terquemi in pebbles of Utakwa River. With review of older paleontological literature of New Guinea)

Nicoll, R.S. (1981)- Irian Jaya conodont age determinations. Bureau Mineral Res., Canberra, Prof. Opinion 1981/20, p.
(Modio Dolomite of Irian Jaya contains conodonts of Siluro-Devonian age)

Nicoll, R.S. (2002)- Conodonts from Noordwest 1 and Cross Catalina 1, West Papua, Indonesia. Unpublished report for Santos Pty, p.
(Nicoll (2006) and Zhen et al. (2011): Early Ordovician conodonts in these 2 wells; presumably in carbonates)

Nicoll, R.S. & G.M. Bladon (1991)- Silurian and Late Carboniferous conodonts from the Charles Louis Range and central Birds Head, Irian Jaya, Indonesia. BMR J. Australian Geol. Geophysics 12, 4, p. 279-286.

(online at: https://d28rz98at9flks.cloudfront.net/49553/Jou1991_v12_n4.pdf)
(Conodonts from Modio Dolomite in Charles Louis Range, SW West Papua, with Panderodus cf. P. simplex, probably Silurian age. Float samples of Birds Head Aimau Fm with Neognathodus cf. bassleri and Hindeodus minutus suggest Late Carboniferous age)

Noble, R., J. Decker, T. McCullagh, D. Sebayang & D. Orange (2016)- Kofiau and Cendrawasih Bay frontier basin exploration: from joint studies to post-drill assessment. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 6-TS-16, p. 1-18.
(Review of exploration activities in Kofiau Basin (NW of Birds Head) and Cendrawasih Bay (Waipoga) Basin (E of Birds Head. Kofiau basin NE-SW trending depocenter with transtensional evolution controlled by Sorong Fault Zone. Two episodes of basin formation (E Pliocene, M Pliocene- Recent), separated by deformation-erosion event. Cendrawasih Bay (Waipoga) Basin part of N New Guinea Plio-Pleistocene post-collisional clastic basin. Oil and gas seeps in both basins oil and gas seepage with biomarkers/isotopes showing Tertiary source rock(s). No details on three recent unsuccessful exploration wells)

Norvick, M.S. (2002)- The tectono-stratigraphic history of the northern margins of the Australian Plate from the Carnarvon Basin to Papua New Guinea. Western Australia basins Symposium 3, p. 963-964.
(Set of stratigraphic diagrams used to describe tectonostratigraphy of N margins of Australian Plate. Selected chronostratigraphic transects for Barrow Sub-basin, Dampier Sub-basin, N Bonaparte-Timor island area, Birds Head-Seram region, Papuan Fold Belt and stratigraphic comparison for these basins)

Nugraha, H.D. (2018)- Characterisation of Palaeocene remobilised deposits utilising cores and image logs in the HN Field, Bintuni Basin: distribution and implications to reservoir geometry prediction. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-510-G, 21p.
(Slumps and remobilised debrites in Paleocene Waripi/ Daram Fm deepwater deposits of 'HN Field', Bintuni Basin, W Papua (= WD Field of Mardani and Butterworth, 2016 = Wiriagar Deep)

Nugrahanto, K., S.W. McFall & F. Estella (2001)- Submarine-fan deposition in the lower Steenkool formation, Bintuni Basin, Irian Jaya, Eastern Indonesia: 'deep-water reservoir potential?'. In: A. Setiawan et al. (eds.) Deep-water sedimentation of Southeast Asia, Proc. 2nd Regional Seminar Indonesian Sedimentologists Forum (FOSI), Jakarta 2001, p. 66-84.
(Late Miocene- Pliocene post-Kais Limestone clastics in Bintuni Basin overall coarsening upward strata, characterizing change from Klasafet to Steenkool Fms. Depositional environment changes from deep-marine Klasafet to deltaic to deep-water Lower Steenkool. Basin floor and slope fans and (N to S?) progradational complexes with clinoformal and shingled geometries interpreted within Lower Steenkool interval)

Nuraeni, A., G.J. Schurter, Y. Supriyatna, Supriyono, B. Hornby & C. Erdemir (2008)- 3D VSP finite-difference modeling to address advance seismic imaging challenges in Bintuni Bay, Irian Jaya Barat. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA 08-G-061, 10p.
(3D seismic modeling method to better image gas-bearing Paleocene turbiditic channel sands over Wiriagar Deep field, previously hard to see below thick karstified Oligo-Miocene carbonates. Channel complexes trend NW-SE, ~1km wide))

Nurwani, C., Z. Imran, C.I. Abdullah, S. Nurmala Mulyati & D.R. Aprillian (2017)- Hydrocarbon prospectivity of Cendrawasih Bay area. Int. Proc. Chemical Biological Environmental Engineering 101, 15, p. 106-112.
(online at: http://www.ipcbee.com/vol101/rp017_ICGES2017-E0010.pdf)
(Cenderawasih Bay covers Cendrawasih Basin and North Waipoga/Memberamo Basin in E. Underlain by Pacific oceanic and volcanic arc crust. Several wells drilled since 1973, with oil and gas shows. Reservoir rocks in Pliocene-Pleistocene Memberamo Fm turbidites. Source rocks include shale of Miocene Makats Fm. Area high potential of hydrocarbons, thermogenic or biogenic)

Nurzaman, Z.Z. & A. Pujianto (1994)- Geology and reservoir characterisation of Wiriagar Field as a diagenetic facies for reservoir stimulation. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 29-45.

(Reservoir characterization of U Miocene reefal Kais Lst in Wiriagar Field, Bintuni Basin. Producing up to 8470 BOD from 3 wells since 1990. Recoverable reserves ~3.5 MBO, with additional potential of 7.4 MBO. OWC at -1686' subsea. Wiriagar oil with low dissolved gas, sweet and low wax content, probably sourced from Jurassic Lower Kembelangan shales and Permian Aifam Fm. After 18 months of production water cut increased to 93%. Complex diagenetic history, including fracturing)

Nyoman Suta, I. & L. Silahi (1994)- The structurally trapped Matoa field and porosity distribution, Salawati Basin, Irian Jaya. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), 2, Jakarta, p. 1128-1141.
(Matoa field 1991 Santa Fe- Pertamina discovery and only structural trap field in Salawati Basin. Production from non-reefal M-L Miocene Kais Fm platform carbonates. Three productive zones, with av. porosities 11.6-21%, both primary and secondary. Upper 100' of Kais Fm thick pelagic marine planktonic foram mudstone. NE-SW trending fault-bounded antinlinal structure. 14 wells producing 10,000 BOD)

O'Connor, G.V., L. Soebari & S. Widodo (1994)- Upper Miocene-Pliocene magmatism of the Central Range mobile belt, Irian Jaya, Indonesia. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 316-333.
(Major magmatic event in Central Range from 7.1- 2.6 Ma (mainly 7-5 Ma), possibly related to S-dipping subduction after Late Miocene arc reversal. Belt of quartz-poor 'shoshonitic-affinity' calc-alkaline intrusions and volcanics (andesite, trachytes) extends from Etna Bay in W (134.5°) to Ilaga in E (138.0°) and includes Grasberg and porphyry copper and Ertsberg gold-copper skarn. Apparent younging of magmatism in SW direction. After ~4 Ma plate convergence taken up in large transform system; no currently active Benioff zone)

OøConnor, G.V., L. Soebari & S. Widodo (1994)- Upper Miocene- Pliocene magmatism of the Central Range Mobile Belt, Irian Jaya, Indonesia. Proc. 4th Asia Pacific Mining Conference, Jakarta, AFMA, p. 1-27.
(Same paper as O'Connor et al. 1994, above)

OøConnor, G.V., W. Sunyoto, & L. Soebari (1999)- The discovery of the Wabu Ridge gold skarn, Irian Jaya, Indonesia. In: G. Weber (ed.) Proc. PACRIM ø99 Congress, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 549-557.
(Wabu Ridge Gold Skarn deposit identified in 1990 at elevations up to 3100m in Central Range, W Papua, 35 km NNW of Grasberg porphyry deposit. Mineralisation in skarn along S boundaries of Late Miocene Pagane intrusive monzonite-diorite. Intrusive complex in footwall of E-W Derewo fault with sinistral strike-slip and reverse fault movement. Derewo fault separates Derewo metamorphics to N from Australian craton platform sediments to S. Skarn area 6 x 1.5 km, in Tertiary New Guinea limestone group, dominated by prograde garnet. Same paper re-published as Sunyoto & Soebari 2005?)

Oehlers, M. (2005)- Defining structural style using satellite imagery and DEM's: examples from the Bird's Head, Western Papua and the Masilah Basin, Yemen. Proc. 2005 SE Asia Petrol. Expl. Society (SEAPEX) Exploration Conf., Singapore, 51p. *(Abstract + Presentation)*.
(Promoting interpretation of satellite imagery and digital elevation models. Lengguru foldbelt compared to similar setting in Zagros Mts in Iran. Pretty displays of topography and structural elements of Birds Head)

Okal, E.A. (1999)- Historical seismicity and seismotectonic context of the great 1979 Yapen and 1996 Biak, Irian Jaya earthquakes. Pure Applied Geophysics 154, 3-4, p. 633-675.
(Relocations of >220 historical and recent earthquakes in NW Irian Jaya documents continuous activity on 420-km segment of Sorong Fault, with possible 330 km extension to W. Some activity on New Guinea Trench)

Oktariano, O., S. Saputra, D. Dharmayanti, A. Wibisono & M.A.S. Baskoro (2016)- Exploration vague of offshore Semai area in Indonesia? Changing exploration paradigm into Pretertiary play based on drilling results, depositional environment, and geophysical data. In: Proc. 2016 SEG Int. Exp. Ann. Mtg., Dallas, Expanded Abstracts, p. 2030-2034.
(Offshore Semai area S of Bird's Head, Irian Jaya, with interaction of Australian, Pacific and Eurasian Plates. Some compressional events in Oligocene-Miocene, ending with Misool-Onin-Kumawa Ridge uplift in M Pliocene. New seismic generated three regional exploration plays, but 7 dry exploration wells in 2010-2012)

Oliver, W.A., A.E.H. Peddler, R.E. Weiland & A. Quarles van Ufford (1995)- Middle Palaeozoic corals from the southern slope of the Central Ranges of Irian Jaya, Indonesia. Alcheringa 19, p. 1-15.
(First description of in-situ Late Devonian (Frasnian) rugose and tabulate colonial corals in uppermost part of ~1000m thick Silurian-Devonian Modio Fm, mainly along Timika- Ertsberg road. Genera include Scruttonia, Disphyllum and Haplothecia. Associated with brachiopods and stromatoporoids. Pre-Frasnian corals (Favosites, Lithophyllum, etc.) from stream cobbles at two localities. They indicate presence or former presence of more complete M Paleozoic sequence than previously known in Irian Jaya)

OöSullivan, P.B., K.C. Hill, I. Saefudin & R.D. Kendrick (1995)- Mesozoic and Cenozoic thermal history of sedimentary rocks in the Bintuni Basin, Irian Jaya, Indonesia. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 235-248.
(Apatite fission track analyses of Permian-Pliocene from Rawarra-1X and Sebyar-1X wells in S Birds Head suggest rocks reached maximum paleotemperatures today)

Pajot, E. & D. Dhont (2006)- Extension vs. compression in the Lengguru fold-and-thrust Belt (Papua New Guinea): from JERS SAR imagery mapping to 3D geologic modeling. 7th Middle East Geosc. Conf. Exh., American Assoc. Petrol. Geol. (AAPG) Bull. 90 *(Abstract only)*
(Lengguru fold-thrust belt radar images of SW part Birds neck show compressional and extensional features. Compression during Plio-Quaternary. Broad (100 km wide) area of extension with normal faults forming horsts and grabens that mimic a fan-shaped feature extending from N10°E in NW to N85°E in SE. Extension may be associated with gravitational collapse in context of tectonic escape, with Banda Sea acting as free boundary.)

Pamumpuni A., B. Sapiie & I. Deighton (2014)- Zona sesar Sorong- Yapen dari batimetri resolusi tinggi. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-171, 5p.
('The Sorong- Yapen fault zone from high-resolution bathymetry'. Sorong-Yapen FZ extends E-W alongN coast of New Guinea one of most active faults in Indonesia. High-resolution bathymetry data interpretation and seismic reflection in Cendrawasih Bay area W of Yapen Island shows escarpment zone >5km wide)

Pamurty, P.G., Rochmad, A. Wibisono, S. Husein, K. Iqbal, M.D. Wasugi & A. Hafeez (2016)- Identification of fractured basement reservoir in SWO Field, Salawati Basin, West Papua, based on seismic data: a new challenge and ppportunity for hydrocarbon exploration in Pre-Tertiary Basement. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-240-SG, 19p.
(On seismic identification of fractures in Late Cretaceous(?) granites in Salawati Basin basement)

Pandolfi, J.M. (1992)- A review of the tectonic history of New Guinea and its significance for marine biogeography. Proc. 7th Int. Coral Reef Symposium, Guam 1992, 2, p. 718-728.
(Review of New Guinea tectonic history, mainly based on Pigram et al. papers. New Guinea on five lithospheric plates. Biogeography of Indo-Pacific reef corals tied to this history)

Panggabean, H. (1981)- Rembesan aspal di selatan Danau Tage, Irian Jaya. Geosurvey Newsl. 13, 24, p. 221-223.
('Asphalt seepage S of Lake Tage, Irian Jaya'. Report of oil seep S of Paniai Lake (but could not be confirmed by Esso 1991 re-visit; JTvG))

Panggabean, H. (1989)- Tridanau di Pegunungan Nassau, Irian Jaya. Bull. Geol. Res. Dev. Centre 13, p. 61-71.
(also in 10th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung 1981)
(The three lakes of the Nassau Mountains of Irian Jaya (Paniai, Tage, Tigi). Formed with tectonic movements of Central Range in M Miocene)

Panggabean, H., Amiruddin, Kusnama, K. Sutisna, R.L. Situmorang et al. (1995)- Geologic map of the Beoga Quadrangle, Irian Jaya, scale 1:250,000. Geol. Res. Dev. Center, Bandung.
(Map of northern part of Central Range of W Papua. Large areas of Cretaceous Kembelangan Group, overlain by Derewo metamorphics (Early Oligocene?) and ultramafic (Late Cretaceous?) complex)

Panggabean, H. & A.S. Hakim (1986)- Reservoir rock potential of the Palaeozoic- Mesozoic sandstone of the southern flank of the Central Range, Irian Jaya. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 461-476.
(S flank of W Central Range stratigraphy and sandstones petrography. Up to 10km of Paleozoic-Tertiary sediment. Late Cretaceous Ekmai Fm rel.good reservoir, Woniwogi and Triassic Tipuma Fm marginal, and Permian Aiduna Fm marginal to poor reservoirs)

Panggabean, H., S. Purnamaniningsih & E. Rusmana (1995)- Stratigraphy and palaeogeography of Irian Jaya during the Neogene. In: S. Nishimura et al. (eds.) Proc. 6th Int. Congress Pacific Neogene stratigraphy and IGCP 355, Serpong, W. Java, 1995, p. 115-131.

Panggabean, H. & N. Ratman (1991)- Tectonics of collision complex of Irian Jaya. In: Proc. Silver Jubilee Symposium on the Dynamics of Subduction and its Products, Yogyakarta 1991. Indonesian Inst. Sciences (LIPI), p. 271-273.

Panuju (2008)- The new approach for subdivision of Pleistocene nannoplankton zonation in Waipoga-Waropen Basin, Papua: case study of ñTò well section. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 186-196.
(Waipoga-Waropen Basin at N coast of W Papua with gas discoveries since 1958, but non-commercial. Up to 7500m of Plio-Pleistocene Mamberamo Fm turbiditic sediments. Quantitative nannoplankton investigation of onshore 'T' well interval 200-3160m showed good latest Pliocene-Pleistocene (NN18-NN19) assemblages. Pleistocene Zone NN19 subdivided into 9 subzones. Common reworked Cretaceous- Pliocene nannos)

Panuju, M. Firdaus, Imam P., Ginanjar R., Iskandar F. & Buskamal (2010)- Zonasi biostratigrafi nanoplangton berumur Coniacian-Maastrichtian (Kapur Akhir), Cekungan Bintuni. Proc. 39th Conv. Indon. Assoc. Geol. (IAGI), Lombok, PIT-IAGI-2010-178, 16p.
('Biostratigraphic zonation of Coniacian- Maastrichtian nannoplankton, Bintuni Basin'. 14 nannofossil zones CC12 (U Turonian)- CC26 (U Maastrichtian) recognized, based on samples from Bintuni Bay wells RBB-1, WD-4 and Birds Head Ainin River outcrop samples. U Cretaceous section presumably unconformable on M-L Jurassic)

Panuju, M. Firdaus, Imam P., Ginanjar R., Iskandar F. & Buskamal (2012)- Zonasi biostratigrafi nanoplankton berumur Coniacian-Maastrichtian (Kapur Akhir), Cekungan Bintuni, Kepala Burung, Papua. Majalah Geologi Indonesia (IAGI) 27, 3, p. 171-186.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/733)
(Same as Panuju et al 2010. 'Biostratigraphic zonation of Coniacian- E Maastrichtian nannoplankton (Late Cretaceous), Bintuni Basin, Birds Head, Papua')

Parris, K. (1994)- Preliminary geological data record of Timika (3211), 1:250,000 sheet area, Irian Jaya. PT Freeport Indonesia Co., p. 1-38. *(Unpublished)*
(Part of series of PT Freeport regional geological reports on West Papua Cenrral Range that are unpublished, but appear to be rel. widely available to researchers)

Parris, K. (1994)- Basement structures and implications for control of igneous activity, Central Ranges, Irian Jaya, Indonesia. PT Freeport Indonesia, p. 1-40. *(Unpublished)*

Parris, K. (1996)- Preliminary geological data record of Rotanburg (3312), 1:250,000 sheet area, Irian Jaya. PT Freeport Indonesia Co., p.. *(Unpublished)*

Parris, K. (1996)- Preliminary geological data record of the Wamena (3311), 1:250,000 sheet area, Irian Jaya. PT Freeport Indonesia Co., p.. *(Unpublished)*
(Amiruddin (1998): includes otherwise unpublished record of Ordovician graptolites in Kora Fm dark shales: Dicellograptus exilis, Dilogratus euglyphus and Nemagraptus gracilis of probable N gracilis zone, also Pseudoclimacograptus and Isograptus cf. forcipormis)

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Parris, K. (1996)- Central Range, Irian Jaya, geology compilation, 1:500,000 map. PT Freeport Indonesia Co., p.. *(Unpublished)*

Paterson, J.T. (2004)- Magmatic and pervasive hydrothermal mineralogy of the Grasberg Cu-Au porphyry copper deposit (west New Guinea). M.Sc. Thesis, University of Texas, Austin, p. *(Unpublished)*

Paterson, J.T. & M. Cloos (2005)- Grasberg porphyry Cu-Au deposit, Papua, Indonesia: 1. Magmatic history. In: T.M. Porter (ed.) Super porphyry copper and gold deposits: a global perspective, PGC Publishing, Adelaide, p. 313-329.
(Grasberg Igneous Complex formed at ~3 Ma, host to one of world's largest copper-gold porphyry-type ore deposits. Three main phases of intrusion at level of open pit mine: Dalam, Main Grasberg Intrusion and Kali)

Paterson, J.T. & M. Cloos (2005)- Grasberg porphyry Cu-Au deposit, Papua, Indonesia: 2. Pervasive hydrothermal alteration. In: T.M. Porter (ed.) Super porphyry copper and gold deposits: a global perspective, PGC Publishing, Adelaide, p. 331-355.
(Much of rock volume in the Grasberg IC pervasively altered by infiltration of hot, magmatic fluids, partly destroying igneous phases. Intense episode of pervasive fluid flow post-dated Main Grasberg Intrusion and predated Late Kali Intrusion)

Pennington, J.B. (1995)- Geology of the access road to the Ertsberg (Gunung Bijih) Mining District, Irian Jaya. In: D. Mayes & P.J. Pollard (eds.) Geology and copper-gold deposits of the Ertsberg (Gunung Bijih) Mining District, Irian Jaya, Indonesia, 17th Int. Geochemical Exploration Symposium, James Cook University EGRU Contr. 53, p. 44-63.
(Brief overview of stratigraphy along Timika- Tembagapura road: Precambrian sediments and basic pillow lavas, Cambrian- Ordovician clastics, Devonian Modio Fm carbonates (~1800m dolomites capped by coral limestone), Permian Aiduna Fm (~1200m; deltaic clastics, coal, thin limestone), Triassic or E-M Jurassic Tipuma Fm fluvial redbeds, M Jurassic- Upper Cretaceous Kembelangan Fm (~1900m), Tertiary New Guinea Limestone Group)

Pennington J. & I. Kavalieris (1997)- New advances in the understanding of the Grasberg copper-gold porphyry system, Iran Jaya, Indonesia. In: Pacific treasure trove- copper-gold deposits of the Pacific Rim, Prospectors and Developers Association of Canada, Toronto, p. 79-97.

Penniston-Dorland, S. (2001)- Illumination of vein quartz textures in a porphyry copper ore deposit using scanned cathodoluminescence: Grasberg Igneous Complex, Irian Jaya, Indonesia. American Mineralogist 86, 5-6, p. 652-666.
(Textures in vein quartz from Grasberg Igneous Complex allow interpretation of history of fracture opening and infilling)

Perdana, A. (2015)- Exploration and mineral inventory at PT Freeport Indonesia. In: N.I. Basuki (ed.) Proc. Indonesian Soc. Econ. Geol. (MGEI) 7th Ann. Conv., Balikpapan, p. 57-66.

Perkins, T.W. & A.R. Livsey (1993)- Geology of the Jurassic gas discoveries in Bintuni Bay, western Irian Jaya. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 793-830.
(Roabiba-1 1990 tested 23.6 MCFD from M Jurassic sandstone. Two more Jurassic gas discoveries in 1992. Gas in NW-trending anticlines formed by Late Miocene and younger compression and wrench faulting. Reservoirs Jurassic fluvio-deltaic sandstones, deposited in E-W belt through Bintuni Bay. Low porosity due to quartz overgrowth cement. Gas-condensate in Jurassic reservoirs most likely from Permian- Jurassic source dominated by nonmarine kerogen. Tertiary source rocks dominated by marine algal sapropel and oil prone. Oils in New Guinea Lst from Tertiary source, with possible exception of Wiriagar. Present day kitchen areas

for pre-Tertiary source in Bintuni and Berau Basins. Gas migrated NW along regional anticlines from deep SE Bintuni Basin in last five million years)

Permana, A.K., J. Shima, S. Maryanto & J. Wahyudiono (2019)- Model fasies batuan karbonat Formasi Wainukendi di Cekungan Biak-Yapen, Papua. J. Geologi Sumberdaya Mineral 20, 2, p. 101-110.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/129/398)
('Carbonate rocks facies model of the Wainukendi Formation in the Biak-Yapen Basin, Papua'. Late Oligocene Wainukendi Fm outcrops in S part of Supiori Island in carbonate platform and platform margin facies)

Permana, H. (1998)- Dynamique de la mise en place des ophiolites dÕIrian Jaya (Indonesie), cas des Cyclops, de la Haute Chaine Centrale et des Weylands. Doct. Thesis Universite de Nantes, p. 1-314. *(Unpublished)*
('Dynamics of ophiolite emplacement in Irian Jaya: Cyclops, Central Range and Weyland'. Thery et al. 1999: 40 Ma age of amphibolite sole of ophiolite N of Cyclops?)

Permana, H. & S. Djoehanah (1991)- Geologi tinjau daerah lemah Baliem, Wamena, Irian Jaya. J. Riset Geologi Pertambangan (LIPI) 10, 1, p. 9-21.
(Review of the geology of the Baliem Valley area, Wamena, Irian Jaya'. Baliem Valley with outcrops of Cretaceous Kembelangan Fm, Paleocene- M Miocene Irian Limestone Group and M-L Miocene clastics of Iwoer Fm. Normal faults and strike-slip fault influence Baliem valley)

Permana, H., J. Girardeau, M. Pubellier, R. Soeria-Atmadja & C. Monnier (2005)- Emplacement mechanism of the Cyclop Ophiolite, Western Papua (Indonesia). Majalah Geologi Indonesia (IAGI) 20, 2, Spec. Ed., p. 103-115.
(Cyclop Mts mainly metamorphic rocks, overlain by peridotites and volcanics. Metamorphism of arc volcanic and MORB oceanic protoliths during S-SW obduction of forearc peridotite, probably at 25-20 Ma. Lithospheric thickening linked to overthrusting and closing of backarc system to N-NW on obducted peridotite and metamorphic rocks, probably at 14 Ma. Followed by thinning and uplift of metamorphic rocks)

Permana, H., E. Soebowo & Kamtono (1992)- Preliminary study on the proposed road trace Wamena-Habbema Lake- Kuyawage, Irian Jaya. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 803-814.
(Not much geology)

Permana, H., R. Soeria Atmadja, J. Girardeau, M. Pubellier, C. Monnier & H. Bellon (2000)- Metamorphism and deformation in plate convergence: case studies from West Papua (Irian Jaya), Indonesia. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung 2000, p.
(Pubellier & Ego (2002): metamorphic rocks along W coast Cenderawasih Bay between 7 and 4.4 Ma)

Permana, H., R. Soeria-Atmadja, J. Girardeau, M. Pubellier, C. Monnier & H. Bellon (2005)- Weyland Ophiolite of Nabire District, Western Papua, Eastern Indonesia: origin and tectonic consequences. Majalah Geologi Indonesia (IAGI) 20, 2, Spec. Ed., Aug. 2005, p. 90-102.
(Dismembered Weyland Ophiolite Complex chemistry suggestive of subduction arc magmatism. Oldest K-Ar age of altered gabbro 57-51 Ma. Cut by M Eocene- Oligocene dikes with K-Ar ages 42.5- 32.9 Ma, giving minimum age of ophiolite. One 30 Ma K-Ar age may be age of metamorphism. Younger K-Ar ages (16.3-12.4 Ma) reflect metamorphism from Utawa diorite intrusions. WOC can not be linked to Jurassic ophiolite of Central Range and may correlate with Auwewa volcanics/ Sepik arc or with Cyclops Mts ophiolite)

Permana, H., Suharyanto, A. Soebandrio & R. Soeria Atmadja (1999)- Evidence of Cenozoic tectonics: implication to basement evolution and configuration of the northern part of Irian Jaya. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 33-42.
(Three major Cenozoic events in N West Papua after formation of Eocene-Oligocene Cyclops volcanic arc and back-arc basin above S-dipping intra-oceanic subduction zone: (1) Late Oligocene- E Miocene obduction of Cyclops ophiolite over N side of arc, with high-P-T metamorphism (MacArthur metamorphics, ~20-25 Ma));

(2) Miocene- Pliocene thrusting of back-arc volcanics and (3) W-ward emplacement of microplates, accommodated by strike slip faults and thrusting in N West Papua. Meervlakte sub-basin possibly related to Sepik-Ramu basin in PNG)

Peterson, J.A. (1982)- Limestone pedestals and denudation estimates from Mt. Jaya, Irian Jaya. Australian Geographer 15, 3, p. 170-173.

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Petroconsultants (1990)- Bintuni- Salawati basins. Southeast Asia Basin Opportunities XII, 68p. *(Unpublished)*

Phoa, R.S.K. & L. Samuel (1986)- Problems of source rock identification in the Salawati Basin, Irian Jaya. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 405-421.
(Salawati basin oils similar and sourced from kerogen rich in fresh-brackish water algae and higher plants with significant marine type II, sulphur-rich kerogen. Miocene marine Klasafet and Klamogun shales and arbonates were regarded as source rocks for Miocene Kais Fm reefs oils, but possibly more than one source)

Pieters, P.E. (1982)- Geology of New Guinea. In: J.L. Gressitt (ed.) Biogeography and ecology of New Guinea. Dr. W. Junk Publishers, The Hague, 1, 1, p. 15-38.

Pieters, P.E., C.J. Pigram, D.S. Trail, D.B. Dow, N. Ratman & R. Sukamto (1983)- The stratigraphy of western Irian Jaya. Proc. 12th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 229-261.
(Stratigraphic columns across W New Guinea from Birds Head- Misool East to 136° E. Grouped into three provinces: Continental (Paleozoic- Miocene Australian continent series in S New Guinea, Birds Head, Misool), Oceanic (ophiolite-island arc basement of N New Guinea, Cenderawasih Bay, Waigeo, Yapen, etc.) and Transition (Central Range metamorphics, Tamrau Mts, Wandamen Peninsula, Weyland Mts))

Pieters, P.E., C.J. Pigram, D.S. Trail, D.B. Dow et al. (1983)- The stratigraphy of western Irian Jaya. Bull. Geol. Res. Dev. Centre 8, p. 14-48.
(same paper as above)

Pieters, P.E., R.J. Ryburn & D.S. Trail (1979)- Geological reconnaissance in Irian Jaya, 1976-1977. Bureau Mineral Res. Geol. Geophysics, Australia, Record 1979/19, p. 1-74.
(online at: www.ga.gov.au/corporate_data/13721/Rec1979_019.pdf)
(Results of 1976-1977 geological reconnaissance trips to various parts of W Papua, mainly Birds Head, also Wandamen Peninsula, Schouten Islands, Gag Island, Cycloops Mountains)

Pigott, J.D. & P.K. Bettis (1996)- Heat flow and geothermal gradients of Irian Jaya- Papua New Guinea: implications for regional hydrocarbon exploration. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 445-458.
(Compilation of wells temperature and basins heatflow data for all of New Guinea island. Heat flow averages for basins: Salawati 1.98±0.76 HFU (geothermal gradient 3.9 ± 1.48°C/100m), Bintuni 1.49±0.77 HFU (3.31 ± 1.5°C/100m) and Papua Basin 1.57±0.49 HFU (2.61±0.8°C/100m. With calculations to depth of Top oil window for Salawati- Bintuni and Gulf of Papua basins. Similar to Pigott (IPA 1994))

Pigram, C.J. (1986)- Western Irian Jaya: the end-product of oblique plate convergence in the late Tertiary- discussion. Tectonophysics 121, 2-4, p. 345-348.
(Critique of Dow & Sukamto 1994 paper. In Pigram's opinion differences in basement geology and Late Paleozoic and Mesozoic history between Birds Head, Birds Neck and Misool regions and Australian Craton cannot be explained in terms of simple lateral facies changes, but suggest W Irian Jaya is complex

amalgamation of continental fragments, not simply an extension of Australian Craton. E Paleozoic rocks of Australia- New Guinea craton not undergone M Paleozoic regional metamorphism that affected Birds Head)

Pigram, C.J. & H.L. Davies (1987)- Terranes and the accretion history of the New Guinea orogen. Bureau Mineral Res. J. Australian Geol. Geoph. 10, 3, p. 193-212.
(online at: www.ga.gov.au/corporate_data/81217/Jou1987_v10_n3_p193.pdf)
(Classic paper, with interpretation of New Guinea- E Indonesia complex tectonic history in terms of numerous plates, many which derived from E margin of New Guinea, rifted off and transported West. Prior to 40 Ma N edge of Australia- New Guinea continent faced ocean basin that had developed in Mesozoic By ~25 Ma (latest Oligocene) first composite terranes docked (Sepik and probably also Rouffaer terranes). By ~14 Ma (latest M Miocene) N part of E Papua composite terrane had docked. By 10 Ma (Late Miocene) W lrian Jaya composite terrane and northern island-arc terranes of C New Guinea docked. By 2 Ma Late (Pliocene) northern terranes of W lrian Jaya (Tamrau, Arfak, Waigeo terranes) docked, also Seram composite terrane. Opening of Woodlark Basin currently dismembering E end of E Papua composite terrane)

Pigram, C.J. & H. Panggabean (1981)- Pre-Tertiary geology of western Irian Jaya and Misool Island: implications for the tectonic development of Eastern Indonesia. Proc. 10th Ann. Conv. Indon. Petroleum Assoc., Jakarta (IPA), Jakarta, p. 385-399.
(Dated, broad interpretation of W Irian Jaya stratigraphy, tectonics)

Pigram, C.J. & H. Panggabean (1984)- Rifting of the northern margin of the Australian continent and the origin of some microcontinents in Eastern Indonesia. Tectonophysics 107, 3-4, p. 331-353.
(Classic paper linking New Guinea Jurassic-Cretaceous rift-drift stratigraphy to E Indonesian microcontinents like Buton, Buru-Seram and Banggai-Sula. New Guinea N margin rifting began at ~230 Ma. Onset of seafloor spreading (marked by post-breakup unconformity) ranges in age from 185 Ma in PNG to 170 Ma in Irian Jaya and continues to young in SW direction along W margin of Australian continent, reflecting opening of Indian Ocean off W Australia. By end Jurassic N margin of Australian continent faced seaway which linked proto-Indian and proto-Pacific oceans, which was separated from pre-existing Neo-Tethys and Panthalassa oceans by microcontinents, now preserved in E Indonesia. Banggai-Sula and Buton rifted off PNG side of margin, Birds Head closer ties to N Queensland, NE Australia)

Pigram, C.J. & H. Panggabean (1989)- Geology of the Waghete Sheet area. Geol. Res. Dev. Centre (GRDC), Bandung, 46p., 1: 250,000 scale map.

Pigram, C.J., G.P. Robinson & S.L. Tobing (1982)- Late Cainozoic origin for the Bintuni Basin and adjacent Lengguru fold belt, Irian Jaya. Proc. 11th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 109-126.
(Bintuni Basin and Lengguru foldbelt are very young features, possibly result of collision between W Irian Jaya microcontinent and NW margin of Australian continent. Deposition of New Guinea Limestone in Irian Jaya ceased in M Miocene and this limestone forms basement to Late Cenozoic clastic sediments of asymmetrical Bintuni Basin. Intensity of deformation in Lengguru foldbelt increases E-wards; along E margin folded sediments are low-grade metamorphics faulted against Late Miocene- Pliocene gneisses of Wandamen Peninsula (K-Ar ages two clusters: ~5 Ma= age of metamorphism, and 1.5 Ma= age of uplift))

Pigram, C.J., G.P. Robinson & S.L. Tobing (1982)- Late Cainozoic origin for the Bintuni Basin and adjacent Lengguru foldbelt. Geol. Res. Dev. Centre Bull. 7, p. 24-36.
(Same paper as above)

Pigram, C.J. & U. Sukanta (1982)- Geological data record of the Taminabuan 1:250,000 sheet area, Irian Jaya. Geol. Res. Dev. Centre (GRDC), Bandung, Open file Report, p.. *(Unpublished)*

Pigram, C.J. & U. Sukanta (1989)- Geology of the Taminabuan sheet area, Irian Jaya, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung, p. 1-51. *(Unpublished)*

Pigram, C.J. & P.A. Symonds (1991)- A review of the timing of the major tectonic events in the New Guinea orogen. J. Southeast Asian Earth Sci. 6, p. 307-318.
(Three major events shaped New Guinea orogen: (1) Mesozoic extension with Triassic and E Jurassic rifting, leading to passive margin along N edge of Australian craton; (2) Second phase of rifting in Late Cretaceous, dismembering E part of margin and opening Coral Sea basin and contemporaneous ocean basin to N in Latest Cretaceous-Eocene; (3) Initiation of mountain building. First foreland load-induced basin flexing in Mid-Oligocene, coinciding with switch in main clastic source from S to N. Darai carbonate platform backstepping from Late Oligocene- M Miocene)

Pireno, G.E. (2008)- Potensi Formasi Sirga sebagai batuan induk di Cekungan Salawati, Papua. M.Sc. (S2) Thesis, Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('The potential of the Sirga Formation as a source rock in the Salawati Basin, Papua'. SF-1X well (2007) in Salawati Basin with oil and gas shows in Late Oligocene Sirga Fm sandstones, in SAR-1X well (2008) oil in pre-Kais sandstones, making M-Miocene Klasafet source rock unlikely. Oils from both wells waxy (3.6 wt%) with very low sulphur, heavy carbon isotopes (-22 to -23), pristane/phytane ratio 1.33- 2.61, with oleanane as biomarker of Tertiary land plants and diahopane/ neohopane as biomarker of shallow lacustrine source. Most likely source E Tertiary lacustrine rocks, possibly Sirga Fm deposited in extensional-graben system)

Pitaloka, R., A. Vanessa & O. Verdiansyah (2013)- Mineralogy of sulfide ore from skarn type deposits, Oksibil, Papua, Indonesia. Proc. Joint Conv. Indon. Assoc. Geoph. (HAGI) - Indon. Assoc. Geol. (IAGI), Medan, JCM2013-0222, 4p.
(Ok Sibil area in E part of W Papuan fold-thrust belt known for five types of calcic-skarn deposits: iron-skarn, tungsten, copper, zinc-lead and tin-tungsten. Mineralization due to Pliocene intrusion into Tertiary Yawee Fm limestone. Sulphide ore of Oksibil skarn mainly sphalerite, also chalcopyrite, pyrite, galena, covellite, chalcosite, anglesite, etc.. Temperature of ore fluid 234-266 °C to 258-320 °C)

Playford, G. & J.F. Rigby (2008)- Permian palynoflora of the Ainim and Aiduna formations, West Papua. Revista Espanola Micropal. 40, 1-2, p. 1-57.
(online at: http://revistas.igme.es/index.php/revista_micro/article/view/359/357)
(Palynology of Permian samples from Birds Head (Ainim Fm) and W part of Central Range (Aiduna Fm) of W Papua. Similar palynoflora in both places, with 26 species of spores, 18 species of pollen, incl. Laevigatosporites vulgaris, Protohaploxypinus limpidus, etc., and 5 species of microphytoplankton. Dated as late Early- early M Permian (Kungurian-Roadian). Mainly Gondwanan affinity spore-pollen suite (but key Gondwanan trilete genus Dulhuntyispora spp. absent) and megaflora, but also minor Cathaysian elements)

PND- Patra Nusa Data (2009)- Opportunities (II), Salawati Basin. Inameta J. 8, Sept. 2009, p. 28-33.
(online at: www.patranusa.com)
(Overview of Salawati Basin, W end of Birds Head, in conjunction with tender round offering)

Polhemus, D.A. & J.T. Polhemus (1998)- Assembling New Guinea- 40 million years of island arc accretion as indicated by the distribution of aquatic Heteroptera (Insecta). In R. Hall & J. Holloway (eds.) Biogeographical and geological evolution of SE Asia. Backhuys Publ., Leiden, p. 327-340.
(Relates aquatic insects distribution to terrane accretion history)

Pollard, P.J. & R.G. Taylor (2002)- Paragenesis of the Grasberg Cu-Au deposit, Irian Jaya, Indonesia: results from logging section 13. Mineralium Deposita 37, p. 117-136.
(Grasberg Cu-Au deposit within Grasberg Pliocene Igneous Complex (GIC). Multiple intrusive phases; 35 separate stages of hydrothermal alteration and infill recognized)

Pollard, P. J., R.G. Taylor & L. Peters (2005)- Ages of intrusion, alteration, and mineralization at the Grasberg Cu-Au deposit, Papua, Indonesia. Economic Geology 100, 5, p. 1005-1020.
(40Ar/39Ar ages of 10 micas from Grasberg Igneous Complex range from 3.33- 3.01 Ma. Grasberg Igneous Complex formed during several cycles of intrusion/ hydrothermal alteration, each lasting ~0.1 m.y. or less. Phlogopite predating magnetite from Kucing Liar Cu-Au deposit adjacent to Grasberg has age of 3.41 Ma,

within error of age of Dalam intrusive rock and suggests formation of calc-silicate skarn at early stage in development of complex. Intrusion and mineralization at Ertsberg (2.67, 2.71 Ma) younger than Grasberg)

Posthumus-Meyes, R., E.J. de Rochemont, J.W.R. Koch, et.al. (1908)- De Zuidwest Nieuw-Guinea Expeditie 1904/5 van het Koninklijk Nederlands Aardrijkskundig Genootschap. E.J. Brill, Leiden, 676p.
('The SW New Guinea expedition 1904-1905 of the Royal Dutch Geographical Society'. Report of geography, geology, climate, anthropology, etc., of SW Papua)

Potter, D.R. (1996)- What makes Grasberg anomalous, implications for future exploration. In: Proc. Conf. Porphyry related copper and gold deposits of the Asia Pacific Region, Cairns 1996, Australian Min. Found. (AMF), Adelaide, p. 10.1-10.13.

Potter, D., K. Parris, J. MacPherson, D. Wadsworth, G. OâConnor, W. Sunyoto, S. Widodo, C. Jones, D. MacKenzie & A. Edwards (1999)- Gold and silver exploration in Irian Jaya. Mining Engineering 51, 11, p. 33-36.
(On Freeport regional exploration programs in W Papua since 1990, to locate additional Ertsberg/ Grasberg-type deposits. Other types of deposits may be present in largely unexplored W Papua)

Prabowo, A., H. Samodra, S. Permanadewi & A. Ratdomopurbo (2017)- Determine Holocene rate of uplift of Waigeo Island area based on the counting of exposed *Ostrea* age using 14C Radiocarbon dating to site elevation. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 7p.
(Waigeo island NW of Birds Head. 14C dating of marginal marine Ostrea mollusc fossils from uplifted Miocene(??) Waigeo Fm limestone along S part of island gave ages of ~8200 and 11000 years at 110 and 70m above sea level, suggesting recent uplift rates of ~6.3- 13.4 mm/year)

Prasad, M.N.V. (1981)- New species of fossil wood *Planoxylon* from the Late Paleozoic of Irian Jaya, Indonesia. Geol. Res. Dev. Centre, Bull. 5, p. 37-40.
(Planoxylon stopesii from Permian Aimau Fm of Birds Head shows characters of araucarian and abietinian wood types, common in Late Paleozoic of Gondwanaland (Rigby 1998))

Prendergast, K. (2003)- Porphyry-related hydrothermal systems in the Ertsberg District, Papua, Indonesia. Ph.D. Thesis, James Cook University, Australia, p. 1-188.
(online at: http://researchonline.jcu.edu.au/27155/1/27155-prendergast-2003-thesis.pdf)
Ertsberg district hosts multiple skarn and porphyry-related deposits, and is one of largest Cu-Au resources in world. Grasberg (~3.33-3 Ma) and Ertsberg (~3-2.67 Ma) igneous complexes post-dated by early porphyry-style mineralisation and spatially related skarn Cu-Au mineralisation. Deep-intermediate high sulphidation style mineralisation late development at both locations)

Prendergast, K., G.W. Clarke, N.J. Pearson & K. Harris (2005)- Genesis of pyrite-Au-As-Zn-Bi-Te zones associated with Cu-Au skarns; evidence from the Big Gossan and Wanagon gold deposits, Ertsberg District, Papua, Indonesia. Economic Geology and Bull. Soc. Economic Geology 100, 5, p. 1021-1050.
(online at: https://pdfs.semanticscholar.org/a381/12d358829aae4ef2ef833e6e4914f63f96ba.pdf)
(Ertsberg district multiple skarn and porphyry-related deposits, together comprising one of largest Cu-Au resources in world. Skarn Cu-Au deposits at Big Gossan and Wanagon Gold overprinted by distinctive late-stage pyrite, sphalerite, arsenopyrite and native gold. Big Gossan younger than 2.82 ± 0.04 Ma; Wanagon Gold 40Ar/39Ar age of 3.62 ± 0.05 Ma. Etc.)

Prentice, M.L., G.S. Hope, K. Maryunani & J.A. Peterson (2005)- An evaluation of snowline data across New Guinea during the last major glaciation, and area-based glacier snowlines in the Mt. Jaya region of Papua, Indonesia, during the last glacial maximum. In: S.P. Harrison (ed.) Snowlines at the last glacial maximum and tropical cooling, Quaternary Int. 138-139, p. 93-117.
(Data from Puncak Jaya show Last Glacial Maximum glaciation less extensive than previously thought)

Prihanasto, A.S., H. Nugroho & P. Rachwibowo (2011)- Porosity study of Paleocene sandstone reservoir using core and petrography and influence to porosity calculation from density log at Wiriagar Deep field, Bintuni Basin, Papua. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-120, 29p.
(In Indonesian. Paleocene deep water gas sands in Wiriagar Deep field, Bintuni Basin, variable but generally poor reservoir quality due to calcite cementation and heterogeneous turbidite sandstones reservoirs)

Priyanto, B., R. Mjos, K. Hokstad, E.T. Hartadi, C. Zwach, Z.A. Tasarova, M. Van Schaack & K. Duffaut (2015)- Heat flow estimation from BSR: an example from the Aru region, offshore West Papua, Eastern Indonesia. Proc. 39th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA15-G-267, 11p.
(Bottom Simulating Reflector (BSR) widespread on deep-water seismic lines in Aru Trough. Heat flow estimates from depth of BSR below seafloor suggest significant lateral changes: lower heat flow to NW, in fore-arc N of Tarera- Aiduna strike slip fault zone; higher heat flow to SE, close to Aru Trough Spreading Zone)

Pubellier, M. & P.R. Cobbold (1996)- Analogue models for the transpressional docking of volcanic arcs in the western Pacific. Tectonophysics 253, p. 33-52.
(Sand box modeling used for analogues of S Philippines and N New Guinea margins)

Pubellier, M., B. Deffontaines, J. Chorowitz, J.P. Rudant & H. Permana (1999)- Active denudation morphostructures from SAR ERS-1 images (SW Irian Jaya). Int. J. Remote Sensing 20, p. 789-800.
(SAR ERS-1 images are sensitive to minute textural or topographic contrasts in areas of dense vegetation. S flank of western fold-thrust Belt of W Papua is site of active tectonic denudation on S leading edge of very recent (Pliocene-Pleistocene) orogen. Neotectonics three stages:Pliocene collision (compression S of Weyland Range) followed by strike slip environment that isolated front of belt, and by currently active gravitational denudation. Tarera basin is pull-apart along left-lateral Tarera fault)

Pubellier, M., B. Deffontaines, J. Chorowicz, J.P. Rudant & H. Permana (2005)- Expression of morpho-structures on SAR ERS imagery- escape tectonics at a front belt; a case study: SW Irian Jaya (West Papua). In: K. Fletcher (ed.) Spaceborne radar applications in geology, ESA TM-17, p. 16/1-16/9.

Pubellier, M. & F. Ego (2002)- Anatomy of an escape tectonic zone, Western Irian Jaya (Indonesia). Tectonics 21, 4, 1019, 16p.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2001TC901038)
(Birds Head block escape rate from GPS geodetic measurements is 7 cm/yr. Movement accommodated by broad shear zone. Evolution of escape zone depends on geometry of former margin of Australia, which controls style of deformation)

Puntodewo, S.S.O., R. McCaffrey, E. Calais, Y. Bock, J. Rais, C. Subarya, R. Poewariardi, C. Stevens, J. Genrich, Fauzi, P. Zwick & S. Wdowinskic (1994)- GPS measurements of crustal deformation within the Pacific-Australia plate boundary zone in Irian Jaya, Indonesia. Tectonophysics 237, p. 141-153.
(online at: http://www.web.pdx.edu/~mccaf/pubs/puntodewo_irian_tecton_1994.pdf)
(GPS sites in SE Irian Jaya close to moving with Australia. Most convergence between Pacific and Australian plates probably at New Guinea Trough. Biak (136°E), and Sorong (W tip of Birds Head at 131°E) both move ~95 mm/yr to WSW relative to Irian Jaya, but <15 mm/yr relative to each other, showing Sorong fault not presently major boundary between Australian and Pacific plates. Plate boundary now S of Sorong- Biak sites)

Purbo-Hadiwidjojo, M.M. (1964)- Geology and mineral wealth of West Irian. Contrib. Dept. Geology, Inst. Teknologi Bandung (ITB) 53, p. 33-47.

Quarles van Ufford, A.I. (1996)- Stratigraphy, structural geology and tectonics of a young forearc-continent collision, western Central Range (western New Guinea), Indonesia. Ph.D. Thesis University of Texas, Austin, p. 1-420.
(online at: https://repositories.lib.utexas.edu/handle/2152/30179)
(Study of geology and stratigraphy along Ertsberg mine road and mining district. Mine access road N-dipping homocline exposing ~18-km thick Precambrian or Early Paleozoic to Cenozoic sequence. Incl. detail study of

1600-1800m thick New Guinea Lst, with Waripi Fm dolomitic and anhydritic limestone and quartz sandstones (~290-400m; Paleocene/ Ta1), Faumai Fm M-L Eocene/ Ta3-Tb, with Lacazinella at top), Sirga Fm marl, mature quartz sst and thin coal (40m, E Oligocene/ Tc) and Kais Fm (up to ~1200m Oligocene/Tc- M Miocene/Tf2). After rifting in Early Mesozoic and until M Miocene, N Australian continent was passive margin. Central Range of Irian Jaya formed when Australian passive margin subducted beneath and collided with N-dipping subduction zone in M Miocene (initiation ~12 Ma). At ~4 Ma start of left-lateral transform faulting along Australian- Pacific Plate)

Quarles van Ufford, A. & M. Cloos (2005)- Cenozoic tectonics of New Guinea. American Assoc. Petrol. Geol. (AAPG) Bull. 89, 1, p. 119-140.
(New Guinea foldbelt formed in two distinct collisional events: Peninsular Orogeny in Oligocene in E Papua-New Guinea, and Central Range orogeny starting in latest M Miocene (12 Ma), with crystalline basement becoming involved in deformation at ~8 Ma)

Raden Idris (2000)- An overview: geological and economic prospects in Timoforo Block, Irian Jaya. AAPG Int. Conference & Exhibition, p. *(Abstract only)*
(Timoforo Block in Bird's Head N of Wiriagar and Muturi. Ainim Fm sst in Mogoi Deep 1 and Kais limestone Fm in Mogoi and Wasian oil fields are proven reservoir rocks. Permian Ainim excellent source potential. Modeling of Bintuni Basin shows hydrocarbon generation in E Jurassic, expulsion in M Eocene. S Timoforo Block at least three structures with reserves around 1.7 TCF)

Rao, Y. (2012)- Petroleum geology and exploration potential of oil and gas in Block A of Waipogah Basin, Indonesia. Zhongguo Shiyou Kantan = China Petroleum Expl., Beijing, 17, 5, p. 55-58.
(In Chinese. Block A in middle of Waipogah backarc sag basin, northern W Papua. Major source rocks limestone and mudstone of Mamberamo, Darante and Makat Fms, with intra-formational sandstone and limestone reservoir rocks. N zone in block has good hydrocarbon potential)

Ratman, N. (1986)- Metaliferous mineralization related to the geological environment in Western Irian Jaya. Bull. Geol. Res. Dev. Centre (GRDC), Bandung 12, p. 1-14.
(Most promising metal prospects in New Guinea: (1) laterite nickel-chromium ores derived from ultramafic rocks in North; (2) base metal mineralization in Central Range associated with Pliocene intrusions and M Miocene volcanics; (3) rare earth elements associated with Permo-Triassic granitoids in Birds Head)

Ratman, N. (1998)- Geology of the Birdҁs Head, Irian Jaya, Indonesia. In: J. Miedema et al. (eds.) Perspectives on the Birdҁs Head of Irian Jaya, Indonesia. Proc. Conf., Leiden October 1997, Editions Rodopi, Amsterdam, p. 719-755.
(High-level review of Birds Head geology. As on mainland Irian Jaya three tectonic zones: Continental (most of area), Oceanic (N coast ophiolites and Paleogene-E Miocene arc volcanics) and Mobile Belt (N and SE))

Ratman, N., G.P. Robinson & P.E. Pieters (1989)- Geological map of Manokwari Quadrangle, Irian Jaya, 1:250,000. 2nd Ed.. Geol. Res. Dev. Centre (GRDC), Bandung.
(Geologic map of NE corner of Birds Head. Geology similar to Ransiki Sheet, with Paleozoic Kemum Block in SW, Arfak Block Oligocene- E Miocene volcanic arc to NE (Arfak Volcanics, Lembai Diorite, overlain by E-M Miocene Maruni Limestone), separated by Ransiki and Sorong (strike-slip?) fault zones)

Redmond, J.L. & R.P. Koesoemadinata (1976)- Walio oilfield and the Miocene carbonates of Salawati Basin. Proc. 5th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 41-57.
(Walio Miocene carbonate buildup, 21km long, rising 1200' above platform. Steep flanks to N and E, S flank less well defined. N-S trending normal faults. Low salinity formation waters suggest fresh water flushing)

Reijnders, J.J. (1964)- A pedo-ecological study of soil genesis in the tropics from sea level to eternal snow, Star Mountains, Central New Guinea. Doct. Thesis University of Utrecht. p. 1-159. *(Unpublished)*
(also in Nova Guinea, Geology, 6 1994. Soil studies as part of 1959 Royal Netherlands Geographical Society Expedition to Star Mountains. With 1: 250,000 scale soil map)

Reynolds, C.D., I. Havryluk, S. Bastaman & S. Atmowidjojo (1973)- The exploration of nickel laterite deposits in Irian Barat. In: B.K. Tan (ed.) Proc. Reg. Conf. Geology of SE Asia, Bull. Geol. Soc. Malaysia 6, p. 309-323.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973021.pdf)
(*Nickel-bearing laterites developed in-situ on nickel-bearing peridotites in two areas of W Papua, surveyed in 1969-1971: (1) 40x5 km belt along toe of S and W slopes of Cyclops Mts, W Papua, and (2) Waigeo island. 80x 5km belt and on smaller islands off N coast. Similar to other nickel laterites in tropical areas*)

Reynolds, C.D., I. Havryluk, Soepomo & S. Bastaman (1972)- The exploration of the nickel laterite deposits in Irian Barat, Indonesia. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung, 4, 1, p. 59-75.
(Same as Reynolds et al. 1973, above)

Riadini, P., A.C. Adyagharini, A.M. Surya Nugraha, B. Sapiie & P.A. Teas (2009)- Palinspastic reconstruction of the Bird Head pop-up structure as a new mechanism of the Sorong Fault. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, IPA09-SG-067, p. 349-361.
(Seismic interpretation along offshore NW Bird Head area show development of pop-up structures at NW Birds Head area as evidence of Sorong Fault activity. Cuts Paleozoic- Tertiary rocks. Graben development at Eocene- Oligocene sequence was related with passive margin NW shelf Australia rifting since Mesozoic)

Riadini, P. & B. Sapiie (2011)- The Sorong Fault zone kinematics: implication for structural evolution on Salawati Basin, Seram and Misool, West Papua, Indonesia. AAPG Ann. Conv. Exh., Houston 2011, Poster.
(online at: www.searchanddiscovery.com/documents/2011/50489riadini/ndx_riadini.pdf)
(New model for Sorong left-lateral fault zone, active since Late Miocene)

Riadini, P. & B. Sapiie (2012)- The Sorong Fault Zone kinematics: the evidence of divergence and horsetail structure at NW Bird's Head and Salawati Basin, West Papua, Indonesia. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 30264 (2013), 37p. *(Presentation package)*
(online at: www.searchanddiscovery.com/documents/2013/30264riadini/ndx_riadini.pdf)
(Sorong Fault Zone strike-slip system in NW-SW Bird's Head area formed during deposition of M-L Miocene sequence as growth fault and remained active until today. SW Birds Head area part of divergent strike-slip system leading to development of pull-apart basin around Salawati basin area. NW Bird's Head area reverse and normal faults as part of horsetail structure and restraining and releasing fault system)

Riadini, P., B. Sapiie & A.M. Surya-Nugraha (2012)- The Sorong fault zone kinematics: implication for structural evolution on Salawati Basin, Seram and Misool, West Papua, Indonesia. Berita Sedimentologi 24, p. 61-72.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-24-timor-and-arafura-sea.html)

Riadini, P., B. Sapiie, A.M. Surya-Nugraha, F. Nurmaya, R. Regandara & R.P. Sidik (2010)- Tectonic evolution of the Seram fold-thrust belt and Misool-Onin-Kumawa anticline as an implication for the Birdôs Head evolution. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-154, 21p.
(Seismic interpretation with 2D palinspatic reconstructions suggest Seram Fold-Thrust Belt and Misool-Onin-Kumawa Anticline not only related to rotation and translation phase from Sorong Fault Zone activities but also combined with additional W-movement of Tarera-Aiduna strike-slip system. Deformation active since Late Miocene as result of collision between Pacific island arc complexes and margin of NW Australia plate)

Rigby, J.F. (1996)- The significance of a Permian flora from Irian Jaya (West New Guinea) containing elements related to coeval floras of Gondwanaland and Cathaysialand. The Palaeobotanist 45, p. 295-302.
(online at: http://14.139.63.228:8080/pbrep/bitstream/123456789/1724/1/PbV45_295.pdf)
(Re-determination of Permian floras from W Papua described by Jongmans (1940) and study of new material from Aiduna Fm in SW part of main New Guinea island. Mainly of Gondwanan affinity (Glossopteris, Vertebraria), but also Cathaysian elements (Gigantonoclea, Fascipteris) and genera that could be from either region (Pecopteris, Trizygia). Several new species of Glossopteris. Not viewed as 'mixed flora', but as overlap of temperate Gondwanan and (sub-)tropical Cathaysian floras)

Rigby, J.F. (1998)- *Glossopteris* occurrences in the Permian of Irian Jaya (West New Guinea). In: G.R. Shi, N.W. Archbold & M. Grover (eds.) Strzelecki Int. Symposium on Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources. Proc. Royal Soc. Victoria 110, 1-2, p. 309-315.
(Permian flora in Aiduna Fm outcrop in SW part of New Guinea 'body' and in Birds Head Poeragi 1 well. Glossopteris species dominate, but mainly new, endemic species. Assemblages transitional between temperate Gondwana Glossopteris flora and tropical Cathaysia flora. These are seed plants, suggesting land connection between two regions)

Rigby, J.F. (2001)- A review of the Early Permian flora from Papua (West New Guinea). In: I. Metcalfe, J.M.B. Smith et al. (eds.) Faunal and floral migrations and evolution in SE Asia- Australasia, A.A. Balkema, Lisse, p. 85-95.
(Permian Aiduna Fm. S of main suture in W New Guinea, with 20 plant fossil species. Flora dominated by Gondwanaland Glossopteris, but also includes Cathaysian-related species Fascipteris aidunae and Gigantonuclea iriani, perhaps reflecting narrower Paleo-Tethys seaway than commonly suggested)

Robertson, J.D. (2004)- Tangguh- the first major Pre-Tertiary discovery in Indonesia. Houston Geol. Soc. Bull., February 2004, p. 21-23.

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Robinson, G.P., B.H. Harahap & M. Suparman & G.M. Bladon (1985)- Geology of the Fak Fak sheet area, Irian Jaya. Geol. Res. Dev. Centre (GRDC), Bandung, Indonesia, 40p.

Robinson, G.P., B.H. Harahap & M. Suparman (1988)- Fak Fak 1:250,000 map sheet, Irian Jaya. Geol. Res. Dev. Centre, Indonesia, Geologic Data Record.

Robinson, G.P. & N. Ratman (1977)- Explanatory notes on the Manokwari 1:250 000 geological map, Irian Jaya. Bureau Mineral Res., Geol. Geophysics, Canberra, Record 1977/32, p. 1-25.
(online at: https://d28rz98at9flks.cloudfront.net/13561/Rec1977_032.pdf)
(Manokwari map sheet with Silurian- Holocene rocks. Kemum Fm Silurian- Devonian metasediments, with grade of metamorphism increasing to E. K-Ar ages of Wariki granodiorite M-L Triassic (~222-246 Ma, biotite, muscovite); M Miocene Lembai diorite 15.4 Ma. Oligocene-Miocene Arfak Volcanics may conformably overlie subsurface Imskin Fm open marine limestone. Collision Birds Head and 'Banda Arc' at end-Miocene. In NE part of map Late Miocene- Pleistocene soft mudstones-sst of Befoor Fm (with deep marine E Pleistocene/N22 forams near top), unconformably overlain by Pleistocene raised reefs of Manokwari Limestone, suggesting very recent uplift)

Robinson, G.P. & N. Ratman (1978)- The stratigraphic and tectonic development of the Manokwari area, Irian Jaya. Bureau Mineral Res. J. Australian Geol. Geophysics 3, p. 19-24.
(online at: www.ga.gov.au/corporate_data/80941/Jou1978_v3_n1_p019.pdf)
(Manokwari area in NE corner of Birds Head, W Papua, with Silurian-Devonian Kemum Fm metamorphics to S, mainly fine, low-grade meta-sediments. Intruded by Late Permian- M Triassic Wariki granodiorites and M Miocene Lembai diorite. Oligocene-Miocene Arfak Fm basaltic and andesitic volcanics to SE. Massive E-M Miocene Kais Fm limestone elongate ridges NE of, and unconformably over, volcanics. In NE Befoor Fm Late Miocene -Pleistocene clastics, overlain by Pleistocene raised reefs. Sorong and Ransiki Fault Zones are continent-island arc collision sutures which have subsequently undergone sinistral transcurrent faulting)

Robinson, G.P., R.J. Ryburn, B.H. Harahap, S.L. Tobing, G.M. Bladon & P.E. Pieters (1990)- Geology of the Kaimana sheet area, Irian Jaya (Quad. 3012). Geol. Res. Dev. Centre (GRDC), Bandung, scale 1: 250,000, p. 1-50.
(Surface geology of part of Lengguru foldbelt)

Robinson, G.P., R.J. Ryburn, B.H. Harahap, S.L. Tobing, G.M. Bladon & P.E. Pieters (1990)- Geology of the Steenkool sheet area, Irian Jaya (Quad. 3013). Geol. Res. Dev. Centre (GRDC), Bandung, scale 1: 250,000, p. 1-45.
(Surface geology of part of North Lengguru foldbelt- Birds Neck area)

Robinson, G.P., R.J. Ryburn, S.L. Tobing & A. Achdan (1988)- Geologic data record Steenkool (Wasior) - Kaimana 1: 250,000 sheet area, Irian Jaya. Geol. Res. Dev. Centre (GRDC), Bandung, Open File report, p. 1-153.

Rossetter, R.J. (1976)- New Guinea Limestone Group Bomberai Peninsula, Irian Jaya. Proc. Carbonate Seminar Jakarta 1976, Indon. Petroleum Assoc. (IPA), Spec. Vol., p. 93-98.

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(online at: www.google.com/...)
('The SW New Guinea expedition 1904/5 of the Royal Netherlands Geographical Society'. Mainly geographic-ethnographic reconnaissance expedition, with chapter on geology by C. Moerman (1908, p. 399-416))

Rubin, J. (1996)- Skarn formation and ore deposition at the Gunung Bijih Timur (Ertsberg East) complex, Irian Jaya, Indonesia. Ph.D. Thesis University of Texas at Austin, p. 1-310.

Rubin, J.N. & J.R. Kyle (1997)- Precious metal mineralogy in porphyry-, skarn-, and replacement-type ore deposits of the Ertsberg (Gunung Bijih) District, Irian Jaya, Indonesia. Economic Geology 92, 5, p. 535-550.
(Details of gold- copper mineralogy in Pliocene Grasberg- Ertsberg complexes, W Papua. Generally high but variable native Au fineness, Cu-Fe sulfide host for most Ag in Gunung Bijih Timur Cu-Au skarn, etc.)

Rubin, J.N. & J.R. Kyle (1998)- The Gunung Bijih Timur (Ertsberg East) skarn complex, Irian Jaya, Indonesia: geology and genesis of a large, magnesian Cu-Au skarn. In: D.R. Lentz (ed.) Mineralized intrusion-related skarn systems, Mineralogical. Assoc. Canada, Short Course Notes 26, Chapter 8, p. 245-288.
(Comprehensive review of Gunung Bijih Timur (= Ertsberg East) skarn Cu-Au mineralization in Paleo- Eocene limestones, associated with Pliocene (2.6- 3.1 Ma) intermediate-composition plutons intruded into thick Mesozoic- Cenozoic sedimentary sequence. Vertical extent of skarn ~1200m (elevation 2800-4000m))

Ruslan, M. & Y. Kumoro (1993)- Aspek geologi dalam penentuan trase Jalan Waghete- Enarotali- Kumopa, Kabupaten Paniai, Irian Jaya. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 581-589.
(Geological aspects for the determination of the route of the Waghete- Enarotali- Kumopa road, Paniai, Irian Jaya')

Rusmana, E., K. Parris, U. Sukanta & H. Samodra (1995)- Geologic map of the Timika Quadrangle, Irian Jaya, scale 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

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(online at: https://ia800301.us.archive.org/10/items/novaguinearsulta61913nede/novaguinearsulta61913nede.pdf)
('Foraminifera-bearing rocks from Netherlands New Guinea'. Description of foraminifera collected by Wichmann during 1903 Netherlands New Guinea Expedition. Includes reports of Lacazina, Alveolina, Nummulites and Discocyclina larger forams in Eocene of Dramai Island SE of Triton Bay, Miocene Lepidocyclina associated with arc volcanics on Arimoa Islands off N New Guinea, M Miocene with Cycloclypeus annulatus, etc.)

Rutten, L. (1920)- On Foraminifera-bearing rocks from the basin of the Lorentz River (Southwest Dutch New Guinea). Proc. Kon. Akademie Wetenschappen, Amsterdam, 22, 2, p. 606-614.

(online at: www.dwc.knaw.nl/DL/publications/PU00012007.pdf)
(Eocene Alveolina-Lacazina and Nummulites and Miocene Lepidocyclina foraminiferal limestone pebbles from Lorentz River (S foreland of Central Range). Eocene Alveolina-Lacazina limestone from top of Wilhelmina (Trikora) peak. Unlike N New Guinea, no fragments of volcanic rocks observed in limestones and sandstones)

Rutten, L. (1921)- Quaternary and Tertiary limestones of North New Guinea between the Tami- and the Biri-River basins. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 28, 8, p. 1137-1141.
(online at: www.dwc.knaw.nl/DL/publications/PU00014766.pdf)
(Tertiary limestones collected by BPM from N New Guinea between Tami and Biri rivers. No detailed locality information. Majority of limestones of Oligo-Miocene age with Lepidocyclina. Also two samples of black-grey Eocene reefal limestone with Alveolina, Nummulites, Orthophragmina (=Discocyclina) in Nanggoi River, S Nimboran Mts)

Rutten, L. (1923)- Geologische gegevens uit het gebied van den Vogelkop van Nieuw-Guinea. Verslagen Kon. Akademie Wetenschappen (afd. Wis- en Natuurkunde), Amsterdam, 32, 3, p. 221-224.
('Geological data from the region of the Birds Head of New Guinea'. Early notes on Birds Head geology, based on rock collections collected between 1917-1921 by East Indies Mines Department. Widespread Oligo-Miocene limestones with Lepidocyclina, Miogypsina, etc., but relatively rare Eocene (Lacazina limestones in Rumberpon- Horna area at Cenderawasih Bay coast and NW Birds Head))

Rutten, L. (1923)- Geological data derived from the region of the 'Birds Head' of New Guinea. Proc. Kon. Akademie Wetenschappen, Amsterdam, 26, 3-4, p. 274-277.
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('Foraminifera-bearing rocks from the area of the 'Birds Head' on New Guinea'. Brief descriptions of foram-bearing samples, including globigerinid limestone near SE coast (= Imskin Fm of subsequent authors), Eocene Nummulites-Alveolina-Lacazina in Horna region and many E-M Miocene limestone localities)

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(Review of geology of New Guinea and the Aru Islands)

Rutten, L.M.R. (1936)- Roches et fossiles de lôÎle Pisang et de la Nouvelle Guinee. Bull. Musee Royal Histoire Nat. Belgique 12, 10, p. 1-13.
('Rocks and fossils from Pisang Island and from New Guinea'. Pisang Island, E of Misool, samples, include Eocene limestone with Lacazinella, Nummulites, Discocyclina, etc.; no Pellatispira)

Sadjati, O., N.A. Ascaria & A.H. Satyana (2002)- Generation and migration of hydrocarbons from pre-Tertiary source rocks of the Kamundan area, West Papua, Eastern Indonesia. AAPG Int. Conf., Cairo, 2002.
(Abstract only) (Kamundan area N of Wiriagar Deep giant gas field in Jurassic sandstones. Thermal modeling at Ayot-2, Tarof-2 and Wiriagar-1 wells suggest sources mature since 240-260 Ma (Permo-Triassic). In 210 Ma (Late Triassic) hydrocarbons charged Jurassic reservoirs (?). Migration continued and charged Cretaceous reservoirs until mid-Cretaceous tectonic activity uplifted area and changed migration routes. Afterwards, hydrocarbons re-migrated along Cretaceous unconformity and charged Late Cretaceous and Paleocene reservoirs, causing significant hydrocarbon accumulation in Paleocene reservoirs)

Sahidu, M.R.H., S.A. Putri, C.S. Birt & R. Apriani (2018)- Integration of 2D analog and 3D high resolution seismic data for regional shallow overburden description in the Tangguh Field, Indonesia. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-G-85, 17p.
(Late Miocene-Pliocene Steenkool Fm thickens to E (by progressive onlap to W onto Top Late Miocene Top Kais Lst and thickening to E). Kais Lst drowned by influx of clastic material into rapidly evolving E-dipping

foreland basin in-front of Lengguru foldbelt. Shallow marine Lower Steenkool Fm with shallow gas in W part of area. Fluvial-deltaic Upper Steenkool Fm with stacked coal beds in E of area. Shortening in Lengguru fold-thrust belt stopped in Pleistocene. Faulting in Steenkool formation by Plio-Pleistocene strike-slip tectonics, creating E-W faults. Upper Steenkool Fm eroded by Pleistocene unconformity E of Tangguh field)

Sakagami, S. (2000)- Middle Permian Bryozoa from Irian Jaya, Indonesia. Bull. Nat. Science Museum, Tokyo, Ser. C 26, 3-4, p. 139-168.
(online at: http://ci.nii.ac.jp/naid/110004313633/en)
(24 species/ 18 genera of Permian bryozoa from Aiduna Fm at 4 localities in Waghete map sheet. Fauna very similar to Timor described by Bassler (1929), also Peninsular Thailand and W Australia. Incl. Fistulipora spp, Eridopora, Tabulipora, etc. Part of typical S Tethys realm. Age most likely early Guadalupian, M Permian)

Salo, J.P. (2005)- Evaluating sites for subsurface CO2 injection/ sequestration: Tangguh, Bintuni Basin, Papua, Indonesia. Ph.D. Thesis, University of Adelaide, p. 1-368.
(Text online at: http://digital.library.adelaide.edu.au/dspace/bitstream/2440/49746/2/02whole_v.1.pdf)
(Downdip aquifer leg of M Jurassic (Bathonian- Bajocian) Roabiba Fm quartzose marine sandstone is most viable option for disposal of excess CO2 from Tangguh gas production. Second best is 'Aalenian sandstone'. M Jurassic (Aalenian-Callovian) overall transgressive series over Permian (Triassic- E Jurassic absent over Tangguh study area; E Jurassic only in nearby East Onin 1 well), with deeper marine facies to SW and S, with sediment supply mainly from NE. Major unconformity between Late Jurassic- Late Cretaceous, with Early Cretaceous missing, followed by Late Cretaceous (Turonian- Maastrichtian) rifting in Birds Head region, probably separating Birds Head microcontinent from Australia- New Guinea Plate. Erosion of folded Eocene-Oligocene at Basal Miocene unconformity reflects collision of Birds Head and Australia-New Guinea)

Samuel, L., K. Lukman & Suharno (1990)- Dominant geological factors which controlled petroleum potential of Salawati and Bintuni basins, Irian Jaya. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 41-51.
(Birds Head Salawati basin more productive for Tertiary hydrocarbon discoveries than Bintuni basins. Possibly related to presence of Cretaceous shale seal in Bintuni, absence in Salawati)

Samuel, L. & L. Kartanegara (1991)- The role of Cretaceous seal to the hydrocarbon potential of the Salawati and Bintuni Basins, Irian Jaya, Indonesia. AAPG Ann. Mtg., Dallas, Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 75, 3, p. 666.
(In Bintuni basin rel. little success in Miocene carbonates (only in Mogoi and Wagian fields). Presence of Cretaceous shales seal important: where this regional seal is noneffective, oil may migrate vertically from pre-Tertiary sources to Tertiary reservoirs)

Samuel, L. & R.S.K. Phoa (1986)- Problems. of source rock identification in the Salawati basin, Irian Jaya. Proc. 15th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 404-422.

Sapiie, B. (1998)- Strike-slip faulting, breccia formation and porphyry Cu-Au mineralization in the Gunung Bijih (Ertsberg) Mining District, Irian Jaya, Indonesia. Ph.D. Thesis, University of Texas at Austin, p. 1-304. *(Unpublished)*
(Most of Cenozoic tectonic evolution in New Guinea result of obliquely convergence and collision between Australian and Pacific Plates. In area of Gunung Bijih (Ertsberg) Mining District two deformation stages: (1) 12- 4 Ma 10's of km of contractional deformation, generating NW-trending folds and reverse/ thrust faults, (2) few km of strike-slip offset between 4- 2 Ma. Five major left-lateral strike-slip fault zones identified)

Sapiie, B. (2000)- Structural geology and ore deposit: case study of the Grasberg super porphyry Cu-Au mineralization, Irian Jaya, Indonesia. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1-21.
(Strike-slip faulting in Central Range Irian Jaya started at ~4 Ma, after 10's of km of contractional deformation. Grasberg igneous complex emplaced at major left step in left-lateral strike slip system)

Sapiie, B. (2002)- Structural pattern and deformation style in the Central Range of Irian Jaya (West Papua), Indonesia. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 369-376.
(Central Range two stages of deformation: NW-trending folding between ~12- 4 Ma, followed by strike-slip faulting after 4 Ma. Change of deformation style related to change in relative plate motions between Australia and Pacific Plates)

Sapiie, B. (2007)-Strike-slip faulting and collisional delamination in the Central Range of West papua, Indonesia. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, p. 1001-1002. *(Extended Abstract)*
(Change in deformation style in Central Range from regional folding to localized strike-slip between ~4-2 Ma interpreted to be manifestation of short-lived change in relative plate motion between Australian and Pacific plates at 4 Ma (transform movement between Australian plate and short-lived Caroline plate).

Sapiie, B. (2016)- Kinematic analysis of fault-slip data in the Central Range of Papua, Indonesia. Indonesian J. Geoscience 3, 1, p. 1-16.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/225/202)
(Most of Cenozoic tectonic evolution in New Guinea result of oblique convergence that led to arc-continent collision between Australian- Pacific Plates. Structural analysis in Gunung Bijih (Ertsberg) District indicates two deformation stages since ~12 Ma: (1) en-echelon NW-trending folds and reverse faults; (2) left-lateral strike-slip faulting sub-parallel to regional strike. Change from contractional to left-lateral strike-slip offset due to change in relative plate motion between Pacific-Australian Plates from 246° to 253° at ~4 Ma. From ~4- 2 Ma, transform motion along ~270° trend caused left-lateral strike-slip. Strike-slip faulting with 100s of m to at most a few km of offset significant for magma intrusion and mineralization)

Sapiie, B., A.C. Adyagharini & P. Teas (2010)- New insight of tectonic evolution of Cendrawasih Bay and its implications for hydrocarbon prospect, Papua, Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-158, 11p.
(Deformation of Cendrawasih Bay related to coupling movement of Yapen-Sorong Fault Zone and Tarera-Aiduna left-lateral strike-slip faults. Cenderawasih Basin formed by NW-SE directed shortening and is most likely overlain by Australian continental crust)

Sapiie, B. & M. Cloos (2000)- Strike slip faulting in the core of the Central Range of New Guinea: aftermath of collisional delamination. Geol. Soc. America 2002 Denver Annual Meeting, 1p. *(Abstract only)*
(Strike-slip faulting in Gunung Bijih (Ertsberg) District during latest stage of collisional orogenesis, localizing igneous intrusion and copper-gold mineralization at 3 Ma. C Range tectonically inactive; current movements along N edge of island and Tarera-Aiduna fault zone. Between 3 Ma and Pleistocene glaciation, strike-slip motion ceased in W highlands. Rupture of N end of Australian plate (collisional delamination) started at ~8 Ma and propagated >1000 km E by 3 Ma, causing short-lived melting event. Batholithic-scale magma chambers in lower crust from ~7 to 3 Ma. Core of collisional belt was zone of weakness, localizing tectonic motions. Since then upper ~20 km of upwelled asthenosphere cooled, forming new lithospheric mantle. Healing of lithosphere beneath W Central Range caused plate motions to become concentrated at weaknesses along N coast of island)

Sapiie, B. & M. Cloos (2004)- Strike-slip faulting in the core of the Central Range of west New Guinea: Ertsberg Mining District, Indonesia. Geol. Soc. America (GSA) Bull. 116, 3-4, p. 277-293.
(Most of New Guinea Cenozoic tectonic evolution result of obliquely convergent motion. Two stages of deformation: (1) ~12- 4 Ma: km-scale folds and thrusts recording many tens of km of shortening; (2) starting at ~4 Ma five NW-trending (~300°) strike-slip fault zones in core of W Highlands, aiding ascent of magmas. Intrusives of 4.4- 2.6 Ma ages formed in pull-aparts along left-lateral strike slip faults. NE trending normal faults and veins suggest NW-SE extension)

Sapiie, B. & M. Cloos (2013)- Strike-slip faulting and veining in the Grasberg giant porphyry Cu-Au deposit, Ertsberg (Gunung Bijih) mining district, Papua, Indonesia. Int. Geology Review 55, 1, p. 1-42.

(Ertsberg mining district in core of Central Range of W New Guinea best known for Grasberg igneous complex, the host of giant Cu-Au deposit that was emplaced at 3 Ma. Three domains of strike-slip faulting in deposit, E-NE, NW and N-trending faults, formed in left-lateral Riedel shear system trending N60W)

Sapiie, B., W. Naryanto, A.C. Adyagharini & A. Pamumpuni (2012)- Geology and tectonic evolution of Bird Head region Papua, Indonesia: implications for hydrocarbon exploration in the Eastern Indonesia. AAPG Int. Conf. Exh., Singapore 2012, Search and Discovery Art. 30260, p. 1-39.
(online at: www.searchanddiscovery.com/documents/2012/30260sapiie/ndx_sapiie.pdf)
(Birds Head region of W Papua in region with deformation varying from area to area, indicating several translations and rotations during history)

Sapiie, B., D.H. Natawidjaja & M. Cloos (1999)- Strike slip tectonics of New Guinea: transform motion between the Caroline and Australian plates. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc.Geol. (IAGI), Jakarta 1999, 1, p. 1-15.
(Most of Cenozoic tectonic evolution of New Guinea result of oblique convergence that led to collisision between Australian continent and oceanic arc at leading edge of Pacific Plate. Ertsberg mining district of W Papua two stages of deformation: (1) ~12- 4 Ma WNW-trending en-echellon folds (10's of km of shortening) and (2) ~4-2 Ma mainly left-lateral strike slip faulting, with offsets up to 1-2 km. Change in style related to minor change in plate motion at ~4 Ma, also forming Caroline Plate)

Sapin, F., M. Pubellier, J.C. Ringenbach &, V. Bailly (2009)- Alternating thin versus thick-skinned decollements, example in a fast tectonic setting: the Misool-Onin-Kumawa Ridge (West Papua). J. Structural Geol. 31, p. 444-459.
(Misool-Onin-Kumawa Ridge between Seram accretionary wedge and Lengguru fold belt (<8 My). Three deformation stages: (1) Messinian thin-skinned fold-and-thrust belt over shaly-silty Permian-Paleocene; (2) Pliocene thick-skinned event responsible for uplift of ridge, possibly induced by onset of continental subduction; (3) Pleistocene deformation when thin-skinned tectonics resumed in Seram Trough. Currently, Seram wedge abuts ridge, transferring compression N into Salawati Basin. Jumps of active detachment levels may be response to changes in subduction parameters (velocity, rugosity, etc.) during transition between oceanic and continental subduction, or from thinned crust to thicker continental crust)

Saputra, A., R. Hall & L.T. White (2014)- Development of the Sorong Fault Zone north of Misool, Eastern Indonesia. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-086, 14p.
(Sorong Fault Zone W of Birds Head with several small basins along 3 major fault strands. Evidence of both transpression and transtension along sinistral strike-slip system. Kofiau Basin may be N part of Salawati Basin, displaced to W on Molucca-Sorong Fault during Pliocene)

Saragih, R.Y., A.K. Gibran, D.A.R. Prawiranegara, G.G. Arvillyn & A. Kusworo (2017)- Mesozoic source rock potential in Lengguru Basin, West Papua. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-273-G, 16p.
(Jurassic-Cretaceous Kopai Fm in NE part of Lengguru foldbelt rel. high organic richness (TOC up to 1.2-17.7%). Most samples Type III kerogen. High thermal maturity in samples from NE area (overmature). Hydrocarbon seeps)

Saragih, R.Y., G.M.L. Junursyah, F. Badaruddin & Alviyanda (2018)- Structural trap modelling of the Biak-Yapen basin as a Neogen frontier basin in North Papua. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-408-G, 25p.
(Biak Island and Supiori Islands interpreted as series of extensional fault blocks with >2000m of Neogene sediments, overlying Eocene arc volcanics)

Sardjono (1998)- Gravity field and structure of the Sorong Fault Zone, Eastern Indonesia. Ph.D. Thesis University of London, p. 1-269. *(Unpublished)*
(Gravity surveys along coastlines of Banggai-Sula islands, E Sulawesi, Halmahera, Bacan and Obi, integrated with earlier gravity data. Values <-250 mGal in S part of Molucca Sea to >+320 mGal near sea level in coastal

areas S of Mangole and N of Sulabesi (Sula Group). Steep free-air gravity gradients S of Mangole and W of Obi. Gravity along Sorong FZ near Banggal-Sula Islands suggest mainly attenuated continental fragments, juxtaposed to thick tectonic melange and anomalous oceanic crust. Continental fragments of Banggai-Sula dip N-ward, interpreted as response to sinking of Molucca Sea lithosphere. Obi region gravity suggests most of island peridotitic and basaltic rocks, with continental crust in S and S offshore. Ultramafic and basic rocks emplaced on Obi by reverse fault. Exposed basaltic rocks may be remnant of oceanic Philippine Sea Plate)

Sarmili, L., F.K. Jevie & M.F. Rosiana (2009)- Keterdapatan mineral zirkon dan hubungannya dengan batuan metamorfik di Teluk Wondama, Papua. J. Geologi Kelautan 7, 1, p. 37-45.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/169/159)
('Occurrence of zircon minerals and their relationship to metamorphic rocks in Wondama Bay, Papua' (= Wandamen Bay). Zircon-bearing metamorhic schist and amphibolite of Roon Island along Wandamen Bay point to granitoid, continental crust composition of precursor rock)

Sastratenaya, A.S., P. Sampurno & D. Soetarno (1988)- Favourable formations for uranium occurrences in Irian Jaya. In: Proc. Conf. Uranium deposits in Asia and the Pacific; geology and exploration, Jakarta 1985, Int. Atomic Energy Agency (IAEA), Vienna, IAEA-TC-543/19, p. 259-274.
(Probability of Uranium occurrences in basement complexes of W Papua good, owing to younger (Jurassic, Tertiary) intrusions of intermediate acidic magmatic rocks. Most important province is C Irian Jaya with formations favorable for U occurrences, i.e. Aifam, Iwur, Buru, Klasaman and Steenkool Fms. Some indications of mineralized granitic outcrops found by ground surveys in Ransiki area)

Satyana, A.H. (2001)- Dynamic response of the Salawati Basin, Eastern Indonesia, to the Sorong Fault tectonism: example of inter-plate deformation. Proc. 30th Ann. Conv. Indon. Assoc. Geol. (IAGI) and GEOSEA 10th Reg. Congress, Yogyakarta 2001, p. 288-291.
(Sorong Fault major left-lateral fault responsible for reversal of Salawati basin polarity. Late Paleozoic-Miocene beds thicken to S-SE, revealing presence of long-lived southern depocenter. At Miocene-Pliocene boundary basin tilted to W-SW, marking inception of Sorong Fault in N Irian Jaya. By mid-Pliocene Sorong Fault splayed into Salawati Basin and basin subsided rapidly to N-NW with uplift of S and E parts of basin. Coeval with rapid deposition of Late Pliocene Klasaman Fm sediments, which triggered shale diapirism)

Satyana, A.H. (2003)- Sorong Fault and the reversal of the Salawati Basin. Indon. Petroleum Assoc. (IPA) Newsl., March 2003, p. 15-21.
(Major E-W trending left-lateral Sorong strike-slip fault system along N Birds Head, W Papua and Papua New Guinea separates W-moving Pacific oceanic (Caroline and Philippine Sea) plate from relatively stable Australian continental plate. In Salawati Basin polarity reversal in Pliocene)

Satyana, A.H. (2003)- Re-evaluation of the sedimentology and evolution of the Kais carbonate platform, Salawati Basin, Eastern Indonesia: exploration significance. Proc. 29th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 185-206.
(New paleogeographic model of Miocene Kais carbonates, making previous basinal zone lagoonal)

Satyana, A.H. (2008)- Aromatic methylphenanthrene biomarker and maturity of oils keys to identifying new active source rocks in the Salawati Basin, Indonesia. American Assoc. Petrol. Geol. (AAPG), Int. Conf. Exhib., Cape Town, 1p. . *(Abstract only)*
(Salawati Basin with foredeep kitchen bordered by Sorong Fault zone. Early-migrated and moderate-heavy oils in updip area, late-migrated and light oils and gas in downdip area approaching kitchen. Hydrocarbon sources Miocene Kais and Klasafet mudstones and shales. Maturity of oils derived from aromatic biomarker methylphenanthrene (MP) index increases towards downdip area. Low maturity oil seeps at Sorong deformed zone do not follow pattern, suggesting source from E Pliocene Lower Klasaman shale)

Satyana, A.H. (2009)- Emergence of new petroleum system in the mature Salawati Basin: keys from geochemical markers. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 775-795.

(Salawati Basin proven petroleum system is Miocene Kais/Klasafet. Over Sorong foredeep kitchen, oils generated from lower maturity rocks than overmature Kais/Klasafet marly carbonaceous shales, must be sourced by Early Pliocene Lower Klasaman shales)

Satyana, A.H. & N. Herawati (2011)- Sorong fault tectonism and detachment of Salawati Island: implications for petroleum generation and migration in Salawati Basin, Bird's Head of Papua. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-183, 21p.
(Sorong Fault at N and W margin of Salawati Basin reversed basin polarity from basin with S depocenter before Pliocene to the basin with N depocenter today. Subsidence of basin to N resulted in petroleum generation from Miocene Kais-Klasafet carbonates and shales main source rocks. Salawati Island, once attached to main Bird's Head, detached and rotated CCW, opening Sele Strait. After rotation Salawati Island translated SW-ward to present position)

Satyana, A.H., M.E.M. Purwaningsih & E.C.P. Ngantung (2002)- Evolution of the Salawati structures, eastern Indonesia: a frontal Sorong fault deformation. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 277-293.
(Neogene structures in Salawati Basin tied to Sorong Fault tectonism. Four stages of development, reflecting 25° CCW rotation of strain ellipsoid between M Pliocene- Pleistocene. Sorong Fault started at ~3.5 Ma, dissecting N margin of Salawati Basin. Present-day structuring mainly SSW-NNE normal faulting)

Satyana, A.H., Y. Salim & J.M. Demarest (2000)- Significance of focused hydrocarbon migration in the Salawati Basin: controls of faults and structural noses. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 513-530.

Satyana, A.H. & I. Setiawan (2001)- Origin of Pliocene deep-water sedimentation in Salawati Basin, Eastern Indonesia: deposition in inverted basin and exploration implications. In: A. Setiawan et al. (eds.) Deep-water sedimentation of Southeast Asia, Proc. 2nd Regional Seminar Indonesian Sedimentologists Forum (FOSI), Jakarta, p. 53-65.
(New Mid-Late Pliocene NW Salawati Basin depocenter created by tectonic loading of contemporaneous Upper Klasaman Fm thrust sheets along regional Sorong left-lateral strike-slip fault. Accommodation filled with bathyal debris flow deposits. Thick Klasaman deposits buried Miocene source rocks once deposited in lagoonal environment to reach oil window and triggered overpressuring and shale diapirism of E Pliocene Lower Klasaman Fm shales)

Satyana, A.H. & M. Wahyudin (2000)- Meteoric water flushing and microbial alteration of Klamono and Linda oils, Salawati Basin, Eastern Indonesia: geochemical constraints, origin and regional implications. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 71-84.
(Klamono and Linda fields oils evidence of biodegradation. Water from Kais Limestone outcrop flowed W to Klamono field. Linda field probably affected by meteoric water moving along fault)

Schappert, A. (1990)- The seismicity of the Tembagapura region, Irian Jaya. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 50-56.
(Tembagapura at S slopes of West Papua Central Range in seismically active Southen Highland seismic zone. Two groups of events: (1) deep events (>100km deep epicenters), associated with S-ward subduction of Solomon/ Pacific plate; (2) shallow earthquakes (<30km), related to mountain building in upper crust)

Schellart, W.P. & W. Spakman (2015)- Australian plate motion and topography linked to fossil New Guinea slab below Lake Eyre. Earth Planetary Sci. Letters 421, p. 107-116.
(online at: https://www.sciencedirect.com/science/article/pii/S0012821X15001855)
(On relation between latest Cretaceous- E Eocene (~71-50 Ma) N-dipping subduction at N edge of New Guinea-Australian plate and Cenozoic Australian plate motion changes and topography evolution of Australian continent. Evidence for ~4000 km wide subduction zone, which culminated in ophiolite obduction and arc-continent collision in New Guinea- Pocklington Trough region during subduction termination, coinciding with cessation of spreading in Coral Sea. Renewed N-ward motion caused Australian plate to override sinking

subduction remnant, detected with seismic tomography at 800-1200 km depth in mantle under C-SE Australia. Slab sinking and mantle flow cause S-migrating negative dynamic topography of several 100m to present-day ~200m deep depression of Lake Eyre Basin and Murray-Darling Basin)

Schlumberger, C. (1894)- Note sur *Lacazina wichmanni* Schlumb. n.sp.. Bull. Soc. Geologique France (3), 22, p. 295-298.
(Lacazina wichmanni n. sp. described from (Eocene) limestone from Triton Bay area, Lengguru foldbelt, collected by Wichmann. Species also known from New Caledonia?; Koolhoven 1929.)

Schroo, H. (1961)- Some pedological data concerning soils in the Baliem Valley, Netherlands New Guinea. Boor en Spade 11, p. 84-103.
(Early paper on geomorphology and relatively poor soil quality in Baliem Valley, Central Range)

Schurter, G.J., Y. Supriatna, A. Nuraeni & Supriyono (2009)- A 3D finite-difference modeling study of seismic imaging challenges in Bintuni Bay, Irian Jaya Barat. The Leading Edge 28, p. 1008-1021.
(also in Proc. 31st Ann. Conv. Indon. Petroleum Assoc., 2007, p. 369-376 and p. 377-390)

Seno, T. & D.E. Kaplan (1988)- Seismotectonics of Western New Guinea. J. Physics of the Earth 36, p. 107-124.
(online at: www.journalarchive.jst.go.jp/...)
(No seismological evidence of subduction along New Guinea Trench W of 140°E (believed to be relic of ancient subduction). Region between N New Guinea Trench and Central Range characterized by strike-slip faulting and reverse faulting. Yapen Island earthquake suggests active strike-slip motion along this part of Sorong fault zone. Thrust mechanisms common in Meervlakte Basin. Additional strike-slip faulting and thrust faulting in Tarera and Wandamen Fault Zones. Oblique convergence between Caroline and Australian plates in W New Guinea divided into strike-slip and dip-slip components. East of 140°E along New Guinea Trench, Bismarck plates are subducting, producing intermediate- depth seismicity beneath central New Guinea)

Setiadi, I. & Marjiyono (2018)- Interpretasi geologi bawah permukaan dan delineasi Cekungan Salawati wilayah Sorong dan sekitarnya berdasarkan analisis spektral serta pemodelan 2D dan 3D Data Gayaberat. J. Geologi Sumberdaya Mineral 19, 3, p. 117-130.
(online at: https://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/409/3560
(Geological subsurface interpretation and delineation of the Salawati Basin in the Sorong area and surroundings based on spectral analysis of 2D and 3D modelling of gravity data'. Average sediment thickness in area 3.4 km. Five subbasins. Basement metamorphics)

Setiawan, Y., E. Syafron, N. Arbi, M. Hardenberg, M. Jones, H. Banjarnahor, Nakamoto, I. Argakosesoemah et al. (2016)- Chasing the Jurassic sand in Semai Basin, Papua. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 40-TS-16, p. 1-23.
(Since 2006 oil companies invested $600MM in unsuccessful exploration of Semai basin between Onin Peninsula/ Birds Head and Seram Trough (Trench). Tight Lower Jurassic sandstone penetrated in Lengkuas-1 well at 6500m TVDSS (63m gross, but not fully penetrated; porosity <1-2%), i.e. older than M Jurassic main reservoirs in Tangguh fields. Probably part of W-E (or SW to NE?) backstepping pattern in E-M Jurassic deltaic sandstones. Same age reservoir much shallower in Bawang Putih-1 and Serai-1 wells to E; also poor reservoir quality. Reduced porosity in E Jurassic sandstones due to deep burial (quartz overgrowth) and >3km of late structural uplift and inversion. With paleogeographic maps for E Jurassic, Paleocene, Miocene)

Setyadi , H., N. Wiwoho, B. Kusnanto, S. Widodo & N. Sugita (1999)- The lithogeochemistry and magnetic susceptibility properties of the Kucing Liar copper-gold skarn deposit, Ertzberg, Irian Jaya, and its implications for the mineral exploration. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 217-225.
(Kucing Liar 1992 discovery of multistage Cu-Au skarn/ replacement deposit from fluids emanating from W-SW side of Grasberg porphyry intrusive. Mainly in U Cretaceous Ekmai Fm and Paleogene Waripi Fm, along WNW-ESE reverse fault, at depth of 500-1500m below surface elevation of 3700m asl))

Setyaningsih, C.A. (2014)- Pollen Pra-tersier daerah Kepala Burung, Papua. Lembaran Publikasi Minyak dan Gas Bumi (Lemigas) 48, 1, p. 13-22.
(online at: www.lemigas.esdm.go.id/public/publikasi/lembar/1455413071198924 3592.pdf)
('Pre-Tertiary pollen of the Birds Head area, Papua'. Palynology of samples from Ainim River shows Late Permian Ainim Fm (Protohaploxypinus microcorpus zone, with Falcisporites australis, Lunatisporites noviaulensis, etc.), overlain by Late Cretaceous Jass Fm (Tricolporites apoxyexinus zone, also with Coniacian-Campanian planktonic foraminifera and nannofossils in samples G3-G7), overlain by Eocene (Florschuetzia trilobata zone). Permo-Triassic sediments deposited in terrestrial environment with some marine influence, Cretaceous mainly marine)

Setyanta, B. & B.S. Widijono (2009)- Medan gaya berat pada batuan ofiolit (ultramafik) di Beoga, Papua dan implikasi terhadap genesis alih tempatnya. J. Sumber Daya Geologi 19, 3, p. 177-189.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/download/204/195)
('Gravity-magnetic field over the ophiolite (ultramafic) of Beoga, Papau and implications for its emplacement'. Large 50x100 km outcrop of ultramafics has elliptical gravity anomaly pattern, suggesting possible fragmentation of ophiolite during obduction. Also gravity model over Meratus Mts and Banda Sea-Seram)

Siagian, H.P., I. Sobari, J. Nasution, B.S. Widijono, B. Setyanta, Nurmaliah, K. McKenna & A. Noetzli (2013)- Airborne magnetic and radiometric geophysical mapping in South and Central Range Mountains, Papua Indonesia. In: Proc. ASEG-PESA 23rd Int. Geophysical Conf. Exhib., Melbourne 2013, p. 1-4.
(online at: http://www.publish.csiro.au/ex/pdf/ASEG2013ab371)
(Geological Survey of Indonesia commissioned airborne magnetic and radiometric survey covering W Papua Central Highlands and S side of highlands in 2010-2011)

Sidarto & U. Hartono (1995)- Geologic map of the Jayawijaya Quadrangle, Irian Jaya, scale 1: 250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Sidarto & N. Ratman (1996)- Geologi lembar Jayawijaya, Irian Jaya, ditafsir dari citra radar. J. Geologi Sumberdaya Mineral 6, 61, p. 2-10.
('Geology of the Jayawijaya sheet, Irian Jaya, interpreted from radar imagery')

Silalahi, P., M. Ahmad, F.G. Aiwoy, L. Soebari, G. de Jong, E.C. Aloysius & A.F. Budirumantyo (2013)- Molybdenite and bornite distributions in the Ertsberg Stockwork Zone (Esz), Papua, Indonesia. Proc. Papua and Maluku Resources, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv., Kuta, p. 197-203.
(Ertsberg Stockwork Zone deposit is hosted within Ertsberg Diorite (Late Pliocene; 2.66 Ma), SW of E Ertsberg Skarn System. Copper- gold mineralization controlled by biotite-bornite and quartz-chalcopyrite stockwork veins, mainly between 3100-3700m elevation. Lateral and downward decrease in copper-gold mineralization and increase of quartz- bornite and molybdenite veins)

Simandjuntak, T.O., B. Mubrata, D. Sukarna, K. Astadireja, Marino, I. Zulkarnain, N. Buyungg, D. Sutarno & A. Mahfi (1994)- Evolusi tektonik daerah Lengguru, Irian Jaya, dan hubunggannya dengan jebaka sumberdaya hidrokarbon. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 370-388.
('Tectonic evolution of the Lengguru area, Irian Jaya, and relation to hydrocarbon deposits'. Incl. 90° CW rotation of Lengguru Block along Aru-Waipona fracture after Late Miocene- E Pliocene thrusting of Melanesian orogeny)

Simbolon, B. (1984)- Heat flow study in the Salawati and Bintuni basins Irian Jaya. In: Heat flow, Proc. Joint ASCOPE/ CCOP Workshops I and II, CCOP Techn. Publ. 15, p. 105-122.

Skwarko, S.K., J. Sornay & T. Matsumoto (1983)- Upper Cretaceous molluscs from western Irian Jaya. Publ.Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 4, p. 61-73.
(Small Middle Campanian mollusc fauna and one ammonite (Pachydiscus) from Mios River, Ransiki Sheet, Birds Head. Five species of Inoceramus, some similar to species decribed from Misool by Boehm)

Skwarko, S.K. & J.P. Thieuloy (1989)- Early Barremian (Early Cretaceous) mollusca from western Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 6, p. 26-34.
(Barremian ammonites (large Crioceratites (Menuthicrioceras) irianensis n.sp., Pseudothurmannia, Hemihoplites taminabuanensis n.sp.) and pectinid bivalve molluscs from basal Jass Fm (= Kembelangan Fm) marine clastics in tributary of Ainim River, Taminabuan sheet, SW Birds Head. Beds are transgressive, disconformable over Tipuma Fm)

Smith, E.M. (1966)- Nouvelle Guinee. Lexique stratigraphique international 6, Oceania, Fasc. 3a, p. 1-136.
(New Guinea chapter of International Stratigraphic Lexicon. Alphabetical listing with brief descriptions descriptions of geological formations in both W Papua and Papua New Guinea. Somewhat dated (latest reference dated 1957))

Soebagio, S. & Budijono. (1989)- Cu-skarn deposits in Erstberg mine area Irian Jaya, Indonesia. Geologi Indonesia 12, 1, p. 359-374.

Soebari, L., I. Sriyanto, G. de Jong & A. Muntadhim (2012)- The Ertsberg stockwork zone: a unique porphyry copper style mineralization in Papua, Indonesia. In: N.I. Basuki (ed.) Proc. Banda and Eastern Sunda arcs, Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv. 2012, Malang, p. 243-256.

Soebari, L., I. Sriyanto, G. de Jong & A. Muntadhim (2013)- The Ertsberg stockwork zone: a unique porphyry copper style mineralization in Papua, Indonesia. Majalah Geologi Indonesia (IAGI) 28, 1, p. 1-14.
(online at: www.bgl.esdm.go.id/publication/kcfinder/files/MGI%2020130101.pdf)
(Ertsberg Stockwork Zone is unique Cu-Au deposit type in Ertsberg Mining District, with characteristics of both porphyry and skarn-type deposits)

Soebowo, E., Kantono & Y. Kumoro (1991)- Penyelidikan geologi dengan hubungannya dengan pemilihan trase jalan antara Wosiala Hingga Dombomi, Jaya Wijaya, Irian Jaya. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 541-552.
('Geological investigations related to the selection of road alignment between Wosiala to Dombomi, Jaya Wijaya, Irian Jaya'. Traverses New Guinea Limestone, ?Miocene clastics and U Cretaceous Kembelangan Fm clastics. Part of projected Wamena- Jayapura road (still not completed in 2018))

Soehaimi, A., M.T. Zen, H. Moechtar & U. Lumbanbatu (2001)- The tsunamigenic earthquake of 17 February 1996 and the seismicity of Papua. In: Proc. CCOP 37th Ann. Sess. Bangkok 2000, 2, Techn. Repts., p. 72-76.
(Magnitude 8 earthquake NE of Biak island related to thrusting of submarine reverse fault. Aftershocks indicating normal fault movements associated with fault along N shore of Biak island and left-lateral horizontal motions associated with Yapen Fault)

Soemarto K., B. (1986)- Geologi daerah Wamena- Irian Jaya. Pusat Penelitian Geoteknologi LIPI, 18p. *(Unpublished)*

Soeparman, S. & Budijono (1989)- Cu-skarn deposits at Ertsberg mine area, Irian Jaya. Proc. 17th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 359-374.

Soepriadi, S. (2012)- Morfotektonik daerah Enarotali, Kabupaten Paniai, Provinsi Papua. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-05, p.
('Morphotectonics of the Enarotali area, Paniai District, Papua Province')

Stehn, C.E. (1927)- Devonische Fossilien von Hollandisch-Neu-Guinea. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 5, p. 25-27.
('Devonian fossils from Netherlands New Guinea'. Brachiopods Atrypa reticularis var. desquamata and Orthotethes (Schuchertella) cf. umbraculum in sandstone pebbles from upper Setakwa River, collected by Heldring around 1910. Species known from Devonian of China, Queensland, etc.)

Stevens, C.W. (1999)- GPS studies of crustal deformation in eastern Indonesia and Papua New Guinea. Ph.D. Thesis, Rensselaer Polytechnic Institute, Troy, New York, p. 1-117. *(Unpublished)*

Stevens, C.W., R. McCaffrey, Y. Bock, J.F. Genrich, M. Pubellier & C. Subarya (2002)- Evidence for block rotations and basal shear in the worldôs fastest slipping continental shear zone in NW New Guinea. In: S.A. Stein & J.T. Freymueller (eds.) Plate Boundary Zones, American Geophys. Union (AGU) Geodyn. Ser. 30, p. 87-99.
(Birds Head moves 75-80 mm/year relative to N Australia, twice as fast as any other continental block. Left-lateral shear zone possibly as wide as 300 km. Despite high rate, rel. little seismic activity. Movement may be driven by basal drag of Pacific plate sliding beneath it)

Struckmeyer, H.I.M., M. Yeung & M.T. Bradshaw (1990)- Mesozoic palaeogeography of the northern margin of the Australian Plate and its implications for hydrocarbon exploration. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, First PNG Petroleum Convention, Port Moresby, p. 137-152.

Struckmeyer, H.I.M., M. Yeung & C.J. Pigram (1993)- Mesozoic to Cainozoic plate tectonic evolution and palaeogeography of the New Guinea region. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 261-290.
(Triassic- Cenozoic tectonic evolution of New Guinea area. Key proponent of restoration of 'Tasmanide' microcontinental blocks, like Birds Head and 'Australian' terranes in E Indonesia, to areas East of PNG in Paleozoic-Mesozoic time)

Subroto, E.A., H.L. Ong, H. Bagiyo & B. Priadi (1996)- Korelasi antara batuan induk dan minyak bumi di cekungan Salawati, Irian Jaya. Buletin Geologi (ITB) 26, 1, p. 65-72.
(Salawati Basin Kais Fm oils derived from Tertiary shallow marine (deltaic?) to non-marine source rocks. No evidence for Pre-Tertiary source)

Subroto, E.A. & B. Sapiie (2014)- Source rocks assessment in Bintuni Basin, Papua, Indonesia. Proc. 3rd Ann. Int. Conf. on Geological & Earth Sciences (GEOS 2014), GEOS14.42, p. 99.
(Bintuni Basin geochem analyses of sediments and crude oils show absence of oleanane biomarker, eliminating Tertiary sediments as source rock. Most sediments rich in organic matter and main constraint is maturity)

Sudaryanto, S. Indarto & E.T. Sumarnadi (1991)- Kajian bahan konstruksi jalan antara km 35 dan km 75 pada rencana pembuatan jalan tembus Wamena- Senggi- Jayapura, Irian Jaya. J. Riset Geologi Pertambangan (LIPI) 10, 1, p. 37-41.
('Study of road construction materials between km 35 and km 75 on planned Wamena- Senggi- Jayapura road, Irian Jaya'.)

Sudijono (2000)- Biostratigraphy and depositional environment of the limestone sequence in the drill hole LS-12, Ertsberg mining district, Irian Jaya. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 10, p. 1-25.
(M Eocene (Ta3)- earliest Miocene (basal Te5) LBF assemblages in Faumai-Sirga-Kais succession in well LS-12 well. Faumai Fm contains Lacazinella and Fasciolites, no Pellatispira. Sirga Fm quartz sandstone is barren, but is at base Oligocene, overlain by Rupelian (Tc) with Nummulites fichteli)

Sugiharto, S., B. Antoro & B. Bensaman (1998)- Mineralisasi skarn Cu-Au daerah Wawa, Teluk Etna, Irian Jaya, Indonesia. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 169-178.
('Cu-Au skarn mineralization in the Wawa area, Etna Bay, Irian Jaya')

Sukanta, U., S. Atmawinata & B.H. Harahap (1987)- Kendali tektonika dalam pengendapan di cekungan Bintuni, Irian Jaya. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 12p.
('Tectonics- controlled sedimentation in the Bintuni Basin, Irian Jaya')

Sukanta, U. & B.H. Harahap (1993)- The western Irian Jaya microcontinent- a review. J. Geologi Sumberdaya Mineral, 3, 19, p. 13-20.
(Review of concept of West Irian Jaya microcontinent (Birds Head- Misool- Birds Neck) of Pigram et al. (1983), as separate microcontinent that rifted off in Jurassic and was reattached to W Papua in Neogene. Here questioned due to too many similarities between stratigraphy of it and New Guinea mainland)

Sukanta, U. & B.H. Harahap (1996)- Tectonostratigraphy of the Mesozoic-Cenozoic Pacific Province succession in Northeastern Irian Jaya, Eastern Indonesia. Proc. Seminar Nasional Geoteknologi III: Dampak regionalisasi dan globalisasi industri dan perdagangan terhadap Lembaga Litbang, LIPI, Bandung, p. 518-538.

Sukanta, U. H. Panggabean, A.S. Hakim, S. Wiryosujono & Amiruddin (1995)- Paleozoic- Mesozoic stratigraphy and sedimentology of a siliciclastic-dominated unit, southern Central Range, Irian Jaya. In: D. Sukarna (ed.) Proc. Seminar The Irian Jaya geological potentials in the light of the Eastern Indonesia regional development program, Geol. Res. Dev. Centre, Bandung, Spec. Publ. 19, p. 1-24.

Sukanta, U., E. Rusmana, S. Wiryosujono, H. Samodra & Tasiran (1995)- Wave, tide and storm influenced muddy shelf: a special emphasis on the Cretaceous Piniya mudstone in the Timika sheet area, Irian Jaya. J. Geologi Sumberdaya Mineral 5, 49, p. 10-24.
(Outcrops of Late Cretaceous mudstones near Mile 74 along new Freeport roadcut N of Tembagapura. 800m thick section measured section with ~100m or more of E Cretaceous Woniwogi f-m sandstones at base, overlain by 600m of thin-bedded mudstones with virtually no sandstones (unlike Wamena and Kaimana-Steenkool sheets, where 10m thick sandstones are present. Interpreted as low energy shelf deposits, below storm wave base, on passive margin. Gradually coarsens upward into ~100m thick latest Cretaceous Ekmai Sst)

Sukanta, U., S. Wiryosujono & A.S. Hakim (1995)- Geologic map of the Wamena Quadrangle, Irian Jaya, scale 1: 250,000 (Quad 3311). Geol. Res. Dev. Centre (GRDC), Bandung.

Sulaeman, A., A. Sjapawi & S. Sosromihardjo (1990)- Frontier exploration in the Lengguru foldbelt, Irian Jaya, Indonesia. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 85-105.
(Pre- Mobil fieldwork overview of Lengguru foldbelt play potential)

Sumarko K.B. (1996)- Karakteristik geologi batubara di daerah aliran Sungai Titaka dan Sungai Tuko, cekungan Bintuni, Irian Jaya. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 294-312.
('Characteristics of the coal geology in the drainage area of Titaka and Tuko Rivers, Bintuni Basin, W Papua')

Sunyoto, W. (1999)- The nature and distribution of gold mineralisation in hole BO52-4 of the Wabu Skarn system, Irian Jaya. M.Sc. Thesis, James Cook University, Townsville, p. *(Unpublished)*

Sunyoto, W., G. de Jong & L. Soebari (2012)- Porphyry and skarn Cu-Au deposits and its associated Cu-Au bearing intrusions of the Ertsberg District, Papua, Indonesia. In: Proc. Banda and Eastern Sunda Arcs, MGEI Annual Convention, Malang 2012, p. 279-281. *(Extended Abstract; no figures)*
(Ertsberg district thee giant copper-gold deposits: Grasberg Porphyry, Ertsberg East Skarn System and Kucing Liar Skarn. Grasberg open pit mine peak production in 2000 was 1,200,000 t/day)

Sunyoto, W. & L Soebari (2005)- The discovery of the Wabu Ridge gold skarn, Papua. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI), Jakarta, Spec. Issue, p. 74-84.
(Same title published by O'Connor, Sunyoto & Soebari, 1999. Wabu Ridge gold skarn deposit identified in 1990 in Central Range, W Papua, 35km NNW of Grasberg porphyry deposit. Mineralisation in skarn along S boundaries of Late Miocene Pagane intrusive monzonite-diorite)

Supriatna, Y., J. Keggin, J.J. Chameau & Supriyono (2010)- High fold wide azimuth 3D OBC data to overcome noise and image through karst limestone: Bintuni Bay, Irian Jaya Barat. Proc. HAGI-SEG Int. Geosci. Conf., Bali 2010, IGCE10-OP-029, 6p.
(Seismic processing to improve imaging of Pre-Tertiary clastics below surface limestone. No geology)

Surono, S. Bachri, S. Bawono & D. Sukarna (1995)- Geological Map of the Sawai Sheet, Irian Jaya, 3214, 1:250,000 Scale. Geol. Res. Dev. Center, Bandung.
(Map sheet at E side of northernmost part of West Papua, around Mamberamo River/ delta. Mainly alluvial deposits. With major E-W trending anticline with mud volcanoes along Mamberamo Fault Zone, exposing (Late?) Miocene Wurui Fm limestone and Pliocene Kurudu Fm clastics)

Suseno, W.A., S. Zahnuarianto, Y.P. Wulandari & D. Miraza (2018)- The deeper potential in the Kepala Burung PSC, Salawati Basin: a review from current 3D seismic data. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-150-G, 15p.
(3D seismic surveys in Walio and Arar areas of Birds Head. Closures identified in deeper horizons below Kais carbonates, possibly Paleogene Waripi Fm or Jurassic Kembelangan Gp))

Sutadiwiria, Y., Y. Surtiati & A.H. Satyana (2006)- Reefal build ups within Miocene Kais Platform: roles of 3D seismic data in defining a subtle trap. Proc. Jakarta 2006 Int. Geosc. Conf. Exhib., Indon. Petroleum Assoc. (IPA), Jakarta, 06-INT-09, 3p.
(3D seismic significant in recognition of 'Intra-Kais reefal build ups', like Matoa-20 well. Argo 1 well (2005) successful test)

Sutarto, W. Sunyoto, S. Widodo, L. Soebari, Sutanto, H. Setyadi & P. Wiguna (2008)- Sekuen paragenesa dan zonasi skarn pada endapan bijih Big Gossan Distrik Ertsberg, Timika, Papua. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 798-812.
('Paragenetic sequence and zonation of the Big Gossan skarn ore deposit of the Ertsberg District, Timika, Papua'. Big Gossan high-grade high copper deposit with reserves of 52.7 MM ton with average Cu content of 2.31%, Au 1.1 gr /ton and Ag 14.75 gr/ ton. Tabular ore body >1 km long, >500m high and up to 200m wide)

Sutriyono, E. (1999)- Structure and thermochronology of the Bird's Head of Irian Jaya, Indonesia. Ph.D. Thesis La Trobe University, Melbourne, p. 1-321. *(Unpublished)*
(Multiple scenarios for structure and evolution of Lengguru Fold Belt. Early Paleozoic detrital zircons in Paleocene Waripi section of Bintuni Bay suggest attachment to Australian continent (but could also be from Birds Head Kemum terrane?; JTvG)

Sutriyono, E. (2003)- Provenance study and tectonic implications for rock sequences in the Lengguru fold belt of Western Papua: constraints from zircon fission track thermochronology. Forum Teknik 27, p. 121-131.
(online at: http://i-lib.ugm.ac.id/jurnal/detail.php?dataId=5789)
(Zircon fission track thermochronology study shows Triassic-Pliocene source terrains for W Papua clastics. Pliocene Buru Fm in Lengguru Fold Belt abundant Paleogene (~55 Ma) volcanic zircons, possibly derived from erosion of Weyland Terrane, which may be part of Paleogene 'Caroline Arc', eroding after Late Miocene collision with W Papua microcontinent. Main compression 12- 4 Ma, followed by transpression in Central Range, but continued compression in frontal Lengguru FB (Buru anticline, etc.). U Cretaceous Ekmai sst in E Lengguru FB has Triassic age zircons, suggesting erosion of Triassic igneous rocks at that time)

Sutriyono, E. (2005)- Thermochronological constraints on cooling and uplift episodes in the Lengguru fold belt of Western Papua. Jurnal Teknologi Mineral (ITB) 12, 2, p. 65-75.
(Apatite fission track data from Triassic- Lower Jurassic in Lengguru foldbelt suggest maximum T of ~130°C, and ~7 km pre-deformation burial due to deposition of thick Tertiary carbonates. Sequence underwent ~50°-60°C cooling at 5 Ma, consistent with ~4 km unroofing in response to uplift, due to collision with Paleogene volcanic arc in Late Miocene-Pliocene. Upper Miocene-Pleistocene provenance terrain cooled through partial annealing isotherm to ~60°C in E Miocene. Protolith then buried below 3 km and exposed to paleotemperature of ~110°C in M-L Miocene prior to uplift in last 4 My)

Sutriyono, E. (2006)- Hydrocarbons and thermal evolution of the Bintuni basin of Western Papua, assessed by apatite fission track study. Media Teknik (UGM) 28, 1, p. 13-19.

(AFT data from Bintuni basin with ~9 km Permian- Recent sediments, gently folded by Lengguru foldbelt deformation. U Miocene-Pleistocene Steenkool Fm 4-5 km thick, with paleotemperatures below 85°C, Triassic-Lower Jurassic Tipuma Fm max. paleo-T ~110°C. Rocks at maximum temperature today. Exposure of Mesozoic rocks to high paleotemperatures due to Late Cretaceous-Pleistocene burial. Deeper sequences in basin not buried as deeply, allowing preservation of reservoir porosity. Gas generation/ migration for 30 TCF Tangguh field in last 5 My, with kitchen area ~50 km to E)

Sutriyono, E. (2008)- Accretion history of Paleogene arc terranes in Western Papua: evidence from Apatite Fission Track data. J. Ilmiah Magister Teknik Geologi (UPN) 1, 2, 13p.
(online at: http://jurnal.upnyk.ac.id/index.php/mtg/article/view/172)
(Apatite Fission Track (AFT) data from Tosem and Tamrau blocks in N part of Birds Head. Tosem Block (collided with Birds Head microcontinent at ~5 Ma) with Oligocene Mandi island arc Volcanics(K-Ar ages mainly Oligocene, 32-11 Ma; probably part of Auwewa Paleogene arc. Lembai Diorite K/Ar age ~16 Ma), showing effects of Late Miocene collision of Tosem Paleogene arc and Tamrau continental block. Tosem Block: (1) cooling in E Miocene at ~18 Ma; (2) Late Miocene (~8 Ma) cooling, due to uplift and denudation after collision with Tamrau terrane. M Miocene Tamrau Block Moon volcanics rapid cooling caused by uplift and denudation in Late Miocene at ~5 Ma, also resulting from collision with Tosem island arc)

Sutriyono, E. & K.C. Hill (2002)- Structure and hydrocarbon prospectivity of the Lengguru Fold Belt, Irian Jaya. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 319-334.
(Restored cross-sections Lengguru foldbelt. Major uplift and cooling of LFB at ~5 Ma; tight Woniwogi sst at Kamakawala 1 may have been as deep as 6.3 km in Late Miocene, followed by ~4km of E Pliocene uplift, downgrading hydrocarbon potential of LFB)

Sutriyono, E., P.B. O' Sullivan & K.C. Hill (1997)- Thermochronology and tectonics of the Bird's Head Region, Irian Jaya: apatite fission track constraints. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australia Conf., Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 285-299.
(AFT analyses in N Birds Head Tosem Block shows rapid cooling of dacite/diorite in E Miocene and Late Miocene cooling of granite-syenite intrusions, the latter probable response to uplift/obduction of Tosem Block onto N Birds Head. Also AFTT results from Tarof 2 and E Lengguru)

Suwarna, N. & Y. Noya (1995)- Geological map of the Jayapura (Peg. Cyclops) Quadrangle, Irian Jaya, scale 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.
(Common mafic-ultramafic rocks, all in tectonic contact with other units. Cycloops metamorphic Gp includes schist, gneiss, amphibolite, marble, some with glaucophane, E Miocene radiometric ages of schists associated with ophiolites in Cyclops Mts: 20.6±4 Ma and 21.4±4 Ma. Middle Oligocene age of emplacement of ultramafic rocks(?). Ultramafics probably overlain by Late Oligocene- E Miocene Nubai Fm limestone (with Spiroclypeus) in E part Cycloops Mts, lower part interfingering with ?Oligocene Auwewa Fm basaltic-andesitic arc volcanics, upper part interfingers with M-L Miocene turbiditic and volcanoclastic marine Makats Fm (with Miogypsina). Pleistocene Jayapura Fm limestones uplifted over 700m)

Syaeful, H., I.G. Sukadana & A. Sumaryanto (2013)- Geological setting and geochemical approach for Uranium exploration in Papua. In: Papua & Maluku Resources, Proc. Indonesian Soc. Econ. Geol. (MGEI) Ann. Conv., Bali, p. 159-170.
(online at: http://repo-nkm.batan.go.id/963/1/PROSIDING_SYAEFUL_MGEI_2013.pdf)
(West Papua relatively unexplored for uranium. Some uranium anomalies in Tipuma Fm sandstones, Quaternary Mokmer Fm carbonates and Oligocene Wainukendi Fm)

Syafron, E., R. Mardani, S.W. Susilo & R. Anshori (2008)- Hydrocarbon prospectivity of the Pre-Tertiary interval in the offshore Berau Area, Birdõs Head, Papua. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-015, 10p.
(In Berau basin W of Tangguh, all petroleum system elements are working. Biggest risk maturity level of source rock. Primary reservoir target Jurassic transgressive sandstones, equivalent to reservoir in Tangguh fields, but thinner and more distal marine sands penetrated in wells offshore)

Syam, B., A.H. Hamdani, Y. Yuniardi & N. Djumhana (2008)- Oil to source correlation for detect hydrocarbon origin and migration on offshore Southwest Salawati Basin. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-SG-009, 11p.
(Oils from low oxygen marine source rocks in offshore Salawati basin well OT4 tied to Lower Klasafet Fm source rocks in onshore Salawati wells Iw-1 and Im33. OK1 well oil appears to be different. Offshore oils originated from Klasafet Fm source to N)

Talent, J.A., W.N. Berry & A.J. Boucot (1975)- Correlation of the Silurian rocks of Australia, New Zealand, and New Guinea. Geol. Soc. America (GSA), Spec. Paper 150, p. 1-108.

Talent, J., R. Mawson & A. Simpson (2003)- Silurian of Australia and New Guinea: biostratigraphic correlations and paleogeography. In: E. Landing & M.E. Johnson (eds.) Silurian lands and seas-paleogeography outside of Laurentia, Bull. New York State Museum 493, p. 181-220.

Teas, P.A., J. Decker, D. Orange & P. Baillie (2009)- New insight into structure and tectonics of the Seram Trough from SeaSeepTM high resolution bathymetry. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA-G-091, p. 515-532.
(High resolution bathymetry and seismic over active convergent deformation system in Seram Trough. Described as zone of young thrusting within Australian continental crustal block between Birds Head and Seram Island. Offshore extension of New Guinea Tarera-Aiduna fault zone is readily apparent)

Teichert, C. (1928)- Nachweis Palaeozoischer Schichten von Sudwest Neu-Guinea. Nova Guinea, Resultats des expeditions scientifiques Neerlandaise a la Nouvelle-Guinee, 6 (Geologie, 3), p. 71-92.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:000122467:pdf)
('Report of Paleozoic beds from SW New Guinea'. First record of shallow marine Paleozoic bes, incl. dark Silurian limestone with tabulate coral Halysites from float in Upper Lorentz/ Noordwest Rivers, S of Wilhelmina Peak in Central Range, West Papua. Also Devonian sandstones with Spirifer, Chonetes and other brachiopods, dark Permo-Carboniferous limestones with Martinia, Murchisonia, Orthoceras, etc. Material collected by Van Nouhuys during Lorentz 1909-1910 South New Guinea expedition)

Terpstra, H. (1939)- Resultaten van een goud exploratie in het stroomgebied van de Lorentz en Eilanden Rivier in Nederlands Nieuw Guinea. De Ingenieur in Nederlandsch-Indie (IV), 6, 1, p. 1-6.
('Results of gold exploration With small map)

Terpstra, H. (1941)- Opmerkingen naar aanleiding van ir. P.F. de Groot's "Kort Verslag over de werkzaamheden van de IIIde Expeditie der N.V. Mijnbouw Maatschappij Nederlandsch Nieuw-Guinea in 1938 en 1939". De Ingenieur in Nederlandsch-Indie (IV) 8, 1, p. 1-4.
(Critical review of De Groot (1940) report on result of mineral exploration expedition by Terpstra who led earlier part of this campaign)

Thery, J.M., M. Pubellier, B. Thery, J. Butterlin, A. Blondeau & C.G. Adams (1999)- Importance of active tectonics during karst formation. A Middle Eocene to Pleistocene example of the Lina Mountains (Irian Jaya, Indonesia). Geodinamica Acta 12, 3-4, p. 213-221.
(Lina Mts at E side of Birds Head Ayumara Plateau, with Pleistocene karsting in Eocene Faumai Fm platform carbonate. ~250m of Lacazinella-bearing M-L Eocene on Late Maastrichtian, overlain by>50m of Oligocene Sirga sst.)

Thirnbeck, M.R. (2001)- The Sentani and Siduarsi nickel-cobalt laterite deposits, Northeast Irian Jaya, Indonesia. In: G. Hancock (ed.) Proc. PNG Geology, exploration and mining Conference, Port Moresby 2001, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 245-254.
(Results of mineral exploration in nickel-cobalt laterite deposits by PT Pacific Nikkel Indonesia in 1970. Developed on serpentinized harzburgites exposed along S and W flanks of Cyclops Range, NE West Papua. Seven nickel-cobalt laterite deposits in Sentani COW. Cretaceous? Basement complex of ultramafic, basic and

metamorphic rocks, overlain by Pleistocene? Hollandia/ Jayapura Fm massive, chalky, coralline limestone (now at ~700m above sea level))

Thirnbeck, M.R. (2004)- A search for gold in Indonesian New Guinea. In: Proc. PACRIM 2004 Conf., Hi tech and world competitive mineral success stories around the Pacific Rim, Adelaide 2004, Australasian Inst. Mining and Metallurgy (AusIMM), Parkville, p. 391-399.
(Overview of twelve 1994-1999 gold exploration programs North of Central Range, W Papua)

Tikku, A.A., C. Subarya, Masturyono, R. McCaffrey & J. Genrich (2006)- Motion of the Bird's Head Block and co-seismic deformation from GPS data. American Geophys. Union (AGU) Meeting, Baltimore 2006 *(Abstract only)*
(Previous analysis of GPS data collected between 1991 and 1997 revealed rotation of Bird's Head Block of W New Guinea and high shear rates between Pacific and Australian plates accommodated within block. Additional GPS data collected between 1992-2005 suggest Birds Head moving ~100 mm/yr WSW relative to Australia. Cenderawasih Bay area more SW movement, suggesting separate 'East Birds Head Plate' that accommodates shear between Birds Head block and Australian plate)

Tjia, H.D. (1973)- Irian fault zone and Sorong melange, Indonesia. Sains Malaysiana 2, 1, p. 13-30.

Tjia, H.D., R. Hadian, A.R. Sumailani & A. Martono (1980)- The nature of Umsini volcano, Irian Jaya, Indonesia. Bull. Volcanology 43, 3, p. 595-600.
(Mount Umsini at N end of Arfak Range in NE Birds Head of W Papua listed as active volcano. Consists of folded turbidites, mainly dipping 32° to ENE, with greywacke sands composed mainly of mafic volcanic debris, and volcano-clastic rocks. Intruded by E Oligocene gabbroic, occasionally dioritic, rocks (K-Ar age 33 Ma). Absence of volcanic activity, crater relicts and general morphology and lithology suggest Mount Umsini not an active volcano (part of Auwewa Oligocene intra-oceanic arc?; JTvG))

Tonggiroh, A. (2014)- Indikasi tipe endapan emas porfiri daerah Mamberamo, Provinsi Papua. Pros. 2014 Seminar Penelitian Teknologi Terapan 2014, 8, Hasanuddin University, Makassar, TG1, p. 1-6.
('Indications of a porphyry-type gold deposit in the Mamberamo area, Papua Province')

Tonny, S.A. & H. Bagiyo (1993)- New insight on tectonic setting and hydrocarbon potential of Cenderawasih Bay and its adjacent areas. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 664-677.
(Cenderawasih Bay underlain by deformed oceanic and volcanic rock basement. Pull-apart basin between Sorong and Tarera-Aiduna fault zones. Sediment-fill similar to Miocene- Recent Mamberamo Basin, where there are hydrocarbon indications)

Trautman, M.C. (2013)- Hidden intrusions and molybdenite mineralization beneath the Kucing Liar skarn, Ertsberg-Grasberg mining district, Papua, Indonesia. M.Sc. Thesis University of Texas, Austin, p. 1-335.
(online at: http://repositories.lib.utexas.edu/handle/2152/21903)
(Ertsberg-Grasberg Cu-Au Mining District of W Papua hosts Ertsberg Skarn, Grasberg porphyry and several other orebodies. Two 1700m cores beneath Kucing Liar ore skarn and Grasberg Complex contain high concentrations of vein and disseminated molybdenite. Core KL98-10-22 intersects two previously unencountered intrusions: (1) "Tertiary intrusion Kucing Liar" (Tikl; 3.28 Ma) and (2) "Tertiary Pliocene intrusion" (Tpi; 3.18 Ma). Magmatic zircons ages ~3.4 Ma (Dalam Andesite) and 2.8 Ma (Ertsberg intrusion). Inherited zircon cores indicate Precambrian basement (mostly Proterozoic;mainly ~1650-2400 Ma; some grains at ~2500 Ma). Deep Molybdenite veining postdates stockwork veining (~3 Ma Re-Os ages))

Tregoning, P. & A. Gorbatov (2004)- Evidence for active subduction at the New Guinea Trench. Geophysical Research Letters 31, L13608, 4p.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2004GL020190)
(Seismic tomography shows SW-ward subduction along New Guinea Trench in PNG and Indonesia. High-velocity zone down to ~300km, with dip angle gradually increasing from ~10° at ~143°E to 30° at ~136°E. Length of ~650 km of subducted slab under New Guinea suggests subduction started at ~9 Ma)

Turner, S., J.M.J. Vergoossen & G.C. Young (1995)- Fish microfossils from Irian Jaya. Mem. Assoc. Australasian Palaeontologists (AAP) 18, p. 165-178.
(Late Silurian (M Ludlow) thelodonts and acanthodians micro-remains from Lorenz River in eastern W Papua and Kemum Fm of N part of Birds Head are first Paleozoic fish fossils from W Papua. Most forms comparable to Late Silurian- earliest Devonian N Hemisphere forms (Burrow et al. 2010: Silurian thelodont scales originally referred by Turner et al. (1995) to Thelodus trilobatus might be better placed in Praetrilogania))

Ubaghs, J.G.H. (1946)- Preliminary report on a geological reconnaissance in the area of the Cycloops Mountains, New Guinea. Geological Survey Report, p. *(Unpublished)*

Ubaghs, J.G.H. (1955)- Mineral deposits in the Cyclops Mountains (Netherlands New Guinea). Nova Guinea, new ser. 6, 1, p. 167-175.
(Indications of chromite, nickel-cobalt, iron laterite, talc, asbestos, etc., all associated with peridote-serpentinite in Cyclops Mountains of NE part of West Papua. Area surveyed in 1949)

Umbach, K.E. & D. Klepacki (1994)- A triangle zone along the active thrust front in southern Irian Jaya. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 305-321.
(Seismic data and surface geology data from central segment of New Guinea Fold and Thrust belt show complex, Alberta-style thrust front. S-propagating thrust belt results from active oblique convergence of ~120mm/yr between Australian and Pacific plates. Stratigraphy in thrust front Mesozoic clastics overlain by Miocene carbonate and marl, overlain by thick Upper Miocene- Recent clastic foredeep fill. Three detachment horizons in U Cretaceous, M Miocene and uppermost Miocene create triangle zone duplex structure)

Untung, M. (1982)- Gravity and magnetic study of the Kepala Burung region, Irian Jaya. Ph.D. Thesis University of New England, NSW, Australia, p. *(Unpublished)*

Untung, M. (1989)- The isostatic state of the crust in the western portion of Irian Jaya. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, Indon. Assoc. Geol. (IAGI), p. 43-59.
(Strong gravity gradients along main transform zones like Sorong fault. High negative anomaly over Bintuni basin probably reflects flexural loading of lithosphere. Central Range also negative anomalies)

Untung, M., Sardjono, I. Budiman, J. Nasution, E. Mirnanda, E.G. Sirodj & L.F. Henage (1995)- Hydrocarbon prospect mapping using balanced cross-sections and gravity modelling, Onin and Kumawa Peninsulas, Irian Jaya, Indonesia. In: G.H. Teh (ed.) Southeast Asian basins; oil and gas for the 21st century. Proc. AAPG-GSM Int. Conf. 1994, Bull. Geol. Soc. Malaysia 37, p. 445-470.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a31.pdf)
(Geology mapping and acquisition of gravity data along 26 traverses (650 km) across Onin and Kumawa peninsulas. Predominant outcrop is karstified New Guinea Limestone, up to 2150m thick. Onin and Kumawa peninsulas lie at margin of Jurassic rift faulting, inverted during Pliocene-Pleistocene collision of Australian Plate and Banda arc. Gravity data indicate basement at depth of ~3 km in Onin area, ~6 km in Bomberai area)

Untung, M., Sardjono, I. Budiman, J. Nasution, E. Mirnanda, L.F. Henage & E.G. Sirodj (1996)- Balanced cross-section and gravity modelling for hydrocarbon prospect mapping in the Onin and Kumawa Peninsulas, Irian Jaya, Indonesia. Bull. Geol. Res. Dev. Centre 19, p. 1-32.
(Same paper as above)

Urban, L. & M.L. Allen (1977)- Vitrinite reflectance as an indicator of thermal alteration within Paleozoic and Mesozoic sediments from the Phillips Petroleum Company ASM-1X well, Arafura Sea. Palynology 1, p. 19-26.
(Also in GEOSEA 1975 conference volume, p. 103-108. Palynology of Late Permian- Early Cretaceous section. Marine Early Cretaceous unconformable on Early Triassic non-marine sediments. Lack of liquid hydrocarbon source. Max. maturity in early oil window (Rv ~0.60-0.70%))

Utomo, W., M. Bagus K., D. Witjaksono, I. Prasetyo, Y. Wijaya et al. (2015)- The geology of the Mogoi Wasian fields, Bintuni Basin, West Papua. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-174, 5p.
(Study of small, shallow Mogoi-Wasian field in Bintuni Basin, discovered by NNGPM in 1941, with cum. production of 7.9 MMBO. M Miocene Kais Limestone reservoir generally tight, with fractures. Seal Pliocene Steenkool shale. Oil sourced from marine Jurassic- Cretaceous sediments of Jass/ Kembelangan Group. Four reservoir facies. Porosity generally secondary. 1992 British Gas Mogoi Deep 1 well discovered significant gas in Pre-Tertiary)

Valenta, W.T. (1979)- Seismic modelling of porosity distribution in a Miocene reef, Salawati Island, Indonesia. Proc. 8th Ann. Conv. Indon. Petroleum Conv. (IPA), Jakarta, p. 159-176.

Valk, W. (1960)- The mining potentials of Netherlands New Guinea. Nova Guinea, N.S., 10, Geology 1, 3, p. 5-12.

Valk, W. (1960)- Notes on coal in Netherlands New Guinea. Nova Guinea, Geology, 1-3, p. 1-4.
(Reported coal seams near Horna not Eocene, but extensively faulted Pliocene lignite seams, unsuitable for exploitation. Similar unfavorable results for other reported occurrences)

Valk, W. (1962)- Geology of West Amberbaken (New Guinea). Geologie en Mijnbouw 41, 9, p. 384-390.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0OVpzS0VvNXlqZWc/view)
(N coast mountain range of Birds Head dominated by andesites, part of E-W trending, 120x30 km andesite province, probably >1000m thick and dipping ~20° N. Associated brackish-fresh water shales probably earliest Miocene (Te) age. Further W similar shales overlain by Tf1- E-M Miocene limestones. Mio-Pliocene or Pliocene folding event)

Valk, W. (1962)- Geologische verkenning omgeving Ilaga. Bureau Mines Netherlands New Guinea, Report 25, 6p.
(Brief report on geological reconnaissance of the Ilaga region, Central Range, W Papua)

Valk, W., B. Broos, A. Doeve et al. (1961)- Geologische verkenning Bokondini-Kelila-Pyramide, Wamena-Koerima. Bureau Mines Netherlands New Guinea, Report 23, p.
(Geological reconnaissance of area around Wamena Grand Valley, Central Range, West Papua)

Van Bemmelen, R.W. (1939)- The geotectonic structure of New Guinea. De Ingenieur in Nederlandsch-Indie (IV), 6, 2, p. 17-27.
(Review of tectonics of New Guinea island. Not much new)

Van Bemmelen, R.W. (1940)- Verslag van een petrographisch onderzoek der gesteente collectie van het Boven Digoel gebied, verzameld tijdens de derde expeditie der N.V. Mijnbouw Maatschappij Nederlandsch Nieuw Guinea (1938-1939). De Ingenieur in Nederlandsch-Indie (IV) 7, 10, p. 137-145.
('Report of petrographic analysis of a rock collection from the Upper Digul area, collected by Third Netherlands New Guinea Mining Company expedition in 1938-1939, W Papua'. Mainly pebbles from rivers. Sediments include E Miocene and Pliocene limestones. Also andesites, granodiorites, etc.)

Van Bemmelen, R.W. (1953)- Geologie. In: W.C. Klein (ed.) Nieuw Guinea, de ontwikkeling op economisch, sociaal en cultureel gebied in Nederlands en Australisch Nieuw Guinea, I, Staatsdrukkerij (Dutch Govt. Printing Office, The Hague, p. 259-284.
(Rel. brief review of West Papua geology, as still poorly known around 1951. New Guinea still subjected to active orogenic processes, but active volcanoes absent in West Papua)

Van Bemmelen, R.W. (1953)- Mijnbouw. In: W.C. Klein (ed.) Nieuw Guinea, de ontwikkeling op economisch, sociaal en cultureel gebied in Nederlands en Australisch Nieuw Guinea, I, Staatsdrukkerij (Dutch Govt. Printing Office, The Hague, p. 285-310.

(Review of 1953 status of exploration for gold, coal, nickel/ cobalt, etc. in West Papua. Unlike PNG, no commercialy viable deposits identified yet. Horna coal field of Birds Head only potentially commercial coal field of New Guinea (For review of petroleum in W Papua see Gheyselinck, 1953))

Van den Bold, W.A. (1942)- Some rocks from the course of the Digoel, the Oewi-Merah and the Eilanden River (South New Guinea). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam 45, 8, p. 850-854.
(online at: www.dwc.knaw.nl/DL/publications/PU00017831.pdf)
(Pebbles of igneous rocks collected in Digul, Oewi-Merah (tributary of Digoel) and Eilanden rivers in S New Guinea by Heldring in 1909 include augite granite, augite monzonite, diorite, gabbro. Probably all of Neogene age. No illustrations)

Van den Boogaard, M. (1990)- A Ludlow conodont fauna from Irian Jaya (Indonesia). Scripta Geologica 92, p. 1-27.
(Online at: www.repository.naturalis.nl/document/148767)
(Silurian conodont faunas from calcareous quartz sandstone boulder from Lorentz (or Noord) River, West Papua, collected by Heldring in 1906 S of Camp Alkmaar. Dominated by forms also known from SE Australia and Yunnan (Coryssognathus dentatus, Ozarkodina crispa, Ozarkodina confluens). Age probably Late Ludlowian. Rock initially described by Martin (1911), who noticed small trilobite fragments)

Van der Fliert, J.G., H. Graven & J.J. Hermes (1980)- On stratigraphic anomalies associated with major transcurrent faulting. Eclogae Geol. Helvetiae 73, 1, p. 223-237.
(online at: http://dx.doi.org/10.5169/seals-164951)
(Comparison of two major transcurrent fault systems (Betic Fault System of S Spain, Sorong Fault zone of Birds Head, W Papua). Both accompanied by tectonic mega-breccia with blocks of exotic material, up to 10's of km2 in size. Fault zones subparallel to main orogen and horizontal displacements in late stage of orogenic history)

Van der Goes, H.D.A. & J.H. Croockewit (1862)- Nieuw Guinea, ethnographisch en natuurkundig onderzocht en beschreven in 1858 door een Nederlandsch Indische Commissie. Bijdragen Kon. Instituut Taal Land en Volkenkunde van Nederlandsch Indie, Frederik Muller, Amsterdam, p. 1-233.
(online at: https://www.jstor.org/stable/pdf/25733864.pdf)

Van der Wegen, G. (1962)- Geologische verkenning van de Baliem kloof. Bureau Mines Netherlands New Guinea, Report 31, p. *(Unpublished)*
(First geological reconnaissance of Baliem Gorge, Central Range)

Van der Wegen, G. (1963)- De geologie van het eiland Waigeo (Nieuw Guinea). Geologie en Mijnbouw 42, p. 3-12.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0ZGVQOF9iMkdUMlE/view)
('The geology of Waigeo island (W Papua)'. Ultrabasic rocks present in narrow belt along N and W coasts, overlain by spilites and keratophyres, pelagic limestones, pelites, radiolarites and chert, all strongly folded. Unconformably overlain by Late Oligocene- E Miocene Batanta Fm, dominated by andesitic and basaltic volcanics in lower part, and greywackes in upper part. Possible uncomformity within Batanta Fm: Lower Te (Latest Oligocene) overlain (unconformably?; with pebbles of andesite and Batanta Fm at base) by >1450m of Upper Tf-Tg (M Miocene-Pliocene) carbonates of Waigeo Fm)

Van der Wegen, G. (1966)- Contribution of the Bureau of Mines to the geology of the Central mountains of W. New Guinea. Geologie en Mijnbouw 45, 8, p. 249-261.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0eEFCSU4yM0ExaDQ/view)
(Summary of geological activities of the short-lived Bureau of Mines in Hollandia (Jayapura) from 1959 until transfer of Dutch administration of West Papua to United Nations in 1962. Reconnaissance surveys in Central Range, upper reaches of Eilanden River in C Range foreland and Upper Kau-Birim area of Star Mountains. No figures/maps)

Van der Wegen, G. (1971)- Metamorphic rocks in West Irian. Scripta Geologica 1, p. 1-13.

(Online at: www.repository.naturalis.nl/document/148792)
(Metamorphics along N edge of Central range of W Irian associated with ophiolitic suite basic- ultrabasic rocks, and indicating high Pressure- low Temperature regional metamorphism. Metamorphic rocks at Australian-side of Papuan Geosyncline associated with medium- acidic intrusives)

Van der Wegen, G., J.H.A. Doeve et al. (1962)- Geologische verkenning Katoepa- Kangeh Rivier. Bureau Mines Netherlands New Guinea, Report 27, p. *(Unpublished)*

Van de Waard, R. (1962)- Geologische verkenning Ilaga-Mulia-Sinak. Bureau Mines Netherlands New Guinea, Report 28, p. *(Unpublished)*
('Geological reconnaissance of Ilaga-Mulia- Sinak', W part of Central Range)

Van Dun, F.W.P. (1962)- A survey of the Efar-Sidoas Mountain ridge in northern Netherlands New Guinea. Geologie en Mijnbouw 41, 9, p. 391-395.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0b1R5QWVwRUtCaUU/view)
(Geologic reconnaissance in Efar-Sidoas ridge, 50 km SE of Sarmi on N coast of W Papua, shows ridge composed of folded Neogene sediments with core of basic igneous rocks and pre-Tertiary schists (but much less than suggested on Zwierzycki (1921) map)

Van Es, E. (1959)- Korte toelichting bij de fotogeologische kaart van het Westelijk Centrale Bergland van Nederlands Nieuw Guinea. Report Stichting Geologisch Onderzoek Nederlands Nieuw Guinea, 18, p. 1-13.
('Brief explanation of the photo-geologic map of the Western Central Range of Netherlands New Guinea'. Unpublished?)

Van Gelder, J.K. (1912)- Verslag omtrent eene geologische verkenning van de Mamberamo-Rivier op Nieuw-Guinea. Jaarboek Mijnwezen Nederlandsch Oost-Indie 39 (1910), Verhandelingen, p. 87-112.
(Geological reconnaissance Mamberano and Lower Idenburg Rivers during 1909 'military expedition'. Mostly alluvial deposits, with folded Young Tertiary clastics with andesite intrusions in Van Rees mountains. Possibly 5 km thick Young Tertiary stratigraphic section along Van Gelder River, from which also ?Old Tertiary limestone and float of Cretaceous fossils were reported. Van Rees Mts- Meervlakte transition structurally complex fault zone. Toradja River (tributary of Mamberamo River), at foot of Central Range, with only metamorphic and ultrabasic rocks)

Van Gorsel, J.T. (2012)- Middle Jurassic ammonites from the Cendrawasih Bay coast and North Lengguru fold-belt, West Papua: implications of a óforgottenô 1913 paper. Berita Sedimentologi 23, p. 35-41.
(online at: www.iagi.or.id/fosi/..)
(Occurrences of Middle Jurassic (Bathonian-Callovian) bathyal shales with 'Macrocephalites' ammonite faunas as reported from 'Birds Neck' by Boehm (1913) and Gerth (1927) represent deep marine Middle Jurassic facies. This suggests an eastern limit for gas-productive Middle Jurassic sandstone reservoirs of Bintuni Bay and thus have significant negative implications for the potential of Mesozoic hydrocarbon plays in Cenderawasih Bay)

Van Nes, E. (1954)- Exploration of the nickel, cobalt and chrome deposits in the Cyclops area. The First Delft Nieuw Guinea Expedition 1952, Delft Technical University, Report, p. *(Unpublished)*

Van Nort, S.D., G.W. Atwood, T.B. Collinson, D.C. Flint & D.R. Potter (1991)- Geology and mineralization of the Grasberg copper-gold deposit, Irian Jaya, Indonesia. Mining Engineering 43, p. 300-303.

Van Straelen (1928)- Crustaces decapodes subfossiles de Merauke (Nouvelle Guinee). Nova Guinea 6 (Geology), 3, p. 63-69.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:000122467:pdf)
('Subfossil decapod crustaceans from Merauke (New Guinea)'. Crab fossils collected by natives and handed to by 1907 Lorentz Expedition from Merauke at S coast (Thalassina,Scylla), probably of Quaternary age)

Van Rossum, B. (1958)- Geological survey of the Central Digoel hinterland. Nederlands Nieuw Guinea

Petroleum Maatschappij (NNGPM), Geol. Rept. 460, p. *(Unpublished)*

Vera, R. (2009)- Characterization of Roabiba Sandstone reservoir in Bintuni Field, Papua. M.Sc. Thesis, Texas A&M University, College Station, p. 1-114.
(online at: www.repository.tamu.edu/bitstream/handle/...1/.../VERA-THESIS.pdf?).

Verhofstad, J. (1967)- Glaucophanitic stone implements from West New Guinea (West Irian). Geologie en Mijnbouw 45, 9, p. 291-300.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0cXk1WDdFNjltdnc/view)
(Stone tools used by Dani tribes from C Highlands of W Papua all hard, dense, fine-grained, metamorphic glaucophanites with epidote, glaucophane and lawsonite. Two main mineral assemblages: (1) epidote-glaucophane (crossite)- lawsonite- sphene and (2) quartz- glaucophane. Metamorphics appear to be derived from mafic rocks; quartz-rich assemblages may have originated from impure siliceous sediment. Rocks believed to come from outcrops in belt of low-grade metamorphic and basic to ultrabasic igneous rocks along N edge of Central Ranges, and belong to lawsonite-pumpellyite-epidote-glaucophane metamorphic subfacies)

Verhofstad, J. (1992)- Herinneringen van een veldgeoloog (2) : Simpang kanan-kiri (voormalig Ned. Nieuw-Guinea). GEA 1992, 4, p. 119-121.
(online at: http://natuurtijdschriften.nl/record/414906)

Verhofstad, J. (1993)- Herinneringen van een veldgeoloog (4): Bokondini (voormalig Ned. Nieuw-Guinea). GEA 1993, 4, p. 134-137.
(online at: http://natuurtijdschriften.nl/download?type=document&docid=414941)
('Memories of a field geologist (4): Bokindini (former Netherlands New Guinea'. Brief review of field mapping project of West Papua Central Range in 1961 by the 'Bureau of Mines of Netherlands New Guinea. Government post Bokondini used as base. Local Dani tribes used stone tools made of glaucophane schist, which came from areas to North)

Verhofstad, J., H. de Herdt et al. (1961)- Geologische verkenning Swart Vallei. Bureau Mines Netherlands New Guinea, Report 26, 7p. *(Unpublished)*
('Geological reconnaissance of the Swart valley', Central Range)

Verhofstad, J., D. Kerrebijn et al. (1961)- Geologische verkenning Swart Vallei- Bokondini- Archbold Meer. Bureau Mines Netherlands New Guinea, Report 24, 14p. *(Unpublished)*
('Geological reconnaissance Swart Valley- Bokondini- Archbold Lake')

Verstappen, H.Th. (1952)- Luchtfotostudies over het centrale bergland van Nederlands Nieuw Guinea- part 1. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 69, p. 336-362.
(Air-photo studies of W New Guinea Central Range- part 1)

Verstappen, H.Th. (1952)- Luchtfotostudies over het centrale bergland van Nederlands Nieuw Guinea- part 2. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 69, p. 425-431.
(Air-photo studies of W New Guinea Central Range- part 2)

Verstappen, H.Th. (1960)- Geomorphological observations on the North Moluccan- Northern Vogelkop island arcs. Nova Guinea, Geol. 1-3, p. 13-37.
(Following peneplanation of pre-upper Miocene volcanic rocks, on whose surfaces Miocene conglomerates and limestones were deposited, crustal movements formed volcanic and non-volcanic island arc with intervening deep. Volcanic arc extends from Morotai through Halmahera to N Vogelkop and non- volcanic arc from NE and SE Halmahera through Gebe toward Waigeo. Present-day coastal features product of postglacial eustatic and younger tectonic activity)

Verstappen, H.Th. (1964)- Geomorphology of the Star Mountains. Nova Guinea (Geology) 5, p. 101-158.

(Star mountains (Sterrengebergte) of W Papua major boxfolds, steep escarpments and karsted limestone terrains. Relief in youthful stage. Local remnants of older erosion surface occur, separated by areas of lower elevation with complete rejuvenation)

Verstappen, H.Th. & J.P. Doets (1950)- Enige geomorphologische aantekeningen over de Wisselmeren, Centraal Nederlands Nieuw Guinea. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap LXVII, p. 489-496.
('Geomorphologic notes on the Wissel (=Paniai) Lakes, Central New Guinea'. Three lakes at 1640- 1749m altitude, draining to S, but Paniai Lake may have drained N before main uplift of Central Range)

Vincelette, R.R. (1973)- Reef exploration in Irian Jaya. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 243-277.

Vincelette, R.R. & R.A. Soeparjadi (1976)- Oil-bearing reefs in Salawati Basin of Irian Jaya, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 60, p. 1448-1462.
(Salawati basin >4600m marine Tertiary sedimentary deposits. Basin initiated in Miocene, with deposition of basinal limestone and shale. E and S basin margins shallow-water carbonate rocks with well-defined shelf and shelf margin. Productive reef belt basinward of shelf margin. Reefs heights >490m, areal extent 5- 124 km2. Porosities in reefal carbonate up to 43%, average 20- 30%. Late Pliocene-Pleistocene normal faults cut many reefs, which combined with postreef structural tilt modified original reefs configuration and oil accumulations)

Visser, D. (2004)- An unpublished manuscript by C.E.A. Wichmann (Ueber den Chloromelanit von der Humboldt-Bai auf Neu-Guinea). In: J.L.R. Touret & R. P.W. Visser (eds.) Dutch pioneers of the earth sciences, Kon. Nederlandse Akademie Wetenschappen, Amsterdam, p. 177-
(online at: http://www.dwc.knaw.nl/wp-content/HSSN/2004-5-Dutch%20Pioneers%20Earth%20Sciences.pdf)
(Unpublished 1904 manuscript by C.E.A. Wichmann 'On the chloromelanite from the Humboldt Bay in New Guinea', from archives of University of Utrecht; printed here. Chloromelanite is iron-rich variety of jadeite, and possibly metamorphosed gabbroic rocks. Rocks commonly used by local tribes to make stone adzes. Probably from near Sentani Lake/ Cyclops Range foothills)

Visser, W.A. (1968)- A geological reconnaissance in the Nassau Range: discussion. Geologie en Mijnbouw 47, 1, p. 47-49.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0VGxXWjdfSUl4UFE/view)
(Comments on Dow (1968) paper on Central Range reconnaissance)

Visser, W.A. & J.J. Hermes (1962)- Geological results of the exploration for oil in Netherlands New Guinea. Verhandelingen Kon. Nederl. Geologisch Mijnbouwkundig Genootschap, Geol. Series 20, p. 1-265.
(Extensive compilation of NNGPM (Netherlands New Guinea Petroleum Maatschappij= Shell-Caltex-Stanvac consortium) oil exploration and survey work in W New Guinea from 1935-1960)

Visser, W.A. & K.E. Kleiber (1959)- Geology of the Vogelkop, Netherlands New Guinea. Proc. 5th World Petroleum Congress, New York 1959, 1, 52, p. 943-956.
(Birds Head oldest sediments of Silurian age, intensely folded, possibly in Devonian. Unconformably overlain by Permo-Carboniferous clastics and minor limestones up to 2450m in N Birds head. Thin Triassic redbeds overlain by M Jurassic- Cretaceous marine Kembelangan Fm. Paleocene- Miocene section mostly carbonates, except for Oligocene Sirga-Ainod clastics, which were derived from N. N rim of Tertiary basin steeply dipping)

Wachsmuth, W. & F. Kunst (1986)- Wrench fault tectonics in Northern Irian Jaya. Proc. 15th Ann Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 371-376.

Wafforn, S. (2017)- Geo- and thermochronology of the Ertsberg-Grasberg Cu-Au mining district, west New Guinea, Indonesia. Ph.D.Thesis University of Texas at Austin, p. 1-356.
(online at: https://repositories.lib.utexas.edu/handle/2152/61523)

(Novel U/Pb depth profiling technique shows Grasberg Igneous Complex intrusive magmatism active from 3.6-3.1 Ma. Cu-Au mineralization started after intrusion of MGI (3.22 Ma) and predates EKI (3.20 Ma) and LKI (3.09 Ma). High grade core of Grasberg deposit formed in <100 to 220 kyr. Ertsberg pluton (3.1-2.8 Ma) and other minor intrusions shows magmatism in district took less than 1 Myr. Rapid cooling of surface samples precludes presence of 2 km volcanic edifice overlying orebody. Garnets from Big Gossan skarn show skarn formed between 2.9-2.7 Ma)

Wafforn, S., S. Seman, J.R. Kyle, D. Stockli, C. Leys, D. Sonbait & M. Cloos (2018)- Andradite garnet U-Pb geochronology of the Big Gossan skarn, Ertsberg- Grasberg mining district, Indonesia. Economic Geology 113, 3, p. 769-778.
(Big Gossan Cu-Au skarn formed near contact between Cretaceous Ekmai limestone and Paleocene Waripi dolomitic limestone, adjacent to 3.1-2.8 Ma Ertsberg diorite. Andradite garnets dated as 2.9-2.7 Ma, compatible with district-wide zircon U-Pb geochronology and single 2.82 Ma phlogopite 40Ar/39Ar age for skarn. Confirm that Big Gossan was one of last ore-forming events in Ertsberg-Grasberg district)

Wahyono & Sidarto (2001)- Aspek geologi endapan batubara di daerah Sorong, Irian Jaya. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 26, p. 1-13.
('Geologic aspects of coal deposits in the Sorong area' On thin Plio- Pleistocene coal deposits near Sorong, W Birds Head, E Salawati Basin, in regressive Klasaman Fm. Sediments from Sorong Fault Zone High in N)

Ward, M.A. (1974)- Report on geological reconnaissance Block 5, Irian Jaya, Indonesia. PT Paniai Lakes Minerals, Report, p. *(Unpublished)*

Warren, P.Q. (1995)- Petrology, structure and tectonics of the Ruffaer metamorphic belt, west central Irian Jaya, Indonesia. M.A. Thesis University of Texas, Austin, 2 vols., p. 1-338. *(Unpublished)*

Warren, P.Q. & M. Cloos (2007)- Petrology and tectonics of the Derewo metamorphic belt, West New Guinea. Int. Geology Review 49, 6, p. 520-553.
(Derewo-Rouffaer Metamorphic Belt (DM) >500 km long, ~10-30 km wide terrane of slate and phyllite on N flank of Central Range. S edge is Derewo fault in W, but gradational with unmetamorphosed passive margin strata in E. N boundary is fault contact with Irian Ophiolite Belt. Metamorphic protoliths are Jurassic-Cretaceous Australian passive-margin strata. Most of rock pelitic, with minor siltstones, sandstones protoliths. Peak metamorphic conditions in Hitalipa area 250-350°C at 5-8 kbar (burial depths 15- 25 km). DM formed as Australian continental rise and slope sediments entered N-dipping subduction zone since 30 Ma. Widespread emergence by 12 Ma, followed by major uplift from collisional orogenesis at ~8 Ma. Present-day high topography of C Range established by ~4 Ma when delamination of subducting plate was complete and collisional movements changed into left-lateral transform fault system. Tens of km of strike-slip displacement in core of C Range, offsetting parts of metamorphic belt along Derewo and related faults)

Wass, R.E. (1989)- Early Permian bryzoa from Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologie 6, p. 11-25.
(Common late E Permian (Baigendzhinian) bryozoa in outcrops of Aifat Fm (= M Aifam) of upper Aifar River, SW part of Birds Head. Assemblages affinities with Ko Muk region of Peninsular Thailand (with Sulcoretepora, Streblascopora, Rhabdomeson; interpreted Late Artinskian age by Sakagami 1976) and NW Australia Canning Basin (with Stenodiscus variablis))

Webb, M. & L.T. White (2016)- Age and nature of Triassic magmatism in the Netoni Intrusive Complex, West Papua, Indonesia. J. Asian Earth Sci. 132, p. 58-74.
(Zircon U-Pb dating of in Netoni Intrusive Complex in Tamrau Mountains along Sorong Fault Zone in N Birds Head suggests series of pulses of Triassic magmatism between 248- 213 Ma (earlier K-Ar ages of 241-208 Ma in Pieters et al. 1983, 1989). Extensive incorporation of country rock xenoliths into Netoni Intrusive Complex. Granitoids likely emplaced in Andean-style subduction belt along E Gondwana (New Guinea - E Australia) through much of Paleozoic. Volcanic ejecta produced along this arc potential source of detritus for Triassic and younger sedimentary rocks in New Guinea and E Indonesia)

Webb, M. & L.T. White, B.M. Jost& H. Tiranda (2019)- The Tamrau Block of NW New Guinea records late Miocene-Pliocene collision at the northern tip of the Australian Plate. J. Asian Earth Sci. 179, p. 238-260.
(Tamrau Block is terrane in Birds Head at N side of Sorong strike-slip Fault Zone. Oldest rocks (Tamrau Fm) Jurassic-Cretaceous passive margin sediments, deformed and metamorphosed in three events. First phase with amphibolite facies possibly in Oligo-Miocene. Tamrau Fm unconformably overlain by Ajai Lst. Both units cross-cut and overlain by M Miocene Moon Volcanics. Overlying M-L Miocene Koor Fm partially contemporaneous with volcanism. Post-Koor folding/ faulting followed by deposition of undeformed Opmorai Fm (~10.5–4.5 Ma) and records collision of part of oceanic island arc (Tosem Block) to Tamrau Block. No provenance relationship between Tamrau and Kemum blocks. Tamrau Block transported ~300 km W along Sorong FZ after late Miocene-Pliocene collision between Tosem Block and N margin of Australian Plate)

Webb, M. & L.T. White, B.M. Jost, H. Tiranda & M. BouDagher-Fadel (2020)- The history of Cenozoic magmatism and collision in NW New Guinea- new insights into the tectonic evolution of the northernmost margin of the Australian Plate. Gondwana Research 82, p. 12-38.
(In NW New Guinea six units of Oligocene-Pliocene igneous rocks, recording magmatism in response to interaction between Australian and Philippine Sea plates. In Eocene start of oblique subduction of Australian Plate under Philippine Sea Plate (Philippine–Caroline Arc; recorded in Dore, Mandi and Arfak volcanics of NW New Guinea; 32-27 Ma). Collision in Oligocene-Miocene caused reversal in subduction polarity from N-dipping to S-dipping. Subduction of Philippine Sea Plate under Australian Plate produced M Miocene magmatism in W New Guinea (18–12 Ma Moon Volcanics). Following terminal arc–continent collision in late Miocene–Pliocene mantle derived magmas migrated up large strike-slip faults and erupted in Plio-Pleistocene)

Weiland, R.J. (1993)- Plio-Pleistocene unroofing of the Irian fold-and-thrust belt South of the Gunung Bijih (Ertsberg) Mining district, Irian Jaya, Indonesia: apatite fission-track thermochronology. M.A. Thesis, University of Texas, Austin, p. 1-84. *(Unpublished)*

Weiland, R.J. (1999)- Emplacement of the Irian ophiolite and unroofing of the Ruffaer metamorphic belt of Irian Jaya, Indonesia. Ph.D. Thesis, University of Texas, Austin, p. 1-526. *(Unpublished)*
(Irian Ophiolite metabasites near Gauttier Offset exhumed from NE dipping subduction zone. Amphibolites metamorphosed at ~700°C, blueschists at ~400°C, eclogites at ~450°C. Metamorphism ages between 65/70 Ma- 50/ 45 Ma. N Rouffaer Metamorphic Belt metapelites K-Ar ages ~35-20 Ma, recording metamorphism of passive margin strata. Intrusives near Irian Ophiolite characteristic of volcanic arcs; isotopic ages ~35-24 Ma (allochthonous Oligocene- E Miocene oceanic arc) and ~12-10 Ma (autochthonous M Miocene Maramuni Arc). Subduction of Australian passive margin strata and continental lithosphere led to uplift of Irian Ophiolite. Exhumation of metamorphic rocks by normal faulting near ophiolite-metamorphic belt contact (amphibolites from <15 km, slate from 15-20 km, phyllites from 25-30 km). Blueschists and eclogite exhumed from 25-35 km depth along Gauttier Offset. Unroofing in E metamorphic belt increased from 23 to 2 Ma. W metamorphic belt unroofed at ~0.3 km/My from 21-3 Ma and ~6.9 km/My. Age of ophiolite uncertain, probably around Late Cretaceous- Paleocene)

Weiland, R.J. & M. Cloos (1996)- Pliocene-Pleistocene asymmetric unroofing of the Irian fold belt, Irian Jaya, Indonesia: apatite fission-track thermochronology. Geol. Soc. America (GSA) Bull. 108, 11, p. 1438-1449.
(Fission-track ages of apatite from Pliocene intrusions at Ertsberg district at crest of C Range 3.7 ± 0.9 to 2.0 ± 0.3 Ma. Grasberg pluton emplaced into its own volcanic cover and <2 km of material eroded since Pliocene. Apatites from Triassic-Jurassic Tipuma, Carboniferous-Permian Aiduna Fms and igneous dikes exposed halfway S slope of range fission-track ages between 2.7 ± 0.7 and 2.0 ± 0.5 Ma and indication of slower cooling than Pliocene intrusions. Resetting of provenance fission-track ages in detrital apatite requires burial deeper >4 km. Uplift of Mapenduma Anticline S of Central Range started at ~7 Ma, with ~9km of erosion of sediment since then (unroofing here 2.5-5 x faster than at crest of C Range, probably due to higher rainfall on S slope)

Westermann, G.E.G. (1995)- Mid-Jurassic Ammonitina from the Central Ranges of Irian Jaya and the origin of stephanoceratids. In: Barnabas Geczy Jubilee Volume, Hantkeniana 1, Budapest, p. 105-118.

(Descriptions of mainly Bajocian ammonites from C Ranges of W Papua. Riccardiceras n. gen. (type species Coeloceras longalvum) and Riccardiceras suzukinense sp. nov.)

Westermann, G.E.G. & J.H. Callomon (1988)- The Macrocephalitinae and associated Bathonian and early Callovian (Jurassic) ammonoids of the Sula islands and New Guinea. Palaeontographica A, 203, p. 1-90.
(Five Bathonian- Early Callovian ammonite assemblages on S Taliabu. Also from Bathonian at Strickland River, PNG. East Indian faunas dominated by Macrocephalitidae, many of which are species unknown outside Indonesia- New Guinea (one other SW Pacific occurrence in New Zealand). Because of high endemicity at species level in Macrocephalitinae and at genus level in Satoceras and Irianites, E Indonesia and PNG may be considered as separate ammonite faunal province or subprovince, perhaps part of Maorian/SW Pacific Province during Late Bajocian- E Callovian. Diversity and compositions of ammonite faunas suggest Sula was in warmer waters than Birds Head Peninsula)

Westermann, G.E.G. & T.A. Getty (1970)- New Middle Jurassic Ammonitina from New Guinea. Bull. American Paleontology 57, 256, p. 231-308.
(Bajocian- Callovian ammonites from loose stream bed material in Kemabu valley, NE of Paniai Lakes, Central Range, presumably from Kembelangan Fm 'A-member' phyllites and re-examination of Bajocian- Callovian ammonites from other parts Indonesian archipelago. Most ammonite species endemic to E Indonesia)

White, L.T., R. Hall & I. Gunawan (2017)- Multiple tectonic mode switches indicate short-duration heat pulses in a Mio-Pliocene metamorphic core complex, West Papua, Indonesia. American Geophys. Union (AGU) Fall Meeting, New Orleans, V31D-02, 1p. *(Abstract only)*
(online at: https://agu.confex.com/agu/fm17/meetingapp.cgi/Paper/222305)
(Wandaman Peninsula at W side of Cenderawasih Bay almost entirely composed of metamorphic rocks, associated with Late Mio-Pliocene metamorphic core complex. Multiple phases of deformation, all within last few Myrs: (1) crustal extension and partial melting at 5-7 Ma according to new U-Pb data from metamorphic zircons; (2) extensional phase followed by two phases of folding; (3) overprinted by brittle extensional faults and uplift, continuing today)

White, L.T., R. Hall, I. Gunawan & B. Kohn (2019)- Tectonic mode switches recorded at the northern edge of the Australian Plate during the Pliocene and Pleistocene. Tectonics 38, 1, p. 281-306.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2018TC005177)
(Medium-high grade metamorphic rocks at Wandamen Peninsula, W Papua, suggest multiple deformation episodes in last 6 Myrs. Early phase of crustal extension between ~6 and 5 Ma, with formation of metamorphic core complex. Metamorphic zircon growth at 4.9-5.3 Ma interpreted to post-date peak P-T conditions of regional stretching phase. Shear fabrics associated with metamorphic core complex overprinted by two generations of folds. Later mode switch documented by young common brittle extensional faults after 3 Ma)

White, L.T., M.P. Morse & G.S. Lister (2014)- Lithospheric scale structures in New Guinea and their control on the location of gold and copper deposits. Solid Earth 5, p. 163-179.
(online at: www.solid-earth.net/5/163/2014/se-5-163-2014.pdf)
(Comparison of lineaments with location of major gold and copper deposits in New Guinea indicate link between arc-normal structures and mineralization, but only for deposits younger than 4.5 Ma)

Wibisono, A.D., Y.S. Dewi, O. Oktariano, B. Sapiie & I. Gunawan (2018)- Unlocking hydrocarbon potential in Bird's Head Papua Indonesia using integrated geophysical and geological evaluation. In: 8th EAGE Int. Geol. Geophysical Conf. Exhib., Saint Petersburg , p. *(Extended Abstract)*
(Distribution of Pre-Tertiary reservoir and source rock facies in E Indonesia influenced by old tectonic grains such as Paleozoic-Mesozoic grabens. New plays identified in Birds Head of W Papua (Triassic and Early Jurassic reservoir and Paleocene Daram Sandstone)

Wibisono, A., A. Hafeez, Rochmad, D. Lestiyardi, K. Iqbal & C.S. Pulukadang (2016)- Unlocking a carbonates reservoir riddle: a post mortem of the K-2 appraisal well dry hole in the Salawati Basin, West Papua, Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-282-G, 8p.

(Low oil saturation in 2013 K-2 appraisal well in flank of unspecified Kais Lst buildup in Salawati Basin)

Wichmann, A. (1901)- Uber einige Gesteine von der Humboldt-Bai (Neu-Guinea). Centralblatt Mineralogie Geologie Palaont., 1901, p. 647-652.
(online at: www.biodiversitylibrary.org/item/196149page/749/mode/1up)
(‘On some rocks from Humboldt Bay, New Guinea’. Rock descriptions from E of Cyclops Mts near Jayapura in NE corner of West Papua. Including dunite, serpentine, diabase and Neogene Globigerina marls. Not much detail (see also Rutten 1914))

Wichmann, A. (1909)- Entdeckungsgeschichte von Neu-Guinea (bis 1828). In: A. Wichmann (ed.) Nova Guinea, Resultats de lôexpedition scientifique neerlandaise a la Nouvelle Guinee en 1903, E.J. Brill, Leiden, vol. 1, p. 1-387.
(online at: https://www.biodiversitylibrary.org/item/181401page/7/mode/1up)
('Discovery history of New Guinea (until 1828)'. Review of voyages to and observations made on New Guinea before 1828. No geology)

Wichmann, A. (1910)- Entdeckungsgeschichte von Neu-Guinea (1828 bis 1885). In: A. Wichmann (ed.) Nova Guinea, Resultats de lôexpedition scientifique neerlandaise a la Nouvelle Guinee en 1903, E.J. Brill, Leiden, 2, 1, p. 1-369.
(online at: https://ia800305.us.archive.org/29/items/novaguinearesult2191nede/novaguinearesult2191nede.pdf)
('Discovery history of New Guinea (1828-1885)'. Breif reports of 100’s of voyages in area))

Wichmann, A. (1912)- Entdeckungsgeschichte von Neu-Guinea (1885-1902). In: A. Wichmann (ed.) Nova Guinea, Resultats de lôexpedition scientifique neerlandaise a la Nouvelle Guinee en 1903, E.J. Brill, Leiden, vol. 2, 2, p. 371-1026.
('Discovery history of New Guinea (1885-1902)')

Wichmann, A. (1917)- Bericht uber eine im Jahre 1903 ausgefuhrte Reise nach Neu-Guinea. In: A. Wichmann (ed.) Nova Guinea, Resultats de lôexpedition scientifique neerlandaise a la Nouvelle Guinee en 1903, E.J. Brill, Leiden, vol. IV, p. 1-492.
(online at: https://www.biodiversitylibrary.org/item/181363page/7/mode/1up)
(Detailed geographic- geological travel account of 1903 expedition to Northern Netherlands New Guinea. Includes records of Late Jurassic ammonites in area of low metamorphic phyllites- quartzites near Jamoer Lake, Middle Jurassic ammonites near Wendesi along Cenderawasih Bay, etc. Occ. Eocene limestone with Lacazinella on Dramia Island off Lengguru foldbelt, etc)

Widdowson, G. (2001)- E. Indonesian Gas-2- Potential giant gas reserves await development in Irian Jaya. Oil & Gas J. 99, 26, June 25, 2001, p.

Widi, B.N. (2017)- Potensi endapan laterit kromit di daerah Dosay, Kabupaten Jayapura, Papua. Bul. Sumber Daya Geologi 12, 1, p. 1-12.
(online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
('Potential of lateritic chromite deposits in the Dosay area, Jayapura Regency, Papua'. Presence of chromite in weathered ultramafic rocks of Cycloop Mountain Range. Chromite content in saprolite 1.3- 4.7%)

Widodo, S., N. Belluz, N. Wiwoho, B. Kusnanto, P. Manning, A. Edwards & G. Macdonald (1998)- Geology of the Kucing Liar Ore Body, Irian Jaya, Indonesia. In: T.M. Porter (Ed.) Porphyry and hydrothermal copper and gold deposits- a global perspective, Proc. Australian Min. Found. (AMF) Conf., Perth, PGC Publishing, Adelaide, p. 49-60.
(Kucing Liar newly discovered ore zone at Freeport Grasberg mine. Contains >2.16 Gt @ 1.2% Cu, 1.2 g/t Au, 3.95 g/t Ag with over 2500 t (80 Moz) of contained gold. Mineralisation both skarn and replacement ore in sediments surrounding Grasberg porphyry. Deposit strike length 2 km, averaging thickness 200-250m)

Widodo, S., P. Manning, N. Wiwoho, L. Johnson, N. Belluz, B. Kusnanto, G. MacDonald & A.C. Edwards (1999)- Progress in understanding and developing the Kucing Liar orebody, Irian Jaya, Indonesia. In: Proc. Int. Congress Earth science, exploration and mining around the Pacific Rim (PACRIM '99), Bali, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, Publ. Ser. 4/99, p. 499-507.
(Kucing Liar skarn deposit in Ertsberg mining district first intersected in 1994 drill holes and consists of magnetite-copper-gold replacement and skarn mineralisation in Tertiary and Cretaceous units)

Widyanita, A., A. Purwati, J. Naar & W. Hidayat (2011)- Geocellular modelling of Vorwata, Wiriagar Deep, Roabiba and Ofaweri Fields, Tangguh JV. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-096, 14p.
(Reservoir model of M Jurassic Roabiba Fm in five-field Tangguh gas field complex. Vorwata field ~80% of total resources. Model divided into 3 members, 15 zones. Some zones partially eroded or pinching-out. Roabiba Fm sandstones- mudstones deposited in tide-influenced braided rivers and deltas (Lw Roabiba; Toarcian-Bajocian), tide-dominated delta and tidal-shoreface (U Roabiba; Late Bajocian- Bathonian) and delta front-offshore settings (M Roabiba; Bajocian)).

Willems H.W.V. (1934)- Astridiet, een chroomrijk gesteente van Nieuw-Guinea. De Ingenieur in Nederlandsch-Indie, 1, p. 120-121.
('Astridite, a chrome-rich rock from New Guinea'. New rock name proposed for dark green ornamental stone from Manokwari, collected in 1910 by Ir. J.K. van Gelder. Composed of chromojadeite. Named after Belgian Queen Astrid, who showed interest in the rock during visit to Geological Museum in Bandung in May 1932)

Williams, P.R. & Amiruddin (1983)- Diapirism and deformation East of the Mamberamo River, Northern Irian Jaya. Proc. 12th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 68-79.
(Hilly terrain E of Mamberamo River underlain by Mamberamo Fm Late Miocene-Pleistocene predominantly deep marine clastics. Shale diapirism caused much of deformation. Parts of succession overturned, probably prior to current diapiric intrusion. Blocks in diapirs probable Eocene to M Miocene ages. Diapirism probably initiated because of overpressuring due to rapid deposition and tectonic compression. Scaly clay formation not related to collision or subduction, but to diapirism in transcurrent fault system)

Williams, P.R. & Amiruddin (1984)- Diapirism and deformation East of the Mamberamo River, Northern Irian Jaya. Bull. Geol. Res. Dev. Centre 10, p. 10-20.
(Same paper as above)

Williams, P.R., C.J. Pigram & C.B. Dow (1984)- Melange production and the importance of shale diapirism in accretionary terranes. Nature 309, p. 145-146.
(N Irian Jaya discontinuous belt of melange between Cenderawasih Bay and PNG border product of shale diapirism. Deformation of up to 7000m of Mamberamo Fm M Miocene- Pliocene turbidites from M Pleistocene until today. Matrix of diapyric mudstones rich in M Miocene foraminifera. Exotic blocks include Eocene- E Miocene limestone, volcanic rocks, serpentinites)

Williams, P.W. (1971)- Illustrating morphometric analysis of karst with examples from New Guinea. Zeitschrift Geomorphologie, N.F, 15, p. 40-61.

Wilson, J.N. (1995)- Geologic summary of the Salawati Basin, Irian Jaya. In: C. Caughey et al. (eds.) Seismic atlas of Indonesian oil and gas fields II: Java, Kalimantan, Natuna, Irian Jaya, Pertamina/ Indon. Petroleum Assoc. (IPA), Jakarta, p. IRJ1-IRJ5.
(Salawati Basin Tertiary feature over tectonic terranes accreted in Paleocene. N and W portion over Kemum Fm metamorphosed Silurian and Devonian clastics. S and E part over Paleozoic- Lower Tertiary shallow water sandstones, coals and shales. Well data indicate Salawati Basin initiated in Upper Oligocene. Sirga Fm sst-shales overlie igneous/metamorphic basement and are transgressed by Kais Fm limestones. Late Miocene increase in subsidence caused development of pinnacle reefs on basin margin and drowning of many older reefs. Sorong fault more active at end-Miocene, creating landmass to N with massive influx of Pliocene Klasafet Fm clastics, locally 6 km thick. Pleistocene tectonic episode created complex fault system)

Winkelmolen, A.W., J.W.C.M. van der Sijp & F.H. van Oyen (1955)- Geological reconnaissance of the Wissel Lakes area (Central Dutch New Guinea). Nederlands Nieuw Guinea Petroleum Maatschappij (NNGPM) Rept. 26497, p.
(Unpublished NNGPM report, showing outcrops of Triassic (Tipuma Fm) sandstones at W side Paniai Lake (not captured on more recent GRDC map))

Wiryosujono, S. (1997)- Beberapa aspek diagenesis batugamping Formasi Waripi bagian bawah di daerah Wamena, Irian Jaya diamati melalui sayatan tipis. J. Geologi Sumberdaya Mineral 7, 70, p. 11-18.
('Some aspects of the carbonate diagenesis of the lower Waripi Fm in the Wamena area, Irian Jaya. Paleocene Waripi Fm sandy limestone at base of New Guinea Limestone Gp is ~100m thick transition between U Cretaceous glauconitic Ekmai Sst and Eocene Yawee Limestone. Limestone has undergone dolomitization, recrystallization, silicification and fracturing, probably in meteoric phreatic environment)

Wisesa, K.D., A. Mangala, H. Arbi, Qi Adlan & R.M.G. Gani (2017)- Distribution of Permian source rocks maturation related to Lengguru fold-thrust belt position in Bintuni Basin. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-405-SG, 10p.
(Maturity of Ainim Fm Permian source rocks in wells of Bintuni Basin varies from Ro 0,63% - 1.59%, and increases to NE, towards Lengguru fold-thrust belt (Ro 1.5% onshore Bintuni Bay). Gas in Bintuni fields likely came from NE (no details on wells, samples, uncontrolled maps))

Yabe, H. & T. Sugiyama (1942)- Younger Cenozoic reef corals from the Nabire beds of Nabire, Dutch New Guinea. Proc. Imperial Academy (Tokyo) 18, 1, p. 16-23.
(online at: https://www.jstage.jst.go.jp/article/pjab1912/18/1/18_1_16/_pdf)
(Fossil corals from beds considered to be of Plio-Pleistocene age in Nabire district, W Papua. Descriptions of 20 species from 10 localities near Cenderawasih Bay, collected by Tayama S of Nabire. 90% Recent species, one new (Cyathoseris? tayamai)))

Yabe, H. & T. Sugiyama (1942)- Notes on *Anisocoenia* Reuss and *Favoidea* Reuss. Proc. Imperial Academy (Tokyo) 18, 4, p. 194-199.
(online at: https://www.jstage.jst.go.jp/article/pjab1912/18/4/18_4_194/_pdf)
(Reviews of related coral genera Anisocoenia and Favoidea. Description of specimen of Anisocoenia junghuhni from Plio-Pleistocene limestone of Nabire district, W Papua, which is very similar to typical Favoidea)

Yoshino, H., T. Tanaka & H. Yamaguchi (2003)- Petroleum geology in Bintuni Basin in East Indonesia- a case study of exploration and evaluation of giant gas fields. J. Japanese Assoc. Petroleum Technology 68, 2-3, p. 200-210.
(online at: https://www.jstage.jst.go.jp/article/japt1933/68/2-3/68_200/_pdf)
(In Japanese with English summary. Bintuni fore-deep basin has certified 14.4 TCF gas for Wiriagar, Berau and Muturi PSCs in Jurassic and Paleocene reservoirs)

Yudhanto, E.V. & D. Pasaribu (2012)- Structural evolution of Ubadari Field, Birdôs Head, Papua. Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA12-G-187, p. 1-10.
(Also in AAPG Search and Discovery Art. 30248 (2012). Ubadari field in Berau PSC, about 50 km SW of Tangguh is 1997 gas discovery in M Jurassic Roabiba sst and Paleocene sst reservoirs. Birds Head region three main erosion events: Permo-Triassic, Oligocene (NW-SE structural trends of Ubadari, Kalitami, Wiriagar and Vorwata; believed to be result of initial collision between Australian and Pacific plates) in Pliocene. Ubadari low relief structure before Pliocene and continued to grow to present day structure. Roabiba sst sandstone transgressive succession, back stepping from SW to NE)

Yzerman, R. (1939)- Korte verslagen van den geoloog der expeditie van het Kon. Nederl. Aardr. Gen. naar het Wisselmeergebied en het Nassau-gebergte op Nederlandsch Nieuw Guinea in 1938. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap 56, p. 677-679 and p. 791-792.

(Short reports by geologist of 1938 Dutch Geographical Society Expedition to Wissel (Paniai) Lakes and Central Range)

Yzerman, R. (1947)- De aanstaande expeditie van het Nederlandsch Nieuw Guinea Exploratie Committee. Bull. Bur. Mines Geol. Survey Indonesia 1, 1, p. 17-19.
('The upcoming expedition of the Netherlands New Guinea Exploration Committee')

Zakaria, F., I. Syafri & P. Wiguna (2017)- Hubungan antara phyllic alteration dengan nilai kekuatan batuan di Undercut Level Tambang Grasberg Block cave, PT Freeport Indonesia. Bull. Scientific Contr. (UNPAD) 15, 3, p. 233-242.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/15101/pdf)
('The relationship between phyllic alteration and rock strength value in the Grasberg mine Block Cave Undercut Level'. Grasberg Block Cave underground mine with three intrusion stages: Dalam (3.51 Ma), Main Grasberg (3.21 Ma) and Kali (3.1 Ma). Mineral alterations affect rock strength)

Zarmansyah, T.A. & G.J. Edelbrock (1992)- Drilling in karst terrain of Irian Jaya. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 98-108.

Zwierzycki, J. (1922)- Koelietoestanden op Nieuw-Guinea. De Mijningenieur 3, 4, p. 46-50.
('Laborer conditions on New Guinea'. Description of logistics of the multi-year geological investigations of North New Guinea by the 'Dienst Mijnbouw', in particular the difficulties with hiring of local Papuas)

Zwierzycki, J. (1922)- Tektonisch-morphologische beschouwingen omtrent de Noordkust van Nieuw-Guinea. Handelingen 2e Nederlandsch-Indisch Natuurwetenschappelijk Congres, Bandoeng, 11-14 May 1922, p. 188- .
('Tectonic-morphological considerations on the North coast of New Guinea')

Zwierzycki, J. (1924)- Verslag over geologisch-mijnbouwkundige onderzoekingen in een gedeelte van Noord-Nieuw-Guinea. Jaarboek Mijnwezen Nederlandsch Oost-Indie 50 (1921), Verhandelingen, 1, p. 95-161.
('Report on a geological-mining survey in a part of North New Guinea'. Numerous gas and salt water seeps, also 2 oil seeps (Teer River and tributary of Verkam River) in NE part of West Papua. Tectonic complexity of region suggests no commercial petroleum potential to Zwierzycki. Includes petrographic descriptions by W.F. Gisolf, p. 133-161)

Zwierzycki, J. (1926)- Notes on the morphology and tectonics of the North Coast of New Guinea. Philippines J. Sci. 29, 4, p. 505-515.
(Abbreviated, English version of Zwierzycki 1924 geology of North New Guinea)

Zwierzycki, J. (1928)- Geologische overzichtskaart van den Nederlandsch-Indischen Archipel. Toelichting bij de bladen XIV en XXI (Noord en Zuid Nieuw Guinea). Jaarboek Mijnwezen Nederlandsch-Indie 56 (1927), Verhandelingen 1, p. 248-308.
(maps online at: https://digitalcollections.universiteitleiden.nl/view/item/814924 and at https://digitalcollections.universiteitleiden.nl/view/item/813547)
('Geological overview map of the Netherlands Indies Archipelago. Explanatory notes of sheets XIV and XXI (North and South New Guinea)'. Two 1:1M scale overview maps of northern and southern halfs of 'main body' of West Papua (most of area unmapped at this time))

Zwierzycki, J. (1932)- Geologische overzichtskaart van den Nederlandsch-Indischen Archipel, schaal 1: 1,000,000. Toelichting bij blad XIII (Vogelkop, West Nieuw Guinee). Jaarboek Mijnwezen Nederlandsch-Indie 59 (1930), Verhandelingen 3, p. 1-55.
(map online at: https://digitalcollections.universiteitleiden.nl/view/item/815734)
('Geological overview map of the Netherlands Indies Archipelago, scale 1:1 Million. Explanatory notes of sheet XIII (Birds Head, New Guinea'. Early map and overview of Birds Head geology)

VIII.2. Misool

Baggelaar, H. (1937)- Tertiary rocks from the Misool Archipelago (Dutch East Indies). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 40, 3, p. 285-292.
(online at: www.dwc.knaw.nl/DL/publications/PU00017038.pdf)
(Larger forams from limestones from Weber collection from small islands S of Misool identified as Eocene (Alveolina on Jef Lili) and Miocene (Spiroclypeus, Lepidocyclina from 7 islands) genera. However, all 'Miocene' identifications erroneous and should also be Eocene (Baggelaar 1938). Also critiqued by Musper in Neues Jahrbuch Geol. Palaont., 1937, p. 926-927)

Baggelaar H. (1938)- Some correcting notes on 'Tertiary rocks from the Misool-Archipelago (Dutch East Indies)'. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 41, 3, p. 301.
(online at: www.dwc.knaw.nl/DL/publications/PU00017168.pdf)
(Lepidocyclina and Spiroclypeus identified from seven islands S of Misool are Discocyclina and Asterocyclina, and probably also Pellatispira (fig. 10 from Sabenibnoe island W). All limestones therefore appear to be of Eocene age, not Miocene)

Belford, D.J. (1991)- A record of the genus *Lockhartia* (foraminiferida) from Misool archipelago, Irian Jaya. BMR J. Australian Geol. Geophysics 12, 4, p. 297-299.
(online at: www.ga.gov.au/corporate_data/81297/Jou1991_v12_n4_p297.pdf)
(Late Paleocene- M Eocene Lockhartia, Discocyclina and Distichoplax biserialis in 'Daram Sandstone' of Sabennibnu Island, SE of Misool)

Boehm, G. (1910)- Zur Geologie des Indo-Australischen Archipels. 5: Zur Kenntniss der Sudkuste von Misol. Centralblatt Mineralogie Geologie Palaont. 1910, 7, p. 197-209.
(online at: www.biodiversitylibrary.org/item/192869page/219/mode/1up)
(On the geology of the Indo-Australian Archipelago 5: On the knowledge of the South coast of Misool'. Brief descriptions of Triassic- Eocene stratigraphy of Lilinta area at S coast of Misool and offshore islands, based on trip in 1900. Youngest rocks Eocene white Alveolina Limestone, oldest rocks U Triassic Daonella and Athyriden-limestone. Also Jurassic Harpoceras and Hammatoceras beds. With map)

Boehm, G. (1924)- Uber eine senone Fauna von Misol. Palaeontologie von Timor, Schweizerbart, Stuttgart, 14, 26, p. 83-103.
('On a Senonian fauna from Misool'. Upper Cretaceous of Misool mainly marly rocks with large Inoceramus (I. misoliensis n.sp., I. haasti n.sp and others), ammonite Pachydiscus papuanus and rudists (Durania wanneri, D. deningeri, D. crispa n.spp.))

Challinor, A.B. (1989)- The succession of *Belemnopsis* in the Late Jurassic of Eastern Indonesia. Palaeontology 32, 3, p. 571-596.
(online at: www.palass.org/sites/default/files/media/publications/palaeontology/volume_32/vol32_part3_pp571-596.pdf)
(Belemnopsis from Misool and Sula all part of B. moluccana lineage. Misool Jurassic stratigraphy condensed rel. to Sula. Misool: 85m of Oxfordian Demu Fm carbonate/ shale overlain by ~100m of Kimmeridgean-Tithonian Lelinta shale with minor sandstone)

Challinor, A.B. (1989)- Jurassic and Cretaceous belemnitida of Misool Archipelago, Irian Jaya, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 9, p. 1-153.
(Callovian- Hauterivian belemnites from S Misool and islands off S coast. Good correlation with thicker and more complete (down to Toarcian) Jurassic section of the Sula Islands. No clear Kimmeridgean fossils found. Similarities between Misool and Madagascar assemblages, but, unlike earlier studies, no close relationships between Indonesian and New Zealand assemblages)

Challinor, A.B. (1991)- Revision of the belemnites of Misool and a review of the belemnites of Indonesia. Palaeontographica Abt. A, 218, p. 87-164.

(Mid-Bajocian- Hauterivian belemnites from Sula Islands, Misool and W Papua six genera and 40 species: Dicoelites (M Bajocian- E Oxfordian), Conodicoelites (M Bathonian- E Oxfordian), Belemnopsis (late Bathonian-Valanginian), Hibolithes (important only in Callovian-Oxfordian and Hauterivian)and Cretaceous Duvalia and Chalalabelus. Postulated relationships between Indonesian and New Zealand Belemnitidia non-existent. Gondwana Belemnopsis strongly endemic. Tethyan province extended from W Europe to PNG and possibly New Caledonia inM Jurassic and E Cretaceous. Indo-Tethyan province extending E from N India to PNG existed in Late Jurassic)

De Lange, G.J., J.J. Middelburg, R.P. Poorter & S. Shofiyah (1989)- Ferromanganese encrustations on the seabed west of Misool, Eastern Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 541-553.
(Black coating on carbonate rocks from seafloor at ~1000m is iron and manganese-rich dolomite)

Froidevaux, C.M. (1974)- Geology of Misool Island (Irian Jaya). Proc. 3rd Ann. Conv. Indon. Petroleum Assoc., p. 189-196.
(Misool almost complete Triassic- Present stratigraphic record. Misool Island is N flank of ESE plunging anticlinorium. Oldest rocks exposed folded Triassic flysch along S shore. In Jurassic Misool located near N edge of sea that deepened to S. Thick Eocene carbonates.'Oligocene' unconformity: Miocene carbonates thin W-ward from >1300m to 100m and overlap successively older rocks. Island presently being tilted to SE)

Gerth, H. (1932)- *Thecocyathus misolensis* sp. nov.. Eine Koralle aus dem Oxford von Misol. Beitr. Palaontologie des Ost Indischen Archipels, Neues Jahrbuch Mineral. Geol. Palaontologie, Abhandl., Beilage Band B69, p. 169-171.
('Thecocyathus misolensis sp. nov.. A coral from the Oxfordian of Misool')

Hasibuan, F. (1987)- The Triassic worm-tube *Terebellina mackayi* (Bather) from Indonesia. Geol. Soc. New Zealand, Misc. Publ. 37 A, p.
(Triassic calcareous tube worm in Ladinian or Carnian Keskain Fm 'flysch' deposits of Misool)

Hasibuan, F. (1990)- Mesozoic stratigraphy and paleontology of Misool Archipelago, Indonesia. Ph.D. Thesis, University of Auckland, p. 1-384. *(Unpublished)*
(Mesozoic on S half of Misool and adjacent islets includes Triassic (Anisian- Norian), Jurassic (Toarcian-Tithonian) and Cretaceous, unconformably over low metamorphic Siluro-Devonian Ligu Fm. Triassic Keskain Fm 1000m of Anisian-Ladinian sst/shale unconformably overlain by ~100m Late Triassic (Carnian-Rhaetian) Bogal Fm limestone. Major unconformity in E Jurassic. Most Jurassic formations rift-drift on N margin of Australian Gondwanana continent. In Triassic Misool related to Buru, Seram and Sumatra Islands, although few common species. Triassic and Lias also similar faunas to Alps and Mediterranean. Jurassic of Misool similar to Sula in bivalve content, but diverse ammonites of Sula replaced by assemblages of belemnites. In Triassic- Jurassic Misool was on SE margin of Tethys Sea. E Triassic block faulting affected Misool, but since then relatively stable and on N margin of Australian-Gondwana continent)

Hasibuan, F. (1992)- Mesozoic biostratigraphy of Misool Archipelago, Indonesia. Second Int. Symp. Geology and evolution of Eastern Tethys, IGCP 321, Abstracts, p. 50-59.

Hasibuan, F. (1998)- Asosiasi fauna paleoekologi dan lingkungan pengendapan formasi-formasi batuan Jura-Kapur Awal di Kepulauan Misool, Irian Jaya. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 27-36.
('Paleoecological faunal associations and depositional environments of Jurassic- Upper Cretaceous rock formations of the Misool Islands, Irian Jaya'. Four paleoecological faunal associations in shelfal marine Jurassic of SE Misool: (1) Bivalve- Ammonite (Toarcian- Bathonian; locally with low oxygen(?), pseudoplanktonic Bositra ornata), (2) Belemnite-Bivalve (Callovian- Oxfordian), (3) Ammonite-Bivalve-Belemnite, with Belemnopsis moluccana, Retroceramus haasti, Malayomaorica (Kimmeridgean- E Tithonian), (4) Bivalvia-Ammonite-Belmenite with Buchia spp, Belemnopsis galoi, B. stolleyi, etc. (Tithonian))

Hasibuan, F. (2004)- Buchiidae (Bivalvia) Jura Akhir sampai Kapur Awal dari kepulauan Misool dan korelasi regionalnya. J. Sumber Daya Geologi (GRDC, Bandung), 14, 2 (146), p. 51-60.
('Late Jurassic- Early Cretaceous Buchiidae from Misool'. Bivalves of Buchia family in Demu Fm (Late Callovian- Oxfordian; Praebuchia), Lelinta Fm (Late Oxfordian- E Berriasian; B. subspitiensis, B. blanfordiana; also with Malayomaorica) and Gamta Fm (Late Callovian-Cenomanian). Stratigraphic ranges of Buchia from Misool correlated with overseas Buchia, showing good marker for regional correlation)

Hasibuan, F. (2007)- Annelid *Terebellina mackayi* (Bather) from Middle Triassic Keskain Formation, Misool Archipelago. J. Sumber Daya Geologi 17, 2, p. 116-123.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/284/255)
(Infaunal tube worm with agglutinated body in in M Triassic Keskain Fm 'flysch' deposits at S side of Misool, associated with Daonella and ammonite Beyrichites. Also known from Sumatra, Thailand, Timor, New Zealand)

Hasibuan, F. (2008)- Pre-Tertiary biostratigraphy of Indonesia. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok, p. 323-325.
(Paleozoic in Indonesia scattered amongst archipelago and generally thin. Biostratigraphy scarce and most publications not in English. Sumatra and Timor only localities with exposed ?Carboniferous-Permian. Siluro-Devonian faunas only on Irian Jaya. Mesozoic biostratigraphy based mainly on Misool Archipelago, with most complete Mesozoic section ranging from Triassic (Anisian?)- Upper Cretaceous)

Hasibuan, F. (2009)- Biostratigrafi dan biota Jura kepulauan Misool, Indonesia, dan korelasi interregional dan globalnya. J. Sumber Daya Geologi 19, 3, p. 191-207.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/205/196)
('Jurassic biostratigraphy and biota of the Misool islands and its interregional and global correlations'. Jurassic on Misool ~260m thick, spanning Toarcian- Tithonian stages. Can be correlated with New Guinea fauna with ammonites like Fontannesia killiani. Similar bivalve faunas as Sula islands, but Sula faunas also rich in ammonites, while Misool has more belemnites)

Hasibuan, F. (2010)- Cretaceous Inoceramidae (Bivalvia) from Fafanlap Formation, Misool Archipelago, Indonesia. Proc. IGCP 507 Project Symp. Paleoclimates in Asia during the Cretaceous, Yogyakarta 2010, 1p. *(Abstract only)*
(online at: http://igcp507.grdc.esdm.go.id/downloads/cat_view/34-documents)
(Description of small collection of M Campanian inoceramid bivalves from Fafanlap Fm, Misool. Similar to Campanian assemblage from U Kembelangan Fm from W Papua 'Birds Head')

Hasibuan, F. (2010)- Analisis lingkungan pengendapan batuan berumur Jura di Kepulauan Misool, Papua berdasarkan fosil makro. J. Sumber Daya Geologi 20, 5, p. 235-250.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/176/172)
('Facies analysis of rocks of Jurassic age of the Misool islands, Papua, based on macrofossils'. Bivalve molluscs throughout section, belemnites first appear in Callovian. Four Toarcian-Berriasian fossil assemblages on Misool: (1) bivalve-ammonite with Bositra ornati (= anoxic, Aalenian); (2) belemnite-bivalve (Callovian-Oxfordian; with Retroceramus galoi, Malayomaorica, etc.); (3, 4) ammonite-bivalve-belemnite and bivalve-ammonite-belemnite assemblages (Kimmeridgean- Tithonian). Paleoenvironment continental shelf and slope, at N margin of Gondwanaland/ S coast of Tethyan Sea)

Hasibuan, F. (2012)- Mesozoic geology and paleontology of Misool Archipelago, Eastern Indonesia. Geological Agency, Bandung, p. 1-210.
(Thorough review of geology, paleontology (diverse marine faunas of brachiopods, molluscs, ammonoids), biostratigraphy of ~1800m thick M Triassic- Cretaceous section of Misool Islands, and correlations with other regions. Oldest rocks thick, locally steeply dipping Ligu Fm low-grade turbiditic meta-sediments (possibly equivalent of Kemum Fm of Birds Head). Overlain by >1000m thick M Triassic Keskain Fm flysch-type clastics (with endemic Daonella lilintana) and locally steeply dipping, ~100m thick shallow marine Carnian- U Norian 'Athyrid Limestone' (Bogal and Lios Fms; with Misolia misolica brachiopod and Palaeocardita globiformis). Unconformably overlain by gently-dipping neritic marine late E Jurassic ~260m thick ('break-up

unconformity'), starting with Late Toarcian Yefbie Fm shales, with basal conglomerate of milky quartz pebbles. 'Aucella (Buchia, Malayomaorica) Sandstone and Demu Limestone of Callovian-Oxfordian age with belemnites, etc.. Tithonian Lelinta Fm with inoceramid pelagic molluscs and Belemnopsis galoi. Main faunal affinities with New Guinea and Buru island. E Cretaceous rel. deep marine pelagic 'Facet Fm' limestone)

Hasibuan, F. & J.A. Grant-Mackie (2007)- Triassic and Jurassic gastropods from the Misool Archipelago. J. Sumber Daya Geologi 17, 4 (160), p. 257-272.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/294/265)
(Gastropod fauna of Triassic and Jurassic ages from SE Misool Archipelago reviewed, based on 1981 collection. Five described species and five in open nomenclature. Most taxa unique to this area, but Eucyclus orbignyanus known also from Europe)

Hasibuan, F. & P. Janvier (1985)- *Lepidotes* sp. (Actinopterygii, Halecostomi), a fish from the Lower Jurassic of Misool Island. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 7, p. 10-17.
(Lepidotes-like scales of Jurassic marine fish)

Hasibuan, F. & E. Rusmana (2007)- Cretaceous rocks of Misool Archipelago, Indonesia. J. Sumber Daya Geologi 17, 6 (162), p. 420-435.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/322/288)
(Overview of stratigraphy and macrofaunas of Cretaceous at S side Misool and adjacent islands. Section dominated by relatively thin deep marine calcilutites (~100m thick Berriasian- Cenomanian Gamta Fm limestone with chert and with Hibolithes, Belemnopsis, and ~80m of M Cenomanian- Santonian Waaf Fm red-brown and while bedded limestone with reddish chert, rich in planktonic forams). Thicker (~200m) and probably shallower Campanian- Late Maastrichtian Fafanlap Fm shaly limestone with silts and sands and oolitic limestone at top. Macrofossils include Inoceramus and rudist Durania wanneri)

Heinz, R. (1928)- Uber die Oberkreide-Inoceramen der Inseln Fafanlap, Jabatano und Jillo II im Misol Archipel und ihre Beziehungen zu denen Europas und anderer Gebiete. Min. Geol. Staats-Inst., Hamburg 10, p. 99-110.
('On the Upper Cretaceous Inoceramus molluscs from the islands Fafanlap, Jabatano and Jillo II in the Misool Archipelago and their relations to those of Europe and other areas'. Revision of Boehm (1924) inoceramids from Fafanlap Fm and considered to be of Senonian age, not Maastrichtian as assumed by Boehm)

Helby, R. & F. Hasibuan (1988)- A Jurassic dinoflagellate sequence from Misool, Indonesia. In: Proc. 7th Int. Palynological Conf., Brisbane, p. 69. *(Abstract only)*
(Diverse Jurassic dinoflagellate assemblages from Misool. Yefbie shale Toarcian-Bathonian Caddasphaera halosa zone. Demu Fm late Callovian suite to Oxfordian Wanaea spectabilis zone. Lelinta shale upper Oxfordian- early Kimmeridgean Wanaea clathrata zone, possibly extending into early Berriasian Kalyptea wisemaniae zone. Mid-Bathonian- Late Callovian unconformity between Yefbie Fm and Demu Fm. Apparent absence of Kimmeridgean Dingodinium swanense zone in middle Lelinta shale)

Jaworski, E. (1915)- Die Fauna der obertriadischen Nuculamergel von Misol. In: J. Wanner (ed.) Palaontologie von Timor II, 5, p. 73-174.
('Fauna from Upper Triassic Nucula marls of Misool'. Nucula marls in SE part of Lios island SE of Misool underlies the 'Athyridenkalk' (Misolia limestone). Mainly bivalves (Pecten misolensis and other spp., Nucula misolensis n.sp., Anadontophora, Myophoria, Paleocardita), gastropods, solitary corals (Molukkia triasica n.gen., n.sp., Leptophyllia praecursor n.sp.)

Kristan-Tollmann, E. & F. Hasibuan (1990)- Ostracoden aus der Obertrias von Misol (Indonesien). Mitteilungen Osterreichischen Geol. Gesellschaft 82, p. 173-181.
(online at: www.zobodat.at/pdf/MittGeolGes_82_0173-0181.pdf)
('Ostracods from the Upper Triassic of Misool'. Small ostracod fauna from marine Early Carnian?. Nearly all genera known from W Tethys, but found here for first time in E-most Tethys. One new form (Hasibuana asiatica))

Krumbeck, L. (1911)- Uber die Fauna des Norischen Athyridenkalkes von Misol. Dissertation Friedrich-Alexanders-Universitat zu Erlangen, Schweizerbart, p. 1-38.
(‘On the fauna of the Norian athyrid limestone of Misool’. Brief description of macrofauna of ~50m thick limestone rich in Misolia brachiopods from S coast and ilands Jillu, etc., off S Misool. Includes some corals (Thecosmilia), stromatoporoids, hydrozoans (Heterastridium), pectenids, etc. No illustrations)

Krumbeck, L. (1913)- Obere Trias von Buru und Misol. C. Der Athyridenkalk des Misol-Archipels. Palaeontographica Suppl. IV, 2, Beitrage Geologie Niederlandisch-Indien II, 1, p. 128-161.
('Upper Triassic of Buru and Misool. C. The Athyrid limestone of the Misool Archipelago'. Macrofaunas collected by Boehm and Wanner from the ~50m thick Athyrid Limestone of the Misool islands. Rel. shallow marine dark grey limestone with grey and yellowish marls with corals (Thecosmilia cf. clathrata), hydrozoa (Heterastridium), crinoids (Pentacrinus), brachiopods (Spirigera, Aulacothyris), bivalves (Pecten, Anadontophora, Cardita,

Krumbeck, L. (1934)- Die Aucellen des Malms von Misol. N. Jahrbuch Mineral. Geol. Palaont. Beilage Band 71, p. 422-467.
(‘The Aucellas from the Malm of Misool’. West Misool Upper Jurassic (Oxfordian) siliceous marls with muscovite and fine quartz grains and Aucella sandstone with common Aucella (now called Buchia) molluscs, commonly compressed and dissolved. Also Aucellas from clay-marls from Facet island (‘Fatjet Schiefer’), with rich open marine foram assemblages. Facet shales with Aucella (Buchia) malayomaorica, also known from Timor, Roti, Buru, Seram and New Zealand North Island, underlying Demu Limestone with A. cf. subspitiensis)

MacFarlan, D.A.B., F. Hasibuan & J.A. Grant-Mackie (2011)- Mesozoic brachiopods of Misool Archipelago, eastern Indonesia. In: G.R. Shi (ed.) Brachiopods: extant and extinct, Proc. 6th Int. Brachiopod Congress, Melbourne 2010, Mem. Assoc. Australasian Palaeontologists (AAP) 41, p. 149-177.
(Mesozoic brachiopod fauna of Misool ten species, only one previously described (Rhaetian Misolia misolica; three varieties of Von Seidlitz (1913) are synonyms). Four new Late Triassic species, incl. Zugmayerella bogalica, two Jurassic (incl. Aucklandirhynchia yefbiensis) and three Cretaceous. Biogeographically fauna is Perigondwanan (or S Tethyan). Aucklandirhynchia yefbiensis and Prochlidonophora spinulifera of Austral affinity and Ptilorhynchia pugnaciformis belongs to Circum-Pacific or bipolar genus)

Mulyadi, D. (2010)- Mikrofasias dan diagenesa batugamping Formasi Zaag de Pulau Misool dan sekitarnya. J. Teknologi Technoscientia 3, 1, p.
('Microfacies and limestone diagenesis of the Zaag Fm of Misool island and surroundings'. Paleocene-Eocene Zaag Fm carbonates on Misool two facies: (1) packstones with Fasciolites (Alveolina) and Lacazinella and (2) grainstones with Fasciolites (Alveolina), miliolids and algae)

Pigram, C.J., A.B. Challinor, F. Hasibuan, E. Rusmana & U. Hartono (1982)- Geological results of the 1981 expedition to the Misool Archipelago, Irian Jaya. Bull. Geol. Res. Dev. Centre 6, p. 18-29.
(Misool islands with rel. complete and fossiliferous Mesozoic sequences. Low-grade Paleozoic metamorphic basement (folded 'flysch') similar to Seram Sea area islands. ?Triassic flysch-type Keskain Fm unconformably overlain by Late Triassic reefal Bogal Lst with brachiopod Misolia. Marine Jurassic section above E Jurassic breakup unconformity starts with Toarcian-Callovian quartz sandstone but mostly shale with belemnites and ammonites. Latest Jurassic- E Cretaceous section is deep marine Facet Gp calcilutites, overlain by Fafanlap tuffaceous clastics. Eocene Zaag Lst platform carbonates with Alveolina. Late Oligocene unconformity overlain by E Miocene Kasim marls (equivalent of Sirga sst of New Guinea?) and E-M Miocene Openta lst)

Pigram, C.J., A.B. Challinor, F. Hasibuan, E. Rusmana & U. Hartono (1982)- Lithostratigraphy of the Misool Archipelago, Irian Jaya, Indonesia. Geologie en Mijnbouw 61, 3, p. 265-279.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0V29FOHAxRDlzM3c/view)
(On surface geology of islands S of Misool and Paleozoic- Pliocene stratigraphy of Misool. Metamorphics form basement overlain by ?Triassic flysch which was block-faulted and uplifted during Carnian, after which platform carbonates were deposited followed by a period of non-deposition. Marine sedimentation resumed in E Jurassic with fine clastics and bathyal carbonates, incl. radiolarian cherts. E Cretaceous volcanism

accompanied by change to fluvio-deltaic environment. E Tertiary carbonate platform, with marl deposited after Late Oligocene folding. Quaternary uplift formed Misool Archipelago. Misool stratigraphy is continuation of NW Australian/ New Guinea rift-drift sequence formed during breakup of N Gondwana)

Roggeveen, P.M. (1939)- Geologisch onderzoek van Noord Misool. Nederlands Nieuw Guinea Petroleum Maatschappij (NNGPM) Report 19288, 40p. *(Unpublished)*
('Geologic investigations of North Misool'. Frequently quoted NNGPM report, a.o. in Van Bemmelen 1949)

Rusmana, E., U. Hartono & C.J. Pigram (1989)- Geological map of the Misool quadrangle, Irian Jaya, 1:250,000. Geol. Res. Dev. Centre (GRDC), Bandung.

Simbolon, B., S. Martodjojo & R. Gunawan (1984)- Geology and hydrocarbon prospects of the Pre-Tertiary system of Misool area. Proc. 13th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 317-340.
(Review of M Triassic- Cretaceous stratigraphy and paleogeography of Misool Island area)

Siregar, M.S. (1985)- Karbonat Formasi Waaf berumur Kapur di Pulau Misool. J. Riset Geologi Pertambangan (LIPI) 6, 2, p. 36-45.
(Cretaceous Waaf Formation carbonate on Misool Island'. Waaf Fm U Cretaceous carbonate well exposed in S area of Misool. Composed of limestone, marl and chert, generally dark (red-brown), thin-bedded (2-20 cm) with abundant planktonic forams (Globotruncana) in fine matrix. Interpreted as deep-sea pelagic sediment)

Siregar, M.S. (1986)- Endapat karbonat laut dalam di Pulau Misool. Proc. 15th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p.
('Shallow marine carbonate deposits of Misool island')

Skwarko, S.K. (1981)- History of geological investigations of the Misool Archipelago, Moluccas, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 2, p. 53-66.
(Overview of 50 papers on Misool geology since 1899. Mesozoic probably >4000m thick, overlying pre-Late Triassic metamorphics and subdivided into 22 time-rock units. ?Ladinian-Carnian Keskain flysch overlain by Norian marls and Misolia limestones. Jurassic unconformable on Triassic, with thin M Liassic quartz sst, followed by shelfal marine marls, shales, thin limestones, calcareous sandstones, with locally common macrofossils. Cretaceous mainly pelagic limestone)

Soergel, W. (1913)- Geologische Mitteilungen aus dem Indo-Australischen Archipel. 9: Lias und Dogger von Jefbie und Filialpopo (Misol Archipel). Neues. Jahrbuch Min. Geol. Palaontology, Beilage Band B 36, p. 586-612.
('Liassic and Dogger of Jefbie and Filialpopo, Misool Archipelago'. Descriptions of Middle Jurassic macrofossils collected by Boehm in 1901, Van Nouhuys and Wanner in 1909. Mainly bivalves (Astarte spp., Nucula, Cucullaea, etc.), also gastropods, brachiopods, ammonites (Harpoceras spp.) and belemnites)

Soergel, W. (1915)- Unterer Dogger von Jefbie (Misol Archipel). Ein Nachtrag zur Stratigraphie und Biologie. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 67, B, Monatsberichte 3, p. 99-109.
(online at: https://ia800308.us.archive.org/3/items/zeitschriftderd671915deut/zeitschriftderd671915deut.pdf)
(More on Dogger (M Jurassic) of Jefbie, Misool Archipelago. After completion of Soergel (1913) paper additional fossils from Jefbie obtained from Wanner. Incl. Harpoceras cf. toarcense, H. comense, Harpoceras toarcense, Hildoceras, Nucula hammeri, etc. No figures)

Stolley, E. (1934)- Zur Kenntnis des Jura und der Unterkreide von Misol. 1. Stratigraphischer Teil. Beitrage zur Palaontologie des Ostindischen Archipels 11, Neues Jahrbuch Mineral. Geol. Palaontologie, Abhandl. B, 71, p. 470-486.
('On the knowledge of the Jurassic and Lower Cretaceous of Misool- Part 1 Stratigraphy')

Stolley, E. (1935)- Zur Kenntnis des Jura und der Unterkreide von Misol. 2. Palaeontogischer Teil. Neues Jahrbuch Mineral. Geol. Palaontologie, Abhandl. B, 73, p. 42-69.

('On the knowledge of the Jurassic and Lower Cretaceous of Misool- Part 2- paleontology'. Study of belemnites from new collections from Misool by Weber. New species Belemnopsis indica-moluccana and B. incisa)

Syafron, E. (2011)- Evaluation of the Mesozoic stratigraphy of Misool island and implications for petroleum exploration in the Birdôs Head region, West Papua, Indonesia. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-158, 13p.
(Review of Triassic- Jurassic stratigraphy of Misool. Bajocian (M Jurassic) Yefbie Fm marine black shale with terrestrial influence; probably distal facies of Roabiba Sst reservoirs in Tangguh area, Bintuni Bay. Shale underlain by Toarcian sandy limestone and basal conglomerate, equivalent to E Jurassic sandstones penetrated in East Onin-1ST and TBJ-1X wells. Best potential source rock Yefbie Fm shale (TOC up to 1.9%, HI 120-180 mgS2/gTOC, gas prone kerogen type III). No potential reservoir in outcrop)

Thrupp, G.A., E.A. Silver & H. Prasetyo (1986)- Preliminary results of a palaeomagnetic study of Misool, Irian Jaya. In: IOC Symposium on marine science in the Western Pacific: the Indo-Pacific convergence, Townsville 1986, p. 29. *(Abstract only)*
(Results of paleomagnetic analysis of 614 samples from 107 sites on Misool. Tertiary carbonates very weak magnetizaton, but Late Cretaceous Fafanlap and Waaf formations retain well-defined, pre-folding magnetic directions that suggest substantial CCW rotation of Misool relative to Australia (presumably since Late Cretaceous?; JTvG))

Thrupp, G.A., W.V. Sliter, E.A. Silver, C.J. Pigram, H. Prasetyo & R.S. Coe (1988)- Palaeomagnetism of Late Cretaceous calcareous sediments from the Misool Archipelago, Irian Jaya. 9th Australian Geol. Conv., Brisbane 1988, Abstracts 21, p. 401-402.

Thrupp, G.A., W.V. Sliter, E.A. Silver, H. Prasetyo & R.S. Coe (1987)- Paleomagnetic evidence from Late Cretaceous rocks of Misool for rotation relative to Australia. EOS Transactions 68, 44, p. 1260. *(Abstract only)*
(Paleomag data collected for 107 sites on Misool. For most formations magnetization barely detectable, but exceptional fidelity OF thermal demagnetization data of Late Cretaceous (Turonian-. Santonian) Waaf Fm planktonic foram biomicrites. Indicate 33°+/- 5° CCW rotation of Misool since Cretaceous and negligible latitudinal displacement relative to Australia (see also Wensink et al. 1989))

Vogler, J. (1941)- Ober-Jura und Kreide von Misol (Niederlandisch-Ostindien). In: Beitrage zur Geologie von Niederlandisch-Indien, Palaeontographica Suppl. IV, IV, 4, p. 243-293.
('Upper Jurassic and Cretaceous of Misool'. Reports of acid tuffs in Jurassic and Upper Cretaceous limestones. Late Jurassic Facet Limestone with calcispheres Stomosphaera and Cadosina spp.. Illustrations of vertical sections of Upper Cretaceous keeled Globotruncana planktonic forams)

Von Seidlitz, W. (1913)- *Misolia*, eine neue Brachiopoden-Gattung aus den Athyridenkalken von Buru und Misol. Beitrage Geologie Niederlandisch-Indien II, 2, Palaeontographica Suppl. IV, p. 163-194.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
(New genus Misolia for Upper Triassic (Norian) shallow marine costate athyrid brachiopod from Athyrides limestone in Misool and Fogi Beds of Buru. Genus characteristic of 'Gondwanan Tethys'; also known from NW Australian margin)

Wandel, G. (1936)- Beitrage zur Kenntnis der Jurassischen Molluskenfauna von Misol, Ost Celebes, Buton, Seran und Jamdena. In: J. Wanner (ed.) Beitrage zur Palaeontologie des Ostindischen Archipels 13, Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 75B, p. 447-526.
('Contributions to the knowledge of Jurassic molluscs from Misool, East Sulawesi, Buton, Seram and Yamdena'. Description of Mollusca, mainly collected by F. Weber. Misool faunas include upper Liassic Harpoceraten beds, lower Dogger Hammoceraten beds, Oxfordian Aucella malayomaorica marls (also in E Sulawesi), etc.)

Wanner, J. (1910)- Beitrage zur geologischen Kenntnis der Insel Misol (Niederlandisch Ost-Indien). Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 27, p. 469-500.

(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001653001:pdf)
('Contributions to the geological knowledge of Misool island'. Early description of geology and Mesozoic stratigraphy of S Misool and adjacent islands, based on 3-week visit in 1909. Misool island structure rel. simple: 10-20° N-dip. U Triassic- Cretaceous open marine succession, overlain by Eocene alveolinid limestone: (1) Triassic Keskain Beds with Daonella, (2) Nucula Marls, with Triassic Nucula, Myophoria, Cardita (3) U Triassic Athyrid Limestone, (4) Harpoceratid shales with E Jurassic ammonites-belemnites, (5) Lilinta Beds with U Jurassic ammonites- belemnites, (6) Facet Shales, (7) Facet Limestones with Cretaceous planktonic foraminifera, incl. Discorbina (=Globotruncana), (8) Inoceramus-Radiolites marl with U Cretaceous bivalves and rudists, (9) Eocene Alveolina Limestone, (10) Late Tertiary limestone with Lepidocyclina, etc.. With 1:187,500 scale map)

Weber, F. (1930)- Verslag over het geologisch onderzoek op de eilandengroep van Misool. Nederlands Nieuw Guinea Petroleum Maatschappij (NNGPM), Report 12103, p.
('Report of geological investigations of the Misool islands group'. Frequently quoted unpublished BPM/ NNGPM report on Misool islands geology)

Wensink, H., S. Hartosukohardjo & Y. Suryana (1989)- Palaeomagnetism of Cretaceous sediments from Misool, northeastern Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, p. 287-301.
(Misool paleo pole positions do not correspond to Australia; probably split off in Late Triassic-Jurassic. In Late Cretaceous Misool was at ~20° S, much farther N relative to Australia than today. 20° CCW rotation since Late K. Main folding phase on Misool Late Oligocene; older folding event in Late Triassic)

VIII.3. Arafura Shelf

Adhyaksawan, R., P.T. Allo, M. Raharja, M. Isjmiradi & M. Boyd (2010)- Arafura seismic processing: importance of iterating velocity analysis and integrating regional geology to counter signal masking by major unconformities: Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 5p.

Aldha, T. & Kim Jae Ho (2008)- Tertiary hydrocarbon play in NW Arafura Shelf, Offshore South Papua: frontier area in Eastern Indonesia. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA08-G-144, 9p.
(On proven Tertiary petroleum system on NW margin of Arafura Shelf between N Aru Islands and Lengguru foldbelt)

Balke, B., C. Page, R. Harrison & G. Roussopou (1973)- Exploration in the Arafura Sea. Australian Petrol. Explor. Assoc. (APEA) J. 13, p. 9-12.

Bradshaw, J. (1990)- Geological cross-section of the Arafura Basin. Bureau Mineral Res. Geol. Geophysics, Record 1990/14, p. 1-18. + Plates
(online at: www.ga.gov.au/metadata-gateway/metadata/record/14306/)
(Offshore Arafura Basin contains >9 km of Paleozoic rocks in Arafura Graben in S part of basin. Basin underlain by M- Late Proterozoic sequence which thickens to E and is probably equivalent to onshore McArthur Basin. Overlain by Mesozoic Money Shoal Basin, ~1 km thick over central parts of graben, thickening rapidly to W and thinning to E and N)

Bradshaw, J., R.S. Nicoll & M. Bradshaw (1990)- The Cambrian to Permo-Triassic Arafura Basin, Northern Australia. Australian Petrol. Explor. Assoc. (APEA) J. 30, 1, p. 107-127.
(Arafura Basin N Australia shelf thick Cambrian- Permo-Triassic sequence, unconformably overlying Proterozoic McArthur basin, and unconformably overlain by M Jurassic and younger Money Shoal basin. Broad northern platform (3-5 km Paleozoic) and NW trending Goulburn graben (Carboniferous-Lower Permian; >10km Paleozoic; 6 exploration wells). Cambrian-Ordovician mainly carbonates. Late Devonian and Late Carboniferous mainly clastics.)

Brown, C.M. (1979)- Arafura and Money Shoal Basins explanatory notes and stratigraphic correlations. Bureau Mineral Res. Geol. Geophysics, Record 1979/51, p. 1-14.
(online at: www.ga.gov.au/…)
(Arafura Basin is poorly known intracratonic basin of thick Paleozoic and Proterozoic sedimentary rocks which crop out along N coast of Arnhem Land and extend offshore beneath Arafura Sea. Correlation panel through Paleozoic- Mesozoic of wells Heron 1- Lynedoch 1- Money Shoal 1 and shallow onshore wells. (Manuscript for Brown, 1980))

Brown, C.M. (1980)- Arafura and Money Shoal basins. In: Stratigraphic correlation between sedimentary basins of the ESCAP Region, ESCAP Atlas of Stratigraphy II, 7, p. 52-57.

Carter, P.A. (2013)- Under-explored Palaeozoic and Mesozoic petroleum systems. In: 75th EAGE Conf. Exhib., London, 4p. *(Extended Abstract)*
(Barakan Graben on Arafura Shelf SE of Tanimbar Trough may be underlain by Paleozoic oil source rocks, analoguous to NW Australia shelf Goulburn Graben and Petrel Sub-basin)

Dinkelman, M., J. Granath, J. Christ & P. Emmet (2010)- Arafura Sea: a deep look at an underexplored region. SEAPEX Press 62, 13, 1, p. 76-95.
(New deep regional seismic shows locally very thick (up to 30km) sedimentary section on Arafura Platform. Almost all Precambrian Wessel Group and MacArthur Basin sequence)

Dumont, C. & P. Dattilo (2015)- Money Shoal Basin, North Australia: a sequence stratigraphy study of the Plover and Flamingo Formations. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2015, Singapore, 5, 7.2, 3p.
(Extended Abstract + Presentation)
(Mesozoic Money Shoal Basin overlies Neoproterozoic-Paleozoic intra-cratonic Arafura Basin. Paleozoic-Mesozoic separated by Late Triassic 'Fitzroy' angular unconformity (N-S compression). E-M Jurassic Plover Fm overall transgressive unit above unconformity, onlapping to SE. Deposition of Late Jurassic- E Cretaceous Flamingo clastic reservoirs partly controlled by paleo-trough and Tithonian tectonic inversion phase)

Earl, K.L. (2006)- An audit of wells in the Arafura Basin. Geoscience Australia Record 2006/02, p. 1-86.
(Online at: www.ga.gov.au/image_cache/GA15192.pdf)
(Summary of geology and wells in Australian sector of S Arafura Sea. Most wells in Goulburn Graben, penetrated Paleozoic of inverted Goulburn graben and Jurassic- Cretaceous of Money Shoal successor basin)

Edgar, N.T., C.B. Cecil, R.E. Mattick, A.R. Chivas, P. de Deckker & Y.S. Djajadihardja (2003)- A modern analog for tectonic, eustatic and climatic processes in cratonic basins: Gulf of Carpenteria, Northern Australia. In: C.B. Cecil, & N.T. Edgar (eds.) Climate controls on stratigraphy, Soc. Sedimentary Geology (SEPM) Spec. Publ. 77, p. 193-205.
(Gulf of Carpentaria, SE of Arafura Shelf, is tropical, silled epicontinental sea. Reconnaissance seismic and well data show Cenozoic sedimentation clastics-dominated in temperate climate. In Miocene carbonate deposition expanded S-ward into gulf region. In Late Miocene carbonate sedimentation replaced by terrigenous clastics from developing New Guinea Central Range, in wetter climate. At least 14 basin-wide transgressive–regressive cycles identified by channels eroded under subaerial conditions since about Miocene)

Fairbridge, R.W. (1951)- The Aroe Islands and the continental shelf North of Australia. Scope, University West Australia, 1, 6, p. 24-28.
(Geomorphology study of Aru Islands from air photos. Arafura shelf is vast peneplained platform of Pre-Cambrian rocks. Aru Islands Pre-Cambrian basement with thin veneer of Late Tertiary and Quaternary sediments. Marine channels subdividing Aru islands group may be drowned Pleistocene river valleys)

Granath, J., J. Christ, M. Dinkelman & P. Emmet (2011)- Arafura and Banda Seas: a plate-scale look at exploring a convergent margin. SEAPEX Press 63, 14, 1, p. 68-91.
(New deep (>40 km) regional seismic along convergent margin between Aru Trough from Seram to Tanimbar. Seram viewed as fragment of Birds Head thrust North over itself Aru Trough is young extensional basin with complicated Plio-Pleistocene stratigraphy)

Granath, J.W., M. Dinkelman, J.C. Christ-Stringer & P.A. Emmet (2012)- Highlights and implication of a deep-crustal seismic reflection survey in the Arafura Sea region. Berita Sedimentologi 24, p. 48-60.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-24-timor-and-arafura-sea.html)
(New deep seismic shows thick two-part Proterozoic section of ~15+ km thick Arafura Basin and underlying additional 15+ km of McArthur Basin equivalents, making up virtually entire crust under Arafura platform. Weber Deep initiated as forearc extensional event, which severed accretionary prism from its volcanic core, then evolved into basin within Banda Basin. Seram thrust belt lies above strike-slip system that separates Banda microplate from Birds Head, and forms plate boundary in that area)

Grosjean, E., G.A. Logan, N. Rollet, G.J. Ryan & K. Glenn (2007)- Geochemistry of shallow tropical marine sediments from the Arafura Sea, Australia. Organic Geochem. 38, 11, p. 1953-1971.
(Organic matter in modern Arafura Sea tropical carbonate shelf sediments dominated by marine algal input. Closest to shore, high taraxerol abundance indicates strong input of mangrove material during transgression following Last Glacial Maximum. Sediments in paleo-channels with dissolved CH4 of microbial origin)

Gumilar, I.S. (2017)- Periode deformasi Kenozoikum Kepulauan Aru, Cekungan Wokam, Maluku. J. Geologi Sumberdaya Mineral 18, 2, p. 89-103.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/186/281)

('Cenozoic deformation period in the Aru Islands, Wokam Basin, Moluccas'. Three periods of Cenozoic deformation on Aru island, all with strike slip faulting: Late Miocene NW-SE stress (SW-NE folds), Late Pleistocene extension, and late N-S lineations)

Hardjawidjaksana, K. (1988)- The structure and tectonics of the Aru Trough and its surroundings, Banda Arc, Indonesia. M.Sc. Thesis, London University, p. *(Unpublished)*

Helby, R. (2006)- A palynological reconnaissance of new cuttings samples from the Arafura-1, Kulka-1 and Tasman-1 wells. In: H.I.M. Struckmeyer (comp.) New datasets for the Arafura Basin. Geoscience Australia Record 2006/06, Canberra, p. 1-17.
(Results of palynological analyses from Australian part of Arafura shelf. E Permian Pseudoreticulatispora confluens and Corisaccites alutas in all 3 wells, Carboniferous D. birkheadensis and Spelaeotriletes yberti zones in Kulka 1)

Jongsma, D. (1970)- Eustatic sea level changes in the Arafura Sea. Nature 228, p. 150-151.
(Arafura Sea shelf is submerged subaerialle eroded land surface with fluvial pattern of channels and drowned reefs near edge of shelf. Marine survey in Arafura Sea supports eustatic sea level lowering of >130m between 21,000- 14,000 yrs BP. Submarine teraces down to 200m (dated at probably 170,000 yr BP) reflect much lower sea levels during earlier Pleistocene glacials)

Jongsma, D. (1974)- Marine geology of the Arafura Sea. Bureau Mineral Res. Geol. Geophysics, Canberra, Bull. 157, p. 1-56.
(online at: www-a.ga.gov.au/web_temp/1366411/Bull_157.pdf)
(Results of BMR marine geological survey in Australian sector of Arafura Sea in 1969. Seismic profiling revealed series of unconformities in the top few 100m of section. Regional unconformity at base Mesozoic, which overlies Precambrian. Paleozoic sediments may be present in graben in Money Shoal area and N of Melville Island. Another unconformity correlated with regional Mio-Pliocene surface encountered in Ashmore Reef 1 well, etc., corresponding to later Cenozoic orogenies. Near Aru Islands the post-Mesozoic section thin or absent as result of uplift and erosion associated with active orogenic belts to N)

Kaswandi, A.A., F. Ferdian & D. Setiawan (2017)- Tectonostratigraphy of NW Edge Arafura platform. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 5p.
(Tectonostratigraphy of NW edge of Arafura Platform divided into (1) Prekinematic 1 and 2 (Proterozoic-Devonian), Syn-kinematic 1 (Permian- E-Triassic rifting; thickening towards NNE-SSW trending normal faults; ASM 1), Base-Jurassic unconformity, Post-kinematic 1 (backstepping M-L Jurassic- Cretaceous, thickening to W), Post-kinematic 2 (Paleogene- Miocene New Guinea Lst), Syn-kinematic 2 (E Pliocene extension at W platform edge) and Syn-kinematic 3 (Late Pliocene and younger Akimeugah foreland basin, thickening to NE; Aru Trough opening)

Katili, J.A. (1986)- Geology and hydrocarbon potential of the Arafura Sea. In: M.T. Halbouty (ed.) Future petroleum provinces of the world, American Assoc. Petrol. Geol. (AAPG), Mem. 40, p. 487-501.
(Arafura Sea continental shelf dominated by Late Paleozoic-Cenozoic shelf sediments, underlain by granitic basement. Two tectonic styles: block faulting in shelf and slope sediments of Arafura sea and Overthrusting of chaoric sediments from Banda Arc towards Australian continent. In Malita- Calder graben gas shows in M Jurassic- E Cretaceous sediments)

Kusnida, D. & T. Naibaho (2018)- Sediment core from the seafloor of Aru Trough, West Papua- Indonesia. J. Geologi Sumberdaya Mineral 19, 1, p. 1-7.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/334/332)
(Core ARU-3 from seafloor of Aru Trough W of Aru Islands at water depth of 3543m, 2.26m long. Mainly greenish clay. One thin possible ash layer)

Labutis, V., A. Moore & J. Bradshaw (1992)- Petroleum prospectivity evaluation report Arafura Basin. Australian Geol. Survey Org. (AGSO), Canberra, Record 1992/84, p. 1-58.

(online at: www.ga.gov.au/corporate_data/14584/Rec1992_084.pdf)
(Petroleum prospectivity study of Australian part of Arafura Shelf, incl. Goulburn Graben, N Arafura sub-basin. Bitumen strandings in Arafura Basin have Cretaceous or younger origin)

Livsey, A. (2016)- Hydrocarbon exploration in the Arafura Sea- what works and what doesn't. In: 2016 Technical Symposium Where from, where to, Indon. Petroleum Assoc. (IPA), Jakarta, p. *(Abstract?)*

Martin, B.A. & S.J.Cawley (1991)- Onshore and offshore petroleum seepage; contrasting a conventional study in Papua New Guinea and airborne laser fluorosensing over the Arafura Sea. Australian Petrol. Explor. Assoc. (APEA) J. 31, 1, p. 333-353.

Miharwatiman, J.S., L. Andria, D.W. Kleibacker, J. Elliot & J.A. Baker (2013)- Exploration of the Arafura Basin Indonesia. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2013, 29p. *(Presentation)*
(online at: www.seapex.org/im_images/pdf/Simon/12%20Joko%20Suklis%20SEAPEX2013_Arafura.pdf)

Miharwatiman, J.S., L. Andria, D.W. Kleibacker, J. Elliot & J.A. Baker (2013)- Exploration of the Arafura Basin, Indonesia. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-184, p. 1-14.
(same paper as above)
(Results of recent ConocoPhillips exploration of Arafura Basin. Thick N-S trending, 700km long Late Proterozoic rift basin on NW margin of Australian continent, overlain by E Paleozoic, inverted in Triassic? (with 8000'- 15,000' of uplift/ erosion) and overlain by thin Cretaceous- Tertiary section. Two unsuccessful wells drilled in 2010-2011, Aru-1 in Amborip VI PSC and Mutiara Putih-1 in Arafura Sea PSC, both TD in Ordovician clastics and limestones, with Silurian- Carboniferous section missing)

Miyazaki, S. & B. McNeil (1998)- Arafura Sea: petroleum prospectivity bulletin and database. Bureau Resource Science, Petroleum Prospectivity Bulletin and Database, 1998/1, p.

Miyazaki, S. & B. McNeil (1998)- Arafura Sea- Tertiary, Mesozoic, Palaeozoic and weathered basement plays. Australian Petrol. Explor. Assoc. (APEA) J. 38, p. 878.
(Petroleum potential in Arafura Sea: Tertiary, Mesozoic-Paleozoic sandstones or carbonates, weathered Pre-Cambrian basement. NW-trending Goulburn Graben emerged end-Paleozoic, leaving peneplain in E Jurassic. M Jurassic marine transgression over smoothed erosional surface, undeformed, with angular unconformity at base. Oil shows from Paleozoic-Mesozoic in four wells. Bitumen strandings on S shores of Arafura Sea. Oil slicks over Goulburn Graben during ALF survey. Paleozoic source rocks retain oil generative capability. Jurassic and E Cretaceous sandstones good porosity. Paleozoic reservoirs poor, but often fractured. Six play types: fault rollovers low-relief anticlines, 400 km long Tithonian- basal Cretaceous channel, etc.)

Moore, A. (1995)- Is oil being generated beneath the northern Arafura Sea? AGSO Res. Newsl. 23, p. 5-7.

Moore, A., J. Bradshaw & D. Edwards (1996)- Geohistory modelling of hydrocarbon migration and trap formation in the Arafura Sea. Petroleum Expl. Soc. Australia (PESA) Journal, 24, p. 35-52.
(online at: www.ga.gov.au/image_cache/GA7804.pdf)
(Lower Paleozoic in Goulburn Graben wells in Australian part of Arafura Sea reached peak maturity before Late Triassic formation of graben)

Moss, S. (2001)- Extending Australian geology into eastern Indonesia and potential source rocks of the Indonesian Arafura Sea. PESA News, Feb-Mar 2001, p. 54-56.
(Lower Paleozoic 'Larapintine' and U Paleozoic 'Gondwanan' petroleum systems, as identified in NW Australia, extend into parts of E Indonesia. Mesozoic 'Westralian' source rocks unlikely in Indonesian Arafura Sea)

Nicol, G.N. (1970)- Exploration and geology of the Arafura Sea. Australian Petrol. Explor. Assoc. (APEA) J. 1970, 10, p. 56-61.

Nicoll, R.S. (2006)- Cambrian and Ordovician sediments and biostratigraphy of the Arafura Basin, offshore Northern Territory, Australia. In: H.I.M. Struckmeyer (comp.) New datasets for the Arafura Basin. Geoscience Australia Record 2006/06, Canberra, p. 1-16.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=63994)
(Extensive M Cambrian- E Ordovician 'Goulburn Gp' carbonate shelf underlies most of Arafura Sea between Australia and New Guinea. Same sedimentary package hydrocarbon-bearing in Canning and Amadeus Basins. Conodonts from upper part of carbonate-dominated sequence Late Cambrian- Lower Ordovician (early Arenig) age (Cordylodus sp., Prioniodus adami, Jumudontus brevis, Bergstroemognathus extensus, Serratognathus bilobatus, Cooperignathus aranda, Oepikodus communis, O. cleftus))

Nicoll, R.S. (2006)- Devonian stratigraphy and biostratigraphy of the Arafura Basin, offshore Northern Territory, Australia. In: H.I.M. Struckmeyer (comp.) New datasets for the Arafura Basin. Geoscience Australia Record 2006/06, Canberra, p. 1-10.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=63994)
(Devonian sediments in Goulburn Graben are of Upper Devonian (Famennian) age, and unconformably overlie Cambrian- E Ordovician Goulburn Gp. Conodont faunas from Djabura and Yabooma Fms may represent, crepida and expansa conodont zones and suggests shallow water, inner shelf depositional environments)

Oktariano, O., R.D. Pradhana, S.E. Saputra, B. Sapiie & I. Gunawan (2018)- Exploration new play in frontier basin Aru, Eastern Indonesia using new insight of geophysical and geological evaluation. In: 8th EAGE Int. Geol. Geophysical Conf. Exhib., Saint Petersburg , p. *(Extended Abstract)*
(On Pre-Tertiary in Aru area)

Panuju (2012)- Well log sequence stratigraphy and chronostratigraphy of Barakan area, Arafura Sea. Proc. 41st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2012-GD-26, p.
(Sequence stratigraphic interpretation of Barakan-1, Koba-1 and Abadi-1 wells. Cambrian- Recent succession subdivided into 14 sequence units. Several unconformities, and deepening of depositional setting from Koba-1 (N) to Abadi-1 (S))

Panuju, S. Sofyan & H.L. Setiawan (2009)- Sikuen stratigrafi wilayah barat Cekungan Arafura: studi kasus penampang sedimen sumur Barakan-1 dan Koba-1. Proc. 38th Ann. Conv. Indon. Assoc. Geol. (IAGI), Semarang, PITIAGI2009-055, 15p.
('Sequence stratigraphy of the W margin of the Arafura Basin: study of sediments of wells Barakan 1 and Koba 1'. Correlation and sequence stratigraphic interpretation of two key Arafuru Platform margin wells. Latest M Jurassic (Callovian)- basal Cretaceous (Berriasian-Valanginian) sand-rich interval unconformable over Cambrian and older rocks, overlain by deep water M-L Cretaceous clastics and Tertiary carbonate section)

Patmawidjaya, T. & Subagyo (2014)- Penelitian gayaberat dan geomagnit Kepulauan Aru, Cekungan Wokam. J. Geologi Kelautan 12, 1, p. 1-14.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/241/231)
('Gravity and geomagnetic studies of the Aru Islands, Wokam Basin')

Petroconsultants Australasia/ Northern Territory Geological Survey (1989)- Arafura Basin. p. 1-117.
(Unpublished multiclient study report)

Rollet, N., G.A. Logan, G. Ryan, A.G. Judd, J.M. Totterdell, K. Glenn et al. (2009)- Shallow gas and fluid migration in the northern Arafura Sea (offshore Northern Australia). Marine Petroleum Geol. 26, p. 129-147.
(Neoproterozoic-Paleozoic Arafura Basin extends from onshore N Australia across Arafura Sea into Indonesian waters, and is overlain by Mesozoic- Cenozoic Money Shoal Basin. Shallow gas indicators and fluid migration pathways in Holocene section identified from pockmarks and echo sounder profiles. Gas in shallow cores of microbial origin, but deeper fluid movement suggested by hydrocarbon slicks interpreted on synthetic aperture radar data)

Shor, G.G. (1974)- Seismic refraction results from the Arafura Sea. CCOP Newsletter 1, 3, p. 21-23.

Sloan, R.A. & J.A. Jackson (2012)- Upper-mantle earthquakes beneath the Arafura Sea and south Aru Trough: implications for continental rheology. J. Geophysical Research, Solid Earth, 117, B5, p. 1-13.
(Upper continental lithospheric mantle earthquakes generally rare. Two earthquakes under Arafura Sea, where upper mantle probably rel. cool (< 600°C), and one of these earthquakes lies ~25 km below Moho in region where there is no evidence of unusually high strain rates)

Smith, M.R. & J.G. Ross (1986)- Petroleum potential of northern Australian continental shelf. American Assoc. Petrol. Geol. (AAPG) Bull. 70, 11, p. 1700-1712.
(Australian part of Arafura Shelf. Thick Paleozoic basin with possible Devonian reefs, overlain in W by Mesozoic- Tertiary section. Three prospective sequences: Cenozoic with Miocene reefal carbonates, Mesozoic with thick sandstone intervals and thick Paleozoic basin, possibly containing Devonian reefs and younger Paleozoic sandstone intervals. Mesozoic basin prime target for exploration)

Struckmeyer, H.I.M. (comp.) (2006)- Petroleum geology of the Arafura and Money Shoal Basins. Geoscience Australia Record, Canberra, Report 2006/22, p. 1-37. *(Unpublished)*
(online at: https://d28rz98at9flks.cloudfront.net/63995/Rec2006_022.pdf)
(Arafura Basin is thick Neoproterozoic-Paleozoic intracratonic basin that extends from onshore N Australia across Arafura Sea into Indonesian waters. Four subsidence phases, and one uplift phase. Two major episodes of upper crustal extension: NW-SE in Neoproterozoic and NE-SW in Late Carboniferous-E Permian. Major phase of contractional deformation in Middle–Late Triassic, particularly in Goulburn Graben. M Jurassic-Recent subsidence at margin has been called Money Shoal Basin. Four potential source rock intervals)

Struckmeyer, H.I.M. (2006)- The northern Arafura Basin- exploration opportunities from Geoscience Australia's new petroleum program. Australian Petrol. Prod. Explor. Assoc. (APPEA) J., 2006, 2, p. 143-154.

Struckmeyer, H.I.M., G.J. Ryan & I. Deighton (2006)- Geohistory models for Arafura Basin wells and pseudo-wells. In: New datasets for the Arafura Basin, Geoscience Australia Record 2006/06, p. 1-9.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/gcat_63994)
(Geohistory modeling of wells and pseudo-wells on Australian part of Arafura Platform. Area complex multi-phase subsidence history of initial extension in Neoproterozoic, followed by periods of non-deposition and subsidence in Paleozoic. Contractional event in Triassic resulted in uplift and erosion of up to 3200m of sediments. Modelling suggests high heatflow values for Early Paleozoic)

Subroto, E.A. & D. Noeradi (2008)- Petroleum system of the Paleozoic and Mesozoic formation intervals in the northern Arafura Sea, Papua, Indonesia. 8th Middle-East Geoscience Conf. Exh. (GEO 2008), Bahrein, 1p.
(Abstract only) (Geochemical analyses and modeling of outcrop and well samples (mainly W Papua; JTvG) suggest wo oil and gas source rocks: (1) Permian Aiduna Fm (TOC=1.3-6.6%, Ro 0.55%); (1) Jurassic-Cretaceous Kembelangan Gp. Basal Lower Kembelangan entered late maturity for hydrocarbon generation (Ro = 1.2%) at ~2 Ma and reached maturity at ~5-10 Ma. Paleozoic formations reached maturation during Mesozoic. Possible reservoirs porosity 5-15% and permeability 10-20 mD)

Summons, R.E., J. Bradshaw, M. Brooks, A.K. Goody, A.P. Murray & C.B. Foster (1993)- Hydrocarbon composition and origins of coastal bitumens from the Northern Territory, Australia. Petroleum Expl. Soc. Australia (PESA) Journal 21, p. 31-42.
(online at: www.ga.gov.au/image_cache/GA7803.pdf)
(Analyses of coastal bitumens from Northern Territory beaches, facing Arafura Sea. Most samples are waxy bituments derived from lacustrine source rocks, similar to C Sumatra Minas oil and may originate from SE Asia. Associated pollen latest Cretaceous or younger. Second oil family from marine source)

Tayama, R. (1939)- Topography, geology and coral reefs in the Aru Islands in the Dutch East Indies. Japanese J. Geology Geography 16, p. 31-32.
(Summary by T. Kobayashi of paper in Contr. Inst. Geol. Pal. Tohuku Imperial University, Sendai, 20, 1936, p. 1-35. Aru Islands jointed and dismembered Miocene- Pliocene limestone plateau, possibly on granite)

Thomas, B.M., P. Hanson, J.G. Stainforth, P. Stamford & L. Taylor (1990)- Petroleum geology and exploration history of the Carpentaria Basin, Australia, and associated infrabasins. In: M.W. Leighton et al. (eds.) Interior cratonic basins, American Assoc. Petrol. Geol. (AAPG), Mem. 51, p. 709-724.

Verstappen, H.Th. (1959)- Geomorphology and crustal movements of the Aru Islands in relation to the Pleistocene drainage of the Sahul shelf. American J. Science 257, 7, p. 491-502.
(Aru islands geanticlinal upwarp of Sahul shelf WNW of Australia. Structural terraces common and wrongly attributed to Recent uplift by several authors. Sunken coast lines and drowned abrasion platforms indicate subsidence of outer zones in Recent times. Channels between islands are result of pattern of diagonal shear joints and have no connection with Pleistocene courses of New Guinea rivers, as often suggested)

Wagimin, N. & E.A. Sentani (2009)- Opportunities (I), Sahul Basin. Inameta J. 7, p. 20-23.
(online at: www.patranusa.com)
(Overview of Arafura Sea/ Sahul Basin, W Papua, in conjunction with tender round offering)

Zhen, Y.Y., J.R. Laurie & R.S. Nicoll (2012)- Cambrian and Ordovician stratigraphy and biostratigraphy of the Arafura Basin, offshore Northern Territory. Mem. Assoc. Australasian Palaeontologists (AAP) 42, p. 437-457.
(Cambrian and Ordovician conodonts and other fossils from petroleum exploration wells (Tasman 1, Torres 1; Goulburn 1, Arafura 1) in Goulburn Graben of Arafura Basin off NW Australia. Also mentions occurrence of Early Ordovician conodonts from wells Noordwest 1 and Cross Catalina 1 in W Papua frontal foldbelt)

IX. CIRCUM-INDONESIA

IX.1. Andaman Sea Region

Acharyya, S.K. (1991)- Late Mesozoic- Early Tertiary basin evolution along the Indo-Burmese range and Andaman Island. In: S.K. Tandon et al. (eds.) Sedimentary basins of India, p. 104-130.

Acharyya, S.K. (1997)- Stratigraphy and tectonic history reconstruction of the Indo-Burma-Andaman mobile belt. Indian J. Geology 69, p. 211-234.

Acharyya, S.K. (2007)- Collisional emplacement history of the Naga-Andaman ophiolites and the position of the eastern Indian suture. J. Asian Earth Sci. 29, 2-3, p. 229-242.
(Dismembered Late Mesozoic ophiolites in 2 belts along E margin of Indian Plate: (1) E Belt follows magmatic arc of C Burma Basin high gravity, mafic and continental metamorphic rocks and two closely juxtaposed sutures); (2) W Belt along E margin of Indo-Burma Range and Andaman outer island arc (negative gravity anomalies; rootless ophiolites over Eo-Oligocene flysch); with two sets of ophiolites accreted in E Cretaceous and M Eocene in this belt, inferred to be nappes from E Belt, emplaced during Late Oligocene collision between Burmese and Indo-Burma-Andaman microcontinents. Andaman Islands Ophiolites belong to W Belt, formerly interpreted as upthrust oceanic crust, accreted due to prolonged subduction to W of island arc, but subduction began only in Late Miocene and could not have produced ophiolitic rocks accreted in E Eocene)

Acharyya, S.K., K.K. Ray & S. Sengupta (1990)- Tectonics of the ophiolite belt from Naga Hills and Andaman Islands, India. Proc. Indian Academy Sci. (Earth Planetary Sci.) 99, p. 187-199.
(Ophiolitic rocks of Naga Hills-Andaman belt rootless slices, gently dipping over Paleogene flysch. Blueschists in ophiolite melange indicates involvement in subduction process. Subduction initiated prior to M Eocene as proved by lower age limit of ophiolite-derived cover sediment and olistostromal trench sediment. In Late Oligocene terminal collision between India and Sino-Burmese blocks, basement slivers from Sino-Burmese block, accreted ophiolites and trench sediments thrust W-ward as nappe and emplaced over down-going Indian plate. Root-zone of ophiolite nappe (suture) marked by partially-exposed E ophiolite belt of same age and gravity high passing through C Burma-Sumatra-Java. Subduction W of Andaman islands began only in Late Miocene, later than emplacement of ophiolites. Post-collisional N-ward movement of Indian plate developed leaky dextral transcurrent faults and caused Neogene-Quatemary volcanism in C Burma)

Acharyya, S.K., K.K. Ray & D.K. Roy (1989)- Tectono-stratigraphy and emplacement history of the ophiolite assemblage from the Naga Hills and Andaman island arc. J. Geol. Soc. India 33, p. 4-18.

Acharyya, S.K., K.K. Ray & S. Sengupta (1991)- The Naga Hills and Andaman ophiolite belt, their setting, nature and collisional emplacement history. Physics and Chemistry of the Earth 18, 1, p. 293-315.
(Indo-Burmese Range and Andaman-Nicobar Island Arc trend of ophiolite occurrences (dismembered mafic-ultramafic rocks with associated oceanic pelagic sediments). They occur as thrust slices at highest tectonic levels, overlying distal shelf sediments of Eocene- Oligocene age. Ophiolites unconformably overlain by M-L Eocene ophiolite-derived clastics. Ophiolites remnants of one or several intra-continental ocean basin(s), created during Cretaceous rifting of Greater India from Gondwana)

Alam, M., M.M. Alam, J.R. Curray, M.L.R. Chowdhury & M.R. Gani (2003)- An overview of the sedimentary geology of the Bengal Basin in relation to the regional tectonic framework and basin-fill history. Sedimentary Geology 155, p. 179-208.
(Bengal Basin at junction of three interacting plates: Indian, Burma and Tibetan (Eurasian) Plates. Major switch in sedimentation pattern during M Eocene- E Miocene as result of collision of India with Burma and Tibetan Blocks. By M Miocene, with continuing collision events and uplift in Himalayas and Indo-Burman Ranges a huge influx of clastic sediments came into basin from NE and E. From Pliocene onwards, large amounts of sediment filling basin from W and NW)

Alam, M.A., D. Chandrasekharam, O. Vaselli, B. Capaccioni, P. Manetti & P.B. Santo (2004)- Petrology of the prehistoric lavas and dyke of the Barren Island, Andaman Sea, Indian Ocean. Proc. Indian Academy Sci. (Earth Planetary Sci.) 113, 4, p. 715-721.
(online at: https://www.ias.ac.in/article/fulltext/jess/113/04/0715-0721)
(Quaternary volcanics of Barren Island (Andaman Sea, Indian Ocean) evolved from source similar to that of Sunda Arc lavas of Sumatra/Java and is part of the same Neogene Inner Volcanic Arc)

Allen, R., A. Carter, Y. Najman, P.C. Bandopadhyay, H.J. Chapman, M.J. Bickle, E. Garzanti et al. (2008)- New constraints on the sedimentation and uplift history of the Andaman-Nicobar accretionary prism, South Andaman Island In: A.E. Draut et al. (eds.) Formation and applications of the sedimentary record in arc collision zones. Geol. Soc. America (GSA), Spec. Paper 436, p. 223-255.
(Andaman-Nicobar Ridge accretionary complex part of Sunda subduction zone. Tertiary rocks exposed on Andaman Islands preserve record of tectonic evolution of surrounding region. Poor biostratigraphic age control (mainly barren). Oldest unit pre-Late Cretaceous ophiolite, Late Cretaceous- Paleocene pelagic cherts-shales, arc-derived Eocene Mitakhari Gp coarse clastics, Late Eocene?-Oligocene continental-derived Andaman Flysch, major uplift episode around 20 Ma, shallow marine volcanics-rich Miocene-Pliocene Archipelago group)

Andreason, M.W., B. Mudford & J.E.S. Onge (1997)- Geologic evolution and petroleum systems of the Thailand Andaman Sea basin. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia & Australia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 337-350.
(Thailand Andaman Sea sector 12 exploratory wells, including two gas discoveries. Two back-arc basins, Mergui and N Sumatra basin N extension with >10,500' sediment. Miocene reefs and Oligo- Miocene fluvio-deltaics and turbidites major explorationy plays)

ASCOPE (1985)- The stratigraphic correlation study of the Andaman Sea- Strait of Malacca. CCOP Techn. Paper TP/4, 28p.

Aung Khin, J. (1990)- The geology of the Andaman Sea. In:Proc. 8th Offshore SE Asia Conf., Singapore 1990, SE Asia Petroleum Expl. Soc. (SEAPEX) 9, p. 81-88.
(Brief review of Andaman Sea basins. Divided into Martaban fore-arc basin in N, North Sumatra backarc basin in S)

Awasthi, N., J. Ray, A. Laskar, Y. Amzad & M.Yadava (2013)- Chronology of major terrace forming events in the Andaman islands during the last 40 kyr. J. Geol. Soc. India 82, 1, p. 59-66.
(Andaman and Nicobar Islands part of accretionary prism along Andaman subduction zone. Quaternary coral reef coastal terraces up to 5m above s.l. (50m on Interview Island), tied to earthquake/ tsunami activity)

Awasthi, N., J.S. Ray & K. Pande (2015)- Origin of the Mile Tilek Tuff, South Andaman: evidence from 40Ar-39Ar chronology and geochemistry. Current Science 108, 2, p. 205-210.
(online at: www.currentscience.ac.in/Volumes/108/02/0205.pdf)
(Mile Tilek Tuff ~40m thick bedded dacitic-rhyolitic tuff deposit on S Andaman is one of several volcanic ash deposits in Andaman- Nicobar Islands that are evidence of large-scale volcanic eruption in SE Asia. Assumed ages Mio-Pliocene (~25-2 Ma), but new 40Ar-39Ar age for whole rock 0.73± 0.16 Ma. Chemically typical of subduction zone magmatism. Sr-Nd isotopes (87Sr/86Sr = 0.7073 and d Nd <0.9) suggest continental crustal contamination of magma, pointing to source volcano in Sumatra, possibly Ranau volcano in S Sumatra)

Awasthi, N., J.S. Ray, A.K. Singh, S.T. Band & V.K. Rai (2014)- Provenance of the Late Quaternary sediments in the Andaman Sea: implications for monsoon variability and ocean circulation. Geochem. Geophys. Geosystems 15, 10, p.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2014GC005462)
(Andaman Sea three major sediment provenances: (1) Irrawaddy catchment; (2) W slopes of Indo-Burman-Arakan Ranges and Andaman Islands; (3) catchments of Salween and Sittang and Bengal shelf (first two contributing 30-60% of material))

Ayyadurai, V., R. Nainar & C. Ojha (2015)- Mud volcanoes show gas hydrate potential in India's Andaman Islands. Oil and Gas J. 113, 2, p. 44-53.
(Minutes after M9.0 Sumatra-Andaman earthquake in 2004, mud volcanoes erupted on Diglipur Island in N Andaman. Eruptions activity linked to hydrocarbons)

Badve, R.M. & P. Kundal (1986)- Marine Cretaceous algae from the Baratang Formation, Andaman Islands, India. Bull. Geol. Min. Soc. India 54, p. 149-158.
(7 types of ?Cretaceous algae in calcareous sst in Baratang Gp, most of them new: Cayeuxia, Ethelia, Baratangia, Peyssonella, Permocalculus, Halimeda, etc. (possibly Paleogene?))

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Badve, R.M. & P. Kundal (1988)- *Distichoplax* Pia from Baratang Island, Andaman, India. Biovigyanam 14, p. 95-102.
(Distichoplax biserialis algae in Lower Eocene-Oligocene calcareous sst of Port Blair Gp, Baratang Island)

Badve, R.M. & P. Kundal (1998)- Dasycladacean algae from Palaeocene to Oligocene rocks of Baratang Island, Andaman, India. J. Geol. Soc. India 51, p. 485-492.
(Calcareous sst in Baratang Gp (Lw Paleocene- Lw Eocene) and Port Blair Group (M Eocene- Oligocene) yielded 4 dasyclad algae: Broeckella, Dissocladella, Neomeris and Trinocladus. Tethyan affinities)

Ball, V. (1888)- The volcanoes of Barren Island and Narcondam in the Bay of Bengal. Geol. Magazine 9, p. 404-408.

Bandopadhyay, A. & R.R. Bandyopadhyay (1999)- Subsea channels and incidence of thermogenic hydrocarbons in the mid-proximal Bengal Fan, West of the Andaman-Nicobar Islands. Marine Georesources Geotechn. 17, p. 1-16.

Bandopadhyay, P.C. (2005)- Discovery of abundant pyroclasts in Namunagarh grit, South Andaman; evidence for architectural element volcanism and active subduction during the Paleogene in the Andaman area. J. Asian Earth Sci. 25, p. 95-107.
(Late Eocene Namunagarh Grit clastics of S Andaman island mainly immature, locally pebbly greywacke sandstones. Abundant juvenile vesiculated fragments, pumice clasts, etc., suggest pyroclastic origin. Coarse-grained facies emplaced as debris flows, finer-grained facies turbidites, deposited in forearc environment on accretionary complex. Derived from andesitic arc volcanoes on W margin of Burma-Malaya continent in Eocene-Oligocene, indicating active subduction)

Bandopadhyay, P.C. (2012)- Re-interpretation of the age and environment of deposition of Paleogene turbidites in the Andaman and Nicobar Islands, Western Sunda Arc. J. Asian Earth Sci. 45, 2, p. 126-137.
(Andaman Flysch in different areas deposited in different tectonic and sedimentary environments and at different times: Late Paleocene in N Andaman, Oligocene in S Andaman island)

Bandopadhyay, P.C. (2017)- Inner-arc volcanism: Barren and Narcondam islands. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 12, p. 167-192.
(Barren and Narcondam young volcanic islands of volcanic belt that extends from Java in E to Burma in N. Below Narcondam probably continental or transitional crust, below Barren Island oceanic lithosphere)

Bandopadhyay, P.C. & A. Carter (2017)- Introduction to the geography and geomorphology of the Andaman-Nicobar Islands. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 2, p. 9-18.
(online at: http://mem.lyellcollection.org/content/memoirs/47/1/9.full.pdf)

(Introduction to Andaman islands in NE Indian Ocean are segment of tectonically active accretionary wedge of Sunda subduction system, with dismembered ophiolites, volcanic arc rocks, trench-slope deposits, submarine fan turbidites, pelagic sediments, etc.)

Bandopadhyay, P.C. & A. Carter (2017)- Geological framework of the Andaman- Nicobar Islands. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 6, p. 75-93.
(Andaman-Nicobar archipelago at W margin of Andaman Sea is sediment-dominated accretionary wedge (outer-arc). Andaman accretionary ridge two distinct terranes, juxtaposed and telescoped into N-S trending fold-thrust belt along E margin of Indo-Australian oceanic plate. Pre-Cretaceous meta-sedimentary rocks, U Cretaceous ophiolites and Paleogene- Neogene sediments indicate rapid changes in lithology, sedimentology, environments and paleogeographic setting)

Bandopadhyay, P.C. & A. Carter (2017)- Mithakhari deposits. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 8, p. 111-132.
(Mithakhari Melange composed of conglomerates, sandstones, andesitic tuff, siltstone, mudstones, shale, carbonaceous shale and limestones. Coherent and chaotic units with olistoliths of pre-ophiolite metasediments, ophiolitic ultramafics and basalts and pelagic-hemipelagic sediments. Active andesite volcanism on arc massif E of Andaman arc on W margin of Burma-Thai-Malaya peninsula in Eocene- Oligocene, before opening of Andaman Sea in M Miocene)

Bandopadhyay, P.C. & A. Carter (2017)- Submarine fan deposits: petrography and geochemistry of the Andaman Flysch. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 9, p. 133-140.
(Andaman Flysch of Oligocene age marine turbidites from axially fed submarine fan. Intermittently exposed across entire chain of Andaman- Nicobar Islands)

Bandopadhyay, P.C. & A. Carter (2017)- The Archipelago Group: current understanding. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 11, p. 153-166.
(Neogene Archipelago Group overlies Oligocene and older turbidites and tectonic melanges of ophiolite and Mithakhari rocks. Deposited in intertidal and subtidal, nearshore and offshore shelfal environments)

Bandopadhyay, P.C., U. Chakrabarti & A. Roy (2009)- First report of trace fossils from Palaeogene succession (Namunagarh grit) of Andaman and Nicobar islands. J. Geol. Soc. India 73, 2, p. 261-267.
(Namunagarh Grit of Late Eocene age in S Andaman island is submarine fan deposit with trace fossils Thalassinoides, Teichichnus and Lorenzinia. Associated with M-L Eocene (displaced) larger foraminifera Nummulites atacicus, Pellatispira and Biplanispira)

Bandopadhyay, P.C. & M. Ghosh (1998)- Facies, petrology and depositional environment of the Tertiary sedimentary rocks, around Port Blair, South Andaman. J. Geol. Soc. India 52, p. 53-66.

Bandopadhyay, P.C. & B. Ghosh (2015)- Provenance analysis of the Oligocene turbidites (Andaman Flysch), South Andaman Island: a geochemical approach. J. Earth System Science 124, 5, p. 1019-1037.
(online at: www.ias.ac.in/article/fulltext/jess/124/05/1019-1037)
(Oligocene turbidites of Andaman Flysch along E coast of S Andaman Island. Geochemistry of av. 71% SiO2, etc., close to granite field. Combined geochemical, petrographic and paleocurrent data indicate mainly plutonic-metamorphic provenance, possibly Shan-Thai continental block of NE and E Myanmar)

Bandopadhyay, S., M.R. Subramanyam & N. Sharam (1973)- The geology and mineral resources of the Andaman and Nicobar Islands. Geol. Survey of India, Records 105, 2, p. 25-68.

Banerjee, D. (1967)- Upper Cretaceous microflora from middle Andaman Isles (India). Review Palaeobotany Palynology 5, p. 211-216.
(Baratang Fm of Middle Andaman Isles with mixed of Tertiary and Upper Cretaceous forms, the latter being more common (see also Mandal et al. 2003))

Banerji, P.K., D. Halder & G. Ghosh (1981)- Metallogenesis in the Cretaceous embryonic ophiolites of Andaman-Nicobar island arc and its northern prolongation into the mountains along the Indo-Burman border. In: Int. Symp. Metallogeny of mafic and ultramafic complexes, etc., Athens 1980, 2, p. 21-38.

Banghar, A.R. (1987)- Seismo-tectonics of the Andaman- Nicobar Islands. Tectonophysics 133, p. 95-104.
(Epicentres of 345 earthquakes between 1967 1982 mainly shallow focus, deepest 250km. Orientation of slip vectors deduced from thrusting mechanisms consistent with NE- directed underthrusting of Indian Ocean under Andaman-Nicobar Islands)

Bawden, M. (2011)- Andaman Sea Basin, India: hydrocarbon prospectivity from newly reprocessed seismic data. Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 13, p. 1-16. *(Abstract + Presentation)*

Bhatta, K. & B. Ghosh (2014)- Chromian spinel-rich black sands from eastern shoreline of Andaman Island, India: Implication for source characteristics. J. Earth System Science 123, 6, p. 1387-1397.
(Black sands rich in chromian spinel in pockets along E shoreline of Andaman Island, near exposures of peridotites and volcanics of Cretaceous Andaman ophiolite. Volcanic chromian spinels relatively fresh, with geochemical characters of MORB of spreading centers. Peridotitic chromian spinels rounded and altered, and indicating depleted lherzolite and depleted harzburgite source of ophiolite suite)

Carter, A.& P.C. Bandopadhyay (2017)- Seismicity of the Andaman-Nicobar Islands and Andaman Sea. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 14, p. 205-213.
(Seismicity across Andaman-Nicobar island arc and Andaman Sea. Magnitudes of displacements varied from dip-slip on S (Sumatran) segment to dip-slip and strike-slip on Andaman-Nicobar segment. Andaman section more steeply dipping slab and thicker sediment cover compared to Sumatra where coupling with overlying plate is stronger. Seismicity in Andaman Sea spreading centre consistent with normal faulting and dyke injection)

Cawthern, T. (2013)- Reconstructing the Late Miocene to Recent volcanic, geologic, and oceanographic evolution in the Andaman Sea and Northern Bay of Bengal, Northeast Indian Ocean. Ph.D. Thesis University of New Hampshire, p. 1-118.
(Reconstruction of volcanic, geologic, and oceanographic evolution in the Andaman Sea and N Bay of Bengal in last -9.4 Myrs. Geochemistry of volcanic ashes from Andaman Sea suggests they were derived from N Sumatra source)

Chakraborty, A.A. & A.K. Ghosh (2015)- *Acrobotrys disolenia* Haeckel from the Late Miocene of Andaman and Nicobar Islands. Current Science 108, 11, p. 1990-1993.
(On radiolarian species from Late Miocene of Neill Island, Andaman Islands. Previous records of A. disolenia mainly from DSDP/ODP cores of Pacific Ocean and South China Sea)

Chakraborty, A.A. & A.K. Ghosh (2016)- Ocean upwelling and intense monsoonal activity based on late Miocene diatom assemblages from Neil Island, Andaman and Nicobar Islands, India. Marine Micropaleontology 127, p. 26-41.
(Late Miocene (Tortonian) diatoms from Neil Island with 82 taxa/ 35 genera. Two groups, dominated by (1) Thalassionema nitzschioides and T. longissima and (2) Actinocyclus ellipticus, Azpeitia nodulifera, Coscinodiscus asteromphalus and C. radiatus. Dominance of upwelling diatom taxon Thalassionema nitzschioides confirms strong Late Miocene monsoonal activity in study area)

Chakraborty, P.P. & P.K. Khan (2009)- Cenozoic geodynamic evolution of the Andaman-Sumatra subduction margin: current understanding. Island Arc 18, 1, p. 184-200.
(Review of Andaman-Sumatra margin. Subduction-related deformation along trench active since Cretaceous. Oblique subduction in N Sumatra-Andaman sector formed sliver plate between subduction zone and right-lateral fault system. Sliver fault, initiated in Eocene. N-S-trending dismembered ophiolite slices of Cretaceous age at different structural levels with Eocene trench-slope sediments, were uplifted and emplaced by E-dipping thrusts to shape outer-arc prism. Strike-slip faults controlled subsidence and development of forearc basins with Oligocene-Pliocene siliciclastic-carbonate sediments. Opening of Andaman Sea back-arc in two phases: early (~11 Ma) stretching and rifting, followed by spreading since 4-5 Ma. Inner-arc volcanism in Andaman region extends to E Miocene. Arc volcanism since Miocene evolution from felsic to basaltic composition)

Chakraborty, P.P. & T. Pal (2001)- Anatomy of a submarine fan with detached lobe: Upper Eocene- Oligocene Andaman Flysch Group, Andaman Islands, India. Gondwana Research 4, 3, p. 477-486.
(Three facies associations in Andaman Flysch Gp represent two parts of submarine, inner fan and depositional lobe in middle fan. Paleocurrent patterns and high percentages of quartz suggest dual sediment supply)

Chakraborty, P.P., T. Pal, G.T. Dutta & K.S. Gupta (1999)- Facies pattern and depositional motif in an immature trench-slope basin, Eocene Mithakhari Group, Middle Andaman, India. J. Geol. Soc. India 53, 3, p. 271-284.
(Eocene Mithakhari Gp of Middle Andaman eight lithofacies of different paleogeographic significance and indicating sedimentation in small isolated basins in immature trench-slope setting. Lying unconformably on oceanic basement (ophiolite slices?))

Chandra, A. & R.K. Saxena (1998)- Lithostratigraphy of the Car Nicobar Island, Andaman and Nicobar Islands, India. Geophytology 26, p. 33-38.

Chandra, A., R.K. Saxena & A.K.Ghosh (1999)- Coralline algae from the Kakana Formation (Middle Pliocene) of Car Nicobar Island, India and their implication in biostratigraphy, palaeoenvironment and palaeobathymetry. Current Science 76, p. 1498-1502.

Chandrasekharam, D., A.P. Santo, B. Capaccioni, O. Vaselli, M.A. Alam, P. Manetti & F. Tassi (2009)- Volcanological and petrological evolution of Barren Island (Andaman Sea, Indian Ocean). J. Asian Earth Sci. 35, p. 469-487.
(online at: http://www.cec.uchile.cl/~ayaz/jaes.pdf)
(Barren Island only active volcano in Andaman Islands sector of Sunda arc system. Horseshoe-shaped caldera probably formed by giant lateral landslide of original volcanic cone. Compositional varies from low-K basalts to basaltic andesites)

Chatterjee, A.K. (1964)- The Tertiary fauna of Andamans. Repts. 22nd Sess. Int. Geological Congress, India 1964, VIII, sect. 8, p. 303-328.
(Paleocene-Recent sequence, including Eocene-Miocene larger forams)

Chopra, N.N. (1985)- Gas hydrate an unconventional trap in fore-arc regions of Andaman offshore. Bull. Oil and Natural Gas Corporation (ONGC) 22, 1, p. 41-54.

Clift, P.D. (2017)- Regional context of the geology of the Andaman-Nicobar accretionary ridge. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 3, p. 19-26.
(Andaman- Nicobar accretionary ridge along N extension of Java-Sumatra convergent margin is forming by accretion and underplating of sediments off-scraped from obliquely colliding Bengal Fan. Net accretion low (~28%; rest subducted mostly into upper mantle). Subduction initiated at ~95 Ma, but large-scale subduction accretion likely accelerated in E Miocene)

Cochran, J.R. (2010)- Morphology and tectonics of the Andaman Forearc, northeastern Indian Ocean. Geophysical J. Int. 182, 2, p. 631-651.
(online at: https://academic.oup.com/gji/article/182/2/631/568764)
(Description of Andaman Sea accretionary prism and outer arc ridge, a series of forearc basins and major N-S faults, developed as result of highly oblique subduction at W Sunda Trench)

Curray, J.R. (1999)- A new look at present tectonics and opening history of the Andaman Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 83, 13 (Supplement), p. *(Abstract only)*
(Andaman Sea active backarc basin behind Sunda subduction. Oblique convergence formed sliver plate between subduction zone and right lateral fault system after Oligocene. Eocene India- Asia hard collision started rotation and bending of W Sunda Arc. Sliver faulting started in Oligocene on W Andaman fault from off Sumatra through Andaman Sea into Sagaing fault. Late Oligocene Mergui Basin opening by extension of continental crust. E Miocene/ 25 Ma, backarc spreading started forming sea floor which became Alcock and Sewell Rises. From M Miocene/~15 Ma, these features separated from continental slope C Andaman Basin)

Curray, J.R. (2005)- Tectonics and history of the Andaman Sea region. J. Asian Earth Sci. 25, p. 187-232.
(Major review of Andaman Sea geology. Andaman Sea active backarc basin above and behind Sunda subduction zone where convergence is highly oblique. Sliver plate formed between subduction zone and right-lateral fault system (Sagaing Fault, etc.). Late Paleocene collision of Greater India-Asia started CW rotation and bending of N and W Sunda Arc. Series of extensional pull-apart basins opened by the combined backarc extension and strike-slip motion: Mergui Basin (started at 32 Ma), Alcock and Sewell Rises (23 Ma), East Basin (15 Ma). Alcock and Sewell Rises separated by formation of C Andaman Basin, and faulting moved onshore from Mentawai Fault to Sumatra Fault System of Sumatra (NB: ages revised from earlier Curray publications)

Curray, J.R. (2014)- The Bengal depositional system: from rift to orogeny. Marine Geology 352, p. 59-69.
(Bengal Depositional system one of greatest sediment accumulations in world, extends from alluvial-lacustrine sediments of lower Ganges and Brahmaputra Rivers, across Bengal Delta, Bangladesh continental shelf and slope to Bengal Fan. history from Mesozoic breakup of E Gondwanaland, N-ward drift of India, collision with S margin of Asia, rotation and bending of W Sunda Arc, and penetration of Indian continental mass into S Asia. Sources and provenance of sediments changed with ultimate uplift of Tibetan Plateau and Himalayas)

Curray, J.R. (2015)- Discussion: óóIs spreading prolonged, episodic or incipient in the Andaman Sea? Evidence from deepwater sedimentationò by C.K. Morley and A. Alvey. J. Asian Earth Sci. 111, p. 113-119.
(Disputes Morley and Alvey (2015) conclusion that crust of Alcock and Sewell Rises is continental, but is oceanic, thickened by back arc volcanism. Andaman Sea spreading not necessarily episodic, but sedimentation is episodic, caused by Plio-Pleistocene sea level fluctuations)

Curray, J.R., F.J. Emmel & D.G. Moore (2003)- The Bengal Fan: morphology, geometry, stratigraphy, history and processes. Marine Petroleum Geol. 19, p. 1191-1223.

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Curray, J.R. & T. Munasinghe (1989)- Timing of intraplate deformation, northeastern Indian Ocean. Earth Planetary Sci. Letters 94, p. 71-77.
(Seismic stratigraphy and deep sea drilling demonstrated two unconformities (E Eocene and latest Miocene age) can be traced over much of NE Indian Ocean. Eocene event major hiatus in sedimentation following collision of India with Asia. Miocene event was onset of N-S compression in Indian plate during rapid uplift in Tibet and Himalayas)

Das, S., S. Mohan, R.S. Waraich, N. Singh & S. Bankwal (2010)- Exploration targets with speculative petroleum system in different arc setups of Andaman Basin, India. Proc. 8th Int. SPG Conf. Exp. on Petroleum

Geophysics, Hyderabad, p-126, p. 1-9.
(online at: https://www.spgindia.org/2010/126.pdf)
(On hydrocarbon prospectivity in three tectonic settings of Andaman basin (fore arc, volcanic arc, back arc))

Dasgupta, S. & M. Mukhopadhyay (1993)- Seismicity and plate deformation below the Andaman arc, northeastern Indian ocean. Tectonophysics 225, p. 529-542.

Dasgupta, S., M. Mukhopadhyay, A. Bhattacharya & T.K. Jana (2003)- The geometry of the Burmese-Andaman subducting lithosphere. J. Seismology 7, 2, p. 155-174.

Devdas, V., S. Varghese, M. Kartikeyan & M.S. Pathan (2016)- The morphological setup of Andaman-Nicobar trench and accretionary prism: a study using multibeam bathymetry. Indian J. Geosciences 69, 3-4, p. 215-222.

Diehl, T., F. Waldhauser, J.R. Cochran, K.A.K. Raju, L. Seeber, D. Schaff & E.R. Engdahl (2013)- Back-arc extension in the Andaman Sea: tectonic and magmatic processes imaged by high-precision teleseismic double-difference earthquake relocation. J. Geophysical Research, Solid Earth, 118, 5, p. 2206-2224.
(online at: http://www.ldeo.columbia.edu/~felixw/papers/Diehl_etal_JGR2013.pdf)
(Relocated earthquake solutions show active normal faulting in NE-SW trending, obliquely opening Andaman spreading center)

Eguchi, T., S. Uyeda & T. Maki (1979)- Seismotectonics and tectonic history of the Andaman Sea. Tectonophysics 57, p. 35-51.
(Andaman Sea active spreading supported by seismicity and focal-mechanism solutions. NE Indian Ocean mid-oceanic ridge collided with W end of Sunda Trench in M or Late Miocene (10-20 Ma). Ridge-trench collision released much of compressional stress in back-arc area and continued N-ward movement of India exerted drag on the back-arc region, causing opening of Andaman Sea. Andaman Sea formed by oblique extensional rifting associated with both ridge subduction and deformation of back-arc area due to nearby continental collision)

Ehrenberg, C.G. (1850)- Uber ein weit ausgedehnte Felsbildung aus kieselschaligen Polycistinen auf den Nicobaren-Inseln als erstes Seitenstuck des Polycystinen-Gesteins von Barbados der Antillen. Berliner Monatsberichte/ Verhandlungen Kon. Preussische Akademie Wissenschaften zu Berlin 1850, p. 476-478.
(online at: https://www.biodiversitylibrary.org/item/41527page/482/mode/1up)
('On an extensive rock formation composed of siliceous Polycystina on the Nicobar Islands, etc.'. Brief note on Islands Car Nicobar and Comarta with core of syenitic and serpentiniferous gabbro, covered by(?) marls-calcareous siltstones rich in Polycystina (= radiolaria). Over 100 species (one of first reports of radiolaria-rich (Miocene?) rocks from Andaman-Nicobar Islands))

Frerichs, W.E. (1971)- Paleobathymetric trends of Neogene foraminiferal assemblages and sea floor tectonism in the Andaman Sea area. Marine Geology 11, p. 159-173.
(Benthic foraminifera from Miocene samples recovered from floor of Andaman Sea indicate deposition in water depths significantly deeper than depths from which they were dredged. Benthic foraminifera in Pliocene samples indicate depths similar to water depths from which they were dredged, suggesting uplift, probably beginning in M Miocene and culminating in Pliocene)

Gahalaut, V.K. & K. Gahalaut (2007)- Burma plate motion, J. Geophysical Reserach 112, B10, B10402, 9p.

Gahalaut, V.K., B. Kundu, S.S. Laishram, J. Catherine, A. Kumar, M.D. Singh, R.P. Tiwari, R.K. Chadha, S.K. Samanta, A. Ambikapathy, P. Mahesh, A. Bansal & M. Narsaiah (2013)- Aseismic plate boundary in the Indo-Burmese wedge, northwest Sunda Arc. Geology 41, 2, p. 235-238.
(GPS measurements across Sagaing fault suggest ~20 mm/yr of relative plate motion of ~36 mm/yr between India and Sunda plates accommodated at Sagaing fault through dextral strike-slip motion. Steeply dipping Churachandpur-Mao fault in Indo-Burmese Wedge accommodates remaining ~18 mm/yr through dextral strike-slip)

Garzanti, E., M. Limonta, A. Resentini, P.C. Bandopadhyay, Y. Najman, S. Ando & G. Vezzoli (2013)- Sediment recycling at convergent plate margins (Indo-Burman Ranges and Andaman-Nicobar Ridge). Earth-Science Reviews 123, p. 113-132.
(Large subaerially exposed subduction complexes formed by tectonic accretion above trenches choked with thick sections of remnant-ocean turbidites. Study of petrographic and heavy mineral suites of modern sands derived from Indo-Burman-Andaman-Nicobar subduction complex show 'subduction complex provenance', mainly consisting of detritus recycled from turbiditic rocks, with local supply from obducted ultramafic and mafic rocks of forearc or recycled paleovolcanic to neovolcanic sources)

Gee, E.R. (1926)- The geology of the Andaman and Nicobar islands, with special reference to Middle Andaman island. Records Geol. Survey India 59, 2, p. 208-232.
(Middle Andaman island core of serpentinites-peridotites, covered by Eocene sediments (incl. Assilina). Both island groups similar)

Ghosh, A.K. A. Chakraborty & A. Mazumder (2017)- *Halimeda* bioherms from the Serravallian (Middle Miocene) of Little Andaman Island, India. Micropaleontology 63, 1, p. 67-76.
(Halimeda bioherm facies in limestones from M Miocene (Serravallian) of Butler Bay Section, Little Andaman Island (Hut Bay) (first report from Miocene of N Indian Ocean))

Ghosh, A.K. & S. Sarkar (2013)- Facies analysis and paleoenvironmental interpretation of Piacenzian carbonate deposits from the Guitar Formation of Car Nicobar Island, India. Geoscience Frontiers 4, 6, p. 755-764.
(online at: www.sciencedirect.com/science/article/pii/S1674987113000285)
(Piacenzian (late Pliocene) Guitar Fm carbonates in Car Nicobar Island (S of Andaman Islands) rich in coralline algae. Deposited in shallow marine, reefal setting)

Ghosh, B., D. Bandyopadhyay & T. Morishita (2017)- Andaman- Nicobar ophiolites, India: origin, evolution and emplacement. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 7, p. 95-110.
(Andaman- Nicobar ophiolites discontinuous bodies along E margin of Andaman- Nicobar Islands. Composed of mantle rocks overlain by crustal rocks with thin transition zone. Mantle peridotites and volcanic rocks great variability, demonstrating influence of subduction-related magmatism and origin in supra-subduction zone. Final emplacement unlike typical Tethyan-type ophiolites because, before final emplacement over Indo-Burma-Andaman microcontinent subduction margin charged with thick sediments from delta systems to N that accreted at leading age of overriding plate)

Ghosh, B. & K. Bhatta (2014)- Podiform chromitites in lherzolitic mantle rocks (Andaman ophiolite, India): the role of magma/rock interaction and parental melt composition. Bull. Soc. Geologique France 185, 2, p. 123-130.
(Podiform chromitites from lherzolite-dominant mantle sequence of Andaman ophiolite, India, described. Mantle host rocks for chromitite pods show features of melt-mantle interaction. High-Cr chromitites have arc-spinel trend and suggest supra-subduction zone setting. Low-Cr chromitites reported elsewhere MORB-spinel trend)

Ghosh, B., T. Morishita & K. Bhatta (2012)- Detrital chromian spinels from beach placers of Andaman Islands, India: a perspective view of petrological characteristics and variations of the Andaman ophiolite. Island Arc 21, p. 188-201.
(Abundant detrital chromian spinels in black sands along E coast of Andaman Islands, derived from nearby Andaman ophiolite outcrops. Chemical compositions suggest depleted signatures, suggesting all Andaman Cretaceous ophiolite massifs affected under island-arc conditions (relatively less depleted to North))

Ghosh, B., T. Morishita & K. Bhatta (2013)- Significance of chromium spinels from the mantle sequence of the Andaman Ophiolite, India: paleogeodynamic implications. Lithos 164, p. 86-96.
(Andaman Ophiolite (between Rutland Island in S and N Andaman in N) with chromian spinels from mantle representing four major groups. Similar geodynamic setting to present-day also existed during Cretaceous period, with fore-arc at Rutland Island and back-arc at N Andaman)

Ghosh, B., T. Morishita, B. Sen Gupta, A. Tamura, S. Arai & D. Bandyopadhyay (2014)- Moho transition zone in the Cretaceous Andaman ophiolite, India: a passage from the mantle to the crust. Lithos 198-199, p. 117-128.
(Outcrop in S Andaman represents transition to arc crustal section of Cretaceous (~95 Ma) Andaman ophiolite, marked by olivine-rich troctolite, wehrlite, pyroxenite and gabbroic rocks)

Ghosh, B., S. Mukhopadhyay, T. Morishita, A. Tamura S. Arai, D. Bandyopadhyay et al. (2018)- Diversity and evolution of suboceanic mantle: constraints from Neotethyan ophiolites at the eastern margin of the Indian plate. J. Asian Earth Sci. 160, p. 67-77.
(Four Neotethyan Cretaceous ophiolite bodies (Nagaland, Manipur, Andaman island and Rutland island) along E margin of Indian plate, all belonging to W ophiolite belt of Indo-Burman Ranges (continuation of Sumatran fore-arc). Gross similarities with Philippine Sea samples. Geotectonic setting between Mid-ocean ridge and back-arc affinity. Plagiogranites of arc affinity suggest later arc event or back-arc origin of ophiolites)

Ghosh, B., T. Pal, A. Bhattacharya & D. Das (2009)- Petrogenetic implications of ophiolitic chromite from Rutland Island, Andaman- a boninitic parentage in supra-subduction setting. Mineralogy and Petrology 96, p. 59-70.
(Chromitite in mantle ultramafic tectonite and crustal ultramafic cumulates of Rutland Island (S of S Andaman) plot in field of supra-subduction zone peridotites)

Gokarn, S.G., G. Gupta, S. Dutta & N. Hazarika (2006)- Geoelectric structure in the Andaman Islands using magnetotelluric studies. Earth Planets and Space 58, 2, p. 259-264.
(online at: www.journalarchive.jst.go.jp/...)
(Magnetotelluric studies over M Andaman islands delineated a NNE-SSW trending suture, along which 4-10km thick Andaman flysch and underlying igneous crust subduct W-wards along thrust with dip angle of ~60°)

Goli, A. & D.K. Pandey (2014)- Structural characteristics of the Andaman Forearc inferred from interpretation of multichannel seismic reflection data. Acta Geologica Sinica (English Ed.) 88, 4, p. 1145-1156.
(online at: www.geojournals.cn/...)

Guha, D.K. (1968)- On the Ostracoda from the Neogene of Andaman Islands. J. Geol. Soc. India 9, 1, p. 58-66.
(32 species of ostracods from Andaman Islands. Most recorded earlier from Miocene - Recent of SE Asia; one new species, Paracytheridea andamanensis)

Gupta, S. M. & M.S. Srinivasan (1992)- Late Miocene radiolarian biostratigraphy and paleoceanography of Sawai Bay Formation, Neill Island, Andamans, India. Micropaleontology 38, 3, p. 209-235.
(Late Miocene radiolarian zones Stichocorys peregrina, Didymocyrtis penultima and D antepenultima in mudstones of Sawai Bay Fm, Neill Island, Andamans. Cluster analysis of 45 taxa suggest colder and warmer periods due to monsoonal upwelling during warmer periods (5.0-6.3 and 8.5-7.7 Ma). Basinal shallowing during Late Miocene)

Gururaja, M.N. & B.R.J.Rao (1976)- Upper Eocene foraminifera from South Andaman Island. Proc. 6th Indian Colloqium Micropaleont. Stratigraphy, Hyderabad, p. 122-125.
(Namunagarh Grit of S Andaman Island with Late Eocene (displaced) larger foraminifera Nummulites atacicus, Pellatispira and Biplanispira)

Guzman-Speziale, M. (1990)- Seismicity and active tectonics of the Western Sunda Arc. Ph.D. Thesis New Mexico State University, Las Cruces, p. 1-232.
(Seismicity of Andaman Sea, Burmese Arc W Sunda Arc area of oblique convergence. Subducted Indian-Australian slab extends to depth of 160km in N portion of W Sunda Arc (Burmese Arc) with dip from 50° in N to ~30° in S. Along Andaman Arc subducted slab also reaches 160km, with dip of ~40°)

Guzman-Speziale, M. & J.F. Ni (1993)- The opening of the Andaman Sea- where is the short-term displacement being taken up. Geophysical Research Letters 20, 24, p. 2949-2952.

Guzman-Speziale, M. & J.F. Ni (1996)- Seismicity and active tectonics of the Western Sunda Arc. In: A. Yin & T.M. Harrison (eds.) Tectonic evolution of Asia, Cambridge University Press, Cambridge, p. 63-84.

Haldar, D. (1984)- Some aspects of the Andaman ophiolite complex. Records Geol. Survey India 115, 2, p. 1-11.

Harding, T.P. (1983)- Divergent wrench fault and negative flower structure, Andaman Sea. In: A.W. Bally (ed.) Seismic expression of structural styles: a picture and work atlas, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 15, 3, p. 1-8.

Imbus, S.W., F.H. Wind & D. Ephraim (1999)- Origin and occurrence of CO2 in the eastern Andaman Sea, offshore Myanmar. In: C.A. Caughey & J.V.C. Howes (eds.) Proc. Conf. Gas habitats of SE Asia and Australasia, Jakarta 1998, Indon. Petroleum Assoc. (IPA), p. 99-111.
(M Miocene gas accumulations in E Andaman Sea have 10-90% C02. Gas composition and isotopes indicate crustal(3He/4He), principally inorganic (d13C >-10) origin for Miocene C02. In Plio- Pleistocene prospects CO2 may be less, due to Late Miocene calcareous shale seal/ source rock)

Ingersoll, R. V. & C.A. Suczek (1979)- Petrology and provenance of Neogene sand from Nicobar and Bengal fans, DSDP sites 211 and 218. J. Sedimentary Petrology 49, 4, p. 1217-1228.
(Bengal-Nicobar submarine fan complex with sands sourced from gneissic, sedimentary, and metasedimentary terranes of Himalayas. Neogene sands from DSDP sites 211 and 218 reveal very uniform compositions, with typical QFL percentages 55-30-15. Andesitic volcanic lithic grains are absent)

Jacob, K. (1954)- The occurrence of radiolarian cherts in association with ultra-mafic intrusives in the Andaman Islands and its significance in sedimentary tectonics. Records Geol. Survey India 83, 2, p. 397-422.
(Ophiolites of Andaman Islands associated with Eocene radiolarian cherts, deposited in abyssal environment)

Jafar, S.A. (1985)- Discovery of mixed coccoliths from mud volcanoes of Baratang Island, Andamans, India. Current Science 54, 4, p. 170-173.
(Coccoliths from mud volcanoes in W Baratang Island with mixed coccolith assemblages, with latest Eocene as youngest elements. Also common complete Campanian- Danian section suggested present in subsurface)

Jafar, S.A. & O.P. Singh (1999)- Late Miocene coccoliths from Neill Island, Andam Sea, India. J. Palaeontol. Soc. India 44, p. 119-134.
(online at: http://palaeontologicalsociety.in/vol44/v8.pdf)
(Late Miocene Discoaster berggreni (CN9A)/ lower Discoaster quinqueramus zone (NN11) from Neill Island)

Jafri, S.H. (1986)- Occurrence of Hagiastrids in chert associated with Port Blair series, South Andaman, India. J. Geol. Soc. India 28, p. 41-43.
(online at: www.geosocindia.org/index.php/jgsi/article/download/65972/51585)
(18 species of hagiastrid radiolarians from radiolarian ribbon chert at base of (M Eocene?) Port Blair series of S Andaman interpreted to be of E Cretaceous age. Chert inlier in (imbricated?) Eocene sedimentary sequence))

Jafri, S.H., V. Balaram & P.K. Govil (1993)- Depositional environments of Cretaceous radiolarian cherts from Andaman-Nicobar Islands, northeastern Indian Ocean. Marine Geology 112, p. 291-301.
(Cretaceous radiolarian cherts associated with pillow basalts, ultramafic rocks and turbidites in outer arc of Andaman- Nicobar Islands. Tuffaceous radiolarian claystones derived from mixed continental-basaltic source, close to continental margins, bedded radiolarian argillaceous cherts derived from distal continental source in hemipelagic environment. Radiolarian chert sequences scraped off subducting Indian plate and now part of Andaman-Nicobar ophiolite complex. No biostrat)

Jafri, S.H., V. Balaram & S.L. Ramesh (1990)- Geochemistry of Andaman-Nicobar island basalts: a case for a possible plume origin. J. Volcanology Geothermal Res. 44, p. 339-347.

(Pillow basalts of S Andaman island associated with tectonised ultramafics, radiolarian cherts and deformed sedimentary rocks part of outer sedimentary arc of Andaman-Nicobar islands. Basalts tholeiitic, similar to plume-type basalts. Scraped off subducting Indian plate due to NNE movement of Indian plate)

Jafri, S.H., S.N. Charan & P.K. Govil (1995)- Plagiogranite from the Andaman ophiolite belt, Bay of Bengal, India. J. Geol. Soc., London, 152, p. 681-687.
(Plagiogranites on E margin of South Andaman intrude gabbros associated with pillow basalt, East Coast volcanic rocks, radiolarian cherts, conglomerate and grit. Plagiogranite intruded gabbro of Andaman ophiolite probably in Mid-Eocene (subsequent zircon dating by Sarma et al. 2010 suggest Late Cretaceous 94 Ma age))

Jafri, S.H. & J.M. Sheikh (2013)- Geochemistry of pillow basalts from Bompoka, Andaman-Nicobar islands, Bay of Bengal, India. J. Asian Earth Sci. 64, p. 27-37.
(Pillow basalts in Bompoka island (Nicobar islands) part of Sunda-Burmese forearc, are fractured, filled by late-stage calcite and zeolites and are overlain by the Archipelago Group sediments. Formed from N-MORB-like mantle source in trench-distal back-arc basin, probably near leading edge of Eurasian continent in Cretaceous, prior to current Andaman-Java active subduction)

Jafri, S.H., M.V. Subba Rao & S.L. Ramesh (2006)- Occurrence of ash beds in radiolarian cherts from South Andaman Island, Bay of Bengal, India: evidence for Late Cretaceous explosive volcanism. Current Science 91, 12, p. 1614-1615.
(online at: www.currentscience.ac.in/Downloads/article_40794.pdf)
(Ash layers in radiolarian cherts in S Andaman Island suggests Late Cretaceous explosive volcanic activity)

Jha, P., D. Ros, A.d. Alessandrini & M. Kishore (2010)- Speculative petroleum system and play model of East Andaman Basin from regional geology and basin evolution concepts: addressing the exploration challenges of an extreme frontier area. 8th Biennial SPG Int. Conf. Petroleum Geophysics, Hyderabad 2010, P-261, 8p.
(online at: https://www.spgindia.org/2010/261.pdf)
(Recent ENI exploration activities in deepwater East Andaman Basin revealed presence of unexplored rift set-up, on trend with North Sumatra and Mergui rift basins)

Jha, P., D. Ros & M. Kishore (2012)- Seismic and sequence stratigraphic framework and depositional architecture of shallow and deepwater postrift sediments in East Andaman Basin: an overview. GEO India Conf. 2011, New Delhi, 10p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2012/50566jha/ndx_jha.pdf)
(Deepwater East Andaman Basin along W flank of NE-SW trending Mergui Ridge with Eo-Oligocene rift section overlain by up to 2500m of M Miocene and younger post-rift with typical deepwater depositional architecture. NE-SW trending sea-floor spreading centre came into existence at C Andaman Basin area)

Jintasaeranee, P., W. Weinrebe, I. Klaucke, A. Snidvongs & E.R. Flueh (2012)- Morphology of the Andaman outer shelf and upper slope of the Thai exclusive economic zone. J. Asian Earth Sci. 46, p. 78-85.
(Detailed bathymetry and subbottom profiler recordsof outer shelf and upper slope of Thai exclusive economic zone)

Jourdain, A., S.C. Singh, J. Escartin, Y. Klinger, K.A. K. Raju & J. McArdle (2016)- Crustal accretion at a sedimented spreading center in the Andaman Sea. Geology 44, p. 351-354.
(Seismic images across sedimented slow-spreading Andaman Sea spreading center. Faults in axial valley steep dips (65°-75°) in staircase pattern forming axial graben, with base coinciding with shallow-dipping (30°) reflection, defining zone of extension and magmatism. Sill-sediment sequences away from axis rotated and buried due to subsidence and faulting, forming upper oceanic crust. Gabbroic lower oceanic crust separated from mantle by complex Moho transition zone, probably containing dunite lenses)

Karunakaran, C., M.B. Pawde, V.K. Raina, K.K. Ray & S.S. Saha (1964)- Geology of South Andaman Island, India. Repts. 22nd Int. Geological Congress, New Delhi 1964, 11, p. 79-100.
(incl. presence of Paleocene limestone pebbles with Distichoplax biserialis)

Karunakaran, C., K.K. Ray & S.S. Saha (1964)- A new probe into the tectonic history of the Andaman and Nicobar Islands, India. Repts. 22nd Int. Geological Congress, New Delhi 1964, 4, p. 507-515.

Karunakaran, C., K.K. Ray & S.S. Saha (1964)- Sedimentary environment of the formation of the Andaman flysch, Andaman Islands, India. Repts. 22nd Int. Geological Congress, New Delhi 1964, 15, p. 226-232.

Karunakaran, C., K.K. Ray & S.S. Saha (1968)- Tertiary sedimentation in the Andaman-Nicobar geosyncline. J. Geol. Soc. India 9, p. 32-39.
(Andaman orthogeosyncline continuous with Assam-Burma in N and Indonesian geosyncline in S. Andaman-Nicobar islands constitute non-volcanic outer arc of East Indian Orogen, with continuous history of sedimentation from sometime in U Cretaceous to Recent)

Karunakaran, C., K.K. Ray, C.R. Sen, S.S. Saha & S.K. Sarkar (1975)- Geology of Great Nicobar island. J. Geol. Soc. India 16, 2, p. 135-142.
(Geology of Great Nicobar Island similar to geology of Andaman Islands)

Khan, P.K. & P.P. Chakraborty (2005)- Two-phase opening of Andaman Sea; a new seismotectonic insight. Earth Planetary Sci. Letters 229, 3-4, p. 259-271.
(Reconstruction of Benioff zone for Burma-Java subduction margin between 2°-17° N reveals two episodes of plate geometry change, expressed as abrupt change in subduction angle. Deformation events on subducting Indian plate 4-5 and 11 Ma old. 11 Ma event recorded from S part of area correlated with early stretching and rifting phase, 4-5 Ma event interpreted as major forcing behind spreading phase of Andaman Sea. Initial Andaman Sea opening concealed in E-M Miocene forearc subsidence history. Late Miocene-Pliocene pull-apart opening and spreading possibly initiated near W part of Mergui- Sumatra region)

Khin, Aung J. (1990)- The geology of the Andaman Sea basin.In: 8th Offshore SE Asia Conf., Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 9, Singapore, OSEA90177, p. 81-88.
(Brief review of Andaman Sea basin and hydrocarbon potential)

Koley, T., C.S. Anju, S. Parhi & S. Das (2017)- Report of foraminifera in the Andaman Flysch Group of rocks in South Andaman and its implication. Indian J. Geosciences 70, 2, p. 161-168.

Koley, T. & K.M. Wanjarwadkar (2013)- First report of *Ranikothalia* Caudri from Middle Andaman Island, India and its significance. J. Geol. Soc. India 81, p .549-555.
(First record of U Paleocene 'Tethyan' Ranikothalia in in lower argillaceous facies of Mithakhari Group (Lipa Black Shale) in NE part of Middle Andaman Island. Three species R. sidensis, R. cf. nuttalli, R. cf. tobleri. Associated with Discocyclina (also earlier reports of Paleocene limestone on Andaman Islands reported occurrences of Daviesina, Miscellanea, Distichoplax))

Kumar, A. (2011)- Geochemical and isotopic studies of rocks from the Barren Island Volcano and Andaman subduction zone, India. Ph.D. Thesis, Maharaja Sayajirao University of Baroda, Vadodara, India, p. 1-218.

Kumar, S. (1981)- Geodynamics of Burma and Andaman-Nicobar region, on the basis of tectonic stresses and regional seismicity. Tectonophysics 79, p. 75-95.
(Well-defined zones of seismicity dipping 30-50° from Andaman trench to depth of ~180 km under Andaman Islands. Change in nature of volcanism from andesite (S) to basalt (N) in Burma suggested stress field changed from compressional to tensional)

Kumar, S. (1990)- Gravity anomalies, seismicity, subducting slab folding and surface deformations in the orogenic belts- an example from the Andaman-Nicobar region. J. Geodynamics 12, p. 39-63.

Kundal, P. & K.M. Wanjarwadkar (2002)- On stratigraphy, age and depositional environment of algal limestone of Middle Andaman Island, Andaman, India. Gondwana Geol. Mag. 17, 2, p. 103-108.

(Occurrence of Daviesina spp. in limestone exposed as detached mounds near Burmadera, Tugapur and Buddanala in Middle Andaman island suggests Thanetian age)

Kundal, P. & K.M. Wanjarwadkar (2003)- Dasycladacean algae from Late Paleocene limestone of Middle Andaman Island, Andaman, India: implication to paleoenvironments, paleobathymetry and stratigraphy. Gondwana Geol. Mag., Spec. Vol. 6, p. 277-288.
(Late Paleocene algal limestone of Burma Dera Mb of U Cretaceous- Eocene Baratang Fm of Middle Andaman Island with 6 species of dasycladacean algae, incl. Acroporella, Cymopolia spp., Furcoporella, Trinocladus, etc.. Associated with foram Daviesina spp. Tropical assemblage with Tethyan affinities)

Limonta, M., A. Resentini, A. Carter, P.C. Bandopadhyay & E. Garzanti (2017)- Provenance of Oligocene Andaman sandstones (Andaman-Nicobar Islands): Ganga-Brahmaputra or Irrawaddy derived?. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 10, p. 141-152.
(Oligocene flysch exposed in Andaman-Nicobar Islands dominated by strong continental crust signal with minor arc contribution, similar to Paleogene Bengal Fan sediments. Type section on S Andaman closer affinity to provenance of modern Irrawaddy)

Ling, H.Y., R. Chandra & S.G. Karkare (1996)- Tectonic significance of Eocene and Cretaceous radiolaria from South Andaman Island, Northeast Indian Ocean. In: A. Yao et al. (eds.) Proc. INTERRAD VII Conf., Island arc 5, 2, p. 166-179.
(Basement rocks of Andaman-Nicobar Islands consist of U Cretaceous serpentinites, ophiolites and radiolarian cherts. Cherts from SE South Andaman Island with radiolarian faunas of Campanian (Dictyomitra torquata, Pseudoaulophacus lenticulatus, Alievium galloway, etc.) and M Eocene (Podocyrtis faciolata, Eusyringiuiia jstuligerum) age. Similar Eocene assemblage on Nias Island. Overlying sediments in N and Middle Andaman include E-M Eocene larger foraminifera Nummulites biarritzensis and Assilina granulosa)

Ling, H.Y., V. Sharma, S. Sing, D. Mazumdar & A.K. Mahapatra (1995)- Cretaceous and Middle Eocene radiolarian from ejected sediments of mud volcanoes of Baratang Island in the Andaman Sea. J. Geol. Soc. India 38, p. 463-469.

Ling, H.Y. & M.S. Srinivasan (1993)- Significance of Eocene radiolaria from Port Blair Group of South Andaman Island, India. J. Palaeont. Soc. India 38, p. 1-5.
(online at: http://palaeontologicalsociety.in/vol38/v1.pdf)
(M Eocene radiolaria in chert in Port Blair Fm, overlying Late Cretaceous or Early Eocene ultramafic 'basement' on S Andaman. Similar to M Eocene radiolarians of Nias (Ling & Samuel, 1998))

Liu, C.S., J.R. Curray & J.M. McDonald (1983)- New constraints on the tectonic evolution of the eastern Indian Ocean. Earth Planetary Sci. Letters 65, p. 331-342.
(Magnetic anomalies suggest Wharton Ridge fossil spreading ridge beneath Nicobar Fan in NW Wharton Basin, which was part of plate boundary between Indian and Australian plates and ceased spreading shortly after anomaly 20 (45.6 Ma). Indian, Australian, and Antarctic plates were moving relative to one another from about 90 to 45 Ma. At anomaly 19 time (45 Ma) Australia and India became single plate)

Luhr J.F. & D. Haldar (2006)- Barren Island volcano (NE Indian Ocean): island-arc high-alumina basalts produced by troctolite contamination; J. Volcanology Geothermal Res. 149, p. 177-212.

Madhavan, B.B, G. Venkataraman, S.D. Shah & B.K. Mohan (1997)- Revealing the geology of the Great Nicobar Island, Indian Ocean, by the interpretation of airborne synthetic aperture radar images. Int. J. Remote Sensing 18, 13, p. 2723-2742.
(N-S trending folds and thrusts on Great Nicobar Island, with fold axis spacing of 1-2km)

Mahapatra, A.K. & V. Sharma (1994)- Trissocyclid radiolaria from the late Early Miocene sequence of Colebrook, North Passage and Great Nicobar Islands, northeast Indian Ocean. Micropaleontology 40, 2, p. 157-168.
(35 Trissocyclid species from outcrop sections six sections on Colebrook, North Passage and Great Nicobar islands. Belong to Stichocorys wolffii and Calocycletta costata Zones)

Makar, P.S. et al. (1984)- Geochemical studies of fine-grained sediments of offshore Andaman wells for evaluation of hydrocarbon source potential. Petroleum Asia J. 6, 4, p. 175-185.

Malik, J.N., C. Banerjee, A. Khan, F.C. Johnson, M. Shishikura, K. Satake & A.K. Singhvi (2015)- Stratigraphic evidence for earthquakes and tsunamis on the west coast of South Andaman Island, India during the past 1000 years. Tectonophysics 661, p. 49-65.
(Stratigraphic records from W coast of S Andaman Island with evidence of three historical transoceanic tsunamis during past 1000 yrs: (I) predating AD 800, 35-40 cm t fine gravel to coarse sands with broken shell fragments ; (II) ~AD 660-800, 20-25cm coarse sand and broken shell fragments; (III) ~AD 1120-1300, 50 cm thick sand. December 2004 tsunami resulted in deposition of 15cm m-c sand)

Mandal, J., A. Chandra & A.P. Bhattacharyya (2003)- Palynology of the Baratang Formation, Andaman-Nicobar Islands and the significance of reworked palynomorphs. The Palaeobotanist 52, p. 97-112.
(Spores-pollen and dinoflagellate cysts data from Baratang Fm of Baratang Island indicate Early- Late Eocene ages and close relationship between Andaman and Myanmar floras. Associated with common reworked Permian, Triassic and Jurassic-Cretaceous palynomorphs of Gondwanan affinity, suggesting Chindwin Basin of Myanmar mainly supplied reworked palynomorph-bearing sediments)

Martin, K.M., S.P.S. Gulick, J.A. Austin., K. Berglar, D. Franke & Udrekh (2014)- The West Andaman Fault: a complex strain-partitioning boundary at the seaward edge of the Aceh Basin, offshore Sumatra. Tectonics 33, 5, p. 786-806.
(W Andaman Fault in NW Sumatra forearc region predominantly strike-slip in nature, and likely part of system of faults (incl. Sumatran, Mentawai Faults) that accommodate shear component of oblique subduction. Location of fault in forearc may be controlled by contrast between marginal plateau and forearc basin)

Maung, H. (1987)- Transcurrent movements in the Burma-Andaman Sea region. Geology 15, 10, p. 911-912.
(N-ward movement of Indian plate caused Indoburman Ranges accretionary prism to decouple from Burma plate along Kabaw fault, and Burma plate decoupled from E Highlands of Burma along Sagaing fault. Double arc formed by Indoburman Ranges and Andaman-Nicobar-Sumatra islands was formerly one large single arc)

Maurin, T. & C. Rangin (2009)- Impact of the 90°E ridge at the Indo-Burmese subduction zone imaged from deep seismic reflection data. Marine Geology 266, 1, p. 143-155.
(As result of Indo-Burmese active hyper-oblique subduction, part of Bay of Bengal presently subducting E-ward below Burmese microplate)

Misra, T.C. & T.K. Roy (1984)- Exploration in Andaman forearc basin: its evaluation, facies trend and prospects- a review. Proc. 5th Offshore South East Asia Conf. (OFFSEA 84), Singapore 1984, South East Asia Petroleum Expl. Soc. (SEAPEX), p. 4/66- 4/83.
(Andaman Sea forearc basin with subduction complex accretionary prisms and ponded Neogene sediments. Oldest exposed rocks in Andaman Islands Upper Cretaceous oceanic sediments with radiolarian chert, overlain by Upper Cretaceous- Oligocene greywacke turbidites. Late Oligocene unconformity followed by Neogene clastics and carbonates. Low heatflow)

Mitra, D. (2005)- Late Oligocene and Miocene evolution of the carbonate system in the Gulf of Martaban (northern Andaman Sea): effects of eustacy, tectonics, and siliciclastic input; comparison with the Maldives carbonate system. M.Sc. Thesis Rice University, Houston, p. 1-142. *(Unpublished)*
(Gulf of Martaban Field 13x18 km isolated carbonate platform in Myanmar part of N Andaman Sea, formed on top of E-dipping (20-24°), faulted accretionary basement that influenced Late Oligocene Lower Martaban

Limestone growth. At Oligocene-Miocene boundary ~20m thick siliciclastics (age ~23 Ma/ Mi-1 SB?), temporarily inhibiting carbonate growth. Followed by growth of E Miocene U Martaban Lst platform, first aggradation, then backstepping and drowning at ~18 Ma. With common rhodoliths; red algae near top)

Moeremans, R.E. & S.C. Singh (2015)- Fore-arc basin deformation in the Andaman-Nicobar segment of the Sumatra-Andaman subduction zone: insight from high-resolution seismic reflection data. Tectonics 34, 8, p. 1736-1750.
(Deep seismic reflection data across the Andaman-Nicobar fore-arc basin, from 8°N to 11°N. Despite obliquity of subduction fore arc is dominated by compression, suggesting strong slip partitioning)

Mohan, K., S.G.V. Dangwal, S. Sengupta & A.G. Desai (2006)- Andaman Basin- a future exploration target. The Leading Edge 25, 8, p. 964-967.
(Summary of Andaman Sea basin evolution and exploration potential. Eocene-Recent basinal area >1200km from Sumatra into Myanmar. No significant hydrocarbon discoveries yet)

Morley, C.K. (2016)- Cenozoic structural evolution of the Andaman Sea: evolution from an extensional to a sheared margin. In: M. Nemcok et al. (eds.) Transform margins: development, controls and petroleum systems, Geol. Soc., London, Spec. Publ. 431, p. 39-61.
(Andaman Sea developed from margin where Palaeogene back-arc collapse closed mid-Cretaceous back-arc oceanic basin, and resulted in collision between island arc crust to W and W margin of Sundaland. Subsequent E-W to WNW-ESE extension in Late Eocene–Oligocene resulted in highly extended continental crust under Alcock and Sewell rises and E Andaman Basin, and moderately extended crust in Mergui-N Sumatra Basin. As India coupled with W Myanmar, margin became dominated by dextral strike-slip and NNW–SSE transtensional deformation during Miocene)

Morley, C.K. (2017)- Cenozoic rifting, passive margin development and strike-slip faulting in the Andaman Sea: a discussion of established v. new tectonic models. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 4, p. 27-50.
(Andaman Sea evolved from near-pure extension (WNW-ESE) in Late Palaeogene, to oblique extension (NNW-SSE) in Neogene, to strike-slip-dominated deformation in Late Miocene-Recent, probably reflecting switch from slab rollback-driven extension to India coupling with Myanmar. Possible revisions to traditional models for Andaman Sea: (1) Alcock and Sewell rises may be hyperextended continental or island arc crust, not Miocene oceanic crust; (2) E Andaman Basin mainly underlain by strongly necked to hyper-extended continental crust, not oceanic crust; or (3) C Anadaman Basin oceanic crust of Miocene, not Pliocene-Recent age)

Morley, C.K. & A. Alvey (2015)- Is spreading prolongeded, episodic or incipient in the Andaman Sea? Evidence from deepwater sedimentation. J. Asian Earth Sci. 98, p. 446-456.
(C Andaman Basin generally accepted to be site of continuous sea floor spreading since E Pliocene (~4.0 Ma). Seismic lines across E half of spreading centre show 100's m of sediment up to Central trough, suggesting either spreading in central basin was episodic or Central trough is incipient spreading centre in hyper-thinned continental or island arc crust. Gravity indicates C Andaman Basin is oceanic crust, but adjacent Alcock and Sewell Rises and E Andaman Basin are extended continental crust (see also Discussion by Curray (2015))

Morley, C.K. & A. Alvey (2016)- Reply to discussion óóIs spreading prolonged, episodic or incipient in the Andaman Sea? Evidence from deepwater sedimentationò by J.R. Curray 2015. J. Asian Earth Sci. 115, p. 62-68.
(Thick sediment section in axial trough of Andaman Sea spreading center incompatible withrapid influxes of sediment, but more indicative of Miocene spreading, with recently renewed, activity, if at all. Nature of crust adjacent to spreading centre remains uncertain)

Morley, C.K. & M. Searle (2017)- Regional tectonics, structure and evolution of the Andaman-Nicobar Islands from ophiolite formation and obduction to collision and back-arc spreading. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 5, p. 51-74.

(Proposed model for Cretaceous- Cenozoic development of Sumatra-Andaman-Myanmar region suggests continuity of single continental mass between Myanmar and Sumatra during Cenozoic, E Cenozoic ophiolite emplacement as imbricate slices in accretionary complex and no emplacement of a major overthrusting oceanic slab. Subsequent collisional deformation further dismembered ophiolites. ~30° CW rotation of SE Asia occurred following Asia- India collision, accompanied by transition from paired Andean-type magmatic belt to regional oblique-slip and strike-slip tectonics. In Neogene Andaman sea region became dominantly transtensional, while Myanmar in Late Neogene became transpressional)

Mukhopadhyay, B., S. Dasgupta & P. Mukherjee (2016)- Slab tear and tensional fault systems in the Sundaï Andaman Benioff zone: implications on tectonics and potential seismic hazard. Geomatics Natural Hazards Risk 7, 3, p. 1129-1146.
(online at: www.tandfonline.com/doi/full/10.1080/19475705.2015.1011242)
(Multiple transverse slab tear faults and longitudinal trench-parallel extensional faults on top part of Benioff zone in Sunda-Andaman arc)

Mukhopadhyay, M. (1984)- Seismotectonics of subduction and back-arc thrusting under the Andaman Sea. Tectonophysics 108, p. 229-239.

Mukhopadhyay, M. (1988)- Gravity anomalies and deep structure of the Andaman arc. Marine Geoph. Researches 9, 3, p. 197-210.
(Active subduction of Indian plate beneath Andaman arc along E-dipping Benioff zone extends to depth of ~150 km; deepest part of Benioff zone below Andaman volcanic arc. Overriding Burma plate at least 50 km thick. Andaman volcanic arc split by Andaman back-arc spreading ridge, active since at least 11 Ma)

Mukhopadhyay, M., P.P. Chakraborty & S. Paul (2003)- Facies clustering in turbidite successions: case study from Andaman flysch group, Andaman Islands, India. Gondwana Research 6, p. 918-925.
(Bed thickness data of two turbidite sections in Oligocene Andaman Flysch Group at Corbyn's Cove, S Andaman and Kalipur section, N Andaman (forearc submarine fan system))

Nakanart, A. & N. Mantajit (1983)- Stratigraphic correlation of the Andaman Sea. In: Conf. Geology and Mineral Resources of Thailand, Bangkok 1983, p. 171-177.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1983/10594.pdf)
(Correlation between Oligocene- Recent sediments of N Sumatra Basin and Straits of Malacca- Andaman Sea)

Oldham, R.D. (1885)- Notes on the geology of the Andaman Islands. Records Geol. Survey India 18, 3, p. 135-145.

Padmakumari, V.M. & S.M. Ahmad (2004)- Ash layer at ~8 Ma in ODP Site 758 from the Bay of Bengal: evidence from Sr, Nd isotopic compositions and rare earth elements. Current Science 86, 9, p. 1323-1325.
(Late Miocene volcanic ash layer in deep marine sediments of N Indian Ocean ODP Site 758 dated at ~8.2 Ma, compositionally similar to Toba tuffs and probably derived from Indonesian arc)

Pal, T. (2011)- Petrology and geochemistry of the Andaman ophiolite: melt-rock interaction in a suprasubduction-zone setting. J. Geol. Soc., London, 168, 4, p. 1031-1045.
(Andaman ophiolite (Cretaceous-Paleocene) occurs as thrust slices in outer arc of Andaman-Java subduction zone. Mantle sequence of layered serpentinized lherzolite and harzburgite, intrusive and extrusive rocks. Geochemistry indicates mid-ocean ridge basalt or suprasubduction zone setting. MORB mantle of subducting Indian plate accreted into mantle wedge, then melting of accreted mantle first produced boninite melt, followed by tholeiitic melt)

Pal, T. & A. Bhattacharya (2010)- Greenschist-facies sub-ophiolitic metamorphic rocks of Andaman Islands, Burma- Java subduction complex. J. Asian Earth Sci. 39, 6, p. 804-814.
(Greenschist facies metabasics (actinolite schist) and metasediments (garnetiferous quartzo-feldspathic mica-chlorite schist, etc.) at sole of ophiolite slices and as blocks in melange zone under Andaman ophiolite. Top part

of subducting slab and overlying trench sediments metamorphosed and dislocated by thrusts in accretionary prism. Metamorphism and uplift of metamorphic rocks with ophiolite slices between Cretaceous and Oligocene, later than emplacement of ophiolites of Sumatra and Java)

Pal, T., P.P. Chakraborty & R.N. Ghosh (2003)- PGE distribution in chromite placers from Andaman ophiolite and its boninitic parentage. J. Geol. Soc. India 62, 6, p. 671-679.
(Chromite placers in Rutland coast of Andaman and Nicobar Islands, derived from serpentinised dunite with thin stringers of chromite, show PGE incidence. Derivation of source rock from boninitic melt)

Pal, T., P.P. Chakraborty, T.D. Gupta & C.D. Singh (2003)- Geodynamic evolution of the outer-arc-forearc belt in the Andaman islands, the central part of the Burma-Java subduction complex. Geol. Magazine 140, 3, p. 289-307.
(Andaman Islands, part of Burma-Java subduction complex, expose outer-arc accretionary prism and forearc Oligocene-Pliocene turbidites. N-S-trending dismembered ophiolite slices of Cretaceous age at different levels with Eocene trench-slope sediments, uplifted and emplaced by E-dipping thrusts. Metapelites and metabasics of greenschist to amphibolite grade in melange zone of ophiolites. Eocene Mithakhari Group represents pelagic trench sediments and clastics derived from ophiolites. Eocene sediment deposited in isolated basins of immature trench-slope setting. Deposition of Oligocene Andaman Flysch Gp in forearc setting. Mio-Pliocene Archipelago Gp siliciclastic turbidites and subaqueous pyroclastic flow deposits in lower part and carbonate turbidites in upper part, suggesting deposition in shallower forearc compared to Oligocene)

Pal, T., T.D. Gupta, P.P. Chakraborty & S.C.D. Gupta (2005)- Pyroclastic deposits of Mio-Pliocene age in the Arakan Yoma- Andaman- Java subduction complex, Andaman Islands, Bay of Bengal, India. Geochemical J. 39, p. 69-82.
(online at: www.terrapub.co.jp/journals/GJ/pdf/3901/39010069.pdf)
(400m thick Archipelago Group Mio-Pliocene sequence of bedded tuff alternating with non-volcanogenic turbidites on Andaman Islands, overlying Andaman Flysch. Interpreted as tuffs from subaerial eruptions that landed in water and behaved as cold subaqueous flow. No lithic volcanic fragments. Origin of Andaman tuffs in convergent margin)

Pal, T., S.K. Mitra, S. Sengupta, A. Katari, P.C. Bandopadhyay & A.K. Bhattacharya (2007)- Dacite-andesites of Narcondam Volcano in the Andaman Sea; an imprint of magma mixing in the inner arc of the Andaman-Java subduction system. J. Volcanology Geothermal Res. 168, p. 93-113.
(Narcondam volcano along with active Barren volcano lies in chain of inner arc volcanoes extending from Burma to Indonesia. Dacite, amphibole-andesite, and andesite are products of magma mixing)

Pandey, J., R.P. Agarwal, A. Dave, A. Maithani, K.B. Trivedi, A.K. Srivastava & D.N. Singh (1992)- Geology of Andaman. Bull. Oil. Nat. Gas Comm. (ONGC) 29, 2, p. 19-103.
(ONGC review of geology and stratigraphy of Andaman Islands)

Pedersen, R.B., M.P. Searle, A. Carter & P.C. Bandopadhyay (2010)- U-Pb zircon age of the Andaman ophiolite: implications for the beginning of subduction beneath the Andaman-Sumatra arc. J. Geol. Soc., London, 167, p. 1105-1112.
(Andaman ophiolite complex forms basement of Andaman Islands. N Andaman Island with harzburgite and lower crustal gabbros. Campanian radiolaria from cherts overlying ophiolite. U-Pb zircon age of trondhjemitic rock in S Andaman Island 95 Ma, remarkably similar to ophiolites in Oman (~93-98 Ma) and Troodos, Cyprus (92 Ma). Andaman volcanic arc built on Cenomanian ophiolite-oceanic crust and subduction initiated at this time along Tethys, from Cyprus through Oman to Andaman Islands)

Peter, G., L.A. Weeks & R.E. Burns (1966)- A reconnaissance geophysical survey in the Andaman Sea and across the Andaman Nicobar island arc. J. Geophysical Research 71, 2, p. 495-509.
(Major tectonic trends of N Sumatra and S Burma Range can be linked through Andaman Sea on the basis of magnetic gravity and seismic data)

Polachan, S. (1988)- The geological evolution of the Mergui Basin, S.E. Andaman Sea, Thailand. Ph.D.Thesis University of London, p. 1-231. *(Unpublished)*

Polachan, S. & A. Racey (1993)- Lower Miocene larger foraminifera and petroleum potential of the Tai Formation, Mergui Group, Andaman Sea. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 487-496.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7613.pdf)
First record of Tertiary larger foraminifera in Thailand, on Thai side of offshore Mergui Basin. Tai Fm reefal limestones unconformably on pre-Late Eocene quartz-chlorite schist in Central High of Mergui Basin. Three units at type locality: basal anhydrite, dolomite, shale and sandstone; middle coral/algal reefal limestones, and upper calcarenites interbedded with silty shales and sandstones. Middle and upper units with Lepidocyclina (N.) japonica, Spiroclypeus yabei, Miogypsina, Miogypsinoides, etc. (= E Miocene, Upper Te; JTvG))

Polachan, S. & A. Racey (1994)- Stratigraphy of the Mergui Basin, Andaman Sea: implications for petroleum exploration. J. Petroleum Geol. 17, 4, p. 373-406.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1994/2545.pdf)
Nine Late Oligocene- Pleistocene formations described from Mergui Basin, Andaman Sea, a transtensional back-arc basin, formed in Oligocene due to onset of oblique convergence between Indian and SE Asian plates. Major similarities between Mergui Basin and petroleum-rich N Sumatra Basin. Twelve non-commercial exploration wells drilled by Esso, Union and Placid in 1970's-1980's. Oldest formation Late Oligocene Ranong Fm sandstones, in B1 unconformably on Late Cretaceous quartz monzonite (K/Ar age 75 Ma))

Radhakrishna, M., S. Lasitha & M. Mukhopadhyay (2008)- Seismicity, gravity anomalies and lithospheric structure of the Andaman arc, NE Indian Ocean. Tectonophysics 460, 1, p. 248-262.
(Andaman arc nearly 1100 km long active plate margin between India and Burma plates where oblique Benioff zone develops down to 200km depth. Slab gravity high of 85 mgal E of Nicobar Island, where gravity high follows Nicobar Deep. Double peaked gravity low demarcates Andaman trench-arc system. Gravity models favor presence of oceanic crust below Andaman-Nicobar Outer Arc Ridge)

Rai, J. (2006)- Late Miocene siliceous endoskeletal dinoflagellates from the Sawai Bay Formation, Neill Island, Andaman Sea, India. J. Micropalaeontology 25, 1, p. 37-44.
(online at: https://www.j-micropalaeontol.net/25/37/2006/jm-25-37-2006.pdf)
(Rare siliceous spicules of endoskeletal dinoflagellates (Actiniscus spp.) in Late Miocene Sawai Bay Fm on Neill Island (E of South Andaman Island). Associated with calcareous nannofossils of Discoaster berggrenii subzone (CN9A/ NN11))

Rajendran, C.P., K. Rajendran, V. Andrade & S. Srinivasalu (2013)- Ages and relative sizes of pre-2004 tsunamis in the Bay of Bengal inferred from geologic evidence in the Andaman and Nicobar Islands. J. Geophysical Research, Solid Earth 118, p. 1345-1362.
(Geologic evidence along N part of 2004 Aceh-Andaman rupture suggests region generated five tsunamis in prior 2000 years. 2004 tsunami deposits mainly organic debris, sand sheets, coral debris and boulder deposits. Distant and geomorphologically sheltered sites higher potential for tsunami deposit preservation)

Rajendran, K. & H.K. Gupta (1989)- Seismicity and tectonic stress field of a part of the Burma-Andaman-Nicobar Arc. Bull. Seismological Soc. America 79, 4, p. 989-1005.
(Direction of maximum compression in Burma- Andaman- Nicobar region NE-SW to N-S, compatible with postulated motion of Indian Plate)

Raju, D.S.N. & L. Chidambaram (1986)- Cretaceous and Cenozoic foraminiferal biostratigraphy of offshore deep well sections, East coast of Andaman islands. 12th Indian Colloquium on Micropaleontology and Stratigraphy, New Delhi, p.

Raju, D.S.N. & P.K. Mishra (1991)- Miogypsinidae from the Andaman Basin, India. J. Palaeont. Soc. India 36, p. 15-30.

(online at: http://palaeontologicalsociety.in/vol36/v2.pdf)
(11 species of Miogypsinidae reported from 10 offshore wells E of Andaman Island. Oldest forms Late Oligocene Miogypsinoides complanata, youngest M Miocene Miogypsina antillea)

Raju, K.A.K. (2005)- Three-phase tectonic evolution of the Andaman backarc basin. Current Science 89, 11, p. 1932-1937.
(online at: www.iisc.ernet.in/currsci/dec102005/1932.pdf)
(Andaman bacarc basin 3-phase tectonic evolution: Late Oligocene spreading centre jump, M Miocene- E Pliocene rifting and extension, followed by true seafloor spreading since 4 Ma)

Raju, K.A.K., T. Ramprasad, P.S. Rao, B.R. Rao & J. Varghese (2004)- New insights into the tectonic evolution of the Andaman basin, northeast Indian Ocean. Earth Planetary Sci. Letters 221, p. 145-162.
(Seafloor spreading in Andaman backarc basin started at ~4 Ma, rather than 11 Ma postulated previously. Extrusive tectonics prompted extension and rifting along plane joining Sagaing (Myanmar) and Semangko (Sumatra) fault systems. Seafloor spreading in past 4 Myr resulted in formation of deep Andaman backarc basin. This phase also experienced W-ward propagation of spreading center)

Raju, K.A.K., D. Ray, A. Mudholkar, G.P.S. Murty, V.K. Gahalaut, K. Samudrala et al. (2012)- Tectonic and volcanic implications of a cratered seamount off Nicobar Island, Andaman Sea. J. Asian Earth Sci. 56, p. 42-53.
(Seamount with well-developed crater at summit near center of Nicobar earthquake swarm. Rocks dredged from crater dacite, rhyolite and andesite, with veneer of ferromanganese oxide. First documentation of submarine arc-volcanism in Andaman Sea, E of Nicobar Island)

Rangin, C. (2012)- Cenozoic geodynamic evolution of the Burma-Andaman platelet. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 30258, 18p. *(Presentation Abstract)*
(online at: www.searchanddiscovery.com/documents/2012/30258rangin/ndx_rangin.pdf)

Rao, N.P., C.N. Rao, P. Hazarika, V.M. Tiwari, M.R. Kumar & A. Singh (2011)- Structure and tectonics of the Andaman subduction zone from modeling of seismological and gravity data. In: E. Sharkov (ed.) Frontiers in tectonic research- general problems, sedimentary basins and island arcs, p. 249-268.
(online at: http://cdn.intechopen.com/pdfs/17113/..)

Rao, P.B.V.S., M. Radhakrishna, K. Haripriya, B.S. Rao & D. Chandrasekharam (2016)- Magnetic anomalies over the Andaman Islands and their geological significance. J. Earth System Science 125, 2, p. 359-368.
(online at: www.ias.ac.in/article/fulltext/jess/125/02/0359-0368)
(Andaman Islands part of outer-arc accretionary complex of Andaman-Sumatra active subduction zone. Regional magnetic survey shows intermediate-high amplitude magnetic anomalies over areas of exposed ophiolite rocks along E coast of N, Middle and S Andaman Islands. 2D modelling along E-W profiles indicate ophiolite bodies extend to ~5-8 km depth and correlate with mapped fault/ thrust zones)

Ray, D., S. Rajan & R. Ravindra (2012)- Role of subducting component and sub-arc mantle in arc petrogenesis: Andaman volcanic arc. Current Science 102, 4, p. 605-609.
(online at: www.currentscience.ac.in/Volumes/102/04/0605.pdf)
(Trace element ratios of arc lavas from Barren and Narcondam volcanoes of Andaman Islands group: Narcondam lavas (mostly andesitic) with subduction component of sediment fluid and melt. Barren Island lavas (mostly basaltic) ratios, indicative of subduction component from altered ocean crust)

Ray, J.S., K. Pande & N. Awasthi (2013)- A minimum age for the active Barren Island volcano, Andaman Sea. Current Science 104, 7, p. 934-939.
(online at: www.currentscience.ac.in/Volumes/104/07/0934.pdf)
(Barren Island of Andaman Sea is only active volcano in Indian territory. Tephra (ash) layers in Andaman Sea sediment core, 32 km to SE, with tephra layers as old as ~70 ka, and with plagioclase separatesas old as 1.8 ± 0.4 Ma, possibly represents age of older rocks in plumbing system of volcano)

Ray, J.S., K. Pande & R. Bhutani (2015)- 40Ar/39Ar geochronology of subaerial lava flows of Barren Island volcano and the deep crust beneath the Andaman Island Arc, Burma Microplate. Bull. Volcanology 77, 57, p. 1-10.
(Andaman Island Arc part of Indonesian volcanic arc system, contains only one active subaerial magmatic center, Barren Island volcano (two dormant volcanoes N of Barren Island, Narcondam in Andaman Sea and Mt. Popa in Myanmar). Age of oldest subaerial lava flows 1.58 Ma. Compositions of xenoliths indicate derivation from lower (oceanic) crustal olivine gabbro and suggest genetic relationship between arc crust and ophiolitic basement of Andaman accretionary prism)

Ray, K.K. (1982)- A review of the geology of Andaman and Nicobar Islands. Geol. Survey India, Misc. Publ. 42, 2, p. 110-125.

Ray, K.K. (1985)- East coast volcanics- a new suite in the ophiolite of Andaman Islands. Records Geol. Survey India 116, 2, p. 83-87.

Ray, K.K., S. Sengupta S. & J. van den Hul (1988)- Chemical characters of volcanic rocks of Andaman ophiolite, India. J. Geol. Soc., London, 145, p. 393-400.
(Northernmost of Indonesia Arc outer arc ridge is in Andaman islands, where ophiolitic rocks occur as dismembered slices emplaced over Eocene-Oligocene turbidites. Volcanic members of ophiolitic suite pillow basalts, basaltic andesites and acid differentiates, with chemical characters comparable to MAR basalts at 45°N; REE patterns and acid differentiates suggest they represent marginal basin crust)

Ridd, M.F. (1971)- Faults in Southeast Asia and the Andaman rhombochasm. Nature 229, 2, p. 51-52.
(On presence of Andaman rhombochasm between sinistral Thai-Burma fault and dextral Sumatra fault)

Rodolfo, K.S. (1967)- Marine geology of the Andaman Basin, northeastern Indian Ocean. Ph.D. Thesis University of Southern Calfornia, Los Angeles, p. 1-316.

Rodolfo, K.S. (1969)- Sediments of the Andaman basin, Northeastern Indian Ocean. Marine Geology 7, p. 371-402.

Rodolfo, K.S. (1969)- Bathymetry and marine geology of the Andaman Basin and tectonic implications for Southeast Asia. Geol. Soc. America (GSA) Bull. 80, p. 1203-1230.
(Andaman Sea Basin large rhombochasm formed by Late Miocene- Recent rifting. E margin is Malay continental margin, composed of Paleozoic-Mesozoic rocks with thin Cenozoic sediment veneer. W boundary is Andaman-Nicobar Ridge, with U Cretaceous serpentinite-ophiolite-radiolarite core overlain by >3000m Paleocene-Miocene graywackes and shales. In-between are C Andaman Trough, two 220km long elongate basaltic seamounts and system of rift valleys and smaller volcanic seamounts. Maximum depths of Andaman Basin 4400m. Sediments in Central Trough 1.5 km thick)

Rose, K.K., J.E. Johnson, M.E. Torres, W. Hong, L. Giosan, E.A. Solomon et al. (2014)- Anomalous porosity preservation and preferential accumulation of gas hydrate in the Andaman accretionary wedge, NGHP-01 site 17A. Marine Petroleum Geol. 58, A, p. 99-116.
(In addition to pressure, temperature and salinity, additional parameters appear to influence concentration of gas hydrate in host sediments. Site 17A in Andaman Sea illustrates importance of grain-scale heterogeneities in controlling distribution of gas hydrate accumulations in marine sediments)

Roy, D.K., S.K. Acharyya, K.K. Ray, T.C. Lahari & M.K. Sen (1988)- Nature of occurrence, age and depositional environments of the oceanic pelagic sediments associated with the ophiolite assemblage from South Andaman Islands, India. Indian Minerals 42, 1, p. 31-56.

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Roy, S.K. & S. Banerjee (2016)- Soft sediment deformation structures in the Andaman Flysch Group, Andaman Basin: evidence for Palaeogene seismic activity in the island arc. Berita Sedimentologi 35, p. 55-64.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-35-palaeogene-of-the-eastern-margin-of-sundaland-part-1.html)
(Soft-sediment deformation in Late Eocene- Oligocene Andaman Flysch of uplifted accretionary prism of Andaman and Nicobar Islands interpreted as indicators of earthquake activity)

Roy, S.K. & S.D. Sharma (1993)- Evolution of Andaman forearc basin and its hydrocarbon potential. In: S.K. Biswas et al. (eds.) Proc. 2nd Seminar on Petroliferous basins of India, 1, Indian Petroleum Publ., p. 407-435.

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Roy, T.K. & N.N. Chopra (1987)- Wrench faulting in Andaman forearc basin, India. Proc. Offshore Technology Conf. (OTC) 19, Houston, p. 393-404.

Sachin, R., S. Verma & T. Pal (2017)- Petrochemical and petrotectonic characterisation of ophiolitic volcanics from Great Nicobar island Andaman-Sumatra belt. J. Geol. Soc. India 90, 1, p. 85-92.
(Great Nicobar island ophiolite restricted to E coast, as small isolated outcrops in Oligocene sediments terrain. Only upper part of ophiolite suite, with pillow basalts, massive andesite and pyroclastic andesite. In Andaman Islands dismembered ophiolite with complete ophiolite stratigraphy within Eocene sediments. Ophiolitic rocks in Great Nicobar island similar to Sunda outer arc ridge)

Saha, A., A. Dhang, J. Ray, S. Chakraborty & D. Moecher (2010)- Complete preservation of ophiolite suite from South Andaman, India: a mineral-chemical perspective. J. Earth System Science 119, 3, p. 365-381.
(online at:www.ias.ac.in/jess/jun2010/jess102.pdf)
(Complete preservation of ophiolite suite from Port Blair to Chiriyatapu in SE part of S Andaman island. Serpentinite at base overlain unconformably by cumulate ultramafic-mafic members, cut by basaltic dykes and capped by pillow basalts interlayered with arkosic sediments (nothing on ages of ophiolite complex))

Saha, A., M. Santosh, S. Ganguly, C. Manikyamba, J. Ray & J. Dutta (2018)- Geochemical cycling during subduction initiation: evidence from serpentinized mantle wedge peridotite in the south Andaman ophiolite suite. Geoscience Frontiers (Beijing) 9, 6, p. 1755-1775.
(online at: https://www.sciencedirect.com/science/article/pii/S167498711830032X)
(Serpentinized Cretaceous- Paleocene peridotites (dunites) exposed in S Andaman representing tectonized mantle section of ophiolite suite. Geochemical features suggest contributions from boninitic mantle melts and substantiate subduction initiation process by rapid slab roll-back with extension/ seafloor spreading in intra-oceanic forearc regime)

Sahu, V.K., V.K. Gahalaut, S. Rajput, R.K. Chadha, S.S. Laishram & A. Kumar (2006)- Indo-Burmese arc region: implications from the Myanmar and Southeast Asia GPS measurements. Current Science 90, 12, p. 1688-1693.
(GPS observations suggest plate motion of 36 mm/yr between India and Sundaland is partitioned almost equally between Sagaing fault and Indo-Burmese arc through episodic dextral motion. E-ward motion of Indian plate generally compensated by E-ward motion of S China plate. Almost no subduction along Indo-Burmese arc)

Sarkar, S. & A.K. Ghosh (2014)- Evaluation of coralline algal diversity from the Serravallian carbonate sediments of Little Andaman Island (Hut Bay), India. Carbonates and Evaporites 30, 1, 13p.
(Palaeodiversity of coralline algae in Serravallian Long Fm reefal carbonates of SE Little Andaman Island (Hut Bay). Nine genera, incl. Lithothamnium, Lithoporella, Corallina, etc.)

Sarkar, S., A.K. Ghosh & G.M.N Rao (2016)- Coralline algae and benthic foraminifera from the Long Formation (Middle Miocene) of the Little Andaman Island, India: biofacies analysis, systematics and palaeoenvironmental implications. J. Geol. Soc. India 87, 1, p. 69-84.

(M Miocene (Serravallian) algal-foraminiferal carbonates of Long Fm Little Andaman Island. Dominance of coralline algae and larger foraminifera (incl. miogypsinids, Katacycloclypeus) indicates deposition in upper photic zone)

Sarma, D.S., S.H. Jafri, I.R. Fletcher & N.J. McNaughton (2010)- Constraints on the tectonic setting of the Andaman ophiolites, Bay of Bengal, India, from SHRIMP U-Pb zircon geochronology of plagiogranite. J. Geology 118, p. 691-697.
(Andaman ophiolites regarded as accreted and uplifted oceanic basement rocks thrust over Paleogene flysch deposited in Andaman fore-arc basin. U-Pb zircon mean age of ~93.6 Ma for plagiogranite in gabbro of Andaman ophiolites and East Coast Volcanics, interpreted as age of crystallization. Ophiolitic rocks must be older and likely obducted onto leading edge of Eurasian continent in E Cretaceous)

Sastri, V.V. & T.S. Bedi (1962)- On the occurrence of *Miogypsina, Cycloclypeus, Orbulina* in the Miocene of the Andaman islands. Current Science India 31, p. 20-21.
(Brief communication reporting first find of M Miocene foraminifera association of Miogypsina and Orbulina in calcareous sandstones of Strait and Nicholson Islands, Middle and S Andaman Islands)

Saxena, R.K., A.K Ghosh & A. Chandra (2005)- Calcareous algae from the limestone unit of Hut Bay Formation (Late Middle Miocene) of Little Andaman Island, India. In: J.P. Keshri & A. Kargupta (eds.) Glimpses of Indian phycology, Bishen Singh Mahendra Pal Singh Press, Dehra Dun, p. 275-301.
(Late M Miocene calcareous algae assemblage from limestone in Hut Bay Fm of Little Andaman Island with 13 species of coralline red algae (Lithophyllum, Lithothamnion, Amphiroa, etc.) and Halimeda-type green algae)

Satyavani, N., K. Sain & V. Jyothi (2014)- Gas hydrate occurrences in the Andaman offshore, India- seismic inferences. J. Indian Geophys. Union 18, 4, p. 440-447.
(online at: http://www.igu.in/18-4/3-paper.pdf)
(Seismic data in Andaman offshore E of Andaman islands shows prominent bottom-simulating reflector (BSR) at ~575m below seafloor, indicating presence of zone of gas hydrates and free gas below BSR)

Satyavani, N., K. Sain, M. Lall & B. Kumar (2008)- Seismic attribute study for gas hydrates in the Andaman Offshore India. Marine Geophysical Researches 29, 3, p. 167-175.
(Seismic data of Andaman Sea E of Little Andaman Island indicate presence of gas hydrates and underlying free gas. Prominent bottom-simulating reflection (BSR) with reverse polarity around 650-700 ms)

Scaife, S. & A. Billings (2010)- Offshore exploration of the Andaman Sea, GEO ExPro 7, 5, p. 30-34.
(Brief regional overview based on reprocessing of 1982-2001 seismic in Andaman Sea, E of Andaman islands. 13 wells in basin, only one (AN 1-1) flowed gas from Miocene limestone)

Scaife, S. & A. Billings & R. Spoors (2010)- A re-evaluation of vintage Andaman offshore seismic datasets, Proc. GEO-India, New Delhi 2011, AAPG Search and Discovery 10322, 5p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2011/10322scaife/ndx_scaife.pdf)

Schwager, C. (1866)- Fossile Foraminiferen von Kar Nikobar. In: F. Hochstetter, Reise der Osterreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859, Geol. Theil, 2, Staatsdruckerei, Vienna, p. 187-268.
('Fossil foraminifera from Kar-Nikobar'. First or one of earliest studies on foraminifera from SE Asia. From Austrian Novara Expedition 1857-1859 Reports. Taxonomy updated by Srinivasan & Sharma (1980))

Shankar, U. & M. Riedel (2013)- Heat flow and gas hydrate saturation estimates from Andaman Sea, India. Marine Petroleum Geol. 43, p. 434-449.
(Gas hydrate recovered along E coast of Andaman Islands at Site NGHP-01-17, mainly in volcanic ash layers. Gas hydrate saturation values up to ~85% of pore spaces from ~270m below seafloor to base of gas hydrate stability zone (~600m below seafloor). Bottom-simulating reflector imaged along several seismic lines, with depth of BSR >600m on line over Site NGHP-01-17, one of deepest BSRs observed worldwide. BSR-derived

heat flow values ~12- 41.5 mW/m2. Variable BSR depths in Andaman Sea controlled mainly by overall low geothermal gradients, with lower heat flow values over topographic highs)

Shankar, U., K. Sain & M. Riedel (2014)- Assessment of gas hydrate stability zone and geothermal modeling of BSR in the Andaman Sea. J. Asian Earth Sci.79, p. 358-365.
(Widespread bottom simulating reflectors (BSRs) seen on seismic profiles in Andaman Sea. BSR occurs where water depth >1000m, and identified by cross-cutting relationships with dipping reflectors. BSR represents base of gas hydrate stability field, which ranges from ~518-861m below sea floor, depending on water depths. In situ measurement at site 17 shows low geothermal gradient of 19 °C/km, responsible for deepest BSR in world)

Sharma, V., J. Daneshian & D.L. Bhagyapati (2011)- Early Neogene radiolarian faunal turnover in the northern Indian Ocean: evidence from Andaman-Nicobar. J. Geol. Soc. India 78, 2, p. 157-166.
(Two intervals of faunal turnover suggested by E-M Miocene radiolarians from Andaman-Nicobar, in Stichocorys wolffii -Calocycletta costata -Dorcadospyris alata zones: (1) latest E Miocene (upward increase in cold water species and decreasing diversity; (2) in M Miocene Dorcadospyris alata Zone at ~14.8-12.7 Ma, faunal turnover correlated with M Miocene cooling)

Sharma, V. & G.K. Sharma (1989)- Late Miocene to Early Pliocene radiolarian biostratigraphy of Neill Island, Andaman Sea. J. Geol. Soc. India 34, p. 76-82.

Sharma, V. & S. Singh (1997)- Late Neogene radiolarian events in Andaman-Nicobar Islands, Northeast Indian Ocean. Micropaleontology 43, p. 21-28.
(11 radiolarian events identified in Late Miocene - E Pliocene of Andaman-Nicobar islands)

Sharma, V., S. Singh & N. Rawal (1999)- Early Middle Miocene radiolaria from Nicobar Islands, Northeast Indian Ocean. Micropaleontology 45, 3, p. 251-277.
(Neogene of Andaman and Nicobar Islands deep water marine facies rich in Radiolaria. Nicobar islands Nancowry and Kamorta radiolarian assemblages with 120 species of Dorcadospyris alata Zone (~15-13 Ma))

Sharma, V. &, M.S. Srinivasan (2007)- Geology of Andaman-Nicobar: the Neogene. Capital Publishing Co., New Delhi, p. 1-163.

Sheth, H.C., J.S. Ray, R. Bhutani, A. Kumar & R.S. Smitha (2009)- Volcanology and eruptive styles of Barren Island: an active mafic stratovolcano in the Andaman Sea, NE Indian Ocean. Bull. Volcanology 71, 9, p. 1021-1039.
(online at: http://www.mantleplumes.org/WebDocuments/shethetal2009-bv.pdf)
(Barren Island little known volcano in Andaman Sea, and northernmost active volcano of Great Indonesian arc. Recent eruptions (1991, 1994-95, 2005-06) produced aa lava flows of basalt and basaltic andesite and tephra)

Shrivastava, J.P. & V. Sharma (2014)- Compositional variation in magma through Early Neogene in the Northeast Indian Ocean: a testimony from glass shards. J. Geol. Soc. India 84, 2, p. 181-186.
(Volcanic ash/ glass shards widely distributed in E Miocene marine succession of Andaman-Nicobar Islands, also few records from early M Miocene (~21-15 Ma). Range in composition from basalt to rhyolite. Andesite/ basalt-andesite most common, implying island arc tectono-magmatic setting, possibly in Indonesian region)

Singh, O.P. & S.A. Jafar (1995)- Late Miocene discoasters from Sawai Bay Formation, Neill Island, Andaman Sea, India. The Palaeobotanist 44, p. 189-206.
(21 species of Late Miocene discoasters from Sawai Bay Fm. Discoster berggrenii and D quinqueramus common forms. Calcareous nannofossil subzone CN9A = lower NN11)

Singh, O.P., S.M. Subramanya & V. Sharma (2000)- Early Neogene multiple microfossil biostratigraphy, John Lawrence island, Andaman Sea. Micropaleontology 46, p. 343-352.
(Planktic foraminifera, calcareous nannofossils and radiolaria examined from E Neogene of John Lawrence Island, Andaman Sea. Planktonic foraminifera referable to upper Globigerinatella insueta and lower

Praeorbulina glomerosa zones (E-M Miocene boundary). Nannofossil assemblages assigned to Helicosphaera ampliaperta (NN4) zone, radiolarians to Calocycletta costata Zone)

Singh, S.C. & R. Moeremans (2017)- Anatomy of the Andaman-Nicobar subduction system from seismic reflection data. In: P.C. Bandopadhyay & A. Carter (eds.) The Andaman- Nicobar accretionary ridge: geology, tectonics and hazards, Geol. Soc., London, Mem. 47, Chapter 13, p. 193-204.
(online at: http://mem.lyellcollection.org/content/memoirs/47/1/193.full.pdf)
(Andaman-Nicobar subduction system is NW segment of Sunda subduction system, where Indian Plate subducts beneath Sunda Plate in nearly arc-parallel direction. Entire segment ruptured during 2004 Andaman-Sumatra earthquake (Mw 9.3). Seismic characterization of Andaman-Nicobar subduction system from W to E. Ninety-East Ridge overlain by thick continental margin sediments beneath recent Bengal Fan sediments. Fracture zones on subducting plate beneath forearc, influence morphology of upper plate. Forearc region (accretionary wedge, forearc high and forearc basin) exceptionally wide (250 km). Forearc basin contains active backthrust and floored by continental crust of Malay Peninsula origin. Active sliver strike-slip fault in deep basin connects with Great Sumatra Fault in S and Sagaing Fault in N, via Andaman Sea spreading centre and large transform)

Singh, S.C., R. Moeremans, J. McArdle & K. Johansen (2013)- Seismic images of the sliver strike-slip fault and back thrust in the Andaman-Nicobar region. J. Geophysical Research, Solid Earth, 118, p. 5208-5224.
(Great Sumatra Fault defines present day plate boundary between Sunda Plate in N and Burmese Sliver Plate in S. Continues N of Banda Aceh in Andaman Sea for >700 km until it joins Andaman Sea Spreading Centre. Two strands between Banda Aceh and Nicobar Island: transpression in S, and deep narrow active rift system in N with volcanoes in center, suggesting volcanic arc is coincident with rifting. N of Nicobar Island active Andaman-Nicobar strike-slip fault, cuts through rifted deep basin; volcanic arc lies just E of rift. W margin of this basin seems to be rifted continental margin, tilted W, and flooring Andaman-Nicobar fore-arc basin)

Spicak, A. & J. Vanek (2013)- Earthquake clustering in the tectonic pattern and volcanism of the Andaman Sea region. Tectonophysics 608, p. 728-736.
(Earthquake swarms of S Andaman Sea zone induced by intrusions of subduction-generated calc-alkaline magmas, in N zone by intrusions of basaltic magmas associated with seafloor spreading. Earthquake swarm occurrence defines brittle, seismogenic layer at depths of 9-35 km)

Srinivasan, M.S. (1977)- Standard planktonic foraminiferal zones of the Andaman-Nicobar Late Cenozoic. Recent Researches in Geology 3, p. 23-79.

Srinivasan, M.S. (1980)- Early Neogene volcanism in Southeast Asia: evidence of ash beds from Andaman-Nicobar. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 227-234.
(Tephra and ash layers common in E Miocene, mainly around N4-N5 boundary, also in early M Miocene (N8) of E Andaman islands. Low volcanic activity in M-L Miocene in Andaman region. Likely sources island arc volcanoes of Narcondam and Barren Islands to NE in Andaman Sea and Indonesian volcanoes in SE (see aloso Shrivastava and Sharma 2014))

Srinivasan, M.S. (1984)- The Neogene of Andaman Nicobar. In: N. Ikebe & R. Tsuchi (eds.) Pacific Neogene datum planes, University of Tokyo Press, p. 203-207.
(Brief review of Andaman-Nicobar islands Miocene-Recent continuous marine stratigraphy and planktonic foraminifera zonation)

Srinivasan, M.S. (1986)- Neogene reference sections of Andaman-Nicobar: their bearing on volcanism, sea-floor tectonism and global sea-level changes. In: N.C. Ghose & S. Varadarajan (eds.) Ophiolites and Indian Plate margin, p. 295-308.

Srinivasan, M.S. (1988)- Late Cenozoic sequences of Andaman-Nicobar islands; their regional significance and correlation. Indian J. Geology 60, 1, p. 11-34.

Srinivasan, M.S. & R.J. Azmi (1976)- Contribution to the stratigraphy of Neill Island, Ritchieôs Archipelago, Andaman Sea. In: M.S. Srinivasan (ed.) Proc. VI Indian Colloquium on Micropaleontology and Stratigraphy, Devijyoti Press, Varanasi, p. 283-301.

Srinivasan, M.S. & R.J. Azmi (1976)- New developments in the Late Cenozoic lithostratigraphy of Andaman-Nicobar Islands, Bay of Bengal. In: M.S. Srinivasan (ed.) Proc. VI Indian Colloquium on Micropaleontology and Stratigraphy, Devijyoti Press, Varanasi, p. 302-327.

Srinivasan, M.S. & R.J. Azmi (1979)- Correlation of late Cenozoic marine sections in Andaman-Nicobar, northern Indian Ocean and the equatorial Pacific. J. Paleontology 53, p. 1401-1415.
(Andaman-Nicobar Islands contain almost complete E Miocene- Quaternary sequence of tropical planktonic foraminiferal zones. Many of the 24 Andaman-Nicobar datum levels comparable with those established for equatorial Pacific, but some are different)

Srinivasan, M.S. & B.K. Chatterjee (1981)- Stratigraphy and depositional environments of Neogene limestones of Andaman-Nicobar Islands, Northern Indian Ocean. J. Geol. Soc. India 22, 11, p. 536ï 546.
(On rel. widespread E Miocene- Pleistocene limestones of Andaman-Nicobar islands)

Srinivasan, M.S. & A. Dave (1984)- Neogene sequences of Long Island: their bearing on the Late Miocene paleoceanography of the Andaman Sea. In: R.M. Badva et al. (eds.) Proc. 10th Indian Coll. Micropaleontology and Stratigraphy, Pune 1982, p. 433-444.

Srinivasan, M.S. & V. Sharma (1969)- The status of late Tertiary foraminifera of Car Nicobar described by Schwager in 1866. Micropaleontology 15, p. 107-110.
(Brief revision of taxonomy of Late Tertiary foraminifera described by Schwager (1866) from Car Nicobar Island samples collected during 1858 Novara Expedition)

Srinivasan, M.S. & V. Sharma (1969)- Miocene foraminifera from Hut Bay, Little Andaman Island, Bay of Bengal. Cushman Foundation Foraminiferal Research 20, 3, p. 102-105.
(online at: https://cushmanfoundation.allenpress.com/portals/_default/files/pubarchive/CCFFR/20ccffr3.pdf)
(Brief paper listing 86 species of bathyal (probably >600m water depth) small benthic and 25 species of planktonic forams(70% of fauna) in Late Miocene (Tortonian) of Little Andaman Island. No figures)

Srinivasan, M.S. & V. Sharma (1973)- Stratigraphy and microfauna of Car-Nicobar, Bay of Bengal. J. Geol. Soc. India 14, 1, p. 1-11.

Srinivasan, M.S. & V. Sharma (1980)- Schwager's Car Nicobar foraminifera in the reports of the Novara Expedition: a revision. Today & Tomorrow's Publ., New Delhi, p. 1-83.
(Revision of taxonomy of deep marine foraminifera originally described in classic work of Schwager (1866) on material collected by Austrian Novara Expedition in 1858, probably from E Pliocene (N19) Sawai Bay Fm)

Srinivasan, M.S. & S.S. Srivastava (1975)- Late Neogene biostratigraphy and planktonic foraminifera of Andaman- Nicobar Islands, Bay of Bengal. In: T. Saito & L.H. Burckle (eds.) Late Neogene Epoch boundaries, Micropaleontology Press, Spec. Publ. 1, p. 124-161.

Srisuriyon, K. & C.K. Morley (2014)- Pull-apart development at overlapping fault tips, oblique rifting on a Cenozoic continental margin, Northern Mergui Basin, Andaman Sea. Geosphere 10, p. 1, p. 80-106.
(online at: https://pubs.geoscienceworld.org/gsa/geosphere/article/10/1/80-106/132158)
(N Mergui Basin contains ENE-WSW to NE-SW striking normal fault-bound basins and NNW-SSE trending strike-slip faults. Two largest strike-slip faults (Manora with 4.5 km offset and Mergui with ~8 km of offset) pass into extensional or transtensional basins at tips, consistent with dextral offset. Strike-slip and extensional faulting. N part of Mergui Basin developed relatively late, in E Miocene, following WNW-ESE extension in Oligocene in S Mergui Basin, indicating rotation in extension direction to NNW-SSE with time. Basin part of

major transtensional system involving Sumatra, W Andaman and Sagaing faults that accommodated N motion of W Myanmar as India moved N relative to SE Asia)

Srivastava, D.K. (2010)- Tectonic evolution of Andaman Arc system and its hydrocarbon prospectivity. In: S. Ibotombi (ed.) Indo-Myanmar Ranges in the tectonic framework of the Himalaya and Southeast Asia, Proc. National Seminar 2008, Geol. Soc. India, Bangalore, Mem. 75, p. 45-54.

Streck, M.J., F. Ramos, A. Gillam, D. Haldar & R.A. Duncan (2010)- The intra-oceanic Barren Island and Narcondam Arc volcanoes, Andaman Sea: implications for subduction inputs and crustal overprint of a depleted mantle source. In: J. Ray et al. (eds.) Topics in Igneous Petrology, Springer Verlag, p. 241-273.
(Active Barren Island and Pleistocene Narcondam volcanoes are only two subaerially exposed Andaman arc volcanoes, rising from 1000- 2300m deep seafloor of Andaman Sea, and associated with subduction of Indian plate beneath Burma plate. Lavas at Barren Island basalt to andesite, Narcondam volcano andesite to silicic andesite/dacite. Isotopic values from Barren Island likely caused by assimilation of extended continental crust and/or sediments from Irrawaddy Delta fan at Myanmar continental margin)

Subrahmanyama, C., R. Gireesh, S. Chand, K.A.K. Raju & D.G. Rao (2008)- Geophysical characteristics of the Ninetyeast Ridge-Andaman island arc/trench convergent zone. Earth Planetary Sci. Letters 266, p. 29-45.
(Ninetyeast Ridge strongly positive gravity anomalies and causing prominent break in continuity of gravity low of Andaman island arc trench. Ninetyeast Ridge is at starting phase of collision with island arc and may not have started affecting subduction process itself)

Thompson, P. (2018)- From Indonesia to Myanmar: a review of seismic images across the Indo-Australian/ Sunda plate margin: The anatomy of a subduction zone in space & time. Third AAPG/EAGE/MGS Oil and Gas Conf., Yangon 2017, Search and Discovery Art. 30552, p. 1-43.
(online at: http://www.searchanddiscovery.com/documents/2018/30552thompson/ndx_thompson.pdf)
(Series of 11 previously published seismic profiles across Sunda subduction thrench- accretionary prism-forearc from North Sumatra- Andaman Islands- Myanmar. Plate margin changes from subduction margin in S to transform margin in N. May have been wholly subduction margin until ~25Ma)

Tipper, G.H. (1911)- The geology of the Andaman Islands with references to the Nicobars. Mem. Geol. Survey India 35, 4, p. 195-222.
(Incl. occurrence of 'jaspers', quartzites, and pink and white porcellaneous limestones, sometimes as isolated exposures in Eocene, but occasionally in association with serpentines)

Valdiya, K.S. (2015)- Andaman island arc and back-arc sea. In: The making of India- Geodynamic evolution, 2nd Ed., Soc. Earth Scientists Series, Springer, p. 707-722.
(850km-long chain of islands between Bay of Bengal and Andaman Sea central part of 5000-km-long Myanmar-Indonesia Mobile Belt, related to active subduction zone. Andaman Island Arc two parallel arcuate belts: W arc of >300 islands of Andaman, Nicobar and Mentawai groups, made of U Cretaceous-Tertiary flysch, with ophiolites at various structural levels. Etc.)

Venkatesan, M.I., E. Ruth, P.S. Rao, B.N. Nath & B.R. Rao (2003)- Hydrothermal petroleum in the sediments of the Andaman Backarc Basin, Indian Ocean. Applied Geochem. 18, 6, p. 845-861.
(Recent sediment cores of Andaman Basin between Andaman Nicobar islands and Malay Peninsula analyzed for biomarkes. Hydrocarbons of hydrothermal origin present, derived from predominantly marine organic matter with some terrestrial input. Thermal maturity of bitumen comparable to or lower than that of other hydrothermal regions such N Juan de Fuca Ridge, Guaymas Basin and Escanaba Trough)

Verma, R.K., M. Mukhopadhyay & N.C. Bhuin (1979)- Seismicity, gravity and tectonics in the Andaman Sea. In: S. Uyeda, R.W. Murphy & K. Kobayashi (eds.) Geodynamics of the Western Pacific, Proc. Int. Conf. Geodynamics of the Western Pacific- Indonesian Region, J. Physics of the Earth 26, Suppl., p. 233-248.
(online at: https://www.jstage.jst.go.jp/article/jpe1952/26/Supplement/26_Supplement_S233/_pdf)
(Early paper documenting active subduction zone of Indian Ocean Plate under Andaman Sea Basin)

Wang, H, F. Lv, G. Fan, C. Mao & H. Ma (2011)- Geological conditions and accumulation mechanism of shallow biogenic gas reservoirs in Andaman Basin. AAPG Ann. Conv. Exh., Houston 2011, Search and Discovery Art., 16p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2011/10343wang/ndx_wang.pdf)
(Many shallow biogenic gas reservoirs in Miocene-Pleistocene strata in Andaman offshore area. Large biogenic gas field Zawtika 1A in Block M09 discovered in 2007, with >2 TCF proven gas reserves. Reservoirs Miocene-Pliocene delta front sandstonesat 750-1580m depth, and shallower biogenic gas reservoirs in Pleistocene with burial depths <500m)

Weeks, L.A., R.N. Harbison & G. Peter (1967)- The island arc system in Andaman Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 51, 9, p. 1803-1815.
(Early sparker survey in Andaman Sea delineated continuation to N of Sumatra volcanic arc system over 1100 km (foredeep, outer sedimentary island arc, inner volcanic arc with rift valley and backdeep))

Zaw, K., S.K. Acharyya & H. Maung (1989)- Comments and Reply on "Transcurrent movements in the Burma-Andaman Sea region". Geology 17, 1, p. 93-98.
(Commentary and Reply on Maung (1987) paper)

Zhang, P., L. Mei, P. Xiong, X. Hu, R. Li & H. Qiu (2017)- Structural features and proto-type basin reconstructions of the Bay of Bengal basin: a remnant ocean basin model. J. Earth Science (China) 28, 4, p. 666-682.
(online at: http://en.earth-science.net/PDF/20170721112257.pdf)
(Bay of Bengal Basin remnant ocean basin between E continental margin of India to W and Sunda trench-arc system to E. Prominent down flexure structures caused by huge amount of Bengal fan turbidite sediments accumulation. Transition from ocean basin to remnant ocean basin in Late Oligocene)

IX.2. Malay Peninsula, Singapore

Abdullah, I. (2004)- On the presence of pre-Carboniferous metasediments in the Eastern Belt: a structural view. Bull. Geol. Soc. Malaysia 49, p. 79-84.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004014.pdf)
Oldest rocks of Peninsular Malaysia E Belt Carboniferous in low-grade metaclastic facies, unconformably overlain by Late Permian continental deposits with plants, intruded by Permo-Carboniferous mafic-intermediate igneous rocks, followed by Late Permian-E Triassic biotite granite, Late Triassic granite and Jurassic-Cretaceous dolerite dykes. Most metasediments two episodes of folding. In certain areas three generations of folding, older phase probably developed in mid- Devonian)

Abdullah, N.T. (2009)- Mesozoic stratigraphy. In: C.S. Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University of Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 87-131.
(Mesozoic on Malay Peninsula mainly Triassic (incl. 'Tethyan' limestones and redbeds) and U Jurassic- Lower Cretaceous redbeds. U Cretaceous absent)

Abdullah, N.T. & A.H. Rahman (2009)- Discovery of Upper Permian carbonates from the Kenong Wildlife Reserve, Pahang, Malaysia. Bull. Geol. Soc. Malaysia, 38, p. 79-89.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995008.pdf)
(Outcrops of U Permian in N Pahang, C Malay Peninsula. Late Permian carbonates in Kenong Reserve associated with marine shales and common volcanoclastics of M Permian- M Triassic 'Guang Musang Fm'. With common algae, rare, rel. advanced Palaeofusulina, Reichelina, Colaniella cf. parva, Paraglobivalvulina)

Abdullah, W.H. & P. Abolins (1998)- Organic petrological and organic geochemical characterisation of the Tertiary coal-bearing sequence of Batu Arang, Selangor, Malaysia. J. Asian Earth Sci. 16, 4, p. 351-367.
(Selangor Batu Arang Tertiary coal-bearing sequence with oil shales dominated by Botryococcus-derived telalginite and Pediastrum-derived lamalginite. Coals hypautochthonous in origin, mainly duroclarite-type. Both thermally immature. Remarkably, oleanane and bicadinanes, linked to angiosperm plants, not observed)

Adenan, N.B., C.A. Ali & K.R. Mohamed (2014)- Diagenetic history of the Chuping Limestone at Bukit Tengku Lembu, Perlis, Malaysia. Geol. Soc. Malaysia, Nat. Geoscience Conf. (NGC) 2014, Trengganu, P025, p. 86-94.
(also in Sains Malaysiana 46, 6 (2017), p. 887–895. Diagenetic processes in E Permian- Late Triassic Chuping Lst in Perlis, NW Malay Peninsula (= Ratburi Lst of Thailand): (1) early marine diagenesis (fibrous rim calcite cements); (2) burial diagenesis (mechanical compaction, formation of stylolites, cementation, dolomitization); (3) meteoric phreatic cementation)

Agematsu, S. (2010)- Establishment of the Lower to Middle Ordovician biostratigraphy on the Langkawi Islands, Malaysia. J. Geography (Chigaku Zasshi) 119, 5, p. 872-877.
(online at: https://www.jstage.jst.go.jp/article/jgeography/119/5/119_5_872/_pdf)
(Japanese with English summary. 18 species of late Early- early M Ordovician conodonts in Kaki Bukit Fm in Langoon Island, NE Langkawi Islands, deposited on shelfal carbonate platform. E Ordovician conodonts from SE Asia belong to Australian province)

Agematsu, S., K. Sashida & A.B. Ibrahim (2008)- Biostratigraphy and paleobiogeography of Middle and Late Ordovician conodonts from the Langkawi Islands, northwestern peninsular Malaysia. J. Paleontology 82, p. 957-973.
(M-Upper Ordovician limestones of Langkawi Islands 20 species of conodonts in four biostratigraphic zones. M Ordovician fauna belongs to low-latitude Australian Province (part of Sibumasu Block). M Arenigian deposited on shallow-water shelf, Late Arenigian- M Darriwilian limestones formed in hemipelagic deeper-water conditions)

Alexander, F.E.S. (1950)- The geology of Singapore and surrounding islands. In: Report on the availability of granite on Singapore and the surrounding islands, Appendix 1, Singapore Government Press, 24p.

Alexander, J.B. (1959)- Geology and palaeontology in Malaya: Pre-Tertiary stratigraphic succession in Malaya. Nature 183, p. 230-231.
(Early summary of Cambrian- Cretaceous stratigraphy of Malay Peninsula)

Alexander, J.B. (1968)- The geology and mineral resources of Bentong, Pahang and adjoining portions of Selangor and Negri Sembilan, incorporating an account of the prospecting and mining activities of the Bentong district. Geol. Survey Dept. West Malaysia, Ipoh, Mem. 13, p. 1-250.
(Strata dip generally WNW and are tightly folded. Oldest rocks (Schist Series) are schists and phyllites lying immediately E of Main Range granite. They are overlain by Older Arenaceous Series (Bentong Gp quartzite, conglomerate, shales and bedded radiolarian chert, followed by Calcareous Series (Raub Group mudstone with intermediate tuffs and lenses of crystalline limestone) and Younger Arenaceous Series (Lipis Gp). Pyroclastics and lavas are referred to Pahang Volcanic Series. Main Range granite mainly biotite alkali granite)

Alexander, J.B., V. Sethaput, T.H. Holland, M.S. Krishnan & K. Jacob (1956)- Malaya/ Thailand/ Burma. Lexique Stratigraphique International, Int. Geological Congress, Commision de Stratigraphie, Paris, III, Asie 6B-6C-6D, p. 1-115.
(Stratigraphic lexicon of Malaya, Thailand and Myanmar)

Ali, M.A.M., E. Willingshofer, L. Matenco, T. Francois, T.P. Daanen, T.F. Ng, N.I. Taib & M.K. Shuib (2016)- Kinematics of post-orogenic extension and exhumation of the Taku Schist, NE Peninsular Malaysia. J. Asian Earth Sci. 127, p. 63-75.
(Triassic Indosinian orogen in Peninsular Malaysia with significant post-orogenic extension. Taku Schist, Kemahang granite and Gua Musang sediments of N Peninsular Malaysia (E of Bentong-Raub suture?). Three phases of compressional deformation, with metamorphism of Taku mica schist to amphibolite facies, mainly from Paleozoic clastic sediments with some mafic intercalations, equivalent to ones exposed in Bentong-Raub suture zone. Serpentinites near W contact between schist and overlying Gua Musang Fm M Permian- U Triassic forearc basin clastics and volcanics. Triassic Kemahang granite syn-kinematic (~227 Ma). Shortening followed by extension in NW-SE direction, resulting in large Taku detachment (age of exhumation uncertain). Extension probably reactivated former subduction plane as detachment and exhumed previously buried and metamorphosed rocks)

Alkhali, H.A. & C.W. Sum (2015)- The Kati Formation: a review. In: M. Awang et al. (eds.) 3rd Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2014), Kuala Lumpur 2014, Springer Verlag, p. 303-312.
(Review of stratigraphic nomenclature of intensely folded Permo-Carboniferous deep marine shales and sandstones of Kati Fm of W Malay Peninsula. Estimated thickness 800-900m. More intensely folded and probably older than Triassic Semanggol Fm; interpreted as equivalent of Kubang Pasu Fm in NW and Kenny Hill Fm of KL area. Flute casts suggest source from N-NW)

Almashoor, S.S. (1996)-The Benta migmatite complex revisited. Warta Geologi 22, 3, p. 227. *(Abstract)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1996003.pdf)
(Abstract only. Re-interpretation of Hutchison 1971; see also Umor & Almashoor 2000))

Altermann, W., N.A. Harbury, M.E. Jones, M.G. Audley-Charles, K.R. Mohamed & I. Metcalfe (1991)- Discussion on structural evolution of Mesozoic Peninsular Malaysia. J. Geol. Soc., London 148, p. 417-419.
(Discusssion of Harbury, Jones et al. (1990) paper and replies. Mainly on age of Raub Bentong suture)

Anaschinda, P. (1978)- Tin mineralization in the Burmese-Malayan Peninsula- a plate tectonic model. In: P. Nutalaya (ed.) Proc. 3rd Reg. Conf. Geol. Mineral Res. SE Asia (GEOSEA III), Bangkok 1978, p. 293-299.
(Early plate tectonic model of Malay Peninsula granite belts, with Late Triassic collision of W and E Malaya blocks along Bentong- Raub ophiolite belt)

Arbain, N.A., Q.L. Xiang & A.A Ghani (2017)- Geochemistry of Ordovician to Silurian felsic volcanic from Gerik, Peninsular Malaysia. Proc. 30th Nat. Geosc. Conf. Exhib. (NGC 2017), Kuala Lumpur, PDRG13-77, Warta Geologi 43, 3, p. 309. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_032.pdf)
(Record of Late Ordovician- E Silurian (~488-450 Ma) rhyolitic volcanics in W Belt of Malay Peninsula (Sibumasu Terrane). Geochemistry of S-type arc volcanics)

Ariffin, K.S. (2009)- Sediment hosted primary tin deposit associated with biotite granite and fault zone at Gunung Paku, Klian Intan, Upper Perak, Malaysia. Resource Geology 59, 3, p. 282-294.
(Gunung Paku in Perak is primary tin deposit in Malaysia, mined for >200 years. Located in W Tin belt of Peninsular Malaysia, associated with biotite granite (184-230 Ma; Late Triassic- E Jurassic) of Main Range Granitoid. Primary tin mineralization associated with sheet-like quartz vein systems parallel to strike of host rocks, formed in low-metamorphic metasediments rock of Paleozoic Baling Fm. Mineralized veins range from quartz-cassiterite, quartz-tourmaline-cassiterite to complex quartz-cassiterite-polymetallic sulfide veins)

Ariffin, K.S. (2012)- Mesothermal lode gold deposit Central Belt Peninsular Malaysia, In: I.A. Dar (ed.) Earth Sciences, Intechopen, p. 313-342. *(online at: http://cdn.intechopen.com/pdfs/27599/InTech-Mesothermal_lode_gold_deposit_central_belt_peninsular_malaysia.pdf)*
(Gold mineralization in Malay Peninsula Central Belt are low mesothermal lode gold deposits associated with accretionary prism along Raub-Bentong Suture. Mineralization took place in Permo- Late Triassic island arc system during collision of Sibumasu block underneath E Malaya (Indochina))

Ariffin, K.S. & N.J. Hewson (2007)- Gold-related sulfide mineralization and ore genesis of the Penjom gold deposit, Pahang, Malaysia. Resource Geology 57, 2, p. 149-169.
(Penjom gold deposit ~20km E of Raub-Bentong Suture zone, Kuala Lipis, Pahang. Within C Belt of Permian-Lower Triassic Padang Tungku Fm argillaceous marine clastics with thin limestones and Pahang Volcanic Series intermediate to acid volcaniclastics and subordinate rhyolitic lava sequences. Intruded by tonalite and quartz porphyry. Penjom gold deposit associated with Tertiary, volcanic and hydrothermal activity)

Asama, K. (1973)- Lower Carboniferous Kuantan Flora, Pahang, West Malaysia. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 11, p. 109-118.
(Lower Carboniferous (Visean) flora from Raub series near Kuantan, East coast Malay Peninsula. This warm-humid 'Kuantan flora' is on East Malaya/ Indochina Block and contains Lepidodendron spp., Stigmaria, etc.))

Asnachinda, P. (1978)- Tin mineralization in the Burmese-Malayan Peninsula. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 293-299.

Aung, A.K. & J. Azmi (2014)- *Yatsengia jengkaensis*- a new yatsengiid rugose coral from the ñJenga Pass Limestoneò, Pahang, central Peninsular Malaysia. Warta Geologi 40, 1-2, p. 1-6.
(online at: www.gsm.org.my/products/702001-100339-PDF.pdf)
(Yatsengia jengkaensis n.sp. rugose coral from early M Permian (Wordian) Jengka Pass Limestone, ~24km E of Temerloh and 8km E of Bukit Kepayang, Pahang, C Peninsular Malaysia (= W margin of Indochina Plate). Jengka Fm steeply folded. Associated with fusulinds Neoschwagerina katoi, Verbeekina verbeeki, Sumatrina annae, Pseudofusulina, indicating M Permian age. Also with corals Michelinia cf. indica and Parawentzelella socialis and dasyclad algae Mizzia sp.)

Aung, A.K., Ng T. Fatt, K.K. Nyein & M.H. Zin (2013)- New Late Permian rugose corals from Pahang, peninsular Malaysia. Alcheringa 37, p. 1-13.
(Late Permian rugose solitary corals Iranophyllum aequabilis and I. pahangense from limestone lens in Gua Musang Fm, Selborne Estate, Padang Tengku, Pahang (C Peninsular Malaysia), belonging to Waagenophyllidae (Waagenophyllum, Iranophyllum). Associated with rich Late Permian Paleofusulina-Colaniella- Reichelina foraminiferal fauna, indicating Changhsingian age)

Aung, A.K., Ng T. Fatt, & K.K. Nyein (2012)- The first record of the Late Permian waagenophyllid rugose corals from Pahang, Central Peninsular Malaysia. Geol. Soc. Malaysia, Nat. Geoscience Conf., Kuching 2012, Paper A1, p. 7-8. *(Extended Abstract)*
(Late Permian solitary waagenophyllid rugose corals from limestone unit of Gua Musang Fm in Selbourne Estate, Padang Tengku area, Pahang, C Peninsular Malaysia. One new genus, 5 new species. First record of Iranophyllum in Malaysia. See also Aung et al. 2013)

Aung, A.K., Meor H.A. Hassan & Ng T. Fatt (2013)- Discovery of Late Devonian (Frasnian) conodonts from the ñSanai limestoneò, Guar Jentik, Perlis, Malaysia. Bull. Geol. Soc. Malaysia 59, p. 93-99.
(onine at: www.gsm.org.my/products/702001-100325-PDF.pdf)
(First record of Late Devonian (Frasnian) conodonts (Ancyrodella, Ancyrognathus, Palmatolepis, Polygnathus, Icriodus, Ozarkodina and Belodella) of linguiformis Zone from U Sanai Lst, Perlis, Malaysia. Limestone dips 60° NE, is pelagic with common tentaculitids, straight nautiloids, trilobites and bivalves. Sanai Lst limited distribution in Malaysia. Frasnian conodonts comparable to fauna (linguiformis Zone) of NW Thailand)

Aung, A.K. & M.K. Shuib (2013)- Similarities in Middle-Late Permian fossils from Myanmar and Malaysia and its paleogeographic implications. In: Proc. Nat. Geoscience Conf., Ipoh 2013, Geol. Soc. Malaysia, B14, p. 87-88. *(Abstract only)*
(online at: www.gsm.org.my/products/702001-101658-PDF.pdf)
(M-L Permian rugose corals from 'Plateau Limestone' of Myanmar (Sibumasu Block) include Thomasiphyllum ('Cimmerian' province) and Wentzellophyllum, suggesting mixed Cimmerian (Sibumasu) and Cathaysian provinciality in M Permian and imply M Permian Paleo-Tethys is only narrow seaway that probably closed by collision in Late Permian)

Aung, A.K., K. Simon & Ng T. Fatt (2011)- Permian foraminiferal assemblages from the limestone unit of the Gua Musang Formation in the Padang Tengku area, Pahang, Malaysia. Proc. 24th Ann. National Geoscience Conference 2011 (NGC2011), Johor Baru, P2-19, p. 142. *(Abstract)*
(online at: http://geology.um.edu.my/gsmpublic/NGC2011/NGC2011_Proceedings.pdf)
(Permian Gua Musang Fm limestone in Selbourne Estate, 4 km NW of Padang Tengku, Pahang, C Malay Peninsula, with 18 smaller foram genera: Tetrataxis, Reichelina, Climacammina, Geinitzina, Dagmarita, Pachyphloia, Globivalvulina, Paleotextularia, Ozawainella, Pseudokahlerina, Colaniella, Langella, etc. Fusulinids absent. Similar assemblages in M-U Permian of E Malay Peninsula, Phra Nang Bay of Peninsular Thailand, Plateau Limestone of E Myanmar, etc. Assemblages assigned to late M- early Late Permian)

Aw, P.C. (1990)- Geology and mineral resources of the Sungai Aring Area, Kelantan Darul Naim. Geol. Survey Malaysia District Mem. 21, p. 1-116.

Aw, P.C., K. Ishii & Y. Okimura (1977)- On *Palaeofusulina- Colaniella* fauna from the Upper Permian of Kelantan, Malaysia. Trans. Proc. Palaeontological Soc. Japan, N.S, 104, p. 407-417.
(online at: https://www.jstage.jst.go.jp/article/prpsj1951/1977/104/1977_104_407/_pdf)
(First record of uppermost Permian fusulinids (Palaeofusulina cf. bella, Reichelina, also Colaniella media and C. parva) in Malay Peninsula. In folded, WSW-dipping argillo-tuffaceous limestone interbedded with tuffs of Sungei Paloh, Lebir River area of S Kelantan, S of Kotabaru (= W margin of E Malaya Block?). Overlain by E Triassic with bivalve Claraia)

Aziz Ali, C., M.S. Leman & K.R. Mohamed (2004)- Fasies karbonat dan diagenesis di dalam batu kapur Bukit Biwah dan Bukit Taat, Kenyir, Ulu Terengganu. Bull. Geol. Soc. Malaysia 49, p. 61-65.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004011.pdf)
Carbonate facies and diagenesis of M Permian shallow marine limestones in Terengganu province, NE Malay Peninsula)

Aziz Ali, C. & K.R.Mohamed (2013)- Microfacies and diagenesis in the Setul Limestone in Langkawi and Perlis. Bull. Geol. Soc. Malaysia 59, p. 59-66.
(online at: http://gsmpubl.files.wordpress.com/2014/08/bgsm2013010.pdf)

(Ordovician - E Devonian Setul Limestone outcrops in E Langkawi and Perlis seven microfacies. Depositional environments tidal flats to lagoon and shallow subtidal carbonate ramp. Diagenetic environments freshwater phreatic zone, marine phreatic zone, mixing zone and deep burial zone)

Azman, A.G. (2000)- The Western Belt granite of Peninsular Malaysia: some emergent problems on granite classification and its implication. Geosciences J. 4, 4, p. 283-293.
(Western Belt granites of Malay Peninsula considered as exclusively 'S' type granites, but consists of mixed 'I' and 'S' type features. This implies W Belt granites not solely derived from metasediments, but mixed origin of crustal material such as metapelites, greywackes and meta-igneous rocks)

Baioumy, H., M.N. Akmal Bin Anuar, M.N.M. Nordin, M.H. Arifin & K. Al Kahtany (2010)- Source and origin of Late Paleozoic dropstones from Peninsular Malaysia: First record of Mississippian glaciogenic deposits of Gondwana in Southeast Asia. Geological J. *(in press)*
(First record of Lower Carboniferous glacio-marine dropstone-bearing formations in Peninsular Malaysia. Dropstones subrounded-rounded clasts, 0.5-20 cm in size, scattered in red mudstone, black shales, sandstones and shales, and are composed of granite, quartzite, and sandstone. Precambrian basement rocks and Cambrian- Ordovician quartzite and sandstones main sources of dropstones. Glaciomarine rocks of tRebak and Chepor Mbs of the Singa Fm correlated to E Carboniferous global glaciation of Gondwana. Glaciomarine deposits of Kentut and Bukit Raja Mbs (Singa and Kubang Pasu Fms) correlated with global Middle Carboniferous glaciation, those of Kubang Pasu Fm, Ulang and Selang Mbs of Singa Fm and Kenny Hill Fm correlative to Late Carboniferous-Early Permian glaciation episode known as apex of Late Paleozoic ice Age. Results confirm Sibumasu Terrane initially was attached to Late Paleozoic Gondwana)

Baioumy, H. & Y. Ulfa (2016)- Facies analysis of the Semanggol Formation, South Kedah, Malaysia: a possible Permian-Triassic boundary section. Arabian J. Geosciences 9, 8, 530, p. 1-16.
(NW Malay Peninsula outcrop sections of deep-marine Late Permian- Triassic Semanggol Fm. Common volcanogenic material in Late Permian, probably from E China)

Baioumy, H., Y. Ulfa, M. Nawawi, E. Padmanabhan & M.N.A. Anuar (2016)- Mineralogy and geochemistry of Palaeozoic black shales from Peninsular Malaysia: implications for their origin and maturation. Int. J. Coal Geology 165, p. 90-105.
(19 Cambrian- Permian black shale-bearing formations form 25% of sediment cover in Malay Peninsula. Compositions indicate changes in degree of weathering of sediment-source of shales and relatively wet climate in Cambrian, dry in Ordovician, wet from Silurian- Carboniferous, dry in Carboniferous-Permian and relatively wet in Permian. Black shales deposited under reducing conditions. Possible Devonian anoxia. Majority of Paleozoic black shales in Peninsular Malaysia anchimetamorphic and overmature)

Basori, M.B.I. (2014)- Geology and genesis of volcanic-hosted massive sulfide deposits in the Tasik Chini District, Central Peninsular Malaysia. Ph.D. Thesis, University of Tasmania, p. 1-365.
(online at: http://eprints.utas.edu.au/22747/)
(Two polymetallic volcanic-hosted massive sulphide deposits in Tasik Chini district ~250km E of Kuala Lumpur in Pahang, in felsic volcano-sedimentary sequence of E Permian island arc of East Malaya Block. E Permian U-Pb zircon ages of from Bukit Botol (~273, 286, 292 Ma) and Bukit Ketaya (286, 288 Ma) deposits. Also widespread Triassic volcanic- plutonic rocks (Eastern Granite Belt), with zircon ages ~233-242 Ma (Ladinian-Carnian). Massive sulphide deposits are 'kuroko-type' volcanic-hosted seafloor deposits)

Basori, M.B.I., S. Gilbert, R.R. Large & K. Zaw (2018)- Textures and trace element composition of pyrite from the Bukit Botol volcanic-hosted massive sulphide deposit, Peninsular Malaysia. J. Asian Earth Sci. 158, p. 173-185.
(Bukit Botol volcanic-hosted massive sulphide deposit in Central Belt of Peninsular Malaysia, in Permian felsic volcanic and volcaniclastic rocks with volcanic arc geochemical signature. Mineralisation sulphide zone at footwall followed by barite lenses and exhalite layers (Fe-Mn ore) at top. Three types of pyrite)

Basori, M.B.I., M.S. Leman, K. Zaw, S. Meffre, R.R. Large et al. (2018)- Implications of U-Pb detrital zircon geochronology analysis for the depositional age, provenance, and tectonic setting of continental Mesozoic formations in the East Malaya Terrane, Peninsular Malaysia. Geological J. 53, 6, p. 2908-2917.
(U-Pb geochronology of detrital zircons in continental Late Jurassic or older formations of Central Belt of Peninsular Malaysia (E Malaya Terrane). Bertangga Fm zircon populations Jurassic (139-194 Ma), Permo-Triassic (226-274 Ma), Ordovician-Devonian (372-459 Ma), Neoproterozoic (631-876 Ma), and Mesoproterozoic- Palaeoproterozoic (1.5- 2.6 Ga). Gerek Fm significant Carboniferous grains. Detrital zircons correlate well with regional uplift and erosion to tectonic stability of East Malaya Terrane basin in Mesozoic)

Basori, M.B.I., K. Zaw, R.R. Large & W.F.W. Hassan (2017)- Sulfur isotope characteristics of the Permian VHMS deposits in Tasik Chini district, Central Belt of Peninsular Malaysia. Turkish J. Earth Sciences 26, 1, p. 91-103.
(online at: http://journals.tubitak.gov.tr/earth/issues/yer-17-26-1/yer-26-1-5-1510-17.pdf)
(Sulfur isotope data from E Permian volcanic-hosted massive sulfide deposits of Tasik Chini district in Central Belt of Malay Peninsula suggest source of ore fluids is seawater-dominated with minor magmatic input)

Basori, M.B.I., K. Zaw, S. Meffre & R.R. Large (2016)- Geochemistry, geochronology, and tectonic setting of early Permian (~290 Ma) volcanic-hosted massive sulphide deposits of the Tasik Chini district, Peninsular Malaysia. Int. Geology Review 58, p. 929-948.
(Tasik Chini district in C Belt of Malay Peninsula hosts Bukit Botol and Bukit Ketaya VHMS deposits. Hosted by Permian felsic volcanics. Four mineralization zones: (1) stringer sulphide; (2) massive sulphide; (3) barite; and (4) Fe-Mn and Fe-Si zones. U-Pb zircon dating of rhyolites E Permian ages (~286-292 Ma). Differences between E Permian host and later Triassic igneous rocks due to tectonic progression from volcanic arc to collisional setting)

Basori, M.B.I., K. Zaw, S. Meffre, R.R. Large& W.F.W. Hassan (2016)- Pb-isotope compositions of the Tasik Chini volcanic-hosted massive sulfide deposit, Central Belt of Peninsular Malaysia: implication for source region and tectonic setting. Island Arc 26, 2, e12177, 8p.
(Lead isotopes of sulfides and host volcanic rocks of Permian Tasik Chini volcanic-hosted massive sulfide deposit. Range of lead isotopic compositions reflect mixing of bulk crust/juvenile arc and minor mantle sources, are typical for VHMS deposits in island arc- back arc setting)

Batchelor, D.A.F. (1987)- The age of Malaysian fluvial tin placers. In: N. Thiramongkol (ed.) Proc. Workshop on Economic geology, tectonics, sedimentary processes and environment of the Quaternary in Southeast Asia, Haid Yai, Thailand 1986, IGCP 218/ Chulalongkorn University, Bangkok, p. 103-123.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1986/5083...)
(Latest Pliocene- M Pleistocene period principal phase of economic tin placer development. Old Alluvium placers formed during E Pleistocene interglacial period when increasing and more regular precipitation and sealevel rise initially caused increased sediment supply with subsequent stream entrenchment. Present environments unfavorable for tin placer formation)

Batchelor, D.A.F. (1988)- Dating of Malaysian fluvial tin placers. J. Southeast Asian Earth Sci. 2, 1, p. 3-14.
(Richest fluvial and piedmont fan tin placers in Malaysia formed mainly in 'Boulder Beds', 'Old Alluvium' and 'Transitional Unit' (YU) regional lithostratigraphic units. TU deposited during early Brunhes Normal Polarity Epoch, OA and BB during Matuyama Reversed Epoch (0.73-2.48 Ma). Latest Pliocene- M Pleistocene period principal phase of economic tin placer formation. Bulk of OA placers formed in Lower Pleistocene interglacial period. M Pleistocene age for TU placers)

Batchelor, D.A.F. (1994)- Geological characteristics of the Pulai alluvial gold deposit, South Kelantan, Malaysia. J. Southeast Asian Earth Sci. 10, p. 101-108.
(also in Proc. GEOSEA VI Conf. Jakarta 1987. Pulai area in Central Tectonic Belt, Peninsular Malaysia. Fluvial gold placer deposit along 17km of upper Galas River. Gold probably genetically tied to acid intrusions, with important primary sources near Kelantan-Pahang border, 3-5 km SE of Pulai village. Small granite stocks 3 km W of Pulai additional likely source. Area gold mined by Chinese settlers since late 1800's)

Batchelor, D.A.F. (2015)- Clarification of stratigraphic correlation and dating of Late Cainozoic alluvial units in Peninsular Malaysia. Bull. Geol. Soc. Malaysia 61, p. 75-84.
(online at: www.gsm.org.my/products/702001-101674-PDF.pdf)
(Review of Late Pliocene- Quaternary alluvial deposits that overlie M Pliocene 'Sundaland Regiolith' red-yellow lateritic soil development in Malay Peninsula. Old Alluvium/ Simpang Fm older than 775 ka, supported by presence of tektites (~785ka) within tin-bearing beds of Gambang tinfield in Pahang)

Batten, R.L. (1972)- Permian gastropods and chitons from Perak, Malaysia. Part 1. Chitons, bellerophontids, euomphalids and pleurotomarians. Bull. American Museum Natural History 147, 2, p. 1-44.
(online at: http://digitallibrary.amnh.org/dspace/handle/2246/1103)
(One of richest Permian gastropod faunas of Asia 92 species) in H.S. Lee No. 8 opencast tin mine near Kampar, Perak. Associated with fusulinids, all with Tethyan affinities (but on Sibumasu Terrane?; JTvG))

Batten, R.L. (1979)- Permian gastropods from Perak, Malaysia. Part 2. The trochids, patellids, and neritids. American Museum (Natural History) Novitates, 2685, p. 1-26.
(online at: http://digitallibrary.amnh.org/dspace/handle/2246/5386)
(Continuation of Batten (1972). Rich Permian gastropod fauna from white limestone in H.S. Lee Mine 8 near Kampar, Perak, associated with corals, scaphopods, bivalves, brachiopods, cephalopods and fusulinids. Fusulinids suggest Late Artinskian- E Guadalupian age, Misellina claudiae zone (Jones et al. 1966). Neritacean species similar to those found in Sicily, Timor and Sumatra and identified as typical Tethyan)

Batten, R.L. (1985)- Permian gastropods from Perak, Malaysia. Part 3. The murchisoniids, cerithiids, loxonematids, and subulitids. American Museum (Natural History) Novitates, 2829, p. 1-26.
(online at: http://digitallibrary.amnh.org/dspace/handle/2246/3583)
(*(Final part of 3-part study of rich Permian gastropod fauna from H.S. Lee Mine 8 near Kampar, Perak)*

Bean, J.H. (1969)- The iron-ore deposits of West Malaysia, including geology of the Bukit Besi ore-deposits. Geol. Survey West Malaysia, Ipoh, Econ. Bull. 2, p. 1-194.

Bean, J.H. (1972)- Geology, petrography and mineral resources of Pulau Tioman, Pahang. Geol. Survey Malaysia, Map Bull. 5, p. 1-92.

Becher, H.M. (1893)- The gold- quartz deposits of Pahang (Malay Peninsula). Quart. J. Geol. Soc., London 49, p. 84-88.
(Gold-quartz veins of Pahang cut Paleozoic slates, with some sandstones, and dark-coloured, impure limestone-beds strata, strike ~N-S; steep dips, mostly to East, overlain by crystalline limestones)

Bergstrom, S.M ; S. Agematsu & B. Schmitz (2010)- Global Upper Ordovician correlation by means of ŭ13C chemostratigraphy: implications of the discovery of the Guttenberg ŭ 13 C excursion (GICE) in Malaysia. Geol. Magazine 147, 5, p. 641-651.
(Ordovician succession on Langgun, Langkawi Islands, off NW Malay Peninsula (Sibumasu Block), shows presence of Late Ordovician Guttenberg Carbon Excursion (GICE) known from Yangtze Platform, S China, just above conodont Baltoniodus alobatus Subzone and near first appearance of Hamarodus europaeus)

Bignell, J.D. (1972)- The geochronology of the Malayan granites. D. Phil. Thesis, University of Oxford, p. 1-323. *(Unpublished)*

Bignell, J.D. & J.B. Snelling (1977)- The geochronology of Malayan granite. Overseas Geol. Min. Res. Inst. Geol. Science, London, 47, p. 358-359.
(Include Late Triassic ages for biotite granite at Langkawi island (Rb/Sr ages 217± 8 Ma and 209± 6 Ma)

Bignell, J.D. & N.J. Snelling (1977)- K-Ar Ages on some basic igneous rocks from Peninsular Malaysia and Thailand. Bull. Geol. Soc. Malaysia 8, p. 89-93.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977005.pdf)
(K-Ar age data from igneous rocks of E Pahang and Trengganu (Jurassic, Cretaceous Pleistocene), Johore (E Paleocene) and Ko Kut, Gulf of Thailand (Late Miocene basalt))

Boucot, A.J., J.G. Johnson & C.R. Jones (1966)- Silurian brachiopods from Malaya. J. Paleontology 40, 5, p. 1027-1031.
(Four Silurian brachiopod species of genera Capelliniella, 'Conchidium', Cymbidium, and Atrypella described from Kuala Lumpur dolomitic limestones. Cosmopolitan species)

Bradford, E.F. (1961)- The occurrence of tin and tungsten in Malaya. Proc. 9th Pacific Science Congress Bangkok 1957, 12, p. 378-398.
(online at: http://archive.org/details/geologyandgeophy032600mbp)

Bradford, E.F. (1972)- The geology and mineral resources of the Gunung Jerai area, Kedah. Geol. Survey Malaysia Memoir 13, p. 1-242.

Burton, C.K. (1965)- Wrench faulting in Malaya. J. Geology 73, 5, p. 781-798.
(Propose major Bok Bak wrench fault zone, running for >650 miles NW-SE across Malay Peninsula from Baling area in NW to Pulau Tinggi in SE. Offsetting older N-S structural zones, with probable 32-36 miles of sinistral displacement (but Raj (1982) questions SE extension of Bok Bak fault beyond E Kedah/ NW Perak))

Burton, C.K. (1967)- Dacryoconarid tentaculites in the Mid-Paleozoic euxinic facies of the Malaysian geosyncline. J. Paleontology 42, 2, p. 449-454.
(45 localities with fossil tentaculites in strongly folded black shales of Mahang Fm (= Baling Fm= Sentul Fm) in NW Malay Peninsula. E-M Devonian aspect, but associated with Ordovician trilobites and Lower Silurian graptolites. Malayan tentaculites-bearing black shales in 'miogeosynclinal euxinic facies'. Called Nowakia acuaria and placed in E Devonian (Emsian) by Agematsu et al. 2006; JTvG)

Burton, C.K. (1967)- Graptolite and tentaculite correlation and palaeogeography of the Silurian and Devonian in the Yunnan- Malayan geosyncline. Trans. Proc. Palaeontological Soc. Japan 65, p. 27-46.
(online at: www.palaeo-soc-japan.jp/download/TPPSJ/TPPSJ_NS65.pdf)
(Siluran- M Devonian black shales with graptolites and tentaculites present from NW Malay Peninsula (Langkawi, Kedah, Perak, etc.) into Burma, W-most Thailand and Yunnan, SW China (=Sibumau terrane))

Burton, C.K. (1967)- The Mahang Formation: a mid-Palaeozoic euxinic facies from Malaya- with notes on its conditions of deposition and palaeogeography. Geologie en Mijnbouw 46, 5, p. 167-187.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0Vi1nOGd3aklrUDA/view)
(On Silurian- M Devonian Mahang Fm thin-bedded black carbonaceous shales from NW corner of Malay Peninsula with graptolites (monograptus spp., Climacograptus spp., etc.), tentaculids, radiolaria and trilobites)

Burton, C.K. (1970)- The palaeotectonic status of the Malay Peninsula. Palaeogeogr. Palaeoclim. Palaeoecology 7, p. 51-60.
(Malay Peninsula believed to formerly border E side of Indian shield, from which it detached as Gondwanaland disintegrated, with Bay of Bengal a sphenochasm formed by same phase of continental drift (this model never generally accepted; JTvG))

Burton, C.K. (1970)- The geology and mineral resources of the Baling area, Kedah and Perak, West Malaysia. Geological Survey Malaysia District, Mem. 12, p. 1-150.

Burton, C.K. (1972)- Outline of the geological evolution of Malaya. J. Geology 80, p. 293-309.
(Malay Peninsula cratonized by Late Triassic orogeny and plutonism and Malaya became part of Sunda Shield. Record starts with Cambrian- Silurian orthoquartzite-carbonate facies. Geosynclinal conditions started in Ordovician, with eugeosynclinal zone in E, miogeosynclinal in W. Ordovician- Lower Devonian euxinic facies passes up into M Devonian- E Carboniferous flysch. M- Late Carboniferous orogeny with granite emplacement.

Permian widespread shallow-water limestone. Geosynclinal conditions restored in E Triassic, with tectonic and plutonic activity. Near end-Triassic intensive orogenic-plutonic revolution, finally stabilizing peninsula. Emplacement of late granitic stocks, with tin mineralization. Uplift and warping near end- Mesozoic)

Burton, C.K. (1973)- Geology and mineral resources. Johore Bahru- Kulai area, South Johore. Geol. Survey Malaysia Map Bull. 2, p. 1-72.

Burton, C.K. (1986)- The Baling group/Bannang Sata group of the Malay/Thai Peninsula. J. Southeast Asian Earth Sci. 1, 2, p. 93-106.
(Review of stratigraphy of Cambrian- Devonian shelfal marine deposits of NW Malay Peninsula- SW Thailand border area)

Burton, C.K. (1988)- Geology and mineral resources of the Bedung area, Kedah, West Malaysia. Geol. Survey of Malaysia, Map Bull. 7, p. 1-103.
(Bedung geological map in NW part of Malay Peninsula at scale 1:63,360. Folded Ordovician- Devonian Mahang Fm black shales with graptolites, tentaculites, etc., in NW and Triassic Semanggul Fm flysch-type clastics locally with Daonella or Halobia in E)

Campi, M.J., G.R. Shi & M.S. Leman (2002)- The *Leptodus* shales of central Peninsular Malaysia: distribution, age and palaeobiogeographical affinities. J. Asian Earth Sci. 20, 6, p. 703-717.
('Leptodus Shales' is M Permian argillaceous facies rich in brachiopods in C Belt of Peninsular Malaysia. Sediments often highly tuffaceous and in N Pahang associated with pyroclastic volcanics of probable island-arc origin. Probably represent deposits on W continental shelf of Eastern Belt/ Indochina Block. Faunas of Paleo-Equatorial affinity and closest to faunas in Indochina (S China, Cambodia, Japan))

Campi, M.J., G.R. Shi & M.S. Leman (2005)- Guadalupian (Middle Permian) brachiopods from Sungai Toh, a *Leptodus* Shale locality in the central belt of Peninsular Malaysia. Palaeontographica A 273, 3-6, p. 97-160.
(Rich M Permian brachiopod fauna of 48 species from Sungai Toh, Pahang State, in Central Belt of Malay Peninsula, characterised by Permian tuffaceous sediments and limestone. Lower Horizon with mixed plant and invertebrate assemblage, incl. brachiopods Urushtenoidea, Leptodus richthofeni, etc. Upper Horizon more abundant brachiopods: 57 species, incl. Vediproductus, Permianella, Tranrennatia, Leptodus richthofeni, Leptodus cf. tenuis, etc. Age Capitanian (late Guadalupian) possibly Wuchiapingian. Strong Paleo-equatorial affinities, but some elements more typical of cooler peri-Gondwana)

Cao, J., X. Yang, G. Du & Huan Li (2020)- Genesis and tectonic setting of the Malaysian Waterfall granites and tin deposit: Constraints from LA-ICP (MC)-MS zircon U-Pb and cassiterite dating and Sr-Nd-Hf isotopes. Ore Geology Reviews 118, 103336, p.
(Waterfall skarn-type tin deposit in S Peninsular Malaysia one of earliest exploited tin deposits of SE Asian Tin Belt. M Triassic zircon U-Pb ages 241.2 ± 2.5 Ma to 239.0 ± 3.4 Ma from granite, consistent with average age of 238.5 ± 1.7 Ma from LA-ICPMS cassiterite U-Pb dating. Magma for Waterfall granites possibly from partial melting of meta-igneous rocks of Kontum massif. Likely emplaced in syn-collision setting, triggered by subduction of Paleo-Tethys ocean floor beneath Indochina Block)

Chakraborty, K.R. (1994)- How wide and oceanic was Palaeotethys?: evidence from Peninsular Malaysia. Warta Geologi (Newsl. Geol. Soc. Malaysia) 20, 3, p. 224-225. *(Abstract)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1994003.pdf)
(E and W blocks of Peninsular Malaysia were not separated by vast oceanic Palaeotethys. If vestiges of oceanic crust can be seen in serpentinites of Bentong-Raub suture zone, then linearity and persistent narrowness (< 15km in most places) of zone point to no more than very narrow seaway)

Chakraborty, K.R. & I. Metcalfe (1988)- Deformation and age of limestone at Sungai Bilut near Raub, Pahang. Warta Geologi 14, 3, p. 115-123.
(Polyphase deformation of thin-bedded Devonian or basal Carboniferous limestone-shale in Raub Gp, S of Raub. Conodont Color Alteration Index 5 (= 300-480°; low metamorphic))

Chakraborty, K.R. & I. Metcalfe (1995)- Structural evidence for a probable Paleozoic unconformity at Kg. Kuala Abang, Trengganu. Warta Geologi 21, 3, p. 141-146.

Chen, B., M.K. Shuib & T.T. Khoo (2002)- Dating the Kenny Hill Formation: spores to the fore. Warta Geologi 28, 5, p. 189-191.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm2002005.pdf)
(First palynology on poorly-fossiliferous Kenny Hill Fm in Kuala Lumpur area, which overlies Silurian Kuala Lumpur Limestone. Sample with spores Leiotriletes, Punctatisporites, Dictyotriletes, Verrucosisporites microtuberculatus, Lycospora, Acanthotriletes suggest Carboniferous or Permian age)

Chu, L.H., F. Chand & D.S. Singh (1988)- Primary tin mineralization in Malaysia: aspects of geological setting and exploration strategy. In: C.S. Hutchison (ed.) Geology of tin deposits in Asia and the Pacific, Selected papers from Int. Symp. Geology of tin deposits, Nanning, China, 1984, Springer Verlag, Berlin, p. 593-613.
(Primary tin mineralization in Peninsular Malaysia four broad classes: (1) pneumatolytic-hydrothermal lodes, veins, stockworks and stringers, (2) pyrometasomatic skarns (Sn skarns mainly in W belt, Sn-Fe skarn in E Belt), (3) tin-bearing pegmatites and aplites, and (4) stanniferous polymetallic sulphide bodies (W belt))

Chu, L.H. & D.S. Singh (1986)- The nature and potential of gold mineralization in Kelantan, Peninsular Malaysia. In: G.H. Tan & S. Paramanthan (eds.) Proc. GEOSEA V Congress, Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 431-440.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986032.pdf)
(On primary gold-silver quartz vein mineralization at Ulu Sokor are, Kelantan Province, NE Malay Peninsula)

Cocks, L.R.M., R.A. Fortey & C.P. Lee (2005)- A review of Lower and Middle Palaeozoic biostratigraphy in west peninsular Malaysia and southern Thailand in its context within the Sibumasu Terrane. J. Asian Earth Sci. 24, p. 703-717.
(Review of Cambrian- Devonian stratigraphy of S Thailand and NW Peninsular Malaysia (Sibumasu plate). Single depositional basin in shallow-water and cratonic areas of S Thailand, Langkawi, and mainland Kedah and Perlis, in contrast to deeper-water basin of N Perak. Area was part of Paleozoic Sibumasu Terrane, which also included C and N Thailand, E Burma (Myanmar) and part of SW China (Yunnan). Ordovician-Devonian limestones paraconformably overlain by Late Devonian Langun Redbeds)

Courtier, D.B. (1974)- Geology and mineral resources of the neighborhood of Kulim, Kedah. Geol. Survey Malaysia Map Bull. 3, p. 1-50.

Cox, L.R. (1936)- On a fossiliferous Upper Triassic shale from Pahang, Federated Malay States. Ann. Mag. Natural History, ser. 10, 17, p. 213-221.
(Fossils from marly shale at Sungei Taba, N of Raub gold mine, Pahang, dominated by bivalves, mainly Myophoria spp., also Grammotodon malayensis, Modiolus raubensis n.sp.. Age interpreted to be pre-Rhaetian Triassic, but subsequent studies on ammonites (Sato 1963) and bivalves (Tamura 1973) suggest M Triassic age)

Cottam, M.A., R. Hall & A.A. Ghani (2013)- Late Cretaceous and Cenozoic tectonics of the Malay Peninsula constrained by thermochronology. J. Asian Earth Sci. 76, p. 241-257.
(Thermochronological analyses of granites from Malay Peninsula record thermal history in Late Mesozoic-Cenozoic: significant period of thermal perturbation between ~100-90 Ma, lesser perturbation between ~51-43 Ma, regional exhumation of Malay Peninsula in Late Cretaceous (~66-85 Ma), rapid regional exhumation in Late Eocene-Oligocene (30-46 Ma))

Crawford, A.R. (1972)- A displaced Tibetan massif as a possible source of some Malayan rocks. Geol. Magazine 109, 6, p. 483-489.
(Commentary on Burton (1970) and Ridd (1971) suggestion of the westerly origin from India of sediments now in NW Malaya. Instead, Tibetan massif could have provided material now forming part of Malaya)

Cummings, R.H. (1965)- Notes on the Malaysian limestones. Overseas Geology and Mineral Resources 9, 4, p. 418-426.
(Incl. first record of M Permian fusulinids Neoschwagerina and Padangia from Sungei Jengka, 2 km SW of Jengka Pass, Malay Peninsula (Indochina Plate))

Daanen, T. (2015)- On the structure and tectonic evolution of the Taku Schists and their surrounding units, Kelantan, NE Malaysia. M.Sc. Thesis, University of Utrecht, p. 1-72.
(online at: http://dspace.library.uu.nl/handle/1874/316231)
(Taku Schists in Kelantan, in Central Belt of NE Malay Peninsula, in asymmetric anticline, with steeply dipping E flank. Protoliths of schists quartz-rich E-M Permian sediments, accumulated on fore-arc of Sukhothai volcanic arc, with regional contractional event during Triassic collision of Sibumasu Terrane and Sukhothai Arc. Contact with surrounding sediments in SE mylonitic, indicating severe shearing. Stretching lineations developed throughout Taku Schists, show dominant tectonic movement top down to SE (130E). Eocene dextral transtension moves E Malaya Block to SE and causes local exhumation in core complex)

Darbyshire, D.P.F. (1988)- Geochronology of Malaysian granites. Natural Environment Research Council (NERC), Isotope Geology Centre, Open File Report 88/3, p. 1-59.

De Coo, J.C.M. & O.E. Smit (1975)- The Triassic Kodiang Limestone formations in Kedah, West Malaysia. Geologie en Mijnbouw 54, p. 169-176.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0YnpiMFZmQWo5MUE/view)
(Many isolated limestone hills on coastal plain of NW Malay Peninsula, mainly of Paleozoic age (Permian Chuping Fm, E Paleozoic Setul Fm). S and E of Kodiang (30km N of Alor Star, Kedah) also U Triassic limestone, first identified by Ishii & Nogami (1966). Thickness at composite stratotype of Kodiang Lst in 7 hills of Bukit Kecil and Bukit Kalong ~125 m or more. Composed of algal stromatolites, intraformational breccias, limestone conglomerates, black mudstones with radiolarian chert and limestone turbidites; deposited in shelf, slope and basinal environments. Paleoslope was dipping to E. With simple foraminifera, incl. Nautiloculina and Ophthalmidium. Conodonts incl. Gladigondolella tethydis, suggest mainly Ladinian- E Carnian age range (Koike 1973). Kodiang Lst may be lateral equivalent of much thicker flysch sediments of SemanggolFm in E)

Dodge, N.N. (1977)- Mineral production on the East Coast of Malaya in the nineteenth century. J. Malaysian Branch Royal Asiatic Society 50, p. 89-110.
(Before widespread tin production along W coast after 1850, Malaya's main mineral product for centuries was gold from E coast, mainly produced by Chinese. Extraction of gold restricted to narrow belt from Patani in NE, down into interiors of Perak, Kelantan and Pahang and then through Negri-Sembilan into Malacca. No maps)

Drahman, F.A. & J.A. Gamez Vintaned (2017)- Stratigraphy and palaeoichnology of ñBlack Shaleò facies: chert unit of the Semanggol Formation, Perak. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 605-613.
(Black shales of chert unit of Semanggol Formation.exposed at Bukit Putus in abandoned quarry in Bukit Merah (NNW of Taiping, Perak). Chert unit repotedly deposited in deep oceanic basin. Black shale possibly shallower facies, with several levels with abundant Claraia (E Triassic pectinid bivalve))

Du, G., X. Yang, J. Cao & J.H.A. Aziz (2020)- Genesis and timing of the Sungai Lembing tin deposit in Pahang, East Malaysia: constraints from LA-ICP-MS zircon and cassiterite U-Pb dating, geochemical compositions and Sr-Nd-Hf isotopes. Ore Geology Reviews 119, 103364, p.
(Sungai Lembing one of largest primary Sn deposits in Malaysia. Typical hydrothermal vein-type deposit with spatial and genetic relationships with underlying granites. U-Pb dating of Sn-bearing stockworks average age of 264.2 ± 2.0 Ma, consistent with zircon U-Pb ages (~260-263 Ma) for granites. Late Permian granites sourced from magma generated by partial melting of Proterozoic meta-igneous rocks of Indochina Block. Extensive emplacement of Permian granites and Sn mineralization in Eastern Granite Belt of Peninsular Malaysia may be result of E-dipping subduction of Paleotethys under western Indochina Block)

Dzulkafli, M.A., Basir Jasin & M.S. Leman (2012)- Radiolaria berusia Perm Awal (Sakmarian) dari singkapan baru di Pos Blau, Ulu Kelantan dan kepentingannya. Bull. Geol. Soc. Malaysia 58, p. 67-73.
(online at: www.gsm.org.my/products/702001-100348-PDF.pdf)
('Early Permian (Sakmarian) radiolarians from a new outcrop at Pos Blau, Ulu Kelantan and their significance'. Sakmarian radiolaria from chert beds from new outcrop in or near Bentong-Raub suture zone, with 28 species/ 13 genera, representing two radiolarian assemblage zones: Pseudoalbaillella lomentaria (E Sakmarian) and Pseudoalbaillella scalprata m. rhombothoracata (Late Sakmarian). Radiolarian cherts interbedded with shale and interpreted as continental margin chert association)

Edwards, W.N. (1926)- Carboniferous plants from the Malay States. J. Malayan Branch Royal Asiatic Soc. 4, 2, p. 171-172.
(First record of Permo-Carboniferous plant fossils from 'Raub series' shale with thin ash beds at Sungei Chiku, Kelantan, Malay Peninsula. Incl. Pecopteris cf. cyathea (somewhat similar to P. verbeeki Gothan & Jongmans from Sumatra) and Cordaites sp.)

Edwards, W.N. (1933)- Triassic wood from the Malay States. J. Malayan Branch Royal Asiatic Soc. 11, 2, p. 236-241.
(Probably Late Triassic-age wood collected by Scrivenor from 2 localities on Malay Peninsula: (1) Sungei Tranang, Kelantan with Dadoxylon sp. and (2) Jerantut, Pahang with silicified log of Dadoxylon sclerosum from sandy beds overlying andesite. Apparent absence of growth rings)

Elliott, C.F. (1968)- Three new Tethyan Dasycladaceae (calcareous algae). Palaeontology 11, p. 491-497.
(online at: http://cdn.palass.org/publications/palaeontology/volume_11/pdf/vol11_part4_pp491-497.pdf)
(Incl. new taxa Epimastopora malaysiana n.sp. from M Permian of H.S. Lee Mine 8, Kinta Valley, Perak)

Endut, Z., R. Hasnur, S. Mohamed, S. Ismail and A. Prihananto (2014)- Geology of the Penjom gold deposit, Kuala Lipis, Pahang, Malaysia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 301-308.
(Penjom gold deposit at W side of C Belt of Malay Peninsula is largest gold mine in Malaysia. Host rock Late Permian turbiditic sequence. Intruded by felsic tonalitic intrusives. Both host rocks and tonalite intrusives folded during main Late Triassic orogeny along Bentong-Raub Suture. Mineralization at Penjom and other vein-hosted deposits such as at Bukit Koman, Raub along Bentong-Raub Suture in Late Triassic- E Jurassic)

Endut, Z., T.F. Ng, J.H. Abdul Aziz, S. Meffre & C. Makoundi (2015)- Characterization of galena and vein paragenesis in the Penjom gold mine, Malaysia: trace elements, lead isotope study and relationship to gold mineralization episodes. Acta Geologica Sinica (English Ed.) 89, 6, p. 1914-1925.
(Penjom Gold Mine 30 km E of Bentong-Raub Suture, near W boundary of C Belt in Peninsular Malaysia. Gold mineralization in vein system with pyrite, arsenopyrite, and minor base metals including galena. Galena crystallized from two different ore fluids, probably at different times. Pb isotopic ratios suggest derivation from arc rocks associated with continental crust)

Endut, Z., T.F. Ng, J.H. Abdul Aziz & G.H. Teh (2015)- Style of veins in Penjom Gold Mine, Malaysia- implications for gold mineralisation and structural episodes. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 507-514. *(Extended Abstract)*
(Gold mineralisation at Penjom gold deposit in C Belt of Peninsular Malaysia (Bentong-Raub Suture zone) hosted in quartz-carbonate veins of two main types: shear and extension veins)

Endut, Z., T.F. Ng, J.H. Abdul Aziz & G.H. Teh (2015)- Structural analysis and vein episode of the Penjom gold deposit, Malaysia: implications for gold mineralisation and tectonic history in the Central Belt of Malaysia. Ore Geology Reviews 69, p. 157-173.
(Central Belt of Peninsular Malaysia characterised by numerous vein-hosted gold deposits particularly in 50 km wide corridor on E side of Bentong-Raub Suture. Mineralised quartz-carbonate veins of Penjom Gold deposit, S of Kuala Lipis, in U Permian clastic sedimentary host rocks. K/Ar ages of alteration sericite related

to mineralisation ~197-191 Ma (E Jurassic). Veins formed under compressional- transpressional regime with later displacement in transtensional- extensional regime)

Fitch, F.H. (1952)- The geology and mineral resources of the neighbourhood of Kuantan, Pahang. Geol. Survey of Malaya, Mem. 6, p. 1-146.
(Incl. Lower Carboniferous argillaceous and calcareous facies, unconformably overlain by ?Triassic arenaceous series, ?Cretaceous tin-bearing biotite granite, etc.)

Fletcher, W.K. & C.H. Loh (1996)- Transport of cassiterite in a Malaysian stream: implications for geochemical exploration. J. Geochemical Exploration 57, p. 9-20.

Fletcher, W.K. & C.H. Loh (1997)- Transport and deposition of cassiterite by a Malaysian stream. J. Sedimentary Res. 67, p. 763-775.

Fontaine, H., C. Chonglakmani, S. Piyasin, Ibrahim B. Amnan & H.P. Khoo (1993)- Triassic limestone within and around the Gulf of Thailand. In: B.K. Tan et al. (eds.) Proc. 7th Conf. Geology, Mineral and Energy Res. SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 83-95.
(Presence of Early- Late Triassic limestones at Peninsular Thailand and NW Peninsular Malaysia. Many previously included in Permian. Similar to 'Chuping Lst' and 'Kodiang Lst'. Post Triassic fracturing and karstification. Many contain Aulatortus, Tubiphytes, Thaumatoporella parvovesiculifera, etc.)

Fontaine, H. & Ibrahim bin Amnan (1994)- The importance of Triassic limestone in the Central Belt of Peninsular Malaysia. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources and IGCP 306, p. 195-205.
(More than 20 occurrences of Triassic-age limestone in Central Belt of Peninsular Malaysia, including Singapore. Generally poor in macrofossils)

Fontaine, H. & Ibrahim bin Amnan (1995)- Biostratigraphy of the Kinta Valley, Perak. Bull. Geol. Soc. Malaysia 38, p. 159-172.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995015.pdf)
(Review of fossils from thick limestone-dominated M Ordovician- M Permian stratigraphy of Kinta Valley area near Ipoh, Perak, NW Malay Peninsula. Ordovician-Silurian graptolite shale, Ordovician, Devonian, Carboniferous and Permian limestones, etc. (= part of 'Sibumasu' Paleozoic stratigraphy; JTvG). Re-description of fusulinids (Pseudofusulina kraffti, Cancellina (Maklaya) ex gr. pamirica) from H.S. Lee mine, here believed to signify Bolorian, M Permian age)

Fontaine, H. & Ibrahim B.A. (1999)- Carboniferous of Malaysia: biostratigraphy and paleogeography. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symposium on Shallow Tethys 5, Chiang Mai University, p. 26-44.

Fontaine, H., Ibrahim B. Amnan, H.P. Khoo, D.T. Nguyen & D. Vachard (1994)- The *Neoschwagerina* -zone and the *Lepidolina-Yabeina* -zones in Malaysia and the Dzhulfian-Dorashamian in Malaysia: the transition to the Triassic. Geological Survey of Malaysia (Ipoh), Geol. Papers 4, p. 1-74.

Fontaine, H., Ibrahim.B. Amnan, H.P. Khoo & D. Vachard (1990)- More Triassic foraminifera from Peninsular Malaysia. United Nations CCOP Techn. Bull. 21, p. 73-83.
(Anisian smaller benthic foraminifera from Bukit Tunjang (should be Bt Tunjung) limestone quarry, Kedah. Tubipytes locally abundant. Forams rel. rare, common Tolypammina, also Meandrospira dinarica)

Fontaine, H., Ibrahim B. Amnan & D. Vachard (1999)- Kinta Valley displays startling lithology and biostratigraphy. In: 23rd Ann. Conf. Geol. Survey Malaysia, Melaka 1992, 29p.

Fontaine, H., Ibrahim B. Amnan & D. Vachard (1999)- Important discovery of late Early Permian limestone in Southern Terengganu, Peninsular Malaysia. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ð98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 453-460.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999045.pdf)
(Small exposures of dark late E Permian shallow marine limestone, 500m from granite, in Seri Bandi area, NE Malay Peninsula. Thickness 90-300m. With stromatolites, algae (Mizzia, Permocalculus), common Tubiphytes, calcispherids, smaller foraminifers (Tetrataxis, Endothyra) and common fusulinids (incl. primitive verbeekinids (Pamirina leveni, Misellina), Levenella, Brevaxina, Toriyamaya, Chalaroschwagerina, Leeina). Indicate late E Permian (=Artinskian-Kungurian) biozones in rocks previously considered of E Carboniferous age)

Fontaine, H., Ibrahim B.A. & D. Vachard (2003)- Carboniferous corals from the Kuantan area, Peninsular Malaysia, and associated microfauna: peculiar faunas for Southest Asia and puzzling faunas for stratigraphy. Minerals and Geoscience Dept. Malaysia, Techn. Papers 2, p. 69-99.

Fontaine, H., Ibrahim B.A. & D. Vu Khuc (1995)- Triassic limestones of southwest Kelantan (East and South of Pos Blau) and North Pahang (Merapoh Area), Peninsular Malaysia. In: Proc. IGCP Symposium on Geology of SE Asia, Hanoi, J. Geology B, 5-6, Hanoi, p. 16-
(Triassic limestones widespread in Central Belt of Peninsular Malaysia. Beds gently undulating. New limestone localities of Anisian age in C part of Malay Peninsula contain locally rich Daonella lindstroemi and low-diversity foram fauna of Glomospira, Endothyra, Meandrospira and Pilamminella, also algae Tubiphytes and Solenopora)

Fontaine, H. & H.P. Khoo (1990)- A review of paleontology and biostratigraphy of the Kelantan State. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Tech. Publ. 20, p. 111-142.
(Kelantan State in N C Malay Peninsula with two major sequences: (1) Carboniferous- Triassic marine, unconformably overlain by (2) Jurassic- Cretaceous non-marine. Permian forams from SE Kelantan described by Vachard (1990) in same volume)

Fontaine, H., H.P. Khoo & D. Vachard (1988)- Discovery of Triassic fossils at Bukit Chuping, in Gunung Sinyum area and at Kota Jin, Peninsular Malaysia. J. Southeast Asian Earth Sci. 2, p. 145-162.
(Some poorly fossiliferous limestones of Peninsular Malaysia, previously considered to be Permian, yielded Triassic algae (Thaumatoporella parvovesiculifera) and foraminifera (Pilammina gemerica, Aulatortus sinuosus, Paleolituonella meridionalis) indicating Ladinian-Carnian age. New foram Malayspirina fontainei described. Strong affinity with Alpine- European faunas)

Fontaine, H. & K.W. Lee (1993)- A Triassic limestone (ôPandan limestoneö) discovered by drilling in Singapore. CCOP Newsletter 18, p. 9-19.
(About 200m Late Triassic Pandan Limestone with corals in borehole at Pandan Reservoir, in lower part of Jurong Fm)

Fontaine, H., M. Lys & Nguyen Duc Tien (1988)- Some Permian corals from East Peninsular Malaysia: associated microfossils, palaeogeographic significance. J. Southeast Asian Earth Sci. 2, p. 65-78.
(M and Late Permian corals from three localities on E Malay Peninsula: (1) Bukit Kepayang quarry (Kampong Awah) andesite with dark limestone blocks with Waagenophyllum and Ipciphyllum, fusulinid forams (Neoschwagerina, Sumatrina, Verbeekina, etc.), also Mizzia, Hemigordiopsis, etc.; (2) Jengka Pass black shale with limestone lenses with Michelinia and fusulinids a.a.; (3) Bukit Biwah M Permian massive limestone with Parawentzelella and algae. Assemblages of E Malay Peninsula corals and fusulinids different, more abundant and more diverse than NW of Malay Peninsula (= W margin of E Malaya/ Indochina Plate)

Foo, B.N. (1979)- A comparative study of paragenesis, geochemistry and fluid inclusions of selected primary tin deposits of West Malaysia. Ph.D. Thesis Imperial College, University of London, p. 1-534.
(online at: https://spiral.imperial.ac.uk/handle/10044/1/35018)
(Paragenetic tin mineralisation sequence and relation to host rocks and structures at two main hypogene tin deposits in Eastern Belt of SE Asian Tin Province in Malay Peninsula (Hantu and Gakak Mines at Sungei Lembing, Pahang, and Waterfall Mine at Pelapah Kanan, Johore. Mineralization preferentially in brittle calcareous Carboniferous-Permian metasediments)

Foo Khong Yee (1983)- The Palaeozoic sedimentary rocks of Peninsular Malaysia- stratigraphy and correlation. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 1-19.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_01.pdf)
(Paleozoic rocks account for 25% of outcrop of Malay Peninsula. W and NW zones with Lower Paleozoic sediments and conformable Late Cambrian-Permian section. In C and E zones of peninsula outcrops of Carboniferous-Permian only)

Francois, T., M.A.M Ali, L. Matenco, E. Willingshofer, T.F. Ng, N.I. Taib & M.K. Shuib (2017)- Late Cretaceous extension and exhumation of the Stong and Taku magmatic and metamorphic complexes, NE Peninsular Malaysia. J. Asian Earth Sci. 143, p. 296-314.
(Stong and Taku magmatic and metamorphic complexes of N Peninsular Malaysia part of Late Paleozoic-Triassic Indosinian orogeny, dismembered during Cretaceous thermal event that formed large Late Santonian-E Maastrichtian extensional detachment, associated with crustal melting, emplacement of syn-kinematic plutons and widespread migmatisation. Formation of detachment and first phase of Late Cretaceous cooling followed by renewed Eocene- Oligocene exhumation (see also Ali et al. 2016))

Gazdzicki, A. & O.E. Smith (1977)- Triassic foraminifera from the Malay Peninsula. Acta Geologica Polonica 27, 3, p. 319-332.
(online at: https://geojournals.pgi.gov.pl/agp/article/view/9556/8105)
(First report on 52 species of smaller foraminifera from Middle and early Late Triassic Kodiang Lst Fm at Bukit Kechil, 2.5 km S of Kodiang, NW Malay Peninsula. With Endothyra malayensis n.sp., Glomospira densa, Glomospirella grandis, Meandrospira pusilla, G. gemerica, Agathammina austroalpina, Ophthalmidium, Tolypammina gregaria, Endothyranella lombardi, Endothyra kuepperi, Involutina communis and I. gaschei, etc., indicating E Anisian-Ladinian age. Also some loose samples with Carnian- Norian Aulatortus assemblage. Faunas similar to contemporaneous assemblages of Tethyan Realm, incl. Birma, Iran, etc.)

Gebretsadik, H.T., C.W. Sum& A.W. Hunter (2015)- Preservation of marine chemical signatures in Upper Devonian Carbonates of Kinta Valley, Peninsular Malaysia: implications for chemostratigraphy. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering Geosciences (ICIPEG), Kuala Lumpur 2014, Springer Verlag, p. 291-302.
(Kinta Limestone important Silurian-Permian unit in W Belt of Malay Peninsula. Diagenesis obscured many primary sedimentary and geochemical features. Nearly pure limestones have rel. low Mn/Sr values (1.83-3.14), suggesting minor postdepositional alteration and likely preservation of original marine compositions)

Ghani, A.A. (2000)- The Western Belt granite of Peninsular Malaysia: some emergent problems on granite classification and its implication. Geosciences J. 4, 4, p. 283-293.
(Peninsular Malaysian Western Belt granites considered as constituting exclusively 'S' type granites, but commonly mixed 'I' and 'S' type features. W Belt granite not solely derived from metasediments, but probably mixed origin of crustal material such as metapelites, greywackes and meta-igneous rocks)

Ghani, A.A. (2001)- Some problems with the classification of the óSô type granite with particular reference to the Western Belt granite of Peninsular Malaysia. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conference 2001, Pangkor Island, p. 123-130.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_20.pdf))
(Peninsular Malaysian granites grouped into two provinces, W and E Belt granites. W Belt considered as 'S' type granites, but granites show mixed 'I' and 'S' type features. W Belt granite not solely derived from metasediments, but more likely mixed crustal material such as metapelites, greywackes and metaigneous rocks)

Ghani, A.A. (2003)- Geochemistry of tourmaline-bearing granite from Maras-Jong, Terengganu, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 46, p. 19-24.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003004.pdf)
(Maras-Jong granite at East Coast Province, E Malay Peninsula, many similarities to the S-type granite, but is felsic I-type granite)

Ghani, A.A. (2004)- Chemical characteristics of some of the granitic bodies from Terengganu area, Peninsular Malaysia. In: GSM Ann. Geol. Conf. 2004, Kangar, Perlis, Bull. Geol. Soc. Malaysia 49, p. 31-35.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004006.pdf)
(Study of four Permian-Triassic granitic batholiths from Eastern granitic belt in Terengganu area: Maras Jong pluton, Jerong batholith, Perhentian pluton and Kapal batholith. All granites are high K calc alkali)

Ghani, A.A. (2005)- Highly evolved S type granite: Selim Granite, Main Range Batholith, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 51, p. 95-101.
(online at: www.gsm.org.my/products/702001-100540-PDF.pdf)
(Selim granite of Western Belt in NW Malay Penisula consists coarse grained porphyritic biotite granite to m-f grained granite.Highly evolved with high SiO2 (>75%))

Ghani, A.A. (2005)- Geochemical characteristics of S- and I-type granites: example from Peninsular Malaysia granites. In: GSM Ann. Geol. Conf. 2005, Seremban, Bull. Geol. Soc. Malaysia 51, p. 123-134.
(online at: www.gsm.org.my/products/702001-100538-PDF.pdf)

Ghani, A.A. (2009)- Volcanism. In: C.S Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University of Malaya/ Geol. Soc. Malaysia, Kuala Lumpur, p. 197-210.

Ghani, A.A. (2009)- Plutonism. In: C.S Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University of Malaya/ Geol. Soc. Malaysia, Kuala Lumpur, p. 211-231.

Ghani, A.A. & S.L. Chung (2013)- Ar Ar geochronology of volcanic rocks from Eastern Part of Peninsular Malaysia. In: Proc. Nat. Geoscience Conf., Ipoh 2013, Geol. Soc. Malaysia, B20, p. 95-96. *(Abstract only)*
(Along E margin of Bentong-Raub suture, from W Pahang to Kelantan State, elongate strip of Permian and Triassic volcanics, possibly extending to Bangka and Billiton, along W edge of Indochina Terrane. Andesitic and acidic volcanism in Permian, acidic volcanism predominates in Triassic. Hornblende separates from basalt/andesite at Kampung Awah give age of 266 Ma (M Permian). Sibu Island, SE Johore, ages around Carboniferous-Permian boundary (~298-336 Ma) from bedded pyroclastic rocks. Rhyolitic tuff from nearby Tinggi island significantly younger (mid-Cretaceous; ~85-122 Ma)

Ghani, A.A., F.I. Hazad, A. Jamil, Q.L Xiang, W.N.A.W. Ismail, S.L. Chung, Y.M. Lai, M.H. Roselee et al. (2014)- Permian ultrafelsic A-type granite from Besar Islands group, Johor, Peninsular Malaysia. J. Earth System Science 123, 8, p. 1857-1878.
(Granitic rocks of Malay Peninsula traditionally divided into two provinces: (1) W Province S-type granites coarse, tin-mineralised, continental collision granite; (2) E Province granite is bimodal I-type dominated by granodiorite and associated gabbroic of arc type granite. Highly felsic A-type granite occurs in Besar, Tengah, and Hujung islands off SE coast of peninsula (SiO2 content 76- 78%). Shallow level of emplacement. A-type granite can be related to extensional back arc basin in Indo-China terrane during earliest Permian)

Ghani, A.A., C.H. Lo & S.L Chung (2013)- Basaltic dykes of the Eastern Belt of Peninsular Malaysia: the effects of the difference in crustal thickness of Sibumasu and Indochina. J. Asian Earth Sci. 77, p. 127-139.
(Jurassic (~179 Ma) and Cretaceous (~79-129 Ma) basaltic dykes of Peninsular Malaysia confined to E Belt (Indochina/E Malaya block), not in W Belt (Sibumasu Block). Most dykes attributed to difference of crustal thickness between E and W belt (W Belt crust 13 km thicker than E and C belts, and more difficult to fracture))

Ghani, A.A., C.H. Lo & S.L Chung (2014)- Geochronology of volcanic and plutonic rocks from the islands off Pahang and east Johor, Peninsular Malaysia. Geol. Soc. Malaysia, Nat. Geoscience Conf. (NGC) 2014, Trengganu, P059, p. 99-100. *(Extended Abstract)*
(Ages of igneous rocks of islands off coast Johor-Pahang, SE Peninsular Malaysia, beteween 80-300 Ma. U Pb zircon age of granites of P. Tengah and P. Besar 280-282 Ma (E Permian), granite/diorite from Pemanggil and Tioman 80 Ma. Ar/Ar ages of pyroclastics from Sibu mainly ~297 Ma, from Tinggi ~85-120 Ma)

Ghani, A.A., V. Ramesh, B.T, Yong & T.T. Khoo (2004)- Geochemistry and petrology of syenite, monzonite and gabbro from the Central Belt of Peninsular Malaysia. In: GSM Ann. Geol. Conf. 2004, Kangar, Perlis, Bull. Geol. Soc. Malaysia 49, p. 25-30.
(online at: www.gsm.org.my/products/702001-100571-PDF.pdf)
(Benom Igneous Complex C Belt ofMalay Peninsula rocks intruding into M-U Triassic sediments of Semantan Fm. Composition ranges from granitic to syenitic to monzonitic and gabbroic. Range of SiO2 for gabbro 46.5-49.1%, syenite 52.9 -56.9% and monzonite 56.6-64.7%. High alkali content, shoshonitic with I type characteristics. Also high Ba and Sr (mantle material?)

Ghani, A.A., M. Searle, L. Robb & S.L. Chung (2013)- Transitional I-S type characteristics in the Main Range Granite, Peninsular Malaysia. J. Asian Earth Sci. 76, p. 225-240.
(Dominantly Late Triassic (~200-220 Ma) Main Range Granite of Peninsular Malaysia, located W of Paleo-Tethyan Bentong-Raub suture zone and host of large tin province, regarded as S-type granite, but also many features of I-type granites (large scale of plutonism, primary titanite and amphibole, etc.). Moderately peraluminous nature of bulk of Main Range Granite, without cordierite, Fe-Mg garnet or sillimanite, consistent with derivation from metasedimentary protolith that was undersaturated with respect to Al2SiO5)

Ghani, A.A., I. Yusoff, Meor H.A. Hassan & R. Ramli (2013)- Geochemical study of volcanic and associated granitic rocks from Endau Rompin, Johor, Peninsular Malaysia. J. Earth System Science 122, 1, p. 65-78.
(online at: www.ias.ac.in/jessci/feb2013/65.pdf)
(Late Permian-Triassic Jasin felsic volcanics (dacite/rhyolite and andesite) and Besar batholith (~214 Ma) granitic magmas from W of Johor National Park, Endau Rompin, probably from different sources. Granite produced by partial melting of quartz feldspathic rocks containing amphibole among residual phase. Magmas generated at different time during subduction of Sibumasu beneath Indochina block)

Gillespie, M.R., R.S. Kendall, A.G. Leslie, I.L. Millar, T.J.H. Dodd, T.I. Kearsey et al. (2019)- The igneous rocks of Singapore: New insights to Palaeozoic and Mesozoic assembly of the Sukhothai Arc. J. Asian Earth Sci. 183, 103940, p.
(Six plutons of granitic-gabbroic rocks in N and E Singapore. Five emplaced during 285-230 Ma, and record E Permian- Triassic arc-related magmatism at S end of Sukhothai Arc system of Thailand, Peninsular Malaysia and Indonesia. Volcano-sedimentary succession in SW Singapore records contemporaneous deposition in forearc basin, with largest pyroclastic unit developed as volcanic activity peaked at ~242 Ma. Part of Eastern Belt intrusions of Eastern granitoid provinces of SE Asia, and formed in Andean-type setting as Palaeo-Tethys crust descended beneath Indochina–East Malaya block. Widespread hydrothermal-tuffisite in Permo-Triassic intrusions correlated with rapid uplift following slab breakoff, when arc activity ceased in Singapore at ~230-205 Ma. Sixth pluton in NE Singapore emplaced in Upper Cretaceous)

Gobbett, D.J. (1966)- The brachiopod *Stringocephalus* from Malaya. J. Paleontology 40, 6, p. 1345-1348.
(Stringocephalus perakensis n. sp. from alluvial tin-mining area, Kinta valley, Perak, NW Malay Peninsula, indicating marine Givetian (M Devonian). Associated fauna: dasycladacean algae, stromatoporoids, tabulate corals, Murchisonia sp.)

Gobbett, D.J. (1968)- The Permian system in Malaya. Bull. Geol. Soc. Malaysia 1, p. 17-22.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1967002.pdf)
(Shallow marine limestones, shales and volcanics represent complete Permian sequence in Malaya. Correlations mainly by fusulinid foraminifera)

Gobbett, D. J. (1972)- Geological map of the Malay Peninsula. Geol. Soc. Malaysia, scale 1:1,000,000.

Gobbett, D.J. & C.S. Hutchison (eds.) (1973)- Geology of the Malay Peninsula. Wiley, New York, p. 1-438.
(Classic textbook of geology of Malay Peninsula. See also updated edition by Hutchison & Tan(2009))

Goh Sing Thu, D.W. Heacock & D.E. Loveless (1983)- Exploration, development, and reservoir engineering Studies for the Tapis Field offshore Peninsular Malaysia. J. Petroleum Technology 35, 6, p. 1051-1060.

(Tapis field 1969 discovery by Esso in Malay Basin, S China Sea, 209 km off E coast of peninsular Malaysia. Produces from Miocene Group J (Tapis Fm) sandstone reservoirs that contain rim-type oil accumulations with associated gas caps. Three primary reservoirs, J20, J25, J30, are shoreface/barrier bar deposits separated by shale sequences)

Gowda, S.S. (1965)- Age of the Temerloh Limestone (Calcareous Series) of Malaya. Bull. Geol. Soc. India 2, p. 58-61.
(Early description of M Permian corals, fusulinid forams (incl. Neoschwagerina, Sumatrina annae, Verbeekina verbeeki, Hemigordiopsis) and algae (incl. Mizzia velebitana, Macroporella, Tubiphytes, Archaeolithoporella, etc.) from Kampong Awah area, Pahang, C Malay Peninsula (see also Cummings 1965, Jones et al. 1966, Ishii et al. 1966, Fontaine et al. 1988))

Grubb, P.L.C. (1968)- Geology and bauxite deposits of the Pengerang area, southeast Johore. Mem. Geol. Survey Dept. West Malaysia 14, p. 1-125.

Gupta, A., A. Rahman, P.P. Wong & J. Pitts (1987)- The old alluvium of Singapore and the extinct drainage system to the South China Sea. 12, 3. p. 259-275.
(Old Alluvium of Singapore mainly matrix-supported pebbly sand and appears to be proximal braided river alluvium of possible Pleistocene age. Mixed provenance of granitic and low-grade metamorphic origin. Believed to be deposited during low sea levels, in environment of high relief, seasonal rainfall and active erosion. Such conditions may have prevailed over much of SE Asia at time of deposition of Old Alluvium)

Hada, S. (1966)- Discovery of Early Triassic ammonoids from Gua Musang, Kelantan, Malaya. J. Geosciences, Osaka City University 9, 4, p. 111-122.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0090007.pdf)
(Rel. poorly preserved E Triassic ammonites from Gua Panjang, 5 mi S of Gua Musang rail station, Kelantan, incl, Owenites, Arctoceras, Paranannites, Prosphingites and Pseudosageceras (= middle Lower Triassic Meekoceras glacilitatis Zone))

Haile, N.S. (1971)- Quaternary shorelines in West Malaysia and adjacent parts of the Sunda Shelf. Quaternaria 15, p. 333-343.
(Review of former relative sea levels in Malay Peninsula and adjacent marine areas. Well established Holocene level of ~ +6 m. Levels down to -100m shown by depths of fluvial alluvium and erosional submarine morphology. No convincing evidence for former levels higher than + 6 m)

Haile, N.S. (1975)- Postulated Late Cainozoic high sea levels in the Malay Peninsula. J. Malaysian Branch Royal Asiatic Soc. 48, 1, p. 78-88.

Haile, N.S. (1980)- Palaeomagnetic evidence from the Ordovician and Silurian of northwest Peninsular Malaysia. Earth Planetary Sci. Letters 48, p. 233-236.
(Paleomagnetic work on 37 samples from Ordovician- Silurian Setul Lst of Langkawi Islands, off NW Peninsular Malaysia, suggests paleolatitude of Langkawi at 43° (S or N))

Haile, N.S., R.D. Beckinsale, K.R. Chakraborty, H.H. Abdul & T. Hardjono (1983)- Paleomagnetism, geochronology and petrology of the dolerite dykes and basaltic flows from Kuantan, West Malaysia. Bull. Geol. Soc. Malaysia 16, p. 71-85.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1983007.pdf)
(Cretaceous Kuantan basalt dykes, central E coast Malay Peninsula, K-Ar dated at ~104 Ma. Paleomagnetism study shows suggests ~30° CCW rotation since mid-Cretaceous. Paleomagnetic pole similar to that from U Jurassic- Lw Cretaceous redbeds of Malaya and U Cretaceous of W Kalimantan, suggesting CCW rotation on S-ward movements of all these regions since Cretaceous)

Haile, N.S. & Khoo Han Peng (1980)- Palaeomagnetic measurements on Upper Jurassic to Lower Cretaceous sedimentary rocks from Peninsular Malaysia. Bull. Geol. Soc. Malaysia 12, p. 75-78.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1980006.pdf)
(Paleomagnetic data from 3 sites of U Jurassic- Lw Cretaceous redbeds in Pahang and Johore indicate these areas were ~8° N of present position and rotating clockwise and moving N. Since Late Cretaceous Malay Peninsula rotated CCW and moved S to present position)

Haile, N.S., P.H. Stauffer, D. Krishnan, T.P. Lim & Ong G.B. (1977)- Palaeozoic redbeds and radiolarian chert: reinterpretation of their relationships in the Bentong and Raub areas, West Pahang, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 8, p. 45-60.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977002.pdf)
(Foothils Range in Bentong-Raub area E of Main Range in Pahang composed of 3 rock units: (1) earliest Devonian or older schist, (2) E Devonian chert-argillite with radiolarians and Lower Devonian graptolites and (3) Devonian- E Carboniferous fluvial redbed conglomerates. Also serpentinites in parts of Range)

Halim, R.A.A., N.A.N. Tan, H. Zainal & Meor H.A. Hassan (2017)- Carboniferous plant fossils from the Kubang Pasu Formation, Pokok Sena, Kedah. Proc. 30th Nat. Geosc. Conf. Exhib. (NGC 2017), Kuala Lumpur, PDRG08-59, Warta Geologi 43, 3, p. 305. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_032.pdf)
(Kubang Pasu Fm near Pokok Sena, Kedah, thick interbedded marine shale-sandstone. Shale intervals with trilobite Chlupacula (previously known as Macrobole kedahensis), bivalve Posidonia/Posidonomya becheri, etc., indicating E Carboniferous age. Locally abundant plant fossils, incl. leaves identified as Sphenophyllum cf. miravallis. Possibly oldest plant fossils from W Belt of Malay Peninsula)

Hamada, T. (1968)- Ambocoeliids from Red Beds in the Malayan Peninsula. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press 5, p. 13-25.
(Ambocoeliid brachiopods Echinocoeliopsis, 'Emanuella', etc. in Devonian red beds (base Kubang Pasu Fm) of Langkawi and Perlis and Kedah, NW Malay Peninsula. See also Kobayashi & Hamada 1973)

Hamada, T. (1969)- Late Paleozoic brachiopods from red beds in the Malayan Peninsula. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 6, p. 251-264.
(Fauna of small brachiopods, trilobites, ostracodes, etc, associated with bivalve 'Posidonia' (= Posidonomya) from Langgun Redbeds of Langkawi Islands, NW Malaysia, which unconformably overlie E Silurian rocks. Mainly endemic assemblage with many new species, incl. rhynchonellid Langkawia n.gen. Age believed to be around Devonian-Carboniferous boundary)

Hamada, T. (1969)- Devonian brachiopods from Kroh, Upper Perak in Malaysia (Malaya). In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 7, p. 1-13.
(8 species of brachiopods from late Early-M Devonian Tentaculites (Novakia acuaria) shale from S of Kroh, NW Malay Peninsula, incl. Orbiculoidea, Plectodonta, etc.)

Hamada, T. (1984)- Older and Middle Palaeozoic brachiopods of Thailand and Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 183-186.
(Brief review of Ordovician- Devonian brachiopods of W Thailand- Malay Peninsula)

Hamada, T., H. Igo, T. Kobayashi & T. Koike (1975)- Older and Middle Palaeozoic formations and fossils of Thailand and Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 1-39.

Hamzah, U. & Ng Chiang Seng (1995)- Fosil kayu dan beberapa fosil tumbuhan dari Sg. Berok, Gua Musang, Kelantan. Warta Geologi 21, 4, p. 247-253.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1995004.pdf)
('Wood and some plant fossils from Sg. Berok, Gua Musang, Kelantan'. Wood and plant fossils from Gua Musang Fm in Kelantan, N C Malay Peninsula. Two localities, Post Blau and SW of Sungai Berok, Gua Musang, with Cordaites sp., Araucarioxylon sp., Pecopteris sp. and Sphenopteris sp.. Age Permian-Triassic)

Harbury, N.A., M.E. Jones, M.G. Audley-Charles, I. Metcalfe & K.R. Mohamed (1990)- Structural evolution of Mesozoic Peninsular Malaysia. J. Geol. Soc., London, 147, p. 11-26.
(Upper Paleozoic- Mesozoic of Peninsular Malaysia two important compressional events: Late Permian and mid- to Late Cretaceous. Late Paleozoic compressional event was major orogenic phase with emplacement of Permo-Triassic granite plutons that form eastern and main ranges. No indications of Triassic orogenic compression. Raub-Bentong line was important fault zone active in Mesozoic but is not major tectonic suture since Late Paleozoic (Proposed timing of orogenesis questioned by Hutchison & Sivam 1992; JTvG))

Harun, Z. (2002)- Late Mesozoic-Early Tertiary faults of Peninsular Malaysia. In: Proc. GSM Annual Geol. Conf. 2002, Kota Bharu, Bull. Geol. Soc. Malaysia 45, p. 117-120.
(online at: www.gsm.org.my/products/702001-100734-PDF.pdf)
(Samples of sheared granite from two fault zones (Bukit Berapit and Bukit Tinggi Faults). K-Ar dating of whole rock gave isotope ages for timing of fault movements at ~84, 53 and 46 Ma. Possibly tie to Late Cretaceous event of ~NW-trending sinistral strike-slip faulting and E-M Eocene movements from India- S Asia collision)

Harun, Z. & B. Jasin (1999)- Implications of the Bok Bak Fault movements on the structure and lithostratigraphy of the Pokok Sena area. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 145-153.
(online at: www.gsm.org.my/products/702001-100826-PDF.pdf)
(Strike-slip fault in area of Paleozoic sediments in NW Malay Peninsula)

Harun, Z. & B. Jasin (2000)- The occurrence of thrusts in north Kedah and Perlis. In: Proc. Annual Geol. Conf. 2000, Geol. Soc. Malaysia, Pulau Pinang, p. 117-120.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_02.pdf)
(Several thrust faults observed at localities in Kedah and Perlis (NW corner Malay Peninsula). Faults high angle, dipping E, displacing Lower Paleozoic Mahang and Setul Fms onto E Permian Kubang Pasu Fm)

Harun, Z. & B. Jasin (2003)- Some radiolarians from Dengkil, Selangor. Bull. Geol. Soc. Malaysia 46, p. 133-136.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003022.pdf)
(Assemblage of E Carboniferous radiolarians in chert sequence, exposed SW of Dengkil, Selangor. Associated with siliceous mudstone or shale, without volcanics (passive continental shelf?). Possibly part of Kenny Hill Fm. Incl. Astroentactinia sp., Entactinosphaera palimbola and Duplexia? parviperjorata)

Harun, Z., B. Jasin, N. Mohsin & A. Azami (2009)- Thrust in the Semanggol Formation, Kuala Ketil, Kedah. Bull. Geol. Soc. Malaysia 55, p. 61-66.
(online at: www.gsm.org.my/products/702001-100460-PDF.pdf)
N-directed thrusting in Permo-Triassic Semanggol Fm bedded chert unit. Rocks generally strike from ENE to ESE and gently to steeply (20°-78°) dipping to S. Cherts with late E Permian- M Triassic radiolarians. Interpreted as localised transpressional deformation during latest movement of Bok Bak fault zone)

Haseldonckx, P. (1977)- The geology of Pulau Tekong, Singapore. Bull. Geol. Soc. Malaysia 8, p. 75-87.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977004.pdf)
(Geological reconnaissance of Tekong Island in Straits of Johore. Oldest rocks folded Lower Triassic? quartzites and slates, subjected to thermal metamorphism. Overlain by U Triassic molasse facies clastics. No fossils or other age dating obtained)

Hashim, A.S.H. (1985)- Discovery of an ammonoid (*Agathiceras* sp.) and crinoid stems in the Kenny Hill Formation of Peninsular Malaysia, and its significance. Warta Geologi 11, 5, p. 205-212.
(Discovery of poorly preserved ammonoid (Agathiceras sp.) and crinoid fragments in poorly fossiliferous Kenny Hill Fm N of Sepang area, Selangor, near C Malay Peninsula W Coast indicates age of formation is at least in part E-M Permian)

Hassan, S.N. & Basir Jasin (2004)- Kajian awal radiolaria berusia Trias dari Formasi Semanggol di Bukit Lada, Kedah. In: GSM Ann. Geol. Conf. 2004, Kangar, Perlis, Bull. Geol. Soc. Malaysia 49, p. 67-70.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004012.pdf)
('Preliminary studies of Triassic-age radiolarian from the Semanggol Fm in Bukit Lada, Kedah'. Fifteen species of radiolarians from Bukit Lada, Kedah with Busuanga., Cryptosphenidium, Cryptosphenidium verrucosum, Eptingium manfredi, Parasepsagon spp.., Pseudostylosphaera spp. and Triassocampe deweveri. Presence of T.e deweveri and E. manfredi robustum zones indicate M Triassic (Anisian- Ladinian) age of chert)

Hassan, W.F.W. & H.S. Purwanto (2002)- Type deposits of primary gold mineralization in the Central Belt of Peninsular Malaysia. In: G.H. Teh (ed.) GSM Annual Geological Conference, Kota Bharu 2002, Bull. Geol. Soc. Malaysia 45, p. 111-116.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2002016.pdf)
(Three types of gold mineralizations in Central Belt: in quartz veins (dominant), in massive sulphides(kuroko-type marine deposit) and in skarn. Gold-bearing quartz veins in steeply dipping N-S fault and shear zones)

Henney, P.J., M.T. Styles, P.D. Wetton & D.J. Bland (1995)- Characterization of gold from the Penjom area, near Kuala Lipis, Pahang, Malaysia. British Geol. Survey, Overseas Geol. Series, Techn. Report WC/95/21, p. 1-67.
(online at: www.bgs.ac.uk/research/international/dfid-kar/WC95021_col.pdf)
(Penjom area near Kuala Lipis with gold in quartz veins in shales and phyllites of Permian Padang Tenku Fm. In tract of Paleozoic continental margin sediments, between the W and E ranges of Triassic granites. Main Au-Ag vein sulpides with galena, chalcopyrite and sphalerite)

Hosking, K.F.G. (1973)- The primary tin mineralisation patterns of West Malaysia. In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. p. 297-308.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973020.pdf)
(Tin deposits on Malay Peninsula related to exposed granites. Two major tin belts (1) Main Range and (2) East coast granites. Deposits mainly along flanks of major acid intrusives. Main Range tin mineralisation more strongly developed alongW flank than along its E flank)

Hosking, K.F.G. & P.R. Stauffer (1970)- Tektites from the stanniferous placers of eastern Pahang. Newsletter Geol. Soc. Malaysia 22, p. 1-4.
(online at: www.gsm.org.my/products/702001-101619-PDF.pdf)
(Two black glass tektites from Quaternary tin placers at Sungei Reman and Gambang, E Pahang, Malay Peninsula. First finds since Scrivenor 1931. Tektites possibly near base of tin deposits)

Hotson, M., Khin Zaw, G.J.H. Oliver, S. Meffre & T. Manaka (2011)- U-Pb Zircon geochronology of granitoids from Singapore. In: 8th Meeting Asia Oceania Geological Soc. (AOGS), Taipei, p. *(Abstract)*
(Gabbro, granodiorite and granite samples from Singapore Island dated using zircon U-Pb method as Late Permian- E Triassic (~254 - 230 Ma), although one granodiorite sample gave anomalous mid-Cretaceous age of 94.6 ± 0.8 Ma)

Huang, K.L., H. Baioumy, J.M. Lim, L.Y.S. Lim, S. Yong, T. Rajoo & D.M. Hareedranathan (2017)- Sedimentology of black shale in turbidite at Semanggol Formation. In: 79th EAGE Conf. Exhib., Paris 2017, p.
(Black shales in Triassic turbiditic Semanggol Fm deposited in outer fan environment. Organic matter terrigenous-derived)

Hutchison, C.S. (1961)- The basement rocks of Malaya and their palaeo-geographic significance in Southeast Asia. American J. Science 259, 3, p. 181-185.
(Petrology of schists in NE Malaya, deduced to be of Precambrian age and of igneous origin (now probably considered to to be of Late Paleozoic age; JTvG))

Hutchison, C.S. (1964)- A gabbro-granodiorite association in Singapore Island. Quart. J. Geol. Soc. 120, p. 283-296.

(?Jurassic age orogenic granodiorite, part of Thai-Malayan tin-bearing granite belt, intruded into gabbro)

Hutchison, C.S. (1968)- Physical and chemical differentiation of West Malaysian Limestone Formations. Geol. Soc. Malaysia. Bull. 1, p. 45-56.
(online at: www.gsm.org.my/products/702001-101383-PDF.pdf)
(Difficult to differentiatiate Malayan limestones basedon mineralogy and petrography, and must therefore continue to be based on fossils)

Hutchison, C.S. (1968)- Dating tectonism in the Indosinian-Thai-Malayan orogen by thermoluminescence. Geol. Soc. America (GSA) Bull. 79, 3, p. 375-386.
(Thermoluminescence 'ages' of limestones from Thai-Malayan geosyncline (Ordovician- Triassic) not related to stratigraphic age, but to tectonic and magmatic events in Mesozoic Indosinian-Thai-Malayan orogeny)

Hutchison, C.S. (1971)- The Benta migmatite complex, petrology of two important localities. Geological Soc. Malaysia Bull. 4, p. 49-70.
(online at: www.gsm.org.my/products/702001-101363-PDF.pdf)
(Exposures of foliated gneiss, monzonite and migmatite near Benta quarry, Sungei Lipis, Pahang. Origin of Benta rocks considered to be deep seated, anatectic. No genetic relationship to Benom granite implied (see also Almashoor 1996)

Hutchison, C.S. (1973)- Volcanic activity. In: D.J. Gobbett & Hutchison (eds.) Geology of the Malay Peninsula (West Malaysia and Singapore), Wiley, New York, p. 177-214.

Hutchison, C.S. (1973)- Plutonic activity. In: D.J. Gobbett & Hutchison (eds.) Geology of the Malay Peninsula (West Malaysia and Singapore), Wiley, New York, p. 215-252.

Hutchison, C.S. (1973)- Metamorphism. In: D.J. Gobbett & Hutchison (eds.) Geology of the Malay Peninsula (West Malaysia and Singapore), Wiley, New York, p. 253-303.

Hutchison, C.S. (1973)- Synthesis of crustal evolution in the Malay Peninsula. In: D.J. Gobbett & Hutchison (eds.) Geology of the Malay Peninsula (West Malaysia and Singapore), Wiley, New York, p. 330-334.

Hutchison, C.S. (1977)- Granite emplacement and tectonic subdivision of Peninsular Malaysia. Bull. Geol. Soc. Malaysia 9, p. 187-207.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1977030.pdf)
(Large granitic batholiths of mainly Permian and Triassic age characterize Main Range and Eastern Belt of Malay Peninsula. Main Range granites intruded into continental sialic basement (isoclinally folded phyllitic rocks), without notable contact aureoles. This and large difference between Rb-Sr (peaks at 300, 210 Ma) and K-Ar radiometric ages (av. 190 Ma) suggest emplacement at >4 km depth and main uplift by several km, in Jurassic and Cretaceous. Eastern Belt granites mainly Triassic (peak ~220 Ma), also Permian ages, and have concordant Rb-Sr and K-Ar radiometric ages. Eastern Belt stable area since Triassic. Local post-orogenic Late Cretaceous (60-90 Ma) granites, without tin mineralization)

Hutchison, C.S. (2009)- Bentong-Raub suture. In: C.S. Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University of Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 43-53.
(Description of 'Bentong-Raub ophiolite line', which separates W from E peninsular Malaysia. It represents suture zone with remnants of Lower Devonian- U Permian Paleotethys Ocean, which closed in Triassic with collision of Sibumasu (in W) and Indochina (E) blocks. Paleotethys deposits include Lower Devonian slaty shales with graptolite and shales with cherts with U Devonian- Permian radiolaria)

Hutchison, C.S. (2009)- Tectonic evolution. In: C.S. Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 309-330.

Hutchison, C.S. (2009)- Mineral deposits. In: C.S. Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 331-364.
(Malaysia produced 70% of world's tin in world in last century, with 95% from E-M Pleistocene 'Old Alluvium' placer deposits in coastal regions (with 770ka Australasian tektites at base of tin-bearing beds of Gambang tinfield in Pahang). Eastern and Western tin granite belts. Permo-Triassic iron ores. Small gold mines immediately E of Raub-Bentong suture zone. Some Tungsten, bauxite)

Hutchison, C.S. & S.P. Sivam (1992)- Discussion on structural evolution of Mesozoic Peninsular Malaysia. J. Geol. Soc. London, 149, p. 679-680.
(Dispute conclusions of Harbury et al. (1990) proposing pre-Triassic age of 'Indosinian orogeny'. In Peninsular Malaysia and NE Thailand Khorat Basin Late Triassic (Carnian-Norian) flysch unconformable over vertically bedded Late Permian limestones and clastics, followed by Jurassic-Cretaceous molasse, demonstrating Triassic age of folding)

Hutchison, C.S. & Snelling, N.J. (1971)- Age determination on the Bukit Paloh adamellite. Bull. Geol. Soc. Malaysia 4, p. 97-100.
(Bukit Paloh adamellite in Pahang probably Late Carboniferous age, intruded into Lower Carboniferous (Visean) strata)

Hutchison, C.S. & D.N.K. Tan (eds.) (2009)- Geology of Peninsular Malaysia. University of Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 1-479.
(Major and most recent book on geology of Malay Peninsula)

Ibrahim, A.M. (1999)- Geochemistry of selected Upper Paleozoic Kuantan Group and Triassic carbonaceous sediments of Pahang and South Terengganu, West Malaysia. Masters Thesis, University of Malaya, Kuala Lumpur, p. 1-222.
(online at: http://studentsrepo.um.edu.my/1416/)

Ichikawa, K. K. Ishii & S. Hada (1966)- On the remarkable unconformity at the Jengka Pass, Pahang, Malaya. J. Geosc., Osaka City University, 9, 4, p. 123-130.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0090008.pdf)
(Steeply dipping M Permian clastics and limestones with fusulinids (Yabeina, Sumatrina annae, Verbeekina verbeeki, Schwagerina; Ishii 1966) and brachiopods, in W part of E Malaya Block. Unconformably overlain by gently dipping conglomeratic sst and mudstone of Jengka Pass Fm, containing bivalves (Aequipecten), brachiopods, Isocrinus and plants (Sagenopteris, Equisitites), likely of Late Triassic age (possibly Jurassic))

Ichikawa, K. & E.H. Yin (1966)- Discovery of Early Triassic bivalves from Kelantan, Malaya. J. Geosc., Osaka City University 9, p. 101-106.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0090006.pdf)
(Presence of bivalve Claraia intermedia multistriata n.ssp. and Eumorphotis cf. multimformis in Scythian shales 10km SSW of Gua Musang)

Idris, M.B. & M.S. Azlan (1989)- Biostratigraphy and paleoecology of fusulininids from Bukit Panching, Pahang. Bull. Geol. Soc. Malaysia 24, p. 87-99.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1989b08.pdf)
(U Carboniferous Panching Lst near Kuantan, E Malay Peninsula, formerly believed to be massive, folded and ~600m thick now interpreted as tightly folded and 88m thick. U Carboniferous conodonts identified by Metcalfe (1980). Five local foraminifera zones, incl. Eostafella, etc. fusulinid larger forams)

Idris, M.B. & C.N. Hashim (1988)- An Upper Permian fossil assemblage from Gunung Sinyum and Gunung Jebak Puyoh Limestone, Pahang. Warta Geologi 14, 5, p. 199-203.
(online at: www.gsm.org.my/products/702001-101505-PDF.pdf)

(Two prominent limestone hills 50km N of Temerloh, Pahang, surrounded by younger sediments of Semantan Fm, with conodonts Neogondolella rosenkrantzi and N. serrata serrata, indicative of U Permian (Capitanian). Also forams Parafusulina, Schubertella, etc.)

Idris, M.B. & S.M. Zaki (1986)- A Carboniferous shallow marine fauna from Bukit Bucu, Batu Rakit, Trengganu. Warta Geologi (Newsl. Geol. Soc. Malaysia) 12, 6, p. 215-219.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1986006.pdf)
(Sediments at Bukit Bucu, Batu Rakit N of Terengganu with U Carboniferous fauna of trilobites (Paladin ophistops= U Carboniferous), brachiopods (Brachythyrina strangwaysi, Chonetinella), bryozoans (Fenestella retiformes), crinoids ('Poterocrinus') and bivalves (Edmondia). These shallow marine invertebrates also reported from Kelantan, Pahang Darul Makmur and Thailand)

Igo, H. (1964)- Permian fossils from northern Pahang, Malaya. Japanese J. Geology Geography 35, p. 57-71.
(Description of Permian corals from N Pahang, associated with late M Permian fusulinids Yabeina, Verbeekina and Sumatrina annae, Kahlerina)

Igo, H. (1964)- Permian fossils from northern Pahang, Malaya. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 191-208.
(Same paper as Igo (1964) above. Permian NE corner of Pahang province, C Malay Peninsula. Silicified black limestone from Ulu Sungei Atok with diverse fusulinid forams (Climacammina, Pseudofusulina, Verbeekina verbeeki, Sumatrina annae, Yabeina, etc.; similar to Guguk Bulat fauna, W Sumatra)), corals (Wentzellella malayensis n.sp., Sinopora). Grey shale from Sungei Spia with brachiopod Spirifirellina, Neospirifer)

Igo, H. (1967)- Some Permian fusulinids from Pahang, Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 3, p. 30-38.
(M Permian fusulinid limestones in intensely folded clastic- andesitic volcanics series from Jengka Pass area and Kampong Awah quarry, Pahang, C Malay Peninsula. With Neoschwagerina, Verbeekina, Sumatrina, Chusenella, Yabeina, Pseudofusulina (very similar to fauna of Padang Highlands, Sumatra; see also Cummings 1965, Gowka 1967, etc.))

Igo, H. & T. Koike (1967)- Ordovician and Silurian conodonts from the Langkawi Islands, Malaya, Part I. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 3, p. 1-29.
(Simple cone-type conodonts from Ordovician- Silurian Setul Limestone of Langgon Island, NE Langkawi. Most species similar to species known from Europe and North America)

Igo, H. & T. Koike (1968)- Ordovician and Silurian conodonts from the Langkawi Islands, Malaya, Part II. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 1-21.
(Additional types of conodonts from Ordovician- Silurian Setul Lst of Langgon Island, NE Langkawi. 41 species described. Silurian conodonts not described from Asia before)

Igo, H. & T. Koike (1968)- Carboniferous conodonts from Kuantan, Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 5, p. p. 26-30.
(Five species of conodonts from described from Bukit Charas, N Pahang, E Malay Peninsula (part of Indochina Plate). Dominated by cosmopolitan forms Idiognathoides and Hindeodella, also Spathognathodus, Ozarkodaina, indicating E Namurian age (rich brachiopod fauna from area described by Muir-Wood, 1948))

Igo, H. & T. Koike (1973)- Upper Silurian and Lower Devonian conodonts from the Langkawi islands, Malaysia, with note on conodont fauna of the Thung Song Limestone, Southern Thailand and the Setul Limestone, Perlis, Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 13, p. 1-22.
(Similar 'Setul Fm' U Silurian- Lw Devonian dark grey limestones on Langkawi islands, NW Malay Peninsula and peninsular Thailand. Nearby Silurian bituminous graptolite shales. Conodont faunas include

Spathognathodus steinhornensis repetitor similarities with Alps and Neningha Lst of N New South Wales and lower part of Mount Holly Bed of Queensland)

Igo, H., T. Koike & E.H. Yin (1966)- Triassic conodonts from Kelantan, Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 157-171.
(Folded limestones from S Kelantan, central part of Malay Peninsula include white-grey Permian limestone with common fusulinids and grey M Triassic limestones rich in ammonoids and conodonts (dominated by Hindeodella spp and Hibbardella sp))

Igo, H., S.S. Rajah & F. Kobayashi (1979)- Permian fusulinaceans from the Sungei Sedili area, Johore, Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 20, p. 95-118.
(Low diversity fusulinid assemblages from massive lenticular Sumalayang Lst in NW-dipping argillaceous rocks of Dohol Fm (~30 miles N of Singapore; southernmost Permian limestone of Malay Peninsula). With fusulinids signifying late Early Permian- early M Permian age: Misellina, Cuniculinella globosa, Eoparafusulina malayensis, Parafusulina granum-avenae (very similar to Sumatra forms), P. johorensis n.sp. and other spp. and rare Monodiexodina kattaensis and M. shiptoni (but: Ueno (2003, p. 14) and Ueno et al. (2014) question Monodiexodina identification and re-assign to Pseudofusulina; JTvG). Many faunal similarities with 'Tethyan?' Pamir faunas))

Ingham, F.T. & E.P. Bradford (1960)- The geology and mineral resources of the Kinta Valley, Malaya Geol. Survey, Ipoh, Geol. Survey District Mem. 9, p. 1-347.
(Kinta Valley of W Central Malay Peninsula largest alluvial tin-producing area in world. Not much detail on stratigraphy: Kinta Valley sequence mainly 700m of Carboniferous- Lower Permian limestone, poor in fossils, and surrounded by post-Triassic granite intrusive complexes. Triassic arenaceous series. With 1:63,360 scale geologic map)

Ishida, K. & F. Hirsch (2011)- The Triassic conodonts of the NW Malayan Kodiang Limestone revisited: taxonomy and paleogeographic significance. Gondwana Research 19, 1, p. 22-36.
(Revision of M - early L Triassic conodonts from NW Malaya Kodiang Lst. Pseudofurnishius murcianus confers S Tethyan low-latitude character to Kodiang Lst, part of Cimmerian terranes that in Triassic formed diagonal partition between gradually closing Paleo-Tethys and widening Neo-Tethys, stretching E to Malaya (Shan Thai Terrane). Only E edge collided with Eurasia in Late Triassic, forming Sundaland platform. Jurassic Neo-Tethys ocean extended S of consolidated SE Asia block and Cimmerian terranes)

Ishida, K. A. Nanba, F. Hirsch, T. Kozai & A. Meesook (2006)- New micropalaeontological evidence for a Late Triassic Shan-Thai orogeny. Geosciences J. 10, 3, p. 181-194.
(Shan-Thai block is remnant of Paleotethys in SE Asia. Nan-Uttaradit/Nan-Chantaburi and Bentong-Raub sutures commonly proposed as main Paleotethyan suture, but Mae Sariang Zone suture further W advocated here as main suture. Triassic chert-sequence in Mae-Sot and Umphang, NW Thailand, with M and Late Triassic (Ladinian- Norian-Rhaetian) radiolarians, overlain by 'Jurassic base-conglomerate' and Toarcian- E Bajocian shelf deposits. Chert clasts in conglomerate with same Norian-Rhaetian radiolarians, suggesting age of collision is latest Triassic)

Ishihara, S. (2008)- Granite series, type and concentration of HREE in the Malay Peninsula Region. . Proc. Int. Symposia on Geoscience resources and environments of Asian terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 31-35.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.535.6633&rep=rep1&type=pdf)
(Reinterpretion of S/I type granites of Permo-Triassic and Cretaceous-Tertiary in Malay Peninsula region. Rare earth elements tend to be concentrated in ilmenite-series felsic I-types originated in granitic protolith)

Ishihara, S., H. Sawata, S. Arpornsuwan, P. Busaracome & N. Bungrakearti (1979)- The magnetite-series and ilmenite-series granitoids and their bearing on tin mineralization, particularly of the Malay Peninsula region. Bull. Geol. Soc. Malaysia 10, p. 103-110.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1979004.pdf)
(140 granitoids studied in S half Malay Peninsula. Late Paleozoic- E Mesozoic granitoids of Main Range and also E belt mainly composed of ilmenite-series granitoids (91%), and associated with tin deposits. Small plutons of Central intrusive belt and Cretaceous granitoids generally magnetite-series, and without tin)

Ishii, K.I. (1966)- On some fusulinids and other foraminifera from the Permian of Pahang, Malaya. J. Geosciences Osaka City University 9, p. 131-142.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0090009.pdf)
(Grey upper Middle Permian (Wordian) limestones within andesitic series from two localities: ENE of Jengka Pass (steeply dipping interbedded limestones and clastics) and Kampung Awah quarry (thin grey limestones in thick andesitic pyroclastic- volcanic series). Both with primitive Yabeina (Y. asiatica n.sp.), Sumatrina annae, Verbeekina verbeeki, Neoschwagerina douvillei, Schwagerina, etc. Also small forams Pachyphloia, Hemigordiopsis, Glomospira, Tetrataxis, etc. (Pahang series = W part of E Malaya terrane?; related to Guguk Bulat fauna of W Sumatra?; JTvG))

Ishii, K. (1966)- Preliminary notes of the Permian fusulinids of the H. S. Lee Mine No. 8 Limestone near Kampar, Perak, Malaya. J. Geosciences Osaka City University 9, p. 145.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0090010.pdf)
(Short note on E Permian H.S. Lee limestone with fusulinid foraminifera in H.S. Lee No. 8 Mine, W Malay Peninsula (Sibumasu Terrane). Basal fusuline limestone assigned to Pseudofosulina kraffti zone, overlying grey-white limestone rich in gastropods, etc., assigned to Misellina claudiae zone (~Sakmarian- Artinskian age?))

Ishii. K., M. Kato, K. Nakamura & Y. Nogami (1972)- Permian brachiopods from Bukit Tungku, Lembu, Perlis, Malaya. J. Geosciences Osaka City University 15, 3, p. 65-76.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0150003.pdf)
(Tungku Lembu hill in NW Malay Peninsula near Thai border (= Sibumasu terrane), with brachiopods in sandstone near base of M Permian limestone: Derbyia?, Monticulifera, Cancrinella cancrini, etc. (from same range Newton 1926 described Fusulina granum-avenae which probably belongs to M Permian Monodiexodina))

Ishii, K. & Y. Nogami (1966)- Discovery of Triassic conodonts from the so-called Palaeozoic limestones in Kedah, Malaya. J. Geosciences Osaka City University 9, p. 93-95.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0090005.pdf)
(First report of Triassic conodonts in Kodiang Lst in limestone hills near Kodiang station, Kedah, NW Malay Peninsula. With two M-U Triassic conodont assemblages: Gladigondolella cf. abneptis and Gladigondolella tethydis faunules (see also Nogami 1968, Koike 1973, 1982))

Ismail, H.H., M. Madon & Z.A. Abu Bakar (2007)- Sedimentology of the Semantan Formation (Middle-Upper Triassic) along the Kerak- Kuantan highway, Central Pahang. Bull. Geol. Soc. Malaysia 53, p. 27-34.
(online at: www.gsm.org.my/products/702001-100507-PDF.pdf)
(M-L Triassic Semantan Fm probably deeper marine 'flysch-type' slope to outer fan deposits in foreland basin associated with closure of Paleo-Tethys during final E-ward subduction of West Malaya lithosphere beneath East Malaya. Mudstone layers with (displaced) bivalves Entolium, Neoschizodus, Costatoria pahangensis, Costatoria chegarpahangensis, supporting M-U Triassic age. Widespread volcanic and tuffaceous sediments indicate proximity to volcanic arc. No isoclinal folding or imbrication of strata.)

Ismail, H.H., M. Madon & Z.Affendi Abu Bakar (2008)- Distal turbidites of the Semantan Formation (Middle-Upper Triassic) in the Central Pahang, Peninsular Malaysia. In: Petroleum Geology Conf. Exh. (PGCE) 2008, Kuala Lumpur, p. 187-189.
(Extended Abstract only. Outcrop study of deep-marine M-U Triassic Semantan Fm near Temerloh. Shale-dominated section deposited in distal parts of submarine fans and basin plain, in remnants of closing Paleo-Tethys Ocean ocean in Central Belt of Peninsular Malaysia)

Iwai, J. (1972)- Reconnaissance of Mesozoic stratigraphy in Central Pahang, Malaysia. Part 2. Between Mentakab and Jerantut, and from Temerloh to the Jengka Pass. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 10, p. 243-256.
(Triassic stratigraphy in C part of Malay Peninsula. Rocks generally tuffaceous and M Triassic age. Between Mentakab and Jerantut two clastic units: (1) lower, 1400m thick 'flysch-type' shales-sands with some tuffs; (2) upper part ~1000m thick, mainly arenaceous with conglomerates (= Semanggol/ Semantan Fm?; JTvG))

Jaafar, A. (1976)- Geology and mineral resources of the Karak and Temerloh areas, Pahang. Geol. Survey Malaysia, District Mem. 15, p. 1-127.
(*Includes discovery of Lower Devonian graptolite shale S of Karak, which represents oldest known Paleotethys Ocean rocks. Semantan Fm new name for thick series of marine Triassic clastics and rhyolitic tuffs with Daonella in W and shallower Myophoria sandstone facies in E)*

Jamil, A. & A.A. Ghani (2014)- Petrology, geochemistry & geochronology of Jerai Granite, Kedah. Geol. Soc. Malaysia, Nat. Geoscience Conf. (NGC) 2014, Trengganu, p. 76-83.
(online at: http://geology.um.edu.my/gsmpublic/NGC2014/PDFs/5%20-%20Oral2.pdf)
(New U-Pb zircon ages for Jerai Granite (biotite-muscovite granite, tourmaline granite and pegmatite): 205.5± 2.0 Ma and 204.6± 4.3 Ma (latest Triassic). Transitional I-S type granite. W of, but part of syncollisional Main Range batholith of W Malay Peninsula, formed by partial melting of Sibumasu crust subducted beneath Paleo-Tethys accretionary complex, intruded W of Bentong-Raub Suture zone (previously dated as ~135 Ma))

Jamil, A., A.A. Ghani, K. Zaw, S. Osman & L.X. Quek (2016)- Origin and tectonic implications of the ~200 Ma, collision-related Jerai pluton of the Western Granite Belt, Peninsular Malaysia. J. Asian Earth Sci. 127, p. 32-46.
(Triassic granitoids (~200–225 Ma) widespread in W Belt of Peninsular Malaysia. Jerai granitic pluton in NW Malay Peninsula at NW part of S-type Main Range granite batholith. Mainly biotite-muscovite granite, also tourmaline granite. U-Pb zircons ages ~204-205 ± 4Ma. Represents latest magmatic event of continental Sibumasu- Indochina collision)

Jantan, A., Basir Jasin, I. Abdullah, U. Said & A.R. Samsudin (1989)- The Semanggol Formation- lithology, facies association and distribution and probable basin setting. Geol. Soc. Malaysia, Ann. Geol. Conf. '89, Warta Geologi, 15, 1, p. 28. *(Abstract only)*
(Triassic Semanggol Fm rocks interpreted as submarine fan deposits in half-grabens, with source area in E and basinal area in W in some areas, but from W in others)

Jantan, A., Basir Jasin, I. Abdullah, A. R. Samsudin & U. Said: (1987)- Note on the occurrence of limestone in the Semanggol Formation, Kedah, Peninsular Malaysia. Warta Geologi 13, 4, p. 151-159.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1987004.pdf)
(First report of thin, lenticular (pelagic) micritic limestone in Semantan Fm, at Kuala Nerang, Kedah, NW Malay Peninsula. Associated with bedded cherts. Conodonts identified by Metcalfe suggest Late Ladinian- E Carnian age)

Jasin, Basir (1991)- Significance of *Monodiexodina* (Fusulininacea) in geology of Peninsula Malaysia. Bull. Geol. Soc. Malaysia 29, p. 171-181.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991015.pdf)
(late E Permian- early Late Permian Monodiexodina rare genus of Permian fusulinids and restricted to narrow sliver from C Afghanistan in W to Malaysia and Japan in E. In Malaysia present on Sibumasu Block, overlying glacio-marine pebbly mudstones (M. sutschanica and M. shiptoni) and also on E Malaya Block Sumalayang Lst (M. shiptoni and M. kattaensis), associated with many other species of fusulinids)

Jasin, Basir (1994)- Middle Triassic radiolaria from the Semanggol Formation, northwest Peninsular Malaysia. Warta Geologi 20, 4, p. 279-284.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1994004.pdf)

(13 species of radiolaria in chert from gently folded Semanggol Fm outcrops in N and S Kedah areas, NW Malay Peninsula. Assemblages with Pseudastylosphaeracoccostyla, Pseudostylosphaera spp., Parasepsagon spp., Eptigium manfredi, Triassocampe deweveri, etc., indicating Anisian- Ladinian (M Triassic) age range (Sashida et al 1992, 1993 also reported Permian rads from Semanggol Fm) (see also Jasin 1997, Jasin et al. 2005))

Jasin, Basir (1995)- Occurrence of bedded radiolarian chert in the Kubang Pasu Formation, North Kedah, Peninsular Malaysia. Warta Geologi (Newsletter Geol. Soc. Malaysia) 21, 2, p. 73-79.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1995002.pdf)
(E Carboniferous radiolarians from bedded continental margin chert of Kubang Pasu Fm. in NW Malay Peninsula dominated by Entactinia variospina and Callella sp. (Sibumasu Terrane; more recent study see Jasin & Harun 2001))

Jasin, Basir (1996)- Discovery of Early Permian radiolaria from the Semanggol Formation, Northwest Peninsular Malaysia. Warta Geologi (Newsletter Geol. Soc. Malaysia) 22, 4, p. 283-287.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1996004.pdf)
(Radiolarians from chert sequence at Bt Kampung Yoi and Bt Larek indicates latest Wolfcampian, E Permian Pseudoalbaillella scalprata m. rhombothoracata Zone. Age of Semanggol Fm now E Permian- M Triassic)

Jasin, Basir (1996)- Rijang beradiolaria Semenanjung Malaysia: kewujudan, usia dan sekitaran pengendapan. Sains Malaysiana 25, 2, p. 103-113.
('Radiolarian chert of Peninsular Malaysia: occurrence, age and depositional environment'. Chert-clastic associations common in Peninsular Malaysia and represent continental margin settings (E Carboniferous Kubang Pasu chert, E Permian Ulu Kelantan chert, Late Permian- M Triassic Semanggol chert). Carnian-Norian Kodiang chert-limestone represents subsidence environment. Late Permian Jengka area chert-pyroclastic association represents island-arc environment)

Jasin, Basir (1997)- Permo-Triassic radiolaria from the Semanggol Formation, northwest Peninsular Malaysia. J. Asian Earth Sci. 15, p. 43-53.
(32 species of radiolaria from 20 chert samples of folded/faulted Semanggol Fm in N and S Kedah. Early and Late Permian and M Triassic assemblages, indicating chert sequence in Semanggol Fm ranges from E Permian- M Triassic. With Albaiella, Pseudoalbaiella, Follicucullus, Triassocampe, etc.. Associated terrigenous detritus suggest deep continental margin setting. M Triassic cherts interfingers with Ladinian-Norian mudstone with Posidonia kedahensis, Halobia comata, etc.)

Jasin, Basir (1999)- Significance of radiolarian chert in the northwest zone of Peninsular Malaysia. In: Proc. Dynamic stratigraphy and tectonics of Peninsular Malaysia, Seminar II- The Western Belt and Paleozoic of Peninsular Malaysia and neighbouring areas, p. 1-18.

Jasin, Basir (2008)- Some Permian radiolarians from Bukit Yoi, Pokok Sena, Kedah. Bull. Geol. Soc. Malaysia 54, p. 53-58.
(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm54/bgsm2008009.pdf)
(2m thick chert sequence in Semanggol Fm at N slope of Bukit Yoi, S of Pokok Sena, near Thailand border. Interbedded with siliceous and tuffaceous mudstone. Three E-M Permian radiolarian assemblage zones identified: Pseudoalbaillella scalprata. rhombothoracata (late Sakmarian, late E Permian), P. longtanensis Zone and P. globosa Zone (Kungurian-Roadian, M Permian))

Jasin, Basir (2010)- Warisan geologi Negeri Perlis. Bull. Geol. Soc. Malaysia 56, p. 87-93.
(online at: http://geology.um.edu.my/gsmpublic/GSM_Bulletin/GSM_Bulletin56_Paper13.pdf)
('Geological heritage of Perlis State'. Overview of geology of Perlis province, NW Malay Peninsula and need for protection of sites. 'Sibumasu Blocks' sequence of Cambrian-Triassic sediments, including Ordovician-Devonian Setul Fm with stromatolites, trilobites, graptolites, tentaculites and brachiopods, Carboniferous-Permian Kubang Pasu Fm with bivalves, corals, brachiopods, cephalopods and trilobites and E Permian Monodiexodina shiptoni fusulinid forams ('anti-tropical' genus, also in Sibumasu- Cimmerian terranes; JTvG)).

Jasin, Basir (2013)- *Posidonia* (Bivalves) from northwestern Peninsular Malaysia and its significance. In: Proc. Nat. Geoscience Conf., Ipoh 2013, Geol. Soc. Malaysia, B05, p. 69-71. *(Extended Abstract)*
(online at: www.gsm.org.my/products/702001-101658-PDF.pdf)
(Planktonic bivalve Posidonia common in Kubang Pasu and Singa Fms in NW Peninsular Malaysia and Langkawi Islands (= Sibumasu terrane). Probably Early Carboniferous age. Most of Posidonia in Malaysia closely related to Posidonia becheri (=Posidonomya; see Jasin 2015))

Jasin, Basir (2013)- Chert blocks in Bentong-Raub Suture Zone: a heritage of Palaeo-Tethys. Bull. Geol. Soc. Malaysia 59, p. 85-91.
(online at: www.gsm.org.my/products/702001-100326-PDF.pdf)
(Bentong-Raub Suture Zone is Triassic collision zone between Sibumasu and E Malaya terranes. Remnants of closed E-M Devonian- Permian Paleo-Tethys Ocean include blocks of oceanic sedimentary rocks such as bedded chert blocks in several localities. Radiolarian assemblages in cherts: (1) E Frasnian, (Late Devonian) Trilonche minax Zone, (2) Tournaisian (E Carboniferous) Albaillella deflandrei Zone and (3) Permian radiolarians, incl. M Permian/ Wordian Follicucullus monacanthus Zone)

Jasin, Basir (2015)- *Posidonomya* (Bivalvia) from Northwest Peninsular Malaysia and its significance. Sains Malaysiana 44, 2, p. 217-223.
(online at: www.ukm.my/jsm/pdf_files/SM-PDF-44-02-2015/08%20Basir%20Jasin.pdf)
(Thin-shelled pseudopelagic bivalve Posidonomya common in NW Malay Peninsula, in redbeds of Langkawi Island (Singa Fm) and Perlis and Kedah (Kubang Pasu Fm; above Tournaisian radiolarian cherts). Two taxa: Posidonomya becheri and P. cf. kochi (von Koenen). Occurrence of Posidonomya indicates E Carboniferous age of lower Kubang Pasu/ Singa Fms. Part of widespread tropical-subtropical Paleo-Tethys domain)

Jasin, Basir (2018)- Radiolarian biostratigraphy of Malaysia. Bull. Geol. Soc. Malaysia 65, p. 45-58.
(online at: https://gsmpubl.files.wordpress.com/2018/08/bgsm201805.pdf)
(Two types of radiolarian cherts in Malaysia:bedded chert and chert blocks. Bedded cherts in Peninsular Malaysia mainly in Western Belt (Kubang Pasu, Kenny Hill and Semanggol Fms). In Sabah in Sabah Ophiolite Complex. In Sarawak bedded cherts in Serian Volcanic Fm and at basal part of Pedawan Fm. Chert blocks mainly in Bentong Raub Suture Zone of Peninsular Malaysia and in melanges of Sabah and Sarawak. Radiolarians from Peninsular Malaysia Late Devonian-Triassic, with 16 biozones identified. Radiolarians from Sabah and Sarawak E Jurassic- Cretaceous ages. Five hypersiliceous periods, related to volcanism: Late Devonian-E Carboniferous, Permian, Triassic, E Jurassic and Late Jurassic-Cretaceous)

Jasin, Basir & C.A. Ali (1997)- Lower Permian Radiolaria from the Pos Blau area, Ulu Kelantan, Malaysia. J. Southeast Asian Earth Sci. 15, p. 327-337.
(22 radiolaria species from 30m folded chert sequence in roadcut near Pos Blau, Ulu Kelantan, Malay Peninsula. Located near E margin of Bentong suture and above andesitic volcanics and sheared olistostrome unit. Fauna represents upper Pseudoalbaillella lomentaria Zone, upper Wolfcampian (= Sakmarian; Lower Permian). Associated with ammonoid Agathiceras)

Jasin, Basir & C.A. Ali (1997)- Significance of Early Carboniferous radiolaria from Langkap, Negeri Sembilan, Malaysia. Bull. Geol. Soc. Malaysia 41, p. 109-125.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997028.pdf)
(Thin-bedded folded-sheared mudstone in Langkap chert in Bentong Gp in S-C Malay Peninsula, with 34 radiolarian taxa, incl. Albaillella comuta, A. deflandrei and A. undulata, indicating A. deflandrei Zone of Late Tournaisian age. Assemblage similar to W Europe and suggests deposition in equatorial regions of Tethys. (Late Devonian and E Carboniferous radiolaria from Langkap also studied by Spiller and Metcalfe (1995))

Jasin, Basir, C.A. Ali & K. Roslan Mohamed (1995)- Late Triassic radiolaria from the Kodiang Limestone, northwest Peninsular Malaysia. J. Southeast Asian Earth Sci. 12, p. 31-39.

(Cherty packstone-wackestone in Bukit Kodiang quarry, Kedah, NW Malay Peninsula. With Late Triassic (Late Carnian- M Norian) radiolarian assemblage, not well preserved, 18 species (see also Jasin & Harun 2001))

Jasin, Basir, A. Bashardin & Z. Harun (2013)- Middle Permian radiolarians from the siliceous mudstone block near Pos Blau, Ulu Kelantan and their significance. Bull. Geol. Soc. Malaysia 59, p. 33-38.
(online at: www.gsm.org.my/products/702001-100333-PDF.pdf)
(Large siliceous sediment block in melange in Bentong-Raub Suture, exposed near Pos Blau, Ulu Kelantan, N central Malay Peninsula. Steeply dipping to SE; lower part ribbon chert, upper part interbedded siliceous mudstone and tuffaceous mudstone. Fourteen radiolaria taxa, divided into two zones, Pseudoalbaillella fusiformis and Follicucullus monacanthus, indicating M Permian age. Tuffaceous material related to volcanic activity on E Malaya terrane. Tuffaceous sediments became widespread in Late Permian and Triassic)

Jasin, Basir, A. Bashardin, N. Jamaluddin & N. Ishak (2010)- Occurrence of slate in Perlis and its significance. Bull. Geol. Soc. Malaysia 56, p. 75-78.
(online at: www.gsm.org.my/products/702001-100384-PDF.pdf)
(>100m thick unfossiliferous slate exposed at Bukit Tuntung, Pauh, Perlis, NW Malay Peninsula. Overlain by bedded chert of Kubang Pasu Fm with Tournaisian (basal Carboniferous) radiolarians)

Jasin, Basir & Z. Harun (2001)- Some Triassic radiolarians from the Kodiang Limestone, northwest Peninsular Malaysia. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conference 2001, Pangkor, p. 105-109.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_17.pdf)
(Kodiang Lst of NW Malay Peninsula yielded Late Permian- and early Late Triassic conodonts (Metcalfe 1984, 1992). New samples from clastic-chert sequence at base of Bukit Kechil with 11 taxa of radiolarians. Presence of Entactinia chiakensis, E. nikorni, Thaisphaera minuta, Cenosphaera andoi and Pantanellium? virgeum suggestive of Parentactinia nakatsugawaensis Zone, late Spathian age (E Triassic). Overlying limestone at Bukit Kechil with M Triassic conodonts (Koike 1973) and foraminifera (Gazdzicki & Smit 1977))

Jasin, Basir & Z. Harun (2001)- Some radiolarians from bedded chert of the Kubang Pasu Formation. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conference 2001, Pangkor, p. 110-114.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_18.pdf)
(Radiolarians from chert sequence at Bukit Binjal, Kedah, incl. Entactinia variospina, Callela hexatinian, C. cf. parvispinosa, Treanosphaera hebes, Duplexia parviperforata, etc. Assemblage indicates Late Tournaisian (E Carboniferous) age. Chert deposited on outer shelf of passive margin during high siliceous productivity)

Jasin, Basir & Z. Harun (2004)- Discovery of some Early Carboniferous radiolarians from North Perak and their significance. Bull. Geol. Soc. Malaysia 49, p. 19-24.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004004.pdf)
(Albaillella deflandrei radiolarian assemblage from foldd bedded chert at NW Malay Peninsula- Thailand border area indicates Tournaisian, E Carboniferous age. Presumably from S side of Paleotethys Ocean (Sibumasu). Tournaisian radiolarian cherts widespread in Paleo-Tethys ocean)

Jasin, Basir & Z. Harun (2007)- Stratigraphy and sedimentology of the chert unit of the Semanggol Formation. Bull. Geol. Soc. Malaysia 53, p. 103-109.
(online at: http://geology.um.edu.my/gsmpublic/v53/Pdf%20individual%20papers/16%20Paper.pdf)
(Semanggol Fm outcrops in NW Malay Peninsula. Deep marine clastics with cherts with 5 Permian and 4 E-M Triassic radiolarian biozones. Common tuffaceous material in lower Semanggol Fm, older than Sakmarian, E Permian. Thickness of formation hard to determine due to intense folding-thrusting)

Jasin, Basir & Z. Harun (2009)- Radiolarian biostratigraphy of Peninsular Malaysia- an update. In: 11th Reg. Congress Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA 2009), Kuala Lumpur, p. 57-58. *(Abstract)* *(online at: www.gsm.org.my/products/702001-101669-PDF.pdf)*
(16 radiolarian assemblage zones from Late Devonian- Late Triassic on Malay Peninsula)

Jasin, Basir & Z. Harun (2011)- Radiolarian biostratigraphy of Peninsular Malaysia- an update. Bull. Geol. Soc. Malaysia 57, p. 27-38.
(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm57/bgsm2011005.pdf)
(Deep marine radiolarian cherts common in Late Paleozoic- E Mesozoic of W belt of Peninsular Malaysia. Sixteen radiolarian assemblage zones recognized, from Frasnian (Late Devonian)- Triassic. Most of Permo-Triassic biozones identified from Semanggol Fm)

Jasin, Basir & Z. Harun (2011)- Lower Carboniferous (Tournaisian) radiolarians from Peninsular Malaysia and their significance. Bull. Geol. Soc. Malaysia 57, p. 47-54.
(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm57/bgsm2011007.pdf)
(Tournaisian radiolarians widespread in Peninsular Malaysia especially in W Belt, due to high radiolarian productivity during Tournaisian, related to upwelling of cold dense bottom water, which developed at glacial N Gondwana. Chert is marker bed for Tournaisian age and defines base of Kubang Pasu Fm)

Jasin, Basir, Z. Harun & Siti N. Hassan (2003)- Black siliceous deposits in Peninsular Malaysia: their occurrence and significance. Bull. Geol. Soc. Malaysia 46, p. 149-154.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003025.pdf)
(Paleozoic black radiolarian cherts in NW Malay Peninsula in Setul, Mahang (Ordovician-Silurian), Kubang Pasu (Carboniferous) Fms. Related to high plankton productivity. Lithologic association of chert represents passive continental margin association, with episodic supply of terrigenous material from continent)

Jasin, Basir, Z. Harun & U. Said (2004)- Some Devonian radiolarians from chert blocks in the Bentong-Raub Suture Zone, Pahang. Bull. Geol. Soc. Malaysia 48, p. 81-84.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004a16.pdf)
(Ten radiolarian species from chert blocks along Bentong-Raub road (mainly Trilonche spp. and Stigmosphaerostylus herculea), representing Famennian (Late Devonian) age)

Jasin, Basir, Z. Harun & U. Said (2005)- Triassic radiolarian biostratigraphy of the Semanggol Formation, South Kedah, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 51, p. 31-39.
(online at: http://gsmpubl.files.wordpress.com/2014/09/bgsm2005005.pdf)
(27 taxa of E-M Triassic radiolaria from outcrop of chert units in Semanggol Fm, 4.5 km E of Kuala Ketil, S Kedah, NW Peninsular Malaysia. Four assemblage zones, Entactinosphaera chiakensis (late Spathian), Triassocampe coronata (M Anisian), Triassocampe deweveri (late Anisian) and Oertlispongus inaequispinosus (E Ladinian))

Jasin, Basir, Z. Harun, U. Said & S. Saad (2005)- Permian radiolarian biostratigraphy of the Semanggol Formation, south Kedah, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 51, p. 19-30.
(online at: http://gsmpubl.files.wordpress.com/2014/09/bgsm2005004.pdf)
(37 taxa of Permian radiolaria from Semanggol Fm interbedded siliceous shale-chert-tuff in outcrop 4.5 km E of Kuala Ketil, S Kedah, NW Maly Peninsula. Five radiolarian zones recognized (Pseudoalbaillella scalprata, Folliculus monacanthus, F. porrectus, Neoalbaillella ornithoformis and N. optima), ranging in age from late E Permian (Sakmarian)- Late Permian)

Jasin, Basir, W.F.W. Hassan & M.S. Leman (1992)- The occurrence of bryozoan bed in the Singa Formation, Bukit Durian Perangin, Langkawi. Warta Geologi 18, 2, p. 29-35.
(online at: www.gsm.org.my/products/702001-101484-PDF.pdf)
(A 1m thick bed of E Permian thin-bedded bryozoan-bearing limestone and calcareous sandstone at Bukit Durian Perangin, 14km N of Kuah, Langkawi. Located near top of glacio-marine clastic Singa Fm, probably in transition zone to overlying Chuping Lst. Bryozoan genera Fenestella, Polypora, Dyscritella and Streblascopora exilis indicate Artinskian age, E Permian (similar to Late Artinskian assemblage described by Sakagami (1970) from nearby Ko Muk Island, SW Thailand))

Jasin, Basir, A. Jantan, I. Abdullah & U. Said (1987)- Volcanic ash beds at Kampung Temong, Kuala Kangsar, Perak. Warta Geologi 13, 5, p. 205-211
(online at: www.gsm.org.my/products/702001-101511-PDF.pdf)
(2.5m thick Quaternary volcanic ash on Malay Peninsula composed of 6 reverse-graded ash layers 0.2-0.7m thick. Believed to be derived from Toba eruptions in North Sumatra at ~75,000 years ago)

Jasin, Basir & L.T. Koay (1990)- Permian fusulinids from Bukit Wang Pisang, Perlis. Sains Malaysiana 19, 1, p. 35-44.
(Late Early Permian fusulinid Monodiexodina shiptoni from transitional beds between Kraeng Krachan Gr. clastics and overlying Ratburi Lst-equivalent in NW Malay Peninsula (= 'anti-tropical' genus from Kungurian or Artinskian of Sibumasu Terrane; JTvG))

Jasin, Basir, P. Pengajian, S. Sekitaran & D.S. Alam (2006)- Some deep water Middle Triassic foraminifera from the Semanggol Formation. Bull. Geol. Soc. Malaysia 52, p. 27-33.
(M Triassic benthic foraminifera from Semanggol Fm siliceous mudstones at Bukit Lada and Merbau Pulas include Pseudonodosaria densa. P. lata, P. obconica, P. simpsonensis, Prodentalina spp, Cryptoseptida, Protonodosaria spp., Associated with radiolaria Eptingium manfredi, etc. Indicate deep marine depositional environment above calcite compensation depth)

Jasin, Basir, U. Said & R. Abdul Rahman (1995)- Late Middle Permian radiolaria from the Jengka area, central Pahang, Malaysia. J. Southeast Asian Earth Sci. 12, p. 79-83.
(Nine species of radiolarians from tin, bedded chert in quarry in folded Semantan Fm(?)N of Jengka Pass, at E side of Central basin of Malay Peninsula. Assemblage with Entactinia spp., Hegleria spp., Follicucullus spp. and Pseudobaillella indicative of late M Permian Follicucullus japonicus Zone. Assemblage similar to those described from China and Japan)

Jennings, J.R. & C.P. Lee (1985)- Preliminary note on the occurrence of Carboniferous-age coals and in situ plant fossils in eastern Peninsular Malaysia. Warta Geologi 11, 3, p. 117-121.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1985003.pdf)
(On Carboniferous 'Cathaysian' plant fossils from E Pahang and Terengganu, on E Malaya Block, Malay Peninsula. With cf. Lepidodendron, cf. Archaeocalamites sp., Sphenophyllum tenerrimum, Sphenopteris spp., etc., interpreted as late Lower Carboniferous age (see also Asama 1973, Ohana et al. 1991))

Joeharry, N.A.M., M.S. Leman, C.A. Ali & K.R. Mohamed (2018)- Constraining the Permian-Triassic boundary in the Gua Panjang Hill, Merapoh, Pahang state, Malaysia. Bull. Geol. Soc. Malaysia 66, p. 75-80.
(online at: https://gsm.org.my/products/702001-101753-PDF.pdf)
(Permian- Triassic boundary in Gua Panjanglimestone hill in Merapoh, Pahang (Central Belt of Malay Peninsula). Basal beds with Late Permian foraminifera (Colaniella sp., Ichtyofrondina sp., Palaeotextularia sp.) overlain by dolomitized horizon with earliest Triassic conodonts (Hindeodus parvus, Isarcicella staeschi). Negative carbon isotope excursion, often seen in P-T Boundary sections worldwide, not observed here)

Jones, C.R. (1966)- Geologic map of Pulau Langkawi. Geol. Survey of Malaysia, scale 1:63,360.

Jones, C.R. (1967)- Graptolites of the *Monograptus hercynicus* type recorded from Malaya. Nature 215, 5100, p. 497.
(Brief note on presence of graptolites at many localities of NW Malay Peninsula (Kedah, Perak, Pahang) and Langkawi island, presumed to be of Silurian and E Devonian ages. Presence of monograptids of Monograptus hercynicus type suggestive of Early Devonian, as is presence of associated tentaculitid Nowakia acuaria)

Jones, C.R. (1968)- Lower Paleozoic rocks of Malay Peninsula. American Assoc. Petrol. Geol. (AAPG) Bull. 52, 7, p. 1259-1278.
(Lower Paleozoic in W part of Malay Peninsula comprises U Cambrian-Lower Devonian sediments, including Ordovician- Silurian shelf carbonates, Silurian euxinic facies graptolite argillite and thick flysch-type sequence to East. Acid pyroclastic rocks and ophiolitic igneous rocks associated with eugeosynclinal trough deposits)

Jones, C.R. (1970)- On a Lower Devonian fauna from Pahang, West Malaysia. Bull. Geol. Soc. Malaysia 3, p. 63-75.
(Foothils Formation of W Pahang contains shales with reticulate sponges, brachiopods (Orbuciloidea sinensis) and graptolites. Monograptus cf. praehercycnicus indicates early Lower Devonian age)

Jones, C.R. (1973)- Lower Palaeozoic. In: D.J. Gobbett & Hutchison (eds.) Geology of the Malay Peninsula (West Malaysia and Singapore), Wiley, New York, p. 25-60.
(Lower Paleozoic of Malay Peninsula includes well-developed Ordovician-Silurian Setul Lst in NW, mainly argillaceous Mahang Fm with Silurian- E Devonian graptolites and tentaculites in Kedah, etc.)

Jones, C.R. (1973)- The Siluro-Devonian graptolites of the Malay Peninsula. Inst. Geol. Sciences (Great Britain), Overseas Geology and Mineral Resources, 44, p. 1-28.

Jones, C.R. (1978)- The geology and mineral resources of Perlis, north Kedah, and the Langkawi Islands. Geol. Survey Malaysia, District Mem. 17, p. 1-257.

Jones, C.R., D.J. Gobbett & T. Kobayashi (1966)- Summary of fossil record in Malaya and Singapore 1900-1965. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 309-359.
(Substantial review of mainly U Cambrian- Triassic marine fossils known from Malay Peninsula in 1965, compiled from publications, Geological Survey and British Museum files)

Jones, W.R. (1916)- The origin of the secondary stanniferous deposits of the Kinta District, Perak (Federated Malay States). Quart. J. Geol. Soc. London 72, p. 165-194.

Jusop, S. (2017)- Pyritization of coastal sediments in the Kelantan Plains as evidence for the sea level rise in the Malay Peninsula during the Holocene. Bull. Geol. Soc. Malaysia 64 (Geol. Soc. Malaysia 50th Anniversary Issue 2), p. 59-63.
(online at: www.gsm.org.my/products/702001-101718-PDF.pdf)
(Widespread pyritization (2-3%) of low-lying plains in Malay Peninsula linked to inundation by seawater due to sea level rise of 3-5m, ~43,000 years ago))

Kadir, A.A., B.J. Pierson, Z.Z.T. Harith & Chow W.S. (2009)- Kinta Valley Limestone: clues for a new play? AAPG Convention, Denver, Search and Discovery Article 1019826, p. *(Abstract and Presentation)*
(online at: www.searchanddiscovery.com/documents/2009/10198kadir/ndx_kadir.pdf)
(Karst hills of Ordovician-Permian limestone in Kinta Valley, Malay Peninsula, remnants of large Paleozoic carbonate complex on Sibumasu terrane. Limestones interbedded with sandstone, siltstone and carbonaceous shale over thickness of up to 3000m (??). Slumps and breccia beds indicate slope deposition, slumping to West and N-S platform margin orientation. Potential unexplored new carbonate play E of Malay Peninsula)

Kadir, A.A., B.J. Pierson, Z.Z.T. Harith & Chow W.S. (2010)- Elements of Paleozoic hydrocarbon plays around Peninsular Malaysia. Proc. 46th CCOP Ann. Sess., Vung Tau 2009, p. 18-29.
(Presence of effective Paleozoic hydrocarbon system in Peninsular Malaysia- Malay Basin cannot be ruled out. Permian limestones rel. common in Peninsular Malaysia and may extend offshore, but many are affected by contact metamorphism from Triassic granites)

Kato, M. & Y. Ezaki (1986)- Permian corals from Pahang and Trengganu, Malaysia. J. Fac. Science, Hokkaido University, Ser. 4, 21, 4, p. 645-668.
(online at: http://eprints.lib.hokudai.ac.jp/dspace/bitstream/2115/36745/1/21_4_p645-668.pdf)
(M Permian corals in black limestone breccia associated with andesites in Kampong Awah Quarry, Pahang, C Malay Peninsula. Assigned to Yabeina and Neoschwagerina Zones. Six species, including Waagenophyllum, Michelinia, Wentzelloides, Ipciphyllum, etc., all Tethyan elements (=Cathaysian; E Malaya Plate; JTvG))

Khan, A.A. & M.K. Shuib (2016)- A review of the Bentong-Raub suture vis-a-vis new insight of the tectonic evolution of Malay Peninsula, South East Asia. Acta Geologica Sinica (English Ed.) 90, 5, p. 1865-1886.
(Raub-Bentong suture does not fit model of subduction-related collision, but evolved from transpression tectonics after closure and exhumation of inland basin that underwent back-arc extension during Triassic)

Kimura, T. & C.R. Jones (1967)- Geological structures in the northeastern and southern parts of the Langkawi Islands, North-west Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 3, p. 123-134.
(Langkawi Islands off NW coast Malay Peninsula with complete Late Cambrian- Permian section, intruded by Mesozoic granites. Thrust zones between upper and lower Paleozoic. Probably multiple periods of folding)

Khoo, Han Peng (1983)- Mesozoic stratigraphy in Peninsular Malaysia. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 370-383.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_26.pdf)
(Mesozoic of Malay Peninsula in two separate belts: (1) NW corner and (2) N-S axial region. Two main sequences, mainly Triassic flysch sequence and Late Jurassic- E Cretaceous molasse sequence. In NW corner M-L Triassic Kodiang Lst is time equivalent of deeper marine Semanggol Fm with Halobia, Daonella)

Khoo, K.K. (1978)- Serpentinite occurrence at Telok Mas, Melaka. Warta Geologi (Geol. Soc. Malaysia Newsletter) 4, 1, p. 1-6.
(online at: www.gsm.org.my/content.php?id=54&pid=702001-101569)
(Serpentinite in drill core ~11km SE of Malacca town. First in situ occurrence reported W of Main Range)

Khoo, T.T. (1984)- The terrane of the Patani Metamorphics. Bull. Geol. Soc. Malaysia 17, p. 79-95.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1984006.pdf)
(Regional metamorphic terrane in W Kedah, trending NW-SE, ~30km wide>and >650 km2 in size. Regional metamorphism is believed to have ended by M Carboniferous followed by emplacement of Jerai granite in M-L Carboniferous. Onset of regional metamorphism believed to be E Devonian (NB: Jerai granite dated as 204-206 Ma by Jamil and Ghani 2014; typical latest Triassic Main Range granite; JTvG))

Khoo, T.T. (1984)- Evidence of polymetamorphism in the Rebak Islands, Langkawi, Kedah. Bull. Geol. Soc. Malaysia 17, p. 265-281.
(online at: www.gsm.org.my/products/702001-101151-PDF.pdf)
(Clastics of Rebak islands (SW Langkawi) underwent low-grade regional metamorphism followed by contact metamorphism from granitic source (tourmalinization and pyritization evidence of metasomatism))

Khoo, T.T. & S.P. Lim (1983)- Nature of the contact between the Taku Schists and adjacent rocks in the Manek Urai area, Kelantan and its implications. Bull. Geol. Soc. Malaysia 16, p. 139-158.
(online at: www.gsm.org.my/products/702001-101170-PDF.pdf)
(Taku Schists widespread (750 km2) in N Kelantan Province, NE Malay Peninsula. Contact between schist and adjacent rocks interpreted to be conformable (but tectonic disconformity suggestd by Hutchison 1973). Age of protoliths Permo-Triassic, possibly also older. Age of regional metamorphism may be E-M Triassic, uplift likely in Late Triassic)

Khoo, T.T. & B.K. Tan (1983)- Geologic evolution of Peninsular Malaysia. In: T. Thanasuthipitak et al. (eds.) Proc. Workshop on Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, 1, p. 253-290.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_15.pdf)
(Peninsular Malaysia three longitudinal belts, E, C and W, each with own geological development. Post mid-Permian deposition of carbonates and clastics and whole region uplifted by culminating late Triassic orogenic event which affected entire peninsula. Aborted rift model for the tectonic development of Central Belt. Etc.)

Khoo, T.T., B.S. Yaw, T. Kimura & J.H. Kim (1988)- Geology and palaeontology of the Redang islands, Trengganu, Peninsular Malaysia. J. Southeast Asian Earth Sci. 2, p. 123-130.
(Redang islands highly folded clastic sediments, contact metamorphosed by granitic intrusion. Fluvial-nearshore Redang beds and deeper marine Pinang beds. Fossil plants in Redang beds include Calamites, Pecopteris, Cordaites and Taenopteris, resembling Late Carboniferous-Permian species)

Kobayashi, T. (1959)- On some Ordovician fossils from the northern Malaya and her adjacence. J. Fac. Science, University of Tokyo, 2, 11, p. 387-407.
(Early study of Ordovician fossils from NW Malay Peninsula/ Langkawi. Incl. gastropod Teiichispira zonata)

Kobayashi, T. (1963)- On the Triassic *Daonella* beds in central Pahang, Malaya (Contributions to the geology and Palaeontology of Southeast Asia 3). Japanese J. Geology Geography 34, p. 101-112.
(Triassic Daonella faunas with 5 species incl. D. indica, D. lommeli, D. pichleri and D. pahangensis n.sp., from Temerloh area, Pahang, Central Malay Peninsula. Triassic shales of Temerloh associated with Pahang Volcanics tuffs. Typical Tethyan fauna, mainly of Ladinian age. Similar distribution to Myophoria sandstones across Malay Peninsula)

Kobayashi, T. (1963)- *Halobia* and some other fossils from Kedah, northwest Malaya (Contributions to the geology and Palaeontology of Southeast Asia 4). Japanese J. Geology Geography 34, p. 113-128.
(Occurrence of Ladinian-Norian hemipelagic bivalves Posidonia kedahensis n.sp., Halobia talauana Wanner, Halobia parallella Kobayashi and Halobia comata Bittner in Semanggol Fm, NW Malay Peninsula)

Kobayashi, T. (1964)- On the Triassic *Daonella* Beds in Central Pahang, Malaya. In: T. Kobayashi (ed.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 53-68.
(Same paper as Kobayashi 1963. Five species of Daonella (one new species Daonella pahangensis) from M Triassic shales NW of Temerloh. Same paper as Kobayashi 1963)

Kobayashi, T. (1964)- *Halobia* and some other fossils from Kedah, northwest Malaya. In: T. Kobayashi (ed.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 69-87.
(Same paper as Kobayashi 1963. Occurrence of Ladinian-Norian hemipelagic bivalves Posidonia kedahensis n.sp., P. siamensis, P. cf. japonica, Halobia talauana Wanner, H. charlyana, H. parallella Kobayashi and Halobia comata Bittner, Daonella indica, etc., in Semanggol Fm, NW Malay Peninsula))

Kobayashi, T. (1984)- On the geological history of Thailand and West Malaysia. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 3-42.
(Stratigraphy-oriented review of Paleozoic- Recent of Thailand-Malay Peninsula area)

Kobayashi, T., C.K. Burton, A. Tokuyama & E.H. Yin (1967)- The *Daonella* and *Halobia* facies of the Thai-Malay Peninsula compared with those of Japan. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 3, p. 98-122.
(M-L Triassic mollusc-bearing beds in Malay Peninsula E and W zones. Daonella and Halobia widespread in deep-water W zone, from S Thailand through Kedah to N Perak ('Semanggol Fm'). Daonella Beds mainly Ladinian, Halobia beds mainly Carnian- E Norian. E zone on E side of Main Range, from Kelantan via Pahang and Johore to Singapore, characterized mainly by nearshore Myophoria sandstones)

Kobayashi, T. & T. Hamada (1964)- On a new Malayan species of *Dalmanitina*. In: T. Kobayashi (ed.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 221-235.
(Early Silurian (Landoverian) trilobite Dalmanitina malayensis n.sp. from Langkawi Island. Comparable to D. hastingsi from basal Silurian of Shan States, Myanmar)

Kobayashi, T. & T. Hamada (1966)- A new proetoid trilobite from Perlis, Malaysia (Malaya). In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 245-250.
(New trilobite Cyrtosymbole (Waribole) perlisensis from Kubang Pasu Fm in Perlis, NW Malay Peninsula (probably E Carboniferous age))

Kobayashi, T. & T. Hamada (1970)- A Cyclopygid-bearing Ordovician faunule discovered in Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 8, p. 1-16.

Kobayashi, T. & T. Hamada (1971)- Agnostoid trilobites in a Devonian formation in West Malaysia. Proc. Japan Academy 47, 4, p. 396-400.
(online at: www.journalarchive.jst.go.jp/...)

Kobayashi, T. & T. Hamada (1971)- Silurian trilobites from the Langkawi islands, West Malaysia, with notes on the Dalmanitidae and Raphiophoridae. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 9, p. 87-134.

Kobayashi, T. & T. Hamada (1972)- A unique trilobite assemblage of the Devonian Kroh fauna in West Malaysia, with notes on the *Tentaculites* facies and the older Palaeozoic faunal sequence in Thailand-Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 10, p. 1-34.
(Trilobite assemblage from Kroh, Upper Perak, NW Malay Peninsula with 13 species, incl. Pseudotrinodus spp., Perakaspis spp., Blanodalmanites spp., etc.. Associated with tentaculites (Nowakia acauria))

Kobayashi, T. & T. Hamada (1973)- Cyrtosymbolids (Trilobita) from the Langgon red beds in northwest Malaya, Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 1-28.
(Trilobites associated with brachiopods from 4 localities U Devonian- Lower Carboniferous Langgun Fm marine red mustones of NW Malay Peninsula and Langkawi. Four species, incl. Cyrtosymbole (Waribole) perlisensis, Macrobole kedahensis, etc.)

Kobayashi, T. & T. Hamada (1978)- Upper Ordovician trilobites from the Langkawi islands, Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 1-27.

Kobayashi, T. & T. Hamada (1979)- Permo-Carboniferous trilobites from Thailand and Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 20, p. 1-21.
(New collections of trilobites from U Carboniferous- Lw Permian from Loei District. Seven new species of M-L Permian trilobites Paladin, Thaiaspis, etc. described. Also two M Permian pygidia from N Pahang, Malay Peninsula: Ditomopyge sp and a Neoproetus from near Kuala Lipis, Pahang)

Kobayashi, T. & T. Hamada (1981)- Trilobites of Thailand and Malaysia. Proc. Japan Academy, Ser. B, 57, 1, p. 1-6.
(online at: www.jstage.jst.go.jp/article/pjab1977/57/1/57_1_1/_pdf)
(Brief review of 11 occurrences of Late Cambrian- Permian trilobites from Thailand and Malaysia (mainly from Sibumasu terrane?))

Kobayashi, T. & T. Hamada (1984)- Trilobites of Thailand and Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 273-284.
(Same paper as Kobayashi & Hamada (1981))

Kobayashi, T., C.R. Jones & T. Hamada (1964)- On the Lower Silurian shelly fauna in the Langkawi Islands, northwest Malaysia. In: T. Kobayashi (ed.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 209-220.
(Pulau Langgon (Langkawi Islands) with >2400' thick Setul Fm limestone-dominated section. With detrital bands with graptolites (Climacograptus), trilobites (Dalmanitina malayensis), etc.)

Kobayashi, T., G.A. Sai & K.N. Murthy (1984)- On the geological age of the Tanjong Malim Limestone in Peninsular Malaysia. Proc. Japan Academy 55, B, 6, p. 259-263.

(online at: https://www.jstage.jst.go.jp/article/pjab1977/55/6/55_6_259/_pdf)
(Macrofossils in limestone intercalated with argillaceous rocksand quartzite at Tanjung Malim, 80km NNW of Kuala Lumpur. thermally metamorphosed by Triasic granite intrusion. Fossils incl. straight nautiloids (Endoceras, Orthoceras, Ormoceras) and gastropods (Lophospira). Most likely of M Ordovician age)

Kobayashi, T. & M. Tamura (1968)- *Myophoria* (s.l.) in Malaya with a note on the Triassic Trigoniacea. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 88-137.
(Taxonomic review of 13 species of M-U Triassic Trigoniacea bivalves from 'Myophoria Sandstone belt' in Central Belt at E side of Main Range of Malay Peninsula (Chegar Perah, Temerloh, Jurong-Singapore, Kuala Lipis). Presence of Neoschizodus, Myophoria, Costatoria (7 species, incl. C. myophoria, C. pahangensis, C. chegarpahangensis n. sp.), Elegantinia, etc. (Deposits now called Semantan Fm, viewed as M-U Triassic foreland or fore-arc basin along W side of E Malaya Terrane (Ismail 2007); Myophorids from Padang Beds of Sumatra limited to 3 Norian species of Costatoria))

Kobayashi, T. & M. Tamura (1968)- Upper Triassic pelecypods from Singapore. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 138-150.
(Rel. poorly preserved Late Triassic neritic bivalves from Jurong Industrial Estate, SW Singapore. With 17 species, incl. Halobia ex. gr. verbeeki, Costatoria cf. myophoria and other spp., Cassianella cf. verbeeki, Pecten (Entolium?), Cardium scrivenori n.sp. (with affinities to Cardium martini of Sumatra), etc., probably of Early Norian age. Fauna similar to Katialo Fauna of Sumatra described by Krumbeck (1914) and also to Mount Faber, Singapore, fauna described by Newton (1923))

Koike, T. (1973)- Triassic conodonts from Kedah and Pahang, Malaysia. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 91-113.
(Triassic conodonts from N Kedah, Bukit Kecil (probably Ladinian, with Epigondiella mungoensis, Paragondolella polygnathiformis, Neogondolella, etc.) and Bukit Kodiang (E Carnian?; mainly P. polygnathiformis). Also samples from chert of Semanggol Fm at Tawar (S Kedah; within late Ladinian- E Carnian) and 3 km NW of Kampong Awah (C Pahang; E Carnian))

Koike, T. (1982)- Triassic conodont biostratigraphy in Kedah, West Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 23, p. 9-52.

Kon'no, E. (1967)- Some younger Mesozoic plants from Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 3, p. 135-164.
(Nine fossil plants from 'Gagau Flora' from 'post-orogenic' Gagau/ Tebak Fm clastics from 3 areas in median zone of Malay Peninsula, incl. in Gunong Gagau area of N Pahang. Most likely age early E Cretaceous, possibly including Late Jurassic. Descriptions of Equisetites, Gleichenites, Ptilophyllum, Frenelopsis, etc. Floral affinity with East Asia, very different from India flora. See also Kon'no 1968, Smiley 1970)

Kon'no, E. (1968)- Addition to some younger Mesozoic plants from Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 139-155.
(Nine fossil plants of E Cretaceous 'Gagau Flora', newly collected from Sungei Pertang, Kelantan, incl. Gleichenoides spp., Otazamites, Pelourdea, Cupressinocladus, Conites, etc.)

Kon'no, E. & K. Asama (1970)- Some Permian plants from the Jengka Pass, Pahang, West Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 8, p. 97-132.
(U Permian 'Cathaysian' flora with 24 species, incl. Bicoemplectopteris hallei (also common in Cathaysian Gigantopteris flora of S China)

Kon'no, E. & K. Asama (1975)- Younger Mesozoic plants from Ulu Endau, Pahang, West Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 16, p. 91-102.

Kon'no, E., K. Asama & S. Rajah (1970)- The Late Permian Linggiu flora from the Gunung Blumut area, Johore, Malaysia. Bull. Nat. Science Museum, Tokyo, 13, 3, p. 491-580.
(Rel. rich early Late Permian flora from C Johore, SE part of Malay Peninsula. In ~1000-2000' thick Linggiu Fm folded sand-shale-volcanics series. 35 species, many index fossils of North Cathaysian Gigantopteris-Lobatannularia spp. Fauna (correlative with Upper Shihhotse Series of N Cathaysia). Also Pecopteris, Rahajia, Taenioperis, etc.. Only 5 species in common with Jambi flora of Sumatra, which is deemed to be older (Artinskian; tied to Shansi series of N Cathaysia, but lacks some key taxa of that flora))

Kon'no, E., K. Asama & S. Rajah (1971)- The Late Permian Linggiu flora from the Gunung Blumut area, Johore, Malaysia. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 9, p. 1-85.
(Same paper as Kon'no et al. (1970). Linggiu flora from C Johore with 35 early Late Permian species characteristic of N Cathaysian Gigantopteris- Lobatannularia assemblage. Different from nearby, older Permian Jambi Flora)

Koopmans, B.N. (1965)- Structural evidence for a Palaeozoic orogeny in northwest Malaya. Geol. Magazine 102, p. 501-520.
(Lower Paleozoic rocks in Langkawi Islands subjected to late Silurian-Devonian 'Langkawi folding phase' (dynamo-metamorphic slates in SE with NNW cleavage; in unmetamorphosed N part of area cross-folding with NW trend superimposed on NNE trending folds). In U Paleozoic sediments such deformations are missing: Permian and Carboniferous only slightly warped around Jurassic granite batholith. Lack of Devonian strata in Thailand and incompleteness of Devonian sequence in Malaya may indicate Langkawi folding phase not restricted to Langkawi Islands (comparable to U Paleozoic unconformity in N Sumatra, described by Zwierzycki 1919, Klein 1917?) (see also critique of Burton (1966), who argues for ' Langkawi folding phase' of M-U Carboniferous age)

Koopmans, B.N. (1966)- Palaeozoic orogeny in North-West Malaya- a reply. Geol. Magazine 103, 6, p. 565-567.
(Reply to critique of Burton (1966))

Koopmans, B.N. (1968)- The Tembeling Formation- a litho-stratigraphic description (West Malaysia). Bull. Geol. Soc. Malaysia 1, p. 23-43.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1967003.pdf)
(Tembeling Fm 'molasse facies' fluviatile-deltaic lacustrine post-orogenic sediments in E Malay Peninsula. Thickness at type section in Pahang >3000m. Age probably late Triassic- Jurassic. Incl. thick polymict conglomerates, argillaceous red-beds, etc. Unconformably overlies Carboniferous, Permian and Triassic rocks. Folded Tembeling Fm unconformably overlain by flat-lying beds of Late Jurassic- E Cretaceous Gagau Gp)

Koraini, A.M., Z. Konjing & M. Malihan (2012)- Tertiary palynomorph assemblage from eastern Chenor, Pahang. Bull. Geol. Soc. Malaysia 58, p. 37-42.
(online at: www.gsm.org.my/products/702001-100353-PDF.pdf)
(Palynological assemblages from clastic sediments in outcrop in C Pahang dominated by Late Miocene or younger palynomorphs such as Lanagiopollis emarginatus, Stenochlaenidites papuanus, Discoidites borneensis, Taxodiaceae, etc.. Suggestive of ephemeral peat swamp and riparian fringe type environment)

Krahenbuhl, R. (1991)- Magmatism, tin mineralization and tectonics of the Main Range, Malaysian Peninsula: consequences for the plate tectonic model of Southeast Asia based on Rb-Sr, K-Ar and fission track data. Bull. Geol. Soc. Malaysia 29, p. 1-100.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991010.pdf)
(Malaysian Peninsula divided by suture into 2 different magmatic provinces. Major magmatic event in Main Range Late Permian. Also common Later Triassic post-collision granites, with major tin mineralization. Apatite fission track data show rapid Oligocene (33-24 Ma) exhumation of Malay Peninsula Tin granites, etc.)

Kumar, S.C. (1981)- Gabbroic rocks from the southern Malay Peninsula and their relation to similar rocks of other orogenic zones. Geol. Soc. Malaysia, Bull. 14, p. 75-100
(online at: www.gsm.org.my/products/702001-101197-PDF.pdf)
(Linden (NW of Johore) and Gombak (Singapore) gabbroic stocks outcrop as two discrete bodies in S tip of Malay Peninsula. Together with gabbroic rocks in Billiton Island represent elements of Eastern volcanic-plutonic belt, active from Carboniferous- Late Triassic)

Kummel, B. (1960)- Anisian ammonoids from Malaya. Breviora 124, p. 1-8.
(online at: www.archive.org/details/breviora121178harv)
(M Triassic ammonites from folded dark grey shales 10.5 miles SSW of Kuala Lipis, Pahang, central Malay Peninsula (= E Malaya/ Indochina terrane?: JTvG). Contains Tethyan species Paraceratites trinodosus, Sturia sansovinii, Acrochordiceras and Ptychites)

Kwan, T. S., R. Krahenbuhl & E. Jager (1992)- Rb-Sr, K-Ar and fission track ages for granites from Penang Island, West Malaysia: an interpretation model for Rb-Sr whole-rock and for actual and experimental mica data. Contrib. Mineralogy Petrology 111, 4, p. 527-542.
(Penang Island NW extension of Peninsular Malaysia Western Magmatic Belt. Three granite emplacement episodes: ~307 Ma (Late Carboniferous), ~251 Ma (Permian-Triassic boundary) and ~211 Ma (Late Triassic). Late-Triassic hydrothermal system responsible for Rb-Sr and K-Ar biotite age resetting of older granites. Change in tensional regime since Oligo-Miocene, accompanied by SW tilting of island)

Kwan, T.S. & F.L. Yap (1986)- The pattern of K/Ar ages of biotites from the granites of Penang: its interpretation in the light of available Rb/Sr and U/Pb data. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 281-289.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986021.pdf)
(Rb/Sr whole-rock and zircon U/Pb data indicate granites of Penang Island emplaced in late Triassic between 222 Ma and 209 Ma. K/Ar analysis of 31 biotite samples show younger apparent ages, decreasing to SSE from 209 Ma to 160 Ma. Trend of younging apparent ages suggests rejuvenation on regional scale

Lane, H.R., K.J. Muller & W. Ziegler (1979)- Devonian and Carboniferous conodonts from Perak, Malaysia. Geologica et Palaeontologica 13, p. 213-222.
(Devonian and Carboniferous conodonts from J.K.R. quarry in S part Gunung Kanthan, Peral, NW Malay Peninsula)

Latiff, A.H.A. & A.E. Khalil (2018)- Crustal thickness and velocity structure of southern Peninsular Malaysia. Bull. Geol. Soc. Malaysia 66, p. 7-13.
(online at: https://gsm.org.my/products/702001-101761-PDF.pdf)
(Broadband seismometer station earthquake data suggest crust-mantle boundary at 34 km and 30 km beneath Kota Tinggi and Bukit Timah (Singapore) stations)

Latiff, A.H.A. & A.E. Khalil (2019)- Crustal thickness and velocity structure of Malay Peninsula inferred from joint inversion of receiver functions and surface waves dispersion. J. Asian Earth Sci. 169, p. 105-116.
(online at: https://www.sciencedirect.com/science/article/pii/S136791201830350X)
(Seismic inversion indicates Moho boundary shallower toN of Malay Peninsula: depth of crust-mantle boundary from 34 km in S to 26 km in S Thailand)

Laveine, J.P. & A.H. Hussin (2003)- The Carboniferous flora of Eastern Peninsular Malaysia. Revue Paleobiologie, Geneve, 22, 2, p. 811-830.
(Carboniferous floras of E Peninsular Malaysia and NE Thailand typical Euramerican aspect. Indochina Block (NE Thailand) and probably also E Malaya Block (E Peninsular Malaysia) in terrestrial connection with N Palaeotethyan land mass, most probably S China Block, at least since E Carboniferous)

Lee, C. (1980)- Two new Permian ammonoid faunas from Malaysia. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 63-72.
(Two new E-M Permian ammonoid occurrences on: (1) Prostacheoceras, Neocrimites and Adrianites from Lee Mines in Perak, NW Malay Peninsula (Artinskian), and (2) Agathiceras suessi, Adrianites eleans and Popanocera from S. Cheroh, Pahang, C Malay Peninsula (Wordian). Faunas transitional between those from Sicily and Bitauni-Basleo, Timor)

Lee, C.P. (1983)- Stratigraphy of the Tarutao and Machinchang Formations. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 20-38.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_02.pdf)
Review of ~3000m thick mainly shallow marine clastic sections of age-equivalent Cambro-Ordovician Machinchang Fm (NW Malaysia, Langkawi island) and Tarutao Fm (SW Thailand, Ko Tarutao). Somewhat thicker and coarser in S. Overlain by Ordovician limestones of Setul Fm (part of 'Sibumasu Terrane'; similar to Arafura- W Papua stratigraphy?; JTvG))

Lee, C.P. (1993)- Fossil localities in Malaysia: their conservation and significance. Background Paper, Malaysan National Conservation Strategy, Economic Planning Unit, Kuala Lumpur, p. 1-35.
(online at: http://repository.wwf.org.my/technical_reports/...)
(Overview of significant fossil localities on Malay Peninsula, Sarawak and Sabah)

Lee, C.P. (2001)- Scarcity of fossils in the Kenny Hill Formation and its implications. Gondwana Research 4, 4, p. 675-677.
(Permian Kenny Hill Fm is 1200-1500m thick sequence of clastic sediments W and S of Kuala Lumpur. Part of Sibumasu terrane, just W of Bentong Raub suture. Except for single find of E-M Permian ammonoid, Agathiceras no datable body fossils reported. Shallowing-upward succession, reflecting closing of Raub suture)

Lee, C.P. (2001)- Occurrences of *Scyphocrinites* loboliths in the Upper Silurian Upper Setul limestone of Pulau Langgun, Langkawi, Kedah and Guar Sanai, Berseri, Perlis. Proc. Geol. Soc. Malaysia Ann. Geol. Conf., Pangkor Island 2001, Perak, p. 99-104.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_16.pdf)
(Scyphocrinites loboliths (bulbous floats attached to roots of Late Silurian- E Devonian crinoid) in U Silurian U Setul Lst of Pulau Langgun, Langkawi and inh quarry at Guar Sanai, near Guar Jentik, Berseri, Perlis)

Lee, C.P. (2004)- Palaeozoic. In: C.P. Lee et al. (eds.) Stratigraphic Lexicon of Malaysia, Geol. Soc. Malaysia, p. 3-26.
(online at: https://gsmpubl.files.wordpress.com/2014/09/lexicon.pdf)
(Paleozoic sedimentary rocks ~25% of outcrop of Malay Peninsula. In Sarawak only pre-Upper Carboniferous Tuang formation and U Carboniferous- Lower Permian Terbat Fms. No Paleozoic rocks known from Sabah. Paleozoic formations of Peninsular Malaysia in 3-4 NW/N trending zones. Lower Paleozoic rocks confined to W part of peninsula)

Lee, C.P. (2005)- Discovery of plate-type scyphocrinoid loboliths in the uppermost Pridolian- lowermost Lochkovian Upper Setul limestone of Peninsular Malaysia. Geological Journal 40, 3, p. 331-342.
(Floats attached to roots of Late Silurian to Early Devonian crinoids up to 16cm in diameter in top part of U Setul Limestone of Langgun, Langkawi Island, and Guar Jentik on adjacent NW Malay Peninsula (Sibumasu Terrane))

Lee, C.P. (2006)- The Cambrian of Malaysia. Palaeoworld 15, p. 242-255.
(Cambrian of Malaysia best represented by few 1000m thick quartzose Machinchang Fm in Langkawi, Kedah, NW Peninsular Malaysia. Basal part prograding prodelta clastics, middle part estuarine channel-fills and upper shoreface, beach, etc. deposits, youngest member shoreface to lagoonal. Grades upward into Ordovician Setul Fm limestone)

Lee, C.P. (2009)- Palaeozoic stratigraphy. In: C.S. Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 55-86.
(Paleozoic rocks outcrop over ~25% of Malay Peninsula. Peninsula subdivided into 3 belts and a NW Domain. W and NW domains are 'Gondwanan' Late Cambrian- Triassic stratigraphy (incl. thick Ordovician- Devonian limestones and Carboniferous- E Permian glacial diamictites). C and E belts are 'Cathaysian', highly deformed marine Carboniferous- Permian sediments (including Permian fusulinid limestone and shale with Gigantopteris flora), unconformably overlain by U Triassic- Lw Jurassic redbeds)

Lee, C.P. (2013)- Review of the Palaeozoic stratigraphy of the Langkawi Islands, Malaysia. Berita Sedimentologi 27, p. 5-14.
(online at: www.iagi.or.id/fosi/files/2013/08/BS27-Sumatera_Final.pdf)
(Langkawi, off NW Malay Peninsula, part of W Belt ('Sibumasu' microcontinent), with rel. complete Paleozoic section exposed. Machinchang Fm Cambrian quartzose sandstones, Setul Fm Ordovician- E Devonian limestones, Singa Fm Carboniferous- E Permian marine clastic with glacial diamictite, Chuping Fm E-M Permian limestone with fusulinids, Late Triassic and Late Cretaceous granite)

Lee, C.P. & H.H. Meor (2005)- Contributions from the geology of Northeast Langkawi to refining the Mid-Palaeozoic stratigraphy and palaeogeography of Peninsular Malaysia. Malaysian J. Science 24 (Langkawi Spec. Issue), p. 9-14.
(New stratigraphic nomenclature based on observations on Pulau Langgun. Kilim brachiopod beds clues to Late Paleozoic glacial event, indicating proximity of Langkawi to Gondwana during that time)

Lee, C.P., M.S. Leman, K. Hassan, B.M. Nasib & R. Karim (2004)- Stratigraphic lexicon of Malaysia. Geol. Society Malaysia, Kuala Lumpur, p. 1-162.
(online at: www.gsm.org.my/products/702001-100847-PDF.pdf)

Lee, C.Y. (1998)- The Bukit Arang Tertiary basin in Chuping, Perlis. Bull. Geol. Soc. Malaysia 42, p. 179-186.
(online at: www.gsm.org.my/products/702001-100847-PDF.pdf)
(Bukit Arang small Late Tertiary Basin in N Malay Peninsula-Thailand border area. Thickness from gravity data up to 800m thick. Underlain by Carboniferous clastics of Kubang Pasu Fm. May be correlated with Batu Arang Tertiary Basin of Late Oligocene- Late Miocene age in Selangor and other Tertiary basins in peninsula)

Leman, M.S. (1990)- Permian Productidina of Britain and Malaysia. Ph.D. Thesis, Durham University, p. 1-286.
(online at: http://etheses.dur.ac.uk/6293/1/6293_3648.PDF)

Leman, M.S. (1993)- Upper Permian brachiopods from northwest Pahang, Malaysia. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, p. 202-218.
(U Permian- M Triassic Gua Musang Fm in NW Pahang in central belt of Malay Peninsula (= W margin of E Malaya Block?) with rich U Permian 'S Tethyan' brachiopod assemblages, in tuffaceous shales. Most of fauna warm water olhaminids and may be regarded as 'Leptodus Shale', which seems to have flourished on shallow shelf or on volcanic islands. Two zones: Oldhamina dicipens and Haydenella minuta (Leptodus shale of C Malay Peninsula also described by Muir-Wood 1948). Associated with pectinid bivalves, one fusulinid horizon and rare plant remains (incl. Lobatanularia, Taenopteris, Pecopteris= Cathaysian?))

Leman, M.S. (1994)- The significance of Upper Permian brachiopods from Merapoh area, northwest Pahang. Bull. Geol. Soc. Malaysia 35, p. 113-121.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994011.pdf)
(Rich U Permian brachiopod-dominated shelly fauna in M Permian- E Triassic Gua Musang Fm of Merapoh area, NW Pahang, C Malay Peninsula, wit 40 species, incl. Leptodus nobilis, L. cf. catenata. and Oldhamina decipiens. With horizon of 'U Permian Leptodus Shale', which developed on shallow carbonate and volcanic highs during period of active volcanism (Capitanian?))

Leman, M.S. (1995)- Permian ammonoids from Kuala Betis area, Kelantan and their paleogeographic significance. Bull. Geol. Soc. Malaysia 38, p. 153-158.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995014.pdf)
(Two new Permian ammonoid localities in tuffaceous mudstones in Gua Musang Fm metasedimentary-pyroclastic sequence in Kuala Betis area, SW Kelantan. Fauna with Agathiceras cf. suessi, Adrianites, Popanoceras., Propinacoceras, Hoffmannia, etc. and small orthoconic cephalopods. Assemblages resemble M Permian Sg Cheroh cephalopod fauna and are associated with deep water sediment in Bentong (Paleotethys) suture zone. Similarities with Italian Socio, Timor Basleo fauna and other ammonoid occurrences in Europe, N Africa and W Asia indicate oceanic link between these pelagic faunas in M Permian)

Leman, M.S. (1996)- The occurrence of brachiopods from pebbly mudstone near Kilim, Langkawi: their age, paleobiogeography and paleoclimatic implication. Warta Geologi 22, 2, p. 100-102. *(Conference Abstract)*
(online at: www.gsm.org.my/products/702001-101460-PDF.pdf)
(Gondwanan cold water brachiopod assemblage of 8 species in upper Singa Fm in Kilim quarry, Langkawi islands (= Sibumasu terrane). Includes Spirelytha, Sulciplica, Bandoproductus, etc. Indicating late E Permian (Sakmarian) age. Same species also reported from Ko Muk (Thailand))

Leman, M.S. (1997)- The age and paleobiogeography of brachiopod fauna discovered in pebbly mudstone at Kilim, Langkawi. Bull. Geol. Soc. Malaysia 40, p. 233-240.
(online at: www.gsm.org.my/products/702001-100877-PDF.pdf)
(Rich, thick-shelled cold water brachiopod assemblage near top of pebbly mudstone of Singa Fm in Kilim area, E Langkawi, with Spirelytha buravasi, Sulciplica thailandica, Lamniplica cf sapa, Rhynchopora, Streptorhynchus, Arctitreta, etc. Similar to assemblage described by Waterhouse(1982) from Ko Muk, Thailand. Presence of Bandoproductus monticulus suggests E Permian (Late Asselian- Sakmarian) age. Kilim brachiopod fauna close affinity with other E Permian south temperate or peri-Gondwana fauna. Faunas support marine glacial diamictite origin for pebbly mudstone)

Leman, M.S. (1997)- Batuan Formasi Singa di Pulau Langkawi. In: I. Komoo et al. (eds.) Geological heritage of Malaysia: conservation geology for ecotourism, LESTARI UKM, p. 185-207.
('Rocks of the Singa Formation on Langkawi Island')

Leman, M.S. (2000)- Langkawi dropstones: outstanding glaciogenic sedimentological features in Malaysia. In: I. Komoo & H.D. Tjia (eds.) Geological heritage of Malaysia: resource development for conservation and nature tourism. LESTARI UKM, p. 59-82

Leman, M.S. (2003)- An Early Permian (Early Sakmarian) brachiopod fauna from the Sungai Itau Quarry and its relationship to other Early Permian brachiopod horizons in Langkawi, Malaysia. Bull. Geol. Soc. Malaysia 46, p. 155-160.
(online at: www.gsm.org.my/products/702001-100666-PDF.pdf)
(Rich brachiopod bed with 12 species in quarry at Kampung Sllngai Itau, Langkawi, right above beds previously interpreted as E Permian deglaciation deposits. Fauna dominated by spinose genus Spirelytha spp., large thick-shelled Sulciplica thailandica and Bandoproductus cf. monticulus. Assigned to upper Arctitreta-Bandoproductus Zone of E Permian (E Sakmarian))

Leman, M.S. (2004)- Mesozoic. In: C.P. Lee et al. (eds.) Stratigraphic Lexicon of Malaysia, Geol. Soc. Malaysia, p. 37-64.
(online at: https://gsmpubl.files.wordpress.com/2014/09/lexicon.pdf)

Leman, M.S., I. Komoo, K. Roslan, C.A. Ali & T. Unjah (2007)- Geopark as an answer to geoheritage conservation in Malaysia- The Langkawi Geopark case study. Bull. Geol. Soc. Malaysia 53, p. 95-102.
(online at: http://geology.um.edu.my/gsmpublic/v53/Pdf%20individual%20papers/15%20Paper.pdf)
(On preservation of famous 'Sibumasu' Paleozoic section outcrops of Langkawi island, off Malay Peninsula)

Leman, M.S., K.R. Mohamed & M. Sone (2000)- On the new Permian Bera Formation from the Bera District, Pahang, Malaysia. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf. 2000, Pulau Pinang, p. 151-158.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_21.pdf)
(New Bera Formation introduced for M Permian strata exposed in Bera District, Pahang, C Malay Peninsula. Lithology mainly shale, siltstone and sandstone, deposited in shallow marine environment. With ammonoid Agathiceras, trilobite Pseudophillipsia, brachiopods incl. lyttoniid genus Gubleria (similar to Leptodus nobilis; see also Sone et al. 2001). Upper part of Bera Fm equivalent to limestones at Jengka Pass and Kampung Awah with late M Permian fusulinid foraminifera)

Leman, M.S., N. Ramli, S. Mohamed & C. Molujin (2004)- The discovery of Late Permian (early Changshingian) brachiopods from Penjom, Pahang Darul Makmur. Geol. Soc. Malaysia Bull. 48, p. 91-95.
(online at: www.gsm.org.my/products/702001-100582-PDF.pdf)
(Late Permian brachiopod fauna with Peitichia kwangtungensis and Semibrachythyrina rhombiformis in dark grey calcareous shale dipping ~45° to WSW, nearPenjom gold mine, SW of Kuala Lipis)

Leman, M.S. & G. Shi (1998)- The Permian of Langkawi Islands and North West Peninsular Malaysia with comments on the significance of the Kisap Thrust. In: G.R. Shi et al. (eds.) Strzelecki Int. Symp. Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources, Proc. Royal Soc. Victoria 110, p. 405-418.
(W part of Peninsular Malaysia part of Shan-Tai/ Sibumasu block. Carboniferous- Permian sequences deposited in two paleogeographically distinct settings: (1) West Langkawi (with Carboniferous- Lw Permian Singa Fm glacio-marine pebbly mudstone) and (2) Perlis-Kedah (Carboniferous- Lw Permian shallow water Kubang Pasu Fm in W (with E Permian Monodiexodina fusulinid fauna) and deep-water Semanggol Fm in E, no well-defined glacial diamictites, transitional climate between typical cold Gondwana and warm Cathaysian faunas. Two terranes brought close to each other by post-Permian Kisap Thrust, thrusting E block (Perlis-Kedah) over W block (W Langkawi))

Leman, M.S. & M. Sone (2001)- Conglomerate from Setia Jasa near Temerloh, Pahang, Peninsular Malaysia: its stratigraphic position and depositional environment. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conference 2001, Pangkor Island, p. 115-119.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_19.pdf)
(Thick series of conglomerate, tuffaceous sandstone and shale in Setia Jasa area, E of Temerloh, C Malay Peninsula. Anisian (early M Triassic) age is indicated by presence of ammonoid Paraceratites sp. in lower shale bed. Also bivalves Costatoria and Neoschizodus and some plant fragments. Clasts mainly tuffaceous sandstone. Possibly deposited in deep marine environment and probably part of Semantan Fm)

Leman, M.S. & M. Sone (2002)- A Permian phillipsid trilobite from Peninsular Malaysia. Geosciences J. 6, 2, p. 125-129.
(Pygidia of trilobite Pseudophillipsia reported from M Permian Bera Fm sand-shale, Pahang, Central Malay Peninsula, with rich brachiopod fauna of E Capitanian age. Resembles slightly younger Capitanian species of N Laos, suggesting faunal link between Indochina and Peninsular Malaysia (E Malaya terrane) in Capitanian)

Leman, M.S. & A. Yop (2002)- Early Permian sequence from Sungai Itau quarry, Langkawi: its age, depositional environment and palaeoclimatic implication. In: G.H. Teh (ed.) GSM Annual Geological Conf., Kota Bharu 2002, Bull. Geol. Soc. Malaysia 45, p. 163-170.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2002025.pdf)
(Thick bedded sandstones and mudstones with fossiliferous calcareous horizons in quarry in Kampung Sungai !tau, Langkawi. Lower sandstone interbedded with black pebbly mudstone (diamictite), indicating glaciation. Deposition took place on outer shelf. Overlying silty shale yields E Permian (late Asselian- E Sakmarian) brachiopod assemblage of Gondwanan affinity with Spirelytha spp., Sulciplica, Spiriferella, etc.)

Leonova, T.B., M.S. Leman & G.R. Shi (1999)- Discovery of an Early Permian (Late Sakmarian) ammonoid from Langkawi Island, Malaysia. Alcheringa 23, p. 277-281.

(Ammonite Metalegoceras sp. from thin-bedded sands-shales in uppermost part of Singa Fm at Batu Asah, NW part of Kuah town, S Langkawi. Confirms Sakmarian (E Permian) age suggested by brachiopods)

Li, B., S.Y. Jiang, H.Y. Zou, M.Yang & J.Q. Lai (2015)- Geology and fluid characteristics of the Ulu Sokor gold deposit, Kelantan, Malaysia: implications for ore genesis and classification of the deposit. Ore Geology Reviews 64, p. 400-424.
(Ulu Sokor in Central Gold Belt one of largest gold deposits in Malaysia. Three major orebodies related to N-S and NE-striking fractures in fault zones in Permian-Triassic meta-sedimentary and volcanic rocks of E Malaya Block. Gold mineralization quartz-dominant vein systems with sulfides and carbonates. Hydrothermal alteration and mineralization during three stages. Classified as orogenic gold deposit)

Liew, T.C. (1983)- Petrogenesis of the Peninsular Malaysia granitoid batholiths. Ph.D. Thesis, Australia National University (ANU), Canberra, p. 1-291. *(Unpublished)*

Liew, T.C. & M.T. McCulloch (1985)- Genesis of granitoid batholiths of Peninsular Malaysia and implications for models of crustal evolution: evidence from Nd-Sr isotopic and U-Pb zircon study. Geochimica Cosmochimica Acta, 49, p. 587-600.
(Nd, Sr and U-Pb isotopic data for Late Triassic W Coast Province batholiths and Permian-Triassic E Coast Province batholiths of Peninsular Malaysia. U-Pb zircon inheritance ages interpreted to correspond to Mid-Proterozoic (~1300-1900 Ma) 'crust formation' ages of continental fragments represented by W Coast and E Coast batholithic provinces. Absence of Archean signatures)

Liew, T.C. & R.W. Page (1985)- U-Pb zircon dating of granitoid plutons from the West coast of Peninsular Malaysia. J. Geol. Soc., London, 142, p. 515-526.
(U-Pb zircon dating of granitoid plutons from W Coast Province of Malaysia yields ages of 198-220 Ma (Late Triassic), older than previous K-Ar mica ages. U-Pb zircon ages are considered to represent best estimate of intrusive ages of plutons. Zircons from some plutons yield ages of ~1500-1700 Ma, dating source-derived, inherited zircon components, suggesting W Coast Province S-type granitoids derived from sedimentary sources recycled, at least in part, from mid-Proterozoic crystalline basement sources)

Lim, K.K. & N.T. Abdullah (1994)-. Development of Permian volcaniclastics limestone succession at Gua Bama, Pahang Darul Makmur. Warta Geologi 20, 3, p. 243-244. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1994003.pdf)
(Late Permian volcanic and volcaniclastic facies interfingering with minor limestone reported to be ubiquitous from Padang Tengku to Terengan catchment area. Limestone sequence at Gua Bama underlain by stratified volcaniclastics (crystal tuffs). With Tubiphytes and colaniellid foraminifera, indicating Late Permian age)

Lim Teng Chye, S., M. Sharafuddin, M. Sulaiman, G.H. Teh & J.H.A. Aziz (2001)- Geology, structure, mineralization and geochemistry of the Penjom gold deposit, Penjom, Pahang. Proc. Geol. Soc. Malaysia Annual Geological Conf., Pangkor Island, p. 59-63.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_10.pdf)
(Penjom Gold Mine near Bentong-Raub suture in Permian tuffs and sediments of Padang Tengku Fm, striking E-W with 30° dip S, close to E boundary with Triassic. Gold mineralization associated with early felsite sills)

Logan, J.R. (1849)- The rocks of Pulo Ubin. With some remarks on the formation and structure of hydrogene rocks and on the metamorphic theory. Verhandelingen Bataviaasch Genootschap Kunsten Wetenschappen 22, p. 4-45.
(online at: https://www.biodiversitylibrary.org/item/127848page/258/mode/1up)
(Early paper on geology of Palau Ubin, off Singapore, published in Batavia. No figures)

Logan, J.R. (1851)- Notices of the geology of the Straits of Singapore. Proc. Geol. Soc. London 7, p. 310-344.
(Early description of sedimentary and plutonic rocks of Singapore archipelago and southernmost Malay Peninsula. With one map)

Loke, M.H., C.Y. Lee & G. van Klinken (1983)- Interpretation of regional gravity, and magnetic data in Peninsular Malaysia. Bull. Geol. Soc. Malaysia 16, p. 1-21.
(online at: www.gsm.org.my/products/702001-101180-PDF.pdf)
(Gravity maximum of up to 20 mgals, and broad magnetic minimum over Central Belt, indicating underlying denser and more basic upper crust. Gravity minimum over Main Range and smaller gravity minimum over E Belt granites, due to lower densities of granite batholiths than surrounding rocks)

Long, X.Q., A.A. Ghani, M. Saidin & Z.Z.T. Harith (2016)- Durbachite-like melagranite in Taiping Pluton of Bintang Batholith, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 62, p. 1-6.
(online at: https://gsmpubl.files.wordpress.com/2017/04/bgsm2016001.pdf)
(Triassic (218 ± 1.3 Ma) ultrapotassic durbachite-type rocks (K-Mg rich melagranite)in Taiping Pluton, Bintang Batholith, NW Malay Peninsula. Petrogenesis believed to require crustal component and enriched lithospheric mantle source. Taiping Pluton on Sibumasu plate, emplaced during Sibumasu-Indochina collision)

Lye, Y.H. (1984)- Studies of pegmatitic cassiterites from the Gunung Jerai (Kedah), Bakri (Johore) and Kathu Valley (Phuket) regions. Geol. Soc. Malaysia Bull. 17, p. 107-161.
(online at: www.gsm.org.my/products/702001-101157-PDF.pdf)

MacDonald, S. (1968)- The geology and mineral resources of north Kelantan and north Trengganu. Mem. Geol. Survey Dept. West Malaysia 10, p. 1-202.

Madon, M. (2010)- Submarine mass-transport deposits in the Semantan Formation (Middle-Upper Triassic), central Peninsular Malaysia. Bull. Geol. Soc. Malaysia 56, p. 15-26.
(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm56/bgsm2010003.pdf)
(Exposures of M-U Triassic Semantan Fm along East Coast Highway between Karak and Kuantan of Triassic flysch basin that once separated W and E Malaya. E-ward change from distal to proximal facies)

Madon, M. (2017)- A brief review of gravity and magnetic data for Malaysia. Warta Geologi 43, 2, p. 41-49.
(online at: https://gsmpubl.files.wordpress.com/2017/09/ngsm2017_02.pdf)
(Brief review of main sources of public domain gravity- magnetic data for Malaysia and surrounding region)

Madon, M., Z. Affendi Abu Bakar & H.H. Ismail (2010)- Jurassic-Cretaceous fluvial channel and foodplain deposits along the Karak-Kuantan Highway, central Pahang (Peninsular Malaysia). Bull. Geol. Soc. Malaysia 56, p. 9-14.
(Fluvial succession of probable Jurassic-Cretaceous age Gagau Group along Karak-Kuantan highway, C Pahang. Depositional environment, unmetamorphosed nature and low structural dips compared to surrounding rocks, suggest they are 'post-orogenic' continental deposits)

Mahmoodi, I. & E. Padmanabhan (2017)- Exploring the relationship between hydrocarbons with total carbon and organic carbon in black shale from Perak, Malaysia. Petroleum and Coal 59, 6, p. 933-943.
(online at: https://www.vurup.sk/wp-content/uploads/2017/12/PC_6_2017_Mahmoodi_82cor1.pdf)
(Organic geochemistry of Paleozoic black shale from U Carboniferous Batu Gajah Fm, Ipoh, Malay Peninsula)

Makoundi, C. (2012)- Geology, geochemistry and metallogenesis of selected sediment-hosted gold deposits in the central gold belt, Peninsular Malaysia. M.Sc. Thesis, University of Tasmania, p. 1-206.
(online at: http://eprints.utas.edu.au/14712/)
(On Tersang, Selinsing and Penjom gold deposits at E side of Bentong-Raub suture zone, Pahang, C Malaysia. Tersang gold deposit hosted in Triassic sandstone, intruded by Late Triassic (219 Ma) alkali rhyolite. Penjom gold deposit hosted in Permian tuffaceous clastics, intruded by rhyodacitic and trachyandesitic igneous rocks)

Makoundi, C. (2016)- Geochemistry of Phanerozoic carbonaceous black shales, sandstones and cherts in Malaysia: insights into gold source rock potential. Ph.D. Thesis, University of Tasmania, p. 1-318.
(online at: https://eprints.utas.edu.au/23088/1/Makoundi_whole_thesis.pdf)

(Trace element geochemistry of Paleozoic- M Triassic marine black shales from central gold belt/E Malaya and Sibumasu terranes as possible sources of orogenic gold deposits)

Makoundi, C., K. Zaw, R.R. Large, S. Meffre, C.K. Lai & T.G. Hoe (2014)- Geology, geochemistry and metallogenesis of the Selinsing gold deposit, central Malaysia. Gondwana Research 26, p. 241-261.
(Selinsing gold deposit orogenic gold deposit E of Bentong-Raub Suture Zone, in Carboniferous Raub Gp (meta-)sedimentary units. Deposits affected by later Triassic deformation and metamorphism due to collision of Sibumasu Terrane with Sukhothai Arc. Zircon dating of host rocks indicates Carboniferous (~331-300 Ma) maximum depositional age. Selinsing similar to other SE orogenic gold deposits, like Sepon (Laos), Langu (Thailand), Modi Taung and Meyon (Myanmar) and Phuoc Son (C Vietnam))

Malaysian and Thai Working Groups (2006)- Geology of the Gubir-Sadao transect area along the Malaysia-Thailand Border. Malaysia-Thailand Border Joint Geological Survey Committee (MT-JGSC), Minerals and Geoscience Dept. Malaysia and Dept. Mineral Resources Papers, p. 1-32.
(online at: www.dmr.go.th/download/Malaysia_Thai/Sadao.pdf. Mainly on Carboniferous- Triassic stratigraphy of border area))

Malaysian-Thai Working Groups (2009)- Geology of the Pengkalan Hulu-Betong transect area along the Malaysia-Thailand Border. Malaysia-Thailand Border Joint Geological Survey Committee (MT-JGSC), Minerals and Geoscience Dept. Malaysia Geol. Papers 7, p. 1-84.

Malaysian and Thai Working Groups (2009)- Geology of the Bukit Batu Puteh- Satun transect area along the Malaysia- Thailand border. Malaysia-Thailand Border Joint Geological Survey Committee (MT-JGSC), Minerals and Geoscience Dept. Malaysia Geol. Papers 8, Kuala Lumpur, p. 1-111.
(online at: www.dmr.go.th/download/Malaysia_Thai/Satun.pdf)
(Geological mapping and transect of Ordovician- Triassic rocks in outcrops of NW Malay Peninsula- SW Peninsular Thailand border area. With many outcrop, rock and fossil photos)

Malaysian-Thai Working Group (2012)- Litho- and biostratigraphic correlations of chert beds in various rock units along the Malaysia- Thailand border. The Malaysia-Thailand Border Joint Geological Survey Committee (MT-JGSC), Min. Geosc. Dept. Malaysia and Dept. Mineral Resources, Bangkok, p. 1-73.
(online at: www.dmr.go.th/download/Malaysia_Thai/Biostratigraphic_chert.pdf)
(Carboniferous-Triassic chert horizons and radiolarians in Malaysia-Thailand border area. Fifteen radiolarian assemblage zones identified on Malaysian side, ranging in age from Carboniferous-Triassic. Deep sea deposition on Peninsular Malaysia terminated at end of Triassic due to tectonic uplift episode)

McElhinny, M.W., N.S. Haile & A.R. Crawford (1974)- Palaeomagnetic evidence shows Malay Peninsula was not a part of Gondwanaland. Nature 252, 5485, p. 641-654.
(Paleomagnetic results suggest Malay Peninsula was at 15° N in Late Paleozoic, incompatible with once forming part of Gondwanaland. In Cretaceous Peninsula was not finally welded to Asian mainland)

Meng, C.C. & M.Pubellier (2015)- Geological structures of the Kinta Valley revisited using drainage anomalies. In: M. Awang et al. (eds.) 3rd Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2014), Kuala Lumpur 2014, Springer Verlag, p. 267-276.
(Kinta Valley Paleozoic limestone-shale and Late Triassic granitic intrusions covered >50% by thin alluvium. Severely deformed. NE-SW and N-S drainage anomalies may reflect slight or large normal faults. Shortening by thrust faults and subsequent extension may be rooted in lower ductile crust beneath large granitic plutons)

Meng, C.C., M. Pubellier, A. Abdeldayem & Chow W.S. (2016)- Deformation styles and structural history of the Paleozoic limestone, Kinta Valley, Perak, Malaysia. Bull. Geol. Soc. Malaysia 62, p. 37-45.
(online at: www.gsm.org.my/products/702001-101695-PDF.pdf)
(Paleozoic limestone of Kinta Valley narrow deformed strip between Late Triassic- E Jurassic batholiths of N Malay Peninsula. Deformation events: (1) early extension (Permian-Triassic intra-basin extension); (2) early compression indicated by conjugate strike-slip faults; (3) compression with thrusts and folds (coeval with late

stages of granite emplacement); (4) ductile high temperature normal shear near contact with granites, and (5) late extension with large normal faults (Tertiary basins formation or Late Miocene-Quaternary uplift))

Meor, H.Hassan (2003)- Sedimentology and palaeontology of the Devonian red beds of northwest Peninsular Malaysia. Seminar Penyedelikan Jangka Pedek (Vot G), 4p.
(online at: http://eprints.um.edu.my/691/1/paper144.pdf)
(Mid- Late Devonian redbeds throughout Perlis, Kedah and Langkawi islands, probably prodelta deposits)

Meor, H.Hassan (2013)- Post-conference field excursion to Northwest Peninsular Malaysia. Third Int. Conference on Palaeontology of South East Asia (ICPSEA 3), p. 1-28.
(online at: http://umexpert.um.edu.my/file/publication/00006513_97630.pdf)
(Fieldtrip guide to Paleozoic of NW Malay Peninsula. 'Gondwanan' stratigraphy including E Permian Singa Fm glaciomarine deposits (on Langkawi Island only) and U Kubang Pasu Fm with Kungurian-Roadian Monodiexodina fusulinid forams. Youngest Paleozoic unit is Permian Chuping Lst)

Meor, H.Hassan, A.K. Aung, R.T. Becker, N.A. Abdul Rahman, T.F. Ng, A.A. Ghani & M.K. Shuib (2014)- Stratigraphy and palaeoenvironmental evolution of the mid- to upper Palaeozoic succession in Northwest Peninsular Malaysia. J. Asian Earth Sci. 83, p. 60-79.
(online at: https://umexpert.um.edu.my/file/publication/00004083_104753.pdf)
(Revised Devonian-Permian stratigraphy in NW Peninsular Malaysia. E Devonian Timah Tasoh Fm black mudstone with graptolites and tentaculitids overlain by Sanai Lst with Late Devonian conodonts (Frasnian- E Famennian) or by Late Tournaisian chert of Telaga Jatoh Fm. Overlying Kubang Pasu Fm clastics include (1) Late Visean Chepor Mb with glacial marine deposits (with new ammonoid species, Praedaraelites tuntungensis, possibly of Visean age); (2) Carboniferous-Permian Kubang Pasu Fm clastics; (3) Kungurian uppermost Kubang Pasu Fm shallow marine clastics. Permian Chuping Lst. Mid-Paleozoic unconformity separates Early-Late Devonian from overlying Late Devonian-Carboniferous deposits, probably marking initiation of rifting on Sibumasu, which led to separation of Sibumasu from Australian Gondwana in Late Sakmarian (E Permian))

Meor, H.Hassan, A.K. Aung, R.T. Becker, N.A. Abdul Rahman, T.F. Ng, A.A. Ghani & M.K. Shuib (2014)- Carboniferous (Mississippian) dropstones and diamictite from the Chepor Member, basal Kubang Pasu Formation: earliest record of glacial-derived deposits in Peninsular Malaysia. Geol. Soc. Malaysia, Nat. Geoscience Conf. (NGC) 2014, Trengganu, P046, p. 38-39. *(Extended Abstract)*
(Pebbly mudstone and diamictite intervals in Chepor Mb (= basal unit of of Kubang Pasu Fm) in Perlis, NW Malay Peninsula (= Sibumasu Terrane). Trilobite Weyeraspis sp. and ammonoid Praedaraelaites tuntungensis indicate Visean age (E Carboniferous) and is earliest glacial marine conditions on Peninsular Malaysia)

Meor, H.Hassan, B.D. Erdtmann, X.F. Wang & C.P. Lee (2013)- Early Devonian graptolites and tentaculitids in northwest Peninsular Malaysia and a revision of the Devonian-Carboniferous stratigraphy of the region. Alcheringa 37, p. 49-63.
(E Devonian tentaculitids described from new outcrops in black carbonaceous shales of Timah Tasoh Fm in Perlis, NW Peninsular Malaysia. Occurrences of graptolite Monograptus langgunensis and tentaculitid Nowakia (Turkestanella) acuaria acuaria give E Devonian (late Pragian or E Emsian) age for black shales. Probably rel. deep marine outer shelf or continental margin deposits of Sibumasu Terrane)

Meor, H.Hassan & C.P. Lee (2002)- Stratigraphy of the Jentik Formation, the transitional sequence from the Setul Limestone to the Kubang Pasu Formation at Guar Sanai, Kampung Guar Jentik, Beseri, Perlis- a preliminary study. GSM Annual Geological Conf. 2002, Kota Bharu, Bull. Geol. Soc. Malaysia 45, p. 171-178.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2002026.pdf)
(Devonian of NW Malay Peninsula. New name Jentik Fm for ~300m thick E Devonian- E Carboniferous deep marine clastic sequence between Late Silurian U Setul Lst and Kubang Pasu Fm. Includes black dacryoconarid shales and Langgun Red Beds)

Meor, H.Hassan & C.P. Lee (2003)- On the occurrence of *Pleurodictyum* in the Jentik Formation of Kampung Guar Jentik, Beseri, Perlis. Warta Geologi 29, 3, p. 89-92.

(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm2003003.pdf)
(First report of small tabulate corals in M-L Devonian Langgun/ Jentik Fm redbeds of Perlis district, NW Peninsular Malaysia. In marine red mudstone below Jentik Fm black shales with dacryoconarids and trilobites)

Meor, H.Hassan & C.P. Lee (2003)- The Sanai Limestone Member- a Devonian limestone unit in Perlis. Bull. Geol. Soc. Malaysia 46, p. 137-141.
(Sanai Lst proposed for thin pelagic limestone near top Jentik Fm. Underlain by M or Late Devonian red mudstone, overlain by mudstones interbedded with cherts. Lithology micritic limestone with thin shale partings and abundant conodonts, styliolinids, straight-cone nautiloids and trilobites. Occurrence of conodont Palmatolepis glabra indicates Late Devonian, Famennian age)

Meor, H.Hassan & C.P. Lee (2004)- The depositional environment of the Mid-Palaeozoic red beds at Hutan Aji, Perlis and its bearing on global eustatic sea level change. Bull. Geol. Soc. Malaysia 48, p. 65-72.
(Late Devonian- E Carboniferous red mudstones and sandstones widely distributed in NW Peninsular Malaysia. Sequence at Bumita Quarry indicative of marine prodelta-delta front environment. Major mid-Paleozoic paraconformity observed on Shan-Thai/Sibumasu Terrane between M-Famennian Sanai Lst and E Carboniferous cherts may have been caused by global regression)

Meor, H.Hassan & C.P. Lee (2005)- The Devonian- Lower Carboniferous succession in northwest Peninsular Malaysia. J. Asian Earth Sci. 24, 6, p. 719-738.
(New stratigraphic nomenclature for ~600m of Devonian- Carboniferous shallow marine deposits of Sibumasu continental margin: mainly clastic transitional sequence between underlying Mempelam Lst and overlying Kubang Pasu/Singa Fm in NW Malaysia. Timah Tasoh Fm 40m tentaculitid shales at base (with E Devonian Monograptus yukonensis and Nowakia) and 36m of light argillo-arenites. Chepor Fm 90m M-L Devonian red mudstone- sst. Sanai Lst with Famennian conodonts. Binjal Fm mudstone and turbiditic sst, Telaga Jatoh Fm radiolarian chert. Wang Kelian Fm thick E Carboniferous (Visean) prodelta- basinal marine red mudstones-sst. Major regressive event in latest Devonian)

Meor, H.A.Hassan, Y.A. Mustafa, M.Z.Z. Zakaria & A.A. Ghani (2015)- First record of *Homoctenus* (Tentaculitoidea, Homoctenida) from the Late Devonian of northwest Peninsular Malaysia. Alcheringa 39, 4, p. 550-558.
(online at: http://repository.um.edu.my/101072/1/Meoretal15.pdf)
(First record of pelagic homoctenid tentaculitoid genus Homoctenus from Malay Peninsula, in U Devonian Sanai Lst in Perlis. Closely related to Homoctenus tenuicinctus. Associated with rich Frasnian conodont assemblage, (Late Devonian; Palmatolepis linguiformis Zone)

Meor, H.A.Hassan, B.S. Yeow, C.P. Lee & A.H. Abdul Rahman (2013)- Facies analysis of the uppermost Kubang Pasu Formation, Perlis: a wave- and storm-influenced coastal depositional system. Sains Malaysiana 42, 8, p. 1091-1100.
(online at: www.ukm.my/jsm/pdf_files/SM-PDF-42-8-2013/08%20Meor%20Hakif%20Amir.pdf)
(Facies analysis of E Permian uppermost Kubang Pasu Fm in Perlis, NW corner of Malay Peninsula (Sibumasu Terrane; with underlying diamictite). Several coarsening upward facies successions, from offshore bioturbated mudstone into lower shoreface facies association. Gradual transition from siliciclastics to overlying Chuping Lst carbonates (with Monodiexodina grainstone in transition zone) probably related to post rift subsidence and tectonic quiescence due to separation of Sibumasu from Gondwana in Permian)

Meor, H.A.Hassan, N.N.S.A. Zamruddin, B.S. Yeow & A.S.S.A. Zamad (2017)- Sedimentology of the Permian *Monodiexodina*-bearing bed of the uppermost Kubang Pasu Formation, northwest Peninsular Malaysia: Interpretation as storm-generated, transgressive lag deposits. Bull. Geol. Soc. Malaysia 64 (Geol. Soc. Malaysia 50th Anniversary Issue 2), p. 51-58.
(online at: www.gsm.org.my/products/702001-101719-PDF.pdf)
(Late E Permian fusulinid Monodiexodina commonly as dense accumulations associated with marine siliciclastics. Monodiexodina-bearing bed of top Kubang Pasu Fm of Perlis (NW Malay Peninsula, Sibumasu terrane) 0.5-1.5m thick, above ~15m coastal marine coarsening upward succession. Composed of

Monodiexodina tests, bryozoa (Rhombopora sp.), brachiopods, crinoid ossicles and 6-27% f quartz. Bed with giant symmetrical ripples and smaller ripples, interpreted as transgressive deposit overlying flooding surface, with mainly wave- and storm-generated facies formed by wave ravinement)

Metcalfe, I. (1979)- Carboniferous conodonts from Perak, Malaysia. Geol. Soc. Warta Geologi (Newsl. Malaysian Geological Society) 5, 3, p. 35-39.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1979003.pdf)
(Carboniferous (Namurian) conodonts from Idiognathoides noduliferus- Streptognathodus lateralis zone in quarry in N part of Gunung Kanthan, Perak (also M Devonian conodonts near base of section; Lane et al. 1979))

Metcalfe, I. (1980)- Upper Carboniferous conodont faunas of the Panching Limestone, Pahang, West Malaysia. Palaeontology 23, p. 297-314.
(online at: www.palass-pubs.org/palaeontology/pdf/Vol23/Pages%20297-314.pdf)
(Panching Lst of Pahang, E Malay Peninsula, rich conodont faunas around L-U Carboniferous boundary)

Metcalfe, I. (1980)- Ordovician conodonts from the Kaki Bukit area, Perlis, West Malaysia. Warta Geologi 6, 3, p. 63-68.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1980003.pdf)
(Ordovician conodonts from Setul Lst of Perlis, NW corner of Malay Peninsula. Incl. Serratognathus bilobatus, Loxodus bransoni, Scolopodus spp.)

Metcalfe, I. (1980)- Palaeontology and age of the Panching Limestone, Pahang, West Malaysia. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 11-18.
(Carboniferous Panching Lst in Kuantan Group Pahang, NW of Kuantan, Pahang, E Malay Peninsula (on East Malaya Block). Conodont fauna represents Namurian Idiognathoides noduliferus- Streptognathus lateralis zone of Britain (conflicts with Muir-Wood 1948 Visean age interpretation of Panching Limestone))

Metcalfe, I. (1981)- A late Wolfcampian (Early Permian) conodont fauna from Perak, Peninsular Malaysia. Warta Geologi 7, 3, p. 76-79.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1981003.pdf)
(Conodonts from limestones of JKR Quarry at Gunung Kantham, Perak NW Malay Peninsula. Fauna with Anchignathodus minutus and Neogondolella bisseli indicates late Wolfcampian N. bisseli- Sweetognathus whitei Zone, ranging in age from late Early Devonian- E Permian)

Metcalfe, I. (1981)- Permian and Early Triassic conodonts from Northwest Peninsular Malaysia. Bull. Geol. Soc. Malaysia 14, p. 119-126.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1981006.pdf)
(Limestones exposed at Gunung Keriang, Kedah, have E Permian (Wolfcampian) Neogondolella bisselli-Sweetognathus whitei and E Triassic (Smithian) Neospathodus waageni Zones conodonts. Kodiang Lst at Bukit Hantu near Kodiang, Kedah, yielded Late Permian Neogondolella rosenkrantzi-Neospathodus divergens Zone and E Triassic conodonts)

Metcalfe, I. (1983)- Observations on the ornamentation and ultra-structure of some well preserved, specimens of *Idiognathoides noduliferus inaequalis* Higgins (Pennsylvanian conodont). Bull. Geol. Soc. Malaysia 16, p. 31-36.
(online at: www.gsm.org.my/products/702001-101178-PDF.pdf)
(Pennsylvanian conodont from Panching Limestone of Pahang, Malay Peninsula)

Metcalfe, I. (1983)- Devonian conodonts from Batu Gajah, Perak, Peninsular Malaysia. Warta Geologi 9, 4, p. 152-154.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1983004.pdf)

(Brief note on presence of M Devonian conodont Polygnathus linguiformis in limestones in Lee Fatt No. 1 tin mine at Batu Gadjah, S Kinta Valley, which is older than previously suggested. Conodont Colour Alteration Index of 5 indicates limestones were heated to 300-400°C)

Metcalfe, I. (1984)- The Permian-Triassic boundary in northwest Malaya. Warta Geologi 10, p. 139-147.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1984004.pdf)

Metcalfe, I. (1987)- Permian and Early Triassic conodonts from an olistostrome near Raub, Pahang and their implications. Laporan Teknik Fakulti Sains Fizis dan Gunaan, Universiti Kebangsaan Malaysia 1, p. 100-106.
(Diamictites in Raub area (Raub-Bentong Line), Pahang, with clasts up to several m (incl. limestones with Late Permian conodonts Neogondella, etc.) in sheared muddy matrix. Interpreted as olistostrome associated with active normal faults along W margin of Central graben of Malay Peninsula. 'Tethyan' conodonts in diamictite matrix late Early Triassic age (Neospathodus spp., etc), with reworked Permian and earliest Triassic species)

Metcalfe, I. (1987)- An occurrence of sheared diamictite near Genting Sempah. Warta Geologi 13, p. 97-103.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1987003.pdf)
(Diamictite along Kuala Lumpur- Karak highway, 2 km SW of Genting Sempah, turbiditic beds now in tectonic melange or sheared olistostrome. Similar diamictites also in Raub-Bentong-Karak area where they define narrow zone along Bentong-Raub line. Diamictites in Raub area dated as probably late E Triassic; Genting Sempah diamictite may form part of this E Triassic melange/olistostrome belt)

Metcalfe, I. (1989)- Triassic sedimentation in the central basin of Peninsular Malaysia. In: T. Thanasuthipitak & P. Onchanum (eds.) Proc. Int. Symposium Intermontane basins, geology and resources, Chiang Mai University, Department of Geological Sciences, p. 173-186.
(C Basin of Malay Peninsula extensional graben on E Malaya Block, bound in W by faults of Bentong-Raub Line and in E by Lebir fault zone. Triassic faulting along Raub-Bentong produced graben with 2-3 km of marine Triassic, followed by 1.5- 2 km of non-marine Jurassic- E Cretaceous Tembeling Gp. E Triassic includes olistostrome with Permian limestone clasts, etc. In C part of graben deeper marine Semanggol Fm with Claraia in E Triassic and Posidonia, Daonella, Halobia in pelagic interbeds in M-L Triassic volcanics-rich turbidites (no Triassic volcanics on adjacent Sibumasu Block). Basin margin shallow marine fauna with myophoriid bivalves (Costatoria). Triassic folded in single folding phase, with NNW-SSE trending folds)

Metcalfe, I. (1990)- Triassic conodont biostratigraphy in the Malay Peninsula. Bull. Geol. Soc. Malaysia 26, p. 133-145.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990011.pdf)
(Conodonts representative for all Triassic stages, except Rhaetian, found in Malay Peninsula. Best known sequence of Triassic conodonts in Kodiang Lst of Kedah)

Metcalfe, I. (1990)- Lower and Middle Triassic conodonts from the Jerus Limestone, Pahang, Peninsular Malaysia. J. Southeast Asian Earth Sci. 4, 2, p. 141-146.
(Steeply dipping, dark grey Jerus Limestone, Cheroh, Pahang (just E of Raub-Bentong suture?), previously considered part of Permo-Carboniferous Raub Group yielded rich Lower and Middle Triassic conodont faunas (late Dienerian Neospathodus pakistanensis Zone, with common Neospathodus spp.))

Metcalfe, I. (1990)- Stratigraphic and tectonic implications of Triassic conodonts from Northwest Peninsular Malaysia. Geol. Magazine 127, p. 567-578.
(Chuping Lst of NW Malay Peninsula with Late Triassic (E Norian) conodonts and spans late E Permian- Late Triassic. Part equivalent to Kodiang Lst (Late Permian- Triassic) in Kedah and similar limestones in S Thailand and N Sumatra. Early Late Triassic (Carnian) conodonts also in pelagic limestones associated with bedded cherts of Semanggol Fm. Triassic of Malay Peninsula three regions: (1) elongate carbonate platform complex on Sibumasu block (Chuping Lst, Kodiang Lst); (2) pelagic/ turbidite basinal sequence (Semanggol Fm; foredeep or intracratonic pull-apart basin) and (3) volcanic-sourced volcaniclastic basinal sequence on E Malaya block (Semantan Fm and equivalents; forearc/ intra-arc or post-orogenic rift))

Metcalfe, I. (1992)- Lower Triassic (Smithian) conodonts from northwest Pahang Peninsular Malaysia. J. Micropalaeontology 11, 1, p. 13-19.
(online at: https://www.j-micropalaeontol.net/11/13/1992/jm-11-13-1992.pdf)
(Lower Triassic conodonts from limestones (possibly submarine slump) along new Kuala Lipis -Gua Musang highway, NW Pahang, NW Peninsular Malaysia. (in Central Basin, E of Bentong-Raub suture). Co-occurrence of Neospathodus triangularis, Platyvillosus costatus), Neospathodus dieneri and Platyvillosus hamadai indicates Scythian age. P. hamadai unknown from Peri-Gondwana, supporting pre-E Triassic rifting of W Malay Peninsula (Sibumasu) from Gondwana)

Metcalfe, I. (1992)- Upper Triassic conodonts from the Kodiang Limestone, Kedah, Peninsular Malaysia. J. Southeast Asian Earth Sci. 7, p. 131-138.
(Conodonts from Kodiang Lst at Kedah, NW corner of Peninsular Malaysia (= Sibumasu Terrane). Document presence of U Carnian- Lower Norian and conodonts, incl. Epigondolella spp. and Metapolygnathus spp. Faunas correlate with similar faunas from Chuping Lst of Perlis, Malaysia, and limestones from Lake Toba area and Sungei Kalue, N Sumatra)

Metcalfe, I. (1993)- Permian conodonts from the Raub Gold Mine, Pahang, Peninsular Malaysia. Warta Geologi 19, 3, p. 85-88.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1993003.pdf)
(Isoclinally folded sediments of 'Raub Group' at Raub Gold Mine, Pahang, with conodont Neogondolella rosenkrantzi, indicating Late Permian age. Overlain by less-deformed M-U Triassic Semantan Fm, suggesting structural discontinuity which may correspond to age of suturing of Sibumasu and East Malaya blocks)

Metcalfe, I. (1995)- Mixed Permo-Triassic boundary conodont assemblages from Gua Sei and Kampong Gua, Pahang, Peninsular Malaysia. In: Contr. First Australian Conodont Symposium (AUSCOS 1), Sydney 1995, Courier Forschunginstitut Senckenberg, Frankfurt, 182, p. 487-495.
(Merapoh Lst at Kampong Gua and Gua Sei, Pahang, C Peninsular Malaysia, previously assigned to Carboniferous, with E Triassic (Griesbachian) conodont assemblages (Clarkina changxingensis, Hindeodus spp., incl. H. latidentatus))

Metcalfe, I. (1999)- Geological origins and natural resources. In: A. Kaur & I. Metcalfe (eds.) The shaping of Malaysia, Macmillan Press Ltd, p. 11-41.
(online at:http://library.perdana.org.my/Digital_Content/NLM/pnm_bk/M959.5SHA.pdf)

Metcalfe, I. (2002)- Devonian and Carboniferous conodonts from the Kanthan Limestone, Peninsular Malaysia and their stratigraphic and tectonic implications. In: L.V. Hills et al. (eds.) The Carboniferous and Permian of the World, Canadian Soc. Petrol. Geol. Mem. 19, p. 552-579.
(Lower Devonian- Lower Permian Gunong Kanthan Lst in Kinta Valley area, Perak, formed in shallow passive margin sequence of Sibumasu block, when still attached to E Gondwana. Conodonts from Devonian Carboniferous part suggest E and M Devonian and Tournaisian and Visean ages (Polygnathus spp., Gnathodus spp., Tortodus, etc.. Color Alteration Index 5-8 suggest limestone has been heated to 300-400°C)

Metcalfe, I. (2003)- Colour and textural alteration of Paleozoic and Triassic conodonts from Peninsular Malaysia: implications for tectonic evolution and hydrocarbon generation. Courier Forschungsinstitut Senckenberg, Frankfurt 245, p. 261-280.
(Color Alteration Index of conodonts in Malay Peninsula ranges from 1.5- 8, with lowest values in NW Malay Peninsula, highest near granitoid intrusives. Paleozoic conodonts of Sibumasu terrane background CAI 5 (= 7500-10000m overburden?). Lowest Triassic values of 1.5-2.5 in Sibumasu Kodiang-Chuping Lst, equivalent to maturation in oil window. High Triassic values of CAI 5 from E-M Triassic limestones along W margin of Central Belt (reflecting heating by Main Range granitoids?) and M Triassic limestones-cherts from Semanggol Fm in Kedah (implying overburden of 7500- 10,000m, but unrealistic?))

Metcalfe, I. (2013)- Tectonic evolution of the Malay Peninsula. J. Asian Earth Sci. 76, p. 195-213.

(Malay Peninsula three N-S belts: (1) W Belt part of Sibumasu Terrane, derived from Gondwana margin in late E Permian, (2) C and E Belts represent Sukhothai Arc, built in Late Carboniferous- E Permian on margin of Indochina Block and separated from Indochina by back-arc spreading in E Permian. Bentong-Raub suture is boundary between Sibumasu Terrane in W and Sukhothai Arc in E, and preserves remnants of Devonian-Permian Paleo-Tethys ocean basin destroyed by subduction beneath Indochina Block/ Sukhothai Arc, which produced Permian-Triassic andesitic volcanism and I-Type granitoids of C and E Belts of Malay Peninsula. Collision between Sibumasu and Sukhothai Arc began in E Triassic times, completed by Late Triassic. Triassic cherts and turbidites of Semanggol Fm deposited in foredeep basin on leading edge of Sibumasu and uplifted accretionary complex. Collisional crustal thickening produced Main Range Late Triassic- E Jurassic S-type granitoids of W Belt and Bentong-Raub suture zone. Sukhothai back-arc basin closed in M-L Triassic. Jurassic- Cretaceous continental red beds cover sequence. Late Cretaceous tectono-thermal event affected Malay Peninsula with faulting, granitoid intrusions and re-setting of paleomagnetic signatures)

Metcalfe, I. (2016)- A new Lower Triassic (Induan) Jerus Limestone locality in northwest Pahang, Peninsular Malaysia: conodont fauna, depositional and tectonic settings. Island Arc 25, 2, p. 126-136.
(Limestones N of Raub, sandwiched between Bentong-Raub suture and W margin of Sukhothai Arc terrane, yield late Dienerian (late Induan) conodont fauna. With Neospathodus dieneri and Neospathodus pakistanensis. Interpreted as N-ward extension of Jerus Limestone, interpreted as hemipelagic deposit in foredeep or forearc on top of accretionary complex in E-M Triassic (see also Metcalfe 1990))

Metcalfe, I. (2017)- Devonian and Carboniferous stratigraphy and conodont biostratigraphy of the Malay Peninsula in a regional tectonic context. Stratigraphy 14, p. 259-283.
(Devonian- Carboniferous stratigraphy of Malay Peninsula tied to Sibumasu Terrane in W and Sukhothai Arc (Indochina) block in E . Bentong-Raub Suture is former Devonian-Triassic Paleo-Tethys Ocean. Devonian-Carboniferous sediments/ faunas of W belt support placement of Sibumasu Terrane on Paleozoic margin of Australian Gondwana until E Permian (Sakmarian). Carboniferous sediments of E Belt deposited on margin of equatorial Indochina Block, on which Sukhothai Arc was constructed)

Metcalfe, I. & K.R. Chakraborty (1988)- Diamictite along the eastern margin of the Central Basin of the Malay Peninsula. Warta Geologi 14, p. 191-198.
(online at: www.gsm.org.my/products/702001-101505-PDF.pdf)
(Diamictite unit of probable E Triassic age in E part of Central Basin, E of Bentong-Raub suture, with clasts on steeply dipping, sheared muddy matrix. Interpreted as olistostrome, formed along fault scarps of developing graben)

Metcalfe, I. & K.R. Chakraborty (1994)- A stratigraphic log of Semantan Formation along part of the Mentakab-Temerloh bypass, Pahang. Bull. Geol. Soc. Malaysia 35, p. 37-46.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994005.pdf)
(Thickness of M-U Triassic Semantan Fm in Malay Peninsula central basin ~2km. Continuous stratigraphic sequence of 1.25 km logged along Mentakab bypass. Consistent W-ward dip, no evidence of isoclinal folding or imbricate thrusts, so not part of accretionary prism but part of forearc or intra-arc basin constructed over accretionary wedge. Horizons with bivalves (mainly Posidonia, some Daonella) and ammonite (Arpadites), all suggestive of M Triassic age. Interbedded tuffs and mudstones, deposited by turbidity currents; dominant flow to W?. Overall fining-upward indicates waning of coarser volcaniclastic material supply during M Triassic)

Metcalfe, I., K.R. Chakraborty, C.A. Foss & H.T. Samsudin (1985)- A Middle Triassic fauna from the Bt. Jeram Padang Ridge at Bahau, Negri Sembilan, Peninsular Malaysia. Warta Geologi 11, 3, p. 111-115.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1985003.pdf)
(Bukit Jeram Padang Ridge SE of Bahau with folded clastics with M Triassic 'Myophoria biofacies' bivalves, incl. Costatoria malayensis, C. chegarperahensis and Neoschizodus ovatus elongatus)

Metcalfe, I. & J.L. Crowley (2020)- Upper Permian and Lower Triassic conodonts, high-precision U-Pb zircon ages and the Permian-Triassic boundary in the Malay Peninsula. J. Asian Earth Sciences *(in press)*

(Conodont biostratigraphic and high-precision U-Pb isotope data for Permian-Triassic transition in limestone hills Gua Bama, Gua Panjang and Gua Sei in Malay Peninsula)

Metcalfe, I. & A.H. Hussin (1995)- Implications of new biostratigraphic data for stratigraphic correlation of the Permian and Triassic in Peninsular Malaysia. Bull. Geol. Soc. Malaysia 38, p. 173-177.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995016.pdf)
(Review and correlation chart of Permian-Triassic sediments of Malay Peninsula. Western belt mainly Permian- Triassic Kodiang and Chuping limestones, Raub Bentong suture Permian bedded cherts, Central Belt mainly clastics, with Late Permian and Triassic limestones, Eastern Belt almost no limestones. Semanggol Fm usually considered to be entirely of Triassic age, but also contains Lw, M and U Permian radiolaria)

Metcalfe, I., M. Idris & J.T. Tan (1980)- Stratigraphy and palaeontology of the Carboniferous sediments in the Panching areas, Pahang, West Malaysia. Bull. Geol. Soc. Malaysia 13, p. 1-26.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1980008.pdf)
(New lithostratigraphy proposed for Carboniferous of Panching area, Pahang: (1) Charu Fm shallow marine clastics with Visean- basal Namurian brachiopods; (2) Panching Lst reefal limestone with Namurian fauna (believed to be Visean by Toriyama 1984; JTvG); (3) Sagor Fm ?Late Carboniferous shallow marine clastics with rare limestone lenses)

Metcalfe, I., S.P. Sivam & P.H. Stauffer (1982)- Stratigraphy and sedimentology of Middle Triassic rocks exposed near Lanchang, Pahang, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 15, p. 19-30.
(online at: www.gsm.org.my/products/702001-101189-PDF.pdf)
(M Triassic Semantan Fm outcrops E of Lanchang in C Malay Peninsula NE of Kuala Lumpur. NW dipping tuffs, mudstones with locally common bivalves (Daonella lommeli, D. sakawana, Posidonia) and ammonoids, (Arpadites). Also locally common plant fragments (unidentifiable). Mainly marine gravity flows, derived entirely from volcanic source, with downslope transport directions to W or SW (contemporaneous shallow marine Myophoria sandstone ~5-10km E of Lanchang section))

Mohamed, K.R., N.A.M. Joeharry, M.S. Leman & C.A. Ali (2016)- The Gua Musang Group: a newly proposed stratigraphic unit for the Permo-Triassic sequence of Northern Central Belt, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 62, p. 131-142.
(online at: https://gsmpubl.files.wordpress.com/2017/04/bgsm2016012.pdf)
(Permian- Triassic Gua Musang Fm, Telong Fm, Aring Fm and Nilam Marble reflect lateral facies changes within newly defined Gua Musang Gp of argillites-carbonates-volcanics in Central Belt of Malay Peninsula)

Muir-Wood, H.M. (1948)- Malayan Lower Carboniferous fossils and their bearing on the Visean palaeogeography of Asia. British Museum (Natural History), London, p. 1-118.
(Lower Carboniferous brachiopod-dominated macrofauna from 4 localities in Kuantan district, E side of Malay Peninsula. With appendices on Carboniferous Lepidodendroid remains by W.N. Edwards, bryozoa, mollusca and crinoidea by K.P. Oakley, corals by S. Smith and trilobites by C.J. Stubblefield. No indications of Permo-Carboniferous glacial beds in area. Many brachiopods similarities to W European species)

Muller, K.J. (1967)- Devonian of Malaya and Burma. In: Int. Symposium of the Devonian system, 1, Canadian Soc. Petrol. Geol., Special Publ., p. 565-568.
(Devonian rocks widespread in Malay Peninsula and Myanmar, but not yet recognized in Thailand)

Nakazawa, K. (1973)- On the Permian fossils from Jengka Pass, Pahang, Malay Peninsula. Tohoku University, Sci. Rep., 2nd ser. (Geol.), Spec. Vol. 6 (Hatai Memorial Volume), p. 277-296.
(online at: ir.library.tohoku.ac.jp/re/bitstream/10097/28985/1/KJ00004163218.pdf)
(Permian at Jengka Pass 160 km NE of Kuala Lumpur, upper M Permian limestone with corals and abundant fusulinids (Yabeina asiatica fauna), overlain by U Permian sandstone-shale with brachiopods, bivalves. Unconformably overlain by M-U Triassic (supposed Cathaysian/ E Malaya-Indochina block; JTvG))

Nakazawa, K. (2002)- Permian bivalves from the H.S. Lee Formation, Malaysia. Paleontological Research (Palaeontol. Soc. Japan) 6, 1, p. 67-72.
(online at: https://ia600205.us.archive.org/27/items/biostor-118094/biostor-118094.pdf)
(Three bivalve species from Permian H.S. Lee Fm at H.S. Lee No. 8 flooded tin mine in Perak: Sanguinolites ishii, Megalodon yanceyi and Myalina cf. wyomingensis)

Newell, R.A. (1971)- Characteristics of the stanniferous alluvium in the southern Kinta valley, West Malaysia. Bull. Geol. Soc. Malaysia 4, p. 15-37.
(online at: www.gsm.org.my/products/702001-101365-PDF.pdf)
(Kinta Valley near Kampar, Perak, flanked by granite ranges (Main Range to East) and Late Paleozoic sediments. Up to >100' fluvial/alluvial deposits, with basal granite wash which is main placer ore zone of tin mines in valley. Heavy mineral content average 0.59% (0.05- 3.2%), generally highest in coarsest sands)

Newton, R.B. (1900)- On marine Triassic lamellibranchs discovered in the Malay Peninsula. Proc. Malacol. Soc. London, 4, p. 130-135.
(Late Triassic sandstone rich in bivalve shells in from Kuala Lipis, Pahang. Mainly Myophoria spp., also Chlamys valoniensis, Pteria (=Avicula) pahangensis, Gervillia. (Pteroperna malayensis Newton=also Gervillia?; JTvG)

Newton, R.B. (1906)- Notice on some fossils from Singapore. Geol. Magazine (5), 3, p. 487-496.
(First record of Mesozoic fossils from Singapore. Jurassic fauna dominated by marine bivalves, also fragments of land plants)

Newton, R.B. (1923)- On marine Triassic shells from Singapore. Ann. Mag. Natural History 9, p. 300-321.
(Discovery of Triassic fauna in Singapore by Scrivenor. Mainly bivalve molluscs in friable sandstone, a.o. with Myophoria spp., Palaeocardita, Gervillia. Fauna regarded as Late Triassic age. Singapore beds extension of Myophoria Sst of Pahang, first described by Newton in 1900)

Newton, R.B. (1925)- On marine Triassic fossils from the Malayan Provinces of Kedah and Perak. Geol. Magazine 62, p. 76-85.
(Triassic fauna from black shales in Kedah and Semanggol, Perak: small bivalves (Posidonomya, Halobia moussoni) and indeterminate ammonites (probably Juvavites or Anatomites and Hammoceras; Kummel 1960). Probably older than Myophoria fauna of Kedah)

Newton, R.B. (1926)- On *Fusulina* and other organisms in a partially calcareous quartzite from near the Malayan-Siamese frontier. J. Natural History, Ser. 9, 17, 97, p. 49-64.

Ng, S.W.P., S.L. Chung, L.J. Robb, M.P. Searle, A.A. Ghani, M.J. Whitehouse, G.J.H. Oliver, M. Sone, N.J. Gardiner & M.H. Roselee (2015)- Petrogenesis of Malaysian granitoids in the Southeast Asian tin belt: Part 1. Geochemical and Sr-Nd isotopic characteristics. Geol. Soc. America (GSA) Bull. 127, 9-10, p. 1209-1237.
(Malaysian granitoids of SE Asian tin belt traditionally divided into Permian- Late Triassic 'I-type'-dominated arc-related E Province (Indochina terrane) and Late Triassic 'S-type'-dominated collision-related Main Range province (Sibumasu terrane), separated by Bentong-Raub Paleo-Tethyan suture that closed in Late Triassic. This model is oversimplified. Incorporation of sedimentary-sourced melts in E Province is insignificant, but more common sedimentary protolith in melt ore in Main Range, leading to more significant tin endowment)

Ng, S.W.P., M.P. Searle, M.J. Whitehouse, S.L. Chung, L.J. Robb, A.A. Ghani & M. Sone (2012)- High-spatial resolution SIMS U-Pb zircon dating on Malay tin granites: new insights to crustal evolution of the Malaysian Peninsula. AGU Fall Mtg., San Francisco 2012, V23A-2794 *(Poster Abstract)*
(SE Asian tin granite province previously recognized as comprising three distinct granitic belts (1) M Permian-Late Triassic E Province with mainly subduction-related I-type granites with Cu-Au deposits, (2) Late Permian-E Jurassic Main Range Province mainly S-type granites with Sn-W deposits; (3) Late Triassic- Cretaceous W Province mixed I- and S-type granites with Sn-W deposits. Ages based mainly on Rb-Sr and K-Ar whole rock geochronology, no longer considered suitable for crystallization ages of granites due to unstable behaviour of

isotopes in hydrothermal systems. New SIMS dates reveal W-ward younging trend across Malay Peninsula: E Province granites in E Malaysia formed by subduction processes between 220-285 Ma; Main Range Province S-type granites ages between 206-226 Ma (Late Triassic). Some young Cretaceous zircon rim ages. Granites in Malaysia cannot be simply categorized as I, S or A-type. Tin mineralization not restricted to S-type granites)

Ng, S.W.P., M.J. Whitehouse, M.P. Searle, L.J. Robb, A.A. Ghani, S.L. Chung, G.J.H. Oliver, M. Sone, N.J. Gardiner & M.H. Roselee (2015)- Petrogenesis of Malaysian granitoids in the Southeast Asian tin belt: Part 2. U-Pb zircon geochronology and tectonic model. Geol. Soc. America (GSA) Bull. 127, 9-10, p. 1238-1258.
(New U-Pb zircon ages for 39 granitoids across Malay tin-bearing granite province. Two belts: (1) Mostly I-type granitoids from E Malay province span 289-220 Ma (pre-collisional, subduction-related Andean-type magmas formed during E-ward subduction of Paleo-Tethys beneath Indochina in Permian- M-L Triassic; General westerly younging magmatic trend across Malay Peninsula considered to reflect steepening and roll-back of Bentong-Raub subduction zone during closure of Paleo-Tethys); (2) W Main Range Province granitoids all Late Triassic (227-201 Ma; syn- and post-collisional crustal melting of Sibumasu crust in Late Triassic; Tin mineralization mainly associated with this phase). Two models for Triassic evolution: (1) with second Late Triassic- Jurassic or E Cretaceous E-dipping subduction zone W of Sibumasu; (2) W-ward underthrusting of Indochina beneath W Malaya Main Range province. Cretaceous granitoids reflect localized crustal melting)

Niko, S., M. Sone & M.S. Leman (2005)- A new Permian species of *Mooreoceras* (Cephalopoda: Orthocerida) from northwestern Peninsular Malaysia. Proc. Japan Academy 81, B, p. 329-333.
(online at: www.jstage.jst.go.jp/article/pjab/81/8/329/_pdf)
(New late E Permian (Kungurian?) orthocerid cephalopod species Mooreoceras sibumasuense from basal Chuping Fm in Bukit Tungku Lembu in Perlis, NW Malaysia. Associated with Monodiexodia fusulinids, and part of Sibumasu Terrane. Most Permian Mooreoceras species confined to Australian Gondwana- Sibumasu; also M. sp in Atahoc Fm of Timor)

Niko, S., M. Sone & M.S. Leman (2007)- Two new species of orthocerid cephalopods from the Carboniferous Panching Limestone, West Malaysia. Paleontological Research (Palaeont. Soc. Japan) 11, 4, p. 331-336.
(Two new species of orthocerid cephalopods Kionoceras and Dolorthoceras from Bashkirian (Late Carboniferous) Panching Lst in Pahang, NE Malay Peninsula)

Niko, S., M. Sone & M.S. Leman (2018)- Late Silurian cephalopods from Langkawi, Malaysia, with peri-Gondwanan faunal affinity. J. Systematic Palaeontology 16, 7, p. 595-610.
(online at: https://umexpert.um.edu.my/file/publication/00011532_136895.pdf)
(Nine species of latest Silurian orthocerid cephalopods from U Setul Lst of Langgun, Langkawi Islands, incl. orthoceratids (Michelinoceras cf. michelini, Kopaninoceras setulense n.sp., Mimogeisonoceras? langgunense n.sp., Kionoceras?, Orthocycloceras), arionoceratids (Arionoceras mahsuri n.sp., Caliceras mempelamense n.sp.) and geisonoceratid Murchisoniceras? sp.. Assemblage belongs to newly defined Kopaninoceras Fauna, widely distributed along N margin of Gondwana and around Prototethys Ocean)

Ogura, Y. (1972)- *Psaronius* from Linggiu, Johore, Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 10, p. 117-124.
(Permian plant Psaronius johorensis (fern stem) from Linggiu flora, S part Malay Peninsula. See also Kon'no et al. 1971)

Ohana, T., T. Kimura & T.T. Khoo (1991)- Further discovery of some Carboniferous plant fossils from Tanjung Mat Amin, Trengganu, Peninsular Malaysia. J. Southeast Asian Earth Sci. 6, p. 93-101.
(New locality with Carboniferous 'Euramerican' plant fossils Rhacopteris, Sphenopteridium and Sphenopteris at Tanjung Mat Amin, Trengganu. Belong to Kuantan Flora, which was widespread in E Belt of Peninsular Malaysia N of Pahang River. Kuantan Flora indicates warm-humid, low latitudes during Carboniferous)

Oliver, G. & A. Prave (2013)- Palaeogeography of Late Triassic red-beds in Singapore and the Indosinian Orogeny. J. Asian Earth Sci. 76, p. 214-224.

(300m thick section of red-bed facies of U Triassic Jurong Fm on Sentosa Island, Singapore. Overall coarsening and thickening-upward pattern lacustrine mudstones in lower 100m to fluvial sequence. Detrital zircon U-Pb ages vary from 2.7 Ga- 209 Ma, mainly Permo-Triassic, with significant populations at ~245 Ma and 220 Ma. Deposited in half graben formed in hanging wall of Bukit Timah Fault when C Peninsular Malaysia went into extension following climax of Indosinian Orogeny in Late Triassic)

Oliver, G.J.H., K. Zaw & M.D. Hotson (2011)- Dating rocks in Singapore: plate tectonics between 280 and 200 million years ago. Innovation Magazine 10, 2, p. 22-25.

Oliver, G., K. Zaw, M. Hotson, S. Meffre & T. Manka (2013)- U-Pb zircon geochronology of Early Permian to Late Triassic rocks from Singapore and Johor: a plate tectonic reinterpretation. Gondwana Research 26, p. 132-143.
(U-Pb zircon geochronology of Permian- M Triassic granitoids from Singapore and Johor: rhyolite from Pulau Sibu 276 Ma (Permian), gabbros from Singapore 260-249 Ma (Late Permian), granites from Singapore 249-230 Ma (E Triassic) and rhyolite from Telkuma 238 Ma. Detrital zircon ages from Late Triassic Jurong Fm conglomerate from Singapore show Carboniferous- Late Triassic spikes at 350, 245 and 217 Ma. Plate tectonic evolution of Malaysian Peninsula region: active E Permian- M Triassic tin-bearing magmatic arc in E Malaysian Peninsula part of Indochina during Paleo Tethys Ocean subduction. Granitoid ages decrease from E to W. Late Triassic Sibumasu collision with Indochina (Indosinian Orogeny) caused W Belt (Sibumasu) to overthrust C Belt (Indochina) along Bentong Raub Suture. Lower half of thickened crust (tin-bearing Indochina Plate) partially melted and predominantly S-type tin-bearing granites intruded into upper crust (Sibumasu))

Ong, S.T. & B. Jasin (2007)- Discovery of a Lower Devonian Dacryoconarid bed from Hill B, Guar Jentik, Perlis: its significance and implications. Bull. Geol. Soc. Malaysia 53, p. 1-6.
(online at: http://geology.um.edu.my/gsmpublic/v53/Pdf%20individual%20papers/1%20Paper%20.pdf)
(Lower Devonian 'Tentaculites limestone' from Perlis, NW-most Malay Peninsula)

Ooi, P.C., S.N.F. Jamaludin & A.H.A. Latif (2017)- Fracture network analysis of metasedimentary rock in East Coast Terengganu- an analogue to fractured Basement in Malay Basin. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 453-467.
(Outcrop study of Carboniferous metasediments at Kuala Abang, E coast of Terengganu, as analogue for fractured basement in Malay Basin (Puteri Field))

Othman, A.R. (2012)- Fosil moluska Trias Akhir dari kawasan Binjui, Kedah. Warta Geologi (Newsl. Geol. Soc. Malaysia) 38, 2, p. 27-34.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta38_21.pdf)
('Late Triassic molluscan fossils from Binjui area, Kedah'. Fossils ammonoids Frankites apertus, Zestoceras birwicki, Anolcites anguinus and bivalve Halobia charlyana in Semanggol Fm in road-cut near Binjui, Kedah, W Malay Peninsula. Assemblage characteristic of Lower Carnian (Upper Triassic))

Othman, A.R. & M.S. Leman (2009)- The discovery of Middle Triassic bivalve *Daonella pahangensis* Kobayashi from Aring, Kelantan. Warta Geologi (Newsl. Geol. Soc. Malaysia) 35, 3, p. 111-114.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta35_3.pdf)
(Single specimen of bivalve Daonella pahangensis (Kobayashi) from Telong Fm near Aring, Gua Musang. First discovery of species besides those in Kobayashi (1964) from Temerloh, Pahang. Tethyan species, probably of Ladinian, Middle Triassic age)

Othman, A.R. & M.S. Leman (2010)- Fosil ammonoid berusia Trias Tengah dari Aring, Kelantan, Malaysia. Bull. Geol. Soc. Malaysia 56, p. 53-59.
(online at: https://gsmpubl.files.wordpress.com/2014/08/bgsm2010008.pdf)
('Middle Triassic ammonoid fossils from Aring, Kelantan, Malaysia'. Two localities with 13 species from Telong Fm on N Malay Peninsula. Assemblages represent 'Paleo-Tethys' ammonoid Zones Balatonicus Subzone

of Balatonites Zone (M Anisian) and Regoledanus Subzone of Protrachyceras Zone (Late Ladinian). Area can be correlated to Sukhothai Terrain of Shan-Thai (=Sibumasu) Block, belonging to Cathaysian domain)

Othman, A.R. & M.S. Leman (2011)- Fosil bivalvia *Daonella* dari Sg. Jentar, Mentakab, Pahang. Warta Geologi (Newsl. Geol. Soc. Malaysia) 36, 3-4, p. 221-227.
('Daonella bivalve fossils from Sg. Jentar, Mentakab, Pahang'. M Triassic Daonella bivalve fossils from tuffaceous shale of Semantan Fm near Mentakab, Pahang, in Eastern Triassic Rocks Zone. Five species, assigned to U Ladinian Daonella lommeli Zone. Species commonly found in deep marine environment)

Othman, A.R. & M.S. Leman (2012)- Rekod penemuan fosil Trias bivalvia *Daonella* dari Aring, Kelantan. Warta Geologi (Newsl. Geol. Soc. Malaysia) 38, 1, p. 4-10.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta38_1.pdf)
('Note on discovery of the Triassic bivalve Daonella from Aring, Kelantan'. M Triassic (U Ladinian) bivalves Daonella lommeli and D. cf. pichleri in Telong Fm gray mudstone near Aring, Gua Musang. Located in Eastern Triassic Rocks Zone. Associated with M Triassic ammonoids (Frankites spp., Sirenotrachyceras, Zestoceras spp., Clionites, Megaphyllites, Joannites). Bivalves restricted to Paleo-Tethys Ocean. Discovery of species in Kelantan shows that deep marine Semantan basin extended from Singapore to S Kelantan)

Othman, A.R. & M.S. Leman (2013)- Kajian semula fosil ammonoid Trias dari Yong Peng, Johor. Warta Geologi 39, 3-4, p. 59-61.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta-39_34.pdf)
('A revision of the Triassic ammonoid fossils from Yong Peng, Johor'. U Triassic ammonoids from Semantan Fm in Yong Peng area, Johor, S C Malay Peninsula. Include 'Tethyan' Frankites apertus and Sirenotrachyceras thusneldae, indicating Carnian canadensis subzone (fauna originally included in study by Sato (1964))

Otofuji, Y., Y.T. Moriyama, M.P. Arita, M. Miyazaki, K. Tsumura, Y. Yoshimura, M.K. Shuib, M. Sone, M. Miki, K. Uno, Y. Wada & H. Zaman (2017)- Tectonic evolution of the Malay Peninsula inferred from Jurassic to Cretaceous paleomagnetic results. J. Asian Earth Sci. 134, p. 130-149.
(Magnetization in Jurassic-Cretaceous red bed sandstones of Tembeling Gp indicates two-stages of tectonic movement in S Malay Peninsula: (1) CW rotation of 61° ± 12° accompanied by 13° ± 8° S-ward displacement after Cretaceous (caused by indentation of India into Asia after 55 Ma); and (2) subsequent CCW rotation of 18° ± 5° to present position (collision of Australian Plate with SE Asia after 30-20 Ma))

Ozawa, T. (1976)- Late Visean *Eostaffella* (Fusulininan Foraminifera) from West Malaysia. In: T. Kobayashi & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 17, p. 117-128.
(First record of early fusulinid foram genus Eostaffella from Late Visean limestone of Bukit Charas, 23 km NW of Kuantan, Pahang, Malay Peninsula (brachiopods from same locality described by Muir-Wood 1948, conodonts by Igo & Koike 1968, foraminifera by Mamet & Saurin 1970, etc.))

Parham, P.R. (2016)- Late Cenozoic relative sea-level highs and record from Peninsular Malaysia and Malaysian Borneo: implications for vertical crustal movements. Bull. Geol. Soc. Malaysia 62, p. 91-115.
(online at: https://gsmpubl.files.wordpress.com/2017/04/bgsm2016012.pdf)
(Peninsular Malaysia no evidence to indicate Relative Sea Level ever higher than M Holocene maximum (~+5m at ~7 ka). RSL record of Malaysian Borneo more complex, even W Sarawak on Sundaland. Possible strandplain deposits over coarse alluvium in Kuching area could reflect last interglacial highstand deposition but more likely result of uplift. Ongoing subsidence of coastal plain from Kuching to Bintulu mainly due to sediment loading. N of Lupar Line, coast and interior from Bintulu to Bongawan, Sabah, has undergone Quaternary uplift. Geomorphic indicators and lack of emergent RSL indicators along W Sabah coast, N of Bongawan, suggest ongoing subsidence. RSL record from E Sabah very complex)

Parham, P.R., Y. Saito, N. Sapon, R. Suriadi & N.A. Mochtar (2014)- Evidence for ca. 7-ka maximum Holocene transgression on the Peninsular Malaysia east coast. J. Quaternary Science 29, 5, p. 414-422.
(Coral and shelly marine deposits up to 50 cm above mean sea level in NE Peninsular Malaysia, with radiocarbon ages 7238-6909 yrs BP. Maximum transgression at ~7 ka, relative sea 1.4- 3m above present)

Penrose, R.A.F. (1903)- The tin deposits of the Malay Peninsula with special reference to those of the Kinta District. J. Geology 11, 2, p. 135-154.
(Brief review of early tin operations on Malay Peninsula, which are mainly W of Main range. Cassiterite derived from granites, but mined mainly from alluvial placers. Most mines operated by Chinese)

Pfeiffer, D. (1975)- The hydrogeologic map of the islands of Singapore, 1: 100,000. Geol. Jahrbuch C, 9, p. 3-14.

Pierson, J.B., A.K. Askury, W.S. Chow & Z.T.H. Zuhar (2009)- Palaeozoic hydrocarbon plays in and around Peninsular Malaysia: any chance of exploration success? PETRONAS Techn. J. 2, p. 16-25.

Pierson, J.B., A.K. Askury, W.S. Chow & Z.T.H. Zuhar (2009)- Paleozoic sedimentary sequences exposed in the Kinta Valley: possible clues to a Paleozoic hydrocarbon system in and around Peninsular Malaysia? Platform (Universiti Teknologi Petronas) 7, 1, p. 56-65.
(Paleozoic sediments exposed in Kinta Valley suggest presence of source rocks, reservoirs and seals in Paleozoic interval. Limestone hills part of Paleozoic carbonate complex that covered large parts of SE Asia. Permian carbonate reservoirs may be found in E and off E coast of Peninsular Malaysia)

Pierson, J.B., S. Kassa, H. Tsegab, A.A. Kadir, Chow W.S., A. W. Hunter & Z.T. Harith (2011)- Sedimentology of the Paleozoic limestone of the Kinta Valley, Peninsular Malaysia. In: First EAGE South-East Asia Regional Geology Workshop, Ipoh 2011, 5p. *(Extended Abstract)*
(Limestone hills of Kinta Valley remnants of extensive Paleozoic carbonate complex. Altered by contact metamorphism of Triassic granite intrusion, but in N part of valley rel. unaltered. Mainly thin-beeded micritic limestone. Slump folds and breccias suggestive of marine slope deposition. Direction of slumping mainly toW, implying platform margin and lagoon facies should be E of Kinta Valley)

Pimm, A.C. (1967)- Triassic volcanic rocks in East and West Malaysia. Bull. Geol. Survey Dept. Borneo Region, Malaysia, 8, p. 36-40.
(Predominantly basic-acid lavas in E Malaysia and intermediate-acid pyroclastics in W Malaysia are associated with Triassic neritic sediments. Volcanic rocks in these areas do not belong to same province but are related to separate tectonic belts in Sunda Region)

Pour, A.B. & M. Hashim (2015)- Structural mapping using PALSAR data in the Central Gold Belt, Peninsular Malaysia. Ore Geology Reviews 64, p. 13-22.
(SAR radar mapping of structural features in Central Gold Belt, mainly E of Bentong-Raub Suture Zone, identified high potential areas for gold prospecting. Four sets of lineaments, trending N-S, NE-SW, NNW-SSE and ESE-WNW)

Pour, A.B., M. Hashim, C. Makoundi & K. Zaw (2016)- Structural mapping of the Bentong-Raub suture zone Using PALSAR remote sensing data, Peninsular Malaysia: implications for sediment-hosted/orogenic gold mineral systems exploration. Resource Geology 66, 4, p. 368-385.
(Bentong-Raub Suture between Gondwana-derived Sibumasu terrane and Sukhothai Arc genetically related to the sediment-hosted/orogenic gold deposits associated with major lineaments in Central Gold Belt of Peninsular Malaysia)

Quek, L.X., A.A. Ghani, S.L. Chung, S. Li, Y.M. Lai, M. Saidin, M.H.A. Hassan et al. (2017)- Mafic microgranular enclaves (MMEs) in amphibole-bearing granites of the Bintang batholith, Main Range granite province: evidence for a meta-igneous basement in Western Peninsular Malaysia. J. Asian Earth Sci. 143, p. 11-29.
(Mafic microgranular enclaves in Late Triassic amphibole-bearing I-type Bintang granite of Main Range granite province. MMEs slightly older zircon age (224 ± 1 Ma) than granite host (216 ± 1Ma). Oldest inherited zircons 2.0 and 1.3 Ga, oldest xenocrystic zircons 2.5 and 1.5 Ga. Rocks generated from similar, ancient source in basement (E Proterozoic- Late Archean (~2.5 Ga) meta-igneous rock))

Rahman, A.H. & M.K. Shuib (1999)- The Upper Paleozoic Singa-Kubang Pasu megasequence: Some thoughts on basin initiations, depositional and tectonic history. In: Proc. GSM Dynamic stratigraphy & tectonics of Peninsular Malaysia, Second Seminar- The Western belt and Palaeozoic of Peninsular Malaysia and neighbouring areas, Kuala Lumpur, p. 58-67

Rahman, A.H. & M.K. Shuib (2000)- The Mesozoic of the Central Belt of the Malay Peninsula- Part I: Stratigraphy and depositional sequence. In: Proc. Geol. Soc. Malaysia Conf. Dynamic stratigraphy and tectonics of Peninsular Malaysia, Third Seminar, The Mesozoic of Peninsular Malaysia, Kuala Lumpur 2000, p. 55-73.
(see Shuib & Abd Rachman & (2000) for Part II)

Raj, J.K. (1998)- A reappraisal of the Bok Balt fault zone. Warta Geologi 8, 2, p. 36-41.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1982002.pdf)

Raj, J.K. (1998)- Tectonic evolution of the Tertiary basin at Batu Arang, Selangor Darul Ehsan, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 42, p. 197-210.
(online at: www.gsm.org.my/products/702001-100845-PDF.pdf)
(Small Tertiary Batu Arang basin on W Central Malay Peninsula, N of Kuala Lumpur. Estimated area ~15km2, depth 1000-1500'. Up to 265m basal clastics with coal, overlain by 'Boulder beds'. Unconformably overlie steeply dipping Permian meta-sediments)

Raj, J.K., Abdul Hadi Abd. Rahman & M.K. Shuib (1998)- Tertiary basins of inland Peninsular Malaysia: review and tectonic evolution. Bull. Geol. Soc. Malaysia 42, p. 211-216.
(online at: www.gsm.org.my/products/702001-100844-PDF.pdf)
(Unlike Malaysia offshore regions, Tertiary sediments rare on Malay Peninsula. Seven small basins identified, all <300-400m thick, most with lignite seams)

Raj, J.K., D.N.K. Tan & W.H. Abdullah (2009)- Cenozoic stratigraphy. In: C.S. Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 133-173.
(Malay Peninsula almost entirely emergent during Cenozoic, with thin Cenozoic deposits mainly along W and E coasts. Isolated small Tertiary pull-apart basins. Batu Arang basin, Selangor, with 7-15m thick Eo-Oligocene thermally immature coal beds and lacustrine oil shale. E-M Pleistocene Simpang Fm (Old Alluvium) aggraded to 70m above s.l. Patches of up to 9m thick rhyolitic ash probably form Toba volcano, Sumatra)

Rajah, S.S. (1969)- Younger Mesozoic sedimentary rocks, State of Johore, West Malaysia. American Assoc. Petrol. Geol. (AAPG) Bull. 53, p. 2187-2189.
(Flat-lying, post-orogenic, fluvio-deltaic Tebak Fm (possibly same as Gagau, Panti Fms) of Johore Province, W Malaysia, most likely Lower Cretaceous age, and predominantly arenaceous)

Rajah, S.S. (1970)- Limestone occurrences in Johore. Bull. Geol. Soc. Malaysia 3, p. 131-133.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1970010.pdf)
(First record of E-M Permian limestones with fusulinids from Sungei Sedili and Sungei Lenggor areas in S part Malay Peninsula)

Rajah, S.S. (1979)- The Kinta tinfield, Malaysia. Bull. Geol. Soc. Malaysia 11, p. 111-136.
(online at: www.gsm.org.my/products/702001-101229-PDF.pdf)
(Kinta tinfield in Perak, NW Malay Peninsula, one of world's richest fields. Mainly in placer deposits in area with Triassic-Jurassic? granites intruded into steeply dipping, N/NW striking Silurian-Permian sediments (incl. Permian limestones)

Rajah, S.S., F. Chand & D. Santokh-Sing (1977)- The granitoids and mineralization of the Eastern Belt of Peninsular Malaysia. Bull. Geol. Soc. Malaysia 9, p. 209-232.
(online at: www.gsm.org.my/products/702001-101290-PDF.pdf)

(Malay Peninsula 3 mineral belts: Western Tin belt, Central Gold and base metal belt and Eastern Tin belt. Eastern Belt granites emplaced in Upper Carboniferous- U Jurassic, peaking in U Permian. Invaded country rocks tightly folded and weakly regionally metamorphosed. Tin, tungsten and iron mineralization in marginal and apical parts of plutons)

Rajah, S.S. (1986)- Bauxite in the Kuantan area, Peninsular Malaysia. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 315-325.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986024.pdf)
(Significant reserves of ferruginous bauxite in Kuantan area, E part of Malay Peninsula. Bauxite is tropical laterite, formed by decomposition of underlying Kuantan basalt of probable Miocene or younger age)

Rajah, S.S. & E.H. Yin (1980)- Summary of the geology of the Central Belt, Peninsular Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University Tokyo Press, 21, p. 319-342.
(Comprehensive review of geology of Central Belt. Mainly Permian and Triassic sediments and intrusive rocks)

Rao, C.P. (1988)- Paleoclimate of some Permo-Triassic carbonates of Malaysia. Sedimentary Geology 60, p. 163-171.
(Study of Permian and Triassic carbonates of Malaysia. Permian Chuping Lst at Langkawi (= part of Sibumasu terrane; JTvG) with common brachiopods with oxygen/carbon isotope signature similar to E Australian faunas. Paleoclimate was cool- temperate ('Gondwanan'). Permian Summalayang Lst of NE Malay Peninsula rich in fusulinids, but no corals, etc., Foramol facies and predominantly Mg calcite mineralogy reflect temperate climate. Late Triassic Kodiang Lst with corals, algae, stromatolites, etc., and formed in tropical setting)

Rastall, R.H (1927)- The geology of the Kinta Valley. Mining Magazine 36, p. 328-338.

Rastall, R.H (1927)- The limestone of the Kinta Valley, Federated Malay States. Geol. Magazine 64, p. 410-432.
(Kinta Valley with steep hills of thick, probably Permo-Carboniferous limestone. No biostrat)

Rastall, R.H (1931)- The metamorphic rocks of Gunong Terendum, Kinta Valley, Federated Malay States. Geol. Magazine 68, p. 193-206.
(?Triassic schist, in vertical contact with ?Permo-Carboniferous limestone, both with veins of granite)

Richardson, J.A. (1939)- The geology and mineral resources of the neighbourhood of Raub, Pahang with an account of the geology of the Raub Australian Gold Mine. Geol. Survey Dept., Federated Malay States, Singapore, Mem. 3, p. 1-166.

Richardson, J.A. (1946)- The stratigraphy and structure of the Arenaceous Formation of the Main Range Foothills, F.M.S.. Geol. Magazine 83, 5, p. 217-229.
(Unfossiliferous Triassic? Arenaceous Formation E of Main Range Granite of Malay Peninsula, associated with amphibolites (following Raub-Bentong suture?; JTvG))

Richardson, J.A. (1947)- The origin of the amphibole-schist series of Pahang, Malaya. Geol. Magazine 84, p. 241-249.
(Amphibole-Schist Series confined to Malay Peninsula E of Main Range, and is most abundant in NW Pahang. Associated with serpentine. Parent rocks may have been sediments or pyroclastics of Permo-Carboniferous. Associated with Arenaceous Formation of Main Range Foothills, quartzites, quartzite-conglomerates, shales, cherts, phyllites, quartz- and mica-schists, which may be either Triassic or perhaps older than adjacent Permocarboniferous shales and limestones)

Richardson, J.A. (1947)- Facies changes and lithological variation in the Permo-Carboniferous Formation of North-West Pahang and South-West Kelantan, Malaya. Geol. Magazine 84, 5, p. 281-288.

(Facies change and lithological variation traceable in outcrop of Permocarboniferous rocks exposed over large jungle area of NW Pahang and SW Kelantan. Three major facies: (1) calcareous facies; (2) argillaceous facies (incl. mixed shale-rhyolite tuff sub-facies); (3) volcanic facies (Pahang Volcanic Series); mainly rhyolite and andesite tuffs)

Richardson, J.A. (1950)- The geology and mineral resources of the neighbourhood of Chegar, Perah and Merapoh, Pahang. Geol. Survey Dept., Federated Malay States, Ipoh, Mem. 4, p. 1-162.

Richter, B., E. Schmidtke, M. Fuller, N. Harbury & A.R. Samsudin (1999)- Paleomagnetism of Peninsular Malaysia. J. Asian Earth Sci. 17, p. 477-519.
(Paleomagnetic results from Peninsular Malaysia. Peninsular Malaysia in low N latitudes since Late Triassic. Jurassic- Paleocene counterclockwise (CCW) rotations, while clockwise rotations (CW) predominant in older rocks. 'S Sundaland' block (Malay Peninsula, Borneo, Sulawesi, Celebes Sea) rotated ~30°- 40° CCW between Late Eocene (~40-45 Ma) and M Miocene (~10-15 Ma). Regional CCW rotations not consistent with extrusion tectonic models)

Rishworth, D.E.H. (1974)- The Upper Mesozoic terrigenous Gagau Group of Peninsular Malaysia. Geol. Survey Malaysia, Kuala Lumpur, Spec. Paper 1, p. 1-78.
(Gagau Gp thick sequence of non-marine clastic sediments in isolated areas of E Malay Peninsula. Rel. gently dipping and unconformable over highly folded Permian- Triassic strata. Plant remains suggest mainly Late Jurassic- E Cretaceous age. Two formations, unfossiliferous Badong Conglomerate (400-500m) overlain by Lotong Sandstone (600m), locally with plant remains (Equisetites, Gleichenoides, Otozamites, Frenelopsis, etc.; first described by Kon'no 1967, 1968) and rare small chitinous bivalves. With volcanic interbeds. Gagau Gp similar to rocks of Khorat Plateau (NE Thailand) and also Bintan Fm of Bintan Island (Indonesia, SE of Singapore))

Roe, F.W. (1951)- The geology and mineral resources of the Fraser's Hill area, Selangor, Perak and Pahang, Federation of Malaya, with an account of the mineral resources. Geol. Survey Dept. Federation of Malaya, Mem. 5, p. 1-138.
(Pahang area with extensive Main Range granites, Pahang Volcanics. Widespread tin mining)

Roe, F.W. (1953)- The geology and and mineral resources of the neighbourhood of Kuala Selangor and Rasa, Selangor, Federation of Malaya, with an account of the geology of Batu Arang coal-field. Geol. Survey Dept. Federation of Malaya, Mem. 7, p. 1-163.

Romang, M. (1922)- Petrographische Untersuchung zinnerzfuhrender Gesteine aus Kinta (Malakka)., Eclogae Geol. Helvetiae 17, 2, p. 178-252.
('Petrographic investigations of tin-bearing rocks from Kinta (Malakka)'. Descriptions of samples from western Malay Peninsula collected by Dr. Pannekoek van Rheden in 1907-1909, as Dissertation at University of Basel under Prof. C. Schmidt. Granites, pegmatites, greisen, hornfels, metamorphic limestones, etc.)

Roselee, M.H., A.A. Ghani, S.L. Chung, M.R. Umor & L.X. Quek (2016)- óA-typeô signature of volcanics suite from Teluk Ramunia, Southeastern of Johor, Peninsular Malaysia: Geochemical evidence of Paleo-Tethys slab rollback extension. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 739-742.
(Triassic (Late Carnian; 229, 231 Ma) volcanics of SE tip of Malay Peninsula)

Roselee, M.H., A.A. Ghani & M.R. Umor (2016)- Petrology and geochemistry of igneous rocks from southern Tioman Island, Pahang, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 62, p. 79-89.
(online at: https://gsmpubl.files.wordpress.com/2017/04/bgsm2016011.pdf)
(Plutonic (hornblende diorite, biotite granite) and volcanic rocks (rhyolite-dacite; andesite on other part of island) in S part of Tioman Island, E of Pahang coast. Late Cretaceous granite (~80 Ma) intruded Tioman Volcanics (~88.9 Ma). Biotite granite formed in calc-alkaline volcanic arc setting (Neotethys subduction?))

Roslan, K. (1988)- The stratigraphy and sedimentology of Triassic rocks of Peninsular Malaya. Ph.D. Thesis University College, London, p. 1-344. *(Unpublished)*

Roslan, M.H.K., C.A. Ali & K. Roslan Mohamed (2016)- Fasies dan sekitaran sedimen Formasi Singa di Langkawi, Malaysia. Sains Malaysiana 45, 12, p. 1897-1904.
(online at: www.ukm.my/jsm/pdf_files/SM-PDF-45-12-2016/14%20Mohamad%20Hanif%20Kamal.pdf)
('Facies and sedimentary environment of the Singa Formation of Langkawi, Malaysia'. Depositional model of Carboniferous- E Permian shallow marine clastics of Singa Fm, widespread on Langkawi. With pebbly mudstone facies indicative of cold climate)

Runnegar, B. & D. Gobbett (1975)- *Tanchintongia* gen.nov., a bizarre Permian myalinid bivalve from West Malaysia and Japan. Palaeontology 18, 2, p. 315-322.
(online at: http://palaeontology.palass-pubs.org/pdf/Vol%2018/Pages%20315-322.pdf)
(New large, thick-shelled myalinid bivalve species and genus Tanchintongia perakensis from open-cut tin mine H.S. Lee No. 8, Kinta Valley, Perak. Associated with E Permian ammonoids and Pseudofusulina (tropical E Permian alatoconchid, also discussed in Isozaki et al. 2009))

Ryall, P.J.C. (1982)- Some thoughts on the crustal structure of Peninsular Malaysia: results of a gravity traverse. Bull. Geol. Soc. Malaysia, 15, p. 9-18.
(online at: www.gsm.org.my/products/702001-101190-PDF.pdf)
(Gravity profile across Malay Peninsula from Kuala Lumpur to Selangor)

Saaid, N.S.M. & Basir Jasin (2014)- Litho and biostratigraphy of the Tournaisian chert, the Kubang Pasu Formation of the Kedah and Perlis, Malaysia. Geol. Soc. Malaysia, Nat. Geoscience Conf. (NGC) 2014, Trengganu, P045, p. 35-36. *(Abstract)*
(Kubang Pasu Fm of NW Peninsular Malaysia equivalent to Singa Fm of Langkawi Island. Current age interpretation of formation E Carboniferous- E Permian. Age of lower boundary based on widespread Tournaisian radiolarian chert (with Stigmosphaerostylus variospina, S. vulgaris, Astroentactinia multispinosa))

Said, Uyop (1997)- Palinologi batuan Jura-Kapur Taman Negara. In: I. Komoo et al. (eds.) Warisan Geologi Malaysia, Lestari, Universiti Kebangsaan Malaysia, p. 249-368.
('Palynology of Jurassic- Cretaceous rocks of Taman Negara'. Cretaceous palynology of non-marine Tembeling Gp in C part of Malay Peninsula))

Said, Uyop (2002)- Palynomorph assemblage from Keratong, Pahang: its age and emergence of angiospermlike pollen. GSM Annual Geological Conf. 2002, Kota Bharu, Bull. Geol. Soc. Malaysia 45, p. 179-185.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2002027.pdf)
(Palynomorph assemblage from outcrop at Felda Keratong, SE Pahang, resembles Paradoxa Assemblage, of late E Cretaceous (Barremian-Albian) suggested age. Occurrence of monosulcate pollen Clavatipollenites hughesii indicates emergence of angiosperms during deposition of these sediments)

Said, Uyop & Che Aziz Ali (2000)- On the palynomorph assemblage from the Panti Sandstone, Kota Tinggi, Johor. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf. 2000, Pulau Pinang, p. 137-141.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_19.pdf)
(Palynomorphs from Panti Sst in quarry N of Kota Tinggi, Johor, which overlies older granite body. Most common palynomorphs Classopollis, Cicatricosisporites, Aequitriradites, Ischyosporites and Ephedripites. Age Lower Cretaceous (Berriasian-Valanginian) and climate during was warm and dry)

Said, Uyop, M. Malihan & Z. Konjing (2007)- Neocomian palynomorph assemblage from Central Pahang, Malaysia. Bull. Geol. Soc. Malaysia 53, p. 21-25.
(online at: http://geology.um.edu.my/gsmpublic/v53/Pdf%20individual%20papers/5%20Paper0.pdf)
(Road-cuts in central Pahang with distinct palynomorph assemblage with Cicatricosisporites australiensis, C. ludbrookiae, Biretisporites eneabbaensis and Baculatisporites comaumensis. Assigned to lowest speciosus Assemblage zone (Valanginian- Hauterivian))

Said, Uyop & S. Salehudin (2001)- A palynological study on an Early Cretaceous rock sequence at Bukit Belah, Batu Pahat, Johor. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf., Pangkor 2001, p. 91-97.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2001_15.pdf)
(New outcrops at Bukit Belah, N of Batu Pahat, Johor, with Late Jurassic- E Cretaceous plant fossils attributed to Gleichenites pantiensis, Frenelopsis malaiana, Cupressinocladus acuminifolia, Otozamites malayana and Ptilophyllum spp.. Palynomorphs include Cicatricosisporites australiensis, C. ludbrooki and Reticulatisporites pudens suggesting E Cretaceous age, probably Speciosus Assemblage (Valanginian- ?Hauterivian))

Sakagami, S. (1963)- Bryozoa from Pulau Jong, the Langkawi Islands, Northwest Malaya. Japanese J. Geology Geography 34, p. 205-209.

Sakagami, S. (1964)- Bryozoa from Pulau Jong, the Langkawi Islands, Northwest Malaya. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 135-141.
(Same paper as Sakagami (1963). Short paper on 4 species of Permian(Artinskian- Kungurian) bryozoa from Jong Island, Langkawi islands: Cyclotrypa, Fistulipora, Polypora aff. timorensis, P. gigantea)

Sakagami, S. (1970)- On the Paleozoic bryozoa of Japan and Thai-Malayan districts. J. Paleontology 44, 4, p. 680-692.

Sakagami, S. (1972)- Carboniferous bryozoa from Bukit Charas, near Kuantan, Pahang, Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 10, p. 35-62.
(24 species of Visean bryoza from E part Malay Peninsula)

Sakagami, S. (1973)- Some Permian Bryozoa from Pahang, Malaysia. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 63-73.
(M Permian bryoza from limestone blocks in andesite volcaniclastic matrix in Kampong Awah quarry, Pahang and Jenka Pass: Fistulipora, Araxopora, Clausotrypa, etc. Associated with fusulinids Yabeina asiatica, Neoschwagerina cheni, N. douvillei, Sumatrina annae, Verbeekina verbeeki, Chusenella tingi, suggesting early M Permian (Wordian) age (= part of Sukhothai Arc, just E of Raub Bentong suture?; JTvG))

Sakagami, S. (1976)- Palaeobiogeography of the Permian bryozoa on the basis of the Thai-Malayan district. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 155-172.
(121 species of Lower Permian and 7species of Upper Permian bryozoa known from Thai-Malayan region. Thai-Malayan bryozoa are common with those of Timor, W Australia and the Urals)

Samah, M.E.A., C. A. Ali, K.R. Mohamed & N.A.M. Radzir (2018)- Pencirian dan tafsiran paleo-sekitaran stromatolit dan thrombolit dalam jujukan batu kapur Setul di Langkawi dan Perlis. Bull. Geol. Soc. Malaysia 66, p. 99-105.
(online at: https://gsm.org.my/products/702001-101747-PDF.pdf)
('Characterisation and interpretation of stromatolites and thrombolites paleo-environment in Setul Limestone succession, Langkawi and Perlis'. Microbial deposits in Paleozoic Setul Lst (stromatolites, thrombolites, oncolites)

Samsudin, A.R., Basir Jasin, I. Abdullah, A. Janlan & U. Said (1991)- Beberapa aspek geologi batuan klastik Trias zone barat Semenanjung Malaysia. Sains Malaysiana 20, 1, p. 55-74.
('Some aspects of the geology of Triassic clastic rocks in the western zone of Malaysia')

Samsudin, A.R., N S. Ahmad, N.D. Johari & U. Hamzah (2014)- Geophysical evidences of a possible meteorite impact crater at Langkawi Island, Kedah, Malaysia. Electronic J. Geotechn. Engin. (EJGE) 19, Bund. R, p. 4741-4749.

(Semi-circular rim structure on Langkawi island previously identified by Tjia (2001) as possible remnant of impact crater. Gravity and magnetic surveys over ~35 km2 area shows low gravity negative anomaly of ~1.5 km in diameter. Modelled as simple type crater with ~1500m of low density sedimentary fill)

Sarkar, S.S. (1972)- On *Posidonia* from Rebak Island, Langkawi, West Malaysia. Geol. Soc. Malaysia Newsl. 37, p. 5-9.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1972005.pdf)
(E Carboniferous thin-shelled bivalve molluscs from Rebak, Langkawi Islands. New species: Posidonia elongata, P. dilatata, P. intermedia, P. conspicua (= Posidonomya; see also Basir Jasin 2013, 2015))

Sashida, K., S. Adachi, H. Igo, T. Koike & A.B. Ibrahim (1995)- Middle and Late Permian radiolarians from the Semanggol Formation, northwest Peninsular Malaysia. Trans. Proc. Palaeontological Soc. Japan 177, p. 43-58.
(online at: http://ci.nii.ac.jp/naid/110002703388/en)
(Semanggol Fm in NW Malay Peninsula subdivided into lower Chert, middle Rhythmite (with Triassic Daonella and Halobia) and upper Conglomerate Members. Allochthonous siliceous limestone block in lower Chert Member at Bukit Barak, 25km NE of Alor Setar, with late M Permian radiolarians, including Follicucullus monacanthus. Late Permian radiolarians of Neoalbaillella optima and N. ornithoformis assemblages in chert beds of same member at Bukit Nyan, E of Alor Setar. Permian radiolarian faunas similar to Japan, Philippines, and S China. Eight species and five unidentified species of radiolaria described)

Sato, T. (1964)- Ammonites du Trias de la Malaisie. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 43-51.
('Ammonites from the Triassic of Malaysia'. Three new localities with Triassic ammonites in Peninsular Malaysia:(1) Yong Peng (Johore; Carnian with Paratrachyceras, Joannites, Lobites), (2), (3) Temerloh and Kulal Lipis (Anisian-Ladinian, with Paraceratites aff. trinodosu, Arpadites))

Sautter, B. (2017)- Influence de lõheritage structural sur le rifting: exemple de la marge Ouest de La Sonde. Doct. Thesis Ecole Normal Superiere, Universite de Paris, p.
('Influence of pre-existing structural fabric on rifting: example from the western margin of Sunda Plate')

Sautter, B., M. Pubellier, P. Jousselin, P. Dattilo, Y. Kerdraon, C.M. Choong & D. Menier (2017)- Late Paleogene rifting along the Malay Peninsula thickened crust. Tectonophysics 710-711, p. 205-224.
(Continental core of Malay Peninsula relatively undeformed after Triassic Indosinian orogeny. Thick crustal mega-horst bounded by shear zones (Ranong, Klong Marui, Main Range Batholith Fault Zones), initiated in latest Cretaceous and reactivated in Late Paleogene. Extension localized on sides with Late Cretaceous deformation. In W continental shelf three major crustal steps (crustal-scale tilted blocks bounded by deep-rooted normal faults; Mergui Basin). To E rift systems with large tilted blocks (W Thai, Songkhla, Chumphon) which may reflect large crustal boudins. Central domain extension limited to narrow N-S half grabens. Rifted basins resemble N-S en-echelon structures along large NW-SE shear bands. Deep Andaman, Malay and Pattani basins on weaker crust inherited from Gondwanan continental blocks (Burma, Sibumasu, Indochina))

Schwartz, M.O. & A.K. Askury (1989)- Geological, geochemical, and fluid inclusion studies of the tin granites from the Bujang Melaka pluton, Kinta Valley, Malaysia. Economic Geology 84, p. 751-779.
(Bujang Melaka pluton of Kinta Valley has area of 20x10 km, and belongs to Permo-Triassic Main Range batholith, or W granite belt of PeninsularMalaysia. Mainly S-type biotite granites, emplaced into Devonian-Lower Permian sediments.

Savage, H.E.F. (1938)- The geology of the neighbourhood of Sungai Siput, Perak, Federated Malay States, with an account of the mineral deposits. Geol. Survey Dept. Fed. Malay States, new ser., Mem. 1, p. 1-46.
(online at: http://myrepositori.pnm.gov.my/bitstream/123456789/2825/1/MN1100008_FAMD.pdf)

Scrivenor, J.B. (1908)- Note on the sedimentary rocks of Singapore. Geol. Magazine Dec. 5, 7, p. 289-291.

(Early note on sediments of Singapore. Steeply dipping NW-SE striking sandstone and conglomerates with red and grey shales at Blakang Mati island contain chert pebbles, probably an extension of Late Triassic Tembeling Series of Pahang, Malay Peninsula, which are probably unconformable on Raub series)

Scrivenor, J.B. (1909)- Obsidianites in the Malay Peninsula. Geol. Magazine 6, 9, p. 411-413.
(Obsidianites of probable meteoric origin(tektites) and similar to material from Billiton and Java described by Verbeek, also known from tin-ore bearing alluvium of Pahang and Negri Sembilan on Malay Peninsula)

Scrivenor, J.B. (1910)- The rocks of Pulau Ubin and Pulau Nanas (Singapore). Quart. J. Geol. Soc. (London) 66, p. 420-434.
(Rocks of Singapore islands mainly granites and tuffs)

Scrivenor, J.B. (1912)- The Gopeng beds of Kinta (Federated Malay States). Quart. J. Geol. Soc. (London) 68, p. 140-163.
(Remains of 'ancient Gondwanaland tin-field' near Gopeng tin mining center at E side Kinta Valley, older than Mesozoic granite of Main range of Peninsula, altered by it, and further enriched in tin-ore by it near contact. Steeply dipping Gopeng Beds overlie Permo-Carbononiferous limestone, and include polymict boulder clays that were deposited under glacial conditions and probably equivalents of (E Permian) Bacchus Marsh and Murree marine beds of Australia (now viewed as Quaternary alluvial deposits (Hutchison & Tan 2009))

Scrivenor, J.B. (1913)- The geology and mining industry of the Kinta District, Perak, Federated Malay States, with a geological sketch map. F.M.S. Government Printing Office, Kuala Lumpur, p. 1-91.
(online at: https://books.google.com/books...)
(Much of Kinta District in Perak occupied by granite of Main Range. Also Paleozoic limestone and 'Gondwana rocks': clays and boulder clays (probably of glacial origin), phyllites and quartzites. Kinta Valley with steep Carboniferous limestone hills, etc. Many tin mines in alluvial deposits)

Scrivenor, J.B. (1913)- The geological history of the Malay Peninsula. Quart. J. Geol. Soc. (London) 69, p. 343-371.
(Early summary of Malay Peninsula geology. Sparsely illustrated)

Scrivenor, J.B. (1923)- The structural geology of British Malaya. J. Geology 31, 7, p. 556-570.
(Early essay on geology of Malay Peninsula)

Scrivenor, J.B. (1924)- The geology of Singapore Island, with a geological sketch map. J. Malayan Branch, Royal Asiatic Society 2, p. 1-8.
(Brief account of geology of Singapore Islands. Greater part Singapore is built on locally steeply dipping sandstone and shale, probably of Triassic age, intruded by granites)

Scrivenor, J.B. (1925)- Summary of the geological history of British Malaya and British Borneo. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 441-447.

Scrivenor, J.B. (1926)- The palaeontology of British Malaya. J. Malayan Branch, Royal Asiatic Society 4, p. 173-184.
(On fossils collected in Malay Peninsula since 1900: Triassic Myophoria sandstone, Jurassic and Late Triassic marine molluscs from Singapore, radiolarian cherts, Carboniferous plants, Permian fusulinids in NW Malay Peninsula, etc.)

Scrivenor, J.B. (1928)- The geology of Malayan ore deposits. Macmillan, London, p. 1-216.
(Review of mineral deposits of Malaysia, mainly gold and tin)

Scrivenor, J.B. (1928)- Geological map of British Malaya, issued as Folio II of the general geological map of the Netherlands East Indies, scale 1:1000.000. Jaarboek Mijnwezen Nederlandsch-Indie 54 (1925), Verhandelingen 2, p. 81-96.
(Overview map of Malay Peninsula and Riau Islands, with very brief explanatory notes)

Scrivenor, J.B. (1929)- Radiolaria-bearing rocks in the Malay Peninsula. De Mijningenieur 10, 11, p. 238-239.
(Brief review of radiolarian rocks of Malay Peninsula. Present in numerous localities of Malay Peninsula, often in steeply dipping deformed series. Bulk of radiolarian rocks at base of Triassic series of quartzites and shales and above Carboniferous limestone; some chert horizons may be younger)

Scrivenor, J.B. (1931)- The geology of Malaya. Macmillan and Co., London, p. 1-250.
(First textbook on geology of Malay Peninsula)

Scrivenor, J.B. (1941)- Geological research in the Malay Peninsula and Archipelago. Geol. Magazine 78, 2, p. 125-150.
(Review of status of geological research in Malay Peninsula and Indonesian Archipelago)

Scrivenor, J.B. & W.R. Jones (1919)- The geology of south Perak, North Selangor and the Dindings. Geological Department Federated Malay States, Kuala Lumpur, 212p.

Seong, K.T. (1990)- K-Ar dating of micas from granitoids in the Kuala Lumpur-Seramban area. Bull. Geol. Soc. Malaysia 26, p. 77-96.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990008.pdf)
(Granitoids near Kuala Lumpur part of Main Range. U-Pb zircon ages of 211 and 215 Ma suggest Late Triassic empacement age. K-Ar ages similar and also younger ages, suggesting partial resetting in Cretaceous)

Serra, C. (1968)- Sur quelques empreintes Mesozoiques de Malaisie. Archives Geol. Vietnam 11, p. 43-51.
('On some Mesozoic imprints of Malaysia'. Poorly preserved plant fossils, Ptilophyllum, Zamites and Klukia? collected from middle part of Tembeling Fm, N of Maran, Pahang. Affinities with Rhaetian and Liassic species. Also Paracalamites, probably of Triassic age described from N of Mentakab, Pahang)

Sevastjanova, I. (2007)- Detrital heavy minerals from the Malay Peninsula. M.Sc. Thesis, Royal Holloway, University of London, p. 1-155. *(Unpublished)*

Sevastjanova, I., B. Clements, R. Hall, E.A. Belousova, W.L. Griffin & N. Pearson (2011)- Granitic magmatism, basement ages, and provenance indicators in the Malay Peninsula: insights from detrital zircon U-Pb and Hf-isotope data. Gondwana Research 19, 4, p. 1024-1039.
(Malay Peninsula two continental blocks, Sibumasu and E Malaya, with two granitoids provinces: Main Range and Eastern. U-Pb analyses on zircons from Malay Peninsula river sands suggest three Permian-Triassic episodes of granitoids intrusives, two in E Province: (a) Permian, crustally-derived (~280 Ma), (b) E-M Triassic, Eastern Province, mixed mantle-crust sources (~220-250 Ma), (c) Late Triassic Main Range, crustally-derived (~180-220 Ma). Sibumasu- E Malaya collision probably in Late Permian-E Triassic. Mainly Paleoproterozoic basement ages for Sibumasu (1.9-2.0 Ga) and East Malaya (1.7-2.0 Ga) blocks)

Shah, A.K. & M.A.K. Azizi (1995)- An overview of the mineralization and mineralogical characteristics of the goldfields from Central Belt of Peninsular Malaysia., Proc. Int. Conf. Geology, Geotechnology and Mineral Res. of Indochina (GEOINDO 2005), Khon Khean, p. 188-199.

Sharma, J.S., J. Chu & J. Zhao (1999)- Geological and geotechnical features of Singapore: an overview. Tunneling and Underground Space Technology 14, 4, p. 419-431.
(One-third of Singapore Island underlain by Triassic Bukit Timah granite and Gombak norite in center and N. In W common intensely folded (strike NW-SE), low-metamorphic Late Triassic or E-M Jurassic Jurong Fm sediments (incl. Late Triassic Pandan Limestone in borehole at Pandan Reservoir in lower part))

Shi, G.R., M.S. Leman & B.K. Tan (1997)- Early Permian brachiopods from upper Singa Formation of Langkawi Island, northwestern Peninsular Malaysia: biostratigraphical and biogeographical implications. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 62-72.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Two assemblages of E Permian (Sakmarian) brachiopods from pebbly mudstones and associated bryozoan limestones of U Singa Fm of Langkawi island, incl. Kasetia, Bandoproductus, Stenoscisma, Sulciplica, Spinomartinia prolifica, etc.. Comparable to peri-Gondwanan assemblages now in Cimmerian terranes (S Thailand, Lhasa, Baoshan, SE Pamir). Transitional between cool Gondwanan and warm Cathaysian faunas)

Shi, G.R. & J.B. Waterhouse (1991)- Early Permian brachiopods from Perak, West Malaysia. J. Southeast Asian Earth Sci. 6, p. 25-39.
(New Permian brachiopod fauna of probable Sakmarian (E Permian) age from Nam Loong 1 Mine of Kinta Valley, W of Kampar, Perak, on Sibumasu Terrane. Material collected by Gobbett below fossiliferous H.S. Lee Beds (Pseudofosulina kraffti and Misellina claudiae fusulinid zones; Ishii 1966). Nam Loong beds ~150m thick, with crinoid limestone of at base, overlain by brachiopod limestone)

Shuib, M.K. (2000)- Synsedimentary tectonic control of the Permo-Triassic Central Basin sedimentation. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf. 2000, Pulau Pinang, p. 45-49.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_07.pdf)
(Sediments in C basin 2 depositional sequences: (1) Permian-E Triassic continental sediments at base, grading into shallow marine to deeper marine at top, marking opening of basin; (2) (M - Late Triassic deep marine turbidites and volcaniclastics grading upward into shallow marine sediments, marking rifting of basin followed by closure. Evidences for syn-sedimentary tectonism: slumps, normal and strike-slip faults, syn-sedimentary folds and shale injection structures. Permo-Triassic Central Basin N-S graben-like configuration with Bentong-Raub Zone as W margin and Lebir Fault Zone in E. Deep basin in central areas represented by Semantan Fm. Dextral transpressive and transtensive faults suggest basin is strike-slip control basin)

Shuib, M.K. (2000)- The olistostromes in the Bentong Area, Pahang and their tectonic implications. In: G.H. Teh et al. (eds.) Proc. Geol. Soc. Malaysia Ann. Geol. Conf. 2000, Pulau Pinang, p. 51-55.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_08.pdf)
(Two types of (Permian?) olistostromes in Bentong area: (1) intercalated with cherts (deep marine gravity flow deposits) and (2) intercalated with sandstone/shale layers (may be shallow marine to continental sediments). Deformed by sub-vertical strike-slip faults. Interpreted as deep continental margin deposits along Bentong-Raub Zone suture zone, inverted by Late Triassic time (no mention of possibility of glacio-marine facies))

Shuib, M.K. (2000)- Syndepositional deformation in the Permo-Triassic and Latest Triassic to Cretaceous Central belt of Peninsular Malaysia. In: Proc. Geol. Soc. Malaysia Conf. Dynamic stratigraphy and tectonics of Peninsular Malaysia, Third Seminar, The Mesozoic of Peninsular Malaysia, Kuala Lumpur 2000, p. 30-47.

Shuib, M.K. (2000)- The Mesozoic tectonics of Peninsular Malaysia. In: Proc. Geol. Soc. Malaysia Conf. Dynamic stratigraphy and tectonics of Peninsular Malaysia, Third Seminar, The Mesozoic of Peninsular Malaysia, Kuala Lumpur 2000, p. 106-126.

Shuib, M.K. (2009)- Structures and deformation. In: C.S. Hutchison & D.N.K. Tan (eds.) Geology of Peninsular Malaysia, University Malaya and Geol. Soc. Malaysia, p. 271-308.

Shuib, M.K. & A.A. Ghani (1998)- 'Mantle plume' type magmatism in the Central Belt of Peninsular Malaysia and its tectonic implications. Bull. Geol. Soc. Malaysia 42, p. 365-371.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2003058.pdf)
(Central Belt granitoids just E of Bentong-Raub Line, with distinct geochemical characteristics. Late Jurassic-Lower Cretaceous K/Ar ages, but also more reliable Rb/Sr age of 207 Ma (latest Triassic) for Benom Pluton. High Ba and Sr values may result from penetration of lower lithosphere by mantle material ('mantle plume' type magmatism). Bimodal magmatism, with significant time (up to 30 Myrs) between first mafic magmatism and

later felsic magmatism. C Belt plutons post-orogenic and penecontemporaneus with rapid post-orogenic uplift and erosion with development of Jurassic-Cretaceous continental deposits of C Basin Model proposed involves oblique convergence of two tectonic provinces of Peninsular Malaysia, followed by slab breakoff leading to linear belt of single plutons characterized by high-K, shoshonitic granitoids with high Ba and Sr)

Shuib, M.K. & A.Hadi Abd Rahman (1999)- A five-fold stratigraphic and tectonic subdivision of the Malay Peninsula and the implications on its tectonic evolutionary history. In: Proc. First Seminar Problem & issues relating to the stratigraphy and tectonic of Peninsular Malaysia, Kuala Lumpur 1999, Geol. Soc. Malaysia, p. 38-64.

Shuib, M.K. & A.Hadi Abd Rahman (2000)- The Mesozoic of the Central Belt of the Malay Peninsula- Part II: Basin configuration and tectonism. In: Proc. Geol. Soc. Malaysia Conf. Dynamic stratigraphy and tectonics of Peninsular Malaysia, Third Seminar, The Mesozoic of Peninsular Malaysia, Kuala Lumpur 2000, p. 74-95.
(see Abd Rachman & Shuib (2000) for Part I)

Singh, D.S., L.H. Chu, L.H. Teoh, P. Loganathan, E.J. Cobbing & D.I.J. Mallick (1984)- The Stong Complex: a reassessment. Bull. Geol. Soc. Malaysia 17, p. 61-77.
(online at: www.gsm.org.my/products/702001-101160-PDF.pdf)
(Stong Complex of plutonic and metamorphic rocks in NW Kelantan with three granitoid components. Earliest two phases Triassic or younger deformed; third phase undeformed Late Cretaceous (64, 67 Ma) pink granites)

Smiley, C.J. (1970)- Later Mesozoic flora from Maran, Pahang, West Malaysia, Part 1: Geological considerations. Bull. Geol. Soc. Malaysia 3, p. 77-88.
(online at: www.gsm.org.my/products/702001-101372-PDF.pdf)
(Plant fossils from Tembeling Fm 4 mi N of Maran, C Malay Peninsula. Include tree fern Gleichenoides spp., conifer Frenelopsis and others. Maran florules identical to Gagau flora from N Pahang (Kon'no 1967, 1968) and resemble Neocomian species from other areas. Probably represents open forest flora under climate with distinct dry season)

Smiley, C.J. (1970)- Later Mesozoic flora from Maran, Pahang, West Malaysia, Part 2: Taxonomic considerations. Bull. Geol. Soc. Malaysia 3, p. 89-113.
(online at: www.gsm.org.my/products/702001-101371-PDF.pdf)
(16 plant megafossil species in Maran area: 5 pteridophytes (Gleichenoides, Equisetites), 5 cycadophytes (Olozamites, Ptilophyllum, Zamites, 1 conifer (Frenelopsis). No records of Ginkgophytes or Angiosperms (Dicotyledons) in Neocomian floras of W Malaysia)

Snelling, N.J., J.D. Bignell & R.D. Harding (1968)- Ages of Malayan granites. Geologie en Mijnbouw 47, 5, p. 538-539.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0dzhzY3RmVEdvWFk/view)
(Summary of results of Rb-Sr whole rock age determinations on Malayan granites. Ages of intrusion Late Carboniferous (280-300 Ma), M Triassic and Late Cretaceous (~70 Ma). Triassic granites intruded in two episodes at ~230 Ma and 200 Ma. Most K-Ar ages on micas disturbed by younger intrusions and events)

Sone, M. & M.S. Leman (2000)- Some mid-Permian fossils from Felda Mayam, Central Peninsular Malaysia. Proc. Geol. Soc. Malaysia Ann. Conf. 2000, Pinang, p. 143-150.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_20.pdf)
(Small suites of early M Permian ammonoids (Agathiceras, Bamyaniceras), brachiopods (Dicystoconcha, Leptodus), bivalves, crinoids and plants (Taeniopteris) from Felda Mayam area, C Pahang. Represents N-most extent of Bera Fm. Permianellid brachiopod genus recorded in Malaysia for first time. Age Roadian-Wordian. Brachiopod assemblage suggests warm-water Tethyan affinities)

Sone, M. & M.S. Leman (2005)- Permian linoproductoid brachiopod *Permundaria* from Bera South, Peninsular Malaysia. J. Paleontology 79, 3, p. 601-606.

(Permundaria is uncommon genus confined to M- early Late Permian Tethys Sea. New species Permindaria perplexus in Wordian, Middle Permian Bera Fm, Pahang, Malay Peninsula (genus also recorded from Jambi, C Sumatra as Strophomena analoga; Meyer 1922))

Sone, M. & M.S. Leman & M. Ehiro (2001)- Middle Permian cephalopods from central Peninsular Malaysia: implications for faunal migration through the southern Tethys. J. Asian Earth Sci. 19, 6, p. 805-814.
(Wordian (early M Permian) cephalopod fauna in steeply dipping shales- tuffaceous sandstones at Bera South, S Pahang, dominated by Agathiceras. Also ammonoids Tauroceras, Bamyaniceras and Pronoritidae and nautiloids Tainoceras and Orthocerida. Presence of Tauroceras. aff. scrobiculatum suggests correlation with S Tethys strata of NE Iraq, N Oman and Sicily)

Sone, M., M.S. Leman & I. Metcalfe (2004)- Triassic nautiloid *Sibyllonautilus* from Gua Bama, Peninsular Malaysia and its regional stratigraphic implications. Alcheringa 28, 2, p. 477-483.
(Coiled nautiloid suggesting Late Permian- earliest Triassic (Lopingian- Anisian) age for Gua Bama sponge-algal reefal limestone section, just E of Bentong-Raub suture, NW Pahang, Peninsular Malaysia. Overlies Permian tuffaceous Leptodus brachiopod shales)

Sone, M., M.S. Leman & G.R. Shi (2001)- Middle Permian brachiopods from central Peninsular Malaysia- faunal affinities between Malaysia and west Cambodia. J. Asian Earth Sci. 19, p. 177-194.
(Moderately diverse M Permian brachiopod fauna from Bera District, C Pahang, 'Central Basin' of Peninsular Malaysia (on E Malaya Plate). In N Bera Fm associated with Late Permian andesitic volcanics. Near top of section fusulinids Sumatrina, Verbeekina, etc. and common Leptodus-like lyttonid brachiopods here called Gubleria. Brachiopods 19 species, typically warm-water Tethyan. Strong linkage to Yabeina beds of Sisophon Lst, W Cambodia. Possible E Capitanian (M Permian) age)

Sone, M., I. Metcalfe & M.S. Leman (2003)- Palaeobiogeographic implications of Middle Permian brachiopods from Johore (Peninsular Malaysia). Geol. Magazine 140, 5, p. 523-538.
(New M Permian brachiopods fauna from folded tuffaceous sandstone at Sermin, N Johore, with Pseudoleptodus, Neochonetes, etc., associated with ammonoid Agathiceras sp.. Fauna lacks diagnostic Cathaysian taxa, but has minor Sibumasu elements. Locality just E of Bentong-Raub suture on E Malaya terrane of Cathaysian province, suggesting species interchange between shallow waters of E Malaya and Sibumasu across Paleo-Tethys. Sibumasu, Timor (Bitauni) and W Irian Jaya dominantly Gondwanan affinity and cooler, higher latitude than E Malaya)

Sone, M., I. Metcalfe & M.S. Leman (2008)- Search for the Permian-Triassic boundary in central Peninsular Malaysia: preliminary report. Permophiles 51, p. 32-34.
(online at: http://permian.stratigraphy.org/files/20121027153250868.pdf)
(Permian- Triassic transition in C Malay Peninsula present in basal parts of Gua Bama and Gua Sei limestones. Conodonts Isarcicella isarcica and Hindeodus parvus indicate basal Triassic age of limestone overlying Upper Permian Colaniella-bearing limestone and lyttonoid brachiopod (Leptodus) shales)

Sone, M., I. Metcalfe & M.S. Leman (2011)- Where is the Permian-Triassic boundary (PTB) in central Peninsular Malaysia? Proc. 24th Ann. National Geoscience Conference 2011 (NGC2011), Johor Baru, P2-25, p. 152. *(Abstract only)*
(online at: http://geology.um.edu.my/gsmpublic/NGC2011/NGC2011_Proceedings.pdf)
(Permian- Triassic boundary defined by first appearance of conodont species Hindeodus parvus, now indicated to be 252.3 Ma by zircon U-Pb dating. In Pahang, C Peninsular Malaysia, several limestone sections contain Permian- Triassic boundary, incl. Gua Bama and Gua Sei)

Spiller, F.C.P. (1996)- Late Paleozoic radiolarians from the Bentong-Raub suture zone, Peninsular Malaysia. The Island Arc 5, 2, p. 91-103.
(Radiolarians from deep marine siliceous sediments from melange from Bentong-Raub suture zone contain 7 radiolarian zones from 10 localities: Late Devonian (Famennian), E Carboniferous (Tournaisian and Visean)

and E Permian. Suggests ocean existed between Sibumasu and East Malaya terranes from at least Late Devonian- late E Permian time)

Spiller, F.C.P. (2002)- Radiolarian biostratigraphy of Peninsular Malaysia and implications for regional palaeotectonics and palaeogeography. Palaeontographica Abt. A, 266, p. 1-91.

Spiller, F.C.P. & I. Metcalfe (1995)- Late Palaeozoic radiolarians from the Bentong-Raub suture and the Semanggol Formation of Peninsular Malaysia- initial results. J. Southeast Asian Earth Sci. 11, 3, p. 217-224.
(Cherts and tuffaceous siltstones from Bentong-Raub suture zone, Peninsular Malaysia, with Late Devonian and E Carboniferous radiolarians. Cherts deposited in Paleo-Tethys ocean between Sibumasu and East Malaya. Also radiolarians from siliceous Semanggol Fm of NW Peninsular Malaysia (Sibumasu Block), with E and Late Permian and M Triassic ages, extending age of Semanggol Fm down to E Permian and confirms presence of deep-marine basin in NW Malay Peninsula during Permian)

Spiller, F.C.P. & I. Metcalfe (1995)- Paleozoic and Mesozoic radiolarian biostratigraphy of Peninsular Malaysia. Proc. IGCP Symposium on Geology of SE Asia, Hanoi, J. Geology, ser. B, 5-6, p. 75-93.
(Similat to Spiller & Metcalfe 1995. Late Devonian- late E Permian radiolaria from highly deformed pelagic marine sediments in ~13-18 km wide tectonic melange/ imbricate thrust slices of Raub-Bentong suture (Paleotethys) of Malay Peninsula)

Stait, B.A. & C.F. Burrett (1982)- *Wutinoceras* (Nautiloidea) from the Setul Limestone (Ordovician) of Malaysia. Alcheringa 6, p. 193-196.
(Common straight nautiloid Wutinoceras robustum in Ordovician Setul Limestone of Langkawi islands)

Stauffer, P.H. (1969)- Tin mineralisation and faults in the Kuala Lumpur region. Newsletter Geol. Soc. Malaysia 20, p. 5-7.
(Tin mineralisation in KL area may be related to fault zones, especially WNW trending faults, which may sinistrally offset primary tin lodes by ~70 km)

Stauffer, P.H. (1971)- Quaternary volcanic ash at Ampang, Kuala Lumpur; West Malaysia. Newsletter Geol. Soc. Malaysia 33, p. 5-8.
(White fine-grained and rhyolitic ash layer, 0.45m thick, in sequence of alluvium and peat exposed by tin mining. Correlated with ash previously reported from Perak and Pahang (= Young Toba Tuff?; JTvG))

Stauffer, P.H. (1973)- The Kuala Lumpur fault zone- a proposed major strike-slip fault across Malaya. Geol. Soc. Ma1aysia Newsletter 15, p. 2-4.

Stauffer, P.H. (1973)- Kenny Hill Formation. In: D.J. Gobbett & C.S. Hutchison (eds.) Geology of the Malay Peninsula, John Wiley Interscience, New York, p. 87-91.
(Thick, gently folded, unfossiliferous ?Permian clastics formation near Kuala Lumpur)

Stauffer, P.H. (1974)- Malaya and Southeast Asia in the pattern of continental drift. Bull. Geol. Soc. Malaysia 7, p. 89-138.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973026.pdf)
(Review of early plate tectonic models of SE Asia)

Stauffer, P.H. (1974)- Petrology of some Malayan conglomerates and their implications. Geol. Soc. Malaysia Newsl. 47, 1, p. 7-8. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1974002.pdf)
(Submarine channel fill in (E Permian, glacio-marine) Singa Fm at Pulau Singa Besar, Langkawi, evidently, emplaced by mass flow, possibly in deep water. It is highly calareous and contains shell fragments, implying resedimentation from shallow marine waters. Megaclasts include variety of rock types: sandstone, fossiliferous limestone, shales, acid tuffs and ignimbrites and acid plutonics. Relative absence of metamorphic rocks suggests plutonics formed crystalline basement beneath sediments)

Stauffer, P.H. (1980)- The Singa Formation: is it a glacial deposit? Warta Geologi (Geological Soc. Malaysia Newsletter) 6, p. 33-34. *(Abstract only)*
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1980002.pdf)
(Singa Fm in Langkawi forms most of clastic interval between Lower Paleozoic (Setul Fm.) and Permian (Chuping/Jong Fm.) carbonates. Generally unfossiliferous, fine-grained and carbonaceous, but with numerous scattered pebbles and boulders. Pebbly mudstone facies part of 2000 km long facies belt. Clasts of plutonic rock are exotic, as no pre-Carboniferous acid plutons known in Malaya, S Thailand or Sumatra. Most likely of glacial origin, at Gondwana margin (see also Stauffer & Lee 1986))

Stauffer, P.H. (1984)- Distribution of tektite finds in Malaysia and immediately adjacent territories. Federation Museums Journal, Kuala Lumpur, 29, p.

Stauffer, P.H. & N.J. Snelling (1977)- A Precambrian trondhjemite boulder in Palaeozoic mudstones of NW Malaya. Geol. Magazine 114, 6, p. 479-482.
(Possible Precambrian-age leucotonalite clasts with K-Ar age of 1029 ± 15 Ma in 'pebbly mudstone' of E Permian Singa Fm of Pulau Tepor, SW Langkawi Islands, NW Malaysia)

Sulaiman, A.. K. Hassan & H.D.Tjia (2003)- The Holocene optimum in Malaysia. Minerals and Geoscience Department Malaysia, Technical Papers 2, p. 37-67.
(In Peninsular Malaysia Holocene climate optimum coincides with peak of Holocene transgression. Between ~6500- 4000 years BP sea levels of >2 m above present known from many localities in Peninsular Malaysia (maximum at ~4m above sealevel at ~ 5 ka))

Suntharalingam, T. (1968)- Upper Palaeozoic stratigraphy of the area west of Kampar, Perak. Bull. Geol. Soc. Malaysia 1, p. 1-15.
(online at: www.gsm.org.my/products/702001-101386-PDF.pdf)
(Marine sediments of Kampar area, W Central Malay Peninsula, estimated to be >5500' thick, divided into six units of M Devonian- M Permian ages, dominated by oolitic-shelly limestones, with thick dolomites in lower unit (= part of Sibumasu Block Late Paleozoic))

Suntharalingam, T. (1983)- Cenozoic stratigraphy of Peninsular Malaysia. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 149-158.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_08.pdf)

Surjono, S.S & M.S. Leman (2010)- Origin of the Late Paleozoic metamorphic rocks in East Johor, Peninsular Malaysia. J. Southeast Asian Applied Geol. (UGM) 2, 2, p. 70-80.
(Late Carboniferous low-grade metasediments widely distributed in E Johor and extend N to N Terengganu area. Protolith >5000m thick shallow marine clastics, formed in rift-passive margin at W side of W Indochina-E Malaya continental block during rifting of this block from Gondwanaland)

Surjono, S.S., M.S. Leman, C. Aziz Ali & K.R. Mohamed (2004)- A review of the Palaeozoic lithostratigraphy of East Johor, Malaysia. Bull. Geol. Soc. Malaysia 49, p. 71-78.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004013.pdf)
(E Johore, SE Malay Peninsula, Carboniferous metasediments unconformably overlain by Permian clastics, E-M Permian limestones and ?Late Permian volcanics, intruded by Triassic-Jurassic granites)

Surjono, S.S., M.S. Leman, K.R. Mohamed & C. Aziz Ali (2007)- The Paleozoic continental rudaceous rock in East Johor. Proc. Joint Conv. 32nd HAGI, 36th IAGI and 29th IATMI, Bali 2007, JCB2007-095, p. 580-592.
(Late Carboniferous- Late Permain conglomeratic sandstones in Murau, Tanjung Leman and Linggiu formations in E Johore, suggesting E Johore was continental to shallow marine depositional environment)

Surjono, S.S., M.S. Leman, K.R. Mohamed & C. Aziz Ali (2009)- The occurrence of Palaeozoic conglomeratic rocks in East Johor, Peninsular Malaysia. J. Southeast Asian Applied Geol. (UGM) 1, 2, p. 49-59.
(online at: https://jurnal.ugm.ac.id/jag/article/view/7227/5666)
(Conglomeratic rocks in East Johor, SE Malay Peninsula, in three formations, believed to be of Late Carboniferous- Late Permian age. Formations near E coast interpreted as fan delta and braided stream deposits. In C Johor deposited by debris flows in shallow marine environment. Permian conglomerates with volcanic clasts, probably deposited in forearc environment)

Tamura, M. (1968)- *Claraia* from North Malaya, with a note on the distribution of *Claraia* in Southeast Asia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 78-87.
(Two species of E Triassic (M Scythian) thin-shelled marine bivalve Claraia from folded limestone-shale series in N Pahang and S Kelantan, C Malay Peninsula: C. intermedia multistriata and C. griesbachi concentrica (latter species also described from Timor by Krumbeck 1924))

Tamura, M. (1970)- Pteriacea from Malayan Triassic. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 8, p. 133-149.
(Species of Pteria, Cassianella, Hoernesia and Bakevellia from Chegar Perah, Kuala Lipis, Temerloh and Fort Iskandar, Pahang. Temerloh faunas may be slightly younger, but others of M Triassic affinites)

Tamura, M. (1973)- Pectinids from Malayan Triassic. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 115-131.
(M Triassic pectinid bivalves from 'Myophoria sandstone' from central- east parts of Malay Peninsula. With Chlamys, Entolium, etc.)

Tamura, M. (1973)- Some Triassic bivalves from Malaya. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 133-148.
(Descriptions of bivalve molluscs of M Triassic, mainly Chegar Perah area (not incl. myophoriids and pectiniids described by Tamura 1970, 1973). Nuculana, Palaeonucula, Grammatodon, Pinna, etc.)

Tamura, M., W. Hashimoto, H. Igo, T. Ishibashi, J. Iwai, T. Kobayashi, T.Koike, K.Pitakpaivan, T. Sato & E.H. Yin (1975)- The Triassic system of Malaysia and adjacent areas. In: T. Kobayashi, & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 103-149.

Tan, B.K. (1981)- On the supposed existence of the Kisap thrust in the Langkawi Islands, Northwest Peninsular Malaysia. Bull. Geol. Soc. Malaysia 14, p. 127-134.
(online at: www.gsm.org.my/products/702001-101194-PDF.pdf)
(Kisap thrust described by Koopmans (1965) in E part of Langkawi islands is only large thrust fault described in Peninsular Malaysia, but existence of large scale thrusting questionable. Nature of contact between Lower and U Paleozoic rocks interpreted as thrust cannot be satisfactorily resolved at present)

Tan, B.K. (1981)- Structures in Peninsular Malaysia and their interpretations. Bull. Geol. Soc. Malaysia 15, p. 1-7.
(online at: www.gsm.org.my/products/702001-101191-PDF.pdf)

Tan, B.K. (1984)- The tectonic framework and evolution of the Central Belt and its margins, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 17, p. 307-322.
(online at: www.gsm.org.my/products/702001-101149-PDF.pdf)
(On difficulties in defining boundaries of Central Belt of Malay Peninsula, and interpretation of Bentong-Raub suture as graben instead of suture zone)

Tan, B.K. (1996)- 'Suture zones' in peninsular Malaysia and Thailand: implications for palaeotectonic reconstruction of Southeast Asia. J. Southeast Asian Earth Sci. 13, p. 243-249.

(Critical review of suture zones postulated in many paleotectonic reconstructions (Bentong-Raub and Kuala Lebir fault zone in Peninsular Malaysia and Chiang Mai-Chiang Rai, Nan-Uttaradit, etc. in Thailand)

Tan, B.K. & T.T. Khoo (1978)- Review of the development in the geology and mineral resources of Malaysia and Singapore. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, Asian Inst. Techn., p. 655-671.

Tan, B.K. & T.T. Khoo (1981)- Ultramafic rocks in Peninsular Malaysia and their tectonic implications. In: P. Nutalya (ed.) Proc. 4th Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA IV), Manila 1981, Geol. Soc. Philippines, p. 259-264.
(Argue that serpentinised ultramafics in Bentong-Raub zone not remnants of ancient oceanic lithosphere)

Tan, B.K. & T.T. Khoo (1993)- Clinopyroxene composition and tectonic setting of the Bentong-Raub belt, Peninsular Malaysia. In: B.K. Tan et al. (eds.) Proc. 7th Conf. Geology, Mineral and Energy Res. SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 539-545.
(Bentong Raub belt is N-S trending topographically negative feature across Malay Peninsula from Tomo in S Thailand to Malacca, with small bodies of serpentinized mafic and ultramafic rocks. Clinopyroxenes from pyroxenite, metagabbro and amphibolite indicate alkaline character, suggesting continental rather than subduction zone origin)

Tan, B.K. & S.P. Sivam (1971)- A fossil "Portuguese Man-of-War" (Velellidae) from the Paleozoic of the Raub area, Pahang, West Malaysia. Newsletter Geol. Soc. Malaysia 33, p. 8-12.
(Well preserved imprints of jellyfish occur in metasedimentary rocks of probable Carboniferous age along Cheroh River)

Tan, D.N.K. (1980)- Siliceous deposits of Malaysia. Geol. Survey Malaysia, Geological Papers 3, p. 100-113.
(Review of chert occurrences in Peninsular Malaysia (mainly Lower Paleozoic- Lower Mesozoic) and W Sarawak- E Sabah (some U Carboniferous- Lower Permian, mainly Mesozoic, some Tertiary)

Tate, R.B., D.N.K.Tan & T.F. Ng (2008)- Geological map of Peninsular Malaysia, scale 1:1,000,000. Geol. Soc. Malaysia and University Malaya.

Taylor, D. (1986)- Some thoughts on the development of the alluvial tinfields of the Malay-Thai Peninsula. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 375-392.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986028.pdf)
(Three categories of economic cassiterite placers in SE Asia: (1) 'kulit' residual deposits, formed in situ, without major lateral transport or sorting; (2) 'kaksa' washed-out residual deposits where coarser and heavier minerals remain close to source while finer and lighter minerals are removed; (3) 'mintjan' transported deposits. Phuket-Takuapa area of Thailand cassiterite derived largely from pegmatites and yields essentially kaksa placers. West Coast Tin Belt of Malay Peninsula and island of Bangka contain wide diversity of primary ore types all closely related to granite contacts. In Kuala Lumpur Tinfield tin roughly equally divided between kaksa placers close to granite contact and mintjan placers up to 25 km away. Substantial part of primary tin mineralisation in East Coast Tin Belt and in Belitung is exogranitic and characterized by fine cassiterite)

Teh, G.H. (1981)- The Tekka tin deposit, Perak, Peninsular Malaysia. Bull. Geol. Soc. Malaysia 14, p. 101-118.
(online at: www.gsm.org.my/products/702001-101196-PDF.pdf)
(Tekka deposit is hard-rock tin deposit in Kinta Valley. Cassiterite in mineralized veins (5mm- 1m thick) in granites and schists, associated with Triassic Main Range biotite granite. Early high T mineralization with cassiterite, columbite/tantalite and wolframite, followed by late stage low T minerals galena and stibnite)

Teoh, L.H. (1992)- Geology and mineral resources of the Sungai Tiang area, Kedah Darulman. Geol. Survey of Malaysia, Map Report 5, p. 1-93.

(Geology of area in Kedah, NW Malay Peninsula, with Paleozoic- Mesozoic section including folded possibly 800m thick Permo-Triassic Semanggol Fm)

Thomas, H.D. & C.T. Scrutton (1969)- Palaeozoic corals from Perak, Malaya, Malaysia. Overseas Geol. Min. Res. 10, 2, p. 164-171.
(In old Wen Yoon Yuen tin mine pit, near Batu Gajah town, Kinta Valley, NW Malay Peninsula, solitary corals identified as Siphonophyllia cf. gigantea and Zaphrentites sp., indicating E Carboniferous (Tournaisian-Visean) age. Also Late Ordovician coral Quepora sp. and M Silurian- E Devonian Heliolites barrandei, Favosites allani and Favosites sp. from two tin mines near Kanthan, Kinta)

Tjia, H.D. (1972)- Strike-slip faults in West Malaysia. Proc. 24th Sess. Int. Geological Congress, Montreal, sect. 3, Tectonics, p. 255-262.

Tjia, H.D. (1978)- Structural geology of Peninsular Malaysia. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 673-682.

Tjia, H.D. (1986)- Geological transport directions in Peninsular Malaysia. In: G.H. Teh & S. Paramananthan (eds.) Proc. GEOSEA V Conf., Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 149-177.
(Fold asymmetry, isoclinal folds and low-angle reverse faults are indicators of structural transport direction. All domains of Peninsular Malaysia suggest E-ward transport in oldest rocks (Lower Paleozoic), followed by movement to S (U Paleozoic), then in general W-ward direction (Late Triassic- E Jurassic))

Tjia, H.D. (1987)- Olistostrome in the Bentong area, Pahang. Warta Geologi 13, p. 105-111.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1987003.pdf)
(Steeply E-dipping metasediments including olistostrome horizons with large blocks in Raub- Bentong suture zone. Associated with serpentinite bodies)

Tjia, H.D. (1989)- The Bentong suture. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology Mineral Hydrocarbon Resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 73-85.
(Bentong suture or Raub-Bentong Line in Peninsular Malaysia is N-S trending, 13 km wide zone of deformed rocks. Two main belts: in W pre-Silurian quartz-graphite schists, in East E Silurian- Permian clastic-chert unit with small occurrences of serpentinite, crystalline limestone (incl. Permian fusulinid Lst) and red clastics. Also few 100m wide zones of olistostrome. Probably Paleozoic accretionary prism. Earliest vergence E- SE (= W-ward subduction); later vergence in opposite direction (= generally viewed as Paleotethys suture))

Tjia, H.D. (1989)- Tectonic history of the Bentong-Bengkalis suture. Geologi Indonesia (IAGI) 12, 1 (Katili Volume), p. 89-111.

Tjia, H.D. (1996)- Tectonics of deformed and undeformed Jurassic-Cretaceous strata of Peninsular Malaysia. Bull. Geol. Soc. Malaysia 39, p. 131-156.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1996014.pdf)
(Jurassic-Cretaceous strata in Peninsular Malaysia occur as folded sequences (Tembeling Gp, Koh Fm, Bertangga Sst) but also as undeformed, slightly tilted strata (Gagau Gp, Ulu Endau Fm, Panti San))

Tjia, H.D. (1999)- Geological setting of Peninsular Malaysia. In: Petronas (1999) The petroleum geology and resources of Malaysia, p. 141-169.
(Review of regional geology of Malay Peninsula. Part of Sundaland. Two main basement domains: Mergui in W, Indosinia in E, separated by Bentong-Bengkalis suture zone. Oldest dated rocks of Cambrian age, in NW domain. Straits of Malacca with 15 Oligocene-Miocene grabens/ half-grabens in 4 N-S trending belts. Etc.)

Tjia, H.D. (1999)- Pre-Tertiary hydrocarbon potential. In: Petronas (1999) The petroleum geology and resources of Malaysia, p. 605-635.
(Review of Pretertiary stratigraphy and structure of Malaysia. Pre-Permian deposits low or no hydrocarbon prospectivity. Permian sediments marine, including common limestone.M Triassic common flysch deposits. End

Triassic- Jurassic start of continental deposition. Locally thick U Jurassic- Lower Cretaceous Tembeling Gp (6800m) in intermontane basins. No known hydrocarbon seeps associated with Paleozoic-Mesozoic rocks. Triassic locally moderately high TOC, but generally overmature. Other formations low in organic matter.Potential for hydrocarbons in Pretertiary of Malacca Straits, etc., sourced from Tertiary rifts))

Tjia, H.D. (2000)- Tectonics of deformed and undeformed Jurassic-Cretaceous strata of Peninsular Malaysia. In: Dynamic stratigraphy and tectonics of Peninsular Malaysia, Geol. Soc. Malaysia, 3rd Seminar- The Mesozoic of Peninsular Malaysia, p. 1-29.

Tjia H.D. & S.S. Almashoor (1996)- The Bentong Suture in southwest Kelantan, Peninsular Malaysia. Bull. Geol. Soc. Malaysia, 39, p. 195-211.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1996017.pdf)
(Bentong Suture in SW Kelantan 18 km wide. W border is injection complex with Titiwangsa granitoids, E border consists of bedded chert. Seven imbricated tectonic units, each comprising schist, phyllite, olistostrome, mudstone and chert form suture zone. A single serpentinite body between two of tectonic units. Units stacked at moderate - vertical dips, with SW vergence. E border zone has younger, postdocking chaotic assemblage with common large Permian crystalline limestone clasts, probably also olistostrome. Interpreted as accretionary prism composed of suture rocks that originated in E-M Paleozoic marine or oceanic region that closed by E Triassic through NE-ward subduction of sliver of Gondwana plate in W with Cathaysian plate in E)

Tjia, H.D. & Anizan Isahak (1990)- Permian glacigenic deposits at Salak Tinggi, Selangor. Sains Malaysiana 19, 1, p. 43-64.

Tjia, H.D. & S. A. Sharifah Mastura (2013)- Sea level changes in Peninsular Malaysia: a geological record. Penerbit Universiti Kebangsaan Malaysia (UKM), p. 1-150.

Tjia, H.D. & M.M. Zain (2002)- Shock structures in Peninsular Malaysia: evidence from Kedah and Pahang. Geol. Soc. Malaysia Ann. Geol. Conf. 2002, Kota Bharu, Kelantan, p. 103-109.
(online at: www.gsm.org.my/products/702001-100736-PDF.pdf)
(Double Mahsuri Rings in S C Langkawi are impact structures. Each ring 2.4 km across, with depths of 45-107m and part of series of 4 structures, representing serial impacts of extraterrestrial projectiles arriving from SW. Age post Triassic-Jurassic granite, but could be of Neogene age)

Tjia, H.D. & H. Zaitun (1985)- Regional structures of Peninsular Malaysia. Sains Malaysiana 14, p. 95-107.
(Fontaine & Ibrahim 1995: suggest two geologic domains in W Malay Peninsula, 'W Peninsular Malaysia' and 'NW Peninsular Malaysia')

Tokuyama, A. (1961)- On some Triassic pelecypods from Pahang Province, Malaya. Trans. Proc. Palaeontological Soc. Japan 9, 44, p. 175-181.
(M Triassic bivalves from two localities in Lower Myophoria sandstone in Pahang. Three Myophoria species, also Neoschizodus laevigatus)

Tsegab, H., W.S. Chow, A.Y. Gatovsky, A.W. Hunter, J.A. Talib & S. Kassa (2017)- Higher-resolution biostratigraphy for the Kinta Limestone and an implication for continuous sedimentation in the Paleo-Tethys, Western Belt of Peninsular Malaysia. Turkish J. Earth Sciences 26, p. 377-394.
(online at: http://journals.tubitak.gov.tr/earth/issues/yer-17-26-5/yer-26-5-3-1612-29.pdf)
(Kinta Limestone in C part of W Belt of Peninsular Malaysia (=Sibumasu terrane) extensively altered by diagenesis, making age determinations challenging. Three boreholes (total 360m) drilled at either end of Kinta Valley. Conodonts incl. Pseudopolygnathus triangulus and Declinognathodus noduliferus, indicate Late Devonian (Famennian)- Late Carboniferous (Bashkirian) age)

Tsegab, H., W.S. Chow & J.A. Talib (2017)- Lithostratigraphy of Paleozoic carbonates in the Kinta Valley, Peninsular Malaysia: analogue for Paleozoic successions. In: M. Awang et al. (eds.) Proc. Int. Conf. Integrated Petroleum Engineering and Geosciences (ICIPEG2016), Kuala Lumpur 2016, Springer Verlag, p. 559-567.

(W zone of Malay Peninsula (= Sibumasu terrane) with extensive Paleozoic carbonate sediments, incl. Kinta Limestone (Silurian-Permian))

Tsegab, H., Chow W. Sum & A.W. Hunter (2015)- Preservation of marine chemical signatures in Upper Devonian carbonates of Kinta Valley, Peninsular Malaysia: implications for chemostratigraphy. In: M. Awang et al. (eds.) Proc. ICIPEG 2014 Conf., Singapore, Springer, p. 291-302.

Ulfa, Y., M.H. Hafizzy & M. Farhan (2012)- Structural characteristics of the Semanggol Formation along the East-West Highway Route 67 Baling Area, Kedah, Malaysia. Eksplorium 33, 2, p. 83-96.
(online at: http://jurnal.batan.go.id/index.php/eksplorium/article/view/2659/2447)
(Structural deformation in 6 outcrops in Permian-Triassic Semanggol Fm in NW Malay Peninsula. Regional strike NE-SW, with most dips to SE)

Umor, M.R., A.A. Ghani, H. Mohamad, M.S. Leman, K. Zaw & A. Hussin (2011)- Re-evaluation of geochemical classification of the Western Belt, Central Belt and Eastern Belt granitoids, Malaysia Peninsular and their tectonic implications. Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2011), Khon Kaen, p. 22-27.
(online at: http://home.kku.ac.th/geoindo2011/A1-1-116.pdf)
(Three granite belts in Peninsular Malaysia: W, C and E. W Belt mainly granites, mainly S-type, suggesting syncollision emplacement. C Belt granitoids mafic-intermediate and minor felsic rock, high-K calc-alkali to shoshonite, I-type and S-type granites in syn-collision setting. E Belt granitoids similar to C Belt granites but calc-alkali to high-K calc-alkali series, I-type granite affinity and classified as volcanic arc granite)

Vachard, D. (1990)- Fusulinoids, smaller foraminifera and pseudo-algae from southeastern Kelantan (Malaysia) and their biostratigraphic and paleogeographic value. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Tech. Publ. 20, p. 143-167.
(Eight Carboniferous- Permian fusulinid biozones in SE Kelantan. M Carboniferous with Pseudostaffella, Fusulinella, Beedeina, Ozawainella, etc.; Late Carboniferous- earliest Permian (Asselian- Sakmarian) not represented (= plant fossil interval?). Upper Lower Permian with Darvasites. Basal U Permian (Lower Murghabian) with Neoschwagerina simplex and Verbeekina verbeeki. U Murgabian- Midian with Yabeina, Lepidolina. Uppermost Permian with Colaniella media and Palaeofusulina bella. Faunas similar to E Tethys assemblages of S China, Japan, Vietnam, Thailand, etc.)

Van Bemmelen, R.W. (1940)- On the origin of some granites from Singapore. De Ingenieur in Nederlandsch-Indie (IV) 7, 2, p. 23-35.
(Description of granites that form core of Singapore island. Intrusive into clastic sediments with Triassic fossils. Mainly discussion on genesis of granites)

Van der Wal, J.L.N. (2015)- The structural evolution of the Bentong-Raub Zone and the Western Belt around Kuala Lumpur, Peninsular Malaysia. M.Sc. Thesis, University of Utrecht, p. 1-109.
(online at: http://dspace.library.uu.nl/handle/1874/316232)
(Four deformation phases in Bentong-Raub suture zone. D1: NE-SW shortening during accretionary wedge formation during N-ward subduction of PaleoTethys Ocean beneath Indochina, with greenschist facies metamorphism; D2: Deformation and burial-related sub-greenschist facies metamorphism of Triassic forearc basin; D3: Contact metamorphism in metasediments during intrusion of Triassic S-type Main Range Granites, followed by steep normal faulting; D4: strike-slip shearing in Paleogene, related to Eocene formation of offshore sedimentary basins due to Indian-Eurasian collision and subsequent CW rotation of SE Asia)

Webby, B.D., D. Wyatt & C. Burrett (1985)- Ordovician stromatoporoids from the Langkawi Islands, Malaysia. Alcheringa 9, 2, p. 159-166.
(Four species of labechiid stromatoporoids from ~1100m thick Ordovician Lower Setul Lst of Langkawi Island, including Labechia variabilis and Rosenella woyuensis. Reported previously from M Ordovician of N China and New South Wales)

Weir, J. (1925)- On some specimens of fossiliferous sandstone from Pahang, Malay Peninsula. Geol. Magazine 62, 8, p. 347-350.
(On Upper Triassic Myophoria Sst of Newton (1900, 1925) from Kuala Lipis, Pahang and Singapore. Several Myophoria spp., also poorly preserved Halobia)

Willbourn, E.S. (1917)- The Pahang Volcanic series. Geol. Magazine (VI), 4, 10, p. 447-462.
(Part 1 of 2 on Late Carboniferous- Permian andesitic Pahang Series of Malay Peninsula. Mainly developed in Pahang Province, also in Singapore, Johore, Negri Sembilan and Perak. Composed of andesitic and rhyolitic lavas, tuffs and porphyric intrusives. Associated with serpentinite, but relations not cleaar.)

Willbourn, E.S. (1917)- The Pahang Volcanic series. Geol. Magazine (VI), 4, 11, p. 503-514.
(Continuation of Willbourn (1917) paper above. Descriptions of andesitic and rhyolitic tuffs and breccias of Pahang Series. Comparison with 'Permo-Carboniferous' volcanic rocks of Guai Mts, S Sumatra shows differences. Majority of tuffs and lavas are interstratified with Raub shales, and fossil evidence proves that some of them are of Permian age, some Raub limestones possible Upper Carboniferous age)

Willbourn, E.S. (1922)- An account of the geology and mining industries of South Selangor and Negri Sembilan. Geological Department Federated Malay States, Kuala Lumpur, 115p.

Willbourn, E.S. (1925)- The volcanic rocks of the Malay Peninsula and a comparison with their equivalents in the surrounding regions. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Gedenkboek Verbeek), p. 601-616.
(In Verbeek Memorial Volume. No maps. Includes chapter on comparison of Pahang volcanic series with Permo-Carboniferous volcanic rocks of Gumai Mts, S Sumatra, as described by Tobler 1912 (looks like the two are not very similar; JTvG))

Willbourn, E.S. (1936)- A short account of the geology of those tin-deposits of Kinta that are mined by alluvial methods. J. Engineering Assoc. Malaysia. 4, p. 255-264.

Wong, R.H.F. (1999)- Petroleum resources, Peninsular Malaysia. In: Petronas (1999) The petroleum geology and resources of Malaysia, p. 253-272.

Wong, P.K., F. Hassan & T.E. Yancey (1973)- Newly recognized structural and stratigraphic features in the eastern part of the Langkawi Islands, West Malaysia. Geol. Soc. Malaysia Newsletter 43, p. 5-10.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1973004.pdf)

Wongwanich, T., D. Wyatt, B. Stait & C Burrett (1983)- The Ordovician system in southern Thailand and northern Malaysia. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 77-95.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_04.pdf)
(Ordovician sediments known from W and Peninsular Thailand, and in adjacent Langkawi Island off NW Malay Peninsula. Parts of (Shan-Tai/ Sibumasu Terrane. Oldest faunas of U Cambrian and E Ordovician ages)

Wyatt, D.J. (1983)- Lithostratigraphy and sedimentology of the Ordovician Lower Setul Limestone, Langkawi Islands, Malaysia. Thesis, University of Tasmania, p. 1-125.

Yaacub, S.N. & U. Said (2002)- Plant fossils from Bukit Belah, Batu Pahat, Johor. In: Geol. Soc. Malaysia Ann. Geol. Conf. 2002, Bull. Geol. Soc. Malaysia, 45, p. 287-292.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2002044.pdf)
(Late Jurassic-Early Cretaceous plant fossils from 'post-orogenic' fluvial deposits in outcrop at Bukit Belah, Batu Pahat, Johor, S Malay Peninsula. Include Gleichenites (Gleichenoides) gagauensis, G. pantiensis, Ptilophyllum cf. pterophylloides and Otozamites gagauensis (similar to 'Gagau' and Ulu Endau floras described by Kon'no 1967, 1968, Smiley 1970 and Kon'no and Asama 1975))

Yanagida, J. & P.C. Aw (1979)- Upper Carboniferous, Permian and Triassic brachiopods from Kelantan, Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 20, p. 119-141.

Yanagida, J. & S. Sakagami (1971)- Lower Carboniferous brachiopods from Sungei Lembing district, NW of Kuantan, Malaysia with a brief note on the bryozoans in association with brachiopods. Mem. Fac. Science Kyushu University, Ser. D (Geology), 21, p. 75-91. *(also in Geology and Palaeontology of SE Asia 11?)*
(Seven species of brachiopods from siltstones of Lower Carboniferous Calcareous Series of E Pahang. Assemblage strong affinity with M Visean fauna of Russian Central Asia and N America)

Yancey, T.E. (1972)- Devonian fossils from Pulau Rebak Besar, Langkawi Islands, West Malaysia. Geol. Soc. Malaysia Newsletter 37, p. 10-12.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1972005.pdf)
(Red mudstones below Singa Fm tilloid-bearing sediments yield uppermost Devonian marine fossils (Meor & Lee (2004) interpreted beds of nearby NW Peninsular Malaysia as Late Devonian- earliest Carboniferous))

Yancey, T.E. (1975)- Evidence against Devonian unconformity and Middle Paleozoic age of Langkawi folding phase in Northwest Malaya. American Assoc. Petrol. Geol. (AAPG) Bull. 59, 6, p. 1015-1019.
(No Devonian unconformity in NW Peninsular Malaysia/ Langkawi Islands. Age of Langkawi folding phase probably post-Early Permian and pre-Early Triassic (This is on Sibumasu Blocks and coincides with collision with E Malaya block; JTvG))

Yancey, T.E. (1985)- Bivalvia of the H.S. Lee Formation (Permian) of Malaysia. J. Paleontology 59, 5, p. 1286-1297.
(Bivalves of upper 15m of H.S. Lee Fm section at H.S. Lee No. 8 tin mine, Kinta Valley, 35km S of Ipoh, Perak, Malaysia, most diverse Permian (Artinskian) mollusc-dominated biota in Tethyan province. Bivalves dominated by giant clams of family Alatoconchidae. Also highly diverse bellerophontid and other gastropods. With Shikamaia perakensis, Saikraconcha, Prospondylus, Grammatodon obsoletiformis, Pernopecten, etc. One new genus Permartella with three new species)

Yap, F.L. (1986)- Age determination on the Kuantan granite and dolerite dykes. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 415-422.
(Rb/Sr age of granite in Kuantan area (E coast Malay Peninsula) ~292 ±12 My (E Permian))

Yap, S.F. & U. Said (2002)- Palynological study on a rock sequence at Bandar Tenggara, Johore. GSM Annual Geological Conf. 2002, Kota Bharu, Bull. Geol. Soc. Malaysia 45, p. 185-189.
(online at: www.gsm.org.my/products/702001-100723-PDF.pdf)
(Outcrop of Tertiary sediments at Bandar Tenggara, Johore, ~45 km SE of Keluang, with plant fossils and rich palynomorph assemblage. Presence of Verrucatosporites usmensis, Spinizonocolpites baculatus, Alnipollenites, Psilatricolporites operculatus, etc., suggests Late Eocene V. usmensis zone. Fresh water algae Pediastrum sp., with Striatricolpites catatumbus, Stenochlaena, Laevigatosporites and Deltoidosporas, indicate freshwater swamp environment)

Yeap, C.H. (1980)- A comparative study of Peninsular Malaysia granites with special reference to tin mineralisation. Ph.D. Thesis, University of Malaya, Kuala Lumpur, p. 1-395. *(Unpublished)*

Yeap, E.B. (1979)- Primary mineralization of the Kuala Lumpur tin field, Selangor, Peninsular Malaysia. Ph.D. Thesis, University of Malaya, Kuala Lumpur, p. 1-300. *(Unpublished)*

Yeap, E.B. (1993)- Tin and gold mineralizations in peninsula Malaysia and their relationships to the tectonic development. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 329-348.

(Tin and gold mineralizations in Peninsular Malaysia several juxtaposed and overlapping belts. Tin deposits genetically related to Late Triassic S-type granites)

Yeap, E.B. (2000)- The prospects for hardrock gold and tin deposits in Malaysia. In: G.H. Teh et al. (ed.) Geol. Soc. Malaysia Ann. Geol. Conf. 2000, Pulau Pinang, p. 325-332.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_46.pdf)
(Tin and gold mineralization in Peninsular Malaysia in parallel belts, related to tectonic setting. Sarawak and Sabah hosts to gold deposits related to magmatism. Primary tin deposits in two belts (W and E) of Peninsular Malaysia in aplite, cassiterite-magnetite skarn, cassiterite pegmatites, etc. Gold mineralization dominated by Mesozoic mesothermal veins in folded and partly metamorphosed Paleozoic-Triassic rocks. Primary gold mineralization in 4 distinct N-S belts. old mineralization in Bau, Sarawak, epithermal Au-Ag-As-Sb-Pb-S vein type, associated with Miocene dacitic intrusives. Sabah, gold commercially produced from Mamut Cu-Au porphyry deposit, genetically related to Kinabalu granodiorite-diorite)

Zahir, N.A.M., M.A. Beg & A.A. Kadir (2020)- Hydrothermal dolomitization on Devonian to Carboniferous carbonates in Kinta Valley, Perak, Malaysia: a petrographic study. Indonesian J. Geoscience 7, 1, p. 25-39.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/636/297)
(Thick Devonian- Carboniferous shallow marine Kinta Limestone platform in Perak, NW Malay Peninsula uplifted by granite intrusions in Triassic. Selectively dolomitized along N-S oriented deep-seated fault)

IX.3. Thailand

Achache, J. & V. Courtillot (1985)- A preliminary Upper Triassic paleomagnetic pole for the Khorat plateau (Thailand): consequences for the accretion of Indochina against Eurasia. Earth Planetary Sci. Letters 73, 1, p. 147-157.
(Paleomagnetic results from U Triassic (Norian) Huai Hin Lat Fm at base of Khorat Group in C Thailand suggest this unit remained at tropical northern latitudes since Late Triassic. Comparison with Eurasian poles reveals 1650 ± 850 km of SW-NE convergence and 15° ± 10° of CCW rotation between 205-160 Ma (NB: results questioned by Opdyke and Chen and Coutillot 1989: results probably Cenozoic remagnetization)

Adachi, S., H. Igo, A. Ampornmaha & N. Nakornsri (1993)- Triassic coral buildups observed in the Chaiburi Formation near Phattalung, Peninsular Thailand. Annual Report Inst. Geoscience University of Tsukuba 19, p. 27-31.
(Small coral buildups up to 10m thick in upper part Phanomwand Limestone Mb of Chaiburi Fm near Phatthalung in S Thailand (on Sibumasu Terrane). Fauna dominated by sponges and Tubiphytes. With foram Ophthalmidium tori, suggesting Carnian age (Flugel, 2002))

Agematsu, S., K. Sashida, S. Salyapongse & A. Sardsud (2006)- Lower Devonian tentaculite bed in the Satun area, southern peninsular Thailand. J. Asian Earth Sci. 26, p. 605-611.
(Lower Devonian (Emsian) tentaculite fauna including Nowakia acuaria in black shale in basal part of siliciclastic sequence N of Satun, southern peninsular Thailand. Similar E Devonian black tentaculites shale present from N Thailand to NW Malaysia (Langkawi Islands and Mahang-Baling))

Agematsu, S., K. Sashida, S. Salyapongse & A. Sardsud (2006)- Ordovician-Silurian boundary graptolites of the Satun area, southern peninsular Thailand. Paleontological Research 10, 3, p. 207-214.
(online at: www.jstage.jst.go.jp/article/prpsj/10/3/207/_pdf)
(Black shale N of Satun, S Peninsular Thailand, lies upon Upper Ordovician limestone and rich in graptolites, including Normalograptus pseudovenustus, index species for interval around Ordovician-Silurian boundary)

Agematsu, S., K. Sashida, S. Salyapongse & A. Sardsud (2006)- Ordovician conodonts from the Thong Pha Phum area, western Thailand. J. Asian Earth Sci. 26, p. 49-60.
(Ordovician conodont biostratigraphy of ~500m thick limestones in Tha Manao Fm in W Thailand with four E-M Ordovician conodont zones: Juanognathus variaviris, Walliserodus comptus, Juanognathus jaanussoni–Histiodella holodentata and Plectodina onychodonta Zone. Faunas are similar to those from Midcontinent Province, N China, E Australia, and Argentina)

Agematsu, S., K. Sashida, S. Salyapongse & A. Sardsud (2006)- Lower and Middle Ordovician conodonts from the Thung Song and Thung Wa areas, southern peninsular Thailand. Paleontological Research 10, 3, p. 215-231.
(online at: https://www.jstage.jst.go.jp/article/prpsj/10/3/10_3_215/_pdf)
(15 species of E-M Ordovician (M Arenigian- E Caradocian) conodonts from Thung Song Gp in S Peninsular Thailand. Affinities with faunas in Australia, S China, Argentina and N America midcontinent)

Agematsu, S., K. Sashida, S. Salyapongse & A. Sardsud (2007)- Ordovician conodonts from the Satun area, Southern Peninsular Thailand. J. Paleontology 81, p. 19-37.
(Well-preserved U Ordovician conodonts from micritic limestone of Thung Song Gp in Satun area of S peninsular Thailand near Malaysian border. Faunas have N Atlantic Realm affinities, some of these faunas also reported from S China. Conodont-bearing limestone deposited on continental margin of NE Gondwana)

Agematsu, S., K. Sashida, S. Salyapongse & A. Sardsud (2008)- Early Ordovician conodonts from Tarutao Island, southern Peninsular Thailand. Palaeontology 51, 6, p. 1435-1453.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1475-4983.2008.00810.x/epdf)
(E Ordovician conodont faunas from E Tremadocian - M Arenig Thung Song Gp limestone (1000m thick) on SE Tarutao Island, SW side of Peninsular Thailand. 14 known and 8 undescribed species. Three zones: Rossodus

manitouensis, Utahconus tarutaoensis and Filodontus tenuis. Deposited on deeper shelf; S2 member limestone-shale shallow marine)

Agematsu, S., K. Sashida & A. Sardsud (2008)- Reinterpretation of Early and Middle Ordovician conodonts from the Thong Pha Phum area, western Thailand, in the context of new material from western and northern Thailand. Paleontological Research 12, 2, p. 181-195.
(E and M Ordovician conodonts Thong Pha Phum and Kanchanaburi areas in W Thailand and Li area in N Thailand. Two zones, Triangulodus larapintinensis and Aurilobodus leptosomatus. Two regression events in latest E Ordovician and earliest M Ordovician)

Agematsu, S., K. Sashida & A. Sardsud (2013)- A new Middle Ordovician conodont fauna from the Thong Pha Phum Area of Western Thailand. Paleontological Research (Palaeont. Soc. Japan) 17, 2, p. 179-188.
(New M Ordovician conodonts from Thong Pha Phum area, central W Thailand. Nine species, incl. first report of Eoplacognathus suecicus, Pygodus lunnensis, Protopanderodus calceatus, Protopanderodus cooperi, and P. graeai in Thailand, indicating cool-water fauna in W and in southern peninsular Thailand in M-L Ordovician)

Ahrendt, H., C. Chonglakmany, B.T. Hansen & D. Helmcke (1993)- Geochronological cross section through Northern Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 207-217.
(Isotopic age determinations in N Thailand, mainly S and SE of Chiang Mai. Zircons from crystalline basement W of Tak indicate maximum age of ~200 Ma for last amphibolite facies overprint instead of Precambrian. Tertiary K-Ar ages of ~30 Ma on mica from crystalline rocks interpreted as cooling ages, pointing to strong uplift in mid-Tertiary)

Ahrendt, H., B.T. Hansen, A. Lumjuan, A. Mickein & K. Wemmer (1997)- Tectonometamorphic evolution of NW Thailand deduced from U/Pb- Sm/Nd and K/Ar isotope investigations. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, p. 314-319.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(U-Pb zircon analyses of gneisses of crystalline basement of NW Thailand show age of high-grade metamorphic event is ~197-202 Ma, suggesting no Precambrian metamorphic events and gneisses are not original basement of Paleozoic and Mesozoic strata. Younger high-grade overprints. K/Ar cooling ages around U Cretaceous (79-66 Ma) in W and Late Oligocene- E Miocene (25-18 Ma) in E, suggesting two-stage uplift. Two granite groups: Triassic and Tertiary cooling ages)

Aihara, K. K. Takemoto, H. Zaman, H. Inokuchi, D. Miura, A. Surinkum, A. Paiyarom et al. (2007)- Internal deformation of the Shan-Thai block inferred from paleomagnetism of Jurassic sedimentary rocks in Northern Thailand. J. Asian Earth Sci. 30, p. 530-541.
(Clockwise rotation of ~20° in S and N Shan-Thai block due to collision of India. Larger local internal CW deformation in central part of Shan-Tai block)

Ainsworth, B.R., M. Sanlung & S.T.C. Duivenvoorden (1999)- Correlation techniques, perforation strategies, and recovery factors; an integrated 3-D reservoir modelling study, Sirikit field, Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 83, p. 1535-1551.
(Sirikit oil field of Phitsanulok basin producing since 1982. 130 wells, oil-in-place >800 MMBO. Reservoirs mainly lacustrine mouth-bar and fluvial deposits. Discussion of lithostratigraphic vs. chronostratigraphic mouth-bar correlation techniques between adjacent wells)

Alderson, A., N.J.L. Bailey & A. Racey (1994)- Palynology and geochemistry of Mesozoic source rocks from southern Peninsula Thailand: implications for petroleum exploration. In: P. Angsuwathana et al. (eds.) Proc. Int. Symposium Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources and IGCP 306, p. 276-281.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1994/6953.pdf)

(Oil-prone Mesozoic source rock in fluvial-coastal deposits in Peninsular Thailand SE of Phuket. Presence of palynomorphs Callialisporites dampieri and Aequitriradites spinulosus suggest Early Cretaceous (?Late Jurassic) age. In correlative deposits also crocodiles, turtles, Estheria and plant fossils (Asama et al. 1981). For additional palynogy data see Lei Zuoqi (1993))

Almeras, Y. (1988)- Jurassic brachiopods from the Klo-Mae-Sot area. CCOP Techn. Bull. 20, p. 211-217.
(Descriptions of five rel. non-diagnostic E-M Jurassic rhynchonellids from Klo Tho, NW Thailand)

Altermann, W.W. (1986)- The Upper Palaeozoic pebbly mudstone facies of peninsular Thailand and western Malaysia- continental margin deposits of Palaeoeurasia. Geol. Rundschau 75, 2, p. 371-381.
(Questions the glacial origin of Carboniferous-Lower Permian 'pebbly mudstones' of Phuket Group/ Singha Fm of S Thailand/ NW Malaysia. See also comments by Stauffer & Lee 1986)

Altermann, W.W. (1989)- The Permo-Carboniferous facies development in Thailand: a plate-tectonic discussion. Compte Rendu 11th Congres Int. Stratigraphie Geologie du Carbonifere, Beijing 1987, 4, p. 119-126.
(online at: http://epub.ub.uni-muenchen.de/5586/1/5586.pdf)
(N-S trending pelagic basin separated Shan Thai and Indosinia cratons in Carboniferous- Permian. Deposition of ribbon cherts from pre-Asselian- Kubergandian. M Permian flysch sedimentation. Basin was E-vergent, isoclinally folded and overthrusted. Parts of basin metamorphosed into greenschist facies. In E margin Kubergandian- Midian molasse deposited from new rising fold belt. Total width of basin <200 km. Folding affected marginal marine basin and was caused by W-directed subduction under volcanic arc. W of arc, pebbly mudstones deposited on trench slope or continental margin of Paleoeurasia. Deposition of mixtites continued through Carboniferous- Lower Permian and came to end with uplift of Shan-Thai Craton and onset of subduction under Petchabun marginal basin. Subduction W of area of pebbly mudstones and directed to E)

Altermann, W.W. (1989)- Facies development in the Permian Phetchabun Basin, Central Thailand. Verlag Wissenschaft und Bildung, Berlin, p. 1-234.
(online at: https://epub.ub.uni-muenchen.de/5585/1/5585(1).pdf)
(Part I on N-S trending Permian Phetchapun Basin (E of Sukhothai, W of Loei) separates Shan Tai craton (Sibumasu) in W from Indochina craton in E. E-M Permian overall coarsening-upward cycle: Early Permian mainly pelagic deposits with ribbon cherts. M Permian flysch sedimentation, with molasse deposits in E margin. Tectonic interpretation is folded marginal marine basin, with folding caused by W-directed subduction (A-subduction) under volcanic arc. Part II on pebbly mudstones in Peninsular Thailand and W Malaysia)

Altermann, W.W. (1991)- New Permo-Carboniferous geochemical data from central Thailand: implication for a volcanic arc model. Palaeogeogr. Palaeoclim. Palaeoecology 87, p. 191-210.
(On implications for SE Asia geotectonic reconstructions of new data on Late Carboniferous- M Permian quartz- keratophyric to spilitic volcanics from C Thailand. Volcanic rocks associated with platform carbonates and deep basin sediments suggest Late Paleozoic volcanic arc and subduction zone in West)

Ampaiwan, T., P. Churasiri & C. Kunwasi (2003)- Palynology of coal-bearing units in the Mae Ramat Basin, Tak Province, Northern Thailand: implications for the paleoclimate and the paleoenvironment. Natural History J. Chulalongkorn University 3, 2, p. 19-40.
(online at: http://www.thaiscience.info/journals/Article/NHCU/10439719.pdf)
(Palynology of lacustrine shale core from Mae Ramat Basin. Exact age of sequence cannot be assigned, but was deduced from paleoclimate and time ranges of fossils as E Miocene)

Ampaiwan, T., K.I. Hisada & P. Charusiri (2009)- Lower Permian glacially influenced deposits in Phuket and adjacent islands, peninsular Thailand. Island Arc 18, 1, p. 52-68.
(Dropstones and dump structures from E Permian (Asselian- Lower Sakmarian) diamictite-bearing sequence at Phuket and adjacent islands suggests sediments originated as glaciomarine (Basal Ko Sire Fm, up to 400m thick) and debris-flow deposits (Ko He Fm; ~400m thick). Diamictite clasts 70% quartzite, remainder granite/

gneiss, shale, carbonate, vein quartz and diamictite. Evidence of glacially influenced environment supports paleogeographic interpretation of Sibumasu block at NW Australian margin of Gondwana)

Ampornmaha, A. (1995)- Triassic carbonate rocks in the Phattalung area, Peninsular Thailand. J. Southeast Asian Earth Sci. 11, 3, p. 225-236.
(Carbonates near Phatthalung and others areas in Peninsular Thailand known as Permian Rat Buri Lst, but of Triassic age and here renamed Chaiburi Fm. Three members: (1) basal Dienerian- Smithian dolomite with conodonts Neospathodus kummeli, N. waageni, etc.; (2) bedded limestone with thin chert layers and nodules with latest Spathian- M Anisian Neospathodus timorensis, N. kockeli and Neogondolella bulgarica; (3) Carnian massive limestone with coral buildups)

Anderson, K. (2017)- Pennsylvanian- Early Permian Pha Nok Khao platform margin evolution and paleoecology of carbonate buildups, Loei-Phetchabun foldbelt, NE Thailand. Ph.D. Thesis University of Western Australia, Perth, p. 1-271.
(online at: http://research-repository.uwa.edu.au/files/16863899/THESIS_DOCTOR_OF_PHILOSOPHY_ANDERSON_Kaylee_Dawn_2017_Part_1.pdf)

Aranyakanon, P. (1955)- Diamond discovery in Phangnga and Phuket, South Thailand. Royal Department of Mines, Bangkok, Report of Investigation 1, p. 35-36.
(Diamonds present in tailings at dredgings at Phuket Tin Dredging and Kamunting Tin Dredging. Originate either from conglomerates of Phuket Series or pegmatitie dikes in tin granites. No ultrabasic rocks nearby)

Aranyakanon, P. (1961)- The cassiterite deposit of Haad Som Pan Ranong Province, Thailand. Ph.D. Thesis University of Durham 1960, Dept. Mineral Resources, Bangkok, p. 1-182.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1961/883.pdf)

Aranyakanon, P. (1969)- Tin deposits in Thailand. In: Second Technical Conf. on Tin, Bangkok 1969, 1, p. 83-102.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1980/5551.pdf)

Aranyakanon, P., W. Jantaranipa, P. Vichit & P. Suthakorn (1976)- Tin exploration in the Adang-Rawee Archipelago area, Satun Province, southern Thailand. Dept. Mineral Resources, Economic Geology Spec. Issue 2, Bangkok, p. 143-161.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1980/5554.pdf)
(Results of 1972-1974 survey for tin, off W coast of Satun, ~170km SE of Phuket. Most core holes did not reach likely tin placers)

Aranyakanon, P. & C. Nilkuha (1955)- Radioactive minerals from Tin and Tungsten mines in Thailand. Royal Dept. of Mines, Bangkok, Report of. Investigation 1, p. 41-47.
(Monazite present at several localities in Thailand, but rel. small occurrences. No Uranium)

Aranyakanon, P. & P. Vichit (1983)- The gem deposits of Thailand. In: Proc. Conf. Geology and Mineral Resources of Thailand, Bangkok, p. 280-290.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1983/10601.pdf)
(Main gems of Thailand are ruby and sapphire. Deposits common in N, NE, SE and W-C part of country, mostly in alluvial deposits associated with basalt flows)

Arboit, F., K. Amrouch, A.S. Collins, R. King & C. Morley (2015)- Determination of the tectonic evolution from fractures, faults, and calcite twins on the southwestern margin of the Indochina Block. Tectonics 34, 8, p. 1576-1599.
(Analyses of fractures, striated faults in Permian carbonates of Khao Khwang Fold-Thrust Belt in C Thailand. Five tectonic stages; first three predate main Indosinian deformation event, later two stages after or during, the

main folding (N-S compression) and Cenozoic E-W composite strike-slip/contractional stage, related to India-Asia collision)

Arboit, F., K. Amrouch, C.K. Morley, A.S. Collins & R. King (2017)- Palaeostress magnitudes in the Khao Khwang fold-thrust belt, new insights into the tectonic evolution of the Indosinian orogeny in central Thailand. Tectonophysics 710-711, p. 266-276.
(Calcite twinning analysis in Khao Khwang fold-thrust belt in Saraburi Province, C Thailand, to quantify palaeostresses magnitudes since onset of Indosinian orogeny. Foldbelt located on SW margin of Indochina Block. M Permian structural regime likely dominated by foreland flexure or extension due to back-arc rifting. Thrusting/folding in KKFTB began in E Triassic. Possibly later reactivation coeval with phase of fold tightening in Late Triassic after Sibumasu-Indochina collision. Maximum depositional ages of syntectonic sediments in foredeep 251 ± 3 Ma, and foreland 205 ± 6 Ma)

Arboit, F., A.S. Collins, R. King, C.K. Morley & R. Hansberry (2014)- Structure of the Sibumasu-Indochina collision, central Thailand: a section through the Khao Khwang Fold and thrust belt. J. Asian Earth Sci. 95, p. 182-191.
(Triassic Indosinian orogeny in Thailand often interpreted without considering tectonic evolution of portion of Indochina Block margin formed by Khao Khwang Platform area of Saraburi Group, C Thailand. Area represents thin-skinned fold-thrust belt with several large thrusts dominantly ~N-propagating deformation in Triassic. Foldbelt represents significant kink in collision between Sibumasu and Indochina)

Arboit, F., A.S. Collins, C.K. Morley & K. Amrouch (2016)- Detrital zircon analysis of the southwest Indochina terrane, central Thailand: unravelling the Indosinian orogeny. Geol. Soc. America (GSA) Bull. 128, 5-6, p. 1024-1043.
(Zircon age assemblages from Khao Khwang fold-thrust belt of C Thailand with common age peak at ~450 Ma (Late Ordovician). Samples also grains of 0.2-0.3, 0.4-0.6, 1.0-1.3, 1.7-1.8 and 2.2-2.7 Ga. Probable sediment sources Indochina basement and/or continental crust in terranes amalgamated to Indochina at that time. Detrital zircons as young as 205± 6 Ma show parts of Saraburi Gp no older than Late Triassic. Propose depositional model of Permian rift or passive margin setting that evolved into piggyback and foredeep basins during folding-thrusting in Triassic)

Arboit, F., A.S. Collins, C.K. Morley, F. Jourdan, R. King, J. Foden & K. Amrouch (2016)- Geochronological and geochemical study of mafic and intermediate dykes from the Khao Khwang fold-thrust belt: implications for petrogenesis and tectonic evolution. Gondwana Research 36, p. 111-128.
(Late Permian- Late Triassic dyke swarms in Khao Khwang fold-thrust belt at SW margin of Indochina Terrane in C Thailand. Three groups. Mafic dykes share geochemical characteristics with Chiang Khong volcanic suite in Sukhothai terrane and Loei volcanic belt in N Indochina and likely emplaced in similar orogenic setting. Group III rocks intruded from E Triassic (255± 6 Ma) to Late Triassic (207± 2 Ma), and probably sourced from more crustally contaminated magma)

Archbold, N.W. (1999)- Additional records of Permian brachiopods from near Rat Buri, Thailand. Proc. Royal Soc. Victoria 111, p. 71-86.
(Permian brachiopods from Ratburi Lst of NE Peninsular Thailand, which overlies Phuket Gp 'pebbly mudstones'. Referred to Ufimian (=Roadian) stage)

Arsairai, B. (2014)- Depositional environment and petroleum source rock potential of the Late Triassic Huai Hin Lat Formation, Northeastern Thailand. Doct. Engin. Thesis, Sunaree University of Technology, p. 1-310.
(online at: http://sutir.sut.ac.th:8080/sutir/bitstream/123456789/5758/1/Fulltext.pdf)
(Organic-rich shales of Late Triassic Huai Hin Lat Fm in Sap Phlu and Na Pho Song basins include excellent gas source rocks)

Arsairai, B., A. Wannakomol, Q. Feng & C. Chonglakmani (2016)- Paleoproductivity and paleoredox condition of the Huai Hin Lat Formation in northeastern Thailand. J. Earth Science (China) 27, 3, p. 350-364.
(online at: http://en.earth-science.net/PDF/20160612012847.pdf)

(Lacustrine facies of Late Triassic Huai Hin Lat Fm at Khorat Plateau of NE Thailand believed to be one of main source rocks of gas. Organic matter mainly of AOM and acritarchs, with TOC of 2-7%. Mainly Type I and II kerogens with some Type III as indicated by phytoclasts, spores, and pollen)

Asama, K. (1966)- Permian plants from Phetchabun, Thailand and problems of floral migration from Gondwanaland. Bull. Nat. Science Museum, Tokyo, 9, p. 171-211. *(in Japanese?)*
(Re-evalution of Permian floras of Phetchabun(Indochina Plate), described by Kon'no (1964) as Cathaysian with Gondwanan elements Glossopteris and Paleovittaria. Asama interpreted only Cathaysian flora, suggesting similarities to Jambi flora of SW Sumatra)

Asama, K. (1966)- Permian plants from Phetchabun, Thailand and problems of floral migration from Gondwanaland. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 197-244.
(Re-evalution of Permian floras of Phetchabun, described by Kon'no (1964) as Cathaysian with Gondwanan elements Glossopteris and Paleovittaria. Asama interpreted only Cathaysian flora. Similarities to Jambi flora of SW Sumatra (6 genera (but no species?) in common, incl. Sphenophyllum, Alethopteris, Pecopteris, Taeniopteris, Cordaites. With discussion on Permo-Carboniferous floral provinces)

Asama, K. (1973)- Some younger Mesozoic plants from the Lom Sak Formation, Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 13, p. 39-46.
(Plant fossils from C Thailand identified as Sequoia ambigua and Pterophyllum sp., interpreted to be probably of Cretaceous age (but vertebrate fossils suggest Late Triassic age of rocks; Buffetaut et al., 1984))

Asama, K (1982)- *Araucarioxylon* from Khorat, Thailand. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press 23, p. 57-64.

Asama, K, J. Iwai, M. Veeraburus & A. Hongnusonthi (1968)- Permian plants from Loei, Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 82-99.
(Typical Gigantopteris flora in continental facies U Permian of Loei area, NNE ofPhetchabun, NE Thailand (= W margin Indochina terrane). 16 species of Sphenophyllum, Pecopteris, Bicoemplectopteris, Gigantonuclea, Taeniopteris, etc. (but no Gigantopteris) (more locality information in Iwai et al. 1966))

Asama, K, N. Nakornsri, C. Hinthong & S. Sinsakul (1981)- Some younger Mesozoic plants from Trang, southern Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 22, p. 35-47.
(Probably E Cretaceous-age plant fossils of Filicales, Bennettales and Coniferales groups from Peninsular Thailand, SE of Phuket)

Asnachinda, P. & S. Pitragool (1978)- Review of non-metallic mineral deposits of Thailand. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 795-804.

Assavapatchara, S., P. Charusiri, V. Chutakositkanon, K. Hisada & K. Ueno (2006)- On the lithostratigraphy of Permian rocks in Thailand: implications for depositional environments and tectonic settings. J. Geol. Soc. Thailand 1, p. 27-48.
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper/70.pdf)
(Review of limestone-dominated Permian sections in Thailand)

Assavapatchara, S. & L. Raksaskulwong (2010)- Geologic investigation at Paklay- Kenthao area, Lao PDR. In: P. Puncharoen (ed.) Proc.Thai-Lao Techn. Conf. on Geology Mineral Resources, Bangkok, p. 197-217.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2010/25987.pdf)
(Correlation of Silurian-Cretaceous stratigraphy between Paklay- Kenthao area in Laos and Loei-Phitsunulok-Uttaradit region of N Thailand. No maps)

Assavarittiprom, V., B. Chaisilboon & S. Polachan (1995)- Review on petroleum exploration in Northeastern Thailand. Proc. Int. Conf. Geology Geotechnology and Mineral Resources of Indochina (GEO-INDO '95), Kon Khaen, p. 541-550.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1995/7459.pdf)
(First exploration well in Khorat Plateau drilled by Unocal in 1971 (dry). Esso drilled 13 wells in 1982- 1990, mainly dry holes, but 1981 gas discovery at Nam Phong (developed in late 1990's). Seven more wells drilled in 1991-1994, also mainly dry. Still remaining potential in Permian and Triassic sequences)

Atherton M.P., M.S Brotherton & C. Mahawat (1992)- Integrated chemistry, textures, phase relations and modelling of a composite granodioritic-monzonitic batholith, Tak, Thailand. J. Southeast Asian Earth Sci. 7, p. 89-112.

Baird, A. (1992)- The sedimentology and diagenesis of the Ratburi Limestone, northern peninsular Thailand. Ph.D. Thesis Royal Holloway and Bedford New College, University of London, p. 1-318. *(Unpublished)*

Baird, A. & D. Bosence (1993)- The sedimentological and diagenetic evolution of the Ratburi Limestone, Peninsular Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Res. SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 173-180.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7599.pdf)
(Ratburi Lst in Peninsular Thailand is warm-water carbonate deposit in platform setting, suggesting that after deposition of glacial pebbly mudstones in rift setting in earliest Permian, the Shan Thai (=Sibumasu) craton moved to lower latitudes by late M- early Late Permian. Platform topography and facies distribution controlled by extensional tectonics. Early dolomitisation, followed by karstification, in response to uplift of Late Permian Indosinian orogeny. Petroleum potential from long karst history (Late Permian- present day) and source potential of platform carbonate mudstone. E-dipping subduction of Indian Ocean Plate resulted in granite magmatism in peninsula during Cretaceous)

Baird, A., O. Dawson & D. Vachard (1993)- New data on biostratigraphy of the Permian Ratburi limestone from north peninsular Thailand. In: T. Thanasuthipitak (ed.) Proc. Int. Symposium Biostratigraphy of mainland Southeast Asia: facies & paleontology (BIOSEA), Chiang Mai 1993, Chiang Mai University, 2, p. 243-260.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/6790.pdf)
(Ratburi Lst of Peninsular Thailand deposited on broad carbonate platform that covered Shan-Tai (Sibumasu) Terrane. With rel. low diversity fusulinid forams (Nankinella, Staffella, Eopolydiexodina afghanensis and rare Parafusulina, Pseudofusulina, Chusenella), typical hemigordiopsid small forams (Hemigordius reicheli, Hemigordiopsis renzi, Baisalina, Shanita amosi) and Sphairionia sikuoides, suggesting age range of late Murgabian- Midian (late M- early Late Permian))

Bal, A.A., H.M. Burgisser, D.K. Harris, M.A. Herber, S.M. Rigby, S. Thumprasertwong & F.J. Winkler (1992)- The Tertiary Phitsanulok lacustrine basin, Thailand. In: Proc. Conf. Geological resources of Thailand: potential for future development, Dept. Mineral Resources, Bangkok 1992, p. 247-258.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1992/6223.pdf)
(Phitsanulok basin N-S intra-cratonic rift formed by E-W extension related to India- Asia collision. Located in zone between Shan-Tai and Indochina cratonic plates. Early extension Late Oligocene- E Miocene, followed by later transpressional phase with basic volcanism. Basin center is Sukhothai depression, with 8 km of alluvial-lacustrine sediments)

Barber, A.J., M.F. Ridd & M.J. Crow (2011)- The origin, movement and assembly of the pre-Tertiary tectonic units of Thailand. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 507-537.

Barr, S.M. & P. Charusiri (2011)- Volcanic rocks. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 415-439.

(Widely distributed volcanic rocks in Thailand, from five Late Paleozoic- Mesozoic belts in Sukhothai and Phetchabun foldbelts to more widely scattered Late Cenozoic basaltic volcanism. Radiometric dating of young basalts is difficult)

Barr, S.M. & M.A. Cooper (2013)- Late Cenozoic basalt and gabbro in the subsurface in the Phetchabun Basin, Thailand: implications for the Southeast Asian Volcanic Province. J. Asian Earth Sci. 76, p. 169-184.
(Fragments of basaltic and gabbroic rocks in cuttings from exploration wells in Na Sanun area, Phetchabun Basin, C Thailand, represent flows and sills in lacustrine and fluvial sediments of E-M-Miocene Wichian Buri Group. Basaltic flows ages of ~2, 16, 18 and 24 Ma, and within-plate tholeiitic-alkalic characteristics)

Barr, S.M. & D.E. James (1990)- Trace element characteristics of Upper Cenozoic basaltic rocks of Thailand, Kampuchea and Vietnam. J. Southeast Asian Earth Sci. 4, p. 233-242.
(U Cenozoic basaltic rocks of SE Asia classified as nephelinite, basanite, trachybasalt, alkali basalt, basaltic trachyandesite, etc. Classified as continental (within-plate) alkalic or tholeiitic volcanics)

Barr, S.M. & A.S. MacDonald (1978)- Geochemistry and petrogenesis of Late Cenozoic alkaline basalts of Thailand. Bull. Geol. Soc. Malaysia 10, p. 25-52.
(online at: www.gsm.org.my/products/702001-101285-PDF.pdf)
(Pleistocene(?) basalts of Thailand small plugs, vents and flows. Part of large NW-SE trending alkaline basalt province through Thailand, Cambodia, Laos, Vietnam, increasing in volume to SE. Thai basalts mainly in two groups: basanitoid (formed by partial melting in mantle at high P, followed by rapid ascent; with gem-quality corundum and zircon) and hawaiitic.Also rare tholiitic basalts. Possibly related to rifting of S China Sea and associated basins (unlikely?; JTvG))

Barr, S.M. & A.S. MacDonald (1987)- Nan River suture zone, northern Thailand. Geology 15, p. 907-910.
(Nan River suture zone in N Central Thailand is belt of ophiolitic mafic- ultramafic rocks and Pha Som Gp metasedimentary rocks (epidote-crossite blueschists), probably pre-Permian in age. Nan River belt part of (Paleotethys) suture between Indosinian and Shan-Thai cratonic blocks)

Barr, S.M. & A.S. MacDonald (1991)- Toward a late Palaeozoic-early Mesozoic tectonic model for Thailand. J. Thai Geosciences 1, p. 11-22.
(Sukhothai terrane, located between Shan-Thai and Indochina, accreted to Indochina in M Permian, while Shan-Thai followed in Late Triassic)

Barr, S.M., A.S. Macdonald, D.R. Dunning & W. Yaowanoiyothin (1993)- The Doi-Inthanon metamorphic core complex in NW Thailand: age and tectonic significance. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 117-125.
(Doi Inthanon complex in belt of high-grade gneissic rocks along W mountain ranges of Thailand. Dome-shaped orthogneissic core, mantled by mylonitic paragneisses, separated by detachment surfaces from cover of mainly E Paleozoic low-grade to unmetamorphosed sediments. Zircon from core orthogneiss suggests derivation from Late Triassic- E Jurassic granitic protolith, with high-grade metamorphism in Late Cretaceous. Development of complex between Late Cretaceous and Miocene, in response to major crustal thinning)

Barr, S.M., A.S. Macdonald, D.R. Dunning, P. Ounchanum & W.Yaowanoiyothin (2000)- Petrochemistry, U-Pb (zircon) age, and paleotectonic setting of the Lampang volcanic belt, northern Thailand. J. Geol. Soc. London 157, p. 553-563.
(Two NE-trending belts of subaerial dacitic-rhyolitic flows and tuffs nearLampang, N Thailand. Rhyolite from Doi Luang belt yielded U-Pb zircon age of 240 Ma (M-Triassic). Lampang volcanic belt can be traced to N into Lincang-Jinghong volcanic belt in S China, and formed at M-Triassic convergent plate margin. Data constrain timing of final amalgamation between Indochina- Shan-Thai terranes to M Triassic or younger)

Barr, S.M., A.S. MacDonald, N.S. Haile & P.H. Reynolds (1976)- Paleomagnetism and age of the Lampang basalt (northern Thailand) and the age of the underlying pebble tools. J. Geol. Soc. Thailand 2, 1, p. 1-10.

(online at: http://library.dmr.go.th/Document/J-Index/1976/36.pdf)
(Quaternary Lampang basalt flows in area of ~200 km2 in NW Thailand. Overlie gravels with Early Paleolithic pebble tools. Reversed-to-normal magnetic polarity change recorded within basalt series, probably Matuyama-Brunhes boundary of 0.69 Ma (now assumed to be closer to 0.78 Ma; JTvG). Pebble tools must be older)

Barr, S.M., A.S. Macdonald, B.V. Miller, R. Reynolds, B.P. Rhodes & B. Yokart (2002)- New U- Pb and 40Ar/39Ar Ages from the Doi Inthanon and Doi Suthep metamorphic core complexes, Northwestern Thailand. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 284-294.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2002/6405.pdf)
(Fission Track ages of extensional metamorphic core complexes in gneiss belt of NW Thailand (W of Chiang Mai) show mainly E Miocene (21-16 Ma) exhumation/ uplift/ cooling ages of Doi Inthanon complex, suggesting response to indentation of SE Asia by India. Zircon dates of ~200-212 Ma from gneiss regarded as igneous protolith ages))

Barr, S.M., A.S. Macdonald, P. Ounchanum & M.A. Hamilton (2006)- Age, tectonic setting and regional implications of the Chiang Khong volcanic suite, northern Thailand. J. Geol. Soc. London 163, p. 1037-1046.
(NE part of Tak-Chiang Khong volcanic belt in Sukhothai terrane of N Thailand mainly subaerial andesitic-rhyolitic tuffs, with Triassic U-Pb zircon age of 233 Ma (Carnian). Suite correlated with ~240 Ma Lampang volcanics to SW in Tak-Chiang Khong belt, and Lincang-Jinghong belt in Yunnan (W Simao block). Correlations support placement of Paleo-Tethys suture to W of Sukhothai terrane (see also Srichan et al 2009))

Barr, S.M., A.S. Macdonald & W. Yaowanoiyothin (1985)- Occurrence of blueschist in the Nan River mafic-ultramafic belt, northern Thailand. Warta Geologi (Newsl. Geol. Soc. Malaysia) 11, 2, p. 47-50.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1985002.pdf)
(Doi Phuk Sung area, Nan Province, N Thailand with crossite schists (blueschists), associated with metagabbro, hornblendite, pyroxenite, garnet amphibolite, and serpentinite in sequence of SSW-dipping sheet-like units, which may have been repeated by thrusting)

Barr, S.M., C. Tantisukrit, W. Yaowanoiyothin & A.S. Macdonald (1990)- Petrology and tectonic implications of Upper Palaeozoic volcanic rocks of the Chiang Mai belt, northern Thailand. J. Southeast Asian Earth Sci. 4, p. 37-47.
(Chiang Mai volcanics in N-C Thailand small areas of basaltic volcanic rocks in Permo-Carboniferous sediment sequences. No apparent relationship to plate margin (subduction) environment)

Bassoulet, J.P. (1988)- Preliminary note on some Jurassic microfossils (foraminifers, algae) from Thailand. In: H. Fontaine & V.Suteethorn (eds.) Late Paleozoic and Mesozoic fossils of West Thailand and their environments, Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, Techn. Bull. 20, p. 142-151.
(Marine Jurassic rel. widespread in N, W and NW Thailand M Jurassic Kanchanaburi Lst platform facies already described by Kemper (1976), with new species of foraminifera Lucasella and Haurania. Other species present include Gutnicella kaempferi, G. parva, Mesoendothyra, Timidonella sarda and dasyclad alga Holosporella siamensis Von Pia)

Bassoulet, J.P. (1994)- *Bosniella fontainei* nov. sp. (Foraminifere, Biokovinidae) du Jurassique moyen de Thailande. Geobios 27, 4, p. 403-411.
('Bosniella fontainei nov. sp. (Foraminifera, Biokovinidae) from the Middle Jurassic of Thailand'. New small benthic foram species from M Jurassic carbonate platform facies in Kanchanaburi Province near Myanmar border in NW Thailand. Associated with bivalve Parvamussium donaiense and foram Timidonella sarda (age probably Late Toarcian- Aalenian; Fontaine et al. 2009))

Bastin, H., E. Braun, A. Hess, K.E. Koch, V. Stein, D. Stoppel & R. Wolfart (1970)- Silurian and Early Devonian biostratigraphy in northwestern Thailand. Newsletters Stratigraphy 1, 2, p. 25-32.

(Silurian and E Devonian graptolites from Paleotethys suture zone melange between Shan-Tai (=Sibumasu) and Indochina terranes)

Baum, F. & K.E. Koch (1968)- Ein Beitrag zur stratigraphischen Neuordnung des Palaozoikums in Sud-Thailand. Geol. Jahrbuch 86, p. 879-884.
('A contribution to the stratigraphic revision of the Paleozoic of Thailand'. Incl. occurrences of E Devonian graptolites Monograptus spp.)

Baum, F., E. von Braun, A. Hess, K.E. Koch, G. Kruse, H. Quarch & M. Siebenhuner (1970)- On the geology of northern Thailand. Beihefte Geol. Jahrbuch, Heft 102, p. 1-23.
(Review of 1966-1968 work on Geologic Map of N Thailand by German Geological Mission. Summary of Precambrian- ?Jurassic stratigraphy. Precambrian gneiss overlain by ~500m Cambrian quartzites, ~100m Ordovician limestone, 500m Silurian- Devonian shale, sand and limestones. Lower Carboniferousin flysch facies, U Carboniferous intermediate volcanic and igneous rocks, Permian clastics and several 100m thick reefal limestones, etc.)

Beauvais, L. (1988)- Jurassic corals and coral-bearing limestones of Thailand and Burma. Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, Techn. Bull. 20, p. 152-203.
(Lower, Middle and Upper Jurassic limestones present in Thailand, but no true coral reef limestones; mainly of microbial origin. Corals from 4 levels, incl. Montlivaltia numismalis. Jurassic microfacies of Thailand and Sumatra similar but not identical. Incl. rare calcisponge Cladocoropsis miriabilis and algae Salpingoporella pygmaea at Pa La Tha, S of Umphang, Tak Province, W Thailand (Sibumasu Block))

Beauvais, L. (1988)- Revision of the corals from the Kamawkala Limestone (Burmo-Thai frontier) described in 1930 by J.W. Gregory. In: H. Fontaine & V.Suteethorn (eds.) Late Paleozoic and Mesozoic fossils of West Thailand and their environments, Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, Techn. Bull. 20, p. 204-210.
(Fossils from Kamawkala Lst in Thai- Myanmar border area previously interpreted as probable Triassic, but corals here re-identified as Thalamocoenia, Stereocoenia, Stylosmilia, etc. are M-L Jurassic taxa)

Beauvais, L. & H. Fontaine (1993)- *Montlivaltia numismalis* (DôOrbigny): a Middle Jurassic coral newly found in west Thailand. In: T. Thanasuthipitak (ed.) Proc. Int. Symp. Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, p. 63-70.
(Scleractinian coral species Montlivaltia numismalis in black shale S of Mae Sot, W Thailand. Well known from Bathonian (M Jurassic) of Europe (also known from Timor, Seram. Bangka, etc. and usually assigned Late Triassic age?))

Beckinsale, R.D., S. Suensilpong, S. Nakapadungrat & J.N. Walsh (1979)- Geochronology and geochemistry of granite magmatism in Thailand in relation to a plate tectonic model. J. Geol. Soc., London, 136, p. 529-537.
(Rb-Sr ages of granites in Thailand suggest phases at ~240 Ma (Lower Triassic), ~210 Ma (U Triassic), ~130 Ma (Lower Cretaceous) and ~90 Ma (U Cretaceous). K-Ar ages for mica separates commonly grossly discordant (up to 150 Ma younger than corresponding Rb-Sr whole rock age). Grouped into I-types or S-types, related respectively to subduction of oceanic lithosphere and continent-continent or continent-magmatic arc collisions. Major tin deposits of Thailand associated with Triassic and M Cretaceous S-type granites)

Benammi, M., Y. Chaimanee, J.J. Jaeger, V. Suteethorn & S. Ducrocq (1999)- Paleontology and magnetostratigraphy of the Eocene Krabi basin (Southern Thailand). In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 545-553.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999055.pdf)
(Eocene Krabi basin in Peninsular Thailand with 6 reptile genera and 31 mammal species. Nearly all vertebrates from lignite levels, indicating tropical climate. Mammal fauna can be related to Late Eocene and/or E Oligocene forms from Europe, N Africa and Asia. Proposed age for mammal fauna Late Eocene (~37-34 Ma). Paleomagnetic work suggests probable correlation for Krabi section with chron C13r (33.5-34.7 Ma))

Benammi, M., Y. Chaimanee, J.J. Jaeger, V. Suteethorn & S. Ducrocq (2001)- Eocene Krabi basin (southern Thailand): paleontology and magnetostratigraphy. Geol. Soc. America (GSA) Bull. 113, 2, p. 265-273.
(Krabi section from Krabi basin ~105 m of siltstones, sandstones, claystones, lignites, and limestones. Mammalian biostratigraphy indicates Late Eocene age, but correlation of magnetostratigraphy to Geomagnetic Polarity Time Scale suggests age of section between 31-34 Ma (E Oligocene))

Benammi, M., Y. Chaimanee, J. Urrutia-Fucugauchi & J.J. Jaeger (2004)- Magnetostratigraphic study of the continental sedimentary sequence of Chiang Muan Basin, northern Thailand: implication for the age of the first Miocene hominoids from Thailand. Int. Geology Review 46, p. 646-654,

Benammi, M., J. Urrutia-Fucugauchi, L.M. Alva-Valdivia, Y. Chaimanee, S. Triamwichanon & J.J. Jaeger (2002)- Magnetostratigraphy of the middle Miocene continental sedimentary sequences of the Mae Moh Basin in northern Thailand: evidence for counterclockwise block rotation. Earth Planetary Sci. Letters 204, p. 373-383.
(Magnetostratigraphic study in Mae Moh basin, N Thailand, documents CCW vertical axis rotation of ~13° with respect to expected Miocene direction derived from Eurasian polar wander curve. Not consistent with previously reported paleomagnetic data and may be due to local tectonics. Polarity sequence of nine magnetozones correlated to chron C5ABn–C5An2n, between 13.5 and 12.1 Ma)

Bhongsuwan, T. & P. Ponathong (2002)- Magnetic characterization of the Thung-Yai Redbed of Nakhon Si Thammarat Province, Southern Thailand, and magnetic relationship with the Khorat Redbed. Science Asia 28, p. 277-290.
(online at: http://scienceasia.org/2002.28.n3/v28_277_290.pdf)
(Paleomag analysis of U Jurassic - Lower Cretaceous Thung-Yai redbeds. Paleopole position is at Plat/Plon = 57.8°N/184.6°E, which overlaps well with pole position derived from Khorat redbeds, indicating that S Thailand (Shan-Thai/ Sibumasu block) and Khorat Plateau (Indochina block) have not moved relative to each other since U Jurassic- Lower Cretaceous)

Blum, J.D., D.A. Papanastassiou, C. Koeberl & G.J.Wasserburg (1992)- Nd and Sr isotopic study of Australasian tektites: new constraints on the provenance and age of the target materials. Geochimica Cosmochimica Acta 56, 1, p. 483-492.
(Nd and Sr isotopic studies of Australites tektites suggest source material derived mainly from Proterozoic crustal terrane. Sr analyses of Muong Nong-type layered indochinite tektites from NE Thailand yield isochron age of ~170 Ma, possibly time of deposition of sedimentary target rocks. Compositional layering in Muong Nong-type tektites may reflect compositional variability of Jurassic sediments. Impact site may be in area of Jurassic sedimentary bedrock, near N Cambodia, S Laos or SE Thailand)

Boonchai, N., P.J. Grote & P. Jintasakul (2009)- Paleontological parks and museums and prominent fossil sites in Thailand and their importance in the conservation of fossils. In: J.H. Lipps & B.R.C. Granier (eds.) Paleoparks and the protection and conservation of fossil sites worldwide, Carnets de Geologie, Book 2009/03, Chapter 7, p. 75-95.
(online at: http://paleopolis.rediris.es/cg/CG2009_BOOK_03/CG2009_BOOK_03_Chapter07.pdf)
(Incl. Petrified Forest Park in Tak Province, NW Thailand. Large silicified tree trunks, ~800,000 years old)

Boonchaisuk, S., W. Siripunvaraporn & Y. Ogawa (2013)- Evidence for middle Triassic to Miocene dual subduction zones beneath the Shan-Thai terrane, western Thailand from magnetotelluric data. Gondwana Research 23, p. 1607-1616.
(Kanchanaburi province, W Thailand, on Shan-Thai terrane. Late Triassic W-ward subduction in E, where Lampang- Chiang Rai block subducted under Shan-Thai terrane. In E Tertiary W Burma terrane subducted under Shan-Thai. Two deep conductive zones interpreted as mafic/ultramafic rocks, tied to subducted slabs)

Boonsener, M. & K. Sonpirom (1997)- Correlation of Tertiary rocks in northeast Thailand In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 2, p. 656-661.

Boonsoong, A. (2007)- Petrography and geochemistry of the Chanthaburi-Trat basalt, Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIǿ07), Bangkok, Dept. Mineral Resources, p. 242-250.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2007/12729.pdf)
(Late Cenozoic (24 -<0.5 Ma) basalts in mainland SE Asia (Vietnam, China, Thailand, Malaysia) interpreted to have erupted in continental rift environments. Chanthaburi-Trat basalts transitional between trachybasalts and basanites. Magma was generated in continental rift environment, in fertile mantle at ~35km depth).)

Boonsoong, A., Y. Panjasawatwong & K. Metparsopsan (2011)- Petrochemistry and tectonic setting of mafic volcanic rocks in the Chon Daen-Wang Pong area, Phetchabun, Thailand. Island Arc 20, 1, p. 107-124.
(Mafic volcanic rocks and hypabyssal rocks in Chon Dean-Wang Pong area possibly S extension of western Loei volcanic Sub-belt, NE Thailand. Possibly Permian-Triassic age and formed in volcanic arc setting)

Booth, J.E. (1998)- The Khorat Plateau of NE Thailand- exploration history and hydrocarbon potential. In: Offshore South East Asia Conf.1998 (OSEA98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 169-203.
(Khorat Basin at N edge Indochina Plate, with stacked Permo-Carboniferous, Triassic, Mesozoic and Tertiary basins. To date Permian platform carbonates ony productive (gas) reservoir. Oldest well penetration is E Carboniferous (329 Ma) granite in Yang Talat 1. Etc.)

Booth, J. (2011)- The Nakhon Thai Ranges fold-belt in Northern Thailand- evolution of a Late Palaeozoic play from concept to drillable prospect. Proc. 4th Petroleum Forum: Approaching to the 21st Petroleum concession bidding round, Bangkok 2011, Department of Mineral Fuels, p. 90-112.
(online at: www.dmf.go.th/cms/assets/1/The%204th%20(DMF)%20Petroleum%20Forum%20Proceeding.pdf)
(Exploration blocks in N Thailand highlands between Tertiary Phetchabun- Wichan Buri and Phitsanulok basins, W side of Khorat Plateau. Potential gas play in fractured Permian carbonates)

Booth, J. (2011)- The Nakhon Thai Ranges fold-belt in northern Thailand- evolution of a Late Palaeozoic play from concept to drillable prospects. Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 22, 38p. *(Abstract + Presentation)*
(Similar to Booth 2011, above)

Booth, J. & N. Sattayarak (2011)- Subsurface Carboniferous- Cretaceous geology of NE Thailand. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 185-222.

Boucot, A.J., L.R.M. Cocks & P.R. Racheboeuf (1999)- Early Devonian brachiopods from Satun Province, Southern Thailand. J. Paleontology 73, 5, p. 850-859.
(Twelve species of brachiopods from E Devonian (Emsian) Pa Samed Fm mudstones of S Thailand (= Shan Tai/ Sibumasu Block). Represent deeper-water benthic assemblages. Assemblages affinities to Old World Realm, but cannot be assigned to particular biogeographic region)

Brooks, J. (1987)- Development of the Sirikit oil field, Thailand. In: M.K. Horn (ed.) Trans. Fourth Circum Pacific Energy and Mineral Resources Conf., Singapore 1986, Circum-Pacific Council for Energy and Mineral Resources, p. 35-42.
(Sirikit field is 1981 Shell oil discovery in Miocene fluvial-lacustrine K and L sands of Phitsanoluk intra-cratonic basin of C Thailand. Recoverable oil ~34-40 MBO. Crude oil waxy (pour point 35°C), but light (40° API) and no sulphur)

Brown, G.F., S. Buravas, J. Charaljavanaphet, N. Jalichandra, W.D. Johnston, V. Sresthaputra & G.C. Taylor (1951)- Geologic reconnaissance of the mineral deposits of Thailand. U.S. Geol. Survey (USGS) Bull. 984, p. 1-183.
(online at: http://pubs.usgs.gov/bul/0984/report.pdf)

Buffetaut, E. (1982)- Mesozoic vertebrates from Thailand and their paleo-biological significance. Terra Cognita 2, 1, p. 27-34.

Buffetaut, E. (1983)- Mesozoic vertebrates from Thailand: a review. In: 2nd Symp. Mesozoic terrestrial ecosystems, Jadwisin 1981, Acta Palaeontologica Polonica 28, 1-2, p. 43-53.
(online at: www.app.pan.pl/archive/published/app28/app28-043.pdf)
(Late Triassic (?Norian) fauna from basal Khorat Group at Chulabhorn Dam includes fishes, stegocephalian and phytosaurs. Phu Kradung Fm (?Liassic) yielded jaw of mesosuchian crocodile. Dinosaur remains (sauropods and theropods) in various places in Jurassic and Cretaceous rocks. Laurasian affinities, suggesting collision of SE Asian blocks with mainland Asia Late Triassic or earlier)

Buffetaut, E., G. Dyke, V. Suteethorn & H. Tong (2005)- First record of a fossil bird from the Early Cretaceous of Thailand. Comptes Rendus Palevol 4, 8, p. 681-686.
(First known occurrence of Mesozoic fossil bird from NE Thailand and SE Asia: left humerus from non-marine E Cretaceous Sao Khua Fm)

Buffetaut, E. & R. Ingavat (1980)- A new crocodilian from the Jurassic of Thailand, *Sunosuchus thailandicus* n. sp. (Mesosuchia, Goniopholididae), and the palaeogeographical history of South-East Asia in the Mesozoic. Geobios 13, 6, p. 879-889.
(Crocodilian jaw fragment from Jurassic Phu Kradung Fm of Thailand is new species Sunosuchus thailandicus. Interpreted to belong to family Goniopholididae (Mesosuchia), of Laurasian affinity and known only from continental Late Jurassic of N C China)

Buffetaut, E. & R. Ingavat (1981)- The significance of the crocodilian *Sunosuchus thailandicus* from the Jurassic of Northeastern Thailand. Proc. Fourth Reg. Conf. on the Geology of Southeast Asia, p. 325-327.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_2/1981/7471.pdf)
(Goniopholidid crocodile Sunosuchus thailandicus from the Jurassic Phu Kradung Fm, Khorat Gp, of NE Thailand previously known only from N Central China)

Buffetaut, E. & R. Ingavat (1982)- Phytosaur remains (Reptilia, Thecodontia) from the Upper Triassic of North-Eastern Thailand. Geobios 15, 1, p. 7-15.
(Late Triassic vertebrate fragments of phytosaurs (related to Belodon, Rutiodon) at Chulabhorn Dam suggest NE Thailand already biogeographically part of Laurasia in Late Triassic)

Buffetaut, E. & R. Ingavat (1983)- Vertebrates from the continental Jurassic of Thailand. CCOP Techn. Bull. 16, p. 68-74.
(Thailand is only place in SE Asia with Jurassic continental vertebrates, mainly from Khorat Plateau in NE (incl. E Jurassic crocodile Sunosuchus, Late Jurassic dinosaurs and crocodilians), but also from Ko Kut island in Gulf of Thailand (Lepidotus fish and shark remains). Probably Laurasian affinities)

Buffetaut, E. & R. Ingavat (1983)- *Goniopholis phuwiangensis* nov. sp., a new mesosuchian crocodile from the Mesozoic of north-eastern Thailand. Geobios 16, p. 79-91.
(Remnant of goniopholid crocodilian from non-marine late Jurassic-E Cretaceous Sao Khua Fm of Khorat Group at NW Khorat Plateau similar to material from N America and Europe suggests Late Jurassic- Early Cretaceous age for Sao Khua Fm. Presence indicative of Laurasian faunal affinities)

Buffetaut, E. & R. Ingavat (1984)- The lower jaw of *Sunosuchus thailandicus*, a mesosuchian crocodilian from the Jurassic of Thailand. Palaeontology 27, 1, p. 199-206.
(online at: http://palaeontology.palass-pubs.org/pdf/Vol%2027/Pages%20199-206.pdf)

(E Jurassic crocodile jaw from Phu Kradung Fm of lower Khorat Group in NE Thailand)

Buffetaut, E. & R. Ingavat (1985)- The Mesozoic vertebrates of Thailand. Scientic American 253, p. 80-87.
(Popular review of vertebrate faunas from Late Triassic- middle Cretaceous laccustrine and fluvial deposits of NE Thailand (mainly Khorat Plateau))

Buffetaut, E. & R. Ingavat (1986)- The succession of vertebrate faunas in the continental Mesozoic of Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 167-172.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986013.pdf)
(Common continental vertebrate fossils in Late Triassic - E Cretaceous of Thailand, mainly Khorat Plateau of NE Thailand. Best assemblages from Late Triassic Huai Hin Lat Fm (with phytosaurs, turtles, stegocephalians and fishes) and late Jurassic Sao Khua Fm (with dinosaurs, crocodilians, turtles and fishes))

Buffetaut, E. & R. Ingavat (1986)- Unusual theropod dinosaur teeth from the Upper Jurassic of Phu Wiang, northeastern Thailand. Revue Paleobiologie 5, p. 2, 217-220.
(With Siamosaurus suteethorni n.sp.)

Buffetaut, E., R. Ingavat & M. Martin (1984)- Fossil vertebrates and the Late Triassic age of the Lom Sak Formation of Central Thailand. J. Geol. Soc. Thailand 7, p. 19-24.
(online at: http://library.dmr.go.th/library/J-Index/1984/27.pdf)
(Lom Sak Fm near Lom Sak, Changwat Petchabun, C Thailand with (Late) Triassic vertebrate remains: Semionotus actinopterigian fish scales and phytosaur reptile tooth. Formation previously assigned to Cretaceous based on plant fossils, but probably underlies Jurassic redbeds of Khorat Fm)

Buffetaut, E., S. Suteethorn, V. Suteethorn, U. Deesri & H Tong (2013)- Preliminary note on a small ornithopod dinosaur from the Phu Kradung Formation (terminal Jurassic- basal Cretaceous) of Phu Noi, north-eastern Thailand. J. Science Technol. Mahasarakham University 33, 4, p. 344-347.
(online at: http://research.msu.ac.th/msu_journal/upload/journal_file/jfile_no34_44342.pdf)

Buffetaut, E. & V. Suteethorn (1993)- The dinosaurs of Thailand. J. Southeast Asian Earth Sci. 8, p. 77-82.
(Dinosaur record from continental rocks of Khorat Plateau includes footprints of small dinosaurs in M-L Jurassic Phra Wihan Fm, varied dinosaur assemblage from Late Jurassic Sao Khua Fm dominated by sauropods, theropod footprints from E Cretaceous Phu Phan Fm and theropods and primitive ceratopsian Psittacosaurus in Aptian-Albian Khok Kruat Fm)

Buffetaut, E. & V. Suteethorn (1998)- The biogeographical significance of the Mesozoic vertebrates from Thailand. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 83-90.
(online at: http://searg.rhul.ac.uk/searg_uploads/2016/01/Buffetaut.pdf)
(Late Triassic (Norian)- Early Cretaceous non-marine vertebrate faunas of Thailand are mainly on Indochina Block. Jurassic assemblages similar on Indochina and Shan-Thai blocks, suggesting these were already in contact at that time. Thailand faunas show relationships to Eurasian and Chinese faunas)

Buffetaut, E.H. & V. Suteethorn (1999)- The dinosaur fauna of the Sao Khua Formation of Thailand and the beginning of the Cretaceous radiation of dinosaurs in Asia. Palaeogeogr. Palaeoclim. Palaeoecology 150, p. 13-23.
(On diverse pre-Aptian, Early Cretaceous dinosaur remains from Sao Khua Fm, Khorat Gp, NE Thailand)

Buffetaut, E.H. & V. Suteethorn (2007)- A sinraptorid theropod (Dinosauria: Saurischia) from the Phu Kradung Formation of northeastern Thailand. Bull. Soc. Geologique France 178, p. 497-502.
(Theropod tibia from Phu Kradung Fm of NE Thailand referred to family Sinraptoridae. Previously known only from Late Jurassic of SW China, but E Cretaceous age suggested by palynomorphs)

Buffetaut, E.H. & V. Suteethorn (2011)- A new iguanodontian dinosaur from the Khok Kruat Formation (Early Cretaceous, Aptian) of northeastern Thailand. Annales Paleontologie 97, p. 51-62.
(New ornithopod dinosaur Siamodon nimngami n. gen, n. sp., on basis of well-preserved maxilla from Khok Kruat Fm (Aptian) in village near Khorat).

Buffetaut, E.H., V. Suteethorn, G. Cuny, H. Tong, J. Le Loeuff, S. Khansubha & S. Jongautchariyakul (2000)- The earliest known sauropod dinosaur. Nature 407, 6800, p. 72-74.
(Incomplete sauropod skeleton from fluvial Late Triassic NamPhong Fm at Phu Nok Khian hill near Ban Non Thaworn village, Khorat Plateau, NE Thailand: Isanosaurus attavipachi gen. et sp. nov.)

Buffetaut, E.H., V. Suteethorn & S. Khansubha (2007)- The ceratopsian dinosaur *Psittacosaurus* in the Early Cretaceous of Southeast Asia: a review of old and recent finds. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIâ07), Bangkok, Dept. Mineral Resources, p. 338-343.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2007/12744.pdf)
(Ceratopsian dinosaur Psittacosaurus first found in SE Asia in Aptian Khok Kruat Fm of NE Thailand. Subsequently, psittacosaurids also reported from S Laos)

Buffetaut, E.H., V. Suteethorn, J. Le Loeuff, G. Cuny, H. Tong & S. Khansubha (2002)- A review of the sauropod dinosaurs of Thailand. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 95-101.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6379.pdf)
(Record of sauropod dinosaurs from NE Thailand starts in Late Triassic (Isanosaurus attavipachi, Nam Phong Fm) and ends in M Cretaceous)

Buffetaut, E.H., V. Suteethorn, J. Le Loeuff, S. Khansubha, H. Tong & K. Wongko (2005)- The dinosaur fauna from the Khok Kruat Formation (Early Cretaceous) of Thailand. In: L. Wannakao (ed.) Proc.Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (GEOINDO 2005), Khon Kaen, p. 575-581.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2005/9379.pdf)
(Aptian Khok Kruat Fm of non-marine Mesozoic Khorat Gp of NE Thailand with abundant, diverse dinosaurs, including saurischians (theropods and sauropods) and ornithischians (ceratopsians and ornithopods) (teeth, partial skeletons, footprints). Dinosaur assemblage from Khok Kruat Fm different from slightly older Sao Khua Fm, which is dominated by sauropods without ornithischians)

Buffetaut, E.H., V. Suteethorn, V. Martin, T. Chaimanee & H. Tong-Buffetaut (1993)- Biostratigraphy of the Mesozoic Khorat Group of northeastern Thailand: the contribution of vertebrate palaeontology. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, p. 51-62.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/6792.pdf)
(Fossil vertebrates from non-marine Khorat Gp of NE Thailand with Late Triassic (Norian) fish, amphibians, reptiles, M Jurassic crocodilian Sunosuchus, Late Jurassic crocodilians and sauropod dinosaurs and Aptian-Albian shark Thaiodus and dinosaur Psittacosaurus)

Buffetaut, E.H., V. Suteethorn, V. Martin, H. Tong ,T. Chaimanee & S. Triamwichanon (1995)- New dinosaur dicoveries in Thailand. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (Geo-Indo '95), Khon Kaen, p. 157-161.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1995/7426.pdf)

Buffetaut, E., V. Suteethorn & H. Tong (1996)- The earliest known tyrannosaur from the Lower Cretaceous of Thailand. Nature 381, 6584, p. 689-691.
(New incomplete skeleton of large theropod from E Cretaceous (Berriasian- Barremian) Sao Khua Fm of NE Thailand described as Siamotyrannus isanensis. May be early representative of Tyrannosauridae (20 My older than earliest known tyrannosaurids))

Buffetaut, E.H., V. Suteethorn & H. Tong (2006)-Dinosaur assemblages from Thailand: a comparison with Chinese faunas. In: J.C. Lu et al. (eds.) Papers Heyuan Int. Dinosaur Symposium, Beijing 2005, Geological Publishing House, p. 19-37.

Buffetaut, E., V. Suteethorn & H. Tong (2009)- An early ‘ostrich dinosaur’ (Theropoda: Ornithomimosauria) from the Early Cretaceous Sao Khua Formation of NE Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Spec. Publ. 315, p. 229-243.
(Remnants of new taxon of ornithomimosaur, Kinnareemimus khonkaenensis n. gen., n.sp.)

Buffetaut, E.H., V. Suteethorn, H. Tong, Y. Chaimanee & S. Khansubha (1997)- New dinosaur discoveries in the Jurassic and Cretaceous of northeastern Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 177-187.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(New dinosaur finds in Late Jurassic- M Cretaceous of NE Thailand)

Buffetaut, E.H., V. Suteethorn, H. Tong, G. Cuny & L. Cavin (2003)- A pterodactyloid tooth from the Sao Khua Formation (Early Cretaceous) of Thailand. Mahasarakham University J. 22, Special Issue, p. 92-98.

Buffetaut, E.H., V. Suteethorn, H. Tong & A. Kosir (2005)- First dinosaur from the Shan-Thai block of SE Asia: a Jurassic sauropod from the southern peninsula of Thailand. J. Geol. Soc., London, 162, 3, p. 481-484.
(Vertebra collected from Jurassic non-marine Khlong Min Fm of S Thailand referred to sauropod dinosaur family Euhelopodidae, apparently endemic to E Asia in Jurassic- E Cretaceous. Occurrence in Shan-Thai Block supports idea of a collision of the Shan-Thai Block with Indochina Block before Jurassic)

Buffetaut, E.H., H. Tong & V. Suteethorn (1994)- First post-Triassic labyrinthodont amphibian in Southeast Asia: a temnospondyl intercentrum from Jurassic of Thailand. Neues Jahrbuch Geol. Palaont., Monatshefte 7, p. 385-390.

Bunjitradulya, S. (1978)- A review of the Lower Paleozoic rocks of Thailand. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, Asian Inst. Techn., p. 721-730.
(Many metamorphic rocks of Thailand assumed to be of E Paleozoic age, but may be incorrect. Lower Paleozoic sediments mainly along W side of Thailand (= Sibumasu Block). Incl. Late Cambrian sandstones, Ordovician limestones, Silurian graptolite shale, Devonian limestone, etc.)

Bunopas, S. (1976)- On the stratigraphic successions in Thailand- a preliminary summary. J. Geol. Soc. Thailand 2, 1, p. 31-58.
(online at: http://library.dmr.go.th/Document/J-Index/1976/38.pdf)
(Review of Precambrian- Cenozoic successions and fossil content in Thailand)

Bunopas, S. (1981)- Paleogeographic history of western Thailand and adjacent parts of South-East Asia- a plate tectonics interpretation. Ph.D. Thesis Victoria University of Wellington, New Zealand, p. 1-810.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1981/29786_1.pdf and
http://library.dmr.go.th/Document/DMR_Technical_Reports/1981/29786_2.pdf)

Bunopas, S. (1982)- Palaeogeographic history of Western Thailand and adjacent parts of Southeast Asia- a plate tectonics interpretation. Geol. Survey Paper No. 5. Dept. Mineral Resources, Bangkok, p. 1-810.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1982/4573.pdf
(Reprint of Bunopas (1982) thesis. Milestone study of W Thailand paleogeography and tectonics)

Bunopas, S. (1983)- Paleozoic succession in Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 39-76.
(online at: www.gsm.org.my/file/SCTM_03.pdf)

(Rel. complete sequence of Paleozoic rocks, mainly of marine origin, outcrops outside Khorat Plateau, both in Shan- Thai and Indochina microcontinents)

Bunopas, S. (1990)- Tektites- their origin and the continental catastrophic destruction in NE Thailand and Indochina. Proc. 16th Conf. Sciences and Technology of Thailand, Bangkok, p. 512-513.
(see also Bunopas, Wasson et al. 1999a,b)

Bunopas, S. (1992)- Regional stratigraphic correlation in Thailand. In: Nat. Conf. Geologic resources of Thailand potential for future development, DMR, Bangkok, p. 189-208.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1992/6197.pdf)
(Review of new Paleozoic- Cenozoic stratigraphic nomenclature in 7 stratigraphic belts of Thailand: (1) Archeotectonics- Precambrian- Lower Paleozoic Shan-Thai and Indochina part of Australian Gondwana; (2) Paleotectonics; Shan Thai and possibly Indochina rifting in Paleozoic, >180° CW rotation as it moved from S to N Hemisphere and collided with. each other near end-Triassic; (3) Mesotectonics; latest Triassic- Jurassic post-orogenic stage, with early M Cretaceous CW rotation, causing folding along W mountains and downwarping of Khorat Plateau with evaporite deposition; (4) Neotectonics; Cenozoic extension))

Bunopas, S. (1994)- Regional stratigraphy, paleogeographic and tectonic events of Thailand and continental Southeast Asia. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources, p. 2-24.
(online at: http://library.dmr.go.th/library/6936.pdf)
(Four major tectonic events in geologic evolution of Thailand and parts of SE Asia)

Bunopas, S., H. Fontaine, S. Salyapongse & D. Vachard (1983)- Permian paleogeography in Southeast Thailand evidenced by new discoveries. J. Geol. Soc. Thailand 6, p. 17-21.
(online at: http://library.dmr.go.th/library/J-Index/1983/85.pdf)
(Complete sequence of Permian fossils now known from Thailand. New Permian limestone localities described from E Thailand near Cambodia border (incl. M Permian Ipciphyllum timoricum). In E Thailand limestones dominant, in W dominantly shale with rare limestones)

Bunopas, S., S. Khositanont & J.T. Wasson (1997)- Evidences of the Early Quaternary global disaster and destruction from extraterrestrial impacts of comet in NE Thailand and South Indochina within the Australasian tektites field: the last mass extinction. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 434-435. *(Extended Abstract)*
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_3/2540_1/8440.pdf)
(Extinction of many mammals and marsupials and formerly widespread Dipterocaryoxylon plant in S and E Asia, up to 10m thick structureless atmospheric sand and loess across Khorat Plateau, etc. all related to ~700,000 yr Pleistocene Australasian tektite field/ asteroid impact))

Bunopas, S. & P. Vella (1978)- Late Palaeozoic and Mesozoic structural evolution of northern Thailand, a plate tectonics model. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 133-140.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1978/7404.pdf)
(Probably first plate tectonic reconstruction of Thailand. Four N-S trending tectonic belts)

Bunopas, S. & P. Vella (1983)- Tectonic and geologic evolution of Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 307-322.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_18.pdf)
(Thailand consists of two microcontinents: Shan-Tai (=Sibumasu) and Sukhothai foldbelt in W and Indochina and eastern foldbelt in E. Both cratonic fragments derived from Australian Gondwana in Paleozoic, and sutured in M-L Triassic. Gulf of Thailand formed by Late Cretaceous- E Tertiary rifting- spreading)

Bunopas, S. & P. Vella (1983)- Opening of the Gulf of Thailand, rifting of continental Southeast Asia, and Late Cenozoic tectonics. J. Geol. Soc. Thailand 6, 1, p. 1-12.
(online at: http://library.dmr.go.th/Document/J-Index/1983/83.pdf0
(Gulf of Thailand floored by up to 7km of mainly fresh-water sediments, including beds of Oligocene age or older, with marine deposition from Pliocene onward. Extension E-W, at right angles to normal faults.)

Bunopas, S. & P. Vella (1992)-Geotectonics and geologic evolution of Thailand. In: Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, p. 209-228.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1992/6198.pdf)
(Review of Thailand tectonic history. Seven major stratigraphic belts in Thailand (5 on Shan Thai, 2 on Indochina Block. Paleomagnetic data suggest >180° CW rotation of Shan-Thai (= Sibumasu) between Carboniferous and Triassic, after rifting from Gondwana)

Bunopas, S., P. Vella, C. Burrett, H. Fontaine, S. Hada, P. Haines, S. Khositanont, P. Chintasakul, P. Chaodamrong, P. Charusiri & K.T. Howard (2007)- Australasian cometary impact, 0.8 Ma catastroloess buried alive Miocene, Pliocene faunas in Thailand and Central Australia, and tektite-bearing flood deposits in NE Thailand. New world's discovery extinction age in Thailand (Indochina) and Australia impact fields. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: towards sustainable development and sufficiency economy (GEOTHAIô07), Bangkok, Dept. Mineral Resources, p. 30-43.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2007/12701.pdf)
(Review of Australasia Comet Impact event at ~0.8 Ma, which caused mass extinction, forest fires, floods, >12m thick 'catastroloess', etc., from SE Asia to Australia. Named 'Buntharik Event')

Bunopas, S., J.T. Wasson, P. Vella, H. Fontaine, S. Hada, C. Burrett, T. Suphajanya & S. Khositanont (1999)- Catastrophic loess, mass mortality and forest fires suggest that a Pleistocene cometary impact in Thailand caused the Australasian tektite field. J. Geol. Soc. Thailand, 1999, 1, p. 1-17.
(online at: http://library.dmr.go.th/Document/J-Index/1999/138.pdf)
(Common fires, local extinction of trees and mammals and presence of thick catastrophic loess all tied to Australasian tektite impact event at ~0.77 Ma. Sandpits at Udon in NE Thailand, possibly 300-500km from possible impact site, with piles of burnt and petrified logs and trees pushed down abruptly. Associated with mammal fossils and buildup of >12m thick 'catastroloess' (airfall sands/ debris))

Bunopas, S., J.T. Wasson, P. Vella, H. Fontaine, S. Hada, C. Burrett, T. Suphajanya & S. Khositanont (1999)- Early Quaternary global terrestrial impact of a whole comet in the Australasian tektite field, newest apparent evidences discovery from Thailand and East Asia. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral Energy Resources SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 533-575.
(online at: www.gsm.org.my/products/702001-100784-PDF.pdf)
(Additional evidence of ~0.77 Ma catastrophic comet impact event in Thailand and E Asia, linked to Pleistoceen Australasian tektite field, and here named Buntharik Event. Multiple impact craters in 800 x 1140 km wide impact center from Hainan, Vietnam, NE Thailand to Cambodia)

Bunopas, S., J.T. Wasson, P. Vella, H. Fontaine, S. Hada, C. Burrett, T. Suphajanya & S. Khositanont (1999)- Ancient analogs of burial alive extinction of the mastodons in catastroloess in Thailand, and of the last dinosaurs (in eggs) in Gobi desert: further on tektites. In: Symposium Mineral, energy and water resources of Thailand: towards the year 2000, Bangkok, p. 168-177.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1999/6614.pdf)
(Quaternary sudden mass extinction of mastodons, stegodons and other mammals and reptiles, buried alive under catastroloess in sandpits of Khorat, NE Thailand. Associated with common burnt and abruptly felled trees and tied to Buntharik Impact Event, which generated widespread tektites. Caused E Quaternary extinction across >1/4 of globe. Probably multiple impact craters in NE Thailand- E Cambodia-SE Laos- Hainan)

Bunopas, S., N. Yaemniyoun & S. Khositanont (1999)- Catastroloess and its derivatives, the life time sustainable contruction was originally high atmospheric settling in the Quaternary cometary impact in Thailand

and Asia. In: Proc. Symposium Mineral, energy and water resources of Thailand: towards the year 2000, Bangkok 1999, p. 142-151.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1999/6611.pdf)
(Widespread yellow fine construction sands across NE Thailand are derivatives of Pleistocene catastrophic loess that originally formed 10-50m thick blanket across Thailand (not windblown sands). With microtektites, formed at ~0.770 Ma, and tied to comet impact. Covers tektite horizons, burnt petrified trees, burnt trees, ancient elephants, etc., and also E Quaternary tin placers)

Bunpitaksakul, T., K. Jankae & S.Pisutha-Arnond (2009)- Geological study of oil sand from Lower Mae Sot Formation, Fang Basin, Changwat Chiang Mai. Bull. Earth Sci. Thailand (BEST), 2, p. 90-92.
(Brief paper on geochemical and petrological characteristics of oil sand in (Miocene?) Mae Sot Fm in Fang Song intermontane basin, N Chiang Mai province. Oils sourced from lacustrine and floodplain environments)

Buravas, S.C. (1952)- Preliminary notes on the geology of Thailand. Thai Science Bull. 7, p. 7-43

Buravas, S.C. (1957)- Age of the Mae Soon Oil Field of Fang Basin, Chiang Mai Province. In: Proc. Conference on the Geology of Thailand, 2, p. 61-65.
(Tertiary oil-bearing deposits of Fang Basin with freshwater molluscs Viviparus and Unio, and plant remains. Preliminary spores-pollen identifications suggest Oligocene age

Burrett, C.F., S.P. Carey & T. Wongwanich (1986)- A Siluro-Devonian carbonate sequence in northern Thailand. J. Southeast Asian Earth Sci. 1, 4, p. 215-220.
(220m thick Silurian-M Devonian calcarenites-calcisiltites at Mae Ping, S of Chiang Mai, NW Thailand. Overlie tentaculitid shale. Most common and abundant fossils orthoconic nautiloids similar to Parakionoceras, also known from S Europe and Australia. Conodont fauna near base with Ozarkodina excavata, indicating Lower Silurian-M Devonian age)

Burrett, C., H. Thassanapak & M. Udchachon (2015)- Upper Devonian (Famennian) conodonts from radiolarian cherts, Loei Terrane, Loei Province, Northeast Thailand. Research and Knowledge 1, 2, p. 26-32.
(online at: https://rk.msu.ac.th/wp-content/uploads/2016/02/rkv2-03-indd-5.compressed.pdf)
(Conodonts from radiolarian cherts in Loei Terrane, NE Thailand (W margin Indochina block), include Palmatolepis triangularis, P. minuta ssp and polygnathids, indicating Famennian crepida Zone age. Cherts ~20 My younger than Givetian reef limestones and unlikely deposited in major ocean, but rather in deep marine basin close to volcanic arc)

Burrett, C.; M. Udchachon, H. Thassanapak & A. Chitnarin (2015)- Conodonts, radiolarians and ostracodes in the Permian E-Lert Formation, Loei Fold Belt, Indochina Terrane, Thailand. Geol. Magazine 152, 1, p. 106-142.
(Conodonts rare in Permian carbonates of Indochina block, but abundant conodonts and ostracodes in carbonate turbidites of E-M Permian E-Lert Fm, deposited on margins of interplatform Nam Duk Basin, W side of Khorat Plateau. Conodonts typically Tethyan, incl. Hindeodus, Mesogondolella, Sweetognathus, etc., and indicating late Kungurian-Roadian age. Overlying siliceous shales and chert with radiolaria of latest Kungurian- earliest Roadian age. Ostracodes 23 species)

Burri, P. (1989)- Hydrocarbon potential of Tertiary intermontane basins of Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Int. Symposium on Intermontane basins: geology and resources, Chiang Mai, p. 3-12.

Burton, C.K. (1974)- Peninsular Thailand. In: A.M. Spencer (ed.) Mesozoic-Cenozoic orogenic belts, Geol. Soc., London, Spec. Publ. 4, p. 301-315.
(Older overview of Triassic-Jurassic Yunnan-Malayan orogeny of W Thailand in terms of geosynclinal theory)

Burton, C.K. (1974)- The Satun Group (Nai Tak Formation and Thong Song Limestone) of Peninsular Thailand. Sains Malaysiana 3, p. 15-34.

Burton, C.K. (1986)- The Kanchanaburi supergroup of Peninsular and Western Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 311-361.
(online at: www.gsm.org.my/products/702001-101421-PDF.pdf)
(Extensive review of Paleozoic stratigraphy of W and Peninsular Thailand (= Sibumasu Terrane). Carboniferous- Lower Permian Phuket Group deposited as turbiditic series in opening graben, etc.)

Burton, C.K. & J.D. Bignell (1969)- Cretaceous-Tertiary events in Southeast Asia. Geol. Soc. America (GSA) Bull. 80, p. 681-688.
(Granites NE of Gulf of Thailand mainly Triassic or older age. Granites from Malay-Thai Peninsula reveal widespread Cretaceous-Tertiary activity)

Busse, A.G., B. Orberger, S. Pitragool, L. Zenker & G. Friedrich (1990)- Preliminary petrographic and geochemical investigations on mafics and ultramafics from the Phrae Nan chromite mining district in comparison to the Ban Pak Nai area: The Nan river suture zone, northern Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Proc. Int. Symp. Intermontane basins: geology and resources, Chiang Mai, p. 493-501.

C&C Reservoirs (2009)- Sirikit Field, Phitsanulok Basin, Thailand. 48p.
(online at: http://ccop.asia/uc/data/43/docs/Sirikit%20field_c&c%20reservoir.pdf)
(Sirikit Field in Phitsanulok Basin, ~400 km N of Bangkok. Discovered in 1981, onstream in 1982. Largest onshore oil field in Thailand, with EUR 148 MMBO. Sweet light waxy oil (~39°API) in faulted N-S-trending anticline. Reservoirs mainly lacustrine-delta sandstones of Miocene Lan Krabu Fm)

Canham, A.C., M.A. Love, A. Racey & S. Polachan (1996)- Stratigraphy and reservoir potential of the Mesozoic Khorat Group, NE Thailand: Part 2: Diagenesis and reservoir quality. J. Petroleum Geol. 19, 3, p. 321-338.
(Khorat Gp Cretaceous continental redbeds, unconformably over lithologically similar U Triassic Nam Phong Fm. Reservoir quality decreases with increasing age due to burial compaction and diagenesis. Maximum burial depth >7 km. Porosities from 11% (U Khorat Gp)- 4.9% (Nam Phong Fm). Ratio of secondary grain-dissolution porosity to primary porosity increases with age. Part 1 see Racey et al., 1996)

Cappetta, H., E. Buffetaut & V. Suteethorn (1990)- A new hybodont shark from the Lower Cretaceous of Thailand. Neues Jahrbuch Geol. Palaont., Monatshefte 11, p. 659-666.
(Lower Cretaceous freshwater shark fossils from Khorat Gp of Thailand, incl. Thaiodus ruchae n.sp.. Thaiodus also known from Lhasa Block (Tibet) (see also Cuny et al. 2003, 2004, 2006))

Cappetta, H., E. Buffetaut, G. Cuny & V.Suteethorn (2006)- A new elasmobranch assemblage from the Lower Cretaceous of Thailand. Palaeontology 49, 3, p. 547-555.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1475-4983.2006.00555.x/pdf)
(New elasmobranch shark teeth from diverse freshwater fauna from fluvial Khok Kruat Fm in Khok Pha Suam, SE part of Khorat Plateau, NE Thailand. Incl. Thaiodus ruchae, Acrorhizodus khoratensis, Hybodus, etc.)

Carey, S.P., C.F. Burrett, P. Chaodumrong, T. Wongwanich & C. Chonglakmani (1995)- Triassic and Permian conodonts from the Lampang and Ngao Groups, northern Thailand. Courier Forschungsinstitut Senckenberg 182, p. 497-513.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1995/4991.pdf)
(Limestones of Triassic Lampang Gp and Permian-Triassic Ngao group (in NE margin of Shan-Tai terrane or Sukhothai terrane) with 3 conodont assemblages: (1)U Permian Neogondella bitteri, (2) Lower Triassic Neospathodus pakistanensis and (3) U Triassic (Norian) Epigondella triangularis))

Caridroit, M. (1993)- Permian radiolaria from NW Thailand. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, Chiang Mai University, p. 83-96.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7485.pdf)

(Permian and Triassic radiolaria from Chiang Dao region, NW Thailand, an area SW of Nan from which U Silurian- Triassic deep water radiolarian-bearing rocks are known, and where nappe sheets are indicated. With descriptions of Permian radiolaria (Folliculus, Albailella, etc.))

Caridroit, M., D. Bohlke, A. Lamchuan, D. Helmcke & P. de Wever (1993)- A mixed radiolarian fauna (Permian/Triassic) from clastics of the Mae Sariang area, northwestern Thailand. In T. Thanasuthipitak (ed.) Proc. Int. Symposium on Biostratigraphy of Mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai, 2, p. 401-413.
(online at: www.mnhn.fr/mnhn/geo/PDW/Caridroit%20et%20al%201993.pdf)
(Sequence of red conglomerates/ sandstones/shales unconformably over highly deformed U Paleozoic beds W of Amphoe Mae Sariang not of M Triassic age but latest Triassic or younger. Pebbles include metamorphic quartz and reworked chert clasts with M-L Permian and M Triassic radiolarian assemblages)

Caridroit, M., H. Fontaine, V. Suteethorn & D. Vachard (1990)- New paleontological data on the Carboniferous and Permian of NW Thailand. In: Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP, Spec. Vol., p. 337-351.
(Microfaunas from 40 new localities of Visean- Late Permian limestones in NW Thailand)

Caridroit, M., D. Vachard & H. Fontaine (1992)- Datations par radiolaires (Carbonifere, Permien et Trias) en Thailande nord-occidentale. Mise en evidence de nappes de charriage et d'olistostromes. Comptes Rendus Academie Sciences, Paris, ser. II, 315, 4, p. 515-520.
('Radiolarian age datings (Carboniferous, Permian and, Triassic) in NW Thailand; evidence of nappes and olisthostromes'. Paleozoic stratigraphy in NW Thailand described as single Ordovician- Permian marine succession, tectonized in Triassic time, but ages from radiolarite dating (Carboniferous- Triassic) demonstrate existence of separate sedimentary basin far from detrital sources and of Carboniferous- Triassic limestones. Present structural imbrication of radiolarites with limestones and detritic series interpreted in terms of tectonic nappes with considerable shortening, and olistostrome deposits)

Carter, A. & C.S. Bristow (2003)- Linking hinterland evolution and continental basin sedimentation by using detrital zircon thermochronology: a study of the Khorat Plateau Basin, eastern Thailand. Basin Research 15, p. 271-285.
(Khorat Plateau Basin, E Thailand, U-Pb and fission-track (FT) zircon data from Phu Kradung Fm age peaks at 141 ± 17 and 210 ±24 Ma (FT) and 2456, 2001, 251 and 168 Ma (U-Pb). FT data record post-metamorphic cooling, U-Pb data record zircon growth events. U-Pb zircon ages consistent with Qinling Orogenic Belt as source for Khorat Basin sediments. Zircon FT cooling peaks between 114 ±6 (Phra Wihan Fm) and 141 ±17 Ma (Phu Kradung Fm), corresponding to Late Jurassic-E Cretaceous reactivation event, which affected Qinling Belt. Early Cretaceous erosion from collision between Lhasa Block and Eurasia)

Carter, A., C.S. Bristow & A. Hurford (1995)- Constraints on the thermal history and provenance of the Khorat Group in Thailand using Fission Track Analysis. In: Proc. IGCP Symposium on Geology of SE Asia, Hanoi 1995, J. Geology B, 1995, 5/6, p. 342-353.
(Khorat Gp on Khorat Plateau up to 4000m thick redbed sequence of Cretaceous age. Zircon fission track data show two age peaks: major Late Triassic (~195 Ma), lesser ~109, 135, 158 Ma age peaks. Increase in zircon ages through Khorat Gp suggests progressive unroofing in foreland basin)

Cavin, L., E. Buffetaut, K. Lauprasert, J. Le Loeuff, P. Lutat, M. Philippe, U. Richter & H. Tong (2004)- A new fish locality from the continental Late Jurassic- Early Cretaceous of north-eastern Thailand. Revue Paleobiologie, Spec. Vol. 9, p. 161-167.
(Phu Nam Jun in Khorat Plateau of NE Thailand with 124 specimens of fish, all but two Lepidotes buddhabutrensis)

Cavin, L., U. Deesri & V. Suteethorn (2008)- The Jurassic and Cretaceous bony fish record (Actinopterygii, Dipnoi) from Thailand. In: L. Cavin et al. (eds.) Fishes and the break-up of Pangaea, Geol. Soc., London, Spec. Publ. 295, p. 125-139.

(16 species of bony fish in Jurassic and Cretaceous continental deposits of Thailand. e assemblages provide few paleogeographical indications at present, except for evidence of relationships with China and C Asia)*

Cavin, L., U. Deesri & V. Suteethorn (2013)- Osteology and relationships of *Thaiichthys* nov. gen.: A Ginglymodi from the Late Jurassic - Early Cretaceous of Thailand. Palaeontology 56, 1, p. 183-208
(Well-preserved freshwater fish Thaiichthys buddhabutrensis, n. gen., from Late Jurassic- E Cretaceous of Thailand)

Cavin, L., U. Deesri & V. Suteethorn (2014)- Ginglymodian fishes (Actinopterygii, Holostei) from Thailand: an overview. J. Science Technol. Mahasarakham University (MSU) 33, 4, p. 349-356.
(online at: http://research.msu.ac.th/msu_journal/upload/journal_file/jfile_no34_44342.pdf)
(Ginglymodian fishes are relatively common in Mesozoic of Thailand. Two genera and three species identified so far (Thaiichthys buddhabutrensis, Isanichthys palustris), but many more taxa present. Known Isanichthys species restricted to N margin of Tethys in M Jurassic- basal Cretaceous time)

Cavin, L. & V. Suteethorn (2006)- A new semionotiform (Actinopterygii, Neopterygii) from Upper Jurassic-Lower Cretaceous deposits of north-east Thailand with comments on the relationships of semionotiforms. Palaeontology 49, 2, p. 339-353.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1475-4983.2006.00539.x/epdf)
(New semionotiform freshwater fish, Isanichthys palustris, from Late Jurassic- E Cretaceous Phu Kradung Fm, NE Thailand)

Cavin, L., V. Suteethorn, E. Buffetaut, S. Chitsin, K. Lauprasert, J. Le Loeuff, P. Lutat, M. Philippe, U. Richter & H. Tong (2004)- A new fish locality from the continental Late Jurassicï Early Cretaceous of northeastern Thailand. Revue Paleobiologie 9, p. 160-167.

Cavin, L., V. Suteethorn, E. Buffetaut & H. Tong (2007)- A new Thai Mesozoic lungfish (Sarcopterygii, Dipnoi) with an insight into post-Palaeozoic dipnoan evolution. Zool. J. Linnean Society 149, 2, p. 141-177.
(online at: https://watermark.silverchair.com/j.1096-3....)
(New species of freshwater dipnoi/ lungfish (Ferganoceratodus martini) from Late Jurassic or basal Cretaceous upper Phu Kradung Fm of Phu Nam Jun, Kalasin Province, NE Thailand (Khorat Gp). Comprises almost complete skull roof, jaws and some postcranial remains)

Cavin, L., V. Suteethorn, S. Khansubha, E. Buffetaut & H. Tong (2003)- A new Semionotid (Actinopterygii, Neopterygii) from the Late Jurassic- Early Cretaceous of Thailand. Comptes Rendus Palevol, p. 291-297.
(New semionotid fish, Lepidotes buddhabutrensis n. sp., from continental Late Jurassic- E Cretaceous Phu Kradung Formation, Phu Nam Jun, Khorat Plateau, NE Thailand)

Cavosie, A.J., N.E. Timms, T.M. Erickson & C. Koeberl (2018)- New clues from Earth's most elusive impact crater: evidence of reidite in Australasian tektites from Thailand. Geology 46, 3, p. 203-206.
(Former presence of reidite (high-P polymorph of zircon) detected in zircon grains in Muong Nong-type tektites from Thailand. Preserved microstructures and dissociation of zircon to ZrO2 and SiO2 require pressure of >30 GPa and T >1673°C, the most extreme conditions reported for Australasian tektites so far)

Chakrabarti A.K. (1976)- The oil shale deposits of Thailand. Economic Geology 71, 4, p. 812-813.
(Brief discussion of Late Tertiary oil-shale deposits in several areas of Thailand. Most important deposit at Mae Sod in NW Thailand (20-25% oil by weight); others are Li (Lamphum Province), Ko Kha District (Lampang) and Krabi (S Peninsular region). Thickness up to 20'. With fish fossils of family Cyprinidae)

Chantong, W. & J. Booth (2007)- Is the Kuchinarai Group of the Khorat Plateau a good source of hydrocarbons? In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIõ07), Bangkok, Dept. Mineral Resources, p. 132 *(Abstract only)*
(Late Triassic Kuchinarai Gp synrift clastics and volcanoclastics in half-grabens/ grabens that formed after Indosinian Orogeny I (age based on palynology from exploration wells). Most rift basins bounded by NW-SE

and W-E faults to S. Graben fill three main sequences: (1) upper claystone- shale, (2) middle dark lacustrine shale with minor siltstone- sandstone, (3) lower basal conglomerates and volcanoclastics. Petroleum wells shows shales ofM Kuchinarai Gp have 1.0-3.7% TOC and are potentially good oil-gas source)

Chantong, W., P. Srisuwon, C. Kaewkor, C. Praipipan & S. Ponsri (2013)- Distributions of the Permo-Carboniferous rocks in the Khorat Plateau Basin. In: Proc. 2nd Lao-Thai Technical Conference on geology and mineral resources, Vientiane, p. 73-80.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2013/36770.pdf)
(Permian carbonate major petroleum reservoir in Khorat Plateau. 47 wells drilled, two producing gas fields (Nam Phong and Sin Phu Horm) from reservoirs in Permo-Carboniferous carbonate platform, with thrust fault resulting in fracture development. Dong Mun Gas field in development, in carbonate reef with karst topography. 18 separate isolated carbonate platforms identified from seismic)

Chaodumrong, P. (1992)- Stratigraphy, sedimentology and tectonic implications of the Lampang Group, central North Thailand. Ph.D. Thesis, University of Tasmania, p. 1-230.
(online at: http://eprints.utas.edu.au/18810/1/whole_ChaodumrongPol1992_thesis.pdf)
(Triassic Lampang Gp in Sukhothai foldbelt deposited on E side of Shan Thai terrane (= Sibumasu) in Lampang and Phrae forearc basins, above W-ward subduction of Indochina under Shan-Thai terrane. Collision in Late Triassic. Both sub-basins with similar deepening-upward megasequence, starting with fan-delta red beds, grading upward to ramp carbonates (with common oolites and oncolites) and submarine fan sediments with Halobia, etc.. Volcaniclastics dominate most Lampang sandstones. Source areas changed from active magmatic arc in Hong Hoi and Pha Daeng Fms to combination magmatic arc and recycled orogen in Wang Chin Fm as result of interaction between ShanThai and W-ward subducting Indochina terrane)

Chaodumrong, P. (1994)- Sedimentology and tectonic implication of Triassic submarine fans, Lampang group, central north Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok, 1994, Dept Mineral Resources and IGCP 306, p. 208-225.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1994/6948.pdf)
(Triassic Lampang Gp in central N Thailand deposited in two adjacent subbasins in fore-arc basin of Shan-Thai (= Sibumasu) terrane). Mainly mud-rich submarine fans, with Daonella, Halobia, etc. Provenance change from active magmatic arc in Hong Hoi Fm to combined active arc- recycled orogen during Wang Chin Fm, probably due to interaction of Shan-Thai Plate and W-ward subducting Indochina terranes, with collision ending in Late Triassic)

Chaodumrong, P. (2007)- Stratigraphy and tectonic evolution of Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIö07), Bangkok, Dept. Mineral Resources, p. 319-321. *(Extended Abstract*
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2007/12740.pdf)
(Thailand consists of two major Gondwana derived, Shan-Thai to W and Indochina to E, amalgamated along Nan-Uttaradit suture in Late Triassic. Indochina terrane drifted away from Gondwana in Late Devonian, as suggested by radiolarian assemblages from chert in suture zone. Shan-Thai terrane was adjacent to NW Australian part of Gondwana until E Permian, based on stratigraphic and faunal affinities from Cambrian- E Permian. Discovery of Devonian- M Triassic deep sea thin-bedded chert and Cathaysian fauna in Carboniferous-Permian limestones in N Thailand, formerly mapped as part of Shan-Thai terrane)

Chaodumrong, P. (2012)- Stratigraphy and tectonic subdivisions of Thailand. Proc. 12th Regional Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA 2012), Bangkok, p. 111-114. *(Extended Abstract)*
(Three tectonostratigraphic Gondwana-derived terranes in Thailand, from E to W: (1) Indochina (with Loei-Phetchabun fold belt on W margin), (2) North Thailand (Sukhothai fold belt + Inthanon zone; with Cathaysian Late Carboniferous- Permian seamount limestones)) and (3) Shan-Thai (=Sibumasu))

Chaodumrong, P. (2013)- Lexicon of stratigraphic names of Thailand. Dept. Mineral Resources, Bangkok, p. 1-265.

(Listing of formal and informal stratigraphic names in Thailand from Precambrian-Cenozoic)

Chaodumrong, P. & C.F. Burrett (1992)- Revised stratigraphy of the Lampang Group and provenance of volcanoclastic sandstones. In: Technical Ann. Mtg. Volcanic and volcanoclastic rocks of Thailand, Chiang Mai University, 28p.
(see also Chaodumrong & Burrett (1997))

Chaodumrong, P. & C.F. Burrett (1997)- Early Late Triassic continental colliding between Shan- Thai and Indochina terranes as indicated by occurrence of fan delta red beds of Pha Daeng Formation Central North Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 143-157.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7632.pdf)
(In Lampang basin of C N Thailand 200-700m thick early Late Triassic shallow marine 'red bed' fan delta deposits, sourced from active magmatic arc in extensional forearc basin on Shan-Thai (Sibumasu) terrane during collision with W-dipping Indochina terrane. With marine mudstone with M Carnian ingularis fauna. Paleocurrents mainly from W and S)

Chaodumrong, P. & C.F. Burrett (1997)- Stratigraphy of the Lampang Group in central north Thailand: new version. CCOP Techn. Bull. 26, p. 65-80.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1997/4982.pdf)
(Triassic Lampang Gp in central N Thailand formed in two sub-basins, Lampang in W and Phrae in E. Lampang sub-basin formed in Early Triassic to early Late Triassic and contains Daonella, Paratrachyceras, Costatoria and Claraia. Phrae sub-basin formed from in Late Triassic and contains mainly Halobia)

Chaodumrong, P. & Y. Chaimanee (2002)- Tertiary sedimentary basins in Thailand. In: The Symposium on Geology of Thailand, Bangkok, p. 156-169.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6389.pdf)
(At least 70 named Tertiary intermontane and rift basins in Thailand, with many similarities. Tied to N-ward movement of India. Basins in S formed earlier than in N, in W earlier than E. Alluvial facies dominant in lower and upper parts, flluvio-lacustrine and swamp facies common in middle part)

Chaodumrong, P. & P. Rao (1992)- Depositional environments of Triassic carbonates, Lampang group, central north Thailand. In: C. Piencharoen (ed.) Proc. Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, Dept Mineral Resources, p. 355-367.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1992/6235.pdf)
(Carbonate facies of Triassic Lampang Gp. Six carbonate units in mainly siliciclastic sequence. Carbonate ramp model with 14 microfacies types. Shallow ramp/shoal facies with common oncolites and some oolites)

Chaodumrong, P., Y. Ukakimapan, S. Snansieng, S. Janmaha, S. Prадidtan & N. Sae Leow (1983)- A review of the Tertiary sedimentary rocks of Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 159-187.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_09.pdf)
(In Thailand 61 small intermontane and larger basins, with mainly lacustrine and fluvial sediments)

Chaodumrong, P., X. Wang & S. Shen (2007)- Permian lithostratigraphy of the Shan-Tai terrane in Thailand: revision of the Kaeng Krachan and Ratburi Groups. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIõ07), Bangkok, Dept. Mineral Resources, p. 229-236.
(online at: http://library.dmr.go.th/library/Proceedings/M_1/2007/12727.pdf)
(Revision of Permian stratigraphy of clastics-dominated E Permian (Asselian-Kungurian) Kaeng Krachan Gp and overlying M-U Permian carbonates of Roadian-Wuchiapingian Ratburi Gp. Ratburi Gp contains fusulinids Pseudofusilina and Eopolydiexodina sp. and small foram Shanita. Can be traced from Malaysia, through peninsular Thailand, Myanmar, W Yunnan to Lhasa)

Charoentitirat, T. (2002)- Permian fusulinodean biostratigraphy and carbonate development in the Indochina Block of Thailand with their paleogeographic implication. Doct. Thesis, University of Tsukuba, p. . *(Unpublished)*

Charoentitirat, T. (2002)- Late Middle Permian Fusulinoidean zonations from Changwat Sra Kaeo, East Thailand. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 77-81.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2002/6377.pd)
(Common fusulinids in Khao Taa Ngog Fm in Sta Keao area of E Thailand. Two zones, Colania douvillei and Lepidolina multiseptata- M. douvillei zones)

Charoentitirat, T. (2005)- Development of Indochina carbonates during Late Paleozoic time based on fusulinoidean data. In: K. Ueno et al. (eds.) Proc. First Int. Symp. Geological anatomy of East and South Asia, paleogeography and paleoenvironment in Eastern Tethys (IGCP 516), Tsukuba, p. *(Abstract?)*

Charoentitirat, T. & S. Chantraprasert (2012)- Fusulinacean biostratigraphy from limestone blocks within Nan-Uttaradit suture, Thailand. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geologica Sinica 33, Suppl. 1, p. 74 *(Abstract)*
(online at: http://igcp589.cags.ac.cn/pdf/33-Charoentitirat%20Thasinee(news).pdf)
(Nan-Uttaradit Suture former back-arc basin between Sukhothai Zone and Indochina Block. Scattered Permian limestone blocks in intensely folded shales-tuffs in Nan area with Middle and early Late Permian fusulinid fauna (Neoschwagerina, Pseudodoliolina, Colania, Lepidolina, Colaniella). Earlier reports of late Early Permian fusulinids and M Triassic radiolaria show existence of Nan back-arc basin from late E Permian (Artinskian)- M Triassic. Fusulinids similar to Indochina Block)

Charoentitirat, T., K. Lousuwan, P. Ampaiwan, A.T. Nguyen, P.T.L. Phung, S. Thanudamrong, C.K. Morley & J. Warren (2012)- Relationships between fluid chemistry and the creation of fractured carbonate-hosted fields in Thailand (analogs for Phu Horm and Nang Nuan Fields). Proc. 12th Regional Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA 2012), Bangkok, p. 92 *(Abstract only)*
(Permian limestones in Saraburi and Chum Phae areas with isotope trends reflecting regional burial related to Indosinian orogeny and later catagenic fluid migration event, possibly tied to Paleogene transpression. Same catagenic fluids associated with reservoir-creating fracture system in nearby Phu Horm gas field)

Charusiri, P. (1989)- Lithophile metallogenetic epochs of Thailand: a geological and geochronological investigation. Ph.D. Thesis, Queen's University, Kingston, p. 1-809.

Charusiri, P., A.H. Clark, E. Farrar, D. Archibald & B. Charusiri (1993)- Granite belts in Thailand: evidence from the 40Ar/39Ar geochronological and geological syntheses. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 127-136.
(Three granitoid belts of Thailand formed in different geotectonic environments: (1) E Belt formed in M-U Triassic (245-210 Ma; no Permian ages; I-type granitoids formed by subduction under Shan-Thai and Indo-China microcontinents), (2) C Belt in Late Triassic- E Jurassic (220-180 Ma; S-type granitoids result of Shan-Thai/Indo-China microcontinental plate collision), and (3) W Belt in Late Cretaceous- M Tertiary (80-50 Ma; S-type granitoids result of Shan-Thai/ W Burma collision)

Charusiri, P., V. Daorerk & D. Archibald, K. Hisada & T. Ampaiwan (2002)- Geotectonic evolution of Thailand: a new synthesis. J. Geol. Soc. Thailand 1, p. 1-20.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2005/6785.pdf)
(Thailand two major terranes, Shan Tai and Indochina, which amalgamated in Late Triassic. In M Paleozoic two smaller terrnanes between Shan-Tai and Indochina: 'Nakhon Thai' ocean floor to E and 'Lampang- Chiang Rai' volcanic arc to W. Late Triassic- E Jurassic thrusting of Shan-Tai over Lampang-Chiang Rai, E Lampang-Chiang Rai over Nakhon Thai, W Nakhon Thai over W Indochina, etc., followed by Jurassic-Cretaceous

continental sedimentation over Lampang-Chiang Rai, Nakhon Thai and W and SW Indochina. M-L Miocene mantle-derived, gem-bearing basalts, possibly linked to late regional uplift. Etc.)

Charusiri, P., S. Imsamut, Z. Zhuang, T. Ampaiwan & X. Xu (2006)- Paleomagnetism of the earliest Cretaceous to early late Cretaceous sandstones, Khorat Group, Northeast Thailand: implications for tectonic plate movement of the Indochina block. Gondwana Research 9, p. 310-325.
(Paleomagnetic study of samples from earliest Cretaceous to early Late Cretaceous sandstones of Khorat Gp in Indochina block suggest paleolatitude similar to today. Major displacement of Indochina along Red River and associated faults by ~950 km with 16-17° CW rotation relative S China plate in earliest Cretaceous. Indochina plate rotated 20-25° CW since very Late Cretaceous-E Neogene, may be due to India-Asia collision)

Charusiri, P., S. Kosuwan & S. Imsamut (1997)- Tectonic evolution of Thailand: from Bunopas (1981)'s to a new scenario. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 414-420.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7645.pdf)

Charusiri, P., S. Kosuwan, A. Lumjuan & B. Wechbunthung (1999)- Review of active faults and seismicity in Thailand. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 653-665.
(online at: www.gsm.org.my/products/702001-100776-PDF.pdf)
(Thailand rel. low seismicity. Fault activities more or less linked to extrusion tectonics caused by India-Asia collision in mid-Tertiary. Five major fault zones: N, WNW, C Peninsular, S Peninsular, and ENE FZ)

Charusiri, P., W. Lunwongsa & P. Laochu (2003)- Geophysical investigations at Khao Nang Klu lead deposit, Ban Kli Ti, Kanchanaburi, Western Thailand: implications for tectonic structures ore locallization and exploration. Science Asia 29, p. 265-277.
(online at: www.scienceasia.org/2003.29.n3/v29_265_277.pdf)

Charusiri, P., W. Pongsapich, V. Daorerk & B. Charusiri (1992)- Anatomy of Chantaburi granites: geochronology, petrochemistry, tectonics and associated mineralization. In: C. Piencharoen (ed.) Proc. Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, Dept. Min. Resources, p. 383-392.
(online at: www.geo.sc.chula.ac.th/eatgru/Thai/research/pdf/paper/11.pdf)
(Chantaburi granites I-type and intruded in U Paleozoic- Lower Triassic, emplaced at ~195-209 Ma (= ~Triassic-Jurassic boundary), overprinted by Paleogene thermal event. Nearby Early Eocene S-type intrusions)

Charusiri, P., W. Pongsapich & S. Vedchakanchana (1986)- Petrological & geochemical studies of granites of Kathu Plutons of Phuket Island, Southern Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 261-280.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986020.pdf)
(C part of Phuket Island is covered with Cretaceous- Tertiary granitic rocks of Kathu Plutons. Five types of granites. Tin deposits mainly in greisenized mica granites and pegmatites)

Charusiri, P. & S. Pum-Im (2009)- Cenozoic tectonic evolution of major sedimentary basins in Central, Northern, and the Gulf of Thailand. Bull. Earth Sci. Thailand (BEST 2009), 2, 1, p. 40-62.
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper_2/95.pdf)
(In Thailand all major N-S trending Cenozoic basins are pull-apart basins developed during Late Eocene- E Oligocene (55-35 Ma) rifting as result of 'extrusion tectonics' of SE Asian block along major NE-SW trending fault zones. Basins fill started with localized lacustrine and alluvial deposits in Oligocene, followed by fluvial-alluvial deposits in lower unit (<100-2500m thick), transgressive fluvial and marginal marine deposition (<500-1000m thick) in middle, and capped by overall regressive fluvial- alluvial deposits in upper unit)

Charusiri, P., T. Pungrassami & G. Sinclair (2006)- Classification of rare-earth element (REE) deposits in Thailand: a genetic model. J. Geol. Soc. Thailand 1, p. 57-66.
(online at: http://library.dmr.go.th/Document/J-Index/2005-2006/2848.pdf)
(Rare Earth minerals in Thaialnad mainly monazite, and also xenotime and microlite. Primary REE deposits associated with tin granitoids of S-type affinity and mainly in Cretaceous- Tertiary Western Granitoid Belt. Alluvial placersnear weathered granites may yield variable amounts of REE ores, mainly near granitoid terraces of western Gulf of Thailand, possibly also along Andaman Sea)

Charusiri, P., T. Rewbumroong , K. Rittidate & N. Srinak (2014)- Tectonic evolution of Cenozoic basins in Thailand with special emphasis on Mae Moh Basin, northern Thailand. In: Development of the Asian Tethyan Realm, Proc. 3rd Int. Symposium Int. Geosciences Program (IGCP) Project 589, Tehran 2014, p. 68-70. *(Abstract)*
(N-S trending Cenozoic basins of Thailand inferred to have developed in Late Eocene- E Oligocene as result of extrusion tectonics of SE Asian block, along major NE-SW trending fault zones. Most basins regarded as pull-apart basins. Deposition started with localized lacustrine and alluvial deposition in Oligocene, followed by fluvial and marginal marine deposits. Four main tectonic episodes: (1) pull-apart and transtensional rifting (55-30 Ma), marked at end by M Tertiary unconformity; (2) quiescent thermal subsidence event (30-15 Ma) involving widespread transpression and extensive delta progradation; (3) transpression wrenching event (15-7 Ma) due to on-going dextral shear along major NW-trending fault zones, with subsequent basin inversion and folding; end marked by late M Miocene unconformity; (4) post-rifting (7 Ma- Recent))

Charusiri, P., C. Sutthirat, C. Plathong & W. Pongsapich (2004)- Geology and petrochemistry of basaltic Rocks at Khao Kradong, Burirum, NE Thailand: implications for rock wool potentials and tectonic setting. J. Scientific Res. Chulalongkorn University 29, 2, p. 81-103.
(Khao Kradong in Burirum national park in NE Thailand is small basaltic volcanic cone in Cenozoic basaltic terrain of ~30 km2. Age from whole-rock Ar/Ar dating 1 Ma. Rocks transitional from hawaiite to alkali olivine basalt. Part of Cenozoic basalts of continental-rift origin of Laos-Cambodia- Vietnam)

Charusiri, P., C. Sutthirat & V. Daorerk (2009)- Introduction to Rare-Earth metal resources in Thailand. 6th Int. Conf. Materials Engineering for Resources (ICMR) 2009, Akita, Keynote Session, A1-3, p. 73-78.
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper/93.pdf)
(Monazite and xenotime significant rare earth minerals occurring with tin-tungsten deposits in granites and pegmatites and in Quaternary fluvial and beach deposits. Ilmenite- series granites more rare earth minerals than magnetite - series granites. Weathering crust of granites-pegmatites of important economic significance. In S Thailand highest RE metal contents 0.092%. Important secondary provinces in Songkhla and Yala of S Thailand with up to 0.045% monazite and 0.196% xenotime)

Chavasseau, O., Y. Chaimanee, C. Yamee, P. Tian, M. Rugbumrung, B. Marandat & J.J. Jaeger (2009)- New Proboscideans (Mammalia) from the Middle Miocene of Thailand. Zool. J. Linnean Soc. 155, 3, p. 703-721.
(online at: https://academic.oup.com/zoolinnean/article/155/3/703/2627128)
(M Miocene proboscidean fauna of NW Thailand E of Chiang Mai five taxa (4 elephantoids, 1 deinothere), dominated by Stegolophodon and Gomphotherium. Thai proboscidean asssemblage mainly endemic, although Gomphotherium cf. browni denotes faunal affinities with Pakistan)

Chen, Y. & V. Courtillot (1989)- Widespread Cenozoic(?) remagnetisation in Thailand and its implications for the India-Asia collision. Earth Planetary Sci. Letters 93, 1, 113-122.
(Paleomagnetic study of Devonian- Jurassic sites of Khorat plateau and reappraisal of published data from Triassic-Cretaceous show most of Indochina block suffered complete remagnetization after Triassic and possibly after Cretaceous, most likely during India- Eurasia collision. Paleodirections associated with remagnetization consistent with Thailand as part of Eurasia that suffered some 20° of CW rotation)

Cheneval, J., L. Ginsburg & C. Mourer-Chauvire (1984)- Discovery of an avifauna from the Miocene of Northern Thailand. Comptes Rendus Academie Sciences Paris 299, Serie II, 19, p. 1369-1372.

Cheneval, J., L. Ginsburg & C. Mourer-Chauvire & B. Ratanasthien (1991)- The Miocene avifauna of the Li Mae Long locality, Thailand: systematics and paleoecology. J. Southeast Asian Earth Sci. 6, 2, p. 117-126.
(Miocene bird fossils from Li Mae Long includes anhinga, heron, lesser flamingo (Phoeniconaias siamensis n. sp.), etc.. Probably in large swampy depression surrounded by humid forests, under warm climate)

Chenrai, P. (2012)- Paleocurrent analysis of the Sao Khua Formation, Khorat Group, Nong Bua Lamphu region, NE Thailand. Arabian J. Science Engineering 37, 1, p. 115-120.
(Paleocurrent analysis in sandstones of E Cretaceous Sao Khua Fm of Khorat Plateau shows paleocurrent trend of sand channels dominantly NE; probabl yin braided channel environment)

Chinbunchorn, N., S. Pradidtan & N. Sattayarak (1989)- Petroleum potential of Tertiary intermontane basins in Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Int. Symp. Intermontane basins: geology and resources, Chiang Mai, p. 29-42.

Chinoroje, O. (1993)- Petrographic studies of Permian carbonates in Southern Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 161-171.
(Petrography of M-U Permian carbonates from Peninsular Thailand (Ratburi, Prachuab Khirikhan, Ko Ang Thong and Surat Thani-Phang Nga). Six facies in interior-platform setting. Bioclastic grains stromatolite, green algae, tabulate corals, solitary corals, crinoids, foraminifera (Shanita, Hemigordius), brachiopods, bryozoan, etc.. Non-bioclastic grains ooids, peloids and intraclasts)

Chinoroje, O. & M.R. Cole (1995)- Permian carbonates in the Dao Ruang 1 exploration well- implications for petroleum potential, Northeast Thailand. Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (Geo-Indo '95), Khon Kaen University 1995, p. 563-576.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1995/7461.pdf)
(Texaco 1993 Doa Ruang 1 well in NE Thailand penetrated ~3000' of late E- early M Permian Ratburi Fm carbonates, overlying Permian? andesitic volcanics. With significant gas shows, but low, non-commercial flow rates due to poor reservoir quality. Potential massive dolomite reservoir not encountered)

Chitnarin, A., S. Crasquin, T. Charoentitirat, P. Tepnarong & N. Thanee (2012)- Ostracods (Crustacea) of the Early-Middle Permian from Central Thailand (Indochina block). Part I. Order Palaeocopida. Geodiversitas 34, 4, p. 801-835.
(online at: http://sciencepress.mnhn.fr/sites/default/files/articles/pdf/g2012n4a5.pdf)
(E-M Permian shallow marine ostracods from W margin of Indochina block, C Thailand. Samples from 12 limestone localities in Loei, Phetchabun and Nakhon Sawan-Lopburi contain 39 species of Palaeocopida, families Aparchitidae, Kloedenellidae, Knoxitidae, Paraparchitidae, Kirkbyidae, Amphissitidae, Youngiellidae, Hollinellidae, and Coelonellidae. Podocopida will be described in second paper. Eight new species)

Chitnarin, A., S. Crasquin, C. Chonglakmani, J. Broutin, P.J. Grote & N. Thanee (2008)- Middle Permian ostracods from Tak Fa Limestone, Phetchabun Province, Central Thailand. Geobios 41, 3, p. 341-353.
(First Permian ostracod fauna described from M Permian Tak Fa Lst of Khao Khwang carbonate platform in Phetchabun province, C Thailand. Shallow marine, nearshore assemblages. 15 species mainly endemic, except one, which shows paleobiogeographic links between C Thailand and S China)

Chonglakmani, C. (1981)- The systematics and biostratigraphy of Triassic bivalves and ammonoids of Thailand. Ph. D. Thesis, University of Auckland, New Zealand, p. *(Unpublished)*

Chonglakmani, C. (1983)- The marine Mesozoic stratigraphy of Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 105-126.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_06.pdf)
(Marine Mesozoic rel. widespread in W Thailand (mainly non-marine in NE). Widespread marine Triassic deposits. Less common, but complete Jurassic sections in NW, NC and S Thailand)

Chonglakmani, C. (1985)- Report on work done along SEATAR Transect-1. Proc. 21st Sess. CCOP, Bandung 1984, 2, Techn. repts., p. 144-162.

Chonglakmani, C. (1999)- The Triassic system of Thailand: implication on geotectonic evolution of Southeast Asia. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 95-102.
(online at: www.gsm.org.my/products/702001-100830-PDF.pdf)
(Four main Triassic sedimentary facies: (1) Continental facies in retroarc foreland basins in NE Thailand amalgamated Indosinia- Sukhothai terranes; (2) Continental platform facies in 'Shan-Mergui' and Chiang Mai (Phrao Lst, Klaeng Lst) terranes;. (3) Marine intra-arc facies in volcanoplutonic setting on W part of Sukhothai- Indosinia terrane (shallow water siliciclastics- carbonates, turbidites and rhyolitic- andesitic volcanics; (4) Deep marine and oceanic facies (radiolarian chert, pelagic limestone, turbidite and basalts) in two zones representing two distinct Triassic sutures: (1) Chiangrai-Chanthburi belt, extending S into Bentong-Raub suture of Malaysia, and (2) Mae Sariang-Kanchanaburi belt, extending S to W Malaysia and C Sumatra. Nan-Uttaradit-Sra Kaeo ophiolite belt previously considered as Late Triassic suture is Late Permian one. Major terrane accretions in Late Triassic by subduction to E in Late Carnian and M-L Norian)

Chonglakmani, C. (2001)- The Saraburi Group of North-Central Thailand: implication for geotectonic evolution. Gondwana Research 4, 4, p. 597-598. *(Abstract only*
(Permian limestones of Thailand used to be grouped in Ratburi Limestone, named after province in W Thailand and formed in peri-Gondwanan Realm. Permian limestones from N and NE Thailand are different, formed on Indochina Plate/ Tethyan Realm and should be grouped in Ngao and Saraburi Groups)

Chonglakmani, C. (2002)- Current status of Triassic stratigraphy of Thailand and its implication for geotectonic evolution. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 1-3.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6367.pdf)
(Brief review of Triassic deposits in Thailand. Mainly marine, except in NE where only continental, with warm Dictyophylum- Chlathopteris flora. Shan-Tai block with rel. widespread carbonate. E part of Shan-Tai block Late Triassic marine with volcanics facies (equiv. of Semantan Fm in Malaysia Central Belt. Deep marine and oceanic facies in two belts: (1) between Chiang Mai (C Shan Tai) and Sukhothai (E Shan Tai) terranes; with Devonian- M Triassic cherts (=Inthanon suture?); (2) Mae Sariang Zone (farther W; extends S to Kanchaburi, to Semanggol Fm in Malaysia, into C Sumatra. Shan Tai here regarded as part of Indochina province?)

Chonglakmani, C. (2011)- Triassic. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 137-150.

Chonglakmani, C., T. Charoentitirat & M. Liengjarern (1995)- Permian carbonates of Loei area, Northeastern Thailand. Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (Geo-Indo '95), Khon Kaen University 1995, p. 577-587.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1995/7462.pdf)
(Late Carboniferous- M Permian carbonates in E part of Changwat Loei, NE Thailand. Dark grey massive limestone, ~280m thick, with abundant fusulinids (6 zones), corals algae, etc.)

Chonglakmani, C., W.W. Duan & H. Fontaine (1990)- Note on the continental deposits of Peninsular Thailand with a description of some conchostracans. Oil and Gas Geology 11, 1, p. 31-37.
(Conchostracans collected from continental sediments halfway between Trong and Krabi dominated by Pseudograpta spp. and probably of late M Jurassic age. Associated with plants, crocodile teeth, etc.)

Chonglakmani, C., Q. Feng, D. Meischner, R. Ingavat-Helmcke & D. Helmcke (2001)- Correlation of tectono-stratigraphic units in northern Thailand with those of western Yunnan (China). J. China University of Geosc. 12, 3, p. 207-213.
(online at: http://sutir.sut.ac.th:8080/sutir/bitstream/123456789/506/1/bib132.pdf)

(N continuation of Lampang region of Thailand is in Simao region of Yunnan, with very similar Permian-Triassic developments)

Chonglakmani, C. & H. Fontaine (1993)- The Lam Narai- Phetchabun region: a platform of Early Carboniferous to Late Permian age. In: Proc. Conf. Development of geology for Thailand into the year 2000, Chulalongkorn University, Bangkok 1990, p. 39-98.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1990/24715.pdf)
(On Carboniferous- Permian carbonate platform S of Phetchabun, NE Thailand (= W passive margin of Indochina Block). Incl. late M Permian massive corals (Ipciphyllum, Wentzelloides), small forams (Dagmarita, Hemigordiopsis), fusulinids (Verbeekina verbeeki, Colania douvillei, Sumatrina, Neoschwagerina). No marine Triassic noted)

Chonglakmani, C., H. Fontaine & D. Vachard (1983)- A Carboniferous -Lower Permian(?) section in Chon Daen, Central Thailand. In: Symposium on Stratigraphy of Thailand, Bangkok, Dept. Mineral Resources, p. 1-5.

Chonglakmani, C. & J.A. Grant-Mackie (1993)- Biostratigraphy and facies variation of the marine Triassic sequences in Thailand. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, Chiang Mai University, p. 97-123.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7482.pdf)
Relatively complete marine Triassic section in Thailand >3000m thick, in 3 sedimentary basins across W Thailand (Sibumasu terrane and Paleotethys suture zone?). Twelve faunal zones in Lampang-Phrae basin, mainly based on bivalve molluscs (Claraia, Costatoria, Daonella, Halobia, Trigonodus, Indopecten). Ammonoids relatively rare)

Chonglakmani, C. & D. Helmcke (1989)- The Triassic Lampang Group of northern Thailand: forearc basin deposits or sediment of intramontane basins. In: T. Thanasuthipitak & P. Ounchanum (eds.) Int. Symposium on Intermontane basins: geology and resources, Chiang Mai, p. 265-275.
(Lampang Group, which overlies Late Triassic Lampang volcanic rocks, deposited in shallow intramontane basins, developed on continental crust in post-collisional setting)

Chonglakmani, C. & D. Helmcke (2001)- Geodynamic evolution of Loei and Phetchabun regions- does the discovery of detrital chromian spinels from the Nam Duk Formation (Permian, North-Central Thailand) provide new constraint? Gondwana Research 4, 3, p. 437-442.
(M-U Permian Nam Duk Fm sandstones of Phetchabun region contain chromian spinel and are affected by compressional deformation (unconformably overlain by U Triassic). Confirms erosion of compressional mountain belt and reflects M-U Permian closure of Nan-Uttaradit suture)

Chonglakmani, C. & N. Sattayarak (1978)- Stratigraphy of the Huai Hin Lat Formation (Upper Triassic) in northeastern Thailand. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 739-774.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1978/7413.pdf)
(Huai Hin Lat Fm at W side of Khorat Plateau is <1300m thick basal unit of Mesozoic Khorat Group. Composed of grey-red fluvial-lacustrine sediments, unconformably over eroded Permian limestones or clastics. Basal unit rhyolite-andesite-tuff volcanics. Age mainly Norian possibly also late Carnian, based on plant fossils of Dictyophyllum- Clathropteris flora (Kon'no & Asama 1973), estheriids (Kobayashi 1973) and spores-pollen (Haile 1973))

Choowong, M. (2011)- Quaternary. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 335-350.

Chualaowanich, T., D. Saisuthichai, P. Sarapanchotewittaya, P. Charusiri, C.L. Sutthirat, T.Y. Lee. & M.W. Yeh (2008)- New 40Ar/39Ar ages of some Cenozoic basalts from the east and northeast of Thailand. Proc. Int. Symposia on Geoscience Resources and Environments of Asian Terranes, Bangkok, p. 225-229.

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(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7642.pdf)
(Three deformation phases in Khorat Plateau, NE Thailand, from Landsat interpretation. Oldest N-S trending, tied to Late Cretaceous Shan Tai- Indochina collision; younger events NW-SE trending folds tied to E Tertiary India collision)

Chutakositkanon, V., P. Charusiri & K. Sashida (2000)- Lithostratigraphy of Permian marine sequences, Khao Pun area, Central Thailand: paleoenvironments and tectonic history. The Island Arc 9, p. 173-187.
(Thick marine Permian section in Saraburi Province, C Thailand (W side of Indochina Block), Permian transgressive-regressive trend from E Permian limestone dominated shelf to M Permian pelagic-abyssal environment. Late Permian again shallow marine facies)

Chutakositkanon, V. & K. Hisada (2008)- Tectono-stratigraphy of the Sa Kaeo-Chanthaburi accretionary complex, Eastern Thailand: reconstruction of tectonic evolution of oceanic plate- Indochina collision. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok, p. 330-338.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/101.pdf)
(Sa Kaeo suture in E Thailand formerly proposed to be collision zone between Sibumasu and Indochina blocks. Redefined as Sa Kaeo-Chanthaburi Accretionary Complex: melange with Late Paleozoic blocks, characterized by oceanic plate materials of basalts and overlying chert with seamount-type limestone, subducted/accreted to W edge of Indochina in latest Permian, covered by turbidite deposits in M Triassic)

Chutakositkanon, V., K. Hisada, P. Charusiri & S. Arai (1999)- Detrital chromian spinels from the Nam Duk Formation: a key to elucidate the tectonic evolution of central mainland Southeast Asia and the Loei suture zone in Thailand. In: Proc. Int. Symposium Shallow Tethys 5, Chiang Mai, p. 450-456.

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(Detrital chromian spinels in turbiditic sandstones of Permian Nam Duk Fm suggest mafic- ultramafic volcanics and peridotites of arc origin were exposed in region in Permian. Loei-Phetchabun-Ko Chang volcanic belt, possible candidate for source of detrital Cr-spinels. Associated limestone beds with Pseudodoliolina pseudolepida and Verbeekina verbeeki suggest late M Permian age for Nam Duk Fm)

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(online at: http://home.kku.ac.th/geoindo2011/A1-1-116.pdf)
(Loei-Phetchabun Volcanic Belt is N-S trending Permo-Triassic magmatic-volcanic arc which trends from Laos through C Thailand and into W Cambodia and hosts several world-class Au and Cu-Au deposits)

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(M Miocene- Pleistocene turtles and crocodiles from Nakhon Ratchasima Province, NE Thailand. Incl. Pleistocene Gavialis aff. bengawanicus, giant land tortoises (Megalochelys), etc. Most from shallow temporary sandpits, with little or no stratigraphic context)

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(Two new species of geoemydid turtles from three lignite pits in latest Eocene- earliest Oligocene of Krabi Basin in SW Peninsular Thailand; early representatives of testudinoid turtles from SE Asia. Eocene turtle assemblage from Krabi different Eocene Pondaung Fm of Myanmar, dominated by highly aquatic taxa, while Krabi fauna mostly composed of smaller aquatic or more semi-terrestrial species)

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(New occurrence of widespread latest Ashgillian Hirnantia brachiopod shelly fauna from Satun Province, S Thailand. Fauna similar to N Shan States, Myanmar and to S China, indicating that Sibumasu (Shan-Thai) palaeocontinent, on which Thailand and N Shan States were situated, in Ordovician and Silurian closer to S China than previously supposed. Incl. descriptions of trilobite Mucronaspis, brachiopods Hirnantia, etc.)

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(Sapphire, zircon and magnetite-bearing xenolith from Khao Wua, near Chanthaburi dated as ~2 Ma. This is within range of fission track ages for alluvial zircons (~2.57 Ma) from Chanthaburi-Trat gem fields and K/Ar ages of 0.44-3.0 Ma for alkali basaltic volcanism in Chanthaburi Province, with which Thailand's gemstones appear to be associated)

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(Description of Khorat Plateau, NE Thailand, Late Triassic half-grabens filled with fluvial sediments. Basin and range type extension explained as collapse of thickened continental crust, 20 My after E Triassic 'Indosinian' collision of Shan Tai and Indochina plates. Overlain by sag-phase Jurassic- Cretaceous continental sediments of Khorat Gp. Basin system inverted during Late Cretaceous- E Tertiary compression caused by Kohistan Arc collision (=W Burma plate?). (Triassic grabens mainly on Indochina Block?; JTvG))

Coster, P., M. Benammi, Y. Chaimanee, C. Yamee O. Chavasseau, E.G. Emonet & J.J. Jaeger (2010)- A complete magnetic-polarity stratigraphy of the Miocene continental deposits of Mae Moh Basin, northern Thailand, and a reassessment of the age of hominoid-bearing localities in northern Thailand. Geol. Soc. America (GSA) Bull. 122, 7-8, p. 1180-1191.
(N Thailand has >40 Tertiary intermontane basins. Some contain hominoid fossils and rich Neogene mammal faunas. Magnetic-polarity stratigraphy used for age calibration in Mae Moh Basin, Lampang Province. 15 polarity zones recognized between 14-12 Ma. Correlation with nearby Chiang Muan basin suggest age of beds with large-bodied hominoid Khoratpithecus chiangmuanensis is between 12.4- 12.2 Ma)

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(Development of reduced-eyed phacopid species Plagiolaria poothaii Kobayashi and Hamada 1968, from E Devonian of Pa Samed Fm, Satun Province (Sibumasu terrane). Associated with dacryoconarid tentaculites. Plagiolaria part of specialized group of phacopids inhabiting muddy, dark, deep water environment)

Crow, M.J. (2011)- Radiometric ages of Thailand rocks. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 593-614.

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Cuny, G. (2012)- Freshwater hybodont sharks in Early Cretaceous ecosystems: a review. In: P. Godefroit (ed.) Bernissart dinosaurs and Early Cretaceous terrestrial ecosystems. Indiania University Press, Bloomington, p. 518-529.
(Includes newly defined Heteroptychodus-Thaiodus Province of SE Asian E Cretaceous freshwater sharks)

Cuny, G., R. Liard, U. Deesri, T. Liard, S. Khamha & V. Suteethorn (2013)- Shark faunas from the Late Jurassic- Early Cretaceous of northern Thailand. Palaeont. Zeitschrift 88, 3, p. 309-328.
(online at: http://link.springer.com/article/10.1007/s12542-013-0206-0)
(Freshwater hybodont shark fauna from NE Thailand from Phu Kradung Fm, which is basal formation of Khorat Group. Vertebrate assemblages suggest Late Jurassic age, but palynology and detrital zircons favor Early Cretaceous age. Shark assemblages of Phu Kradung Fm both European and Asian affinities)

Cuny, G., P. Srisuk, S. Khamha, V. Suteethorn & H. Tong (2009)- A new elasmobranch fauna from the Middle Jurassic of southern Thailand. In: E. Buffetaut, G. Cuny et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia. Geol. Soc. London, Spec. Publ. 315, p. 33-40.
(New M Jurassic shark fauna from Khlong Min Fm, S Thailand)

Cuny, G., V. Suteethorn, E. Buffetaut & M. Philippe (2003)- Hybodont sharks from the Mesozoic Khorat Group of Thailand. Mahasarakham University J. 22 (Special issue), p. 49-68.

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(Isolated teeth of five hybodont species from Khok Kruat Fm (Aptian) of E Thailand. These sharks appear to be restricted to freshwater environment and probably endemic to Khorat Plateau, although Thaiodus and Heteroptychodus also found in deltaic and/or marine environments outside Thailand on Asian continent)

Cuny, G., V. Suteethorn, S. Kamha, E. Buffetaut & M. Philippe (2006)- A new hybodont shark assemblage from the Lower Cretaceous of Thailand. Historical Biology 18, 1, p. 21-31.
(Tteeth of five hybodont taxa from freshwater E Cretaceous Sao Khua Fm of Khorat Plateau. Fauna appears less endemic, with some European affinities, than fauna from younger Aptian-Albian Khok Kruat Fm)

Cuny, G., V. Suteethorn, S. Kamha, K. Lauprasert, P. Srisuk & E. Buffetaut (2007)- The Mesozoic fossil record of sharks in Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIõ07), Bangkok, Dept. Mineral Resources, p. 349-354
(Mesozoic sharks known in Thailand from Indochina and Sibumasu (Shan-Thai) terranes Over 21 species, mainly Cretaceous freshwater hybodont sharks endemic to Asia)

Cuny, G., V. Suteethorn & S. Khansubha (2015)- A sclerorhynchoid (Chondrichthyes: Batomorphii) in the Lower Cretaceous of Thailand? In: R.M. Sullivan and S.G. Lucas (eds.) Fossil Record 4, New Mexico Museum Natural History Science Bull. 67, p. 15-17.
(Possible sclerorhynchid rostral tooth in Barremian freshwater Sao Khua Fm of Khorat Gp of NE Thailand)

Curiale, J.A. & M.R. Gibling (1994)- Productivity control on oil shale formation- Mae Sot Basin, Thailand. Organic Geochem. 21, p. 67-89.
(On Neogene oil shales from freshwater, lacustrine, intermontane Mae Sot Basin, W Thailand)

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(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1978/7401.pdf)
(Study of 1400m of Permian Ratburi Lst, N of Saraburi, C Thailand. Fusulinid faunas can be correlated with Misellina, Neoschwagerina zones of Tethyan Realm)

Dawson, O.T. (1978)- Notes on deformation fabrics of the Permian Limestone from Central Thailand. J. Geol. Soc. Thailand 3, 1, p. 3-14.
(online at: http://library.dmr.go.th/library/J-Index/1978/45.pdf)
(On deformation and pressure solution in anticlinal structures of folded Permian limestones in Saraburi area. Tests of staffellid and schwagerinid (Nankinella) fusulinid foraminifera more susceptible to stress and solution than neoschwagerinid (Neoschwagerina simplex) types))

Dawson, O. (1993)- Fusiline foraminiferal biostratigraphy and carbonate facies of the Permian Ratburi Limestone, Saraburi, central Thailand. J. Micropalaeontology 12, 1, p. 9-33.
(online at: https://www.j-micropalaeontol.net/12/9/1993/jm-12-9-1993.pdf)
(Permian carbonates N of Saraburi, at S end of Phetchabun foldbelt in C Thailand. N-S trending carbonate platform with diverse E Permian (Sakmarian)- early Late Permian (Midian) fusulinid-algal assemblages. Archaeolithoporella and Tubiphytes form reef frameworks, similar to M Permian reefs of Austria and W Texas. Fusulinids of Arctic-Tethyan affinities in E Permian, of Tethyan affinity in M Permian. Tethyan verbeekinids dominate in late M Permian, together with cosmopolitan species of Parufusulina and Schwagerina, and can be correlated with S Pamirs, Afghanistan, S China, Johore and W Sumatra. Associated dasycladacean floras assignable to E Circum-Pacific Realm. Eight fusuline assemblage zones)

Dawson, O., A. Baird & D. Bosence (1993)- No reef-rimmed margins to the Permian carbonate platforms of Thailand. In: B.K. Tan et al. (eds.) Proc. 7th Conf. Geology, Mineral and Energy Res. SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 181-186.
(C Thailand E Permian platform, margins formed mainly by grainstones, with only small Archaelithoporella-Tubiphytes- calcisponges boundstone biostromes. In Ratburi area of Peninsular Thailand, small M Permian Tubiphytes bioherms on platform interior ridges, not in shelf marginal position)

Dawson, O. & A. Racey (1993)- Fusuline- calcareous algal biofacies of the Permian Ratburi Limestone, Saraburi, Central Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 49-65.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7589.pdf)
E-M Permian Ratburi Lst of C Thailand (= W margin of Indochina terrane) folded sequence of Sakmarian- E Midian supratidal to outer platform biofacies. Subdivided with abundant fusuline and calcareous algal biota. Ratburi Lst transgressive-regressive carbonate platform sequence. Fusulinid distribution depth-controlled, with 6 main assemblages. With fusulinid facies distribution model)

Dawson, O., A. Racey & J.E. Whittaker (1993)- The palaeoecological and palaeobiogeographical significance of *Shanita* (foraminifera) and associated foraminifera/ algae from the Permian of peninsular Thailand. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 2, Chiang Mai University, p. 283-295.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/6791.pdf)
(late M Permian (Midian) pillared miliolid foram Shanita amosi known from Ratburi Lst of peninsular Thailand and from platform carbonates in Tunisia, Turkey, Iran, E Burma. Associated with poor fusulinid assemblages (unlike high-diversity fusulinids in E Thailand. Appears to be restricted to W Tethys and Shan-Tai Block (Key marker genus for latest M-early Late Permian) of Sibumasu/ Cimmerian terranes; JTvG))

Dawson, O., A. Racey & J.E. Whittaker (1994)- Permian foraminifera from northeast and peninsular Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources and IGCP 306, p. 323-332.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1994/6958.pdf)
(Permian carbonates of Peninsular Thailand originally deposited on Shan-Tai (Sibumasu) terrane. With mod. diverse foraminifera and algal assemblages mainly of M Permian (late Murgabian-Midian) age, locally

ranging down into Sakmarian. Localities with Shanita amosi and common Hemigordius and Hemigordiopsis restricted to peninsular Thailand, where fusulinid assemblage of low diversity. NE Thailand (Indochina terrane) age-equivalent fusulinids are abundant and diverse Tethyan assemblages with Colania douvilei, Lepidolina, Neoschwagerina, Verbeekina verbeeki, etc.))

De Broin, F., R. Ingavat, P. Janvier & N. Sattayarak (1982)- Triassic turtle remains from northeastern Thailand. J. Vertebrate Paleontology 2, 1, p. 41-46.
(Fragments of dermal plates of undetermined aquatic chelonian in Huai Hin Lat Fm near Chulabhorn Dam, NE Thailand. In same formation also ostracodes, semionotid actinopterygians, lungfishes, capitosaurids, and phytosaurs, all suggestive of Late Triassic (possibly Norian) age. Turtle remains first from Triassic of Asia)

Deesri, U., L. Cavin, J. Claude, V. Suteethorn & P. Yuangdetkla (2009)- Morphometric and taphonomic study of a ray-finned fish assemblage (*Lepidotes buddhabutrensis*, Semionotidae) from the Late Jurassic-earliest Cretaceous of NE Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Special Publ. 315, p. 115-124.

Deesri, U., K. Laupraasert, K. Wongko & L. Cavin (2014)- A new species of the ginglymodian fish *Isanichthys* (Actinopterygii, Holostei) from the Late Jurassic Phu Kradung Formation, northeastern Thailand. Acta Palaeontologica Polonica 59, 2, p. 313-331.
(online at: https://www.app.pan.pl/archive/published/app59/app20120013.pdf)
(New ginglymodian fish, Isanichthys lertboosi, from freshwater deposit of probable Late Jurassic age in NE Thailand. Associated with rich fauna of sharks, turtles, crocodiles, and theropod and sauropod dinosaurs)

Deesri, U. (2017)- Taxic diversity and ecology of Mesozoic bony fish assemblages from the Khorat Group, NE Thailand. Research and Knowledge 3, 2 p. 18-22.
(online at: doi.nrct.go.th/ListDoi/Download/.../0413d160426beeb7c065c3cb57bc63e0?)
(Khorat Gp in NE Thailand with 5 M? Jurassic- Aptian continental formation with succession of freshwater bony fish assemblages in 15 localities)

Deng, T., R. Hanta & P. Jintasakul (2008)- A new species of *Aceratherium* (Rhinocerotidae, Perissodactyla) from the late Miocene of Nakhon Ratchasima, northeastern Thailand. J. Vertebrate Paleontology 33, 3, p. 977-985.
(New skull and mandible of mid-sized rhinocerotid Aceratherium from Tha Chang sand pits in Nakhon Ratchasima Province, described as A. porpani. First discovery of Aceratherium in Thailand. Mixture of primitive and derived characters that differ from known species of Aceratherium. Probably latest Miocene)

Department of Mineral resources (2014)- Geology of Thailand. Department of Mineral Resources, Bangkok, Thailand, p. 1-508.
(online at: www.dmr.go.th/ewt_dl_link.php?nid=77457&filename=index___EN)

Dew, R.E.C., A.S. Collins, R. King, F. Arboit, S. Glorie & C.K. Morley (2015)- Stratigraphy of deformed Permian carbonate reefs in the Saraburi Province, Thailand. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 14-16. *(Extended Abstract*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf))
(E-M Permian (Asselian-Capitanian) Khao Khwang carbonate platform with minor clastic sediments with well-bedded platform carbonates and massive reef complexes. After deposition platform deformed into Khao Khwang fold-thrust belt in Triassic-Lower Jurassic Indosinian Orogeny along S margin of Indochina Block)

Dew, R.E.C., R. King, A.S. Collins, C.K. Morley, F. Arboit & S. Glorie (2017)- Stratigraphy of deformed Permian carbonate reefs in Saraburi Province, Thailand. J. Geol. Soc., London, 175, 1, p. 163-175.
(Km-scale thrusts affect sedimentary of Khao Khwang Platform in C Thailand (W margin of Indochina Terrane). Platform three Permian carbonate-dominated units, intercalated with clastics. Paleogeography of area prior to Triassic Indosinian Orogeny poorly known. In Saraburi area several separate carbonate

platforms dominated by four major M Permian facies, dated with foraminifera (incl. verbeekinid and neoschwagerinid fusulinids) and algae)

Dheeradilok, P. & W. Kaewyana (1986)- On the Quaternary deposits of Thailand. In: Proc. GEOSEA V, 1, Bull. Geol. Soc. Malaysia 19, p. 515-532.
(online at: www.gsm.org.my/products/702001-101242-PDF.pdf)

Diehl, P. & H. Kern (1981)- Geology, mineralogy, and geochemistry of some carbonate-hosted lead-zinc deposits in Kanchanaburi Province, western Thailand. Economic Geology 76, 8, p. 2128-2146.
(Pb-Zn deposits in W mountain chains of Kanchanaburi Province, W Thailand. Sulfide mineralization stratabound and related to reef-like algal crinoidal buildups in thick Ordovician limestone sequence. Mainly fne-grained galena-sphalerite-pyrite. Homogenization temperatures of fluid inclusions 107-174 °C. Origin of metal-bearing solutions is uncertain, possibly nearby igneous source)

Diemar, M.G. & V.A. Diemar (2000)- Geology of the Chatree epithermal gold deposits, Thailand. In: G. Weber (ed.) Proc. PACRIM '99 Congress, Bali, Australasian Inst. of Mining and Metallurgy (AusIMM), Publ. 4-99, p. 227-231.

Dill, H.G., R. Botz, F.W. Luppold & F. Henjes-Kunst (2005)- Hypogene and supergene alteration of the Late Palaeozoic Ratburi Limestone during the Mesozoic and Cenozoic (Thailand, Surat Thani Province). Implications for the concentration of mineral commodities and hydrocarbons. Int. J. Earth Sciences (Geol. Rundschau) 94, p. 24-46.
(Interdisciplinary study of Late Carboniferous-M Permian Ratburi Gp, Peninsular Thailand, with emphasis on multi-stage diagenesis of Ratburi Lst in Surat Thani Province)

Dill, H.G., F.W. Luppold, A. Techmer, P.I. Chaodumrong & S. Phoonphun (2004)- Lithology, micropaleontology and chemical composition of calcareous rocks of Paleozoic through Cenozoic age (Surat Thani Province, central Peninsular Thailand): implications concerning the environment of deposition and the economic potential of limestones. J. Asian Earth Sci. 23, p. 63-89.
(On composition and diagenesis of Ordovician, Carboniferous, Permian, Triassic and Jurassic limestones of Central Peninsular Thailand)

Dill, H.G., F. Melcher & R. Botz (2008)- Meso- to epithermal W-bearing Sb vein-type deposits in calcareous rocks in western Thailand; with special reference to their metallogenetic position in SE Asia. Ore Geology Reviews 34, p. 242-262.
(Vein-type antimony deposits hosted by Late Paleozoic calcareous rocks widespread in Lampang-Phrae Province in NW Thailand and in Surat Thani Province in Peninsular Thailand. Stibnite mineralization in N Thailand may be related to Late Permian- Triassic magmatism near Sibumasu- Indochina suture)

Dopieralska, J., Z. Belka, P. Konigshof, G. Racki, N. Savage, P. Lutat & A. Sardsud (2012)- Nd isotopic composition of Late Devonian seawater in western Thailand: geotectonic implications for the origin of the Sibumasu terrane. Gondwana Research 22, p. 1102-1109.
(Sm/Nd isotopic data from two U Devonian carbonates near Myanmar border. Conodonts from Thong Pha Phum, W Thailand, with high Sm/Nd ratios, suggesting passive margin continental setting and implying Sibumasu terrane was situated near Archean cratons of W Australia in Devonian, presumably near Carnarvon intracratonic basin. Conodonts from Mae Sariang succession in NW Thailand low and uniform Sm/Nd ratios resemble Variscan and present-day oceanic seawaters and point to pelagic setting within Paleotethys Ocean, suggesting Mae Sariang Paleozoic not part of Sibumasu terrane but part of Inthanon suture zone)

Drumm, A., H. Heggemann & D. Helmcke (1993)- Contribution to the sedimentology and sedimentary petrology of the non-marine Mesozoic sediments in northern Thailand (Phrae and Nan Provinces). In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology, (BIOSEA), Chiang Mai, University of Chiang Mai, 2, p. 299-318.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7486.pdf)

(On Permo-Triassic post-Variscan orogeny (latest M Permian) extensional basins in N and NE Thailand. Triassic Phrae-Nan paleo-graben starts with Norian siltstones- limestones, grading upward into Late Triassic-Jurassic continental deposits, with Rhaetian volcanics. Sediment source from E and NE)

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(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1992/283.pdf)
('Biochronologic study of the continental basins of SE Asia'. Diverse mammal-reptile faunas from ~500m thick continental Upper Eocene of Krabi Basin of Peninsular Thailand and faunas of Neogene basins from NW Thailand)

Ducrocq, S. (1994)- Les anthracotheres paleogenes de Thailande: paleogeographie et phylogenie. Comptes Rendus Academie Sciences, Paris, 318, p. 549-554.
('The Paleogene anthracoceres of Thailand: paleogeography and phylogeny'. Anthracotheriidae from U Eocene of Krabi suggest likely migrations between Asia and W Europe and Africa during terminal Eocene. Siamotherium krabiense considered as most primitive known anthracothere)

Ducrocq, S. (1994)- An Eocene peccary from Thailand and the biogeographical origins of the artiodactyl family Tayassuidae. Palaeontology 37, p. 765-779.
(online at: http://cdn.palass.org/publications/palaeontology/volume_37/pdf/vol37_part4_pp765-779.pdf)
(Remains of new tayassuid Egatochoerus jaegeri from U Eocene Krabi Basin (pig-like ungulate))

Ducrocq, S. (1994)- *Siamopithecus eocaenus*, a late Eocene anthropoid primate from Thailand: its contribution to the evolution of anthropoids in Southeast Asia. J. Human Evolution 36, p. 613-635.

Ducrocq, S. (1998)- Eocene primates from Thailand: are Asian anthropoideans related to African ones? Evolutionary Anthropology 7, 3, p. 97-104.
(Suborder Anthropoidea (simians, simiiforms) contains New and Old World monkeys, apes and humans. Recent discovery of Eocene early primate remains allows better understanding of early evolutionary history of group of mammals from which we evolved)

Ducrocq, S. (1999)- The Late Eocene Anthracotheriidae (Mammalia, Artiodactyla) from Thailand. Palaeontographica 252, p. 93-140.
(Late Eocene hippopotamus-like mammals from Krabi Basin)

Ducrocq, S., E. Buffetaut, H. Buffetaut-Tong, Y. Chaimanee, J.J. Jaeger, R. Lacassin & V. Suteethorn (1993)- Age and correlations of the Neogene continental basins from Thailand. In: 7th Regional Conf. Geology Mineral Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, p. 14-15. *(Abstract only)*

Ducrocq, S., E. Buffetaut, H. Buffetaut-Tong, R. Helmcke-Ingavat, J.J. Jaeger, Y. Jongkanchanasoontorn & V. Suteethorn (1992)- A lower Tertiary vertebrate fauna from Krabi (South Thailand). Neues Jahrbuch Geol. Palaont. Abhandl. 184, 1, p. 101-122.

Ducrocq, S., E. Buffetaut, H. Buffetaut-Tong, J.J. Jaeger, Y. Jongkanchanasoontorn & V. Suteethorn (1992)- First fossil flying lemur from the Late Eocene of Thailand. Palaeontology 35, 2, p. 373-380.
(online at: www.palass-pubs.org/palaeontology/pdf/Vol35/Pages%20373-380.pdf)
(First fossil dermatopteran from U Eocene of Krabi, S Thailand. Described as Dermotherium major n.sp.)

Ducrocq, S., Y. Chaimanee, J.J. Jaeger & G. Metais (2006)- A new ceratomorph (Perissodactyla, Mammalia) from the Late Eocene of Southeast Asia. J. Vertebrate Paleontology 26, 4, p. 1024-1027.
(New ceratomorph (small rhinocerotoid) maxilla from Late Eocene in Wai Lek lignite pit near Krabi, Associated with diverse mammal fauna of >30 species)

Ducrocq, S., Y. Chaimanee, V. Suteethorn & J.J. Jaeger (1994)- Ages and paleoenvironment of Miocene mammalian faunas from Thailand. Palaeogeogr. Palaeoclim. Palaeoecology 108, p. 149-163.
(Mammalian assemblages of rodents, ruminants, rhinos and mastodonts from continental basins in N Thailand all of early M Miocene age (16-14 Ma). Paleoenvironment monsoonal, open forests with grassland)

Ducrocq, S., Y. Chaimanee, V. Suteethorn & J.J. Jaeger (1994)- Mammalian faunas and the ages of the continental Tertiary basins of Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symposium Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources and IGCP 306, p. 147. *(Abstract only)*
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_3/2537/30265.pdf)
(Micromammals have higher biostratigraphic resolution than large mammals. Northern rift basins (Lampang, Pong) of M Miocene age (17-14 Ma). Krabi Basin in Peninsular Thailand Late Eocene age. Vegetation of M Miocenein N Thailand already in monsoon climate with distinct dry season)

Ducrocq, S., Y. Chaimanee, V. Suteethorn & J.J. Jaeger (1995)- Mammalian faunas and the ages of the continental Tertiary fossiliferous localities from Thailand. J. Southeast Asia Earth Sci. 12, p. 65-78.
(Krabi Basin in SW Thailand 27 mammal species of Late Eocene age. Localities from N Thailand M Miocene (16-14 Ma)).

Ducrocq, S., Y. Chaimanee, V. Suteethorn & J.J. Jaeger (1997)- A new species of *Conohyus* (Suidae, Mammalia) from the Miocene of northern Thailand. Neues Jahrbuch Geol. Palaont., Monatshefte 6, p. 348-360

Ducrocq, S., Y. Chaimanee, V. Suteethorn & J.J. Jaeger (1997)- First discovery of Helohyidae (Artiodactyla, Mammalia) in the Late Eocene of Thailand: a possible transitional form of Anthracotheriidae. Comptes Rendus Academie Sciences, Paris, Ser. 2A, Science Terre Planetes, 325, p. 367-372.
(Dental remains of earliest known helohyid artiodactyl from Late Eocene of Krabi, S Thailand (Progenitohyus thailandicus. Strong affinities with primitive anthracotheriid Siamotherium krabiense from Krabi)

Ducrocq, S., Y. Chaimanee, V. Suteethorn & J.J. Jaeger (1998)- The earliest known pig from the Upper Eocene of Thailand. Palaeontology 41, p. 141-156.
(online at: www.palass-pubs.org/palaeontology/pdf/Vol41/Pages%20147-156.pdf)
(Dental remains of new suid species, Siamochoerus banmarkensis from Late Eocene main lignite seam in Ban Mark pit of Krabi (coal) mine. One of oldest known reps of pig family)

Ducrocq, S., Y. Chaimanee & J.J. Jaeger (2006)- New primates from the late Eocene of Thailand: a contribution to primate diversity in the Paleogene of Asia. J. Human Evolution 51, 2, p. 153-158.

Ducrocq, S., J.J. Jaeger, Y. Chaimanee & V. Suteethorn (1995)- New primate from the Paleogene of Thailand, and the biogeographical origin of anthropoids. J. Human Evolution 28, p. 477-485.

Ducrocq, S., J.J. Jaeger & S. Sige (1993)- Un megachiroptere dans l'Eocene superieur de Thailande: incidence dans la discussion phylogenique du groupe. Neues Jahrbuch Geol. Palaont. 1993, 9, p. 561-576.

Dunning, G.R., A.S. Macdonald & S.M. Barr (1995)- Zircon and monazite U-Pb dating of the Doi Inthanon core complex, northern Thailand: implications for extension within the Indosinian Orogen. Tectonophysics 251, p. 197-213.
(Doi Inthanon metamorphic core complex in NW Thai gneiss belt. Zircon dating of orthogneisses suggests derivation from Late Triassic-Early Jurassic granitic protoliths (~205 Ma). High-T metamorphism events in Late Cretaceous (84-72 Ma) and Late Oligocene (~27 Ma). Development of gneiss belt between Late Cretaceous- Early Miocene. Uplift and tectonic denudation chronologically overlap initiation of extensional basins to E and SE and imply genetic connection)

El Tabakh, M., B.C. Schreiber, C. Utha-Aroon, L. Coshell & J.K. Warren (1998)- Diagenetic origin of basal anhydrite in the Cretaceous Maha Sarakham salt: Khorat Plateau, NE Thailand. Sedimentology 45, p. 579-594.

(Development of `Basal Anhydrite' of Cretaceous Maha Sarakham Saline Fm, Khorat Plateau, due to leaching or pressure dissolution of salt at contact between underlying active sandstone aquifer system and overlying massive halite-dominated evaporite sequence)

El Tabakh, M. & C. Utha-Aroon (1998)- Evolution of a Permian carbonate platform to siliciclastic basin: Indochina Plate, Thailand. Sedimentary Geology 121, p. 97-119.
(Extensive Permian carbonate platform developed in Thailand on margin of Indochina Plate and near deeper siliciclastic-dominated marine basin, which separated Indochina Plate in E from Shan Thai Plate in W. Sedimentation in both areas ended by late Permian/ E Triassic closure of Paleo-Tethys ocean. Tectonism controlled pattern of platform sedimentation and supplies of carbonate and clastic sediments into basin)

El Tabakh, M., C. Utha-Aroon & B.C. Schreiber (1999)- Sedimentology of the Cretaceous Maha Sarakham evaporites in the Khorat Plateau of northeastern Thailand. Sedimentary Geology123, p. 31-62.
(Cretaceous- E Tertiary evaporites of Maha Sarakham Fm on Khorat Plateau of Thailand and Laos three members of evaporitic successions overlain by non-marine clastic red beds. Khorat and Sakhon Nakhon basins periods of marine influx due to relative global sea-level rise but sporadically isolated from world ocean)

El Tabakh, M., C. Utha-Aroon, J.K. Warren & B.C. Schreiber (2003)- Origin of dolomites in the Cretaceous Maha Sarakham evaporites of the Khorat Plateau, northeast Thailand. Sedimentary Geology 157, p. 235-252.
(Khorat Plateau of NE Thailand and Laos area of widespread deposition of evaporites and siliciclastics (Maha Sarakham Fm) in Cretaceous. Three types of dolomites associated with this formation)

Endo, S. (1964)- Some older Tertiary plants from northern Thailand. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 113-115.
(Fossil plants from lignite and oil shale deposits of Amphoe Li, N Thailand incl. new species of Alnus, Sequoia, Taxodium, Sparganium. Age most likely Late Eocene, possibly E Oligocene. Signify warm-temperate (not tropical) climate (viewed asM Miocene age in Ginsbur & Tassy 1985))

Endo, S. (1966)- A supplementary note on the Paleogene Li flora in northern Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 3, p. 165-169.
(*Additional fossil plant species from lignite and oil shale deposits of Amphoe Li, N Thailand, incl. Glyptostrobus europaeus, Ficus, Fagus, Quercus, etc. Confirm Paleogene age)*

Endo, R. (1969)- Fossil algae from the Khao Phlong Phrab District in Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 7, p. 33-85.
(Descriptions of calcareous algae from E-M Permian Rat Buri Lst between Lop Buri and Sara Buri, N Thailand. Fusulinids described earlier by Toriyama and Kanmera 1968. Mainly systematic descriptions of 64 species of 33 genera, incl. Velebitella, Mizzia velebitana, Permocalculus, Macroporella, Solenopora, Vermiporella, etc.)

Endo, S. & I. Fujiyama (1966)- Some late Mesozoic and late Tertiary plants and a fossil insect from Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 301-307.
(Upper Cretaceous plants from tuffaceous Lomsak Fm in C Thailand (Sequoia ambigua) and Miocene plants from Mae Sot series, W Thailand)

Fanka, A., T. Tsunogae, V. Daorerk, Y. Tsutsumi, Y. Takamura & C. Sutthirat (2018)- Petrochemistry and zircon U-Pb geochronology of granitic rocks in the Wang Nam Khiao area, Nakhon Ratchasima, Thailand: implications for petrogenesis and tectonic setting. J. Asian Earth Sci. 157, p. 92-118.
(Wang Nam Khiao area, NE Thailand, with Carboniferous biotite granite (zircon U-Pb ages ~315-285 Ma), Late Permian hornblende granite (2453.4 Ma) and Triassic biotite-hornblende granite (238 Ma). All part of Eastern Granite Belt and implying multiple episodes of arc-magmatism formed by Paleo-Tethys subduction beneath Indochina Terrane)

Feng, Q.L., C. Chonglakmani, D. Helmcke & R. Ingavat-Helmcke (2004)- Long-lived Paleotethyan pelagic remnant inside Shan-Thai block: evidence from radiolarian biostratigraphy. Science in China D, 47, 12, p. 1113-1119.
(online at: www.scichina.com:8080/sciDe/fileup/PDF/04yd1113.pdf)
(E Carboniferous- M-L Triassic radiolarians from ribbon chert in Mae Hong Son-Mae Sariang area, W of Chiang Mai, NW Thailand, indicate pelagic basin in this region. Situated on 'Shan-Thai Block', which was not single block, but composed of Paleotethyan Ocean and two continental terranes affiliated to Gondwana and Cathaysian domains respectively)

Feng, Q.L., C. Chonglakmani, D. Helmcke, R. Ingavat-Helmcke & B. Liu (2002)- Middle Triassic radiolarian fauna from Lamphun, northern Thailand. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 108-116.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6381.pdf)
(Late Anisian radiolaria in thin-bedded siliceous rocks SSE of Chiang Mai. 12 species indicative of Triassocampe deweveri zone. Deep basin, probably part of Paleotethys)

Feng, Q.L., C. Chonglakmani, D. Helmcke, R. Ingavat-Helmcke & B. Liu (2005)- Correlation of Triassic stratigraphy between the Simao and Lampang-Phrae Basins: implications for the tectono-paleogeography of Southeast Asia. J. Asian Earth Sci. 24, 6, p. 777-785.
(Simao Basin (Yunnan, S China) and Lampang-Phrae Basin (N Thailand) similar Triassic stratigraphy and parts of same tectono-paleogeographic unit. Triassic Lampang Gp with thin-shelled bivalves in E Triassic (Claraia) and Late Triassic (Daonella indica, Halobia). Part of Sukhothai Terrane, E of main Changning–Menglian Paleotethys suture, and belongs to W margin of Cathaysian domain)

Feng, Q.L., D. Helmcke, C. Chonglakmani, R. Ingavat-Helmcke & B. Liu (2004)- Early Carboniferous radiolarians from North-West Thailand: palaeogeographical implications. Palaeontology 47, 2, p. 377-393.
(middle E Carboniferous radiolarians from bedded cherts S of Mae Hong Son, NW Thailand, in melange zone composed of Silurian to Triassic slices. Signify pelagic basin at W side of Shan-Tai Terrane, between Shan-Thai and Gondwana, suggesting Shan-Thai terrane already rifted from Gondwana in E Carboniferous, earlier than commonly assumed)

Feng, Q., K. Malila, N. Wonganan, C. Chonglakmani, D. Helmcke, R. Ingavat-Helmcke & M. Caridroit (2005)- Permian and Triassic radiolaria from Northwest Thailand: paleogeographical implications. Revue Micropaleontologie 84, p. 237-255.
(Late Permian, late Ladinian and M Carnian radiolarians (51 species) from Mae Hong Son- Mae Sariang area, W of Chiang Mai, NW Thailand, represent part of Paleotethyan pelagic basin with E Carboniferous-early Late Triassic chert sedimentation. Main oceanic basin was within 'Shan-Thai Block' (= Sibumasu; JTvG), which was not single block, but composed of two continental terranes affiliated with Gondwana (Tengchong- Phuket) and Cathaysian (Simao- Lampang) domains, respectively, separated Paleotethyan Ocean, represented by remnant oceanic basins Changning-Menglian in SW China, Chiang Dao and Mae Yuan in NW Thailand)

Feng, Q.L., W.Q. Yang, S.Y. Shen, C. Chonglakmani & K. Malila (2008)- The Permian seamount stratigraphic sequence in Chiang Mai, North Thailand and its tectogeographic significance. Science in China, Ser. D, Earth Sciences, 51, 12, p. 1768-1775.
(online at: http://engine.scichina.com/downloadPdf/9TokmWFpbobQDqBz9)
(Widespread Permian carbonate outcrops in NW Thailand formerly considered as evidence for Late Paleozoic shallow Tethys, but are underlain by basalt comparable to oceanic island basalt in Three Rivers area, SW China. Permian carbonates in study area deposited on seamounts comparable to Late Paleozoic Paleotethys ocean of Changning-Menglian Belt in SW China. Seamounts in Chiang Mai-Fang area demonstrate oceanic basin in Late Paleozoic (Paleo-Tethys) between Shan Block of Myanmar and Lampang (= Suthothai) Block of Thailand, shows that in Late Paleozoic Shan and Thai blocks were two different microplates)

Feng, Q.L., Z. Zhang & M. Ye (2001)- Middle Triassic radiolarian fauna from Southwest Yunnan, China. Micropaleontology 47, 3, p. 173-204.
(Diverse Anisian radiolarian fauna in siliceous rocks with tuffs and mudstones in Paleo-Tethyan Changning-Menglian belt of SW Yunnan. 73 radiolarian species, 6 new (mainly Triassocampe spp.). Four zones: Triassocampe deweveri (late Anisian), T. coronata coronata (M Anisian), T. coronata inflata (M Anisian) and T. dumitricai (E Anisian). E Triassic radiolarian fauna in area low diversity, mainly Permian survivors)

Fenton, C.H., P. Charusiri, C. Hinthong, A. Lumjuan & B. Mangkonkarn (1997)- Late Quaternary faulting in northern Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution in Southeast Asia and the South Pacific, Bangkok, 1, p. 436-452.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7646.pdf)
(N Thailand is intraplate Basin and Range province, with N-S trending grabens and half-grabens, developed in E-W oriented extensional stress regime initiated in Oligocene, with main phase of extension in Late Miocene- E Pliocene. Result of India- Eurasia collision and subsequent E-ward extrusion and rotation of S China and SE Asia along large strike-slip fault systems. Still some Quaternary activity on basin-bounding faults)

Ferrari, O.M. (2007)- Contribution to the geology of Thailand and implications for the geodynamic evolution of Southeast Asia. Doctoral Thesis, University of Lausanne, Lausanne, p. 1-179. *(Unpublished)*
(Study of Nan-Uttaradit suture and Chiang Mai Volcanic Belt. Proposes new location for Palaeotethys suture and new plate tectonic model of SE Asia, implying existence of new Orang Laut terranes (E Vietnam, W Sumatra, Kalimantan, Palawan, Taiwan) and redefined Shan-Thai terrane. Shan-Thai previously viewed as Cimmerian (when Nan-Uttaradit suture thought to be Paleotethys suture), but detached from Indochina with E Permian opening of Nan basin, which closed in M Triassic)

Ferrari, O.M., R. Martini, D. Vachard & G.M. Stampfli (2006)- Permian limestone blocks inside the Nan-Uttaradit Suture Zone (Northern Thailand): faunal affinities and palaeogeographic implications. EGU Geophysical Res. Abstracts, 8, 03423, 2p. *(Abstract only)*
(Nan ophiolite belt in E part of N Thailand separates Shan-Thai block from Indochina, and commonly interpreted as Paleotethys suture between Cimmerian domain and Indochina or closure of smaller basin at N Margin of Palaeotethys. Shan Thai may not be Cimmerian, but Indochina-derived. Oldest rocks in Nan belt Carboniferous-Permian Pha Som Metamorphic Complex, melange of blocks including three kinds of limestone blocks: M Permian grey limestone overlying ophiolite, U Permian bluish limestone as blocks inside schists and siliceous limestone as part of matrix. Closure of basin in two phases: (1) E-M Permian obduction induced greenschists metamorphism at 269 ± 12 Ma; (2) subduction between deposition of U Permian radiolarites and deposition of overlying Carnian-Norian molasse. True Paleotethys suture in region of Mae Hong Son)

Flint, S., D.J. Stewart, T. Hyde, C.A. Gevers, O.R.F. Dubrule & E.D. van Riessen (1988)- Aspects of reservoir geology and production behaviour of Sirikit Oil Field, Thailand: an integrated study using well and 3-D seismic data. American Assoc. Petrol. Geol. (AAPG) Bull. 72, p. 1254-1268.
(Onshore Thailand Sirikit oil field in intracratonic Phitsanulok half-graben basin that was subsequently deformed by sinistral strike-slip movement. 8 km thick Tertiary basin-fill includes fluvial-deltaic Lan Krabu Fm, which contains two main oil reservoirs (K, L sands). Formation intertongues with Chum Saeng Fm lacustrine claystones that form stratigraphic seals to both reservoirs)

Flint, S., D.J. Stewart & E.D. Van Riessen (1989)- Reservoir geology of the Sirikit oilfield, Thailand: lacustrine deltaic sedimentation in a Tertiary intermontane basin. In: M.K.G. Whateley & K.T. Pickering (eds.) Deltas: sites and traps for fossil fuels, Geol. Soc., London, Spec. Publ. 41, p. 223-235.
(Sirikit oilfield, ~400 km N of Bangkok, is fault-bounded structure in major half-graben basin. 8 km thick basin-fill succession includes alluvial fan-fluvial deposits overlain by fluvio-deltaic Lan Krabu Fm, which contains two main oil reservoirs)

Fontaine, H. (1988)- Permian corals of West Thailand. In: H. Fontaine & V.Suteethorn (eds.) Late Paleozoic and Mesozoic fossils of West Thailand and their environments, Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, Techn. Bull. 20, p. 112-127.

(Corals from W Thailand (Sibumasu Terrane) not abundant and mainly simple forms. Include Tabulata (mainly Sinopora, also Pseudofavosites, Michelinia), solitary rugosa (Lophophyllidium, Amplexocarinia, Pavastehphyllum) and rare compound rugosa (Paraipciphyllum, Waagenophyllum?))

Fontaine, H. (1990)- Some Devonian corals and stromatoporoids from Northeast Thailand. Geol. Jahrbuch B73, p. 57-79.
(NE Thailand (Loei Province) E-M Devonian limestones two facies belts: (1) E belt of thin limestone lenses with brachiopods and massive tabulate corals (Favosites, Heliotes, Michelinia) in marls, and (2) W belt with thicker limestones with rugose and tabulate corals (Phillipsastraea, Endophyllum, Heliolites porosus, Favosites, Cladopora, etc.) and stromatoporoids (Chlathrodictyon, Actinostroma, Amphipora). Most limestones probably Givetian age (Heliolites extict at end M Devonian))

Fontaine, H. (1990)- Carboniferous corals from Northeast Thailand (northeast of Loei). Geol. Jahrbuch B73, p. 81-89.
(NE of Loei in NE Thailand small outcrops of M Carboniferous(Visean- Bashkirian) limestones in two facies belts. Rel. poor coral assemblages of mainly solitary Rugosa, incl. Multithecopora, Chaetetes)

Fontaine, H. (1990)- Preliminary note on the Carboniferous corals of Thailand. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 281-284.
(Many Carboniferous localities in NE Thailand, some with corals of Eurasian affinity, incl. Koninckophyllum)

Fontaine, H. (1999)- Diverse Permian coral faunas are widely distributed in Thailand. Permophiles 33, p. 36-38.
(online at: http://permian.stratigraphy.org/files/20121027151807120.pdf)
(Summary of Permian coral distribution in Thailand, known from >100 localities, from Lower to Upper Permian. Two distinct provinces (1) E and C Thailand, with high diversity assemblages similar to Cambodia, Laos, Vietnam and S China, and (2) Peninsular Thailand, extending into NW Malay Peninsula with low diversity corals, absence of corals in Lower Permian and no Ipciphyllum, Pseudohuangia, etc.). U Permian declining coral faunas)

Fontaine, H., Y. Almeras, L. Beauvais, J.P. Bassoulet, E. Cariou et al. (1989)- Jurassic of West Thailand. Proc. 24th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok 1987, 2, p. 137-146.
(Marine Jurassic known only from W Thailand (E Thailand continental with only minor marine ingressions). No marine Cretaceous in Thailand or E Burma. Red beds at Triassic-Jurassic boundary above Triassic Halobia shale, overlain by Toarcian- Aalenian with ammonites. Bathonian- Callovian not found. M Jurassic and Oxfordian coral limestones and mudstones present)

Fontaine, H. & S. Bunopas (1990)- The Carboniferous and the Permian in Thailand: a complex palaeogeography. In: 4th Int. Symposium on Pre-Jurassic East Asia, IGCP Project 224, 1, Osaka, p. 65-76.

Fontaine, H., C. Chonglakmani, S. Piyasin, B.A. Ibrahim & H.P. Khoo (1993)- Triassic limestones within and around the Gulf of Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 83-95.
(Presence of Early- Late Triassic limestones at Peninsular Thailand and NW Peninsular Malaysia, generally associated with Permian 'Ratburi Lst' and previously all included in Permian. Similar to 'Chuping Lst' and 'Kodiang Lst' of NW Peninsular Malaysia. Post Triassic fracturing and karstification. Many contain Aulatortus, Tubiphytes, Thaumatoporella parvovesiculifera)

Fontaine, H. & S. Gafoer (1989)- The Carboniferous of Thailand: its fossils and sediments. In: Proc. 24th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok 1987, 2, p. 125-129.
(Thailand Carboniferous 3 provinces: (1) Peninsular Thailand and Kanchanaburi: rare fossils and glacial? pebbly mudstones in upper part, (2) N and NW Thailand: more fossiliferous but poorly studied, and (3) E Thailand: fossiliferous limestones with fusulinids, corals, etc., throughout Carboniferous)

Fontaine, H., T.T. Hoang, S. Juanngam, S. Kavinate, S. Salyapongse, V. Suteethorn & D. Vachard (2009)- Paleontology and stratigraphy of the Northwest Thailand: paleogeographical implications. Department of Mineral Resources, Bangkok, p. 1-207.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/2009/22977.pdf0
(Major review of Lower Carboniferous- M Permian in Pang Mapha-Ban District near Myanmar border, NW Thailand (= within Inthanon Paleotethys suture zone?; area located W of 'Paleotethys' Chiang Dao cherts; JTvG). Rel. complete Carboniferous section, including limestones with corals. Widespread E-M Permian limestones, incl. rare Asselian with fusulinids (rel. high diversity and warm climate faunas, incl. presence of Neoschwagerina and Verbeekina and absence of Shanita, different from Peninsular Thailand, suggesting this is not typical Sibumasa fauna, despite being just W possible Paleotethys radiolarian cherts of 'Chiang Dao/ Fang'. Is in Inthanon zone with Paleotethyan seamounts/ microcontinents? (Ueno et al. 2008); JTvG)

Fontaine, H., T.T. Hoang, S. Salyapongse, V. Suteethorn & D. Vachard (2007)- Permian limestones of Surat Thani Province, Peninsular Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIõ07), Bangkok, Dept. Mineral Resources, p. 221-228.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2007/12726.pdf)
(Limestone widespread in Surat Thani Province of NE Peninsular Thailand, forming spectacular karst topography (= Ratburi Lst of Shan-Tai/ Sibumasu terrane; JTvG). Fossils rel. rare due to dolomitization/ recrystallization. Youngest well-dated Permian limestones of Surat Thani Province of Midian (M Permian) age. Some localities rich in Hemigordiopsis renzi, with smaller foraminifers (Sphairionia sikuoides, Geinitzina, Endothyra, Pachyphloia, Globivalvulina, Agathammina), rare Fusulinidae and solitary corals. Other samples rich in low-diversity Fusulinidae (Parafusulina spp., Yangchienia, Chusenella) with few, low diversity corals (mainly solitary Rugosa, rare massive). Peninsular Thailand oldest Permian limestone upper Lower Permian)

Fontaine, H., T.T. Hoang, S. Kavinate, V. Suteethorn & D. Vachard (2013)- Upper Permian (Late Changhsingian) marine strata in Nan Province, Northern Thailand. J. Asian Earth Sci. 76, p. 115-119.
(U Permian of NE Thailand (Loei Province) with land plants, and in Laos (Luang Prabang) with continental vertebrates (Dicynodon). M Permian represented only by marine sediments. W of these areas (Nan province) U Permian represented by marine sediments, with continental beds absent. Presence of marine U Permian with Colaniella and Palaeofusulina in N Thailand, locally extending to top U Permian and possibly Triassic)

Fontaine, H., T.T. Hoang, S. Kavinate, V. Suteethorn & D. Vachard (2013)- North Thailand 1-Very fossiliferous limestone belonging to the end of the Permian (Upper Changhsingian) in Wiang Sa Area; 2-Another Upper Permian limestone in Phrae Area. J. Science Technol. Mahasarakham University (MSU) 31, 1, p. 51-62.
(online at: http://journal.msu.ac.th/2012_/index.php/SCI/article/view/285/293)
(Occurrence of Upper Permian limestone in outcrop in N Thailand, W of Wiang Sa (close to localities mentioned by Hahn and Siebenhuner 1982, Sakagami and Hatta 1982), with abundant Colaniella and some Palaeofusulina (= characteristic of latest Permian of Indochina terrane?; JTvG))

Fontaine, H., T.T. Hoang, S. Kavinate, V. Suteethorn & D. Vachard (2013)- Wide extension of Carboniferous Limestone in Northwest Thailand with an interesting stratigraphy. J. Geol. Soc. Thailand, Spec. Issue, p. 1-65.
(online at: www.gst.or.th/sites/default/files/GST-Limestone-E-book.pdf)
(Carboniferous limestones in NW Thailand, N of Chiang Dao, near Myanmar border, more widespread than previously thought (usually assigned to Permian). Descriptions of localities and diverse assemblages of smaller foraminifera, algae (incl. Permocalculus, Tubiphytes), fusulinids (Schellwienia, Fusulinella, Pseudostaffella, Palaeofusulina, Profusulinella, etc.) and corals (mainly solitary Rugosa). Very different from Carboniferous of Peninsular Thailand)

Fontaine, H., Ibrahim B. Amnan & W. Tansathien (2002)- An overview of the Devonian of Malaysia and a comparison with the Devonian of Thailand. J. Geol. Soc. Thailand 1, p. 21-33.
(online at: http://library.dmr.go.th/library/J-Index/2002/135.pdf)

(In Malaysia Devonian known only from Peninsular region, in 3 facies: (1) clastic facies widely distributed in W, extending into Peninsular and W Thailand; (2) limestone facies restricted to small area of Perak, but more widespread and more fossiliferous in NE Thailand; (3) radiolarian chert facies at few localities of Peninsular Malaysia and Thailand)

Fontaine, H. & N. Jungyusuk (1995)- Permian corals from Chom Bung area West of Bangkok: their paleogeographic significance. CCOP Newsletter 20, 3-4, p. 70-79.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2538/6639.pdf)
(Corals from Permian Ratburi Limestone at Chom Bung, N Peninsular Thailand, 115 km WSW of Bangkok (= Sibumasu Terrane). Probably late M Permian (Murgabian-Midian). Common massive rugose corals (Iranophyllum, Paraipciphyllum spp., etc.), associated with low-diversity fusulinid assemblage. Also common Tubiphytes. Chombungia ratburina n.gen, n.sp. of massive rugose coral))

Fontaine, H. & N. Jungyusuk (1997)- Growth bands in Permian corals of Peninsular Thailand. In: Int. Conf. Stratigraphy and tectonics evolution of SE Asia and the South Pacific, p. 83-87.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7624.pdf)
(Massive rugose coral Paraipciphyllum from base of M Permian Ratburi/ Chuping Lst of Peninsular Thailand (= Sibumasu terrane, overlying pebbly mudstones) with growth bands, suggesting seasonal climate. Corals associated with M Permian foram assemblage with Sphairionia, Hemigordius, Pseudofusulina, Nankinella, Langella, etc. Absence of growth bands in mod. diverse M Permian coral assemblage from upper part of limestone (Sinopora, Paraipciphyllum, Chombungia, etc.) at Khao Lan suggests warming climate)

Fontaine, H., S. Kavinate, T.T. Hoang & D. Vachard (2012)- Permian limestone of Peninsular and Western Thailand in Khao Yoi, Cha-am and Thong Pha Phum areas. Natural History Bull. Siam. Soc. 58, p. 39-47.
(online at: www.siamese-heritage.org/nhbsspdf/vol051-060/NHBSS_058_1k_Fontaine_PermianLimestone.pdf)
(Paleontological study of limestones in N Peninsular Thailand (Khao Yoi, Cha-am, Petchaburi Province) and W Thailand. Khao Yoi localities rich in fusulines (Eopolydiexodina megasphaerica) indicating U Murgabian/ M Permian age. In Cha-am District M Permian corals (Paraipciphyllum, Sinopora asiatica) and fusulinids (Yangchienia iniqua). In Thong Pha Phum, Kanchanaburi Province, W Thailand, fossils similar to above, with Sinopora asiatica and Paraipciphyllum, also suggesting M Permian Shan-Thai fauna (=Sibumasu) Block)

Fontaine, H., S. Lovachalasupaporn & B. Sektheera (1990)- Distribution of corals and coral reefs in the Permian of Thailand. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 271-280.
(Reprint of Fontaine et al. (1982) paper in CCOP Newsletter 9, 2. Thailand among richest countries in world in abundance of Permian corals. Coral-bearing Permian limestones common in Thailand, particularly Middle Permian of C Thailand, but not all represent reefs. Peninsular Thailand no reefs in E and Late Permian and only one possible locality in M Permian)

Fontaine, H., S. Lovachalasupaporn, N.D. Tien & D. Vachard (1990)- New data on the Lower Carboniferous in Thailand. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 297-306.
(Reprint of Fontaine et al. 1983, CCOP Newsletter, 10, 1/2, p. 13-18)

Fontaine, H., B. Mistiaen, W. Tantiwanit & T. Tong-Dzuy (1990)- Devonian fossils from Northeast Thailand: some new data from Tabulata and Stromatoporoidea. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 319-330.
(Devonian fossils from 5 areas in NE Thailand. Limestones commonly rich in tabulate and rugose corals (incl. Heliolites, Thamnopora, Phillipsastraea, Favosites, etc.) and Stromatoporoidea (Amphipora, Clathrodictyon))

Fontaine, H. & C. Poumot (1988)- The age of anthracite in Thailand. J. Southeast Asian Earth Sci.2, 1, p. 41-42.
(Anthracite from N of Na Duang, Loei Province, NE Thailand. Overlying shale with Lepidodendron-like plant fossils and palynomorphs Cirratriradites, Apiculatisporites and Cycadopites, suggesting Permian age. May be

equivalent of E Permian coals across Laos border, W of Vientiane, with Permian plants Asterophyllites longifolius and Sigillaria brardi)

Fontaine, H., C. Poumot & B. Songsirikul (1990)- Upper Palaeozoic formations of Northeast Thailand in Devonian and Lower Carboniferous. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 289-296.
(Reprint of Fontaine et al. 1981 in CCOP Newsletter, 8, 4, p., 1-7. Presence of M Devonian- Lower Carboniferous shales, sandstones, limestones, along Mekong River in Loei Province, NE Thailand)

Fontaine, H. & S. Salyapongse (1997)- Unexpected discovery of Early Carboniferous (Late Visean-Serpukhovian) coarals in East Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 48-52.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7620.pdf)
(First E Carboniferous coral fauna in limestones from E Thailand, with Tabulata (solitary Kueichouphyllum and compound Siphonodendron, Solenodendron), Rugosa and abundant Heterocorallia (Hexaphyllia). U Visean warm water fauna. Probably related to Indochina Block)

Fontaine, H. & S. Salyapongse (1997)- Biostratigraphy of East Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 73-82.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7623.pdf)
(Listing of 71 fossiliferous localities in E Thailand. Rel. complete Paleozoic section and possible Precambrian metamorphic rocks. Carboniferous rare. Permian mainly large bodies of limestone, a continuation of limestones in W Cambodia locally rich in fusulinids (Yabeina, Lepidolina). M-L Triassic coral limestones. Widespread Jurassic- Cretaceous continental sediments)

Fontaine, H. & S. Salyapongse (1999)- Oncolitic limestone is widespread in Klaeng area, East Thailand; distribution of this type of limestone in the Triassic of Southeast Asia. In: Proc. Int. Symp. Shallow Tethys 5, Chiang Mai, p. 282-286.
(On Triassic (Scythian - Anisian) limestones with abundant oncolites but few other fossils in E Thailand and SE Asia (overlie latest Permian limestones with Palaeofusulina, Colaniella, Dagmarita, in Klaeng zone = continuation of Sukhothai zone? (Ridd et al. 2011))

Fontaine, H. & S. Salyapongse (2001)- A Murgabian to Lower Triassic sequence exposed from Khao Tham Yai to Khao Pa Khi, Northeast Thailand: a preliminary report. J. Geol. Soc. Thailand 2001, 1, p. 43-47.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7487.pdf)
(>700m thick late M Permian- early Late Permian limestones in Nam Nao district, NE Thailand, overlain by 300m of Late Permian (Lopingian) clastics (= Indochina Plate). Lower part (Murgabian- lower Midian) with fusulinids Colania douvillei, Sumatrina, Verbeekina verbeeki and coral Ipciphyllum. Upper part (U Midian) with fusulinids Lepidolina, Dunbarula, Sumatrina longissima, Kahlerina and common Mizzia algae)

Fontaine, H., S. Salyapongse, Nguyen D. Tien & D. Vachard (2002)- Permian fossils recently collected from limestones of Nan area, North Thailand. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 45-57.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2002/6375.pdf)
(M Permian limestone around Nan, N Thailand, with rugose corals, smaller foraminifera and fusulinids (Pseudodoliolina pseudolepida, Nankinella?, Parawedekindellina?, Parafusulina gigantea, schwagerinids). Also Latest Permian with Colaniella and Paleofusulina? in area. Lower Permian (Asselian-Sakmarian) unknown in area. Of Cathaysian affinity, although Nan area is separated from Indochina block by Nan-Uttaradit suture.)

Fontaine, H., S. Salyapongse, Nguyen D. Tien & D. Vachard (2002)- The Permian of Khao Tham Yai area in Northeast Thailand. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 58-76.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2002/6376.pdf)
(>700m thick, thick-bedded, 45° E-dipping M Permian limestone of Tham Yai hill cave in Nam Nao district, ~360km NNE of Bangkok. Typical Tethyan/ Indochina Block assemblages of fusulinids (incl. Lepidolina, Colania douvillei, Verbeekina verbeeki, Chusenella, Sumatrina, etc.) and mainly massive rugose corals (Ipciphyllum, Multimurinus) (Lower Midian Horizon 3 comparable to Guguk Bulat fauna of Sumatra?)(see also Fontaine & Salyapongse 2001))

Fontaine, H., S. Salyapongse & V. Suteethorn (2003)- Glimpses into fossil assemblages of Thailand: coral perspectives. Natural History Bull. Siam Soc. 51, 1, p. 37-67.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/2003/4927.pdf)
(Review paper of fossil corals of Thailand. Carboniferous, Permian and Triassic corals widespread; Devonian and Jurassic corals locally common; Ordovician and Silurian corals rare and poorly known. Includes Devonian limestone in NE Thailand area near Laos border (possibly Givetian- E Frasnian; affinities with Vietnam and S China) with rich coral faunas, incl. stromatoporoid Chlathrodictyon and tabulate coral Heliolites porosus (= same taxa as reported by Rutten 1940 from NE Kalimantan))

Fontaine, H., S. Salyapongse, V. Suteethorn, P. Tian & D. Vachard (2005)- Sedimentary rocks of the Loei Region, Northeast Thailand: stratigraphy, paleontology, sedimentology. Dept. Mineral Resources, Bangkok, p. 1-165.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/2005/409.pdf)
(Extensive review of Loei region in NE Thailand, near Laos border. Includes Silurian with Heliolites spp. corals. M Devonian limestone with corals Heliolites spp. (incl. H. porosus) and Favosites, common stromatoporoids, and with basalts. Late Devonian- E Carboniferous (Famennian- Tournasian) siliceous shales and chert with radiolaria. Includes overview of Carboniferous of all of Thailand (p. 33-89). Permian of Loei area in marine facies in E-M Permian, in Late Permian in continental facies with Gigantopteris plant fossils and vertebrates (Dicynodon) in nearby Laos. Permian limestones now called Sariburi Lst, with diverse fossil assemblages, incl. common Tubiphytes. E Permian clastics with Agathiceras ammonoid. M Permian limestones with Mizzia, Verbeekina, etc.)

Fontaine, H., S. Salyapongse, V. Suteethorn & D. Vachard (2000)- Widespread occurrence of Triassic limestones Northwest of Uthai Tani in West Thailand. Natural History Bull. Siam Soc. 48, 1, p. 7-19.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2543/6927.pdf)
(Two parallel N-S trending series of limestone hills associated with volcanic rocks in Nan region, NW of Uthai Thani near Laos border, NW Thailand, previously considered Silurian-Devonian and Permian in age, here assigned to Upper Triassic. Abundant coral. Foraminifera include locally common Aulatortus, suggesting likely Norian age)

Fontaine, H., S. Salyapongse, V. Tansuwan & D. Vachard (1997)- The Permian of East Thailand: biostratigraphy, corals, discussion about the division of the Permian system. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 109-127.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Permian limestones common in E Thailand near Cambodian border: In E Roadian lst with Cancellina and Neoschwagerina; in W Capitanian with Yabeina and Lepidolina and abundant coral (incl. Waagenophyllum))

Fontaine, H., S. Salyapongse, C. Utha-aroon & D. Vachard (1997)- Age of limestones associated with gypsum deposits in northeast and central Thailand: a first report, CCOP Newsletter 21, 4, p. 6-10.
(Late Carboniferous limestones with gypsum-anhydrite interbeds in C Thailand (Indochina Block))

Fontaine, H., S. Salyapongse & D. Vachard (1999)- Occurrence of an Upper Permian (Dorashamian) limestone northeast of Klaeng, East Thailand. CCOP Newsletter 24, 2, p. 14-19.

Fontaine, H., S. Salyapongse & D. Vachard (1999)- The Carboniferous of East Thailand- new information from microfossils. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 461-465.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999046.pdf)
(E Carboniferous microfossils from 8 localities in area 70 km east of Chonburi, SE Thailand. In ~1000m thick shale-dominated series with limestone interbeds, highly folded with dips commonly >60°; strike ~N300W.)

Fontaine, H., S. Salyapongse & D. Vachard (1999)- Permian limestones from Chanthaburi to Sakaeo and Upper Carboniferous limestone of Khao Singto, East Thailand. CCOP Newsletter 24, 4, p. 13-17.

Fontaine, H., S. Salyapongse & D. Vachard (2000)- New Carboniferous fossils found in Ban Bo Nam area, Central Thailand. In:Proc. Symposium Mineral, energy and water resources of Thailand: towards the year 2000, Bangkok 1999, p. 201-211.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1999/6617.pdf)
(M-U Carboniferous fossils from black limestone lenses intercalated in basic-intermediate volcanoclastics E of Lam Narai, 250km NE of Bangkok, C Thailand. Rare fusulinds, incl. Profusulinella, Staffella, Protriticites, etc.. Carboniferous volcanic section overlain by E-M Permian limestones (=W margin Indochina Block?; JTvG))

Fontaine, H., S. Salyapongse & D. Vachard (2001)- Widespread occurrence of Triassic limestones in Nan region, northern Thailand and their constraints on age of the associated volcaniclastic rocks. J. Geol. Soc. Thailand 1, p. 15-42.
(online at: http://library.dmr.go.th/library/J-Index/2001/80.pdf)
(Similar to Fontaine et al. (2000). Late Triassic (Carnian, some Norian) limestone outcrops in Nan province, NW Thailand, near Laos border. Rich in algae and Tubiphytes, locally also coral and oncolites. Common smaller foraminifera (mainly Aulotortus). Interbeddeded with rhyolite and rhyolitic tuffs, mainly ignimbrite tuffs (Khao Luang Tuff) (= probably part of Sukhothai Arc terrane; JTvG))

Fontaine, H., S. Salyapongse & D. Vachard (2002)- Paleozoic sediments west of the road from Chiang Khan to Loei and Wang Saphung. J. Geol. Soc. Thailand 1, p. 47-61.
(online at: http://library.dmr.go.th/Document/J-Index/2002/137.pdf)
(Descriptions of various outcrops of clastics-dominated Carboniferous and limestone-dominated E-M Permian in Loei area, N-C Thailand (= W side of Indochina Block; JTvG))

Fontaine, H., N. Sattayarak & V. Suteethorn (1994)- Permian corals of Thailand. CCOP Techn. Bull. 24, p. 1-108.
(Permian corals common and diverse assemblages in SE, Central and NE Thailand, with strong affinities to S China, Vietnam, Cambodia, E Malay Peninsula and Sumatra (Indochina- E Malaya terrane'; JTvG), but unknown in Australia. Peninsular Thailand (= Shan-Thai/ Sibumasu terrane) only rare corals belonging to Tabulata (Sinopora) and solitary Rugosa and with low diversity fusulinids (but absent in E Permian). Peak coral diversity in Thailand in late M Permian (Murghabian= Wordian to Midian= Capitanian), with locally abundant Ipciphyllum, after which coral species diversity dropped 90%. C Thailand coral fauna very similar to Guguk Bulat locality of C Sumatra (p. 38). W Papua Permian faunas, without compound corals, most similar to faunas from Peninsular Thailand (p. 39))

Fontaine, H. & V. Suteethorn (1988)- Late Paleozoic and Mesozoic fossils of West Thailand and their environments. Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, Techn. Bull. 20, p. 1-107.
(Descriptions of Devonian- Jurassic faunas of W Thailand (part of Shan-Thai/ Sibumasu Block). Incl. Toarcian-Aalenian limestones rich in forams, Toarcian limestones rich in Parvamussium donaiense, etc. Followed by 8 additional papers as Appendix 1-8)

Fontaine, H. & V. Suteethorn (1988)- Discovery of widespread Bashkirian limestone northeast of Loei. In: T. Silakul (ed.) Proc. Annual Techn. Mtg. Dept. Geological Sciences, Chiang Mai University, Special Publ. 8, p. 199-206.

Fontaine, H. & V. Suteethorn (1995)- Khao Tham Rusi Laat: Early Permian red limestone. CCOP Newsletter 20, 2, p. 13-18.
(Red limestone at Khao Tham Rusi Laat, W of Lam Narai- Phetchabun road, C Thailand with rel. diverse E Permian coral fauna, incl. solitary Rugosa (Pseudozaphrentoides, ?Caninophyllum), fasciculate Rugosa (Akagophyllum) and massive Rugosa (Chusenophyllum). Associated with few non- age diagnostic foraminifera)

Fontaine, H. & V. Suteethorn (2000)- Devonian and Lower Carboniferous corals found in Ban Na Klang Area, Loei Province, Northeast Thailand. J. Geol. Soc. Thailand 2000, 1, p. 27-33.
(online at: http://library.dmr.go.th/library/J-Index/2000/147.pdf)
(Devonian diverse stromatoporoids and corals and Lower Carboniferous corals in limestones previously mapped as Permian)

Fontaine, H. & V. Suteethorn (2000)- Moscovian to Gshelian coral assemblages in northeastern Thailand: field-relationship between Carboniferous and Permian strata. J. Geol. Soc. Thailand 2000, 1, p. 34-41.
(online at: http://library.dmr.go.th/library/J-Index/2000/148.pdf)
(New M-U Carboniferous (mainly Moscovian) coral limestone localities in Ban Na Duang area, Loei Province, NE Thailand. Overlain by Permian (Asselian) sandstones-limestones and M Permian fusulinid limestone)

Fontaine, H. & V. Suteethorn (2007)- Carboniferous corals of Pang Mapha District in northwest Thailand. Natural History Bull. Siam Society 55, 2, p. 199-221.

Fontaine, H., V. Suteethorn & Y. Jongkanjanasoontorn (1991)- Carboniferous corals of Thailand. CCOP Techn. Bull. 22, p. 1-73.
(Carboniferous corals abundant in C and NE Thailand. In SE and NW only rare solitary Rugosa. Absent or only rare tiny corals without dissipiments in Peninsular Thailand (=Sibumasu terrane; JTvG). Most diverse coral faunas in 'mid-Carboniferous' (Upper Visean- Lower Serpukhovian). Rugosa most common; Tabulata (Syringopora, Chaetetes) rel. rare))

Fontaine, H., V. Suteethorn & D. Vachard (1993)- Carboniferous and Permian limestones in Sop Pong area: unexpected lithology and fossils. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, Chiang Mai University, p. 319-336.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7487.pdf)
(On thick reefal E Carboniferous (Visean)- Late Permian Doi Chiang Dao Limestone in Inthanon Zone of NW Thailand, near Burma border. With diverse fusulinid foraminifera in Late Carboniferous (Triticites, Schubertella), E Permian (Sphaeroschwagerina, Rugofusulina), M Permian (Neoschwagerina, Verbeekina, Sumatrina, Afghanella, primitive Colaniella), more affinities to Indochina than Sibumasu. Also Hemigordius, Mizzia, Permocalculus, etc. Now considered to be Paleotethyan seamount carbonate)

Fontaine, H., V. Suteethorn & D. Vachard (1994)- The Carboniferous corals of Southeast Asia with new discoveries in Laos and Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources and IGCP 306, p. 25-42.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1994/6937.pdf)
(Review of geographic and stratigraphic distribution of Carboniferous corals in SE Asia (generally rare). Sumatra only place in Indonesia with Carboniferous corals: Visean at Muara Gorge in C Sumatra, and Alas River in N Sumatra. W Sarawak lower Terbat Lst is of M-U Carboniferous age, very rare corals. No corals in Carboniferous of Peninsular Thailand or NW Peninsular Malaysia (Sibumasu))

Fontaine, H., V. Suteethorn & D. Vachard (1995)- The Carboniferous of northeast Thailand: a review with new data. J. Southeast Asian Earth Sci. 12, p. 1-17.

(All stages of Carboniferous represented in NE Thailand (Indochina Block), E of Loei. In parts of area overlain by Permian (mainly limestone). M-U Devonian limestone, shale and chert occur occasionally in C and N parts of area. U Tournaisian-Visean and U Carboniferous limestones rich in corals, algae, etc.. Carboniferous of N Thailand affinities with S China, Japan, W Europe, but differs from Peninsular Thailand/ NW Malaysia, where, as in NW Australia, limestone is rare and fusulinids and compound corals are absent)

Fontaine, H., V. Suteethorn & D. Vachard (1998)- Khao Yoi, a Permian limestone hill of the Ratburi area, Peninsular Thailand. CCOP Newslett. 23, 3, p. 12-14.
(Midian-age Ratburi Lst at Khao Yoi with Pseudoalgae (Tubiphytes), algae (Permocalculus), foraminifera (Dagmarita, Hemigordiopsis, Sphairionia, transitional form between Hemigordiopsis and Shanita), corals (Sinopora, fasciculate Waagenophyllidae) (= late M Permian 'Sibumasu Fauna'; JTvG))

Fontaine, H. & W. Tantiwanit (1987)- Discovery of widespread and very fossiliferous Devonian beds in Northeast Thailand. CCOP Newsletter 12, 3, p. 25-26. *(also in CCOP Techn. Publ. 20, p. 315-317)*
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1987/9619.pdf)
(Brief paper on probably M Devonian (Givetian) outcrops of NE Thailand (= Indochina Plate). Composed of shales with brachiopods, chert and thin-bedded limestone with stromatoporoids and corals (Heliolites spp., Phillipsastraea, Favosites, etc.))

Fontaine, H. & W. Tansthein (1987)- The coral *Koninckophyllum* in the Early Carboniferous of Thailand. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 35-37.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2002/6374.pdf)
(E Carboniferous rugose coral genus Koninckophyllum not common in Thailand. Second locality in C Thailand, in M Visean limestone 40 km SW of Phetchabun)

Fontaine, H. & D. Vachard (1981)- Decouvertes de microfaunes Scytho-anisiennes au sud-est de Bangkok: consequences paleogeographiques. Comptes Rendus somm. Soc. Geologique France 2, p. 63-66.
('Discoveries of Scythian-Anisian microfaunas in the SE of Bangkok: paleogeographic consequences')

Foopatthanakamol, A., B. Ratanasthien, H.I. Petersen, P. Wongpornchai & W. Utamo (2008)- Composition and petroleum potential of lake facies in the FA-MS-48-73 well, Mae Soon structure, Fang oilfield, northern Thailand. J. Petroleum Geol. 31, 3, p 317-326.
(Fang Basin Cenozoic rift structure in N Thailand. Fang oilfield includes Mae Soon anticline with well FAMS-48-73, with multiple oil-filled sandstone reservoirs. Organic petrography, etc., shows Type II and III kerogen, consisting mainly of telalginite (Botryococcus-type), lamalginite, etc., suggesting freshwater lacustrine environment. Vitrinite Reflectance values ~0.38- 0.66% Ro, thermally immature for petroleum generation)

Fortey, R.A. (1989)- An Early Devonian trilobite fauna from Thailand. Alcheringa 13, 4, p. 257-267.
(Well-preserved, small Devonian trilobite fauna from limestones in Satun Province, S Thailand (Shan-Tai/ Sibumasu Block). Early Devonian age, probably Emsian. Includes Decoroproetus, Cornuproetus, Platyscutellum and two species of Reedops)

Fortey, R.A. (1997)- Late Ordovician trilobites from southern Thailand. Palaeontology 40, 2, p. 397-449.
(online at: http://cdn.palass.org/publications/palaeontology/volume_40/pdf/vol40_part2_pp397-449.pdf)
(Rich, well-preserved trilobite fauna from U Ordovician (Caradoc)limestone in Satun Province, S Thailand (= Shan Thai/ Sibumasu terrane). Outer shelf assemblage of 39 species, dominated by Ovalocephalus, nileids and remopleuridids. Identical to faunas described from Pagoda Lst of S China, suggesting proximity in Late Ordovician. Two new speciesd: Sculptaspis pulcherrima and Ovalocephalus plewesae)

Fujikawa, M. & T. Ishibashi (1999)- Carboniferous and Permian ammonoids from North Thailand. Mem. Fac. Science, Kyushu University, D, 30, p. 91-110.
(Ammonoids from N Thailand in latest Permian of Lampang (Prototoceras, Paratirolites, Pseudogastrioceras, Pseudotirolites, Tapashanites floriformis, T. changxingensis, Xenodiscus) and Carboniferous from Loei and Sop Pong (Lower Pennsylvanian; Pseudoparalegoceras sp., Gastrioceras, Paralegoceras, Pronorites, etc.)

Fujikawa, M., T. Ishibashi & N. Nakornsri (1999)- Middle Carboniferous cephalopods from Loei area, northern Thailand. In: Ninth Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA '98), Kuala Lumpur, Bull. Geol. Soc. Malaysia 43, p. 467-475.
(online at: www.gsm.org.my/products/702001-100793-PDF.pdf)
(Abundant M Carboniferous cephalopods at 'Barite Mine', N Loei city, N Thailand. Five genera of ammonoids and 5 nautiloids: Branneroceras branneri, Diaboloceras involutum, Syngastrioceras, Neogastrioceras, Bisatoceras, Catastroboceras subsulcatifomae, Epidomatoceras doohylense, Gzheloceras, Temnocheilus and Epistroboceras, indicative of Namurian-Moscovian age. With brief overview of known Late Paleozoic ammonoid localities in Thailand)

Fujikawa, M., K. Ueno, A. Sardsud, W. Saengsrichan, Y. Kamata & K. Hisada (2005)- Early Permian ammonoids from the Kaeng Krachan Group of the Phatthalung-Hat Yai area, southern peninsular Thailand. J. Asian Earth Sci. 24, 6, p. 739-752
(Late E Permian (Kungurian/ Bolorian) small ammonoid fauna with Neocrimites, Agathiceras suessi, A. girtyi and Miklukhoceras from uppermost Kaeng Krachan Gp, ~15m below Ratburi Lst (with Monodiexidina in basal transition beds) on S Peninsular Thailand (= Sibumasu block) suggests these beds are of Kungurian/Bolorian age, slightly younger than previously considered. Environment of Sibumasu Block changed around this time from cool, clastic-dominant shelf to temperate- subtropical, carbonate platform. Ammonoid fauna much less diverse than probably coeval faunas of Timor)

Fukuchi, A., B. Ratanasthien, S. Tanaka, S. Nagaoka & S. Suzuki (2007)- Stratigraphy and sedimentary environment of late Middle‒early Late Miocene Chiang Muan Formation, Phayao Province, Thailand. Nature and Human Activities 11, p. 1-15.
(online at: www.hitohaku.jp/publication/r-bulletin/KiyouE_No11_1-1.pdf)
(Late M- early Late Miocene fluvial Chiang Muan Fm in Chiang Muan Basin of N Thailand ~300m thick and subdivided into five members, incl. two lignite members two mammalian fossil-bearing horizons)

Gabel, J. (1991)- Die marine Trias in Nordthailand: Sedimentation in expandierenden Halbgraben. Ph.D. Thesis, Universitat Gorringen, p. 1-99.
('The marine Trias in North Thailand: sedimentation in expanding half-grabens')

Gardiner, N.J., N.M.W. Roberts, C.K. Morley, M.P. Searle & M.J. Whitehouse (2016)- Did Oligocene crustal thickening precede basin development in northern Thailand? A geochronological reassessment of Doi Inthanon and Doi Suthep. Lithos 240-243, p. 69-83.
(Doi Inthanon and Doi Suthep metamorphic core complexes in N Thailand, exhumed through mobilization of low-angle detachment fault. Previous studies interpreted Late Triassic and Late Cretaceous metamorphic events, followed by ductile extension between Late Eocene- Late Oligocene (detachment at ~40 Ma, culminating in rapid unroofing in E Miocene. Zircon data from Doi Inthanon and Doi Suthep age ranges of 221-210 Ma, ~72 Ma, and 32-26 Ma. Monazite older ages. Data support view of Indosinian basement being reworked in Cretaceous, and indicate late Eocene- Oligocene tectonothermal event. Etc.)

Garson, M.S. & A.H.G. Mitchell (1970)- Transform faulting in the Thai Peninsula. Nature 228, 5266, p. 45-47.
(Angular feature in Phuket area of peninsular Thailand projecting into Andaman Sea is physiographic expression of two major transcurrent faults with total sinistral displacement of at least 200 km)

Garson, M.S., B. Young, A.H.G. Mitchell & B.A.R.Tait (1975)- The geology of the tin belt in Peninsular Thailand around Phuket, Phang Nga and Takua Pa. Inst. Geol. Science, Overseas Division, Mem. 1, Bangkok, p. 1-112.
(Ridd 2009: diamonds found while dredging for tin, presumed reworked into E Permian diamictite from kimberlite exposed on Gondwana)

Geard, A. (2008)- Geology of the Klaeng region (Southeast Thailand): lithology, structure and geochronology. B.Sc. Honours Thesis, University of Tasmania, Hobart, p. *(Unpublished)*

George, A.D., S. Lazar & J. Booth (2012)- Mounds and boundstone facies in the Late Carboniferous- Early Permian Pha Nok Khao Formation-equivalent of the Loei Syncline, Loei-Phetchabun foldbelt: implications for reservoir quality. Int. Petrol. Techn. Conf., Bangkok 2012, 4, IPTC 15256, p. 3026-3031. *(Extended Abstract)*
(Late Carboniferous- E-M Permian carbonate platforms major petroleum reservoirs in Khorat region of NE Thailand (Indochina Terrane). Carbonate platforms initiated on fault blocks formed during Late Carboniferous rifting. Outcrop analog study in N part of Loei-Phetchabun Foldbelt shows diverse platform-margin boundstones, incl. sandy shoal facies with Tubiphytes and phylloid algal mounds)

Getahun, B. & B. Ratanasthien (1993)- *Botryococcus* algae in oil source rocks, Fang Basin, northern Thailand. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 2, p. 337-346.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7488.pdf)
(Oligocene- E Miocene (pre-Florschuetzia) Mae Sot Fm in well IF 30 03S in intermontane Fang Basin, N Thailand, with basal lacustrine facies rich in Botryococcus algae and higher plant exinite. Botryococcus-rich layers occur between Nypa-rich palynological assemblages, suggesting brackish- deltaic influence)

Gibling, M. R. & B. Ratanasthien (1980)- Cenozoic basins of Thailand and their coal deposits: a preliminary report. Bull. Geol. Soc. Malaysia 13, p. 27-42.
(online: https://gsmpubl.files.wordpress.com/2014/09/bgsm1980009.pdf)
(Many N-S trending Cenozoic basins in Thailand, especially in N (43 named basins), in Chao Phraya basin and Gulf of Thailand. Tertiary in onshore basins generally <3000m thick, locally >4000m in Gulf of Thailand. Locally common coal (up to 35m thick seams) and lacustrine oil shales (up to 15m thick beds). Plant fossils suggest oldest rocks possibly Late Eocene in age)

Gibling, M.R., C. Tantisukrit, W. Uttamo, T. Thanasuthipitak & M. Haraluck (1985)- Oil shale sedimentology and geochemistry in Cenozoic Mae Sot Basin, Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 69, 5, p. 767-780.
(Intermontane Mae Sot basin, NW Thailand, with carbonate-rich oil shales. Laminated deposits with fish and plant fragments as main megafossils. Mappable oil shale sequences 10m thick, interstratified with marl-sandstone sequences 70m thick. Oil shales formed in perennial stratified lakes. Episodic deposition of oil shales reflects changes in lake level, probably due to climatic fluctuations on 24- 46kyr scale)

Gibling, M.R., Y. Ukakimaphan & S. Srisuk (1985)- Oil shale and coal in intermontane basins of Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 69, 5, p. 760-766.
(Mae Tip intermontane basin of NW Thailand contains Cenozoic oil shales in beds up to 1m thick, interbedded with coal and mudstone. Oil shales contain lamosite-type alginite. Beds laterally continuous for at least 1.5 km, but pass into mudstones toward basin margin. Oil shales originated when peat swamps were flooded by shallow lakes. Locally high geothermal gradients suggest potential for hydrocarbons)

Ginsburg, L. (1983)- The land vertebrates and plants of the Tertiary of Northern Thailand : stratigraphic and tectonic implication. In: Conf. Geology and Mineral Resources of Thailand, Bangkok, p. 198-201.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1983/10571.pdf)
(Tertiary lignites of N Thailand (Khon Khaen area) two groups: Li Gp and Mae Moh Gp. Both groups associated with mammal fossils and both appear to be of Late Miocene age)

Ginsburg, L. (1989)- The fossils mammals of Pong (Phayao) and the age of some intermontane basins of northern Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Proc. Int. Symposium Intermontane basins, Chiang Mai 1989, Chiang Mai University, p. 196-204.

Ginsburg, L., R. Ingavat & P. Tassy (1983)- *Siamogale thailandica*, un nouveau Mustelidae (Carnivora, Mammalia) neogene du Sud-Est asiatique. Bull. Soc. Geologique France, 25, 6, p. 953-956.
(New otter species from M-L Miocene of Mae Moh lignite mine, N Thailand)

Ginsburg, L. & P. Mein (1987)- *Tarsius thailandica* nov. sp., first fossil Tarsiidae (Primate, Mammalia) of Asia. Comptes Rendus Academie Sciences, Paris, Serie 2, 304, 19, p. 1213-1215.

Ginsburg, L., P. Mein & P. Tassy (1991)- The Miocene of Li Basin, Changwat Lumphun, Thailand. In: Annual Techn. Meeting 1989 and IGCP-246, Chiang Mai University, p. 101-109.

Ginsburg, L. & P. Tassy (1985)- The fossil mammals and the age of the lignite beds in the intermontane basins of Northern Thailand: J. Geol. Soc. Thailand. 8, 1-2, p. 13-27.
(online at: http://library.dmr.go.th/Document/J-Index/1985/20.pdf)
(Lignite sequences in Tertiary intermontane basins of N Thailand traditionally divided in Eocene (Li Fm; based on study of poor flora by Endo (1963)) and Upper Miocene (Mae Moh Fm; based on mastodon molar identified as Stegolophodon by Von Koenigswald 1959. Also with fossil frogs, Siamogale (Thai otter)). New mammal discoveries suggest age in late part of M Miocene)

Ginsburg, L. & Y. Ukkakimaphan (1983)- A new cervid from the South Asia Miocene and the age of the intermontane basins of North Thailand. Comptes Rendus Academie Sciences, Paris 297, Ser. 2, p. 297-300.

Glenister, B.F., W.M. Furnish, Z. Zhou &M. Polahan (1990)- Ammonoid cephalopods from the Lower Permian of Thailand. J. Paleontology 64, 3, p. 479-780.
(Brief note on discovery of Lower Permian ammonoid fauna in 'Ratburi Lst' at Amphoe Muaglek, S-C Thailand,~150 km NE of Bangkok. Four species identified: Miklukhoceras cf. M. pamiricum, Agathiceras mediterraneum, Perrinites cf. P. hilli, Prostacheoceras cf. P. oshense. Advanced perrinitid suggestive of Late Artinskian (Baigendzhinian). Ecologically, Thai ammonoids close to assemblages of SW China and Pamir, and minimal similarities to faunas of S China or Boreal biogeographic assemblages of W Australia. No figures)

Glumglojit, S. & Akkhapun Wannakomol (2011)- Undiscovered hydrocarbon resources of Chonnabot Prospect, Northeast Thailand. Suranaree J. Science Technol. 18, 2, p. 89-97.
(online at: http://ird.sut.ac.th/e-journal/document/contents/Journal18(2)/vol.%2018%20no.2%20part%201.pdf)
(Assessment of undiscovered hydrocarbon resources in Permian carbonate prospect in NE Thailand. Probabilistic play analysis mean estimates 15 MMB Oil and 657 BCF of non-associated gas)

Gocht, W. & E. Pluhar (1982)- Types of Phuket pegmatites with special reference to Ta-rich ores. In: A.M. Evans (ed.) Mineralization associated with acid magmatism, Wiley, New York, p. 91-99.

Gocht, W. & C. Strobel (1982)- Classification of tin-bearing pegmatites in Phuket, Thailand. In: T. Thanasuthipak (ed.) Proc. Ann. Technical Meeting, Dept. Geol. Sci., Chiang Mai University, Spec. Publ. 4, p. 143-153.
(Kathu Valley on Phuket Island two types of tin-bearing pegmatites: Sn-Ta pegmatites (or albite-muscovite pegmatites) and Sn- Rare earth element (REE) pegmatities (or orthoclase-lepidolite pegmatites). Pegmatites intruded into Late Paleozoic (meta-) sediments of Phuket Group. Sn-Ta pegmatites in areas close to granite body; more complex Sn-REE pegmatites located further (2-4 km) from source granite)

Grant, R.E. (1976)- Permian brachiopods from southern Thailand. Palaeont. Soc. Memoir 9 (J. Paleontology 50, 3, Supplement), p. 1-269.
(Descriptions of 109 species/ 81 genera of silicified brachiopods from Permian 'Rat Buri Limestone' in 7 localities along S Peninsula of Thailand. Indicate late Artinskian (Baigendzinian) age and many similarities with Bitauni fauna of Timor. Paleogeographic setting of Thailand faunas interpreted to be near E end of Tethys Sea in fairly warm- shallow waters with access to cooler, Boreal regions (=Sibumasu Terrane; results questioned by Waterhouse (1981); characterized as Stereochia-Meekella fauna by Fang (1994) (JTvG))

Gregory, J.W. (1930)- Upper Triassic fossils from Burmo-Siamese frontier: the Thaungyin Trias and description of the corals. Records Geol. Survey India 63, p. 155-166.

(Fossils collected by Cotter from Late Triassic (Norian-Rhaetian) reefal Kamawkale Limestone on N Thailand-Myanmar border between Tak and Kanchanaburi Provinces. Corals revised by Beauvais (1988) and identified as M-L Jurassic species)

Griffin, W.L., T.T. Win, R. Davies, P. Wathanakul, A. Andrew, I. Metcalfe & P. Cartigny (2001)- Diamonds from Myanmar and Thailand: characteristics and possible origins. Economic Geology 96, p. 159-170.
(online at: http://www.ipgp.fr/~cartigny/2001-EconGeol-Griffinetal.pdf)
(No obvious primary sources for diamonds in modern alluvial deposits in Myanmar, Thailand and Sumatra. Rounded and polished surfaces of most diamonds reflect resorption in corrosive magma. Abrasion and brown radiation damage spots suggest long surface transport. Distribution within Sibumasu terrane and close association with Carboniferous-Permian glacial-marine sediments suggest diamonds derived from primary sources in NW Australia or within terrane)

Grote P. (2007)- Studies of fruits and seeds from the Pleistocene of northeastern Thailand. Courier Forschungsinstitut Senckenberg 258, p. 171-181.
(Middle (or Early?) Pleistocene fluvial deposits in Nakhon Ratchasiam provonce with plant remains(endocarp and dipterocarp fruits, seeds, leaves, wood, tubers, amber, pollen), suggestive of tropical mixed deciduous and dry evergreen forests. Also vertebrate fossils of fish, turtles, gavials, bovids, deer, Stegodon and hyena)

Hada, S., S. Khosithanont, H. Goto, H. Fontaine & S. Salyapongse (2015)- Evolution and extinction of Permian fusulinid fauna in the Khao Tham Yai Limestone in NE Thailand. J. Asian Earth Sci. 104, p. 175-184.
(Limestone unit within Khao Tham Yai Lst deposited in shelf setting on Indochina Block without clastic beds. Ranges in age from Wordian (middle M Permian)- Wuchiapingian (lower U Permian). Three fusulinid zones, in ascending order: Colania, Lepidolina (with abundant large fusulinids) and Codonofusiella. Boundary between Guadalupian (M Permian) and Lopingian (U Permian) defined by extinction of large Verbeekinids and Schwagerinids to domination of small Schubertellids (similar pattern evolution at Guadalupian-Lopingian boundary in shallow-water Tethyan shelf areas and mid-Panthalassa). Also common Mizzia algae)

Hagen, D. & E. Kemper (1976)- Geology of the Thong Pha Phum area (Kanchanaburi province, western Thailand). Geol. Jahrbuch B21, p. 53-91.
(On Paleozoic-Jurassic 'Sibumasu' rocks in W Thailand, including Permian limestone with fusulinids ('Polydiexodina'; but not as rich as other parts of Thailand), Hemigordius, Tubiphytes, etc. M Jurassic limestone with Thaumatoporella parvovesiculifera algae and foram Lucasella kaempferi)

Hahn, L. (1976)- The stratigraphy and palaeogeography of the nonmarine Mesozoic deposits in northern Thailand. Geol. Jahrbuch B21, p. 155-169.
(On 1750-2000m thick red, non-marine Upper Triassic (Norian)- M Jurassic clastics of N Thailand. With ms2 horizon (Rhaetian?) of abundant rhyolite, rhyodacite and andesite. Units can be correlated with continental red series of Khorat Plateau. Overlie U Triassic (Carnian) marine rocks with Juvavites, Halobia cf. comata, Paleocardita cf. buruca)

Hahn, L. (1982)- The Triassic in Thailand. Geol. Rundschau 71, 3, p. 1041-1056.
('Indosinian Orogeny' tectonics in Thailand between Permian and Jurassic. Strong orogenic movements in Norian. Two Triassic sedimentation cycles: Scythian- E Norian marine facies and Norian- Rhaetian/ Liassic terrestrial. Sediment facies and distribution of igneous rocks due to subduction of oceanic crust, starting in Carboniferous, and to collision of Eurasian and Indochina Plates in Norian)

Hahn, L. (1982)- Stratigraphy and marine ingressions of the Mesozoic Khorat Group in northeastern Thailand. Geol. Jahrbuch B43, 35, p. 7-35.
(Jurassic-Cretaceous of Khorat Gp of NE Thailand deposited in predominantly fluvio-lacustrine environment. Climate was semi-arid to arid, with subtropical humid intervals. Several horizons in M-U Jurassic with bivalves and plesiosaur and ichthyosaurus teeth evidence of episodic marine transgressions)

Hahn, L., K.E. Koch & H. Wittekindt (1986)- Outline of the geology and the mineral potential of Thailand. Geol. Jahrbuch B59, p. 3-49.

Hahn, L. & M. Siebenhuner (1982)- Explanatory notes (paleontology) on the geological maps of Northern and Western Thailand 1:250,000 (Sheets Nan, Chiang Rai, Phayao, Chiang Dao, Chiang Mai, Li, Thong Pha Phum). Bundesanstalt fur Geowissenschaften und Rohstoffe, Hannover, p. 1-76.

Haile N.S. (1973)- Note on Triassic fossil pollen from the Nam Pha Formation, Chulabhorn Nam Phrom Dam, Thailand. Newsletter Geol. Soc. Thailand 6, 1, p. 15-16.
(Mostly Late Triassic Ovalipollis lunzensis, Cycadopites carpentieri and Alisporites sp.)

Haile, N.S. & D.H. Tarling (1973)- Note on the reversed magnetism of young Cainozoic basalts near Lampang, Northern Thailand. In: Proc. Conf. Geology of Thailand, Chiang Mai University Spec. Publ. 1, 2, p. 66-73.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1975/7390.pdf)
(Reverse magnetic polarity near base of Pleistocene Lampang basalts (see also Barr et al. 1976))

Haines, P.W., K.T. Howard, J.R. Ali, C.F. Burrett & S. Bunopas (2004)- Flood deposits penecontemporaneous with 0.8 Ma tektite fall in NE Thailand: impact-induced environmental effects? Earth Planetary Sci. Letters 225, 1-2, p. 19-28.
(Tektite-bearing flood deposits in NE Thailand penecontemporaneous with impact event of Pleistocene SE Asia-Australian tektite strewn field. Major flood events consistent with effects of regional deforestation, increased run off and erosion, etc., expected in aftermath of major impact event)

Hamada, T. (1964)- Two Carboniferous brachiopods from Loei, Thailand. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 177-189.
(M Carboniferous brachiopods from Loei Province, N Central Thailand: Purdonella magna n.sp. and Brachythyrina strangwaysi. With review of Carboniferous fossil localities in other mainland SE Asia countries)

Hamada, T. (1964)- Some Middle Ordovician brachiopods from Satun, Southern Thailand. In: T. Kobayshi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 279-289.
(Black calcareous shale in Satun are of Peninsular Thailand contains M Ordovician shelly fauna, incl. 6 species of brachiopods: Cyrtonotella spp., Rafinesquina, Opikina)

Hamada, T. (1968)- *Swaicoelia*, a new Ambocoeliid genus (Brachiopoda) from north Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 1-12.
(Common but low-diversity amboceliid brachiopods assemblage in red mudstones SW of Fang, 108km N of Chiang Mai, N Thailand. Near outcrops with E Devonian graptolites. Age likely U Devonian. New genus and species Swaicoelia rotunda (part of Sibumasu/ Shan-Tai Terrane))

Hansawek, R., W. Pongsapich & S. Vedchakanchana. (1986)- Tin-tungsten mineralized granite at Mae Chedi area, Wiang Pa Pao District, Chiang Rai Province, Northern Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 423-471.

Hansberry, R.L., A.S. Collins, R.C. King, C.K. Morley, A.P. Gize, J. Warren, S.C. Loehr & P.A. Hall (2015)- Syn-deformation temperature and fossil fluid pathways along an exhumed detachment zone, Khao Khwang fold-thrust belt, Thailand. Tectonophysics 655, p. 73-87.
(Upper-level detachment zone in exhumed Khao Khwang fold-thrust belt of C Thailand, with illite crystallinity indicating deep diagenetic to low anchizonal conditions, and T of ~160-210 °C in shale detachment, interpreted as peak metamorphic conditions during Triassic Indosinian Orogeny. Positive association between organic carbon content in the shales and spacing and complexity of deformational structures)

Hansberry, R.L., R. King, A.S. Collins & C.K. Morley (2014)- Complex structure of an upper-level shale detachment zone: Khao Khwang fold and thrust belt, Central Thailand. J. Structural Geol. 67, p. 140-153.

(On newly identified upper-level detachment zone in shale unit in Khao Khwang fold- thrust Belt, C Thailand)

Hansen, B.T. & K. Wemmer (2011)- Age and evolution of the basement rocks in Thailand. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 19-32.

Hansen, B.T., K. Wemmer, M. Eckhardt, P. Putthapiban & S. Assavapatchara (2016)- Isotope dating of the potash and rock salt deposit at Bamnet Narong, NE Thailand. Open J. of Geology 6, p. 875-894
(online at: https://goedoc.uni-goettingen.de/handle/1/14086)
(Age determination of Cretaceous evaporite (halite, anhydrite) of Maha Sarakham Fm in samples from Bamnet Narong Asian Potash Mine, at W edge of Khorat Plateau/ Basin. Multiple isotopic approaches (K/Ar, K/Ca and Sr) suggest depositional age from ~93 Ma to <76 Ma (Cenomanian- Campanian), in agreement with Aptian-Albian ages from vertebrate fossils from underlying non-marine Khok Kruat Fm)

Hansen, B.T., K. Wemmer, P. Putthapiban, I.C. Kleinhanns & F. Wilsky (2014)- Do U/Pb-SHRIMP dating and Pb stepwise leaching (PbSL) analyses confirm the lack of Precambrian Basement outcrops in Thailand? Open Journal of Geology 4, 10, p. 505-517.
(online at: http://dx.doi.org/10.4236/ojg.2014.410037)
(Zircon dating and Pb stepwise leaching experiments on garnets suggest absence of Precambrian outcrops in crystalline basement of Thailand. High grade metamorphism show Indosinian ages (225-200 Ma) for vast majority of outcrops in NW Thailand, and small group of ages of ~445 Ma (~Ordovician-Silurian boundary) in Lampang Province. Age of thermal imprint at ~60 Ma confirmed near Surat Thani, Peninsular Thailand)

Hanta, R., B. Ratanasthien, Y. Kunimatsu, H. Saegusa, H. Nakaya & P. Chintasakul (2005)- Description of the Tha Chang *Merycopotamus* and its preserved condition. In: L. Wannakao et al. (eds.) Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (GEOINDO 2005), Khon Kaen, p. 600-605.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2005/9383.pdf)
(Well-preserved anthracothere skull from sandpit in NE Thailand assigned to Merycopotamus. Related to Late Miocene M. medioximus from Pakistan)

Hanta, R., B. Ratanasthien, Y. Kunimatsu, H. Saegusa, H. Nakaya & P. Jintasakul (2008)- A new species of Bothriodontinae, *Merycopotamus thachangensis* (Cetartiodactyla, Anthracotheriidae) from the Late Miocene of Nakhon Ratchasima, northeastern Thailand. J. Vertebrate Paleontology 28, 4, p. 1182-1188.
(online at: http://www.khoratgeopark.com/kgp/researchs/2008_Hanta%20et%20al.pdf)
(Merycopotamus thachangensis n.sp.(Cetartiodactyla, Anthracotheriidae) from sand pit in Tha Chang. Nearly complete cranium of first known Merycopotamus in Thailand. Mixture of derived and primitive features, most likely Late Miocene age, possibly late late Miocene)

Hara, H., Y. Kon, T. Usuki, Y.L. Ching, Y. Kamata, K. Hisada, K. Ueno, T. Charoentitira & P. Charusiri (2013)- U-Pb ages of detrital zircons within the Inthanon Zone of the Paleo-Tethyan subduction zone, northern Thailand: new constraints on accretionary age and arc activity. J. Asian Earth Sci. 74, p. 50-61.
(U-Pb dating of detrital zircons in lithic and basaltic sandstones from Inthanon Zone melange in N Thailand (W margin of Sukhothai Arc). Peak ages 3400-3200, 2600-2400, 1000-700, 600-400, and 300-250 Ma, similar to zircons in other circum-Paleo-Tethys subduction zones. Two types of sandstone:(1) with Late Carboniferous youngest zircon ages of ~300, 308 Ma, older than associated radiolarian chert blocks in same outcrop; (2) with youngest zircon ages of ~238 Ma, suggesting M Triassic maximum depositional age and peak magmatism in Sukhothai Arc. Youngest detrital zircons in Type 1 sandstones from Late Carboniferous- E Permian 'missing' arc, suggesting Sukhothai Arc was active during sedimentation. Significant M Triassic arc magmatism inferred from zircon age peaks in Type 2 sandstones and igneous rock record of Sukhothai Arc)

Hara, H., M. Kunii, K. Hisada, K. Ueno, Y. Kamata, W. Srichan, P. Charusiri, T. Charoentitirat et al. (2012)- Petrography and geochemistry of clastic rocks within the Inthanon zone, northern Thailand: implications for Paleo-Tethys subduction and convergence. J. Asian Earth Sci. 61, p. 2-15.
(Two types of clastic rocks in Paleo-Tethys convergence zone at Inthanon Zone, N Thailand: (1) lithic sst-shale in Permo-Triassic accretionary complex (35% from Sukhothai Zone volcanic rocks, 65% Indochina

craton sst); and (2) Carboniferous quartzose sst- mudstone in Sibumasu Block (continental margin). Paleo-Tethys subduction caused continental island arc in Sukhothai Zone, with Late Permian-Triassic forearc basins and M- early Late Triassic volcanism and accretionary complex formation)

Hara, H., M. Kunii, Y. Miyake, K. Hisada, Y. Kamata, K. Ueno, Y. Kon, T. Kurihara, H. Ueda, S. Assavapatchara, A. Treerotchananon, T. Charoentitirat & P. Charusiri (2017)- Sandstone provenance and U-Pb ages of detrital zircons from Permian-Triassic forearc sediments within the Sukhothai Arc, northern Thailand: record of volcanic-arc evolution in response to Paleo-Tethys subduction. J. Asian Earth Sci. 146, p. 30-55.
(Provenance analysis and U-Pb dating of detrital zircons in Permian-Triassic forearc sediments from Sukhothai Arc in N Thailand clarify evolution of missing arc system associated with Paleo-Tethys subduction. Turbidite-dominated forearc sediments include Permian- Late Triassic formations. Initial Sukhothai Arc (Late Carboniferous- E Permian) developed as continental island arc. Magmatic quiescence in M- early Late Permian. Latest Permian- early Late Triassic Sukhothai Arc activity with E-M Triassic I-type granites, evolution of accretionary complex, and abundant supply of volcanic sediments to trench through forearc basin. Sukhothai Arc became quiescent as Paleo-Tethys closed after Late Triassic)

Hara, H., T. Kurihara, J. Kuroda, Y. Adachi, H. Kuritae, K. Wakita, K. Hisada, P. Charusiri, T. Charoentitirat & P. Chaodumrong (2010)- Geological and geochemical aspects of a Devonian siliceous succession in northern Thailand: implications for the opening of the Paleo-Tethys. Palaeogeogr. Palaeoclim. Palaeoecology 297, p. 452-464.
(Opening of Paleo-Tethys reconstructed, using radiolarian fossils and geochemistry of Devonian siliceous succession in Chiang Dao area of N Thailand. Rock types: black shale (Lower Devonian), siliceous shale (M Devonian), tuffaceous chert and tuff (M-U Devonian), and chert (U Devonian). Succession deposited in continental margin and pelagic environments between Sibumasu and Indochina-North China blocks. Initial Paleo-Tethys developed as small, closed anoxic-suboxic oceanic basin in E-M Devonian, close to continental margin. Opening of Paleo-Tethys started around M-U Devonian boundary, marked by voluminous volcanic activity. Ash and pumice in chert derived from continental source. After Late Devonian, Paleo-Tethys developed as deep, broad ocean in which pelagic chert was deposited)

Hara, H., J. Kuroda, T. Kurihara, K. Wakita & P. Chaodumrong (2008)- Depositional environment related to Paleo-Tethys opening during Devonian: new insights from Total Organic Carbon analysis of siliceous rocks in the Chiang Dao Area, Northern Thailand. Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok, p. 339-340. *(Extended Abstract)*
(online at: www.geo.sc.chula.ac.th/Geology/English/News/Technique/GREAT_2008/PDF/102.pdf)
(Devonian siliceous rocks in Chiang Dao area, N Thailand, with basal organic black shale with E Devonian graptolites, brachiopods and conodonts. Upward decrease of TOC values indicates opening history of Paleo-Tethys during Devonian, with change from anoxic conditions in E-M Devonian to oxic siliceous rocks in Late Devonian. Late Devonian mud, organic matter and pumice tuff still derived from continental margin. After Carboniferous pelagic chert was distributed in deep ocean with development of Paleo-Tethys Ocean)

Hara, H., T. Tokiwa, T. Kurihara, T. Charoentitirat, A. Ngamnithiporn, K. Visetnat, K.Tominaga, Y. Kamata & K. Ueno (2018)- Permian-Triassic back-arc basin development in response to Paleo-Tethys subduction, Sa Kaeo-Chanthaburi area in Southeastern Thailand. Gondwana Research 64, p. 50-66.
(Sa Kaeo Back-arc Basin in SE Thailand developed behind Sukhothai Arc along W margin of Indochina Block during Permian-Triassic subduction of Paleo-Tethys. Two lithologic units:(1) Thung Kabin Melange, of back-arc basin basalts, chert, limestone and sandstone, along with melange; (2) Pong Nam Ron Fm thick clastic sediments, deposited over oceanic rocks of TKK melange. Detrital zircons youngest grain early Late Triassic, youngest cluster latest Permian- earliest Triassic, also Paleozoic and Proterozoic zircon ages. Tectonic evolution: (1) E Permian spreading,with basaltic magmatism, (2) subsidence during inactive period of Sukhothai Arc into M Triassic, with formation of Permian cherts- limestones and M Triassic cherts; (3) Triassic clastic sedimentation and eventual closing of basin. Clastics sourced from back-arc basin basalts, felsic volcanics of Sukhothai Arc and continental Indochina Block (Paleozoic and Proterozoic zircons))

Hara, H., K. Wakita, K. Ueno, Y. Kamata, K. Hisada, P. Charusiri, T. Charoentitirat & P. Chaodumrong (2009)- Nature of accretion related to Paleo-Tethys subduction recorded in northern Thailand: constraints from melange kinematics and illite crystallinity. Gondwana Research 16, 2, p. 310-320.
(Reconstruction of accretion process of Paleo-Tethys subduction in N Thailand shows trend of Paleo-Tethys subduction zone was N80°E, indicating Paleo-Tethys subducted N-ward beneath Indochina Block from Permian- Triassic)

Harnpattanapanich, T. (2008)- Phitsanulok thrust and fold belt: geologic evidences from Kwai Noi Dam. In: Proc. Int. Symp. Geoscience resources and environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok, p. 73-83.

Hasegawa, H., S. Imsamut, P. Charusiri, R. Tada, Y. Horiuchi & K. Hisada (2010)- óThailand was a desert' during the mid-Cretaceous: equatorward shift of the subtropical high-pressure belt indicated by eolian deposits (Phu Thok Formation) in the Khorat Basin, northeastern Thailand. Island Arc 19, 4, p. 605-621.
(online at: http://www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper_2/106.pdf)
(Paleo-wind directions in M Cretaceous eolian sandstones of Phu Thok Fm (~126- 95 Ma; lateral equivalent of evaporite formations?) show Khorat Basin in NE trade wind belt. Subtropical high-pressure belt was N of area during initial deposition, immediately above basin during main phase of deposition, then shifted N again to N of basin during final deposition. Similar age eolian sandstone in Sichuan Basin, S China. Suggest development of low-latitude desert and equatorward shift of subtropical high-pressure belt in mid-Cretaceous)

Hashimoto, W, S. Buravas & S. Kudo (1968)- On the source rock of the Mae Fang oil field, North Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 68-77.
(Mae Fang oil field in Mio-Pliocene lacustrine sediments of Cenozoic Mae Fang intermontane basin in NW Thailand. Nearby dark Early Paleozoic graptolite shales, but no obvious source rocks)

Hayami, I. (1968)- Some non-marine bivalves from the Mesozoic Khorat Group of Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 100-107.
(Early paper on Cretaceous non-marine bivalves from Khorat Group)

Heggemann, H. (1993)- Sedimentare Entwicklung der Khorat-Gruppe (Ober-Trias bis Palaogene) in NE und N-Thailand. Doct. Thesis, Gottinger Arbeiten Geologie Palaontologie 63, p. 1-146.
(online at: www.geomuseum.uni-goettingen.de/museum/publications/images/GAGP/pdf/GAGP_Nr%2063_Heggemann_Heiner.pdf
('Sedimentary development of the Khorat Group (Upper Triassic to Paleogene) in NE and N Thailand'. Extensive descriptions of sedimentology of >4000m fluvial-dominated redbeds, with some lacustrine and brackish deposits, representing 'molasse fcaies' after Indosinian orogeny (Paleotethys closure). Includes Late Triassic half-grabens with acid-intermediate volcanic rocks, Jurassic redbeds indicate increasing aridity, Lower Cretaceous Maha Sarakham evaporites up to 890m thick)

Heggemann, H., D. Helmcke & K.W. Tietze (1994)- Sedimentary evolution of the Mesozoic Khorat Basin in Thailand. Zentralblatt Mineralogie Geol. Palaont., I, 1992, 11-12, p. 1267-1285.
(Khorat Basin of NE Thailand extends into Cambodia, Vietnam, Laos and SW China (Yunnan). After compressional deformation along Nan-Uttaradit suture (Phetchabun fold-thrust belt) Late Triassic extensional tectonics led to formation of half-grabens, followed by larger scale subsidence in Jurassic- Early Cretaceous. Up to 4000m of Latest Triassic- E Cretaceous fluvial-continental redbeds with lacustrine and brackish deposits)

Heggemann, H., R. Khoring & T.H. Schluter (1990)- Fossil plants and arthropods from the Phra Wihan Formation, presumably Middle Jurassic, of northern Thailand. Alcheringa 14, p. 311-316.
(Fossil plants, conchostracan crustaceans (Cyzicus sp.) and insects (Blattodea, Procercopina thailandica n.sp.) from lacustrine sediments of M Jurassic? age from Phra Wihan Fm in N Thailand)

Heggemann, H., K.W. Tietze & D. Helmcke (2003)- The river system of the Phra Wihan Formation, Thailand. In: Festschrift Behr, Gottinger Arbeiten Geologie Palaeontologie, Sonderband SB5, p. 23-32.
(online at: www.geomuseum.uni-goettingen.de/museum/publications/images/GAGP/...)
(Fluvial sedimentology of quartzitic sandstones of ~700m thick E Cretaceous Pra Wihan Fm, in middle part of Khorat Gp, Khorat Basin. General evolution from bed-load (braided) streams tor mixed-load (meandering), to suspended-load (meandering to anatomising) rivers. Paleocurrent measurements suggest source rock areas to N and NE of Khorat Basin. Petrified tree fragments (Dadoxylon (Araucarioxylon)) in channel-lag deposits)

Heim, A. & H. Hirschi (1939)- A section of the mountain ranges of North-Western Siam. Eclogae Geol. Helvetiae 32, p. 1-16.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1939:32::279&subp=hires)
(Description of 80km W-E traverse from Rameng to Mesod at Burma border, carried out in 1935. Includes description of Tertiary lacustrine oil shales in Mesod Basin. Rock types: Metamorphic rocks, ?Carboniferous shales-quartzite, ?Permo-Carboniferous recrystallized limestone, loose block of M Permian fusulinid limestone (Neoschwagerina, Verbeekina, Pseudofusulina, Sumatrina), Triassic green shale and limestone with Daonella, etc.. Evidence for longitudinal stretching)

Helmcke, D. (1984)- The orogenic evolution (Permo-Triassic) of central Thailand. implications on palaeogeographic models for mainland S.E. Asia. Mem. Soc. Geologique France, N.S.147, p. 83-91.

Helmcke, D. (1986)- On the geology of Petchabun Fold Belt (Central Thailand): implications for the geodynamic evolution of mainland SE Asia. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 79-85.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986007.pdf)
(Petchabun fold-thrust belt in C Thailand with Permian succession indicative of Late Variscan (Permian) orogeny, not Late Triassic continent/continent-collision between Indosinia and Shan-Thai Cratons. Main orogenic event, accompanied by low grade metamorphism, already during Late Devonian- E r Carboniferous)

Helmcke, D. (1994)- Distribution of Permian and Triassic syn-orogenic sediments in Central Mainland SE-Asia. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, IGCP 306, Bangkok 1994, Dept. Mineral Res., p. 123-128.
(Permian syn-orogenic sediments known from Phetchabun region, but N and S continuation unclear. Triassic syn-orogenic sediments described Lampang and Phrae regions, but not true flysch. True syn-orogenic sediments discovered in Mae Sariang region, NW Thailand)

Helmcke, D., C. Chonglakmani, Q. Feng & R. Ingavat-Helmcke (2002)- Contributions to the Paleozoic evolution of Northern Thailand. In: In: Geodynamic processes of Gondwanaland-derived terranes in East and Southeast Asia, their crustal evolution, emplacement and natural resources potential, Fourth Symp. ICGP Proj. 411, Phitsanulok 2002, p. 20-23.

Helmcke, D. & C. Kraikhong (1982)- On the geosynclinal and orogenic evolution of Central and Northeast Thailand. J. Geol. Soc. Thailand 5, 1, p. 52-74.
(online at: http://library.dmr.go.th/library/J-Index/1982/76.pdf)
(Most parts of Petchabun, etc., foldbelts of C and E Thailand affected by E-M Triassic Indosinian orogeny. In Loei area, Petchabun Province, E Permian pelagic sediments overlain by M-L Permian flysch and molasse, suggesting also 'late Variscan' (Permian) orogeny in this area)

Helmcke, D. & H.G. Lindenberg (1983)- New data on the 'Indosinian' orogeny from Central Thailand. Geol. Rundschau 72, 1, p. 317-328.
(Petchabun foldbelt in C Thailand previously thought to be deformed by 'Indosinian' (Triassic) orogeny. New data show main orogenic event in Thailand is dated as Late Permian and Paleotethys closed on Thai territory during this event. Upper Triassic deformation in N Thailand intracontinental and of minor importance)

Hirschi, H. (1939)- Zur Petrographie von Nordwest-Siam (Gebiet westlich von Raheng). Schweizerische Mineralogische Petrographische Mitteilungen 19, 1, p. 200-221.
(online at: https://www.e-periodica.ch/digbib/view?pid=smp-001:1939:19210)
('On the petrography of NW Thailand (area W of Raheng)'. Descriptions of igneous and metamorphic rocks collected in 1935 with Arnold Heim. No locality maps)

Hisada, K., S. Arai, K. Ueno, Y. Kamata, H. Hara,T. Charoentitirat, P. Charusiri & H. Chanthavongsa (2016)- Ultramafic rocks of Nan Suture Zone in northern Thailand and its northward extension in Laos. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 65. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(Nan Suture Zone was regarded as site of collision of Shan Thai (Sibumasu) and Indochina continents, but more recently accepted as oceanic materials in suture zone representinf floor of marginal basin (Nan backarc basin) N extension of Nan SZ recently confirmed near Pakbeng, N Laos (serpentinites, metamorphics). Ultramafic rocks derived from supra-subduction zone)

Hisada, K., M. Sugiyama, K. Ueno, P. Charusiri & S. Arai (2004)- Missing ophiolitic rocks along the Mae Yuam Fault as the Gondwana-Tethys divide in north-west Thailand. The Island Arc 13, p. 119-127.
(Thailand two continental blocks: Sibumasu and Indochina. Late Triassic Mae Sariang clastics in NW Thailand (Sibumasu) with chromian spinels sourced from ultramafic/ mafic rocks, suggest ophiolitic rocks were exposed nearby, but no known outcrops. Exposure of ophiolitic complex denotes suture zone and suggests Gondwana-Tethys divide is along Mae Yuam Fault zone)

Hite, R.J. (1973)- Evaporite deposits of the Khorat Plateau, northeastern Thailand. in A.H. Coogan (ed.) Fourth Symposium on Salt, Northern Ohio Geol. Society, 1, p. 135-146.

Hite, R.J. (1982)- Progress report on the potash deposits of the Khorat Plateau, Thailand. U.S. Geol.Survey, Open-File report 82-1096, p. 1-70.
(online at: https://pubs.usgs.gov/of/1982/1096/report.pdf)
(Potash deposits mainly in Lower Salt Member of Cretaceous Maha Sarakham Fm of Khorat Plateau. Most surface anticlines on Khorat Plateau are very young formed as result of unloading of lower salt horizons by ~150m deep Pleistocene channel incision of overlying bedrock. Alluvial fills in paleo-stream channels potential for hosting uranium deposits)

Hite, R.J. (1983)- Pleistocene? stream channel control of Khorat Plateau sylvite deposits. Proc. Conf. Geol. Mineral Resources of Thailand, p.

Hite, R.J. & J. Japakasetr (1979)- Potash deposits of the Khorat Plateau: Thailand and Laos. Economic Geology 77, p. 448-458.
(Khorat Basin of NE Thailand with extensive Cretaceous evaporites, commonly ~200-250m thick, locally much thicker. Four main salt-angydrite cycles. Potash deposits discovered in 1973 near Top Lower Salt, up to 82m thick and underlie more than half of Khorat Basin. Potassium minerals mainly carnalite, also sylvite)

Horiuchi, Y., P. Charusiri & K. Hisada (2012)- Identification of an anastomosing river system in the Early Cretaceous Khorat Basin, Northeastern Thailand, using stratigraphy and paleosols. J. Asian Earth Sci. 61, p. 62-77.

Howard, K.T. (2011)- Tektites. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The geology of Thailand, Chapter 21, Geol. Soc., London, p. 573-591.
(Review of 800 ka old tektites from large impact that formed Australasian strewn field in Thailand)

Howard, K.T., P.W. Haines, C.F. Burrett, J.R. Ali & S. Bunopas (2003)- Sedimentology of 0.8 Ma log-bearing flood deposits in northeast Thailand and mechanisms for pre-flood deforestation. Proc. 8th Int. Congress on Pacific Neogene Stratigraphy, ChiangMai, p. 49-67.

Igo, H. (1972)- Fusilinacean fossils from Thailand. Part VI. Fusulinacean fossils from North Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 10, p. 63-116.
(33 species of Carboniferous fusulinids from NE Thailand, incl. Profusulinella spp., Hemifusulina, Protriticites)

Igo, H. (1973)- Lower Carboniferous conodonts from Ko Yu, Songkla, Peninsular Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 29-42.
(Lower Carboniferous conodonts from siliceous shale of Khanchaburi series on island at SE side of Peninsular Thailand. With Hindeodella, Gnathodus, Polygnathus, etc.))

Igo, H. (1998)- Some Carboniferous rugose corals from northeast Thailand. Bull. Nat. Science Museum, Tokyo, Ser. C 24, 3-4, p. 151-162.
(online at: http://ci.nii.ac.jp/naid/110004313609/en)
(U Carboniferous limestones exposed in Loei-Wang Saphung area, NE Thailand, with many rugose corals, most of them described by Fontaine et al. (1991) and strikingly similar to S China Block)

Igo, H., K. Ueno & K. Sashida (1993)- Lower Permian fusulinaceans from Ban Phia, Changwat Loei, northeastern Thailand. Trans. Proc. Palaeontological Soc. Japan 169, p. 15-43.
(online at: www.palaeo-soc-japan.jp/download/TPPSJ/TPPSJ_NS169.pdf)
(Late E Permian (Yakhtasian) fusulinids in Saraburi limestone-sandstone of Loei foldbelt with Pamirina, Schubertella, Darvasites, Pseudofusulina, etc.)

Imai, A., K. Yonezu, K. Sanematsu, T. Ikuno, S. Ishida, K. Watanabe, V. Pisutha-Arnond, S. Nakapadungrat & J. Boosayasak (2013)- Rare Earth Elements in hydrothermally altered granitic rocks in the Ranong and Takua Pa Tin-Field, Southern Thailand. Resource Geol 63, 1, p. 84-98.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1751-3928.2012.00212.x/epdf)
(EREE and HREE content in some altered granitic rocks associated with hydrothermal Sn mineralization in Takua Pa tin-field in W Belt of S Thailand higher original fresh granitic rocks.)

Imsamut, S. (2003)- Marine Paleozoic stratigraphy of the Betong- Than-To area, Yala Province, Peninsular Thailand. Dept. Mineral Resources, Bangkok, Techn. Report BGS 25/2003, p. 1-49.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2003/10556.pdf)
(Folded 'Sibumasu' Paleozoic stratigraphy of N Peninsular Thailand: (1) Silurian Devonian Betong Fm clastics >100m thick with minor chert and limestones with Tentaculites, graptolites, trilobites, brachiopods, etc.; (2) 800m of E Carboniferous Yaha Fm shales and thin-bedded chert with radiolaria and conodonts; (3) 500m of Sri Paen Fm with bivalves, brachiopods and ribbon chert with Carboniferous radiolaria; (4) E Permian recrystallized crinoid limestones of Tham Krachaeng Fm with fusulinids. Intruded by Triassic biotite granites)

Imsamut, S. (2012)- Lithostratigraphy of the Khuan Klang Formation, Satun Province, Peninsular Thailand. 12th Regional Congress on Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA 2012), p. 95-112.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2555/34880.pdf)
(E Carboniferous Khuan Klang Fm in S Thailand 200-250m thick clastics with Posidonomiya sp., trilobites, brachiopods, etc.)

Imsamut, S., S. Bunopas, V. Daorerk, M. Pattarametha, S. Maranata, V. Thotosawam & P. Charusiri (1994)- Magnetostratigraphy of Phu Thok Mesozoic deposit NE Thailand: preliminary investigation. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, IGCP 306, Bangkok 1994, Dept. Mineral Res., p. 170-182.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1994/6947.pdf)
(Palleomagnetic succession of Phu Tok Fm redbeds of Khorat Gp with 7 normal and 7 reverse periods. Tied to Late Jurassic- E Cretaceous)

Imsamut, S., P. Charusiri, Z. Zhuang & V. Daorerk (1995)- Paleomagnetic result of Phu Thok red beds of NE Thailand : implication for Mesozoic tectonic history of SE Asia. Proc. Int. Conf. Geology geotechnology and mineral resources of Indochina, Khon Koen, p. 73-78.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1995/7421.pdf)
(Paleomagnetic study of Phu Tok Fm continental red beds of Khorat Gp of Indochina Block in NE Thailand suggest Cretaceous age. paleolatitude of 20-30°N and CW rotation during M Cretaceous)

Imsamut, S., P. Charusiri & V. Daorerk (1993)- On the stratigraphy of Ban Rai area, Changwat Uthai Thani: implication for tectonic history. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and palaeontology (BIOSEA), Chiang Mai, 1, p. 187-201.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/6787.pdf)
(Paleozoic (meta-)sediments of W Thailand five Cambrian- Permian units (= Shan Thai/ Sibumasu passive margin series))

Ingavat, R. (1984)- On the correlation of the Permian foraminiferal faunas of the western, central and eastern provinces of Thailand. Mem. Soc. Geologique France, N.S. 147, p. 93-100.

Ingavat-Helmcke, R. (1993)- Contribution to the Permian fusulinacean faunas of Peninsular Thailand. In: B.K. Tan et al. (eds.) Proc. 7th Conf. Geology, Mineral and Energy Res. SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 67-75.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7590.pdf)
(Permian fusulinids and smaller forams (incl. Shanita, Hemigordius) from S Peninsular Thailand (=Sibumasu Block). Lower Permian (Asselian) from W coast cold water facies, along E coast near Chumphon warmer-water carbonates with fusulinids Pseudoschwagerina and Eoparafusulina (but may be younger taxa?; Ueno et al. 1996). M Permian fusulinids (Schwagerina, Chusenella, Pseudodoliolina, Ozawainella, etc.) many similarities with faunas of central N Thailand (Indochina Block). M Permian smaller benthic foram Shanita widespread in S Peninsular Thailand. Also occ. Sphairionia sikuoides)

Ingavat-Helmcke, R. (1993)- Review on fossils of Thailand. In: T. Thanasuthipitak (ed.) Proc. Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and correlation (BIOSEA), Chiang Mai 1993, 1, p. 1-22.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7483.pdf)
(Review of Cambrian-Tertiary biostratigraphy/ fossil occurrences in Thailand)

Ingavat-Helmcke, R. (1994)- Paleozoic paleontological evidence of Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symposium Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources and IGCP 306, p. 43-54.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1994/6938.pdf)
(Review of Paleozoic faunas reported from Thailand. Cambrian- Devonian faunas of Thailand close faunal affinities with Australia and S China. Carboniferous- Permian carbonate facies warm, shallow marine. Incl. Pronorites sp. from NW Thailand)

Ingavat, R. & R.C. Douglas (1981)- Fusuline fossils from Thailand, Part XIV. The fusulinid genus *Monodiexodina* from Northwest Thailand. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press 22, p. 23-34.
(First record of fusulinid Monodiexodina from basal Ratburi Limestone in W-most Thailand- Myanmar border area (genus generally regarded as typical of Kungurian of Sibumasu/ Cimmerian Terranes; JTvG)

Ingavat-Helmcke, R. & D. Helmcke (1986)- Permian Fusulinacean faunas of Thailand- event controlled evolution. In: Lecture Notes in Earth Sciences 8, Springer Verlag, p. 241-248.
(Evolution of Permian fusulinid faunas of Thailand controlled by 3 bioevents (1) upper Lower Permian disappearance of 'Arctic-Tethyan' elements, tied to closure of Urals and global regression; (2) M-U Permian boundary to lower U Permian (Midian) extinction of ~90% of fusulinids; (3) End of Permian extinction)

Ingavat-Helmcke, R. & D. Helmcke (1994)- Permian facies-realms in Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources, IGCP 306, p. 100-105.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1994/6940.pdf)
(With schematic maps showing paleopositions of terranes, incl. evolution of 'Phuket Terrane' (=Sibumasu) from E Permian rifting off Gondwana to M Triassic collision with Eurasia)

Ingavat, R. & P. Janvier (1981)- Bradyodont (Chondrichthyes) teeth from the Permian and Carboniferous of Northern Thailand. Geobios 14, 5, p. 651-653.
(Psammodontid fish tooth fragment in a massive Visean limestone in Ban Pak Chom area of Thailand. Tooth referred to Deltodus sp., associated with teeth of 'Cladodus type, in Lower Permian limestone at Ban Na Chareon (E of Loei)).

Ingavat, R. & P. Janvier (1981)- *Cyclotosaurus* cf. *posthumus* Fraas (Capitosauridae, Stereospondyli) from the Huai Hin Lat Formation (Upper Triassic), Northeastern Thailand; with a note on capitosaurid biogeography. Geobios 14, 6, p. 711-725.
(Part of large amphibian capitosaurid skull, similar to Cyclotosaurus posthumus from U Triassic of Germany in U Huai Hin Lat Fm (basal part of Khorat Gp) near Chulabhorn Dam, consistent with presumed Norian age of formation. Supports hypothesis that this part of SE Asia was linked to Laurasia by Late Triassic)

Ingavat, R., P. Janvier & P. Taquet (1978)- Decouverte en Thailande d'une portion de femur de Dinosaure sauropode (Saurischia, Reptilia). Comptes Rendus somm. Soc. Geologique France 1978, 3, p. 140-141.
('Discovery in Thailand of a part of a sauropod dinosaur femur (Saurischia, Reptilia'. Discovery of Cretaceous dinosaur bone in Phetchabun region is first dinosaur remain found in Thailand)

Ingavat, R. & J. Jumnongthai (1988)- Permian foraminifera at Wang Nua, Lampang. Geol. Survey Division, Dept. Mineral Resources, Palaeont. Report 3, p.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1985/5125.pdf)
(Interesting assemblages of Lower Permian foraminifera from 10m thick limestone at Wang Nua, 6 km NW of Amphoe Wang Nau, Lampang Province, NW Thailand: in middle part Pseudofusulina sp. Boultonia willsei and Sphairionia sikuoides, towards upper part Sphaeroschwagerina glomerosa, Paraschwagerina, Rugoschwagerina and Darvasites. Age of section Asselian- Sakmarian. Thin limestones in basal part of overlying clastics with Monodiexodina (Yahtashian= lower Artinskian?) (=Sibumasu assemblage?; JTvG))

Ingavat, R., S. Muanlek & C. Udomratn (1975)- On the discoveries of some Permian fusulinids and Ordovician cephalopods at Ban Rai, west Thailand. J. Geol. Soc. Thailand 1, p. 81-89.
(online at: http://library.dmr.go.th/library/J-Index/1975/34.pdf)
(M Permian limestone hills ~200 km N of Bangkok, associated with thick Ordovician limestone with straight nautiloids, Silurian- Devonian shale, etc. (should be E Sibumasu Terrane). Kungurian- Kazanian fusulinids incl. Neoschwagerina, Sumatrina annae, Verbeekina verbeeki, Parafusulina gigantea, Ozawainella, etc.))

Ingavat, R. & P. Taquet (1978)- First discovery of dinosaur remain in Thailand. J. Geol. Soc. Thailand 3, 1, p. 1-6.
(see also Ingavat, Janvier & Taquet 1978)

Ingavat, R., R. Toriyama & K. Pitakpaivan (1980)- Fusuline zonation and faunal characteristics of the Ratburi Limestone in Thailand and its equivalents in Malaysia. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 43-62.
(Carboniferous- Permian Ratburi Fm limestones of C Thailand contain 256 species of fusulinid foraminifera, grouped in 20 fusulinid zones. Most species of East Tethyan affinity or endemic to Thai-Malay province)

Intasopa, S.B. (1993)- Petrology and geochronology of the volcanic rocks of the Central Thailand Volcanic Belt. Ph.D. Thesis University of New Brunswick, Fredericton, p. 1-242.

Intasopa, S. & T. Dunn (1994)- Petrology and Sr-Nd isotopic systems of the basalts and rhyolites, Loei, Thailand. J. Southeast Asian Earth Sci. 9, p. 167-180.
(Loei volcanic province in N part of C Thailand Loei-Prachinburi Volcanic belt (W margin Indochina block). Devonian rhyolite, M Devonian- Lower Carboniferous basalt and Permo-Triassic andesite. Not part of contemporaneous volcanic arc. Two magmatic episodes: partial melting of continental crust at 374 Ma, ocean floor basalts at 361 Ma)

Intasopa, S., T. Dunn & R.S.J. Lambert (2011)- Geochemistry of Cenozoic basaltic and silicic magmas in the central portion of the Loei-Phetchabun volcanic belt, Lop Buri, Thailand. Canadian J. Earth Sci. 32, 4, p. 393-409.
(Cenozoic volcanic rocks in central Loei-Phetchabun volcanic belt in C Thailand. Composition ranging from basalt to high-silica rhyolite. Decrease in age from S to N: oldest rocks 55–57 Ma rhyolites; younger rhyolites that occur farther N (13–24 Ma). Depleted mantle source)

Ishibashi, T. & C. Chonglakmani (1990)- Uppermost Permian ammonoids from northern Thailand. J. Southeast Asian Earth Sci. 4, p. 163-170.
(Uppermost Permian ammonoids (Pseudogastrioceras aff. P. guangxiensis, Paratirolites nakornsrii n.sp. and Xenodiscus?) in Huai Thak Fm near Lampang, N Thailand, ~50m below occurrence of Triassic bivalve Claraia Uppermost Permian Palaeofusulina fauna-bearing limestone bed present in same area)

Ishibashi, T., M. Fujikawa & N. Nakornsri (1997)- Biostratigraphy of Carboniferous and Permian ammonoids in Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, p. 403-411.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7621.pdf)

Ishibashi, T., M. Fujikawa, S. Yoda & N. Nakornsri (1998)- Dorashamian biostratigraphy of the Doi Pha Phlung area, North Thailand. In: Strzelecki Int. Symposium, Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources, Proc. Royal Soc. Victoria 110, p. 221-226.
(Late Permian diverse macrofauna in Huai Tak Fm shale N of Lampang, incl. foramininifera (Gallowayinella and Colaniella parva-Reichelina zones), ammonoids (Paratirolites nakornsrii, Tapashanites yaowalakae) in uppermost horizon of Doi Pha Phlung area. Also brachiopod Oldhamina (and Leptodus tenuis?) and rugose coral Waagenophyllum aff. virgalense)

Ishibashi, T., N. Nakornstri & K. Nagai (1994)- Permian- Triassic boundary and fauna at Doi Pha Phlung, northern Thailand. Mem. Fac. Science, Kyushu University, D, 28, p. 23-40.
(Paratirolites- Tapashanites ammonoid fauna associated with Palaeofusulina sinensis of latest Permian age from top of 1100m thick Permian Huak Thai Fm in N Thailand. Overlying basal Triassic with ammonite Opiceras sakuntula and bivalve Claraia spp.)

Ishihara, S., H. Hirano & T. Moriyama (2009)- Constituent minerals and REE contents of the granite and Sn skarn ores from the Pin Yok mine, southern Thailand. Bull. Geol. Survey Japan 60, 11/12, p. 581-591.
(in Japanese; online at: https://www.gsj.jp/data/bulletin/60_11_04.pdf)

Ishihara, S., T. Moriyama & H. Hirano (2008)- REE-rich granites of Ko Samui, Ko Phuket and Yod Nam mine in the Southern Thailand. Proc. Int. Symposia on Geoscience resources and environments of Asian terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, p. 238-247.
(online at:

Ishihara, S., H. Sawata, K. Shibata, S. Terashima, S. Arrykul & K. Sato (1980)- Granites and Sn-W deposits of Peninsular Thailand. Mining Geology, Spec. Issue 8, p. 223-241.

Iwai, J., K. Asama, M. Veeraburus & A. Hongnusonthi (1966)- Stratigraphy of the so-called Khorat Series and a note on the fossil plant-bearing Paleozoic strata in Thailand. In: T. Kobayashi (ed.) Geology and Palaeontology

of Southeast Asia, University of Tokyo Press, 2, p. 179-196. *(also in Japanese J. Geology Geography 37, 1, p. 21-38)*
(Rhaetian- Lower Cretaceous Khorat Series of Khorat Plateau, NE Thailand, >1000m thick, unconformably overlies U Permian (and older) beds with Cathaysian flora (Taeniopteris, Pecopteris, Cordaites, etc. Five formations, mainly non-marine, very poor in fossils. Late Triassic or Liassic-age plants in basal clastics, incl. Chlathropteris cf. meniscoides, Neocalamites, Equisetites, etc.. Lower Cretaceous(?) Ban No Yo Fm with fresh-water molluscs Nippononaia, Trigonioides, Plicatounio, etc.)

Iwai, J., A. Hongnusonthi, K. Asama, T. Kobayashi, E. Kon'no, N. Nakornsri, M. Veerebus & W. Yuyen (1975)- Non-marine Mesozoic formations and fossils in Thailand and Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 191-218.

Iwai, J., S. Sakagami, N. Nakornsri & W. Yuen (1968)- Mesozoic stratigraphy of the northwestern part of the Khorat Plateau. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 151-165.
(Khorat Series Mesozoic stratigraphy along Second Friendship Highway E of Phitsanulok in NE Thailand. Mainy redbeds, gently folded, >1000m thick)

Jaeger, H., V. Nakinvodae, V. Nahakapong, E. Braun, A. Hess, K.E. Koch & V. Stein (1968)- Graptolites of the Lower Devonian from Thailand (preliminary result). Neues Jahrbuch Geol. Palaont., Monatshefte, 12, p. 728-730.
(Initial report on earliest Devonian graptolites incl. Monograptus hercynicus and M. yukonensis from folded black shales between KM 105.5-106.1 of Chiangmai- Fang highway. Fauna resembles graptolite assemblage d from Malay Peninsula by Jones (1967). More detail in Jaeger et al. (1969))

Jaeger, H., V.S.R. Wolfart & D. Stoppel (1969)- Fauna (Graptolithen, Brachiopoden) der unterdevonischen Schwartzschiefer Nord-Thailands. Neues Jahrbuch Geol. Palaont. Abhandl. 133, 2, p. 171-190.
('Fauna (graptolites, brachiopods) from the Lower Devonian black shale of North Thailand'. Five Monograptus species from near Fang, N Thailand. Monograptus hercynicus, M aequabilis and M. yukonensis suggest E Devonian age, not Ordovician as initially reported by Kobayashi and Igo (1966). New brachiopod species name for Paterula nana for small disc-shaped brachiopod described as Orbiculoidea minutula by Kobayashi and Igo (1966). Associated conodonts suggest M Siegenian- Lw Emsian age for black shales (=Sibumasu Terrane?))

James, R. & G.V. Cumming (2007)- Geology and mineralization of the Chatree epithermal Au-Ag Deposit, Phetchabun Province, Central Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIö07), Bangkok, Dept. Mineral Resources, p. 378-390.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2007/12753.pdf)
(Chatree mine low-intermediate sulphidation epithermal gold-silver deposit in C Thailand, largest hard-rock Au resource in Thailand. Au-Ag hosted in multiple hydrothermal veins and breccias in gently folded 350m thick E Triassic andesitic host rocks, representing continental arc at W side of Indochina Terrane (Sukhothai Arc). Mineralization dated as E Triassic (~251 Ma); host volcanic succession dated as 250 ± 6 Ma (= ~Permian-Triassic boundary). Granodiorite S of mine anomalous in copper and intruded in M Triassic (244 Ma))

Japakasetr, T. & D.R. Workman (1981)- Evaporite deposits of northeast Thailand. In: M.T. Halbouty (ed.) Energy Resources of the Pacific Region, Hawaii, American Assoc. Petrol. Geol. (AAPG) Studies in Geology 12, p. 179-187.
(Khorat plateau of NE Thailand with 130,000 km2 of gently folded Mesozoic continental- paralic deposits. Upper part of Cretaceous Khorat Gp with three thick evaporite sequences, separated by10-50m thick claystones. Lowest evaporite sequence basal thin anhydrite layer overlain by 300+ m of massive halite then, over much basins, zone with potassium minerals (carnallite, also sylvite). Thickest lower evaporite 437m, with 0.7m anhydrite, 354m of halite, and 82m of halite+ carnallite. Middle evaporite generally thinner. Uppermost evaporite sequence averages ~22m of halite, with little anhydrite and no potassium minerals)

Javanaphet, C. (1969)- Geological map of Thailand; Scale 1: 1,000,000, with Explanation. Dept. Mineral Resources, Bangkok.

Jungyusuk, N. & T. Sirinawin (1983)- Cenozoic basalts of Thailand. Conf. Geology Mineral Resources of Thailand, Bangkok, 9 p.

Junhavat, S. & S. Piyasin (1978)- Triassic rocks of Thailand. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, Asian Inst. Techn., p. 735-738.
(Brief review of marine Triassic sediments (commonly grouped as Lampang Group) in 5 areas of Thailand)

Kamata, Y., H. Hara, K. Ueno, A. Sardsud, T. Charoentitirat, P. Charusiri & K. Hisada (2012)- Middle and Late Permian radiolarians from allochthonous chert blocks in the Inthanon Zone, Northern Thailand: constraints for the formation age of melange fabric related to Paleo-Tethys subduction. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geologica Sinica 33, Suppl. 1, p. 36-37. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/pdf/18-Kamata%20et%20al%202.pdf)
(Inthanon Zone of N Thailand characterized by Paleo-Tethys pelagic sediments, including Carboniferous-Permian seamount-type carbonate associated with oceanic basaltic rocks and M Devonian-M Triassic radiolarian chert. Two chert blocks in accretionary prism with Late and Middle Permian radiolaria)

Kamata, Y., M. Kato, K. Ueno, A. Miyahigashi, T. Charoentitirat & S. Apsom (2013)- Middle Triassic basalt-chert succession in the Chanthaburi area, Southeast Thailand. In: 2nd Int. Symposium Int. Geoscience Programme Project (IGCP) 589, Borocay, Philippines, p. 79-81. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/2nd%20Symposium/Abstract%20volume.pdf)
(Conformable basalt-chert succession of Noen Po Fm in SE Thailand in zone between Indochina and Sibumasu Terranes. With M Triassic age bedded chert, deposited directly on oceanic crust with MORB geochemical signature, suggesting formation in oceanic area remote from volcanic arc or continental domain (not part of Sukhothai Arc Domain))

Kamata, Y., M. Kato, K. Ueno, A. Miyahigashi, T. Charoentitirat & A. Sardsud (2012)- Middle to Late Devonian radiolarians from Klaeng of Rayong Province, Southeast Thailand. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geoscientica Sinica 33, Suppl.1, p. 33-35. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/pdf/17-Kamata%20et%20al%201.pdf)
(Tightly folded Silurian-Devonian bedded siliceous rocks in Kanchanaburi Fm SW of Klaeng with M-L Devonian radiolarians. Dark shales with quartz- mica sandstones, probably from felsic plutonic rocks. This shows environment not pelagic Paleo-Tethys ocean floor, but continental margin, probably Sibumasu block)

Kamata, Y., M. Kato, K. Ueno, A. Miyahigashi, T. Charoentitirat & A. Sardsud (2014)- Middle-Late Devonian radiolarians from Klaeng District, Rayong Province, southeastern Thailand: geotectonic significance of the Rayong area as a continental margin of the Sibumasu Block. J. Asian Earth Sci. 104, p. 197-204.
(Fine clastics-siliceous succession at Laem Krabang Phet, ~20 km SW of Klaeng, SE Thailand with thin bedded chert intercalated with carbonaceous shale, tuffaceous shale, brown glassy tuff and quartz-rich sandstones. One chert horizon with poorly preserved M-L Devonian radiolarians, incl. Palaeoscenidium cladophorum, Stigmosphaerostylus cf. pusilla and Entactiniidae. Succession coeval with Devonian part of Fang chert, N Thailand. Depositional environment of section deep water continental margin of E Sibumasu Block)

Kamata, Y., A. Maezawa, H. Hara, K. Ueno, K. Hisada, A. Sardsud, T. Charoentitirat & P. Charusiri (2012)- Basaltic activity preserved in an Upper Permian radiolarian chert from the Paleo-Tethys in the Inthanon Zone, northern Thailand. J. Asian Earth Sci. 61, p. 51-61.
(Basaltic sandstone below and intercalated with U Permian radiolarian chert in Inthanon suture zone, NW Thailand (Wuchiapingian Follicucullus charveti- Albaillella yamakitai and E Changhsingian Neoalbaillella ornithoformis zones). Deposition in pelagic realm of Paleo-Tethys. Gravity currents of basaltic fragments in radiolarian chert and presence of fusulinid foraminifera tests indicate source from oceanic seamount)

Kamata, Y., K. Sashida, K. Ueno, K. Hisada, N. Nakornsri & P. Charusiri (2002)- Triassic radiolarian faunas from the Mae Sariang area, northern Thailand and their paleogeographic significance. J. Asian Earth Sci. 20, 5, p. 491-506.
(Early to Late Triassic (Spathian-Carnian) radiolaria from bedded cherts of Mae Sariang Gp in NW Thailand. Similar fauna and rocks to E continental margin of Sibumasu Block. E (?) Carnian radiolarian assemblage from bedded chert shows closure of Paleotethys Ocean between Sibumasu- Indochina blocks after E Carnian)

Kamata, Y., A. Shirouzu, K. Ueno, A. Sardsud, T. Charoentitirat, P. Charusiri, T. Koike & K. Hisada (2014)- Late Permian and Early to Middle Triassic radiolarians from the Hat Yai area, southern peninsular Thailand: implications for the tectonic setting of the eastern margin of the Sibumasu Continental Block and closure timing of the Paleo-Tethys. Marine Micropaleontology 110, p. 8-24
(Hat Yai area, SE Peninsular Thailand with two kinds of radiolarian-bearing fine-grained sediments: Middle-early Late Permian lower shale unit and E-M Triassic upper chert unit. Triassic chert interpreted as continental slope sediments overlying Permian clastic-calcareous facies, rather than abyssal plain pelagic deep-water sediments)

Kamata, Y., K. Ueno, M. Fujikawa, H. Hara, K. Hisada, K. Uno, T. Charoentitirat & P. Charusiri (2005)- Siliceous sedimentary rocks distributed in the Loei area, northeastern Thailand, lithological description and geological ages. In: L. Wannakoe et al. (eds.) Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2005), Khon Kaen, p. 417-420.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2005/9358.pdf)
(Paleozoic cherts and siliceous shales from 'Loei-Petchabun flodbelt', also viewed as Loei suture zone that was Paleotethys suture at E margin of Indochina Block. With black cherts with Late Devonian- E Carboniferous radiolarians. Also thin-bedded Permian shales with radiolaria and calcareous microfossils, deposited closer to continental margin)

Kamata, Y., K. Ueno, A. Miyahigashi, H. Hara, K.I. Hisada, T. Charoentitirat & P. Charusiri (2016)- Geological significance of the discovery of Middle Triassic (Ladinian) radiolarians from the Hong Hoi Formation of the Lampang Group, Sukhothai Zone, northern Thailand. Revue Micropaleontologie 59, 4, p. 347-358.
(Newly found Ladinian (M Triassic) radiolarians from Hong Hoi Fm of Lampang Group, Sukhothai Zone, N Thailand. Concords with age previously determined by molluscs. Radiolarian-bearing siliceous beds intercalated with volcanics-rich lithic sandstone -shale in lower part of lower Hong Hoi Fm. Probably deposited in forearc basin close to Sukhothai Arc, during time of intensive volcanic activity)

Kamata, Y., K. Ueno, W. Saengsrichan, A. Sardsud, T. Charoentitirat, P. Charusiri & K. Hisada (2008)- Stratigraphy and geological ages of siliceous sedimentary rocks distributed in the Hat Yai Area, Southern Peninsular Thailand. Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok, p. 349-352.
(online at: www.geo.sc.chula.ac.th/Geology/English/News/Technique/GREAT_2008/PDF/104.pdf)
(Permian- Triassic Kaeng Krachan and Yaha Fms deep marine clastics of Peninsular Thailand, 20km W of Hat Yai, probably continental margin sequence at E side of Sibumasu Plate. Incl. dark shale with Late Permian radiolaria (Follicucullus scholasticus). M Triassic radiolarians in bedded chert (Triassocampe coronata, T. deweveri, Pseudostylosphaera japonica, Eptingium, etc.), suggesting closure of Paleo-Tethys after M Triassic in Peninsular Thailand (see also Kamata et al. 2014))

Kamvong, T. & K. Zaw (2005)- Geology and genesis of the Phu Lon copper-gold skarn deposit, northeast Thailand. In: L. Wannakao (ed.) Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2005), Khon Kaen, Thailand, p. 310-318.

Kamvong, T. & K. Zaw (2009)- The origin and evolution of skarn-forming fluids from the Phu Lon deposit, northern Loei Fold Belt, Thailand: evidence from fluid inclusion and sulfur isotope studies. J. Asian Earth Sci. 34, 5, p. 624-633.
(Phu Lon skarn Cu-Au deposit in Triassic N Loei Fold Belt along W margin of Indochina terrane. Hosted by Devonian volcano-sedimentary sequences intercalated with limestone and marble units. Intruded by diorite and

quartz monzonite porphyries of *calc-alkaline affinities; U-Pb dating of zircon from quartz monzonite phases indicates age of 244 ± 4 Ma (earlyM Triassic))*

Kamvong, T., K. Zaw, S. Meffre, R. Maas, H. Stein, C.K. Lai (2014)- Adakites in the Truong Son and Loei fold belts, Thailand and Laos: genesis and implications for geodynamics and metallogeny. Gondwana Research 26, p. 165-184.
(Phu Kham adakites Truong Son Belt emplaced in Late Carboniferous (~306-304 Ma; subduction of Ailaoshan-Song Ma plate). Puthep adakites in Loei Fold Belt of SE Thailand formed in M Triassic (~244-241 Ma; main Paleotethys subduction))

Kanjanapayont, P. (2009)- Structural analysis and geochronology of the Khlong Marui Fault, Southern Thailand. Ph.D. Thesis Universitat Wien, p. 1-137.
(online at: http://othes.univie.ac.at/6871/1/2009-09-07_0648134.pdf)
(Khlong Marui Fault cuts ~150 km across Thai peninsula trending NNE-SSW from Gulf of Thailand to Andaman Sea. Three deformation phases. Two early dextral ductile deformation phases influenced by Late Cretaceous W Burma-Shan-Thai collision and/or subduction along Sunda Trench. Major exhumation period of ductile core in Eocene, influenced by early India-Asia collision)

Kanjanapayont, P. (2016)- Strike-slip ductile shear zones in Thailand. In: Soumyajit Mukherjee, Kieran F. Mulchrone (eds.) Ductile shear zones: from micro- to macro-scales, Chapter 15, Wiley Blackwell, p. 250-269.

Kanjanapayont, P., M.A. Edwards & B Grasemann (2009)- The dextral strike-slip Khlong Marui Fault, southern Thailand. Trabajos de Geologia, Universidad de Oviedo, 29, p. 393-398.
(online at: www.geol.uniovi.es/TDG/Volumen29/TG29-72.PDF)
(Khlong Marui Fault is S-most of four major strike-slip faults in Thailand. NNE-SSW-trending dextral strike-slip fault zone from Gulf of Thailand to Andaman Sea. No clear age-constraints, but likely related to escape tectonics arising from India-Asia collision)

Kanjanapayont, P., B. Grasemann, M.A. Edwards & H. Fritz (2012)- Quantitative kinematic analysis within the Khlong Marui shear zone, southern Thailand. J. Structural Geol. 35, p. 17-27.
(NNE trending Khlong Marui shear zone at least two deformation phases. Rocks metamorphosed at amphibolite and greenschist facies by first deformation. No clear age-constraints, but early dextral strike-slip displacement of KM shear zone related to W Burma and Shan-Thai collision and subduction along Sunda Trench in Late Cretaceous, while main exhumation influenced by early India-Asia collision)

Kanjanapayont, P., P. Kieduppatum, U. Klotzli, E. Klotzli & P. Charusiri (2013)- Deformation history and U-Pb zircon geochronology of the high grade metamorphic rocks within the Klaeng fault zone, eastern Thailand. J. Asian Earth Sci. 77, p. 224-233.
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper_2/133.pdf)
(In SE Thailand Nong Yai Gneiss high-grade metamorphic assemblage extends ~30 km in NW-SE direction along Klaeng fault zone. Three episodes of deformation:D1 NW–SE-trending isoclinal folds;D2 NE–SW shortening during Triassic Indosinian orogeny, cross-cut by Late Cretaceous (~79 Ma) leucogranite (effects of W Burma and Shan-Thai/Sibumasu collision or development of Andean margin). Sinistral ductile movement D3 coeval with Eocene peak metamorphism during early phases of India-Asia collision)

Kanjanapayont, P., U. Klotzli, M. Thoni, B. Grasemann,& M.A. Edwards (2012)- Rb-Sr, Sm-Nd, and U-Pb geochronology of the rocks within the Khlong Marui shear zone, southern Thailand. J. Asian Earth Sci. 56, p. 263-275.
(Khlong Marui shear zone in S Thailand E Eocene dextral ductile deformation phase suggested by U-Pb ages of zircon rims; Late Eocene dextral transpression indicated by mica Rb-Sr ages. Rb-Sr, Sm-Nd and U-Pb dating correlation implies major exhumation period of ductile lens in Eocene. Tied to early India-Asia collision?)

Kanmera, K. & R. Toriyama (1968)- Fusulinacean fossils from Thailand, Part III. *Maklaya*, new generic designation for Neoschwagerinids of the group *Cancellina pamirica* LEVEN. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 31-46.
(On group of neoschwagerinid fusulinids from M Permian of Sara Buri/ Rat Buri Lst, C Thailand. Maklaya evolved from Misellina)

Kawakami, T., N. Nakano, F. Higashino, T. Hokada, Y. Osanai, M. Yuhara, P. Charusiri et al. (2014)- U-Pb zircon and CHIME monazite dating of granitoids and high-grade metamorphic rocks from the Eastern and Peninsular Thailand- a new report of Early Paleozoic granite. Lithos 200-201, p. 64-79.
(U-Pb zircon dating of igneous and metamorphic rocks in 4 areas of E, NW and Peninsular Thailand. E Thailand, SE of Bangkok (Sukhothai Arc): gneiss from Khao Chao area crystallization age 229 Ma (Carnian), metamorphic age 193 Ma (E Jurassic). Peninsular Thailand Khao Dat Fa granite 477 Ma (E Ordovician; second oldest granite pluton from Thailand, suggesting Sibumasu block basement formed during Pan-African Orogeny). Khao Pret granite 67.5 Ma. NW Thailand metamorphic rocks in Doi Inthanon area similar plutono-metamorphic history with Peninsular Thailand, suggesting all belong to Sibumasu block)

Kemper, E. (1976)- The foraminifera in the Jurassic limestone of West Thailand. Geol. Jahrbuch B21, p. 129-153.
(Early to Late Jurassic limestones with 'Tethyan' larger foraminifera from few-100m thick limestones in Kanchanaburi Province, W Thailand: Orbitopsella (M Lias/ E Jurassic), Lucasella (E-M Dogger/ M Jurassic), Haurania (M Lias-M Dogger) and Kurnubia (Late Jurassic). Little or no locality information)

Kemper, E., H.D. Maronde & D. Stoppel (1976)- Triassic and Jurassic limestone in the region northwest and west of Si Sawat (Kanchanaburi Province, Western Thailand. Geol. Jahrbuch B21, p. 93-127.
(200-300m thick Triassic with Anisian and Norian (with Boueina- Involutina) limestone, overlain by red and violet clastics and limestone of Rhaetian- E Jurassic age (mainly non-marine; uplift event?). Overlain by 200-300m thick Jurassic (M Lias- Malm) limestones with Lucasella, Orbitopsella, Haurania, etc. (U Triassic halimediform alga Boueina redescribed by Flugel (1988) as Boueina marondei n.sp.))

Kerrich, R. & R.D. Beckinsale (1988)- Oxygen and strontium evidence for the origin of granites in the tin belt of southeast Asia. Canadian Inst. Mining Metallurgy, Spec. Vol. 39, p. 114-123.

Ketmuangmoon, P., A. Chitnarin, M.B. Forel & P. Tepnarong (2018)- Diversity and paleoenvironmental significance of Middle Triassic ostracods (Crustacea) from northern Thailand: Pha Kan Formation (Anisian, Lampang Group). Revue Micropaleontologie 61, 1, p. 3-22.
(online at: https://www.sciencedirect.com/science/article/pii/S0035159817300727)
(Pha Kan Fm of Lampang Gp S of Lampang city, N Thailand, with 29 species of ostracods (4 new), dominated by Bairdiidae. First report of M Triassic (Anisian) ostracods from Sukhothai terrane)

Ketwetsuriya, C., A. Nutzel & P. Kanjanapayont (2014)- A new Permian gastropod fauna from the Tak Fa Limestone, Nakhonsawan, Northern Thailand- a report of preliminary results. Zitteliana A 54, p. 137-146.
(New silicified M Permian gastropod fauna from Tak Fa Lst from shallow water carbonates rich in fusulinids in N Thailand. 22 gastropod species, one of richest Permian gastropod faunas from SE Asia. Presence of Bellerophontidae, Pleurotomarioidea, Meekospiridae and Goniasmatidae)

Khamloet, P., V. Pisutha-Arnond & C. Sutthirat (2014)- Mineral inclusions in sapphire from the basalt-related deposit in Bo Phloi, Kanchanaburi, western Thailand; indication of their genesis. Russian Geol. Geophysics 55, 9, p. 1087-1102.
(Bo Phloi gem field in Kanchanaburi Province, W Thailand, closely associated with Cenozoic basalts. Blue and yellow sapphire, black spinel, and minor zircon mined for >3 decades. Most sapphires crystallized from high-alkali felsic melt, probably in lower crust)

Khositanont, S., P. Ounchanum, Y. Panjasawatwong, T. Thanasuthipitak, Khin Zaw & S. Meffre (2007)- U-Pb zircon ages and geochemical characteristics of Lampang-Phrae granites; implications for plate tectonic

interpretation. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIö07), Bangkok, Dept. Mineral Resources, p. 367-372.
(Lampang-Phrae granites isolated plutons in N-S trending volcanic rocks in Sukhothai Fold Belt, N Thailand. Zircon ages of ~224 Ma and 228 Ma suggest formation in early Late Triassic (~Carnian). Granites of I type affinity and may have emplaced in transition of subduction-collision environments in Late Triassic)

Khositanont, S., Y. Panjasawatwong, P. Ounchanum, T. Thanasuthipitak, Khin Zaw & S. Meffre (2008)- Petrochemistry and zircon age determination of Loei-Phetchabun volcanic rocks. Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516, 5th APSEG, Bangkok, p. 272-278.
(Loei-Phetchabun Fold Belt volcanic and plutonic rocks characteristics suggesting formation in ocean floor in Paleozoic and back arc environment in Late Permian- E Triassic)

Khositanont, S., K. Zaw, S. Meffre, Y. Panjasawatwong, P. Ounchanum & T. Thanasuthipitak (2013)- Geotectonic and geochronology of volcano-plutonic rocks in the Loei-Phetchabun fold belt. In: C. Senebouttalath et al. (eds.) Proc. 2nd Lao-Tai Conf. Geology and Mineral resources, Vientiane, p. 81-95.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2013/36771.pdf)
(Late Permian- E Triassic volcanic-plutonic rocks in Loei-Phetchabun Fold Belt three types: basic volcanics, intermediate volcanics and intermediate-acid plutonic rocks. Formed in mid oceanic and subduction-related volcanic arc environments. Jurassic red beds of Khorat Gp show Tethys sea closed before Jurassic)

Khummongkol, D. & A. Suwannathong (2007)- Aspect of oil shale in Thailand. In: In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIö07), Bangkok, Dept. Mineral Resources, p. 399-403.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2007/12755.pdf)
(Largest oil shale reserves in Thailand in M-U Miocene of Mae Sot Fm in Mae Sot Basin in NW Thailand. Measured reserves ~952 Mtons and oil yield is 183 million barrels)

Kromkhun, K., G. Baines, P. Satarugsa & J. Foden (2013)- Petrochemistry of volcanic and plutonic rocks in Loei Province, Loei-Petchabun fold belt, Thailand. In: 2nd Int. Conf. Geological and environmental sciences, IPCBEE vol.52, Singapore, p. 55-59.
(online at: www.ipcbee.com/vol52/011-ICGES2013-G041.pdf)
(Permo-Triassic intermediate volcanic-plutonic rocks of Loei-Phetchabun foldbelt in Amphoe Wang Sa Phung and Maung areas, Loei Province, have calc-alkaline affinities and indicate magmatism at E-dipping subduction zone, where former ocean between Indochina-Sibumasu blocks subducted beneath Indochina block. Subduction active from at least 244-230 Ma (Middle- early Late Truassic). Subduction-derived melts probably contaminated by overlying continental crust)

Klompe, Th.H.F. (1962)- Igneous and structural features of Thailand. In: G.A.Macdonald & H. Kuno (eds.) The crust of the Pacific Basin, American Geophys. Union (AGU) Geophys. Monograph Ser. 6, p. 122-134.
(Thailand 3 groups of igneous rocks: (1) mafic-ultramafics in N Thailand, intrusive in Silurian- Lw Carboniferous; (2) U Triassic hornblende-biotite granite in E and younger two-mica tin-bearing granite in W Thailand, considered to be post-Triassic, possibly same as 145-155 Ma (Late Jurassic) ages of tin granites from Billiton and Singkep; (3) various U Tertiary- Pleistocene effusives and some dioritic intrusions. W Thailand conformable Paleozoic sequence, locally capped by Triassic deposits. Regularity of this sequence, age of granites and unconformable contact between folded beds and overlying Late Jurassic- E Cretaceous in adjacent areas (Malaya, Borneo, Sumatra) favor Late Jurassic phase of mountain building. To E, Khorat Plateau folded Paleozoic sequence unconformably overlain by near-horizontal Rhaetian-Liassic, suggesting Late Triassic (old Cimmerian) phase of diastrophism in E part of country. Gulf of Thailand result of faulting)

Klompe, Th.H.F. (1962)- Igneous and structural features of Thailand. Geologie en Mijnbouw 41, 6, p. 290-302.
(Same paper as above)

Knox, G.J. & L.L. Wakefield (1983)- An introduction to the geology of the Phitsanulok Basin. In: Proc. Conf. Geology and Mineral Resources of Thailand, Bangkok, Dept. Mineral Resources, 9p.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1983/8734.pdf)
(Phitsanulok Basin N-S trending Tertiary basin, with Sirikit oilfield producing from Miocene fluvio-lacustrine Lan Krabu Fm. Oligocene- Recent sediment fill ~8 km, E-W extension ~15 km)

Kobayashi, F., R. Martini, R. Rettori, L. Zaninetti, B. Ratanasthien, H. Saegusa & H. Nakaya (2006)- Triassic foraminifers of the Lampang Group (Northern Thailand). J. Asian Earth Sci. 27, 3, p. 312-325.
(Four Triassic foraminiferal limestone localities in Lampang Gp of Sukhothai foldbelt, N Thailand, between Sibumasu (Shan-Thai) Terrane in W and Indochina in E. Characterized by: (1) Glomospirella lampangensis n. sp. (E Triassic ?), (2) Pilammina densa (Anisian), (3) endothyroid foraminifers- Diplotremina astrofimbriata (Ladinian) and (4) Aulotortus sinuosus (Carnian). Taxa of these associations common to S China and SE Asia, also Europe (unlike M- Late Permian provincial/ endemic foram assemblages)

Kobayashi, T. (1957)- Upper Cambrian fossils from peninsular Thailand. J. Fac. Science, University of Tokyo, Sect. 2, 10, 3, p. 367-382.
(online at: http://umdb.um.u-tokyo.ac.jp/DKoseibu/pdf/Ref_0152_.pdf)
(Oldest faunas of W Peninsular Thailand (= Sibumasu Terrane) are Late Cambrian trilobites from Phuket series from Tarutao island, incl. Coreanocephalus planulatus, Sankiella, Pagodia thaiensis, Mictosaukia buravasi, Thailandium solum, etc.))

Kobayashi, T. (1958)- Some Ordovician fossils from the Thailand- Malayan borderland. Japanese J. Geology Geography 29, 4, p. 223-231.

Kobayashi, T. (1959)- On some Ordovician fossils from northern Malaya and her adjacence. J. Fac. Science, University of Tokyo, 2, 11, 4, p. 387-407.
(online at: http://umdb.um.u-tokyo.ac.jp/DKoseibu/pdf/Ref_0159_.pdf)
(Ordovician gastropods, nautiloids, graptolites, from thick Setul Fm of Langkawi isands and adjacent Perlis Malay Peninsula))

Kobayashi, T. (1961)- A new genus of the Phillipsidae from Thailand. Japanese J. Geology Geography 32, 1, p. 1-4.
(Carboniferous trilobite Thaiaspis sethapuli n.gen., n.sp.)

Kobayashi, T. (1961)- On the occurrence of Ordovician nautiloids in northern Thailand and her adjacence. Japanese J. Geology Geography 32, 1, p. 35-43.

Kobayashi, T. (1963)- On the Cretaceous Ban Na Yo fauna of East Thailand with a note on the distribution of *Nippononaia*, *Trigonioides* and *Plicatounio*. Japanese J. Geology Geography 34, p. 34-41.
(Cretaceous fresh-water molluscs from Khorat Group; see also Kobayashi, 1964)

Kobayashi, T. (1964)- Geology of Thailand. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 1-16.
(Early review of geology, stratigraphy of Thailand)

Kobayashi, T. (1964)- Paleontology of Thailand, 1916-62. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 17-30.
(Early review of Cambrian- Quaternary paleontology of Thailand)

Kobayashi, T. (1964)- On the Cretaceous Ban Na Yo fauna of East Thailand, with a note on the distribution of Nippononaia, Trigonioides and Plicatiunio. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 31-41.

(Same paper as Kobayashi 1963. Lower? Cretaceous fresh-water molluscs inmiddle or upper member of Khorat Series in extreme E of Khorat Plateau. Dominated by Nippononaia mekongensis n.sp., also Trigonioides, Plicatiunio and Paranodonta. Similar to faunas known from Laos)

Kobayashi, T. (1968)- The Cretaceous non-marine pelecypods from the Nam Phung Dam Site in the Northeastern part of the Khorat Plateau, Thailand, with a note on the Trigonioididae. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 109-138.
(Pelecypods from Nam Phung dam site in NE Khorat Plateau belong to characteristic Trigonioides-Plicatounio- Nipponaia fauna of non-marine Cretaceous of SE Asia (Laos, Yunnan, S Korea, Japan))

Kobayashi, T. (1973)- A Norian conchostracan from the basal part of the Khorat Group in Central Thailand. Proc. Japan Academy 49, 10, p. 825-828.
(online at: https://www.jstage.jst.go.jp/article/pjab1945/49/10/49_10_825/_pdf)
(Non-marine conchostracan (bivalve crustacean) Euestheria mansuyi from Late Triassic Nam Pha Fm, basal Khorat Group, Nam Phrom Dam, NW Khorat Plateau)

Kobayashi, T. (1975)- Upper Triassic estheriids in Thailand and the conchostracan development in Asia in the Mesozoic era. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 16, p. 57-90.
(Fresh-water estheriid crustaceans in Khorat Plateau area indicate Norian age. With Khoratestheria n.gen., Asmussia symmetrica n.sp.)

Kobayashi, T. (1980)- Notes on the Mesozoic history of Thailand and adjacent territories. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 27-36.
(Review of 4 stages of 'Burmese-Malayan geosyncline' in Paleozoic-Mesozoic, with paleogeographic maps of distributions of Triassic, Jurassic and E Cretaceous fossil occurrences)

Kobayashi, T. (1983)- Geological history of Thailand, Malayan Peninsula and adjacent Areas-II. J. of Geography (Chigaku Zasshi) 92, 5, p. 303-320.
(In Japanese; online at: www.journalarchive.jst.go.jp/...)

Kobayashi, T. (1983)- Geological history of Thailand, Malayan Peninsula and adjacent areas- II. J. of Geography (Chigaku Zasshi) 92, 6, p. 371-391.
(In Japanese; online at: www.journalarchive.jst.go.jp/...)

Kobayashi, T. (1984)- On the geological history of Thailand and West Malaysia. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 3-42.
(Stratigraphy-oriented review of Thailand-Malay Peninsula area)

Kobayashi, T. & T. Hamada (1964)- On the Middle Ordovician fossils from Satun, the Malaysian frontier of Thailand. In: T. Kobayashi (ed.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 269-278.
(Ordovician trilobites from black calcareous shale in Satun area, SW-most Peninsular Thailand: Basiliella satunensis n.sp., Lophospira sp., etc)

Kobayashi, T. & T. Hamada (1968)- A Devonian phacopid recently discovered by Mr. Charan Poothai in peninsular Thailand. In: T. Kobayashi (ed.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 22-28.
(Trilobite Plagiolaria in E-M Devonian Tentaculites Shale of Peninsular Thailand. Associated with Monograptus spp.)

Kobayashi, T. & H. Igo (1966)- On the occurrence of graptolite shales in North Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 1-8.

(M Ordovician- Silurian graptolites in highly deformed black shale below 'Fang Chert' in N Chiang Mai Province (= Paleo-Tethys suture). With Monograptus, Dicranograptus. (Monograptus spp. assemblage re-assigned to E Devonian age by Jaeger et al. 1968 and Baum et al. (1970). Also presence of small round, disc-shaped brachiopod, described as Orbiculoidea minutula (re-described as Paterula nana by Jaeger et al. 1969))

Kobayashi, T. & S. Sakagami (1989)- A Permian trilobite from North Thailand. Proc. Japan Academy 65, B, p. 67-69.
(online at: https://www.jstage.jst.go.jp/article/pjab1977/65/4/65_4_67/_pdf)
(M-U Permian Pseudophullipsia aff. ozawai from NW Thailand)

Kobayashi, T., F. Takai & I. Hayami (1963)- On some Mesozoic fossils from the Khorat Series of East Thailand and a note on the Khorat Series. Japanese J. Geology Geography 34, p. 181-192.

Kobayashi, T., F. Takai & I. Hayami (1964)- On some Mesozoic fossils from the Khorat Series of East Thailand and a note on the Khorat Series. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 119-133.
(Same paper as Kobayashi et al. (1963). Generally poorly preserved fossils from several localities in Jurassic-Cretaceous Khorat series of NE Thailand, incl. Jurassic Ichthyosauria and pleisiosauria teeth, E Jurassic bivalves, silicified wood (Araucaryoxylon))

Kobayashi, T. & A. Tokuyama (1959)- The Halobiidae from Thailand. J. Fac. Science, University Tokyo, sect. 2, 12, 1, p. 27-30.
(online at: http://umdb.um.u-tokyo.ac.jp/DKoseibu/pdf/Ref_0211_.pdf)
(Late Triassic bivalves previously reported from Chiang Rai and Lampang areas. New faunas with Daonella sumatrensis Volz (originally described from N Sumatra) from Na Thawi at Thai-Malay border area. Also Daonella cf. pichleri, Halobia cf. styriaca Krumbeck (originally described from Timor) and Halobia cf. comata from E of Lampang. All species related to Carnian of Alpine-Himalayan region)

Koch, K.E. (1973)- Geology of the region Sri Sawat-Thong Pha Phum- Sangkhlaburi (Kanchanaburi Province/Thailand). Bull. Geol. Soc. Malaysia 6, p. 177-185.
(online at: www.gsm.org.my/products/702001-101347-PDF.pdf)
(Review of area in NW-most Thailand near Myanmar border, mapped by German Geological Mission in 1968-1971. Stratigraphy ~3000m of Cambrian- Jurassic (meta-)sediments, part of geosynclinal tract which extends from Yunnan in N to W Malay Peninsula in S (= Sibumasu terrane; JTvG). Include Ordovician limestone, Siurian graptolite shale, basal Devonian Tentaculites- graptolite shale, Carboniferous flysch-type clastics with pebbly shale, Permian carbonate, Triassic conglomerates ('Triassic orogeny'), Jurassic limestone, etc.)

Komalarjun, P. & T. Sato (1964)- Aalenian (Jurassic) ammonites from Mae Sot, Northwestern Thailand. Japan. In: T. Kobayashi (ed.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 237-251.
(Three ammonites from marly limestone localities of Mae Sot Basin, NW Thailand: Tmetoceras dhanarajatai n.sp., T. regleyi, Erycites and Graphoceras concavum. Generally accepted as index species for Aalenian of Mediterranean and Pacific provinces)

Konigshof, P., N.M. Savage, P. Lutat, A. Sardsud, J. Dopieralska, Z. Belka & G. Racki (2012)- Late Devonian sedimentary record of the Paleotethys Ocean- The Mae Sariang section, northwestern Thailand. J. Asian Earth Sci. 52, p. 146-157.
(11 m thick condensed sequence of Late Devonian grey pelagic limestones in Mae Sariang section of NW Thailand, with hardgrounds and Fe/Mn crusts. Ranges from Late rhenana to praesulcata conodont biozones. Probably belongs to Inthanon Zone, comprising remnants of Paleotethys Ocean)

Konishi, K. (1953)- New *Boultonia* and other microfossils from North Thailand. Trans. Proc. Palaeontological Soc. Japan, N.S., 12, p. 103-110.
(Late Permian fusulinid forams from Burmo-Thai borderland, incl. Boultonia trancata n.sp., Triticites, Rugofusilina, Schwagerina, etc.).)

Kon'no, E. (1963)- Some Permian plants from Thailand. Contributions to the geology and palaeontology of Southeast Asia, 5. Japanese J. Geology Geography 34, p. 139-159.
(Same paper as Kno'no (1964). Includes record of Permian 'Gondwanan'? Glossopteris cf. angustifolia among mainly 'Cathaysian' Alethopteris thailandica n.sp., Sphenophyllum, Cordaites, Taeniopteris from black shale at Khlong Wang Ang in Phetchabun province)

Kon'no, E. (1964)- Some Permian plants from Thailand. In: T. Kobayashi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 89-111.
(Same paper as Kon'no (1963). Eight species of Permian plants from Khlong Wang Ang, 50km SSW of Phetchabun, C Thailand. Incl. Bowmanites, Sphenophyllum, Alethopteris thailandica n.sp., Glossopteris cf. angustifolia, Palaeovittaria, Taeniopteris hallei and Poacordaites. Probable age Kungurian- Kazanian. Remarkable presence of Gondwanan Glossopteris in assemblage otherwise 'Cathaysian' (although without Gigantopteroids))

Kon'no, E. & K. Asama (1973)- Mesozoic plants from Khorat, Thailand. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 149-171.
(Description of Late Triassic (E Norian?) flora dominated by Equisetites arenaceus, also with Chlathropteris meniscoides, Todites goeppertianus, etc., in Huai Hin Lat Fm, which lies unconformably over Permian limestone in Khorat Plateau, NE Thailand. Flora similar to 'Tonkin flora' of N Vietnam and belongs to Dictyophyllum- Clathropteris flora of SW Pacific floral province)

Kosuwan, S. & P. Charusiri (1997)- Structure geology of the Khanom gneissic complex, Nakhon Si Thamamarat Province, southern Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 2, p. 727-739.

Koysamran, S. & N. Comrie-Smith (2011)- Basin modeling of Block L26/50, Eastern Khorat Plateau, Northeast Thailand. Proc. 4th Petroleum Forum: Approaching to the 21st Petroleum concession bidding round, Bangkok 2011, Department of Mineral Fuels, p. 5-12.
(online at: www.dmf.go.th/cms/assets/1/The%204th%20(DMF)%20Petroleum%20Forum%20Proceeding.pdf)
(E Khorat Plateau experienced a number of tectonic events. First was in M Carboniferous, followed by Indosinian events I, II, and III. Permian Pha Nok Khao carbonate primary reservoir target. Late Jurassic-Cretaceous Khorat Group deposited during extended period of regional subsidence and represents overburden for petroleum system. Structuring during Indosinian orogenies and amplified by uplift in Late Cretaceous and Tertiary. Permian source rocks mature for gas in Triassic; Triassic source rocks mature in Cretaceous)

Kozai, T., F. Hirsch, K. Ishida & A. Meesook (2006)- Faunal affinity of Toarcian-Aalenian (Early Jurassic) bivalves from Mae Sot and Umphang (Tak Province), Northwestern Thailand. Geosc. J. 10, 3, p. 205-215.
(NW Thailand Mae Sot- Umphang areas E-M Jurassic (Toarcian-Aalenian) beds overlie Permian-Triassic substratum of Shan-Thai (=Sibumasu) terrane with brecciated conglomerate. Pliensbachian- Early Bajocian shallow marine strata in partly terrestrial Jurassic sequence. 35 bivalve species (incl. Parvamussium donaiense) mainly endemic and defining Toarcian-Aalenian SE Asian Province of Tethys. Associated corals of Tethyan affinity)

Kozai, T., L. Perelis-Grossowicz, A. Bartolini, C. Yamee, J. Sandoval, F. Hirsch, K. Ishida, T. Charoentitirat, A. Meesook & J. Guex (2011)- New palaeontological investigations in the Jurassic of western Thailand. Gondwana Research 19, 1, p. 37-46.
(Jurassic of Mae Sot and Umphang districts, W Thailand, provide age constraints for marine Jurassic inundation of Sundaland after Paleotethys closure. Basal conglomerate of Jurassic derived from pelagic Triassic substratum. Ammonites (Tethyan Catulloceras perisphinctoides, Riccardiceras longalvum, Malladaites spp., Abbasites, Spinammatoceras schindewolfi, etc.), bivalves, large benthic forams (Timidonella sarda) and algae (Cladocoropsis mirabilis) suggest Toarcian-Bajocian ages. Faunas partly endemic, with N Tethyan

(Eurasian/ Sundaland) affinity. Bivalves mainly endemic fauna with pectinoid bivalve Parvamussium donaiense and Bositra ornate in Toarcian- Early Bajocian)

Kozar, M.G., G.F. Crandall & S.E. Hall (1992)- Integrated structural and stratigraphic study of the Khorat Basin, Rat Buri Limestone (Permian), Thailand. In: C. Piencharoen (ed.) Proc. Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, Dept. Min. Resources, p. 692-736.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1992/6259.pdf)
(Review of Khorat Basin Permian geology and results of 17 wells drilled by Esso between 1982-1984. Main discovery Nam Phong gas field (recoverable reserves ~300-500 BCF of H2S bearing gas). Eight depositional sequences from Wolfcampian- E Guadalupian (~271-255 Ma). E Carboniferous Variscan compression and Late Carboniferous rifting(back-arc extension) followed by deposition of Permian Ratburi carbonate platform on high blocks. M Triassic Indosinian and E Tertiary compressional events. Complicated diagenetic history; early dolomitized low-energy carbonates better reservoirs than high-energy counterparts)

Kozu, S., A. Sardsud, D. Saesaengseerung, C. Pothichaiya, S. Agematsu & K. Sashida (2017)- Dinosaur footprint assemblage from the Lower Cretaceous Khok Kruat Formation, Khorat Group, northeastern Thailand. Geoscience Frontiers 8, 6, p. 1479-1493.
(online at: www.sciencedirect.com/science/article/pii/S1674987117300324
(Khok Kruat Fm in U Khorat Gp, with many Aptian-Albian dinosaur footprints at Huai Dam Chum near Laos border. ~600 tracks in thin mudstone layer of small theropods and crocodylomorphs. Most footprints of cf. Asianopodus, and imprinted by small theropoda)

Krobicki, M., A. Meesook & W. Yathakum (2013)- Early Jurassic marine molasse-type conglomerates (Mae Sot area, northern Thailand)- its sedimentological features and geotectonic significance. In: C. Senebouttalath et al. (eds.) Proc. 2nd Lao-Tai Conf. Geology and Mineral resources, Vientiane, p. 70-71. *(Abstract and Presentation)*
(online at: www.dmr.go.th/download/lao_thai56/pdf_dat/Early%20Jurassic%20marine%20.pdf)

Kromkhun, K., G. Baines, P. Satarugsa & J. Foden (2013)- Petrochemistry of volcanic and plutonic rocks in Loei Province, Loei-Petchabun Fold Belt, Thailand. In: 2nd Int. Conf. Geological and Environmental Sciences, IPCBEE 52, IACSIT Press, Singapore, p. 55-59.
(online at: www.ipcbee.com/vol52/011-ICGES2013-G041.pdf)
(Petrography and geochemistry of Permo-Triassic volcanic- plutonic rocks of Loei-Phetchabun Fold Belt in Amphoe Wang Sa Phung and Maung areas (=arc at W margin Indochina Block). Intermediate igneous rocks with calc-alkaline affinities indicating magmatism at E-dipping continent- ocean subduction zone where Paleotethys ocean subducted beneath Indochina block. Subduction active from at least 244-230 Ma)

Kruse, P. (1989)- A Thai receptaculitalean. Alcheringa (Australasian J. Palaeontology) 13, 2, p. 141-144.
(Fragmentary silicified receptaculitalean material from E-M Ordovician Tha Manao Formation at Khao Tham, W- C Thailand (= Sibumasu terrane). Described as ?Fisherites sp., possibly related to Fischerites burmensis from C Myanmar (Rietschel & Nitecki 1984). One of few SE Asian records of this order)

Kummel, B. (1960)- Triassic ammonoids from Thailand. J. Paleontology 34, 4, p. 682-694.
(First Triassic ammonoids from N Thailand (Doi Chang, Mae Moh River), showing presence of Anisian (Balatonites, Ptychites, Tropigymnites, Beyrichites, Sturia) and Carnian (Joannites, Cladiscites beyrichi, Trachyceras (Paratrachyceras), Lobites). None of Triassic localities and faunas known to date from mainland SE Asia anywhere comparable to abundance and diversity of faunas known from Himalayas and Timor)

Kuroda, J., H. Hara, K. Ueno, T. Charoentitirat, T. Maruoka, T. Miyazaki, A. Miyahigashi & S. Lugli (2017)- Characterization of sulfate mineral deposits in central Thailand. Island Arc 26, 2, e12175, p.
(Layered anhydrite and massive gypsum in NE Nakhon Sawan, C Thailand, likely precipitated from Carboniferous sea water (~ 326 Ma). Intruded by andesitic dikes with M Triassic zircons (~ 240 Ma))

Lacassin, R., H. Maluski, P.H. Leloup, P. Tapponnier, C. Hinthong, K. Siribhakdi, S. Chuaviroj & A. Charoenravat (1997)- Tertiary diachronic extrusion and deformation of western Indochina: structural and 40Ar/39Ar evidence from NW Thailand. J. Geophysical Research 102, B5, p. 10,013-10,037.
(Wang Chao and Three Pagodas fault zones cut W part of Indochina block. Evidence of left-lateral shear in Lansang gneisses. Ar dating shows deformation terminated at ~30.5 Ma. Faults offset N striking lowerMesozoic metamorphic-magmatic belt of N Thailand, which rapidly cooled around 23 Ma. Extrusion of SW Indochina occurred in Late Eocene- E Oligocene, probably inducing rifting in Gulf of Thailand and in Malay and Mekong basins. In Oligo-Miocene, continuing penetration of India into Asia culminated with extrusion of all of Indochina along Ailao Shan- Red River fault)

Laojumpon, C., U. Deesri , S. Khamha, A. Wattanapituksakul, K. Lauprasert, S. Suteethorn & V. Suteethorn (2014)- New vertebrate-bearing localities in the Triassic of Thailand. J. Science Technol. Mahasarakham University (MSU) 33, 4, p. 335
(online at: http://research.msu.ac.th/msu_journal/upload/journal_file/jfile_no34_44342.pdf)
(Three new vertebrate localities in Late Triassic Huai Hin Lat Fm, N Thailand. With coprolites, hybodont shark, bony fish remains, phytosaur tooth and temnospondyl fragments)

Laojumpon, C., V. Suteethorn, P. Chanthasit, K. Lauprasert & S. Suteethorn (2017)- New evidence of sauropod dinosaurs from the Early Jurassic period of Thailand. Acta Geologica Sinica (English Ed.) 91, 4, p. 1169-1178.
(Oldest dinosaur assemblages of Thailand in Nam Phong Fm continental sediments. With Isanosaurus attavipatchi and other species of basal sauropods. Age more likely E Jurassic than Triassic)

Laoniyomthai, N., T. Charoenpun & F. Saifuddin (2012)- Shallow pays in Sirikit Main oilfield, Phitsanulok Basin, Onshore Thailand: their habitat and identification on 3D seismic data. Proc. Int. Petroleum Techn. Conf. (IPTC), Bangkok, IPTC 15144, p. 2758-2769.
(Several shallow oil-gas reservoirs above main regional seal in Sirikit Main Field)

Lauprasert, K., G. Cuny, E. Buffetaut, K. Thirakhupt & V. Suteethorn (2007)- *Siamosuchus phuphokensis*, a new goniopholidid from the Early Cretaceous (ante-Aptian) of northeastern Thailand. Bull. Soc. Geologique France 178, 3, p. 201-216.
(New broad-snouted goniopholidid crocodile in pre-Aptian Sao Khua Fm of Khorat Plateau, NE Thailand)

Lauprasert, K., G. Cuny, K. Thirakhupt & V. Suteethorn (2009)- *Khoratosuchus jintasakuli* gen. et sp. nov., an advanced neosuchian crocodyliform from the early Cretaceous (Aptian/Albian) of northeastern Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Spec. Publ. 315, p. 175-187.
(New slender-snouted neosuchian crocodile from Aptian Khok Kruat Fm of NE Thailand. Represents youngest Mesozoic crocodyliform known in Thailand and resembles derived neosuchians of China and Europe)

Lauprasert, K., C. Laojumpon, W. Saenphala, G. Cuny, K. Thirakhupt & V. Suteethorn (2010)- Atoposaurid crocodyliforms from the Khorat group of Thailand: first record of *Theriosuchus* from Southeast Asia. Palaeont. Zeitschrift 85, p. 37-47.
(Crocodilian skull from Berriasian-Barremian non-marine sediments of the Khorat Plateau in NE Thailand)

Lauprasert, K., P. Watchajittaphan, S. Juanngam, S. Bhuttarach (2019)- Freshwater crocodile, *Crocodylus siamensis* Schneider, 1801, from the Middle Pleistocene deposits in Chaloem Phrakiat District, Nakhon Ratchasima, Thailand. Annales Paleontologie 105, p. 269-274.

Laurie, J.R. & C. Burrett (1992)- Biogeographic significance of Ordovician brachiopods from Thailand and Malaysia. J. Paleontology 66, 1, p. 16-23.
(Early Ordovician brachiopods Spanodonta floweri and Aporthophyla tianjingshanensis? from peninsular Thailand and Langkawi Islands, NW Malaysia, confirm evidence for Ordovician juxtaposition of Shan-Thai terrane, N China terrane and W Australia)

Laveine, J.P., B. Ratanasthien & S. Sithirach (1993)- The Carboniferous flora of Northeastern Thailand: its paleogeographic importance. Comptes Rendus Academie Sciences, Paris 317, 2, p. 279-285.
(Carboniferous plant fossils from near Na Duang coal mine, Loei area, NE Thailand, with Stigmaria, Lepidodendron, etc.)

Laveine, J.P., B. Ratanasthien & S. Sithirach (2003)- The Carboniferous flora of Northeastern Thailand. Revue Paleobiologie, Geneve, 22, 2, p. 761-797.

Laveine, J.P., B. Ratanasthien, S. Sithirach & D. Demarque (2009)- The Carboniferous flora of northeastern Thailand: additional documentation from the Na Duang-Na Klang basin. Revue Paleobiologie, Geneve, 28, 2, p. 315-331.
(online at: www.ville-ge.ch/mhng/paleo/paleo-pdf/28-2/pal-28-2-02.pdf)
(New Carboniferous plant material from E Carboniferous (Visean) of Na Duang-Na Klang basin in NE Thailand includes Lepidodendron timsuwanii n.sp.. Flora essentially of Euramerican aspect)

Laveine, J.P., D. Vachard, B. Ratanasthien & S. Sithirach (2003)- The Lower Carboniferous Na Duang Marine band (Na Duang Coal Mine, Loei District, Northeastern Thailand). Revue Paleobiologie, Geneve, 22, 2, p. 799-809.

Lawwongngam, K. (1990)- Geochemical characterization of crude oils from Sirikit Oilfield, Phitsanulok Basin. Thesis Chulalongkorn University, Bangkok, p. 1-220.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1990/4586.pdf)

Lawwongngam, K. & R.P. Philp (1993)- Geochemical characteristics of oils from the Sirikit Oilfield, Phisanulok Basin, Thailand. Chemical Geology 93, p. 129-146.
(12 oils from Sirikit field of onshore Phisanulok Basin suggest all oils derived from mixture of bacterial, algal and higher plant material. Sterane contents relatively low and sterane ratios suggest oils relatively immature. Extensive strike-slip faults in basin may have led to rapid burial of sediments)

Lawwongngam, K. & R.P. Philp (1993)- Preliminary investigation of oil and source rock organic geochemistry from selected Tertiary basins of Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 433-448.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7612.pdf)
(Crude oils and extracts from source rocks from 6 basins of central plain and Gulf of Thailand suggest organic sources deposited in lacustrine environments. Organic matter mainly algae, with varying amounts of higher plant material. Variation in pristane/phytane ratios may imply differences in depositional oxicity. Separation between lacustrine environments indicated by differences in paleosalinity, e.g. hypersaline biomarker, gammacerane, which is restricted to offshore Gulf of Thailand)

Lawwongngam, K., R.P. Philp & S. Tantayanon (1990)- Geochemical characterization of crude oils from Sirikit Oilfield, Phitsanulok Basin. In: Development geology for Thailand into the Year 2000, Chulangkorn University, Bangkok, p. 377-407.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1990/24728.pdf)
(similar to Lawwongngam & Philp, 1993)

Lazar, S. (2012)- Sedimentology and depositional history of the Pha Nok Khao platform in the Loei-Phetchabun fold belt, Northeast Thailand. M.Sc. Thesis University of Western Australia, Pert, p. 1-188.
(online at: http://research-repository.uwa.edu.au/files/3245697/Lazar_Shachar_2012.pdf)
(U Carboniferous- Permian Pha Nok Khao platform outcrops in N Loei-Phetchabun foldbelt and is outcrop analogue for coeval gas fields in nearby Khorat plateau. Part of Indochina Terrane)

Lehmann, B., N. Jungyusuk, S. Khositanont, A. Hohndorf & Y. Kuroda (1994)- The tin-tungsten ore system of Pilok, Thailand. J. Southeast Asian Earth Sci. 10, p. 51-63.

(Tin-tungsten mineralization in Pilok mining area on apical parts of probably Late Cretaceous alkali feldspar aplite stocks (aplogranite), which intrude earlier K-feldspar megacrystic biotite granite)

Lehmann, B. & C. Mahawat (1989)- Metallogeny of tin in central Thailand: a genetic concept. Geology 17, 5, p. 426-429.
(Tin mineralization in C Thailand is associated with granitic rocks of Thai-Burmese border range (W group). Eastern group granites have no tin)

Lei, Z.Q. (1993)- The discovery and significance of the Late Jurassic sporopollen assemblage in Peninsular Thailand (Phrae and Nan Provinces). In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology, (BIOSEA), Chiang Mai, University of Chiang Mai, 2, p. 361-380
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7489.pdf)
(Abundant and diverse sporopollen assemblages from redbeds of SW Peninsular Thailand dominated by 21 species of Classopollis (86%) and Dicheiropollis (4.3%). Indicate arid climate and Late Jurassic age, similar to Late Jurassic of dry southern zone in China. Associated with 'Estheria' fauna of conchostracans Pseudograpta, Paleoleptestheria, etc. (Alderson et al. 1994 suggest more likely Early Cretaceous age))

Lek-uthai, T., C. Sangsuwan & B. Thongpenyai (1987)- A petroleum source rock potential in Chumphorn Basin. In: P. Thanasuthipitak (ed.) Proc. Symp. Cenozoic basins Thailand: geology and resources, Chiang Mai 1984, p. 43-66.

Le Loeuff, J., S. Khansubha, E. Buffetaut, V. Suteethorn, H. Tong& C. Souillat (2002)- Dinosaur footprints from the Phra Wihan Formation (Early Cretaceous of Thailand). Comptes Rendus Palevol 1, 5, p. 287-292.
(First sauropod tracks in Thailand, in basal Cretaceous Phra Wihan Fm E of Khon Kaen, NE Thailand (Khorat Gp). Associated with theropod tracks)

Le Loeuff, J., T. Saenyamoon, C. Souillat, V. Suteethorn & E. Buffetaut (2009)- Mesozoic vertebrate footprints of Thailand and Laos. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Spec. Publ. 315, p. 245-254.
(Vertebrate footprints from seven Mesozoic formations of Thailand and Laos, from Late Triassic (Kuchinari Group; Norian basal archosaurs replaced by Rhaetian dinosaurs) and E Cretaceous (Khorat Gp))

Limtrakun P. (2003)- Origin and distribution of corundum from an intraplate alkali basaltic province in Thailand: evidence from field and inclusion studies. Ph. D. Thesis University of Tasmania, p. 1-276.
(online at: http://eprints.utas.edu.au/20552/7/whole_LimtrakunPhisit2003_thesis_ex_pub_mat.pdf)
(Sapphires from alluvial placer deposits in Denchai gem fields of Phrae Province, N Thailand, generally interpreted as derived from late Cenozoic Denchai basalts, with olivine, clinopyroxene and common mantle-derived xenoliths. New evidence suggests sapphires crystallised from melts formed in continental lithosphere)

Limtrakun, P., Y. Panjasawatwong & J. Khanmanee (2013)- Petrochemistry and origin of basalt breccia from Ban Sap Sawat area, Wichian Buri, Phetchabun, central Thailand. Songklanakarin J. Sci. Technol. 35, 4, p. 469-482.
(online at: http://rdo.psu.ac.th/sjstweb/journal/35-4/35-4-13.pdf)
(Miocene Wichian Buri basalts and basalt breccias in Loei-Phetchabun Volcanic Belt similar petrography and chemical compositions. Both formed from same continental within-plate, transitional tholeiitic magma)

Limtrakun, P., Khin Zaw, C.G. Ryan & T.P. Mernagh (2001)- Formation of the Denchai gem sapphires, northern Thailand: evidence from mineral chemistry and fluid/melt inclusion characteristics. Mineralogical Magazine 65, 6, p. 725-735.
(Denchai gem sapphire deposits in Phrae Province, N Thailand, closely associated with late Cenozoic high CO2/ high K alkaline basaltic rocks. Sapphires in alluvial placer deposits in paleo-channels at shallow depths)

Lin, Y.L., M.W. Yeh, T.Y. Lee, S.L. Chung, Y. Iizuka & P. Charusiri (2013)- First evidence of the Cambrian basement in Upper Peninsula of Thailand and its implication for crustal and tectonic evolution of the Sibumasu Terrane. Gondwana Research 24, p. 1031-1037.
(First radiometric date of Cambrian crystalline basement of Sibumasu: zircon U/Pb age of Khao Tao orthogneiss in Thailand Upper Peninsula 501.5 ± 7.5 Ma (Late Cambrian). Chemical similarity and spatial continuity of Khao Tao orthogneiss with other pre-Neotethys marginal Eurasian and Sibumasu granitoids indicate similar magmatic arc regime along Gondwana India-Australia margin)

Linnen, R.L. (1998)- Depth of emplacement, fluid provenance and metallogeny in granitic terranes: a comparison of western Thailand with other tin belts. Mineralium Deposita 33, p. 461-476.
(Tin mineralization may occur at shallow and deep levels of emplacement, but greater tendency for cassiterite-bearing pegmatites to form at depth)

Linnen, R.L. & A.E. Williams-Jones (1994)- The evolution of pegmatite-hosted tin-tungsten mineralization at Nong Sua, Thailand: evidence from fluid inclusions and stable isotopes. Geochimica Cosmochimica Acta 58, p. 735-747.
(Maximum pressure for emplacement of Nong Sua pegmatite 3.8 kbar corresponding to depth of <12-14 km)

Linnen, R.L. & A.E. Williams-Jones (1995)- Genesis of a magmatic metamorphic hydrothermal system: The Sn-W polymetallic deposits at Pilok, Thailand. Economic Geology 90, p. 1148-1166.
(Cassiterite, wolframite and base metal mineralization in Pilok area, 250km NW of Bangkok, W Thailand, are hosted by veins and stockworks in apical portion of Late Cretaceous leucocratic granite stocks (Ar-Ar ages 72-77 Ma), close to contacts with pelitic metasedimentary rocks)

Linnen, R.L., A.E. Williams-Jones & R.F. Martin (1992)- Evidence of magmatic cassiterite mineralization at the Nong Sua aplite-pegmatite complex, Thailand. Canadian Mineralogist 30, p. 739-761.
(online at: http://rruff.info/doclib/cm/vol30/CM30_739.pdf)
(Nong Sua intrusive complex in N Peninsular Thailand, 180 km S of Bangkok, is layered aplite-pegmatite with Sn-W mineralization. Muscovite from pegmatite with Ar/Ar age of 63.9± 0.6 Ma. Nearby biotite granite with biotite Ar/Ar age of 53.2 Ma. Cassiterite crystallized at ~95% crystallization, or prior to vapor saturation)

Lockley M.G,. M. Matsukawa, Y. Sato (2006)- A distinctive new theropod dinosaur track from the Cretaceous of Thailand: Implications for theropod track diversity. Cretaceous Research 27, 1, p. 139-145.
(Well-preserved, three-toed dinosaur footprints with bilobed heel impressions from Cretaceous of Thailand are assigned to new ichnotaxon Siamopodus khaoyaiensis. Represent gracile theropods. Also theropod tracks with bulbous heel impressions from a new locality, similar to Lower Cretaceous tracks from elsewhere in Asia)

Loffler, E. & J. Kubiniot (1996)- Landform development and bioturbation on the Khorat Plateau, Northeast Thailand. Natural History Bull. Siam Society 44, p. 199-216.
(online at: www.thaiscience.info/Article%20for%20ThaiScience/Article/61/10001833.pdf)
(Khorat Plateau erosional surface developed in two main phases: (1) E Tertiary formation of extensive plain, with deep weathering under humid tropical conditions (red Yasothon ferralsols and gravels of 'upper terrace'); (2) Pliocene or E Pleistocene relief rejuvenation after tectonic uplift, dissecting and stripping much of weathered mantle, with development of yellow sandy xanthic ferralsols on new land surfaces under more seasonal climate. Modifying factor in landform/ soil development is post-depositional bioturbation by termites, capable of reworking a few m of soil profile in several 1000 yrs, transporting fine material upward and causing coarse material like tektites to move down profile like a lag deposit)

Long, J.A. & C. Burrett (1989)- Fish from the Upper Devonian of the Shan-Thai terrane indicate proximity to East Gondwana and South China terranes. Geology 17, 9, p. 811-813.
(Coronodontid shark tooth, new species of Phoebodus and occurrence of chondrichthyan Harpagodens in Late Famennian of Thailand, Australia, and S China suggests Late Devonian proximity of these terranes, in accord with recent paleomagnetic data)

Long, J.A. & C.F. Burrett (1989)- Early Devonian conodonts from the Kuan Tung Formation, Thailand: systematics and biogeographic considerations. Records Australian Museum, Sydney, 41, 2, p. 121-133.
(online at: http://australianmuseum.net.au/Uploads/Journals/17706/140_complete.pdf)
(Conodonts from limestone horizon in Kuan Tung Fm, Satun Province, S Thailand, show E Devonian (Emsian) age. Many conodont species cosmopolitan, some restricted to E Gondwana- ShanThai- S China Terranes)

Luddecke, S., C. Chonglakmani & D. Helmcke (1991)- Analysis of pebble associations from the marine Triassic of northern Thailand. J. Thai Geoscience 2, p. 91-101.
(Carnian-Norian age 'molasse' overlying Permian ophiolitic melange in N Thailand. Three types: (1) M Triassic Lampang/ Hong Hoi conglomerate mainly pebbles of M Triassic limestones and acid volcanic rocks (from nearby carbonate platform on Permo-Triassic volcanic arc or rift?); (2) U Triassic Rong Kwang conglomerate mainly siliciclastic sediments and low-grade metamorphic rocks; (3) Nam Pat conglomerate 38% volcanic, 26% metamorphic, 10% plutonic (from continental crust with Triassic volcanic arc?))

Lumjuan, A. (1993)- Permo-Carboniferous of northern Nakhon Si Thammarat. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, p. 219-224.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/6788.pdf)
(Carboniferous- Permian series in N part of Peninsular Thailand. ~500m+ of Carboniferous quartzitic sandstones and shales, overlain by ~200m of Late Carboniferous- earliest Permian pebbly mudstones (with granitic and other clasts) With Posidonomya. Capped by E-M Permian Ratburi Limestone)

Macdonald, A.S. & S.M. Barr (1978)- Tectonic significance of a Late Carboniferous volcanic arc in northern Thailand. In: P. Nutalaya (ed.) Proc. Third Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA III), Bangkok, p. 151-156.
(Remnants of Late Carboniferous volcanic arc through central N Thailand, W of younger andesitic arcs and (Nan-Uttaradit) ultramafic belt. Mainly tholeiitic basalts, possibly from island arc environment. Associated with Late Carboniferous sediment, below base of Rat Buri Limestone. Distribution of volcanics and granites implies convergence along W-dipping subduction zone)

Macdonald, A.S. & S.M. Barr (1984)- The Nan River mafic-ultramafic belt, northern Thailand: geochemistry and tectonic significance. Bull. Geol. Soc. Malaysia 17, p. 209-217.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1984010.pdf)
(Nan River suture in N Thailand with mafic and ultramafic rocks (mainly metabasalt and metabasaltic andesite flows) and tuffs overlying metagabbro. Ultramafic rocks along SE side metahornblendite, metapyroxenite and serpentite lenses within garnet amphibolite. Mafic rocks resemble calc-alkali basalts formed in volcanic arc, rather than in oceanic environment. Should probably be termed volcanic arc suite with associated fault-emplaced ultramafic bodies. If belt marks suture between Shan-Thai and Indosinian cratonic blocks no significant obduction of intervening oceanic basin onto Shan-Thai block)

Macdonald, A.S., S.M. Barr, G.R. Dunning & W. Yaowanoiyothin (1993)- The Doi Inthanon metamorphic core complex in NW Thailand: age and tectonic significance. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 117-125.
(Doi Inthanon complex in NW Thailand part of 400km belt of high-grade gneissic rocks along W mountain ranges of Thailand. Orthogneiss dome looks like Cordilleran-type metamorphic core complex, Zircon ages suggest gneiss derived from Late Triassic- E Triassic granitic protolith; high-grade metamorphism probably in Late Cretaceous. Large scale extension to form core complex sometime between Late Cretaceous and Miocene)

Macdonald, A.S., S.M. Barr, B.V. Miller, P.H. Reynolds, B.P. Rhodes & B. Yokart (2010)- P-T-t constraints on the development of the Doi Inthanon metamorphic core complex domain and implications for the evolution of the western gneiss belt, northern Thailand. J. Asian Earth Sci. 37, p. 82-104.
(Western gneiss belt in N Thailand exposed in Doi Inthanon metamorphic core complex (W of Chiang Mai basin), and in Mae Ping strike-slip fault domain W of Tak batholith. Doi Inthanon gneiss experienced: (1) high-

grade, medium-P metamorphism in Late Triassic- E Jurassic (~210 Ma); (2) Late Cretaceous (84, 72 Ma) thermal overprint; (3) Late Eocene mylonite age (40 Ma) is early stage of development of core complex by low-angle extension; (4) Miocene (~26-15 Ma) late-stage development of core complex. Similarities with N Vietnam, Laos, Yunnan, and C Myanmar suggest regional response to indentation of SE Asia by India)

Mahawat, C., M.P. Atherton & M.S Brotherton (1990)- The Tak Batholith, Thailand: the evolution of contrasting granite types and implications for tectonic setting. J. Southeast Asian Earth Sci. 4, p. 11-27.
(Tak Batholith, W Central Thailand at boundary of E and C granitoid belts. Four zoned plutons, with youngest of Late Triassic age (210 Ma). Composition changes from granodioritic in oldest, through monzonitic and monzogranitic to syenogranitic in youngest. Changes in composition with time similar to increasing K volcanic series at active continental margin. Due to change from subduction to strike-slip and then uplift)

Makel, G., B. Ainsworth, S. Chuenbunchom, M. Harvey, S. Kaewla-Iad & R. Pal (1997)- The Sirikit Field- improved structural interpretation and reservoir architecture and its impact on further field development. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 2, p. 541-542. *(Abstract only)*
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Sirikit oil field discovered in 1981 and largest field in Oligocene- Miocene N-S trending extensional Phitsanulok Basin. Numerous lacustrine- deltaic- fluvial cycles)

Malila, K. (2005)- Provenance of the Nam Duk Formation and implications for the geodynamic evolution of the Phetchabun fold belt. Ph.D. Thesis Suranaree University of Technology, p. 1-162. *(Unpublished)*
(On provenance of Permian sediments in Nam Duk Carboniferous- Permian marginal basin, C Thailand. Basin openeed in Carboniferous as maginal basin off Indochina, and closed in Late permian? with ophiolite obduction and formation of Nan-Uttaradit suture)

Malila, K., C. Chonglakmani, Q. Feng & D. Helmcke (2008)- Provenance and tectonic setting of the Permian Nam Duk Formation, North-Central Thailand: implications for geodynamic evolution. Science Asia 34, p. 7-22.
(online at: www.scienceasia.org/2008.34.n1/v34_007_022.pdf)
(Permian Nam Duk Basin, Phetchabun Fold Belt, C Thailand, is remnant ocean basin and branch of Paleo-Tethys. Geochemistry of siliciclastics indicates E-M Permian 'pelagic sequence' transitional between oceanic and continental island arc and derived mainly from metabasic sources. Middle-late M Permian provenance signatures of 'flysch' and 'molasse' with indications of ultramafic-mafic igneous provenance and deposition in continental island arc environment. Apparently ocean closed in short period in M Permian)

Manoonphol, P., Y. Thasod & B. Ratanasthien (2015)- The composition and the yield of oil shale from Na Hong Basin, Mae Chaem District, Chiang Mai Province. Proc. 5th GEOINDO 2015, Khon Kaen, PO-4, 6p.
(Oil shales from small Tertiary Na Hong Basin, N Thailand, dominated by alginite. Also Botryococcus, Pila and Reinschia)

Mansyur, M., J.K. Warren, I. Cartwright & Yow Lam Cheong (2013)- Dolomitization and its relation to fracture porosity evolution: a case study in Permian Ratburi carbonate outcrop in the Sibumasu domain, Krabi, Southern Peninsular, Thailand. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-016, p. 1-15.
(Production from Permian carbonates in Nang Nuan oil field, offshore S Thailand and Sin Phu Horm and Nam Pong gas fields in NE Thailand. Dolomitization, karstification and fracturing part of diagenetic evolution. Study of Ratburi Lst dolomite outcrop near Krabi in S Peninsular Thailand revealed three distinct dolomite textures, all formed during burial in response to rock-fluid interaction)

Mantajit, N. (1997)- Stratigraphy and tectonic evolution of Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 1-26.
(Review of Paleozoic- Cenozoic stratigraphy, tectonic evolution and mineral deposits of Thailand)

Mantajit, N., W. Tantiwanit & L. Raksasakulwong (1979)- Stratigraphy of Phuket- Phang Nga area (Permo-Carboniferous), J. Geol. Soc. Thailand,
(Carboniferous- E Permian clastics of Phuket Gp derived from western source)

Maranate, S. (1982)- Palaeomagnetism of the Khorat Group in Northeast Thailand. M.Sc. Thesis Victoria University, Wellington, p. 1-398.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1982/4505.pdf)

Maranate, S. (1984)- Magnetostratigraphic correlation for dating in the Khorat Group Northeast Thailand. Proc. Conf. Applications of Geology and the National Development, Bangkok, p. 293-296.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1984/7249.pdf)

Maranate, S. (1984)- Palaeomagnetism of the Khorat Group in Northeast Thailand. Geological Survey Paper 3, p. 1-71.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1982/5292.pdf)
(Paleomag data from 179 sites in M Triassic- M Cretaceous Khorat Gp (54% of sites rejected). Paleolatitude not signicantly different from today (unlike nearby S China, whose Jurassic-Cretaceous paleolatitudes N of present-day?). Clockwise rotation of ~38° after mid-Cretaceous))

Maranate, S. & P. Vella (1986)- Palaeomagnetism of the Khorat Group, Mesozoic, northeast Thailand. J. Southeast Asian Earth Sci. 1, p. 23-36.
(Late Triassic- Cretaceous Khorat Group up to 5000m of paralic-freshwater sediments, mainly red-beds. Paleomagnetic data suggest clockwise rotation (37 ± 7°) in last 100 My. Inclinations not much different from present day, indicating NE Thailand (and Indochina plate) at nearly same latitude since Late Triassic (NB: Van der Voo (1993) suspects widespread resetting of paleomagnetic data in Indochina- SE Asia mainland))

Marivaux, L., M. Benammi, S. Ducrocq, J.J. Jaeger & Y. Chaimanee (2000)- A new baluchimyine rodent from the Late Eocene of the Krabi Basin (Thailand): palaeobiogeographic and biochronologic implications. Comptes Rendus Academie Sciences, Paris, ser, IIA, 331, 6, p. 427-433.
(New baluchimyine rodent, Baluchimys krabiense n. sp., from Bang Mark pit of Krabi mine (Late Eocene))

Marivaux, L., Y. Chaimanee, P. Tafforeau & J.J. Jaeger (2006)- New strepsirrhine primate from the late Eocene of Peninsular Thailand (Krabi Basin). American J. Physical Anthropology 130, 4, p. 425-434.
(New lower jaw of primate from late Eocene in Krabi coal mine of Peninsular Thailand (Muangthanhinius siami))

Marivaux, L., Y. Chaimanee, C. Yamee, P. Srisuk & J.J. Jaeger (2004)- Discovery of *Fallomus ladakhensis* Nanda & Sahni, 1998 (Mammalia, Rodentia, Diatomyidae) in the lignites of Nong Ya Plong (Phetchaburi Province, Thailand): systematic, biochronological and paleoenvironmental implications. Geodiversitas 26, 3, p. 493-507.
(online at: http://sciencepress.mnhn.fr/sites/default/files/articles/pdf/g2004n3a4.pdf)
(New finds of mandibles and isolated teeth of a diatomyid rodent Fallomus ladakhensis in Oligocene lignites of the Tertiary basin of Nong Ya Plong in C Thailand. Development of lophodont and moderately hypsodont teeth more likely in fairly arid environments.)

Martin, J.E. & K. Lauprasert (2010)- A new primitive alligatorine from the Eocene of Thailand: relevance of Asiatic members to the radiation of the group. Zoological J. Linnean Soc. 158, 3, p. 608-628.
(online at: https://academic.oup.com/zoolinnean/article/158/3/608/3798456)
(Remnants of new alligatorine taxon from Late Eocene of Krabi Basin, S Thailand: Krabisuchus siamogallicus. Alligatorines widespread as early as Late Eocene across N hemisphere. Probably colonized vast territories, during periods of global warm climates)

Martin, J.E., K. Lauprasert, E. Buffetaut, R. Liard & V. Suteethorn (2013)- A large pholidosaurid in the Phu Kradung Formation of north-eastern Thailand. Palaeontology 57, 4, p. 757-769.

(Jaw of large crocodilian from E Cretaceous (possibly Late Jurassic) continental Phu Kradung Fm in NE Thailand Indochina block). Originally described as Sunosuchus thailandicus, but here assigned to new genus Chalawan)

Martin, M., E. Buffetaut, H. Tong & V. Suteethorn (1996)- New Jurassic dipnoans from Thailand. Geol. Soc. Denmark, DGF Online Series. 1,
(online at: http://2dgf.dk/dgf-online-series/new-jurassic-dipnoans-from-thailand/)
(Toothplates of freshwater dipnoans (lungfish) in Jurassic of S and NE Thailand assigned to Ferganaceratodus szechuanensis. Also known from S China Late Triassic- Jurassic)

Martin, V. (1994)- Baby sauropods from the Sao Khua Formation (Lower Cretaceous) in northeastern Thailand. GAIA 10, p. 147-153.
(online at: www.arca.museus.ul.pt/ArcaSite/obj/gaia/MNHNL-0000270-MG-DOC-web.PDF)
(Remains of juvenile sauropods Phuwiangosaurus sirindhornae from E Cretaceous fluvial deposits)

Martin, V., E. Buffetaut & V. Suteethorn (1993)- Jurassic sauropod dinosaurs of Thailand: a preliminary report. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 2, p. 415-425.
(Great number of localities in Khorat Plateau, NE Thailand, yielded U Jurassic sauropod remains)

Martin, V., E. Buffetaut & V. Suteethorn (1994)- A new genus of sauropod dinosaur from the Sao Khua Formation (Late Jurassic to Early Cretaceous) of northeastern Thailand. Comptes Rendus Academie Sciences, Paris, ser. 2, 319, p. 1085-1092.
(New sauropod Phuwiangosaurus sirindhornae from Phu Wiang)

Martin, V. & R. Ingavat (1982)- First record of an Upper Triassic Ceratodontid (Dipnoi, Ceratodontiformes) in Thailand and its paleogeographical significance. Geobios 15, 1, p. 111-114.
(First discovered Norian continental vertebrate locality of Thailand yielded minute toothplate of ceratodontid (lungfish). Probably Ceratodus cf. szechuanensi, previously recorded from U Triassic of China, providing evidence for land connection between Thailand and China as early as Late Triassic)

Martin, V., V. Suteethorn & E. Buffetaut (1999)- Description of the type and referred material of *Phuwiangosaurus sirindhornae* Martin, Buffetaut and Suteethorn 1994, a sauropod from the Lower Cretaceous of Thailand. Oryctos 2, p. 39-91.
(online at: http://www.dinosauria.org/documents/2003/oryctos_v2_99-p39-91.pdf)
(Most of the abundant sauropod material from E Cretaceous Sao Khua Fm from E Cretaceous of Khorat Plateau in NE Thailand referable to Phuwiangosaurus sirindhornae, a mid-sized sauropod different from Jurassic Chinese sauropods. Early representative of family Nemegtosauridae)

Matha, S., F. Saifuddin, A. Panthong, I.N. Nuada, S. Phaungphuak et al. (2012)- Stratigraphic traps in distal lacustrine delta, a case history from Greater Sirikit East Field, Phitsanulok Basin, Central Plain, Thailand. Int. Petrol. Techn. Conf. (IPTC), Bangkok, 1, IPTC 14491, p. 932-947.
(On stratigraphic traps in Greater Sirikit East oil- gas field in Phitsanulok Basin. Main reservoirs are fluvio-deltaic Lan Krabu Fm members of K, L and M that interfinger with lacustrine Chumsaeng Fm)

McCabe, R., M. Celaya, J. Cole, H.C. Han, T. Ohnstad, V. Paijitprapapon & V. Thitipawarn (2012)- Extension tectonics: the Neogene opening of the north-south trending basins of central Thailand. J. Geophysical Research, Solid Earth, 93, B10, p. 11899ï 11910.
(Paleomagnetic work on late Neogene basalt flows from Thailand suggest differential rotation between W and C Thailand versus Khorat Plateau. Rotations record late Neogene phase of E-W extension of Chao Phraya-Phitsanulok Basin, Gulf of Thailand, and intermontane basins of W Thailand basins. Formation of basins and related basaltic volcanism developed in reponse to subduction of Indian plate under W Burma. Tectonics of region similar in style to Basin and Range region of W United States)

Meesook, A. (2000)- Cretaceous environments of northeastern Thailand. In: H. Okada, H. & N.J. Mateer (eds.) Cretaceous environments of Asia, Elsevier Science B 17, p. 207-223.
(In NE Thailand widespread non-marine Cretaceous rocks of Khorat Group. Semi-arid conditions in Early Cretaceous to arid paleoclimate in Late Cretaceous)

Meesook, A. (2011)- Cretaceous. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 169-184.

Meesook, A. & J.A. Grant-Mackie (1994)- Biostratigraphic correlation of marine Jurassic rocks within Thailand and Southeast Asia. Proc. Int. Symp. Stratigraphic Correlation Southeast Asia, Bangkok 1994, p. 160-169.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1994/4665.pdf)
(Jurassic sediments of Thailand widespread marine (in W) and non-marine (in NE) deposits. Marine Jurassic mainly Toarcian- E Bajocian. Regionally Thailand Jurassic similar to that of Vietnam and Myanmar)

Meesook, A. & J.A. Grant-Mackie (1996)- Marine Jurassic lithostratigraphy of Thailand. J. Southeast Asian Earth Sci. 14, p. 377-391.
(Marine Jurassic rocks well-exposed in NW Thailand-Myanmar border area (= W part of Shan-Tai/ Sibumasu block), less in other areas of Thailand. Generally underlain unconformably by Triassic and overlain by Quaternary. Sequences ~450-900m thick in NW, thinner in other areas, particularly in S. Marine Jurassic contains ammonites (Toarcian Dactylioceras, Aalenian Onychoceras, Leioceras, Graphoceras, etc.), bivalves (Parvamussium donaiense, Bositra) and foraminifera (Aalenian Timidonella sarda) and is largely Toarcian-Aalenian plus some Bajocian. Presence of Late Jurassic not confirmed)

Meesook, A. & J.A. Grant-Mackie (1997)- Faunal associations, paleoecology and paleoenvironments of the Thai marine Jurassic: a preliminary study. In: P. Dheeradilok et al. (eds.) Int. Conf. Statigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok 1997, Dept. Mineral. Res., 1, p. 164-176.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7633.pdf)
(Paleoecological study of shelfal marine Toarcian- E Bajocian in W and S Thailand, mainly based on bivalves and ammonites. By M Bajocian all area changed from marine to non-marine facies. Thin-shelled 'paper Pecten' Bositra-dominated facies in Toarcian- Aalenian dark mudstones tied to anoxic conditions. Also Grammatodon, Parvamussium, etc. Belemnites absent in E-M Jurassic of Thailand/ SE Asia)

Meesook, A. & W. Saengsrichan (2011)- Jurassic. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 151-168.
(Review of Jurassic stratigraphy of Thailand. Marine Jurassic limited to W sides of N, W and Peninsular Thailand (Sibumasu) and limited to Toarcian- E Bajocian ages only (locally with non-marine interbeds). Non-marine Jurassic facies only in deposits of NE Thailand (Khorat Basin))

Meesook, A., J.G. Sha, C. Yamee & W. Saengsrichan (2009)- Faunal associations, paleoecology and paleoenvironment of marine Jurassic rocks in the Mae Sot, Phop Phra, and Umphang areas, western Thailand. In: Jurassic of China and environs: stratigraphy, basin history, and paleoenvironment, Science in China, D-Earth Science, 52, 12, p. 2001-2023.
(online at: http://earth.scichina.com:8080/sciDe/EN/article/showArticleFile.do?attachType=PDF&id=415693)
(E-M Jurassic (Toarcian-Aalenian) marine Jurassic clastics and oolitic limestones with mainly bivalves (Parvamussium, Trigonia, etc.), also ammonites, brachiopods and some coral (Montlivaltia numismalis), but no belemnites)

Meesook, A., V. Suteethorn, P. Chaodumrong, N. Teerarungsigul, A. Sardsud & T. Wongprayoon (2002)- Mesozoic rocks of Thailand: a summary. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 82-94.

Mein, P. & L. Ginsburg (1997)- Les mammiferes du gisement Miocene inferieur de Li Mae Long, Thailande: systematique, biostratigraphie et paleoenvironment. Geodiversitas, 19, 4, p. 783-844.

('The mammals from the Lower Miocene beds of Li Mae Long, Thailand: systematics, biostratigraphy and paleoenvironment'. Mammal fauna of Li Mae Long (Lamphun district, Thailand) 33 species, 5 Insectivora , 9 bats, 1 Scandentia, 2 primates, 8 rodents, 2 carnivores, 1 proboscidean, 1 perissodactyl and 4 artiodactyls). Age basal MN4; environment tropical forest near very shallow lake)

Metais, G., Y. Chaimanee & J.J. Jaeger, S. Ducrocq (2007)- Eocene bunoselenodont Artiodactyla from southern Thailand and the early evolution of Ruminantia in South Asia. Naturwissenschaften 94, 6, p. 493-498.
(New early selenodont artiodactyl from Late Eocene of Krabi, S Thailand: Krabitherium waileki)

Metcalfe, I., C.M. Henderson & K. Wakita (2017)- Lower Permian conodonts from Palaeo-Tethys Ocean Plate stratigraphy in the Chiang Mai-Chiang Rai Suture Zone, northern Thailand. Gondwana Research 44, p. 54-66.
(Lower Permian (lower Sakmarian) conodonts from section of Ocean Plate Stratigraphy, and from limestone block in Paleo-Tethys suture zone S of Chiang Mai. Conodont species deep-water forms. Chiang Mai- Chiang Rai suture zone proposed for Paleo-Tethys suture in N Thailand between Sibumasu and Sukhothai Arc terranes. Inthanon Zone of N Thailand interpreted as fold-thrust belt W of suture, comprising Sibumasu Terrane continental margin rocks and remnant klippen of Chiang Mai- Chiang Rai suture zone rocks thrust as nappe W-ward during Triassic Sibumasu- Sukhothai Arc/Indochina Terrane collision)

Metcalfe, I. & M. Sone (2008)- Biostratigraphy and palaeobiogeography of Lower Permian (lower Kungurian) conodonts from the Tak Fa Formation (Saraburi Limestone), Thailand. Palaeogeogr. Palaeoclim. Palaeoecology 257, p. 139-151.
(E Permian (Kungurian) conodonts from Saraburi Lst in C Thailand (W margin of Indochina Terrane). Association with fusulinids and presence of Sweetognathus and Pseudosweetognathus indicate equatorial warm water faunas. Pseudosweetognathus appears restricted to Kungurian of S China and Indochina terranes)

Mickein, A. (1997)- U/Pb-, Rb/Sr- und K/Ar-Untersuchungen zur metamorphen Entwicklung und Altersstellung des 'Prakambriums' in NW-Thailand. GottingerArbeiten Geol. Palaont. 73, p. 1-83.
(U/Pb-, Rb/Sr- und K/Ar-U investigations of the metamorphic development and age determination of the 'Precambrian' in NW Thailand')

Milsom, J. (2011)- Regional geophysics. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 493-506.

Minato, M. (1944)- An occurrence of *Wentzella subtimorica* in northern Tai. Proc. Imperial Academy, Japan, Tokyo, 20, 2, p. 104-106.
(online at: www.journalarchive.jst.go.jp)
(Mid-Permian Lonsdaleia-type colonial tabulate coral from limestone in N Thailand. Species originally described by Huang (1932) from S China, and closely resembles Wentzelella timorica (Gerth 1921) from Basleo, Timor. Pseudoschwagerina fusulinids from nearby localities described by Toriyama (1944))

Minezaki, T. & K.I. Hisada (2016)- The tectono-stratigraphy and the Upper Paleozoic petroleum systems of the Khorat Plateau Basin in onshore NE Thailand. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 7-11. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(Khorat Plateau and surrounding NE Thailand underlain by Permian carbonates, which host two commercial gas fields. Intense deformation of Carboniferous- Permian sections below Indosinian I Event, which may be caused by closure of back-arc basin between Sukhothai arc and Indochina terrane at end of Permian along Nan-Uttaradit suture, before (Triassic) collision between Sibumasu block and Indochina)

Minezaki, T., K.I. Hisada, H. Hara &| Y. Kamata (2019)- Tectono-stratigraphy of Late Carboniferous to Triassic successions of the Khorat Plateau Basin, Indochina Block, northeastern Thailand: initiation of the Indosinian Orogeny by collision of the Indochina and South China blocks. J. Asian Earth Sci. 170, p. 208-224.

(Khorat Plateau Basin in NE Thailand covers much of Indochina Block. Mesozoic gently folded non-marine sediments unconformably over faulted U Paleozoic sequence (Indosinian I unconformity) with, in some areas ~2000m of erosion. Result of collision of Indochina and S China blocks during late Permian- M Triassic)

Mitchell, A.H.G., B. Young & W. Jantaranipaa (1970)- The Phuket Group, Peninsular Thailand: a Palaeozoic ?geosynclinal deposit. Geol. Magazine 107, 5, p. 411-428.
(Phuket Group in Phuket- Takua Pa- Krabi region of Peninsular Thailand, two folded formations: (1) >3 km thick Ordovician (Cambrian?)- Lower Permian deep marine, quartz-rich continental margin clastics (with common pebbly mudstones in lower formation with clasts of quartzite, vein quartz, limestone and biotite granite; probably also diamonds); (2) 100-200m thick shallow marine- deltaics of E Permian age, overlain by Permian Ratburi Lst. Continental source lay to E (Burton, Ridd had proposed clastic source from West; JTvG). Phuket Group continues N into S Burma as Mergui Series. See also comment and reply by Ridd 1971)

Miyahigashi, A., K. Ueno & T. Charoentitirat (2009)- Late Permian (Lopingian) foraminifers from the Doi Chiang DaoLimestone in the Inthanon Zone of Northern Thailand. Acta Geoscientica Sinica 30, Suppl. 1, p. 40-43.
(online at: www.cagsbulletin.com/dqxben/ch/reader/create_pdf.aspx?file_no=2009S123)
(Late Permian foraminifers from massive Visean-latest Permian (earliest Triassic) Doi Chiang Dao Lst in Inthanon Zone of N Thailand, N of Chiang Mai. Considered to be Paleotethyan seamount carbonate, deposited on basalts, and surrounded by shales and bedded 'Fang Chert', which represent M Devonian- M Triassic deep-sea sediments. Three Late Permian fusulinid foram assemblages, which can be compared with Shifodong Fm of Paleo-Tethyan mid-oceanic carbonates in Changning-Menglian Belt of W Yunnan, SW China)

Miyahigashi, A., K. Ueno & T. Charoentitirat & Y. Kamata (2012)- Foraminiferal assemblage and depositional environment of the Doi Long Formation (Triassic Lampang Group), Northern Thailand. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geoscientica Sinica 33, Suppl. 1, p. 45-49.
(online at: http://igcp589.cags.ac.cn/pdf/24-Miyahigashi.pdf)
(Doi Long Fm Triassic limestone NE of Lampang in Sukhothai Zone of N Thailand, believed to be Permian-Triassic island arc system along margin of Indochina Block. Rich foraminiferal assemblage with abundant Aulotortus sinuosus, Alpinophragmium perforatum, Agathammina austroalpina, etc., suggesting Carnian age, consistent with age estimated by ammonoids. Also with Shamovella (formerly Tubiphytes). Lagoon, reef and shoal facies recognized)

Miyahigashi, A., K. Ueno & T. Charoentitirat & Y. Kamata (2014)- Foraminiferal fauna and depositional environment of the Lower Permian Kiu Lom Formation in the Sukhothai Zone, Northern Thailand. In: Development of the Asian Tethyan Realm, Proc. 3rd Int. Symposium Int. Geosciences Program (IGCP) Project 589, Tehran 2014, p. 152-153. *(Abstract)*
(Lampang area in N Thailand belongs to Sukhothai Zone island arc, developed along margin of Indochina Block during Permian-Triassic. E Permian Kiu Lom Fm ~500m thick volcanoclastics with bedded limestone rel. rich in fusulinid foraminifera (Darvasites, Chalaroschwagerina, Praeskinnerella, Levenella, etc.). Volcanism of Sukhothai Arc active from latest Carboniferous - late E Permian (Yakhtashian), ceased, followed by major arc volcanism in M Triassic)

Miyahigashi, A., K. Ueno & T. Charoentitirat, Y. Kamata & A. Sardsud (2013)- Foraminiferal fauna and depositional environment of the Late Triassic Kang Pla Formation (Song Group), Northern Thailand. In: 2nd Int. Symposium Int. Geoscience Programme Project 589, Borocay, Philippines, p. 76-78. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/2nd%20Symposium/Abstract%20volume.pdf)
(Triassic clastics with subordinate limestones widely distributed in Lampang-Phrae area, N Thailand. Kang Pla Fm ~100-500m thick with foraminifera Aulotortus sinuosus, A. communis, A. tumidus, Pilamminella gemerica, P. grandis, Diplotremina subangulata, Agathammina austroalpina, etc., suggesting Carnian age)

Miyahigashi, A., K. Ueno & T. Charoentitirat, Y. Sera, Y. Kamata & A. Sardsud (2010)- Late Carboniferous-Early Permian foraminiferal assemblages from the Doi Chiang Dao Limestone in the Inthanon Zone, Northern

Thailand. 6th Symp. Int. Geological Correlation Programme Project 516 (IGCP516) Geological Anatomy of East and South Asia, Kuala Lumpur 2010, p. 94-97.
(Late Carboniferous-E Permian foraminiferal fauna of Doi Chiang Dao Lst (Paleo-Tethyan mid-oceanic seamount with basaltic rocks at base), shows similarities to Cathaysian blocks (incl. Sukhothai Zone), suggesting mid-oceanic Paleo-Tethys domain where Doi Chiang Dao Lst formed was paleobiogeographically in tropical Tethyan region. Faunal diversity generally lower than in Cathaysian region)

Mongkoltip, P. (1986)- Metamorphic mineral assemblages of gneisses along Doi-Inthanon Highway, Northern Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 473-485.
(online at: www.gsm.org.my/products/702001-101416-PDF.pdf)
(Precambrian?metamorphic rocks of Chiang Mai -Tak gneiss belt include mica-K-feldspar-sillimanite gneiss and biotite gneiss with intercalating marble and calc-silicate. Gneiss units separated by Carboniferous and M Triassic biotite-granite intrusions)

Moonpa, K. & K. Motanated (2018)- Basin classification and tectonic framework of the Nam Pat Group, Uttaradit Province, Thailand: implications for the Nan Suture Zone. Heliyon 4, 1, e00517, 24p.
(online at: https://www.sciencedirect.com/science/article/pii/S2405844017327214)
(Late Triassic Nam Pat Gp of Nam Pat Basin in Nan-Uttaradit Suture Zone, NW Thailand. Clastics dominated by volcanic arc detritus. Paleocurrents to SE and derived from underlying E-M Triassic Pak Pat andesitic magmatic arc volcanics. Basin best interpreted as short-lived back-arc basin rather than forearc basin)

Morley, C.K. (2009)- Geometry and evolution of low-angle normal faults (LANF) within a Cenozoic high-angle rift system, Thailand: implications for sedimentology and the mechanisms of LANF development. Tectonics 28, 5, TC5001, p. 1-30.
(At least 8 examples of large (5–35 km heave), low-angle normal faults (20-30° dip) in Cenozoic rift basins of Thailand, laterally passing into high-angle extensional fault systems. Low-angle dips appear to follow pre-existing low-angle fabrics developed during Late Paleozoic and E Paleogene episodes of folding-thrusting)

Morley, C.K. (2014)- The widespread occurrence of low-angle normal faults in a rift setting: review of examples from Thailand, and implications for their origin and evolution. Earth-Science Reviews 133, p. 18-42.
(Many low-angle (<35° dip), high-displacement (>1km) Cenozoic normal faults identified on seismic onshore and offshore Thailand. In areas like Mergui Basin dominant east-dips suggest pre-existing fabrics control on fault dip direction. Low angles may also be caused by reactivation of pre-existing basement fabric)

Morley, C.K. (2015)- Five anomalous structural aspects of rift basins in Thailand and their impact on petroleum systems. In: F.L. Richards et al. (eds.) Industrial structural geology: principles, techniques and integration, Geol. Soc., London, Spec. Publ. 421, p. 143-168.
(Late Eocene- Miocene intra-cratonic Thailand rift basins caused rifts evolved differently from other intra-cratonic rifts: (1) widespread low-angle normal faults; (2) basin inversion alternating with rifting; (3) diachronous initiation and cessation of rifting (general younging to N with time; also E to W shift in Gulf of Thailand); (4) rapid post-rift subsidence (6km in Pattani, 8 km in Malay Basin) and (5) extensive, low-displacement post-rift faults. Differences may be related to hot, weak continental lithosphere of Sundaland, rapid evolution of plate boundaries and stresses during Cenozoic, and history of subduction and accretion)

Morley, C.K. (2017)- The impact of multiple extension events, stress rotation and inherited fabrics on normal fault geometries and evolution in the Cenozoic rift basins of Thailand. In: The geometry and growth of normal faults, Geol. Soc., London, Spec. Publ. 439, p. 413-445.
(Rift basins of Thailand with remarkable diversity of fault displacement patterns. Oblique extension, influence of pre-existing trends and stress rotation in multi-phase rifts more comprehensive explanation than strike-slip interpretation of previous studies)

Morley, C.K., P. Ampaiwan, S. Thanudamrong, N. Kuenphan & J. Warren (2013)- Development of the Khao Khwang fold and thrust belt: implications for the geodynamic setting of Thailand and Cambodia during the Indosinian Orogeny. J. Asian Earth Sci. 62, p. 705-719.
(Indosinian Orogeny in Thailand often viewed as developed between linear terranes, now ~N-S trending, and subsequently disrupted by NW-SE Cenozoic strike-slip faults, but may be more complex. Indochina Terrane probably series of continental blocks, separated by Permian rifting. In E Triassic early stage collision (S China-Cathaysian Terrane collision with Vietnam/Indochina) resulted in amalgamation of Indochina Terrane by closure along rifts. Rift basins thrusted and inverted during early stages of Indosinian orogeny, with minor reactivation when Sibumasu collided with Sukhothai Zone- Indochina Terrane margin in Late Triassic)

Morley, C.K., F. Arboit, R. Hansberry, A. Collins, R. King, K. Amrouch & J. Warren (2015)- Style, timing, stratigraphic development and structural evolution of the Khao Khwang Fold and Thrust Belt. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 52-53. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(Triassic basins interpreted as syn-kinematic basins (piggy back or foreland) to episodes of thrusting from ~245- 205 Ma (M-L Triassic). Late Triassic deformation suggests later, more intense contraction history for Khao Khwang Foldbelt than adjacent Khorat Plateau area, with development of Norian- continental extensional basins unconformably overlain by Rhaetian. Detrital zircons with common age peak at ~450 Ma. Detrital zircon age spectra of siliciclastics of Saraburi Group resembles Permian-Triassic in Khorat Plateau, Vietnam and SE China, suggesting shared sediment source areas (Indosinan basement))

Morley, C.K., P. Charusiri & I.M. Watkinson (2011)- Structural geology of Thailand during the Cenozoic. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, Chapter 11, p. 273-334.
(Comprehensive review of Cenozoic deformation of Thailand. Two dominant styles: (1) strike-slip faulting (mainly in W half of onshore Thailand and Andaman Sea; incl. Sagaing, Three Pagodas Faulst) and extension. Folds-thrusts and inversion structures also present. Cenozoic rifts mainly N-S trending with E-dipping half-graben boundaries and located predominantly in Sukhothai and Inthanon zones of Indosinian orogeny (mobile belts between stronger Sibumasu and Indochina blocks, reactivating E-dipping thrust faults?) Between Late Miocene and present tectonic setting changed from dominantly extension to increased strike-slip activity)

Morley, C.K., S. Gabdi & K. Seusutthiya (2007)- Fault superimposition and linkage resulting from stress changes during rifting: examples from 3D seismic data, Phitsanulok Basin, Thailand. J. Structural Geol. 29, p. 646-663.
(Phitsanulok basin, Thailand, example of changing fault displacement patterns with time, associated with faults of different orientations. In N Phitsanulok basin three main phases associated with Late Oligocene-Recent fault development: (1) Late Oligocene- Late Miocene E-W extension, 'main rift' stage; (2) Late Miocene- Pliocene transtension to transpression(?), 'late rift' stage; (3) Pliocene- Recent minor faulting, E-W extension)

Morley, C.K., C. Haranya, W. Phoosongsee, S. Pongwapee, A. Kornsawan & N. Wonganan (2004)- Activation of rift oblique and rift parallel pre-existing fabrics during extension and their effect on deformation style: examples from the rifts of Thailand. J. Structural Geol. 26, p. 1803-1829.
(online at: http://it.geol.science.cmu.ac.th/gs/staff/nutthawut/Webpage%20data/Structural%20Geology.pdf)
(Tertiary rift basins of Thailand previously interpreted in terms of strike-slip faulting, but many trends oblique to N-S orientation of rift system appear to be inherited passive fabrics in pre-rift. Fabrics from Paleozoic and Mesozoic orogenies exerted influence on Tertiary strike-slip and normal faults)

Morley, C., Y. Ionnikoff, N. Pinyochon & K. Seusutthiya (2007)- Degradation of a footwall fault block with hanging-wall fault propagation in a continental-lacustrine setting: how a new structural model impacted field development plans, the Sirikit Field, Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 91, 11, p. 1637-1661.
(Sirikit oil-gas field large field (~800 MMBO IP) in Phitsanulok Basin in footwall of complex tilted fault block. Main reservoir horizons Lower Miocene fluvio-deltaic sands of Lan Krabu Fm, sourced and sealed by interbedded lacustrine shales. Stratigraphy on tilted block flank difficult to trace onto fault block crest, caused

by features associated with degradation of footwall (low-angle detachment faulting, multiple episodes of erosion at tilted block crest, E-ward onlap onto eroded footwall surface)

Morley, C.K. & A. Racey (2011)- Tertiary stratigraphy. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 223-271.

Morley, C.K., N. Sangkumarni & T.B. Hoon (1998)- Structural evolution of Rift Basins in northern Thailand: new constraints from paleostress analysis. In: Offshore South East Asia Conference 1998 (OSEA98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 79-81. *(Extended Abstract)*
(Tertiary rift basins of Thailand form N-S trending string of depressions from Gulf of Thailand in S to hill country in N. Southern basins larger, longer and deeper. Extension primarily in Oligocene and Miocene. Li basin data shows episodic compressional or strike-slip events through its evolution, inconsistent with simple pull-apart origin and suggesting strike-slip motions more complex than simple prevalent strike-slip models indicate. Thai basins may have evolved under two separate deformation mechanisms (escape tectonics from India collision and Indian Ocean subduction rollback) that may have alternated in importance with time)

Morley, C.K., N. Sangkumarni, T.B. Hoon, C. Chonglakmani & J. Lambiase (2000)- Structural evolution of the Li Basin, northern Thailand. J. Geol. Soc., London, 157, 2, p. 483-492.
(Oligo-Miocene sections of coal mines in Li Basin of N Thailand show basins formed under E-W extension. At least 5 episodes of mainly NNW-SSE to NE-SW oriented compression interrupted extensional development of basin, probably related to escape tectonics of Himalayan orogeny. Episodic nature of compression and extension inconsistent with either simple strike-slip related opening of basins or simple extension)

Morley, C.K., M. Smith, A. Carter, A. P. Charusiri & S. Chantraprasert (2007)- Evolution of deformation styles at a major restraining bend, constraints from cooling histories, Mae Ping fault zone, western Thailand. In: W.D. Cunningham & P. Mann (eds.) Tectonics of strike-slip restraining and releasing Bends, Geol. Soc., London, Spec. Publ. 290, p. 325-349.
(On ~150km-long, restraining bend in ~500km-long Mae Ping fault zone, a NW-SE trending fault zone across onshore Thailand and E Myanmar with >150 km sinistral motion during Cenozoic)

Morley, C.K. & N. Wonganan (2000)- Normal fault displacement characteristics, with particular reference to synthetic transfer zones, Mae Moh Mine, Northern Thailand. Basin Research 12, 3/4, p. 307-327.
(Study of normal faults in M Miocene sediments of the Mae Moh mine, E of Lampang, N Thailand)

Morley, C.K., N. Wonganan, N. Sankumarn, T.B Hoon, A. Alief & M. Simmons (2001)- Late Oligocene-Recent stress evolution in rift basins of Northern and Central Thailand: implications for escape tectonics. Tectonophysics 334, p. 115-150.
(Tertiary rift basins of Thailand generally evolved under E-W extension. Extension episodically interrupted by inversion events. Rift basins from N. Thailand and Laos into Gulf of Thailand different evolutions, but common trends: (1) widespread Oligocene- E Miocene extension; (2) In C and N Thailand also M Miocene extension, persisting into the Upper Miocene-Pliocene; (3) In S (W. Natuna, Penyu, Malay basins) extension ceased in earliest Miocene; (4) In N Gulf of Thailand extension ceased in M Miocene; (5) Thermal subsidence greatest (up to 4 km) in S (Malay, Pattani, W. Natuna, Penyu basins) and least in N Thailand; (6) Intense E-M Miocene inversion in S Gulf of Thailand; mild E-M Miocene inversion in N Gulf of Thailand. Most widespread inversion in N, in Plio-Pleistocene. Evolution more complex than can be explained by simple escape tectonic models)

Mouret, C. (1994)- Geological history of northeastern Thailand since the Carboniferous. Relations with Indochina and Carboniferous- Early Cenozoic evolution model. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Res.and IGCP 306, p. 132-158.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1994/6945.pdf)
(Phu Phan Range of NE Thailand result of strong E Cenozoic inversion. Khorat Plateau area major regional M Carboniferous unconformity('Hercynian compression'). Post-collisional M-U Carboniferous half-grabens with clastic fill, followed by Permian carbonate-dominated deposition. M Triassic 'Indosinian I' and Latest Triassic/

Rhaetian 'Indosinian II' thrusting events. Jurassic- Cretaceous Khorat Gp mainly fluvial redbeds, with thick evaporites in Albian- Cenomanian, followed by eolian sandstones. Around 65 Ma major uplift, erosion (folding/ inversion of pre-Rhaetien depocenters. Etc.))

Mouret, C., H. Heggemann, J. Gouadain & S. Krisadasima (1993)- Geological history of the siliciclastic Mesozoic strata of the Khorat Group in the Phu Phan Range area, northeastern Thailand. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and palaeontology (BIOSEA), Chiang Mai, 1, p. 23-49.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7484.pdf)
(On stratigraphy of Khorat Group of NE Thailand part of widespread Mesozoic non-marine deposits over E Thailand, Laos, Cambodia and Vietnam. Deposition starts in latest Triassic (Rhaetian) and continues with up to 5000m of redbeds before final uplift and erosion at 65 Ma (tied to plate collision in W, in Myanmar), resulting in erosion of up to 3500m of post M Jurassic sediments. Evaporitic conditions in Albian-Cenomanian. Paleocurrents mainly to WSW, possibly from Annamitic Mountain belt or farther NE)

Mukasa, S.B., G.M. Fischer & S.M. Barr (1996)- The character of the subcontinental mantle in Southeast Asia: evidence from isotopic and elemental compositions of extension-related Cenozoic basalts in Thailand. In: Earth processes: reading the isotopic code, American Geophys. Union (AGU) Geophys. Monograph 95, p. 233-252.
(Central Valley of Thailand and its flanks sites of basaltic volcanism due to extensional deformation since at least 10 Ma. Isotopic compositions of basalts most closely resemble post-spreading lavas in S China Sea Basin)

Nachtergaele, S., S. Glorie, C. Morley, P. Charusiri, P. Kanjanapayont, P. Vermeesch, A. Carter, G. Van Ranst & J. de Grave (2020- Cenozoic tectonic evolution of southeastern Thailand derived from low-temperature thermochronology. J. Geological Society, London, 177, 2, p. 395-411.
(online at: https://jgs.lyellcollection.org/content/jgs/177/2/395.full.pdf)
(Apatite thermal histories indicate late Eocene- Oligocene regional exhumation of exposed granitic and metamorphic basement rocks in SE Thailand. Exhumation contemporaneous with late Eocene- E Oligocene sinistral fault activity along Mae Ping and Three Pagodas Faults. Exhumation coeval with synrift phase of intracontinental offshore rift and half-graben development in E Gulf of Thailand. Exhumation ended in E Miocene, as result of changing plate-tectonic forces along plate boundaries of Sundaland)

Nakaoka, S., Y. Suganuma & B. Ratanasthien (2003)- Tectonics and paleomagnetism northern Thai Tertiary basins sediments. In: B. Ratanasthien et al. (eds.) Pacific Neogene paleoenvironments and their evolution, 8th Int. Congress on Pacific Neogene Stratigraphy, Chiang Mai, 2003, p.

Nakapadungrat, S., R.D. Beckinsale & S. Suensilpong (1985)- Geochronology and geology of Thai granites. In: N. Thiramongkol et al. (eds.) Proc. Conf. Applications of geology and the national development, Suppl. Vol., Chulalongkorn University, Bangkok, p. 75-93.

Nakapadungrat, S. & D. Maneenai (1993)- The Phuket, Phangnga and Takua Pa tin-field, Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 359-368.
(Tin fields on W side of Peninsular Thailand have been produced since late 1500's. Main production from alluvial placer deposits, but also from primary deposits, i.e. Cretaceous (78-98 Ma) S-type granites of W Tin Province of SE Asia. Three types of deposits: (1) pegmatites with minor cassiterite, (2) argillic dissemination and (3) quartz- cassiterite- wolframite vein swarms)

Nakapadungrat, S. & P. Putthapiban (1992)- Granites and associated mineralization in Thailand. In: C. Piencharoen (ed.) Proc. Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, Dept Min. Resources, p. 153-171.
(online at: http://library.dmr.go.th/library/6192.pdf)
(Rb-Sr whole rock ages indicate 4 periods of granite magmatism in Thailand: ~240 Ma (M Triassic), ~200-220 Ma (Late Triassic), ~130 Ma (E Cretaceous) and ~75-90 Ma (Late Cretaceous). Ar-Ar ages generally broader ranges. Three belts: E (I-type, Triassic), C (S type, mainly Triassic) and W Belt (mixed I and S, Cretaceous)

Naviset, S., C.K. Morley, D.H. Naghadeh & J. Ghosh (2017)- Sill emplacement during rifting and inversion from three-dimensional seismic and well data, Phitsanulok Basin, Thailand. Geosphere 13, 6, p. 2017-2040.
(online at: https://gsw.silverchair-cdn.com/gsw/Content_public/Journal/geosphere/13/6/...)
(Cenozoic Phitsanulok rift basin with igneous intrusions and lava flows. Age of youngest sills ~10 Ma; older sills inferred of M Miocene age. Well E-A01 drilled E Miocene synrift Lan Krabu Fm with 300m thick olivine dolerite sill, but without high amplitude seismic responses usually seen in intrusions)

Nichols, G. & W. Uttamo (2005)- Sedimentation in a humid, interior, extensional basin: the Cenozoic Li Basin, northern Thailand. J. Geol. Soc., London, 162, p. 333-347.
(Mid-Cenozoic extension created ~40 basins in N Thailand, related to major strike-slip faults, during time of relatively humid climate. Li Basin continental facies basin fill, with economic coal deposits. Fluvial channel and muddy overbank facies during periods of high clastic input ; peat swamp and lacustrine facies when clastic input was lower. Trend towards drier conditions through Late Oligocene -Miocene)

Nieuwland, D.A. (1987)- The geology of the Sirikit oil field. In: P. Thanasuthipitak (ed.) Proc. Symp. Cenozoic basins Thailand: geology and resources, Chiang Mai 1984, p. 1-20.
(Sirikit oil field 1981 discovery in large, complex strike slip structure in E-M Miocene fluvial-lacustrine Lan Krabu Fm sediments of Phitsanoluk Basin. Estimated EUR 35 MBO)

Nishioka, Y., R. Hanta & P. Jintasakul (2013)- Note on giraffe remains from the Miocene of continental Southeast Asia. J. Science Technol. Mahasarakham University (MSU) 33, 4, p. 365-377.
(online at: http://research.msu.ac.th/msu_journal/upload/articles/article441_98487.pdf)
(Bramatherium remains from (Late) Miocene deposits at Tha Chang sand pit, NE Thailand, and from Irrawaddy sediments, C Myanmar)

Nishioka, Y., H. Nakaya, K. Suzuki, B. Ratanasthien, P. Jintasakul, R. Hanta & Y. Kunimatsu (2016)- Two large rodents from the Middle Miocene of Chiang Muan, northern Thailand. Historical Biology 28, 1-2, p.
(Two large rodents from M Miocene (13.0- 12.4 Ma) from Chiang Muan Coal Mine, N Thailand (1) beaver (Anchitheriomys); (2) indeterminate larger rodent)

Nulay, P., C. Chonglakmani & Q. Feng (2015)- The provenances of the clastic Phu Khat Formation in the Nakhon Thai region constrained by the U-Pb detrital zircon age dating : Implications for geotectonics evolution. J. Geol. Soc. Thailand 1, p. 37-45.

Nulay, P., C. Chonglakmani & Q. Feng (2016)- Petrography, geochemistry and U-Pb detrital zircon dating of the clastic Phu Khat Formation in the Nakhon Thai region, Thailand: implications for provenance and geotectonic setting. J. Earth Science (China) 27, 3, p. 329-349.
(online at: http://en.earth-science.net/PDF/20160612012417.pdf)
(Late Cretaceous- E Tertiary Phu Khat Fm in Nakhon Thai region (between Nan-Uttaradit Suture/ Sukhothai Zone to W and Loei-Phetchabun Foldbelt/ Indochina Block to E). Sandstone unsorted texture and common unstable volcanic lithic fragments (recycled sediments and felsic volcanic rocks from M-L Triassic arc to W). Unconformably overlies mature sandstone of Late Cretaceous Khao Ya Puk Fm (mainly recycled sediments))

Nulay, P., C. Chonglakmani & W. Paengkaew (2014)- Lithostratigraphy of the Phu Khat Formation in Nakhon Thai Region, Thailand : preliminary result. Dept. Mineral. Resources (DMR), Annual Meeting 2014, Bangkok, 19p.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2557/8590.pdf)
(Phu Khat Fm is uppermost (Cretaceous) red bed in Nakhon Thai region. Alluvial fan and braided fluvial deposits overlie unconformably aeolian sandstone of Khao Ya Puk Fm. Thickness ~ 490m. Age not older than Campanian age and not younger than Ypresian)

Nutalaya, P., K.V. Campbell, A.S. MacDonald, P. Aranyakanon & P. Suthakorn (1979)- Review of the geology of Thai tin fields. In: C.H. Yeap (ed.) Proc. Int. Symp. Geology of tin deposits, Kuala Lumpur 1978, Bull. Geol. Soc. Malaysia 11, p. 137-159.
(online at: www.gsm.org.my/products/702001-101228-PDF.pdf)
(Tin belt of SE Asia extends for 2900km from Myanmar through Thailand, Malaysia to Indonesian tin islands; 1800km portion of belt lies in Thailand. Tin occurrences spatially associated with granites. Main plutonic episode in Thailand Late Permian- Jurassic, with apparent peak in Upper Triassic. Ten main tin districts)

Nutalaya, P. & J.L. Rau (1987)- Structural framework of the Chao Phraya Basin, Thailand. In: P. Thanasuthipitak (ed.) Proc. Symp. Cenozoic basins Thailand: geology and resources, Chiang Mai 1984, p. 106-129.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1984/7351.pdf)
(Chao Phraya Cenozoic basin with basement-and-range like basement relief of ~2000m, resulting from mostly normal and some strike slip faulting)

Okuzawa, K., K. Hisada, H. Hara, P. Charusiri & S. Arai (2009)- Basaltic sandstone from the Loei Suture, Northeast Thailand. J. Geol. Soc. Thailand 1, p. 1-10.
(online at: http://library.dmr.go.th/library/J-Index/2009/2972.pdf)
(Block of basaltic sandstone in outcrop of serpentinized and sheared dunite within Devonian metamorphic rocks along Loei suture between Indochina and Nakhon Thai continental blocks in NE Thailand. Probably emplaced in or before E Permian)

OõLeary, H. & G.S. Hill (1989)- Tertiary basin development in the Southern Central Plains, Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Int. Symposium on Intermontane basins: geology and resources, Chiang Mai, p. 254-264.

Orberger, B., G. Friedrich & P. Suchit (1989)- Platinum-group-element distribution in ultramafic, chromite, magnetite, and pyrrhotite, Nan-Uttaradit ultramafic belt, Northern Thailand: preliminary results. In: T. Thanasuthipitak & P. Ounchanum (eds.) Int. Symposium on Intermontane basins: geology and resources, Chiang Mai, p. 483-492.

Orberger, B., J. Girardeau, J.C.C. Mercier, J.P. Lorand & S. Pitragool (1993)- Ophiolithic chromitite from Nan-Uttaradit, Northern Thailand: a result of boninitic-type melt and peridotite interaction. In: A. Fenoll Hach-Ali et al. (eds.) Current research in geology applied to ore deposits, University of Granada, p. 197-201.

Orberger, B., J.P. Lorand, J. Girardeau, J.C.C.Mercier & S. Pitragool (1995)- Petrogenesis of ultramafic rocks and associated chromitites in the Nan Uttaradit ophiolite, Northern Thailand. Lithos 35, p. 153-182.
(NE-SW trending Nan Uttaradit ophiolite belt 150km long, 10km wide. Ophiolitic rocks as tectonic slices within sediments: Carboniferous-Triassic in W, Siluro-Devonian in SE, Jurassic in E and NE. Geochemistry of volcanics suggests formation above subduction zone)

Orliac, M., F. Guy, Y. Chaimanee, J.J. Jaeger & S. Ducrocq (2011)- New remains of *Egatochoerus jaegeri* (Mammalia, Suoidea) from the late Eocene of Peninsular Thailand. Palaeontology 54, 6, p. 1-
(online at: https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1475-4983.2011.01106.x)
(New remains of suoid (pigs and peccaries) Egatochoerus jaegeri from Late Eocene in Krabi basin)

Owen, R.B. & C. Utha-aroon (1999)- Diatomaceous sedimentation in the Tertiary Lampang Basin, Northern Thailand. J. Paleolimnology 22, 1, p. 81-95.
(Pliocene diatomite and diatomaceous clay in Ko Kha Fm of Lampang Basin, N Thailand. Lacustrine deposits with freshwater diatom floras dominated by Aulacoseira spp.)

Palin, R.M., M.P. Searle, C.K. Morley, P. Charusiri, M.S.A. Horstwood & N.M.W. Roberts (2013)- Timing of metamorphism of the Lansang gneiss and implications for left-lateral motion along the Mae Ping (Wang Chao) strike-slip fault, Thailand. J. Asian Earth Sci., 76, p. 120-136.

(Mae Ping fault in W Thailand, mainly left-lateral strike-slip motion. Previous studies suggested fault assisted extrusion of Sundaland in Late Eocene- E Oligocene, with offset of 120-150 km from displaced high-grade gneisses-granites of Chiang Mai-Lincang belt. Monazite from orthogneiss suggests two episodes of crystallization, core of ~123-114 Ma and rim of ~45-37 Ma, suggesting magmatic protolith emplacement for Lansang orthogneiss in E Cretaceous, with later metamorphism in Eocene)

Palin, R.M., M.P. Searle, D.J. Waters, M.S.A. Horstwood, R.R. Parrish, N.M.W. Roberts, M.S.A. Horstwood, M.W. Yeh & S.L. Chung (2013)- A geochronological and petrological study of anatect ic paragneiss and associated granite dykesfrom the Day Nui Con Voi metamorphic core complex, North Vietnam; constraints upon the timing of metamorphism within the Red River Shear Zone. J. Metamorphic Geol. 31, 4, p. 359-387.

Panjasawatwong, Y., S. Chantaramee, P. Limtrakun & K. Pirarai (1997)- Geochemistry and tectonic setting of eruption of Central Loei Volcanics in the Pak Chom Area, Loei, Northeast Thailand. In: P. Dheeradilok et al. (eds.) Int. Conf. Statigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok 1997, Dept. Mineral. Res., 1, p. 287-302.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7639.pdf)
(At least four pre-Jurassic volcanic belts in Thailand. Late Devonian C Loei volcanics part of Loei- Petchabun-Phai Sali volcanic belt, representing mid-ocean ridge basalts (MORB) and oceanic island arc lavas)

Panjasawatwong, Y., B. Phajuy & S. Hada (2003)- Tectonic setting of the Permo-Triassic Chiang Khong volcanic rocks, Northern Thailand based on petrochemical characteristics. Gondwana Research 6, 4, p. 743-755.
(Inferred Permo-Triassic Chiang Khong volcanic belt felsic to mafic volcanic rocks and pyroclastic equivalents. Mafic volcanic rocks interpreted to have formed in continental volcanic arc)

Panjasawatwong, Y. & W. Yaowanoiyothin (1983)- Igneous rocks of Thailand: a review of plutonic rocks with intermediate-ultrabasic compositions and volcanic rocks. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 233-243.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_13.pdf)

Panjasawatwong, Y. & W. Yaowanoiyothin (1993)- Petrochemical study of post-Triassic basalts from the Nan Suture, northern Thailand. J. Southeast Asian Earth Sci. 8, p. 147-158.
(Nan Suture metagabbros/ amphibolites and serpentinite melange represent Late Triassic collision suture between Shan-Thai and Indo-China cratons. With Carboniferous- Permo-Triassic ocean-island basalts, backarc basin and island-arc basalts and andesites, etc. Post-collisional, possibly Cenozoic, continental intraplate basalts form discontinuous narrow belt, disconformably above melange)

Panjasawatwong, Y., K. Zaw, S. Chantaramee, P. Limtrakun & K. Pirarai (2006)- Geochemistry and tectonic setting of the Central Loei volcanic rocks, Pak Chom area, Loei, northeastern Thailand. J. Asian Earth Sci. 26, p. 77-90.
(C Loei basalts and microgabbro are Late Devonian-E Carboniferous MOR Basalts and oceanic island-arc lavas, erupted on oceanic basement in same ocean basin as Chiang Rai- Chiang Mai volcanic belt)

Patience, R.L., S.L. Rodrigues, A.L. Mann & I.J.F. Poplett (1993)- An integrated organic geochemical and palynofacies evolution of a series of lacustrine sediments from Thailand. Proc. ASCOPE 93 Conference, Bangkok, p. 75-84.

Peigne, S., Y. Chaimanee, J.J. Jaeger, V. Suteethorn & S. Ducrocq (2000)- Eocene nimravid carnivorans from Thailand. J. Vertebrate Paleontology 20, p. 157-163.
(Dental remains of nimravid (sabre-toothed) carnivores from U Eocene Krabi Basin are among oldest known Nimravidae and attributed to Nimravus cf. intermedius and Hoplophoneus sp. Occurrence of nimravid carnivores in SE Asia implies exchanges between Asia and N America in Late Eocene)

Peigne, S., Y. Chaimanee, J.J. Jaeger, C. Yamee, P. Srisuk & B. Marandat (2006)- A new member of the Mustelida (Mammalia: Carnivora) from the Paleogene of Southern Asia. J. Vertebrate Paleontology 26, p. 788-793.
(New mustelid rodents from Late Oligocene in Nong Ya Plong lignite mine in C Thailand)

Perez-Huerta, A., C. Chonglakmani & A. Chitnarinc (2007)- Permian brachiopods from new localities in northeast Thailand: implications for paleobiogeographic analysis. J. Asian Earth Sci. 30, p. 504-517.
(Small E-M Permian brachiopod faunas from Khao Khwang limestone, Nam Duk Basin and Khao Khwang Platform confirm Cathaysian affinities for brachiopods and fusulinids in NE Thailand. Fossils in Nam Duk Fm molasse facies, also show possible Gondwanan relationships with brachiopod taxa described in Australia)

Petersen, H.I., A. Foopatthanakamol & B. Ratanasthien (2006)- Petroleum potential, thermal maturity and the oil window of oil shales and coals in Cenozoic rift-basins, central and northern Thailand. J. Petroleum Geol. 29, 4, p. 337-360.
(C and N Thailand Oligocene- E Miocene rift basins with oil shales deposited in fresh-brackish lakes, with TOC up to 44%. With abundant lamalginite and algal-derived amorphous organic matter, liptodetrinite and telalginite (Botryococcus-type). Coals dominated by huminite and formed in freshwater mires. Exposed coals thermally immature. Steep Vitrinite Reflectance curves from oil basins reflect high geothermal gradients of ~62°C/km and ~92°C/km. Depth to top oil window for oil shales (VR ~0.70%) between ~1100-1800m depending on gradient. Kerogen composition and high T gradients result in narrow oil windows)

Petersen, H.I. & A. Mathiesen (2007)- Determination of the temperature history for the U Thong oilfield area (Suphan Buri Basin, Central Thailand) using a realistic surface temperature. J. Petroleum Geol. 30, 3, p. 289-296.
(BP1-W2 well in oil-producing Suphan Buri Basin with likely geothermal gradient of ~42ºC/km. Predicts that onset of oil generation at 107ºC post-dated reservoir and trap formation in M-L Miocene times)

Petersen, H.I., H.P. Nytoft, B. Ratanasthien & A. Foopatthanakamol (2007)- Oils from Cenozoic rift-basins in central and northern Thailand: source and thermal maturity. J. Petroleum. Geol. 30, 1, p. 59-78.
(Oil produced from Suphan Buri (U Thong, Sang Kajai fields), Phitsanulok (Sirikit field) and Fang Basin (Fang field) in C and N Thailand. Most Cenozoic rift-basins 2-4 km deep, but Phitsanulok Basin deepest, with up to 8km basin-fill. Sirikit oil most mature. Oils highly waxy, generated from freshwater lacustrine source rocks with common algal material. Presence of cadalene, tetracyclic C24 compounds, oleanane, lupane, bicadinane, etc., indicate contributions from higher land plants, either disseminated in lacustrine facies or from associated coal seams. Thermally immature oil shales (lacustrine mudstones) and coals exposed in many Thai basins)

Petersen, H.I. & B. Ratanasthien (2011)- Coal facies in a Cenozoic paralic lignite bed, Krabi Basin, southern Thailand: changing peat-forming conditions related to relative sea-level controlled watertable variations. Int. J. Coal Geology 87, p. 2-12.
(Cenozoic Krabi Basin in S part of peninsular Thailand contains about 112 MTons proven coal reserves. Production from Bang Mark mine in S part of basin, where main lignite bed is 7-20m thick. Lignite low rank and dominated by huminite, indicating generally oxygen-deficient conditions in precursor mire. Lower part of lignite bed topogenous fresh water peat mire, subjected to periodic inundations and deposition of siliciclastics. Upper part of lignite bed represents slightly domed fresh water ombrogenous peat mire)

Phajuy, B., Y. Panjasawatwong & P. Osataporn (2005)- Preliminary geochemical study of volcanic rocks in the Pang Mayao area, Phrao, Chiang Mai, northern Thailand: tectonic setting of formation. J. Asian Earth Sci. 24, p. 765-776.
(Permian mafic volcanic rocks from Pang Mayao, Chiang Rai- Chiang Mai volcanic belt, are mid-ocean ridge and ocean-island basalts, possibly remnants of consumed Paleotethys Ocean)

Philippe, M., N. Boonchai, D.K. Ferguson, Hui Jia & W. Songtham (2013)- Giant trees from the Middle Pleistocene of Northern Thailand. Quaternary Science Reviews 65, 1, p. 1-4.

(Giant silicified trees in M Pleistocene gravel terraces of Ping River, 20 km N of Tak, N Thailand, with longest log 72.2m. Most trees belong to Koompassioxylon elegans. Part of >100m tall tropical- subtropical rainforest Lannathaian pebble tools (presumably from Homo erectus) from coeval beds in same area. Overlying basalts K/Ar dated at 0.6± 0.2 and 0.8 ±0.2 Ma)

Philippe, M., G. Cuny, V. Suteethorn, N. Teerarungsigul, G. Barale, F. Thevenard et al. (2005)- A Jurassic amber deposit in Southern Thailand. Historical Biol. 17, p. 1-6.
(First Jurassic deposit with cm-sized pieces of amber, in M-L Jurassic paralic Khlong Min Fm of S Peninsular Thailand. Associated wood fossils Agathoxylon and Brachyoxylon, leaves of genus Cupressinocladus (not Frenelopsis as suggested by Asama et al. 1981). Amber from dense forest surrounding coastal lake dominated by resin-producing Agathoxylon trees)

Philippe, M., V. Daviero-Gomez & V. Sutheethorn (2009)- Silhouette and palaeoecology of Mesozoic trees in Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia. Geol. Soc., London, Spec. Publ. 315, p. 85-96.
(Large M Jurassic- E Cretaceous conifer logs from forest environments with different types of architecture)

Philippe, M., V. Sutheethorn & E. Buffetaut (2010)- Revision de *Brachyoxylon rotnaense* Mathiesen, description de *B. serrae* n. sp. et consequences pour la stratigraphie du Cretace inferieur d'Asie du Sud-Est. Geodiversitas 33, 1, p. 25-32.
(online at: http://sciencepress.mnhn.fr/sites/default/files/articles/pdf/g2011n1a2.pdf)
('Reappraisal of Brachyoxylon rotnaense Mathiesen, description of B. serrae n. sp. and stratigraphical implications for SE Asia Early Cretaceous stratigraphy'. Mesozoic beds of Muang Phalan basin in S Laos continuation of Thailand Khorat Gp. (Khok Kruat Fm). With wood fossils formerly assigned to Brachyoxylon rotnaense, known from E Jurassic of Denmark, but associated vertebrate fossils indicate Aptian age. Laos material not same as European species and here described as B. serrae n. sp.. In Thailand B. serrae associated with endemic SE Asian E Cretaceous flora, with indicators of tropical climate with seasonal rainfall)

Philippe, M., V. Sutheethorn, P. Lutat, E. Buffetaut, L. Cavin, G. Cuny & G. Barale (2004)- Stratigraphical and palaeobiogeographical significance of fossil wood from the Mesozoic Khorat Group of Thailand. Geol. Magazine 141, p. 319-328.
(Fossil wood common in poorly dated continental sediments of Khorat Gp, NE Thailand. Agathoxylon (formerly Araucarioxylon), Brachyoxylon, etc., suggest relationships with Indochina, especially Vietnam, and suggest M Jurassic- E Cretaceous age. Trees grew along streams in arid climate, becoming wetter during deposition of upper formations of Khorat Gp)

Pia, J. von (1930)- Upper Triassic fossils from the Burmo-Siamese frontier. A new dasycladacea, *Holosporella siamensis* nov. gen., nov. spec., with a description of the allied genus *Aciculella* Pia. Records Geol. Survey India 63, p. 177-181.

Pinyo, K. (2010)- Petroleum system of the Chum Saeng Formation, Phitsanulok Basin, Thailand. M.Sc.Thesis, Colorado School of Mines, p. 1-123.
(online at: http://digitool.library.colostate.edu/..)
(Chum Saeng Fm of Phitsanulok Basin, C Thailand, E Miocene organic-rich lacustrine shale, 50-400m thick)

Pinyo, K. (2011)- Unconventional petroleum system evaluation of the Chum Saeng Formation, Phitsanulok Basin, Thailand. Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2011), Khon Kaen, p. 267-280.

Pitakpaivan, K. (1959)- Preliminary study of fusulinid foraminifera from the Permo-Carboniferous of Thailand. Ph.D. Thesis, University of Cambridge, p. 1-188.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1959/4495.pdf)

Pitakpaivan, K. (1965)- Fusulines of the Rat Buri limestone of Thailand. Mem. Fac. Science Kyushu University, D (Geology), 17, 1, p. 3-69.
(Permian Rat Buri Limestone widespread across Thailand. With 25 species, 11 genera of fusulinid foraminifera, ranging in age from Sakmarian (Pseudoschwagerina assemblage)- Artinskian (Schwagerina and Neofusulinella)- Kungurian (Parafusulina) to Kazanian (Neoschwagerina). In many places Rat Buri Lst unconformably over intensely folded clastic series)

Pitakpaivan, K. (1966)- Fusulines of the Rat Buri limestone of Thailand. Bangkok (Thailand). In: T. Kobayasi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 63-129.
(Same paper as Pitakpaivan (1965) above)

Pitakpaivan, K. (1969)- Tin-bearing granite and tin-barren granite in Thailand. Proc. Second Technical Conference on Tin, 1, Tin Council, Bangkok, p. 284-298.

Pitakpaivan, K. & R. Ingavat (1980)- *Lepidolina multiseptata* Deprat in Thailand. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 37-42.
(First record of Permian fusulinid Lepidolina multiseptata from M or U Permian limestone blocks of border region between E Thailand- Cambodia (= part of E Malaya/ Indochina province). Associated with 11 other genera, incl. Yabeina, Neoschwagerina, Verbeekina, Chusenella, etc.)

Pitakpaivan, K., R. Ingavat & P. Pariwatvorn (1969)- Fossils of Thailand. vol. 1. Dept. Mineral Res. Thailand, Bangkok, Geol. Survey Memoir 3, 1, p. 1-67.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1969/4814.1_1.pdf)
(Listings of fossils known from Thailand: Cambrian trilobite-brachiopod shale off W Peninsular Thailand, Ordovician cephalopod limestone, Silurian Tentaculites and graptolite shale, no known Devonian fossils, Carboniferous- Permian (numerous localities with fusulinid limestones), Triassic, Jurassic- Cretaceous (rel. rare marine fossils), Tertiary (in isolated intermontane basins only). With descriptions and illustrations of Permian fusulinids and corals)

Pitakpaivan, K., R. Ingavat & P. Pariwatvorn (1969)- Fossils of Thailand, vol. 2. Dept Mineral Res. Thailand, Bangkok, Geol. Survey Memoir 3, 2, p. 1-65.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1969/4814.1_2.pdf)
(Continuation 1 of fossils known from Thailand: descriptions and illustrations of brachiopods (incl. Permian Leptodus tenuis) and molluscs (Daonella sumatrensis, Halobia, etc.), incl. ammonoids of Permian (Agathiceras), Late Triassic-E Jurassic Clathropteris)

Pitakpaivan, K., R. Ingavat & P. Pariwatvorn (1969)- Fossils of Thailand, vol. 3. Dept Mineral Res. Thailand, Bangkok, Geol. Survey Memoir 3, 3, p. 1-41.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1969/4814.1_3.pdf)
(Continuation 2 of fossils known from Thailand: descriptions and illustrations of Cambrian trilobites(Pagodia, Thailandium), Carboniferous trilobites (Thaiaspis, Phillipsia, Proetus), Ordovician-Silurian graptolites, Pliocene- Pleistocene vertebrates (Stegolophodon). Also plant fossils: Permian 'Cathaysian' Pecopteris, Alethopteris, Sphenophyllum, Cordaites and Taeniopteris spp., Late Triassic-E Jurassic Clathropteris, Cretaceous Araucaryoxylon from Khorat series, U Cretaceous- Paleogene Sequoia, Taxodium, etc.)

Pitsanupong, K., U. Klotzli, P. Charusiri & E. Klotzli (2011)- LA-MC-ICP-MS U-Pb zircon geochronology of the Lan Sang and Nong Yai gneisses, Thailand. Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2011), Khon Kaen, p. 62-65.
(Gneisses of different U-Pb zircon ages in two different NW-SE sinistral strike slip faults: (1) Lan Sang gneiss (Mae Ping fault zone; associated with Shan-Thai - Indochina microcontinent collision?) in N Thailand with Triassic metamorphism and (2) Nong Yai Gneiss (Klaeng fault zone) in E Thailand in Cretaceous)

Piyasin, S. (1971)- Marine Triassic sediments of Northern Thailand. Geol. Soc. Thailand, Newsl. 4, p. 12-30.

Piyasin, S. (1973)- Review of the Lampang group. Proc. Conf. Geology and mineral deposits of Thailand, 1, p. 101-107.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1975/7339.pdf)
(Marine lower-upper Triassic rocks of W Thailand united in Lampang Gp. Incl. M Triassic limestone, deeper marine deposits with Daonella, etc.)

Piyasin, S. (1980)- Tentative correlation of the Lower Paleozoic stratigraphy of western part of southern Shan State, Burma, and Northwestern through Peninsular of Thailand. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 19-24.
(Lower Paleozoic sedimentary succession of all of W Thailand (= Sibumasu Block; JTvG) extends N-ward to Shan State of Burma. Upper Cambrian sediments with trilobites unconformable of Precambrian metamorphics. Ordovician rocks mainly limestones, with common straight nautiloids Armenoceras and Ormoceras. Basin subsidence in Silurian and Devonian, with graptolite shales (Monograptus, Climacograptus), thin limestones, bedded chert)

Piyasin, S. (1981)- Reef limestone of Lower Permian at Ban Na Charoen, Northeastern Thailand. J. Geol. Soc. Thailand 4, p. 13-22.
(online at: http://library.dmr.go.th/library/J-Index/1981/64.pdf)

Piyasin, S. (1995)- The hydrocarbon potential of Khorat Plateau. Proc. Int. Conf. Geology Geotechnology and Mineral Resources of Indochina p. 551-562.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1995/7460.pdf)

Polachan, S., W. Chantong, P. Srisuwon, P. Kaewkor & C. Praipiban (2010)- Petroleum potential of the Khorat Plateau, Thailand. Proc. Thai-Lao Technical Conf. Geology and mineral resources, Bangkok, p. 42-63.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2010/25973.pdf)
(Petroleum exploration of Khorat Plateau since 1962. 41 wells drilled, only two are gas discoveries, in Permian carbonate reservoirs (Nam Phong and Sin Phu Hom fields; Esso 1981,1982). Source rocks mainly Late Carboniferous rocks)

Polachan, S., S. Prадidtan, C. Tongtaow, S. Janmaha, K. Intarawijitr & C. Sangsuwan (1991)- Development of Cenozoic basins in Thailand. Marine Petroleum Geol. 8, p. 84-97.
(>60 Cenozoic onshore and offshore basins in Thailand, mainly N-S trending half grabens, initiated in Late Oligocene. N-S trending extensional faults, related to NW-SE dextral and NE-SW conjugate sinistral strike-slip faults, active since Oligocene and tied to CW rotation of SE Asia after India with S Asia collision. Four main basins (Mergui, Pattani, Malay, Phitsanulok), with up to 8 km of sediments. Mainly continental facies, except in Mergui Basin in Andaman Sea, where fill is mainly marine. Widespread perennial lake conditions onshore and in Western Graben Area of Gulf of Thailand. Change in tectonic and climatic conditions in M-L Miocene, resulting in cessation of lake conditions and development of regional unconformity)

Polachan, S. & N. Sattayarak (1989)- Strike-slip tectonics and the development of Tertiary basins in Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Int. Symposium on intermontane basins, geology and resources, Chiang Mai, p. 243-253.

Polahan, M. & V. Daorerk (1993)- Report on aditional discovery of dinosaur's footprints in Thailand. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, p. 225-230.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/6789.pdf)

Pollard, P.J., S. Nakapadungrat & R.G. Taylor (1995)- The Phuket Supersuite Southwest Thailand fractionated I-type granites associated with tin-tantalum mineralization. Economic Geology 90, 3, p. 586-602.

(Granites in Phuket-Ranong region of SW Thailand, some with extensive tin (-tantalum) mineralization, form part of Phuket Supersuite. Half of world tin production and significant part of tantalum production from mineralization related to granites which may have been derived from fractionation of I-type magmas)

Pongsapich, W., P. Charusiri & S. Vedchakanchana (1983)- Reviews of metamorphic rocks of Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 244-252.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_14.pdf)

Pongsapich, W. & C. Mahawat (1977)- Some aspects of Tak Granites, northern Thailand. Geol. Soc. Malaysia. Bull. Geol. Soc. Malaysia 9, p. 175-186.
(online at: www.gsm.org.my/products/702001-101292-PDF.pdf)
(N-S trending Tak Batholith near Changwat Tak in NW Thailand >4000 km2, with 4 granitoid types. Minimum emplacement age Triassic.)

Pongsapich, W., V. Pisutha-Arnond & P. Charusiri (1983)- Review of felsic plutonic rocks of Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 213-232.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_12.pdf)
(Granitic rocks in Thailand in three main parallel belts: Eastern (Triassic), Central (Triassic), and Western (Cretaceous))

Pongsapich, W., S. Vedchakanchana & P. Pongprayoon (1980)- Petrology of the Praburi-Hin Metamorphic Complex and geochemistry of gneisses in it. Bull. Geol. Soc. Malaysia 12, p. 55-74.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1980005.pdf)

Prididtan, S. (1989)- Characteristics and controls of lacustrine deposits of some Tertiary basins in Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Int. Symp. on Intermontane basins: geology and resources, Chiang Mai 1989, p. 133-145.
(Petrography and geochemistry of high-grade metamorphic gneiss complexes of NE Peninsular Thailand: Some of sedimentary, some of igneous origin)

Prididtan, S. (1995)- Petroleum exploration in Northeastern Thailand: the revealed results and its potential. Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (Geo-Indo '95), Khon Kaen University 1995, p. 589-599.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1995/7463.pdf)

Prididtan, S., S. Jaroonsitha & Y. Gonecome (1999)- Petroleum systems of the petroliferous basins in Thailand. In: Proc. Symposium Mineral, energy and water resources of Thailand: towards the year 2000, Bangkok 1999, p. 557-563
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1999/6769.pdf)
(Tertiary basins of Thailand two major source systems: (1) Oligocene- E Miocene synrift lacustrine source (Phitsanulok, Fang, Suphan Buri, Songkhla and other small oil-bearing basins); (2) M Miocene fluvial gas-prone system (Pattani, North Malay). In depocenters of large Pattani and North Malay Basinonset of main generation in E Miocene, predating Miocene structural closures)

Punpate, N., S. Pailoplee, I. Takshima & P. Charusiri (2005)- Ages of layered tektites and tektite- bearing sediments in Buntharik Area, Ubonratchathani, Northeast Thailand. Proc. Int. Conf. Geology Geotechnology and Mineral Resources of Indochina (Geo-Indo), Khon Kaen, p. 517-523.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2005/9369.pdf)
(Layered tektites from 0.7-1m thick pebble bed in Unit 4 of alluvial deposits in E-most Khorat Plateau. Size 1-5 cm, with average thermoluminescence age of ~850 ka. Younger ages of surrounding sediments suggests probable reworking of tektites)

Punya, P., P. Charusiri & P. Putthapiban (2007)- Tectonic evolution of the Kampaengsaen Basin, Nakorn Pathom, Central Thailand from PTTEP seismic data. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: towards sustainable development and sufficiency economy (GEOTHAIö07), Bangkok, Dept. Mineral Resources, p. 331-337.
(Kampaengsaen basin onshore Tertiary sedimentary basins in C Thailand, ~70 km NW of Bangkok. With minor oil production since 1991. Half-graben with N-S trending bounding faults)

Putthapiban, P. (1984)- Geochemistry, geochronology and tin mineralization of Phuket granites, Phuket, Thailand. Ph.D. Thesis La Trobe University, Melbourne, p. 1-435.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1984/4609.pdf)

Putthapiban, P. (1992)- The Cretaceous- Tertiary granite magmatism in the West coast of Peninsular Thailand and the Mergui Archipelago of Myanmar/ Burma. In: C. Piancharoen (ed.) Proc. Nat. Conf. on Geologic resources of Thailand: potential for future development, Bangkok, p. 75-88.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1992/6182.pdf)
(Cretaceous granites along W coast of Peninsular Thailand and along Myanmar- Thai border. Rb/Sr and K-Ar ages vary from ~72- 51 Ma, fission track ages ~55, 43 Ma, possibly reflecting slow cooling after emplacement)

Putthapiban, P. (2002)- Geology and geochronology of the igneous rocks of Thailand. In: N. Mantajit (ed.) Proc. Symposium on the Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, Bangkok, p. 261-283.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6404.pdf)
(Thai granites in 3 major belts, tounging to W from Triassic to Late Cretaceous: (1) Eastern Belt (Triassic, I-type/magnetite series; rel. common gold), (2) Central Belt (Triassic, S-type, ilmenite series; with tin- tungsten) and (3) Western belt (Cretaceous; mainly S-, minor I-type; with tin-tungsten, REE minerals). Ultramafic suites (E Permian+) in 3 discontinuous strips, representing Paleo-Tethys suture, from N to S: (1) Pha Som (Nan-Uttaradit), (2) Sra Kaeo and (3) Narathiwat. Volcanic rocks, etc.)

Putthapiban, P. & C.M. Gray (1983)- Age and tin-tungsten mineralization of the Phuket granites, Thailand. Conference on Geology and mineral resources of Thailand, Bangkok, p. 30-39.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1983/10576.pdf)
(Four different granite suites at Phuket, W side of Peninsular Thailand. Rb/Sr ages ~83-94 Ma (Late Cretaceous). Age of tin-tungsten mineralization rel. late, ~84 Ma)

Qian, X., Q.L. Feng, C. Chonglakmai & D. Monjai (2013)- Geochemical and geochronological constrains on the Chiang Khong volcanic rocks (northwestern Thailand) and its tectonic implications. Frontiers of Earth Science 7, p. 508-521.
(M Triassic volcanic rocks in Chiang Khong area at NW Thailand- Laos border genetically linked to tectonic evolution of Paleo-Tethyan Ocean. Mainly of andesitic to rhyolitic rocks. Andesitic samples of Doi Yao volcanic zone with zircon U-Pb ages of ~241 Ma and of arc volcanic affinity. Rhyolitic sample ~239 Ma and transitional arc-syncollisional chemistry. Most samples comparable to Lampang area in N Thailand and Jinghong area of SW Yunnan, indicating Chiang Rai arc-volcanic zone might link to Lancangjiang volcanic zone, SW China)

Qian, X., Q. Feng, Y. Wang, T. Zhao, J.W. Zi, M. Udchachon & Y. Wang (2017)- Late Triassic post-collisional granites related to Paleotethyan evolution in SE Thailand: geochronological and geochemical constraints. Lithos 286-287, p. 440-453.
(Chonburi, Rayong-Bang Lamung and Chanthaburi granite plutons in SE Thailand similar crystallization ages of 222-218 Ma (Norian, Late Triassic). Geochemically classified into S-type (Group 1; mainly from ancient greywackes) and I-type (Group 2; from juvenile mafic crust with input of meta-sediments) granites. Formed in post-collisional thickened crust after assemblage of Indochina and Sibumasu blocks. Linked to N with Late Triassic granitoids in NW Thailand (Sukhothai zone), to S with East Malay Peninsula granites)

Qian, X., Y. Wang, Q. Feng, J.W. Zi, Y. Zhang & C. Chonglakmani (2016)- Petrogenesis and tectonic implication of the Late Triassic post-collisional volcanic rocks in Chiang Khong, NW Thailand. Lithos 248-251, p. 418-431.

('Post-collisional' Late Triassic Chiang Khong volcanics of ~220-229 Ma, younger than continental-arc and syn-collisional volcanic rocks (~238-242 Ma). Equivalent to volcanic rocks in Lancangjiang igneous zone in SW China and possibly related to upwelling of asthenospheric mantle shortly after slab detachment, which induced melting of metasomatized mantle wedge)

Qian, X., Y. Wang, Q. Feng, J.W. Zi, Y. Zhang & C. Chonglakmani (2017)- Zircon U-Pb geochronology, and elemental and Sr-Nd-Hf-O isotopic geochemistry of post-collisional rhyolite in the Chiang Khong area, NW Thailand and implications for the melting of juvenile crust. Int. J. Earth Sciences 106, 4, p. 1375-1389.
(Widespread Triassic volcanic rocks Chiang Khong-Lampang-Tak igneous zone in NW Thailand (part of Sukhothai Arc). Rhyolite with zircon U-Pb age of 230.7 ± 1.1 Ma. Rhyolites formed by partial melting of juvenile mafic lower crust in post-collisional setting. Deep crustal anatexis probably induced by upwelling asthenospheric mantle, shortly after slab detachment subsequent to closure of Paleo-Tethys)

Qian, X., Y. Wang, B. Srithai, Q. Feng, Y. Zhang, J.W. Zi & H. He (2017)- Geochronological and geochemical constraints on the intermediate-acid volcanic rocks along the Chiang Khong-Lampang-Tak igneous zone in NW Thailand and their tectonic implications. Gondwana Research 45, p. 87-99.
(*Lampang-Den Chai area volcanic suite in NW Thailand intermediate- acid rocks with zircon U-Pb ages of ~240-242 Ma (M Triassic). Sequence dominated by calc-alkaline andesites, dacites and rhyolites. Formed in response to slab roll-back during transition from subduction to continental collision between Sibumasu and Indochina blocks. Constitute part of Chiang Khong- Lampang- Tak igneous zone, extending N to Lancangjiang igneous zone and S to Chanthaburi, Malaysia and Singapore areas)*

Qian, X., H. Wei, Y. Wang & Q.L. Feng (2012)- Zircon U-Pb age and geological significance of arc-volcanic rocks in Chiang Khong, northern Thailand. J. China University of Geosciences 37, p. 195-203.
(Common Permian- Triassic volcanic rocks in Chiang Khong area of N Thailand. Zircon ages of basaltic andesite samples from Doi Yao zone 241 ±6 Ma. Rhyolite from Doi Khun Ta Khuan zone 238± 9Ma. M Triassic ages comparable to arc-volcanic rocks in Lampang area, N Thailand (Chiang Rai Arc) and Jinghong area, SW Yunnan (Lancangjiang arc). Also zircons of 1885- 1323 Ma, indicating Proterozoic-Mesoproterozoic basement)

Racey, A. (2009)- Mesozoic red bed sequences from SE Asia and the significance of the Khorat Group of NE Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia. Geol. Soc., London, Spec. Publ. 315, p. 41-67.
(Much of Khorat Gp of NE Thailand is Early Cretaceous age, rather than Late Triassic- E Cretaceous. Jurassic absent. Khorat Gp deposited in foreland basin, not thermal sag following Late Triassic rifting. Two 'Indosinian' orogenies recognized, one in Late Permian- Triassic (along Nan-Uttaradit suture/ Petchabun foldbelt/ Bentong-Raub suture), followed by Late Triassic rifting, followed by second tectonic event near end-Triassic)

Racey, A. (2011)- Petroleum geology. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 351-392.

Racey, A. (2011)- Petroleum geology of Thailand- an overview. Proc. 4th Petroleum Forum: Approaching to the 21st Petroleum concession bidding round, Bangkok 2011, Department of Mineral Fuels, p. 61-63.
(online at: www.dmf.go.th/cms/assets/1/The%204th%20(DMF)%20Petroleum%20Forum%20Proceeding.pdf)
(Petroleum geology of Thailand four main areas (1) Gulf of Thailand, 13 basins, 4 with hydrocarbons (Pattani, Malay, Chumphon, Songkhla) in E-M Miocene fluvial sands, sourced from Oligocene lacustrine shales and E-M Miocene coals and lacustrine mudstones; (2) Onshore C- N Thailand Tertiary Basins: apart from Phitsanulok Basin small basins; (3) NE Thailand Khorat Plateau: principal exploration targets faulted Permian carbonates-sandstones and Late Triassic non-marine siliciclastics; (4) W Offshore Thailand Mergui Basin: no commercial discoveries yet, gas prone, stratigraphy similar to N Sumatra Basin but thicker Late Miocene-Pleistocene)

Racey, A., I.R. Duddy & M.A. Love (1997)- Apatite fission track analysis of Mesozoic red beds from northeastern Thailand and western Laos. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 1, p. 200-209.

(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(AFT analyses on Early Cretaceous fluvial sandstones from NE Thailand and SW Laos (incl. Khorat Plateau). Max. paleo-T before cooling >120° during burial. Cooling started at ~55 Ma for most samples, with possible final cooling to present outcrop between 35-25 Ma (Oligocene))

Racey, A. & J.G.S. Goodall (2009)- Palynology and stratigraphy of the Mesozoic Khorat Group of NE Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Spec. Publ. 315, p. 67-81.
(Most of NE Thailand Khorat Group redbeds of (Late Jurassic?-) Cretaceous age; Jurassic mostly absent. Khorat Gp overlies Late Triassic Nam Phong Fm and is unconformably overlain by continental evaporitic Maha Sarakham Fm, palynologically dated as M Albian-Cenomanian. Khorat Gp palynomorphs dominated by gymnosperm pollen Corollina (= Classopollis) spp. and Dicheiropollis, indicating warm, seasonally dry subtropical climate)

Racey, A., J.G.S. Goodall, M.A. Love, S. Polachan & P.D. Jones (1994)- New age data for the Mesozoic Khorat Group of Northeast Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Res.and IGCP 306, p. 245-252.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1994/6950.pdf)
(Age of much of Khorat Gp (Late Jurassic?-) Early Cretaceous, not Jurassic). Lowermost formation of Khorat Gp (Nam Phong Fm) dated as latest Norian- Rhaetian (Ovalipoliis ovalis))

Racey, A., P.J.C. Highton, T. Lekuthai, A. Alderson & S. Polachan (1997)- Mesozoic oils and source rocks from Peninsular Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 2, p. 511-524.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7651.pdf)
(Oil-gas source rocks of mainly of E Cretaceous age at several localities in S Peninsular Thailand. Variety of fluvial, lacustrine, restricted marine and open marine environments. TOC 0.22-30%, S2 values 0.35-298 mg/g and HI 50-928 mg/g TOC. Tmax data indicate many samples are in oil window. Oil extracted from seep in E Cretaceous limestone near Phru Toei with biomarker profiles of lacustrine source. Absence of oleanane suggests oil from pre M Cretaceous source rock. Gulf of Thailand oils studied do contain oleanane)

Racey, A., M.A. Love, A.C. Canham, J.G.S. Goodall, S. Polachan & P.D. Jones (1996)- Stratigraphy and reservoir potential of the Mesozoic Khorat Group, NE Thailand: Part 1: Stratigraphy and sedimentary evolution. J. Petroleum Geol. 19, 1, p. 5-39.
(Nam Phong Fm dated for first time as Late Norian- Rhaetian, while overlying Khorat Gp reassigned to Early Cretaceous (Berriasian- Aptian). Age of intervening Phu Kradung Fm probably Late Jurassic or E Cretaceous. Changes in provenance between Nam Phong and overlying Phu Kradung Fm suggest possible sedimentary hiatus. Paleocurrent data suggest main source from N and E. Part 2 of series see Canham et al. 1996)

Racey, A., A.B. Smith & O. Dawson (1994)- Permian echinoderms from Peninsular Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, IGCP 306, Dept. Mineral Resources, p. 106-114.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1994/6941.pdf)
(Four species of crinoid (Trimerocrinus, Parabursacrinus, Timorocidaris, etc.) and one blastoid (Deltoblastus permicus) described for first time from Ratburi Lst of Peninsular Thailand. All taxa previously known mainly or only from E-M Permian of Basleo, Timor, suggesting Peninsular Thailand and Timor (Maubisse Lst) were in same faunal province around Artinskian time. Associated with Tubiphytes and 'mid-Permian' foraminifera, including Shanita amosi, Hemigordiopsis renzi, Hemigordius reicheli, Parafusilina sp., etc.)

Racey, A., R.B. Stokes, P. Lovatt Smith & M.A. Love (1997)- Late Jurassic collision in northern Thailand and the significance of the Khorat Group. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 412-413. *(Extended Abstract)*

(Khorat Gp of NE Thailand commonly assumed to be of Late Triassic- E Cretaceous age, but here argued to include only Late Triassic and E Cretaceous sediments. Possibly reflects Late Jurassic collisional event (Sibumasu- Indochina collision)

Racki, G., P. Konigshof, Z. Belka, J. Dopieralska & A. Pisarzowska (2019)- Diverse depositional and geochemical signatures of the Frasnian-Famennian global event in western Thailand reveal Palaeotethyan vs. Western Australian geotectonic affinities. J. Asian Earth Sci. X, 2, 20p.
(online at: https://www.sciencedirect.com/science/article/pii/S2590056019300064)
(Two sections of Frasnian-Famennian (Devonian) boundary sections in W Thailand differ in depositional and geochemical characteristics, confirming different paleogeographic settings. Condensed Mae Sariang limestone succession (Inthanon Zone; Paleotethys) corresponds to event-chemostratigraphic pattern of F-F biocrisis, based primarily on German sections. Thong Pha Phum site (Sibumasu terane) with peculiar W Australian biogeochemical signature. Provenance in MS succession from continental margin, in TPP section from older, continental sedimentary-metasedimentary terrains)

Raksaskulwong, L. (2002)- Upper Paleozoic rocks of Thailand. In: Proc. Symposium on Geology of Thailand, Bangkok, p. 29-34.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6373.pdf)
(Brief review of Carboniferous- Permian stratigraphy of Thailand)

Ramingwong, T. (1978)- A review of the Khorat Group of Thailand. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 763-774.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1978/7414.pdf)
(Review of Khorat Group of NE Thailand. Rel. undeformed Late Triassic- Cretaceous non-marine redbeds-dominated series, unconformably over Paleozoic rocks. With up to 610m of ?Upper Cretaceous evaporites)

Randon, C., N. Wonganan, M. Caridroit, M.F. Perret-Minouse & J.M Degardin (2006)- Upper Devonian-Lower Carboniferous conodonts from Chiang Dao cherts, northern Thailand. Rivista Italiana Paleont. Strat. 112, 2, p. 191-206.
(online at: www.rivistaitalianadipaleontologia.it/doc/Randon_et_al_2006.pdf)
(U Devonian (Frasnian) -Lower Carboniferous conodonts from Paleotethys oceanic cherts in Chiang Dao chert (= 'Fang Chert'; Shan-Tai Block, N of Chiang Mai)

Ratanasthien, B. (1984)- Spore and pollen dating of some Tertiary coal and oil deposits in Northern Thailand. In: Conf. Applications of geology at the National Development Chulalongkorn University, Bangkok 1984, p. 273-280.
(online at: http://library.dmr.go.th/library/7247.pdf)

Ratanasthien, B. (1997)- Algae types of oil source rocks in northern Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 2, p. 606-612
(Lacustrine oil shales in multiple Tertiary rift basins of NW Thailand dominated by Alginite B with disseminated Alginite A (Botryococcus brownii, Pila, Reinschia algae). Also Pediastrum)

Ratanasthien, B. (1999)- Association of oil source algae in some Tertiary basins, northern Thailand. J. Asian Earth Sci. 17, 1-2, p. 295-299.
(N Thailand Tertiry rift basins with coals and oil shales. In lower part Tertiary (especially in Fang oilfield), mainly alginite A (Botryococcus sp.) only type of algae, changing upward into association of Botryococcus braunii, Pila,, thick-walled alginite B, and temperate palynomorphs (Late Oligocene?- E Miocene). In upper section alginite B dominant with Botryococcus-related taxa Pila, Reinschia and fresh-water-dwelling ferns)

Ratanasthien, B. (2002)- Problems of Neogene biostratigraphic correlation in Thailand and surrounding areas. Revista Mexicana Ciencias Geol. 19, 3, p. 235-241.
(online at: http://rmcg.unam.mx/19-3/(10)Ratanasthien.pdf)

(Main correlation tools in Thailand Neogene are vertebrate fossils and palynology)

Ratanasthien, B. (2005)- Evidences of tectonic evolution during Miocene. In: L. Wannakao et al. (eds.) Int. Conf. Geology Geotechnology and Mineral Resources (GEOINDO 2005), Khon Khaen, p. 615-621.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2005/9386.pdf)
(Tertiary basins in Thailand and Myanmar record change from temperate flora in lower part to subtropical-tropical, implying SE-ward movement towards Equator))

Ratanasthien, B. (2011)- Coal deposits. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 393-414.

Ratanasthien, B., S. Chomproosi & T. Mahatthanachai (1997)- Deposition environment of Mae Moh Basin as indicated by coal petrography. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 2, p. 596-605.
(Mae Moh basin rel. small N-S trending Tertiary rift basin E of Lampang, with rel.common coal deposits (lignite- subbituminous) in fluvial-lacustrine ?Neogene section. Formed on Lampang Gp Permian-Triassic clastic and limestone basement. High sulfur content. Coal petrography)

Ratanasthien, B. & W. Kandharosa (1987)- Coal, oil-, oil shale-bearing formations in intermontane basins of Thailand. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology Mineral Hydrocarbon Resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 363-369.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_2/1987/4669.pdf)
(Cenozoic intermontane and intercratonic basins of Thailand mainly filled with fluvial- lacustrine deposits. Most formations immature (Ro 0.2-0.7 %))

Ratanasthien, B., W. Kandharosa, S. Chompusri & S. Chartprasert (1999)- Liptinite in coal and oil source rocks in northern Thailand J. Asian Earth Sci. 17, 1-2, p. 301-306.
(N Thailand coal and oil shale deposits similar palynological associations to Borneo region. Oldest coal and oil shales (Late Oligocene- E Miocene age) dominated by Botryococcus sp. or related algae. Thick-walled lamaginites and spores and pollen of temperate affinity in some areas. Thin-walled lamaginite dominant in late M Miocene. Resinite, suberinite, and cutinite dominant in forest swamp coal deposits whereas alginite, cutinite and lycopodium spores dominant in lacustrine environments)

Ratanasthien B., T. Kojima, T.Tokumitsu, A. Katoh & N.Uyemura (1992)- Relationship between elementary analysis, origin and diagenesis of Tertiary Thai coals. In: C. Piancharoen (ed.) Proc. Nat. Conf. Geologic Resources of Thailand: potential for future development, Bangkok 1992, p 273-282.

Ratanasthien B. & S. Promkotra (1994)- Coal seams correlation of Li coal deposits. In: P. Angsuwathana (ed.) Proc. Int. Symposium on Stratigraphic Correlation of Southeast Asia, Bangkok 1994, p. 282-290.

Ratanasthien, B., I. Takashima & O. Matsubaya (2008)- Paleaogeography and climatic change recorded on Viviparidae carbon and oxygen isotope in Mae Moh Coal Mine, Northern Thailand. Bull. Geol. Survey Japan 59, 7/8, p. 328-338.
(online at: https://www.gsj.jp/data/bulletin/59_07_05.pdf)
(Coal mine in largest coal deposit in Thailand, in M Miocene of Mae Moh basin. With intercalations of up to 12m thick shell beds, composed of nearly 100% Bellemya fresh-water gastropod. C and O isotopes suggest more tropical climate in N Thailand in M Miocene)

Reed, F.R.C. (1920)- Carboniferous fossils from Siam. Geol. Magazine 57, p. 113-120.
(Includes record of Posidonia becheri var. siamensis, Carboniferous ammonoids from Peninsular Thailand (Prolecanites, Glyphyoceras, Pronorites aff. cyclolobus from Hat Yai area)

Reed, F.R.C. (1920)- Carboniferous fossils from Siam. Geol. Magazine 57, p. 172-178.

(Continuation of paper above. Permo-Carboniferous fossis, incl. brachiopods Athyris, Spirifer, Productus, Chonetes and trilobite Phillipsia))

Remus, D., M. Webster & K. Keawkan (1993)- Rift architecture and sedimentology of the Phetchabun intermontane basin, central Thailand. J. Southeast Asian Earth Sci. 8, p. 421ï 432.
(Phetchabun Basin, onshore C Thailand is one of >30 Tertiary intermontane basins in Thailand. Composite of several N-S trending half and full graben, 1100-2500m deep, formed through transtensional dextral shear along Mae Ping fault zone. Oligocene syn-rift fluvial deposits and associated rift volcanics, followed by Oligocene-M-Miocene fluvial and lacustrine deposits. E and Late M Miocene intrusives reflect periods of igneous activity. M Miocene tectonic episode. Waxy oils and dry gas in thin bedded sandstones and igneous sills)

Reynolds, N.A., T.W Chisnali, K. Kaewsang, C. Keesaneyabutr & T. Taksavasu (2003)- The Padaeng supergene nonsulfide zinc deposit, Mae Sod, Thailand. Economic Geology 98, p. 773-785.
(Padaeng deposit near Mae Sod in NW Thailand first commercial supergene non-sulfide zinc deposit in world. Hosted by M Jurassic mixed carbonates-clastics. Formed when substantial body of sulfide ore was uplifted on margin of Mae Sod Tertiary intermontane basin, starting in M-L Miocene)

Rhodes, B.P., J. Blum & T. Devine (2000)- Structural development of the mid-Tertiary Doi Suthep Metamorphic Complex and Western Chiang Mai Basin, Northern Thailand. J. Asian Earth Sci. 18, p. 97-108.
(Doi Suthep Metamorphic Complex near Chiang Mai part of 400km long N-S trending crystalline complex, likely metamorphosed, deformed, and intruded by granitoids during Permo-Triassic collision of Shan Thai terrane with Indosinian Craton. With mylonitic gneisses and major low-angle normal faults. Complex developed between Triassic- E Miocene, with detachment and uplift during Oligocene-Miocene. Stretching lineations trend N80°W)

Rhodes, B.P., J. Blum, T. Devine & K. Ruangvataasirikul (1997)- Geology of the Doi Suthep metamorphic complex and adjacent Chiang Mai Basin. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution in Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok 1997, Dept. Mineral. Res., 1, p. 305-313.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7640.pdf)
(Doi Suthep metamorphic complex of amphibolite-grade gneisses and granitic rocks previously mapped as Precambrian, but now viewed as part of Cenozoic metamorphic core complex. Nearly uni-directional stretching lineations in complex with average N80°W trend. Zircon ages suggest likely Late Triassic granites as protoliths for orthogneiss (Dunnig et al. 1995). Peak metamorphism probably Late Cretaceous)

Rhodes, B.P., P. Charusiri, S. Kosuwan & A. Lamjuan (2005)- Tertiary evolution of the Three Pagodas Fault, Western Thailand. In: L. Wannakao et al (eds.) Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (GEOINDO 2005), Khon Kaen University, p. 498-505.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2005/9366.pdf)
(Three Pagodas Fault Zone developed as consequence of Indian-Asian collision. As NE syntaxis of India migrated N-ward, stresses rotated >100° clockwise)

Rhodes, B.P., R. Conejo, T. Benchawan, S. Titus & R. Lawson (2005)- Palaeocurrents and provenance of the Mae Rim Formation, Northern Thailand: implications for tectonic evolution of the Chiang Mai basin. J. Geol. Soc., London, 162, p. 51-63.
(Chiang Mai basin is largest of series of Tertiary rift basins in N Thailand. Several phases of extension from Late Oligocene -Quaternary, with at least two periods of basin inversion. Paleocurrent and clast-composition data from Mae Rim Fm. alluvial fans and lacustrine deposits suggest provenance from W, from low-grade metasedimentary rocks of W Ranges metamorphic complex. Most of Mae Rim Fm accumulated during uplift of Western Ranges but before erosion had breached detachment fault)

Rhodes, B.P., R. Perez, A. Lamjuan & S. Kosuwan (2002)- Kinematics of the Mae Kuang fault, northern Thailand Basin and Range Province. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 298-308.

(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2002/6409.pdf)
(N-S tending basins characterize 'basin and range' province in N Thailand. One model for Tertiary deformation involves regional simple shear between set of sinistral faults. Newly discovered SW-NE trending Mae Kuang Fault may accommodate transfer of extension between two basins; not a throughgoing fault. Same paper as Rhodes et al. (2004) below)

Rhodes, B.P., R. Perez, A. Lamjuan & S. Kosuwan (2004)- Kinematics and tectonic implications of the Mae Kuang Fault, northern Thailand. J. Asian Earth Sci. 24, p. 79-89.
(NE trending Mae Kuang strike-slip fault does not accommodate mid-Tertiary E-W extension in N Thailand. Fault probably initiated between 20- 5 Ma, simultaneous with slip inversion on Mae Ping and Red River Faults)

Ridd, M.F. (1971)- The Phuket Group of Peninsular Thailand. Geol. Magazine 108, 5, p. 445-446.
(Brief commentary on Mitchell et al. 1970 paper on Phuket Group. Phuket Group of S Thailand stands out by great thickness and presence of pebbly mudstone. Source area was W of present-day Thailand. Numerous limestone clasts in Phuket Gp tilloids lithologically like Ordovician-Silurian Thung Song Lst)

Ridd, M.F. (2007)- A geological traverse across Peninsular Thailand. Geol. Soc. Thailand, Bangkok, Spec. Issue 1, p.

Ridd, M.F. (2008)- Khao Thalai red-beds, a Lower Triassic or older formation in Chanthaburi and Rayong Provinces, SE Thailand. In: Proc. Int. Symp. Geoscience resources and environments of Asian terranes (GREAT 2008), Bangkok, p. 36-41.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/007.pdf)
(Unfossiliferous red sandstone and conglomerate ('Khao Thalai Redbeds') on Gulf of Thailand coast SW of Chanthaburi, SE Thailand. Underlie limestone with Scythian-Anisian foraminifera, so redbeds are older than-E-M Triassic)

Ridd, M.F. (2009)- The Phuket Terrane: a Late Palaeozoic rift at the margin of Sibumasu. J. Asian Earth Sci. 36, p. 238-251.
(Kaeng Krachan Gp of Peninsular Thailand identified as infill of rift between Sibumasu and Gondwana, and given name Phuket Terrane. Rift-infill several km thick, with glacially-influenced diamictites similar to >3 km pre-M Permian rift-fill of Carnarvon Basin, W Australia. Khlong Marui Fault E boundary of rift, Three Pagodas Fault zone also rift margin. Rifting ceased in E Permian and passive margin formed as Mesotethys ocean widened. U Kaeng Krachan Gp and overlying Ratburi Lst part of post-rift)

Ridd, M.F. (2009)- Geological history of the Sibumasu Block in Peninsular Thailand: report of a Geologistsô Association Field Meeting in 2007. Proc. Geologists Assoc. 120, p. 163-174.
(Thailand two main terranes, both of Gondwana origin: Sibumasu in W, Indochina in E, which collided in Late Triassic. Cambrian-Miocene Sibumasu sediments crop out in Peninsular Thailand, as well as two N-S chains of granite plutons: Cretaceous-Paleogene age in W, Triassic further E)

Ridd, M.F. (2011)- Lower Palaeozoic. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 33-51.

Ridd, M.F. (2012)- The role of strike-slip faults in the displacement of the Palaeotethys suture zone in Southeast Thailand. J. Asian Earth Sci. 51, p. 63-84.
(Six N-S tectono-stratigraphic belts in SE Thailand: (1) W-most Belt part of Sibumasu Block, while E-most belt (5) is Permian accretionary complex on W flank of Indochina. Belt (3) volcanics and Carboniferous- Triassic sediments with distinctive faunas, interpreted to be volcanic arc; Belt (4) Triassic rocks of back-arc basin origin; Belt (6) is unconformable cover of Jurassic-Cretaceous red-beds. Triassic Indosinian Orogeny led to cratonization of SE Thailand by end-Triassic. Apparent absence of Devonian-Triassic Paleotethys Ocean (Inthanon Zone of N Thailand) in SE due to post-Indosinian sinistral strike-slip faulting)

Ridd, M.F. (2013)- A Middle Permian- Middle Triassic accretionary complex and a Late Triassic foredeep basin: forerunners of an Indosinian (Late Triassic) thrust complex in the Thailand- Malaysia border area. J. Asian Earth Sci. 76, p. 99-114.
(Semanggol Fm of NW Peninsular Malaysia is N-S belt of imbricately-thrust, deep-water, M Permian- Late Triassic sediments (radiolarian chert, sandstone, mudstone, conglomerate), and extends into Thailand. In M Permian Paleotethys began subducting beneath Indochina/ E Malaya, until end of M Triassic collision with Sibumasu. Crustal shortening continued into Late Triassic, forming foredeep basin in front of inactive subduction zone/ accretionary complex, depositing youngest part of Semanggol Fm)

Ridd, M. (2015)- A second Tethyan plate-boundary in southern Thailand: the medial Myanmar-Thai Peninsula suture. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 62-68. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(Sibumasu Block of Metcalfe (1984) and later papers subdivided into two blocks, 'Sibuma' and 'Irrawaddy', probably amalgamated in Early Cretaceous. Irrawaddy Block W of Medial Myanmar (Mitchell et al., 2012, 2015) and Thai Peninsula sutures contains (1) E part of W Burma Block, E of Sagaing Fault; (2) Karen-Tenasserim Unit with Phuket terrane; (3) N-S strip E of Khlong Marui Fault, and (4) NE Sumatra (Bohorok, Mentulu Fms). Similar boundary in SW Yunnan between Tengchong and Baoshan blocks, in Tibet between Lhasa and Qiangtang Blocks. Sumatran diamictites more closely resemble Phuket Gp than Singa Fm)

Ridd, M.F., A.J. Barber & M.J. Crow (2011)- Introduction to the geology of Thailand. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 1-32.

Ridd, M.F., A.J. Barber & M.J. Crow (eds.) (2011)- The geology of Thailand. Geol. Soc., London, p. 1-614.
(Comprehensive overview of geology of Thailand, including tectonic evolution, stratigraphy, petroleum, coal, minerals, igneous rocks, etc.)

Ridd, M.F. & C.K. Morley (2011)- The Khao Yai Fault on the southern margin of the Khorat Plateau, and the pattern of faulting in Southeast Thailand. Proc. Geologists Assoc. 122, p. 143-156.
(Khao Yai fault ~E-W trending fault at SW margin of Khorat Plateau probably part of strike-slip duplex of bigger Mae Ping Fault belt. Part of Paleogene transpressional deformation that affected N part of Gulf of Thailand and surrounding land areas. Deformation from ~50-60 Ma, continuing in some places to ~30 Ma)

Ridd, M.F. & I. Watkinson (2013)- The Phuket- Slate Belt terrane: tectonic evolution and strike-slip emplacement of a major terrane on the Sundaland margin of Thailand and Myanmar. Proc. Geologists Assoc. 124, 6, p. 994-1010.
(online at: http://searg.rhul.ac.uk/pubs/ridd_watkinson_2013%20Phuket%20Thailand.pdf)
(Phuket-Slate Belt terrane can be traced for 1700 km in Peninsular and W Thailand (W side of Sibumasu continental terrane). Thick Carboniferous-Lower Permian series with diamictites, interpreted as glacio-marine rift-infill, deposited when Sibumasu block separated from Gondwana. It was emplaced in Late Cretaceous-Paleogene by dextral strike-slip along Khlong Marui/ Panlaung fault system. To S, bounding-fault postulated to extend to Sumatra where it aligns with restored proto-Indian Ocean location of India- Australia transform. Emplacement of Phuket-Slate Belt terrane was result of coupling with N-going India plate, resulting in up to 450 km of dextral shift on bounding fault system)

Rigby, S.M., A.A. Bal, H.M. Burgisser, D.K. Harris, M.A. Herber, S. Thumprasertwong & S. Winkler (1992)- The Phitsanulok lacustrine basin, onshore Thailand. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Abstract only)*
(Phitsanulok basin is N-S trending intra-cratonic rift with up to 8 km of Tertiary sediments. Early rifting in Oligocene and E Miocene. Later compressional phase accompanied by basic volcanism. Lake Phitsanulok was 1000-4000 km2 body of fresh water, with up to 400m of organic-rich claystones. Lake margins coarser deltaic deposits constitute main reservoirs of Sirikit oilfield. Sukhothai Depression main kitchen, first generating oil in M Miocene. Crudes are light (40° API) and waxy, with low sulfur and a high pour point)

Roberts, T.R. & J. Jumnongthai (1999)- Miocene fishes from Lake Phetchabun in North Central Thailand, with description of new taxa of Cyprinidae, Pangasiidae and Chandidae. Natural History Bull. Siam Soc. 47, 2, p. 153-189.
(online at: www.thaiscience.info/journals/Article/NHB/10439370.pdf)
(Miocene lacustrine beds at 2-4m depth in Phetchabun intermontane basin at Ban Nong Pia, N-C Thailand with 11 species of teleosts or bony fishes)

Robinson, K. (1984)- Assessment of undiscovered conventionally recoverable petroleum resources in Tertiary sedimentary basins of Thailand. U.S. Geol. Survey (USGS), Open-File Report 84-330, p. 1-14.
(online at: https://pubs.usgs.gov/of/1984/0330/report.pdf)

Ronghe, S. & K. Surarat (2002)- Acoustic impedance interpretation for sand distribution adjacent to a rift boundary fault, Suphan Buri basin, Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 86, p. 1753-1771.
(Suphan Buri basin N-S trending onshore Tertiary non-marine rift basin in Central Plain of Thailand, between two NW-SE trending strike-slip fault zones, Mae Ping and Three Pagodas fault zones. Seismic impedance used to image water-saturated sands in producing interval of half graben. Two styles of sand distribution: axial deposits comprising delta lobes and boundary fault-induced fan deltas and feeder canyons deposits)

Saegusa, H., B. Ratanasthien & H. Nakaya (2000)- A new Miocene mammalian locality, Mae Soi and the occurrence of partial skeletons of rhinocerotids and gomophotheres from northern Thailand. Asian Paleoprimatology 1, p. 137-147
(online at: https://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/199736/1/aspp_01_137.pdf)
(New E or M Miocene vertebrate fossil locality in Mae Soi, Chiang Mai Province, with nearly complete gomphothere (Archaeobelodon or Gomphotherium) (elephant-like proboscideans))

Saengsrichan, W, T. Charoentitirat, A. Meesook, K. Hisada & P. Charusiri (2011)- Paleo-environments and tectonic setting of the Mesozoic Thung Yai Group in Peninsular Thailand, with a new record of *Parvamussium donaiense* Mansuy. Gondwana Research 19, 1, p. 47-60.
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper_2/107.pdf)
(300m thick late E Jurassic- E Cretaceous Thung Yai Gp along E margin of Shan Thai (=Sibumasu) block, unconformable between Triassic marine and Tertiary non-marine sediments. Dominantly brackish- non-marine clastics with few limestone beds. First record in peninsular S Thailand of pectinoid bivalve Parvamussium donaiense in Khlong Min Fm, representing Toarcian- Bajocian (E-M Jurassic) inundation after Late Triassic closure of Paleotethys (species common in NW Thailand, Vietnam, Tibet))

Saengsrichan, W., J. Sha, A. Meesook & K. Hisada (2009)- Lithostratigraphy and petrography of marine Jurassic rocks in the Mae Sot area, Tak Province, western Thailand: implications for depositional environment and tectonics. Geologiska Foren. Forhandlingar (GFF) 131, p. 83-103.
(online at: www.tandfonline.com/doi/pdf/10.1080/11035890902857895)(
(Marine Jurassic rocks from the Mae Sot area of W Thailand (near Myanmar border; part of Shan-Thai/ Sibumasu terrane): 200-832m thick, Toarcian- Bajocian age, shallow marine clastics with occasional carbonate platforms and reef flats. Three assemblages of ammonites: (1)late Toarcian (Pseudolioceras, Lytoceras and Onychoceras); (2) late Aalenian- E Bajocian (Erycites, Tmetoceras, Eumetoceras, Docidoceras); (3) M-L Oxfordian (Epimyaites, Phylloceras). Also bivalve Parvamussium donaiense)

Saesaengseerung, D. (2009)- Devonian to Triassic radiolarian biostratigraphy and depositional environments of these radiolarian-bearing rocks in Thailand. Ph.D. Thesis University of Tsukuba, p. 1-220. *(Unpublished)*

Saesaengseerung, D., S. Agematsu, K. Sashida & A. Sardsud (2009)- Discovery of Lower Permian radiolarian and conodont faunas from the bedded chert of the Chanthaburi area along the Sra Kaeo suture zone, Eastern Thailand. Paleont. Research, Palaentological Soc. Japan, 13, 2, p. 119-138.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2009/30936.pdf)

(Lower Permian (Asselian- Sakmarian) radiolarians and conodonts from bedded chert blocks in Thung Kabin melange of Chanthaburi area, SE Thailand (Sra Kaeo suture zone). Probably deposited in pelagic environment at low latitudes of S Hemisphere in Paleotethys or Paleotethyan back-arc basin)

Saesaengseerung, D. & A. Sardsud (2013)- Summary of the Devonian to Triassic radiolarian faunas from northern and northeastern Thailand along the Laos-Thai Border. In: C. Senebouttalath et al. (eds.) Proc. 2nd Lao-Tai Conf. Geology and Mineral resources, Vientiane, p. 247-252.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2013/36797.pdf)
(M Devonian- M Triassic 'Paleotethys' radiolaria along Laos-Thai border in pelagic and hemipelagic chert, and siliceous shales Assemblages: Stigmosphaerostylus variospina (M Devonian- E Carboniferous), Follicuculus scholasticus-Albaillella levis (M-L Permian) and Triassocampe deweveri (M Triassic))

Saesaengseerung, D., K. Sashida & A. Sardsud (2007)- Late Devonian to Early Carboniferous radiolarian fauna from the Pak Chom area, Loei Province, northeastern Thailand. Paleontological Research 11, 2, p. 109-121.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2007/30935.pdf)
(Famennian- Tournaisian radiolarian fauna in chert-clastic section along Khong River, Pak Chom area, NE Thailand, near Laos border. Deposited in pelagic- hemipelagic environment within E-most margin of Paleotethys Ocean/ Indochina Block in Late Devonian- E Carboniferous, probably on Nakhon Thai Block, subducted beneath Indochina Block. This suggests subduction and accretion of Naknon Thai Block continued through E Carboniferous)

Saesaengseerung, D., K. Sashida & A. Sardsud (2007)- Devonian to Triassic radiolarian faunas from Northern and Northeastern Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIǿ07), Bangkok, Dept. Mineral Resources, p. 54-71.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2007/12703.pdf)
(Radiolarian biostratigraphy of Devonian-Triassic deep marine sequences in N and NE Thailand. Twelve radiolarian zones proposed. Paleo-Tethys ocean probably existed between Shan-Thai (=Sibumasu) and Indochina terranes at least since E Devonian. Timing of collision between Shan-Thai and Indochina later than E? Carnian (early Late Triassic))

Saesaengseerung, D., K. Sashida & A. Sardsud (2008)- Discovery of Middle Triassic radiolarian fauna from the Nan area along the Nan-Uttaradit suture zone, northern Thailand. Paleontological Research 12, 4, p. 397-409.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2009/30937.pdf)
(M Triassic radiolaria of Anisian Triassocampe deweveri fauna with Cenosphaera igoi, Annulotrassocampe, etc., in siliceous rocks at Nan area along Nan-Uttaradit suture zone, N Thailand. Deposited in pelagic environment in Nan-Uttaradit back-arc basin between Simao and Indochina blocks, suggesting this basin was connected with Paleo-Tethys and Panthalassa oceans and closed after M Triassic)

Saesaengseerung, D., K. Sashida, A. Sardsud & S. Salyapongse (2008)- Paleozoic and Mesozoic radiolarian faunas in Thailand. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 186-188 *(Extended Abstract)*
(Fourteen M Devonian- M Triassic radiolarian zones identified in pelagic- hemipelagic rocks of Thailand)

Saesaengseerung, D., T. Kawinate & C. Pothichaiya (2015)- Discovery of Devonian to Carboniferous radiolarians from Central Thailand and its significance of these fauna in Thailand and Laos. Proc. 3rd Thai-Lao Techn. Conf. Geology and Mineral Resources, 2015, p. 115-134.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2015/10914.pdf)
(14 species of Late Devonian (Frasnian)- E Carboniferous (Tournasian) radiolaria in siliceous shale from E of Ban Rai, western C Thailand. With Trilonche spp., Stigmasphaerostylus spp., Albailella paradoxa, etc. Deposited on passive continental margin of Sibumasu terrane, facing Paleo-Tethys ocean)

Saifuddin, F., S. Phaungphuak, S. Matha, W. Ratawessanun & I Nengah Nuada (2012)- Recent step-out exploration in the Greater Sirikit East Area, Sirikit Oil Field, Onshore Thailand, a model for overlooked area. Inter. Petrol. Techn. Conf. (IPTC), Bangkok 2012, IPTC 14465, 17p.

(Main Sirikit oil-gas field is faulted anticline in Oligocene-Miocene Phitsanulok Basin ~400km N of Bangkok is 1981 discovery and is surrounded by smaller fields Sirikit West, Thap Raet, Sirikit East and Nong Jig. New step-out exploration in Greater Sirikit East area, including some stratigraphic trap models (updip pinchouts))

Sakagami, S. (1966)- The Permian bryozoan fauna of Ko Muk, Peninsular Thailand, with the description of the Cyclostomata. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 255-2727.
(28 species of Permian (Artinskian) bryozoa from Ratburi Lst of Ko Muk island, W coast of Thailand, most of them new. Several species in common with Timor (Goniacladia timorensis, G. laxa, Fistulipora simillina, F wanneri, Penniretepora scalaris) and W Australia)

Sakagami, S. (1966)- The cryptostomatous bryozoa from Ko Muk, Peninsular Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 2, p. 273-287.
(Continuation of Sakagami (1966) paper above. Description of 14 species of Permian Cryptosomata, incl. Fenestella spp., Polypora, Penniretepora, etc.)

Sakagami, S. (1968)- Permian Bryozoa from Khao Phrik, near Rat Buri, Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 45-66.

Sakagami, S. (1968)- Permian Bryozoa from Khao Chong Krachok, Peninsular, Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 67-81.

Sakagami, S. (1968)- Permian Bryozoa from Khao Ta Mong Rai, Peninsular Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 47-67.
(16 species of Permian (Artinskian or Sakmarian) bryozoans from N part of Peninsular Thailand. Incl. Fistulipora timorensis, Fenestella spp., Polypora spp. Associated with fusulinid forams))

Sakagami, S. (1969)- Fusulinacean fossils from Thailand, Part IV. On some Permian Fusulinaceans from Peninsular Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 6, p. 256-275.
(Permian fusulinids from 3 localities in Peninsular Thailand: Khao Prik with Ozawainella and Neofusulinella cf. lantenoisi (E Artinskian), Khao Chong Krachok with Pseudofusulina valida (Sakmarian?); Khoo Ta Mong Rai on coast with Triticites obai, Dunbarinella, Schwagerina mongraiensis and S. rouxi (Sakmarian?))

Sakagami, S. (1970)- On the Paleozoic bryozoa of Japan and Thai-Malayan districts. J. Paleontology 44, 4, p. 680-692.

Sakagami, S. (1971)- On the Palaeozoic bryozoa collected by Dr. C.K. Burton from Chumphon, peninsular Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 9, p. 135-146.

Sakagami, S. (1973)- Permian Bryozoa from Khao Raen, near Rat Buri, Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 75-89.
(Diverse Artinskian (E Permian) bryoza from Ratburi Lst at Khao Raen near Rat Buri)

Sakagami, S. (1975)- Permian Bryozoa from Khao Hin Kling, near Phetchabun, North-Central Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 16, p. 33-43.

Sakagami, S. (1976)- Paleobiogeography of the Permian Bryozoa on the basis of the Thai-Malayan District. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 17, p. 155-172.
(Geographic distributions of Permian bryozoa genera. Notmuch detail on SE Asia)

Sakagami, S. (1999)- Permian bryozoans from some localities in the Khao Hin Kling area near Phetchabun, North-central Thailand. Bull. Kitakyushi Museum Natural History 18, p. 77-103.
(online at: www.kmnh.jp/publication/ronbun_pdf/18-77-E-Sakagami.pdf)
(30 species of bryozoa in outcrops in Permian Tak Fa limestone of Ratburi Gp. Associated with fusulinids (schwagerinids, etc.). Some species in common with Timor. Faunas indicate typical S and C Tethys realms (see companion paper on brachiopods by Yanagida & Nakornsri (1999))

Sakagami, S. & A. Hatta (1982)- On the Upper Permian *Palaeofusulina-Colaniella* fauna from Khao Doi Pha Phlung, North Thailand. In: T. Kobayshi, R. Toriyama & W. Hashimoto (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 24, p. 1-14.
(Latest Permian (late Changhsingian) foram-rich limestone of Palaeofusulina sinensis- Colaniella parva Zone from limestone 60km NE of Lampang. With Paleofusulina sinensis, Colaniella lepida, C. xikouensis, Pachyphloia langei, Paraglobivalvulina piyasini n.sp., Reichelina changhsingensis, etc.)

Sakagami, S. & J. Twai (1974)- Permian fusulinaceans from the Pha Duk Chik limestone and in the limestone conglomerate in its environs, North Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 49-81.

Salam, A., W. Lunwongsa, L. Tangwattananukul, W. Sirisookprasert, A. Veeravinantanakul, K. Zaw & P. Charusiri (2014)- On the Chatree deposit in Central Thailand: its tectonism, ages, magmatism, structures, alteration and mineralization. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 331-341.
(Chatree epithermal Au-Ag deposit in C Thailand in Late Permian and E Triassic arc-related volcanic host rock units. Late Permian Suite 1 probably formed immediately after start of subduction and creation of new island arc. Less depleted E Triassic Suite 2 erupted during steady state subduction. Mineralization during switch between two mantle sources at Permo-Triassic boundary (~250 Ma). U-Pb zircon ages of emplacement of plutonic rocks at ~250-240 Ma and ~215-205 Ma. NNW-SSE normal faults response to E-W back arc extension prior to or during earliest Triassic. N-S trending reverse faults related to Triassic collision)

Salam, A., K. Zaw, S. Meffre, J. McPhie & C.K. Lai (2014)- Geochemistry and geochronology of the Chatree epithermal gold-silver deposit: implications for the tectonic setting of the Loei Fold Belt, central Thailand. Gondwana Research 26, p. 198-217.
(Chatree Au deposit between Phichit and Phetchabun provinces, C Thailand, is largest epithermal Au deposit in mainland SE Asia. Hosted by Late Permian- E Triassic volcanics, which can be subdivided into 4 stratigraphic units and two volcanic suites. Late Permian Suite 1 formed immediately after onset of subduction and creation of new island arc. E Triassic Suite 2 units erupted during ongoing subduction. Chatree Au mineralization occurred during switch between mantle sources at Permo-Triassic boundary (~250 Ma))

Salyapongse, S. (1992)- Foliated contact metamorphic rock of the eastern Gulf of Thailand. Thai Geoscience 2, p. 35-42.

Salyapongse, S., H. Fontaine, P. Putthapiban & A. Lamjuan (1997)- Geology of the Eastern Thailand (Route No. 1)- Guidebook for excursion. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, p. 1-69.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1997/2520_1.pdf)
(Brief review of E Thailand geology and fieldtrip stops in Shan Tai and Indochina terranes)

Salyapongse, S., H. Fontaine & K. Sashida (2000)- Petrologic and paleontologic constraints of rock associations- pyroclastics, volcanoclastics and limestones in Nan, Phayao and Prae Provinces. Natural History Bull. Siam Soc. 48, p. 137-169.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2543/6923.pdf)
('Post-tectonic'? rhyolitic volcanics in NE corner of N Thailand (Nan, etc. provinces) near Laos border associated with Late Triassic limestones (volcanics formerly regarded as Jurassic-age (fossils see Fontaine, Salyapongse et al. 2000))

Salyapongse, S. & K. Sashida (2002?)- Volcanic rock fragments in sandstone associated with Triassic chert beds at Nong Pru, Kanchanaburi province. ??, p. 13-20.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2543/6935.pdf)
(Triassic volcanic sandstone with Carboniferous chert fragments, possibly sourced from Sukhothai volcanic belt)

Salyapongse, S. & K. Pitakpaivan (1999)- Older eolian evidences on the Khorat Plateau. J. Geol. Soc. Thailand 1, p. 18-26

Salyapongse, S. & P. Putthapiban (1997)- A reconsideration of the Nan Suture. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 403-411.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7644.pdf)
(Nan suture with High P- low T eclogite- glaucophane schist- greenschist, as common in large orogenic belts, and indicative of subduction zone)

Saminpanya, S., J. Duangkrayom, P. Jintasakul & R. Hanta (2014)- Petrography, mineralogy and geochemistry of Cretaceous sediment samples from western Khorat Plateau, Thailand, and considerations on their provenance. J. Asian Earth Sci. 83, p. 13-34.

Saminpanya, S. & F.L. Sutherland (2014)- Different origins of Thai area sapphire and ruby, derived from mineral inclusions and co-existing minerals. European J. Mineralogy 23, 4, p. 683-694.
(Gem corundum from Thailand divided into sapphire and ruby suites. Rubies may have crystallized in high-P metamorphic rock of ultramafic/mafic composition. Sapphires may have crystallized in high-grade metamorphic rock or from highly alkaline magmas, at shallower depths than those hosting Thai rubies)

Sangsomphong, A., T. Thitimakorn & P. Charusiri (2015)- Interpretation of tectonic setting in the Phetchabun Volcanic Terrane, Northern Thailand: evidence from enhanced airborne geophysical data. J. Southeast Asian Earth Sci. 107, p. 12-25
(Aeromagnetic data used to interpret subsurface structures of Carboniferous-Triassic Phetchabun Volcanic Terrane, now largely covered by thick Cenozoic sediment deposits. Four distinct structural domains, N, E, C and W. Elongate units interpreted to represent Late Carboniferous intrusive bodies. tied to E-ward subduction of Nakhonthai oceanic plate beneath Indochina continental plate, along Loei suture)

Sangsomphong, A., D. Tulyatid, T. Thitimakorn & P. Charusiri (2013)- Tectonic blocks and suture zones of eastern Thailand: evidence from enhanced airborne geophysical analysis. Annals Geophysics 56, 1, R0102, 12p.
(online at: www.annalsofgeophysics.eu/index.php/annals/article/viewFile/5547/6201)
(Airborne geophysical data used to analyze tectonic structures of SE Thailand. Main regional structure trends NW-SE, with sinistral fault movements, result of E-W compression that generated strike-slip movement before Indian-Asian collision. Faults cross-cut by NE-SW sinistral fault and NW-SE dextral faults, which formed after Indian-Asian collision from transpression sinistral shear in NW-SE direction. Three geophysical domains: N (Indochina block), C (Nakhonthai block) and S (Lampang-Chaing Rai block) and lower Southern Subdomain with Shan Thai block)

Sanjit, P., N. Wonganan & Y. Thasod (2013)- Devonian radiolarian faunas in Pai Area, Mae Hong Son Province, Northern Thailand: paleogeographic implication. J. Science Technol. Mahasarakham University (MSU) 33, 4, p. 393-402.
(online at: www.journal.msu.ac.th/upload/articles/article444_18057.pdf)
(High-diversity Devonian radiolarian fauna from N-S trending, vertically dipping dark-grey pelagic thin-bedded chert in Pai district in N Thailand (= Paleotethys Ocean floor sediment in Paleotethys suture zone). With 21 taxa/ 8 genera, identified as M-L Devonian (Trilonche dihelicis, T. echinata, Stigmosphaerostylus, etc. and Late Devonian (Trilonche palimbola, T. altasulcata, T. australis, etc.))

Sasada, M., B. Ratanasthien & R. Soponpongpipat (1987)- New K-Ar ages from the Lampang basalt, Northern Thailand. Bull. Geol. Survey Japan 38, 1, p. 13-20.
(online at: https://www.gsj.jp/data/bull-gsj/38-01_04.pdf)
(Two samples of aphyric Lampang basalts from SW part of Mae Moh basin, NW Thailand. Chemically of basanite composition. Whole rock ages 0.8 ± 0.3 Ma and 0.6 ± 0.2 Ma. K-Ar ages may give lower limit of formation age because of argon loss due to hydration. Most flows of Lampang basalt normal polarity, except lower flow. Some flows overlie gravel with early Paleolithic pebble tools)

Sashida, K. & H. Igo (1992)- Triassic radiolarians from a limestone exposed at Khao Chiak near Phattalung, southern Thailand. Trans. Proc. Palaeontological Soc. Japan, N.S., 168, p. 1296-1310.
(online at: www.palaeo-soc-japan.jp/download/TPPSJ/TPPSJ_NS168.pdf)
(Limestones around Phattalung regarded as S extension of Permian Ratburi Lst, but with Triassic (Anisian) radiolaria)

Sashida, K. & H. Igo (1999)- Occurrence and tectonic significance of Paleozoic and early Mesozoic radiolaria in Thailand and Malaysia. In: I. Metcalfe (ed.) Gondwana Dispersion and Asian accretion, IGCP 321 Final results volume, A.A. Balkema, Rotterdam, p. 175-196.
(On occurrences of U Devonian- M Triassic radiolarians in cherts various parts of Thailand and Malaysia. Late Devonian- E Carboniferous 'Pak Chom Chert' on W margin of Indochina Block remnants of Paleotethys Ocean)

Sashida, K., H. Igo, S. Adachi, K. Ueno, Y. Kajiwara, N. Nakornsri & A. Sardsud (2000)- Late Permian to Middle Triassic radiolarian faunas from Northern Thailand. J. Paleontology 74, 5, p. 789-811.
(Wuchiapingian- Anisian radiolarians from Shan-Thai Block in thin chert- shale sequences exposed N of Chiang Mai, NW Thailand. 50 species, 35 genera. Radiolarians identical to faunas of Late Permian Neoalbaillella ornithoformis and N. optima zones and E Triassic Parentactinia nakatsugawaensis and Triassocampe coronata Assemblage Zones in chert sequences of Japan)

Sashida, K., H. Igo, S. Adachi, K. Ueno, N. Nakornsri & A. Sardsud (1998)- Late Paleozoic radiolarian faunas from northern and northeastern Thailand. Sci. Repts. Inst. Geoscience, University of Tsukuba, B, 19, p. 1-27.

Sashida, K., H. Igo, K. Hisada, N. Nakornsri & A. Ampornmaha (1993)- Occurrence of Paleozoic and Early Mesozoic radiolaria in Thailand (preliminary report). In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 97-108.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/7593.pdf)
(Devonian. E Carboniferous and Permian radiolaria found in 'Fang Chert' near Chiang Mai, NW Thailand (= Paleotethys ocean floor sediment). Late Devonian- E Carboniferous radiolaria also in tuffaceous shale/ chert in Loei area near Pak Chom (NE Thailand, Indochina Block). Well-preserved late E Triassic radiolarians in limestone near Patthalung, S Peninsular Thailand)

Sashida, K., H. Igo, K. Ueno, N. Nakornsri & A. Sardsud (1998)- Late Paleozoic radiolarian faunas from northern and northeastern Thailand. Science Repts. Inst. Geoscience, University of Tsukuba, B 19, p. 1-27.

Sashida, K. & N. Nakornsri (1997)- Lower Permian radiolarian faunas from the Khanu Chert Formation distributed in the Sukthothai area, northern Central Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 101-108.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Lower Permian Pseudoalbaillella spp. radiolarian assemblages from deformed phyllitic bedded Khanu Chert Fm of Sukhothai foldbelt (Paleotethys suture))

Sashida, K., N. Nakornsri, K. Ueno & A. Sardsud (2000)- Carboniferous and Triassic radiolarian faunas from the Saba Yoi area, southernmost part of Peninsular Thailand and their paleogeographic significance. Science Reports Inst. Geoscience, University of Tsukuba, B, Geol. Sci., 21, p. 71-99.

(see also Sashida et al. 2002)

Sashida, K. & S. Salyapongse (2002)- Permian radiolarian faunas from Thailand and their paleogeographic significance. J. Asian Earth Sci. 20, 6, p. 691-701.
(Eight Permian radiolarian zones in chert and fine-grained pelagic-hemipelagic rocks in Permian of Thailand, Deposited in deep pelagic environment of Paleotethys Ocean that existed between Late Devonian- M Triassic. N Thailand uppermost Permian- M Triassic deposited in pelagic basin, in E Thailand change in depositional environment from deep pelagic in Permian to shallow seas in Triassic)

Sashida, K., S. Salyapongse & P. Charusiri (2002)- Lower Carboniferous radiolarian fauna from the Saba Yoi-Kabang area, southernmost part of Peninsular Thailand. Micropaleontology 48, Suppl. 1, Proc. INTERRAD 9, p. 129-143.
(U Tournasian radiolaria from black chert in thick-bedded sandstone at Saba Yoi-Kabang, S Peninsular Thailand, near Malaysia border. 23 species of Albaillella indensis assemblage, also known from Pyrenees, SW China, Malay Peninsula and E Australia. Deposited in pelagic- hemipelagic environment in Paleotethys Ocean)

Sashida, K., S. Salyapongse & N. Nakornsri (2000)- Latest Permian radiolarian fauna from Klaeng, Eastern Thailand. Micropaleontology 46, 3, p. 245-263.
(Latest Permian radiolarian fauna from chert-clastic sequence at Khao Wang Chik, Klaeng, E Thailand (Shan-Tai Block). composed of Neoalbaillella, Albaillella, Entactinia, etc. and represent latest Permian Neoalbaillella optima Assemblage, also known from Japan, Russian Far East, Philippines, S and SW China, and N Thailand. Probably deposited in deep, pelagic environment of Paleotethys Ocean)

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(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_07.pdf)
(Thailand widespread non-marine Mesozoic redbeds, especially in NE (Khorat Plateau). More marine in W. Mainly of Triassic age (+ Jurassic- E Cretaceous?; JTvG))

Sattayarak, N. (1992)- Petroleum exploration opportunities in Thailand. In: Proc. Nat. Conf. Geological Resources of Thailand: potential for furture development, Bangkok 1992, Dept.Mineral Res., p. 668-675.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1992/6257.pdf)
(Thailand with 8 petroleim provinces. Established plays mainly in Oligo-Miocene faulted sands. Dry gas produced from Permian carbonates in NE. Several other potential plays)

Sattayarak, N. (2005)- Petroleum potential of the northeast Thailand. In: L. Wannakao (ed.) Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (GEOINDO 2005), Khon Kaen 2005, p. 21-30.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2005/9311.pdf)
(Multiple Pre-Tertiary hydrocarbon play types in Khorat Basin area of NE Thailand. Main gas production from Permian carbonates (Nam Phong field))

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(Brief review of Paleozoic- Mesozoic stratigraphy of Thailand and fieldtrip stops)

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(11m thick section near Mae Sariang, NW Thailand (Sibumasu terrane), yielded late Frasnian- Famennian conodont faunas. Faunas mostly cosmopolitan, but with several new species of Palmatolepis, Polygnathus, Pseudopolygnathus and Siphonodella. Outer-shelf, starved basin setting)

Savage, N.M., A. Sardsud & W. Buggisch (2006)- Late Devonian conodonts and the global Frasnian-Famennian extinction event, Thong Pha Phum, western Thailand. Palaeoworld 15, 2. p. 171-184.
(Late Devonian Frasnian- Famennian conodonts in W Thailand mostly cosmopolitan species. Thailand section includes U Kellwasser Event recorded in Europe, N America, China, etc. Regional disappearance or extinction of conodont species at Frasnian-Famennian boundary followed by recovery during E Famennian)

Savage, N.M., A. Sardsud & P. Lutat (2007)- Famennean (Upper Devonian) conodonts from Mae Sariang, Northwestern Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIö07), Bangkok, Dept. Mineral Resources, p. 87-92.
(Late Famennian conodonts (Lower- Middle expansa Zones) from outcrop SW of Mae Sariang, NW Thailand (= Sibumasu Terrane). Species mostly cosmopolitan, with new species Polygnathus sariangensis)

Savage, N.M., A. Sardsud & M. Orchard (2006)- Conodonts of Dienerian age (Early Triassic) from northern Thailand. In: V. Luer et al. (eds.) InterRad 11 & Triassic Stratigraphy Symposium, Wellington 2006, p. 120.
(Dienerian (Early Triassic) Neospathodus dieneri conodont fauna reported from limestone outcrop possibly belonging to Doi Chiang Dao Limestone (= Carboniferous- Permian Paleotethys seamount Lst)

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(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.883.4261&rep=rep1&type=pdf)
(Several sea-level curves for younger Holocene published for Malay-Thai Peninsula. General assumption is rapid rise to M Holocene maximum up to +5 m above present sea level, followed by regression. Paleo-sea level indicators at Andaman Sea coast document Holocene maximum of +2.6 m at 5700 yr BP)

Schenk, C.J., R.R. Charpentier, T.R. Klett, T.J. Mercier, M.E. Tennyson, J.K Pitman & M.E. Brownfield (2014)- Geology and assessment of unconventional oil and gas resources of the Phitsanulok Basin, Thailand. U.S. Geol. Survey (USGS) Open-File Report 2014-1133, 1 sheet.

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(Review of tectonic elements, history and thermal events of Thailand)

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(online at: https://umexpert.um.edu.my/file/publication/00004083_88503.pdf)
(Three principal granite provinces across SE Asia (1) W Thailand-Myanmar I-type granites with tin mineralization in greisen-type veins (zircon core ages Late Triassic ~212-214 Ma; thermal overprint rims of 81 and 85-75 Ma; (2) N Thailand-W Malaya Main Range S-type biotite granites with tin mineralization resulting from crustal thickening following Sibumasu-Indochina collision in M Triassic (zircon ages ~215- 210 Ma); (3) E Malaya province of Permian-Triassic I-type granites also yield zircon rim age of ~80 Ma, showing Cretaceous magmatism in common with province 1. Two E-dipping subduction zones required in Triassic, one along Bentong-Raub Paleo-Tethyan suture, and one W of Phuket-Burma province 1 belt)

Senowbari-Daryan, B. & R. Ingavat-Helmcke (1993)- Upper Permian sponges from Phrae province (northern Thailand). In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 2, Chiang Mai University, p. 439-451.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7494.pdf)
(Uppermost Permian in Phrae Province, ESE of Chiang Mai, N Thailand, is shale- sandstone- limestone sequence W of Nan-Uttaradit suture. Limestones with Paleofusulina and Colaniella parva and locally rich sponge faunas)

Senowbari-Daryan, B. & R. Ingavat-Helmcke (1994)- Sponge assemblage of some Upper Permian reef limestones from Phrae province (Northern Thailand). Geologija 36, p. 5-59.
(Fauna of uppermost Permian reefal limestones of Phrae province, N Thailand dominated by sponges incl. hexactinellida, sclerospongea, 'sphinctozoans', and 'inozoans'. Associated with Tubiphytes and Hemigordius, but no corals and fusulinid foraminifers found. Locality is just W of 'Nan-Uttaradit' suture, which was probably not trace of Paleotethys, but closure of minor oceanic basin)

Senowbari-Daryan, B. & M.F. Ridd (2008)- Two new Triassic sphinctozoan sponge species from near Kantang, Trang Province, Southern Thailand. Palaontol. Zeitschrift 82, 3, p. 254-261.
(Triassic black limestone from near Kantan, Trang Province, S Thailand, contains two new species of calcified sphinctozoan sponge, Amblysiphonella parva and Platythalamiella minima)

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(online at: www.clim-past.net/6/461/2010/cp-6-461-2010.pdf)
(Pollen assemblages from Late Oligocene and M-L Miocene mammal sites. Palynoflora from Oligocene suggests warm temperate forests at 24-26 Ma. M Miocene assemblages thermophilous taxa. Change can be linked to climate reorganization that brought warmer and wetter conditions over SE Asia around 22 Ma)

Sethakul, N. (1987)- Pongnok oil field. In: P. Thanasuthipitak (ed.) Proc. Symp. Cenozoic basins Thailand: geology and resources, Chiang Mai University 1984, p. 21-42.

(Pongnok oil field in stratigraphic trap along E margin of intra-cratonic Fang Basin in non-marine Oligo-Miocene clastics. Twelve wells between 1978-1984)

Settakul, N. (1993)- Fang oil field: ramification for exploration in intermontane basins in Thailand. In: Proc. 5th ASEAN Council, ASCOPE 93, Bangkok 1993, p. 85-94.
(On oldest oilfield in Thailand. In non-marine Miocene deposits of small Fang intermontane half-graben basin, N Chiang Mai province)

Settakul, N. (2009)- Fang oilfield development. Walailak J. Sci. Techn. 6, 1, p. 1-15.
(online at: http://wjst.wu.ac.th/index.php/wjst/article/view/69/52)
(Review of Fang Oilfield is located in Fang intermontane basin, N Thailand, ~150 km N of Chiang Mai. Produced ~9 MMBO since 1960, from 240 wells. Seven sandstone reservoir zones, all in Maesod Fm. Oils high wax content (up to 18%))

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(online at: www.dmr.go.th/download/English/LAO%20-THAI%20Conference%202012_Proceedings.pdf)
(Cretaceous sediments in Thailand and Lao PDR entirely non-marine facies: widespread in NE, SE and S Thailand and much of Laos. Generally, reddish brown to light grey sandstones, claystones and conglomerates, with salts and gypsum only in Maha Sarakham and Saysomboun Fms. Two assemblages of Aptian-Albian trigoniodid bivalves, in NE and Peninsular Thailand and in Savannakhet (Donghen) Basin of S Laos: T kobayashi- Plicatounio suzukii assemblage, and T. diversicostatus-Pseudohyria subovalis assemblage)

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(online at: http://pubs.usgs.gov/of/1984/0403/report.pdf)

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(Ophiolite melange in Nan-Uttaradit zone, N Thailand, formed in Late Devonian- Permian. Metamorphic tholeiites similar to ocean-ridge basalts, hawaiites in Nan area similar to oceanic-island basalts. Basalts are all oceanic volcanic rocks and part of Paleo-Tethys oceanic crust)

Shen, S., Q. Feng, W. Yang, Z. Zhang & C. Chonglakmani (2010)- Geochemical characteristics of island-arc volcanic rocks in the Nan-Nam Pat-Phetchabun zone, northern Thailand. Chinese J. Geochemistry 29, 4, p. 337-342.
(Late Permian-Early Triassic volcanic rocks on E side of ocean-ridge/oceanic-island basalts in Nan-Uttaradit zone are basaltic-andesite island-arc volcanics. Ocean-ridge-island-arc pair indicates oceanic crust of Nan-Uttaradit zone once was of E-ward subduction)

Shen, S., Q. Feng, W. Yang, Z. Zhang & C. Chonglakmani (2010)- Study on the geochemical characteristics of arc-volcanic rocks in the Chiang Rai-Lampang belt of northern Thailand. Chinese J. Geochemistry 29, 3, p. 255-260.
(Late Permian- E Triassic continent margin arc volcanics on E side of oceanic basalts in Chiang Mai belt indicative of E-ward subduction of oceanic crust in Chiang Mai belt)

Shen, S., Q. Feng, Z. Zhang & C. Chonglakmani (2009)- Geochemical characteristics of the oceanic island-type volcanic rocks in the Chiang Mai zone, northern Thailand. Chinese J. Geochemistry 28, 3, p. 258-263.
(Oceanic island arc rocks in Chiang Mai zone, N Thailand, are usually covered by Lower Carboniferous-Permian shallow marine carbonates. Geochemistry typical of oceanic island basalts and alkali basalts, similar to equivalents in Deqin and Gengma (Changning-Menglian zone) of Yunnan Province, China)

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(~850m thick Tarutao Fm of Tarutao Island off SW Peninsular Thailand shallow marine clastics with U Cambrian and basal Ordovician trilobites. Terminal Cambrian assemblage with Micragnostus, Prosaukia, Hoytaspis, Lophosaukia, etc. Fauna resembles assemblage known from Vietnam)

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(Small Meekella-dominated brachiopod assemblage from upper Khao Phra Fm of uppermost Kaeng Krachan Gp in C Peninsular Thailand (Sibumasu Terrane). In cross-bedded quartz sst above diamictite. With Meekella bisculpta and Costatumulus. Most likely Late Artinskian or Kungurian age. Transitional between temperate Gondwanan and warm-water Cathaysian faunas)

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(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0145904)
(New basal hadrosauroid dinosaur from Lower Cretaceous (Aptian) Khok Kruat Fm of Thailand: Sirindhorna khoratensis gen. et sp. nov.)

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(online at: www.scienceasia.org/2004.30.n1/v30_043_058.pdf)
(Sulfur isotopic study in M Miocene of Mae Moh and Chiang Muan coal fields in N Thailand suggest marine incursion occurred during deposition of the U2 coal)

Sinclair, G. (1997)- A study of the Pranburi Formation and Khao Tao Formation. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 337-345.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7643.pdf)
(Metamorphic formations at E side of Upper Peninsula of Thailand near Khao Tao. Pranburi Fm paragneiss and schist, marble and quartzite originally shallow marine island arc sediments. Khao Tao Fm orthogneiss originally granite. Since peak metamorphism in Late Triassic uplifted by ~10km. Several deformation episodes. N-S to NNE-SSW trending folds and schistosity. Tied to Sibumasu- Indochina collision)

Singharajwarapan, S. (1994)- Deformation and metamorphism of the Sukhothai Fold Belt, Northern Thailand, Ph.D. Thesis, University of Tasmania, Hobart, p. 1-385.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1994/566.pdf)
(Sukhothai foldbelt area E of Lampang in N Thailand, close to Nan Suture. Sirikit Dam area stratigraphy:(1) Permo-Carboniferous? Pha Som Metamorphic complex (intensely deformed melange with ultramafics and

metasediments with M-U Permian radiolarian chert, W-dipping), structurally juxtaposed against (2) Permian-Triassic Pak Pat Volcanics (mainly basaltic andesite lavas, minor dacites, tuffs;1500m thick?; geochemistry suggestive of rifting of intra-oceanic arc to form back arc basin), (3) unconformably overlain by Triassic Nam Pat Gp (with volcanics-rich basal conglomerates and turbiditic series with Halobia/ Daonella in upper part; >3000m?)) and (4) unconformably covered by Phra Wihan Fm non-marine sst redbeds with M Jurassic plants. Also brief study of Doi-Inthanon metamorphic complex W of Lampang)

Singharajwarapan, S. (1994)- Provenance and tectonic setting of deposition of metagreywackes in the Nan River Suture, Northern Thailand. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 113-129.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999012.pdf)
(Metagreywackes from Sirikit Dam area in N Thailand cover part of Nan River Suture between Shan-Thai terrane in W and Indochina in E. Belong to Pha Som Metamorphic Complex of Carboniferous-Permian pumpellyite-actinolite facies metasediments and tectonic slices of ophiolitic mafic-ultramafic rocks. Interpreted as accretionary complex on W dipping subduction zone. Metagreywacke derived from (1) quartz-rich continental island arc source, probably deposited in submarine fan setting and (2) quartz-poor oceanic island arc source. Suggests accretionary complex older than Late Triassic Shan-Thai- Indochina amalgamation)

Singharajwarapan, S. & R.F. Berry (1993)- Structural analysis of the accretionary complex in Sirikit Dam area, Uttaradit, Northern Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 233-245.
(Complexly folded Late Carboniferous- Permian metagreywakes and phyllites with enclosed mafic-ultramafic rocks in Sirikit Dam area are part of 'Nan River Ophiolite Belt', interpreted as suture between Shan-Tai in W and Indochina terrane in E. Tight isoclinal folding, S2 slaty cleavage, stretching lineations and metamorphism related to E-directed (W-dipping) accretionary thrusting)

Singharajwarapan, S. & R. Berry (2000)- Tectonic implications of the Nan Suture Zone and its relationship to the Sukhothai Fold Belt, Northern Thailand. J. Asian Earth Sci. 18, p. 663-673.
(Nan Suture and Sukhothai Fold Belt mark Shan-Thai -Indochina collision zone. Shan-Thai Terrane rifted from Gondwana in E Permian. As it drifted N, subduction complex developed along N margin. Nan serpentinitic melange is Late Permian accretionary complex with offscraped blocks from subducted Carboniferous and Permian oceanic crust. Deformational style supports W-dipping subduction zone. Late Permian-Late Triassic fore-arc basin sediments preserved in Sukhothai Fold Belt. Sequence folded and complexly thrust in Late Triassic as result of collision. Post-orogenic sediments prograded across suture in Jurassic)

Singtuen, M. & B. Phajuy (2016)- Geochemistry and tectonic significance of andesitic rocks in Tak Province, Thailand. In: Proc. 52nd Annual Session Coord. Comm. Geoscience Programmes E and SE Asia (CCOP), Bangkok, p. 65-74.
(online at: www.ccop.or.th/download/as/52as2.pdf)
(Geochemistry of M-L Triassic mildly calc-alkalic andesite porphyry from Chiang Kong- Lampang- Tak volcanic belt of NW Thailand. Erupted in volcanic arc setting)

Sinhabaedya, P. & Y. Ionnikoff (2008)- Integrating high resolution sequence stratigraphy, sedimentology and structuration in complexly faulted thin-bedded fluvio-lacustrine reservoirs, Sirikit oil fields, onshore Thailand. Proc. Int. Symp. Geoscience resources and environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 387-394.
(Sirikit oilfields in Phitsanulok basin, Thailand, started production in 1982 and reached peak production of 26,740 BOD in 2000. Over 400 wells. Field geology complex, particularly deltaic reservoir architecture)

Sitthithaworn, E. & P. Wasuwanich (1992)- Metallogenic map of Thailand. In: C. Piancharoen (ed.) Proc. Nat. Conf. Geologic Resources of Thailand-potential for future development, Dept. Mineral Resources, Bangkok, p. 1-15.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1992/6199.pdf)

(Thailand three metallogenic provinces, NE, Central (A, Cu, etc.) and West (Sn, Pb, Zn, etc.) representing continental and subduction system settings)

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(Chainat N-S trending strike-slip duplex ~100 km long, developed along sinistral Mae Ping fault zone, which was active during Cenozoic. Probably began to develop towards end of main phase of escape tectonics in Thailand, i.e. around 33-30 Ma. E and Late Miocene inversions in adjacent rift basins suggests possible activity in duplex. Possible minor episodic dextral motions in Late Oligocene-Miocene and/or Pliocene-Recent)

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(Neritopsid gastropod genus Magnicapitatus from fusulinoid-rich limestone of Khao Taa Ngog Fm (Capitanian, M Permian) at Khao Makha in E Thailand near Cambodia border, in Indochina Terrane)

Sone, M., C. Chonglakmani & A. Chitnarin (2009)- Middle Permian productidine brachiopods from Central Thailand (the Indochina Terrane) with paleobiogeographic implications. J. Paleontology 83, 5, p. 804-810.
(Assemblage of productid brachiopods Haydenella, Paraplicatifera and Compressoproductus from Wordian of U Saraburi Limestone Gp of C Thailand (W margin Indochina Terrane) suggests endemism for M Permian marine faunule of Indochina Terrane)

Sone, M., I. Metcalfe & P. Chaodumrong (2012)- The Chanthaburi terrane of southeastern Thailand: stratigraphic confirmation as a disrupted segment of the Sukhothai Arc. J. Asian Earth Sci. 61, p. 16-32.
(Chanthaburi terrane interpreted as S segment of Permo-Triassic Sukhothai Arc. In SE Thailand, extending into Cambodia, between Indochina and Sibumasu continental blocks. Klaeng tectonic line is boundary between Chanthaburi Terrane- Sibumasu block. Late Permian- Triassic largely absent due to Indosinian I unconformity (W Indochina) or mainly carbonates (Sibumasu). Brachiopod, previously reported as Leptodus, re-identified as Oldhamina, previously known elsewhere in SE Asia, in Thailand confined to Sukhothai Arc. Marine stratigraphy of Sukhothai Arc Permian-Triassic carbonates and siliciclastics with common volcanic material. Marine conditions on Sukhothai Arc terminated by end-Triassic, later than Indochina block (Late Permian) but earlier than Sibumasu block (Jurassic/ Cretaceous))

Songtham W., (2003)- Stratigraphic correlation of Tertiary basins in northern Thailand using algae, pollen and spores. Ph.D. Thesis, Chiang Mai University, Thailand, p. 1-280. *(Unpublished)*

Songtham, W., J. Duangkrayom & P. Jintasakul (2012)- An Australasian tektite from the Yasothon soil series, Noen Sa-nga, Chaiyaphum, Northeastern Thailand. In: Proc. First Int. Symposium of IGCP-589, Acta Geoscientica Sinica 33, Suppl. 1, p. 59-64.
(Quarries N of Noen Sa-nga, Khorat Basin, NE Thailand, with lower fluvial gravel unit (with thin ferricrete layer at top) and upper bright reddish brown structureless sand unit with fining-upward basal portion (Yasothon soil series). Black glassy tektite (4x2 cm) found at contact between two units.Tektite deposition followed by larger-sized sediments and angular quartz fragments forming fining-upward sedimentary series. Finer sediments gradually settled down, forming Yasothon structureless sand deposit. Meteoritic impact event occurred at ~0.77 Ma)

Songtham, W., D.C. Mildenhall, P. Jintasakul & J. Duangkrayom (2011)- Evidence of sedimentary deposits generated by an Early Pleistocene meteor impact in Northeastern Thailand. In: Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (GEOINDO 2011), Khon Kaen, p. 66-71.
(Yasothon soil horizon wide distribution in Khorat basin, NE Thailand. Probably 'loess', catastrophically generated by Pleistocene meteor impact in Buntharik, Ubon Ratchathani, at ~0.7-0.8 Ma, as dated by tektites (Bunopas 1990; part of Australasian strewnfield). Yasothon soils with 10-30 cm thick basal breccia, with sharp angular rock fragments (incl. tektites at base, fining upward into structureless silt -fine sand, interpreted as

airfall deposit. Size of basal breccia coarser in E than in W, suggesting impact site in E, possibly circular raised ridge 13km across, W of Phanom Phrai)

Songtham, W., D.C. Mildenhall & B. Ratanasthien (2012)- Petrified tree trunks from a gravel deposit, Ban Tak Petrified Forest Park, Ban Tak- Sam Ngao Basin, Tak Province, Northern Thailand. J. Science Technol. Mahasarakham University (MSU), p. 93-100.
(online at: www.thaiscience.info/journals/Article/JSMU/10887847.pdf)
(Fossil tree stumps and up to 72.2m long trunks from fluvial and alluvial fan deposits in excavation pits at Ban Tak (Bantak) Petrified Forest Park identified as Koompassioxylon elegans and Pahudioxylon cf. sahnii. Ban Tak- Sam Ngao basin fluvial sediments on granite. Sediments deposited under tropical humid climate with deciduous forests. Tentative age E Pleistocene)

Songtham, W., B. Ratanasthien & D.C. Mildenhall (2001)- Tropical palynofloras from Middle Miocene Chiang Muan basin, Phayao, Thailand. ?
(online at: www.thaiscience.info/Article%20for%20ThaiScience/Article/61/10012001.pdf)
(Sporomorphs from M Miocene sediments of Chiang Muan basin include abundant Crassoretitriletes vanraadshoovenii, Dipterocarpaceae, Ilexpollenites, Botryococcus and rare Florschuetzia, , representing tropical palynofloras derived from tropical monsoon forests, accumulated mainly in lacustrine environments)

Songtham, W., B. Ratanasthien & D.C. Mildenhall (2004)- New species of algae *Actinastrum* Lagerheim and *Closterium nitzsch* ex Ralfs from Middle Miocene sediments of Chiang Muan basin, Phayao, Thailand, with tropical pollen composition. Science Asia 30, p. 171-181.
(online at: www.scienceasia.org/2004.30.n2/v30_171_181.pdf)
(Two new algal species of algae Actinastrum bansaense n. sp. and Closterium thailandicum from late M Miocene (~13.5 -10 Ma) lacustrine deposits associated with coals of Chiang Muan basin. Palynofloras from tropical monsoon forests (incl. Crassoretitriletes vanraadshoovenii fern spores, also Dipterocarpaceae, Lagerstroemia, Ilexpollenites, Myrtaceidites and Combretaceae with rare Florschuetzia-type, Homonoia, Calophyllum, Striatriletes susannae, Botryococcus and Mimosaceae. Laevigatosporites haardtii fern spores in some horizons. Three acme zones; upper zone mainly with freshwater alga Actinastrum bansaense)

Songtham, W., B. Ratanasthien, D.C. Mildenhall, S. Singharajwarapana & W. Kandharosa (2001)- Palynological zonation and their paleovegetations of Ban Pa Kha coal mine, Li basin, Changwat Lamphun. In: Geological Survey Division Annual Academic Meeting, Dept. Mineral Resources, Bangkok, p. 1-11.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2544/6144.pdf)
(Palynology of Oligocene- E Miocene Li Basin sediments, N Thailand. Climate became warmer and wetter with time)

Songtham, W., B. Ratanasthien, D.C. Mildenhall, S. Singharajwarapana & W. Kandharosa (2003)- Oligocene-Miocene climatic changes in Northern Thailand resulting from extrusion tectonics of Southeast Asian landmass. Science Asia 29, p. 221-233.
(online at: www.scienceasia.org/2003.29.n3/v29_221_233.pdf)
(Tertiary basins of N Thailand two main palynological assemblages: warm temperate (Oligocene- E Miocene; with common conifers) and tropical (M Miocene, probably also E Miocene age). Climate in Thailand changed from temperate to tropical in Oligo-Miocene, possibly caused by S-SE-ward movement of SE Asian landmass by extrusion tectonics induced by India- Eurasia collision, beginning at ~40-50 Ma)

Songtham, W., B. Ratanasthien, M. Watanasak, D. Mildenhall, S. Singharajwarapan & W. Kandharosa (2005)- Tertiary basin evolution in northern Thailand: a palynological point of view. Natural History Bull. Siam Soc. 53, 1, p. 17-32.
(online at: www.thaiscience.info/journals/Article/NHB/10439470.pdf)
(Tertiary basins in NW Thailand developed in Oligocene- M Miocene, initially in warm-temperate climate, with mid-latitude forests. Early Miocene warming until completely tropical in late E Miocene, persisting until end of M Miocene)

Songtham, W., H. Ugai, S. Imsamut, S. Maranate, W. Tansathien, A. Meesook & W. Saengsrichan (2005)- Middle Miocene molluscan assemblages in Mae Moh Basin, Lampang Province, Northern Thailand. Science Asia 31, p. 183-191.
(online at: www.scienceasia.org/2005.31.n2/v31_183_191.pdf)
(Fresh-water molluscs in M Miocene Mae Moh Gp of N Thailand (?Paludina, Melanoides, Bellamya, Margarya, Planorbidae, etc.))

Songtham, W. & M. Watanasak (1999)- Palynology, age, and paleoenvironment of Krabi Basin, southern Thailand. In: B. Rattanasathien & S. Rieb (eds.) Proc. Int. Symposium on Shallow Tethys 5, Chiang Mai, p. 426-439.

Srichan, W. (2008)- Petrochemistry, geochonology and tectonic implication of the Chiang Khong-Lampang-Tak Volcanic belt, Northern Thailand. Ph.D. Thesis, University of Tasmania, p. 1-284. *(Unpublished)*
(Chiang Khong-Lampang-Tak volcanic belt part of Sukhothai Fold Belt in N Thailand, between Chiang Mai (lnthanon) and Nan-Sra-Kaeo sutures. Here suggested to form in post-collisional, extensional Basin and Range-type setting (crustal thickening due to late M Triassic collision between Shan-Thai and Indochina terranes, followed by rifting led to post-collisional magmatism). Zircons U-Pb ages mainly late M-early Late Triassic (220-230 Ma). Permian zircons in Late Triassic igneous rocks possibly inherited from Permian granites. Detrital zircons in belt's sediments indicate Late Devonian-E Carboniferous, Permian and Late Triassic rocks exposed in provenance areas. Thin-skinned, mainly E-directed fold-thrust deformation. Unconformably overlain by Latest Triassic- E Jurassic Khorat Gp molasse)

Srichan, W. (2011)- Petrology and geochronology of igneous rocks from Thoen District, Lampang Province, Northern Thailand. Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2011), Khon Kaen, p. 54-57.
(Granites and andesitic mafic dykes from Thoen District, Lampang, in S part of Chiang Khong-Lampang-Tak volcanic belt (= C part of Sukhothai Fold Belt; 240-220 Ma). Mafic rocks evolved from basalt- andesite and have calc-alkalic composition, erupted in continental margin arc environment associated with subduction zone. U-Pb zircon ages of felsic igneous rocks 231 Ma (late M Triassic); dykes are younger)

Srichan, W. (2015)- Age dating of rocks in the Chiang Khong-Lampang-Tak Volcanic belt, northern Thailand. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 77-78. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(U-Pb-Th zircon ages of igneous and sedimentary rocks in Chiang Khong-Lampang-Tak volcanic belt in middle part of Sukhothai Fold Belt. Most volcanic belt igneous rocks crystallized in late M- early Late Triassic (216-237 Ma) and show zircon age groups of ~ 220 Ma and ~230 Ma. Permian zircons (261-280 Ma) possibly inherited from Permian granites. Detrital zircons in sedimentary rocks in belt indicate Devonian-Carboniferous, Permian and Late Triassic rocks in provenance areas)

Srichan, W., A.J. Crawford & R.F. Berry (2009)- Geochemistry and geochronology of Late Triassic volcanic rocks in the Chiang Khong region, Northern Thailand. Island Arc 18, 32-51.
(Chiang Khong segment of Chiang Khong-Lampang-Tak Volcanic Belt (part of Sukhothai volcanic arc) in NW Thailand composed of three meridional sub-belts of mafic-felsic volcanic, volcaniclastic, and associated intrusive rocks. Associated sedimentary rocks mainly non-marine red beds. Late Triassic (223-220 Ma; Norian) zircon ages of lavas. E Sub-belt dominated by mafic lavas transitional between E-mid-oceanic ridge basalt and back-arc basin basalts. Dominance of felsic lavas and mainly non-marine associated sediments suggest post-collisional extensional setting)

Srinak, N., K. Hisada, Y. Kamata & P. Charusiri (2007)- Stratigraphy of the Mae Sariang Group of Northwestern Thailand:implication for paleoenvironments and tectonic setting. Natural History J. Chulalongkorn University 7, 2, p. 87-108.
(online at: www2.biology.sc.chula.ac.th/web%20of%20NHJCU%20PDF/7-2,%2087-108.pdf)

(M-L Triassic deep marine clastics of Mae Sariang Gp of NW Thailand in narrow N-S belt and ~900m thick, conformably over deformed Permian marine clastics and unconformably below subhorizontal Jurassic clastics. Conglomerate-lithic sandstone near base with Halobia and Daonella cf. sumatrensis bivalves, mainly mudstone and radiolarian chert in middle and with abundant Halobia and Posidonia bivalves near top of section. Interpreted as deposits of Permian-Triassic intra-cratonic basin (branch of Paleotethys?), within Shan-Tai Terrane, which closed in Late Triassic (Ishida et al. 2006 proposed this belt as main Paleotethys suture; JTvG))

Stait, B. & C. Burrett (1982)- Early Ordovician polyplacophoran *Chelodes whitehousei* from Tarutao Island, southern Thailand. Alcheringa 8, p. 112.
(Polyplacophoran Chelodes whitehousei Runnegar et al. 1979 from basal Thung Song Fm at NE Tarutao Island. Carbonates of E-M Ordovician Thung Song Fm form N-S belt through Peninsular Thailand)

Stait, B.A. & C.F. Burrett (1987)- Ordovician nautiloid faunas of Central and Southern Thailand. Geol. Magazine 121, p. 115-124.
(Nautiloids from Ordovician shallow marine carbonates of W and Peninsular Thailand grouped into five assemblages Incl. Hardmanoceras chrysanthimum, Manchuroceras nakamense, Wutinoceras, Armenoceras chediforme, etc.. All genera also occur in Australia and China)

Stait, B.A., C.F. Burrett & T. Wongwanich (1987)- Ordovician trilobites from the Tarutao Formation, Southern Thailand. Neues Jahrbuch Geol. Palaont., Monatshefte 1984, 1, p. 53-64.
(Ordovician (M-U Tremadocian) trilobites in upper 100m of Tarutao Fm clastics of Tarutao Island, N of Langkawi (= Sibumasu block) (see also Shergold et al. 1988, Late Cambrian trilobites from Tarutao))

Stait, B.A., D. Wyatt & C.F. Burrett (1987)- Ordovician nautiloid faunas of Langkawi Islands, Malaysia, and Tarutao Island, Thailand. Neues Jahrbuch Geol. Palaont. Abhandl. 174, p. 373-391.

Stokes, R.B. (1988)- Correlation of the Permian 'Phawa Limestone' of Thailand with the 'Kamawkala Limestone' of Burma. J. Southeast Asian Earth Sci. 2, p. 35-39.
(Phawa Dolomite Fm in area E of Mae Sot in western foldbelt of W Thailand contains rich Permian brachiopod fauna (with Leptodus, Waagenites speciosus, Uncinulus timorensis, etc., Artinskian-Kazanian?) and correlates with part of 'Kamawkala Limestone' at W rim of Mae Sot basin in Karen State of E Burma. This latter unit is re-named Htichara Dolomite Fm)

Stokes, R.B. (1988)- Structural control of Neogene sedimentation in the Mae Sot Basin (Thai-Burmese border: implications for oil shale reserves. J. Petroleum Geol. 11, 3, p. 341-346.

Stokes, R.B. (2011)- The Late Cimmerian event in Western Thailand and Central Thailand and Central Lao PDR. J. Geol.Soc. Thailand 1, p. 25-29.
(Folding and faulting of Jurassic marine strata in W Thailand interpreted as Jurassic-Cretaceous boundary event, pre-dating unconformable deposition of non-marine Cretaceous conglomerates with pebbles of Jurassic limestone. Corresponds to widespread 'Late Cimmerian event' elsewhere in Asia, younger than M-L Triassic 'Indosinian Event')

Suensilpong, S., C.K. Burton, N. Mantajit & D.R. Workman (1978)- Geological evolution and igneous activity of Thailand and adjacent areas. Episodes 13, p. 12-18.
(online at: www.episodes.co.in/www/backissues/13/ARTICLES--12.pdf)
(Brief review of geologic history of Thailand from Precambrian- Recent))

Suensilpong, S., P. Putthapiban & N. Mantajit (1983)- Some aspects of tin granite and its relationship to tectonic setting. Geol. Soc. America (GSA) Mem. 159, p. 77-86.
(SE Asia granite belt in Thailand multiple phases of granite. Permian and Late Triassic-E Jurassic formed above W-dipping subduction zones. E Cretaceous (~125-130 Ma) and Late Cretaceous- E Tertiary (~80-50 Ma) granites involved E-dipping subduction (Indian Ocean- Eurasian plates convergence). Tin mineralization confined mostly to highly silicic parts of S-type granitoids, like Late Triassic- E Jurassic (~212-190 Ma))

Sugiyama, T. (1982)- Middle Permian corals from the Ratburi Limestone in the Khao Khao area, Sara Buri, Central Thailand. In: T. Kobayshi, R. Toriyama & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 24, p. 15-29.
(M Permian corals from 360m thick Ratburi Lst in Khao Khao section (with fusulinids of Afganella-Neoschwagerina haydeni zones described by Toriyama and Kanmera 1979). Five coral localities with waagenophyllids Ipciphyllum saraburiense n.sp., Paraipciphyllum, Pseudohuangia, Chihsiaphyllum kanmerai n.sp. and tabulate Tetraporinus)

Sugiyama, T. & R. Toriyama (1981)- Coral and fusuline faunas from the Kabin Buri Area, East Central Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 22, p. 1-22.
(Description of new coral Koninckophyllum ingavatae n.sp., presumably of E Carboniferous age, 400km S of Loei (Visean))

Surakotra, N. (2011)- Diagenesis of laminated Loei-Wang Saphung gypsum- anhydrite deposits in the Northeastern Thailand. Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2011), Khon Kaen, p. 106-115.
(Presence of laminated gypsum-anhydrite asociated with Late Carboniferous carbonates in Loei-Wang Saphung area, NE Thailand)

Suteethorn, V., E. Buffetaut, R. Helmcke-Ingavat, J.J. Jaeger & Y. Jongkanjanasoontorn (1988)- Oldest known Tertiary mammals from South East Asia: Middle Eocene primate and anthracotheres from Thailand. Neues Jahrbuch Geol. Palaont., Monatshefte 9, p. 563-570.

Suteethorn, S., J. Le Loeuff, E. Buffetaut, V. Suteethorn, C. Talubmook & C. Chonglakmani (2009)- A new skeleton of *Phuwiangosaurus sirindhornae* (Dinosauria, Sauropoda) from NE Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Spec. Publ. 315, p. 189-215.
(New skeleton of sauropod dinosaur from E Cretaceous Sao Khua Fm at Ban Na Khrai in NE Thailand)

Suteethorn, S., J. Le Loeuff, E. Buffetaut, V. Suteethorn & K. Wongko (2013)- First evidence of a mamenchisaurid dinosaur from the Upper Jurassic- Lower Cretaceous Phu Kradung Formation of Thailand. Acta Palaeontologica Polonica 58, 3, p. 459-469.
(online at: www.app.pan.pl/archive/published/app58/app20090155.pdf)
(Sauropod vertebra from U Jurassic- Lower Cretaceous continental Phu Kradung Fm near Phu Dan Ma, NE Thailand)

Sutthirat, C., P. Charusiri, E. Farrar & A.H. Clark (1994)- New 40Ar/39Ar geochronology and characteristics of some Cenozoic basalts in Thailand. In: P. Angsuwathana et al. (eds.) Proc. Int. Symp. Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Res., p. 306-321.
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper/19.pdf)
(Ar-Ar ages of Cenozoic basalts in Thailand suggest six main episodes: 22-24 Ma, 18-20 Ma, 8-14 Ma, 4-5.3 Ma, 1.6-3.6 Ma and <1.6 Ma). Believed to be result of continental rifting)

Sutthirat, C., S. Saminpanya, G.T.R. Droop, C.M.B. Henderson & D.A.C. Manning (2001)- Clinopyroxene-corundum assemblages from alkali basalt and alluvium, eastern Thailand: constraints on the origin of Thai rubies. Mineralogical Magazine 65, 2, p. 277-295.
(Thailand rubies mainly from alluvial deposits, but probably originated from Late Cenozoic basalts, probably crystallized in mafic garnet-clinopyroxenites or garnet-pyriclasites, in upper mantle)

Suwanich, P. (1983)- Potash and rock salt in Thailand. In: Conf. Geology and Mineral Resources of Thailand, Bangkok, p. 244-252.

Suwanich, P. (2007)- Potash-evaporite deposits in Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIô07), Bangkok, Dept. Mineral Resources, p. 252-262.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2007/12730.pdf)
(NE Thailand Khorat plateau/ basin with thick Cretaceous evaporites of Maha Sarakham Fm. Review of evaporite stratigraphy. Potash minerals carnallite, sylvite and tachyhydrite present above lower salt)

Suwanich, P. (2009)- Potassium Bromide (KBr) contents in the Maha Sarakham Formation, northeastern Thailand: indicator of origin and deformation of rock salt strata. J. Science Technol. Mahasarakham University (MSU) 29, 3, p. 249-258.

Suwannathong, A. & D. Khummongkol (2007)- Oil shale resource in Mae Sot Basin, Thailand. In: 27th Oil Shale Symposium, Colorado School of Mines, p. 1-8.
(online at: www.ceri-mines.org/documents/27symposium/papers/ma11-4suwannathong.pdf)
(On E Miocene lacustrine oil shale in Mae Sot Basin, Tak Province, NW Thailand. Quality poor-medium)

Suwimonprecha, P., P. Cerny & G. Friedrich (1995)- Rare metal mineralization related to granites and pegmatites, Phuket, Thailand. Economic Geology 90, p. 603-615.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.857.7029&rep=rep1&type=pdf)
(Rare metal mineralization on Phuket Island, SW Thailand, with deposits of Sn, Nb-Ta and W, related to Cretaceous granites of Khao Tosae Suite and pegmatite derivative)

Taiyaqupt, M., P. Charusiri & W. Pongsapich (1984)- Geology and stratigraphy of Sri Racha area, Chonburi Province, Eastern Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geol. Min. Energy Res. SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 59-71.
(Sri Racha area along coast SE of Bangkok, underlain by folded Carboniferous low grade metamorphics, thin Permian sediments including thin limestone similar to Ratburi Group with Tubiphytes and Pseudofusulina. Intruded by Triassic granites)

Takemoto, K., S. Sato, K. Chanthavichith, T. Inthavong, H. Inokuchi, M. Fujihara, H. Zaman et al. (2009)- Tectonic deformation of the Indochina Peninsula recorded in the Mesozoic palaeomagnetic results. Geophysical J. Int. 179, p. 97-111
(online at: http://gji.oxfordjournals.org/content/179/1/97.full.pdf+html)
(E Jurassic- E Cretaceous red sandstones sampled at three localities in Shan-Thai and Indochina blocks. Shan-Thai and Indochina blocks experienced ~10° CW rotation in early stage of India-Asia collision. After this, Shan-Thai Block underwent internal tectonic deformation, while Indochina Block behaved as rigid tectonic unit. Strength of continental lithosphere important role in deformation (continental roots beneath Indochina prevented internal deformation))

Tangwattananukul, L. (2015)- Characteristics of epithermal Au and porphyry Cu-Mo mineralizations of the Chatree deposit, central Thailand. Thesis, Akita University, p. 1-140.
(online at: https://air.repo.nii.ac.jp/?action=repository_uri&item_id=2547&file_id...2)
(Chatree Au-Ag deposit in Petchabun Province with two E Triassic mineralization styles in Carboniferous-sediments and Permian arc volcanics: (1) epithermal Au-Ag (~250 Ma; formed ~200m below paleosurface); (2) porphyry Cu-Mo (~244 Ma; formed ~1 km below paleosurface))

Tangwattananukul, L. & D. Ishiyama (2018)- Characteristics of Cu-Mo mineralization in the Chatree mining area, Central Thailand. Resource Geology 68, 1, p. 83-92.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/rge.12146/epdf)
(Chatree mineral deposits within Eastern Granite Belt at W side of Indochina Block (Triassic- Jurassic Sukhothai arc/ foldbelt). Include Cu-Mo-bearing quartz veins in altered E Triassic (243±5 Ma) granodiorite porphyry and altered andesite lava, formed at T of 450°C and P of 250 bars. Associated Au mineralization at Chatree slightly older (250±0.8 Ma; latest Permian))

Tangwattananukul, L., D. Ishiyama, O. Matsubaya, T Mizuta, P. Charusiri, H. Sato & K. Sera (2014)- Characteristics of Triassic epithermal Au mineralization at the Q prospect, Chatree mining area, Central Thailand. Resource Geology 64, 2, p. 167-181.
(Chatree Au deposit in 600km Loei-Phetchabun-Nakhon Nayok volcanic belt between Shan-Thai and Indochina terranes, that extends from Laos in N through C and E Thailand into Cambodia. Gold-bearing quartz veins in late Permian- E Triassic andesitic breccia and Carboniferous-Permian volcanic sedimentary breccia. Gold-bearing quartz veins five stages; formed ~200 m below paleosurface)

Tansathien, W., L. Raksaskulwong & A. Meesook (1997)- Stratigraphy, tectonic evolution and mineral deposits of Western Thailand (Route No. 2)- Guidebook for excursion. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, p. 1-55.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1997/2520_2.pdf)
(Brief review of W Thailand geology and fieldtrip stops in ?Precambrian metamorphics, Paleozoic sediments and younger rocks)

Tantiwanit, W., L. Raksaskulwong & N. Mantajit (1983)- The Upper Palaeozoic pebbly rocks in southern Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 96-104.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_05.pdf)
Widespread pebbly rocks/ diamictites in Carboniferous- E Permian marine Kaeng Krachan Fm in SW Thailand (Phuket, etc.). Can be correlated with Mergui Fm of Burma and Singa Fm of Malaysia. May be ice-rafted deposits and tillites, some may be slump deposits. Thickness tilloid-bearing clastics >1200m?. Most common clasts quartzites/ quartz sandstones, also grey limestone, vein quartz, acid plutonic rocks (biotite-granite and trondhjemite) and rare megaclasts of shale, mudstone, chert, biotite-gneiss and diorite. Conformably overlain by E Permian Ratburi Lst)

Tassy, P., P. Anupandhanant, L. Ginsburg, P. Mein, B. Ratanasthien & V. Suteethorn (1992)- A new *Stegolophodon* (Proboscidea, Mammalia) from the Early Miocene of Northern Thailand. Geobios 25, 4, p. 511-523.
(First complete molars of Stegolophodon from Thailand, from Mae Moh (M Miocene) and Na Sai (E Miocene;; earliest known species of Stegolophodon)

Teraoka Y., H. Sawata, T. Yoshida & T. Pungrassami (1982)- Lower Paleozoic Formations of the Tarutao Islands, Southern Thailand. Prince of Songkhla University, Geol. Resources Project Publ. 6, p. 1-54.
(Igo 1984: oldest conodonts of SE Asia found here (E Ordovician) (see also Agematsu et al. 2008))

Thambunya, S., V. Pisutha-Arnond & C. Khantaprab (2007)- Depositional environments of Permian rocks of the Khao Khad Formation in Central Thailand. Science Asia 3, p. 371-381.
(online at: www.scienceasia.org/2007.33.n4/v33_371_381.pdf)
(Khao Khad Fm of Saraburi Group in C Thailand is sequences of limestone, dolomitic limestone and silty shale with nodular and banded cherts. Fifteen rock units distinguished. Deposited during major transgressive-regressive cycle in Lower- M Permian)

Thanasuthipitak, T. (1978)- Geology of Uttaradit area and its implications on tectonic history of Thailand. Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 187-197.
(Suture zone in NW Thailand between Indochina- Sibumasu plate, with ophiolites, etc., reflecting W-dipping Permo-Carboniferous subduction/ continental collision zone)

Thanasuthipitak, T. (1978)- A review of igneous rocks of Thailand. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 775-782.
(Brief review of Late Carboniferous- Cretaceous granitic rocks of N, W and SE Thailand and Thai Peninsula, ultramafic-mafic rocks of NW Thailand and volcanics)

Thanasuthipitak, T. & T. Sirinawan (1986)- Petrochemistry of gem-bearing basalt in the Nong Bon area, Trat Province, Eastern Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 503-521.
(Gem deposits of Thailand (ruby, sapphire, zircon, garnet) associated with three belts of weathered Late Cenozoic basalt deposits)

Thanomsap, S. (1983)- Stratigraphic sequences and facies distributions in the Mae Sot Basin. In: Conf. Geology and Mineral Resources of Thailand, Bangkok, p. 367-376.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1983/10619.pdf)
(Late Tertiary Mae Sot intramontane basin in W Thailand with >2000m of fluvial-lacustrine sediments unconformably over Triassic-Jurassic limestones)

Thanomsap, S. & S. Sitahirun (1992)- The Mae Sot oil shale. In: C. Piencharoen (ed.) Proc. Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, Dept. Min. Resources, p. 676-691.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1992/6258.pdf)
(On Miocene lacustrine oil shale in Mae Sot Basin, Tak Province, W Thailand. Oil shale beds 5- 100' thick. Generally low quality (average oil yield 5% by weight), minor quantities of higher quality (>10% oil). Explored since 1939, but no viable commercial development yet)

Thasod, Y., P. Jintasakul & B. Ratanasthien (2012)- Proboscidean fossil from the Tha Chang sand pits, Nakhon Ratchasima Province, Thailand. J. Science Technol. Mahasarakham University (MSU), 31, p. 33-44.
(online at: ttps://www.khoratgeopark.com/kgp/researchs/2012_Thasod_283-293-1-PB.pdf)
(Eight genera of Proboscidean fossils in sand pits in Nakhon Ratchasima province, NE Thailand, of families Dienotheriidae (Prodeinotherium, Gomphotherium, Tetralophodon, Sinomastodon, Protanancus), Stegodontidae (Stegolophodon, Stegodon) and Elephantiidae (Elephas). Ages M Miocene- Pleistocene)

Thassanapak, H., C. Chonglakmani, Q. Feng, J. Grant-Mackie & N. Thanee (2007)- Middle Triassic radiolarians from Den Chai Area, Northern Thailand. In: W. Tantiwanit (ed.) Int. Conf. on Geology of Thailand: towards sustainable development and sufficiency economy (GEOTHAIœ07), Bangkok, Dept. Mineral Resources, p. 180-186.
(Den Chai area at S edge of Cenozoic Phrae basin in NW Thailand with Lampang Gp marine Triassic, incl. Wang Chin Fm with Halobia, Paleocardita, Posidonia. M Triassic (Anisian-Ladinian) radiolarians extracted from maroon siliceous rocks, S of Den Chai, incl. Triassocampe deweveri, T. coronata, T. scalaris, Muelleritortis spp., etc. Interpreted as deposited offshore of extensional continental margin)

Thassanapak, H. Q.L. Feng, J. Grant-Mackie, C. Chonglakmani & N. Thanee (2011)- Middle Triassic radiolarian faunas from Chiang Dao, Northern Thailand. Palaeoworld 20, 2, p. 179-202.
(64 species of Late Anisian radiolarians from 9m thick thin-bedded chert sequence N of Chiang Dao indicates deep marine environment in NW Thailand (seaway between E and W Paleotethys). Beds probably from tectonic slice in Carboniferous- M Triassic sequence overlain by Triassic igneous rocks. Can be correlated with E zone of Changning-Menglian Belt in SW Yunnan, China)

Thassanapak, H., M. Udchachon & C. Burrett (2012)- Devonian conodont, radiolarian, and tentaculitid assemblages in the Indochina Terrane. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geologica Sinica 33, Suppl. 1, p. 65-66 *(Abstract)*
(online at: http://igcp589.cags.ac.cn/pdf/29-THASSANAPAK,%20UDCHACHON%20et%20al.pdf)
(In E margin of Indochina Terrane along Troungson Foldbelt in C Laos, localities in Lak Xao and Sepon districts contain radiolarians (Trilonche spp.) and tentaculitids (Homoctenus ultimus, Costulatostylionina vesca), indicating Frasnian age. In W margin of Indochina Terrane Pak Chom in Loei, Thailand, Late Devonian radiolarian cherts)

Thassanapak, H., M. Udchachon, C. Burrett & Q. Feng (2017)- Geochemistry of radiolarian cherts from a Late Devonian continental margin basin, Loei fold belt, Indo-China terrane. J. Earth Science (China) 28, 1, p. 29-50.

(online at: http://en.earth-science.net/PDF/20170110101143.pdf)
(>42 species of U Devonian (Frasnian-Famennian) radiolaria in cherts-siliceous shales in NE Thailand sector of Loei fold belt (Indochina terrane). Geochemistry suggests continental margin environment near volcanic arc, different from U Devonian cherts from N Thailand, Truong Son foldbelt (Laos) and S China. U Devonian deep marine sequences in Loei fold belt deposited in rifted continental margin basin, possibly back-arc basin, not in large oceanic basin)

Thassanapak, H., M. Udchachon, C. Chonglakmani & Q. Feng (2011)- Geochemistry of Middle Triassic radiolarian cherts from northern Thailand: implication for depositional environment. J. Earth Science (China) 22, 6, p. 688-703.
(M Triassic radiolarian cherts from N Thailand (Chiang Dao, Lamphun, Den Chai) of biogenic origin. Geochemistry suggests M Triassic radiolarian cherts deposited in deeper part of residual basin. Main Paleotethys which closed during Late Triassic should be located further to W)

Thassanapak, H., M. Udchachon, Q. Feng & C. Burrett (2017)- Middle Triassic radiolarians from cherts/siliceous shales in an extensional basin in the Sukhothai Fold Belt, Northern Thailand. J. Earth Science (China) 28, 1, p. 9-28.
(online at: http://en.earth-science.net/PDF/20170110100741.pdf)
(>30 species of Late Ladinian radiolaria from red chert- siliceous shales in E of Sukhothai fold belt, incl. Muelleritortis cochleata, M. expansa, Triassocampe deweveri, T. coronata, T. scalaris, Annulotriassocampe companilis, A. multisegmantatus, A. sulovensis, Pseudostylosphaera spp., Canoptum inornatus, C. levis, Corum kraineri, Spongoserrula rarauana, Orbiculiforma karnica and others. Assemblages correlated with Fang-Chiang Dao and Lumphun areas in N Thailand and Changning-Menglian belt of W Yunnan. Interpreted deposited in extensional continental margin in Sukhothai fold belt/ Lampang-Phrae Basin, not in Devonian-Permian back-arc basin of Nan suture)

Thienprasert, A. & M. Raksaskulwong (1984)- Heat flow in northern Thailand. Tectonophysics 103, p. 217-233.
(Heat flow in N Thailand highly variable. Four regions with high heat-flow, over 100 mW/m2: Fang oil fields, San Kamphaeng geothermal area, Mae Sot and W margin of Khorat plateau)

Thongboonruang, C. (2008)- Petroleum source rock potential of NE Thailand. Proc. 2nd Petroleum Forum: Blooming era of Northeastern Thailand, Bangkok 2008, Department of Mineral Fuels, p. 33-50.

Tien, Nguyen D. (1988)- Note on two "Incertae sedis" from the Permian of West Thailand. In: H. Fontaine & V.Suteethorn (eds.) Late Paleozoic and Mesozoic fossils of West Thailand and their environments, Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, Techn. Bull. 20, p. 109-111.
(Two organisms of uncertain affinity relatively common in Permian of W Thailand: (1) Rectostipulina quatrata, a small tube, square in section; also known from Turkey, Cyprus, Iran, Afghanistan, etc.; (2) Sphairionia sikuoides n.gen., n.sp., a small bubble that may be foraminifer or fossil of algal affinity; known from Cambodia, Thailand, Malay Peninsula (= also 'Sibumasu fossil' subsequently reported from Oman, etc.?; JTvG))

Tingay, M.R.P., C.K. Morley, R.R. Hillis & J. Meyer (2010)- Present-day stress orientation in Thailand's basins. J. Structural Geol. 32, p. 235-248.
(Borehole breakouts in wells from 6 basins indicate N-S Smax in S Thailand and Gulf of Thailand, inconsistent with those predicted from India- Eurasia collision. Stresses from Sumatran-Andaman subduction zone may have resulted in significant deformation in offshore Thailand)

Tofke, T., A. Lumjuan & D. Helmcke (1993)- Triassic syn-orogenic siliciclastics from the area of Mae Sariang (northwestern Thailand). In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai 1993, 1, Chiang Mai University, 2, p. 391-400.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1993/7490.pdf)

(In Mae Sariang area of NW Thailand, dissecting 'Shan-Tai craton' is zone of oceanic Permian and E-M Triassic radiolarian ribbon cherts overlain by M-L Triassic syn-orogenic siliciclastics with Ladinian- Carnian Posidonia and Halobia. Coarse grained beds with pebbles of chert, metamorphic and plutonic rocks)

Tong, H., E. Buffetaut & V. Suteethorn (2002)- Middle Jurassic turtles from southern Thailand. Geol. Magazine 139, 6, p. 687-697.
(New cryptodiran turtle, from M Jurassic Mab Ching locality, in S peninsula of Thailand (Sibumasu Block). Closely resembles species M- L Jurassic of China and C Asia)

Tong, H., J. Claude, E. Buffetaut, V. Suteethorn, W. Naksri & S. Chitizing (2006)- Fossil turtles of Thailand: an updated review. In: J.C. Lu et al. (eds.) Papers from the 2005 Heyuan International dinosaur symposium, Geological Publishing House, Beijing, p. 183-194.

Tong, H., J. Claude, W. Naksri, V. Suteethorn, E. Buffetaut, S. Khansubha, K. Wongko & P. Yuangdetkla (2009)- *Basilochelys macrobios* n. gen. and n. sp., a large cryptodiran turtle from the Phu Kradung Formation (latest Jurassic-earliest Cretaceous) of the Khorat Plateau, NE Thailand. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Special Publ. 315, p. 153-173.

Tong, H., J. Claude, V. Suteethorn, W. Naksri & E. Buffetaut (2009)- Turtle assemblages of the Khorat Group (Late Jurassic-Early Cretaceous) of NE Thailand and their palaeobiogeographical significance. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Spec. Publ. 315, p. 141-152.
(Late Jurassic- E Cretaceous turtle assemblages from Khorat Gp mainly trionychoids (Basilochelys, Isanemys srisuki, Kizylkumemys, Shachemys sp., etc.) (Aptian). Some faunal links between turtle faunas from Khorat Group and those from peripheral regions of Asia)

Tong, H., W. Naksri, E. Buffetaut, V. Suteethorn, S. Suteethorn, U. Deesri et al. (2014)- A new primitive eucryptodiran turtle from the Upper Jurassic Phu Kradung Formation of the Khorat Plateau, NE Thailand. Geol. Magazine 152, 1, p. 166-175.
(Phunoichelys thirakhupti n.sp. is nearly complete primitive xinjiangchelyid turtle shell from Tithonian/ Berriasian fluvial deposits of Phu Kradung Formation, Khorat Gp., at Phu Noi, NE Thailand. Xinjiangchelyid turtles are dominant components in turtle faunas of U Jurassic of China and C Asia. Formation previously considered of Late Jurassic age, but palynology favors E Cretaceous age (Racey & Goodall 2009))

Tong, H., V. Suteethorn, J. Claude, E. Buffetaut & P.Jintasakul (2005)- The turtle fauna from the Khok Kruat Formation (Early Cretaceous) of Thailand. In: Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of Indochina (GEOINDO 2005), Khon Kaen, p. 610-614.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2005/9385.pdf)
(Two fresh water turtle species from Cretaceous non-marine beds of Khorat Plateau, resembling Aptian-Albian forms of Laos and C Asia. Associated with Aptian-Albian hybodont sharks and Aptian palynomorphs)

Tongtherm, K., J Nabhitabhata, P. Srisuk. T. Nutadhira & D. Tonnayopas5 (2016)- New records of nautiloid and ammonoid cephalopod fossils in peninsular Thailand. Swiss J. Palaeontology 135, 1, p. 153-168.
(30 species of nautiloids and ammonoids identified from peninsular Thailand (+Shan-Thai/ Sibumasu). Ordovician nautiloids, Devonian-Carboniferous ammonoids, Triassic nautiloids (Michelinoceras, Tienoceras and syringonautilid nautiloids. Etc.))

Toriyama, R. (1944)- On some fusulinids from Northern Tai. Japanese J. Geology Geography 19, p. 243-247.
(Mid-Permian Pseudoschwagerina-dominated fusulinid assemblage from N Thailand)

Toriyama, R. (1965)- Fusuline fossils from Thailand, Part I, Fusulines of the Rat Buri Limestone of Thailand. Mem. Fac. Science Kyushu University, ser. D, 27, 1, p. 1-69.

Toriyama, R. (1975)- Fusuline fossils from Thailand. Part IX. Permian fusulines from the Rat Buri Limestone in the Khao Phlong Phrab area, Sara Buri, Central Thailand. Mem. Fac. Science, Kyushu University, Ser. D, 23, p. 1-116.
(Systematic descriptions and vertical distribution of 91 species/26 genera of fusulinid forams from 225m thick late Early- M Permian Ratburi Limestone section in C Thailand. Overall assemblage 'of Tethyan aspect', with Verbeekina, Neoschwagerina, also Parafusulina, rare Monodiexodina (but is on Sibumasu Plate?; JTvG). No locality maps, but described earlier in Toriyama, Kanmera et al. 1974; vol. 14 of this series)

Toriyama, R. (1976)- Fusuline fossils from Thailand. Part IX. Permian fusulines from the Rat Buri Limestone in the Khao Phlong Phrab area, Sara Buri, Central Thailand. In: T. Kobayashi & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 17, p. 1-116.
(Same paper as Toriyama 1975, Mem. Fac. Science Kyushu University, above. Systematic descriptions and vertical distribution of 91 species/26 genera of fusulinid forams from 225m thick late Early- M Permian Ratburi Limestone section in C Thailand)

Toriyama, R. (1984)- Summary of the fusuline faunas in Thailand and Malaysia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 137-146.
(Brief review of localities with Carboniferous- Permian fusulinid forams in Ratburi Lst and equivelents in Thailand and Malaysia: 265 species belonging to 70 genera)

Toriyama, R., T. Hamada, H. Igo, R. Ingavat, K. Kanmera. T. Kobayashi, T. Koike et al. (1975)- The Carboniferous and Permian Systems in Thailand and Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 39-76.

Toriyama, R. & K. Kanmera (1968)- Fusulinacean fossils from Thailand, Part II: Two new Permian genera from Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 29-44.
(Two new fusulinid genera Thailandina and Neothailandina described from rich fusulinid assemblages in 275m thick Rat Buri Limestone section at Phao Phlong Phrab, NE Thailand (names deemed invalid by Kobayashi et al. 2010). Section ranges from Misellina zone to lower part of Neoschwagerina zone (upper Lower- lower M Permian))

Toriyama, R. & K. Kanmera (1977)- Fusuline fossils from Thailand. Part X. The Permian fusulines from the Limestone Conglomerate Formation in the Khao Phlong Phrab area, Sara Buri, Central Thailand. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 18, p. 1-28.

Toriyama, R. & K. Kanmera (1979)- Fusuline fossils from Thailand. Part XII. Permian fusulines from the Rat Buri Limestone in the Khao Khao area, Sara Buri, Central Thailand. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 20, p. 23-93.
(Limestone quarries at Khao Khao hill, N of Saraburi, N Thailand, expose ~360m thick Permian Ratburi Limestone section. Abundant fusulinid foraminifera, 34 species, representing only part of Middle Permian, in four zones: Afghanella megaspherica to Neoschwagerina haydeni)

Toriyama, R., K. Kanmera & R. Ingavat (1969)- Fusulinacean fossils from Thailand. Part V. *Neofusulinella* from Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 7, p. 15-32.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1969/24353.pdf)
(E-M Permian fusulinids Neofusulinella sarburiensis n.sp., N. praecursor and N. lantenoisi from lower part of 'Ratburi Lst' in Khao Phlong Khrab section, Changwat Sara Buri, C. Thailand. Genus ranges from Misellina zone to Neoschwagerina simplex zone and is good indicator of upper Lower- lower Middle Permian. New species Neofusulinella sariburiensis n.sp.)

Toriyama, R., K. Kanmera, S. Kaewbaidhoam & A. Hongnushonthi (1974)- Biostratigraphic zonation of the Rat Buri Limestone in the Khao Phlong Phrab area, Sara Buri, Central Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 25-48.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1974/10.pdf)
(late Early-Middle Permian 'Ratburi Lst' at Khao Phlong Phrab Hill section, NE Thailand, ~250m thick and very rich in fusulinids (81 species, 26 genera). Subdivided into 7 zones (Misellina - Maklaya- Neoschwagerina-Presumatrina zones). High affinity of fauna with SE Pamir, S China and Japan)

Toriyama, R. & K. Pitakpaivan (1973)- Fusulinacean fossils from Thailand, Part VII: Middle Permian fusulines from Wat Kirinakratanaram, Central Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 12, p. 43-61.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1973/12082.pdf)
(lower M Permian fusulinids from Ratburi Lst near Kirinakratanaram Temple, Changwat Lop Buri, C Thailand. With Neofusulinella lantenoisi, Parafusulina gigantea, Verbeekina verbeeki, Sumatrina annae, Pseudodoliolina pseudolepida, etc.)

Toriyama, R., K. Pitakpavan & R. Ingavat (1978)- The paleogeographic characteristics of fusuline faunas of the Rat Buri Group in Thailand and its equivalent in Malysia. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok 1978, p. 128-132.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_3/2521-2530/9492.pdf)
(Permian 'Ratburi Lst' (s.l.) of Thailand with 238 species of fusulinids. Subdivided in 3 paleogeographic zones (1) Western zone with 41 species; in M Permian with Verbeekina verbbeki, Sumatrina annae, Neoschwagerina, etc.; U Permian fusulinds (Paleofusulina, Colaniella) only found in W; belt appears to extend into Malay Peninsula and N Kalimantan; (2) Central zone: little known fusulinids; (3) Eastern zone in Loei, etc., with 197 M Carboniferous- M Permian species. Fusuline faunas of Thailand and Malaysia close relationship to W Tethys in M-U Carboniferous. In Permian stronger affinity to E Tethys. No maps)

Toriyama, R. & T. Sugi (1959)- Permian fusulinids from Central Thailand. Mem. Fac. Science., Kyushu University, Series D, 9, 1, p. 17-32.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1959/12083.pdf)
(Fusulinids from 4 samples of Permian Rat Buri limestones and cherts in Sara Buri district of C Thailand. All referable to Neoschwagerina zone. With Neoschwagerina spp., Parafusulina gigantea, Pseudofusulina crassa, Verbeekina and Sumatrina)

Tsubamoto, T., B. Ratanasthien, Y. Kunimatsu, H. Nakaya, B. Udomkan, T. Silaratana et al. (2003)- A report on the paleontological excavation in the primate-bearing Krabi basin (late Eocene; Thailand). In: Research Report III on 'Evolution of the apes and the origin of the human beings', Primate Research Institute, Kyoto University p. 180-219.
(Vertebrate fossils from Late Eocene lignite beds of Krabi coal mine in S Thailand 6 genera of reptiles and 28 genera of mammals, incl. two primates (Wailekia, Siamopithecus). Krabi fauna dominated by artiodactyl mammals, particularly anthracotheres (Anthracotherium, etc.). Paleoenvironment tropical forests with swamps)

Tulyatid, J. & J.D. Fairhead (1999)- Tectonic development of Central Thailand: new evidences from airborne geophysical data. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geol. Min. Energy Res. SE Asia (GEOSEA '98), Kuala Lumpur 1998, Geol. Soc. Malaysia 43, p. 63-76
(online at: www.gsm.org.my/products/702001-100833-PDF.pdf)
(Review of Thailand structural geology and aeromagnetic maps of C Thailand)

Tumpeesuwan, S., Y. Sato & S. Nakhapadungrat (2010)- A new species of *Pseudohyria (Matsumotoina)* (Bivalvia: Trigonioidoidea) from the Early Cretaceous Sao Khua Formation, Khorat Group, Northeastern Thailand. Tropical Natural History 10, p. 93-106.
(online at: www.biology.sc.chula.ac.th/TNH/v10%20no1/8%20Tumpeesuwan%2093-106.pdf)
(New freshwater bivalve species, P. (Matsumotoina) somanai n. sp. from E Cretaceous Sao Khua Fm of NE Thailand. Interpreted as fluvial species, probably of Late Barremian age)

Udchachon, M., C. Burrett, H. Thassanapak, C. Chonglakmani, H. Campbell & Q. Feng (2014)- Depositional setting and paleoenvironment of an alatoconchid-bearing Middle Permian carbonate ramp sequence in the Indochina Terrane. J. Asian Earth Sci. 87, p. 37-55.
(M Permian carbonate sequence in S of Khao Khwang Platform, C Thailand (= tropical Tethyan shelf of Indochina Terrane). With common large alatoconchid bivalves. Nine main microfacies types. Platform evolved from rimmed platform in E Permian to ramp in M Permian. Abrupt negative shift in d 13C in late Wordian and late Capitanian indicate significant changes in paleoenvironment, probably contemporaneous with Kamura event and related to global cooling and sea-level lowstand)

Udchachon, M., C. Chonglakmani, H. Campbell & N. Thanee (2007)- Late Middle Permian alatoconchid-bearing limestones from the south of the Khao Khwang platform, central Thailand. In: W. Tantiwanit (ed.) Proc. Int. Conf. Geology of Thailand: towards sustainable development and sufficiency economy, Bangkok, p. 169-176.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2007/12718.pdf)
(Thick-shelled, alatoconchid tropical bivalves in M Permian Khao Khwang platform Permian limestones, exposed in Phetchabun fold-thrust belt along W edge of Khorat Plateau, C Thailand (W side of Indochina Block). Midian-age limestone with fusulinids (Colania, Lepidolina, Verbeekina, Neoschwagerina), and smaller forams (Hemigordius, Agathammina, Pachyphloia, Tuberitina, Tetrataxis) and algae (incl. Mizzia velebitana). Six main microfacies and facies model. Alatoconchids prefer soft substrate with peloidal wackestone texture of lagoon facies)

Udchachon, M., H. Thassanapak & C. Burrett (2017)- Palaeoenvironment and palaeogeography of Middle and Upper Devonian strata from the Loei fold belt, Indochina terrane (northeast Thailand). Palaeobiodiversity and Palaeoenvironments 97, 3, p. 497-516.
(Limestone-chert sections from Loei foldbelt, NE Thailand, yielded M-L Devonian (Givetian- Famennian) conodonts and Late Devonian radiolarian faunas. M Devonian siliciclastics interbedded with volcaniclastics and locally replaced by pillow basalts. Conformably overlain by argillaceous limestones and U Givetian reefal stromatoporoid-coral limestone. Drowning of bioherms and deposition of condensed continental margin oozes with radiolarians Trilonche spp and Famennian conodonts Palmatolepis spp.. Transgressive M-U Devonian series broadly similar to sections in S China and in Germany. Continental margin series)

Udchachon, M., H. Thassanapak, Q. Feng & C. Chonglakmani (2011)- Geochemical constraints on the depositional environment of Upper Devonian radiolarian cherts from Loei, north-eastern Thailand. Frontiers Earth Sci. 5, 2, p. 178-190.
(Late Devonian radiolarian chert sequences on Indochina terrane of NE Thailand exposed in narrow belt E of Loei province. Characterized by high silica content, high aluminum, low iron, etc. Results indicate cherts deposition in continental margin environment)

Ueno, K., M. Arita, S. Meno, A. Sardsud & D. Saesaengseerung (2015)- An Early Permian fusuline fauna from southernmost Peninsular Thailand: discovery of Early Permian warming spikes in the peri-Gondwanan Sibumasu Block. J. Asian Earth Sci. 104, p. 185-196.
(late Early Permian fusuline fauna from Tarn To Fm of Yala area in S-most Peninsular Thailand (=E margin of Sibumasu Block, near base Ratburi Lst). Fauna consists of Pseudofusulina spp. and Praeskinnerella? sp., including forms resembling Tethyan and Panthalassan Pseudofusulina fusiformis and P. ex gr. kraffti. Likely Yakhtashian-Bolorian (=late Artinskian- E Kungurian) age. Similar Tethyan-affinity shallow marine fauna in Sibumasu in E Permian of Kinta Valley area in W Peninsular Malaysia. Yala fauna almost coeval with Monodiexodina fauna known elsewhere on Sibumasu Block. Interpreted as warming spikes during late Yakhtashian-Bolorian transgression)

Ueno, K. & T. Charoentitirat (2011)- Carboniferous and Permian. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The geology of Thailand, Geol. Soc., London, p. 71-136.

(Extensive review of Carboniferous and Permian of Thailand. Stratigraphy and tectono-sedimentary development of five main domains: Indocina, Nan back-arc basin, Sukhothai Arc, Palaeotethyan (Inthanon Zone) and Sibumasu)

Ueno, K., T. Charoentitirat, Y. Sera, A. Miyahigashi, J. Suwanprasert et al. (2008)- The Doi Chiang Dao Limestone: Paleo-Tethyan mid-oceanic carbonates in the Inthanon Zone of North Thailand. In: Proc. Int. Symp. Geoscience resources and environments of Asian Terranes (GREAT 2008), Bangkok 2008, p. 42-48.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/008.pdf)
(Doi Chiang Dao Lst in Inthanon zone of N Thailand >1000m thick continuous Carboniferous (Visean)- latest Permian (= 90 My) succession of mid-oceanic shallow marine carbonates without clastics, formed on seamount basalt base in Paleo-Tethys Ocean. Rich in fusulinids, some corals, paleo-tropical Tethyan affinities. Comparable in origin to carbonate bodies in Central zone of Changning-Menglian Belt of SW China and Panthalassan seamount carbonates in accretionary complexes in Japan)

Ueno, K., M. Ejima, Y. Kamata, T. Charoentitirat & A. Sardsud (2005)-Stratigraphy and sedimentary cycles of the Permian Kaeng Krachan Group of Phi Phi Island southern Thailand. In: Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2005), Khon Kaen, p. 555-557.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2005/9376.pdf)
(E Permian Kaeng Krachan Gp on Phi Phi Island off Krabi, S Peninsular Thailand, part of Sibumasu Block. Cyclic, ~350m thick quartz-rich marine clastics, including sparse dropstones, overlain by temperate-subtropical Ratburi Limestone. Formed in glaciation-influenced basin. No figures)

Ueno, K. & K. Hisada (2001)- The Nan-Uttaradit-Sa Kaeo Suture as a main Paleo-Tethyan suture in Thailand: is it real? Gondwana Research 4, p. 804-806. *(Extended Abstract)*
(In Thailand Nan-Uttaradit-Sa Kaeo Suture believed to be main Paleo-Tethyan suture between Cathaysian Indochina Block and Gondwana-derived Sibumasu Block of E Cimmerian continent, but is best interpreted as remnant of Nan back-arc basin. Paleotethys is represented by Chiang Rai tectonic line)

Ueno, K. & H. Igo (1993)- Upper Carboniferous foraminifers from Ban Na Din dam, Changwat Loei, Northeastern Thailand. Trans. Proc. Palaeont. Soc. Japan, N.S., 171, p. 213-228.
(online at: www.palaeo-soc-japan.jp/download/TPPSJ/TPPSJ_NS171.pdf)
(Limestone outcrops at Ban Na Din Dam, E of Loei, NE Thailand. Previously assigned to Lower Permian Nam Mahoran Fm, but with fusulinids Triticites samaricus and Jigulites grandis n.sp., indicating Gzhelian (latest Carboniferous) age. Also descriptions of smaller foraminifera)

Ueno, K. & H. Igo (1997)- Late Paleozoic foraminifers from the Chiang Dao area, Northern Thailand: geologic age, faunal affinity, and paleobiogeographic implications. In: 13th Int. Congress on the Carboniferous and Permian, Krakow 1995, Prace Panst. Inst. Geol. 157, p. 339-354.
(Permian fusulinid fauna from N Thailand of Tethyan affinity, similar to Indochina Block)

Ueno, K., A. Miyahigashi, Y. Kamata, M. Kato, T. Charoentitirat & S. Limruk (2010)- Triassic shallow-marine limestone in the Central Plain of Thailand: its foraminiferal age and geotectonic implications. In: C.P. Lee et al. (eds.) 6th Symp. Int. Geol. Correl. Progr. Project 516 (IGCP516), Geological anatomy of East and South Asia, Kuala Lumpur 2010, p. 37-39. *(Extended Abstract)*
(Foraminiferal fauna limestone exposed in eastern Uthai Thani Province, Central Plain, previously interpreted as Permian age suggest (Late) Triassic age (common Aulotortus spp., with Agathammina austroalpina, Ophthalmidium, Valvulina azzouzi, Endoteba, Tetrataxis inflata, Austrocolomia, Frondicularia woodwardi, etc. Probably belongs to S extension of Sukhothai Zone)

Ueno, K., A. Miyahigashi, Y. Kamata, M. Kato, T. Charoentitirat & S. Limruk (2012)- Geotectonic implications of Permian and Triassic carbonate successions in the Central Plain of Thailand. J. Asian Earth Sci. 61, p. 33-50.
(Two Paleozoic-Mesozoic basement carbonate successions in Chao Phraya Central Plain of Thailand: (1) Triassic in E Uthai Thani Province, with rich foram fauna with Aulotortus sinuosus, Tetrataxis inflata, etc.

suggesting Late Triassic, Norian/Rhaetian age. Formed carbonate platform and is comparable to Triassic Lampang-Phrae Basin in Sukhothai Zone of N Thailand; (2) Uthai Thani Lst to W: slightly metamorphosed, thick-bedded Permian succession. Tied to Ratburi Lst typical of Permian on Sibumasu Block. Three geotectonic domains in C Plain, from E to W: (1) Indochina Block (Cathaysialand), (2) Sukhothai Zone (Permian-Triassic island arc system), and (3) Sibumasu Block (Gondwanaland))

Ueno, K., K. Nagai, N. Nakornsri & T. Sugiyama (1994)- Middle Carboniferous foraminifers from Ban Sup, Changwat Loei, Northeastern Thailand. Science Repts. Inst. Geoscience, University of Tsukuba, B (Geol.) 15, p. 15-45.

Ueno, K., K. Nagai, N. Nakornsri & T. Sugiyama (1995)- Upper Carboniferous foraminifers from Phu Tham Maholan, southeast of Wang Saphung, Changwat Loei, Northeast Thailand. Sci. Repts. Inst. Geosci., Univ.Tsukuba, B (Geol.) 16, p. 29-37.

Ueno, K., K. Nagai, N. Nakornsri & T. Sugiyama (1996)- A new Moscovian foraminiferal fauna from Huai Luang, east of Wang Saphung, Changwat Loei, Northeast Thailand. J. Southeast Asian Earth Sci. 14, p. 79-89.
(Small foraminiferal fauna with two species of Fusulinella)

Ueno, K. & S. Sakagami (1991)- Late Permian Fusulinacean fauna of Doi Pha Phlung, North Thailand. Trans. Proc. Paleont. Soc. Japan, N.S. 164, p. 928-943.
(online at: http://www.palaeo-soc-japan.jp/download/TPPSJ/TPPSJ_NS164.pdf)
(Eight species of Late Permian fusulinaceans from lower Huai Thak Fm in Doi Pha Phlung area, NE of Lampang. Fauna is characterized by abundant Gallowayinella guidingensis, similar Changxing Lst in S China, indicating an early Changxingian or E Dorashamian age)

Ueno, K., T. Sugiyama & K. Nagai (1996)- Discovery of Permian foraminifers and corals from the Ratburi Limestone of the Phatthalang area, southern Peninular Thailand. In: H. Noda & K. Sashida (eds.) Professor H. Igo Commemorative volume on Geology and Paleontology of Japan and Southeast Asia, Gakujyutsu Tosho Insatsu, Tokyo, p. 201-216.

UN/ESCAP and DMR Thailand (2001)- Mineral resources of Thailand. Atlas of mineral resources of the ESCAP region 16, United Nations Publications, New York, p. 1-239.

Unwin, D.M. & D.M. Martill (2017)- Systematic reassessment of the first Jurassic pterosaur from Thailand. In: D.W.E. Hone et al. (eds.) New perspectives on pterosaur palaeobiology, Geol. Soc., London, Spec. Publ. 455, 1, p. 181-186.
(Pterosaur humerus (PRC 64) from U Jurassic of Thailand reassigned to Rhamphorhynchidae)

Upton, D.R. (1999)- A regional fission track study of Thailand: implications for thermal history and denudation. Ph.D. Thesis Birkbeck, University of London, p. 1-392. *(Unpublished)*

Upton, D., C.S. Bristow, A.J. Hurford, & A. Carter (1997)- Tertiary tectonic denudation in northwestern Thailand: provisional results from apatite fission-track analysis. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 421-431.
(online at: http://searg.rhul.ac.uk/pubs/upton_etal_199%20Tertiary%20tectonic%20denudation%20NW%20Thailand.pdf)
(Preliminary results of Apatite Fission-Track study in NW Thailand, consistent with gentle inversion in Late Cretaceous- E Tertiary prior to rapid cooling in N-S belt of gneissic and plutonic rocks in Late Oligocene- E Miocene. Cooling rates equate to 2.75- 3.5 km of section denuded in Late Oligocene over ~3 Myrs, most likely representing tectonic denudation possibly associated with unroofing of metamorphic core complex)

Utha-Aroon, C. (1993)- Continental origin of the Maha Sarakham evaporites Northeastern Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 193-203.
(On Upper Cretaceous potash-bearing evaporites of Khorat Basin, NE Thailand)

Uttamo, W., C. Elders & G. Nichols (1999)- The Tertiary sedimentary basins of northern Thailand. In: Proc. Symposium Mineral, energy and water resources of Thailand: towards the year 2000, Bangkok, p. 71-92.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1999/6605.pd)
(>40 Tertiary intra-cratonic basins in N Thailand, mainly N-S trending, and with 500-3000m of sediment fill)

Uttamo, W., C. Elders & G. Nichols (2003)- Relationships between Cenozoic strike-slip faulting and basin opening in northern Thailand. In: F. Sorti et al. (eds.) lntraplate strike-slip deformation belts, Geol. Soc., London, Spec. Publ. 210, p. 89-108.
(Cenozoic tectonics in N Thailand resulted from collision between Indian plate and Eurasia. Continued indentation of Indian plate into Eurasia caused polyphase extrusion of Sundaland and movement of major strike-slip faults. Regional E-W extension in Late Oligocene-Early Miocene. Thirty-six major faults and 42 intra-cratonic basins recognized in N Thailand from Landsat TM images, >70% related to strike-slip tectonics)

Uyeno, T. (1969)- Miocene Cyprinid fishes from Mae Sot Basin, northwestern Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 7, p. 93-96.
(Fresh-water fish fossils Puntius and Cyprinidae from Miocene grey papery oil shale in Mae Sot series near Amphur Mae Sot, NW Thailand)

Vachard, D. (1988)- Some foraminifera and algae of the Upper Triassic of West Thailand. In: H. Fontaine & V. Suteethorn (eds.) Late Paleozoic and Mesozoic fossils of West Thailand and their environments, Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok, Techn. Bull. 20, p. 135-141.
(Carnian-Norian Aulotortus assemblage of W Thailand characteristic of Tethyan province, and resembles Kodiang Lst of NW Malaysia and various outcops of Sumatra)

Vachard, D. (1990)- New data on foraminifera, algae and pseudo-algae of the Visean and Bashkirian (Lower-Middle Carboniferous) from Northeast Thailand. Geol. Jahrbuch B73, p. 91-109.
(Three Visean- Bashkirian assemblages from NE Thailand. Paleobiogeogrphic affinities with Australia and Vietnam. Diverse foraminifera with >40 species, incl. Staffelidae and Profusulinella)

Vachard, D., H. Fontaine & M. Caridroit (1992)- Foraminifera, algae and pseudo-algae from Carboniferous and Permian limestone of North-west Thailand. Revue Paleobiologie, Geneve, 11, p. 137-147.

Veeraburus, M., N. Mantjit & S. Suensilpong (1981)- Outline of geology and ore deposits of Thailand. In: S. Ishihara & A. Sasaki (eds.) Metallogeny of Asia, Geol. Survey Japan, Report 261, p. 81-92.

Vivatpinyo, J., P. Charusiri, C. Sutthirat (2014)- Volcanic rocks from Q-prospect, Chatree gold deposit, Phichit Province, North Central Thailand: indicators of ancient subduction. Arabian J. Engin. 39, p. 325-338.
(Area of Chatree gold deposit, W side of Khorat Plateau, N-C Thailand with subduction-related Loei-Phetchabun- Ko Chang volcanic arc sequence from basalt porphyry, basaltic tuff to rhyolite/rhyodacite tuff. Andesite dated as 250 ± 6 Ma, younger basaltic andesite dykes 244 ± 7Ma)

Von Braun, E. & R. Jordan (1976)- The stratigraphy and palaeontology of the Mesozoic sequence in the Mae Sot area in western Thailand. Geol. Jahrbuch B21, p. 5-51.
(Mae Sot Basin in NW Thailand with reefal E-M Permian Ratburi Lst, Triassic redbeds overlain by marine shales and sandstone and Late Triassic Kamawkale Limestone. Jurassic Mae Moei Gp marine with with ammonites incl. Lytoceras, etc.)

Von Braun, E., C. Besang, W. Eberle, W. Harre, H. Kreuzer et al. (1976)- Radiometric age determinations of granites in northern Thailand. Geol. Jahrbuch B21, p. 171-204.
(In N Thailand three N-S belts of igneous rocks. Central complex oldest. E chain E Triassic (~232-236 Ma))

Von Koenigswald, G.H.R. (1959)- A mastodon and other fossil mammals from Thailand. Royal Dept. Mines, Bangkok, Rept. Invest. 2, p. 25-28.

Von Martini, H.J. (1957)- Ueber das Alter von Hauptfaltung und Granit in Thailand. Geol. Jahrbuch 74 (Bentz Festschrift), p. 687-696.
('On the age of the main folding and granites in Thailand'. Alpinotype main folding in Thailand is old Cimmeridgian (Late Triassic))

Vozenin-Serra, C. & C. Prive-Gill (1989)- Bois Plio-Pleistocenes du gisement du Saropee, Plateau de Khorat, Est de la Thailande. Review Palaeobotany Palynology 60, 3-4, p. 225-254.
('Plio-Pleistocene wood from the Saropee deposit, Khorat Plateau, East Thailand'. Alluvial deposits of Mue Nam Mum river at Saropee yielded ~60 wood specimens, attributed to Araucarioxylon sp., Shoreoxylon thailandense n.sp., Careyoxylon pondicherriense, Dipterocarioxylon, etc. Plio-Pleistocene mixed deciduous forest assemblage, probably not far from river and ancient volcanoes (Bunopas et al. 1999: buried by 0.770 Ma Australasian tektite event?))

Vozenin-Serra, C. & C. Prive-Gill (2001)- Bois plio-pleistocenes du gisement de Ban Tachang (=Sarapee), Est-Thailande. Palaeontographica B, 260, p. 201ï 212

Vozenin-Serra, C., C. Prive-Gill & L. Ginsburg (1989)- Bois miocenes du gisement de Pong, nord-ouest de la Thailande. Review Palaeobotany Palynology 58, 2-4, p. 333-355.
('Miocene wood from the Pong deposit, NW Thailand')

Wang, Y., H. He, P.A. Cawood, B. Srithai, Q. Feng, W. Fan, Y. Zhang & X. Qian (2016)- Geochronological, elemental and Sr-Nd-Hf-O isotopic constraints on the petrogenesis of the Triassic post-collisional granitic rocks in NW Thailand and its Paleotethyan implications. Lithos 266-267, p. 264-286.
(Inthanon zone main suture zone of E Paleotethys Ocean in NW Thailand and links with Changning-Menglian suture zone in SW Yunnan. In NW Thailand switch from E-ward subduction of Paleotethys ocean plate to collision of Sibumasu with Indochina at ~ 237 Ma, with syn-collision at ~237-230 Ma and post-collision time at ~200-230 Ma. Late Triassic granites in Inthanon and Sukhothai zones of NW Thailand post-collisional magmatic products)

Wang, Y., H. He, Y. Zhang, B. Srithai, Q. Feng, P.A. Cawood & W. Fan (2017)- Origin of Permian OIB-like basalts in NW Thailand and implication on the Paleotethyan Ocean. Lithos 274-275, p. 93-105.
(manuscript online at: https://research-repository.st-andrews.ac.uk/handle/10023/12399)
(Basaltic rocks in NW Thailand part of SE Asian igneous zone that delineates extension of Paleotethys Ocean from SW China into NW Thailand. Chiang Mai basalts two groups of high-iron basalts, resembling OIB-like rocks. Origin in intra-oceanic seamount setting in Paleotethyan Ocean, continued at least till 283 Ma (E Permian). Inthanon/ Changning-Menglian zones define main Paleotethyan suture zone)

Ward, D.E. & D. Bunnag (1964)- Stratigraphy of the Mesozoic Khorat Group in northeastern Thailand. Department of Mineral Resources, Thailand, Report of Investigation 6, p. 1-95.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1964/1967.pdf)
(Review of Triassic- Cretaceous stratigraphy overlying Late Carboniferous- Permian Ratburi Lst)

Warren, J., C.K. Morley, T. Charoentitirat, I. Cartwright, P. Ampaiwan, P. Khositchaisri, M. Mirzaloo, J. Yingyuen (2014)- Structural and fluid evolution of Saraburi Group sedimentary carbonates, central Thailand: a tectonically driven fluid system. Marine Petroleum Geol. 55, p. 100-121.
(Isotopic study of calcite in deformed L-M Permian Saraburi Gp carbonates defines fluid-cement histories, tied to regional burial followed by orogenic overprint of Triassic Indosinian and telogenetic overprints driven by

late Cenozoic uplift. Carbonates deposited along W margin of Indochina Block as isolated calcareous algal, sponge and fusulinid-rimmed platforms on highs bound by extensional faults. Likelihood of preserving primary and mesogenetic matrix porosity in Permian carbonates of C Thailand is low)

Warren, J., C.K. Morley, T. Charoentitirat, I. Cartwright, P. Ampaiwan, P. Khositchaisri, M. Mirzaloo, M. Nazrul, A. Panthong & J. Yingyuen (2016)- Poroperm evolution through different deformation stages: stable isotopes define fluid evolution in Permian and older carbonates in Thailand. AAPG Asia Pacific Geosciences Technology Workshop, Bangkok. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/51264warren/ndx_warren.pdf)

Wasson, J.T., K. Pitakpaivan, P. Putthapiban, S. Salyapongse, B. Thapthimthong & J.F. McHone (1995)- Field recovery of layered tektites in northeast Thailand: evidence of a large scale melted sheet. J. Geophysical Research 100, E7, p. 14385-14389.
(Australasian tektites from 40×130 km region in NE Thailand all layered (Muong-Nong-type) tektites, with two exceptions near W edge of region, implying impact melt hot enough to flow if deposited on sloping surface. Absence of splash-form tektites indicates that layer still molten when reached ground. This requires that atmosphere remained hot (>2300°K) for few minutes. In-place tektites almost always associated with 10cm -1m thick layer of laterite, at bottom layer of loess-like sandy layer. Part of 1100-km-long area with layered tektites)

Watanasak, M. (1988)- Mid-Tertiary palynology of onshore and offshore Thailand. Ph.D. Thesis University of Adelaide, p. 1-207.
(online at: https://digital.library.adelaide.edu.au/dspace/bitstream/2440/19395/2/02whole.pdf)
(Mid-Tertiary palynology from 9 basins in Thailand. Zonation based on key species like Inaperturopollenites dubius, Alnipollenites verus, etc.. Paleoclimate in Thailand temperate in Late Oligocene, warming to more tropical conditions in E-M Miocene)

Watanasak, M. (1989)- Palynological zonation of Mid-Tertiary intermontane basins in northern Thailand. In: T. Thanasuthipitak & P. Ounchanum (eds.) Proc. Int. Symposium Intermontane basins, geology and resources, Chiang Mai University, Chiang Mai, p. 216-223.

Watanasak, M. (1990)- Mid-Tertiary palynostratigraphy of Thailand. J. Southeast Asian Earth Sci. 4, 3, p. 203-218.
(Late Oligocene- E Miocene palynological assemblages from nine basins in Thailand. Basis for zonations is first or last appearances of species incl. Inaperturopollenites dubius, Alnipollenites verus and Echiperiporites cf. estelae. Correlation between terrestrial and dated marine sequences)

Waterhouse, J.B. (1981)- Age of the Rat Buri Limestone of southern Thailand. In: J.B. Waterhouse et al. (eds.) The Permian stratigraphy and palaeontology of Southern Thailand, Geological Survey Mem. 4, Dept. Mineral Resources, Bangkok, p. 1-42.
(Mainly critical evaluation of Grant (1976). Brachiopods from basal part of Rat Buri Limestone in S Thailand likely of Kungurian (late E Permian) age, not Baigendzinian (= Artinskian) as reported earlier, and in agreement with fusulinid data. Several specific links with Kungurian Bitauni fauna of Timor. No stratigraphy)

Waterhouse, J.B. (1981)- Age of the brachiopod faunas from Kaeng Krachan Formation of southern Thailand. In: M.J. Hambrey & W.B. Harland (eds.) Earth's pre-Pleistocene glacial record, Cambridge University Press, p. 336. *(Abstract only)*
(Brachiopods above earliest Permian glacial pebbly mudstone in S Thailand 40 species, mainly new species of Orthotetes, Chonetinella, Neospirifer, Sririferrella, etc. Most common is new form of Spinomartinia. Probably of mid-Sakmarian age suggested by Brachythyrina rectangulus and Neospirifer sterlitamakensis. Small fauna from pebbly mudstones at Ko Muk could be Asselian or Sakmarian age. Overlain by Rat Buri Lst with rich brachiopods of Kungurian age)

Waterhouse, J.B. (1982)- An Early Permian cool-water fauna from pebbly mudstones in south Thailand. Geol. Magazine 119, 4, p. 337-354.

(E Permian (Asselian) small brachiopod fauna from above E Permian pebbly mudstones- sandstones of Phuket Gp at Ko Muk and Ko Phi Phi islands, Andaman Sea. With Komukia, Cancrinelloides, Rhynchopora, Sulciplica, etc. At one locality associated with solitary coral Euryphyllum. Most genera are found in temperate-high paleolatitudes, suggesting pebbly mudstones are cool water deposits, contemporaneous with Late Asselian Gondwana glacial deposits (=Sibumasu terrane'; JTvG))

Waterhouse, J.B. (1982)- New Carboniferous brachiopod genera from Huai Bun Nak, North-east Thailand. Palaontol. Zeitschrift 56, 1-2, p. 39-52.
(Five new brachiopod genera and species are described from brown silty mudstone near Huai Bun Nak, NE Thailand)

Waterhouse, J.B. (1983)- A late Permian lyttoniid fauna from Northwest Thailand. Papers Dept. of Geology, University of Queensland, 10, 3, p. 113-153.
(25 Lopingian (Late Permian) brachiopod species in marine shale in Huai Tak Fm of Lampang Province, NW Thailand. With common lyttoniid brachiopod Oldhamina squamosa and new taxa Lampangella lata, Transennatia pitakpaivani, Acosarina antesulcata, etc.)

Waterhouse, J.B., K. Pitakpaivan & N. Mantajit (1981)- Early Permian brachiopods from Ko Yao Noi and near Krabi, southern Thailand. In: J.B. Waterhouse et al. (eds.) The Permian stratigraphy and palaeontology of Southern Thailand, Geol. Survey Mem. 4, Dept. Mineral Resources, Bangkok, p. 43-213.
(40 brachiopod species from SW Peninsular Thailand near Krabi and NE of Phuket, in U Kaeng Krachan Gp just below Rat Buri Lst and mostly above pebbly mudstones (= Sibumasu stratigraphy). Likely age Sakmarian (E Permian). Most common species Spinomartinia prolifica, also common Retimarginifera, Brachythyrina, Stenoscisma, Stereochia, etc. No obvious correlation with SE Asian faunas outside Thailand)

Waterhouse, J.B. & S. Piyasin (1970)- Mid-Permian brachiopods from Khao Phrik, Thailand. Palaeontographica, Abt. A, 135, 3-6, p. 83-197.
(40 species of silicified brachiopods from limestone at Khao Phrik, W of Bangkok, S Thailand. Incl. Neospirifer, Marginifera, Hustedia, Leptodus and Waagenites speciosus n.sp., close to W. molengraaffi (Broili) from Timor Bitauni beds. Fauna lacks cool water elements. Some species in common with Basleo fauna of Timor)

Wathanakul, P., S. Nakapudungaat, S. Sakkaravej & P. Lomthong (2001)- Diamonds from the eastern offshore of Phuket island, Thailand. 28th Int. Gemmological Conference, Madrid, p. 101-104.

Wathanakul, P., T.T. Win, R.M. Davis, S. Sakkaravej, A. Andrew & W.I. Griffin (1998)- Characteristics of diamonds, southern Thailand. In: Ninth Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA '98), Kuala Lumpur, p. 101-102. *(Extended Abstract)*
(Diamonds found in on- and offshore alluvial deposits in tin dredger samples in Takuapa-Phang Nga and Phuket areas, S Thailand. Source unknown. Area mainly covered with Carboniferous-Tertiary granites. Inclusions include graphite, sulfides, olivine, Cr-pyrope and chromite, indicating predominantly harzburgitic paragenesis)

Watkinson, I. (2009)- The kinematic history of the Khlong Marui and Ranong Faults, Southern Thailand. Ph.D. Thesis Royal Holloway, University of London, p. 1-505. *(Unpublished)*

Watkinson, I., C. Elders, G. Batt, F. Jourdan, R. Hall & N.J. McNaughton (2011)- The timing of strike-slip shear along the Ranong and Khlong Marui faults, Thailand. J. Geophysical Research, Solid Earth, 116, 9, B09403, 26p.
(Ranong and Khlong Marui faults experienced major ductile dextral shear in M Eocene (48-40 Ma), which followed two phases of dextral shear along Ranong Fault: before Late Cretaceous (>81 Ma) and Late Paleocene- E Eocene (59-49 Ma). Many sheared rocks part of pre-kinematic crystalline basement, which partially melted and was intruded by Late Cretaceous (81-71 Ma) and E Eocene (48 Ma) tin granites. Late Eocene (<37 Ma) faults reactivation as curved sinistral branches of Mae Ping and Three Pagodas faults, accommodating lateral extrusion during India-Asia collision and Himalayan orogenesis)

Watkinson, I., C. Elders & R. Hall (2008)- The kinematic history of the Khlong Marui and Ranong Faults, southern Thailand. J. Structural Geol. 30, p. 1554-1571.
(Khlong Marui (KMF) and Ranong Fault (RF) NNE-trending strike-slip faults dissecting peninsular Thailand. Two phases of ductile dextral shear, separated by Campanian magmatism. Paleocene-Eocene post-kinematic granites date end of this phase. Brittle sinistral phase deforms granites, and exhumed ductile fault rocks. Faults formed near S margin of Late Cretaceous-Paleocene orogen, and may have been influenced by variations in rate of subduction. N-S compression prior to reactivation of subduction around southern Sundaland in Eocene caused widespread deformation in overriding plate, including sinistral transpression on KMF and RF)

Wattananikorn, K., J.A. Beshir & A. Nochaiwong (1995)- Gravity interpretation of Chiang Mai Basin, northern Thailand: concentrating on Ban Thung Sieo area. J. Southeast Asian Earth Sci. 12, p. 53-64.
(Chiang Mai Tertiary basin five sub-basins. Depth to Cretaceous basement up to 2.3 km)

Wielchowsky, C.C. & J.D. Young (1985)- Regional facies variations in Permian rocks of the Petchabun fold and thrust belt. In: P. Thanavarachorn et al. (eds.) Conf. Geology and Mineral resource development of NE Thailand, Khon Kaen University, Bangkok 1983, p. 41-55.
(Regional study of Lower-Middle Permian of Phetchabun fold-thrust belt of NE and C Thailand. Includes Carboniferous- M Permian Khao Kwang carbonate platform, in Late Paleozoic foldbelt at W margin of Indochina Plate?)

Winkel, R., R. Ingavat & D. Helmcke (1983)- Facies and stratigraphy of the lower-lower Middle Permian strata of the Petchabun fold-belt in Central Thailand. In: P. Nutalaya (ed.) Proc. Workshop Stratigraphic correlation of Thailand and Malaysia, Haad Yai 1983, Geol. Soc. Thailand and Geol. Soc. Malaysia, p. 293-306.
(online at: https://gsmpubl.files.wordpress.com/2014/10/sctm_17.pdf)
(Lower and lower Middle Permian Nam Duk Fm of Petchabun area mainly deep water limestones, cherts and shales, with acid tuff interbeds. Presence of displaced shallow marine fusulinids (Sumatrina, Parafusulina). Foram genus Hemigordius in most E-M Permian samples. Onset of overlying flysch and molasse deposits in late M Permian (Murgabian))

Wolfart, R. (1987)- Geology of Amphoe Sop Prap (Sheet 4844-1) and Amphoe Wang Chin (sheet 4944-4) (1:50,000), Thailand. Geol. Jahrbuch 65, p. 3-52.

Wolfart, R. (2003)- Ordovician faunas (Trilobita, Ostracoda, Cystoidea, Crinoidea) from West Thailand. their significance for biostratigraphy and palaeobiogeography. Geol. Jahrbuch B94, p. 1-265.
(Descriptions of Ordovician faunas from Khanchanaburi, Tong Pha Phum and Bo Noi regions and their meaning for biostratigraphy and paleogeography)

Wonganan, N. (2005)- Radiolaria and radiolarites of Northern Thailand- paleontology, tectonic and palaeogeographic implications. Ph.D. Thesis, Universite Sciences Technologies de Lille, Villeneuve d'Ascq, p. 1-577. *(Unpublished)*

Wonganan, N. (2012)- The youngest radiolarians from Mae Hong Son region, Northern Thailand; implication for the tectonic of Southeast Asia. In: Proc. 13th Interrad Conf., Cadiz 2012, Radiolaria Newsletter 28, p. 196-197. *(Abstract only)*
(Rich Triassic radiolaria in ~100m thick section of bedded siliceous rocks N of Mae La Noi, Mae Hong Son province, NW Thailand, representing Paleo-Tethys Ocean deposits. 55 species, including Palaeosaturnalis triassicus, Vinassaspongus subsphaericus, Capnuchosphaera crassa, etc., indicating U Ladinian- Carnian age. Top of section of E-M Norian age (Capnuchosphaera crassa, Multimonilis, etc). Chert in uppermost part of section with significant siliciclastics and carbonate minerals, indicating gradual change from deep oceanic environment to continental marginal realm. Therefore, Paleo-Tethys almost closed in middle Late Triassic)

Wonganan, N. & M. Caridroit (2005)- Middle and Upper Devonian radiolarian faunas from Chiang Dao area, Chiang Mai province, northern Thailand. Micropaleontology 51, 1, p. 39-58.

(Diverse Devonian radiolarians in ribbon-bedded chert in accretionary complex N of Chiang Dao, Chiang Mai, N Thailand, part of newly described (Paleotethys) suture zone. M Devonian- M Permian (and younger?) 'Chiang Dao chert series' is (imbricated?) oceanic sequence ~300m thick. Rich radiolarian assemblages with 43 species, Entactinaria dominant. Trilonche minax (lower Frasnian) assemblage from Australia recognized in area. Radiolarian cherts evidence for presence of wide paleo-ocean between Shan-Thai and Indochina continental terranes)

Wonganan, N. & M. Caridroit (2005)- Devonian radiolarians from Pai District, Mae Hong Son, northern Thailand. In: Int. Conf. Geology, geotechnology and general resources of Indochina (GEOINDO 2005), Khon Khaen 2005, p. 637-648.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2005/9389.pdf)
(Late Devonian radiolaria in highly folded cherts between Pai and Mae Hong Song, NW Thailand (Paleotethys oceanic deposit) (partly same localities as Sashida et al. 1998))

Wonganan, N. & M. Caridroit (2006)- Middle to Upper Permian radiolarian faunas from chert blocks in Pai area, northwestern Thailand. Eclogae Geol. Helvetiae 99, Suppl. 1, p. 133-139.
(Well-preserved Permian radiolarians in chert blocks in Mae Hong Son province, NW Thailand, recently mapped as Carboniferous. Twenty-four taxa, incl. Follicucullus charveti, believed to define Equatorial warm water province. In N Thailand Devonian- Triassic was zone of deep marine sedimentation, one of longest records of continuous deposition in oceanic setting)

Wonganan, N., M. Caridroit & C. Randon (2003)- The ''Chiang Dao radiolarian chert' in the Chiang Dao area, Northern Thailand: a witness of a 150 My (at least ?) of oceanic deposit. In: 10th Meeting Int. Assoc. Radiolarian Paleontologists (Interrad X), Lausanne, Program and Abstracts, p. 116-117. *(Abstract only)*
(Big M Devonian- Permian chert body rich in radiolarians crops out for 2 km along N107 near Chiang Dao city. Also called 'Fang Chert'. Thickness ~300m, including ~50m volcanic bed. Overlies several m of black siliceous shale with graptolites (Monograptus) of early Lower Devonian age)

Wonganan, N., C. Randon & M. Caridroit (2009)- Mississippian (Early Carboniferous) radiolarian biostratigraphy of northern Thailand (Chiang Dao area). Geobios 40, 6, p. 875-888.
(Five E Carboniferous radiolarian assemblage zones recognized in ribbon-bedded radiolarites N of Chiang Dao, N Thailand. About 300m thick series of M Devonian- M-L Triassic distal oceanic deposits present in N Thailand, reflecting long-lived (150-200 My) Paleotethys oceanic realm between Indochina and Shan-Thai continental terranes)

Wongpornchai, P. (1997)- Origin of the formations in Nong Bua Basin, Central Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 1, p. 210-217.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Nong Bua Cenozoic continental rift basin in central plains of Thailand. Asymmetric half-graben, formed during E-W extension. Fluvial-lacustrine fill)

Wongwanich, T. (1990)- Lithostratigraphy, sedimentology, and diagenesis of the Ordovician carbonates, Southern Thailand. Ph.D. Thesis, University of Tasmania, p. 1-215.
(online at: https://eprints.utas.edu.au/21931/1/whole_WongwanichThanis1991_thesis.pdf)
(Study of Ordovician Thung Song Gp in Satun Province. Age U Tremadoc- U Ashgill. Ramp setting, 1400m thick sequence of tropical limestones, dolomites and calcareous shale, with tidal flats, stromatolite reefs, lagoons, buildup-barrier reefs and deeper water facies. Long and complex diagenetic history. Overlies red siliciclastics and overlain by latest Ordovician- Silurian- Devonian black graptolitic shales and cherts with radiolarians)

Wongwanich, T. & A.J. Boucot (2011)- Devonian. In: M.F. Ridd, A.J. Barber & M.J. Crow (eds.) The Geology of Thailand, Geol. Soc., London, p. 53-70.

Wongwanich, T., A.J. Boucot, C.H.C. Brunton, M.R. House & P.R. Racheboeuf (2004)- Namurian fossils (brachiopods, goniatites) from Satun Province, southern Thailand. J. Paleontology 78, 6, p. 1072-1085.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2004/5533.pdf)
(Previously unknown M Carboniferous goniatite and brachiopod fauna from Pa Samed Fm clastics in Satun area, S Thailand (= Sibumasu terrane), which unconformably overlie E. Devonian (Emsian) dacryonarid-rich (= Tentaculites) black mudstones. Brachiopod fauna several new species and unlike any previously known from Asia)

Wongwanich, T. & C.F. Burrett (1983)- The Lower Palaeozoic of Thailand. J. Geol. Soc. Thailand 6, 2, p. 21-29.
(online at: http://library.dmr.go.th/Document/J-Index/1983/90.pdf)
(Brief review of Lower Paleozoic in S and W Thailand. Close faunal affinities between trilobites and molluscs of Shan-Thai (Sibumasu) block and Australia suggest proximity to NW Australia in E Paleozoic)

Wongwanich, T., C.F. Burrett, P. Chaodumrong & W. Tansathien (1990)- Lower to Mid Palaeozoic stratigraphy of mainland Satun province, southern Thailand. J. Southeast Asian Earth Sci. 4, 1, p. 1-9.
(A 727m thick sequence of L-M Mid Paleozoic in Satun province, S Peninsular Thailand (= Sibumasu Terrane) is succession of Ordovician- M Devonian deep water carbonates and clastics with trilobites, graptolites, tentaculites shale, etc., overlain by M-L Devonian shallower water carbonates and clastics)

Wongwanich, T., W. Tansathien, S. Leevongcharoen, W. Paengkaew, P. Thiamwong, J. Chaeroenmit & W. Saengsrichan W (2002)- The Lower Paleozoic rocks of Thailand. In: Proc. Symposium on geology of Thailand, Bangkok, p.16-21.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/2002/6370.pdf)

Woodruff, D.S. (2003)- Neogene marine transgressions, palaeogeography and biogeographic transitions on the Thai-Malay Peninsula. J. Biogeography 30, p. 551-567.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.606.8853&rep=rep1&type=pdf)
(Neogene marine transgressions flooded Thai-Malay Peninsula in two areas and created circumstances leading to present day phytogeographical and zoogeographical transitions between Sundaic and Indochinese subregions. Global eustatic sea level curve predicts 30-100 km wide seaways N and S of Nakhon in Thammarat Range in C Peninsula of S Thailand in E-M Miocene and E Pliocene, but not yet documented)

Wu, C. & S. Ishihara (1994)- REE geochemistry of the Southern Thailand granites. J. Asian Earth Sci. 10, p. 81-94.
(REE study of Triassic- Cretaceous tin-bearing and tin-barren granitic plutons in S Peninsular Thailand. Three groups: low, variable and exceptionally high REE contents)

Yakzan, A.M. & R.J. Morley (1997)- Palynology of Lower Miocene intermontane lacustrine sediments from the Nong Ya Plong Basin Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific, Dept. Mineral Resources, Bangkok, p. 259. *(Abstract only)*
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1997/7638.pdf)
(Palynology of 45m core from Sa Kae Ngam oilfield in Nong Ya Plong intermontane basin with E Miocene lacustrine shale and 6m bituminous coal. Shale with abundant Alnus. Upper mudstone with common pollen comparable to Florschuetzia and Lagerstroemia)

Yamee, C., T. Charoentitirat & A. Meesook (2008)- Faunal aspects of marine Jurassic rocks in the Ban Mae Kut Luang Area, Mae Sot District, Tak Province, Thailand. In: Proc. Int. Symposia on Geoscience Resources and Environments of Asian Terranes (GREAT 2008), Bangkok, p. 177-180.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/061.pdf)
(Marine Jurassic of NE Thailand ~600m of clastics and oolitic limestone, with shallow marine faunas dominated by bivalves (incl. Bositra ornati, Camptonectes sp., Grammatodon sp., Parvamussium donaiense) and ammonoids, also rhynchonellid brachiopods, trace fossils and plant remains. Age Toarcian-Aalenian)

Yan, Q., X. Shi, I. Metcalfe, S. Liu, T. Xu, N. Kornkanitnan, T. Sirichaiseth, L. Yuan, Y. Zhang & H. Zhang (2018)- Hainan mantle plume produced late Cenozoic basaltic rocks in Thailand, Southeast Asia. Nature Scientific Reports 8, 2640, p. 1-14.
(online at: https://www.nature.com/articles/s41598-018-20712-7)
(Late Cenozoic (0.4- 11 Ma) intraplate volcanism in SE Asia started shortly after end of seafloor spreading in S China Sea region. Major and trace element data and Sr-Nd-Pb-Hf isotope ratios of basaltic lavas from Khorat plateau and volcanic centers in Paleozoic Sukhothai arc terrane in Thailand mainly trachybasalts and basaltic trachyandesites with oceanic island basalt (OIB)-like characteristics. Post-spreading intraplate volcanism in SCS region induced by Hainan mantle plume which spread W-wards)

Yan, Y., B. Huang, J. Zhao, D. Zhang, X. Liu & P. Charusiri & A. Veeravinantanakul (2017)- Large southward motion and clockwise rotation of Indochina throughout the Mesozoic: paleomagnetic and detrital zircon U-Pb geochronological constraints. Earth Planetary Sci. Letters 459, p. 264-278.
(Paleomagnetic and U-Pb geochronologic study of Late Triassic-Cretaceous Huai Hin Lat and Nam Phong Fms in NE Thailand (W Khorat Plateau; part of Indochina Block). Paleolatitudes in Norian (<227 Ma) 33.4 ± 7.2°N to Late Cretaceous 24.5 ± 4.9°N. Data indicate S-ward displacement with CW rotation)

Yanagida, J. (1964)- Permian brachiopods from Central Thailand. In: T. Kobayshi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 143-176.
(Seven species of M-U Permian brachiopods from dark calcareous mudstone in Ratburi Lst, SW of Phetchabun, C Thailand, incl. Tyloplecta yangtzeensis, T. nangkinensis, Haydenella, Orthotichia, etc. Faunal affinities closest to S China)

Yanagida, J. (1967)- Early Permian brachiopods from North-Central Thailand. In: T. Kobayshi & R. Toriyama (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 3, p. 46-97.
(First description of E Permian brachiopods from Thailand: assemblage of 29 species from Asselian? of Tham Nam Maholan, Ban Nong Hin, Changwat Loei, incl. Reticulatia, Costiferina, lyttonid Oldhamina aff. decipiens. Similar to 'Productus-Limestone' of Indochina, China, Urals, etc.. Associated with fusulinids Paraschwagerina and Triticites sp.)

Yanagida, J. (1974)- Middle Carboniferous brachiopods from Loei, North Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 7-23.

Yanagida, J. (1976)- Palaeobiogeographical consideration on the Late Carboniferous and Early Permian brachiopods of Central North Thailand. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 173-189.
(Brachiopod faunas from Thum Nam Maholan Lst of N-C Thailand strong similarities to Lower Permian of Eurasian continent, but not to Australia- New Zealand. Etc.)

Yanagida, J. (1976)- Upper Carboniferous brachiopods from Wang Saphung, North Thailand. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 16, p. 1-31.

Yanagida, J. (1976)- Palaeobiogeographical consideration on the Late Carboniferous and Early Permian brachiopods of Central North Thailand. In: T. Kobayashi & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 17, p. 173-189.
(U Carboniferous and Lower Permian Brachiopod localities near Loei, N Thailand with similarities to N China, Europe, N America, etc.; few similarities with Australia)

Yanagida, J. (1980)- Carboniferous brachiopoda of the Thai-Malayan district and its significance in paleobiogeography. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 25-26.
(Brief review of Carboniferous brachiopod faunas in Thailand and Malay Peninsula. Moscovian brachiopods rel. warm-water asemblages, often associated with fusulinids, and no clear affinities with Australian faunas)

Yanagida, J. (1984)- Carboniferous and Permian brachiopods of Thailand and Malaysia with a brief note on the Mesozoic. In: T. Kobayshi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 187-194.
(Brief review of work on Carboniferous and Permian brachiopods in Thailand and Malaysia)

Yanagida, J. & N. Nakornsri (1999)- Permian brachiopods from the Khao Hin Kling Area near Phetchabun, North-central Thailand. Bull. Kitakyushu Mus. Natural History 18, p. 105-136.
(online at: www.kmnh.jp/info/publication/date/18-105-E-Yanagida_Nakornsri.pdf)
(M- early Late Permian brachiopods from Tak Fa Fm black mudstone of Rat Buri Group ~50 km SW of Phetchabun, C Thailand (in Phetchabun foldbelt= W margin of Indochina Block). Fauna 21 species of 17 genera, close affinities to C and S Tethyan realms)

Yanagida, J. & Peck Chin Aw (1979)- Upper Carboniferous, Upper Permian and Triassic brachiopods from Kelantan, Malaysia. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 20, p. 119-141.
(Brachiopod assemblages from NE Malay Peninsula)

Yang, W., Q. Feng & S. Shen (2008)- Permian radiolarians, chert and basalt from the Nan Suture Zone, Northern Thailand. Proc. Int. Symp. Geoscience resources and environments of Asian terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 172-173. *(Abstract)*
(Nan suture zone in N Thailand dominated by Carboniferous- Permian Pha Som Metamorphic Complex, with slices of volcanic rocks, schist, meta-greywacke, serpentinite and bedded chert, unconformably overlain by U Triassic and Jurassic red sandstones. Oceanic island basalt- purple radiolarian chert sequence with abundant radiolarians, incl. Follicucullus porrectus, suggesting latest M Permian- earliest Late Permian age)

Yang, W., Q. Feng & S. Shen, K. Malila & C. Chonglakmani (2009)- Permian radiolarians, chert and basalt from the Nan Suture Zone, Northern Thailand. Earth Science (J. China University of Geosciences) 34, 5, p. 743-751.
(Well-preserved sequences of radiolarian chert and basalt in Pha Som metamorphic complex in Nan suture zone, N Thailand. Bedded chert with Follicucullus porrectus (late M Permian- early Late Permian), deposited on continental margin, and Oceanic Island basalts suggest Nan suture zone was small marginal oceanic basin, which closed between Late Permian-Late Triassic)

Yang, W., Q. Feng, S. Shen & C. Chonglakmani (2009)- Constraints of U-Pb zircon dating on the evolution of the Nan-Uttaradit suture zone in northern Thailand. Acta Geoscientica Sinica 30, Suppl. 1, p. 88-89.
(Nan-Uttaradit suture zone in N Thailand narrow N-S ophiolite belt, interpreted as (1) Paleo-Tethys ocean remnants separating Shan-Thai (Sibumasu) and Indochina terranes or (2) boundary of Sukhothai (Simao) and Indochina terranes. Zircon dating of gabbro (~377 Ma; M Carboniferous) and tholeiite (~315 Ma; Late Carboniferous) from Carboniferous-Permian Pha Som Metamorphic Complex in suture zone suggest Late Devonian- early Late Carboniferous spreading of oceanic crust)

Yang, W., X. Qian, Q. Feng, S. Shen & C. Chonglakmani (2016)- Zircon U-Pb geochronological evidence for the evolution of the Nan-Uttaradit suture in northern Thailand. J. Earth Science (China) 27, 3, p. 378-390.
(online at: http://en.earth-science.net/PDF/20160612013541.pdf)
(Nan-Uttaradit suture narrow N-S trending discontinuous ophiolite belt in N Thailand. Melange composed of gabbro, metabasalt, andesite and radiolarian chert. Gabbro and meta-basalt zircon U-Pb ages of ~311 and 316 Ma, suggesting Nan-Uttaradit Ocean existed in Late Carboniferous. Nan-Uttaradit Ocean probably Ailaoshan-extension Jinshajiang Ocean to N)

Yokart, B., S.M. Barr, A.E. Williams-Jones & A.S. Macdonald (2003)- Late-stage alteration and tin-tungsten mineralization in the Khuntan Batholith, northern Thailand. J. Asian Earth Sci. 21, p. 999-1018.
(Khuntan Batholith of NW Thailand part of Late Triassic (~202, 212 Ma) E marginal belt of N Thailand Granite Province which formed in syn-collisional setting and may tie to Main Range of Malay Peninsula (= Sukhothai

terrane of later authors?; JTvG). Most of batholith coarse biotite-muscovite granite, but SE part muscovite-tourmaline granite associated with Sn-W mineralization)

Young, B. & W. Jantaranipa (1970)- The discovery of Upper Palaeozoic fossils in the "Phuket Series" of peninsular Thailand. Proc. Geol. Soc. London 1662, p. 5-7.

Yumuang, S. (1997)- Post-depositional structural models of the potential potash layer in the Maha Sarakham Formation in Bamnet Narong area, Changwat Chaiapum, northeastern Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 2, p. 663-668.
(Delineation of potash (carnallite) layer in Cretaceous evaporites of Khorat Basin, NE Thailand. Thickness 4.3-40m)

Yumuang, S., C. Khantaprab & M. Taiyaqupt (1986)- On the evaporite deposits in Bamnet Narong area, northeastern Thailand. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 249-267.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b14.pdf)
(Cretaceous evaporites of Khorat Basin with three main evaporite cycles of halite- anhydrite-clastics. Evaporite facies primary precipitates of marine evaporites in 'bar-basin')

Zaw, K., T. Rodmanee, S. Khositanont, T. Thanasuthipitak & S. Ruamkid (2007)- Geology and genesis of Phu Thap Fah gold skarn deposit, northeastern Thailand: implications for reduced gold skarn formation and mineral exploration. GEOTHAIô07 Int. Conference on Geology of Thailand, Bangkok, DMR, p. 93-95.
(Phu Thap Fah gold skarn deposit in Loei Province, NE Thailand, in Permian crystalline limestone and siltstone intruded by E Triassic granodiorite (~245 Ma) and Late Triassic andesitic dykes (~221 Ma). Gold occurs as electrum and gold-bismuth-telluride association. Most gold confined to massive pyrrhotite and pyrite)

Zhang, Y., Y. Wang, B. Srithai & B. Phajuy (2016)- Petrogenesis for the Chiang Dao Permian high-iron basalt and its implication on the Paleotethyan Ocean in NW Thailand. J. Earth Science (China) 27, 3, p. 425-434.
(online at: http://en.earth-science.net/PDF/20160612015946.pdf)
(E Permian very high-iron basalts from Chiang Dao, NW Thailand, have geochemical affinity to Oceanic Intraplate Basalts (OIB). Probable evidence for Paleotethys seamount, and suggest Paleotethys Ocean was located between Shan-Thai terrane of Sibumasu and Sukhothai arc along Inthanon zone of Chiang Mai-Chiang Rai rather than Nan-Uttaradit zones)

Zhao T., X. Qian & Q. Feng (2016)- Geochemistry, zircon U-Pb age and Hf isotopic constraints on the petrogenesis of the Silurian rhyolites in the Loei fold belt and their tectonic implications. J. Earth Science (China) 27, 3, p. 391-402.
(Silurian calc-alkaline rhyolites from Loei foldbelt with mean Pb-U age of 424±3 Ma typical arc-related rocks. Formed in volcanic arc, in contact with Truong Son fold belt during E Paleozoic. Simao Block may be contiguous with Indochina Block during Silurian)

Zhao T., X. Qin & Q. Feng (2015)- Zircon U-Pb-Hf isotopes and whole-rock geochemistry of the Late Triassic rhyolites from Lampang Zone, northern Thailand: implications for the closure of Paleo-Tethys. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 102-106. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(Lampang rhyolites formed at ~225 Ma (Norian) in W Sukhothai terrane, after subduction in post-continental collision setting and represent closure of Paleo-Tethys Ocean in N Thailand. Youngest arc volcanics in same area ~242 Ma. Youngest oceanic pelagic sediments in Changning-Menglian and Inthanon Suture Zones with Triassocampe deweveri radiolarian assemblage, suggesting Paleo-Tethys ocean still open in M Triassic)

Zhou, P. & S.B. Mukasa (1997)- Nd-Sr-Pb isotopic, and major- and trace-element geochemistry of Cenozoic lavas from the Khorat Plateau, Thailand: sources and petrogenesis. Chemical Geology 137, p. 175-193.

(Basaltic rocks from Khorat Plateau dated at 0.9 Ma, believed to be related to extension of continental SE Asia. Dominated by alkali-olivine basalt and hawaiite. Probably derived from melts similar in isotopic character to moderately depleted Indian Ocean MORB. This asthenospheric source likely prevalent beneath continental SE Asia)

Zhou, Z. & M. Liengjarern (2004)- Lower Permian perrinitid ammonoid faunas from Thailand. J. Paleontology 78, 2, p. 317-339.
(Artinskian Metaperrinites and Kungurian Perrinites faunas in Ratburi Group of N C Thailand and Saraburi Group of S C Thailand represent part of perrinitid belt of ancient Tethys ocean from Crimea in W to Pamir, Afghanistan, W China, C Thailand to Timor in E)

Zhou, Z. & M. Liengjarern (2007)- Early Permian verbeekinacean fusulinids associated with ammonoid *Perrinites* from Thailand. Acta Micropalaeontologica Sinica 24, 4, p. 346-358.
(Late E Permian (Kungurian) verbeekinaceans associated with Perrinites ammonoid fauna from Saraburi Group in S C Thailand. They represent mixed association of faunas with different ecological attributions)

IX.4. Myanmar (Burma), NE India, SW Yunnan (Sibumasu- West Burma plates)

Acharyya, S.K. (1986)- Tectono-stratigraphic history of Naga Hill Ophiolites. Geol. Survey India, Mem. 119, p. 94-103.

Acharyya, S.K. (2007)- Collisional emplacement history of the Naga-Andaman ophiolites and the position of the eastern Indian suture. J. Asian Earth Sci. 29, p. 229-242.

Acharyya, S. (2015)- Indo-Burma Range: a belt of accreted microcontinents, ophiolites and Mesozoicï Paleogene flyschoid sediments. Int. J. Earth Sciences 104, 5, p. 1235-1251.
(N-S trending Indo-Burma Range W-verging series commonly interpreted as accretionary prism of oceanic material from subduction of Indian plate under Eurasian/Burmese plate. With two ophiolite suites with different accretion histories: (1) Naga Hills Lower Ophiolite (overthrusting from E; covered with Late Jurassic- E Eocene(~150-55 Ma) pelagic sediments, accreted in E-M Eocene, overlain by M Eocene ophiolite-derived clastics); (2) Victoria Hills Upper Ophiolite (Mesozoic age, overthrusting continental metamorphic rocks, unconformably overlain by shallow marine U Albian - Cenomanian sediments). Ophiolites and cover rock overthrusted by Proterozoic metamorphics from Burmese continent. Both ophiolite suites thrust W-ward over Eocene shelf sediments. Dismembered ophiolites and continental metamorphic rocks suggest thin-skinned tectonic detachment processes)

Acharyya, S.K, D.K. Roy, N.D. Mitra, R.G. Coleman & I. Gass (1986)- Stratigraphy and paleontology of the Naga Hills ophiolite belt. In: Geology of Nagaland Ophiolite, Mem. Geol. Survey India 119, p. 64-74.

Agematsu, S. & K. Sashida (2009)- Ordovician sea-level change and paleogeography of the Sibumasu Terrane based on the conodont biostratigraphy. Paleont. Research 13, 4, p. 327-336.
(Ordovician conodont biostratigraphy of Sibumasu terrane in Thailand- Langkawi- N Malaysia. Faunal affinity of conodonts suggest Sibumasu was close to both Australia and N China, at that time located in low paleolatitudes)

Agematsu, S., K. Sashida & A. Sardsud (2008)- Early and Middle Paleozoic conodont paleobiogeography and paleoenvironments on the Sibumasu Block. Proc. Int. Symp. Geoscience resources and environments of Asian terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 1753-1760.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/060.pdf)
(Ordovician- E Devonian sea-level curve of Sibumasu Block in Thailand and NW Malaysia shows five regressions. Conodonts reflect tropical domain and closely related to Australia and N China in Tremadocian-Dapingian (E-M Ordovician), changing to middle- high-latitudes before Katian (Late Ordovician))

Aitchison, J.C., G.L. Clarke, T.R. Ireland, K. Lokho, A. Ao, S.K. Bhowmik, T. Roeder et al. (2016)- New age constraints on the evolution of the Naga Hills: radiolarians and radiometric. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 54. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(Naga Hills in Indo-Myanmar Ranges dominated by Cenozoic sediments structurally overlying Indian passive-margin sequence. Near India-Myanmar border imbricate thrust stack also contains sheets of ophiolitic melange. Ophiolite disrupted and overlain by Eocene shallow marine sediments of Phokphur Fm. Further E high-grade metamorphic units thrust W-wards over ophiolite. Well-preserved Jurassic, Cretaceous and Paleo-Eocene radiolarians together with U/Pb data from ophiolitic and metamorphic units. New detrital zircon ages suggest derivation of some units from Sibumasu rather than Lhasa or Qiangtang terranes)

Ali, J.R., H.M.Z. Cheung, J.C. Aitchison & Y. Sun (2013)- Palaeomagnetic re-investigation of Early Permian rift basalts from the Baoshan Block, SW China: constraints on the site-of-origin of the Gondwana-derived eastern Cimmerian terranes. Geophysical J. Int. 193, 2, p. 650-663.
(online at: https://academic.oup.com/gji/article-pdf/193/2/650/1772194/ggt012.pdf)

(Paleomagnetic data from E Permian Woniusi Fm rift basalts of Baoshan block (SW China) suggest this part of E Cimmerian terrane detached from E Gondwana at ~42°S (34.2-51.2°S) (similar to Huang & Opdyke 1991 results on paleolatitude). Gondwana estoration: Baoshan fits against in narrow longitudinal belt close to NE Greater India and NW Australia; Sibumasu lay directly to E, off Australia; Qiangtang and Lhasa sat to W, off N Greater India- SE Arabia (see also Xu et al. 2015, who arrive at slightly lower paleolatitudes))

Ali, J.R., G.M. Thompson, M.F. Zhou & X. Song (2005)- Emeishan large igneous province, SW China. Lithos 79, p. 475-489.
(Emeishan large igneous province of SW China volcanic and upper-intrusive portion of province is relatively small. Most reliable age dates (zircon U-Pb SHRIMP) from intrusive body indicate generation at ~259 Ma, consistent with end-Guadalupian (end M Permian) age. Magnetostratigraphic data and field observations suggest bulk of volcanic sequence formed within 1-2 My. Geochemistry of volcanics and studies of underlying Maokou Fm suggests mantle plume generated province)

Ali, J., J. Fitton & C. Herzberg (2010)- Emeishan large igneous province (SW China) and the mantle-plume up-doming hypothesis. J. Geol. Soc., London, 167, p. 953-959.
(M Permian (~262 Ma) Emeishan Basalts of SW China commonly cited example of large igneous province that formed as result of mantle plume generating large regional-scale up-doming prior to volcanism. Support idea that ELIP was generated by plume that originated in mantle, but amount and lateral extent of uplift significantly less than predicted by conventional deep-mantle plume models. Large-scale doming may not be diagnostic feature of mantle plumes)

Allen, R., Y. Najman, A. Carter, D. Barfod, M.J. Bickle, H.J. Chapman, E. Garzanti, G. Vezzoli, S. Ando & R.R. Parrish (2008)- Provenance of the Tertiary sedimentary rocks of the Indo-Burman Ranges, Burma (Myanmar): Burman arc or Himalayan-derived? J. Geol. Soc. London, 165, p. 1045-1057.
(Indo-Burman Ranges in W Myanmar extend along Sunda Arc subduction zone and may be divided into W part of Neogene and E part of Paleogene sediments, separated by fault. Paleogene Indo-Burman Ranges contain significant arc-derived material from Burmese portion of Mesozoic-Tertiary arc to E. U-Pb dating on detrital zircons shows dominant zircon populations of (~55-150 Ma) in Paleocene; also Cambro-Ordovician and Precambrian age. Old populations possibly sourced from Himalaya or Burmese margin. Neogene Indo-Burman Ranges dominant derivation from Himalaya; minor arc-derived component may have been sourced from Trans-Himalaya, or recycled from arc-derived Paleogene Indo-Burman Ranges)

Amos, B.J. (1975)- Stratigraphy of some of the Upper Palaeozoic and Mesozoic carbonate rocks of the Eastern Highlands, Burma. Newsletters Stratigraphy 4, p. 49-70.
(Stratigraphy of Permian- Triassic 'Plateau Limestone' from E Myanmar Highlands (Sibumasu/ Shan-Tai block). Permian with fusulinids Yangchienia, Verbeekina, Parafusulina, etc. Locally extensive diagenetic dolomitisation; incomplete dolomitisation in some areas. Permian. Triassic carbonates at least 2500m thick)

Anderson, M.M., A.J. Boucot & J.G.Johnson (1969)- Eifelian brachiopods from Padaukpin, northern Shan States, Burma. Bull. British Museum (Natural History), Geology, 18, 4, p. 107-163.
(online at: http://ia600708.us.archive.org/4/items/bulletinofbritis18brit/bulletinofbritis18brit.pdf)
(M Devonian articulate brachiopods from weathered 'Lower Plateau Limestone' in Padaukpin area, NE of Maymyo area, E of Mandalay, associated with colonies of tabulate corals and stromatoporoids. Brachiopod fauna 32 species, similar to West Yunnan faunas and with marked affinity with Eifelian of W Europe (stronger affinity with Europe than USSR))

Ao, A. & S.K. Bhowmik (2014)- Cold subduction of the Neotethys: the metamorphic record from finely banded lawsonite and epidote blueschists and associated metabasalts of the Nagaland Ophiolite Complex, India. J. Metamorphic Geol. 32, p. 829-860.
(Thermal history of subducting Neotethys, using metabasalts from serpentinitic melange in segment of Nagaland Ophiolite Complex. Tectonically disturbed Cretaceous? metamorphic sequence, from W to E: (1) greenschist, (2) pumpellyite- diopside and (3) lawsonite/ glaucophane and epidote/glaucophane blueschist facies. Low T gradient of 8°C/km, corresponding to 40 km max. burial depth, suggest cold intra-oceanic

subduction zone setting for Nagaland blueschists. Metamorphics suggest presence of intra-oceanic subduction systems within Neotethys also between Indian and Burmese plates)

Ariffin, M.M.M., Kyaw Linn Oo, M.H.B.A. Wahab, Nyunt Shwe & M Khairil (2017)- Lower Miocene carbonate play in the Pyay sub-basin, onshore Myanmar: Reservoir characterization for prospectivity de-risking. AAPG/EAGE/MGS 3rd Oil & Gas Myanmar Geosciences Conf., Yangon, 11p. *(Extended Abstract)*
(Underexplored Lower Miocene carbonate play in Pyay sub-basin of C Myanmar, with Htantabin oil field (1979-1987))

Aung, A.K. (1995)- New Middle Devonian (Eifelian) rugose corals from Myanmar. J. Southeast Asian Earth Sci. 11, p. 23-32.
(Eight new species of M Devonian (Eifelian) rugose corals from Padaukpin and Pwepon areas in N Shan State, N Myanmar. Genera Phacellophyllum, Peripaedium, Pterorrhiza, Dohmophyllum, Temnophyllum and Puanophyllum reported for first time from Myanmar. Some Myanmar forms resemble species from Eifelian of SW China and E Australia)

Aung, A.K. (2004)- The primate-bearing Pondaung Formation in the Upland area, Northwest of Central Myanmar. In: C.F. Ross & R.F. Kay (eds.) Anthropoid origins, Kluwer/ Plenum, New York, p. 205-217.
(Review of late Middle Eocene molasse-type sediments of Central Burma Tertiary Belt (Inner Burman Tertiary Basin), at E side of the Indo-Burman Ranges)

Aung, A.K. (2010)- A short note on the discovery of Early Devonian tentaculite-bearing unit from Taunggyi-Taungchun range, Southern Shan State, Myanmar. Warta Geologi 36, 4, p. 175-178.
(online at: www.gsm.org.my/products/702001-100402-PDF.pdf)
(Short note on occurrences of E-M Devonian tentaculites in Myanmar. Similarities to Nowakia acuaria from Mahang Fm of NW Malay Peninsula (= part of 'Sibumasu' E Paleozoic stratigraphy; JTvG))

Aung, A.K. (2011)- A short note on the discovery of Early Devonian tentaculite-bearing unit from Taunggyi-Taungchun Range, southern Shan State, Myanmar. Warta Geologi (Geol. Soc. Malaysia) 36, 4, p. 175-178.
(online at: ttps://gsmpubl.files.wordpress.com/2014/09/warta-36_4.pdf)
(E-M Devonian limestone with tentaculites from Taunggyi area, SE of Mandalay, in S Shan State. ~10m thick, between Silurian Linwe Fm and Permian-Triassic 'Plateau Lst'. Resemble Mahang Fm and Lalang Mb of NW Peninsular Malaysia. Also correlatable with E Devonian Zebingyi Fm of Pyin Oo Lwin)

Aung, A.K. (2011)- Stratigraphy of the Devonian sediments in the northwestern part of the Shan Plateau, Myanmar. Proc. 24th Ann. National Geoscience Conference 2011 (NGC2011), Johor Baru, B13, p. 59-60. *(Extended Abstract)*
(online at: http://geology.um.edu.my/gsmpublic/NGC2011/NGC2011_Proceedings.pdf)
(Rel. complete and mainly shallow marine Devonian section E of Mandalay, C Myanmar)

Aung, A.K., R.T. Becker & K.K. Myint (2011)- First record of Frasnian (Upper Devonian) sediments and ammonoids from Myanmar. Subcomm. Devonian Stratigraphy (SDS) Newsletter 26, p. 49-53.
(First record of U Devonian sediments and ammonoids (goniatite Beloceras and Tornoceras) in Myogyi area, Sino-Burman Ranges, E Myanmar, so far unknown from all of SE Asia (= Precambrian- Mesozoic shelf series of 'Sibumasu Terrane'))

Aung, A.K. & L.R.M. Cocks (2017)- Cambrian-Devonian stratigraphy of the Shan Plateau, Myanmar (Burma). In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 14, p. 317-342.
(Sibumasu (Shan-Thai) Terrane of Shan Plateau with common limestone-dominated Cambrian - Devonian rocks, which, before Permian were part of N Gondwana margin. By M Cambrian (~510 Ma) Myanmar part of Sibumasu sector of Gondwana straddled equator and was close to NW Australian sector. Some acidic Cambrian volcanics, but passive margin setting from E Ordovician- end Carboniferous)

Aung, A.K. & K. Min (2011)- Stratigraphy of the Lower Devonian sediments in the northwestern Shan Plateau, Myanmar. Bull. Geol. Soc. Malaysia 57, p. 55-67.
(online at: http://geology.um.edu.my/gsmpublic/BGSM/bgsm57/bgsm2011008.pdf)
(Lower Devonian sediments in NW Shan Plateau of C Myanmar with rich micro- and macrofauna, including graptolites (Monograptus atopus, M. helmckei), trilobites (Cornuproetus), tentaculids (Nowakia acuaria), conodonts) (*Eognathodus sulcatus), rugose corals, etc. Can be correlated with neighboring regions in NW Malay Peninsula, Thailand and China (= part of Sibumasu stratigraphy; JTvG))*

Aung, H.H. (2009)- Recognition of Paleo-Tethys Suture Zone in eastern Myanmar. Acta Geoscientica Sinica 30, Suppl.1, p. 1-3.
(Closure of Paleo-Tethys Ocean marked by collision between Shan Massif and Indochina plate in E Myanmar. Now complex zone of suturing and deformation along Than Lwin River, extending N to Yunnan (Changning-Menglian belt) and S into West Thailand (Inthanon Zone). Also large complex of Late Triassic granites)

Aung, H.H. (2015)- Delineation of western boundary of Paleo-Tethys suture zone in Myanmar. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 1-3. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf))
(On western boundary fault of Paleo-Tethys suture zone in E Myanmar)

Aung, N.S., O. Chavasseau, Y. Chaimanee, C. Sein, J.J. Jaeger, X. Valentin & S. Ducrocq (2017)- New remains of *Siamotherium pondaungensis* (Cetartiodactyla, Hippopotamoidea) from the Eocene of Pondaung, Myanmar: paleoecologic and phylogenetic implications. J. Vertebrate Paleontology 37, 1, p.
(Well preserved skull of small anthracothere from late M Eocene of Pondaung Fm, attributed to Siamotherium pondaungensis. New material confirms it is anthracothere and not helohyid. Most likely terrestrial, open-forest animal with an omnivorous diet. Both species of Siamotherium confirms basal position in Hippopotamoidea)

Aung, N.S., Myitta, S.T. Tun, A.K. Aung, T. Thein, B. Marandat, S. Ducrocq & J.J Jaeger (2002)- Sedimentary facies of the late Middle Eocene Pondaung Formation (central Myanmar) and the palaeoenvironments of its anthropoid primates. Comptes Rendus Palevol 1, p. 153-160.

Aung, P.S., C. Satirapod & C.O. Andrei (2016)- Sagaing Fault slip and deformation in Myanmar observed by continuous GPS measurements. Geodesy and Geodynamics 7, 1, p. 56-63.
(GPS stations along dextral Sagaing Fault suggest E side of fault moves SE at ~32-40 mm/yr, whereas W side moves NE at ~31-35 mm/yr)

Aung Zaw Myint, Khin Zaw, Ye Myint Swe, K. Yonezu, Yue Cai, T. Manaka & K. Watanabe (2017)- Geochemistry and geochronology of granites hosting the Mawchi Sn-W deposit, Myanmar: implications for tectonic setting and emplacement. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 17, p. 385-400.
(Mawchi Mine in Myanmar is historic world-class Sn-W deposit in SE Asia tin province (world's largest tin–tungsten quartz vein system exploited before WW II). M Eocene (~43 Ma) Mawchi granite small pluton at W side of Shan Plateau with biotite granite and tourmaline granite, derived from melting of crustal rocks. Part of Cretaceous-Paleogene Western granite province (with nearby granites generally older: ~48-60 Ma)

Aung Zaw Myint, K. Yonezu, A.J. Boyce, D. Selby, A. Schersten, T. Tindell, K. Watanabe & Ye Myint Swe (2018)- Stable isotope and geochronological study of the Mawchi Sn-W deposit, Myanmar: implications for timing of mineralization and ore genesis. Ore Geology Reviews 95, p. 663-679.
(World-class Mawchi Sn-W mineralization in N-S trending steeply dipping quartz veins, hosted by Eocene granite and Carboniferous- E Permian metasediments. Three stages of ore formation; (1) tourmaline-cassiterite stage (2) main ore stage and (3) sulfide stage (with 40Ar/39Ar magmatic biotite age of ~41.5 Ma and zircon U-Pb age of 42.7 Ma. Sn-W mineralization synchronous with late Eocene granitic magmatism)

Ba Maw, R.L. Ciochon & D.E. Savage (1979)- Late Eocene of Burma yields earliest anthropoid primate *Pondaungia cotteri*. Nature 282, p. 65-67.

Bannert, D. & D. Helmcke (1981)- The evolution of the Asian plate in Burma. In: Alfred Wegener Symposium, Berlin 1980, Geol. Rundschau 70, 2, p. 446-458.
(Post-Cretaceous evolution of Asian Plate in Burma strongly influenced by spreading of E Indian Ocean and N-ward movement of 'Greater India'. During end of Mesozoic E part of Burma emerged from ocean; W part formed shelf area with slowly W-wards migrating Indoburman geosyncline to W (U Cretaceous flysch). Emergence of Indoburman Ranges in Miocene, generating Outer Island Arc and forming Bay of Bengal. Approach of continental Indian crust led to thrusts in N part of Indoburman Ranges. Today subduction active only S of 18°N in E Bay of Bengal)

Bannert, D., A. Sang Lyen & T. Htay (2011)- The geology of the Indoburman Ranges in Myanmar. Geol. Jahrbuch B101, p. 5-101.
(Indoburman Ranges are W-most unit in Myanmar and represent accretionary wedge formed by Late Mesozoic-Paleogene-Neogene marine sediments with transitions into molasse-type sediments. Four geological units. Most rocks Tertiary age, with widespread units of U Cretaceous, Albian and Cenomanian. Triassic (Carnian-Norian) flysch part of E Indoburman Ranges; Jurassic sediments absent. C Chin Hills of E Indoburman Ranges with U Cretaceous- Paleocene Kanpetlet Schists (metamorphosed Triassic flysch); Naga metamorphic rocks possibly similar, but age still undetermined. Common serpentinised ultrabasics, especially along continental splinter of W Burma Plate. Docking of W Burma Plate onto Eurasia margin at 83 Ma, followed by continent- continent collision of India Plate. During Late Himalayan collision, many young strike-slip faults developed, hampering reconstruction of original sedimentary regions. Tectonic contacts very steep)

Barber, A.J., K. Zaw & M.J. Crow (eds.) (2017)- Myanmar: geology, resources and tectonics. Geol. Soc., London, Memoir 48, p. 1-759.
(Major, modern review of geology of Myanmar by collective of expert authors)

Barber, A.J., K. Zaw & M.J. Crow (2017)- The pre-Cenozoic tectonic evolution of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 31, p. 687-712.
(Myanmar 7 N-S tectonic units, from W to E: (1) Indo-Myanmar Ranges (accretionary prism); (2) W Myanmar (Burma) Block (metamorphic basement overlain by Cenozoic C Myanmar Basins); (3) Mogok Metamorphic Belt (high-grade metamorphic core complex with Late Oligocene- E Miocene exhumation age, and granitoids); (4) Slate Belt (Mergui Gp with Late Carboniferous- Permian diamictites and intruded by Late Jurassic- E Cretaceous granodiorites); (5) Paunglaung Mawchi zone (isoclinally folded Shan Plateau margin rocks), (3,4,5 = Shan Scarps area) and (7) Shan Plateau (Paleozoic- Triassic stratigraphy, part of Sibumasu Terrane). Indochina Block does not extend into Myanmar. Mt Victoria/ West Burma Block identified in literature, but E margin of this block against Sibumasu, conventionally identified as Sagaing Fault, not clearly defined. Cenozoic development of Myanmar profoundly affected by N-ward movement of India and collision with Eurasia at ~50 Ma, resulting in ~70° rotation of whole country)

Barley, M.E., A.L. Pickard, K. Zaw, P. Rak & M.G. Doyle (2003)- Jurassic to Miocene magmatism and metamorphism in the Mogok metamorphic belt and the India-Eurasia collision in Myanmar. Tectonics 22, 3, 1019, p. 1-11.
(Mogok metamorphic belt at W margin of Shan-Thai terrane. Deformed granitic orthogneisses contain Jurassic (~170 Ma) zircons, partly recrystallized during ~43 Ma high-grade metamorphism. Syenite from Mandalay Hill also with Jurassic zircons with evidence of Eocene metamorphic recrystallization rimmed by thin zones of ~31 Ma magmatic zircon. Abundance of Jurassic zircons consistent with Andean-type margin at S Eurasia at that time. Mid-Cretaceous- E Eocene (120-50 Ma) I-type granitoids in MMB and W Myanmar confirm up to 200 km wide magmatic belt along Eurasian margin from Pakistan to Sumatra (K-Ar cooling ages 79-100 Ma; Allen et al. 2008))

Basu, P., R. Verma, R. Paul & K. Viswanath (2010)- Deep waters of Rakhine Basin - a new frontier? Proc. 3rd Biennial Int. Conf. Petroleum Geophysics, Hyderabad 2010, P-160, 7p.
(online at: https://www.spgindia.org/2010/160.pdf)

(Offshore Rakhine frontier basin in E part of Bay of Bengal, off Myanmar, with Shwe (2003) and Shwe Phyu and Mya subsequent gas discoveries, all three with biogenic gas in deep marine Lower Pliocene sandstones. Also postulated thermogenic petroleum system in Cretaceous sequence. Rakhine Basin merges with Andaman Nicobar-Sunda- Java foredeep basins system to South)

Baxter, A.T., J.C. Aitchison, S.V. Zyabrev & J.R. Ali (2011)- Upper Jurassic radiolarians from the Naga Ophiolite, Nagaland, northeast India. Gondwana Research 20, p. 638-644.
(Cherts from ophiolitic melange near Salumi, Nagaland, NE India, part of Naga- Andaman suture (Neotethys/Mesotethys oceanic material?) with U Jurassic (Kimmeridgian- lower Tithonian) radiolaria. Significantly older than fossils previously reported from this melange, but similar to radiometric ages from associated igneous units)

Beard, K.C., L. Marivaux, Y. Chaimanee, J.J. Jaeger, B. Maranda, P. Tafforeau, A.N. Soe, S.T. Tun & A.A. Kyaw (2010)- A new primate from the Eocene Pondaung Formation of Myanmar and the monophyly of Burmese amphipithecids. Proc. Royal Society, Biological Sciences, 276, p. 3285-394.
(online at: http://rspb.royalsocietypublishing.org/content/royprsb/276/1671/3285.full.pdf)
(New anthropoid amphipithecid Ganlea megacanina n.sp. from late M Eocene Pondaung Fm of C Myanmar. Pondaungia is sister taxon of Ganlea- Myanmarpithecus clade. Burmese amphipithecids endemic radiation of hard object feeders)

Beard, K.C., L. Marivaux, S.T. Tun, N.S. Aung, Y. Chaimanee, W. Htoon, B. Marandat, H.H. Aung & J.J. Jaeger (2007)- New sivaladapid primates from the Eocene Pondaung Formation of Myanmar and the anthropoid status of Amphipithecidae. Bull. Carnegie Museum Natural History 39, p. 67-76.
(Two new sivaladapid primates from late M Eocene Pondaung Fm.)

Bender, F. (1983)- Geology of Burma. Beitrage Regionalen Geologie der Erde 16, Borntraeger, Berlin, p. 1-293.
(Classic textbook on geology of Myanmar, with contributions by Bannert, Brinckmann, Gramann, Helmcke. Fout main N-S trending physiographic/tectonic units: (1) Arakan coastal area, (2) Indo-Burman Ranges (E Tertiary flysch belt, with in E intercalated allochthonous U Cretaceous and older (U Triassic Halobia schist), W-vergent imbricate structures and some ophiolite; belt of ultrabasic rocks and Naga metamorphic complex along E side); (3) Chindwin- Irrawaddy Basin (Inner Burman) Basin (7 sub-basins?), mainly Miocene and youger age, with large thrust anticlines; continues into Andaman Sea and N and C Sumatra basins; (4) Sino-Burman Ranges (Eastern Highlands; mainly deformed Precambrian, Paleozoic and Mesozoic sediments (Sibumasu terrane) (incl. M Cretaceous with Orbitolina, Globotruncana limestone, latest Cretaceous with Siderolites, Lepidorbitoides (Asterorbis)). Etc.)

Bender, F. (1994)- Myanmar (former Birma, Burma). In: H. Kulke (ed.) Regional petroleum geology of the world, I, Borntraeger, Berlin, p. 699-708.
(Brief review of oil-gas basins and fields of Myanmar; in German)

Bertrand, G. & C. Rangin (2003)- Tectonics of the western margin of the Shan plateau (central Myanmar): implication for the India-Indochina oblique convergence since the Oligocene. J. Asian Earth Sci. 21, p. 1139-1157.
(*Neogene tectonics of Shan scarp area (C Myanmar) and relationship with India- Indochina oblique convergence. Two tectonic regimes: (1) NNW–SSE-trending extension, with ductile stretching in Mogok Metamorphic Belt, with N70E brittle normal faults; (2) M or U Miocene-Present right-lateral faults (N20W transpressive Shan scarp fault, N-S Sagaing fault). Transition from transtensional to transpressive stress regime in Miocene tied to end of spreading in S China Sea, opening of Andaman basin or end of subduction in Indo-Burma range)*

Bertrand, G., C. Rangin, H. Maluski, Tin Aung Han, M. Thein, O. Myint, W. Maw & S. Lwin (1999)- Cenozoic metamorphism along the Shan Scarp (Myanmar): evidences for ductile shear along the Sagaing Fault or the northward migration of the Eastern Himalayan syntaxis? Geophysical Research Letters 26, 7, p. 915-918.

(Mogok metamorphic belt along N-S trending Shan scarp and Sagaing fault in E Myanmar regarded as Paleozoic-Precambrian, but Ar/Ar data suggests Oligocene- E Miocene metamorphism age (26-21 Ma). Metamorphism caused by NNW-SSE to N-S ductile extension, not directly related to Sagaing fault, but possibly related to N-ward migration of E Himalayan syntaxis, resulting from India-Asia oblique collision)

Bertrand, G., C. Rangin, H. Maluski, H. Bellon & Giac Scientific Party (2001)- Diachronous cooling along the Mogok Metamorphic belt (Shan scarp, Myanmar): the trace of the northward migration of the Indian syntaxis. J. Asian Earth Sci. 19, p. 649-659.

Bhattacharjee, C.G. (1991)- The ophiolites of northeast India- a subduction zone ophiolite complex of the Indo-Burman orogenic belt. Tectonophysics 191, p. 213-222.
(Ophiolites of NE India rootless blocks floating in matrix of U Cretaceous-Lower Tertiary Disang Gp. Ultramafics main component and interpreted as slices of oceanic crust and upper mantle obducted onto Indian continental margin. Associated blueschist indicative of subduction zone tectonics)

Bleeck, A.W.G. (1907)- Die Jadeitlagerstatten in Upper Burma. Zeitschrift Praktische Geol. 15, p. 341-365.
(online at: https://books.google.com/books...)
('The jadeite deposits of Upper Burma'. Early, detailed description of geologic setting of jadeitites of Kachin Hills, NE Myanmar. Primary occurrence as bed or dike in serpentinite)

Bleeck, A.W.G. (1908)- Jadeite in the Kachin Hills, Upper Burma. Records Geol. Survey India 36, 4, p. 254-285.
(online at: https://babel.hathitrust.org/cgi/pt?id=uc1.31822009563370;view=1up;seq=172;size=125)
(Jadeite found in three places in Kachin Hills of NE Myanmar: Tawmaw, Hweka and Mamon. Jadeite occurs as intrusive dike in serpentinite and in boulder conglomerates)

Bojesen-Koefoed, J.A., M.B.W. Fyhn, L.H. Nielsen, H.P. Nytoft, I. Abatzis & U Nyan Tun (2017)- Petroleum composition in the Central Burma Depression, Myanmar- a preliminary assessment. AAPG/EAGE/MGS 3rd Oil & Gas Conf., Yangon 2017, 5p. *(Extended Abstract)*
(C Burma Depression with up to 15km Albian- Recent sediments. Oils from Salin Basin from predominantly terrestrial source. Thermal maturity increasing from N to S across Salin Basin)

Bronnimann, P., J.E. Whittaker & L. Zaninetti (1975)- Triassic foraminiferal biostratigraphy of the Kyaukme-Longtawkno area, Northern Shan States, Burma. Rivista Italiana Paleont. 81, p. 1-30.
(Incl. new Late Triassic species Duotaxis birmanica)

Brunnschweiler, R.O. (1970)- Contributions to the post-Silurian geology of Burma (Northern Shan States and Karen state). J. Geol. Soc. Australia 17, 1, p. 59-79.
(Review of U Paleozoic-Mesozoic stratigraphy of E Myanmar)

Brunnschweiler, R.O. (1974)- Indoburman Ranges- data for orogenic studies. In: A.M. Spencer (ed.) Mesozoic-Cenozoic orogenic belts, Geol. Soc., London, Spec. Publ. 4, p. 279-299.
(Tertiary fold-thrust belt)

Brunnschweiler, R. O. (1996)- On the geology of the Indoburman Ranges (Arakan Coast and Yoma, Chin Hills, Naga Hills). J. Geol. Soc. Australia 13, 1, p. 127-194.
(Mountains of W and NW Burma mainly thick accumulations of Paleo- Eocene (Arakan and Chin Hills) or Senonian-Eocene (Naga Hills) flysch. Some of highest mountains in Naga Hills are 'klippen' of metamorphics lying on flysch. Flysch ranges uplifted in Oligocene but along Arakan Coast also earlier orogenic phase (latest Cretaceous). Lowlands of Central and Lower Burma intramontane molasse-filled basin)

Burchfiel, B.C. & E Wang (2003)- Northwest-trending, middle Cenozoic, left-lateral faults in southern Yunnan, China, and their tectonic significance. J. Structural Geol. 25, 5, p. 781-792.

Burton, C.K. (1967)- Graptolite and tentaculite corelations and palaeogeography of the Silurian and Devonian in the Yunnan- Malaya geosyncline. Trans. Proc. Paleont. Soc. Japan, N.S. 65, p. 27-46.
(Silurian- M Devonian deeper marine graptolites and tentaculites found in black shales from W Yunnan (S China)- E Burma- W Thailand into NW Malay Peninsula (incl. Langkawi) (=Sibumasu Block))

Cai, F., L. Ding, W. Yao, A.K. Laskowski, Q. Xu, J. Zhang & K. Sein (2017)- Provenance and tectonic evolution of Lower Paleozoic-Upper Mesozoic strata from Sibumasu terrane, Myanmar. Gondwana Research 41, p. 325-336.
(Sandstone petrographic and U-Pb detrital zircon geochronologic data from Ordovician- Jurassic of Sibumasu terrane in Shan State. Ordovician-Silurian sandstones dominated by 567-470 Ma and 982-917 Ma zircons, sourced from E Gondwana continent. Carboniferous meta-sandstones strong 1165-1070 Ma zircon age peak, likely derived from Albany-Fraser Province in SW Australia and Maud Province in Antarctic. U Triassic- Lower Jurassic Loi-an Gp clastics over Permian- M Triassic Plateau Limestone Gp, with abundant Permian-Triassic detrital zircons (215 Ma and older) from Sukhothai Arc in E. Sibumasu terrane juxtaposed against NW Australia until E Permian time. Late Triassic change in provenance to Sukhothai Arc)

Cao, R.G. (1986)- Discovery of Late Carboniferous glacial-marine deposits in Western Yunnan. Geol. Rev. 32, 3, p. 236-242.
(U Carboniferous Dingjiazhai Fm in W Yunnan represented by glacio-marine strata. Lower part littoral diamictite, middle part glacio-marine strata with cold-water fauna of Stepanoviella and Eurydesma, upper part with fusulinids such as Triticites, of Late Carboniferous age. Similar to strata in India, Nepal, Bhutan, Tibet, Burma, Thailand, Malaysia and Australia. Baoshan and Tengchong areas belong to Gondwanaland (NB: age more likely E Permian; see Ueno et al. 2003))

Carter, P. (2015)- Exploration potential of the Rakhine Basin/Bengal Fan, Offshore Myanmar. Proc. 2015 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 2.1, p. 1-27 *(Abstract + Presentation)*
(Myanmar large number of oil fields discovered, but most are small. Bulk of production from five fields: Yenangyaung, Chauk/Lanywa, Myanaung, Pyay and Mann. Onshore/offshore Cretaceous- Pliocene Rakhine Basin along W coast of Myanmar part of M Eocene- Recent accretionary prism in front of colliding India. N part of basin thick Pliocene- Recent Bengal Fan sediments, which extend from mouths of Brahmaputra and Ganges rivers to oceanic crust in Bay of Bengal. At least 10 onshore and 17 offshore exploration wells. Two proven petroleum systems: nearshore oil and offshore biogenic gas)

Catlos, E.J., E. Reyes, M. Brookfield & D.F. Stockli (2016)- Age and emplacement of the Permian-Jurassic Menghai batholith, Western Yunnan, China. Int. Geol. Review 59, 8, p. 919-945.
(Menghai batholith in W Yunnan is S extension of ~370km long Lincang granite body that syntectonically intruded Paleotethys collision zone between Gondwanan Baoshan block and Laurasian Simao block. Crustal anatexis of Menghai granodiorites related to post-collisional lithosphere delamination and upwelling of hot asthenosphere, forming large-volume melts. Zircon ages from ~3234 to 172 Ma. Inherited zircons Carboniferous (~318 Ma) and older. Crystallization ages Permian- E Jurassic, with ages decreasing from centre of batholith to E perimeter from ~227- 211 Ma to 212- 171 Ma respectively. Collision and closure of branch of Paleotethys here over ~100 Myr period (Permian (281 Ma)- Jurassic (172 Ma))

Chaimanee, Y., O. Chavasseau, K.C. Beard, A.K. Aung, N.S. Aung, C. Sein V. Lazzari, L. Marivaux, B. Marandat, M. Swe et al. (2012)- Late Middle Eocene primate from Myanmar and the initial anthropoid colonization of Africa. Proc. National Academy Sciences USA (PNAS) 109, 26, p. 10293-10297.
(online at: www.pnas.org/content/109/26/10293.full.pdf)
(Earlier hypotheses supported African origin for anthropoids, but recent discoveries of older and phylogenetically more basal fossils in China and Myanmar indicate group originated in Asia. New fossil primate from late M Eocene Pondaung Fm of Myanmar (Afrasia djijidae) remarkably similar to, but dentally more primitive than roughly contemporaneous N African anthropoid Afrotarsius. Members of this clade may have dispersed from Asia to Africa in M Eocene, shortly before first appearance in African fossil record)

Chatterjee, N. & N.C. Ghose (2010)- Metamorphic evolution of the Naga Hills eclogite and blueschist, Northeast India: implications for early subduction of the Indian plate under the Burma microplate. J. Metamorphic Geology 28, p. 209-225.
(Tectonic slices of eclogite and blueschist in E Cretaceous-Eocene Naga Hills ophiolite belt. Part of accretionary wedge, reflecting E-ward subduction of Indian plate under Burma microplate prior to India-Eurasia collision. Glaucophane and epidote represent post-peak assemblage)

Chattopadhyay, B., P. Venkataramana, D.K. Roy, S. Bhattacharyya & S. Ghosh (1983)- Geology of Naga Hills ophiolites. Geol. Survey India Record 112, p. 59-115.

Chavasseau, O., Y. Chaimanee, T. Soethoera, S. Aung Naing, J.C. Barry, B. Marandat, J. Sudre, L. Marivaux, S. Ducrocq & J.J. Jaeger (2006)- *Chaungtha*, a new Middle Miocene mammal locality from the Irrawaddy Formation, Myanmar. J. Asian Earth Sci. 28, p. 354-362.

Chavasseau, O., A.A. Khyaw, Y. Chaimanee, P. Coster, E.G. Emonet, Aung Naing Soe, M. Rugbumrung, Soe Thura Tun & J.J. Jaeger (2013)- Advances in the biochronology and biostratigraphy of the continental Neogene of Myanmar. In: M. Fortelius et al. (eds.) Fossil mammals of Asia: Neogene biostratigraphy and chronology, Columbia University Press, New York, p. 461-476.

Chen, B. & G. Xie (1994)- Evolution of the Tethys in Yunnan and Tibet. J. Southeast Asian Earth Sci. 9, 4, p. 349-354.
(Five ophiolite belts in Yunnan and Tibet, two represent Paleotethys and two Mesotethys. Lancangjiang belt is suture between Gondwana and Eurasia (N limit of Glossopteris flora and cool-water faunas). Palaeotethys closed in Late Permian, resulting in extension of W margin of Yangtze plate. Mesotethys opened after closure of Paleotethys and disappeared at end Mesozoic)

Chen, F., X.H. Li, X.L. Wang, Q.L. Li & W. Siebel (2007)- Zircon age and Nd-Hf isotopic composition of the Yunnan Tethyan belt, southwestern China. Int. J. Earth Sciences (Geol. Rundschau) 96, 6, p. 1179-1194.
(Baoshan block, SW China, is N part of Sibumasu microcontinent. Zircon ages and Nd-Hf isotopic composition of granites E Paleozoic (~470 Ma) and Latest Cretaceous- E Paleocene (Yanshanian; ~78-61 Ma). E Paleozoic granite with Archean- Mesoproterozoic inherited zircons, clustering around 1900-1800 and 1600-1400 Ma. Yanshanian magmatism related to closure of Neotethys ocean)

Chen, X.C., C.H. Zhao, J.J. Zhu, X.S. Wang & T. Cui (2018)- He, Ar, and S isotopic constraints on the relationship between A-type granites and tin mineralization: a case study of tin deposits in the Tengchong-Lianghe tin belt, southwest China. Ore Geology Reviews 92, p. 416-429.
(online at: https://www.sciencedirect.com/science/article/pii/S0169136817302007)
(Tengchong-Lianghe tin belt in W Yunnan, SW China, important tin mineralization belt with two large tin deposits: Paleogene Lailishan and Late Cretaceous Xiaolonghe, associated with A-type granitoids)

Chhibber, H.L. (1934)- The geology of Burma. Macmillan, London, p. 1-538.

Chhibber, H.L. (1934)- The mineral resources of Burma. Macmillan, London, p. 1-320.

Chun Kit Lai (2012)- Tectonic evolution of the Ailaoshan fold belt in Southwestern Yunnan, China. Ph.D. Thesis, University of Tasmania, Hobart, p. 1-284. *(Unpublished)*
(online at: http://eprints.utas.edu.au/15931/2/whole-lai-thesis-2012.pdf)

Chungkham, P. & S.A. Jafar (1988)- Late Cretaceous (Santonian-Maastrichtian) integrated Coccolith-Globotruncanid biostratigraphy of pelagic limestones from the accretionary prism of Manipur, Northeastern India. Micropaleontology 44, 1, p. 69-83.
(Exotic blocks of pelagic limestones in melange of Manipur/ Nagaland ophiolite belt in NE India with Late Santonian- Late Maastrichtian low-latitude calcareous plankton. Initial rifting and birth of Indo-Myanmar (= part of Neotethys) ocean took place before latest Santonian and suturing initiated by latest Maastrichtian)

Chung, Y.H., S.Y. Yang & J.W. Kim (2012)- Numerical simulation of deep biogenic gas play northeastern Bay of Bengal, offshore Northwest Myanmar. AAPG Int. Conf. Exhib., Milan 2011, Search and Discovery Art. 50562, 32p. *(Abstract + Presentation)*
(Three commercial biogenic methane gas discoveries in Late Pliocene deepwater turbidite sandstones reservoirs of Bengal Fan off NW Myanma, 2900-3300m subsea. Modeling indicates M Miocene- Pliocene section thermally immature. Most biogenic gas generated from M Miocene and E Pliocene shale. Accumulation of commercial quantities of biogenic gas requires early formation of traps and seals. Miocene- Pliocene paleo-hydrates formed have played important role in gas accumulation, acting as seals in initial gas generation stage)

Ciochon, R.L., P.D. Gingerich, G.F. Gunnell & E.L. Simons (2001)- Primate postcrania from the late middle Eocene of Myanmar. Proc. National Academy Sciences USA 98, 14, p. 7672-7677.
(online at: www.pnas.org/content/98/14/7672.full.pdf)
(First postcrania fossils of Pondaungia from M Eocene of C Myanmar. Overall, humeral and calcaneal morphology most consistent with that of other adapiforms and does not support inclusion in Anthropoidea)

Ciochon, R. L. & G.F. Gunnell (2002)- Eocene primates from Myanmar: historical perspectives on the origin of Anthropoidea. Evolutionary Anthropology 11, 4, p. 156-168.

Ciochon, R. L. & G.F. Gunnell (2002)- Chronology of primate discoveries in Myanmar: influences on the anthropoid origins debate. American J. Physical Anthropology, Suppl. 35, p. 2-35.
(First Eocene mammals from Asia described from Myanmar in 1916. First primates (Pondaungia, Amphipithecus) described in 1927 and 1937. all from M Eocene Pondaung Fm in Myanmar, and commonly compared with anthropoids. In late 1990s new primates discovered in Myanmar (Bahinia, Myanmarpithecus). None of known Asian primate taxa appear closely related to African anthropoids, making Asian origin for Anthropoidea unlikely)

Ciochon, R.L. & G.F. Gunnell (2004)- Eocene large-bodied primates of Myanmar and Thailand: morphological considerations and phylogenetic affinities. In: C.F. Ross & R.F. Kay (eds.) Anthropoid origins: new visions, Kluwer, New York, p. 249-282.

Ciochon R.L., D.E. Savage, T. Tint & B. Maw (1985)- Anthropoid origins in Asia? New discovery of *Amphipithecus* from the Eocene of Burma. Science 229, p. 756-759.

Clegg, E.L.G. (1938)- The geology of part of the Minbu and Thayetmyo Districts, Burma. Mem. Geol. Survey India, Memoir 72, 2, p. 132-307.

Clegg, E.L.G. (1941)- The Cretaceous and associated rocks of Burma. Mem. Geol. Survey India 74, p. 1-101.

Cliff, D. & P. Carter (2016)- Exploration of the Rakhine Basin, pushing out the barriers with new 3D. 2nd AAPG/EAGE/MGS Conf. Unlocking the complex geology of Myanmar, Yangon 2015, Search and Discovery Art. 10848, 25p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/10848cliff/ndx_cliff.pdf)

Cocks, L.R.M. & R.B. Zhan (1998)- Caradoc brachiopods from the Shan States, Burma (Myanmar). Bull. British Museum (Natural History), Geology, 54, 2, p. 109-130.
(Late Ordovician brachiopod fauna from Naungkangyi Gp in Shan States (= Sibumasu Plate) with 37 species. Faunal affinities most comparable with S China, suggesting proximity during Ordovician)

Colbert, E.H. (1937)- A new primate from the upper Eocene Pondaung Formation of Burma. American Museum Novitates 951, p. 1ï 18.
(online at: http://digitallibrary.amnh.org/handle/2246/2188)
(First? primate fossil (mandibule with few teeth) from upper Eocene Pondaung fauna, NW of Mogaung, Myanmar, named Amphipithecus mogaungensis, new genus and species)

Colbert, E.H. (1938)- Fossil mammals from Burma in the American Museum of Natural History. Bull. American Museum Natural History 74, 6, p. 395-436.
(online at: http://digitallibrary.amnh.org/handle/2246/372)
(Diverse collection of mammal fossils from (1) M-U Pleistocene terraces along Irrawaddy River in N Myanmar (most common in Terrace 3); (2) in underlying E Pleistocene Upper Irrawaddy Beds (U Irrawaddy fauna probably related to Upper Siwalik fauna of India and E Pleistocene faunas of Java (Tji Djoelang, Kali Glagah and Djetis); and (3) Mogok cave fauna (likely equivalent to M Pleistocene Trinil fauna of C Java))

Connors, K., C. Jorand & L. Pryer (2017)- Influence of structural inheritance on the Moattama- East Andaman basins and the present day plate boundary. In: Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, p. 1-27. *(Abstract + Presentation)*
(Moattama Basin offshore Myanmar between Yadana-M8 High in W and Tanintharyi- Mergui Shelf to E, continuing S as oceanic (or highly extended continental crust) E Andaman Basin. Basement of Yadana-M8 highs in N and Alcock and Sewell rises with E Miocene volcanic units (K-Ar age date of ~20 Ma), possibly continental crust intruded during arc magmatism (W Burma Terrane possible analogue.)

Cossey, S. D. Kim, S.Y. Yang & H.Y. Jung (2013)- The identification and implication of injectites in the Shwe gas field, offshore Northwestern Myanmar. AAPG Ann. Conv. Exhib., Pittsburgh 2013, Search and Discovery Art. 20225, 26p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2013/20225cossey/ndx_cossey.pdf)
(Sand injectites identified in offshore Pliocene Shwe (biogenic) gas field in Myanmar (distal Bengal Fan, on oceanic crust). Injectites provide vertical and lateral continuity from basal proximal lobe sequence to overlying distal lobe sequence. Sills 5 cm- 2m thick in cored wells, with sharp bases and tops))

Crow, M.J. & Khin Zaw (2017)- Geochronology in Myanmar (1964-2017). In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Appendix, p. 713-759.
(Summary of published isotopic age data for Myanmar up to early 2017. K–Ar age data often ambiguous due to resetting by later tectonic and metasomatic events. Isotopes of Rb and Sr in magmatic minerals more stable. U-Pb isotopes of zircons from granitoids particularly useful, also as detrital zircons in sediments)

Cruickshank, R.D. & K. Ko (2003)- Geology of an amber locality in the Hukawng Valley, northern Myanmar. J. Asian Earth Sci. 21, p. 441-455.
(Occurrence of M Cretaceous amber ('burmite') rich in arthropod fossils in volcanics-rich clastics in Hukawng Valley of NE Myanmar. With Late Albian- E Cenomanian palynomorphs. Believed to be of M-U Albian age based on ammonite Mortoniceras. Also nearby U Albian Orbitolina limestone (see also Shi et al. 2012))

Curiale, J.A., P. Kyi, I.D.Collins, Aung Din, Kyaw Nyein, Maung Nyunt & C.J.Stuart (1994)- The Central Myanmar (Burma) oil family; composition and implications for source. Organic Geochem. 22, 2, p. 237-255.
(Geochemistry of 31 Eocene-Miocene oils/seeps, Eocene coal and Eocene resin from C Myanmar basin system suggest deep Eocene resinous shale/coal source for oils. Least mature oils in oldest reservoirs with oldest (Eocene) reservoirs filling first and youngest (Miocene) reservoirs filling last. Surface seepage may be from subsurface traps filled to spillpoint)

Dalton, L.V. (1908)- Notes on the geology of Burma. Quart. J. Geol. Soc., London, 64, p. 604-644.
(Geological observations in Irawadi Valley, with descriptions of Eocene and younger molluscs)

De Bonis, L., F. Sole, Y. Chaimanee, Aung Naing Soe, Chit Sein, V. Lazzaria, O. Chavasseau & J.J. Jaeger (2018)- New hyaenodonta (Mammalia) from the middle Eocene of Myanmar. Comptes Rendus Paleovol 17, 6, p. 357-365.
(online at: https://www.sciencedirect.com/science/article/pii/S1631068318300010)
(M Eocene Pondaung Fm in Myanmar with rich mammalian fauna, including Hyaenodonta of genera Kyawdawia, Yarshea, Orienspterodon)

De Cotter, G.P. (1924)- The oil shales of Eastern Amherst, Burma, with a sketch of the geology of the neighbourhood. Records Geol. Survey India 55, p. 273-313.
(online at: https://archive.org/details/in.ernet.dli.2015.98037)
(Late Tertiary (Miocene- Pliocene?) outcrops of ~100m thick lacustrine shale with numerous remains of teleostean fish, plant leaves and molluscs (Melaniidae, Viviparidae, Unionidae) in Mesod Basin at Birma- Thai border area. Some shale rich enough to ignite when heated)

De Cotter, G.P. (1938)- The geology of parts of the Minbu, Myingyan, Pakokku, and lower Chindwin districts. Memoir Geol. Survey India 72, 1, p. 1-136.

De la Rue, W. & H. Muller (1857)- Chemical examination of Burmese naphtha, or Rangoon tar. Proc. Royal Soc. London 1857, 8, p. 221-228.
(online at: http://rspl.royalsocietypublishing.org/content/8/221.full.pdf+html)
(At several localities in Burmah tar is mined from 60' deep wells. Mostly composed of volatiles. Etc.))

De Terra, H. (1943)- The Pleistocene of Burma. In: Research on early man in Burma, Trans. American Philosophical Soc., N.S. 32, 3, p. 271-340.
(Five Pleistocene terraces along Irrawaddy River, unconformably over tilted Pliocene- E Pleistocene 'Upper Irrawaddy Beds'. Contain 'Anyathian' Paleolithic stone tools)

Dey, A., M.F. Hussain & M.N. Barman (2017)- Geochemical characteristics of mafic and ultramafic rocks from the Naga Hills Ophiolite, India: Implications for petrogenesis. Geoscience Frontiers 9, 2, p. 517-529.
(online at: www.sciencedirect.com/science/article/pii/S1674987117301020)
(Naga Hills Ophiolite in NE India one of fragments of Tethyan oceanic crust in Himalayan Orogenic system. Geochemistry of ophiolites suggest two groups)

Diener, C. (1911)- Anthracolithic fossils of the Shan States. Mem. Geol. Survey India (Palaeontologica Indica), N.S., 3, 4, p. 1-74.
('Carboniferous fossils from Myanmar'. Mainly on (Permian) brachiopods from Fusulina elongata Limestone of Ke-Hsi Mansam in E Myanmar (incl. Spirifer, Spiriferella, Productus spp., Camarophoria purdoni, Oldhamina, Streptorhynchus, Dielasma, etc.). Also bryozoa (Fenestella, Polypora), corals (Amplexus, Zaphrentis, Lonsdaleia), etc.))

Ding, H., Q. Hou & Z. Zhang (2016)- Petrogenesis and tectonic significance of the Eocene adakite-like rocks in western Yunnan, southeastern Tibetan Plateau. Lithos 245, p. 161-173.
(Eocene magmatic rocks widespread in W Yunnan, SE Tibetan Plateau, linked with India-Asia collision. Eocene-Oligocene potassic-ultrapotassic magmatic suite widely distributed across E Qiangtang- Simao Block and W margin of Yangtze Plateau. Adakite-like rocks from E part of W Yunnan with zircon age of ~35 Ma and derived from partial melting of late Paleozoic- Mesozoic mafic rocks formed as lower crust of continental magmatic arc during E-ward Paleotethys subduction. Eocene magmatic rocks in W Yunnan generated during removal of thickened continental lithosphere triggered by India and Asia collision)

DMR-CCOP-TCNU (2017)- Technical seminar on Biostratigraphy and karst morphology of Satun aspiring geopark, Bangkok, p. 1-27.
(online at: www.dmr.go.th/download/article/article_20170720115517.pdf)
(Geology of Satun Province- Tarutao Island in SW Thailand. Part of Shan-Thai(Sibumasu) Plate, with well-documented complete Cambrian- Permian marine sediment section. Tarutao Gp Late Cambrian- E Ordovician clastics with trilobites. Thung Song Gp Ordovician limestones with nautiloids, stromatolites and trilobites. Thong Pha Phum Gp Silurian- Carboniferous black shale, chert, sandstone and limestone with graptolites, trilobites, dacryoconarids (tentaculites), brachiopods. U Carboniferous- Lower Permian Kaeng Krachan Gp clastics with glacial dropstones, including unweathered granite pebbles)

Ducrocq, S., Aung N. Soe, A.K. Aung, M. Benammi, Bo Bo, Y. Chaimanee, T. Tun, T. Thein & J.J. Jaeger (2000)- A new anthracotheriid artiodactyl from Myanmar, and the relative ages of the Eocene anthropoid primate-bearing localities of Thailand (Krabi) and Myanmar (Pondaung). J. Vertebrate Paleontology 20, p. 755-760.

Ducrocq, S., Aung N. Soe, C. Sein, V. Lazzari, Y. Chaimanee, X. Valentin & J.J. Jaeger (2016)- First record of a diacodexeid artiodactyl in the middle Eocene Pondaung Formation (Myanmar). Palaeontologische Zeitschrift (PalZ) 90, 3, p. 611-618.
(Fragmentary maxilla of new diacodexeid artiodactyl, Magwetherium burmense. Morphological affinities with the diacodexeid Jiangsudon from M Eocene Shanghuang fissure fillings in E China)

Du, Naizheng (1988)- Fossil wood from the late Tertiary of Burma. Proc. Kon. Nederl. Akademie Wetenschappen B91, 3, p. 213-236.
(Two pieces of fossil wood collected almost 100 years ago from Pliocene of Magwe and Yenangyaung oil fields described as new species Ebenoxylon burmense and Saracoxylon irrawaddiense)

Edwards, W.N. (1923)- On some Tertiary plants from South-East Burma. Geol. Magazine 60, 4, p. 159-165.
(Collection of Tertiary plant fossils collected by Gregory near Tichara, NW of Myawadi in Myanmar- Thailand border region. Incl. Ficophyllum burmense, Dipterocarpophyllum, Leguminosites, Dicotyledonous, etc.)

Edwards, A., R. Courel, N. Bianchi, A. Duffy, C. Jorand, G. Moltifiori, L. Ryan & S. O'Connor (2017)- Pore pressure modelling in data limited areas- a case study from a deepwater block, offshore Rakhine Basin, Myanmar. In: 79th EAGE Conf. Exhibition, Paris 2017, p.

UN/ESCAP (1996)- Geology and mineral resources of Myanmar. Atlas of mineral resources of the ESCAP region, 12, United Nations Publications, New York, p. 1-193.
(Extensive review of geologic setting and mineral occurrences of Myanmar)

Evans, P. & C.A. Sansom (1941)- The geology of British oil fields; 3, The oil fields of Burma. Geol. Magazine 78, 5, p. 321-350.
(Oilfields of Burma almost all in elongated N-S Tertiary basin, bordered on W by Arakan Yoma and on E by the ancient plateau of Shan Hills. Most oil from fields in single line of folding and in belt 50 miles long between latitudes 20° 20' and 21° 10'. Remainder in small fields between 19° 25' and 23° 45')

Fan, J.J., C. Li, M. Wang, C.M. Xie & W. Xu (2015)- Features, provenance, and tectonic significance of Carboniferous- Permian glacial marine diamictites in the Southern Qiangtang-Baoshan block, Tibetan Plateau. Gondwana Research 28, 4, p. 1530-1542.
(Edge of S Qiangtang- Baoshan block, Tibetan Plateau, with glacial marine diamictite in Gangmaco-Dabure area. Four distinct Carboniferous- E Permian glacial cycles. Gravel assemblages of diamictites similar to rock assemblages of Indian Gondwana basement. Detrital zircons from matrix of glacial marine diamictite similar between S Qiangtang-Baoshan block, Lhasa block, Tethys Himalaya and India-Nepal areas, with peak ages mainly at 576, 788, 1026, 1512 and 2518 Ma. Provenance of diamictite Indian Gondwana. Diamictites deposited on passive continental margin)

Fan, P. & K. Ko (1994)- Accreted terranes and mineral deposits of Myanmar. J.Southeast Asian Earth Sci. 10, p. 95-100.
(Three terranes in Myanmar: (1) Shan-W Malaysia-Sumatra in E (three subterranes: W Kachin continental fragment, E Kachin-Shan= Baoshan, and Karen-Tenasserim); (2) C Burma Basin, and (3) Arakan Yoma in W (W Ranges or Indo-Burman ranges subduction system, uplifted by collision of India plate in Eocene). Volcanic arc divides C Myanmar Basin terrane into forearc and back-arc basins; oil-bearing fields in forearc basin. In Arakan-Yoma terrane, chromium and nickel of Late Cretaceous- E Tertiary age in ultramafic belts)

Fan, W., Y. Wang, A. Zhang, F. Zhang, Y. Zhang (2010)- Permian arc-back-arc basin development along the Ailaoshan tectonic zone: geochemical, isotopic and geochronological evidence from the Mojiang volcanic rocks, Southwest China. Lithos 119, p. 553-568.

(Wusu and Yaxuanqiao basalts in S China with affinities to both MORB- and arc-like sources, together with other geological observations, support development of Permian arc-back-arc basin along Ailaoshan- Song Ma tectonic zone in response to N-ward subduction of Paleotethys main Ocean. Final closure of basin in uppermost Triassic due to diachronous amalgamation between Yangtze and Simao- Indochina Blocks)

Fang, N., Q. Feng, S. Zhang & X. Wang (1998)- Paleo-Tethys evolution recorded in the Changning-Menglian Belt, western Yunnan, China. Comptes Rendus Academie Sciences, Paris, Earth Planetary Sci., 326, p. 275-282.
(Changning-Menglian Belt of W Yunnan 400km in N-S direction, 50-70km wide. Represents part of Paleotethys Ocean, with volcano-sedimentary record from E Devonian to M-L Triassic and several types of oceanic plateaus. Flanked by Lincang-Simao massif with Cathaysian flora-fauna in E and Gengma-Baoshan massifs with Permo-Carboniferous glacial deposits in W)

Fang, N. & Y. Niu (2003)- Late Palaeozoic ultramafic lavas in Yunnan, SW China, and their geodynamic significance. J. Petrology 44, 1, p. 141-157.
(online at: https://academic.oup.com/petrology/article/44/1/141/1408585)
(Ultramafic pillow lavas from Late Palaeozoic marine sequences in Yunnan have >26% MgO, olivine phenocrysts, clinopyroxenes with or without plagioclase in devitrified glassy matrix. Termed high-Mg picrites. Chemistry consistent with mantle plume origin. Chert interbes with Carboniferous radiolaria)

Fang, W., R. van der Voo & Q. Liang (1989)- Devonian paleomagnetism of Yunnan Province across the Shan Thai-South China Suture. Tectonics 8, 5, p. 939-952.
(Contrasting paleolatitudes for Devonian sediments in E Yunnan (equatorial; part of Yangtze/S China Block) versus W Yunnan (paleolatitude of ~42°; part of Gondwanan Shan-Thai Block). Majority of samples overprinted by present-day field magnetization. Blocks separated by Red River and Lancang (Mekong) River fault zones, one of which inferred to be ancient suture)

Fang, W., R. van der Voo & Q. Liang (1990)- Ordovician paleomagnetism of Eastern Yunnan, China. Geophysical Research Letters 17, 7, p. 953-956.
(Ordovician formations of Yangtze Paraplatform (South China Block) show paleolatitude of 48°S, supporting Ordovician position of South China adjacent to Gondwana)

Fang, X., X. Ma, W. Li, Y. Zhang, Z. Zhou, T. Chen, Yong Lu & S Yu & J. Fa (2018)- Biostratigraphical constraints on the disconformity within the Upper Ordovician in the Baoshan and Mangshi regions, western Yunnan Province, China. Lethaia, 51, 2, p. 312-323.
(Ordovician- Silurian of Baoshan and Mangshi regions in W Yunnan regarded as parts of Sibumasu terrane. Significant disconformity in U Ordovician, possibly related to sea-level drop during Late Ordovician glaciations or, less likely regional tectonic uplift in N Sibumasu)

Fang, Z.J. & J.C.W. Cope (2008)- Affinities and palaeobiogeographical significance of some Ordovician bivalves from East Yunnan, China. Alcheringa 32, 3, p. 297-312.
(Restudy of four poorly known Ordovician bivalve genera from Lw Ordovician Hongshiya Fm of E Yunnan. Similarities between cycloconchids suggest proximity of E Yunnan and Australia, although no species in common. Eastern W Yunnan fauna lay at much higher paleolatitude than E Yunnan fauna)

Fareeduddin & Y. Dilek (2015)- Structure and petrology of the Nagaland-Manipur Hill ophiolitic melange zone, NE India: A fossil Tethyan subduction channel at the India- Burma plate boundary. Episodes 38, 4, p. 298-314.
(online at: www.episodes.org/index.php/epi/article/viewFile/82426/65474)
(Nagaland-Manipur Hill ophiolite belt in IndoMyanmar Ranges in NE India represents S extension of Neotethyan Yarlung-Zhangbo suture in S Tibet, and connects late Mesozoic collision front in N with modern trench-arc system in Andaman Sea region in S. Ophiolites occur as blocks or thrust sheets within melange and are associated with eclogitic and blueschist rock assemblages. Ophiolitic melange tectonically sandwiched between Triassic- E Cretaceous accretionary prism complex (Nimi Flysch, overlying Burma Plate) in E and Late Cretaceous-Miocene accretionary wedge (Disang Flysch; on India Plate) to W. Melange represents subduction channel of fast subduction of Neotethys oceanic lithosphere beneath Asia- Sundaland. U Eocene-

Miocene Pokhpur Fm uncomformably over melange and accretionary prism metasediments constitute wedge-top or slope-basin sequence, rather than postcollisional molasse. Nagaland-Manipur Hill ophiolites represent accretionary-type ophiolite, mainly from downgoing plate, not Penrose-type complete ophiolite sequence)

Feng, Q. & D. Helmcke (2001)- Late Paleozoic compressional deformation in the Simao Region, Southern Yunnan, P.R. of China. Newsletters on Stratigraphy 39, 1, p. 21-31.
(In Yunxian anticline, 40 km NW of Simao, strongly deformed Carboniferous- Lower Permian sediments, deposited in deep basin, separated by angular unconformity from shallow marine strata of upper M Permian and U Permian age. Existence of Triassic island arc along Lancang Jiang must be questioned)

Gaillot, J. & D. Vachard (2007)- The Khuff Formation (Middle East) and time-equivalents in Turkey and South China: biostratigraphy from Capitanian to Changhsingian times (Permian), new foraminiferal taxa, and palaeogeographical implications. Coloquios de Paleontologia, 57, p. 37-223.
(Middle- Late Permian foraminiferal biostratigraphy for 'Cimmerian Plates' of Middle East (can be applied to to Sibumasu plates in SE Asia; JTvG). Paleobiogeographically significant M-L Permian foraminifera for Cimmerian/ Sibumasu blocks incl. W Thailand, Baoshan) include Shanita, 'Lysites', Hemigordiopsis renzi, Eopolydiexodina ex gr. persica. Indochina- S China plates (e.g. E Thailand) characterized by presence of Lepidolina, Paleofusulina, Colaniella)

Gaillot, J., D. Vachard, T. Galfetti & R. Martini (2009)- New latest Permian foraminifers from Laren (Guangxi Province, South China): palaeobiogeographic implications. Geobios 42, p. 141-168.
(Latest Permian limestones of Yangtze carbonate platform at Laren, S China, with rich small foram fauna. Paleogeographic distribution interpreted to be Neo-Tethyan, ranging from S Turkey to S China and Japan)

Gaillot, J., T. Galfetti, R. Martini & D. Vachard, & (2007)- Latest Permian calcisponges of Laren, Guangxi Province, South China. In: E. Vennin et al. (eds.). Facies from Palaeozoic reefs and bioaccumulations. Mem. Museum Nat. Histoire Naturelle 195, Paris, p. 321-324.
(Latest Permian Wujiaping Fm limestones of Paleozoic- M Triassic Yangtze carbonate platform at Laren with rare fusulinids (Nankinella cf. inflata, Reichelina simplex) and low diversity calcisponges)

Gao Lianda (1998)- On the discovery of a Gondwana affinity microflora from Baoshan, West Yunnan and its geologic significance. Acta Geoscientica Sinica 1998, 1, p.
(First record of palynomorphs from E Permian Dingjiazhai Fm in Baoshan, W Yunnan. 55 species. Miospore assemblages assigned to Parasaccites distinctus-Microbaculispora fentula zone, dominated by Gondwana microfloral elements (up to 80%, incl. Parasaccites distinctus, Brakarites rotatus, Potonieisporites spp., Microbaculispora, Interradispora, Horriditriletes, etc.). Asselian-Sakmarian in age)

Gardiner, N.J., L.J. Robb, C.K. Morley, M.P. Searle, P.A. Cawood, M.J. Whitehouse, C.L. Kirkland, N.M.W. Roberts & Tin Aung Myint (2016)- The tectonic and metallogenic framework of Myanmar: a Tethyan mineral system. Ore Geology Reviews 79, p. 26-45.
(Myanmar highly prospective but little explored minerals province, with deposits of tin, tungsten, copper, gold, zinc, lead, nickel, silver, jade and gemstones. MyanmarMesozoic-Recent geological history dominated by orogenic events representing closing of Tethys Ocean. Genesis of much of Myanmar's mineral deposits in single, evolving, mineral system: subduction and suturing of Neo-Tethys. Nine metallogenic provinces: (1) Late Cretaceous- Eocene granites with Sn-W, (2) skarn Au-Ag linked to Kabaing Granite (~17 Ma); (3) porphyry Cu-Au (Eocene/ 40 Ma intrusion, (4) epithermal Au-Cu (latest Cretaceous or younger), (5) ultramafic-hosted nickel, jade, (6) orogenic Au, (7) sediment-hosted Pb-Zn in U Paleozoic carbonates of Shan Plateau, (8) gemstones (9) Sediment-hosted epithermal Au. Two sub-parallel magmatic belts: Wuntho-Popa Arc magmatism (mainly 80-110 Ma, also younger, with Cu-Au) and Mogok-Mandalay-Mergui Belt granitoids (~170 Ma, Late Cretaceous- Eocene with Sn-W mineralisation)

Gardiner, N.J., L.J. Robb & M.P. Searle (2014)- The metallogenic provinces of Myanmar. Applied Earth Science (Trans. Inst. Mining Metallurgy B), 123, 1, p. 25-38.

(Myanmar contains important deposits of tin, tungsten, copper, gold, gemstones, zinc, lead, nickel and silver. Three world class deposits: Bawdwin (lead-zinc-silver), Monywa (copper) and Mawchi (tin-tungsten). Three principal metallotects: (1) Late Cretaceous Wuntho-Popa Arc of subduction-related granites with associated porphyry-type copper-gold and epithermal gold; (2) Late Cretaceous and younger Mogok-Mandalay-Mergui Belt with Sn-W (tin-tungsten) associated with crustal melt granites; (3) Shan Plateau with massive sulphide-type lead-zinc deposits)

Gardiner, N.J., L.J. Robb & M.P. Searle, K. Htun & K. Zaw (2017)- The Bawdwin Mine, Myanmar: a review of its geological setting and genesis. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 30, p. 669-686.
(Bawdwin Mine Pb-Zn-(Cu-Ag-Ni) world-class mineral deposit in N Shan State, NE Myanmar, with near-continuous mining since 1412. E Paleozoic (Late Cambrian- E Ordovician) exhalative marine siliciclastic-felsic volcanogenic massive sulphide (VMS) deposit. Originally exploited as silver deposit, redeveloped in early 1900's as mainly lead-zinc producer (largest lead mine before WWII). Thermal overprint in Late Triassic, linked to Indosinian orogeny)

Gardiner, N.J., M.P. Searle, C.K. Morley, L.J. Robb, M.J.Whitehouse, N.M.W. Roberts, C.L.Kirkland & C.J. Spencer (2018)- The crustal architecture of Myanmar imaged through zircon U-Pb, Lu-Hf and O isotopes: tectonic and metallogenic implications. Gondwana Research 62, p. 27-60.
(Myanmar at least 4 major magmatic belts. Eastern and Main Range Provinces associated with Late Permian-E Triassic closure of Paleo-Tethys;Mogok- Mandalay- Mergui Belt and Wuntho- Popa Arc response to Eocene closure of Neo-Tethys. Mogok-Mandalay-Mergui Belt divided into Tin Province (~77-50 Ma magmatism) and Mogok Metamorphic Belt (complex magmatic- metamorphic history). Tagaung-Myitkyina Belt magmatic age of 172 Ma. New tectonic model for Myanmar: Baoshan and Greater Sibumasu likely assembled on or before Triassic, then sutured onto Indochina margin in Late Triassic. Tengchong Block within Myanmar southerly termination of Meso-Tethys suture immediately N of Mogok area. Tengchong Block sutured onto Greater Sibumasu before Late Cretaceous, after which Neo-Tethys subduction drove magmatism of Wuntho-Popa Arc)

Gardiner, N.J., M.P. Searle, L.J. Robb & C.K. Morley (2015)- Neo-Tethyan magmatism and metallogeny in Myanmar- an Andean analogue? J. Asian Earth Sci. 106, p. 197-215.
(In Myanmar two (U Cretaceous- Paleogene) granite belts with significant metal deposits: (1) Late Cretaceous (mainly 80-110 Ma) Wuntho-Popa Arc with I-type granitoids with Cu-Au mineralization; (2) Mogok-Mandalay-Mergui Belt with S-type granites with Sn-W deposits. Represent subduction of Neo-Tethys below W side of Sibumasu Terrane (W Birma). Belts are parallel, reminiscent of metallogenic belts of C Andes)

Gardiner, N.J., J.P. Sykes, A. Trench & L.J. Robb (2015)- Tin mining in Myanmar: production and potential. Resources Policy 46, 2, p. 219-233.
(online at: www.burmalibrary.org/docs22/Tin_Mining_in_Myanmar.pdf)
(In 2014, Myanmar became World's third biggest tin producer, after China and Indonesia. Likely contributed to drop in tin prices in 2015. Production increase from new Man Maw mining district in Wa State, E Myanmar, not far from traditional tin-producing areas in S)

Garson, M.S., B.J. Amos & A.H.G. Mitchell (1976)- The geology of the area around Neyaungga and Yengan, southern Shan states, Burma. Inst. Geol. Science, London, Overseas Memoir 2, 2, p. 1-70.

Ghose, N.C., O.P. Agrawal & N. Chatterjee (2010)- A geological and mineralogical study of eclogite and glaucophane schists in the Naga Hills Ophiolite, Northeast India. Island Arc 19, p. 336-356.
(Low- to high-P metamorphic assemblages in metabasic rocks and metachert inU Cretaceous- Eocene ophiolite belt of Naga Hills, N Indo-Myanmar Ranges, in Indo-Eurasian collision zone. Metabasic rocks high-grade barroisite/ glaucophane epidote eclogite and glaucophane schist, also low-grade greenschist and prehnite-clinochlore schist, associated with lava flows and ultramafic cumulates at W thrust contact. Peak P-T conditions of ~20 kb/ 525°C. Retrogression/ uplift marked by replacement of barroisite and omphacite by glaucophane, followed by secondary actinolite, albite and chlorite. Mylonite in garnet lherzolite and 'mica fish' in glaucophane schist indicate ductile deformation in shear zone along which ophiolite was emplaced)

Ghose, N.C., O.P. Agrawal & R.N. Singh (1986)- Geochemistry of the ophiolite belt of Nagaland, N.E. India. In: N.C. Ghose & S. Varadarajan (eds.) Ophiolites and Indian plate margin, Sumna Publishers, Patna, p. 241-294.

Ghose, N.C., N. Chatterjee & Fareeduddin (2014)- A petrographic atlas of ophiolite: an example from the eastern India-Asia collision zone. Springer India, p. 1-232.
(Extensive review of Naga Hills ophiolite, with ultramafic rocks, plagiogranite, glaucophane schist, eclogite, chert, etc.)

Ghose, N.C. & Fareeduddin (2011)- Textural fingerprints of magmatic, metamorphic and sedimentary rocks associated with the Naga Hills Ophiolite, northeast India. In: J. Ray et al. (eds.) Topics in igneous petrology, Springer, p. 321-354.

Ghosh, S., B. Chattapadhyay, D.K. Roy & P. Venkataramana (1984)- On the radiolarian bearing rocks of Naga Hills ophiolite. Geol. Survey India Records 113, 4, p. 89-97.
(U Cretaceous- Lower Eocene age inferred for ophiolite rocks and associated cherts based on radiolarians (however: Baxter et al. (2011) also reported Late Jurassic radiolaria))

Gonguet, C., T. Kelly, F. Mohammad, U.K. Win &, N. Hlaing (2017)- MOGE4 exploration block- Prome Embayment- Central Burma Depression - Learnings from new 2D seismic acquisition. AAPG/EAGE/MGS 3rd Oil & Gas Myanmar Geosciences Conf., Yangon, 7p. *(Extended Abstract)*

Goossens, P.J. (1978)- The metallogenic provinces of Burma: their definitions, geologic relationships, and their extension into China, India, and Thailand. Proc. 3rd Regional Conference on Geology and Mineral Resources of Southeast Asia, Bangkok 1978, p. 431-492.
(Comprehensive review of metallic mineral occurrences in Myanmar. Geology still poorly known)

Gough, A., R. Hall & M.K. BouDagher-Fadel (2020)- Mid-Cenozoic fluvio-deltaic to marine environments of the Salin Sub-basin, Central Myanmar. J. Asian Earth Sci. 190, 104143, p.
(Salin sub-basin within N-S trending Central Basin in Myanmar. Oligocene Shwezetaw, Padaung and Okhmintaung Fms deposits of large broadly S-ward-flowing fluvial systems that interacted with deltaic and shallow marine environments in SW)

Gough, A., J. McNeil & R. Hall (2019)- Where did they come from, where did they go? Oligocene fluvio-deltaic sediments of the Salin Sub-Basin, Myanmar. Proc. 2019 SE Asia Petroleum Expl. Society (SEAPEX) Conf., Singapore 2019, p. 38. *(Abstract and Presentation)*
(Oligocene sediments in Salin Basin in C Myanmar probably intra-montane basin. Large contribution from nearby Myanmar magmatic arc suggested by common Late Cretaceous- Eocene zircons)

Gramann, F. (1974)- Some palaeontological data on the Triassic and Cretaceous of the western part of Burma (Arakan Islands, Arakan Yoma, western outcrops of Central Basin). Newsletters Stratigraphy 3, 4, p. 277-290.
(Confirmation of presence of 'flysch-type' marine U Triassic (Carnian) deposits in Kyauktu-Sa area, at W side of Central Basin of Myanmar: dark shales with Daonella lommeli of Chin Hills, shales with Halobia cf. comata. Unconformably overlain by ~400m thick marine U Cretaceous, incl. Cenomanian limestones with Orbitolina, younger Cretaceous Globotruncana Limestones, thin Maastrichtian with Orbitoides and Siderolites)

Gramann, F., F. Lain & D. Stoppel (1972)- Paleontological evidence of Triassic age for limestones from the Southern Shan and Kayah States of Burma. Geol. Jahrbuch B1, p. 1-33.
(Cephalopod limestone at top of 'U Plateau Limestone' of S Shan and Kauah States of Myanmar. Ammonoids Paraceratites and Flexoptychites suggest Anisian, M Triassic, age, not Permo-Carboniferous. M Triassic age confirmed by conodont Gladiogondella tethydis. Underlain by >1000' of E-M Triassic dolomitic limestones and Permian fusulinid limestones)

Gregory, J.W. (1923)- The geological relations of the oil shales of Southern Burma. Geol. Magazine 60, 4, p. 152-159.
(Tichara oil shales are lacustrine deposits in upper part of series of freshwater deposits of probably Pliocene age. Associated with fossil plant-bearing beds with Leguminosites, Phyllites, Ficophyllum, Dipterocarpophyllum and fresh water molluscs)

Grimaldi D.A., M.S. Engel & P.C. Nascimbene (2002)- Fossiliferous Cretaceous amber from Myanmar (Burma): its rediscovery, biotic diversity, and paleontological significance. American Museum Novitates 3361, p. 1-71.
(online at: http://digitallibrary.amnh.org/handle/2246/2914)
(Amber from thin lignite seams in Kachin, N Myanmar, ('burmite') used in China for at least a millennium for carving decorative objects. Metasequoia (Coniferae) possible source of amber. Age probably Turonian-Cenomanian (90-100 Ma; see also Shi et al. 2012) . Very rich in tropical plant and animal fossils. Newly excavated material in AMNH with 3100 organisms, incl. angiosperm flower and other plant material, mites, insects, flies, snails, etc., etc.)

Gunnell, G.F., R.L. Ciochon, P.D. Gingerich & P.A. Holroyd (2002)- New assessment of *Pondaungia* and *Amphipithecus* (Primates) from the late middle Eocene of Myanmar, with a comment on óAmphipithecidaeô. Contr. Museum of Paleontology, University of Michigan, 30, p. 337-372.

Han, E.M., Y. Sampei & B. Roser (2014)- Upper Eocene coal and coaly shale in the Central Myanmar Basin: origin of organic matter and the effect of weathering. Geochemical J. 48, p. 259-275.
(online at: www.terrapub.co.jp/journals/GJ/pdf/4803/48030259.pdf)
(Extensive Late Eocene coals- coaly shales at W margin C Myanmar Basin. Organic matter mainly terrestrial herbaceous vegetation and aquatic plants, deposited in oxic to oxygen-poor peat swamps in estuarine/ fluvial-deltaic setting. Phase-I rich in gymnosperm biomarkers such as retene and 1,7-dimethylphenanthrene (type II-III kerogen); Phase-II increase in angiosperm proxies like oleanane (type III kerogen))

Harlow, G.E. & W. Bender (2013)- A study of ruby (corundum) compositions from the Mogok Belt, Myanmar: searching for chemical fingerprints. American Mineralogist 98, 7, p. 1120-1132.
(Mogok metamorphic belt of Myanmar famous for classic ruby (corundum: Al2O3) specimens. Model for formation of rubies hosted in marble from Himalayan arc is metamorphism of clays from evaporitic/organic-rich shale units. Mogok may involve igneous intrusions and formation of skarn)

Harrowfield. G. (2015)- Mass Transport Complexes of the Rakhine Basin, Myanmar- Deepwater examples from recent 3D seismic data. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore 2015, 2.3, 5p.
(Mass Transport Complexes constitute significant volume of Miocene- Recent deep water deposits in Rakhine Basin, offshore Myanmar)

Harun, S.N.F., F. Zainetti & G.A. Cole (2014)- The petroleum system of the Central Burma Basin, onshore Myanmar. AAPG Int. Conf. & Exhib., Istanbul 2014, Search and Discovery Art. 41439, 10p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2014/41439harun/ndx_harun.pdf)
(Onshore C Burma Basin Tertiary- age hydrocarbon system with potential source rocks of Eocene through Miocene age. Producing reservoirs M Eocene- M Miocene sandstones. All accumulations of oil and gas in structural traps associated with NNW-SSE trending thrust anticlines)

He, Q., L. Xiao, B. Balta, R. Gao & J. Chen (2010)- Variety and complexity of the Late-Permian Emeishan basalts: reappraisal of plume-lithosphere interaction processes. Lithos 119, 1-2, p. 91-107.
(Compositional variations in Emeishan basalts generated by melting of heterogeneous mantle sources and interaction between Emeishan plume and lithosphere. High-Ti basalts products of deep melting plume head material, similar to oceanic island basalts, with little lithospheric overprint. Low-Ti basalts from shallower melting of plume head with either crustal contamination or by inherited subduction components in lithosphere)

Healey, M. (1908)- The fauna of the Napeng beds or the Rhaetic beds of Upper Burma. Palaeontologia Indica 2, 4, p. 1-88.
(Late Triassic (Rhaetian?) bivalves from N Shan States, Myanmar. Napeng Fm shale fauna dominated by bivalve molluscs, incl. Grammatodon lycettii, Pinna cf. blanfordi, Conocardium, Gervillia spp., Hoernesia filosa, Myophoria, Aequipecten, Modiola, Cardita, etc. (Assemblage similar to 'Padang Fauna' from W Sumatra (Krumbeck 1914))

Helmcke, D., R. Ingavat-Helmcke, Q. Feng, B. Wagner & K. Heppe (2001)- On geodynamic evolution of Simao region (Southwestern Yunnan, China) during Late Paleozoic and Triassic. J. China University of Geosciences 12, 3, p. 195-200.
(online at: www.geobiology.net.cn/chaen/photo/2012-11-10/20121110204048084808.pdf)
(Late Paleozoic compressional deformation along Lancangjiang, Yunnan, SW China, resulted in highly deformed Carboniferous quartz-phyllite, unconformably overlain by Late Triassic red beds and rhyolites, probably reperesenting Late Triassic rifting stage. In Yunxian anticline (NW of Simao) two angular unconformities: (1) deep marine Carboniferous- Lower Permian unconformably overlain by shallow marine upper M-U Permian sediments with fusulinids Yabeina, Verbeekina, Gigantopteris plants and brachiopod Leptodus tenuis. Angular unconformity same age as syn-orogenous sediments first described and dated from Phetchabun region in Thailand; (2) ~Early Triassic. (Simao Block generally regarded as 'Cathaysian' block in Late Paleozoic (W part of Indochina Block); JTvG))

Heppe, K. (2004)- Plate tectonic evolution and mineral resource potential of the Lancang River Zone, SW Yunnan, Peopleǿs Republic of China. Doct. Thesis Georg August University, Gottingen, p. 1-105.
(online at: ediss.uni-goettingen.de/)

Heppe, K. (2006)- Plate tectonic evolution and mineral resource potential of the Lancang River zone, southwestern Yunnan, People's Republic of China. Geol. Jahrbuch, Sonderhefte, D, 7, p. 1-159.
(Published version of 2004 thesis. Late Paleozoic- E Mesozoic geodynamic evolution of Lancang River Zone (Yangtze Platform, SW Yunnan))

Heppe, K., D. Helmcke & K. Wemmer (2007)- The Lancang River Zone of southwestern Yunnan, China: a questionable location for the active continental margin of Paleotethys. J. Asian Earth Sci. 30, 5-6, p. 706-720.
(No active continental margin accounts for subduction of Paleotethys main branch, proposed to be recorded either along Lancang River or Changning-Menglian Belt)

Hisada, K., K. Ueno, T. Sugiyama, K. Nagai and X.D. Wang (2001)- Confirmation of dropstones in the Dingjiazhai Formation of the Gondwana-derived Baoshan Block, West Yunnan. Gondwana Research 4, p. 630-631. *(Abstract)*
(Occurrence of cobble-sized dropstones in thin-bedded shale-siltstone in Dongshanpo section of Dingjiazhai Fm in Shidian area, 30km S of Baoshan, W Yunnan)

Hobson, G.V. (1941)- Report on a geological survey in part of Karenni and the Southern Shan States: Geol. Survey India Memoir 74, 2, p. 103-155.

Holroyd, P.A., T. Tsubamoto, N. Egi, R.L. Ciochon, M. Takai, S.T. Tun, C. Sein & G.F. Gunnell (2006)- A rhinocerotid Perissodactyl from the Late Middle Eocene Pondaung Formation, Myanmar. J. Vertebrate Paleontology 26, 2, p. 491-494.
(Teeth of earliest rhinocerotid, M Eocene Teletaceras from C Myanmar)

Htay, Hla (2016)- Tectonic setting of ophiolite Belts in Myanmar. In: 2nd AAPG/EAGE/MGS Conf. Innovation in geoscience: unlocking the complex geology of Myanmar, Yangon 2015, Search and Discovery Art. 30452, 43p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/30452htay/ndx_htay.pdf)
(Myanmar region N-S trending major tectonic domains, from W to E: Rakhine foredeep, Indo-Burman Ranges outer arc or fore-arc, W Inner-Burma Tertiary inter-arc basin, Central volcanic arc, E Inner-Burman Tertiary

back-arc basin, and Shan-Tenasserim massif ensialic, Sino-Burman Ranges. Ophiolitic rock associations in 3 parallel belts from W to E: W Ophiolite Belt (Naga Hill Line), Central and E Ophiolite Belt (Mandalay Line))

Htay, Hla, K. Zaw & T.T. Oo (2017)- The mafic-ultramafic (ophiolitic) rocks of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 6, p. 117-141.
(Ophiolitic rock in three parallel N-S belts: (1) Western Ophiolitic Belt (Naga Hill Line; eastern hills of the Naga, Chin and Rakhine ranges; pre-Triassic ocean floor? (likely E Cretaceous oceanic crust and plagiogranites?); (2) Central Ophiolitic Belt; and (3) Eastern Ophiolitic Belt (Tagaung-Mytkina Belt M Jurassic ophiolite with Late Jurassic chert). Mandalay Line is combination of (2) and (3). All dismembered incomplete ophiolite bodies in fore-arc accretionary prism, emplaced in Late Cretaceous-Eocene. EOB associated with Cretaceous clastics, radiolarian chert and Orbitolina limestone, which probably overlaps Mesotethys suture)

Htun, Than, Aung Kyin & K. Zaw (2017)- Lead-zinc-silver deposits of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 27, p. 589-623.
(>290 Pb-Zn-Ag deposits known in Myanmar, incl. large volcanic-hosted Namtu-Bawdwin mining complex. Eight types of host rocks with Pb-Zn-Ag mineralization. Pb-Zn-Ag belts at E Paleozoic active margin of N-C Shan Plateau (Sibumasu), hosted within Lower Paleozoic sediments and volcanics)

Htun, Than, Than Htay & K. Zaw (2017)- Tin-tungsten deposits of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 28, p. 625-647.
(Sn-W deposits associated with Late Cretaceous-Paleogene Central and Late Triassic- E Jurassic Eastern granitoid belts of Myanmar. Commercial exploitation of tin and tungsten in Myeik (Mergui) district of Myanmar. Surge in tin production in Myanmar since 2013 from Man Maw Mining District)

Htut, Than (2017)- Myanmar petroleum systems, including the offshore area. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 11, p. 219-260.
(Oil exploration and production in Myanmar date back to 13th century, a time of manual excavation from hand-dug wells in Yenangyaung District. Export of crude oil began in 1853. After British annexation of U Burma Burmah Oil Company (BOC) established and started drilling at Yenangyaung in 1887, followed Yenangyat in 1893 and Chauk (Singu) in 1902. In 1918 oil production of Yenangyaung Field was >5.8 MMbbl/ year and, in 1941, Chauk's production peaked at >4 MMbbl. U Triassic- Miocene stratigraphy of Salin sub-basin of C Myanmar Basin includes Paleocene with Distichoplax, U Eocene with Biplanispira, Asterocyclina, etc.)

Htwe, K.K., K.M. Win, S. Aung & T.N. Win (2017)- Structural trap formation and petroleum accumulation in the northern part of Central Myanmar Basin: Kyaukkwet/ Letpanto Field. AAPG/EAGE/MGS 3rd Oil & Gas Conf., Yangon 2017, 5p. *(Extended Abstract)*

Huang, H. & X. Jin (2016)- Permian oolitic carbonates from the Baoshan Block, China: ooid features, stratigraphic distribution and paleogeographic indications. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 15-16. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(In Baoshan (W Yunnan) and Peninsular Thailand(Sibumasu) block onset of (mid-latitude) oolitic carbonates in late M Permian (Wordian- Capitanian) (see also Huang et al. 2017))

Huang, H., X. Jin, F. Li & Y. Shen (2017)- Permian oolitic carbonates from the Baoshan Block in western Yunnan, China, and their paleoclimatic and paleogeographic significance. Int. J. Earth Sciences 106, 4, p. 1341-1358.
(M-L Permian ooids in Hewanjie Fm (N Baoshan) and Shazipo Fm (S Baoshan Block). Diachronous onset of Permian ooids among Gondwana-derived Cimmerian blocks: (1) mostly Sakmarian in Cl Taurides- C Pamir-Karakorum Block versus (2) Wordian-Capitanian in Baoshan Block, Peninsular Thailand and S Qiangtang (these also with Asselian- Sakmarian glaciomarine diamictite). Baoshan Block at higher paleolatitude during

Asselian- Sakmarian than blocks with Sakmarian ooids. Marine ooids virtually absent near equator, so Baoshan Block interpreted to drift to warm-water southern mid-latitudes during Wordian- Capitanian)

Huang, H., X. Jin & Y. Shi (2008)- Middle Permian fusulinids from Southern Baoshan Block, Western Yunnan, China. Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), Bangkok 2008, p. 169. *(Abstract only)*
(online at: www.geo.sc.chula.ac.th/Geology/English/News/Technique/GREAT_2008/PDF/056.pdf)
(41 M Permian fusulinid species of 9 genera from lower Shazipo Fm in of SE Baoshan Block, W Yunnan, China (= Cimmerian/Sibumasu Block). Three biozones in ascending order (1) Verbeekina inflata Range Zone (9 species of Schwagerina, Roadian-Wordian in age, with Verbeekina inflata, V. grabaui, Pseudodoliolina pulchra and P. chinghaiensis, (2) Eopolydiexodina Abundance Zone (high diversity, commn Eopolydiexodina, Roadian-Wordian and (3) Sumatrina annae Range Zone (5 species of Sumatrina, incl. Sumatrina longissima and S. annae (Wordian- E Capitanian))

Huang, H., X. Jin & Y. Shi (2015)- A *Verbeekina* assemblage (Permian fusulinid) from the Baoshan Block in western Yunnan, China. J. Paleontology 89, 2, p. 269-280.
(Newly discovered M Permian (~Capitanian) Verbeekina assemblage from Xiaoxinzhai Section in Baoshan Block. Fusulinid assemblage of 11 species/ 6 genera, incl. Verbeekina verbeeki, Pseudodoliolina pseudolepida, Sumatrina annae, Yangchienia, Xiaoxinzhaiella, and ?Rugosochusenella. Two unusual attributes: dominance of Verbeekina and relatively low diversity compared with coeval fusulinids from paleo-tropical S China, indicating Baoshan Block probably in subtropical setting in M Permian (NB: several of these species were first described from W Sumatra; JTvG))

Huang, H., X. Jin & Y. Shi (2015)- Mid-Permian fusulinids of the Bawei Section in southern Baoshan Block of western Yunnan, China with a discussion on paleogeographic implications. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 28-30. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(Permian fusulinids and carbonates of Baoshan Block in W Yunnan show dramatic switch from cool, Gondwana-affinity to warm, Tethyan affinity. M Permian carbonates in some areas have diverse verbeekinids and neoschwagerinids and rare staffellids (and ooid grainstones), others no verbeekinids/ neoschwagerinids but abundant staffellids (and dolomitic peloidal/skeletal wackestone-packstones). This reflects local sedimentary factors (open vs. restricted platform), not large-scale paleolatitude changes)

Huang, H., X. Jin, Y. Shi, H. Wang, J. Zheng & Pu Zong (2020)- Fusulinid-bearing oolites from the Tengchong Block in western Yunnan, SW China: Early Permian warming signal in the eastern peri-Gondwana. J. Asian Earth Sciences 193, 104307, p.
(Oolites with E Permian (Sakmarian-Artinskian) Eoparafusulina fusulinids from Cimmerian Tengchong Bloc, W Yunnan, probably reflect short-term warming pulse during demise of late Paleozoic glaciation in Gondwana)

Huang, H., X. Jin, Y. Shi & X. Yang (2009)- Middle Permian Western Tethyan fusulinids from southern Baoshan Block, Western Yunnan, China. J. Paleontology 83, 6, p. 880-896.
(New fusulinid collections from SE Baoshan Block in SW China necessitate paleobiogeographic re-evaluation of M Permian fusulinids in region. 32 fusulinid species, 9 genera, 3 Murgabian- Midian biozones (Schwagerina yunnanensis Range Zone, Eopolydiexodina Abundance Zone, and Sumatrina annae Range Zone). Assemblages belong to W Tethyan Province: presence of 'W Tethyan' genera Eopolydiexodina (but also 'Tethyan' Verbeekina, Sumatrina and Pseudodoliolina) and low diversity suggests rel. high latitudinal region within Tethyan Realm (N.B.: This 'Cimmerian' Baoshan Block includes 'Sumatran' species Verbeekina, Sumatrina annae Volz 1904, Schwagerina padangensis Lange 1925, Pseudodoliolina, etc.; JTvG))

Huang, H., Y. Shi & X. Jin (2015)- Permian fusulinid biostratigraphy of the Baoshan Block in western Yunnan, China with constraints on paleogeography and paleoclimate. J. Asian Earth Sci. 104, p. 127-144.
(Gondwana-derived Baoshan Block in W Yunnan, China, yields poor Sakmarian-Yakhtashian fusulinids with Eoparafusulina and Pseudofusulina, signifying temperate-water conditions. M Permian fusulinids more diversified warm-water assemblages (Schwagerina, Eopolydiexodina, Sumatrina and Verbeekina; also small

foram Shanita in Midian). Baoshan block in Murgabian-Midian probably located between equatorial region to N and majority of Sibumasu areas lacking Verbeekinids and Neoschwagerinids with temperate water to S)

Huang, H., Y.K. Shi & X.C. Jin (2016)- Permian (Guadalupian) fusulinids of Bawei Section in Baoshan Block, western Yunnan, China: biostratigraphy, facies distribution and paleogeographic discussion. Palaeoworld 26, 1, p. 95-114.
(online at: www.sciencedirect.com/science/article/pii/S1871174X16300026?via%3Dihub)
(Bawei Section in Shazipo Fm of S Baoshan Block (part of Sibumasu) in W Yunnan, with 31 species of M Permian fusulinids, in two late Murgabian- Midian assemblages: (1) Yangchienia-Nankinella and (2)overlying Chusenella-Rugosofusulina. Overlain by Shanita-bearing limestone. Dominance of staffellids and paucity of neoschwagerinids and verbeekinids differs from coeval fusulinids in Nansan-Hewai area in S Baoshan Block with common neoschwagerinids and verbeekinids. Interpreted as due to different depositional environments. (Nansan-Hewai area high-energy open platform))

Huang, H., X. Yang & X. Jin (2005)- The *Shanita* fauna (Permian foraminifera) from Baoshan area, western Yunnan Province, China. Acta Palaeontologica Sinica 44, 4, p. 545-555. *(In Chinese; translated in Frontiers of Biology in China 2, 1, p. 114-124 (2007))*
(online at: http://article.geobiology.cn/)
(Permian Shanita foram fauna good marker of N peri-Gondwana tectonic blocks. Shanita fauna from Baoshan area in W Yunnan suggest characteristic genera Shanita and Hemigordiopsis here comprised 8 species and 10 genera of other nonfusulinid foraminifera. Age probably late Maokouan- Wuchiapingian. Fauna comparable to Shanita faunas from Burma, Thailand and Tibet, but lower diversity and absence of fusulinids)

Huang, K. & N.D. Opdyke (1991)- Paleomagnetic results from the Upper Carboniferous of the Shan-Thai-Malay block of western Yunnan, China. Tectonophysics 192, p. 333-344.
(Upper Carboniferous basaltic Woniusi Fm from near Baoshan (= now viewed as E Permian age basalts; part of Shan-Thai-Malay microplate). Paleomagnetic inclinations similar to Devonian rocks from area, indicating paleolatitude of ~41.9° S for Baoshan in Devonian-E Permian time)

Huang, K. & N.D. Opdyke (1993)- Paleomagnetic results from Cretaceous and Jurassic rocks of South and Southwest Yunnan: evidence for large clockwise rotations in the Indochina and Shan-Thai-Malay terranes. Earth Planetary Sci. Letters 117, p. 507-524.
(Paleomag studies of Jurassic-Cretaceous redbeds from S and SW Yunnan, China, indicate Xiaguan area on Red River fault, has not rotated relative to stable Eurasia since at least Late Cretaceous. Jinggu-Mengla area 200-400 km farther S rotated CW by 46-65°. Comparison with Mesozoic paleomagnetic data from C Yunnan, N Thailand and NW Borneo suggests Red River fault not demarcation between unrotated and significantly rotated regions, and that Sundaland did not respond to India-Asia collision as single coherent unit)

Hughes, R.W., O. Galibert, G. Bosshart, F. Ward, Thet Oo, M. Smith, Tay Thye Sun & G.E. Harlow (2000)- Burmese jade: the inscrutable gem. Gems and Gemology. 36, 1, p. 2-26.
(N Myanmar remains primary source of top-grade jadeite. Primary jadeite in dikes, secondary jadeite in serpentinite boulder conglomerates)

Hurukawa, N., Pa Pa Tun & B. Shibazaki (2012)- Detailed geometry of the subducting Indian Plate beneath the Burma Plate and subcrustal seismicity in the Burma Plate derived from joint hypocenter relocation. Earth Planets Space 64, p. 333-343, 2012
(online at: https://www.terrapub.co.jp/journals/EPS/pdf/2012/6404/64040333.pdf)
(Geometry of subducting Indian Plate under Burma Plate from relocated subduction earthquakes at depths of 30-140 km. Strikes of contours oriented ~N-S, and show 'S' shape in map view)

Ito, T., X. Qian & Q.L. Feng (2016)- Geochemistry of Triassic siliceous rocks of the Muyinhe Formation in the Changning-Menglian belt of Southwest China. J. Earth Science (China) 27, 3, p. 403-411.
(online at: http://en.earth-science.net/PDF/20160612014127.pdf)

(Triassic siliceous rocks of Muyinhe Fm in Changning-Menglian belt (Paleotethys suture). Triassic radiolaria Triassocampe, Pseudostylosphaera, Eptingium and Paroertlispongus observed on etched surfaces. Geochemistry suggests unlikely to be oceanic pelagic deposits; possibly represent closure stage of Paleotethys)

Iyer, L.A.N. (1953)- The geology and gemstones of the Mogok stone tract, Burma. Mem. Geol. Survey India, 82, p. 1-100.
(Mogok stone tract in upper Myanmar known for ruby gemstones for centuries. Rocks intensely folded, ENE and NE striking with dips to SE and SSE. Mogok gneiss associated with common crystalline limestone. Granite, syenite intrusions, etc. Ruby and spinel generally derived from crystalline limestone, sapphire from pegmatite)

Jaeger, H. (1983)- Unterdevonische Graptolithen aus Burma. Geol. Jahrbuch 126, 2, p. 245-257.
(online at: www.landesmuseum.at/pdf_frei_remote/JbGeolReichsanst_126_0245-0257.pdf)
('Lower Devonian graptolites from Burma'. Two monograptids M. atopus and M. thomasi helmckei n.subsp., described from northern Shan states, indicative of mid-Early Devonian age)

Jaeger, J.J., A. Naing Soe, A.K. Aung, M. Benammi, Y. Chaimanee, R.M. Ducrocq, C.T. Tun, T. Thein & S. Ducrocq (1998)- New Myanmar middle Eocene anthropoids. An Asian origin for catarrhines? Comptes Rendus Academie Sciences, Paris, ser. 3, 321, p. 953-959.
(New lower jaw fragments of primates Amphipithecus and Pondaungia in Eocene Pondaung Fm in C Myanmar Together with Siamopithecus from Late Eocene of Peninsular Thailand resemblance some African relatives)

Jaeger, J.J., O. Chavasseau, V. Lazzari, A. Naing Soe, C. Sein, A. Le Maitre, H. Swe & Y. Chaimanee (2019)- New Eocene primate from Myanmar shares dental characters with African Eocene crown anthropoids. Nature Communications 10, 3531, p. 1-10.
(online at: https://www.nature.com/articles/s41467-019-11295-6.pdf)
(Recent discoveries of older and more primitive basal anthropoids in China and Myanmar (eosimiiforms) support Asia was place of origins of anthropoids,rather than Africa. Similar taxa of eosimiiforms in the late M Eocene of Myanmar and North Africa, reflecting a colonization event in M Eocene)

Jaeger, J.J., A. Naing Soe, O. Chavasseau, P. Coster, E. Emonet, F. Guy, R. Lebrun, Aye Maung et al. (2011)- First hominoid from the Late Miocene of the Irrawaddy Formation (Myanmar). PLos ONE 6, 4, e17065, p. 1-14.
(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0017065)
(First hominoid found in Myanmar (Khoratpithecus ayeyarwadyensis sp. nov.), together with Hipparion and other mammal fauna from Irrawaddy Fm, dated between 10.4- 8.8 Ma. Fauna and stable isotope data indicate evergreen forest environment)

Jaeger, J.J., T. Thein, M. Benammi, Y. Chaimanee, A.N. Soe, T. Lwin, T. Tun, S. Wai & S. Ducrocq (1999)- A new primate from the Middle Eocene of Myanmar and the Asian early origin of anthropoids. Science 286, 5439, p. 528-530.
(New anthropoid primate, Bahinia pondaungensis from late M Eocene Pondaung Fm. Part of Eosimiidae now known from three M Eocene localities in Asia, supporting hypothesis of Asian origin of anthropoids)

Jerram, D.A., M. Widdowson, P.B. Wignall, Y. Sun, X. Lai, D.P.G. Bond & T.H. Torsvik (2016)- Submarine palaeoenvironments during Emeishan flood basalt volcanism, SW China; implications for plume-lithosphere interaction during the Capitanian, Middle Permian ("end Guadalupian") extinction event. Palaeogeogr. Palaeoclim. Palaeoecology 441, 1, p. 65-73.
(M Permian platform carbonate deposition terminated by rapid subsidence, with onset of late M Permian Emeishan volcanism during deepening (with widespread losses amongst fusulinacean foraminifera and calcareous algae). Lower two thirds of 4-5 km thick lava pile erupted at or below sea level, with terrestrial lava flows only in later stages. Late Permian of SW China at time of Emeishan was extended area of thinned lithosphere with epeiric seas, sustained through onset of LIP emplacement. Geochemical support of plume origin for Emeishan volcanism, but LIP emplacement not associated with regional pre-eruption uplift)

Jian, P., D. Liu, A. Kroner, Q. Zhang, Y. Wang, X. Sun & W. Zhang (2009)- Devonian to Permian plate tectonic cycle of the Paleo-Tethys Orogen in southwest China (I): Geochemistry of ophiolites, arc/back-arc assemblages and within-plate igneous rocks. Lithos 113, p. 748-766.
(Study of Paleo-Tethys ophiolites, incl. Ailaoshan ophiolite (NMORB-type; ~387-374 Ma= Late Devonian), Jinshajiang ophiolite (EMORB-type; 346-341 Ma= M Carboniferous) and Changning-Menglian ophiolite (~270-264 Ma= M Permian; marks main Paleo-Tethys suture between Gondwana-derived Sibumasu terrane and Yangtze-derived Simao terrane and formed at supra-subduction zone))

Jian, P., D. Liu, A. Kroner, Q. Zhang, Y. Wang, X. Sun & W. Zhang (2009)- Devonian to Permian plate tectonic cycle of the Paleo-Tethys Orogen in southwest China (II): Insights from zircon ages of ophiolites, arc/back-arc assemblages and within-plate igneous rocks and generation of the Emeishan CFB province. Lithos 113, p. 767-784.
(Ophiolites in SW China are remnants of Paleo-Tethys ocean, which was divided by Simao terrane into two tracts (1) main ocean in W (Changning-Menglian ophiolite with metagabbro crystallization age of 267 Ma= M-L Permian) and (2) oceanic branch in E (Ailaoshan- Jinshajiang ophiolites with sea-floor spreading ages from zircons ~383, 376, 343 Ma = Late Devonian- E Carboniferous). With reconstruction of Devonian-Permian plate tectonic cycle: Simao Block rifted off Yangtze margin in Carboniferous, etc.)

Jin, X. (1998)- A comparison between Permo-Carboniferous sequences of the Baoshan Block and the Lhasa Block, China. In: G.R. Shi et al. (eds.) Permian of Eastern Tethys: biostratigraphy, palaeogeography and resources, Strzelecki Symposium, Proc. Royal Soc. Victoria 110, 1-2, p. 401-404.
(Baoshan and Lhasa Block in SW China and Tibet both have Permo-Carboniferous glacio-marine deposits and Gondwana affinity fauna and palynomorph assemblages, indicating Gondwana origin. Both blocks with Early Permian basalts/ red beds above glacial deposits, and overlain by M-U Permian- Triassic limestones)

Jin, X. (2002)- Permo-Carboniferous sequences of Gondwana affinity in Southwest China and their paleogeographic implications. J. Asian Earth Sci. 20, p. 633-646.
(Descriptions of stratigraphy of Gondwana-affinity Permo-Carboniferous sequences in Himalayas, Lhasa Block, S Qiangtang Block in Tibet, and Tengchong and Baoshan blocks in Yunnan, SW China. Sequences characterized by presence of glacio-marine deposits and Gondwana-affinity biota)

Jin, X., H. Huang, Y. Shen & Y. Wang (2008)- Subdivision and correlation of Middle-Late Permian successions in the Baoshan Block, Western Yunnan, China: status and problems. Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th ICGP 416, Bangkok, p. 341-348.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/103.pdf)
(Review of Middle-Late Permian lithostritgraphy of Baoshan Block, Yunnan, SW China (= Sibumasu terrane). Earliest Permian Dingjiazhai Fm with diamictites. Artinskian Woniusi Fm basalts, overlain with Kungurian hiatus by Roadian-Wordian red beds, then limestone. Lower Shazipo Fm with Verbeekina, Eopolydiexodina, overlain by Capitanian Shanita-Hemigordius assemblage)

Jin, X., H. Huang, Y. Shi & L. Zhan (2011)- Lithologic boundaries in Permian post- glacial sediments of the Gondwana-affinity regions of China: typical sections, age range and correlation. Acta Geologica Sinica, 85, p. 373-386.
(SW China Gondwana-affinity Permo-Carboniferous deposits in N Himalayas, Lhasa, S Qiangtang, Baoshan and Tengchong Blocks. Diamictite- pebbly mudstone- dark mudstone and shale interpreted as glacial-deglacial- post-glacial marine environments. Change from post-glacial clastics to carbonate environment in Baoshan, Tengchong and Lhasa Blocks in E Artinskian. Carbonate environment in Baoshan Block with Woniusi Basalts. In N Himalayas limestones began in Late Permian)

Kamenetsky, V.S., S.L. Chung, M.B. Kamenetsky & D.V. Kuzmin (2012)- Picrites from the Emeishan Large Igneous Province, SW China: a compositional continuum in primitive magmas and their respective mantle sources. J. Petrology 53, 10, p. 2095-2113.
(online at: https://watermark.silverchair.com/egs045.pdf)

(Late Permian Emeishian flood picrite lavas represent low- and high-Ti end-members of continental flood basalt magmatism. Diverse spectrum of basaltic magma. Peridotite and garnet pyroxenite mantle source for low- and high-Ti end-members, and more likely from subcontinental lithospheric mantle than from deep mantle 'plume')

Kelly, T. & C. Gonguet (2017)- Insights in the development of the Central Tertiary basins onshore & offshore Myanmar. In: Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, 8p. *(Extended Abstract)*
(Review of geology and hydrocarbons in offshore Myanmar M8 Block, S of Yadana field)

Khin, A., Aung Tin V., Aung Soe & Khin Khan (1970)- A study on the gravity indication of the Shan scarp fault. J. Science and Techn. (Burma), 3, 1, p. 431-443.

Khin, A. & K. Win (1968)- Geology and hydrocarbon prospects of the Burma Tertiary geosyncline. Union of Burma J. Science and Technology 2, 1, p. 53-81.

Khin, A. & K. Win (1969)- Preliminary studies of the paleogeography of Burma during the Cenozoic: Union of Burma J. Science and Technology 3, 2, p. 53-73.

Khin, J.A. (1991)- Hydrocarbon-producing formations of Salin, Irrawaddy, and Martaban Basins, Myanmar (Burma). Proc. Soc. Petroleum Engineers (SPE) Asia-Pacific Conf., Perth 1991, p. 245-258.
(Almost all producing oil - gas fields in Myanmar in Salin, Irrawaddy and Martaban basins, in Mio-Pliocene reservoirs)

Khin, K. & T. Sakai (2012)- Neogene sedimentary fringe, West of Indo-Burma Ranges, in Western Myanmar: some evidences for Late Cenozoic synorogenic sedimentation in Himalayan-Bengal System. AAPG Int. Conv. Exhibition, Singapore 2012, Search and Discovery Art. 50771, 48p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/50771khin/ndx_khin.pdf)
(On Late Cenozoic clastics Arakan Basin, W Myanmar, in frontal part of Himalayan orogenic belt)

Khin, K., T. Sakai & K. Zaw (2017)- Arakan Coastal Ranges in western Myanmar, geology and provenance of Neogene siliciclastic sequences: implications for the tectonic evolution of the Himalaya-Bengal System. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 5, p. 81-116.
(Mainly analysis of ~2000m thick Miocene clastics of W Arakan Basin. Overall shallowing-upward series. E Mioceen sandstones quartz-rich. Overall upward increase in feldspar and high-metamorphic lithics, reflecting Himalayan uplift and orogenic unroofing)

Khin, K. & K. Zaw & L.T. Aung (2017)- Geological and tectonic evolution of the Indo-Myanmar Ranges (IMR) in the Myanmar region. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 4, p. 65-79.
(Indo-Myanmar Ranges (= Indo-Burman Ranges or Western Ranges) along W margin of Myanmar microplate extend from E Himalayas S-wards along E side of Bay of Bengal to Andaman Sea. Comprise Naga Hills in N, Chin Hills in middle and Rakhine (Arakan) Yoma in S. Considered to have formed as accretioanry wedge due to E-ward subduction under Myanmar from ?E Cretaceous- Recent. Rocks Late Triassic-Eocene flysch-type metasediments, three belts of Triassic-Jurassic ophiolitic rocks in E (W-ward obduction in Late Oligocene?). Ophiolitic sequence overlain by Eocene-Miocene flysch with Cretaceous-Eocene limestone olistoliths (derived from neighboring carbonate platform?))

Kim, D., S.Y. Yang & J. Kim (2012)- Geological modeling with seismic inversion for deepwater turbidite fields offshore Northwestern Myanmar. AAPG Int. Conf. Exh., Italy 2011, Search and Discovery Art. 40877, 26p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/40877kim/ndx_kim.pdf)
(Geologic modeling of Daewoo Shwe, Shwe Phyu and Mya gas fields in Bay of Bengal, off W Myanmar. Reservoirs Late Pliocene deepwater channelized and basin floor fan lobe deposits)

Kingson, O., R. Bhutani, J.K. Dash, S. Sebastian & S. Balakrishnan (2017)- Resolving the conundrum in origin of the Manipur Ophiolite Complex, Indo-Myanmar range: constraints from Nd isotopic ratios and elemental concentrations in serpentinized peridotite. Chemical Geology 460, p. 117-129.
(REE abundances and Nd isotopic ratios in serpentinized peridotite from Manipur Ophiolite Complex (MOC), Indo-Myanmar Range. Variation of La/Yb consistent with progressive addition of subduction-derived fluid to depleted mantle source. MOC buoyant fore-arc-mantle-wedge system along with subducted slab that was obducted during terminal stage of subduction of Neotethys below Burmese plate)

Kondo, K., C. Mu, T. Yamamoto, H. Zaman, D. Miura, M. Yokoyama, H.S. Ahn & Y. Otofuji (2012)- Oroclinal origin of the Simao Arc in the Shan-Thai Block inferred from the Cretaceous palaeomagnetic data. Geophysical J. Int. 190, 1, p. 201-216.
(online at: https://academic.oup.com/gji/article/190/1/201/596342)
(Paleomagnetic data suggest present-day arc-like geometry curvature of Simao Basin formed by oroclinal bending, starting after E Pliocene (4 Ma) and continuing until now. Ascribed to SW-ward movement of crustal material across Ailao Shan-Red River Fault. Requires decoupling between upper and middle-lower crusts)

Krishnan, M.S. & K. Jacob (1957)- Burma/Birmanie. Lexique Stratigraphic Int. 3, Asie, 8b, p. 283-328.
(Old stratigraphic lexicon for Burma/ Myanmar)

Kyaw, L. Oo, Zaw Khin, S. Meffre, D. Myitta, Wa Aung & C.K. Lai (2015)- Provenance of the Eocene sandstones in the southern Chindwin Basin, Myanmar: implications for the unroofing history of the Cretaceous-Eocene magmatic arc. J. Asian Earth Sci. 107, p. 172-194.
(Thick Eocene continental clastics in S Chindwin Basin, N Myanmar, with sandstones rich in volcaniclastic material and subordinate metamorphic lithic fragments. Detrital zircon ages of 101-43 Ma and palaeocurrent directions of late M Eocene Pondaung sst show Cretaceous- Eocene Andean-type andesitic volcanic arc to NE, possibly related to Neo-Tethys seafloor subduction under W Burma Block (= late M Eocene volcaniclastic deposition in fore-arc basin of C Myanmar Basin)

Kyaw Thu & Khin Zaw (2017)- Gem deposits of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics. Geol. Soc., London, Memoir 48, Chapter 23, p. 497-529.
(Myanmar contains world-class gem deposits, incl. ruby from Mogok Stone Tract in Mandalay district, Mong Hsu ruby deposit in Shan State and jadeite from Kachin State. Both primary hard-rock deposits and secondary eroded/transported deposits)

Kyaw, Toe Aung (2017)- Antimony deposits of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 29, p. 649-668.
(Antimony deposits mainly in E Myanmar, in Shan Plateau and Mogok- Mandalay- Mergui metallogenic provinces)

La Touche, T.H.D. (1913)- Geology of the northern Shan States. Mem. Geol. Survey India 39, 2, p. 1-380.

Latt, T.T., T. Nakazawa, X. Wang & K. Ueno (2009)- Carboniferous foraminifers from the lower part of Paleo-Tethyan seamount-type carbonates in the Changning-Menglian Belt, western Yunnan, Southwest China. Acta Geoscientica Sinica 30, Suppl. 1, p. 35-36.
(online at: www.cagsbulletin.com/dqxbcn/ch/reader/download_pdf.aspx?file_no...)
(Changning-Menglian Belt in W Yunnan is well-known as closed remnant of Paleo-Tethys Ocean. Thick E Carboniferous-Late Permian carbonate successions formed as Paleo-Tethyan seamount-capping atoll. Lower 400m of carbonate all Carboniferous, with >28 foraminiferal genera, including Eostaffella, Endothyra and 11 fusulinid genera)

Latt, T.T., Z. Win & K. Ueno (2008)- Permian fusuline fauna from the Plateau Limestone of the Lebyin Area, Eastern Myanmar: biochronologic and paleobiogeographic assessments. Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), Bangkok 2008, p. 170-171. *(Extended Abstract)*

(M Permian Plateau Lst of E Myanmar Shan Plateau is part of Sibumasu/ Shan-Thai terrane. Thickness 700m, lower part with shaly interbeds, middle part bioclastic limestones, upper part mainly oolitic limestone. In middle part E Midian fusulinid assemblages with Yangchienia, Pseudofusulina, Neoschwagerina, Sumatrina, Verbeekina, etc. Presence of neoschwagerinids and verbeekinids previously believed to be typical of paleo-equatorial Cathaysian domain, but here present in late M Permian of Sibumasu Block (but still lower diversity))

Latt, T.T., Z. Win & K. Ueno (2010)- Middle Permian Cimmerian fusuline succession of the Plateau Limestone in the Linwe area, Eastern Myanmar In: C.P. Lee et al. (eds.) 6th Symp. Int. Geol. Correl. Progr. Project 516 (IGCP516), Geological anatomy of East and South Asia, Kuala Lumpur 2010, p. 40-41 *(Abstract only)*
(Permian Plateau Limestone in Linwe section, E Myanmar, on Sibumasu Block. ~570m thick and unconformable on Silurian Linwe Fm. Three fusuline assemblages in m-u parts: (1) Late Murgabian, with Cimmerian genus Rugososchwagerina; (2) (3) Midian assemblages with more Tethys-type genera such as Afghanella, Verbeekina, and Pseudodoliolina. Fauna lacks Tethyan advanced neoschwagerinids (Yabeina, Lepidolina) and of lower diversity than Indochina and S China faunas)

Le Dain, A.Y., P. Tapponnier & P. Molnar (1984)- Active faulting and tectonics of Burma and surrounding regions. J. Geophysical Research 89, B1, p. 453-472.
(Slab of oceanic lithosphere was recently subducted to E under Indoburman Ranges. Sagaing fault probably accomodates most of right-lateral strike-slip of India past Indochina, but also internal deformation in Burma, Thailand. Large parts of Burma-Thailand may have rotated clockwise)

Lee, H.Y., S.L. Chung, H.M. Yang (2016)- Late Cenozoic volcanism in central Myanmar: geochemical characteristics and geodynamic significance. Lithos 245, p. 174-190.
(Late Cenozoic volcanism in C Myanmar basin around Sagaing fault. Volcanics from Monywa, Mt. Popa and Singu areas erupted in two stages: M Miocene (mainly intermediate compositions) and Quaternary (mainly basalts). Magma generation related to India- Asia collision, causing Miocene plate reorganization from oblique subduction to dextral movement, and rollback of subducted Indian oceanic lithosphere in Quaternary)

Lenz, H. & P. Mueller (1981)- Rb/Sr determinations (total rock) of rocks of the Bawdwin Volcanic formation/northern Shan State, Burma. Geol. Jahrbuch D, 43, p. 47-52.

Li, D., Z. Luo, Y. Chen, J. Liu & Y. Jin (2014)- Deciphering the origin of the Tengchong block, west Yunnan: evidence from detrital zircon U-Pb ages and Hf isotopes of Carboniferous strata. Tectonophysics 614, p. 66-77.
(U-Pb and Hf isotope analyses on detrital zircons from Carboniferous in Tengchong block yield Neoarchean (~2.5 Ga), Mesoproterozoic (1.7-1.4 Ga), Grenvillian (~ 0.95 Ga) and Pan-African (0.65-0.5 Ga) age groups. Oldest Hf model ages indicate source magma included reworked Eoarchean (3.8-3.7 Ga) crustal material. Resemblance with Tethyan Himalayan, W Qiangtang and Indochina suggests Tengchong block was located along Indian margin of Gondwana in E Paleozoic)

Li, G., Q. Wang, Y. Huang, F. Chen & P. Dong (2015)- Discovery of Hadean- Mesoarchean crustal materials in the northern Sibumasu block and its significance for Gondwana reconstruction. Precambrian Research 271, p. 118-137.
(online at: www.cugb.edu.cn/uploadCms/file/20600/papers_upload/20161013165713736776.pdf)
(First occurrence in SE Asia of Hadean-Mesoarchean crustal materials in N Sibumasu block, SW China (Baoshan Block). Inherited zircons in E Paleozoic S-type granitoids (~470- 450 Ma; Ordovician) as old as Mesoarchean (~3.1 Ga). Model ages for source crust ~4.39 Ga, ~3.62 Ga and ~3.12 Ga. Hadean-Mesoarchean crustal materials similar age distribution as crusts of Pilbara and Yilgarn Cratons, W Australia)

Li, H., Aung Zaw Myint, K. Yonezu, K. Watanabe, T.J. Algoe & J.H. Wu (2018)- Geochemistry and U-Pb geochronology of the Wagone and Hermyingyi A-type granites, southern Myanmar: implications for tectonic setting, magma evolution and Sn-W mineralization. Ore Geology Reviews 95, p. 575-592.
(Sn-W-associated granites common in Dawei region of SE Asian tin belt. High-K calc-alkaline Type A2 granites. U-Pb dating of magmatic and hydrothermal zircons from two granites yielded ages of 61-60 Ma (Paleocene)

magmatic-mineralization event. Granites crustal origin, produced by partial melting of felsic clay-rich source in back-arc extensional setting)

Li, J.X., W.M. Fan, L.Y. Zhang, N.J. Evans, J.L. Sun, L. Ding et al. (2019)- Geochronology, geochemistry and Srï Ndï Hf isotopic compositions of Late Cretaceous- Eocene granites in southern Myanmar: petrogenetic, tectonic and metallogenic implications. Ore Geology Reviews 112, 103031, p.
Granites associated with tin-tungsten mineralization in S Myanmar with Late Cretaceous- Eocene zircon ages (~84-48 Ma). Likely S-ward extension of coeval magmatic belt in Tengchong terrane. From fractionated I-type magmas and derived from Sibusima crust during subduction of Neo-Tethyan oceanic lithosphere)

Li, J., H. Zhong, W.G. Zhu, Z.J. Bai & W.J. Hu (2017)- Elemental and Sr-Nd isotopic geochemistry of Permian Emeishan flood basalts in Zhaotong, Yunnan Province, SW China. Int. J. Earth Sciences 106, 2, p. 617-630.
(Elemental and isotopic data for basalts from intermediate zone of ~260 Ma Emeishan large igneous province suggest garnet-dominated peridotite mantle plume source. High-Ti basalts in inner zone variable compositions, indicating heterogeneous mantle source, possibly with subcontinental lithospheric mantle)

Li, M.H., M.D. Yan, Z.R. Wang, X.M. Liu, X.M Fang, & J. Li (2015)- The origins of the Mengye potash deposit in the Lanping-Simao Basin, Yunnan Province, Western China. Ore Geology Reviews 69, p. 174-186.
(Lanping–Simao Basin is Mesozoic-enozoic continental margin rift basin in W China, formed during opening and closing of Tethys Ocean. Mengye potash deposit either Paleocene or Cretaceous. Salt layers typical continental lithological features)

Li, R., L. Mei, G. Zhu, R. Zhao, X. Xu, H. Zhao, P. Zhang, Y. Yin & Y. Ma (2013)- Late Mesozoic to Cenozoic tectonic events in volcanic arc, West Burma Block: evidences from U-Pb zircon dating and apatite fission track data of granitoids. J. Earth Science 24, 4, p. 553-568.
(Pb/U ages of S-type volcanic arc in N of W Burma Block average 102 Ma, similar to ~94 Ma in N and 105Ma in S, indicating continuous development of volcanic arc in N of W Burma Block and subsequent late E Cretaceous granitic intrusion. AFT ages suggesting rapid uplift and cooling from Late Oligocene- E Miocene (29-20 Ma) and slow uplift since E Pliocene (~4.2 Ma))

Liang, Y., S. Chung, D. Liu, Y. Xu, F.Y. Wu, J. Yang, Y. Wang & C. Lo (2008)- Detrital zircon evidence from Burma for reorganization of the eastern Himalayan river system. American J. Science 308, 4, p. 618-638.

Licht, A., A. Boura, D. De Franceschi, S. Ducrocq, A.N.Soe & J.J. Jaeger (2014)- Fossil woods from the late middle Eocene Pondaung Formation, Myanmar. Review Palaeobotany Palynology 202, p. 29-46.
(Twelve species of silicified wood in late M Eocene Pondaung Fm, W Myanmar, with affinities with modern Fabaceae, Moraceae, Combretaceae, Sapindaceae, Malvaceae, Dipterocarpaceae and Theaceae. Five new species of Ficoxylon (F. mogaungense), Sapindoxylon (S. burmense), Bombacoxylon (B. pondaungense), Shoreoxylon (S. panganense) and Schimoxylon (S. benderi). Material represents oldest record of fossil dipterocarps outside Indian subcontinent. M Eocene climate in proto Bengal Bay significantly seasonal)

Licht, A., A. Boura, D. De Franceschi, T. Utescher, C. Sein & J.J. Jaeger (2015)- Late Middle Eocene fossil wood of Myanmar: implications for the landscape and the climate of the Eocene Bengal Bay. Review Palaeobotany Palynology 216, p. 44-54.
(Diversified silicified wood assemblage in late M Eocene Pondaung Fm, including earliest Dipterocarpaceae. Three additional species, Menispermoxylon mowglii, Glutoxylon burmense and Heritieroxylon arunachalensis, all related to modern mangrove and coastal forest species in Bengal Bay. Toposequence with mangroves along seashore, riparian elements in upper delta plain, and dry dipterocarp forests in upstream areas suggests (1) monsoonal climate (with significant rainfall and marked dry season), confirming studies showing Bengal Bay experienced monsoonal regime as early as 40 Ma and (2) warmer annual temperatures, supporting hypothesis that monsoonal rainfall at that time favored by Eocene greenhouse conditions)

Licht, A., I. Cojan, L. Caner, Aung Naing Soe, J.J. Jaeger & C. France-Lanord (2013)- Role of permeability barriers in alluvial hydromorphic palaeosols: the Eocene Pondaung Formation, Myanmar. Sedimentology 61, 2, p. 362-382.

Licht, A., C. France-Lanord, L. Reisberg, C. Fontaine, A. Naing Soe & J.J. Jaeger (2013)- A palaeo Tibet-Myanmar connection? Reconstructing the Late Eocene drainage system of central Myanmar using a multi-proxy approach. J. Geol. Soc., London, 170, 6, p. 929-939.
(Collision of India with Asia has caused fundamental changes to Asian drainage patterns. Provenance of study Paleogene fluvio-clastic sedimentary indicate primary magmatic arc source, and secondary source of recycled, metamorphosed basement material. Rel. proximal source area on E Asian margin, no evidence to support Paleo Tsangpo- Irrawaddy River in Late Eocene)

Licht, A., L. Reisberg, C. France-Lanord, A. N. Soe & J.J. Jaeger (2016)- Cenozoic evolution of the central Myanmar drainage system: insights from sediment provenance in the Minbu sub-basin. Basin Research 28, 2, p. 237-251.
(C Myanmar Basin several Tertiary sub-basins that remained filled since India-Asia collision. No dramatic provenance shift in M Eocene-Pleistocene sediments from Minbu sub-Basin, but gradual decrease of volcanic input and increase in supply from Burmese basement in Eo- Oligocene, reflecting unroofing of Wuntho-Popa volcanic arc along flank of Sino-Burman Ranges. C Myanmar drainage remained restricted to Sino-Burman Ranges since India-Asia collision)

Licht, A., M. van Cappelle, H.A. Abels, J. Ladant, J. Trabucho-Alexandre, C. France-Lanord, Y. Donnadieu et al. (2014)- Asian monsoons in a late Eocene greenhouse world. Nature 513, p. 501-506.
(Data from Eocene of Myanmar suggestive of monsoon-like climate patterns during Late Eocene greenhouse conditions (55-34 Ma))

Lin, T.H., S.L. Chung, A. Kumar, F.Y. Wu, H.Y. Chiu & I.J. Lin (2013)- Linking a prolonged Neo-Tethyan magmatic arc in South Asia: zircon U-Pb and Hf isotopic constraints from the Lohit Batholith, NE India. Terra Nova 25, 6, p. 453-458.
(Neo-Tethyan subduction before India-Asia collision resulted in Andean-type convergent margin in S Asia, with extensive arc magmatism. Gangdese Batholith in Lhasa terrane of S Tibet lasted from E Jurassic- Eocene. E-ward continuation of Neo-Tethyan magmatic arc truncated by E Himalayan syntaxis. Lohit Batholith in NE India is E-ward extension of Gangdese Batholith, and can be correlated S-ward to Wuntho-Popa arc in W Myanmar (zircon U-Pb ages of five granitoids ~148-96 Ma (mainly 110-96 Ma; 148 Ma= gabbro))

Lin, T.H., S.L. Chung, J.T. Tang & T. Oo (2017)- The delimitation between the mature and juvenile crustal provinces in SE Asia: Insights from detrital zircon U-Pb and Hf isotopic data for the Salween drainage, Myanmar. J. Asian Earth Sci. 145, B, p. 641-651.

Liu, B.P., Q.L. Feng, N.Q. Fang et al. (1993)- Tectonic evolution of Paleo-Tethys poly-island-ocean in Changning-Menglian and Lancangjiang Belts, Southwestern Yunnan, China. J. Chinese Univ. Geoscience 18, 5, p. 529-539. *(in Chinese)*

Liu, C.Z., S.L. Chung, F.Y. Wu, C. Zhang, Y. Xu, J.G. Wang, Y. Chen & S. Guo (2016)- Tethyan suturing in Southeast Asia: zircon U-Pb and Hf-O isotopic constraints from Myanmar ophiolites. Geology 44, 4, p. 311-314.
(Two ophiolite belts in Myanmar: (1) Western Belt (E of Indo-Birman Range) Kalaymyo ophiolite with E Cretaceous zircons (av. ~127 Ma), coeval with Neotethys ophiolites of Yarlung-Tsangpo suture; (2) Eastern Belt Myitkyina ophiolite (between Sibumasu- W Burma plates) formed in M Jurassic (~173 Ma) and is S continuation of Mesotethys Bangong-Nujiang suture in Tibetan Plateau. Boundary between Sibumasu and W Burma blocks is Jurassic suture rather than transcurrent shear zone)

Loydell, D. K. & K.P. Aung (2017). The ñPanghkawkwo graptolite bedò (Llandovery, Silurian), Myanmar and the location of the Sibumasu (or Sibuma) terrane in the Silurian. Palaeogeogr. Palaeoclim. Palaeoecology 469, p. 1-17.

(Panghkawkwo graptolite bed from Loilem area, Shan States, E Myanmar, with several M-U Llandoverian graptolite zones. Graptolites suggest paleo-location for Sibuma(su) between Gondwana and South China)

Luo, W., Z.C. Zhang, M. Santosh, T. Hou, H. Huang, J. Zhu, X. Wang & X. Fu (2014)- Petrology and geochemistry of Permian mafic-ultramafic intrusions in the Emeishan large igneous province, SW China: insight into the ore potential. Ore Geology Reviews 56, p. 258-275.

Lwin, S.M., M.M. Aung & N.P. Oo (2017)- Paleoenvironmental analysis of benthic foraminifera and radiolarians in Middle Eocene Tabyin Formation, Mindon-Taing Da Area, Magway Region, Myanmar. AAPG/EAGE/MGS 3rd Oil & Gas Conf., Yangon 2017, Search and Discovery Art. 51427, 45p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2017/51427lwin/ndx_lwin.pdf)
(Deep marine M Eocene benthic and planktonic foraminifera and radiolaria from folded sediments near eastern foothills of Rakhine Yoma, C Myanmar Basin)

Mann, S., M. Lim, Q. van de Laarschot, M. Keym, A. Jones & R. Nesbit (2017)- Hydrate observations in the deepwater Rakhine Basin, Myanmar. Proc. Third AAPG/EAGE/MGS Myanmar Oil and Gas Conf., Yangon 2017, 1p. *(Abstract only)*
(Bottom Simulating Reflector (BSR) in deepwater Rakhine Basin off Myanmar indicates Gas Hydrate Stability Zone (HSZ) and potential extensive gas hydrate system, likely indicatative of extensive microbial gas system)

Marivaux, L., K.C. Beard, Y. Chaimanee, M. Dagosto, D.L. Gebo et al. (2010)- Talar morphology, phylogenetic affinities, and locomotor adaptation of a large-bodied amphipithecid primate from the late Middle Eocene of Myanmar. American J. Physical Anthropology 143, p. 208-222.

Marivaux, L., Y. Chaimanee, S. Ducrocq, B. Marandat, J. Sudre, A.N. Soe, S.T. Tun, W. Htoon & J.J. Jaeger (2003)- The anthropoid status of a primate from the late middle Eocene Pondaung Formation (Central Myanmar): tarsal evidence. Proc. National Academy Sciences USA 100, 23, p. 13173-13178.
(online at: www.pnas.org/content/100/23/13173.full.pdf)
(Primate talus from Segyauk, Myanmar, more similar to anthropoids than to adapiforms. Foot bone may belong to Amphipithecus)

Marivaux, L., S. Ducrocq, J.J. Jaeger, B. Marandat, J. Sudre, Y. Chaimanee, S.T. Tun et al. (2005)- New remains of *Pondaugimys anomaluropsis* (Rodentia, Anomaluroidea) from the latest Middle Eocene Pondaung Formation of central Myanmar. J. Vertebrate Paleontology 25, 1, p. 214-227.
(New material of anomaluroid rodent Pondaungimys anomaluropsis Dawson 2003 from latest M Eocene Pondaung Fm in C Myanmar (South Asia). Suggest faunal exchanges between Africa and Asia in Paleogene)

Maung, M., T. Htike, T. Tsubamoto, H, Suzuki, C. Sein, N. Egi, Z. Win et al. (2005)- Stratigraphy of the primate-bearing beds of the Eocene Pondaung Formation at Paukkaung area, Myanmar. Anthropological Science 113, p. 11-15.
(online at: https://www.jstage.jst.go.jp/article/ase/113/1/113_1_11/_pdf/-char/ja)
('Upper Member' of ~500m thick fluvio-deltaic, late M Eocene (Bartonian) Pondaung Fm at Paukkaung area in C Myanmar known for vertebrate fossils (incl. primates) since 1920's. Formation underlain by M Eocene Tabyin Fm with Nummulites and overlain by Late Eocene Yaw Fm with Nummulites and Discocylina. Primate fossil localities Pk1, Pk2, Pk3, and Pk5 all nearly at same stratigraphic level, with age of ~37.2 Ma)

Maung Thein (1973)- A preliminary synthesis of the geological evolution of Burma with reference to the tectonic development of Southeast Asia: In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 87-116.
(online at: www.gsm.org.my/products/702001-101352-PDF.pdf)
(Early review of geology of Myanmar)

Maung Thein (2015)- The Pre-Tertiary carbonate rocks exposed at the NE margin of the Central Myanmar Basin and their developmental history. J. Myanmar Geosciences Soc. 6, p. 1-22.

Maung Thein & B.T. Haq (1970)- The Pre-Paleozoic and Paleozoic stratigraphy of Burma, a brief review. Union of Burma J. Science & Technology, 2, p. 275-289.

Maung Thein & Soe Win (1970)- The metamorphic petrology, structures and mineral resources of the Shantaung-u-Thandawmywet Range, Kyaukse District. J. Science and Technology, Burma, 3, p. 487-514.

Maurin, T., F. Masson, C. Rangin, U Than Min & P. Collard (2010)- First global positioning system results in northern Myanmar: constant and localized slip rate along the Sagaing fault. Geology 38, 7, p. 591-594.
(GPS data measured in 2005 and 2008 in N Myanmar at N tip of Sagaing fault show slip rate of 18 mm/yr, localized along single active narrow fault trace (<20 km wide). Same rate in C Myanmar. Modeled locking depth varies from 20 km in C Myanmar to 5 km in N)

Maurin, T. & C. Rangin (2009)- Structure and kinematics of the Indo-Burmese Wedge: Recent and fast growth of the outer wedge. Tectonics 28, 2, TC2010, p. 1-21.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2008TC002276/epdf)
(N Sunda subduction zone offshore Burma, and associated Indo-Burmese Wedge mark active E boundary of Burma Platelet between India and Sunda Plates. Indo-Burmese Wedge underwent right-lateral shearing in innermost part (E) and E-W shortening in outermost part (W). In outer wedge thick-skinned deformation overprints thin-skinned deformation. Seismic lines show outer wedge deformation not older than 2 Ma)

Metais, G., Aung Naing Soe & S. Ducrocq (2006)- A new basal tapiromorph (Perissodactyla, Mammalia) from the middle Eocene of Myanmar. Geobios 39, p. 513-519.
(online at: https://doc.rero.ch/record/20953/files/PAL_E4155.pdf)
(New tapiromorph, Skopaiolophus burmese, from M Eocene Pondaung Fm suggests primitive tapiromorphs may have persisted in SE Asia until late M Eocene while they became extinct in both Eurasia and N America)

Metais, G., Aung Naing Soe, L. Marivaux, & K.C. Beard (2007)- Artiodactyls from the Pondaung Formation (Myanmar): new data and reevaluation of the South Asian faunal province during the Middle Eocene. Naturwissenschaften 94, 9, p. 759-768.
(New dichobunid Cadutherium kyaukmagyii and basal ruminant Irrawadymeryx pondaungi, from late M Eocene Pondaung Fm, Central Myanmar (small rabbit-like ungulates).)

Metcalfe, I. (2014)- Phanerozoic tectonic and palaeogeographical evolution of East and Southeast Asia: Myanmar in context. AAPG/MGS Conf. Tectonic evolution of Myanmar and its basin development with special references to its petroleum occurrences, p. 6-18.
(E part of Myanmar (E of Sagaing Fault and Mogok Metamorphic Belt) part of Gondwana-derived Sibumasu. W part of Myanmar possibly underlain by continental fragment called West Burma Block, overlain by Cretaceous and Cenozoic sediments. Jurassic-Cretaceous intra-oceanic arc (Mawgyi Arc) and associated ophiolites and accretionary complex rocks (termed Naga- Andaman suture) emplaced to W as Mawgyi Nappe in M-L Cretaceous)

Metcalfe, I. & K.P. Aung (2014)- Late Tournaisian conodonts from the Taungnyo Group near Loi Kaw, Myanmar (Burma): implications for Shan Plateau stratigraphy and evolution of the Gondwana-derived Sibumasu Terrane. Gondwana Research 26, p. 1159-172.
(First record of Carboniferous (Tournaisian) conodonts in Taungnyo Gp of Shan Plateau (Sibumasu Terrane) of Myanmar (Scaliognathus anchoralis and Gnathodus typicus- Protognathodus cordiformis zones). Biogeographic links support NW Australian Gondwana margin position for Sibumasu in Late Paleozoic)

Min, M., L. Ratschbacher, E. Enkelmann, L. Franz, R. Jonckheere & M. Tichomirowa (2017)- Magmatism, Metamorphism, Deformation, and Exhumation in Southern, Central and Eastern Myanmar. AAPG/EAGE/MGS 3rd Oil & Gas Conf., Yangon 2017, 5p. *(Extended Abstract)*

(Zircon dating shows basement of Myanmar contains Proterozoic and E Paleozoic zircons. Igneous event of ~490 Ma ties basement to Gondwana. Shan Plateau of E Myanmar lacks Cenozoic-Cretaceous magmatism; Triassic event links it to Qiangtang block of C Tibet. Jurassic- E Cretaceous magmatism ties Mogok metamorphic belt to Gangdese belt of Tibet (Lhasa block) and Neotethys subduction. Both belts also share Late Cretaceous- Paleocene magmatism. Late Eocene- Oligocene high-grade metamorphism dominates Mogok belt; rapid cooling started at ~17 Ma and terminated before 10 Ma)

Mitchell, A.H.G. (1989)- The Shan Plateau and Western Burma: Mesozoic-Cenozoic plate boundaries and correlation with Tibet. In: A.M.C. Sengor (ed.) Tectonic evolution of the Tethyan region, Kluwer, Dordrecht p. 567-583.
(Four suture zones in Myanmar. E Burma- Chiang Rai- medial Malaya suture resulted from closure of ocean I (=Paleotethys) in E Triassic. Ocean II, N of Lhasa block, closed in end-Jurassic, but suture buried in Burma. Mount Victoria Land block (= W Burma block of Hutchison, 1989) rifted from Gondwanaland in Jurassic and collided with Burma after NE-ward subduction of ocean III in E Cretaceous. Contains metamorphic rocks overlain by Triassic turbidites, overthrust by ophiolite nappe (may correlate to W Sumatra block; Barber (2005). Shan Plateau in E Myanmar with thick Precambrian- Mesozoic succession similar to W and SW Thailand (= Sibumasu; JTvG). With U. Carb- Lower Permian diamictites only in W part)

Mitchell, A.H.G. (1992)- Late Permian-Mesozoic events and the Mergui Group nappe in Myanmar and Thailand. J. Southeast Asian Earth Sci. 7, 2, p. 165-178.
(Continental Shan-Thai Block (= Sibumasu) accreted to Indochina block to E by closure of two Tethyan ocean basins, terminating in Late Norian collision with generation of anatectic granites. Lower Permian Mergui Gp diamictites and associated rocks not part of Shan-Thai until Late Triassic-E Jurassic, when they were emplaced as nappe from present W, perhaps part of E Mesozoic arc system. Subsequent emplacement of ophiolite and overlying E-facing mafic magmatic arc onto W margin of Shan-Thai-Mergui Group block in E Cretaceous was followed by polarity reversal and development of W-facing M Cretaceous- Recent Myanmar arc)

Mitchell, A.H.G. (1993)- Cretaceous- Cenozoic tectonic events in the western Myanmar (Burma)- Assam region. J. Geol. Soc., London, 150, p. 1089-1102.
(Correlation of Late Mesozoic ophiolitic rocks suggests that in Late E Cretaceous a NE-facing mafic arc was emplaced onto SE Borneo, W Sumatra, Mogok belt of W Myanmar and farther W, all then on SW margin of Asia. Reversal in tectonic polarity and E-ward subduction generated Late Cretaceous magmatic arc in W Myanmar and Sumatra. Magmatism, interrupted in latest Cretaceous, probably resumed in W Myanmar-Tibet and Sumatra arc segments in E Paleogene, again interrupted in M Eocene when E-vergent ophiolite nappe overrode Indo-Burman Ranges, deforming Lw Eocene turbidites derived from magmatic arc to E. Following renewed N and E-ward subduction of ocean floor in latest Eocene, India collided with N Myanmar and Tibet. 450km of post-E Miocene dextral displacement on Sagaing Fault and related spreading in Andaman Sea)

Mitchell, A.H.G. (2011)- Very high-grade orogenic quartz-gold vein deposits in the Permo-Carboniferous Slate belt, Central Myanmar: indications of a regional gold province? Proc. 24th Ann. Geol. Conv. Geol. Soc. Philippines (GEOCON 2011), Geology working for a resilient society, p. 57-58. *(Abstract only)*
(online: http://rwg-tag.bravehost.com/Conferences/geocon/abstracts/D2%200845-0900%20Mitchell%202.pdf)
(Gold mineralization in argillites- quartzites, overlain by U Carboniferous-Lower Permian pebbly diamictites, interpreted as glacial deposits from Gondwana. Veins are orogenic or mesothermal, probably generated by metamorphic dehydration at depths of >15 km. Textures suggest gold formation in brittle-ductile transition zone at >4km, possibly related to Late Jurassic collision in suture along E margin of Slate belt, which continues S for >2800 km nearly to Borneo)

Mitchell, A.H.G. (2017)- Geological belts, plate boundaries and mineral deposits in Myanmar. Elsevier, p. 1-509.
(Comprehensive overview of geology, mineral potential and plate tectonics of Myanmar. Several of the structural belts of Myanmar continue into SW China and NW Thailand. With chapters on petroleum occurrences in C Burma Depression by M.F. Ridd and offshore petroleum geology by A. Racey)

Mitchell, A.H.G., C.A. Ausa, L. Deiparine, T. Hlaing, N. Htay & A. Khine (2004)- The Modi Taung-Nankwe gold district, Slate belt, central Myanmar: mesothermal veins in a Mesozoic orogen. J. Asian Earth Sci. 23, 3, p. 321-341.
(*Quartz-gold veins of Modi Taung-Nankwe gold district, C Myanmar, hosted by mudstones of late Paleozoic Slate belt. Mineralization in E Jurassic following collision of Myanmar (on passive W margin of Shan-Thai continental block) with oceanic arc on overriding plate to W. Collision generated thrusting, metamorphism of Plateau rocks thrust W beneath Slate belt to form Mogok Metamorphics. Reversal in orogenic polarity initiated late Jurassic E-ward subduction of oceanic crust beneath Myanmar and generation of magmatic arc. Young radiometric ages on Mogok Metamorphic belt imply renewed Tertiary uplift or intrusion of Tertiary granites)*

Mitchell, A., S.L. Chung, T. Oo, T.H. Lin & C.H. Hung (2012)- Zircon U-Pb ages in Myanmar: magmatic-metamorphic events and the closure of a neo-Tethys ocean? J. Asian Earth Sci. 56, p. 1-23.
(Main metamorphic event in Mogok Metamorphic belt (MMB) in Myanmar pre-dated India-Asia collision. MMB and Slate belt interpreted as part of W Myanmar (W Burma) block, separated in Jurassic from Shan Plateau to E by SW continuation of Bangong-Nujiang-Luxi 'Neo-Tethys I' ocean. Intrusive and metamorphic events in and near MMB related to W-ward subduction of this ocean and end-Jurassic collision of Plateau with overriding W Myanmar-Slate belt block; to orogenic polarity reversal and E Cretaceous W-ward translation of Plateau sequence over suture zone; and to E-ward subduction of ancestral Indian Ocean or 'Neo-Tethys II' beneath Myanmar with generation of Wuntho-Popa arc beginning before Late Cretaceous)

Mitchell, A., T. Hlaing & N. Htay (2002)- Mesozoic orogenies along the Mandalay-Yangon margin of the Shan Plateau. In: N. Mantajit (ed.) Proc. Symposium on Geology of Thailand, Bangkok 2002, Dept. Mineral Resources, p. 137-149.

Mitchell, A.H.G., T. Hlaing & N. Htay (2010)- The Chin Hills segment of the lndo-Burman Ranges: not a simple accretionary wedge. In: S. Ibotombi (ed.) Indo-Myanmar Ranges in the tectonic framework of the Himalaya and Southeast Asia, Proc. National Seminar 2008, Geol. Soc. India, Mem. 75, p. 3-24.

Mitchell, A.H.G. & M.T. Htay (2013)- The magmatic arc and the slate belt: copper-gold and tin-tungsten and gold metallotects in Myanmar. In: Proc. Symp. East Asia: Geology, exploration technologies and mines, Bali 2013, Australian Inst. Geoscient., Bull. 57, p. 66-67. *(Extended Abstract)*
(Cretaceous Popa-Loimye magmatic arc and Slate belt each host distinctive types of mineralisation and include two of Myanmar's four world- class mineral deposits (Monywa, Mawchi). Slate belt in Myanmar continues SSE for 2000km to Bangka Island in Indonesia. It consists largely of Carboniferous- E Permian mudstones or argillites and quartzites, with thick diamictite beds implying glaciation in Gondwana. Within Slate belt orogenic quartz- gold veins discovered in 1999)

Mitchell, A.H.G., M.T. Htay, C. Ausa, L. Deiparine, A. Khine & S. Po (1999)- Geological settings of gold districts in Myanmar. Proc. PACRIM 99 Int. Congress, 1999, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, 8p.
(Historically most lode gold production from latest Cretaceous mesothermal veins and derived placers)

Mitchell, A.H.G., M.T. Htay & K.M. Htun (2015)- The Medial Myanmar suture zone and the Western Myanmar- Mogok foreland. J. Myanmar Geosciences Soc. 6, 1, p. 73-88.
(Mesotethys suture in Myanmar?)

Mitchell, A.H.G., M.T. Htay, K.M. Htun, M.N. Win, T. Oo & T. Hlaing (2007)- Rock relationships in the Mogok metamorphic belt, Tatkon to Mandalay, central Myanmar. J. Asian Earth Sci. 29, p. 891-910.
(Mogok metamorphic belt >1450 km long, up to 40 km wide, along W margin of Shan Plateau in C Myanmar and continuing N to E Himalayas. At least two metamorphic events, one before and one after intrusion of Late Jurassic- E Cretaceous calc-alkaline rocks)

Mitchell, A.H.G., W. Myint, K. Lynn, M.T. Htay, Maw Oo & T. Zaw (2011)- Geology of the high sulfidation copper deposits, Monywa Mine, Myanmar. Resource Geology 61, 1, p. 1-29.

(Monywa copper district near Chindwin River, 50 km2, in N-ward continuation of Sunda-Andaman magmatic arc through W Myanmar. Ore hosted by M Miocene andesite or dacite porphyry intrusions and early M Miocene sandstone and overlying volcaniclastics)

Morley, C.K. (2017)- Syn-kinematic sedimentation at a releasing splay in the northern Minwun Ranges, Sagaing Fault zone, Myanmar: significance for fault timing and displacement. Basin Research 29, S1, p. 684-700.
(Sagaing Fault zone largest active fault in SE Asia, with displacement rate of ~1.8 cm/yr established from GPS data. Newly identified syn-kinematic extensional basin related to displacement on Sagaing Fault in N Minwun Ranges may help constrain the timing and displacement along N part of Sagaing Fault)

Morley, C.K. & F. Arboit (2019)- Dating the onset of motion on the Sagaing fault: evidence from detrital zircon and titanite U-Pb geochronology from the North Minwun Basin, Myanmar. Geology 47, 6, p. 581-585.
(Recently identified synkinematic basin at releasing bend in one of fault strands in N Myanmar dated using maximum depositional ages from detrital zircons and titanites, giving Oligocene age (28-27 Ma). This dates onset of motion on fault zone and favors high-displacement models (>400 km))

Mukhopadhyay, M. & S. Dasgupta (1988)- Deep structure and tectonics of the Burmese Arc: constraints from earthquakes and gravity data. Tectonophysics 149, p. 299-322.
(Active subduction of Indian plate beneath Burmese arc along E- dipping Benioff zone to depth of ~180 km)

Myint, L. (2016)- A synthesis of Myanmar petroleum geology and potential. Second AAPG/EAGE/MGS Conf. Innovation in Geoscience: unlocking the complex geology of Myanmar, Yangon 2015, Search and Discovery Art. 30453, 30p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/30453myint/ndx_myint.pdf)
(Myanmar with numerous surface oil seeps and one of oldest known oil producing countries in world. In Indian- Eurasian Plates collision zone, with three types of plate boundaries: (1) convergent plate boundary (subduction) between Indian Oceanic and continental Burma Plate; (2) continent-continent boundary between Burma Plate- Eurasia plate in N; (3) transform boundary in E between Eurasia, Sunda and Burma plates)

Myint, L. (2017)- Speculative Pre-Tertiary petroleum systems and play types of Myanmar. AAPG/EAGE/ MGS 3rd Oil & Gas Conf., Yangon 2017, Search and Discovery Art. 30516, 25p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2017/30516myint/ndx_myint.pdf)
(Oil and gas in Myanmar currently limited to Tertiary petroleum systems, with bionic gas in Plio-Pleistocene reservoirs, thermogenic oil and gas in Eocene- Miocene reservoirs. Potential pre-Tertiary hydrocarbon plays in sizable Pre-Tertiary basins of Eastern Highlands)

Myint L. Thein (1973)- The Lower Paleozoic stratigraphy of Western part of the southern Shan States, Burma. Bull. Geol. Soc. Malaysia 6, p. 143-163.
(online at: www.gsm.org.my/products/702001-101349-PDF.pdf)
(Cambrian- Silurian stratigraphy of area SE of Mandalay, S Shan State, E Myanmar. Incl. basal Silurian Orthoceras Beds, Silurian graptolite shales (Monograptus, Climacograptus) and Tentaculites beds))

Myint Thein (1991)- On the lateral displacement of the Sagaing Fault. Georeports, Yangon University, p. 23-34.

Myint Thein (2015)- The Pre-Tertiary carbonate rocks exposed at the NE margin of the Central Myanmar Basin and their development history. J. Myanmar Geosciences Soc. 6, p. 1-22.
(Barber et al. 2017:) Permian limestone slivers in Sagaing fault zone and associated with ophiolites of C Ophiolite belt interpreted as displaced from W margin of Shan Plateau (but with 'Cathaysian' fusulinids??))

Myint Thein (2017)- Current tectonic activity along the Sagaing Fault, Myanmar indicated by alluvial fans. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics. Geol. Soc., London, Memoir 48, Chapter 20, p. 443-452.

(Young alluvial fans and fanglomerates along Sagaing fault zone commonly displaced laterally relative to source areas. Sediments on E side of fault mainly (tilted) Upper Irrawaddy series fluvial-alluvial sediments, locally with rich Lower Pleistocene vertebrate faunas equivalent of Djetis fauna of C Java. Younger fans mainly on W side of fault))

Myint Thein & M. Maung (2017)- The Eastern (Back-arc) Basin of Central Myanmar: Basement rocks, lithostratigraphic units, palaeocurrents, provenance and developmental history. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics. Geol. Soc., London, Memoir 48, Chapter 8, p. 169-183.
(On eastern part of Central Myanmar Basin on W Myanmar Block. Lower Eocene- Pliocene sediments unconformably over U Paleozoic carbonates/ Mesozoic ophiolitic sediments in E, and igneous rocks of Wuntho Salingyi Mesozoic arc in W. Sediment source from N)

Naing Maw Than, Kyi Khin & Myint Thein (2017)- Cretaceous geology of Myanmar and Cenozoic geology in the Central Myanmar Basin. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 7, p. 143-167.
(Review of stratigraphy of Cretaceous sediments in different tectonic belts of Myanmar. Thick Lower Cretaceous- Cenozoic succession in Myanmar Central Basin)

Naing, T.T., D.A. Bussien, W.H. Winkler, M. Nold & A. von Quadt (2014)- Provenance study on Eocene-Miocene sandstones of the Rakhine Coastal Belt, Indo-Burman Ranges of Myanmar: geodynamic implications. In: R.A. Scott et al. (eds.) Sediment provenance studies in hydrocarbon exploration and production. Geol. Soc., London, Spec. Publ. 386, p. 195-216.
(Indo-Burman Ranges accretionary wedge, resulting from subduction of Indian plate beneath Asian plate. Rakhine Coastal Belt thick stack of Cretaceous to Neogene turbiditic sediments and local thrust sheets of oceanic mafics and pelagic sediments. Eocene–Miocene sandstones provenance mainly from: (1) Late Cretaceous- Oligocene igneous rocks and (2) recycled orogenic terrane sources comprising ophiolitic rocks, from Burman margin and arc)

Nakazawa, T., K. Ueno & X. Wang (2009)- Sedimentary facies of Carboniferous- Permian mid-oceanic carbonates in the Changning-Menglian Belt, West Yunnan, Southwest China: origin and depositional process. Island Arc 18, 1, p. 94-107.
(Huge E Carboniferous- Late Permian (Visean-Lopingian) carbonate bodies on basaltic basement in Changning-Menglian Belt, W Yunnan. No terrigenous siliciclastic material. Formed on isolated, subsiding mid-oceanic island probably of hotspot origin. Shallow-water carbonate platform and relatively deep-water carbonate slope facies developed contemporaneously)

Nandy, D.R. (1986)- Geology and tectonics of Arakan Yoma; a reappraisal. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 137-148.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b08.pdf)
(Brief review of Arakan-Yoma zone of Indo-Burman Orogen, W Myanmar)

Ng, Y.N., G.H. Shi & M. Santosh (2016)- Titanite-bearing omphacitite from the Jade Tract, Myanmar: Interpretation from mineral and trace element compositions. J. Asian Earth Sci. 117, p. 1-12.

Ni, J.F., M. Guzman-Speziale, M. Bevis, M., W.E. Holt, T.C. Wallace & W.R. Seager (1989)- Accretionary tectonics of Burma and the three-dimensional geometry of the Burma subduction zone. Geology 17, 1, p. 68-71.
(Geometry of Burma Wadati-Benioff zone determined from earthquake hypocenters. Dip varies from ~50° in N near E Himalayan syntaxis to ~30° in Bay of Bengal area)

Ni, Y., T. Chen, C. Cai, G. Li, Y. Duan & J. Wang (1982)- The Silurian rocks in Western Yunnan. Acta Palaeontologica Sinica 21, p. 119-132.

Nie, X., Q. Feng, I. Metcalfe, A.T. Baxter & G. Liu (2016)- Discovery of a Late Devonian magmatic arc in the southern Lancangjiang zone, western Yunnan: geochemical and zircon U-Pb geochronological constraints on the evolution of Tethyan ocean basins in SW China. J. Asian Earth Sci. 118, p. 32-50.
(Geochemistry and U-Pb zircon ages of Nanguang Fm volcanogenic sediments from S Lancangjiang zone in W Yunnan (= W margin of Simao/ Indochina plate) suggest as yet unidentified Late Devonian (~380-360 Ma) subduction-related magmatic arc. Either continuation of Late Ordovician- Silurian 'Proto-Tethyan' subduction or initial stage of Paleo-Tethyan Lincang Arc, i.e. subduction of Changning-Menglian ocean beneath Simao/ Indochina Block in Late Devonian)

Niko, S. & M. Sone (2014)- Actinocerid cephalopods from the Ordovician of Myanmar, and their paleobiogeographic implications for Northern Gondwana. Paleontological Reserach 18, 2, p. 94-103.
(online at: https://umexpert.um.edu.my/file/publication/00011532_97674.pdf)
(Actinocerid cephalopod fauna from shallow marine limestones in W Shan Plateau, Myanmar (=Sibumasu Block), with Ordosoceras, Armenoceras, Paratunkuskoceras and Wutinoceras moeseini. Strong link with N China during E-M Ordovician time; Sibumasu affinity to coeval Australian fauna less definable)

Niko, S. & M. Sone (2015)- Gondwanan nautiloid cephalopods from the Ordovician of Myanmar. Paleontological Research 19, 4, p. 288-293.
(online at: https://umexpert.um.edu.my/file/publication/00011532_112196.pdf)
(Two late M Ordovician nautiloids from Wunbye Fm in Shan Plateau of Myanmar (= Sibumasu Block): orthocerid Sibumasuoceras langkawiense (Kobayashi) and discosorid Tasmanoceras sp. Sibumasuoceras known only from Malaysia and Myanmar of Sibumasu Block. Tasmanoceras previously known only in Tasmania, implying Ordovician marine biotic linkage between Sibumasu and Tasmania)

Ningthoujam, P.S., C.S. Dubey, S. Guillot, A.S. Fagion & D.P. Shukla (2012)- Origin and serpentinization of ultramafic rocks of Manipur Ophiolite complex in the Indo-Myanmar subduction zone, Northeast India. J. Asian Earth Sci. 50, p. 128-140.
(Manipur-Nagaland ophiolite belt in Indo-Myanmar Ranges formed by collision between India and Myanmar continental plates. Dismembered ophiolite sequence of U Cretaceous- Lower Eocene age overlain by E-M Eocene oceanic pelagics, probably created at slow-spreading ridge, rather than supra-subduction-zone setting. Obducted and incorporated into Indo-Myanmar suture zone. Indo-Myanmar Ranges mainly composed of Late Cretaceous-Paleogene marine sediments, unconformably overlying U Triassic flysch-type sediments and associated ophiolite rocks)

Noetling, F. (1893)- Note on the occurrence of jadeite in Upper Burma. Records Geol. Survey India 26, p. 26-31.
(online at: http://pahar.in/wpfb-file/1893-records-of-geological-survey-of-india-vol-26-pdf/)
(Brief report of first visit of western geologist to jade mines in NE Myanmar)

Noetling, F. (1896)- Uber das Vorkommen von Jadeit in Ober-Birma. Neues Jahrbuch Mineral. Geol. Palaontologie, 1896, 1, p. 1-17.
(online at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015068271041;view=1up;seq=45)
('On the occurrence of jadeite in Upper Burma')

Noetling, F. (1889)- Report on the oil fields of Twingoung and Beme, Burma. Records Geol. Survey India 22, 2, p. 75-136.
(online at: http://pahar.in/wpfb-file/1889-records-of-geological-survey-of-india-vol-22-pdf/)

Noetling, F. (1897)- The occurrence of petroleum in Burma and its technical exploration. Mem. Geol. Survey India, 27, 2, p. 47-272.
(online at: https://books.googleusercontent.com/books/...)
(Oilfields, mud volcanoes, etc.. See also Pascoe 1912)

Noetling, F. (1900)- The Miocene of Burma. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam (2), 7, 2, p. 1-131.
(online at: https://books.googleusercontent.com/books/...)

Nyunt, M. & S. Lwin (1997)- Tectonic setting and hydrocarbon occurrence in the Central Myanmar Tertiary belt. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 319-333.
(Onshore C Myanmar Tertiary Basin is 1300km long, 200km wide depression, which originated in Eocene as array of pull-apart rift segments along oceanic-cratonic transform zone between Indian and SE Asian lithospheric plates (influenced by oblique subduction of Indian oceanic crust beneath SE Asian craton and dextral slip along intra cratonic Sagaing transform fault). Proven reservoirs mainly Oligo-Miocene sandstones. Oils derived from Tertiary land plant material)

Nyunt, Thet Tin, H.J. Massonne & Tay Thye Sun (2017)- Jadeitite and other high-pressure metamorphic rocks from the Jade Mines Belt, Tawmaw area, Kachin State, northern Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 13, p. 295-315.
(World's largest jadeite (NaAlSi2O6) deposit, with highest-quality jade, in Pharkant-Tawmaw Jade Mines Belt in N part of C Myanmar basin. N-S trending belt. Jadeitite in serpentinite melange, probably formed in subduction zone environment. Associated with albitites, chlorite schists, garnet-mica schists, graphite schists, glaucophane and epidote schists and amphibolite. Timing of jadeite formation still controversial: original oceanic crust may have formed in M Jurassic (163 Ma zircon age), ~146 ma (Late Jurassic) zircons may reflect age of subduction and high-P metamorphism. Rapid exhumation required for jadeite preservation)

Oo, T., T. Hlaing & N. Htay (2002)- Permian of Myanmar. J. Asian Earth Sci. 20, 6, p. 683-689.
(Permian 'Plateau Limestone' with minor basal clastics widespread on Shan Plateau in E and S Myanmar. Thitshipin Lst three fusulinid biozones (1) Pseudoschwagerina (early E Permian, also with Pseudofusulina, Pseudofusulinella), (2) Parafusulina (late E Permian, with P. cf. kattaensis), (3) Neoschwagerina- Verbeekina (early Late Permian; with Yangchienia, Schubertella, Tetrataxis and Polydiexodina). Overlying Nwabangyi Lst of Paleofusulina- Codonofusiella zone (Late Permian, also with Hemigordius renzi, Shanita amosi, etc.) Unconformable over Devonian silicicarbonates in Shan State, and Carboniferous meta-siliciclastics in other areas and suggest Permian limestones were deposited after emplacement of Mergui Terrane onto S margin of Shan-Thai Block, when Shan-Thai Block was in S hemisphere)

Ovung, T.N., J. Ray, X. Teng, B. Ghosh, M. Paul, P. Ganguly, S. Sengupta & S. Das (2017)- Mineralogy of the Manipur Ophiolite Belt, North East India: implications for mid-oceanic ridge and supra-subduction zone origin. Current Science 112, 10, p. 2122-2129.
(online at: www.currentscience.ac.in/Volumes/112/10/2122.pdf)
(In Indo-Myanmar Ranges ophiolitic rocks in two parallel belts along E margin of Indian plate: (1) E belt through C Myanmar, Sumatra and Java; (2) W belt through Nagaland, Manipur, W Myanmar and Andaman islands. Wide compositional gap in Cr and Mg content of spinel in mantle peridotites of W Belt Manipur Ophiolite Belt implies upper mantle melting in different tectonic settings: (1) mid-oceanic ridge (MOR) origin for high-Al spinel peridotites and (2) supra-subduction zone origin for high-Cr spinel peridotites)

Pal, T., A. Bhattacharya, G. Nagendran, N. Yanthan, R. Singh & N. Raghumani (2014)- Petrogenesis of chromites from the Manipur ophiolite belt, NE India: evidence for a supra-subduction zone setting prior to Indo-Myanmar collision. Mineralogy and Petrology 108, 5, p. 713-726.
(Manipur ophiolite belt in W Ophiolite Belt of Indo-Myanmar Ranges consists of serpentinised peridotite, dykes, volcanic rocks and pelagic sediments. Compositions of magmatic chromites suggest ophiolite formed in supra-subduction zone setting)

Panda, D.., B. Kundu, V.K. Gahalaut & C. Rangin (2018)- Crustal deformation, spatial distribution of earthquakes and along strike segmentation of the Sagaing Fault, Myanmar. J. Asian Earth Sci. 166, p. 89-94.
(~1200 km long, N-S Sagaing fault is plate boundary fault between Burma and Sunda plate, accommodates ~50-55% of dextral motion of India-Sunda plate motion. Along strike segmentation)

Pascoe, E.H. (1912)- The oil fields of Burma. Mem. Geol. Survey India, Calcutta, 40, 1, p. 1-269.

Pascoe, E.H. (1965)- Manual of the geology of India and Burma, 3rd Edition, 3 vols. Government of India Press, Calcutta, p. 1-2363.

Paumard, V., E. Zuckmeyer, R. Boichard, S.J. Jorry, J. Bourget, J. Borgomano, T. Maurin & J.N. Ferry (2017)- Evolution of Late Oligocene - Early Miocene attached and isolated carbonate platforms in a volcanic ridge context (Maldives type), Yadana field, offshore Myanmar. Marine Petroleum Geol. 81, p. 361-387.
(Stratigraphic evolution of Late Oligocene- E Miocene (Aquitanian) carbonate platforms of Yadana High, offshore Myanmar (N of Andaman spreading zone). Seven seismic sequences in three stages: (1) Chattian development of aggrading attached and isolated platforms; (2) platform emersion at Oligo- Miocene transition; (3) Aquitanian drowning of small buildup and km-scale backstepping on large platforms (3DF and Yadana). Aquitanian onset of renewed volcanic activity, followed by development of ~300-850m thick Burdigalian fringing carbonate reefs in ~6 My. Platforms developed on volcanic ridge of hotspot origin in Indian Ocean, not part of volcanic arc)

Peng, T., Y. Wang, G. Zhao, W. Fan & B. Peng (2008)- Arc-like volcanic rocks from the southern Lancangjiang zone, SW China: geochronological and geochemical constraints on their petrogenesis and tectonic implications. Lithos 102, p. 358-373.
(Triassic volcanic rocks in C part of San-Jiang orogenic belt, SW China, mainly in E segment of Lancangjiang zone. Interpreted as products of subduction during closure of Paleo-Tethys. Mainly andesites with minor basaltic andesites. Andesite zircon age of 248.5±6.3 Ma (E Triassic), and similar to typical subduction-related arc volcanic rocks. Associated with M-Triassic (~230 Ma) syn-collision granites, andesites in S Lancangjiang zone viewed as E Triassic continental margin volcanic arc rocks, suggesting Paleo-Tethyan Ocean not closed until M Triassic continent- continent or continent- arc collision)

Peng, T., S.A. Wilde, Y. Wang, W. Fan & B. Peng (2013)- Mid-Triassic felsic igneous rocks from the southern Lancangjiang Zone, SW China: petrogenesis and implications for the evolution of Paleo-Tethys. Lithos 168-169, p. 15-32.
(SW Lancangjiang magmatic belt in SW China mainly composed of Lincang batholith and Mesozoic volcanic belt with abundant rhyolites. Zircon U-Pb results define emplacement ages for large Lincang batholith at ~230 Ma and ~220 Ma (just E of Changning-Mengliang suture zone). M-Triassic magmatism was generated in post-collisional tectonic setting, possibly tied to slab breakoff, resulting in post-collisional extension and asthenospheric upwelling that induced melting of middle-lower crust to produce felsic magma. This post-collisional magmatism indicates continent-continent/arc collision between Gondwana-derived Sibumasu and Indochina blocks was completed by early M Triassic)

Pilgrim, G.E. (1925)- The Perissodactyla of the Eocene of Burma. Palaeontologia Indica, N.S., 8, p. 1-28.
(One of early discoveries of M Eocene mammals in Myanmar: a rhinocerotoid hoofed mammal)

Pilgrim, G. E. (1928)- The Artiodactyla of the Eocene of Burma. Paleontologia Indica 13, p. 1-39.

Pilgrim G.E. & P. de Cotter (1916)- Some newly discovered Eocene mammals from Burma. Records Geol. Survey India, 47, p. 42-77.

Pivnik, D.A., J. Nahm, R.S. Tucker, G.O. Smith, K. Nyein, M. Nyunt & P.H. Maung (1998)- Polyphase deformation in a fore-arc/back-arc basin, Salin subbasin, Myanmar (Burma). American Assoc. Petrol. Geol. (AAPG) Bull. 82, 10, p. 1837-1856.
(Salin subbasin of Myanmar is fore-arc/back-arc basin couplet between oblique subduction zone to W and right-lateral strike-slip fault to E. NNW-directed extensional basin in Miocene, followed by ENE–directed Plio-Pleistocene transpressional deformation. In S part of basin Miocene thickens over 20°N and Yedwet uplifts, suggesting NNW striking faults that bound them represent Plio-Pleistocene inversion of Miocene normal faults)

Qi, M. H. Xiang, Z.Q. Zhong, H.N. Qiu, H. Wang, X.L. Sun & B. Xu (2013)- 40Ar/39Ar geochronology constraints on the formation age of Myanmar jadeitite. Lithos 162-163, p. 107-114.
(First direct 40Ar/39Ar dating of Myanmar jadeite from yielded plateau age of 123.9 ± 3.4 Ma, sodic-calcic amphibole associated with jadeite plateau age of 134.8 ± 1.4 Ma, and sodic amphibole of late amphibole rock plateau age of 92.7 ± 1.2 Ma. Indicate jadeitite formed during E Cretaceous (135 Ma) from high-P metasomatism, then experienced late Cretaceous (93 Ma) HP metasomatism)

Racey, A. (2017)- Petroleum exploration offshore Myanmar: history and future potential. In: Proc. SE Asia Petrol. Expl. Soc (SEAPEX) Exploration Conf. 2017, Singapore, Session 1, 4p. *(Extended Abstract)*
(Brief review of hydrocarbon exploration offshore Myanmar since 1969. Currently four producing gas fields (Zawtika, Shwe/Shwe Phyu/Mya, Yadana, Yetagun) with Aung Sinkha field under development)

Racey, A. (2017)- Exploration history and petroleum geology of offshore Myanmar. In: A.H.G. Mitchell, Geological belts, plate boundaries and mineral deposits in Myanmar, Elsevier, Chapter 12, p. 391-431.

Racey, A. & M.F. Ridd (2015)- Petroleum geology of Myanmar. Geol. Soc., London, Mem. 45, p. 1-118.
(Review of onshore and offshore petroleum geology of Myanmar and adjoining basins, in 11 chapters by Racey & Ridd and Ridd & Racey)

Racey, A. & M.F. Ridd (2015)- Myanmar offshore petroleum overview. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 6, Geol. Soc., London, Mem. 45, p. 57-62.
(Myanmar offshore petroleum exploration since 1972, with main regions Rakhine (=Ganges-Brahmaputra delta), Moattama and Tanintharyi (=Ayeyerwaddy Delta). Mainly gas fields, with main discoveries Zawtika (2.05 Tcf), Shwe/ShwePhyu/Mya (4.09 Tcf biogenic gas in distal Bengal Fan), Yadana (2.89 Tcf in E Miocene carbonates in forearc basin setting) and Yetagun (1.5 Tcf,41 MMb condensate, thermogenic)

Racey, A. & M.F. Ridd (2015)- Petroleum geology of the Moattama region, Myanmar. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 6, Geol. Soc., London, Mem. 45, p. 63-81.
(Offshore Moattama Region dominated by Martaban Basin, between Yadana- M8 highs in W and Tanintharyi Shelf in E. Late Oligocene- E Miocene carbonate platform of Yadana- M8 highs (with Yadana and smaller gas fields) overlies volcanic arc basement, and is overlain by thin U Miocene- Recent clastics from ancestral Ayeyarwady River. In C part of Martaban Basin area thick Miocene clastics from ancestral Ayeyarwady and Thanlwin Rivers (with Zawtika biogenic gas field))

Racey, A. & M.F. Ridd (2015)- Petroleum geology of the Tanintharyi region, Myanmar. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 8, Geol. Soc., London, Mem. 45, p. 83-91.

Racey, A. & M.F. Ridd (2015)- Petroleum geology of the Rakhine region, Myanmar. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 9, Geol. Soc., London, Mem. 45, p. 93-108.
(Rakhine Basin off NW Myanmar (with Shwe gas field) also extends onshore under Rakhine coastal lowlands (with small oil fields). Rakhine Coastal Lowlands represents S-ward extension of hydrocarbon-bearing regions of Assam and E Bangladesh. Structurally complex onshore and offshore shelf area separated from poorly structured deepwater area by dextral trench-parallel shear fault system which represents boundary between India Plate in W and Burma Platelet in E)

Rangin, C. (2017)- Active and recent tectonics of the Burma Platelet in Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, p. 53-64.
(Burma Platelet covers W part of Myanmar, between Indian Plate/ Bengal Basin in W and Sunda Plate in E. Boundaries are active Sagaing dextral strike-slip fault in E, and debatable Bengal Basin subduction zone in W. Non-rigid sliver plate with several right-lateral shear zones accommodated N-ward India/Sunda dextral wrench movement, with hyper-oblique convergence since E Cenozoic)

Rangin, C., T. Maurin & F. Masson (2013)- Combined effects of Eurasia/Sunda oblique convergence and East Tibetan crustal flow on the active tectonics of Burma. J. Asian Earth Sci. 76, p. 185-194.

(Deformation of India/ Sunda plate result of partitioned oblique convergence. Sub-meridian dextral strike slip faulting accommodates India/Sunda motion in buffer zone (Burma platelet). This wide dextral strike slip shear zone is complicated by side effect of Tibet plateau collapse. Apparent E-W shortening component of hyper-oblique subduction is only effect of regional gravitational forces related to Tibet plateau collapse whereas N-S strike slip faulting accommodates India/Sunda motion)

Ridd, M.F. (2017)- Central Burma Depression and its petroleum occurrences. In: A.H.G. Mitchell, Geological belts, plate boundaries and mineral deposits in Myanmar, Elsevier, Chapter 12, p. 325-349.
(Synopsis of Ridd & Racey (2015) papers. All Myanmar onshore oil-gas fields are in 1200km long Central Burma Depression. Possibly oldest oil production/ mining in world. N-S trending basin with up to 15,000m of U Cretacous- Pleistocene sediments. Most productive fields Yenangyaung, Chauk and Yenangyat)

Ridd, M.F. (2017)- Karen-Tenasserim Unit. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 16, p. 365-384.
(Fault-bounded, N-S trending Karen-Tenasserim Unit of Bender (1983) W of Shan Plateau in southern Central Myanmar is direct continuation of 'Phuket -Slate Belt Terrane' of Ridd (2009) in Peninsular Thailand (and Tengchong Block to N?). With metamorphic rocks (incorrectly called Mogok Metamorphics), overlain by thick U Paleozoic Mergui Gp with intervals of ?Carboniferous- E Permian glacial diamictites and Permian 'Moulmein Limestone' (= Ratburi Lst of Peninsular Thailand; at Myeik/Mergui archipelago of S Myanmar with Lonsdaleia, Schwagerina, Productus sumatrensis, etc.). Aso with common granitoid intrusions. Often viewed as W part of Sibumasu Block, but interpreted as separate 'Phuket Terrane' or 'Irrawaddy block' (Mitchell 2012, 2015, Ridd 2016) (but no ophiolites found yet between them)

Ridd, M.F. & A. Racey (2015)- Introduction to the petroleum geology of Myanmar. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 1, Geol. Soc., London, Mem. 45, p. 1-6.
(Oil and gas produced in Myanmar from Cenozoic sediments in 1200 km-long Central Burma Depression and in Andaman Sea offshore)

Ridd, M.F. & A. Racey (2015)- Regional tectonic setting of Myanmar's petroleum basins. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 2, Geol. Soc., London, Mem. 45, p. 7-12.
(Petroleum-bearing parts of Myanmar in west of country, with geology dominated by oblique collision between continental Sunda (Sibumasu and (W) Burma Plate) Plate in E and N-moving India Plate in W. Sagaing Fault separates W Burma Platelet from Sunda Plate to E. W Burma probably continuation of Woyla terranes of Sumatra, which collided with W side of Sibumasu in Late Jurassic- E Cretaceous)

Ridd, M.F. & A. Racey (2015)- Onshore petroleum geology of Myanmar: Central Burma Depression. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 4, Geol. Soc., London, Mem. 45, p. 21-50.
(All of Myanmar's commercial onshore oil- gas fields in Cenozoic of C Burma Depression. Seven sub-basins. Southern region contains all currently producing fields)

Ridd, M.F. & A. Racey (2015)- Frontier onshore petroleum basins of Myanmar. In: A. Racey & M.F. Ridd (eds.) Petroleum geology of Myanmar, Chapter 5, Geol. Soc., London, Mem. 45, p. 51-55.

Rietschel, S. & M.H. Nitecki (1984)- Ordovician receptaculid algae from Burma. Palaeontology 27, 2, p. 415-420.
(online at: http://cdn.palass.org/publications/palaeontology/volume_27/pdf/vol27_part2_pp415-420.pdf)
(Fischerites burmensis n.sp. from M Ordovician Wunbye Fm in W part of S Shan State (first receptaculid described from SE Asia) (second is from W Thailand?; Kruse 1989))

Roeder, T. (2015)- Using detrital zircon geochronology to unravel the history of the Naga Hills Ophiolite. M.Sc. Thesis, University of Sydney, p. 1-76.
(online at: https://ses.library.usyd.edu.au/handle/2123/13535)
(Naga Hills with dismembered Neotethyan ophiolite suite, assigned Late Jurassic age based on radiolaria from red cherts above ophiolite (Baxter et al., 2011). Naga Hills Ophiolite unconformably overlain by India-derived

Phokphur Fm polymict conglomerates (incl. ophiolite debris), with detrital zircon peak ages Jurassic (190-200), Permo-Triassic (200-300 Ma), Cambrian, Mesoproterozoic (~1000-1200 Ma) and Archean (~2700- 2750 Ma), suggestive of SW Australian provenance. Youngest zircon ages 90 Ma (=maximum age of Naga ophiolite emplacement)

Qiu, Z.L., F.Y. Wu, S.F. Yang, M. Zhu, J.F. Sun & P. Yang (2009)- Age and genesis of the Myanmar jadeite: constraints from U-Pb ages and Hf isotopes of zircon inclusions. Chinese Science Bull. 54, 4, p. 658-668.
(U-Pb ages of zircons in Myanmar jadeite from collisional belt between India- Eurasia plates 158 ± 2 Ma (Late Jurassic). Jadeite formation not genetically related to collision of India- Eurasia continental plates)

Rao, R.B.S.T.R. (1930)- The geology of the Mergui District. Geol. Survey India Mem. 55, p. 1-62.
(Early description of Carboniferous- Permian Mergui series of S Myanmar, with probable diamictites, overlain by Permian Moulmein Limestone with Schwagerina, Lonsdaleia salinaria, Productus sumatrensis, etc.)

Saing, U.C. (2003)- Evolution of Neogene Basins in Myanmar. In: B. Ratanasthien et al. (eds.) Pacific Neogene paleoenvironments and their evolution, 8th Int. Congress on Pacific Neogene Stratigraphy, Chiang Mai, 2003, p.

Sarkar, A., A.K. Datta, B.C. Poddar, B.K. Bhattacharyya, V.K. Kollapuri & R. Sanwal (1996)- Geochronological studies of Mesozoic igneous rocks from eastern India. J. Southeast Asian Earth Sci. 13, p. 77-81.
(Variety of Mesozoic basaltic and alkaline igneous rocks on E margin of Indian shield. Igneous rock suites from Meghalaya-Nagaland region with K-Ar ages of 149-107 Ma (Late Jurassic-E Cretaceous). Mantle upwelling in extensional tectonic regime related to fragmentation of Indian plate from Australia-Antarctica in E Cretaceous main trigger for magmatic activity. Includes latest Jurassic age of 148± 4 Ma for basalts of Nagaland Ophiolite Complex)

Satyabala, S.P. (2003)- Oblique plate convergence in the Indo-Burma (Myanmar) subduction region. Pure Applied Geophysics 160, 9, p. 1611-1650.
(Indo-Burma (Myanmar) subduction boundary highly oblique to direction Indian plate motion relative to Eurasian plate.Area includes Wadati-Benioff zone of earthquakes, magmatic arc, fold-thrust belts. Also oblique subduction features-like arc-parallel strike-slip fault (Sagaing Fault) and buttress (Mishmi block) that resists the motion of fore-arc sliver. Study of earthquakes consistent with model of M Miocene- Recent E-ward subduction, volcanic activity and transcurrent movement)

Searle, D.L. & B.T. Haq (1964)- The Mogok belt of Burma and its relationship to the Himalayan orogeny. In: G. Kohli et al. (eds.) Himalayan and Alpine orogeny, Proc. 22nd Int. Geological Congress, India 1964, 11, p. 132-161.

Searle, M.P. (2006)- Role of the Red River shear zone, Yunnan and Vietnam, in the continental extrusion of SE Asia. J. Geol. Soc., London, 163, p. 1025-1036.
(1000km long Ailao Shan-Red River fault zone from SE Tibet to Gulf of Tonkin and S China Sea. Left-lateral strike-slip shearing along Red River shear zone started after 21 Ma, not 35 Ma as previously thought, and fault was purely crustal structure. None of geological features used to propose 500-1000 km offsets are robust, and total offset remains unknown (but see also Tang et al. 2012; JTvG))

Searle, M.P., C.K. Morley, D.J. Waters, N.J. Gardiner, U Kyi Htun., T.T. Nu & L.J. Robb (2017)- Tectonic and metamorphic evolution of the Mogok Metamorphic and Jade Mines Belts and ophiolitic terranes of Burma (Myanmar). In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 12, p. 261-293.
(Mogok High-T Metamorphic terrane along W margin of Sibumasu/ Shan Plateau in Myanmar (Burma) thought to be S-ward continuation of Lhasa block of S Tibet. S of Burma MMB may extend into tin granite province of Mergui coast and S to Phuket. MMB has little in common with Western granite belt of peninsula Malaysia, dominated by Triassic tin-bearing biotite granites. Includes Jade Mines Belt (ophiolitic mantle rocks subjected

to high-P metamorphism). Peak metamorphism time ~M-L Eocene (~43-33 Ma), rapid exhumation in late E Miocene (~16-22 Ma))

Searle, M.P., S.R. Noble, J.M. Cottle, D.J. Waters, A.H.G. Mitchell, Tin Hlaing & M.S.A. Horstwood (2007)- Tectonic evolution of the Mogok metamorphic belt, Burma (Myanmar) constrained by U-Th-Pb dating of metamorphic and magmatic rocks. Tectonics 26, 3, p. 1-24.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006TC002083/epdf)
(Mogok belt of high-grade metamorphic rocks of Birma extends >1500 km along W margin of Shan-Thai block. Previous geochronology suggested long-lasting Jurassic- E Cretaceous subduction-related event with emplacement of granodiorites and orthogneisses (171-120 Ma) and poorly constrained Tertiary metamorphic event. New U-Pb isotope data suggest two Tertiary metamorphic events affecting MMB: (1) Paleocene ~59 Ma and (2) Late Eocene- Oligocene (at least from 37 (47?)- 29 Ma))

Sein, C., J. van der Made & G.E. Rossner (2009)- New material of *Propotamochoerus* (Suidae, Mammalia) from the Irrawaddy Formation, Myanmar. Neues Jahrbuch Geol. Palaont., Abhandl. 251, 1, p. 17-31.
(New records of Late Miocene Propotamochoerus from Lower Irrawaddy Fm at Tebingan in Myanmar (P. "hysudricus", P. wui). Presence in Myanmar indicates faunal affinities between India, SE Asia and S China)

Sengupta, S., S.K. Acharyya, H.J. van den Hul & B. Chattopadhyay (1989)- Geochemistry of volcanic rocks from the Naga Hills Ophiolites, northeast India and their inferred tectonic setting. J. Geol. Soc., London, 146, p. 491-498.
(Highly disrupted and deformed slices of ophiolitic rocks occur in linear belt in Nagaland and Manipur, known as the Naga Hills Ophiolites. Principal rock types dunite, harzburgite, lherzolite, wehrlite, pyroxenite and mafic volcanics. Volcanics low-Ti and high-Ti groups, probably not cogenetic. Low-Ti group overlapping Mid-Ocean Ridge Basalt and island arc-like characteristics, and possibly suggest back-arc basin setting. High-Ti group similarities with within-plate basalts erupted at off-axis seamounts)

Sengupta, S., K.K. Ray, S.K. Acharyya & J.B. de Smeth (1990)- Nature of ophiolite occurrences along the eastern margin of the Indian Plate and their tectonic significance. Geology 18, p. 439-442.
(U Mesozoic- Lower Eocene ophiolitic rocks in two parallel belts along E margin of Indian plate: (1) E belt: C Burma, Sumatra and Java, with gravity highs from steeply dipping mafic rocks, and denotes line of subduction prior to M Eocene (root zone of Cretaceous-Paleocene oceanic crust?) (2) W belt: Nagaland, Manipur, W Burma, and Andaman, flanked toE by negative gravity anomaly zone, with rootless subhorizontal ophiolites overlying Eocene-Oligocene flysch of Indo-Burmese Range (W-propagating ophiolite nappes from E belt during late Oligocene terminal collision of Indian and Eurasian continental blocks) (but associated with M Eocene ophiolite-derived clastics?). Late Oligocene unconformity in entire region Ophiolite occurrences in Andaman and Mentawai islands belong to W belt; generally linked with active subduction W of island arc, but subduction began only in Late Miocene and could not have produced ophiolites emplaced much earlier)

Sevastjanova, I., L. Wilson, P. Markwick, C. Davies, A. Quallington & M. Harland (2016)- A source-to-sink study in Myanmar: implications for exploration. AAPG Geoscience Techn. Workshop Characterization of Asian hydrocarbon reservoirs, Bangkok, Search and Discovery Art. 30454, 6p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/30454sevastjanova/ndx_sevastjanova.pdf)
(Detrital zircon U-Pb age data from Rakhine Basin shows Precambrian zircons more abundant in present-day river sands compared to Eocene-Miocene. This implies provenance change and increased sediment reworking between Miocene- Present, consistent with suggested rapid uplift of Indo-Burman ranges since Late Miocene)

Shellnutt, J.G. (2014)- The Emeishan large igneous province: a synthesis. Geoscience Frontiers 5, 3, p. 369-394.
(online at: www.sciencedirect.com/science/article/pii/S1674987113001072)
(Late Permian Emeishan large igneous province in SW China covers W margin of Yangtze Block (S China Block) and E Tibetan Plateau, with displaced units in N Vietnam (Song Da zone). Contains base metal deposits and is contemporaneous with late Capitanian (~260 Ma) mass extinction. Mainly flood basalts, but also ultramafic and silicic volcanic rocks. Three nearly concentric zones with thicker crust from inner to outer zone.

Age of the ELIP constrained to interval of 3 Myrs or less. Uncertainty whether magmas derived from subcontinental lithospheric mantle or asthenosphere/ mantle plume sources or both. ELIP likely derived from short-lived, plume-like upwelling of mantle-derived magmas)

Shellnutt, J.G. (2015)- Igneous Rock associations 16. The Late Permian Emeishan Large Igneous Province. Geoscience Canada 42, p. 169-180.
(online at: https://journals.lib.unb.ca/index.php/GC/article/download/21548/26356)
(Review of Late Permian Emeishan large igneous province (ELIP) covers W margin of Yangtze Block and Tibetan plateau of SW China, with displaced correlative units in N Vietnam (Song Da zone). Contemporaneous with Late Capitanian mass extinction (260 Ma) erupted in <3 Myrs. Mainly flood basalts, but also also picritic and silicic volcanic rocks. Considered to be mantle plume-derived, albeit with some crustal contamination)

Shellnutt, J.G., S.W. Denyszyn & R. Mundil (2012)- Precise age determination of mafic and felsic intrusive rocks from the Permian Emeishan large igneous province; SW China. Gondwana Research 22, 1, p. 118-126.
(New zircon CA-TIMS U-Pb from intrusive rocks of Panxi region (Inner Zone) of M-L Permian ELIP yielded ages between >257 Ma and ~260 Ma, consistent with estimates from magneto-biostratigraphic data)

Shellnutt, J.G. & B.M. Jahn (2011)- Origin of Late Permian Emeishan basaltic rocks from the Panxi region (SW China): implications for the Ti-classification and spatial-compositional distribution of the Emeishan flood basalts. J. Volcanology Geothermal Research 199, p. 85-95.

Shellnutt, J.G., T. Usuki, A.K. Kennedy & H.Y. Chiu (2015)- A lower crust origin of some flood basalts of the Emeishan large igneous province, SW China. J. Asian Earth Sci. 109, p. 74-85.
(Neoproterozoic (i.e. ~750-850 Ma) zircons in Late Permian Emeishan basalts indicates either assimilation of older material during emplacement or rocks could be derived from mafic Neoproterozoic precursor, like Neoproterozoic Kangdian basalts)

Shellnutt, J.G. & K.L. Wang (2014)- An ultramafic primary magma for a low Si, high Ti-Fe gabbro in the Panxi region of the Emeishan large igneous province, SW China. J. Asian Earth Sci. 79, A, p. 329-344.
(Kelang gabbro (256± 3 Ma) in contact with syenite of Late Permian (~260 Ma) Baima igneous complex of Emeishan Large Igneous Province. Gabbro may be uppermost portion of large mafic-ultramafic intrusion unrelated to Baima igneous complex)

Shen, S., Q. Feng, Q. Wei, Z. Zhang & H. Zhang (2006)- A study on the geochemical characteristics of Upper Permian continental marginal arc volcanic rocks in the northern segment of South Lancangjiang Belt. Chinese J. Geochemistry 25, 3, p. 216-222.
(Geochemical characteristics of U Permian continental marginal arc volcanics from Xiaodingxi and Zangli on the E side of Yunxian-Lincang granite. Dominated by basalt-andesite-dacite. Lancangjiang Belt, together with ocean-ridge and ocean-island volcanic rocks and ophiolites in Changning-Menglian Belt, indicate Lancangjiang oceanic crust (Paleotethys) subducted E-wards)

Shen, S., Q. Feng, Q. Wei & Z. Zhang (2007)- Newly developed evidence for the original Tethysan island-arc volcanic rocks in the southern segment of the South Lancangjiang Belt. Chinese J. Geochemistry 26, 1, p. 91-97.
(Pre-Ordovician metamorphic volcanic rocks in Huimin-Manlai region of Yunnan Province represent Tethysan island-arc volcanic rocks)

Shen, S.Z., G.R. Shi & Z.J. Fang (2002)- Permian brachiopods from the Baoshan and Simao Blocks in Western Yunnan, China. J. Asian Earth Sci. 20, 6, p. 665-682.
(Four Permian brachiopod assemblages from W Yunnan, SW China. Faunas from Baoshan Block dominated by species characteristic of Cathaysian Province with some links with Peri-Gondwanan faunas. Simao Block characterised exclusively by taxa of Cathaysian Province)

Shen, S.Z., G.R. Shi & K. Zhu (2000)- Early Permian brachiopods of Gondwana affinity from the Dingjiazhai Formation of the Baoshan block, western Yunnan, China. Rivista Italiana Paleont. Stratigr. 106, 3, p. 263-282.
(online at: https://riviste.unimi.it/index.php/RIPS/article/download/6146/6108)
(28 species and 3 assemblages of E Permian brachiopods in 100-340m thick Dingjiazhai Fm of Baoshan block. In ascending order: (A) Bandoproductus qingshwigouensis- Marginifera semigrariosa (lower member with glacial dropstones; Asselian), (B) Punctocyrtella australis- Punctospirifer afghanus (latest Asselian- E Sakmarian) and (C) Callytharrella dongsbanpoensis (Late Sakmarian-Artinskian; correlative with Late Sakmarian Spinomartinia prolifica assemblage of S Thailand). Uppermost Dingjiazhai Fm with fusulinids Eoparafusulina spp., Schwagerina spp and Triticites. Strong Gondwanan affinity)

Shi, G.H., W. Cui, S. Cao, N. Jiang, P. Jian, D. Liu, L. Miao & B. Chu (2008)- Ion microprobe zircon U-Pb age and geochemistry of the Myanmar jadeitite. J. Geol. Society, London, 165, p. 221-234.
(Myanmar jadeitite from W part of Sagaing fault belt with three groups of zircons: (1) ~163 Ma, indicating M Jurassic igneous (oceanic crust formation) or hydrothermal (serpentinization) event; (2) ~146.5 Ma, with jadeite inclusions, suggesting Late Jurassic age of formation of Myanmar jadeitites, and subduction of E Indian oceanic plate; (3) 122 Ma, representing later unknown thermal event)

Shi, G.H., D.A. Grimaldi, G.E. Harlow, J. Wang, J. Wang, M. Yang, W. Lei, Q. Li & X. Li (2012)- Age constraint on Burmese amber based on U-Pb dating of zircons. Cretaceous Research 37, p. 155-163.
(online at: www.cugb.edu.cn/uploadCms/file/20600/20170113080954938661.pdf)
(Commercially exploited Cretaceous amber (burmite) from clastic rocks rich in volcanics in Hukawng Valley, N Myanmar, with diverse biota. Earlier age estimates Albian- Cenomanian based on palynology and insects. Zircons from amber two age groups: (1) 102-108 Ma; (2) 98.8 Ma (E Cenomanian; viewed as maximum age for burmite). Ages also indicate volcanic activity at ~98.8 Ma in area)

Shi, G.H., G.E. Harlow, J. Wang, J. Wang, E. Ng, X. Wang, S. Cao & W. Cui (2012)- Mineralogy of jadeitite and related rocks from Myanmar: a review with new data. European J. Mineralogy 24, 2, p. 345-370.
(Jadeitite composed almost entirely of jadeite and related pyroxene. It is found in subduction channel serpentinite melange associated with High P/ low T metamorphosed rocks, but generally rarer than eclogite or blueschist. Late Jurassic jadeitite from Myanmar Jade Mine Tract at W side of Sagaing Fault highly diverse mineralogy, with >30 minerals: jadeite, omphacite, kosmochlor, etc. Primary jadeitite veins occur in serpentinite with albitite and/or amphibolite boundaries. At least two stages of jadeitization identified. Late-stage zeolites, pectolite, hyalophane, etc. formed at lower P and T. Jadeite-forming fluids rich in Na, Al, Ba, Sr and Ca. Most rocks in serpentinite melanges subject to infiltration and potential replacement by jadeitite or reaction with jadeitite)

Shi, G.H., N. Jiang, Y. Liu, X. Wang, Z.Y. Zhang & Y.J. Xu (2009)- Zircon Hf isotope signature of the depleted mantle in the Myanmar jadeitite: implications for Mesozoic intra-oceanic subduction between the Eastern Indian Plate and the Burmese Platelet. Lithos 112, p. 342-350
(Lu-Hf isotope signatures of zircons in jadeitite from N Myanmar. Indo-Burma Range interpreted as Eastern subduction zone where oceanic crust of E Indian plate was overridden by Burmese platelet. Jadeite formed in serpentinite, marking subduction zone. Three zircon groups: ~163, 146 and 122 Ma. Zircon in jadeitite can be used to constrain age of serpentinization/rodingitization, and age of formation of ultramafic rock within ophiolites. Results suggest presence of Mesozoic intra-oceanic subduction in Indo-Burman Range)

Shi, G.H., W. Lei, H. He, Y.N. Ng, Y. Liu, Y.X. Liu, Y. Yuan, Z. Kang & G. Xie (2014)- Superimposed tectono-metamorphic episodes of Jurassic and Eocene age in the jadeite uplift, Myanmar, as revealed by 40Ar/39Ar dating. Gondwana Research 26, 2, p. 464-474.
(Jade Mine Track HP ophiolites/ serpentinite melange of Myanmar between Indo-Burma Range and Tagaung-Myitkyina Belt with two contrasting Ar-Ar ages: (1) Late Jurassic (152.4 Ma of glaucophane from blueschist) and (2) M Eocene (~45 Ma) of phengitic muscovites from quartz schists. Late Jurassic Jadeite Uplift possibly related to Woyla intra-oceanic arc subduction zone)

Shi, G.U., P. Tropper, W. Cui, J. Tan & C. Wang (2005)- Methane (CH4)-bearing fluid inclusions in the Myanmar jadeitite. Geochemical J. 39, 6, p. 503-516.
(Fluid inclusions in high-pressure jadeitites from famous jadeite tract of N Myanmar mostly H2O (87-94%) and methane (CH4). Stable isotope ratios of CH4 indicative of abiogenic thermal maturation, probably from subducted organic carbon in paleosubduction zone. CH4 may be stable to at least upper 20 km of subduction zone where jadeitite veins formed under low T / high-P conditions)

Shi, Y. (2010)- Early Permian fusulinids from West Yunnan and their chronological puzzle. In: C.P. Lee et al. (eds.) 6th Symp. Int. Geol. Correl. Progr. Project 516 (IGCP516), Geological anatomy of East and South Asia, Kuala Lumpur 2010, p. 42-43. *(Abstract only)*
(E Permian (Artinskian) fusulinids described recently from W Yunnan Sibumasu/ Cimmerian terranes: Eoparafusulina-Pseudofusulina faunas from Baoshan;, Eoparafusulina-Monodiexodina fauna from Tengchong)

Shi, Y., J.L. Anderson, Z. Wu, Z. Yang, L. Li & J. Ding (2016)- Age and origin of Early Paleozoic and Mesozoic granitoids in Western Yunnan Province, China: geochemistry, SHRIMP zircon ages, and Hf-in-zircon isotopic compositions. J. Geology 124, 5, p. 617-630.
(E Paleozoic magmatism in Baoshan block (granitoids with zircon Pb/U ages of ~481, 493 Ma and indications of crustal melting/reworking. Tengchong block Late Triassic S-type granites with zircons of 216-226 Ma, probably in post-collisional tectonic setting. Late Early Cretaceous (118 Ma) S-type granite; emplacement may be related to closure of Neotethys ocean)

Shi, Y., H. Huang & X. Jin (2017)- Depauperate fusulinid faunas of the Tengchong Block in western Yunnan, China, and their paleogeographic and paleoenvironmental indications. J. Paleontology 91, 1, p. 12-24.
(online at: www.cambridge.org/core/journals/journal-of-paleontology/article/depauperate-fusul...)
(M Permian fusulinids from Tengchong Block, W Yunnan, China (= part of Sibumasu) dominated by Chusenella, Nankinella and Schwagerina. Low diversity through E-M Permian and paucity of M Permian neoschwagerinids and verbeekinids in block confirm Gondwana-affinity and possibly relatively low temperature of seawater. Depauperate assemblages of limited number of species with abundant individuals)

Shi, Y., H. Huang, X. Jin & X. Yang (2011)- Early Permian fusulinids from the Baoshan Block, Western Yunnan, China and their paleobiogeographic significance. J. Paleontology 85, 3, p. 489-501.
(Sakmarian-Artinskian fusulinids from N and S Baoshan and W Yunnan, dominated by Pseudofusulina and Eoparafusulina spp. and similar to those from C Pamir, S Afghanistan, E-C Iran, C Oman, E Hindu Kush and N Karakorum)

Shi, Y., X. Jin, H. Huang & X. Yang (2008)- Permian fusulinids from the Tengchong Block, Western Yunnan, China. J. Paleontology 82, p. 118-127.
(Permian fusulinid faunas from N Tengchong Block, SW China. Lower Dadongchang Fm dominated by Eoparafusulina, possibly Sakmarian age. Dadongchang Fm mainly Chusenella and Monodiexodina, indicating Wordian-Capitanian age. Similar to fusulinid assemblages from Baoshan and Sibumasu Blocks (both low diversity without Cathaysian-Tethyan Pseudoschwagerinidae, Verbeekinidae, Neoschwagerinidae))

Shimada, K., N. Egi, T. Tsubamoto, M. Maung, T. Htike, M. Thein, Y. Nishioka et al. (2016)- The extinct river shark *Glyphis pagoda* from the Miocene of Myanmar and a review of the fossil record of the genus *Glyphis* (Carcharhiniformes: Carcharhinidae). Zootaxa 4161, 2, p.
(Re-description of extinct river shark, Glyphis pagoda (Noetling), based on 20 teeth from three Miocene localities in Myanmar (nearshore marineObogon Fm and freshwater Irrawaddy sediments). Glyphis pagoda likely reached 185cm in length)

Shoup, R.C., A.J. Filipov & M. Hiner (2017)- Geological interpretation of the reservoir and pay distribution of the G3.2 and G5.2 series of the Shwe Field, Myanmar. AAPG/EAGE/MGS 3rd Oil & Gas Conf., Yangon 2017, Search and Discovery Art. 20401, 33p.
(online at: www.searchanddiscovery.com/documents/2017/20401shoup/ndx_shoup.pdf)

(Offshore Myanmar Shwe, Shwe Phyu, and Mya gas fields discovered between 2004-2006 in Blocks A1 and A3. in Pliocene deepwater channel sandstones, sourced from NW. Gas biogenic in origin. Recoverable reserves for Shwe Field 2.9- 4.7 TCF, Shwe Phyu 0.4- 0.9 TCF and Mya 1.3- 2.2 TCF)

Singh, A.K. (2013)- Petrology and geochemistry of abyssal peridotites from the Manipur Ophiolite Complex, Indo-Myanmar orogenic belt, Northeast India: implication for melt generation in mid-oceanic ridge environment. J. Asian Earth Sci. 66, p. 258-276.
(Manipur Ophiolite Complex in Indo-Myanmar Orogenic Belt accretionary prism is segment of Cenozoic Tethyan Ophiolite Belt of Alpine-Himalayan orogenic system. Peridotites of mid-oceanic ridge character (low Cr spinels. (U Cretaceous- M Eocene?) dismembered ophiolite and oceanic pelagic sediments now thrust slices at highest tectonic levels of IM Range, overlying U Cretaceous- U Eocene flysch above E-dipping thrust contact. Overthrust from E by continental metamorphic rocks of mica-schists, quartzite and granitic gneiss)

Singh, A.K., S.L. Chung, R.K. Bikramaditya & H.Y. Lee (2017)- New U-Pb ages of plagiogranites from the Nagaland-Manipur ophiolites, Indo-Myanmar orogenic belt., NE India. J. Geol. Soc., London, 174, 1, p. 170-179.
(E Cretaceous U-Pb zircon ages of plagiogranites from Nagaland-Manipur Ophiolites in Indo-Myanmar orogenic belt (between 116.4 ± 2.2 and 118.8 ± 1.2 Ma; Aptian). Ophiolite overlain by Late Cretaceous pelagic limestones- to Eocene flysch. Ages coeval and geochemically comparable with Neo-Tethyan ophiolites in Indus-Yarlung-Tsangpo Suture to NW. To S ophiolite belt continues to Andaman-Nicobar island arc and Mentawai Islands of outer Indonesian island arc)

Singh, A.K., L.D. Devi, N.I. Singh, K.S.V. Subramanyam, R.K.B. Singh & M. Satyanarayanan (2013)- Platinum-group elements and gold distributions in peridotites and associated podiform chromitites of the Manipur Ophiolitic Complex, Indo-Myanmar Orogenic Belt, Northeast India. Chemie der Erde 73, 2, p. 147-161.
(Platinum group of elements and gold in peridotites and associated podiform chromitites of Neotethyan Manipur Ophiolitic Complex of Indo-Myanmar Orogenic Belt, NE India. PGE content in MOC peridotites 22-79 ppb, slightly higher than primitive mantle peridotites and mantle peridotites in ophiolites)

Singh, A.K., R. Nayak, S. Khogenkumar, K.S.V. Subramanyam, S.S. Thakur, R.K.B. Singh & M. Satyanarayanan (2016)- Genesis and tectonic implications of cumulate pyroxenites and tectonite peridotites from the Nagaland-Manipur ophiolites, Northeast India: constraints from mineralogical and geochemical characteristics. Geological J. 52, 3, p. 415-436.
(Ultramafic sequence of Nagaland- Manipur Ophiolite generated at mid-oceanic ridge tectonic setting, close to E boundary of Indian passive margin, then thrust over continental margin of Indian Plate to W during collision with Myanmar Plate)

Singh, A.K., N.I. Singh, L.D. Devi & R.K.B. Singh (2012)- Geochemistry of mid-ocean ridge mafic intrusives from the Manipur Ophiolitic Complex, Indo-Myanmar Orogenic Belt, NE India. J. Geol. Soc. India 80, 2, p. 231-240.

Singh, A.K., V.C. Tewari, A.N. Sial, P.P. Khanna & N.I. Singh (2016)- Rare earth elements and stable isotope geochemistry of carbonates from the melange zone of Manipur ophiolitic Complex, Indo-Myanmar orogenic belt, Northeast India. Carbonates and Evaporites 31, 2, p. 139-151.
(Carbonates in Neotethyan melange zone of Manipur Ophiolitic complex (= NE India-Myanmar plates collision zone/ accretionary prism). Melange with Late Cretaceous (Santonian- Maastrichtian) pelagic limestones that originally formed cover of ophiolitic oceanic crust, also Eocene flysch and younger molasse)

Sloan, R.A., J.R. Elliott, M.P. Searle & C.K.Morley (2017)- Active tectonics of Myanmar and the Andaman Sea. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, p. 19-52.
(online at: http://mem.lyellcollection.org/content/memoirs/48/1/19.full.pdf)

(Active tectonics of Myanmar controlled by combination of: (1) continuing N-wards penetration of India into Asia; (2) active shear along right-lateral Sagaing strike-slip fault, and region to W; (3) active E-dipping Burma Seismic Zone indicating subduction of downgoing plate to >150 km; (4) CW rotation around E Himalayan Syntaxis and series of arcuate strike-slip faults in N Shan Plateau; and (5) active extensional and strike-slip tectonics in back-arc Andaman Sea)

Smith, S. (1941)- Some Permian corals from the Plateau Limestone of the Southern Shan States, Burma. Palaeontologia Indica. N.S., 30, 2, p. 1-21.
(Permian corals from Plateau Limestone of E Myanmar (= Sibumasu Block). With rel. common solitary rugose ncl. Lophophyllidium orientale, Pavastehphyllum), also Protomichelinia, Wentzelella cf timorica Gerth (= Paraipciphyllum?; Fontaine1988). (= part of Cyathaxonia faunas from Sibumasu Terrane of Wang et al. 2013)

Socquet, A. & M. Pubellier (2005)- Cenozoic deformation in western Yunnan (China-Myanmar border). J. Asian Earth Sci. 24, p. 495-515.
(On Tertiary clockwise rotation of crustal blocks of E Himalayas around NE edge of India)

Soe A.N., Myitta, S.T. Tun, A.K. Aung, T. Thein, B. Marandat, S. Ducrocq & J.J. Jaeger (2002)- Sedimentary facies of the late Middle Eocene Pondaung Formation (central Myanmar) and the palaeoenvironments of its anthropoid primates. Comptes Rendus Palevol 1, 3, p. 153-160.
(Primate-bearing Pondaung Fm in NW part of C Myanmar mainly composed of cyclic sequences of sandstones and variegated clays, deposited in fluvio-deltaic environment. Anthropoid primate remains in swale-fill sediments, sometimes in carbonate nodules of pedogenetic origin and in small crevasse channel deposits of U Pondaung Fm)

Soe Min, I.M. Watkinson, Soe Thura Tun, Win Naing & Tin Lwin Swe (2017)- The Kyaukkyan Fault, Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics. Geol. Soc., London, Memoir 48, Chapter 21, p. 453-471.
(Kyaukkyan Fault active N-S dextral strike-slip structure across W Shan Plateau, parallel to and ~100-150 km E of central Sagaing Fault. Probable Late Oligocene- M Miocene onset of dextral shear)

Soibam, I., M.C. Khuman & S.S. Subhamenon (2015)- Ophiolitic rocks of the Indo-Myanmar Ranges, NE India: relicts of an inverted and tectonically imbricated hyper-extended continental margin basin? In: G.M. Gibson et al. (eds.) Sedimentary basins and crustal processes at continental margins: from modern hyper-extended margins to deformed ancient analogues, Geol. Soc., London, Spec. Publ. 413, p. 301-331.
(Indo-Myanmar Ranges structural and tectonic features best explained by dextral shear and oblique subduction of Indian Plate below Myanmar Plate. U Cretaceous- Lower Eocene ophiolitic rocks Alpine-type harzburgite and lherzolite enriched in trace and rare earth elements, also diabase dykes, pillow basalts. Formation and unroofing probably by mantle exhumation in hyperextended continental margin setting. Paleomagnetic data suggest no latitudinal change since formation)

Stamp, L.D. (1922)- An outline of the Tertiary geology of Burma. Geol. Magazine 59, 11, p. 481-501.
(Main physical geographic belts of Myanmar: (1) Shan Plateau, in E: N-S trending belt of highly folded Paleozoic and E Mesozoic rocks; continuous with plateau of Yunnan; main folding post-E Jurassic and pre-late Tertiary; (2) Central Tertiary Belt; (3) Arakan Yoma foldbelt in W. With detailed discussion of Tertiary stratigraphy and paleogeography)

Stamp, L.D. (1927)- Conditions governing the occurrence of oil in Burma. J. Inst. Petroleum Technol. 13, 60, p. 21-70.

Stamp, L.D. (1927)- The geology of the oil fields of Burma. American Assoc. Petrol. Geol. (AAPG) Bull. 11, 6, p. 557-579.
(Oil fields of Burma in long N-S line in Tertiary synclinal trough in central part of country, bounded in E by Shan Plateau and in W by Arakan Yoma/ Naga Hills, originally marine gulf, filled in by clastics of Chindwin and Irrawaddy Rivers. Oil-bearing reservoirs mainly deltaic. Main fields from N to S: Indaw, Yenangyat-Singu,

Yenangyaung, Minbu, Padaukpin and Yenanma. Largest producer Yenangyaung (3,000,000,000 gallons since 1900). Singu has largest reserves. Discovery of important new fields unlikely)

Stamp, L.D. (1934)- Natural gas fields of Burma. American Assoc. Petrol. Geol. (AAPG) Bull. 18, 3, p. 315-326.

Stojanovic, D., J.C. Aitchison, S. Kachovich, K. Lokho & T.R. Ireland (2016)- New age constraints for the Manipur ophiolitic melange: insights into Tethyan ophiolites of the Indo-Myanmar Range. American Geoph. Union (AGU), Fall General Assembly 2016, Abstract id. T11A-2595, 1p. *(Abstract only)*
(Manipur Ophiolite Complex disrupted belt of ophiolitic melange along border ranges between Myanmar and NE Indian states Manipur and Nagaland. Ranges formed through collision of Indian plate and displaced elements of Sibumasu terrane that have been sinistrally displaced >450 km along Asian margin by Sagaing fault (Neotethys suture). Well-preserved Lower Cretaceous radiolarian assemblages in green ribbon chert blocks (= minimum age of underlying ophiolitic ocean floor))

Sun, Y., X. Lai, P.B. Wignall, M. Widdowson, J.R. Ali, H. Jiang, W. Wang, C. Yan, D.P.G. Bond & S. Vedrine (2010)- Dating the onset and nature of the Middle Permian Emeishan large igneous province eruptions in SW China using conodont biostratigraphy and its bearing on mantle plume uplift models. Lithos 119, p. 20-33.
(M Permian Emeishan large igneous province of SW China. Conodont ages show eruptions began in M Capitanian Jinogondolella altudaensis Zone (~263 Ma) and increased in J. xuanhanensis Zone (~262 Ma). Postulated km-scale plume-related domal uplift prior to Emeishan eruptions not supported by data; rather more complex interaction between plume and lithosphere with minor localized uplift and subsidence is inferred)

Suzuki, H., M. Maung, Zaw Win, T. Tsubamoto, M. Maung, N. Egi, M. Takai & N. Shigehara (2006) Stratigraphic positions of the Eocene vertebrate localities in the Paukkaung area (Pondaung Formation, Central Myanmar). Asian Paleoprimatology 4, p. 67-74.
(online at: https://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/199770/1/aspp_04_067.pdf)
(Detailed survey of ~275m thick Upper Member of Eocene Pondaung Fm W of Paukkaung, to clarify stratigraphic relationship among the localities of fossil vertebrates. Most localities (Pkl, Pk2, Pk3, Pk4, Pk5 and Pk8) in single claystone (Ayoedawpon Taung Claystone), which overlies widely traceable Ayoedawpon Taung Sst. Localities Pk9 and and Pk12 below and above this claystone)

Suzuki, H., M. Maung, N.S. Aung & N. Shigehara (2006)- Lithostratigraphy of the Pondaung Formation (Eocene) between Tabyin and Kyauktakha to the west of Pauk, Central Myanmar. Asian Paleoprimatology 4, p. 75-97.
(online at: https://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/199769/1/aspp_04_075.pdf)
(Pondaung Fm along Tabyin-Kyauktakha route composed of sandstone, siltstone and claystone with minor coal, acidic tuff and pebbly sandstone. Thickness~1170m. Upper Member mainly sandstone that, unlike in areas of Pale and Myaing, did not preserve fossil vertebrates)

Swe, Y.M., C.C. Aye & K. Zaw (2017)- Gold deposits of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 25, p. 557-572.
(>300 gold occurrences in Myanmar, in 6 main associations: porphyry and epithermal deposits in Late Cretaceous- Paleogene Central Magmatic Arc; orogenic gold; skarn, sediment-hosted, Slate Belt-hosted and quartz veins in ophiolite-greenschist units)

Tainsh, H.R. (1950)- Tertiary geology and principal oil fields of Burma. American Assoc. Petrol. Geol. (AAPG) Bull. 34, p. 823-855.
(Review of Tertiary geology of Myanmar. Gravity minimum of Arakan Yoma runs through Andaman Islands to join gravity low of Vening Meinesz, SW of Sumatra along Mentawai Islands. Gravity maximum associated with Burma volcanic line can be traced to volcanoes of Narcondam and Barren Island in Andaman area may correspond to high of volcanic belt of Sumatra. Major oil fields near Irrawaddy River in C part of Upper Burma. Principal oil fields described are anticlinal structures of Chauk- Lanywa and Yenangyaung)

Takai, M., H. Saegusa, Thaung-Htike & Z.M.M. Thein (2006)- Neogene mammalian fauna in Myanmar. Asian Paleoprimatology 4, p. 143-172.
(online at: https://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/199765/1/aspp_04_143.pdf)
(Review of Neogene mammalian fossils from E-M Miocene Pegu beds (12 mammal genera) and Late Miocene-Pliocene Irrawaddy beds (14 mammal families) along Irrawaddy River, Myanmar. Although fossils scarce, Myanmar faunas greater similarity to S Asian(India) fauna than to E Asian (China) fauna until Pliocene)

Takai, M., C. Sein, T. Tsubamoto, N. Egi, M. Maung & N. Shigehara (2005)- A new eosimiid from the latest middle Eocene in Pondaung, Central Myanmar. Anthropologal Science 113, p. 17-25.
(online at: https://www.jstage.jst.go.jp/article/ase/113/1/113_1_17/_pdf)
(New eosimiid primate, Eosimias paukkaungensis from latest M Eocene of Pondaung. Mandibular fragments larger than homologues of Eosimias species from China, but smaller than Bahinia pondaungensis)

Takai, M. & N. Shigehara (2004)- The Pondaung primates, enigmatic ñpossible anthropoidsò from the Latest Middle Eocene, Central Myanmar. In: C.F. Ross & R.F. Kay (eds.) Anthropoid origins: new visions, Kluwer/ Plenum, New York, p 283-321.
(Recent discoveries of 'possible anthropoids' from M Eocene from China, Myanmar and Thailand suggest 'protoanthropoids' may have originated in E Asia, not Africa)

Takai, M., N. Shigehara, T. Tsubamoto, N. Egi, A.K. Aung, T. Thein, A.N. Soe & S.T. Tun (2000)- The latest Middle Eocene primate fauna in the Pondaung area, Central Myanmar. Asian Paleoprimatology, Volume 1, Primate Research Institute, Kyoto University, Inuyama, Japan, p. 7-28.
(Four M Eocene primate taxa known from Pondaung Fm of Burma, incl. Pondaungia cotteri (discovered in 1914), Amphipithecus mogaungensis (1923), Bahinia pondaungensis (1998), and unnamed new taxon (1998))

Tanaka, K., C. Mu, K. Sato, K. Takemoto, D. Miura, Y. Liu, H. Zaman et al. (2008)- Tectonic deformation around the eastern Himalayan syntaxis: constraints from the Cretaceous palaeomagnetic data of the Shan-Thai Block. Geophysical J. Int. 175, p. 713-728.
(E-M Cretaceous red sandstones sampled at four localities in Lanpin-Simao fold belt of Shan-Thai Block. Shan-Thai Block ~20° CW rotation in early stage of India-Asia collision, followed by S-ward displacement along Red River Fault before 32 Ma, then subjected to N-S compressive stresses from 32-27 Ma, shaping structure of Chongshan- Lancang- Chiang Mai Belt. Some local CW rotation in Pliocene-Quaternary in central Shan-Thai)

Tarrass, I., P. Dattilo, P. Bourguignon, S. Van De Beuque & J.P. Thiriet (2017)- Turbidite systems of the East Andaman Basin (Myanmar): impacts on exploration. In: SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, 2p. *(Abstract)*
(Andaman Sea series of pull-apart basins formed in right lateral strike slip regime in back-arc setting. Volcanic basement overlain by Eocene and younger carbonate and clastic sequences. Oligocene- E Miocene shelf clastics sourced from E, with carbonate platforms and reefs mainly on W volcanic highs. Huge siliciclastic succession related to Irrawaddy Delta from U Miocene-present. Large slope channels, extending in abyssal plain)

Teillet, T., F. Fournier, F. Gisquet, L.F. Montaggioni, J. Borgomano, Q. Villeneuve & Fei Hong (2019)- Diagenetic history and porosity evolution of an Early Miocene carbonate buildup (Upper Burman Limestone), Yadana gas field, offshore Myanmar. Marine Petroleum Geol. 109, p. 589-606.
(Diagenetic history of Upper Burman Limestone reservoir in Miocene Yadana carbonate platform major offshore gas reservoir in Andaman Sea, offshore Myanmar. High porosity (av. 28%) mainly due to development of microporosity, moldic and vuggy porosity. Long-term depositional hiatus (M-L Miocene) at top of reservoir related to platform drowning and non-deposition in deep marine setting. Microporosity development and sparry calcite cementation mainly occurred in marine to marine shallow burial environments. Major decrease in porosity (10%) below gas-water contact suggests porosity evolution after hydrocarbon emplacement).

Teillet, T., F. Fournier, L.F. Montaggioni, M. BouDagher-Fadel, J. Borgomano, J.C. Braga, Q. Villeneuve & Fei Hong (2019)- Development patterns of an isolated oligo-mesophotic carbonate buildup, early Miocene, Yadana field, offshore Myanmar. Marine Petroleum Geol. 111, p. 440-460.

(Development history of 160m of upper part of Oligocene- E Miocene Yadana buildup in N Andaman Sea. Three types of carbonate factories: (1) scleractinian, (2) echinodermal and (3) large benthic foraminiferal- coralline algal. Carbonate accumulation on t Yadana platform mainly controlled by light penetration, nutrient content and hydrodynamic conditions)

Thein, T. (2004)- Review of the large-bodied Pondaung primates of Myanmar. In: C.F. Ross & R.F. Kay (eds.) Anthropoid origins: new visions, Kluwer/ Plenum, New York, p. 219-247.
(M Eocene Pondaung Fm in NW C Myanmar has been known for mammal fossils since 1916. Fossils include artiodactyls (Anthracotheriidae) and perissodactyls (Amynodontidae), carnivores, and primates. Primates from represented by Pondaungia cotteri Pilgrim, 1927, Amphipithecus mogaungensis Colbert, 1937, Bahinia pondaungensis Jaeger et al., 1999, and Myanmarpithecus yarshensis)

Thornton, S.E. (2015)- The history of oil exploration in the Union of Myanmar. AAPG/SEG Int. Conf. Exhib., Melbourne 2015, Search and Discovery Art. 10807, 34p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2015/10807thornton/ndx_thornton.pdf)
(After centuries of oil mining in hand-dug wells in C Burma Basin first oil well drilled by Burmah Oil Company in 1899. Foreign oil companies activity since 1988 led to several large offshore gas discoveries)

Thornton, S.E. (2016)- Regional tectonics, structure and history of petroleum exploration in the Union of Myanmar (nee Burma). Houston Geol. Soc. Bull., December 2016, p. 23-29.

Thu, K. & K. Zaw (2017)- Gem deposits of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, p. 497-529.

Tin Aung Myint, Than Than Nu & Min Aung (2014)- Precious and base metal mineralization in Kwinthonze-Nweyon area, Singu and Thabeikkyin Townships, Mandalay Region, Myanmar. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 343-354.
(Gold-silver and base metal mineralization in Kwinthonze-Nweyon area in Mogok Metamorphic Belt)

Tsubamoto, T. (2000)- The Pondaung mammal fauna: an analysis of a terrestrial mammal fauna in the latest Middle Eocene of central Myanmar (Southeast Asia). Doct. Thesis, Kyoto University, 215p.
(online at: http://earth.sci.ehime-u.ac.jp/~tsubamoto/TBM_Papers/Tsubamoto_2001_PhD_Kyoto_Univ.pdf)
(M Eocene (37.2 ± 1.3 Ma) Pondaung fauna from C Myanmar with six orders of mammals: Primates 4 genera), Creodonta (2 genera), Rodentia (1 genus), Artiodactyla (4 genera), Perissodactyla (9 genera), and Ungulata (1 genus). All primates considered to be primitive anthropoids. Anthracotheres all one genus (Anthracotherium), with 4 species (A. pangan, A. rubricum, A. birmanicus, A. tenuis))

Tsubamoto, T., N. Egi, M. Takai, T. Htike & Z.M. Maung Thein (2013)- A new genus and species of bunodont Artiodactyl from the Eocene Pondaung Formation, Myanmar. Paleontological Research 17, 4, p. 297-311.

Tsubamoto, T., N. Egi, M. Takai, C. Sein & M. Maung (2005)- Middle Eocene ungulate mammals from Myanmar: a review with description of new specimens. Acta Palaeontologica Polonica 50, 1, p. 117-138.
(online at: www.app.pan.pl/archive/published/app50/app50-117.pdf)
(Two new ungulate taxa from M Eocene Pondaung Fm. Pondaung ungulate fauna now 29 species, mainly artiodactyls and perissodactyls. Paleoenvironment of fauna was humid forested/woodland vegetation with large rivers, located not far from E Tethyan Sea. Relatively high endemism at generic level)

Tsubamoto, T., T. Htike, Z.M. Maung Thein, N. Egi, Y. Nishioka & M. Takai (2012)- New data on the Neogene anthracotheres (Mammalia, Artiodactyla) from central Myanmar. J. Vertebrate Paleontology 32, 4, p. 956-964.
(Anthracotheres from Neogene in C Myanmar with 4 species of anthracotheres: Microbunodon silistrensis from M Miocene; Microbunodon milaensis and Merycopotamus dissimilis from latest Miocene- Pliocene)

Tsubamoto, T., Z.M. Maung Thein, N. Egi, T. Nishimura, T. Htike & M. Takai (2011)- A new anthracotheriid Artiodactyl from the Eocene Pondaung Formation of Myanmar. Vertebrata Palasiatica 49, p. 85-113.

(online at: http://www.ivpp.cas.cn/cbw/gjzdwxb/xbwzxz/201102/P020110216367564823071.pdf)
Mandible and molars of new anthracotherid from M Eocene Upper Pondaung Fm (~38 Ma), C Myanmar, Myaingtherium kenyapotamoides. Some similarities of M3 molar with 'Anthracothema' verhoeveni Von Koenigswald from Timor)

Tsubamoto, T., M. Takai, N. Egi, N. Shigehara, S.T. Tun et al. (2002)- The Anthracotheriidae (Mammalia; Artiodactyla) from the Eocene Pondaung Formation (Myanmar) and comments on some other anthracotheres from the Eocene of Asia. Paleont. Research 6, 4, p. 363-384.
(online at: https://ci.nii.ac.jp/els/contents110002695299.pdf?id=ART0002971777)
(On anthracoceres (hippopotamid like mammals) from latest M Eocene Pondaung Fm of C Myanmar. Three Anthracothema, Anthracokeryx and Anthracohyus synonymized into Anthracotherium. Four species, based on M1 size. Pondaung Anthracotherium species oldest of genus. Anthracothema (Anthracitherium) also known from Timor)

Tsubamoto, T., M. Takai, N. Shigehara, N. Egi, S.T. Tun, A.K. Aung, M. Maung, T. Danhara & H. Suzuki (2002)- Fission-track zircon age of the Eocene Pondaung Formation, Myanmar. J. Human Evolution 42, p. 361-369.
(Pondaung Fm in C Myanmar with >20 mammal genera. ~2000m thick freshwater deposits, overlying and partially interfingering with Tabyin Fm (with M Eocene Nummulites acutus). Overlain by marine Yaw Fm)with Late Eocene Nummulites yawensis, etc.). One tuff from upper Pondaung Fm with fission track age from 75 zircons of 37.2 ± 1.3 Ma (M-L Eocene boundary))

Tsubamoto, T., S.T. Tun, N. Egi, M. Takai, N. Shigehara, Aung N. Soe, K.A. Aung & T. Thein (2003)- Reevaluation of some ungulate mammals from the Eocene Pondaung Formation, Myanmar. Paleontological Research 7, 3, p. 219-243.

Tun, Soe Thura & I.M. Watkinson (2017)- The Sagaing Fault, Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 19, p. 413-441.
(N-S trending and relatively straight Sagaing Fault across Myanmar 1500 km long active strike-slip fault that accommodates more than half of right-lateral motion between Sundaland and India, within diffuse plate boundary along E margin of India, which occupies much of Myanmar. Ridge-subduction transform linking major thrust systems in N (E Himalaya) to Andaman Sea spreading centre S. N-ward younging strike-slip segments. Little evidence for pre-M Miocene movement, but more diffuse dextral slip possibly accommodated 300-700km of offset since Eo-Oligocene)

Udchachon, M., P. Charusiri, H. Thassanapak & C. Burrett (2018)- A new section of Lower Palaeozoic rocks in Kayin State (Southeast Myanmar). Proc. Geologists Assoc. 129, 2, p. 215-226.
(Lower Paleozoic rocks mapped in Kayin State (Sibuma Block). Three new formations with thickness >900 m, Lower siliciclastics overlain by predominantly carbonate with M Ordovician conodonts. Older formations probable correlate to S Shan State of Myanmar and Lower Ordovician siliciclastics of W Thailand. Folds in Lower Paleozoic rocks overturned to NE; deformation in one major phase between Tournaisian- E Permian)

Uddin, A., W.E. Hames & K.M. Zahid (2010)- Laser 40Ar/39Ar age constraints on Miocene sequences from the Bengal basin: implications for Middle Miocene denudation of the eastern Himalayas. J. Geophysical Res., Solid Earth 115, 7, B07416, p. 1-9.
(Orogenic sedimentation had begun in Bengal basin by E Miocene. Laser 40Ar/39Ar age determinations of detrital muscovite grains from E-M Miocene Bhuban Fm show ages from ~12 Ma- 516 Ma, suggesting derivation from a combination of sources. Modes of ~16, 18, 26 and 40 Ma most consistent with unroofing of Higher Himalayas since E Miocene. Detrital ages of ~16 and 22 Ma most prominent in highest levels, consistent with M Miocene unroofing of crystalline rocks of E Himalayas)

Uddin, A., P. Kumar & J.N. Sarma (2007)- Early orogenic history of the eastern Himalayas: compositional studies of Paleogene sandstones from Assam, northeast India. Int. Geology Review 49, p. 798-810.

(Disang Fm deep marine flysch-type sequence of cherts, carbonaceous mudstones and fine-grained sandstones of Late Eocene age in front of obducted Naga ophiolites= foreland basin fill?)

Uddin, A. & N. Lundberg (1998)- Unroofing history of the eastern Himalaya and the Indo-Burman ranges; heavy-mineral study of Cenozoic sediments from the Bengal Basin, Bangladesh. J. Sedimentary Res. 68, 3, p. 465-472.
(U Eocene- Neogene fill of Bengal basin provides unroofing history of E Himalaya and Indo-Burman ranges. Quartzose sandstones of Eocene-Oligocene Fms only 0.2% heavy minerals, most likely sourced from Indian craton immediately to W. E Miocene sandstones of Surma Gp contain more heavy-minerals, indicating mostly metamorphic source rocks. U Miocene U Surma Gp also abundant blue-green amphibole, orthopyroxene, and sparse chromite, suggesting deeper exhumation, of high P metamorphic and ophiolitic rocks)

Uddin, A. & N. Lundberg (1998)- Cenozoic history of the Himalayan-Bengal system: sand composition in the Bengal Basin, Bangladesh. Geol. Soc. America (GSA) Bull. 110, 4, p. 497-511.

Ueno, K., Y. Mizuno, X. Wang & S. Mei (2003)- Artinskian conodonts from the Dingjiazhai Formation of the Baoshan Block, West Yunnan, Southwest China. J. Paleontology. 76, 4, p. 741-750.
(E Permian conodonts from U Dingjiazhai Fm diamictite-bearing unit, in Gondwana-derived Baoshan Block. Conodont fauna in limestones in upper part of formation consists of Sweetognathus spp. Mesogondolella, etc., dated as M Artinskian. Dingjiazhai Fm overlain by basaltic volcanics related to rift volcanism during separation of Baoshan Block from Gondwanaland. Faunas including brachiopods and fusulinids from limestones interpreted as middle latitudinal, non-tropical, and Gondwana-influenced assemblage developed at N margin of Gondwanaland just after deglaciation (Ueno 2000))

Ueno, K., Myint Thein & A.J. Barber (2016)- Permian fusuline fauna from the Minwun Range, Central Myanmar. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 6. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(Fault-bounded blocks of Permian limestones in Sagaing Fault Zone (associated with ophiolites of C Ophiolite Belt?) at Minwun Range with Permian fusulinids containing abundant Chalaroschwagerina, together with Pseudofusulina kraftii, Levenella, Pamirina, Schubertella, Toriyamaia, Minojapanella, and Pseudoreichelina. Age late Yakhtashian (late E Permian) age and Tethyan/ Cathaysian paleobiogeographic affinity)

Ueno, K. & S. Tsutsumi (2009)- Lopingian (Late Permian) foraminiferal faunal succession of a Paleo-Tethyan mid-oceanic carbonate buildup: Shifodong Formation in the Changning-Menglian Belt, West Yunnan, SW China. Island Arc 18, 1, p. 69-93.
(Late Permian foraminiferal succession in Changning-Menglian Belt (closed remnants of Paleo-Tethys Ocean). Shifodong Fm is uppermost unit in thick Carboniferous-Permian carbonate section on oceanic seamount basalts. Sixteen fusuline taxa, 3 zones: Codonofusiella kwangsiana, Palaeofusulina minima and Palaeofusulina sinensis Zones. Foram fauna in Paleo-Tethyan shallow-marine environment high faunal diversity, comparable to circum-Tethyan shelves like S China, and more diversified than coeval mid-oceanic Panthalassan faunas like Kamura Lst in Jurassic accretionary complex of SW Japan)

Ueno, K., Y. Wang & X. Wang (2003)- Fusulinoidean faunal succession of a Paleo-Tethyan oceanic seamount in the Changning-Menglian Belt, West Yunnan, Southwest China: an overview. Island Arc 12, 2, p. 145-161.
(Fusulinids from Paleo-Tethyan seamount-type carbonates of Changning-Menglian Belt, SW China, which is main Paleo-Tethys suture in E Asia. Basalts and overlying carbonates ~1100m thick with 17 late E Carboniferous- M Permian fusulinid zones. Tropical Tethyan-type succession, although diversity lower than those of Paleo-Tethyan shelves, such as S China, Indochina, and C Asia)

U Ko Ko (2016)- Structural observations along the Salin-Pyay Pleistocene strike-slip deformation belt. 2nd AAPG/EAGE/MGS Conference Unlocking the complex geology of Myanmar, Yangon 2015, Search and Discovery Art. 10845, 17p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/10845ko/ndx_ko.pdf)

(Major Pleistocene strike-slip deformation over 200- 300 km wide belt of Myanmar sedimentary basins between Sagaing fault and escarpment between shallow and deep waters of Rakhine Yoma foldbelt. Tied toN-ward translational subduction of India below SE Asia plates)

Ukstins Peate, I. & S.E. Bryan (2008)- Re-evaluating plume-induced uplift in the Emeishan large igneous province. Nature Geoscience 1, p. 625-629.
(Mantle plumes should generate broad domal uplift (>1000 km wide, 500-1000m high) preceding volcanism in large igneous provinces. Most of Emeishan large igneous province in SW China emplaced at sea level, with no evidence for dynamic pre-volcanic uplift. Any positive relief that developed more likely result of formation of volcanic edifice and rapid accumulation of volcanic pile)

Ukstins Peate, I. & S.E. Bryan (2009)- Pre-eruptive uplift in the Emeishan? Nature Geoscience 2, p. 531-532.
(Part of discussion-reply with He et al. 2009, who argue for subaerial volcanism, as demonstrated by plant fossils (Cladophlebis permica))

Utitsan, S., T. Benjawan, S. Thanatit, W. Wetmongkongorn, U.S. Than, K.H. Myint & L.B. Wah (2014)- Geological evolution of Bago-Yoma Basin, Onshore Myanmar. AAPG Asia Pacific Region AAPG/MGS Conf., Yangon 2014, Search and Discovery Art.10659, 10p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2014/10659utitsan/ndx_utitsan.pdf)
(Bago-Yoma Basin 1 of 8 Tertiary basins in onshore Myanmar, with up to 14km of Late Cretaceous-Cenozoic deposits. Basins in N-S trend between Indo-Myanmar ranges to W and Shan Plateau to E. Basins experienced NW-SE extension in Miocene, followed by NE-SW transpression in Pliocene during change of maximum horizontal stress direction. Bago-Yoma Basin SE of main petroleum producing fields of C Myanmar Basin)

Varga, R.J. (1997)- Burma. Encyclopedia of Earth Science, Springer, p. 109-121.

Vigny, C., A. Socquet, C. Rangin, N. Chamot-Rooke, M. Pubellier, M.N. Bouin, G. Bertrand & M. Becker (2003)- Present-day crustal deformation around Sagaing fault, Myanmar. J. Geophysical Research- Solid Earth 108, B11, 2533, p. 1-10.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2002JB001999/epdf)
(GPS campaign in Myanmar in 1998 and 2000 around Sagaing fault system in C Myanmar, near Mandalay. Oblique slip of India along rigid Sundaland block accommodated by partitioned system characterized by distribution of deformation over wide zone)

Von Koenigswald, G. (1965)- Critical observations upon the so-called higher primates from the upper Eocene of Burma, Proc. Kon. Nederl. Akademie Wetenschappen 68, p. 165-167.

Vredenburg, E. (1921)- Results of a revision of some portions of Dr. Noetling's second monograph on the Tertiary fauna of Burma. Records Geol. Survey India 51, 3, p. 224-302.
(online at: https://ia801608.us.archive.org/6/items/in.ernet.dli.2015.20723/2015.20723.Records-Of-The-Geological-Survey-Of-India--Vol-51.pdf)
(Revisions of identifications of Noetling of molluscs from post-Eocene beds of Myanmar)

Wandrey, C. J. (2006)- Eocene to Miocene composite Total Petroleum System, Irrawaddy-Andaman and North Burma geologic provinces, Myanmar. U.S. Geol. Survey Bull. 2208-E, p. 1-26.
(online at: https://pubs.usgs.gov/bul/2208/E/pdf/B2208-E.pdf)
(Eocene-Miocene petroleum system produced most hydrocarbons in C Burma Basin and Irrawaddy Delta. Structural traps predominant, but stratigraphic traps likely in both ancient and modern delta environments. Mean undiscovered resources estimated at 725 MMB Oil and 20.5 TCFG gas)

Wandrey, C.J., C.J. Schenk, T.R. Klett, M.E. Brownfield, R.R. Charpentier, T.A. Cook, R.M. Pollastro & M.E. Tennyson (2012)- Assessment of undiscovered oil and gas resources of the Central Burma Basin, Irrawaddy-Andaman, and Indo-Burman Geologic Provinces, Myanmar. U.S. Geol. Survey (USGS) Fact Sheet 2012-3107, 2p.

(online at: http://pubs.usgs.gov/fs/2012/3107/)

Wang, C., J. Deng, E.J.M. Carranza & M. Santosh (2013)- Tin metallogenesis associated with granitoids in the southwestern Sanjiang Tethyan Domain: nature, deposit types, and tectonic setting. Gondwana Research 26, 2, p. 576-593.
(Tin mineralization in SW Sanjiang Tethys Sn metallogenic domain in SW China extends from SE Asia tin belt in S. C part of domain is Changning-Menglian Sn belt and related to ~239-178 Ma (M Triassic- E Jurassic) S-type granitoids generated by Tengchong/Baoshan- Simao Blocks collision (= Paleotethys closing). W part of domain is Tengchong/ Baoshan Sn metallogenic belt, related to Cretaceous S-type granitoids (136-113 Ma, resulting from W Burma- Tengchong/Baoshan Blocks collision and 89-52 Ma, corresponding to India- Asia continental collision. Permian (298-262 Ma) I-type granitoids include Lincang granodiorite)

Wang, J.G., F.Y. Wu, X.C. Tan & C.Z. Liu (2014)- Magmatic evolution of the Western Myanmar Arc documented by U-Pb and Hf isotopes in detrital zircon. Tectonophysics 612-613, p. 97-105
(Magmatic arc that formed along Asian margin of Neo-Tethys well studied in Trans-Himalaya in Tibet, but SE extension of arc poorly documented in Myanmar. Detrital zircons from Chindwin Basin indicate mid-Cretaceous arc magmatism in W Myanmar (main magmatic stage ~110-80 Ma, with subordinate stage at ~70-40 Ma))

Wang, M. & D. Cheong (2016)- Reconstruction of burial history and analysis of the hydrocarbon potential using sedimentary modeling the middle Bengal Fan, Myanmar. Geosciences J. 20, 6, p. 813-825.
(Bengal Fan 3 stages of evolution: I (4.5-1.81 Ma; low sedimentation and subsidence), II (1.81-0.79 Ma; highest sedimentation and rapid subsidence), and III (0.79-0 Ma; high sedimentation, slowest subsidence). Biogenic gas typical hydrocarbon in area; generation and migration probably immediately after deposition of Unit 2. Thermogenic hydrocarbon potential low due to relatively low T and short burial)

Wang, X.D., T. Sugiyama & K. Ueno (1998)- Carboniferous and Permian stratigraphy of the Baoshan Block, West Yunnan, Southwest China. Permophiles, Newsletter Permian Stratigraphy 32, p. 38-40.
(Carboniferous and Permian stratigraphy of Baoshan Block (comparable to Sibumasu Block; Gondwana-derived terranes in present-day SE Asia). Basal Permian includes diamictites of possible glaciomarine origin, fusulinid forams Pseudofusulina and Eoparafusulina, small solitary corals incl. Cyathaxonia and basaltic lavas. M Permian Shazipo Fm limestone with forams Eopolydiexodina, Neoschwagerina sp., Verbeekina, Shanita amosi, Hemigordius and massive corals)

Wang, Y. (2013)- Earthquake geology of Myanmar. Ph.D. Thesis, California Institute of Technology, Pasadena, p. 1-300.
(Earthquake distributions in Myanmar suggest three distinct active structural systems that accommodate oblique convergence between Indian plate and SE Asia and extrusion of Asian territory around E syntaxis of Himalayan Range. Focus on right-lateral Sagaing fault and oblique subducting N Sunda megathrust)

Wang, Y., K. Sieh, S.T. Tun, K.Y. Lai & Than Myint (2014)- Active tectonics and earthquake potential of the Myanmar region. J. Geophysical Research 119, 4, p. 3767-3822.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2013JB010762/epdf)
(In Myanmar and immediate surroundings three tectonic systems accommodate oblique collision of Indian plate with SE Asia and extrusion of Asia. Subduction and collision associated with Sunda megathrust under and in Indoburman Range and Naga Hills accommodate most of shortening across transpressional plate boundary. Sagaing fault system dominant locus of dextral motion associated with N-ward translation of India. Left-lateral faults of N Shan Plateau, N Laos, Thailand and S China facilitate extrusion of rocks around E syntaxis of Himalaya. All systems produced major earthquakes in recorded history)

Wang, Y., A. Zhang, W. Fan, T. Peng, F. Zhang, Y. Zhang, & X. Bi (2010)- Petrogenesis of late Triassic post-collisional basaltic rocks of the Lancangjiang tectonic zone, southwest China, and tectonic implications for the evolution of the eastern Paleotethys: geochronological and geochemical constraints. Lithos 120, 3, p. 529-546.
(Xiaodingxi and Manghuihe volcanic sequences of Lancangjiang igneous zone in SW China with zircon ages of ~214 and 210 Ma (~Late Norian), i.e. ~15-20 Myrs younger than syn-collisional granite magmatism (230-241

Ma; ~Carnian). Tectonic model involving E-ward subduction in E Permian and collision in Triassic proposed for E Paleotethys Ocean. During Late Triassic, upwelling of asthenospheric mantle, shortly after slab detachment, may have led to melting of metasomatized mantle wedge, resulting in post-collisional Group 1 and Group 2 magmas)

Wang, Y. & Y. Zhang (2010)- Llandovery sporomorphs and graptolites from the Manbo Formation, the Mojiang County, Yunnan, China. Proc. Royal Society (London), B, 277, p. 267-275.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2842664/)
(E Silurian (Llandoverian) sporomorphs and graptolites from Manbo Fm, Mojiang area, W Yunnan (part of Indo-China plate in Palaeozoic). Sporomorphs suggest South China and Indo-China paleo-plates may have been in close proximity in Llandoverian; both closely related to Gondwanaland)

Wang, Z. & X. Tan (1994)- Palaeozoic structural evolution of Yunnan. J. Southeast Asian Earth Sci. 9, p. 345-348.
(Yunling-Wuliangshan zone along SW margin of Yangtze Platform was passive margin in E Paleozoic-Devonian and active margin in Carboniferous-Permian. May be main suture of Paleotethys, after E-M Triassic collision. In SW of area Tengcong-Baoshan block (=Sibumasu; JTvG) with Late Carboniferous ice-rafted deposits and Stepanoviella- Lytvolasma fauna Also possible 'Gondwanan E Permian' Glossopteris flora. Paleomag suggests Baoshan was at latitude 38°S in Devonian and 30° S in Carboniferous. E of Baoshan but W of Paleotethys suture are Gengma Block (with Devonian with Monograptus, M Carboniferous-Permian carbonates with Monodiexodina in Permian, no ice-rafted sediments) and Lincang blocks at E side of Changning-Menglian Fracture. Permian 'Cathaysian' Gigantopteris flora at E side of Lancangjiang suture)

Wen, Z., N. Fang & R. Xin (2016)- Meso-Tethys and Neo-Tethys tectonic evolution in Myanmar and adjacent areas. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 55. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(Two Tethyan suture zones inMyanmar: (1) Mesotethys Taguang-Myitkyina suture (equivalent of Bangong-Nujiang suture in Tibetan Plateau): ophiolites formation in M Jurassic, M Triassic-E Jurassic subduction under Sibumasu block, and M Jurassic-M Cretaceous West Burma block collision with Sibumasu; (2) Neotethys Yarlung-Tsangpo suture (continuation of Yarlung-Tsangpo suture in Tibetan Plateau): Indo-Burma Range ophiolites formation in E Cretaceous, Late Jurassic-E Cretaceous subduction under West Burma block and Late Cretaceous-Tertiary closing of ocean)

Westerweel, J., P. Roperch, A. Licht, G. Dupont-Nivet, Z. Win, F. Poblete, G. Ruffet, H.H. Swe, M.K. Thi & D.W. Aung (2019)- Burma Terrane part of the Trans-Tethyan arc during collision with India according to palaeomagnetic data. Nature Geoscience 12, 10, p. 863-868.
(Palaeomagnetic data from Burma Terrane (also called West Burma Block) at E edge of India collision zone, which was part of Trans-Tethyan island arc at near-equatorial S latitude at ~95 Ma, suggesting island endemism for Burmese Cretaceous amber biota. Terrane underwent significant CW rotation between ~80 and 50 Ma, then was translated N on Indian Plate by at least 2000 km along dextral strike-slip fault system in E. Reconstructions suggest initial collision of India with near-equatorial Trans-Tethyan subduction system at ~60 Ma, followed by later collision with Asian margin (Cretaceous arc (~97-87 Ma and younger?) has been correlated with intra-oceanic mid-Cretaceous Woyla Arc in Sumatra as part of Incertus Arc and may continue W to Kohistan Arc in Pakistan)

Whittaker, J., L. Zaninetti & D. Altiner (1979)- Further remarks on the micropalaeontology of the Late Permian of eastern Burma. Notes Laboratoire Paleontologie Universite de Geneve 5, p. 1-7.
(Companion paper to Zaninetti et al. 1978)

Win, M.M., M. Enami & T. Kato (2016)- Metamorphic conditions and CHIME monazite ages of Late Eocene to Late Oligocene high-temperature Mogok metamorphic rocks in central Myanmar. J. Asian Earth Sci. 117, p. 304-316.

(High T/ P regional Mogok metamorphic belt in C Myanmar, between W margin of Sibumasu block and E edge of W Burma block. Four age components: ~49 Ma (Late Eocene peak metamorphic upper-amphibolite-granulite stage), 38 Ma, ~28 Ma and ~24 Ma (Late Oligocene postdated hydration stage))

Win, S. & M.M. Myint (1998)- Mineral potential of Myanmar. Resource Geology 48, 3, p. 209-218.

Win, T.T., R.M. Davies, W.L. Griffin, P. Wathanakul & D.H. French (2001)- Distribution and characteristics of diamonds from Myanmar. J. Asian Earth Sci. 19, p. 563-577.
(Diamonds in headless placers at several locations in Myanmar. Common abrasion due to alluvial transport. Brown radiation spots suggest long history in surface environments. Syngenetic minerals mainly of peridotitic paragenesis and include olivine, chromite and native iron. Derivation from upper mantle more likely than from crustal metamorphic sources. Primary source of diamonds alkaline igneous rock (lamproitic rather than kimberlitic) but reached present locations via sedimentary redistribution)

Wolfart, R., U.M. Win, S. Boiteau, M. Wai, P.U. Cung & U.T. Lwin (1984)- Stratigraphy of the Western Shan Massif, Burma. Geol. Jahrbuch, B57, p. 3-92.

Wolfart, R., U.M. Win, S. Boiteau, M. Wai, P.U. Cung & U.T. Lwin (1984)- The tectonics of the Western Shan Massif, Burma. Geol. Jahrbuch, A75, p. 285-294.

Xie, L., W.Q. Yang, G.C. Liu & Q.L. Feng (2011)- Late Paleozoic radiolaria from the Upper Triassic sedimentary melange in Shangrila, Southwest China and its geological significance. Palaeoworld 20, p. 203-217.
(Radiolarians in exotic siliceous blocks in U Triassic sedimentary melange in Shangrila, SW China show Garze-Litang tectonic belt was deep-water basin in E Carboniferous-M Permian)

Xing, X., Y. Wang & Y. Zhang (2016)- Detrital zircon U-Pb geochronology and Lu-Hf isotopic compositions of the Wuliangshan metasediment rocks in SW Yunnan (China) and its provenance implications. J. Earth Science (China) 27, 3, p. 412-424.
(online at: http://en.earth-science.net/PDF/20160613095735.pdf)
(Wuliangshan Gp low-grade metasediments E of Lancang giant igneous zone, SW Yunnan, syn-orogenic product of collision between Baoshan with Simao-Indochina blocks. Detrital zircons major age-peak at ∼259 Ma, four subordinate-peaks at ∼1859, 941, 788 and 447 Ma. Youngest zircon age of 230±5 Ma suggests deposition after M Triassic. Provenance mainly from Simao/ Yangtze blocks to E rather than Baoshan Block to W)

Xu, Y.G. & B. He (2007)- Thick, high-velocity crust in the Emeishan large igneous province, SW China: evidence for crustal growth by magmatic underplating or intraplating. Geol. Soc. America (GSA), Special Paper 430, p. 841-858.

Yan, D.P., M.F. Zhou, C.Y. Wang & B. Xia (2006)- Structural and geochronological constraints on the tectonic evolution of the Dulong-Song Chay tectonic dome in Yunnan province, SW China. J. Asian Earth Sci. 28, p. 332-353.
(Dulong-Song Chay dome on border of China (SE Yunnan) and N Vietnam consists of metamorphic core complex, probably ~800 Ma protolith age, and cover sequence, separated by extensional detachment fault, both overlain unconformably by Late Triassic strata. Late Silurian- E Devonian (~436-402 Ma) granitic intrusion in core complex. Metamorphic grades upper greenschist-low amphibolite facies in core to low greenschist facies in cover sequence. Major extension at M Triassic (237 Ma). Dulong granites intruded Dulong-Song Chay dome in Early Cretaceous (144-140 Ma) and M Cretaceous (116±10 Ma))

Yan, J.X. & D. Liang (2005)- Early and Middle Permian paleoclimates of the Baoshan Block, western Yunnan, China: insight from carbonates. J. Asian Earth Sci. 24, 6, p. 753-764.
(Baoshan Block of W Yunnan, SW China formed E part of Cimmerian Continent in Permian. E Permian formed under influence of Permo-Carboniferous glaciation. After E Permian rifting faunal elements of Gondwana affinity decreased, while those of Cathaysian affinity increased. Late Permian faunas exclusively Cathaysian. E Permian Dingjiazhai Fm carbonates characterized by warm-temperate bryozoan-echinoderm facies of

heterozoan association, with no non-skeletal grains. Overlying Yongde and Shazipo Fm carbonates subtropical-tropical chloroforam facies of photozoan association, with common non-skeletal grains)

Yan, J.X., D.Y. Liang & M. Wu (2004)- Permian carbonates of Baoshan block, western Yunnan and their paleoclimatic implications. Science in China, Ser. D, Earth Sci. 47, p. 385-392.
(online at: http://earth.scichina.com:8080/sciDe/fileup/PDF/04yd0385.pdf)
(E Permian carbonates of Djingjiazhai Fm, Baoshan block, temperate facies, dominated by bryozoans, crinoids and brachiopods and without fusulinids. Artinskian basalts (marking rifting-separation from Gondwanaland) overlain by M Permian (Roadian-Wordian) Yongde Fm bryozoan-mollusc limestone with minor fusulinids and algae (incl. Permocalculus). M-L Permian (Wordian- Capitanian- E Wuchiapingian) Shazipo Fm carbonates oolitic, warm-water, incl. common fusulinids and algae)

Yang, S.Y. & J.W. Kim (2014)- Pliocene basin-floor fan sedimentation in the Bay of Bengal (offshore northwest Myanmar). Marine Petroleum Geol. 49, p. 45-58.
(Late Pliocene basin-floor fan deposits in NE Bay of Bengal, Myanmar, with dry, biogenic gas in three fields on W flank of the NW-SE anticline. Reservoir sands stacked in back-stepping fashion and sourced from NW as part of Bengal fan. Shwe field fan-shaped (12 km long, 4 km wide) and ~30 km off base of slope)

Yang, W. (1999)- Stratigraphic and phytogeographic palynology of late Paleozoic sediments in western Yunnan, China. Science Repts. Niigata University, Ser E (Geology), 14, p. 15-99.
(online at: http://work.geobiology.cn/)
(Extensive review of W Yunnan geology and Permo-Carboniferous flora. E Permian Gondwanan glacial sediments, overlain by cold-water fauna like Eurydesma and cool Glossopteris flora. In late E Permian appearance of tropical- subtropical Tethyan elements, incl. Monodiexodina, Costiferina, etc.)

Yang, X., X. Jin, Z.S. Ji, Y.Z. Wang, J.X. Yao & H.L. Yang (2004)- New materials of the *Shanita-Hemigordius* assemblage (Permian foraminifers) from the Baoshan Block, Western Yunnan. Acta Geologica Sinica (English Ed.) 78, 1, p. 15-21.
(Description of abundant late M Permian hemigordiid foraminifera Shanita and Hemigordius from 'Cracked Lst' NE of Woniu Temple of Baoshan, W Yunnan. Assemblage similar to Shanita fauna from Shazipo Fm, Zhengkang, W Yunnan, and to Permian of Burma, Thailand, Iran and Turkey. all believed to originate on tectonic blocks derived from N margin of Gondwana)

Yao, W., L. Ding, F. Cai, H. Wang, Q. Xu & Than Zaw (2017)- Origin and tectonic evolution of upper Triassic turbidites in the Indo-Burman ranges, West Myanmar. Tectonophysics 721, p. 90-105.
(Petrography, detrital zircon ages and Hf isotopic data from Late Triassic Pane Chaung Fm exposed in Indo-Burman Ranges (W Burma Block). With Carnian-Norian Halobia molluscs; maximum depositional ages ~233-206 Ma. Detrital zircon age populations and Hf values interpreted to be derived from W Papua region. Triassic zircons (mainly ~210-250 Ma) probably from contemporaneous volcanic source. Older populations (~600-450 Ma, 1250-900 Ma and Archean from orogenic belts and cratons in Australia. Zircon ages different from similar-aged strata in Indochina and Sibumasu, but comparable to NW Australia and Greater India. Probably deposited in Late Triassic submarine fan along N margin of Australia)

Yenne, K.A. (1988)- Hydrocarbon (oil, gas and coal) prospect for Burma. U.S. Geol. Survey, Open-File Report 88-402, p. 1- 25.
(online at: https://pubs.usgs.gov/of/1988/0402/report.pdf)
(Brief review of oil occurrences in C Myanmar onshore, where oil has been extracted perhaps as early as 13th century. Future oil-gas discoveries expected to be small)

Yi, H., C. Lee & D.Y. Kim (2015)- Shwe Ga development, Rakhine Offshore, Myanmar. Proc. SEAPEX Exploration Conference 2015, Singapore, 2.2, p. 1-15. *(Extended Abstract + Presentation)*
(Three Daewoo gas field discoveries in Rakhine basin, NE offshore Myanmar from 2004-2006: Shwe, Shwe Phyu and Mya. Three fields with 2P reserves of 4 TCF. Biogenic gas in deepwater Late Pliocene Bengal Fan

turbidite sand reservoirs (interbedded lobes, channels and slumps, sourced from NW and NE).(see also Yang & Kim 2014))

Yin, T.H. & C.H.Lu (1937)- On the Ordovician and Silurian beds of Shihtien, Western Yunnan. Acta Geologica Sinica 16, 1, p. 41-56.
(Shihtien Beds lower Ordovicain shales rich in brachiopods, trilobites, graptolites, overlain by 90m Hengshuitang Lst, equivalent of Nyaungbaw Lst of Myanamar (N Shan), overlain by Silurian graptolite shale)

Yonemura, K., Y. Osanai, N. Nakano, T. Adachi, P. Charusiri & Z.T. Nain (2013)- EPMA U-Th-Pb monazite dating of metamorphic rocks from the Mogok metamorphic belt, central Myanmar. J. Mineralogical Petrological Sci. 108, 3, p. 184-188.
(online at: https://www.jstage.jst.go.jp/article/jmps/108/3/108_121019a/_pdf)
(Mogok Metamorphic Belt in C Myanmar with high-grade metamorphics, probably formed during regional Eocene- Oligocene metamorphic event. U-Th-Pb monazite dating in central MMB suggests Eocene- Oligocene deformation. Several Mnz grains from Meikthila and Mandalay areas also record ages of Late Triassic (~200 Ma) and Cretaceous (~80 Ma and 110 Ma) geologic events)

Yui, T.F., M. Fukoyama Y. Iizuka, C.M. Wu, T.W. Wu, J.G. Liou & M. Grove (2013)- Is Myanmar jadeitite of Jurassic age? A result from incompletely recrystallized inherited zircon. Lithos 160-161, p. 268-282.
(Tree types of zircons in two Myanmar jadeitite samples: Type I -inherited zircons with igneous protolith age of 160 ± 1 Ma; Type II- metasomatic/hydrothermal zircons, giving minimum jadeitite formation age of ~77 Ma (Late Cretaceous subduction before India collision); Type III- incompletely recrystallized zircons with geologically meaningless ages of 153-105 Ma. Jadeitites formed through metasomatic replacement processes)

Zaw, H.N. & Myint Soe (2016)- Massive iron ore deposit, Hwe Hpa area, Mong Yawng, Myanmar. In: Proc. 52nd Annual Session Coord. Comm. Geoscience Programmes E and SE Asia (CCOP), Bangkok, p. 165-173.
(online at: www.ccop.or.th/download/as/52as2.pdf)
(Magnetite-hematite mineralization in northern continuation of Permian-Triassic Sukhothai island arc system along margin of Indochina terrane, in E Shan State, easternmost Myanmar. Hosted in Paleozoic siltstone-mudstone)

Zaw, K. (1990)- Geological, petrogical and geochemical characteristics of granitoid rocks in Burma: with special reference to the associated W-Sn mineralization and their tectonic setting. J. Southeast Asian Earth Sci. 4, 4, p. 293-335.
(Burmese granitoids in three N-S trending, major belts (1) U Cretaceous-Lower Eocene E belt granitoids, with porphyry Cu-Au, thought to represent magmatic-volcanic arc above E-dipping, but W-ward migrating, subduction zone; (2) mostly U Cretaceous- Lower Eocene Central granitoid belt plutons, with vein-type W-Sn deposits in deformed, Paleozoic metamorphic rocks; (3) E belt granitoids are largely unknown, immediately N of mostly Triassic granitoids in N Thailand and Sn-W bearing Main Range granitoids in W Malay Peninsula)

Zaw, K. (1998)- Geological evolution of selected granitic pegmatites in Myanmar (Burma): constraints from regional setting, lithology, and fluid-inclusion studies. Int. Geology Review 40, 7, p. 647-662.
(Pegmatite veins and dikes common in 1500km long, N-S-trending, tungsten-tin bearing granitoid belt in Myanmar. Emanated from cooling S-type granitoids, with which they are spatially associated)

Zaw, K. (2017)- Overview of mineralization styles and tectonic metallogenic setting in Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 24, p. 531-556.
(Review of many different styles of mineralization of metallic and non-metallic mineral deposits in Myanmar (tin-tungsten, lead-zinc-silver, copper ± gold, Ni-Cr ± platinum (in Jurassic ophiolites), etc.)

Zaw, K., S. Meffre, M. Takai, H. Suzuki, C. Burrett, T. Htike, Z.M.M.Thein, T. Tsubamoto, N. Egi & M. Maung (2014)- The oldest anthropoid primates in SE Asia: evidence from LA-ICP-MS U-Pb zircon age in the Late Middle Eocene Pondaung Formation, Myanmar. Gondwana Research 26, p. 122-131.

(Afrasia monkey and other terrestrial mammal fossils in late M Eocene Pondaung Fm, C Myanmar. Pondaung Fm sands derived from unroofing of dissected andesitic volcanic arc and deposited on forested floodplains of large tropical river. U-Pb age for zircons from tuffaceous bed in Pondaung Fm 40.3 and 40.2 Ma, slightly older than debatable magnetostratigraphic ages of 36-39 Ma for anthropoids from Egypt and Libya. New date supports Asian origin for anthropoids)

Zaw, K., A. Pwa & T.A. Zan (1984)- Lead-zinc mineralization at Theingon Mine, Bawsaing, Southern Shan State, Burma; a Mississippi Valley-type deposit? Bull. Geol. Soc. Malaysia 17, p. 283-306.
(online at: www.gsm.org.my/products/702001-101150-PDF.pdf)
(Theingon Pb-Zn deposit near Bawsaing, S Shan State comparable to Mississippi-Valley-type deposits. Pb-Zn mineralization within Lower- M Ordovician Wunbye Fm carbonates (Sibumasu Plate). Epigenetic in origin)

Zaw, K., W. Swe, A.J. Barber, M.J. Crow & Y.Y. Nwe (2017)- Introduction to the geology of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, p. 1-17.
(online at: http://mem.lyellcollection.org/content/memoirs/48/1/1.1.full.pdf)
(Myanmar lies at junction of Alpine-Himalayan orogenic belt and Indonesian island arc system. West Myanmar Block considered to have formed part of N margin of Gondwana; subsequent history block contentious: one possiblity separation from W Sumatra during Miocene development of Andaman Sea (similar Permian fusulinid assemblages. E Myanmar, including Shan Plateau, part of Sibumasu Block, which extends S-wards from Yunnan through Myanmar to Thailand, Malay Peninsula and Sumatra. In E Paleozoic Slate Belt (Mergui Gp) with diamictitesm part of Sibumasu Block or separate bloc. Etc.)

Zaw, K., Y.M. Swe, T.A. Myint & J. Knight (2017)- Copper deposits of Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 26, p. 573-588.
(Myanmar with >70 copper occurrences, including large high-sulphidation Cu ± Au deposits W of Monywa. Production started in 1985 with development of Sabetaung deposit at Monywa in C Myanmar. Copper produced as by-product from Bawdwin Mine, a volcanic-hosted massive sulphide deposit. Most copper associated with epigenetic vein-type and epithermal gold ± silver deposits)

Zaw Win (1991)- Triassic ammonites from the Plateau Limestone, East of Lungyaw and Baukkewzu, Myit-tha and Ywa-ngan Township, Myanmar. Georeports 1, 1, p. 75-87.

Zaw Win (2004)- Permian-Triassic Plateau Limestone in Lungyaw-Sakangyi Area, Shan State: its depositional and biotic history. J. Myanmar Academy Arts and Science 2, 5, p. 217-239.

Zaw Win (2008)- Triassic organic reefs in Lungyaw-Sakangyi Area, Ywa-ngan Township, Shan State. J. Myanmar Geosciences Soc. 1, 1, p. 21-36.
(M-U Triassic organic reefs in upper Plateau Lst in Myanmar massive ridges forming NNW-SSE trending range. Composed off in situ frame-building hexacorals (incl. Montlivaltia), calcisponges (Paradeningeria) and encrusting calcareous algae. Foraminifera include Alpinophragmium perforatum, Trocholina, Agathammina, Duotaxis, etc. Limestone turbidites flanks limestone masses as fore-reef slope and toe-of slope facies. Reefs probably developed as fringe of steep shelf margin that may have undergone growth-faulting)

Zaw Win (2009)- Fossil brachiopods from the Zwekabin Range. Hpa-an University Research J. 2009, 1, p. 145-149.
(Spinomartinia prolifica brachiopod assemblage found for first time from U Taungnyo Gp exposed along NW flank of Zwekabin Range, S Myanmar. Associated with Retimarginifera cf. alata, Torynifer, etc. Correlated with Spinomartinia prolifica fauna of E Permian Ko Yao Noi Fm of S Thailand and Kinta Valley of W Malay Peninsula , where age determined as Late Sakmarian (E Permian). Spinomartinia fauna viewed as 'transitional' biotic province with both Gondwanan and Tethyan affinities and endemic taxa of Shan-Thai Terrane (S. prolifica also in upper part of Mergui Gp of Slate Belt of S Myanmar, below Moulmein Lst; Mitchell 2017, p. 101-102)

Zaw Win, H.H. Aung & K.K. Shwe (2011)- *Shanita thawtinti*, a new milioloid foraminifer from the Middle Permian of Myanmar. Micropaleontology 57, 2, p. 125-137.
(online at: www.micropress.org/micropen2/articles/1/7/30349_articles_article_file_1727.pdf)
(Shanita thawtinti n. sp. proposed for pillared miliolid in Plateau Limestone Gp, W Shan Plateau, Myanmar. Characterized by very large size. Age interpreted as M Permian (Murgabian=Wordian) based on fusulinids Neoschwagerina craticulifera below and Neoschwagerina margaritae above. Shanita amosi and Hemigordiopsis renzi at slightly lower horizons)

Zaw Win & K.K. Shwe (2005)- Study of fusulinaceans from the Plateau Limestone at Kyaukap: taxonomic and biostratigraphic consideration. J. Myanmar Academy Arts and Science 3, p. 73-90.

Zaw Win, K.K. Shwe & O.S. Yin (2017)- Sedimentary facies and biotic associations in the Permian-Triassic limestones on the Shan Plateau, Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 15, p. 343-363.
(Thick late E Permian- M-L Triassic Plateau Limestone on Shan Plateau of E Myanmar (= W part of Sibumasu terrane). Unconformably over Ordovician-Silurian formations. Basal dolomitic limestone unit rich in corals (Wentzelella cf timorica, Ipciphyllum, Polythecalis), fusulinids (Pseudofusulina, Yangchienia, rare Neoschwagerina), small forams (Shanita amosi, Hemigordiopsis renzi, Agathammina, Pachyphloia), algae (Mizzia), etc. Triassic algal and cherty basinal limestones. Plateau Lst correlated with: (1) Ratburi Lst of Peninsular Thailand, (2) Chuping Fm/ Kodiang Lst of NW PeninsularMalaysia and (3) U Shazipo Fm of Baoshan Block, SW Yunnan)

Zhang, H., J. Liu & W. Wu (2012)- Geochronology and tectonic evolution of the Lincang Batholith in southwestern Yunnan, China. J. Geol. Research 2012, Article ID 287962, p. 1-11.
(online at: www.hindawi.com/journals/jgr/2012/287962/)
(U-Pb zircon dating of Late Triassic (~220, 230 Ma) granites of Lincang Batholith, subduction-related magmatism along W edge of Lanping-Simao-Indochina terrane, prior to latest Triassic closure of Paleo-Tethys)
(E Devonian graptolites from SW Yunnan, close to NE Myanmar border. Rel. cosmopolitan species. Three zones of based on Monograptus spp.. Part of Sibumasu Block with related graptolite occurrences in E Myanmar, N Thailand, W Malay Peninsula (Jaeger 1969, 1983))

Zhang, J., W. Xiao, B.F. Windley, F. Cai, K. Sein & S. Naing (2017)- Early Cretaceous wedge extrusion in the Indo-Burma Range accretionary complex: implications for the Mesozoic subduction of Neotethys in SE Asia. Int. J. Earth Sciences 106, 4, p. 1391-1408.
(Indo-Burma Range of Myanmar (E extension of Yarlung-Tsangpo Neotethyan belt of Tibet in China), contains melanges with serpentinite, greenschist facies basalt, chert, sericite schist, silty slate and unmetamorphosed Triassic sandstone, mudstone and siltstone interbedded with chert in E, and farther N high-P blueschist and eclogite blocks in Naga Hills melange. IBR metamorphic rocks exhumed by wedge extrusion in subduction zone accretionary complex. Amphibolites zircon ages of 119 ± 3 Ma and 115 Ma, close to ages of nearby calc-alkaline granite and diorite, which belong to active continental margin arc along W side of Shan-Thai block. IBR accretionary complex generated during E Cretaceous (115-128 Ma) subduction of Neotethys Ocean).

Zhang, P., L. Mei, X. Hu, R. Li, L. Wu, Z. Zhou & H. Qiu (2017)- Structures, uplift, and magmatism of the Western Myanmar Arc: constraints to mid-Cretaceous-Paleogene tectonic evolution of the western Myanmar continental margin. Gondwana Research 52, p. 18-38.
(Arc-basin system along W Myanmar continental margin, with at least three igneous events in W Myanmar Arc: mid-Cretaceous (110-90 Ma), latest Cretaceous- E Paleocene (69-64 Ma) and Eocene (53-38 Ma), and associated uplift in Late Cretaceous, Eocene and Late Oligocene. Magmas significant juvenile mantle source component involving subducted sediments and juvenile crustal materials. Magmatism can be correlated with Gangdese arc in Lhasa terrane of S Tibetan Plateau. Model of E-ward subduction of Neo-Tethyan/Indian plate oceanic crust under Sibumasu starting in mid-Cretaceous, with long-lived back-arc extension in W Myanmar)

Zhang, R.Y., C.H. Lo, S.L. Chung, M. Grove, S. Omoti, Y. Iizuka, J. G. Liou & T.V. Tri (2013)- Origin and tectonic implication of ophiolite and eclogite in the Song Ma Suture Zone between the South China and Indochina Blocks. J. Metamorphic Geol. 31, 1, p. 49-62.
(Song Ma belt in N Vietnam with ophiolite, metabasite, metasediments and eclogite, and thought to be suture zone between Indochina and South China blocks. Eclogite high-P metamorphism in subduction zone with low T gradient (~8 °C/km). Song Ma ophiolite experienced ocean-floor metamorphism. Metabasalt and gabbro with MORB-type geochemical affinities. Eclogite U-Pb zircons mean age 230.5 ± 8.2 Ma, interpreted as closure age of Paleotethys and subsequent collision of two blocks in M Triassic (main Indosinian Orogeny))

Zhang, R.Y., C.H. Lo, X.H. Li, S.L. Chung, Tran Tuan Anh & Tran V. Tri (2014)- U-Pb dating and tectonic implication of ophiolite and metabasite from the Song Ma suture zone, northern Vietnam. American J. Science 314, 2, p. 649-678.
(Song Ma ophiolites mainly peridotite, basalt and gabbro with greenschist- lower amphibolite-facies metamorphism. U-Pb zircon ages 340± 29 Ma (E Carboniferous), interpreted as protolith age. Metamorphic rims age of ~280 Ma (E Permian). Metabasalt protolith age ~315 Ma. Eclogite and garnet hornblende metamorphic ages ~ 230 Ma. Three-stage evolution: (1) Paleotethys oceanic crust formation at 340-315 Ma and ocean-floor metamorphism at 283-280 Ma, (2) <280-230 Ma: Paleotethys lithosphere subduction and HP metamorphism at ~230 Ma; closure of Paleotethys in M Triassic; and (3) <230 Ma: breakoff of Paleotethys oceanic lithosphere and exhumation of subducted slabs. Subduction polarity still problematic)

Zhang, Y.D., J.X. Fan, B.D. Erdtmann & X. Liu (2009)- Darriwilian graptolites of the Shihtien Formation (Ordovician) in west Yunnan, China. Alcheringa 33, 4, p. 303-329.
(online at: www.tandfonline.com/doi/pdf/10.1080/03115510903043762?needAccess=true)
(W Yunnan in SW China part of Sibumasu Terrane. Ordovician rocks affected by several phases of tectonics. M-L Darriwilian graptolite fauna from Shihtien Fm at Baoshan and Shidian with 15 species, incl. Didymograptus artus, D. murchisoni, D. spinulosus, Pterograptus sp., Hustedograptus spp, Archiclimacograptus spp., etc. Two biozones:Didymograptus artus and D. murchisoni. Graptolite fauna similar to Baltica and S China)

Zhang, Y.D., J.X. Fan & X. Liu (2009)- Graptolite biostratigraphy of the Shihtien Formation (Darriwilian) in West Yunnan, China. Bull. Geosciences 84, 1, p. 35-40.
(online at: www.geology.cz/bulletin/fulltext/bullgeosci841_1103.pdf)
(Rich M Ordovician graptolite fauna from Shihtien Fm at Baoshan and Shidian in W Yunnan, SW China (W Yunnan generally considered part of Sibumasu/ Shan-Tai terrane). Incl. Didymograptus artus, D. murchisoni, D. spinulosus, Pterograptus, Hustedograptus, etc., indicating Darriwilian age.)

Zhang, Y., W.H. He, G.R. Shi & K.X. Zhang (2013)- A new Changhsingian (Late Permian) Rugosochonetidae (Brachiopoda) fauna from the Zhongzhai section, southwestern Guizhou Province, South China. Alcheringa 37, p. 223-247.

Zhang, Y., W.H. He, G.R. Shi, K.X. Zhang & H.T. Wu (2015)- A new Changhsingian (Late Permian) brachiopod fauna from the Zhongzhai section (South China) Part 3: Productida. Alcheringa 39, 3, p. 295-314.
(Latest Permian Brachiopod fauna from section at Zhongzhai, Guizhou Province (S China). 15 species of Productida. Etc.)

Zhang, Y.D. & A.C. Lenz (1998)- Early Devonian graptolites from southwest Yunnan, China. J. Paleontology 72, 2, p. 353-360.

Zhang, Y., G.R. Shi, W.H. He, K.X. Zhang & H.T. Wu (2014)- A new Changhsingian (Late Permian) brachiopod fauna from the Zhongzhai section (South China), Part 2: Lingulida, Orthida, Orthotetida and Spiriferida. Alcheringa 38, 4, p. 480-503.

Zhang, Y., Y. Wang, R. Zhan, J. Fan, Z. Zhou & X. Fang (2014)- Ordovician and Silurian stratigraphy and palaeontology of Yunnan, Southwest China- A guide to the field excursion across the South China, Indochina and Sibumasu. IGCP Project 591 Post-conference fieldtrip, Kunming 2014, Science Press, Beijing, p. 1-128.

(Yunnan province of SW China comprises three terrains: South China (E Yunnan), Indochina (Simao; C and S Yunnan) and Sibumasu (Baoshan- Tengchong; W Yunnan- E Myanmar, etc.). All were part of NE Peri-Gondwana Region in Early Paleozoic, possibly off the NW Australia sector)

Zhao, J., B. Huang, Y. Yan & D. Zhang (2015)- Late Triassic paleomagnetic result from the Baoshan Terrane, West Yunnan of China: implication for orientation of the East Paleotethys suture zone and timing of the Sibumasu-Indochina collision. J. Asian Earth Sci. 111, p. 350-364.
(Paleomagnetic study of Late Triassic basalts from S part of Baoshan Terrane (= N-most Sibumasu Block) in W Yunnan indicates 15°N paleolatitude in Late Triassic time. Wider paleomagnetic comparison supports view that E Paleotethys Ocean separated Sibumasu and Indochina blocks and closed no later than Late Triassic. N-S directed Changning-Menglian suture zone likely E-W at time of Sibumasu-Indochina collision)

Zhao, J.M. & G.D. Zhou (1987)- Discovery of *Lytvolasma* fauna from western section of Eastern Kunlun Mountains. Acta Palaeontologica Sinica 26, 4, p. 486-491.
(Lytvolasma late E Permian coral fauna from E Kunlun Mts, W Qinghai. Also with Pleramplexus, Wannerophyllum, Lophophyllidium wichmanni, Timorphyllum, etc. Coral fauna characterized by simple forms with no dissepiments, signifying cold-water fauna. Comparable to Basleo beds of Timor)

Zheng, D., S.C. Chang, V. Perrichot, S. Dutta, A. Rudra, Lin Mu, R.S. Kelly, Sha Li et al. (2018)- A Late Cretaceous amber biota from central Myanmar. Nature Communications 9, 3170, p. 1-6.
(online at: www.ncbi.nlm.nih.gov/pmc/articles/PMC6085374/pdf/41467_2018_Article_5650.pdf)
(Insect faunas in U Campanian (~72.1 Ma) amber from Tilin, C Myanmar. Chemical composition suggests conifer tree source, indicating gymnosperms still abundant in latest Campanian equatorial forests. Twelve families of insects found, incl. ants, wasps, midges, lice, etc.)

Zherikhin, V.V. & A.J. Ross (2000)- A review of the history, geology and age of Burmese amber (burmite). Bull. Natural History Museum, London (Geology) 56, 1, p. 3-10.
(online at: https://ia800304.us.archive.org/24/items/bulletinofnatura561natu/bulletinofnatura561natu.pdf)
(Burmese amber has been known since 1st century AD. Recorded from five regions in Myanmar, but only mined commercially in Hukawng Valley in N Myanmar. Amber in clastic deposits with Nummulites of M Eocene age, but amber as reworked pebbles and probably of Cretaceous age (also associated with reworked Cenomanian limestone clasts with Orbitolina birmanica). With 10 additional papers on insects from Burmese amber)

Zhou, Z. & Z. Yang (2005)- Permian ammonoids from Xinjiang, Northwest China. J. Paleontology 79, 2, p. 378-388.
(late E Permian ammonoid faunas from Xinjiang in W China (edge of Tarim Basin, E of Pamir). With Parapronorites, Propinacoceras, Medlicottia, Agathiceras, Prostacheoceras, Metaperrinites, Perrinites, etc., similar to faunas from adjacent Pamirs and Thailand. Associated with fusulinid limestones)

Zhou, Z.R., Y.J. Wang, J.Z. Sheng & K.Y. Zhu (2000)- *Neofusulinella lantenoisi* Deprat, 1913, type species of the Permian fusulinid genus *Neofusulinella* from Baoshan County, West Yunnan, China. Acta Palaeontologica Sinica 39, 4, p. 457-465.
(E-M Permian Neofusulinella present in Baoshan area (Yunnan; Maokouan age = ?) and Rat Buri Limestone near Takli, Thailand, along W margin of S China- SE Asia block)

Zhu, B., Z. Guo, R. Liu, D. Liu & W. Du (2014)- No pre-eruptive uplift in the Emeishan large igneous province; new evidences from its 'inner zone', Dali area, southwest China. J. Volcanology Geothermal Res. 269, p. 57-67.
(M-L Permian Emeishan LIP considered example of crustal domal uplift caused by mantle plume upwelling before onset of volcanism, but emplacement began in deeper water setting. Lower Succession volcanism had grown into shallower water; Upper Succession subaerial lavas and tuffs. Inconsistent with domal uplift model)

Zhu, B.Q., C.X. Mao, G.W. Lugmair & J.D. Macdougall (1983)- Isotopic and geochemical evidence for the origin of Plio-Pleistocene volcanic rocks near the Indo-Eurasian collisional margin at Tengchong, China. Earth Planetary Sci. Letters 65, 2, p. 263-275.

(In Yunnan Province, SW China, regional extension associated with India- Asia collision formed series of N-S trending basins. Near Tengchong close to Myanmar border, basin is characterized by K-rich basalt-dacite volcanism which began in Pliocene (~ 7 Ma) and continued to historic times. Five chemical groups recognized)

IX.5. Cambodia, Vietnam, Laos, SE China (Indochina - South China Plates)

Allain, R., P. Taquet, B. Battail, J. Dejax, P. Richir, M. Veran, P. Sayarath, B. Khenthavong, P. Thamvirith & B. Hom (1997)- Pistes de dinosaures dans les niveaux du Cretace inferieur de Muong Phalane, province de Savannakhet (Laos). Comptes Rendus Academie Sciences, Paris, IIA, 325, 10, p. 815-821.
('Dinosaur tracks in the Lower Cretaceous of Muong Phalane, Savannakhet Province, Laos'. Three levels with dinosaur footprints along Sang Soy River, in flood plain sandstone at top of late Lower Cretaceous 'Gres superieurs', dated by fresh water pelecypods (Trigonioidacea). Theropod, ornithopod and sauropod footprints)

Allain, R., P. Taquet, B. Battail, J. Dejax, P. Richir, M. Veran, F. Limon-Duparcmeur, R. Vacant et al. (1999)- Un nouveau genre de dinosaure sauropode de la formation des Grss superieurs (Aptien-Albien) du Laos. Comptes Rendus Academie Sciences, Paris, IIA, 329, p. 609-616.
(Partly-articulated postcranial remains of two sauropod skeletons in Tang Vay (Savannakhet) assigned to Tungvuyosuurus hoffeti n.gen. n.sp. . Considered as primitive titanosaur)

Allain, R., T. Xaisanavong, P. Richir & B. Khentavong (2012)- The first definitive Asian spinosaurid (Dinosauria: Theropoda) from the Early Cretaceous of Laos. Naturwissenschaften 99, 5, p. 369-377.
(First discovery of new spinosaurid theropod from Asia in late E Cretaceous Savannakhet Basin in Laos. Named Ichthyovenator laosensis n.gen. n.sp. Includes partially articulated postcranial remains with dorsosacral sail)

Amare, K. & C. Koeberl (2006)- Variation of chemical composition in Australasian tektites from different localities in Vietnam. Meteoritics Planetary Science 41, 1, p. 107-123.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1945-5100.2006.tb00196.x/epdf)
(Pleistocene tektites from Vietnam either of splash form (SiO2 70-77%), or larger, blocky Muong Nong-type (SiO2 74-81%.). Geochemistry similar to Muong Nong-type indochinites, indicating same source and composition similar to average upper continental crust, without obvious extraterrestrial components)

Anh, P.L., A.G. Vladimirov, N.N. Kruk, G.V. Polyakov, V.A. Ponomarchuk, T.T. Hoa et al. (2010)- Stanniferous granites of Vietnam: Rb-Sr and Ar-Ar isotope age, composition, sources, and geodynamic formation conditions. Doklady Earth Sciences 432, 2, p. 839-845.
(Granite-leucogranite massifs in Vietnam, linked to cassiterite placer deposits, are of Late Cretaceous age (~85 Ma) by Rb-Sr and Ar-Ar isotope dating)

Barnes, V.E. & K. Pitakpaivan (1962)- Origin of indochinite tektites. Proc. National Academy Sciences USA 48, p. 947-955.
(online at: www.pnas.org/content/48/6/947)
(Chemical analyses of Muong Nong-type and 'normal' splashform indochinite flassy tektites from Laos and Thailand)

Barr, S.M. & A.S. MacDonald (1981)- Geochemistry and geochronology of Late Cenozoic basalts of Southeast Asia: summary. Geol. Soc. America (GSA) Bull. 92, 8, p. 508-512.
(Brief review of Late Cenozoic (12 Ma- Recent) basalts in Vietnam, Cambodia, Thailand. Wide diversity in geochemistry. Hawaiites appear to be most voluminous, but tholeiites also abundant, especially in Vietnam. Basanitoid basalts relatively minor, as small isolated flows, vents, or plugs, or as youngest extrusions capping more voluminous, less-undersaturated, older flows)

Battail, B. (2009)- Late Permian dicynodont fauna from Laos. In: E. Buffetaut, G. Cuny et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc. London, Spec. Publ. 315, p. 33-40.
(New collection of Dicynodon spp. tetrapod skulls from Late Permian purple beds of Luang Prabang area. This indicates Indochina Plate was probably connected to mainland Eurasia (Pangea) by Late Permian time)

Battail, B., J. Dejax, P. Richir, P. Taquet & M. Veran (1995)- New data on the continental Upper Permian in the area of Luang Prabang, Laos. In: Proc. IGCP Symposium on Geology of SE Asia, Hanoi, J. Geology B, 5-6, Hanoi, p. 11-15.
(Permian N of Luang Prabang contains ~120m thick 'fourth zone' of continental purple clays- sandstones with silicified wood and tetrapod fauna dominated by Dicynodon, a cosmopolitan terrestrial animal widespread in Late Permian of Pangea. Sshows NW edge of Indochina block probably had land connection to Pangea in Late Permian. Basal section of zone with (reworked?) Late Murgabian corals, incl Ipciphyllum, Multimurus)

Bercovici A., S. Bourquin, J. Broutin, J.S. Steyer, B. Battail, M. Veran, R. Vacant, B. Khentavong & S. Vongphamany (2012)- Permian continental paleoenvironments in Southeastern Asia: new insights from the Luang Prabang Basin (Laos). J. Asian Earth Sci. 60, p. 197-211.
(On M-L Permian fluvial and shallow marine clastics along Mekong River in Luang Prabang area, Indochina Block. Basal marine limestones with Spiriferina, clastics with Cathaysian-affinity floras (but also Glossopteris-like leaves) and 'Pangean' tetrapod reptile fossils of genus Dicynodon)

Blanchard, S., C. Rossignol, S. Bourquin, M.P. Dabard, E. Hallot, T. Nalpas, M. Poujol, B. Battail, N.E. Jalil et al. (2013)- Late Triassic volcanic activity in South-East Asia: new stratigraphical, geochronological and paleontological evidence from the Luang Prabang Basin (Laos). J. Asian Earth Sci. 70-71, p. 8-28.
(Luang Prabang Basin in N Laos asymmetric NE-SW syncline with NE-SW thrusts between Late Permian and Late Triassic deposits. Late Triassic fluvial volcaniclastics with euhedral zircon grains aged ~225, 220 to 216 Ma, indicating Carnian-Norian volcanism during sedimentation. Anhedral inherited zircons older, many of them ~1870 Ma)

Blanche, J.B. (1990)- An overview of the exploration history and hydrocarbon potential of Cambodia and Laos. In: 8th Offshore SE Asia Conf., Singapore 1990, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 9, OSEA 90178, p. 89-99.

Blanche, J.B. & J.D. Blanche (1992)- An overview of the exploration history and hydrocarbon potential of Cambodia and Laos. Bull. Geol. Soc. Malaysia 32, p. 135-154.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992019.pdf)
(Petroleum geology and hydrocarbon potential of Cambodia and Laos virtually unknown. Only 3 wells drilled in Cambodia. Mesozoic and Cenozoic basins may have potential)

Blondel, F. (1932)- La geologie et les mines de l'Indochine francaise. Soc. Edit.Geogr. Maritimes Coloniales, Paris, p. 1-148.
('The geology and mines of French Indochina')

Bohme, M., M. Aiglstorfer, P.O. Antoine, E. Appel, P. Havlik, G. Metais, Laq The Phuc, S. Schneider et al. (2013)- Na Duong (northern Vietnam)- an exceptional window into Eocene ecosystems from Southeast Asia. Zitteliana A 53, p. 121-167.
(online at: www.wahre-staerke.com/~madelaine/2014_Boehme_NaDuong.pdf)
(Na Duong Basin in N Vietnam with high diversity Paleogene vertebrate, invertebrate and plant fossils in 220 m thick coal-bearing Na Duong section, ~20km SE of Lang Son. Affinities of new mammal species suggest M-L Eocene age (late Bartonian-Priabonian). High biodiversity unionid mussels (Nodularia, Cristaria), freshwater gastropods, fishes, turtles and crocodiles. Dipterocarp trees and tree ferns identified. In-situ tree-stump horizons suggest maximum canopy height (35m). Environment changed abruptly from swamp forest to tropical-warm subtropical lake. Strong biogeographic link with Eocene mammal faunas from Europe)

Bohme, M., J. Prieto, S. Schneider, Nguyen Viet Hung, Do Duc Quang & Dang Ngoc Tran (2011)- The Cenozoic on-shore basins of Northern Vietnam: biostratigraphy, vertebrate and invertebrate faunas. J. Asian Earth Sci.40, p. 672-687.
(Na Duong, Cao Bang, and Hang Mon basins of N Vietnam (at boundary of Indochina- S China plates) contain rich non-marine fauna and flora of supposed Oligocene age, including mammals, crocodiles, >6 turtle species, 20 fish taxa, 20 mollusc species and plant remains. Most taxa new to science)

Boura, A., D. Pons, C. Vozenin-Serra & Bui Phu My (2013)- Mesozoic fossil wood of Kien Giang Province, southwestern Vietnam. Palaeontographica, B 290, 1-3, p. 11ï 40
(New fossil wood from E Cretaceous continental red beds ('Gres superieurs') of islands in NE Gulf of Thailand off S Vietnam. Fossil wood samples belong to Agathoxylon saravanensis, Protophyllocladoxylon, Cycadeanoxylon. Brachyoxylon orientale and Prototaxoxylon asiaticum already known from this area. Associated with rel. common Classopollis pollen, Signify rel. aridclimate with some seasonality (growth rings))

Boureau, E. (1950)- Contribution a l'etude paleoxylologique de l'Indochine. Presence du *Xenoxylon latiporosum* (Cramer) Gothan dans le Lias du Centre-Amman. Bull. Service Geol. L'Indochine 29, p. 1-16.
('Contribution to a study of fossil wood from Indochina. Presence of Xenoxylon latiporosum (Cramer) Gothan in the Lias of Centre-Amman'. Early Jurassic wood (supposedly Boreal Northern Hemisphere genus; Philippe 2013))

Bouttathep, B. (2013)- Geology of the Sepon copper and gold deposits, Laos. In: C. Senebouttalath et al. (eds.) Proc. 2nd Lao-Tai Conf. Geology and Mineral resources, Vientiane, p. 164-187.
(online at: www.dmr.go.th/download/English/LAO%20-THAI%20Conference%202012_Proceedings.pdf)
(Sepon Mining District in S C Laos in Sepon basin within NW trending Truongson fold belt of Devonian-Carboniferous sediments and metamorphic rocks (Indochina terrane). Major compressional event, likely associated with Indosinian orogeny and with Carlin-type? gold mineralization-forming intrusion of rhyodacite porphyry dikes)

Buffetaut, E. (1991)- On the age of the dinosaur-bearing beds of southern Laos. Newsletters Stratigraphy 24, 1-2, p. 59-73.
(Dinosaur fauna discovered by Hoffet in 1930 in S Laos considered by him as Senonian in age, but sauropod and hadrosaurid material non-diagnostic. Dinosaur-bearing beds of Muong Phalane equivalent of Khok Kruat Fm of nearby Khorat Plateau in NE Thailand, dated as late E Cretaceous (Barremian; Buffetaut et al. 2005)

Cannell, J.B., J. Stewart, P. Williams, M. Wallace, C.F. Burrett & B. Davis (2015)- The Sepon copper deposits (Laos) and their relation to Carlin-like gold mineralisation. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 399-408. *(Extended Abstract)*
(Sepon district in Lao PDR 1.8 Mt of Cu and >4.5 Moz of Carlin-like Au in Paleozoic sedimentary package. Cu deposits nearPermian rhyodacite porphyry. Carlin-like Au deposits outboard of Cu deposits, but may be related to copper mineralisation, with differences in style related to palaeodepth and proximity to intrusive centres)

Carbonnel, J.P. (1972)- Le Quaternaire cambodgien : structure et stratigraphie. Mem. ORSTOM 60, p. 1-254.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_2/memoires/05936.pdf)
('The Quaternary of Cambodia'. Include M Pleistocene tektites occurrence in upper gravels of 40m terrace of Mekong River)

Carter, A. & P.D. Clift (2008)- Was the Indosinian orogeny a Triassic mountain building or a thermotectonic reactivation event? Comptes Rendus Geoscience 340, 2, p. 83-93.
(No definitive evidence for Triassic age of collision between Indochina and S China blocks. Indosinian event in S China/ Vietnam is reactivation event caused by closure of Paleotethys with accretion of Sibumasu block to Indochina in E-M Triassic (~250-220 Ma))

Carter, A., D. Roques & C. Bristow (2000)- Denudation history of onshore central Vietnam: constraints on the Cenozoic evolution of the western margin of the South China Sea. Tectonophysics 322, p. 265-277.
(Apatite fission track analysis suggests denudation across C Vietnam during syn- and post-rift phases of South China Sea occurred at similar rates (~40m/ Myr), suggesting extension was not dominant factor controlling Cenozoic denudation. Regional Late Miocene cooling linked to enhanced erosion and deposition of prograding sediments in adjacent offshore basins and associated with initiation of regional basaltic magmatism and development of topography)

Carter, A., D. Roques, C. Bristow & P. Kinny (2001)- Understanding Mesozoic accretion in Southeast Asia: significance of Triassic thermotectonism (Indosinian orogeny) in Vietnam. Geology 29, 3, p. 211-214.
(Zircon U-Pb study of metamorphic basement of Vietnam show large part was affected by short-lived episode of ductile deformation and high T metamorphism between 258 ± 6 Ma and 243 ± 5 Ma (Late Permian- earliest Triassic), caused by accretion of Sibumasu to Indochina- S China ('Indosinian Orogeny'). Coincident with final N-S China collision (Qinling orogenesis))

Cawood, P.A., Y. Wang, Y. Xu & G. Zhao (2013)- Locating South China in Rodinia and Gondwana: a fragment of greater India lithosphere? Geology 2013, 41, p. 903-906.
(online at: http://geology.gsapubs.org/content/41/8/903.full.pdf+html)
(From formation of Rodinia at end of Mesoproterozoic to Pangea breakup at end Paleozoic, S China craton (Cathaysia+Yangtze blocks) was adjacent to W Australia and N India. Neoproterozoic arc-backarc assemblages ages from ~1000 to 820 Ma, with NW decrease in ages, suggesting SE-directed subduction at periphery of Rodinia. E Paleozoic detrital zircon age spectra require E Gondwana source, similar to Tethyan Himalaya and W Australia, suggesting common source and accumulation along N margin of Gondwana. S China block rifted from Gondwana in Late Devonian- E Carboniferous, before drifting across Tethys Ocean, and accreting to Asia (N China) along Qinling-Dabie suture in Permian-Triassic)

Charoentitirat, T., K. Ueno & N. Ratthapon (2011)- Late Paleozoic carbonates and foraminiferal faunas in northern Lao PDR: their geotectonic implications. In: Proc. Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2011), Khon Kaen, p. 6-8. *(Extended Abstract)*
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2011/34445.pdf)
(N Laos limestones NW of Luang Prabang and S of Sayabouli with Late Permian foraminifera Dagmarita, Septoglobivalvulina? and Reichelina?. Similar to W margin of Indochina Block in Thailand, suggesting link between NE Thailand and NW Laos. Nan-Uttaradit Suture between Sukhothai zone and Indochina Block runs NNE-ward into NW Laos and continues to Lancangjiang suture in W Yunnan (similar to Ueno et al. 2010))

Charvet, J., H. Lapierre & Y. Yu (1994)- Geodynamic significance of the Mesozoic volcanism of southeastern China. J. Southeast Asian Earth Sci. 9, 4, p. 387-396.
(Two main magmatic episodes during Yenshanian cycle, separated by tectonic event: (1) Late Jurassic-M Cretaceous, and (2) Late Cretaceous bimodal suite of continental basalts and acidic rocks, separated by angular unconformity. Geodynamic evolution: (1) subduction of Izanagi plate beneath E Asian continental margin until M Cretaceous; (2) collision with W Philippines Block around E-L Cretaceous boundary; (3) post-collisional extension and onset of rifting during Late Cretaceous)

Chen, Z., Wei Lin, M. Faure, C. Lepvrier, Nguyen Van Vuong & Vu Van Tich (2013)- Geochronology and isotope analysis of the Late Paleozoic to Mesozoic granitoids from northeastern Vietnam and implications for the evolution of the South China block. J. Asian Earth Sci. 86, p. 131-150.
(In NE Vietnam widespread Late Paleozoic and Permo-Triassic granitic plutons. Zircon ages suggest at least four thermal events, at ~525, 254-251, ~245-220 and ~91 Ma. Granitic rocks formed by re-melting of Paleoproterozoic continental crust. NE Vietnam granites belongs to S China block. Late Cretaceous magmatism in back-arc extensional tectonic setting)

Cheng, Y., J. Mao & P. Liu (2016)- Geodynamic setting of Late Cretaceous Sn-W mineralization in southeastern Yunnan and northeastern Vietnam. Solid Earth Sciences 1, 3, p. 79-88
(online at: www.sciencedirect.com/science/article/pii/S2451912X16300046)
(Late Cretaceous (~80-100 Ma) Sn-W mineralization in SE Yunnan (S China) and NE Vietnam many similarities, representing one regional magmatic-mineralization event. Late Cretaceous magmatic-mineralization- metamorphic activities widely distributed along E Asian continental margin, and product of subduction of Paleo-Pacific Plate under Eurasia (also Triassic magmatism with Sn-W mineralization))

Chi, C.T. & J.W. Geissman (2013)- A review of the paleomagnetic data from Cretaceous to lower Tertiary rocks from Vietnam, Indochina and South China, and their implications for Cenozoic tectonism in Vietnam and adjacent areas. J. Geodynamics 69, p. 54-64.
(Review of paleomagnetic data from Cretaceous of Vietnam, Indochina and S China in common reference frame with respect to Eurasia's coeval paleopoles. S China Block has been relatively stable with respect to Eurasia since mid-Cretaceous. Cretaceous - E Tertiary paleomagnetic data from Indochina-Shan Thai Block reveal complex patterns of intra-plate deformation in response to the India-Eurasia collision. Red River transcurrent fault system complicated slip history in area with modest (~800 km) S-ward translation)

Chung Nguyen (2014)- A review of Tertiary palynomorph assemblage in Cuu Long Basin: case study of palynomorphs in Miocene-Oligocene sediments. Int. J. Sciences Basic Applied Research (IJSBAR) 24, 3, p. 103-111.
(online at: http://gssrr.org/index.php?journal=JournalOfBasicAndApplied&page=issue&op=archive)
(E Oligocene- Late Miocene palynomorph assemblages and Vietnam Petroleum Institute (VPI) palynological zonation, with age-restricted taxa Florschuetzia trilobata, F. meridionalis, Stenochlaenidites papuanus (= S. laurifolia), Jussiena, Verutricolporites pachydermus, Gothanipollis basensis, Cicatricosisporites dorogensis, Lycopodiumsporites neogenicus, Meyeripolis nahankotensis, etc)

Clift, P.D., A. Carter, I.H. Campbell, M.S. Pringle, Nguyen Van Lap, C.M. Allen, K.V. Hodges & M.T. Tan (2006)- Thermochronology of mineral grains in the Red and Mekong Rivers, Vietnam: provenance and exhumation implications for Southeast Asia. Geochem. Geophys. Geosystems 7, 10, p. 1-28.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006GC001336/epdf)
(Zircon dating of sand samples from mouths of Red and Mekong Rivers shows main sources from crust within Yangtze Craton, formed during Triassic Indosinian Orogeny. Indosinian grains in Mekong younger (210-240 Ma) than in Red River (230-290 Ma))

Counillon, H. (1896)- Documents pour servir a ' l'etude geologique de Luang Prabang (Cochinchine). Comptes Redus Academie Sciences Paris 123, p. 1330-1333.
(Incl. first record of Permian dicynodonts vertebrates in Luang Prabang area of N Laos (known throughout Pangea and linking N Laos to main Eurasian continent by Permian time; see also Battail (2009))

Cung, T.C., S. Dorobek, S.C. Richter, M.F.J. Flower, E. Kikawa, Y.T. Nguyen & R. McCabe (1998)- Paleomagnetism of late Neogene basalts in Vietnam and Thailand; implications for the post-Miocene tectonic history of Indochina. AGU Geodynamics Series, Mantle dynamics and plate interactions in East Asia, 1998, 27, p. 289-299.
(Paleomagnetic poles for Late Miocene-Quaternary basalts in Vietnam indistinguishable from other Neogene paleomagnetic poles for Indochina, Borneo, S China, and Eurasia, suggesting little or no relative motion between these regions since at least Late Miocene (and possibly earlier). CW declinations from coeval basalts in W and C Thailand probably related to local strike-slip faults that developed during late Neogene uplift and extension of Indochina)

Corsin, P. & C. Desreumaux (1972)- Decouverte dûune flore neocomienne dans les ñGres superieursò de Bokor (Cambodge meridional). Annales Soc. Geol. du Nord 92, p. 199-212.
('Discovery of a Neocomian flora in the 'Upper sands' of Bokor (East Cambodia)'. Philippe et al. (2004) noted that wood from 'Gres superieurs' of Indochina very similar to that from Phu Kradung Fm of NE Thailand (= Late Jurassic oldest formation of Khorat Gp))

Cromie, P.W. (2010)- Geological setting, geochemistry and genesis of the Sepon gold and copper deposits, Laos. Ph.D. Thesis, University of Tasmania, p. 1-395.
(online at: http://eprints.utas.edu.au/10703/)
(Sepon Mineral District gold-copper deposits along Truong Son Fold Belt on NE margins of Indochina Terrane in SE Laos. Geology dominated by Ordovician- Devonian fluvial and marine sediments. Mineralization tied to intrusion of rhyodacite porphyry along faults in E Permian (U-Pb zircons ages ~280-300 Ma) and mainly hosted in Devonian calcareous shale)

Cullen, P.J., P.L. Birch, S.C. Wright, C.J. Keamey & A.T. Pink (1997)- Exploration in the Savannakhet Basin, Peoples Democratic Republic of Laos. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia, Indon. Petroleum Assoc. (IPA), Jakarta, p. 425-447.
(Collision of Indochina Block with S China Plate in E Carboniferous led to initiation of Khorat Basin as foreland basin to Annamitic fold-belt of NE Vietnam. Subsequent Permo-Triassic collision of Shan-Thai plate from W trapped Indochina Block between converging thrust-fold belts. Marine clastic foredeep and carbonate foreland ramp sedimentation gave way to continental foreland basin deposition across Mesozoic Khorat intermontane basin. Later collision of Lhasa/Myanmar Block and Indian Plate from W rejuvenated earlier compressional structures and propagated fold belts into foreland, resulting in isolation of sub-basins including Savannakhet Basin. Three hydrocarbon plays: Paleozoic carbonate play (analogous to Khorat Plateau play of Thailand), Triassic clastic play, and E Jurassic Khorat Group clastics play)

Cung, T.C. (1996)- Paleomagnetism of Mesozoic and Cenozoic rocks from Vietnam: implications for the Tertiary tectonic history of Indochina and a test of the extrusion model. Ph.D. Thesis Texas A&M University, College Station, p. 1-227.

Cung, T.C. (2007)- Paleomagnetism of Cretaceous continental redbed formations from Indochina and South China, their Cenozoic tectonic implications: a review. VNU J. Science, Earth Sci. 23, p. 220-230.
(online at: www.js.vnu.edu.vn/e_4_07/B3.pdf)
(Cretaceous paleomagnetic data from S China block confirms S China block has been relatively stable with respect to Eurasia since Cretaceous time. Cretaceous paleomagnetic data from Indochina- Shan Thai block reveal complex intraplate deformations due to India- Eurasia collision. CCW rotations recorded from Borneo and Malay Peninsula indicate complex tectonic evolution of SE Asian region)

Cung, T.C. & S.L. Dorobek (2004)- Cretaceous palaeomagnetism of Indochina and surrounding regions: Cenozoic tectonic implications. In: J. Malpas et al. (eds.) Aspects of the geological evolution of China, Geol. Soc., London, Spec. Publ. 226, p. 273-287.
(Paleomagnetic studies of Cretaceous volcanics and sediments from S Vietnam suggests ~5-10° S-ward displacement and virtually no rotation since Cretaceous. Review of paleomag data suggests Sundaland three domains with different rotation/ translation histories: Shan-Thai, Indochina, offshore Sundaland)

Cung, T.C. & J.W. Geissman (2013)- A review of the paleomagnetic data from Cretaceous to lower Tertiary rocks from Vietnam, Indochina and South China, and their implications for Cenozoic tectonism in Vietnam and adjacent areas. J. Geodynamics 69, p. 54-64.
(Cretaceous paleomagnetic data from S China Block show present geographic position of S China Block relatively stable relative to Eurasia since mid-Cretaceous. Cretaceous- E Tertiary data from Indochina- Shan Thai Block reveal complex patterns of intra-plate deformation in response to India-Eurasia collision. Most paleomagnetic results from E and S of Red River fault system at latitude of Yunnan consistent with modest (~800 km) S-ward component of latitudinal translation)

Cung, T.C., J.W. Geissman, V.Q. Hoang, T.P.D. Nguyen & T.H. Nguyen (2014)- New paleomagnetic results of upper Permian- lower Triassic volcanic sequences from the Hoa Binh area, northwest Vietnam. Vietnam J. Earth Sciences 36, p. 413-423.
(online at: www.vjs.ac.vn/index.php/jse/article/download/6429/5701)
(Paleomag work on late Permian- E Triassic volcanics (basalt ages 257-270 Ma; distal equivalents of Emeishian?) of Viet Nam Fm at Hoa Binh dam suggest paleolatitude of ~15°S, and that volcanic terrane was close to or part of S China Block since late Permian)

Cuny, G., J. Mo, R. Amiot, E. Buffetaut, S. Suteethorn,V. Suteethorn & H. Tong (2017)- New data on Cretaceous freshwater hybodont sharks from Guangxi Province, South China. Research and Knowledge 3, 1, p. 11-15.
(online at: https://rk.msu.ac.th/wp-content/uploads/2017/09/04-Gilles.pdf)

(Fluvial Lower Cretaceous Xinlong Fm in Guangxi with diverse assemblage of vertebrates, incl. fresh-water hybodont shark teeth Acrorhizodus khoratensis)

De Franceschi, D. & C. Vozenin-Serra C. (1997)- La flore du Trias superieur vietnamien. Implications paleogeographiques. Comptes Rendus Academie Sciences, Paris, Ser. 2, 324, 4, p. 333-340.
('The flora of the Upper Triassic of Vietnam; paleogeographic implications'. Vietnamese U Triassic flora belongs to coastal floristic assemblage of SW Pacific. (see also Vozenin-Serra & De Franceschi, 1999))

Deng, J., C. Wang, J.W. Zi, R. Xia & Q. Li (2018)- Constraining subduction-collision processes of the Paleo-Tethys along the Changning-Menglian suture: new zircon U-Pb ages and Sr-Nd-Pb-Hf-O isotopes of the Lincang Batholith. Gondwana Research 62, p. 75-92.
(Changning-Menglian suture remnant of main Paleo-Tethys in SW China, with abundant magmatic rocks formed during orogenic processes related to closure of Paleo-Tethys. Lincang granitoid batholith crystallization ages of 261, 252 (Late Permian) to 203 Ma (Late Triassic), suggesting multi-stage emplacement. Three episodes related to subduction (before ~252 Ma), syn-collision (250-237 Ma) and post-collision (235-203 Ma))

Douville, H. (1906)- Les calcaires a fusulines de lǒIndo-Chine. Bull. Soc. Geologique France (4) 6, p. 575-587.
('The fusulinid limestones of Indochina'. Early paper on Permian fusulinid foraminifera from Vietnam and Laos)

Du, Y., A. Bertinelli, X. Jin, Z. Shi V. Karadi, He Yin, Lu Han, Q. Wu & M. Rigo (2020)- Integrated conodont and radiolarian biostratigraphy of the upper Norian in Baoshan Block, Southwestern China. Lethaia, 13p.
(Baoshan Block was located in E Tethys during Late Triassic. New samples from Hongyan section thin-layered limestones, sandstone and siltstone, with Sevatian (Norian) conodont and radiolarian faunas)

Ducrocq, S., M. Benammi, O. Chavasseau, Y. Chaimanee, K. Suraprasit, P.D. Pha, L. Vu, P.V. Phach & J.J. Jaeger (2015)- New anthracotheres (Cetartiodactyla, Mammalia) from the Paleogene of northeastern Vietnam: biochronological implications. J. Vertebrate Paleontology 35, 3, e929139, p. 1-11.
(Three new species of anthracotheres from Late Eocene Na Duong coal deposits in NE Vietnam. Morphologically close to species known in China, Thailand, Myanmar and Egypt)

UN/ESCAP (1990)- Lao People's Republic. Atlas of mineral resources of the ESCAP region 7, United Nations Publications, New York, p. 1-19.
(Brief review of mineral occurrences of Laos)

Fan, P.F. (2000)- Accreted terranes and mineral deposits of Indochina. J. Asian Earth Sci. 18, p. 342-350.
(Summary of Indochina terranes and mineral deposits. Indochina is amalgamation of Sino-Vietnam (=S China), and Viet-Lao, Uttaradit, and Khorat-Kontum (combined into Indochina) terranes)

Faure, C. & H. Fontaine (1969)- Geochronologie du Viet-Nam meridional. Archives Geol. Vietnam 12, p. 213-222.
('Geochronology of South Vietnam'. see also Lasserre et al. 1974)

Feng Rulin (1998)- Discovery of Australia Early Permian brachiopods faunas from Bianping Section of Southwestern Guizhou Province, China and it's significance. Guizhou Geology 1998, 3, p.
(E Permian brachiopod fauna from Bianping section, Guizhou, with Strophomenida, Ptaluctida and Spiriferida, of high diversity and warm water. Faunas chiefly Asselian-Sakmarian, incl. Globiella foordi, Elivina bisnaini, Spiriferella sp., etc., similar similar to E Permian of W Australia. E Permian brachiopods can be correlated with those of E Permian of Irian Jaya, Pakistan Salt Range, Afghanistan, Pamirs, Thailand, Timor, etc. (another example of fairly similar Permian brachiopod assemblages across different tectonic terranes; JTvG))

Feng, Q., W. He, S. Gu, Y. Jin & Y. Meng (2006)- Latest Permian Spumellaria and Entactinaria (Radiolaria) from South China. Revue Micropaleontologie 49, p. 21-43.
(33 species of latest Permian radiolaria from bedded cherts in S China)

Findlay, R.H. (1997)- The Song Ma Anticlinorium, northern Vietnam: the structure of an allochthonous terrane containing an early Palaeozoic island arc sequence. J. Asian Earth Sci. 15, p. 453-464.
(Argues for Indochina- South China blocks collision in Ordovician- E Silurian, older than commonly accepted)

Findlay, R.H. & P.T. Trinh (1997)- The structural setting of the Song Ma Region, Vietnam and the Indochina-South China plate boundary problem. Gondwana Research 1, 1, p. 11-33.
(Song Ma- Song Da region of N Vietnam contains Song Ma Anticlinorium, a polydeformed E Paleozoic island arc/ forearc terrane accreted to S China plate in Siluro-Devonian. Anticlinorium not Indosinian subduction zone. Song Ma Fault is one of many NW-trending post-Cretaceous oblique-slip faults and thrusts)

Filleul, A. & D. Vu Khuc (2001)- A new fish fauna from the Jurassic of Vietnam. J. Asian Earth Sci. 19, 5, p. 641-647.
(Fish fauna from U Jurassic Long Binh Fm (andesitic volcanics and continental redbeds), 17km E of Ho Chi Minh city, Vietnam. Mainly small actinopterygian fish, three different taxa)

Chung, S.L., B.M. Jahn, Wu Genyao, C.H. Lo & B. Cong (1998)- The Emeishan flood basalt in SW China: a mantle plume initiation model and its connection with continental breakup and mass extinction at the Permian-Triassic boundary. In: M.F.J. Flower (ed.) Mantle dynamics and plate interactions in East Asia, AGU Geodynamics Ser. 27, p. 47-58.
(online at: www.agu.org/books/gd/v027/GD027p0047/GD027p0047.pdf)
(Mantle plume model proposed to account for generation of the Emeishan LIP in SW China and N Vietnam. Magmatism may have played role in rifting of Qiangtang Terrane of Tibet from S China Block (Yangtze Craton) in Permian when these blocks were near equator)

Fan, P.F. (1995)- Tectonic patterns and Cenozoic basalts in the western margin of the South China Sea. In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. Southeast Asian basins; oil and gas for the 21st century, Kuala Lumpur 1994, Bull. Geol. Soc. Malaysia 37, p. 91-99.
(online at: www.gsm.org.my/products/702001-100960-PDF.pdf)
(Allochthonous fragments (Indosinia, Sibumasu, E Malaya, and SW Kalimantan) rifted from Gondwanaland and drifted N. At ~50 Ma collision of Indian continent led to fragmentation of Asia, followed by Andaman Sea opening, clockwise rotation of Indochina plate and S China Sea rifting and opening. Indian-Eurasian collision pushed Indochina Peninsula in ESE direction. Most M Tertiary movements along left-lateral Red River, Tonle Sap-Mekong faults, with extension along these faults responsible for widespread Plio-Pleistocene alkaline basalts from Vietnam/Kampuchea N-ward into E Thailand. Basalts composition tholeiitic to alkalic)

Faure, M., C. Lepvrier, Vuong Van Nguyen, Tich Van Vu, W. Lin & Z. Chen (2014)- The South China block-Indochina collision: where, when, and how? J. Asian Earth Sci. 79, p. 260-274.
(Two NW-SE striking orogens in NW and NE Vietnam, each stack of NE-directed nappes, due to SW-directed subduction with arc magmatism, ocean closure, and continental collision. Song Ma zone and Song Chay ophiolitic melange represent two ophiolitic sutures (closing N branch of Paleotethys). Late Triassic unconformity, 225-205 Ma (Norian) postorogenic plutonism, and 250-230 Ma syntectonic metamorphism support E-M Triassic age for tectonic events)

Faure, M., W. Lin, Y. Chu & C. Lepvrier (2016)- Triassic tectonics of the southern margin of the South China Block. Comptes Rendus Geoscience 348, 1, p. 5-14.
(M Triassic orogens widespread around and inside S China Block, resulting from oceanic, then continental subduction of S China Block below Indochina. Triassic suture hypothesized offshore of SCB, E of Hainan Island. Within SCB Xuefengshan M Triassic intracontinental orogen)

Faure, M., W. Lin, P. Monie & S. Meffre (2008)- Palaeozoic collision between the North and South China blocks, Triassic intracontinental tectonics, and the problem of the ultrahigh-pressure metamorphism. Comptes Rendus Geoscience 340, p. 139-150.

(Widespread ultrahigh-pressure rocks in Qinling-Dabie suture between N and S China blocks. Structures and zircon dating of migmatites in core of C Qinling suggests Silurian continent collision, before 400 Ma. Late Permian- M Triassic N-ward continental subduction of SCB responsible for development of UHP metamorphism. Age of UHP metamorphism unsettled. Radiometric ages from Neoproterozoic- Cretaceous, with cluster of ages around 240-210 Ma, leading previous authors to accept Triassic age for NCB-SCB collision)

Faure, M., Van Vuong Nguyen, Luong Thi Thu Hoai & C. Lepvrier (2018)- Early Paleozoic or Early-Middle Triassic collision between the South China and Indochina Blocks: The controversy resolved? Structural insights from the Kon Tum massif (Central Vietnam). J. Asian Earth Sci. 166, p. 162-180.
(Kon Tum massif in C Vietnam is E-M Triassic Metamorphic Core Complex. Top-to-NW ductile shearing accommodated exhumation. MCC superimposed on E Paleozoic collision belt between N and S Vietnam. Interaction between Emeishan mantle plume and continental subduction proposed)

Fiske, P.S., P. Putthapiban & J.Y. Wasson (1996)- Excavation and analysis of layered tektites from northeast Thailand: results of 1994 field expedition. Meteoritics Planetary Science 31, p. 36-41.

Fiske, P.S., C.C. Schnetzler, J. McHone, K.K. Chanthavaichith et al. (1999)- Layered tektites of southeast Asia: Field studies in central Laos and Vietnam. Meteoritics Planetary Science 34, 5, p. 757-761.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1945-5100.1999.tb01388.x/epdf)
(Pleistocene layered tektites particularly big and abundant near Muong Nong (Laos). Layered tektites also common in C Vietnam and NE Thailand. Part of large layered tektites subfield of Australasian strewn field)

Flower, M.F.J., N. Hoang, N. Trong Yem, N.X. Bao, R. McCabe & S.H. Harder (1993)- Cenozoic magmatism in Indochina: lithospere extension and mantle potential temperature. In: G.H. Teh (ed.) Proc. Symposium on tectonic framework and energy resources of the Western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 211-222.
(Cenozoic basaltic magmatism of Vietnam- Cambodia initiated at ~15Ma, peaked between ~5 and 0.5 Ma, postdates opening of S China Sea and is associated with lithospheric extension)

Fontaine, H. (1954)- Etude et revision des Tabules et Heliolitides du Devonien d'Indochine et du Yunnan. Archives Geol. Vietnam 2, p. 1-86.
('Study and review of Devonian Tabulata and Heliolitidae from Indochina and Yunnan'. Rel. rich Devonian coral assemblages from Laos and S China. Including Heliolites porosus (also in NE Thailand))

Fontaine, H. (1962)- Gisements fossiliferes du Bassin houiller du Quang-Nam. Travaux de Geologie, 1, p. 33-52.
('Fossiliferous beds from the coal basin of Quang-Nam', Vietnam)

Fontaine, H. (1976)- Tectites du Viet-Nam meridional: repartition geographique, richesse des gisements. Comptes Rendus Soc. Geol. France 2, p. 37-39.
('Tektites of southern Vietnam: geographic distribution and richness of the deposits')

Fontaine, H. & D.R. Workman (1978)- Review of the geology and mineral resources of Kampuchea, Laos and Viet Nam. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA III), Bangkok 1978, p. 539-605.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1978/5242.pdf)
(Major review of Paleozoic-Recent stratigraphy, tectonics and mineral occurrences of Cambodia, Laos and Vietnam)

Fromaget, J. (1927)- Etudes geologiques sur le nord de l'Indochine centrale. Bull. Serv. Geol. Indochina, Hanoi, 16, 2, p. 1-368.
('Geologic studies on the north of central Indochina')

Fromaget, J. (1934)- Observations et reflexions sur la geologie stratigraphique et structurale de l'Indochine. Bull. Soc. Geologique France (5) 4, p. 101-164.

Fromaget, J. (1941)- L'Indochine francaise: sa structure geologique, ses roches, ses mines et leurs relations possibles avec la tectonique. Imprimerie d'Extreme-Orient, p. 1-140.
('French Indochina: its geological structure, rocks, mines and their relations to tectonics')

Garnier, V. (2003)- Les gisements de rubis associes aux marbres de l'Asie Centrale et du Sud-est: genese et caracterisation isotopique. Ph.D. Thesis, Institut National Polytechnique de Lorraine, Nancy, p. 1-371.
('The ruby-bearing beds associated with marbles on Central and SE Asia: genesis and isotopic characterization')

Garnier, V., D. Ohnenstetter, G. Giuliani, A.E. Fallick, T. Phan Trong et al. (2005)- Basalt petrology, zircon ages and sapphire genesis from Dak Nong, southern Vietnam. Mineralogical Magazine 69, 1, p. 21-38.
(Basalts with sapphires in S Vietnam. U-Pb dating of zircons from basaltic placers show two eruptional events, at ~6.5 Ma and at ~1 Ma. No evidence that sapphires in recent alluvial deposits came from basalts)

Garnier, V., D. Ohnenstetter, G. Giuliani, H. Maluski, E. Deloule et al. (2005)- Age and significance of ruby-bearing marble from the Red River shear zone, northern Vietnam. Canadian Mineralogist 43, p. 1315-1329.
(Marble-hosted ruby deposits in Red River Shear Zone, N Vietnam. Wide range of zircon ages (266-38 Ma) suggest complex metamorphic history with two main thermal events: (1) zircon in spinel crystallized in Permian (257± 9Ma), (2) Ruby formed at ~38 Ma during Red River Shear Zone ductile deformation peak metamorphism)

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(Late Silurian- Devonian of Ngoc Vung Series of N Vietnam with plant remains. Late Silurian localities earliest known flora of S China block. Flora supports hypothesis that more derived plants were present on E Gondwana earlier than elsewhere. Devonian localities with thick fibrous stem fragment, of Eifelian-Emsian age)

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Gubler, J. (1935)- Les fusulinides du Permian de l'Indochine: leur structure et leur classification. Mem. Soc. Geologique France, n.s., 11, 4, 26, p. 1-173.
('The fusulinids from the Permian of Indochina: their structure and classification'. Incl. NW Cambodia)

Halle, T.G. (1927)- Palaeozoic plants from Central Shansi. Palaeontologica Sinica, ser. A, 2, 1, p. 1-316.
(Extensive documentation of diverse collection of Permian plant fossils from Upper Shihhotze Formation in C Shanxi Province, C-N China (N China Plate, Cathaysian). With comparisons to Late Paleozoic floras from other parts of SE Asia: of all Asian floras most closely related to Jambi flora of Sumatra which is probably Lower Permian in age and of 'northern type', not Gondwanan)

Halpin, J.A., H.T. Tran, C.K. Lai, S. Meffre, A.J. Crawford & Khin Zaw (2016)- U-Pb zircon geochronology and geochemistry from NE Vietnam: a ´tectonically disputedô territory between the Indochina and South China blocks. Gondwana Research 34, p. 254-273.
(NE Vietnam complex geological history records collision between Indochina- S China blocks. Magmatic rocks in Lo-Gam-Song Hien domain represent latest Permian- E Triassic (~245-254 Ma) early post-collisional rift, not genetically linked to Late Permian Emeishan Large Igneous Province in Yangtze block of S China)

Hara, H., T. Ito, T. Tokiwab S. Kong & Pagna Lim (2020)- The origin of the Pailin Crystalline Complex in western Cambodia, and back-arc basin development in the Paleo-Tethys Ocean. Gondwana Research 82, p. 299-316.
(Pailin Crystalline Complex in W Cambodia with amphibolites, metagabbros, and felsic igneous rocks. Geochemical analyses indicate mid-ocean ridge basalts, similar to Sa Kaeo back-arc of SE Thailand. Zircon ages 283 Ma (anorthosite dike)- 275 Ma (plagiogranite). Triassic sediments in Sa Kaeo Back-arc Basin derived from Pailin CC, which is part of dismembered ophiolite related to E Permian back-arc basin, related to subduction of Paleo-Tethys oceanic crust and the Sukhothai Arc)

Hartung, J.B. & C. Koeberl (1994)- In search of the Australasian tektite source crater: the Tonle Sap hypothesis. Meteorics Planetary Science 29, 3, p. 411-416.
(online at: http://adsabs.harvard.edu/full/1994Metic..29..411H)
(Tonle Sap lake in S-C Cambodia may be remnant of source crater of Australasian tektites strewn field))

Hartung, JB. & A.R. Rivolo (1979)- A possible source in Cambodia for Australasian tektites. Meteoritics 14, 1, p. 153-159.
(A 10x6km ring of hills in NE Cambodia is possible impact crater of Australasian tektite strewn field)

Hayami, I. (1964)- Some Lower Jurassic pelecypods from South Vietnam, collected by Dr. H. Fontaine. In: T. Kobayshi (ed.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 1, p. 253-267.
(Lower Jurassic in Indochina transgressive epoch, with marine deposits in several areas. Black shales in Huu-Nien area (C E Vietnam) with poorly preserved bivalves, incl. Grammatodon, Modiolus, Gervillia, Parainoceramus, Chlamys, Cardinia, Goniomiya, etc.)

Hayami, I. (1972)- Lower Jurassic bivalvia from the environs of Saigon. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 10, p. 179-230.
(Shallow marine late Early Jurassic (Toarcian) bivalve assemblage from Lo-Duc, 30km NNE of Saigon. 21 species, incl. Grammatodon tenuis, Parvamussium donaiense, Palaeonucula, Modiolus, Tancredia, similar to first Jurassic transgressive beds over Indosinian unconformity across Thailand (Kozai et al., 2006))

Hayashi, M. (1989)- The hydrocarbon potential and tectonics of Indochina. Bull. Geol. Soc. Malaysia 25, p. 65-78.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1989c05.pdf)

He, B., Y.G. Xu, S.L. Chung, L. Xiao & Y. Wang (2003)- Sedimentary evidence for a rapid, kilometer-scale crustal doming prior to the eruption of the Emeishan flood basalts. Earth Planetary Sci. Letters 213, p. 391-405.
(Investigations in 67 sections of M Permian Maokou Fm that underlies Emeishan flood basalts in SW China suggests domal crustal thinning and uplift of >1000m in area 800 km in radius, before emplacement of basalts. Duration of uplift estimated to be <3 Myr)

He, W., G.R. Shi, Y. Zhang, T. Yang, K. Zhang, S. Wu, Z. Niu & Z. Zhang (2014)- Changhsingian (latest Permian) deep-water brachiopod fauna from South China. J. Systematic Palaeontology 12, 8, p. 907-960.
(45 brachiopod species from latest Permian Talung F of marine deep-water facies of S China)

Hennig, J. (2017)- SE Vietnam U-Pb zircon ages and provenance: correlating the Da Lat zone on land with the Cuu Long basin offshore. American Geophys. Union (AGU) Fall Meeting, New Orleans, EP21A-1830, 1p. *(Abstract and Poster)*
(online at: https://agu.confex.com/agu/fm17/meetingapp.cgi/Paper/223717)
(Onshore SE Vietnam Da Lat zone with Cretaceous intrusions with zircons aged ~122-76 Ma. Jurassic metasediments of Ban Don Gp contain dominant Jurassic, Permo-Triassic and Paleoproterozoic (c. 1.8 Ga) age populations. Oligocene samples from offshore Cuu Long Basin strong Cretaceous age peak (mainly 90-110 Ma, and not much else. M Miocene sandstones mainly Triassic peak (220-240 Ma) and subordinate peaks of Cretaceous and many older oges, mainly 1.8 Ga (from proto-Mekong Delta more distant sources?))

Hennig, J., H.T. Breitfeld, A. Gough, R. Hall, Trinh Van Long, Vinh Mai Kim & Sang Dinh Quang (2018)- U-PB zircon ages and provenance of Upper Cenozoic sediments from the Da Lat Zone, SE Vietnam: implications for an Intra-Miocene unconformity and paleo-drainage of the Proto-Mekong River. J. Sedimentary Res. 88, 4, p. 495-515.
(Oligo-Miocene Di Linh Fm with abundant Cretaceous zircons and subordinate Paleoproterozoic (c. 1.8-1.9 Ga), sourced mainly from Cretaceous plutons. Pliocene- Pleistocene Song Luy Fm with additional Permian-Triassic and Ordovician-Silurian age populations, interpreted to be from basement in C and N Vietnam and reflecting intra-Miocene unconformity)

Hieu, P.T., S.Q. Li, Y.Yu, N.X. Thanh, L.T. Dung, VuLe Tu, W. Siebel & F. Chen (2017)- Stages of late Paleozoic to early Mesozoic magmatism in the Song Ma belt, NW Vietnam: evidence from zircon U-Pb geochronology and Hf isotope composition. Int. J. Earth Sciences (Geol. Rundschau), 106, 3, p. 855-874.
(Song Ma zone in NW Vietnam subduction corridor between Indochina and S China blocks. Two-stage magmatic evolution: ocean subduction at ~290-260 Ma and post-collisional magmatism at ~245-230 Ma)

Hilde, T.W.C. & C.G. Engel (1967)- Age, composition and tectonic setting of the granite island Hon Trung Lon, off the coast of South Vietnam. Geol. Soc. America (GSA) Bull. 78, p. 1289-1294.
(Hon Trung Lon island off S Vietnam composed of Cretaceous high-silica alkali granite with K-Ar age between 70-100 Ma, a previously unrecognized period of intrusion along NE side of Gulf of Thailand)

Hoa, T.T., T.T. Anh, N.T. Phuong, P.T. Dung, T.V. Anh, A.E. Izokh, A.S. Borisenko, C.Y. Lan, S.L. Chung & C.H. Lo (2008)- Permo-Triassic intermediate-felsic magmatism of the Truong Son belt, eastern margin of Indochina. Comptes Rendus Geoscience 340, p. 112-126.
(Permo-Triassic intermediate-felsic magmatism along Truong Son fold belt in N Vietnam, along E margin of Indochina Block: calc-alkaline volcano-plutonic associations (272-248 Ma), peraluminous granites (259-245 Ma), and subalkaline felsic volcano-plutonic associations (<245 Ma). Products of Paleotethys subduction during Indochina/ N Vietnam- S China amalgamation. Event ended in E-M Triassic (246-240 Ma))

Hoang, C.M., M.V. Du, P.K. Hoan & T.D. Hung (2013)- Hydrocarbon potential of Champasak & Saravan area, Southern Lao PDR. In: C. Senebouttalath et al. (eds.) Proc. 2nd Lao-Tai Conf. Geology and Mineral resources, Vientiane, p. 226-235.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2013/36787.pdf)
(Hydrocarbon exploration in Champasak and Saravan provinces, geologically SE part of Khorat Plateau. No significant hydrocarbon flows obtained yet)

Hoang, N. & M. Flower (1998)- Petrogenesis of Cenozoic basalts from Vietnam: implication for origins of a ôDiffuse Igneous Provinceö. J. Petrology 39, 3, p. 369-395.
(online at: http://petrology.oxfordjournals.org/content/39/3/369.full.pdf+html)
(Widespread M Miocene- Recent basalt plateaux in S and C Vietnam associated with pull-apart structures. Activity does not conform to 'Large Igneous Province', more consistent with clockwise rotating stress field)

Hoang, T.H.A., S.H. Choi, Y. Yu, T.H. Pham, K.H.Nguyen & J.S. Ryu (2018)- Geochemical constraints on the spatial distribution of recycled oceanic crust in the mantle source of late Cenozoic basalts, Vietnam. Lithos 296-299, p. 382-395.
(online at: https://www.sciencedirect.com/science/article/pii/S002449371730405X)
(Geochemical composition of Late Cenozoic intraplate basaltic rocks from C and S Vietnam indicates basalts sourced from mantle dominated by garnet peridotite, and recycled oceanic crustal material (sediment, basalt, and gabbro). Possibly result of entrainment of accumulated Paleo-Pacific slab into rising Hainan plume)

Hoffet, J.H. (1933)- Etude geologique sur le centre de l'Indochine entre Tourane et le Mekong (Annam Central et Bas-Laos). Bull. Service Geol. Indochine, Hanoi, 20, 2, p. 1-154.
('Geologic study of the center of Indochina between Tourane and the Mekong (C Annam and Lower Laos)')

Hoffet, J.H. (1937)- Les lamellibranches saumatres du Senonien de Muong Phalane. Bull. Service Geol. de l'Indochine 24, 1, p. 3-25.
('The freshwater bivalves of the Senonian of Muong Phalane (Laos)'. Upper Cretaceous freshwater molluscs, mainly Trigonoides spp. and Unio spp. and Plicatounio. Locally associated with large reptiles Titanosaurus and Mandchurosaurus)

Hoffet, J.H. (1937)- Note sur la geologie du Bas-Laos. Bull. Service Geol. Indochine 24, 2, p. 1-22.
('Note on the geology of lower Laos')

Hoffet, J.H. (1942)- Description de quelques ossements de Titanosauriens du Senonien du Bas-Laos. Comptes Rendus Seances Conseil Recherches Scient. Indochine 1942, 1, p. 51-57.
('Description of some titanosaurian bones from the Senonian of Lower Laos'. See also Buffetaut 1991)

Hovikoski, J., J. Therkelse, L.H. Nielsen, J.A. Bojesen-Koefoed, H.P. Nytoft, H.I. Petersen, I. Abatzis, H.A. Tuan, B.T.N. Phuong, C.V. Dao & M.B.W. Fyhn (2016)- Density-flow deposition in a fresh-water lacustrine rift basin, Paleogene Bach Long Vi Graben, Vietnam. J. Sedimentary Research 86, 9, p. 982-1007.
(Bach Long Vi Island is crest of inverted Eo-Oligocene Bach Long Vi Graben in Gulf of Tonkin area, at intersection of Song Hong and Beibuwan basins, N Vietnam. 500m-thick Paleogene lacustrine oil-prone source rock succession in Enreca-3 core-hole)

Hu, L., P.A. Cawood, Y. Du, J. Yang & L. Jiao (2015)- Late Paleozoic to Early Mesozoic provenance record of Paleo-Pacific subduction beneath South China. Tectonics 34, 5, p. 986-1008.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2014TC003803)
(NE-trending Yong'an Basin, SE S China craton, preserves Permian-Jurassic marine-continental, clastic-dominated retroarc foreland basin succession. Sources for M Paleozoic- E Mesozoic detrital zircons include input from beyond currently exposed China mainland, possibly from active convergent plate margin along SE rim of craton that incorporated part of SW Japan and is related to subduction of Paleo-Pacific Ocean. Termination of Paleo-Tethys subduction beneath SW margin in Permo-Triassic)

Huang, B.C., R.X. Zhu, Y. Otofuji & Z.Y. Yang (2000)- The Early Paleozoic paleogeography of the North China block and the other major blocks of China. Chinese Science Bull. 45, 12, p. 1057-1065.
(Review of paleomagnetic data of N China, S China and Tarim blocks suggests blocks were adjacent to E Gondwana in low latitudes in E Cambrian)

Huang, K. & N.D. Opdyke (2016)- Paleomagnetism of the Upper Triassic rocks from south of the Ailaoshan Suture and the timing of the amalgamation between the South China and the Indochina Blocks. J. Asian Earth Sci. 119, p. 118-127.
(Paleomagnetic work on redbed samples of U Triassic Yiwanshui Fm S of Ailaoshan Suture in S Yunnan consistent with results previously reported from same section. Indicates Simao and Baoshan terranes amalgamated by Late Triassic times but coalescence between them and S China Block not until end-Triassic)

Ishihara, S. & Y. Orihashi (2014)- Zircon U-Pb age of the Triassic granitoids at Nui Phao, northern Viet Nam. Bull. Geol. Survey Japan 65, p. 17-22.
(online at: https://www.jstage.jst.go.jp/article/bullgsj/65/1-2/65_17/_pdf)
(Zircons from granitoids at Nui Phao in N Vietnam dated as earliest Triassic (~250 Ma). Possibly associated with Sn-W and REE ore deposits hosted in granitoids)

Ishii, K., M. Kato & K. Nakamura (1969)- Permian limestones of West Cambodia. In: T. Matsumoto (ed.) Litho- and bio-facies of sedimentary rocks- a symposium, Palaeont. Soc. Japan, Spec. Paper 14, p. 41-56.
(online at: www.palaeo-soc-japan.jp/download/SP/SP14.pdf)
(Sisophon Limestone hills on plains of SW Cambodia (W of Indosinian Massif; = part of Chanthaburi Terrane/ Sukhothai Arc of Metcalfe 2013?). Limestone ~150-200m thick, on folded and partially metamorphosed Devono-Carboniferous or older rocks. Volcanics- tuffs in basal beds suggest possible deposition of limestone on volcanic seamounts. Nearby granite intrusion with 227 Ma Rb-Sr age (= Late Triassic). Rich in M-U Permian fauna,

including fusulinids (incl. Pseudodoliolina, Yabeina, Neoschwagerina, Sumatrina, Verbeekina), corals (incl. Verbeekiella, Lophophyllidium, Wannerophyllum))

Ishii, K. & Y. Nogami (1964)- Contributions to the geology and paleontology of Cambodia. Part 1. Permian fusulinids. J. Geosciences, Osaka City University, 8, p. 9-68.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0080002.pdf)
(Late Middle Permian fusulinids, corals and brachiopods from limestone hills W of Siem Reap in NW plains of Cambodia, from where fusulinids were first described by Gubler (1935). Species present include Yabeina (also called Lepidolina) multiseptata, Yabeina elongata, Verbeekina verbeeki, Pseudofusulina aff. crassa padangensis (Lange) and Chusenella cambodgiensis)

Janvier, P., P. Gerienne and T. Tong-Dzut (1989)- Les placodermes, arthropodes et lycophytes des gres devoniens de Do Son (Haiphong, Viet Nam). Geobios 25, 5, p. 625-638.
('The placoderms, arthropodes and lycophytes from the Devonian sandstones of Do Son (Haiphong, Vietnam)')

Janvier, P., T.D. Thanh & D.N. Truong (1994)- Devonian fishes from Vietnam: new data from Central Vietnam and their paleobiogeographical significance. In: P. Angsuwathana et al. (eds.) Proc. Int. Symposium Stratigraphic correlation of Southeast Asia, Bangkok 1994, Dept. Mineral Resources and IGCP 306, p. 69-74.
(Devonian fish of Vietnam mainly in Bac Bo, N Vietnam, and E Devonian age. Faunas similar to S China, with many taxa endemic to S China Block. New M Devonian fish fauna reported)

Janvier, P. & T.D. Tran (1998)- The Silurian and Devonian vertebrates of Viet Nam: a review. J. Geology (Geol. Survey Viet Nam), B 11/12, p. 18-28.

Janvier, P., T.D. Tran, T.H. Phuong & D.N. Truong (1997)- The Devonian vertebrates (Placodermi, Sarcopterygii) from Central Vietnam and their bearing on the Devonian palaeogeography of Southeast Asia. J. Asian Earth Sci. 15, 4, p. 393-406.
(New placoderm fish remains from terrigenous facies of Givetian Dong Tho Fm in C Vietnam confirm close ties between Indochina and S China blocks as early as M Devonian)

Jiang, X.Y., X.H. Li, W.J. Collins & H.Q. Huang (2015)- U-Pb age and Hf-O isotopes of detrital zircons from Hainan Island: implications for Mesozoic subduction models. Lithos 239, p. 60-70.
(Detrital zircon samples from Cretaceous Lumuwan Fm on Hainan Island (SE China/NW S China Sea) suggest three major episodes of Mesozoic magmatic activity along continental margin of E Asia in S China: ~120 and 155 Ma (Yanshanian) and 235 Ma (Carnian/Triassic; Indosinian?))

Johansen, K.B., L. Endebrock, K. Oh & S. Maingarm (2009)- An insight to the petroleum geology in the Kampong Som and Tonle Sap basins, onshore Cambodia. Proc. 2009 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, p. 1-39. *(Abstract + Presentation)*
(Onshore Cambodia Kampong Som and Tonle Sap basins outlined with gravity and reconnaissance seismic. At least three phases of uplift and erosion of pre-Tertiary age. Basins surrounding Tonle Sap Lake at least 5-6 km of Mesozoic and older sediments. Potential Triassic and Permian source rocks mature for oil and gas over large parts of basins. Khorat Plateau-like stratigraphy, with Indosinian? major unconformity)

Jolivet, L., O. Beyssac, B. Goffe, D. Avigad, C. Lepvrier, H. Maluski & T.T. Ta (2001)- Oligo-Miocene midcrustal subhorizontal shear zone in Indochina. Tectonics 20, p. 46-57.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2000TC900021/pdf)
(Oligo-Miocene left-lateral strike-slip shear deformation along Red River Shear Zone in N Vietnam restricted to upper and middle crust above horizontal shear zone. Deformation associated with low P- low T (greenschist) parageneses. Above horizontal shear zone active left-lateral transpression during first stage, changing to transtension at ~33Ma, with exhumation of extensional and transtensional metamorphic domes)

Jolivet, L., H. Maluski, O. Beyssac, B. Goffe, C. Lepvrier, Phan Truong Thi & Nguyen Van Vuong (1999)- Oligocene-Miocene Bu Khang extensional gneiss dome in Vietnam; geodynamic implications. Geology 27, 1, p. 67-70.
(Large Oligocene-Miocene extensional gneiss dome in Vietnam, with major NE-dipping extensional shear zone separating Bu Khang dome from less-metamorphosed units above. 40Ar-39Ar ages from 36-21 Ma. NE-SW extension during opening of S China Sea. Kinematic model of left-lateral shear and block rotation)

Katz, M.B. (1993)- The Kannack complex of the Vietnam Kontum Massif of the Indochina Block: an exotic fragment of Precambrian Gondwanaland? In: R.H. Findlay et al. (eds.) Gondwana 8- Assembly, evolution and dispersal, Balkema, Rotterdam, p. 161-164.

Komatsu, T., D.T. Huyen & J.H. Chen (2006)- Depositional environments and fossil bivalves in the lowermost parts of the Triassic systems in North Vietnam and South China. J. Geography (Chigaku Zasshi) 115, 4, p. 470-483.
(online at: www.jstage.jst.go.jp/article/jgeography1889/115/4/115_4_470/_pdf)
(Similar to paper below: E Triassic Claraia, etc. open marine bivalves)

Komatsu, T., D.T. Huyen & J. Chen (2007)- Bivalve assemblages in North Vietnam and South China following the end-Permian crisis. In: S.G. Lucas & J.A. Spielmann (eds.) The Global Triassic, New Mexico Museum Natural History Science Bull. 41, p. 134-136.
(On thin-walled, flat molluscs Claraia spp., Eumorphotis, Towapteria, etc. in basal Triassic calcareous mudstones of Yangtze Block of S China and N Vietnam)

Komatsu, T., D.T. Huyen & J. Chen (2008)- Lower Triassic bivalve assemblages after the end-Permian mass extinction in South China and North Vietnam. Paleontol. Research 12, 2, p. 119-128.
(Lower Triassic bivalve assemblages in S China, and N Vietnam: (1) basinal mudstones carbonates with Claraia wangi; deep ramp with Eumorphotis teilhardi- Towapteria scythica assemblage; shallow ramp with Claraia stachei-C. phobangensis assemblage)

Komatsu, T., H. Naruse, Y. Shigeta, R. Takashima, T. Maekawa, Huyen T. Dang, Tien C. Dinh et al. (2014)- Lower Triassic mixed carbonate and siliciclastic setting containing Smithian to Spathian anoxic to dysoxic facies in the An Chau basin, northeastern Vietnam. Sedimentary Geology 300, p. 28-48.

Krobicki, M., J. Golonka & Khuong The Hung (2008)- Major tectonic events and plates of Northwest Vietnam. In: Proc. Int. Symp. Geoscience resources and environments of Asian Terranes (GREAT 2008), Bangkok, 2008, p. 101-104. *(Extended Abstract)*
(Major tectonic events of NW Vietnam include: Paleozoic (Silurian-Devonian?) suturing of Indochina and S China plate, Triassic Indosinian orogeny associated with strong deformation, metamorphism and magmatic activity and strike-slip faulting related to Cenozoic collision of India with Asia)

Lacassin, R., P.H. Leloup, T. Phan Trong & P. Tapponnier (1998)- Unconformity of red sandstones in North Vietnam: field evidence for Indosinian orogeny in northern Indochina? Terra Nova 10, p. 106-111.
(Black-River (Song Da) region red sandstones/conglomerates, reportedly of Cretaceous age, unconformably above schistose epi-metamorphic M Triassic sediments, probably Indosinian Mesozoic unconformity. Age of deformation poorly constrained. Unconformity strongly deformed, implying Tertiary deformation probably due to India-Asia collision in N part of Indochina block)

Lai, X.L., W. Wang, P.B. Wignall, D.P.G. Bond, H.S. Jiang, J.R. Ali, E.H. John & Y.D. Sun (2008)- Palaeoenvironmental change during the end-Guadalupian (Permian) mass extinction in Sichuan, China. Palaeogeogr. Palaeoclim. Palaeoecology 269, p. 78-93.
(End-Guadalupian mass extinction in Sichuan, SW China. Platform carbonates of Maokou Fm overlain by Emeishan flood basalts. Extinction primarily loss of fusulinaceans and possibly by species turnover amongst calcareous algae (Permocalculus dominant in pre-Emeishan, Mizzia more common after))

Lan, C.Y., S.L. Chung, C.H. Lo, T.Y. Lee, P.L. Wang, H. Li & D. Van Toan (2001)- First evidence for Archean continental crust in northern Vietnam and its implications for crustal and tectonic evolution in Southeast Asia. Geology 29, 3, p. 219-222.
(Indochinese continent previously considered to be composed entirely of Proterozoic-Phanerozoic rocks. First evidence of Late Archean continental crust in SE Asia on S China Block from gneisses of Cavinh Complex, S of Red River shear zone, N Vietnam. Archean Nd model ages 3.4-3.1 Ga, zircon U-Pb ages of 2.8-2.5 Ga first in SE Asia. One of oldest crustal nuclei of South China block)

Lan, C.Y., S.L. Chung, T.V. Long, C.H. Lo, T.Y. Lee, S.A. Mertzman & J.J.S. Shen (2003)- Geochemical and Sr-Nd isotopic constraints from the Kontum massif, central Vietnam, on the crustal evolution of the Indochina block. Precambrian Research 122, p. 7-27.
(Kontum massif, C Vietnam, mainly amphibolite-granulite facies metamorphic rocks and is largest basement core complex of Indochina block. Basement rocks yield depleted-mantle model ages from 1.2-2.4 Ga and TDM of 2.7 Ga for granulite, suggesting Indochina block crustal formation mainly in Paleoproterozoic and Mesoproterozoic, not Archean. During accretion with other SE Asian continental blocks in Permo-Triassic, Indochina core complex subjected to Indosinian orogeny, characterized by high-T, granulite facies metamorphism in lower crust with charnockite magmatism and subsequent regional exhumation)

Lasserre, M., H. Fontaine & E. Saurin (1974)- Geochronologie du Sud Viet-Nam. Archives Geol. Vietnam 17, p. 17-34.
('Geochronology of South Vietnam')

Le Dzuy Bach & Ngo Gia Thang (1995)- Phanerozoic ophiolites in Indochina. In: Proc. Int. Symp. Geology of Southeast Asia and adjacent areas, Hanoi 1995, J. Geology, Hanoi, B, 1995, 5-6, p. 212-221.

Lee, K.Y. (1984)- Geology of the Dian-Qian-Gui foldbelt, Southwest China. U.S. Geol. Survey (USGS), Open-File Report 84-357, p. 1-52.
(online at: http://pubs.usgs.gov/of/1984/0357/report.pdf)

Lee, T.Y, C.H. Lo, S.L. Chun, C.Y. Chen, P.L. Wang, W.P Lin et al. (1998)- 40Ar/39Ar dating result of Neogene basalts in Vietnam and its tectonic implication. In: M.F.J. Flower et al. (eds.) Mantle dynamics and plate interactions in East Asia, AGU Geodynamics Ser. 27, p. 317-330.
(Large scale Late Neogene magmatic activity around S China Sea, from Taiwan Straits, S China to Hainan Island and Indochina Peninsula. Ar/Ar ages of basalts from Vietnam show oldest rocks early M Miocene (~16 Ma; mainly quartz tholeiite). Since Late Miocene (-8 Ma) it changed to olivine tholeiite, and from Pliocene-Quaternary common alkali basalt and basanite. First appearance of igneous activity in Vietnam coincides with cessation of sea-floor spreading in S China Sea. See also Flower et al. 1993, Hoang & Flower 1998)

Leloup, P.H., N. Arnaud, R. Lacassin, J.R. Kienast, T.M. Harrison, T.T. Phan Trong, A. Replumaz & P. Tapponnier (2001)- New constraints on the structure, thermochronology and timing of the Ailao Shan- Red River shear zone. J. Geophysical Research 106, p. 6683-6732.
(Cooling diachronism along Ailao Shan fault suggests left-lateral rates of 4-5 cm/yr from 27 Ma- ~17 Ma. Similarities of deformation kinematics along ASRR and in S China Sea confirms causal link between continental strike-slip faulting and marginal basin opening)

Leloup, P.H., R. Lacassin, P. Tapponnier, U. Scharer, D. Zhong, X. Liu, L. Zhang Liangshang, S. Ji & Phan Trong Trinh (1995)- The Ailao Shan- Red River shear zone (Yunnan, China), Tertiary transform boundary of Indochina. Tectonophysics 251, p. 3-84.
(Red River Fault zone is major geological discontinuity that separates S China from Indochina. Today it corresponds to great right-lateral fault along several metamorphic complexes. U/Pb ages of deformation-associated melts ~22.4- 26.3 Ma, implying shear in Lower Miocene. ASRR belt site of major left-lateral motion, as Indochina was extruded toward SE as result of India-Asia collision)

Leloup, P., P. Tapponnier, R. Lacassin & M. Searle (2007)- Discussion on the role of the Red River shear zone, Yunnan and Vietnam, in the continental extrusion of SE Asia. J. Geol. Soc. 164, p. 1253-1260.
(Critique and response of Searle (2006) paper)

Lepvrier, C., M. Faure, V.N. Van, T.V. Vu, W. Lin, T.T. Trong & P.T. Hoa (2012)- North-directed Triassic nappes in Northeastern Vietnam (East Bac Bo). J. Asian Earth Sci. 41, 1, p. 56-68.
(NE Vietnam structure system of slightly metamorphosed nappes formed in Triassic, prior to unconformable deposition of U Triassic terrigenous sediments)

Lepvrier, C., H. Maluski, Vu Van Tich et al. (2004)- The Early Triassic Indosinian orogeny in Vietnam (Truong Son Belt and Kontum Massif); implications for the geodynamic evolution of Indochina. Tectonophysics 393, p. 87-118.
(E Triassic (~250-240 Ma) Indosinian Orogeny interpreted as result of synchronous oblique collision of Indochina block with both Sibumasu and S China)

Lepvrier, C., Nguyen V. Vuong, H. Maluski, P.T. Thi, T.V. Vu (2008)- Indosinian tectonics in Vietnam. Comptes Rendus Geoscience 340, 2-3, p. 94-111.
(In Vietnam E Triassic Indosinian collision affected Truong Son belt and Kontum Massif, which were parts of Gondwana-derived Indochina continental block, around 250-240 Ma. Collisional process resulted from NW-striking convergence of Indochina with respect to adjacent blocks. Indosinian evolution applied on continental crust that had been probably affected by Devonian event, as in S China)

Le Van De (1997)- Outline of plate-tectonic evolution of continental crust of Vietnam. In: P. Dheeradilok (ed.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and South Pacific (GEOTHAI'97), Department of Mineral Resources, Bangkok, 2, p. 465-475.

Li, M., M. Yan, X. Fang, Z. Zhang, & X. Liu (2018)- Origins of the Mid-Cretaceous evaporite deposits of the Sakhon Nakhon Basin in Laos: Evidence from the stable isotopes of halite. J. Geochemical Exploration 184, A, p. 209-222.
(online at: https://www.sciencedirect.com/science/article/pii/S0375674217303035)
(Evaporite deposits in Sakhon Nakhon Basin, SE Laos, is northern continuation of M-L Cretaceous salt basin of Khorat Plateau (Thailand; Indochina Plate). Isotopes and trace metals in 600m halite-dominated core suggest continental and hydrothermal origins, with trace marine remnants (probably formed originally by evaporation of seawater, being dissolved in meteoric water and hydrothermal fluid, and subsequently precipitated))

Li, Y., C.Q. Ma, G.F. Xing & H.W. Zhou (2015)- The Early Cretaceous evolution of SE China: insights from the Changle-Nan'ao metamorphic belt. Lithos 230, p. 94-104.
(SE China widespread Jurassic- Cretaceous magmatism, but episode of 'magmatic quiescence' at ~130-110 Ma. E Cretaceous (~140-130 Ma) magmatism in coastal SE China attributed to Paleo-Pacific plate subduction beneath SE China. Collision between W Philippines and SE China blocks at ~130-120 Ma resulted in magmatic quiescence and formation of Changle-Nan'ao metamorphic belt. Post-collisional extension triggered reinitiation of magmatism associated with amphibolite-facies metamorphism at ~110 Ma)

Li, X. (2000)- Cretaceous magmatism and lithospheric extension in Southeast China. J. Asian Earth Sci. 18, p. 293-305.
(E-M Cretaceous 'Yanshanian' magmatism in SE China in four episodes: (1 136-146 Ma, (2) 122-129 Ma, (3) 101-109 Ma (possibly subduction-related calc-alkaline) and (4) 87-97 Ma (A-type granites and bimodal volcanics, marking initiation of extensional environment). Associated with formation of extensional basin systems. Belt of Yanshanian magmatism usually explained as magmatic arc, but width of >1000 km far greater than normally observed in subduction zones (300-400 km))

Li, X.H., Z.X. Li, W.H. Li & Y.J. Wang (2006)- Initiation of the Indosinian orogeny in South China: evidence for a Permian magmatic arc on Hainan Island. J. Geol. 114, p. 341-353.

(Syntectonic granites on Hainan Island, off SE China, with calc-alkaline I-type affinities and zircon ages of 267-262 Ma, reflecting initiation of late E Permian continental margin arc along E margin of China)

Li, X.H., Z.X. Li & W.X. Li (2014)- Detrital zircon U-Pb age and Hf isotope constrains on the generation and reworking of Precambrian continental crust in the Cathaysia Block, South China: a synthesis. Gondwana Research 25, p. 1202-1215.
(S China Block (Yangtze and Cathaysia blocks) one of largest Precambrian blocks in E Asia. Precambrian detrital zircon ages from (meta)sedimentary samples and river sands three major peaks (~2485, 1853 and 970 Ma) and four subordinate peaks (~1426, 1074, 780 and 588 Ma). Five of seven detrital zircon age peaks coincident with crystallisation ages of igneous rocks exposed in Cathaysia (~1.89-1.83 Ga, 1.43 Ga, 1.0-0.98 Ga and 0.82-0.72 Ga. Cathaysia Block is orogenic belt between E Antarctica, Laurentia and Australia during the assembly of Columbia/Nuna supercontinent at ~1.9-1.8 Ga to become part of supercontinent Rodinia. Cathaysia Block amalgamated with Yangtze Block during Sibao Orogeny at ~1.0-0.89 Ga)

Li, X., J. Zheng, S. Li, Bo Liu, L. Xiang, Y. Wang & X. Liu (2016)- Late Triassic orogenic collapse and Palaeo-Pacific slab roll-back beneath central South China: constraints from mafic granulite xenoliths and structural features. In: Evolution of West Pacific Ocean, South China Sea and Indian Ocean, Geological J. 51, Supplement S1, p. 123-136.
(Daoxian mafic granulite xenoliths in basalts from S Hunan Province and structural features of Xuefengshan belt suggest Late Triassic orogenic collapse under central S China Block, accompanied by lithospheric extension and asthenospheric upwelling. Could have contributed to mantle disturbance to enhance rollback of Paleo-Pacific slab)

Li, Z., J.S. Qiu & X.M. Yang (2014)- A review of the geochronology and geochemistry of Late Yanshanian (Cretaceous) plutons along the Fujian coastal area of southeastern China: implications for magma evolution related to slab break-off and rollback in the Cretaceous. Earth-Science Reviews 128, p. 232-248.
(Cretaceous Late Yanshanian magmatic belt along SE coast of China define linear NNE–SSW-trending belt of magmatism. Emplacement mainly ~125-90 Ma, with major peak from 115-90 Ma. First appearance of sparse I-type granitoids with post-collisional extensional granite affinities and emplacement of A-type granites mark start of extension during E Cretaceous at ~125-119 Ma. Subsequent bimodal magmatism at 115-90Ma suggests major igneous event as response to back-arc extension. Break-off and rollback of subducting Paleo-Pacific Plate during Cretaceous responsible for Late Yanshanian tectono-magmatic evolution in area)

Liem, N.V. (1966)- Some Triassic foraminifera from Hoang Mai Limestone, Nghe An Province. Acta Scient. Vietnamica, Sect. Biol. Geol. Geogr., 1, p. 37-44.

Liu, C., Y. Pan & R. Zhu (2012)- New paleomagnetic investigations of the Emeishan basalts in NE Yunnan, southwestern China: constraints on eruption history. J. Asian Earth Sci. 52, p. 88-97.
(Magnetostratigraphic studies of Emeishan basalts and known radiometric ages (peaking at ~260 Ma), suggests eruption period of Emeishan large igneous province <3 Myr)

Liu, H., Y. Wang, P.A. Cawood, W. Fan, Y. Cai & X. Xing (2015)- Record of Tethyan Ocean closure and Indosinian collision along the Ailaoshan suture zone (SW China). Gondwana Research 27, 3, p. 1292-1306.
(online at: http://or.nsfc.gov.cn/bitstream/00001903-5/252870/1/1000014253494.pdf)
(NW-SE trending Ailaoshan suture part of ~2900 km long Jinshajiang- Ailaoshan- Song Ma- Hainan suture, and separates Yangtze (S China Craton) block in N from Simao (Indochina) block in S. Granitic plutons in Ailaoshan zone yield zircon ages of 247-252 Ma. Indosinian magmatism confirmed along Ailaoshan zone. Latest Permian convergent margin magmatism represented by Xin'anzhai granitoid (~252 Ma) terminated through accretion of Simao-Indochina to S China Blocks, marking start of Triassic Indosinian Orogeny, resulting in generation of the ~247 Ma (earliest Triassc) Tongtiange S-type leucogranite)

Liu, H.C., Y.J. Wang, X.F. Guo, W.M Fan & J.J. Song (2016)- Late Triassic post-collisional slab break-off along the Ailaoshan suture: insights from OIB-like metagabbros and associated rocks. Int. J. Earth Sciences (Geol. Rundschau) 106, 4, p. 1359-1373.

(Late Triassic gabbroic intrusion in Mengdong village in S China- Indochina collision zone, Yunnan, SW China, metamorphosed to amphibolite. Late Triassic magmatic flare-up at ~222± 5 Ma in Ailaoshan suture zone post-collisional setting, with heat source from slab break-off and OIB-type asthenospheric mantle upwelling)

Liu, J., M.D. Tran, Y. Tang, Q.L. Nguyen, T.H. Tran, W. Wu, J. Chen, Z. Zhang & Z. Zhao (2012)- Permo-Triassic granitoids in the northern part of the Truong Son belt, NW Vietnam: geochronology, geochemistry and tectonic implications. Gondwana Research 22, p. 628-644.
(N segment of Truong Son belt of NW Vietnam (on N margin Indochina Block) three granitoid complexes. U-Pb dating of magmatic zircons three populations, suggesting M Permian- E Triassic arc magmatism at 280-270 Ma and 250-245 Ma, and magmatism of Dien Bien complex during post-collisional extension at ~229- 202 Ma)

Liu, L. X. Xu & Y. Xia (2016)- Asynchronizing paleo-Pacific slab rollback beneath SE China: insights from the episodic Late Mesozoic volcanism. Gondwana Research 37, p. 397-407.
(Late Jurassic - Cretaceous NW-directed Paleo-Pacific subduction under SE China caused widespread Andean-type active margin magmatism between ~160-88 Ma. Multiple stages: 160-148, 145-130, 130-127 and 110-88 Ma. General SE-ward younging trend in Cretaceous indicates increasing slab dip angle/ slab rollback of Paleo-Pacific subduction after 150 Ma)

Liu, S., R.Z. Hua, S. Gao, C.X. Feng., Z. Huang, S. Lai et al. (2009)- U-Pb zircon, geochemical and Sr-Nd-Hf isotopic constraints on the age and origin of Early Palaeozoic I-type granite from the Tengchong-Baoshan Block, Western Yunnan Province, SW China. J. Asian Earth Sci. 36, p. 168-182.
(Cambrian monzogranite from Tengchong-Baoshan Block, W Yunnan, zircon ages of ~499- 502 Ma. Numerous other granitoids of similar age (490-470 Ma) across Tengchong-Baoshan Block and on Indian Plate and Himalayan Orogenic Belt, both parts Gondwana supercontinent. Tengchong-Baoshan Block also formed part of Gondwana, and separated in Late Paleozoic)

Lovatt Smith, P.F. & R.B. Stokes (1997)- Geology and petroleum potential of the Khorat Plateau basin in the Vientiane area of the Lao P.D.R.. J. Petroleum Geol. 20, 1, p. 27-50.
(N part of Thailand Khorat Plateau Basin extends into Laos. Three gas discoveries. Structural inversion began in mid-Cretaceous, not Tertiary. Permian carbonates main reservoir in basin)

Lovatt Smith, P.F., R.B. Stokes, C. Bristow & A. Carter (1996)- Mid-Cretaceous inversion in the northern Khorat plateau of Lao PDR and Thailand. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of SE Asia, Geol. Soc., London, Spec. Publ. 106, p. 233-247.
(Regional compressive tectonic event in N Khorat Basin in Aptian-Cenomanian, attributed to distant continent-continent collision to W. Reactivated structural trends parallel to paleo-continental sutures and interrupted latest Jurassic- earliest Paleocene subsidence and continental sedimentation of Khorat Plateau Basin. Some reactivation of mid-Cretaceous structures during regional uplift in Tertiary)

Loydell, D.K., M. Udchachon & C. Burrett (2019)- Llandovery (lower Silurian) graptolites from the Sepon Mine, Truong Son Terrane, central Laos and their palaeogeographical significance. J. Asian Earth Sci. 170, p. 360-374.
(Llandoverian graptolites from Sepon mine area, C Laos, part of Truong Son Terrane. Paleobiogeographical affinities of Rhuddanian graptolites with peri-Gondwanan Europe and Arabia rather than equatorial regions such as S China. Graptolites from Mojiang area, Yunnan typical of low latitude Silurian faunas and suggest this area (Simao or Loei Terrane) was separate from Truong Son Terrane)

Manaka, T., K. Zaw, S. Meffre, A. Salam & Y. Lim (2014)- An overview of geological setting and ore deposits of southern Indochina- a focus on Cambodia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 103-107.
(Brief review of Cambodia porphyry gold-copper deposits, associated with Permian- Triassic (260-230 Ma magmatic system, Cu in Jurassic and gold in Cretaceous magmatic sytems (SW continuation of Yanshanian Orogenic Belt of S China)

Mansuy, H. (1913)- Faunes des calcaires a *Productus* de l'Indochine. Mem. Service Geol. Indochine 2, 4, p. 1-133.
('Faunas of the Productus Limestone of Indochina'. Fossils from Permian brachiopod limestone from Cambodia, Laos and Vietnam, which is also rich in fusulinid foraminifera)

Mansuy, H. (1914)- Faunes des calcaires a *Productus* de l'Indochine- 2 serie. Mem. Service Geol. Indochine 3, 3, p. 1-61.
('Faunas of the Productus Limestone of Indochina- 2nd series'. Fossils from Permian brachiopod limestone)

Mansuy, H. (1916)- Nouvelle contribution a l'etude des faunes des calcaires a *Productus* de l'Indochine. Mem. Service Geol. Indochine, Hanoi, 54, p. 26-38.
('New contribution to the study of the faunas of the Productus Limestone of Indochina'.

Mao, J., H. Ye, K. Liu, Z. Li, Y. Takahashi, X. Zhao & W.S. Kee (2013)- The Indosinian collision- extension event between the South China Block and the Palaeo-Pacific plate: evidence from Indosinian alkaline granitic rocks in Dashuang, eastern Zhejiang, South China. Lithos 172-173, p. 81-97.
(M Triassic (~232 Ma) Dashuang pluton in Jinhua, S China feflect collisional granite, emplaced during Indosinian Orogeny)

Martini, R., L. Zaninetti, J.J. Cornee, M. Villeneuve, N. Tran & T.T. Ta (1998)- Decouverte de foraminiferes du Trias dans les calcaires de la region de Ninh Binh (Nord-Vietnam). Comptes Rendus Academie Sciences, Paris, Ser. IIA, 326, p. 113-119.
('Discovery of Triassic foraminifera in limestones from the Ninh Binh Area (North Vietnam)'. Lower Triassic(?) to Anisian benthic foraminifera in Dong Giao Fm limestones, Ninh Binh area (Song Da Terrane, South China Block, N Vietnam), deposited on wide, shallow water carbonate platform. With Glomospirella, Meandrospira, Arenovidalina, etc. Affinities to coeval faunas from N Malaysia and S China Block suggest connections during Triassic between continental blocks of Indochina Peninsula)

Maung, M., A.N. Thu & H. Suzuki (2014)- Latest Jurassic radiolarian fauna from the Chinghkran area, Myitkyina Township, Kachin State, northern Myanmar. In: Proc. Regional Congress on Mineral and Energy Resources of Southeast Asia (GEOSEA 13), Yangon, p. 38-39. *(Abstract only)*
(Late Jurassic radiolaria chert in Tagaung-Myitkyina belt, a presumed suture zone with ophiolites in Myanmar (= Medial Myanmar Suture Zone of Mitchell et al., 2015= Mesotethys suture?))

Meister, C., Vu Khuc, D.T. Huyen & P. Doyle (2000)- Les ammonites et les belemnites du Jurassique inferieur de Huu Nien, province de Quang Nam, Viet Nam Central. Geobios 33, p. 79-96.
('The ammonites and belemnites of the Lower Jurassic of Huu Nien, Central Vietnam'. Rare and low diversity Sinemurian- Pliensbachian ammonites (incl. Ectocentrites, Tongdzuyites) and belemnites (incl. Atractites) in Liassic of Nong Son basin)

Meister, C., Vu Khuc & D.T. Huyen (2002)- Les ammonites du Jurassique inferieur des provinces de Dak Lak et de Ho Chi Minh Ville, Viet Nam du Sud. Revue Paleobiologie, Geneve, 21, 1, p. 439-483.
('Lower Jurassic ammonites of the Dak Lak province and Ho Chi Minh city. South Vietnam'. Lower Sinemurian rel. unique ammonite fauna)

Meng, Q.R. & G.W. Zhang (1999)- Timing of collision of the North and South China blocks: controversy and reconciliation. Geology 27, 2, p. 123-126.
(Late Triassic collision of S China block with S Qinling orogen along Mianlue suture led to final integration of N and S China blocks)

Metcalfe, I. (2012)- Changhsingian (Late Permian) conodonts from Son La, northwest Vietnam and their stratigraphic and tectonic implications. J. Asian Earth Sci. 50, p. 141-149.

(First record of Late Permian conodonts from Vietnam: Changhsingian Hindeodus julfensis in 40cm thick limestone in M Yenduyet Fm near Son La, NW Vietnam, in Song Da Rift Zone, above basaltic volcanics. Conodont Colour Alteration Index of 5 (T ~600°C), but no evidence of compressional Indosinian Orogeny)

Meyer, K., R. Grenier & D. Hoang (2009)- Exploration in Vietnam: exploration experiences in a re-emerging Cuu Long basin. Proc. 2009 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, p. 1-15. *(Abstract + Presentation)*
(Cuu Long basin off S Vietnam with 12 or more oil discoveries, 80% of oil in fractured-weathered granite basement, with additional production from onlapping and draping clastics)

Miyahigashi, A., H. Hara, K. Hisada, N. Nakano, T. Charoentitirat, P. Charusiri, K. Khamphavong & R. Martini (2017)- Middle Triassic foraminifers from northern Laos and their paleobiogeographic significance. Geobios 50, 5-6, p. 441-451.
(First Triassic foraminifera reported from shallow marine limestones in U Nam Sam Suite, Sam Neua area, N Laos (N part of Indochina Block). 17 taxa, incl. Pilammina densa, Pilamminella grandis, Citaella dinarica, etc.. Age M Anisian (M Triassic). Fauna shares several important species with Sibumasu Block, Sukhothai Zone and S China Block, suggesting these domains formed single paleobiogeographic province in Anisian time)

Morley, R., T. Nguyen, Bui Viet Dung, A.J. Kullman & R.T. Bird (2019)- A revised chronostratigraphy for the Cuu Long Basin based on the interpretation of climate-driven depositional cycles during the Late Eocene/Oligocene and VIM depositional cycles during the Mio-Pliocene. SEAPEX Exploration Conf., Singapore 2019, 4p.

Morley, R., V.D. Bui, T.T. Nguyen, A.J. Kullman, H.C. Nguyen (2019)- High-resolution Palaeogene sequence stratigraphic framework for the Cuu Long Basin, offshore Vietnam, driven by climate change and tectonics, established from sequence biostratigraphy. Palaeogeogr. Palaeoclim. Palaeoecology 530, p. 113-135.
(Biostratigraphic database from 46 wells in Cuu Long Basin, off Vietnam identified 36 transgressive-regressive depositional cycles in M Eocene- Oligocene. Cycles climate-driven and correlate to 406 kyr eccentricity cycles. Two types of depositional sequences, 3rd order sequences and 4th order para-sequences. Unconformities reflecting 3rd order sequence boundaries dated at 33.4 Ma, 29.8 Ma and 27.4 Ma.)

Nagy, E.A., H. Maluski, C. Lepvrier, U. Scharer, Phan Truong Thi, A. Leyreloup & Vu Van Thich (2001)- Geodynamic significance of the Kontum Massif in Central Vietnam: composite 40Ar/39Ar and U-Pb Ages from Paleozoic to Triassic. J. Geology 109, p. 755-770.
(online at: www.csun.edu/~ean7513/NagyetalKontum.pdf)
(Kontum massif of S-C Vietnam long regarded as Precambrian (Archean) lower continental crust, but younger ages from U-Pb zircon (~250 Ma) and 40Ar/39Ar (243 Ma), implying two Paleozoic thermal events: (1) Permo-Triassic magmatism, probably related to closing of Paleo-Tethys Sea; (2) Carboniferous crustal thickening and heating during suturing of Indochina and S China blocks along Song Ma suture zone may have produced 340 Ma low-T thermal event. Kontum massif and Kannack metamorphic complex are exposures of deep crustal levels of Permo-Triassic orogeny. Kontum massif did not rift from Precambrian granulite belt in Gondwana)

Nagy, E.A., U. Scharer & Nguyen Trung Minh (2000)- Oligo-Miocene granitic magmatism in Central Vietnam and implications for continental deformation in Indochina. Terra Nova 12, p. 67-76.
(Two granitoids intrusions in Bu Khang extensional complex with radiometric ages of 26.0, 23.7 Ma (previously assigned to Precambrian- Devonian))

Nakano, N. (2016)- Variation and evolution of Vietnamese metamorphic rocks. Japanese Mag. Mineralogical and Petrological Sciences 45, 1, p. 26-32

Nakano, N., Y. Osanai, N.T. Minh, T. Miyamoto, Y. Hayasaka & M. Owada (2008)- Discovery of high-pressure granulite-facies metamorphism in northern Vietnam: constraints on the Permo-Triassic Indochinese continental collision tectonics. Comptes Rendus Geoscience 340, 2, p. 127-138.

(High-P mafic granulites from Song Ma Suture zone in N Vietnam, regarded as microcontinental boundary betweenS China and Indochina blocks. U-Th-Pb age of 233±5Ma of pelitic gneiss strongly suggests E-M Triassic metamorphic event)

Nakano, N., Y. Osanai, M. Owada, Tran Ngoc Nam, P. Charusiri & K. Khamphavong (2013)- Tectonic evolution of high-grade metamorphic terranes in central Vietnam: constraints from large-scale monazite geochronology. J. Asian Earth Sci. 73, p. 520-539.
(High-grade metamorphism observed in so-called Precambrian basement terranes in C Vietnam occurred during Permian-Triassic and Ordovician-Silurian, while peraluminous granitoid magmatism is Triassic. Presence of Ordovician- Silurian volcanic arc magmatism in region. Metamorphic rocks from C Vietnam provide continuous record of subduction-accretion-collision tectonics between S China and Indochina blocks: Ordovician- Silurian active continental margin tectonics, followed by continental collision in Late Permian- E Triassic, exhumation in Late Triassic)

Nakano, N., Y. Osanai & M. Owada (2008)- Textural varieties in the Indochinese metamorphic rocks: a key for understanding Asian tectonics. Island Arc, 17, p. 2-5.

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(Eclogites along Song Ma Suture zone, N Vietnam, widely regarded as boundary between S China- Indochina cratons. Major lithology of area pelitic garnet–phengite schist with garnet, with monazite chemical age of 243 Ma, but some monazite inclusions in garnet and cores of zoned monazite in schist record older thermal event (~424Ma). Indicates Indochina craton deeply (>70 km) subducted underh S China craton in Triassic)

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(Kontum massif in C Vietnam is largest exposure of crystalline basement of Indochina craton, and commonly thought to be of Archean age. Granulites of Kannack complex, metamorphosed under T of 800-850°C and P 8 kbars, and contain zircons with U-Pb ages of ~254 Ma (one sample ~1400 Ma age for zircon core, with 250 Ma rim), suggesting they formed at E Triassic 'Indosinian' tectonothermal event. Cooling history from 850°C at ~254 Ma to 300°C at 242 Ma)

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(online at: http://mollus.oxfordjournals.org....)
(First records of freshwater rissooidean gastropods, from uppermost Eocene- Lower Oligocene of Cao Bang Basin, N Vietnam. Dominated by well-preserved new genus Bacbotricula (Pomatiopsidae: Triculinae?), with two new species. Also two other poorly preserved species. Assemblage is among earliest Cenozoic freshwater gastropod faunas from SE Asia. Paleo-Red River may have served as early dispersal corridor for Triculinae. Gastropods likely lived on delta plains in Lake Cao Bang and were preyed upon by cyprinid fishes)

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(Dalat zone Cretaceous Andean-type magmatic arc with granitoids and volcanic rocks. Three suites: Dinhquan at ~112-100 Ma, Cana at ~96-93 Ma and Deoca at ~92-88 Ma. Geochronological data support continuation of Andean-type arc running from SE China via S Vietnam to SW Borneo)

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(Cretaceous granitoids of Dalat zone are of sub-alkaline affinity, belong to high-K calc-alkaline series and display features typical of I-type granites)

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(Sm/Nd dating of lenses of ophiolitic rocks in Song Ma suture zone, reveals crystallization ages of 387-313 Ma (Carboniferous) for titanites from metagabbros/ metabasalts. Suggests blocks are remnants of E branch of Paleotethys. Metamorphism overprint during Triassic Indosinian orogeny suturing of Indochina- S China blocks. U/Pb and Ar/Ar data show peak metamorphism at 266-265 Ma, followed by cooling at 250-245 Ma)

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(Assessment of undiscovered hydrocarbons and play description of E Miocene in Oligocene- Pliocene Hanoi rift basin)

Nielsen, L.H., H.I. Petersen, N.D. Thai, N.A. Duc, M.B.W. Fyhn, L.O. Boldreel, H.A. Tuan, S. Lindstrom & L.V. Hien (2007)- A Middle-Upper Miocene fluvial-lacustrine rift sequence in the Song Ba Rift, Vietnam: an analogue to oil-prone, small-scale continental rift basins. Petroleum Geoscience 13, 2, p. 145-168.
(Small Neogene Krong Pa graben within continental Song Ba Rift, Vietnam, which is bounded by strike-slip faults that were reactivated as extensional faults in M Miocene. Thickness of graben-fill ~500m. Basal graben-fill mainly fluvial sandstones, overlain by deep lacustrine sediments, including two excellent oil-prone lacustrine source-rock units. In late phase of graben development return to fluvial sedimentation)

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(Khmer Trough in E part of Gulf of Thailand, with oils generated from lacustrine source rock, probably from upper part of Oligocene section)

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(online at: www.geo.sc.chula.ac.th/Geology/English/News/Technique/GREAT_2008/PDF/034.pdf)

(Various types of Permo-Triassic UHT and UHP metamorphic rocks in Red River zone and Kontum Massif. Peak metamorphic stage took ~250 Ma and result of collision between Indochina and S China cratons)

Osanai, Y., N. Nakano, M. Owada, T.N. Nam, T. Miyamato, Nguyen Thi Minh, Nguyen Van Nam & Tran Van Tri (2008)- Collision zone metamorphism in Vietnam and adjacent South-eastern Asia: proposition for Trans Vietnam Orogenic Belt. J. Mineralogical Petrological Sci. 103, 4, p. 226-241.
(online at: https://www.jstage.jst.go.jp/article/jmps/103/4/103_080620e/_pdf)
(Investigations of Vietnam metamorphic complexes suggest peak metamorphic conditions at Kontum Massif, the Song Ma suture zone and Red River zone are linked and may represent continental collision event between Indochina and S China cratons, which led to formation of Trans Vietnam Orogenic Belt)

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(Kontum Massif of S Vietnam, in SE part of Indochina Block, experienced S-ward displacement by 5.1° ± 2.4° between 32-17 Ma. During displacement Kontum massif rotated CCW by 27 ±10° within Indochina block. Left lateral motion along E Vietnam Boundary Fault brought about this CCW rotation)

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(Rel. complete Permian section in Indochina. With common limestones rich in fusulinid foraminifera)

Phan, C.T. et al. (eds.) (1991)- Geology of Cambodia, Laos and Vietnam. Explanatory note to the geological map of Cambodia, Laos and Vietnam, 2nd ed., Geological Survey of Vietnam, Hanoi, p. 1-156.

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(online at: www.geology.cz/img/zpravyvyzkum/fulltext/10_Pokorny_170628.pdf)
(Da Lat basin in SE Vietnam initiated during marine transgression in E Jurassic (Hettangian, ~198 Ma) and ended by regression in M Jurassic (Bathonian, ~165 Ma). Aalenian- Bajocian with common molluscs (?Myophorella) and mid-outer shelf ichnofossils (Skolithis, Paleophycus, Thalassinoides))

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(Paleotethyan sutures/collisional zones: Luang Prabang tectonic zone in NW Laos links with Jinshajiang-Ailaoshan suture zone to N and Nan suture zone to SW. Diabase and basalt in Luang Prabang tectonic zone with zircon ages of ~335, 305 Ma, suggesting Carboniferous age of mafic rocks (also 430-470 Ma peak). E-MORB-like characteristics with addition of subduction-related component. Ages of mafic rocks along Luang Prabang tectonic zone similar to mafic rocks from Jinshajiang-Ailaoshan, Song Ma and Nan suture zones, and suggest development of Carboniferous back-arc basin separating Sukhothai Terrane and Indochina Block. Luang Prabang tectonic zone remnant of synchronous back-arc basins to NE of Paleotethyan Main Ocean)

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(online at: http://en.earth-science.net/PDF/20160612013151.pdf)
(Volcanic rocks from Sayabouli area in NW Laos traditionally mapped as Permian- E Triassic sequences on geologic map, but basaltic-andesite with zircon U-Pb age of 238±2 Ma, suggests M Triassic age. Rocks similar to continental arc volcanic rocks from Phetchabun belt in NE Thailand, through W Loei sub-belt (E-dipping subduction linked closing of Nan backarc basin between Sukhothai terrane and W margin of Indochina Block))

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(Loei Fold Belt at W margin of Indochina Block linked to subduction of Paleotethys Ocean. In NW Laos andesitic and rhyolitic samples from Muang Feuang region of Belt have E Carboniferous zircon ages (~330, 335, 350 Ma). Basaltic and basaltic-andesitic samples frome Pak Lay region zircon ages of ~315 Ma. Suggest Carboniferous active continental margin along W margin of Indochina Block)

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(online at: http://sciencepress.mnhn.fr/sites/default/files/articles/pdf/g2006n1a1.pdf)
(New vertebrate remains from Devonian of C Vietnam (Indochina Block) provide further information about various fish fossils (similar to Yangtse Platform, S China block, brachiopods (Corbicularia, etc.) and charophytes (Sycidium))

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(Pre-Tertiary basement of C and S Vietnam pervasive strike-slip and normal faulting. Two superposed strike-slip systems: (1) Paleogene (large NW-SE left-lateral strike-slip faults, parallel to Red River Fault; E-W maximum shortening axis) and (2) E Neogene (dominant N 160°E to N-S right-lateral faults). Indochina affected bycollision of India with Eurasia, first through pervasive NW-SE left-lateral strike-slip faulting (extrusion of Indochina), then through N160°E to N-S right-lateral faulting, compatible with large right-lateral sub-meridian shear zone over E margin of Indochina as S China Sea basin was opening)

Roger, F., M. Jolivet, H. Maluski, J.P. Respaut, P. Munch, J.L. Paquette, Tich Vu Van & Vuong Nguyen Van (2014)- Emplacement and cooling of the Dien Bien Phu granitic complex: Implications for the tectonic evolution of the Dien Bien Phu Fault (Truong Son Belt, NW Vietnam). Gondwana Research 26, p. 785-801.
(Dien Bien Phu and Muong Lay granites in N Vietnam exposed E and W of DPB fault. U/Pb age of ~277 Ma and considered related to subduction of Song Ma Ocean under Indochina Block during Indosinian orogeny.

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(Song Chay Range with high-grade granitic and metamorphic dome near Cenozoic Ailao Shan-Red River fault zone. Previously considered to be Proterozoic S China basement. Granite with zircon age of 428±5 Ma. Rb/Sr on ands 39Ar/40Ar ages suggest Late Triassic episode of rapid cooling interpreted as due to doming. AFT age of 33.6±3.6 Ma confirms rapid Eocene-Oligocene cooling event, final exhumation of Song Chay dome)

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(NE Vietnam major tectonic episode with nappes emplacement in Triassic. Allochtonous structures intruded by E-M Triassic post-tectonic granitic melts (Phia Bioc granite intrusive; 245-248 Ma), possibly synchronous with strike-slip faulting events (250-245 Ma) in Truong Son Belt Indosinian orogen. Probably linked with intra-plate

magmatism of Emeishan Large Igneous Province or with magmatism associated with Paleotethys closure. Cretaceous Phia Oac granite (87.3 ± 1.2 Ma) probably tied to 'late Yanshanian' Paleo-Pacific subduction)

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(New Triassic stratigraphic framework for Song Da and Sam Nua basins, N Vietnam. Song Da Basin at S margin of S China Block in foreland setting during late E- M Triassic, not rift. Sam Nua basin on N margin of Indochina Block records activity of proximal magmatic arc from late Permian-Anisian, resulting from subduction of S-dipping oceanic slab that separated S China and Indochina blocks. Both basins M-L Triassic erosion, creating major unconformity from erosion of M Triassic Indosinian S China -Indochina collisional belt. Late Triassic terrestrial syn- to post-orogenic foreland basins with coarse detrital material)

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(Luang Prabang Basin in NW Laos with long lasting Triassic subduction related arc volcanism (~ 35My; but rock age data mainly E Norian). Zircon ages of volcanic and volcanoclastic rocks ~233-215 Ma. Triassic active margin along W margin of Indochina Block, with E-dipping subduction from ~250(?)-215 Ma. Oceanic subduction episode followed by continental collision of Indochina Block with E Simao Block (area is E of Sukhothai terrane and Nan-Uttaradit suture= closing of Paleotethys or marginal basin/ branch?; see also Blanchard et al. 2013, Qian et al. 2016)

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(40Ar/39Ar dating of biotite and muscovite of Da Lien granite, Nui Phao, N part of Vietnam on South China Plate indicate Late Cretaceous cooling age (82.8- 81.5 Ma) age of granite with polymetallic mineralization)

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(online at: https://www.jstage.jst.go.jp/article/jmps/106/1/106_091216/_pdf)
(Granitoids of Truong Son fold belt of C Laos formed in Indosinian orogeny, contemporaneous with Late Permian-Early Jurassic granites in SE Asian Tin Belt (253-247 Ma in SW, from 244-199 Ma in NE). Carboniferous-Permian I-type granitoids in Kontum massif of SE Laos (414-252 Ma))

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('Ammonites from the Toarcian N of Saigon, S Vietnam'. Ammonites collected by Fontaine at Lo-Duc, NNE of Saigon. Dumortieria lantenoisi, Pseudogrammoceras, Pseudammatoceras molukkanum, Hammatoceras suggest U Toarcian- lower Aalenian age and Tethyan affinities. Associated with rich bivalve fauna described by Hayami 1972)

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('On some deposits of tektites of Southern Indochina')

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('The geology of Indochina'. With fossiliferous sediments of M Cambrian- Quaternary ages)

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(Stratigraphic lexicon of Indochina (Cambodia, Laos, Vietnam); alphabetical listing and descriptions of stratigraphic units from Cambrian- Recent)

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(Large negative Qui Nhon Slope Anomaly is sea surface depression of ~1.5 m over 100km diameter. Corresponds to gravity anomaly of ~ -50 mgal. May be impact structure that produced Australasian strewn field)

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(Presence of Brachoxylon rotnaensis Mathiesen in the Mesozoic flora of lower Laos')

Serra, C. (1966)- Etude anatomique et paleogeographique de quelques especes homoxylees du Sud-Vietnam et du Cambodge. Archives Geol. Vietnam 8, p. 59-131.
('Anatomic and paleogeographic studies of some of homxylous species from South Vietnam and Cambodia'. Jurassic-Cretaceous fossil wood from 4 localities in S Vietnam and Cambodia. Six new conifer species. Mesozoic forests dominated by podocarps, with araucarias and ginkgos also present. Dadoxylon khmerinum n. sp. from Kazanian (Permian) of Sisophon (Cambodia). Brachyoxylon boureaui from 'Gres Superieurs' in Cambodia (also known from Phu Kradung Fm/ Khorat Gp of NE Thailand; Philippe et al. 2004))

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('New contribution to the paleoxylological study of Cambodia, Laos and Vietnam'. Incl. Araucarioxylon saravanensis (= Agathoxylon; Philippe et al. 2004))

Serra, C. (1969)- Sur des bois fossiles de lôArchipel de Tho Chau (Golfe de Thailande). Archives Geol. Vietnam 12, p. 1-15.
('On fossil wood of the Tho Chau Archipelago (Gulf of Thailand)'. Fossilized tree trunk in Late Jurassic or Early Cretaceous redbeds of Khorat Group-equivalent of Tho Chau islands, Vietnam part of Gulf of Thailand)

Shellnutt, J.G., C.Y. Lan, T. Van Long, T. Usuki, H.Y. Yang, S.A. Mertzman et al. (2013)- Formation of Cretaceous Cordilleran and post-orogenic granites and their microgranular enclaves from the Dalat zone, southern Vietnam: tectonic implications for the evolution of Southeast Asia. Lithos 182-183, p. 229-241.
(Cordilleran-type batholiths ofDalat zone of S Vietnam preserve evidence of Cretaceous convergent zone magmatism superimposed on Precambrian rocks of Indochina Block. Plutons of Dalat zone transitioned from active continental margin batholiths to highly extended crust with within-plate plutons. Deoca and Dinhquan plutons zircon U/Pb ages ~118-115 Ma, Ankroet pluton zircon age ~87Ma. Compositional change of Dalat

zone granitic rocks in M-L Cretaceous indicates tectonic regime evolved from continental arc environment to post-orogenic extension. Region of highly extended crust facilitated opening of S China Sea in Cenozoic)

Shen, J.W., T. Kawamura & W.R Yang (1998)- Upper Permian coral reef and colonial rugose corals in northwest Hunan, South China. Facies 39, p. 35-65.
(Late Permian (Palaeofusulina zone) coral reef limestone in Kanjia-ping, Hunan. Bafflestones formed by in-situ colonies of Waagenophyllum. Associated with fusulinids (Palaeofusulina, Nankinella, Staffella, Codonofusiella) and smaller foraminifera (Colaniella). Reef at Kanjia-ping is youngest Permian reef known)

Shi, M.F., F.C. Lin, W.Y. Fan, Q. Deng, F. Cong, M.D. Tran, H.P. Zhu & H. Wang (2015)- Zircon U-Pb ages and geochemistry of granitoids in the Truong Son terrane, Vietnam: Tectonic and metallogenic implications. Journal of Asian Earth Sciences 101, p. 101-120.
(Truong Son terrane in N Indochina block composed of six or more volcano-plutonic complexes. At least four stages of magmatic activitiy in Paleozoic- E Mesozoic: Ordovician-Silurian (420-470 Ma), Late Carboniferous-E Permian (280-300 Ma), Late Permian- M Triassic (245-270 Ma) and M-L Triassic (200-245 Ma).

Spagnuolo, S.A., J. Chambers & C. Luxton (2009)- Comparison of the geologic evolution and petroleum system of the Hai Phong sub-basin and the Phu Khanh Basin, offshore Vietnam. Proc. 2009 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, p. 1-31. *(Abstract + Presentation)*
(Two underexplored basins off Vietnam, both with initial extension tectonics but have contrasting post syn-rift evolution. Phu Khan Basin no evidence for wrench fault system; mild M Miocene compressional event caused re-activation of pre-existing extensional faults. Compression event appears to have ceased by end M Miocene. Post M Miocene transformation of basin into passive margin with progradational-aggradational mega-sequences. Hai Phong sub-basin in N with major M Miocene and Late Pliocene inversion events)

Steyer, J.S. (2009)- The geological and palaeontological exploration of Laos; following in the footsteps of J.B.H. Counillon and A. Pavie. In: E. Buffetaut et al. (eds.) Late Palaeozoic and Mesozoic continental ecosystems in SE Asia, Geol. Soc., London, Spec. Publ. 315, p. 25-32.
(Brief history of geological exploration in Laos since late 1800's, mainly by Counillon)

Stokes, R.B. (2013)- Depratôs trilobites and the position of the Indochina Terrane in the Early Palaeozoic. Proc. Int. Symposium Geoscience resources and environments of Asian terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 201-207.
(Late Ordovician-Silurian trilobite faunas collected by Deprat in ~1915 from Laos and C Vietnam on Indochina Terrane, have European affinities (paleo-location adjacent to Bohemia ? (but topic of controversy in 1919: according to Mansuy trilobites came from Europe and had been 'planted' in Laos by Deprat)

Stokes, R.B., P. Lovatt Smith, A. Racey, C.H.C. Brunton, O. Dawson, A.R.H. Swan & M.F. Whitaker (2012)- Some Upper Palaeozoic fossil localities in the Vientiane Contract Area, Lao PDR, and their geological importance. J. Science Technol. Mahasarakham University (MSU) 31, p. 63-73.
(online at: http://journal.msu.ac.th/2012_/index.php/SCI/article/view/286/294)
(New Upper Paleozoic (Carboniferous- Permian) localities from C and W Laos. Includes latest Permian limestone with Palaeofusulina- Colaniella fauna N of Vientiane)

Stokes, R.B., P.F. Lovatt Smith & K. Soumphonphakdy (1996)- Timing of the Shan-Thai-Indochina collision: new evidence from the Pak Lay Foldbelt of the Lao PDR. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of SE Asia, Geol. Soc., London, Spec. Publ. 106, p. 225-232.
(Pak Lay Foldbelt in NW Laos is product of Indosinian orogeny (collision of Shan-Thai and Indochina along Nan-Uttaradit ophiolite suture). Current hypotheses place timing of collision in Permian or Triassic. However, in area S of Pak Lay M-U Jurassic argillites (with Classopollis spp., Calliatisporites dampieri, etc.) and volcanic rocks in steeply dipping imbricated wedge, which is unconformably overlain by Cretaceous Khorat Gp, suggesting Late Jurassic Shan-Thai-Indochina suturing)

Suasta, M., O. Arifin. & K. Suhanto (2014)- Gold mineralization along Ban Mai- Nakachan trend, west part of Sepon mineral district, Savannakhet Province, LAO PDR. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 319-329.

Sun, L.Q., H.F. Ling, K.D. Zhao, P.R. Chen, W.F. Chen, T. Sun, W.Z. Shen & G.L. Huang (2017)- Petrogenesis of Early Cretaceous adakitic granodiorite: implication for a crust thickening event within the Cathaysia Block, South China. Science China (Earth Sciences) 60, 7, p. 1237-1255.
(E Cretaceous Lingxi pluton in interior of Cathaysia Block (zircon U-Pb age 100±1 Ma). Granodiorite with geochemical features of adakitic rocks, derived from partial melting of thickened Proterozoic lower continental crust at P ≥12 kbar (= crust thickness ≥40 km), leaving garnet-bearing amphibolite residue. Crust thickened by late E Cretaceous compressive event (angular unconformity between Upper Cretaceous rift deposits and folded early Lower Cretaceous or Jurassic). During subsequent lithospheric extension (driven by Paleo-Pacific subduction?) lower crust heated by upwelling asthenospheric materials, resulting in Lingxi and other coeval granitoids in Cathaysia Block)

Swiecicki, T. & K. Maynard (2009)- Geology and sequence stratigraphy of Block 06/94, Nam Con Son basin, offshore Vietnam. Proc. 2009 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, p. 1-17. *(Abstract + Presentation)*
(Similarities and differences in tectonostratigraphic development of Cuu Long, Nam Con Son and W Natuna basins. W Natuna and Cuu Long Late Eocene/E Oligocene onset of rifting. All three basins with M Oligocene rifting, coincident with sea-floor spreading in S China Sea. Cuu Long Basin compressional reactivation of strike-slip faults in Late Oligocene ; inversion of early grabens in W Natuna Basin in E, M and Late Miocene. Nam Con Son Basin with second period of M -L Miocene rifting following end of sea-floor spreading)

Takemoto, K., N. Halim, Y. Otofuji, Tran Van Tri, Le Van De & S. Hada (2005)- New paleomagnetic constraints on the extrusion of Indochina: Late Cretaceous results from the Song Da terrane, northern Vietnam. Earth Planetary Sci. Letters 229, p. 273-285
(U Cretaceous redbeds of Song Da terrane between Indochina and S China blocks suggest Song Da terrane behaved as part of S China Block, when Shan-Thai Block and S part of Indochina Block experienced 10.5° ± 9.5° S-ward displacement accompanied with CW rotation later than Indo-Asian collision)

Tang, Y., J. Liu, M.D. Tran, Z. Song, W. Wu, Z. Zhang, Z. Zhao & W. Chen (2013)- Timing of left-lateral shearing along the Ailao Shan-Red River shear zone: constraints from zircon U-Pb ages from granitic rocks in the shear zone along the Ailao Shan Range, Western Yunnan, China. Int. J. Earth Sciences (Geol. Rundschau) 102, p. 605-626.
(Zircon U-Pb ages of granites along Ailo Shan- Red River FZ constrain on timing of left-lateral shearing: initiation later than 31 Ma from pre-shearing granitic plutons but earlier than 27 Ma from syn-shearing granitic dykes, and termination ~21 Ma from the post-shearing granitic dykes. Left-lateral shearing result of SE-ward extrusion of Indochina block during Indian-Eurasian plate collision)

Thang, Bui Duc (1989)- Lower Triassic conodonts from North Vietnam. Acta Palaeontologica, Warsaw, 34, 4, p. 391-416.

Thanh, T.D., P. Janvier & T.H. Phuong (1996)- Fish suggests continental connections between the Indochina and South China blocks in Middle Devonian time. Geology 24, 6, p. 571-574.
(Yunnanolepiform antiarch (placoderm fish) from the Givetian Dong Tho Fm of C Vietnam, well S of Song Ma suture, in marginal marine facies. Hitherto known exclusively from Lower Devonian of S China block, suggesting close links between Indochina and South China blocks in M Devonian time)

Thanh, N.X., Mai Trong Tu, T. Itaya & S. Kwon (2011)- Chromian-spinel compositions from the Bo Xinh ultramafics, northern Vietnam; implications on tectonic evolution of the Indochina Block. J. Asian Earth Sci. 42, 3, p. 258-267.
(Bo Xinh ultramafics, N of Song Ma fault zone isolated bodies long considered as remnants of Paleotethys Ocean lithosphere between Indochina and S China blocks. Cr-spinel compositions suggest parental magma was

lherzolite-harzburgite in composition, indicating forearc tectonic environment. Combined with information on magmatism, metamorphism and sedimentary environment, suggest presence of S-ward subduction zone since Cambrian and collision of Indochina and S China in Late-Silurian- E Devonian. Permian-Triassic magmatic-metamorphic events in Indochina block linked to N-ward subduction of Paleo-oceanic plate beneath Indochina block, followed by M-L Triassic Sibumasu collision)

Thassanapak, H., M. Udchachon & C. Burrett (2012)- Devonian radiolarians and tentaculitids from central Laos. J. Asian Earth Sci. 60, p. 104-113.
(Radiolaria (Trilonche spp, Stigmosphaerostylus spp., etc.) and tentaculitids (Homoctenus ultimus, Costulatostylionina vesca) in 4m of thick M-U Devonian section of silicified shales at Ban Phonxai, C Laos (N part of Indochina Terrane). Indicative of Frasnian age. Pelagic deep shelf fauna from Indochina Terrane similar to that from S China)

Thassanapak, H., M. Udchachon & C. Burrett (2017)- Silurian radiolarians from the Sepon Mine, Truong Son Terrane, central Laos and their palaeogeographic and tectonic significance. Geol. Magazine 155, 8, p. 1621-1640.
(Late Silurian radiolarian fauna of 18 species from cherts in Sepon Mine area, C Laos. With Futobari morishitai, F. solidus, Zadrappolus yoshikiensis and Z. tenuis. Evidence from Silurian-Devonian of S Truong Son Terrane indicates deepening to S (radiolarian cherts; terrestrial red sandstone facies to NE). In contact with E Silurian limestone and U Ordovician- E Silurian graptolitic shale, overlain by turbiditic volcaniclastics from nearby Long Dai Volcanic Arc. Arc probably maintained by N-ward subduction along Thakhek-Danang Shear Zone)

Thuong Chi Cung & J.W. Geissman (2012)- A review of the paleomagnetic data from Cretaceous to lower Tertiary rocks from Vietnam, Indochina and South China, and their implications for Cenozoic tectonism in Vietnam and adjacent areas. J. Geodynamics 69, p. 54-64.
(Cretaceous- E Tertiary paleomagnetic data from Indochina– Shan Thai Block reveal complex patterns of intra-plate deformation in response to India-Eurasia collision)

Tien, Nguyen D. (1970)- Quelques fusulinides de Nui Com, Sud Viet-Nam (Zone a). Archives Geol. Vietnam 13, 1, p. 1-70.
(Rel. high diversity 'Tethyan' M Permian fusulinid assemblage with Neoschwagerina from Nui Com, S Vietnam)

Tien, Nguyen D. (1979)- Etude micropaleontologique (foraminiferes) de materiaux du Permien du Cambodge. Thesis 3me Cycle, Universite Paris Sud, Orsay, p. 1-166. *(Unpublished)*
('Micropaleontological study (foraminifera) of material from the Permian of Cambodia')

Tien, Nguyen D. (1986)- Foraminifera and algae from the Permian of Kampuchea. In: H. Fontaine (ed.) The Permian of Southeast Asia, Appendix 2, United Nations CCOP Techn. Bull. 18, p. 116-137.
(Well-illustrated summary of foraminifera from Permian limestones from W and S Cambodia, using thin sections originally used by Gubler (1935)for study on fusulinids of Indochina)

Tien, Phan Cu et al. (eds.) (1991)- Geology of Cambodia, Laos and Vietnam. Explanatory note to Geological map, 1,000,000 scale, 2nd ed., Geol. Survey Vietnam, Hanoi, p. 1-158.

Tong-Dzuy, T., A.J. Boucot, J.Y. Rong & Z.J. Fang (2001)- Late Silurian marine shelly fauna of Central and Northern Vietnam. Geobios 34, 3, p. 315-338.
(Late Silurian brachiopods and bivalves from Kien An (N Vietnam) and My Duc (C Vietnam) localities. Both with similar 'Retziella fauna', indicating that during Late Silurian both areas, situated on S China and Indochina Plates respectively, were probably fairly close to each other (Retziella fauna also in E Australia))

Tong-Dzuy, T., P. Ta Hoa, A.J. Boucot, D. Goujet & P. Janvier (1997)- Vertebres siluriens du Viet Nam Central. Compte Rendus Academie Sciences, Paris, IIa, 324, p. 1023-1030.

('Silurian vertebrates from Central Vietnam'. New placoderm fish Myducosteus anmaensis from Indochina Plate, associated with brachiopods)

Tong-Dzuy T., T.H. Phuong, P. Janvier, Nguyen H. Hong, Nguyen T.T. Coc & Nguyen.T. Duong (2013)- Silurian and Devonian in Vietnam- stratigraphy and facies. J. Geodynamics 69, p. 165-185.
(Review of Silurian and Devonian sediments in Vietnam. Most Devonian units in N and C Vietnam consist of shelfal shallow water sediments, apparently deposited in passive margin marine setting)

Tong-Dzuy, Thanh & Vu Khuc (eds.) (2011)- Stratigraphic units of Vietnam, 2nd Edition. Vietnam National University Publ., Hanoi, p. 1-553.

Tran, H.T., N.X. Thanh, J. Halpin & K. Zaw (2011)- The occurrence of ophiolite-style assemblages along Sino-Vietnam border, Northeastern Vietnam and its implication to the tectonic evolution of Northeastern Indochina. In: Int. Conf. Geology, geotechnology and mineral resources of Indochina (GEOINDO 2011), Khon Kaen, p. 479-488.
(Ophiolites in Sino-Vietnam border, linked to closing of Paleotethys back-arc style oceanic basin flanking NE margin of Indochina Block in Late Paleozoic- E Mesozoic)

Tran Ngoc Nam (1995)- The geology of Vietnam: A brief summary and problems. Geoscience Repts. Shizuoka University 22, p. 1-10.
(online at: https://ci.nii.ac.jp/els/contents110000413364.pdf?id=ART0000542361)
(Vietnam five structural blocks, from N to S: NE, NW, Truongsong, Kontum, Nambo)

Tran Van Tri (1994)- The geotectonic framework of Vietnam and adjacent areas. In: J.L. Rau (ed.) Proc. 29th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, 2, p. 183-190.
(Review of Vietnam tectonics. Indochina foldbelt/ Mekong-Indosinian orogeny with folded Carboniferous-Triassic clastics, andesites and ultramafic bodies marks Late Triassic closure of SE branch of Paleo-Tethys and collision of Sino-Vietnamese (Cathaysia), Indosinian, Shan and W Borneo blocks)

Tran Van Tri, Do Canh Duong, Dang Quoc Lich et al. (2016)- Coal-forming episodes in Vietnam, Cambodia and Lao PDR. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 50-53. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(Coal-forming episodes in Indochina region: M-L Devonian, E Carboniferous, Late Permian, Late Triassic, E Jurassic, Tertiary and Quaternary. Only E Carboniferous, Late Triassic and Tertiary coals economically important)

Trung, N.M., T. Tsujimori & T. Itaya (2006)- Honvang serpentinite body of the Song Ma fault zone, Northern Vietnam: a remnant of oceanic lithosphere within the Indochina- South China suture. Gondwana Research 9, 1-2, p. 225-230.
(Honvang serpentinite body in Song Ma fault zone consists mainly of massive serpentinite, altered gabbro and rare chromitite. Original peridotite was spinel-bearing lherzolitic harzburgite. Serpentinite body of Song Ma fault zone represents remnant of Tethyan oceanic lithosphere between Indochina- S China blocks)

Tsuchiyama, Y., H. Zaman, S. Sotham, Y. Samuth, E. Sato, H.S. Ahna, K. Unoe, K. Tsumura, Masako Miki, Y. Otofuji (2016)- Paleomagnetism of Late Jurassic to Early Cretaceous red beds from the Cardamom Mountains, southwestern Cambodia: Tectonic deformation of the Indochina Peninsula. Earth Planetary Sci. Letters 434, p. 274-288.
(Paleomag of Late Jurassic- E Cretaceous red beds in Phuquoc-Kampot Som Basin (part of Indochina Block) suggests S-ward displacement of 6.0 ± 3.5° and CW rotation of 33 ± 4°. CW rotation ~15° larger than Khorat Basin, attributed to dextral motion along Wang Chao Fault since M Oligocene. Comparison with CCW rotation reported from Da Lat area in Vietnam suggests differential tectonic rotation in S tip of Indochina Block)

Udchachon, M., H. Thassanapak & C. Burrett (2018)- Early Permian radiolarians from the extension of the Sa Kaeo Suture in Cambodia- tectonic implications. Geol. Magazine 155, 7, p. 1449-1464.
(E-W melange-ophiolite belt, 3 km wide-20 km long, separating northern block of amphibolitic Pailin Crystalline Complex from southern area of Triassic submarine fan siliciclastic rocks. Cherts with Asselian-Sakmarian radiolarian fauna of Pseudoalbaillella spp, etc.. Sa Kaeo Suture appears to extends E into Cambodia and possibly then turns S-wards along strike of Pursat-Kampot Foldbelt)

Udchachon, M., H. Thassanapak, Q. Feng & C. Burrett (2017)- Palaeoenvironmental implications of geochemistry and radiolarians from Upper Devonian chert/shale sequences of the Truong Son fold belt, Laos. Geological Journal 52, 1, p. 154-173.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/gj.2743/epdf)
(Frasnian radiolarian chert and siliceous shale in Truong Son fold belt of C Laos (NE part of Indochina Terrane). Radiolarian fauna similar to S China, N Thailand and W Australia. Associated with tentaculitids Homoctenus ultimus and Costulatostyliolina vesca, previously described from S China and Ban Phonxai. Deposited in pull-apart basins along NW-SE trending Thakhek-Danang Shear Zone)

Ueno, K. (1999)- *Robustoschwagerina*-bearing limestone pebbles from southern Laos. Ann. Rept. Institute of Geoscience, University of Tsukuba, 24, p. 57-64.

Ueno, K., T. Charoentitirat, Y. Kamata, H. Hara, M. Ichise, P. Charusiri, K. Khamphavong & K. Hisada (2007)- A new Pennsylvanian fusuline fauna from northern Laos. Acta Micropaleont. Sinica 24, 4, p. 359-369.
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper/83.pdf)
(Small fusuline fauna in limestone hill in SW Luang Prabang Province, N Laos (Indochina Block) with Staffella, Neostaffella, Profusulinella, etc., suggests Late Carboniferous (latest Bashkirian- E Moscovian) age)

Ueno, K., T. Charoentitirat, Y. Kamata, H. Hara, M. Ichise, K. Hisada, K. Khamphavong, S. Kongthiphavong & S.P. Charusiri (2007)- Late Paleozoic carbonates in northern Laos: their foraminiferal faunas and geotectonic implications. In: Geological Anatomy of East and South Asia, Third Symposium of IGCP Project 516, Delhi, p. 154-156.

Ueno, K., T. Charoentitirat, Y. Kamata, K. Khamphavong, K. Hisada, P. Charusiri, H. Hara & S. Chantraprasert (2010)- Late Paleozoic carbonates and foraminiferal faunas in northern Lao PDR: their geotectonic implications. In: Proc. Thai-Lao Tech. Conf. on Geology and Mineral Resources, Bangkok, p. 141-146. *(Extended Abstract)*
(online at: www.eatgru.sc.chula.ac.th/Thai/research/pdf/paper_2/102.pdf)
(N Laos Carboniferous and Permian limestones NW of Luang Prabang and S of Sayabouli. Carboniferous limestone with Profusulinella, Fusulinella, Beedeina, and Fusulina. E-M Permian platform carbonates with Yangchienia, Parafusulina, Neoschwagerina, Afghanella, Presumatrina, Verbeekina, etc. Similar to W margin of Indochina Block in Loei area of M Thailand, suggesting link between NE Thailand and NW Laos. Nan-Uttaradit Suture between Sukhothai zone and Indochina Block runs NNE-ward into NW Laos and continues to Lancangjiang suture in W Yunnan)

Ueno, K., N. Hayakawa, T. Nakazawa, Y. Wang & X.D. Wang (2013)- Pennsylvanian- Early Permian cyclothemic succession on the Yangtze carbonate platform, South China. In: A. Gasiewicz & M. Slowakiewicz (eds.) Palaeozoic climate cycles: their evolutionary and sedimentological impact. Geol. Soc., London, Spec. Publ. 376, p. 235-267.
(Large Carboniferous-Permian Yangtze carbonate platform of S China (Yangtze) Block), with 26 Late Carboniferous- E Permian cyclothems identified. Probably rel. arid climate))

Ueno, K., Y. Kamata, K. Uno, T. Charoentitirat, P. Charusiri, K. Vilaykham & R. Martini (2018)- The Sukhothai Zone (Permian-Triassic island-arc domain of Southeast Asia) in Northern Laos: insights from Triassic carbonates and foraminifers. Gondwana Research 61, p. 88-99.
(Sukhothai Zone Permian-Triassic Paleo-Tethyan island-arc system along W margin of Indochina Block considered to extend from N Thailand to SW Yunnan (China), but no evidence from N Laos in between.

Foraminifers from shallow marine limestone in Long area of NW Laos of Triassic (Carnian) age (Aulotortus sinuosus, A. tumidus, Ophthalmidium, Endotriada, Endoteba, Palaeolituonella, etc.). In Thailand similar Carnian limestone only in Doi Long Fm in Sukhothai Zone)

Ueno, K., A. Miyahigashi, Y. Kamata, K. Hisada, H. Hara, K. Uno, T. Charoentitirat, P. Charusiri et al. (2014)- Permian and Triassic carbonates in the Oudom Xai- Luang Namtha area, northern Laos: stratigraphical and paleontological constraints for connecting Northern Laos with Northern Thailand. In: Development of the Asian Tethyan Realm, Proc. 3rd Int. Symposium Int. Geosciences Program (IGCP) Project 589, Tehran 2014, p. 2-4. *(Extended Abstract)*
(Permian limestones in N Laos dominated by sponge- Tubiphytes-microbial reefal boundstone with Colaniella cylindrica, Agathammina, Pachyphloia, Neoendothyra, Reichelina, Palaeofusulina?, etc., referable to Changhsingian (latest Permian). Also M Triassic (Anisian) carbonates with ooid grainstones and Late Triassic (Carnian) sponge-microbial boundstones. In Thailand similar carbonate succession only in Lampang-Phrae-Nan area of Sukhothai Zone, suggesting Sukhothai Zone extends to W part of N Laos)

Usuki, T., C.Y. Lan, K.L. Wang, T. A. Tran, M.W. Yeh, H.Y. Chiu & S.L. Chung (2010)- Early Archean crustal components in the Indochina block: evidence from U-Pb ages and Hf isotope of detrital zircons from the central Vietnam. In: 7th Int. Symp. Gondwana to Asia: evolution of Asian continent and its continental margins, Qingdao 2010, Int. Assoc. Gondwana Research, Japan, p. 45. *(Abstract only)*
(online at: www.igm.nsc.ru/labs/lab212/~safonova/pdf/7thiagrabstracts.pdf)
(U-Pb dating and Hf isotope analysis of detrital zircons from C Vietnam rivers, to characterize continental crust of Indochina block. Zircon dating results: Archean- Cambrian zircons four major clusters (2.5, 1.6, 1.0-0.9 and 0.65-0.5 Ga), younger zircons three clusters (450, 250, 30 Ma). Indochina block long crustal evolution history, involving significant amount of Archean continental crustal components)

Usuki, T., C.Y. Lan, T.F. Yui, Y. Iizuka, Van Tich Vu, Tuan Anh Tran, K. Okamoto, J.L. Wooden, J.G. Liou (2016)- Early Paleozoic medium-pressure metamorphism in central Vietnam: evidence from SHRIMP U-Pb zircon ages. Geosciences J. 13, 3, p. 245-256.
(Zircon analyses of two paragneiss samples of Kham Duc Complex, C Vietnam ~447, 452Ma, different from the available Ar-Ar mineral ages of 254-225 Ma. ~450 Ma zircon rim ages reflect possible crustal thickening event in Late Orrdovician (most likely collisional orogeny between Indochina and S China blocks), while Permo-Triassic Ar-Ar ages would result from Indosinian overprint. Late Neoproterozoic-Neoarchean ages from detrital zircon cores suggest protoliths may have derived from sediments at Gondwana margin)

Van Doorninck, N.H. (1940)- Kort overzicht over de geologie en de nuttige delfstoffen van Fransch Indochina. De Ingenieur in Nederlandsch-Indie (IV) 7, 11, p. 147-157.
('Brief review of geology and useful minerals of French Indochina')

Van Doorninck, N.H. (1940)- Kort overzicht over de geologie en de nuttige delfstoffen van Fransch Indochina- vervolg. De Ingenieur in Nederlandsch-Indie (IV) 7, 12, p. 162-165.
('Brief review of geology and useful minerals of French Indochina- continuation')

Villeneuve, M., C. Rossignol, R. Martini, J.J. Cornee & S. Bourquin (2020)- New insights into the Triassic sedimentary environment of the eastern parts of the Song Da and Sam Nua basins alongside the Indosinian Song Ma suture, Northern Vietnam. J. Asian Earth Sci. 187, 104067, p.
(online at: www.sciencedirect.com/science/article/pii/S1367912019304195)
(Triassic formations from E part of Truong Son Belt, N Vietnam from both sides of M Triassic Song Ma suture between Indochina and S China Blocks. M-L Triassic (Anisian-Carnian) ~1200m thick carbonate deposits at both sides of suture. Depositional settings and deformation patterns support S-ward subduction under Indochina Block, ending with collision of S China Block in M Triassic. Comparisons of Triassic carbonate platforms of N Vietnam with other platforms. Triassic carbonates in Indonesia (Sulawesi, Seram, Misool) younger (Norian-Rhaetian) and thinner (<250m))

Vozenin-Serra, C. & E. Boureau (1978)- Sur l'interet phytostratigraphique du bassin houiller mesozoique de Nong-Son-Vinh Phuoc dans le centre Vietnam et ses rapports avec la phylogenie des especes. Comptes Rendus Hebd. Academie Sciences, Paris, D, 287, 8, p. p. 791-796.
('The phytostratigraphic significance of the Mesozoic Nong-Son-Vinh Phuoc coal basin, Central Vietnam, and phylogeny of species')

Vozenin-Serra, C. & D. de Francesci (1999)- Flore du Trias superieur du Vietnam (bassins houillers du Quang-Nam et de Hongay). Palaeontographica, B 249, p. 1-62.
('Flora of the Upper Triassic of Vietnam (coal basins of Quang-Nam and Hongay)'. Vietnam M-U Triassic flora belongs to Dictyophyllum-Clathropteris coastal floristic assemblage of SE China-Indochina- S Japan- NW Borneo. Affinities of plant assemblage with Krusin flora (NW Borneo). Remarkable presence of Gondwanan elements Paleovittaria, Glossopteris indica and Noeggerathiopsis; also observed in Triassic of China)

Vu Khuc, D. (1990)- Palaeogeography of Viet Nam during the Triassic. ESCAP Atlas of Stratigraphy 9, p. 54-72.

Vu Khuc (ed.) (1991)- Paleontological Atlas of Vietnam, vol. 3, Molluscs, Geol. Survey Vietnam, Hanoi, p.

Vu Khuc (2000)- Cretaceous environments in Viet Nam, Laos and Cambodia. In: H. Okada, H. & N.J. Mateer (eds.) Cretaceous environments of Asia, Elsevier Science B 17, p. 201-206.
(Indochina Peninsula Cretaceous sedimentation under continental conditions.Some basins with normal red beds, others with volcanogenic formations. Climate became hotter and drier in Late Cretaceous)

Vu Khuc (2000)- The Triassic of Indochina Peninsula and its interregional correlation. In: H. Yin, J.M. Dickins et al. (eds.) Permian-Triassic evolution of Tethys and Western Circum-Pacific, Developments in Palaeontology and Stratigraphy, Elsevier, 18, p. 221-233.
(Triassic correlations in Vietnam, Laos, Myanmar, Thailand. Two types of Triassic: (1) An Chau, with felsic volcanogenic Anisian unconformable on older formations, Carnian continental red beds or absent; (2) Song Da, with calcareous Anisian conformable on Lw Triassic and marine Carnian with deep-water halobiid bivalves)

Vu Khuc & E. Cariou (1998)- Ammonites from Jurassic basins of Viet Nam and their stratigraphic implications. Journal Geology, Hanoi, B, 11-12, p. 107-120.

Vu Khuc, C., A.S. Dagys, V.D. Kiparisova, N.Ba Nguyen, T.C. Bao & I.N. Sredrodolskaia (1965)- Les fossiles characteristiques du Trias du Nord Vietnam. Direct. General. Geologie de la R.D. Vietnam, Hanoi, p. 1-118.
('The characteristic fossils of the Triassic of North Vietnam'. Incl. Anisian ammonite Beyrichites sp.)

Vu Khuc & Dang T. Huyen (1998)- Triassic correlation of the Southeast Asian mainland. Palaeogeogr. Palaeoclim. Palaeoecology 143, p. 285-291.
(Triassic in SE Asia mainly marine sediments. Fossils mostly bivalves and ammonoids. Biostratigraphic scales to help correlate Triassic sequences of different SE Asian areas. Twelve assemblage zones distinguished. SE Asia Triassic many species in common with S China and Himalayas. M Triassic with thin-shelled bivalves Daonella, Late Triassic with Halobia, etc.)

Vu Khuc, D. & J.A. Grant-Mackie (1997)- A new Bajocian molluscan faun, Dalat Basin, southern Vietnam. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 142. *(Abstract only)*
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Discovery of new M Jurassic (E Bajocian) marine fauna in Langa Fm of Datat Basin, S Vietnam, incl. ammonite Fontannesia and bivalves Bositra ornati and B. buchii)

Vu Khuc, C. Meister & Dang T. Huyen (2005)- New results of the study on Early Jurassic ammonites from Viet Nam and their stratigraphic implications. Int. Subcomm. Jurassic Stratigraphy Newsletter 32, p. 38-41.

(online at: http://jurassic.earth.ox.ac.uk/__data/assets/pdf_file/0011/10244/ISJS32.pdf)

Vu Khuc, Vu Chau, Trinh D., Dang Tran Huyen, Nguyen D.H. & Trinh Tho (1991)- Paleontological Atlas of Vietnam, vol.3, Mollusca. Science and Technics Publ. House, p. 1-276.

Vysotsky, V.I., R.D. Rodinikova & M.N. Li (1994)- The petroleum geology of Cambodia. J. Petroleum Geol. 17, p. 195-210.
(Six possibly oil-gas-bearing basins identified in Cambodia: Siam (N Gulf of Thailand), Tonle Sap, Khorat (S portion), Preah, Chung and Svairieng Basins)

Wang, D. & L. Shu (2012)- Late Mesozoic basin and range tectonics and related magmatism in Southeast China. Geoscience Frontiers (China University of Geosciences, Beijing) 3, 2, p. 109-124.
(online at: www.sciencedirect.com/science/article/pii/S1674987111001095)
(M Jurassic- Late Cretaceous extensional basin and range tectonics and associated magmatism widespread in SE China, tied to W Pacific Plate subduction. Basin types: (1) post-orogenic Late Triassic- E Jurassic with coarse clastics, and (2) intra-continental extensional basins, formed during crustal thinning and characterized by development of grabens/ half-grabens. Grabens mainly E-M Jurassic, with bimodal volcanism; half-grabens E Cretaceous, with rhyolitic tuff- lavas and mainly Late Cretaceous-Paleogene redbeds. Ranges composed of granitoids, volcanic rocks and dome-type metamorphic core complexes. Basin and range terrane developed on pre-Mesozoic folded belt, derived from polyphase tectonic evolution, mainly due to subduction of W Pacific Plate since Late Mesozoic)

Wang, S., G. Wang & Q. Chen (1999)- Sedimentary facies of the lower Permian Ngangze Formatio in the Coquen Basin, Xizang. Sedimentary Facies and Paleogeography 19, p. 44-48. *(in Chinese)*

Wang, X.D., W. Qie, Q. Sheng, Y. Qi, Y. Wang, Z. Liao, S. Shen & K. Ueno (2013)- Carboniferous and Lower Permian sedimentological cycles and biotic events of South China. In: A. Gasiewicz & M. Slowakiewicz (eds.) Palaeozoic climate cycles: their evolutionary and sedimentological impact, Geol. Soc., London, Spec. Publ. 376, p. 33-46.

Wang, Y., J.V. Aitchison & H. Luo (2003)- Devonian radiolarian faunas from South China. Micropaleontology 49, 2, p. 127-145.
(Devonian radiolarians from 4 new sections in SW Yunnan, S China, with 15 genera/ 30 species. Stratigraphic significance of M Devonian Eoalbaillella lilaensis fauna, morphotypic variation within genus Helenifore and abundance and diversity of U Devonian Holoeciscus foremanae fauna discussed)

Wang, Y.J., W. Fan, G. Zhang & Y. Zhang (2011)- Phanerozoic tectonics of the South China Block: key observations and controversies. Gondwana Research 23, 4, p. 1273-1305.
(South China Block: 3 tectonothermal events periods: M Paleozoic (Kwangsian), Triassic (Indosinian) and Late Jurassic- mid-Cretaceous (Yanshanian). Yanshanian wide magmatic belt of >1300 km and broad deformational belt of >2000 km (Jurassic in inland regions, Cretaceous in coastal provinces?). Driven by subduction of oceanic crust from Pacific in E. Zircons of Yanshanian I-, S- and A-type granites three age clusters: 152-180 Ma (mainly calk-alkaline, I-type, peak at ~165-155 Ma= ~Oxfordian), 120-130 Ma (I, S and A-types) and 87-107 Ma (93 Ma peak))

Wang, Y.J. & Q. Yang (2011)- Biostratigraphy, phylogeny and paleobiogeography of Carboniferous- Permian radiolarians in South China. Palaeoworld 20, p. 134-145.
(Carboniferous-Permian radiolarian faunas from deep marine bedded chert of S China (Paleotethys?) divided into 22 radiolarian zones. Panthalassa and Paleo-Tethys no clear biotic differentiation in open ocean environment. Discussion of evolutionary series of Pseudoalbaillella (late Guadalupian P. ishigai- P. fusiformis- P. monacanthus lineage) and Follicucullus (latest Guadalupian- E Lopingian F. scholasticus- F. ventricosus- F. orthogous/F. scholasticus- F. hamatus- F. bipartitus lineage). No locality details)

Wang, Y.J., Q. Yang, Y.N. Cheng & J.X. Li (2006)- Lopingian (Upper Permian) radiolarian biostratigraphy of South China. Palaeoworld 15, p. 31-53.
(U Permian radiolarian cherts well-developed basins in S China. Six biozones, incl. Follicucullus bipartitus- F. charveti- F. orthogonus Zone, Foremanhelena, Albaillella and Neoalbaillella zones. Paleobiogeographically U Permian radiolarian faunas cosmopolitan in nature)

Wei, W., M. Faure, Y. Chen, W. Lin, Q. Wang, Q. Yan & Q. Hou (2015)- Back-thrusting response of continental collision: Early Cretaceous NW-directed thrusting in the Changle-Nanĝao belt (Southeast China). J. Asian Earth Sci. 100, p. 98-114.
(SE coastal area of S China Block generally interpreted as Cretaceous active continental margin due to subduction of Paleo-Pacific plate beneath Eurasian plate. NW-directed ductile thrusting at ~130-105 Ma, before deposition of undeformed (~104 Ma) volcanic rocks and intrusion of ~90 Ma plutons. Interpreted as back-thrust resulting W Philippines microcontinent collision with SCB rather than effect of oceanic subduction)

Wen, S., Y.L. Yeh, C. Tang, H.P. Lai, V.T. Dinh, W.Y. Chang & C. Chen (2015)- The tectonic structure of the Song Ma fault zone, Vietnam. J. Asian Earth Sci. 107, p. 26-34.
(Seismotectonic structures of Song Ma fault zone indicate a complex fault system at different segments)

Whitford-Stark, J.L. (1987)- A survey of Cenozoic volcanism on mainland Asia. Geol. Soc. America (GSA), Spec. Paper 213, p. 1-74.
(Cenozoic magmatism, mainly along E margin of Asia. Peaks of volcanic activity in Oligocene-Miocene and Pliocene-Pleistocene. Main tectonic controls on volcanism: E Cenozoic subduction along E seaboard, collision of Indian continent, development of back-arc basins, and interactions between Asian- N American plates)

Workman, D.R. (1972)- Mineral resources of the Lower Mekong Basin and adjacent areas of Khmer Republic, Laos, Thailand and Republic of Vietnam. United Nations. Document E/CN.11/1002, UN Economic Commission for Asia and the Far East, Mineral resources development series 39, p. 1-148.

Workman, D.R. (1975)- Tectonic evolution of Indochina. J. Geol. Soc. Thailand 1, 1-2, p. 3-19.

Workman, D.R. (1978)- Geological structure of the Indochina Peninsula. In: Wiryosujono & A. Sudradjat (eds.) Proc. 2nd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 201-211.
(Indochina Block of Cambodia, Laos, S Vietnam and E Thailand 3 main periods of folding from Late Paleozoic-U Triassic/ E Jurassic; essentially rigid since Jurassic)

Xia S., Y. Shen, D. Zhao & X. Qiu (2015)- Lateral variation of crustal structure and composition in the Cathaysia Block of South China and its geodynamic implications. J. Asian Earth Sci. 109, p. 20-28.

Xia, W., J. Zhou, W. Yuan, S. Zhang & Y. Yang (1994)- Genetic stratigraphic framework and evolutional history of Late Triassic foreland basins in South China. Earth Science. J. China University of Geoscience 19, 1, p. 19-29. *(in Chinese)*
(Late Triassic foreland basin in W Guizhou and E Yunnan provinces))

Xin, Q., Q. Feng, Y. Wang, W. Yang, C. Chonglakmani & D. Monjai (2016)- Petrochemistry and tectonic setting of the Middle Triassic arc-like volcanic rocks in the Sayabouli Area, NW Laos. J. Earth Science (China) 27, 3, p. 365-377.
(Volcanic rocks from Sayabouli area in NW Laos mapped as Permian- E Triassic, but basaltic-andesite with zircon U-Pb age of 238±2 Ma, suggests M Triassic age. Geochemical affinity to continental arc volcanics, and similar to arc volcanics from Phetchabun belt in NE Thailand, suggesting Late Permian- M Triassic continental margin/ volcanic belt at margin of Indochina Block, from NW Laos to C Thailand through W Loei sub-belt)

Xu, Y., C.Y. Wang & T. Zhao (2016)- Using detrital zircons from river sands to constrain major tectono-thermal events of the Cathaysia Block, SE China. J. Asian Earth Sci. 124, p. 1-13.

(Detrital zircons from Minjiang and Zhujiang Rivers in SE China show five major U/Pb age populations: 90-250 Ma, 400-500 Ma, 0.7-1.2 Ga, 1.6-2.0 Ga and 2.3-2.6 Ga. About 80-90% of present crust in NE and SW Cathaysia Blocks formed by 1.6 Ga. The 140-120 Ma tectono-thermal events likely related to change of subduction direction of Paleo-Pacific plate from N-ward to NW ward at 140 Ma. The 112-90 Ma tectono-thermal events may be correlated with rollback of subducted Paleo-Pacific plate at ~110 Ma)

Yang, Z., V. Courtillot, J. Besse, X. Ma, L. Xing, S. Xu & J. Zhang (1992)- Jurassic paleomagnetic constraints on the collision of the North and South China Blocks. Geophysical Research Letters 19, 6, p. 577-580.
(S China Block underwent final accretion to N China Block in M Jurassic. Accretion of N China Block to Siberia not complete until Late Jurassic and possibly even until E Cretaceous)

Yang, Z., Z. Sun, T. Yang & J. Pei (2004)- A long connection (750-380 Ma) between South China and Australia: paleomagnetic constraints. Earth Planetary Sci. Letters 220, p. 423-434.
(Paleomagnetic study on M Cambrian in N Sichuan Basin (Yangtze Block). S China Block placed against NW Australia, correlating Grenville-age Jiangnan orogenic belt with Rudall belt of W Australia, and subsequently Late Proterozoic Jiangnan and Officer/Adelaide rift systems. Paleobiogeographic evidence indicates this configuration might maintain by M Devonian)

Yao, A., K. Kuwahara, Y. Ezaki, J. Liu & W. Hao (2004)- Permian radiolarians from the Qinfang Terrane, South China, and its geological significance. J. Geosciences Osaka City University 47, 3, p. 71-83.
(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DB00011403.pdf)
(Early- Late Permian radiolarian chert of Qinfang Terrane with nine zones, probably signifying deep basin between Yangzi Block in NW and Cathaysia block in SE)

Yonemura, K., Y. Osanai, N. Nakano, M. Owada & S. Baba (2013)- Petrology, geochemistry, and origin of metamorphosed mafic rocks of the Trans Vietnam orogenic belt, Southeast Asia. J. Mineralogical Petrological Sci. 108, p. 55-86.
(online at: https://www.jstage.jst.go.jp/article/jmps/108/2/108_120813/_pdf)
(NW-SE trending Trans-Vietnam Orogenic Belt thought to have formed by continent-continent collision between S China and Indochina blocks in Permian- Triassic. Amphibolite-facies metamorphosed mafic rocks widespread in Song Ma suture zone, Kontum Massif, etc., derived from arc and oceanic crust between these plates)

Yu, Y., S.S. Gao, K.H. Liu, T. Yang, M. Xue & Khanh Phon Le (2017)- Mantle transition zone discontinuities beneath the Indochina Peninsula: implications for slab subduction and mantle upwelling. Geophysical Res. Letters 44, 14, p. 7159-7167.
(Velocity model shows evidence for presence of slab segments in Mantle Transition Zone beneath C and slab window beneath W Indo-China plate. Also broad mantle upwelling adjacent to E edge of slab segments, which may responsible for widespread Cenozoic volcanism and pervasive low upper mantle velocities in area)

Zeng, G., Z.Y. He, Z. Li, X.S. Xu & L.H. Chen (2016)- Geodynamics of paleo-Pacific plate subduction constrained by the source lithologies of Late Mesozoic basalts in southeastern China. Geophysical Research Letters 43, p. 10,189-10,197.
(SE China Late Mesozoic basalts four age groups: 178-172 Ma, ~150 Ma, 137-123 Ma and 109-64 Ma. Mainly pyroxenites. Subduction of Paleo-Pacific plate most likely candidate for mantle-derived magmatism after ~150 Ma. Slab rollback with increased dip angle possible model for lithological variations of Late Mesozoic mantle)

Zhang, X., H. Ma, Y. Ma, Q. Tang & X. Yuan (2013)- Origin of the late Cretaceous potash-bearing evaporites in the Vientiane Basin of Laos: ŭ11B evidence from borates. J. Asian Earth Sci. 62, p. 812-818.
(Late Cretaceous Maha Sarakham Fm evaporites on Khorat Plateau with one of largest potash deposits in world. Origin has long been controversial. Main borates boracite and hilgardite with isotopic values suggesting marine borates)

Zhao, J., J. Qiu, L. Liu & R. Wang (2016)- The Late Cretaceous I- and A-type granite association of southeast China; implications for the origin and evolution of post-collisional extensional magmatism. Lithos 240-243, p. 16-33.
(SE China coast granites two groups: (1) in N, I-type alkali-feldspar granites generated by mixing of mantle-derived material with crustal-derived magmas (98-96 Ma); and (2) in S, A-type plutons (89-86 Ma). All granites highly siliceous, K-rich. Both granite types emplaced during post-collisional extensional tectonism associated with rollback of steeply subducting Paleo-Pacific Plate (increase of dip angle of subducted Paleo-Pacific plate between Early- Late Cretaceous)

Zhao, L., X. Zhou, M. Zhai, M. Santosh, Y. Geng (2015)- Zircon U-Th-Pb-Hf isotopes of the basement rocks in northeastern Cathaysia block, South China: implications for Phanerozoic multiple metamorphic reworking of a Paleoproterozoic terrane. Gondwana Research 28, p. 246-261
(Zircon age peaks of 1.86-1.87 Ga and 230-250 Ma interpreted to represent time of metamorphic reworking. The extensive ~1870 Ma Paleoproterozoic thermal event may be response of Cathaysia block to assembly of Columbia supercontinent)

Zhao, X., Y. Jiang, G. Xing, M. Yu, J. Mao & S. Yu (2018)- Newly discovered Late Cretaceous adakites in South Fujian Province: implications for the late Mesozoic tectonic evolution of Southeast China. Island Arc 27, 2, e12236, p. 1-17.
(online at: https://onlinelibrary.wiley.com/doi/pdf/10.1111/iar.12236)
(Late Cretaceous Yongchun pluton adakitic intrusion in S Fujian, SE China. Zircon U-Pb ages of ~98-100 Ma, similar to those of nearby plutons. Magmas generated by partial melting of Mesoproterozoic continental crust mixed with mantle-derived magmas. Magmatism associated with thickening of lower crust during change in subduction angle and convergence rate of Paleo-Pacific Plate at 100 Ma)

Zhang, D., M. Yan, X. Fang, Y. Yang, T. Zhang, J. Zan, W. Zhang, C. Liu & Q. Yang (2018)- Magnetostratigraphic study of the potash-bearing strata from drilling core ZK2893 in the Sakhon Nakhon Basin, eastern Khorat Plateau. Palaeogeogr. Palaeoclim. Palaeoecology 489, p. 40-51.
(online at: https://www.sciencedirect.com/science/article/pii/S0031018217302080)
(Khorat Plateau one of world's largest potash evaporite deposits. Magnetostratigraphic study of 595m deep borehole in SE Sakhon Nakhon Basin in C Laos penetrated entire potash-bearing Nong Boua Fm and reached underlying sandstone beds. Combined with palynological, isotopic and other evidence, polarity zones correlated to geomagnetic polarity time scale, giving magnetostratigraphic ages of >63.5 Ma- ~92 Ma for evaporite section (= ~Turonian- Maastrichtian?))

Zhong, W.F., Q.L. Feng, C. Chonglakmani, D. Monjai & Z.B. Zhang (2012)- Permian-Triassic stratigraphic correlations between Laos and Yunnan and their tectonic significance. Earth Science (J. China University of Geosciences) 2012, S2, p. 73-80.
(New work in NW Laos shows Permian- Triassic (incl. U Permian clastics with coal) between Luangprabang and Chiang Rai belts are comparable to Simao basin between Ailaoshan and Lancangjiang belts. Nan River belt in N Thailand can therefore not be linked with Lancangjing belt by crossing NW Laos)

Zhou, J.X., K. Luo, Bo Li, Z.L. Huang & Z.F. Yan (2016)- Geological and isotopic constraints on the origin of the Anle carbonate-hosted Zn-Pb deposit in northwestern Yunnan Province, SW China. Ore Geology Reviews 74, p. 88-100.

Zhou, M.F., J. Malpas, M. Sun, X.Y. Song, P.T. Robinson, A.K. Kennedy, C.M. Lesher & R.R. Keays (2002)- A temporal link between the Emeishan large igneous province (SW China) and the end-Guadalupian mass extinction. Earth Planetary Sci. Letters 196, 3-4, p. p. 113-122.
(Emeishan flood basalt province in SW China zircon ages show age of Xinjie intrusion feeder to main phase of EFB volcanism is 259±3 Ma, coincident with proposed end-Guadalupian extinction event at 256-259 Ma)

Zhou, X., T. Sun, W. Shen, L. Shu & Y. Niu (2006)- Petrogenesis of Mesozoic granitoids and volcanic rocks in South China: a response to tectonic evolution. Episodes 29, 1, p. 26-33.

(online at: www.episodes.co.in/www/Backissues/291/26-33.pdf)
(Mesozoic granitoids and volcanic rocks in S China two main phases, responding to regional tectonic regime (1) mainly Late Triassic 'Indosinian' granites, tied to continent-continent collision within Tethyan orogenic domain; (2) Late Jurassic- Cretaceous 'Yanshanian' associated with NW-WNW-ward subduction of Paleo-Pacific ocean. Late Yanshanian K1 granitoid-volcanic rocks represent active continental margin magmatism; K2 tholeiitic basalts (85-105 Ma?) interlayered with red beds are interpreted as genetically associated with development of back-arc extensional basins in interior of S China Block)

Zi, J.W. (2012)- Late Paleozoic- Triassic tectono-magmatism in the Paleo-Tethys ocean, SW China: timing, nature and implications for continental amalgamation and orogenic processes. Ph.D. Thesis, University of Western Australia, Perth, p. 1-189.
(online at: research-repository.uwa.edu.au/files/3214568/Zi_Jianwei_2012.pdf)

Zi, J.W., P.A. Cawood, W.M. Fan, E. Tohver, Y.J. Wang, T.C. McCuaig & T.P. Peng (2013)- Late Permian-Triassic magmatic evolution in the Jinshajiang orogenic belt, SW China and implications for orogenic processes following closure of the Paleo-Tethys. American J. Science 313, 2, p. 81-112.
(Jinshajiang orogenic belt, SW China, records closure of Paleo-Tethys seaway and ensuing collision. Following consumption of ocean, M Triassic (247-237 Ma) collision zone magmatism. From 234-214 Ma emplacement of high-K, calc-alkaline granodiorites-monzogranites prior to isostatic uplift and extension, probably caused by breakoff of subducted slab. Melange and collision-related magmatic suites unconformably overlain by Late Triassic (229-217 Ma) conglomerate-rich sequence that represents overlap assemblage, across Qamdo-Simao terrane (Indochina) and Yangtze Block of S China)

Zi, J.W., P.A. Cawood, W. Fan, Y. Wang, E. Tohver, C. McCuaig & T. Peng (2012)- Triassic collision in the Paleo-Tethys Ocean constrained by volcanic activity in SW China. Lithos 144-145, p. 145-160.
(Collision-related Triassic volcanic rocks in Jinshajiang-Ailaoshan orogenic belt in SW China suggest initial collision and amalgamation of Qamdo-Simao (Indochina) terrane with Yangtze Block (S China) along Jinshajiang- Ailaoshan and Song Ma sutures probably in E Triassic, following consumption of Paleo-Tethys Ocean. 247-246 Ma Pantiange high-Si rhyolites represent early magmatic products. 245-237 Ma bimodal volcanism interpreted as extension within evolving collisional orogen, probably related to oblique convergence)

Zuo, X., L.S. Chan & J.F. Gao (2017)- Compression-extension transition of continental crust in a subduction zone: A parametric numerical modeling study with implications on Mesozoic-Cenozoic tectonic evolution of the Cathaysia Block. PlosS One 12, 2, e0171536, p. 1-35.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5300286/pdf/pone.0171536.pdf)
(Numerical modeling of transition from Mesozoic compression to extension in Cathaysia Block, SE China (upper plate of Paleo-Pacific subduction zone). Initiation of Late Cretaceous- Paleogene extensional regime probably triggered by roll-back of slowly subducting slab)

IX.6. Malay Basin, Gulf of Thailand

Achalabhuti, C. (1976)- Petroleum geology of Thailand (Gulf of Thailand and Andaman Sea) -summary. In: Proc. Conf. Circum-Pacific Energy and Mineral Resources, Honolulu 1974, American Assoc. Petrol. Geol. (AAPG), Spec. Vol. M25, p. 251-255.

Achalabhuti, C. (1981)- Natural gas deposits of Gulf of Thailand. In: M.T. Halbouty (ed.) Energy Resources of the Pacific Region, American Assoc. Petrol. Geol. (AAPG), Spec. Vol. SG 12, p. 155-166.
(Two commercial gas-condensate fields with reserves up to 5 TCF found in Union Oil Block 12 and Texas Pacific's concession block 15 and block 16. Union field in S Pattani trough, Texas Pacific field in N part Malay basin. Several gas-condensate reservoirs identified in E-M Miocene deltaic sandstones)

Achalabhuti, C. (1981)- Offshore hydrocarbon production and potential of Thailand. In: M.J. Valencia (ed.) Proc. EAPI/CCOP Workshop, Honolulu 1980, Energy 6, 11, p. 1247-1254.
(Four commercial gas/condensate fields delineated in Gulf of Thailand with gas reserves of >7 TCF. Also small amounts of crude oil in some wells. Continental woody material primary source, minor components from marine algae. Deep water drilling in Andaman Sea revealed Tertiary source beds mainly immature. Pre-Tertiary sedimentary basins beneath offshore areas of Andaman Sea and Gulf of Thailand more favorable for hydrocarbon potential)

Ahmad, M.N. & P. Rowell (2012)- Application of spectral decomposition and seismic attributes to understand the structure and distribution of sand reservoirs within Tertiary Rift Basins of Gulf of Thailand. AAPG Ann. Conv. Exh., Long Beach 2012, Search and Discovery Art. 40992 (2012), 32p. *(Abstract/ Presentation)*

Ahmad, M.N. & P. Rowell (2012)- Application of spectral decomposition and seismic attributes to understand the structure and distribution of sand reservoirs within Tertiary Rift Basins of Gulf of Thailand. The Leading Edge 31, 6, p. 630-634.
(Same story as Ahmad and Rowell (2012), above)

Alqahtani, F.A., C.A.L. Jackson, H.D. Johnson & M.R.B. Som (2017)- Controls on the geometry and evolution of humid-tropical fluvial systems: insights from 3D seismic geomorphological analysis of the Malay Basin, Sunda Shelf, Southeast Asia. J. Sedimentary Res. 87, 1, p. 17-40.
(High-resolution 3D seismic data from Malay Basin Pleistocene- Recent shows six fluvial channel types in eight 18-145m thick depositional units, with (1) relatively large (300-3000m wide, 15-45m deep) and straight channels at bases, and (2) smaller (75-250m wide, 8-23m deep), highly sinuous channels at tops. Cyclical architecture interpreted as mainly climatically driven changes in fluvial sediment supply. Two large incised valleys interpreted to be formed due relative sea-level fall during Last Glacial Maximum)

Alqahtani, F.A., H.D. Johnson, C.A.L. Jackson & M.R.B. Som (2015)- Nature, origin and evolution of a Late Pleistocene incised valley-fill, Sunda Shelf, Southeast Asia. Sedimentology 62, 4, p. 1198-1232.
(Analysis of 3D seismic data over large (18km wide, 80m deep and >180km long), well-imaged Late Pleistocene incised valley from Malay Basin, Sunda Shelf, S China Sea (' Paleo-Choa Phraya-Johore valley'))

Ampaiwan, T., Minarwan, P. Swire & P. Tognini & P. Charusiri (2016)- Hydrocarbon prospectivity definition, the Kra Basin, Northern Gulf of Thailand. AAPG Geoscience Techn. Workshop Characterization of Asian hydrocarbon reservoirs, Bangkok, Search and Discovery Art. 20357, 10p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2016/20357ampaiwan/ndx_ampaiwan.pdf)
(Kra basin in NW Gulf of Thailand is Tertiary N-S rifted, mainly lacustrine basin with hydrocarbon discoveries (Manora Field, Malida well). Top zone VIMT 50 marks top syn-rift mainly lacustrine section and also regional M Miocene Unconformity. Above syn-rift section mainly M- Late Miocene fluvial section. Post-Oligocene source rock potential)

Armitage, J.H. & C. Viotti (1977)- Stratigraphic nomenclature- Southern end Malay Basin. Proc. 6th Ann. Conv. Indon. Petroleum Assoc.(IPA), Jakarta, 1, p. 69-94.

Armitage, J.H. (1980)- A decade of exploration and development by EPMI off the east coast of Peninsular Malaysia. Offshore SE Asia Conf., Singapore 1980 (OFFSEA 80) preprint, 51p.

Barr, D. & K. Dharmarajan (2015)- The hydrocarbon resources of Block A-18, Gulf of Thailand: a brief overview and history. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2015, Singapore, 6.1, p. 1-24.
(Block A-18 in Malaysia-Thailand Joint Development Area with series of gas fields in stacked E Miocene-Pliocene sandstone reservoirs. Most production from Late Miocene. In central part of North Malay Basin, overlying series of N-S trending horsts and grabens)

Barr, D.C., M.J. Flynn, Ong Cheng Sun & K. Dharmarajan (2012)- Interpreting geological systems from seismic attributes: reasons for caution from the Northern Malay Basin. Proc. Int. Petroleum Techn. Conference, Bangkok, IPTC 14830, 10p.
(Example of channel-like feature clearly imaged from seismic attributes, but where size of channel did not match that implied by pressure transient analysis)

Basu, T., M. Claverie, D. Nolan, K.B. Yahya & M. Suleiman (2004)- Facies analysis; integration of core and log data using a neural network as input for reservoir modeling in Betty Field, Malaysia. The Leading Edge 23, 8, p. 794-797.

Bishop, M.G. (2002)- Petroleum systems of the Malay Basin Province, Malaysia. U.S. Geol. Survey (USGS), Open File Report 99-50T, p. 1-24.
(online at: http://pubs.usgs.gov/of/1999/ofr-99-0050/OF99-50T/OF99-50T.pdf)
(Discovered hydrocarbon reserves in Tertiary Malay Basin 12 billion BOE. USGS assessment of potential added conventional oil, gas and condensate by 2025 is 6.3 BBOE)

Brami, J.B. & M.Y. Muhaiyuddin (1984)- History and geology of the Tinggi Field, offshore Peninsular Malaysia. Proc. 5th Offshore South East Asia Conf., SE Asia Petroleum Expl. Soc. (SEAPEX), Singapore, p. 4.1-4.13.
(Tinggi 1980 oil discovery in J and K sands in small E-W trending anticline in Malay basin)

Brown, A.R., C.G. Dahm, R.J. Graebner (1981)- A stratigraphic case history using three-dimensional seismic data in the Gulf of Thailand. Geophys. Prospecting 29, 3, p. 327-349.
(Early paper on use of 3D seismic. Improved fault resolution and structural definition of gas field in Gulf of Thailand and seismic amplitudes used to map distribution of bars and channels Sands >10m thick mappable)

Bustin, R.M. & A. Chonchawalit (1995)- Formation and tectonic evolution of the Pattani Basin, Gulf of Thailand. Int. Geology Review 37, p. 866-892.
(Pattani Basin the most prolific petroleum basin in Thailand. E-W extension since E Tertiary resulted in series of N-S-trending sedimentary basins. Sediment succession divisible into Late Eocene- E Miocene non-marine synrift and E-M Miocene and younger shallow marine- non marine post-rift sequences. Crustal stretching factor (β) varies from 1.3 at basin margin to 2.8 in center. High heat flow (1.9-2.5 HFU) and geothermal gradient (45-60° C/km))

Bustin, R.M. & A. Chonchawalit (1997)- Petroleum source rock potential and evolution of Tertiary strata, Pattani Basin, Gulf of Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 81, 12, p. 2000-2023.
(Pattani Basin in Gulf of Thailand with 10 km of synrift U Eocene- Lw Miocene mainly nonmarine clastics and E Miocene- Holocene postrift marine-nonmarine clastics. Organic matter dispersed, terrestrial type III kerogen with minor type II kerogen, and consists primarily of vitrinite. Current depth to top oil window 1.4- 1.7 km. Main phase of hydrocarbon generation began at ~34 Ma. Presence of commercial gas fields suggests source rocks are effective in producing and liberating hydrocarbons, despite low hydrocarbon potential)

Carney, S., I.A. Aziz, W. Martins, A. Low & J. Kennedy (2010)- Reservoir characterisation of the Mio-Pliocene reservoirs of PM301 in the North Malay Basin. Proc. Int. Oil and Gas Conf. Exh. China, Beijing, Soc. Petrol. Engineers (SPE) 131017-MS, 25p.
(Block PM301 in N Malay Basin with seven relatively small and geologically complex gas fields discovered to date. Fields. Reservoir study)

Carson, T.G. & G.G. Phipps (1982)- The exploration applications of seismic DHI analysis in the Malay Basin. In: Offshore Southeast Asia '82 Conf. (OFFSEA 82), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 1-18.

Centhonglang, C., P. Promsen, P. Loboonlert, T. Charoenpun & J. Yingyuen (2015)- Success of structural stratigraphic combination trap, Arthit Field, Gulf of Thailand. AAPG/SEG Intl Conf. Exhib., Melbourne, Search and Discovery Art. 20333, 2p. *(Abstract + Poster)*
(online at: www.searchanddiscovery.com/documents/2015/20333centhonglang/ndx_centhonglang.pdf)
(Arthit gas field in NW North Malay Basin, offshore Thailand, mostly in Miocene- Oligocene reservoir. Most of the gas production from stacked channel reservoir in structural traps. 2012 appraisal well confirmed gas in 'nose structure' combination trap)

Chadwick, R.A., D.W. Holliday & W.J. Rowley (1991)- Thermal history of petroliferous basins of the CCOP region: 1. The northern part of the Gulf of Thailand. British Geol. Survey, Techn. Rept. WC/91/01C, p. 1-86.
(online at: www.bgs.ac.uk/research/international/dfid-kar/WC91001C_col.pdf)

Chadwick, R.A., D.W. Holliday & W.J. Rowley (1991)- Thermal history of petroliferous basins of the CCOP region: 1. The Malay Basin. British Geol. Survey, Techn. Rept. WC/91/02C, p. 1- .

Chantraprasert, S. (2000)- Extensional faults and fault linkages, Southern Pattani Basin, Gulf of Thailand. Ph.D. Thesis, University of London, p. *(Unpublished)*

Chen, H.W.W., S. Shukriah, O.A.B Mahmud, N. Pendkar & D. Hasspariah (2013)- An integrated approach of sequence stratigraphic study in southwestern of Malay Basin. Int. Petrol. Techn. Conf., Beijing, IPTC 16787, 7p.
(Sequence stratigraphic framework and implication for petroleum system understanding of SW Malay Basin. Six main 3rd order sequences in Oligocene-Pliocene. Two source rock intervals in study area: Late Oligocene deeper synrift with lacustrine deposits and E Miocene marine inner neritic rocks. Potential reservoirs (fluvial, lacustrine and shallow marine sands) thin basinward (SW to NE))

Chenrai, P. (2013)- Structural style and tectonic evolution of the Nakhon Basin, Gulf of Thailand. Bull. Earth Sci. Thailand (BEST) 4, 2, p. 70-75.
(online at: www.geo.sc.chula.ac.th/BEST/volume4/number2/12_Piyaphong_BEST_4_2_p%2070-75.pdf)
(Nakhon Basin at W margin of Gulf of Thailand. Initial rifting created halfgrabens in Late Oligocene. Rifting followed by inversion and second phase of rifting in M Miocene. Basin formed in response to oblique extension resulting from right-lateral motion)

Chew, H.H. & A.H. Hussein (1986)- Bekok reservoir model study. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 7, p. 87-95.
(Reservoir model of E Miocene J18/20 sands in Esso 1971 Bekok field, Block PM-9, Malay Basin)

Chonchawalit, A. (1993)- Basin analysis of Tertiary strata in the Pattani Basin Gulf of Thailand. Ph.D. Thesis University of British Columbia, Vancouver, p. 1-366.
(online at: https://circle.ubc.ca/handle/2429/2079)
(Stratigraphic-structural evolution of N-S trending Pattani basin in Gulf of Thailand. Up to 10 km of Tertiary sediment fill. Synrift phase 3 units: Late Eocene- E Oligocene alluvial-fluvial deposits, Late Oligocene- E Miocene fluvial and E Miocene mixed marine- non-marine deposits. Post rift succession: E-M Miocene regressive shallow marine- fluvial series, late E Miocene transgressive package and Late Miocene-Pleistocene

transgressive package. Organic matter mainly of detrital and continental origin. Modeling suggests main phase of hydrocarbon generaton started around 34 Ma)

Chua, B.Y. & R. Wong (1997)- Some possible new exploration ideas in the northern and western Malay Basin of Peninsular Malaysia. ASCOPE Proc. 2, p. 177-191.

Chua, B.Y. (1998)- A decade (1987-1997) of exploration in Malaysia under the 1985 PSC. Proc. Offshore South East Asia Conference 1998 (OFFSEA 98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 109-122.
(Brief review of new discoveries and new play fairways in Malay Basin (Bunga Kekwa, Yong/North Raya, Rhu) and offshore Sarawak (Jintan gas, Helang gas, Kinabalu oil, Kebabangan oil-gas)

Chuenbunchom, S., A.P. Heward & G. Makel (2000)- The reservoir geology of the 'pre-Tertiary' sequences of palaeokarst structures, Gulf of Thailand. J. Geol. Soc. Thailand 1, p. 8-18.
(online at: http://library.dmr.go.th/library/J-Index/2000/145.pdf)
(Pre-Tertiary 'basement' highs below Late Oligocene/Base Tertiary in Chumphon Basin penetrated variable Permian- Triassic lithologies. 5 of 6 Pre-Tertiary penetrations encountered losses of drilling fluids. Porous zones in carbonate of B6/27 from subsurface hydrothermal leaching, not near-surface tropical weathering)

Clark, S.J.A. & R.C. Davis (2017)- Observations of hydrocarbon migration within the Jasmine Field and the impact on risk assignment for exploration prospectivity in Eastern Block B5/27, Gulf of Thailand. In: Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, Session 8, 4p. *(Extended Abstract)*
(Jasmine Field (Jasmine and Ban Yen) in NW Pattani Basin, Gulf of Thailand. Discovered in 1974, cumulative production 65 MMSTB Oil from >160 pools in 30 fault blocks and 27 M-L Miocene reservoirs. Oils appear to be expelled from similar organofacies at similar maturities, from kitchen S of Ban Yen area)

Creaney, S., A.H. Hussein, D. Curry, K.M. Bohacs & R. Hassan (1994)- Source facies and oil families of the Malay Basin, Malaysia. American Assoc. Petrol. Geol. (AAPG) Bull. 78, p. 1139. *(Abstract only)*
(Malay Basin several petroleum systems with Oligocene- M Miocene non-marine source rocks. Lower Oligocene- Lw Miocene lacustrine-dominated, Lw-M Miocene coastal/delta plain coal-related sources. Two lacustrine sources, with low pristane/phytane ratios, low oleanane, general absence of resin-derived terpanes. Multiple sources in coaly section (pristane/phytane ratios up to 8, very high oleanane, often abundant resinous compounds). All source rocks generally overmature in basin center and immature toward basin margin. Oils low in sulfur. Migration largely strata parallel with little cross-stratal mixing of families)

Cuny, G., C. Laojumpon, O. Cheychiw & K. Lauprasert (2010)- Fossil vertebrate remains from Kut Island (Gulf of Thailand, Early Cretaceous). Cretaceous Research 31, p. 415-423.
(Mesozoic vertebrate fauna from sandstones on Ko Kut, E Gulf of Thailand, includes fresh water hybodont sharks, actinopterygians, turtles, goniopholidid crocodiles and theropod dinosaurs. Incl. Heteroptychodus kokutensis n.sp. Fauna same age as Sao Khua Fm (Khorat Group) and not Jurassic, but Berriasian or younger. Tectonic affinities of Kut island unclear, may represent Sibumasu or Indochina Block)

Duval, B.C. & J. Gouadain (1994)- Exploration and development in the Bongkot Field Area (Gulf of Thailand): an integrated approach. In: Proc. 14th World Petroleum Congress, Stavanger 1994, p. 247-257.
(Bongkot gas- condensate field, largest in Gulf of Thailand. Complex geometry of reservoirs: faulted blocks and mid to late Tertiary fluvio-deltaic sands distributed across 2000m thick sedimentary section)

Fontaine, H., D. Rodziah & U. Singh (1990)- A Triassic 'reefal' limestone in the basement of the Malay Basin, South China Sea: regional implications. Bull. Geol. Soc. Malaysia 27, p. 1-25.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1990016.pdf)
(Sotong B1 well in SW part of Malay Basin (4.9° N, 104.8° E) drilled ~300m of Late Triassic limestone at TD. Two limestone types: (1) black wackestone-packstone (10000-10017') with some oolites, sponges, Tubiphytes; (2) grey wackestone-packstone (9736-9761') rich in fragments of sponges, bryozoa, corals (Pinacophyllum,

Thecosmilia?). Common Tubiphytes (= Shamovella), calcareous sponges (Colospongia). Foraminifera: Alpinophragmium perforatum, Opthalmidium, Tetrataxis, etc.. 'Tethyan', probably reefal, Norian-age)

Fontaine, H., D. Rodziah & U. Singh (1990)- Discovery of an Upper Triassic limestone basement in the Malay Basin, offshore Peninsular Malaysia: regional implications. J. Southeast Asian Earth Sci. 4, 3, p. 219-232.
(Same paper as above on limestone at base of Sotong B1 well with Triassic limestone penetrated from 9030-10,017'. With pseudoalgae, foraminifera (Alpinophragmium) and abundant calcisponges)

Fujiwara, M. (2010)- Significant erosion during development of the Middle Miocene unconformity and its effect on hydrocarbon generation in the Gulf of Thailand. AAPG Int. Conf. Exh., Rio de Janeiro 2009, Search and Discovery Art. 20084, p. 1-9.
(online at: www.searchanddiscovery.com/documents/2010/20084fujiwara/ndx_fujiwara.pdf)
(>20 oil-gas fields in Pattani Trough rift basin, with up to 7500m of Tertiary sediment. Source rocks Oligocene lacustrine shales and M Miocene coaly shales. M Miocene Unconformity with ~4500' of erosion at Erawan gas field, based on shale compaction trend and 'paleo-anticline' below MMU, possibly related to 'Himalayan' compressional event in Gulf of Thailand)

Fujiwara, M. (2011)- The Middle Miocene Unconformity (MMU) in the southern part of the Pattani Trough in the Gulf of Thailand. J. Japanese Assoc. Petroleum Technologists 76, 6, p. 545-555.
(online at: https://www.jstage.jst.go.jp/article/japt/76/6/76_545/_pdf)
(In Japanese, with English summary. Gulf of Thailand >4000 wells drilled since 1971. Over 30 oil-gas fields discovered. mainly in Cenozoic Pattani Trough rift basin, 200km long/ 50km wide, with 2 main unconformities: deep MTU (below drill depths) and shallower Mid-Miocene Unconformity (MMU). Compaction trends from sonic logs suggest ~1000m of erosion at MMU (possibly too high). MMU between Florschuetzia levipoli and F. meridionalis zones)

Fujiwara, M., M. Yamada & A. Sasaki (2009)- Possible inorganic origin of the high CO2 gas reservoirs in the Platong and the Erawan Gas Fields, Gulf of Thailand. AAPG Hedberg Conf., Variations in fluvial-deltaic and coastal reservoirs deposited in tropical environments, Jakarta, Search and Discovery Art. 90102, 2p. *(Extended Abstract)*

Fyhn, M.B.W., L.O. Boldreel & L.H. Nielsen (2010)- Escape tectonism in the Gulf of Thailand: Paleogene left-lateral pull-apart rifting in the Vietnamese part of the Malay Basin. Tectonophysics 483, p. 365-376.
(Vietnamese part of Malay basin large, deep pull-apart basin formed through M-Late Eocene- Oligocene left-lateral strike-slip along NNW-trending fault zones, likely associated with SE Asian extrusion tectonism. Deep rift widens to S and connects with main Malay Basin. Neogene thermal sag led to thick sediment succession. Moderate rifting resumed in E Miocene. Late Neogene basin inversion attributed to 70 km of right-lateral movement across major N-S-trending faults in central part of basin, but not in Vietnamese territory)

Fyhn, M.B.W., S.A.S. Pedersen, L.O. Boldreel, L.H. Nielsen, P.F. Green, P.T. Dien, L.T. Huyen & D. Frei (2010)- Palaeocene- early Eocene inversion of the Phuquoc-Kampot Som Basin: SE Asian deformation associated with the suturing of Luconia. J. Geol. Soc., London, 167, 2, p. 281-295.
(Phuquoc-Kampot Som Basin, Gulf of Thailand (Cambodia- Vietnam) is Late Jurassic-E Cretaceous foreland basin. Paleocene- E Eocene basin inversion-erosion event associated with Luconia suturing to SE Asia and shutdown of Paleo-Pacific subduction under SE Asia segregated larger Mesozoic basin. Inversion focused along Kampot and Khmer-Chanthaburi fold belts and indicate link between initial SE Asian left-lateral strike-slip faulting and Luconia suturing)

Fyhn, M.B.W., H.I. Petersen, A. Mathiesen, L.H. Nielsen, S.A.S. Pedersen, S. Lindstrom, J.A. Bojesen-Koefoed, I. Abatzis & L.O. Boldreel (2010)- Vietnamese sedimentary basins: geological evolution and petroleum potential. Geol. Survey Denmark and Greenland Bull. 20, p. 91-94.
(online at: www.geus.dk/publications/bull/nr20/nr20_p091-094.pdf)
(Review of two basins in Vietnamese part of Gulf of Thailand: (1) Phu Quoc Basin undrilled, 500 km long, N-S trending basin with up to 4km of mainly non-marine Late Jurassic- Lower Cretaceous sediments, bordered in E

by Jurassic-Cretaceous magmatic arc, inverted in Late Paleocene- E Eocene (AFTA data suggest Late Paleocene- E Eocene cooling); unconformably overlain by Eocene-Neogene; (2) Tho Chu basin= NE part of Malay Basin, initiated between M-L Eocene, with mainly NNW-trending rifts)

Ghosh, D., M.F.A. Halim, M. Brewer, B. Viratno & N. Darman (2010)- Geophysical issues and challenges in Malay and adjacent basins from an E & P perspective. The Leading Edge 29, 436, p. 1-11.
(Malay Basin N-S-trending pull-apart rift basin, formed during Late Eocene-E Oligocene, underwent thermal subsidence and sedimentation in E Miocene. M Miocene structural inversion resulting in E-W anticlines)

Ghosh, D., S. Jirim, S. Isa & P. Abolins (2010)- The roles of coal in hydrocarbon exploration in the Malay Basin: the good, the bad and the ugly. In: Petroleum Geology Conf. Exhib., Kuala Lumpur (PGCE 2010), p. *(Extended Abstract)*

Ghosh, D., M. Sajid, N.A. Ibrahim & B. Viratno (2014)- Seismic attributes add a new dimension to prospect evaluation and geomorphology offshore Malaysia. The Leading Edge 33, 5, p. 536-545.

Goodall, J.G.S., A. Racey & P. Highton (1997)- Early Carboniferous (Tournasian) palynomorphs from the Gulf of Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, 1, p. 56-61.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7622.pdf)
(Clastic basement in wells 7-152-1X and 8-320-1X at W flank of N Pattani Trough in Gulf of Thailand with mod. diverse, cosmopolitan mid-Tournaisian miospore assemblage. Dominant species Punctatisporites/ Retusotriletes spp., Speleotriletes balteatus and Vallatisporites vallatus. Spore color 4-5 (heavily carbonised; in dry gas or barren maturity window))

Halim, M.F.A. (1994)- Geothermics of the Malayan sedimentary basins. Bull. Geol. Soc. Malaysia 36, p. 163-174.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994031.pdf)
(Study of heat flow distribution in Malay, Sarawak and Sabah sedimentary basins from 400 exploration and production wells. Highest heat flow in Malay basin (av. 143 m W/m2), followed by Sarawak basin (104 mW/m2) and lowest in Sabah basin (74 m W/m2))

Hassaan, M., S.K. Bhattacharya, M.J. Mathew & N.A. Siddiqui (2015)- Understanding basin evolution through sediment accumulation modeling: a case study from Malay Basin. Research J. Applied Sciences, Engineering Technology 11, 4, p. 388-395.
(online at: http://maxwellsci.com/msproof.php?doi=rjaset.11.1792)
(Malay Basin with up to 14 km of sediments. Sedimentation rate analysis and 2D modeling suggest sediment accumulation started at 33.9 Ma towards the basinal side, possibly associated to activation of Tenggol fault. Prior to unit K (25.2 Ma) sediments absent on Tenggol arch. During Late Miocene basin wide inversion sediments still accumulated in SW part)

Hassan, M.H.A., R. Tahir & A.K. Ali (2013)- Facies architecture of a complex, heterolith-filled incised valley system, Miocene Malay Basin, Malaysia. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, P15, 4p. *(Extended Abstract)*
(Facies analysis and stratigraphic study of tidal heterolithic deposits infilling deep (up to 43 m thick) incisions in H Group of Field I, WD, ED, CG and C, offshore Malay Basin. Interpret presence of 3 separate, NW-SE trending valley incisions associated with base level fall, which are infilled mainly by tidal heteroliths)

Heward, A.P., S. Chuenbunchom, G. Makel, D. Marsland & L. Spring (2000)- Nang Nuan Field, B6/27, Gulf of Thailand: karst reservoirs of meteoric or deep burial origin? Petroleum Geoscience 6, p. 15-27.
(Permian karst reservoirs in Chumphon Basin of Gulf of Thailand produced oil at >10,000 BBL/day. Previously presumed to be from meteorically karstified buried hills in Ratburi carbonates, but apparently unrelated to subaerial exposure. Highs are probably syn-rift horsts and inversion features, with karstification in karst in Ratburi carbonate reservoirs primarily of deep-burial origin, related to geothermal circulation)

Higgs, R. (1999)- Gravity anomalies, subsidence history and the tectonic evolution of the Malay and Penyu Basins (offshore Peninsula Malaysia)- Discussion. Basin Research 11, 3, p. 285-290.
(Critical discussion of Madon & Watts 1998 paper, suggesting paleobathymetry needed to be incorporated and speculating whether there may be two rift intervals in Malay Basin instead of one (possible renewed rifting in Late Miocene))

Highton, P.J.C., A. Racey, M.I. Wakefield, A.J. Carmichael & N.R.W. Glendinning (1997)- Quantitative biostratigraphy: an example from the Neogene of the Gulf of Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, p. 563-585.
(online at: http://library.dmr.go.th/library/7657.pdf)
(Gulf of Thailand Eocene?- Recent intra-cratonic basin with up to 8000m Neogene section in mainly non-marine facies. Biostratigraphic zonation mainly based on palynology. Most onshore basins lack coastal palynomorphs like Florschuetzia. Existing zonations can be refined by quantitative analysis of biostrat data. Late M Miocene Unconformity (MMU) separates deformed mainly non-marine section from more marine and less deformed younger section)

Hill, J.A., D.K.Y. Soo & T. Verriah (1992)- Clay mineralogy in subsurface sandstones of Malaysia and the effects on petrophysical properties. Bull. Geol. Soc. Malaysia 32, p. 15-43.

Hou, J., T. Takahashi, A. Katoh, S. Jaroonsiththa, K.P. Chumsena & K. Nakayama (2008)- Application of seismic attributes and neural network for sand probability prediction- a case study in the North Malay Basin. Bull. Geol. Soc. Malaysia 54, p. 115-121.

Ibrahim, N.A. & M. Madon (1990)- Depositional environments, diagenesis, and porosity of reservoir sandstones in the Malong Field, offshore West Malaysia. Bull. Geol. Soc. Malaysia 27, p. 27-55.
(online at: www.gsm.org.my/products/702001-101084-PDF.pdf)

Idris, M.B. (1989)- Early Silurian multielement conodont assemblages from Pulau Tanjung Dendang, northeastern Langkawi Islands, Kedah. Warta Geologi 15, 2, p. 63-68.
(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1989002.pdf)
(U Setul Limestone of NW Pulau Tanjung Dendang, NE of Langkawi, with three multi-element species, Pterospathodus pennatus procerus, Panderodus unicostatus and Walliserodus santiclairi, indicating Late Llandoverian- E Wenlockian (E Silurian) age)

Idris, M.B. (1990)- *Araucarioxylon telentangensis*, a new species of fossil coniferous wood from the U1u Endau area, Johore, Malaysia. J. Southeast Asian Earth Sci. 4, p. 55-59.
(Piece of silicified wood 1.5m long, 60cm diameter at Sungai Telentang. Not sure if from Jasin Volcanics (with Late Permian limestones at Kampung Awah and intruded by Late Triassic granites) or from unconformably overlying U Jurassic- Lw Cretaceous Tebak Fm. Described as Araucarioxylon telentangensis n.sp.)

Idris, M.B., M.B. Munawir & N.B. Norazlam (1992)- Plant fossils and some geological aspects of the Ulu Endau Area, Johore-Pahang. Bull. Geol. Soc. Malaysia 31, p. 107-111.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992007.pdf)
(Area at Johore-Pahang boundary. Conifer plant fossils from light grey mudstones in tributaries of Sg. Telentang: silicified wood identified as Araucarioxylon telentangensis Idris and foliage of Frenelopsis malaiana Kon'no (commonly assigned U Jurassic- Lw Cretaceous))

Intawong, A. (2006)- Evolution of the Chumphon Basin, Gulf of Thailand. Ph.D. Thesis, University of London, p. *(Unpublished)*
(In W Gulf of Thailand close relationship between basins such as Chumphon Basin and NE-SW trending Khlong Marui Fault. S Thailand basins early period of rifting started in Late Eocene and became widespread by Oligocene. Inversion took place in eastern basins (Chumphon, Songkhla) at start of Miocene. Extension was

renewed in E Miocene, and M Miocene corresponds to period of basin subsidence in Chumphon, Songkhla, and Andaman Sea Basins. Second period of inversion in Pliocene in Chumphon Basin, possibly coinciding with uplift on Thai Peninsula and in Andaman Sea)

Jamaludin, S.N.F., A.H. Abdul Latiff & A.A.Kadir (2016)- Interpretation of gas seepage on seismic data: example from Malaysian offshore. In: 3rd Int. Conf. AeroEarth, Jakarta 2015, IOP Conf. Series 30, 012002, p. 1-6.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/30/1/012002/pdf)
(Features of gas seepage on Malay Basin seismic data (amplitude anomalies, wipe out zones, sag or push down, pockmarks/ craters, etc.)

Jardine, E. (1997)- Dual petroleum systems governing the prolific Pattani basin, offshore Thailand. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia & Australia, Jakarta 1997, Indon. Petroleum Assoc., p. 351-363.
(Pattani Basin largest of series of N-S trending Tertiary rifts in Gulf of Thailand. Gas and less oil trapped in Miocene fluvial sandstones in faulted graben systems. Two petroleum systems in basin: (1) dominant Miocene gas-generating coals and shales, currently mature in deeper portions of basin; (2) Oligocene oil-prone lacustrine shales, mature in basin flank areas but overmature in central trough)

Jardine, E. (1997)- Dual petroleum systems governing the prolific Pattani basin, offshore Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 2, p. 525-534.
(same as Jardine 1997)

Jirin, S., M. Mohamed & S.S. Hasan (2013)- Transgressive-regressive cycles in the Malay Basin: new insights. Int. Petrol. Techn. Conf. (IPTC 2013), Beijing, IPTC 16838, 6p. *(Extended Abstract)*
(8 pulses of marine transgressions in Late Oligocene- Pliocene interval)

Jong, J., F.L. Kessler, M. Madon & H. Mohamad (2019)- Radioactive apatite-rich ñHot Sandsò of the Tenggol Arch: stratigraphic curiosity or sub-seismic reservoir correlation tool? Bull. Geol. Soc. Malaysia 67, p. 1-8.
(online at: https://gsm.org.my/products/702001-101790-PDF.pdf)
(Late Oligocene to Early Miocene reservoir sandstones in Tenggol Arch with intervals with anomalous radioactive levels within the K, J, and I Tertiary sequences. Thorium-bearing, apatite-rich sandstones and siltstones main source of radioactivity. Sediment derived from Malay Peninsula, Johor Platform and perhaps local cuesta ridges. Could be used for correlating reservoir units at reservoir or field scale)

Kachi, T., H. Yamada, K. Yasuhara, M. Fujimoto, S. Hasegawa, S. Iwanaga & R. Sorkhabi (2005)- Fault-seal analysis applied to the Erawan gas-condensate field in the Gulf of Thailand. In R. Sorkhabi & Y. Tsuji (eds.) Faults, fluid flow, and petroleum traps, AAPG Memoir 85, p. 59-78.
(Unocal Erawan gas field in Gulf of Thailand with series of E- and W-dipping normal faults that displace E-M Miocene clastic reservoirs. Most faults adequate seal capacity)

Kader, M.S. (1994)- Abnormal pressure occurrence in the Malay and Penyu Basins, a regional understanding. Bull. Geol. Soc. Malaysia 36, p. 81-91.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994024.pdf)
(Majority of wells in Malay and Penyu basins terminated due to abnormal pressure. Data from 94 exploratory wells show abnormal pressure in progressively older units towards basin margins, which are normally pressured. Onset of abnormal pressure abrupt in N and more gradual in S part of Malay Basin)

Kader, M.S. & W. Leslie (1995)- Occurrence, origin and implications of overpressure in the Malay and Penyu Basins, offshore Malaysia. Bull. Geol. Soc. Malaysia 37, p. 191-204.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a14.pdf)

(80% of wells drilled in Malay-Penyu Basin terminated due to overpressure. Overpressure neither depth dependent nor age -related. Margins of Malay Basin and entire Penyu Basin normally pressured; central part of Malay Basin overpressured. Onset of overpressure abrupt in N and more gradual in S portion)

Kaewkor, C., I.M. Watkinson & P. Burgess (2015)- Structural style and evolution of the Songkhla Basin, western Gulf of Thailand. Proc. Int. Conf. Geology, Geotechnology and Mineral Resources of INDOCHINA, Khon Kaen, Thailand (GEOINDO 2015), 12p.
(Gulf of Thailand part of suite of Cenozoic basins within Sundaland, with multiple phases of extension and inversion, rapid post-rift subsidence, low-angle normal faults and Basin and Range-style. Songkhla Basin in SW Gulf asymmetric half-graben, bounded by NNW-SSE- faults along W edge, ~75 km long, 30 km wide. Two oil fields in basin. Pre-Cenozoic basement fabrics broadly N-S. Sediments thicken to W along growth fault surfaces; most faults E-dipping. Three main tectonostratigraphic packages in basin: 1) Eocene E Miocene syn-rift, with three sub-extensional packages; 2) early M Miocene inversion and deposition of post-rift package, terminated by M-Miocene Unconformity; 3) Late Miocene-Recent post-rift)

Kantatong, K. (2010)- Hydrocarbon distribution in the North Jakrawan Field, Pattani Basin, Gulf of Thailand. Bull. Earth Sci. Thailand 3, 2, p. 33-36.

Kartikasari, H.A. (2011)- Structural style of Songkhla Basin, Gulf of Thailand. Bull. Earth Sciences Thailand 4, 2, p. 38-47.
(online at: www.geo.sc.chula.ac.th/BEST/volume4/number2/4_Heliosita_BEST_4_2_p%2025-31.pdf)
(Songkhla Basin in Western Graben of Gulf of Thailand asymmetric half-graben, bounded by NNW-SSE-trending major extensional faults. Basin fill thicker in W due to growth faulting. Maximum displacement along main boundary fault in W ~1.2 km in E Oligocene. Most faults E-dipping. Three tectonic phases: Eocene or E Oligocene initial rifting, E Miocene inversion, M Miocene resumption of extensional tectonics)

Kessler, F.L. & J. Jong (2018)- Sandstone diagenesis: establishing threshold temperature and depth of porosity deterioration, Penyu Basin and Tenggol Arch, offshore Peninsular Malaysia. Berita Sedimentologi 41, p. 5-21.
(online at: www.iagi.or.id/fosi/files/2018/09/FOSI_BeritaSedimentologi_BS41_September_2018.pdf)
(Penyu Basin SW of Malay Basin possible pull-apart basin rather than rift basin, affected by repeated strike-slip movements in Oligocene (possibly also before and after. Pre-Oligocene sediments in centre of basin with high vitrinite reflectivity values, suggesting removal of >1000m of pre-Oligocene. Quartz cementation started at paleo-depth of ~2000m tvdss (105°C), and porosity was mostly destroyed at ~3000m tvdss and 130°C)

Khanna, M., N. Comrie-Smith, M. Lawlor & M.K. Virdy (2013)- Bualuang Oilfield, Gulf of Thailand: a successful development using geosteered horizontal wells. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 20189, 23p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2013/20189khanna/ndx_khanna.pdf)
(Bualuang field in W Basin of Gulf of Thailand, initially discovered in 1993 and named Pornsiri field. Oil 27°API, viscosity 8.5 cp. Main T4 reservoir M Miocene fluvial channel sandstones, >50m thick, porosity almost 30%, av. perm 1.8 darcys. Oil column up to 32 m)

Kongwung, B. & S. Ronghe (2000)- Reservoir identification and characterization through sequential horizon mapping and geostatistical analysis: a case study from the Gulf of Thailand. Petroleum Geoscience 6, 1, p. 47-57.
(Reconstruction of reservoir units/ reservoir geometry in ~50 ms thick interval of 3D seismic data on NW flank of Malay Basin, Gulf of Thailand. Depositional environment fluvio-deltaic, with channel sands, point bars, etc., as potential reservoirs)

Kornsawan, A. & C.K. Morley (2002)- The origin and evolution of complex transfer zones (graben shifts) in conjugate fault systems around the Funan Field, Pattani basin, Gulf of Thailand. J. Structural Geol. 24, p. 435-449.
(On transfer zones between sets of convergent conjugate faults in Pattani Basin, Gulf of Thailand. In Funan Field area graben shift seen as W-dipping faults into zone of E-dipping faults. Initial Oligocene- E Miocene

syn-rift fault pattern influenced by pre-existing basement trends. No indication of strike-slip faulting affecting graben shift geometry. Early (Late Oligocene- E Miocene), W-dipping normal faults influenced location of higher M-L Miocene conjugate faults)

Kuenphan, N., K. Kaenmee, Y. Gonecome & R. Shoup (2010)- Application of satellite-based analog studies to resolving reservoir complexity in the North Malay Basin. AAPG Hedberg Conference, Jakarta 2009, Search and Discovery Art. 50256, 17p. *(Extended Abstract)*
(Thailand river patterns used a spotential analogs for N Malay Basin reservoir sand distribution patterns)

Lambiase, J.J. (2016)- Transgressive events in the Lower and Middle Miocene of the Gulf of Thailand: implications for reservoir characterization. AAPG Geoscience Techn. Workshop Characterization of Asian hydrocarbon reservoirs, Bangkok, Search and Discovery Art. 51266, 37p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2016/51266lambiase/ndx_lambiase.pdf)
(Recognition of two marine transgressions (late E Miocene, M Miocene) and several minor transgressive events, expressed as coaly mudstones in fluvial-dominant E-M Miocene of Pattani Basin, Gulf of Thailand)

Lambiase, J.J., J. Narapan & P. Champasa (2017)- Marginal marine mudstones in the Pattani Basin, Gulf of Thailand: implications for stratigraphic development, reservoir characterization and correlation potential. AAPG/SPE 2016 Int. Conf. Exhib., Barcelona 2016, Search and Discovery Art. 51366, 21p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2017/51366lambiase/ndx_lambiase.pdf)
(E-M Miocene late rift- early post-rift sediments in Gulf of Thailand traditionally viewed as fluvial, but also widely distributed marginal marine mudstones and coaly mudstones and tide-dominated sandy facies)

Lau, J.W.E. (1977)- Stratigraphic correlation of Tertiary basins in offshore Malaysia, South China Sea. Ascope, p. 1-30.

Leo, C.T.A.M. (1997)- Exploration in the Gulf of Thailand in deltaic reservoirs, related to the Bongkot Field. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 77-87.
(History of Statoil involvement since 1985 in Bongkot Field in NW Thai sector of Malay Basin)

Leong, K.M. (1978)- Malaysia, onshore sedimentary basins of Malaysia. In: ESCAP Atlas of Stratigraphy, 1. Ch. 3, United Nations ECAFE Mineral Resources Development Ser. 44, p. 26-31.

Lian, H.M. & K. Bradley (1987)- Exploration and develoment of natural gas, Pattani Basin, Gulf of Thailand. In: M.K. Horn (ed.) Trans. 4th Circum Pacific Council for Energy and Mineral Resources Conf., Singapore 1986, p. 171-181.
(Gulf of Thailand series of N-S trending mid-Tertiary rift basins with up to 8km of mainly non-marine Upper Tertiary sediments. Four Unocal gas fields in faulted structures at W side of Pattani basin. First gas discovery in 1972, first production in 1981. Gas typically ~65-72% methane, 17-19% C2+ and ~14-17% CO2)

Liew, K.K. (1994)- Structural development at the west-central margin of the Malay Basin. Bull. Geol. Soc. Malaysia 36, p. 67-80.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994023.pdf)
(Regional structure interprtation of west-central margin of Malay Basin (Dungun Graben, etc.))

Liew, K.K. (1995)- Timing of Cenozoic basin formation in northern Sundaland, Southeast Asia. Bull. Geol. Soc. Malaysia 37, p. 231-251.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a161.pdf)
(Cenozoic continental wrench shear basins and back-arc basins developed on present stable N Sundaland, at both sides of Malay Peninsula. Wrench faulting played significant role in basin formation basins. Collision of Indian Subplate with Eurasian Plate in E Cenozoic caused redistribution of stress in region, reactivating zones of weakness. Two major episodes of basin formation in N Sundaland:Eocene- E Oligocene and Late Miocene)

Liew, K.K. (1995)- Structural analysis of the Malay Basin. Bull. Geol. Soc. Malaysia 40, p. 157-176.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997012.pdf)

Limpornpipat, O., A. Laird, M. Tingay, C.K. Morley, C. Kaewla & H. Macintyre (2012)- Overpressures in the Northern Malay Basin: part 2- implications for pore pressure prediction. Int. Petrol. Techn. Conf. (IPTC), Bangkok 2012, 4, IPTC 15350, p. 3278-3289.
(see also Tingay et al. (2012) for Part 1)
(Pore pressure can be accurately predicted from sonic velocity. In N Malay Basin compaction coefficient varies spatially with geological structure)

Lockhart, B.E., O. Chinoroje, C.B. Enomoto & G.A. Hollomon (1997)- Early Tertiary deposition in the southern Pattani Trough, Gulf of Thailand. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Bangkok, Dept. Mineral Resources, p. 476-489.

Lundegard, P.D. & A.S. Trevena (1990)- Sandstone diagenesis in the Pattani Basin (Gulf of Thailand): history of water-rock interaction and comparison with the Gulf of Mexico. Applied Geochem. 5, p. 669-685.
(In Pattani Basin extensive interaction between Miocene subquartzose alluvial sandstones and formation fluids. Diagenetic rates and pathways strongly influenced by high geothermal gradients, high CO2 and low pore water salinities. Comparisons with other sedimentary basins demonstrate chemical diagenesis of Pattani Basin especially rapid, reflecting high temperatures, with net effect high rate of porosity loss with burial (11%/ km))

Madon, M. (1992)- Note on dolerite, rhyolite, and granophyre in the basement of the Tenggol Arch, offshore Terengganu. Bull. Geol. Soc. Malaysia 31, p. 133-143.
(online at: www.gsm.org.my/products/702001-101045-PDF.pdf)
(Tenggol Arch in well Malong 5G-17.2 well at edge of Malay Basin, 150 km off E coast of Terengganu Basement at 1582 m highly fractured porphyritic rhyolite with dolerite dyke. Overlain by lower Miocene conglomerate composed of rhyolite and granophyre clasts. Dolerite dyke may have been intruded during incipient rifting of basin in early Cenozoic)

Madon, M. (1992)- Depositional setting and origin of berthierine oolitic ironstones in the Lower Miocene Terengganu Shale, Tenggol Arch, Offshore Peninsular Malaysia. J. Sedimentary Res. 62, 5, p. 899-916.
(Berthierine oolitic ironstones in Lower Miocene Terengganu shale of Tenggol Arch, basement high between S Malay Basin and Penyu basin. Ironstones in 30-50m-thick, laterally extensive dark green mudstone, deposited during regional marine transgression over SW margin of ancestral S China Sea. Oolitic ironstones possibly deposited as offshore shelf storm layers and derived from lateritic soils on land)

Madon, M. (1994)- Depositional and diagenetic histories of reservoir sandstones in the Jerneh Field, central Malay Basin. Bull. Geol. Soc. Malaysia 36, p. 31-53.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994020.pdf)
(U Miocene reservoir sandstones in Jerneh field at 1250-2000m. Sandbodies facies: distributary mouthbar-shoreface in delta front, channel point bar deposits in delta plain. Laterally continuous sheet sandstones characterize shallow marine facies deposited during transgression over delta. Increasing compaction and quartz cementation with depth, resulting in reduced porosities (10% and 25%.). Quartz overgrowths started forming at ~1200m. K-feldspar dissolved by acidic formation waters; plagioclase d relatively stable)

Madon, M. (1995)- Tectonic evolution of the Malay and Penyu Basins, offshore Peninsular Malaysia. Ph.D. Thesis, University of Oxford, p. 1-325.
(online at: http://ora.ox.ac.uk/objects/uuid%3Af00a727d-8769-4ac8-88ab-35d8c662ea61)
(Malay and Penyu Basins formed in E Oligocene as result of regional dextral shear deformation caused by indentation of India into Eurasia. Basement inhomogeneities control basin development. Penyu Basin first developed as isolated grabens at fault intersections, in response to N-S extension. Low-angle listric normal faults, pull-apart grabens and flower structures suggest thin-skinned crustal extension and strike-slip tectonics.

E-W Basement faults in Malay Basin oblique to NW basin trend. Basin developed by transtension of NW-trending sinistral shear zone, in which fault-bounded blocks rotate, creating E-trending half-grabens. M-L Miocene transpressive inversion related to rotation of regional stress field by progressive indentation of India into Eurasia. Lithospheric stretching dominant process of basin formation. High heat flows (85-100 mW m^{-2}*) consistent with β stretching factors of 1.2- 4.3)*

Madon, M. (1997)- Analysis of tectonic subsidence and heat flow in the Malay Basin. In: Geol. Soc. Malaysia Annual Geol. Conf. '97, Terengganu, Bull. Geol. Soc. Malaysia 41, p. 95-108.
(online at: www.gsm.org.my/products/702001-100867-PDF.pdf)
(Malay Basin high present-day surface heat flow (~33-42 m W m2, interpreted as result of lithosphere thinning during basin formation. Basin relatively young (~35 Ma), and still undergoing thermal subsidence. Lithospheric stretching model with rifting over 10 Myrs starting at 35 Ma. Subsidence curves suggest stretching factors (B) of 1.2 on basin flanks to ~4.3 in centre. Basin flanks uplifted during initial rifting, causing subsidence to be delayed for ~10 Ma)

Madon, M. (1997)- The kinematics of extension and inversion in the Malay Basin. Bull. Geol. Soc. Malaysia 41, p. 127-138.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1997029.pdf)
(Malay Basin development began in Late Eocene- E Oligocene with sinistral transtensional shear of NW-trending shear zone that contains pre-existing E-trending basement faults. Shearing caused crustal blocks to rotate anticlockwise and form E trending half-grabens between them. Reversal of shear during E-M Miocene caused transpressive deformation and en echelon pattern of inverted half-grabens. Intensity of deformation increases SE-wards towards W Natuna Basin due to buttressing effect of Natuna basement ridge)

Madon, M. (2006)- Overpressure history of the Malay Basin, offshore Peninsular Malaysia. In: Petroleum Geol. Conf. & Exh. 2003, Kuala Lumpur, Bull. Geol. Soc. Malaysia 49, p. 135-144.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004021.pdf)
(Malay Basin present-day depth to top overpressure in basin centre between 1900-2000m, in lower Group E. Top overpressure shallower at basin flanks, <1500m deep along faulted W basin margin. Top overpressure in basin centre influenced by Group F regional shale)

Madon, M. (2007)- Overpressure development in rift basins: an example from the Malay Basin, offshore Peninsular Malaysia. Petroleum Geoscience 13, 2, p. 169-180.
(Malay Basin Tertiary transtensional rift basin with at least two major overpressure compartments, sealed by regional shale units. Main, basin-centre overpressure compartment has domal shape, shallower in basin centre. In basin centre, top of overpressure ~1900-2000m depth and confined mainly to M Miocene unit E. Smaller overpressure compartment on NE flank of basin, sealed by the onlapping, transgressive shale of unit L (Lower Miocene) and at a depth of 2600-3000m. Disequilibrium compaction primary cause of overpressure, and consequence of high subsidence and sedimentation rates)

Madon, M., P. Abolins, J.B.H. Mohammad & B.A. Mansor (1999)- Malay Basin. In: The petroleum geology and resources of Malaysia, Chapter 8, Petronas, Kuala Lumpur, p. 173-217.
(Review of Malay Basin offshore E coast Peninsular Malaysia, straddling Thai border in NW and Vietnam border in NE. Over 50 oil and 30 gas fields discovered since 1969. NW-SE trending Oligo-Miocene rift-sag basin with up to 14km of sediment)

Madon, M. & A. Anuar (1999)- Penyu Basin. In: The petroleum geology and resources of Malaysia, Chapter 9, Petronas, Kuala Lumpur, p. 220-223.
(Review of Penyu Basin offshore of Kuantan, Peninsular Malaysia. Small extensional basinof interior Sundaland, S of main Malay Basin and W of W Natuna Basin. Oligocene non-marine syn-rift sediments overlain by Miocene sag phase. Several sub-basins. Main structures E-M Miocene transpressional folds ('Sunda folds'). Much of section in basin is immature for hydrocarbons. Top of oil window at ~2100m. With Rhu Field sub-commercial oil discovery)

Madon, M.B., A. Anuar & R. Wong (1997)- Structural evolution, maturation history and hydrocarbon potential of the Penyu Basin. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 403-424.
(Penyu Basin offshore Malaysia between Pahang and Johor Platforms on N Sunda Shelf under-explored. Basin structurally contiguous with W Natuna Basin. Comprises half-grabens bounded by two NW and ENE-trending faults, probably formed in E Oligocene by N-S extension. Early Oligocene alcustrine facies, marine incursions starting in Late Oligocene. Inversion of rift faults around E-M Miocene boundary)

Madon, M.B. & A.B. Watts (1998)- Gravity anomalies, subsidence history and the tectonic evolution of the Malay and Penyu basins (offshore Peninsular Malaysia). Basin Research 10, p. 375-392.
(Malay and Penyu basins up to 14 km sediment fill, with 20-30 mGal negative free air gravity anomalies. Modeling suggests basins formed by combination lithosphere stretching and thin-skinned crustal extension)

Madon, M., J.S. Yang, P. Abolins, R. Abu Hassan, A.M. Yakzan & S. B. Zainal (2006)- Petroleum systems of the Northern Malay Basin. In: Petroleum Geol. Conf. & Exh. 2003, Kuala Lumpur, Bull. Geol. Soc. Malaysia 49, p. 125-134.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004020.pdf)
(N Malay Basin petroleum province central/basinal gas-rich area, flanked on both sides and to S by mixed oil/gas zones. Non-associated gas fields in central zone mainly in D and E reservoirs, in Late Miocene inversion anticline. Vertical migration dominant process in basin centre. High CO2 gases typical of reservoirs in groups I and older and derived from inorganic sources. Low CO2 gas (<6%) more typical of D-E reservoirs and derived from organic thermal degradation)

Madsen, E.B., L. O. Boldreel & S.A.Schack Pedersen (2012)- Thin-skinned thrust-fault complex in the Phu Quoc Basin, SW Vietnam. Proc. Int. Petroleum Techn. Conf. (IPTC), Bangkok 2012, p. 1409-1416.
(Phu Quoc Basin is Late Jurassic- E Cretaceous foreland basin SW of Vietnam in undrilled E part of Gulf of Thailand. Deformation of basin took place during orogenic build-up of Kampot Fold Belt in E-M Cretaceous, which resulted in formation of thin-skinned thrust-fault complex, with complex piggyback basins. Main part of complex concealed under Neogene marine deposits)

Madsen, E.B. & S.A. Schack Pedersen (2012)- Thin-skinned thrust-fault complex in the Phu Quoc Basin, SW Vietnam. Int. Petrol. Techn. Conf. IPTC 2012, Bangkok, IPTC 14624, 8p.
(Phu Quoc Basin Late Jurassic- E Cretaceous foreland basin SW of Vietnam, E Gulf of Thailand. Structural model for basin from reflection seismic. Deformation of basin during orogenic build-up of Kampot Fold Belt in E-M Cretaceous, which resulted in thin-skinned thrust-fault complex. Main part of thrust belt concealed under Neogene marine deposits, but outcrops on Phu Quoc island and islands in Nam Du archipelago)

Maga, D., J. Jong, M. Madon & F.L. Kessler (2015)- Fluid inclusions in quartz: implications for hydrocarbon charge, migration and reservoir diagenetic history of the Penyu Basin and Tenggol Arch, offshore Peninsular Malaysia. Bull. Geol. Soc. Malaysia 61, p. 59-73.
(online at: www.gsm.org.my/products/702001-101675-PDF.pdf)
(In Penyu Basin and Tenggol Arch area, SW of Malay Basin fluid inclusions in quartz in Oligocene Groups L and M reservoirs and in Miocene Groups K and H reservoirs (none in I, J). Two populationsin 'oil quartzes': (1) oil inclusions in detrital quartz grains; (2) oil inclusions in quartz cement, indicating oil migration preceded quartz cementation)

Makeen, Y.M., W.H. Abdullah, H.A. Ayinla, X. Shan, Y. Liang, S. Su, N.M. Noor, H.K. Hasnan & L. Asiwaju (2019)- Organic geochemical characteristics and depositional setting of Paleogene oil shale, mudstone and sandstone from onshore Penyu Basin, Chenor, Pahang, Malaysia. Int. J. Coal Geology 207, p. 52-72.
(Organic geochem of Paleogene of Chenor Pahang area of the Penyu Basin show exceleent petroleum potntial and deposition in suboxic lacustrine environment)

Mansor, M.Y., A.H.A. Rahman, D. Menier & M. Pubellier (2014)- Structural evolution of Malay Basin, its link to Sunda Block tectonics. Marine Petroleum Geol. 58, B, p. 736-748.

(Malay Basin developed partly as result of strike-slip shear of SE Asia continental slabs, as Indian Plate collided into Eurasia, and subsequent extrusion of lithospheric blocks towards Indochina. Sunda Block earliest rift margins are Paleogene W-E rift valleys, formed during NW-SE sinistral shear. Later Eocene NW-SE dextral shear of Indochina Block against E Malaya Block rifted opened Malay Basin, with N-S en-echelon ridges and grabens. Fast subsidence from Late Oligocene- M Miocene. Compressional inversion in Late Miocene, basin sag in Plio-Pleistocene with mild compressional episodes. Mio-Pliocene folding history of Malay Basin connected to collision of Sunda Block against subducting Indian-Australian Plate)

Martens, D., R. Lin & R.G. Hickman (2000)- Source, migration and CO2 occurrences in the Pailin Field, Gulf of Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1459-1460. *(Abstract only)*
(Unocal summary of Pailin gas field in S Pattani Trough. Two hydrocarbon sources: (1) fluvial coaly, with high pristane/phytane ratios and high angiosperm resin markers (bicadinanes) and (2) lacustrine shale, with low pristane/phytane ratios and high gammacerane. Lacustrine sources require vertical migration. Majority of hydrocarbons sourced locally from M Miocene coals and carbonaceous shales, with predominantly lateral migration. Gas high CO2 (5- >65%), from organic and inorganic sources)

Matsubayashi, O. & S. Uyeda (1979)- Estimation of heat flow in certain exploration wells in offshore areas of Malaysia. Bull. Earthquake Research Inst. (Tokyo University) 54, p. 31-44.
(Early paper on heatflow in Malay and Sabah basins. See also Halim 1994)

McClay, K.R., T. Dooley, P. Whitehouse, L. Fullarton & S. Chantraprasert (2004)- 3D analogue models of rift systems: templates for 3D seismic interpretation. In: R.J. Davies et al. (eds.) 3D Seismic technology: application to the exploration of sedimentary basins, Geol. Soc., London, Mem. 29, p. 101-115.
(Rift models paper, with example of S Pattani Basin, Gulf of Thailand)

Miall, A.D. (2002)- Architecture and sequence stratigraphy of Pleistocene fluvial systems in the Malay Basin, based on seismic time slices analysis. American Assoc. Petrol. Geol. (AAPG) Bull. 86, p. 1201-1216.
(3-D seismic data from nonproductive, shallow Pleistocene section in N Malay Basin show 5 types of fluvial systems, from braided systems with >4 km wide channel-belts to small-scale meandering systems with meander-belt widths of few 100m. Incised-valley system 40m deep forms is base of one of two sequence boundaries)

Minezaki, T. & K. Moriyama (2002)- The origin of hydrocarbon and carbon dioxide in the gas fields for the Pattani Trough, the Gulf of Thailand. J. Japanese Association Petroleum Technology 67, 1, p. 16-29.
(online at: https://www.jstage.jst.go.jp/article/japt1933/67/1/67_16/_pdf/-char/en)
(In Japanese with English abstract. Gases in Pattani Trough derived from thermal cracking of Type III kerogens and of pre-existing oils. Oils waxy and heavy, probably of lacustrine algal origin. Two source facies: Oligocene lacustrine-algal and Miocene fluvial-coaly. Oil generation from Oligocene source rocks started in E Miocene; gas generation mainly M-L Miocene in central trough. CO2 contents increase with depth from few to ~25% in Trough. Some wells CO2 as high as 91% (Platong gas field), probably of inorganic origin (magmatic decomposition of carbonate basement)

Mohamad, H., R. Wong & M.F.A. Halim (2001)- Seismic facies analysis of the synrift sediments in the North Malay Basin and their impact on the deep reservoir potential. In: Proc. CCOP 37th Ann. Sess. Bangkok 2000, 2, Techn. Repts., p. 30-32.

Morley, C.K. & R. Westaway (2006)- Subsidence in the super-deep Pattani and Malay basins of Southeast Asia: a coupled model incorporating lower-crustal flow in response to post-rift sediment loading. Basin Research 18, 1, p. 51-84.
(Two Early Cenozoic rifts in SE Asia (beneath Pattani and Malay basins) limited upper-crustal extension ($\beta \leq 1.5$), yet very thick post-rift fill with 6-12 km of Late Cenozoic terrestrial and shallow marine sediment. Explanation for high post-rift subsidence involves lower-crustal flow caused by sediment loading and erosion of sediment sources)

Morley, C.K., N. Wonganan, N. Sankumarn, T.B. Hoon, A. Alief & M. Simmons (2001)- Late Oligocene-Recent stress evolution in rift basins of northern and central Thailand: implications for escape tectonics. Tectonophysics 334, p. 115-150.
(Thailand Tertiary rift basins evolved under E-W extension, but extension direction changed periodically. Extension interrupted by inversion events. Basins evolution: (1) widespread Oligocene- Lower Miocene extension; (2) In C and N Thailand extension persisted into U Miocene-Pliocene; (3) In W Natuna, Penyu, Malay basins extension ceased in earliest Miocene, in N Gulf of Thailand in M Miocene. Inversion in Gulf of Thailand in Lower and M Miocene. Relationship between strike-slip and extensional and inversion events more complex than can be explained by simple escape tectonic models)

Muhamad, Abdul J. & A.S.A. Jamil (2010)- Organic facies variation in lacustrine source rocks in the southern Malay Basin. Bull. Geol. Soc. Malaysia 56, p. 27-33.
(On source rock quality of Oligocene lacustrine shales in Groups K, L, M in S Malay Basin Anding Barat Laut 1 well. Kerogens mixture of algal, bacterial and higher plant organic matter. Group L lacustrine shales best oil-prone source rock with TOC 0.45-1.95%, HI values 300-400, predominantly Type II kerogen. Groups L- M more algal input, shown by lower Pr/Ph ratio (3.1- 4.0), lower Tm/Ts ratio, high C30-diahopane, etc.. E Miocene Group K more fluvial, more terrigenous organics, higher Pr/Ph ratio (5.1- 6.2), higher oleanane, predominance of C29-steranes. Change in organic facies reflect transition from synrift to post-rift phase)

Ng Tong San (1987)- Trap styles of the Tenggol Arch and the southern part of the Malay Basin. Bull. Geol. Soc. Malaysia 21, p. 177-193.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1987010.pdf)
(Tenggol Arch at S end of Malay Basin rel. stable block between Malay and Penyu E Oligocene(?) rift systems. Drape over basement topography and anticlinal features identified. Anticlines elongated with great reliefs near E flank of S Malay basin, believed to be related to M Miocene shear movement. 23 wells drilled in area, with several oil-gas discoveries)

Ngah, K. (1990)- Deposition and diagenesis of Oligocene- Lower Miocene sandstones in the Southern Malay Basin. Ph.D. Thesis Imperial College, University of London, p. 1-267.
(online at: https://spiral.imperial.ac.uk/handle/10044/1/46470)
(Deposition and diagenesis of U Oligocene- Lower Miocene reservoir sandstones in S Malay basin from seismic data, cores, and well logs. Depositional model of Miocene Pulai-II Fm reservoirs. Pulai Sst interval no marine microfauna, only Pediastrum and common mangrove pollen; brackish water Miliammina fusca in Terengganu Shale. Deposited during initial marine influence in Malay Basin. Braided fluvial sst in N and NE; lower delta plain in S and SW)

Ngah, K. (2000)- Upper Oligocene- Lower Miocene sandstone reservoirs, Southern Malay Basin. AAPG Search and Discovery Art. 10008, 15p.
(online at: www.searchanddiscovery.com/documents/khalid/)
(Pulai-II Fm reservoirs in S Malay basin deposited during early opening of backarc basin. Braided fluvial channel sandstones dominant in NE, distributary and tidal-channel sands dominate in S. Reservoir quality primarily result of burial diagenesis and depositional facies. Destruction of porosity by precipitation of quartz and ferroan calcite and porosity enhancement by dissolution of framework feldspars and chert. Up to 40% of porosity dissolution by meteoric water introduced during Late Miocene uplift. Porosity up to 45% in braided-channel sandstones. Poor porosity fine sandstones and some m-c sandstones buried deeper than 3000m)

Ngah, K. (2000)- Structural framework of Southeastern Malay Basin. AAPG Search and Discovery Art. 10009, 7p.
(online at: www.searchanddiscovery.net/documents/khalid02/index.htm)
(Malay Basin intracratonic basin in relatively stable Sunda Shelf. Extensional opening from Late Cretaceous-Late Eocene to Late Miocene. Late Miocene- Pliocene compressional phase created anticlinal hydrocarbon traps. Pliocene-Recent extensional basin rejuvenation, with extensive marine incursion. Fault trends N-S in NW Malay Basin, in S two-thirds E-W and NW-SE trends dominant. S Malay Basin relatively oil-prone)

Ngah, K., M. Madon & H.D. Tjia (1996)- Role of Pre-Tertiary fractures in formation and development of the Malay and Penyu basins. In: R. Hall & D.J. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc. London, Spec. Publ. 106, p. 281-289.
(Major faults in Sundaland trend NNW to NW, WNW, N and E. Old NNW to NW, N and E-striking faults in pre-Tertiary basement of Malay and Penyu basins, reactivated before Late Oligocene and in M-Late Miocene. Common N-striking faults in pre-Tertiary of Sundaland, possibly Jurassic regional fractures. NNW-NW and WNW fractures may have originated as strike-slip faults during late Mesozoic deformation. NW-striking basement faults of Malay basin continue onshore SE Asia as Three Pagodas fault zone. M-Late Miocene stress field change resulted in reversal of slip movement along major wrench faults and structural inversion of sedimentary basins (E-W anticlines located over half-graben))

Ngo T.S., Cu M.H., Phung K.H. & Vu M.T. (2010)- The geology and hydrocarbon potential of a Mesozoic basin in western offshore Vietnam. Proc. 46th CCOP Ann. Sess., Vung Tau 2009, p. 4-17.
(Phu Quoc basin is Mesozoic forearc basin developed on margin of Indochina cratonic block, in contact with Sibumasu block, N of East Malay Basin. Over 8 km of Paleozoic- Mesozoic section in depocenters. Three stages: Paleozoic passive margin, Late Permian- Mesozoic forearc, Tertiary- Quaternary sag)

Noor, H.M. (1987)- Tinggi Field- analyzing the DHIs. Bull. Geol. Soc. Malaysia 21, p. 133-149.
(online at: www.gsm.org.my/products/702001-101131-PDF.pdf)
(Esso Tinggi oil-gas field in Malay Basin 1980 discovery with many uneconomic but hazardous shallow gas sands, with clear gas DHI's on seismic)

Ong Tee Suan, M. Lambert, B. Goodin & M. Othman (2012)- Malaysia East Belumut Field: doubling a marginal field's reserves by understanding the application of "Enabling" technology. Proc. Int. Petroleum Techn. Conference, Bangkok, IPTC 14538, 11p.

Osman, S., M.F. Nianamuthu, F.A. Ismail, J.J.M. Idris & J. Ping (2012)- Sepat Barat Deep-2: the deepest and hottest HPHT well in North Malay Basin. In: Petroleum Geoscience Conf. Exhibition (PGCE 2012), Kuala Lumpur, Warta Geologi 38, 2, p. 122-123.
(online at: https://gsmpubl.files.wordpress.com/2014/09/warta38_21.pdf)
(Abstract. Sepat Barat Deep-2 only well to successfully evaluate N Malay Basin deeper Group F and H deltaic sandstone reservoirs. Total depth 2768m ss. Overpressure started at 1748m, steep pressure ramp for 200m until lower Group F sand. Maximum formation pressure 7826 psi at 2623m and maximum T 340 °F. 8 new hydrocarbon bearing sands encountered with gross thickness of 69 m. F sands over-pressured reservoirs with porosity up to 24%)

Othman, M. (2008)- Angsi K-sands production performance- a case history of hydraulically fractured retrograde gas condensate reservoir. In: 70th EAGE Ann. Conf. Exh., Rome, SPE-113816, 10p.
(Angsi field 170km off Terengganu. Hydrocarbons in Group I, J and K sandstones of Lower Oligocene- M Miocene age. Lower Miocene K-sand is first tight gas reservoir development in Malaysia, developed in 2002. Hydraulic fracturing improved well deliverability, but production declined relatively fast, then stabilized at very low rate due to condensate banking)

Oudomugsorn, P., C. Rojanachan & K. Sakdejayont (1987)- Evaluation of the petroleum potential of the western basin, Gulf of Thailand. Proc. 23rd Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Madang 1986, 2, p. 80-97.
(Western basin in N Gulf of Thailand is N-S trending Early Tertiary rift basin. Possibly >3500m of Oligocene-Recent sediments, mainly in fluvial- lacustrine facies. Less than 400m of sediment over basement highs)

Paramita, D. (2012)- Structural evolution of the Songkhla Basin, Gulf of Thailand: a palinspastic restoration Study. Bull. Earth Sciences Thailand 5, 2, p. 38-47.
(online at: www.geo.sc.chula.ac.th/BEST/volume5/number2/Dini_02.pdf)
(Songhla Basin in Gulf of Thailand N-S trending, Eocene rift basin. Early Oligocene and Late Oligocene- E Miocene local inversion structures at E and W sides of basin in overall extensional regime)

Pedersen, S.A.S., L.O. Boldreel, E.B.Madsen, M.B.Filtenborg & L.H. Nielsen (2010)- Thin-skinned thrust-fault tectonics offshore south-west Vietnam. Geol. Survey Denmark Greenland Bull. 20, p. 99-102.
(online at: www.geus.dk/publications/bull/nr20/nr20_p099-102.pdf)
(Phu Quoc basin SW of Vietnam in NE Gulf of Thailand underlain by thin-skinned thrust-fault complex concealed by Neogene marine sediments. Fold belt continues into hills at border between Vietnam of Cambodia and Kampot foldbelt. Width of tectonic complex ~200 km wide; shortening ~50%. Deformation of sedimentary succession in E-M Cretaceous (documented by biostratigraphical studies on Phu Quoc island) and tied to subduction of Pacific Ocean plate. Piggy-back basins formed during displacement along thrust faults. Translations 3-8 km from E to W. See also Madsen et al. 2012))

Petersen, H.I., A. Mathiesen, M.B.W. Fyhn, N.T. Dau, J.A. Bojesen-Koefoed, H. Nielsen & H.P. Nytoft (2011)- Modeling of petroleum generation in the Vietnamese part of the Malay Basin using measured kinetics. American Assoc. Petrol. Geol. (AAPG) Bull. 95, 4, p. 509-536.
(2-D modeling of hydrocarbon generation for Malay-Cho Thu Basin in Gulf of Thailand-S China Sea. Source rocks comprise Oligocene synrift lacustrine mudstones and coals, postrift coals, and coaly mudstones. Main play risks include timing of generation from oil-prone lacustrine synrift deposits relative to structural trap formation and relatively small kitchen areas. Minor contribution from lacustrine deposits after principal trap formation consistent with prominent terrigenous geochemical signature of oils in basin)

Petersen, H.I., N. Sherwood, A. Mathiesen, M.B.W. Fyhn, N.T. Dau, N. Russell, J.A. Bojesen-Koefoed & L.A. Nielsen (2009)- Application of integrated vitrinite reflectance and FAMM analyses for thermal maturity assessment of the northeastern Malay Basin, offshore Vietnam: implications for petroleum prospectivity evaluation. Marine Petroleum Geol. 26, p. 319-332.
(In NE Vietnam part of Malay Basin oil- gas discovery well 46-CN-1x encountered a ∼55 m of lacustrine mudstones with good potential as oil source. Vitrinite reflectance (VR) measurements may be suppresed in alginite-bearing rocksby 0.14%.Modelled temperature histories indicate onset of hydrocarbon generation for the uppermost Oligocene source rocks between 2 Ma and present-day, which post-dates trap formation)

PETRONAS (1999)- The petroleum geology and resources of Malaysia. Petronas Press, Kuala Lumpur, 665p.
(Major review of Malaysian basins and hydrocarbons by collective of authors)

PETRONAS (2007)- Chronostratigraphic chart of the Cenozoic and Mesozoic basins of Malaysia. Petroliam Nasional Berhad, Kuala Lumpur, p. 1-71.
(Elegant review of Cenozoic chronostratigraphy, sequence stratigraphy, biostratigraphy and unconformities of Malaysian basins (incl. Malay Basin, Malacca Straits, Sarawak, Sabah. With extensive reference list)

Phoosongsee, J. & C.K. Morley (2019)- Evolution of a major extensional boundary fault system during multi-phase rifting in the Songkhla Basin, Gulf of Thailand. J. Asian Earth Sci. 172, p. 1-13.
(N-S trending Songkhla rift basin in SW Gulf of Thailand is half-graben structure that developed in phases between Late Eocene and early M Miocene. Two phases of rifting in are Eocene-Oligocene in E and Oligocene-Miocene in W Gulf of Thailand and onshore. Songkhla: Eocene early rift; (2) Oligocene- E Miocene late rift (3) M Miocene and younger post-rift)

Phoosongsee, J., C.K. Morley & A.J. Ferguson (2019)- Quantitative interpretation of seismic attributes for reservoir characterization of Early-Middle Miocene syn- and post-rift successions (Songkhla Basin, Gulf of Thailand). Marine Petroleum Geol. 109, p. 791-807.
(Hydrocarbon reservoirs in Gulf of Thailand mainly in E-M Miocene and predominantly fluvial channels. In Songkhla Basin two distinctive channel characteristics: (A) N-S oriented meandering channel complexes, developed during late syn-rift (upper E Miocene), (B) NE-SW oriented long, narrow fluvial channels with tidal and marine influence in post-rift phase I (M Miocene))

Pigott, J.D. & N. Sattayarak (1993)- Aspects of sedimentary basin evolution assessed through subsidence analysis. Example: northern Gulf of Thailand. In: B.K. Tan et al. (eds.) 7th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 407-420.
(Oligocene- Recent subsidence analysis suggests N Gulf of Thailand basins exhibit time-transient characteristics of cratonic rift and wrench style basins; basin evolution varied in time and space)

Pigott, J.D., R. Zhai, K.L. Pigott & T. Tonianse (2012)- Searching for the missing link: The regressive system tract- seismic stratigraphic evidence from the Southern Gulf of Thailand In: Int. Petroleum Technology Conference (IPTC), Bangkok 2012, IPTC 15113, 21p.
(Seismic stratigraphic and geomorphic analysis of 3D seismic from S Gulf of Thailand reveal preservation of complete eustatic cycle on Quaternary tropical coastal plain periodically affected by oscillating sea levels. Aggradational interfluvial coastal plain records mainly Highstand Systems Tract)

Pongwapee, S., C.K. Morley & Krit Won-in (2019)- Impact of pre-existing fabrics and multi-phase oblique extension on Cenozoic fault patterns, Wichianburi sub-basin of the Phetchabun rift, Thailand. J. Structural Geology 118, p. 340-361.
(Cenozoic fault patterns associated with rift development in Wichianburi sub-basin show controls at different scales, including influence by margin of Permian basin and NW-SE to NE-SW trending Triassic folds/ faults. Regional change from E-W to NW-SE extension in M Miocene)

Pradidtan, S. (1990)- Calculation of heat flow of the Tertiary basins in the Gulf of Thailand. In: B. Elishewitz (ed.) Proc. CCOP Heat Flow Workshop III, Bangkok 1988, CCOP Techn. Publ. 21, p. 99-106.
(Heatflow values from 9 wells in Gulf of Thailand rel. high)

Pradidtan, S. & R. Dook (1992)- Petroleum geology of the northern part of the Gulf of Thailand. In: C. Piencharoen (ed.) Proc. Nat. Conf. Geologic resources of Thailand: potential for future development, Bangkok, Dept Min. Resources, p. 235-246.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1992/6222.pdf)
(Numerous Tertiary intra-cratonic rift basins in N Gulf of Thailand: Sakhon, Paknam, Hua Hin, NW, W, Kra, East Kra, North Kra, Prachuap, Chumphon and N pat of Pattani basin. Tertiary sediments almost entirely non-marine, with limited biostratigraphic controls. three lower units synrift fluvial and lacustrine facies, upper unit Late Miocene- Recent post-rift. Locally organic-rich lacustrine source rocks)

Pradidtan, S. & S. Polachen (1990)- TH-40 sandstone play Hua Hin Basin, Thailand. In: CCOP/WRGA Play modelling exercise 1989-1990, CCOP Techn. Publ. 23, p. 97-112.
(Assessment of undiscovered hydrocarbons and play description of TH-40 Oligocene stacked fluvio-lacustrine sands in rotated fault blocks in Hua Hin Basin, N Gulf of Thailand)

Pradidtan, S. C. Singhasenee & R. Charusirisawad (1990)- Stratigraphy of Tertiary basins in the Gulf of Thailand. In: Proc. Development geology for Thailand into the year 2000, Chulangkorn University, Bangkok, p. 408-429.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1990/24729.pdf)

Priyanto, B., M.N. Ahmad & P. Rowell (2013)- Delineation of rift-related Miocene fluvial sands in the Gulf of Thailand using seismic inversion techniques. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-022, p. 1-9.
(Gulf of Thailand basins form series of en-echelon grabens and half-graben systems, with main gas reservoirs in Lower-Middle Miocene fluvial sands. Seismic inversion techniques used to map reservoir sands)

Puchağa, R.J., S.J. Porebski, W.R. Sliwinski & C.J. August (2011)- Pleistocene to Holocene transition in the central basin of the Gulf of Thailand, based on geoacoustic survey and radiocarbon ages. Marine Geology 288, p. 103-111.

(Acoustic and coring record of Last Glacial Maximum and postglacial sea-level rise in central Gulf of Thailand. Valley incision (Kelantan River), followed by estuarine- marine transgression, interrupted by deltaic progradation. Transgressive ravinement followed by thin, condensed cover of modern marine muds)

Radovich, B.J. (1997)- Proximal nonmarine sequence stratigraphy, reservoir quality and tectonic controls in the southern Gulf of Thailand. In: K.W. Shanley & B.F. Perkins (eds.) Shallow marine and nonmarine reservoirs: sequence stratigraphy, reservoir architecture and production characteristics, 18th Ann. Research Conf. Gulf Coast section SEPM Foundation, 18, p. 235-244.
(Texaco 1994 Mayura 1 well in S Pattani Basin of Gulf of Thailand drilled on the ramp side of half-graben. Numerous oil shows in nonmarine reservoirs in synrift section. Permeability of reservoir units compromised by kaolinite in pore system. Typical sequence composed of stacked, fining-upward parasequences that aggrade during times of relative base level rise)

Radzi, A., Y. Bazleigh & A. Khalil (2016)- Quantifying the uncertainty of Gross Rock Volume: a decade of time-to-depth conversion in Sepat Field, Malay Basin. First Break 34, p. 73-77.
(On estimates of GRV from seismic data in Sepat Field in Malay Basin (1983 discovery, structure 30km x 10 km E-W trending structure dissected by normal faults)

Ramli, N. (1986)- Depositional model of a Miocene barred wave- and storm-dominated shoreface and shelf, SE Malay Basin. American Assoc. Petrol. Geol. (AAPG) Bull. 70, 1, p. 34-47.
(J sandstone reservoir in SE Malay basin composed of shoreface and offshore sediments. Barred wave- and storm-dominated shoreface, laterally associated with stacked offshore bars)

Ramli, N. (1988)- Characteristics of J Sandstone (Tapis Formation) reservoirs in the Southeastern part of the Malay Basin, Offshore West Malaysia. In: Offshore South East Asia Conf. 1988, Singapore, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 8, p. 239-248.
(Reservoir quality of Miocene J sandstone mainly controlled by sedimentary texture (absence of bioturbation) and presence of secondary porosity)

Ramli, M.N. (1988)- Humid tropical fan-delta sedimentaton: an ancient model from the 'K' sandstones (Late Oligocene-Early Miocene), SE part of the Malay basin, offshore W Malaysia. In: W. Nemec & R.J. Steel (eds.) Fan deltas and related systems: sedimentology and tectonic settings, Blackie Publ., Glasgow, p. 341-353.

Ramli, M.N. (1988)- Stratigraphy and paleofacies development of Carigali's operating areas in the Malay basin. Bull. Geol. Soc. Malaysia 22, p. 153-187.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1988008.pdf)
(Stratigraphic scheme, cross-sections and paleofacies maps for Late Oligocene-Pliocene in Malay Basin Blocks PM 6 and PM 12)

Ramli, M.N. (1989)- Stratigraphy and paleofacies development of Carigali's operating areas in the Malay basin, South China Sea. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology mineral hydrocarbon resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 171-196.
(Similar to Ramli (1988). New time-stratigraphic scheme and regional Late Oligocene- Pliocene paleofacies maps for blocks PM6 and PM12. Predominantly coastal plain- fluviomarine facies)

Reijenstein, H.M., H.W. Posamentier & J.P. Bhattacharya (2011)- Seismic geomorphology and high-resolution seismic stratigraphy of inner-shelf fluvial, estuarine, deltaic, and marine sequences, Gulf of Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 95, 11, p. 1959-1990.
(3-D seismic-derived images of channels in Pleistocene fluvial, estuarine, marine, and deltaic depositional systems in the upper 80m of central Gulf of Thailand continental shelf. Most fluvial systems lie within incised valleys in lower parts of each depositional sequence)

Restrepo-Pace, P.A., M. Dalrymple & R. Morley (2014)- Finding new exploration targets in ómatureô petroleum basins offshore Thailand: all about nuance. AAPG Int. Conf. Exhib., Istanbul 2014, Search and Discovery Art. 10696, 5p. *(Extended Abstract)*
(Thailand's offshore Tertiary basins yielded nearly 5 BBOE (~80% gas). Exploration started in 1970s and peaked by mid 1990s. Some fields in N Pattani Basin with significant oil (Jasmine, 60 MMBO). Eocene-Oligocene NW-SE grabens, overprinted by narrow N-S faulted depocenters developed during Miocene 'back-arc' stretching of continental Sundaland crust. Basins fill: lower synrift lake/fluvial deposits, post -rift fluvial sequences and drowning brackish intertidal to marine succession. Hydrocarbons sourced from synrift lacustrine shales. Mature stage of exploration, but complex trapping mechanisms still have exploration potential)

Restrepo-Pace, P., S. King, R. Jones, C. Goulder, Y. Ah Chim & C. Russell (2010)- The Penyu Basin revisited: the abandoned ómateô of the Malay-Natuna Basin. In: Proc. Petrol. Geol. Conf. Exhib., Kuala Lumpur 2010, Geol. Soc.Malaysia, p. 141-144. *(Extended Abstract)*
(Penyu basin transtensional-transpressional basin that developed coeval to Malay Basin to N. No commercial discoveries yet made on Malaysian side of basin, but straddling Malay- Penyu basin is ~350-400 MMBO Belida field, an inverted structure on basement ridge that separates Malay from Penyu basin, and not underpinned by source rock. Distinctive oil signature may be linked to contribution from Penyu source. Rhu oil discovery indicates working petroleum system within Penyu)

Robinson, K. (1985)- Assessment of undiscovered conventionally recoverable petroleum resources in Tertiary sedimentary basins of Malaysia and Brunei. Bull. Geol. Soc. Malaysia 18, p. 119-131.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1985005.pdf)

Rivas, S., J.O.W. Grimmer, A. Alaminos & J. Navarro (2017)- Basin modelling at the Songkhla Basin (Gulf of Thailand) or: How many source rocks do I have? AAPG/SEG Int. Conf. Exhib., Barcelona 2016, Search and Discovery Art. 10922, 10p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2017/10922rivas/ndx_rivas.pdf)
(Songkhla basin in W Gulf of Thailand, with several producing oil fields. Asymmetric Tertiary rift basin formed between 40-20 Ma, controlled by NNW-SSE faults mainly at W side, filled by Eocene-Miocene continental sequence. Reservoir intervals fluvial- alluvial sandstones of Eocene, Lower Oligocene and Lower Miocene age. Lower Oligocene lacustrine shales supposed source rocks of basin)

Said, A. (1982)- Overview of exploration for petroleum in Malaysia under the PSC's. In: Proc. Offshore SE Asia Conf. (OFFSEA 82), p. 1-14.

Salam, O.A., S.A. Aziz & M.Y. Ali (2008)- Pre-Tertiary carbonate play, offshore Peninsula Malaysia, a revival of forgotten play. In: Petrol. Geol. Conf. Exh. (PGCE), Kuala Lumpur 2008, Paper 25, Geol. Soc. Malaysia, p. 177-181.
(In early 1970's sections of Pre-Tertiary carbonates, 8 -492m thick, tested dry at three localities on Sotong and Bunga Raya structures. New potential Pre-Tertiary carbonate plays identified on 'basement' highs in S Malay Basin near Sotong and Tenggol Arch areas. Model requires mature Oligocene lacustrine source rocks in adjacent deeper grabens)

Samorn, H. (2006)- Fluvial reservoir architecture from near surface 3-D seismic data, Block B8/32, Gulf of Thailand. M.S. Thesis, Colorado School of Mines, p. 1-156. *(Unpublished)*

Sasaki, A. (1986)- Geological studies on origin of carbon dioxide in Platong Field, Gulf of Thailand. J. Japanese Assoc. Petroleum Technologists 51, 3, p. 218-227.
(online at: www.journalarchive.jst.go.jp/...)
(In Japanese, with English abstract) (Platong gas field CO2 content average 15%, locally >40%. Most CO2 in nearby Natuna, Malay, N Sumatra basins tied to carbonates, but here believed to be generated from woody-coaly kerogens during thermal diagenesis, and also from 'magmatic origin' through faults)

Shahar, S. (2008)- Structural evolution of the Tenggol Arch and its implication for basement fracture patterns in the Malay Basin, Malaysia. Masters Thesis Durham University, p. 1-324. *(Unpublished)*
(online at: http://etheses.dur.ac.uk/2233/)
(Evaluation of fracture patterns and hydrocarbon potential of Tenggol Arch, a basement high at W margin of Malay Basin)

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992027.pdf)
(Reservoir properties of Late Oligocene-Miocene sandstones of Malay Basin depend on depositional facies, mineralogy and burial diagenesis. Oldest sandstones (Group K) mainly m-grained braided stream deposits, J sandstones f-m brackish- shallow marine; E to I zones sandstones generally fine, matrix-rich estuarine deposits. Clean sands prone to quartz cementation. Secondary porosity generated by dissolution of feldspars, etc. Porosity decreases significantly with depth in sandstones of all groups)

Shoup, R. (2008)- Paleogeographic reconstruction of the Arthit area, North Malay Basin. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 375-381.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/112.pdf)
(Paleogeographic evolution of Arthit area, one of Gulf of Thailand E Tertiary rift basins. No age control)

Shoup, R.C., R.J. Morley, T. Swiecicki & S. Clark (2012)- Tectono-stratigraphic framework and Tertiary paleogeography of Southeast Asia: Gulf of Thailand to South Vietnam shelf. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 30246, 16p. *(Abstract and Presentation package)*
(online at: www.searchanddiscovery.com/documents/2012/30246shoup/ndx_shoup.pdf)
(Top Basement map and Oligocene- Miocene paleogeography maps of Tertiary rift basins in Gulf of Thailand- Malay Basin- Natuna- S Vietnam shelf)

Singh, H. (2005)- The occurrence and exploitation of Malaysian oil and gas resources. In: Oil-industry history, Petroleum History Institute, Meadville, 6, 1, p. 129-152.

Singh, I. & C.H. Ford (1982)- The occurrence, causes and detection of abnormal pressure in the Malay Basin. In: Proc. Offshore Southeast Asia 82 Conf. (OFFSEA 82), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 1-11.
(Abnormal pressure present throughout Malay Basin, except in SW and NE margins. Attributed to rapid burial, faulting and hydrocarbon column effects)

Supriatna, J.M. (2011)- Maturity modeling of the Songkhla Basin. Bull. Earth Sciences Thailand 4, 2, p. 32-35.
(online at: www.geo.sc.chula.ac.th/BEST/volume4/number2/5_Jana_BEST_4_2_p%2032-35.pdf)

Tan, D.N.K. (2009)- Malay and Penyu Basins. In: C.S. Hutchison & D.N.K. Tan (eds.) The geology of Peninsular Malaysia, University of Malaya and Geol. Soc. Malaysia, Kuala Lumpur, p. 175-196.

Tang, M., A.C. Yee, S. King, R.A. Jones, M. Farouki, K. Agbebi, Z. Ye & A. Betteridge (2013)- The geology of the Tenggol Arch, offshore Peninsular Malaysia. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, O54, 4p. *(Extended Abstract)*
(Tenggol Arch Pre-Tertiary structural high is remnant of collapse of regional domal uplift associated with failed rift triple junction of Malay, Penyu and W Natuna Basins. N and S flanks of Tenggol Arch low-angle ramps into Malay and Penyu Basins. Pre-Tertiary basement on crest of arch at 1500m to 2000m depth. Composed of two distinct seismic facies: (1) transparent facies of high grade metamorphic and granitic rocks and (2) layered facies of sedimentary and low-grade metasediments of most likely Mesozoic age)

Thakharw, A. (2010)- Trap mechanism in the Southern Kra Basin, Gulf of Thailand. Bull. Earth Sci. Thailand (BEST), 3, 2, p. 1-4.

(online at: http://cupetrogeoscience.com/BEST_Thakharw,%20A%20.pdf)
(Main trap styles in S Kra Basin, Gulf of Thailand, NE-SW trending listric normal faults that extend into post-rift reservoir. Faults usually trap hydrocarbons on up-thrown sides. Fault traps higher probability for trapping and sealing basinward, where there is thick shale and large fault throws; traps on basin edge low potential)

The, R., J. Pringle, K. Brazier, G. Peace, A. Laird & R. Kudisri (2013)- Songkhla D and E, exploration & development. Proc. SE Asia Petroleum Expl. Soc (SEAPEX) Conf. 2013, Singapore, p. 1-8. *(Presentation)*
(online at: www.seapex.org/im_images/pdf/Simon/13%20Ronald%20The_Coastal%20Energy%20Songkhla%20D&E_SEC%202013.pdf)
(Brief summary of Songkhla oil field discovery and development in stacked Miocene fluvial sand reservoirs in S Gulf of Thailand (other reports suggest reservoir sands of Oligocene age; JTvG))

Tingay, M., C.K. Morley, A. Laird, O. Limpornpipat, K. Krisadasima, H. Macintyre & Suwit Pabchanda (2012)- Origin and distribution of overpressure in the Northern Malay Basin. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 41103, p. *(Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/41103tingay/ndx_tingay.pdf)
(Gas generation accounts for ~46-67% of measured excess pore pressure in N Malay basin, with remaining 33-54% generated by coincident disequilibrium compaction)

Tingay, M., C. Morley, A. Laird, O. Limpornpipat, K. Krisadasima, S. Pabchanda &, H. Macintyre (2012)- Overpressures in the Northern Malay Basin: part 1- origin and distribution. Int. Petrol. Techn. Conf. IPTC, Bangkok 2012, 4, IPTC 15345, p. 3260-3271.
(see also companion paper Limpornpipat et al. (2012) for Part 2. Pore pressure data and sonic velocity-vertical effective stress plots from 31 wells reveal overpressures in N Malay Basin mainly generated by fluid expansion within 2A, 2B and 2C source rock formations. Gas generation accounts for ~70-50% of excess pore pressure in region, with remaining 30-50% generated by coincident disequilibrium compaction)

Tingay, M.R.P., C.K. Morley, A. Laird, O. Limpornpipat, K. Krisadasima, S. Pabchanda& H.R. Macintyre (2013)- Evidence for overpressure generation by kerogen-to-gas maturation in the northern Malay Basin. American Assoc. Petrol. Geol. (AAPG) Bull. 97, 4, p. 639-672.
(Pore-fluid pressure data and sonic velocity-vertical effective stress plots from 30 wells reveal overpressures in N Malay Basin primarily generated by fluid expansion and are located within Miocene 2A, 2B, and 2C source rock formations. Association of fluid expansion overpressures with gas, combined with sonic density response to overpressure and regional geology that precludes other overpressuring mechanisms, provides in-situ evidence for basinwide gas generation overpressuring. Gas generation accounts for ~1/2 to 2/3 of measured excess pore pressure in region, with remainder generated by coincident disequilibrium compaction)

Tjia, H.D. (1994)- Inversion tectonics in the Malay Basin: evidence and timing of events. Bull. Geol. Soc. Malaysia 36, p. 119-126.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994027.pdf)
(Pre-Oligocene half grabens of Malay Basin are pull-apart depressions formed by dextral divergent wrenching. Oligocene- U Miocene sediment fill subjected to compressional deformation, probably in Late Miocene. Extensional regime attributed to 'extrusion' of continental SE Asia and Malay Basin basement due to hard collision between India with Asian Plate. Miocene regional compression probably result of change in motion of Pacific Plate from earlier NNW direction to W-ward direction, combined with N-ward progression of Indo-Australian Plate)

Tjia, H.D. (1998)- Origin and tectonic development of Malay-Penyu-West Natuna basins. Bull. Geol. Soc. Malaysia 42, p. 147-160.
(online at: www.gsm.org.my/products/702001-100849-PDF.pdf)
(Late Cretaceous hot spot arched up continental crust of N Sunda Shelf into Malay Dome. Crest broke into three rift arms, now represented by Malay, Penyu and W Natuna basins. Triple junction is still one of highest heat-flow areas of region. Hot spot activity ended by M Eocene, allowing basins to become aulacogens with up

to 12 km thick Oligocene and younger sediments. Widespread M Miocene fault inversions and unconformity may be tied to end of South China Sea spreading and end of subduction along N Borneo margin)

Tjia, H.D. (2000)- Tectonic and structural development of Cenozoic basins of Malaysia. Proc. Geol. Soc. Malaysia, Ann. Geol. Conf. 2000, Penang, p. 3-16.
(online at: https://gsmpubl.files.wordpress.com/2014/10/agc2000_01.pdf)
(Cenozoic Malaysian basins in: (1) interior of semi-cratonic continental crust (Malay and Penyu basins); (2) marginal belts of semi-cratonic continental crust (small basins of Strait of Melaka and onshore Peninsular Malaysia); (3) straddling collisional plate boundaries (Sarawak and NW Sabah basins); (4) associated with microcontinent (Sandakan, Labuk Bay, Malawali and Tidung basins). Basins may develop as (a) aulacogens above mantle-plume dome (Malay and Penyu); (b) pull-aparts where wrench faulting is dominant (onshore basins of Peninsular Malaysia and Malacca Straits; inverted structures common). (c) At collisional plate boundaries; (d) NE Sabah and Tidung basins originated as rifts in breakup of E Sabah microcontinent)

Tjia, H.D. (2010)- Growing evidence of active deformation in the Malay basin region. Bull. Geol. Soc. Malaysia 56, p. 35-40.
(online at: https://gsmpubl.files.wordpress.com/2014/08/bgsm2010005.pdf)
Very young crustal movements in Malay basin region point to possibility of late reactivation of regional faults. Malay basin originated in Late Cretaceous as aulacogen on Malay Dome, modified by sinistral transtensional wrenching, post M Miocene transpression and general structural inversion. From Pliocene onward most of basin area considered tectonically quiet, but basement-rooted regional fault zones may intrude into Pliocene-Pleistocene strata and almost reach seabed)

Tjia, H.D., Z. Mohamed, A. S.M. Saad, A. Ridhwan, A. Rahim, J. Baharom et al. (2010)- In the quest of open fractures in the crystalline basement of the Malay and Penyu Basins. Petrol. Geosc. Conf. Exhib., Kuala Lumpur 2010, p. *(Extended Abstract)*

Tjia, H.D. & M.I. Ismail (1994)- Tectonic implications of well-bore breakouts in Malaysian basins. Bull. Geol. Soc. Malaysia 36, p. 175-186.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1994032.pdf)
(In Sarawak Basin well-bore breakout directions follow change of tectonic grain in Rajang Accretionary Prism and major tectonic boundaries (W Baram Line, etc.)) and rotations of certain tectonic domains. Other sets directions associated with SW segment of S China Sea spreading ridge. Breakout patterns in Sabah Basin differentiate SW and NE domains which experienced 25° CW rotation. Sandakan Basin experienced compression normal to its axis and also E-W regional compression that is active)

Trevena, A.S. & R.A. Clark (1986)- Diagenesis of sandstone reservoirs of Pattani Basin, Gulf of Thailand. American Assoc. Petrol. Geol. (AAPG) Bull. 70, 3, p. 299-308.
(Miocene sandstones from Pattani basin gas fields, central Gulf of Thailand, show rapid decline in porosity-permeability with depth, from rapid mechanical compaction and cementation by quartz overgrowths, kaolinite, and illite, related to high geothermal gradients. Best porosity- permeability in large pores between 915- 1980m. At greater depths most interparticle pores occluded, and porosity mainly secondary in origin)

Uttarathiyang, T. & J.D. Pigott (2008)- The unexplored post rift Oligocene deltas frontier: North Malay Basin, Thailand. In: Proc. Int. Symp. Geoscience Resources and Environments of Asian Terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok 2008, p. 370-373.
(online at: www.geo.sc.chula.ac.th/Geology/Thai/News/Technique/GREAT_2008/PDF/110.pdf)
(Seismic stratigraphic study of deep post-rift Oligocene deltas in Gulf of Thailand)

Virdy, M.K., S. Adams, T. Kearney, S. Ross & S. Koysamran (2013)- Bualuang Oilfield, Gulf of Thailand: a success story utilising integrated field development planning. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2013, Singapore, p. 1-22. *(Abstract + Presentation)*
(online at: www.seapex.org/im_images/pdf/Simon/15%20Manjeet%20Kaur%20SEAPEX_Salamander%20Bualuang.pdf)

(Brief summary of Bualuang oil field development in stacked M Miocene fluvial sand reservoirs in W Basin of Gulf of Thailand. W Basin is N-S trending Oligocene half-graben, affected by Late Miocene transtension)

Wan Ismail Wan Yusoff (1984)- Heat flow study in the Malay Basin. CCOP Tech. Publ. 15, p. 77-87.

Wan Ismail Wan Yusoff (1990)- Heat flow in offshore Malaysian basins. In: B. Elishewitz (ed.) Proc. CCOP Heat Flow Workshop III, Bangkok 1988, CCOP Tech. Publ. 21, p. 39-54.
(Heat flows over Malay and offshore Sarawak basins variable, from normal to very high (47- 137 mW/m2). In Sabah and Sandakan basins values between 34.5- 64 mW/m2)

Wan Ismail Wan Yusoff (1993)- Geothermics of the Malay basin, offshore Malaysia. M.Sc. Thesis Durham University, p. 1-202.
(online at: http://etheses.dur.ac.uk/5537/1/5537_2976.PDF)
(Review of temperature/ heat flow data of Malay Basin from 59 exploration wells. Malay Basin average heat flow 86 mWm-2, average geothermal gradient 47°C/km, both high. Heat flow regional highs in NW, S and C portions of basin and lower heat flow in SE and NE peripheries. Anomalous heat flow related to subsurface fluid movement and overpressures)

Waples, D.S., R. Mahadir & Meor S. Mahmood (2000)- Geochemistry of gases in the Malay Basin. AAPG Int. Conf. & Exh. 2000, Bali, American Assoc. Petrol. Geol. (AAPG) Bull. 84, p. *(Abstract only)*
(Three end-member gas types in Malay Basin: biogenic, thermal and basement gas. Most gas samples mixtures. Gases with significant biogenic component limited to NE corner of basin, was probably generated locally and does not appear to offer an important exploration. Gases dominated by CO2 predominantly sourced from basement. North central part of basin gas mainly of "normal" thermal origin, with accumulations of moderate size. "Deep" thermal gas seems to dominate over "normal" thermal gas in large accumulations)

Waples, D.S., R. Mahadir & L. Warren (1995)- Implications of vitrinite-reflectance suppression for the tectonic and thermal history of the Malay Basin. Bull. Geol. Soc. Malaysia 37, p. 269-284.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a18.pdf)
(Vitrinite-reflectance (Ro) values in Malay Basin wells lower than expected for high present-day geothermal gradients. Calculated Ro values can only be fitted to measured Ro data by assuming late heat pulse in last few million years. Ro may also be suppressed by abundant liptinite and perhydrous vitrinite. In alternative model paleo heat flow increased during Oligocene rifting and decayed exponentially to modern levels, leading to much earlier hydrocarbon generation)

Waples, D.S. & M. Ramly (1995)- A simple statistical method for correcting and standardizing heat flows and subsurface temperatures derived from logs. Bull. Geol. Soc. Malaysia 37, p. 253-267.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a17.pdf)

Waples, D.S. & M. Ramly (1996)- Geochemistry of gases in the Malay Basin. Bull. Geol. Soc. Malaysia 39, 241-258.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1996020.pdf)
(Three end-member gas types in Malay Basin: biogenic, thermal and basement gas. Most gas samples in Malay Basin mixtures of these. Gases with significant biogenic component limited to NE corner of basin, in small accumulations. Gases dominated by CO2 predominantly sourced from basement.North central part of basin gas mainly of 'normal' thermal origin)

Waples, D.W., L. Warren & R. Mahadir (1994)- A thermal model for the evolution of the Malay Basin. American Assoc. Petrol. Geol. (AAPG) Bull.78, p. 1169. *(Abstract only)*
(Reconstruction of thermal structure of Malay Basin: (1) major heating event in last 100,000 yr; (2) low Ro values throughout basin indicates heat flow prior to heating event, only slightly higher stable cratons, (3) present-day heat flow lowest in E Malay Basin and highest in NW, where Pliocene-Pleistocene subsidence greatest. Basin evolution model: (1) slight Late Eocene extension of stable craton without high heat flow, thermal doming or rift development; (2) continued slight extension and downwarping until end of M Miocene,

when local compression uplifted basement in E portion of basin, leading to 15 km of erosion in some areas; (3) stronger extensional regime throughout basin during Pliocene, causing submergence and greatest subsidence in W, accompanied by increase in heat flow. Strong subsidence (and presumably the increase in basal heat flow) began at ~5.5 Ma, but thermal effects not noted in upper section until recently)

Watcharanantakul, R. & C.K. Morley (2000)- Syn-rift and post-rift modeling of the Pattani Basin, Thailand: evidence for a ramp-flat detachment. Marine Petroleum Geol. 17, p. 937-958.
(Syn-rift section in Pattani Basin has synformal geometry atypical of rifts. Not all subsidence can be modelled as extension-related. Basin probably developed due to both extensional faulting and as synformal basin developed over ramp-flat geometry along major low-angled extensional fault in upper crust. Discrepancy suggests active mantle processes or non-uniform extension (subduction rollback) beneath Gulf of Thailand)

Woollands, M.A. & D. Haw (1976)- Tertiary stratigraphy and sedimentation in the Gulf of Thailand. In: Offshore SE Asia Conf. 1976, Singapore, SE Asia Petrol. Expl. Soc. (SEAPEX), Paper 7, p. 1-22.
(Subdivide Tertiary of Gulf of Thailand into three major cycles of sedimentation)

Wong, R. & S.S. Karimi (2001)- Occurrences of two major transgressive cycles in the North Malay Basin and their impact on the deep reservoir potential. In: Proc. CCOP 37th Ann. Sess. Bangkok 2000, 2, Techn. Repts., p. 27-29.
(Two major transgressive cycles in N Malay Basin: (1) E-M Miocene Group I, H lower coastal plain sands deepening and fining upwards to M Miocene Group F marine shales; (2) U Miocene Group E and D fluvial coastal sands capped by Pliocene Group A/B marine shales. Sandy formation in Groups I, H, E, and D display high amplitude, continuous seismic signature, shale-prone Groups F and A/B weak amplitude, discontinuous seismic facies. Strong indication of deep reservoir potential below overpressured Group F shales)

Yakzan, M., H. Awalludin, M.N. Bahari & R.J. Morley (1996)- Integrated biostratigraphic zonation for the Malay Basin. Bull. Geol. Soc. Malaysia 39, p. 157-184.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1996015.pdf)
(Biostratigraphic scheme for Malay Basin based on foraminiferal, nannofossil and quantitative palynological data. Stratigraphic relationships in U Oligocene fluvial-lacustrine sediments best determined from miospores and freshwater algae. In E Miocene marine flooding surfaces characterized by benthic foraminifera not age diagnostic, but permit accurate correlations. E-M Miocene boundary marine transgressive unit dated by nannofossils and benthic foram and palynological events. Uppermost Miocene- Pleistocene marine facies dated using planktonic foraminifera and nannofossils)

Yamada, H., T. Kachi, J. Maeda & N. Hashimoto (2008)- Recent exploration and development in the Gulf of Thailand oil and gas fields- Investigation of field developing technology and application of fault seal analysis. J. Japanese Association Petroleum Technology 73, 1, p. 74-82.
(online at: https://www.jstage.jst.go.jp/article/japt/73/1/73_1_74/_pdf/-char/en)
(in Japanese, with English abstract))

Yap, C.B. & R. Wong (1997)- Some possible new exploration ideas in the northern and western Malay Basin of peninsular Malaysia. Proc. ASCOPE 97 Conf., 2, p. 177-192.

Yeo, L.G. (2008)- Investigation of the amount of erosion at the upper Miocene unconformity in the southeastern part of the Malay Basin. M.Sc. Thesis Imperial College, London, p. 1-57. *(Unpublished)*
(Malay Basin underwent inversion period in Late Miocene, which led to erosion and basin-wide unconformity. Erosion greatest in SE basin margin (up to 1400m). Paleogeographic maps support theory that inversion was initiated by rotation of Borneo. Erosion thickness little effect on hydrocarbon generation timing)

Yusak, S.A.M. (2012)- Sedimentological characterization of deeper Group M reservoirs in Malay Basin. Petrol. Geosc. Conf. Exh. (PGCE 2012), Kuala Lumpur, Warta Geologi 38, 2, p. 213.
(Extended Abstract. early Oligocene Group M sediments deposited in early rift continental sequence in braided stream to lacustrine environments)

Zainul, A.J.B. et al. (1999)- Overview of petroleum resources of Malaysia. In: Petronas (1999) The petroleum geology and resources of Malaysia, p. 35-58.

Zhang, J., Y. Lu, B. Shi, N. Xu, G. Fan, F. Lu & D. Shao (2014)- Eocene petroleum play: new petroleum system in northeast Gulf of Thailand. Haiyang Xuebao 36, 7, p. 70-76.
(online at: http://english.hyxb.org.cn/EN/abstract/abstract4519.shtml)
(Chinese with English summary. NE Gulf of Thailand stronger inversion structures than elsewhere, enabling petroleum play with Eocene lacustrine source, Eocene- Oligocene deltaic sandstone reservoirs and Miocene delta front and marine shale seals)

IX.7. South China Sea

Andersen, C., A. Mathiesen, L. H. Nielsen, P. V. Tiem, H. I. Petersen & P. T. Dien (2005)- Distribution of source rocks and maturity modelling in the northern Cenozoic Song Hong Basin (Gulf of Tonkin), Vietnam. J. Petroleum Geol. 28, 2, p. 167-184.
(Oil- source rock correlation indicates coal source for sub-commercial oil and gas accumulations in Miocene deltaic sandstones. Coaly source rock interval entered main oil window prior to formation of Late Miocene inversion traps. Lacustrine mudstones interpreted to be preserved in undrilled NW–SE Paleogene half-grabens NE of Song Lo Fault Zone, based on presence of intervals with continuous, high reflection seismic amplitudes)

Areshev, E.G., T.L. Dong, N.T. San & O.A. Shnip (1992)- Reservoirs in fractured basement on the continental shelf of southern Vietnam. J. Petroleum Geol. 15, 3, p. 451-464.
(Several recent oil- and gas discoveries on continental shelf of S Vietnam in weathered Late Jurassic- E Cretaceous granite- granodiorite reservoirs. Largest field is White Tiger. Fracture porosity reservoir may be >1km thick; oil-water contact not yet located. Flow-rates up to 2000 m3/day. Granitoids overlain by Oligocene- younger argillaceous rocks, 2.5-4.4 km thick (locally up to 8 km). Source rocks mostly E Oligocene argillites (or deep abiogenic origin))

ASCOPE/ CCOP- Asian Council on Petroleum (1981)- Tertiary sedimentary basins of the Gulf of Thailand and South China Sea: stratigraphy, structure and hydrocarbon occurrences. ASCOPE Secretariat, Jakarta, 72p.

Bache, F., P. Despland, R. Johns & Z. Eterovic (2015)- A new tectonostratigraphic model for the evolution of the South China Sea. AAPG Geosciences Technology Workshops, Kota Kinabalu 2015, Search and Discovery Art. 90236, 3p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/abstracts/pdf/2015/90236apr/abstracts/ndx_bache.pdf)

Bai, Y.L., S.G. Wu, Z. Liu, R.D. Muller, S.E. Williams, S. Zahirovic & D. Dong (2015)- Full-fit reconstruction of the South China Sea conjugate margins. Tectonophysics 661, p. 121-135.
(Restoration of conjugate margins of S China Sea to original Late Cretaceous unstretched geometries. Model suggests more extension of continental basement on W part of conjugate margins relative to E margin prior to initiation of seafloor spreading. Mid ocean ridge initially formed in E and propagated W-ward)

Baillie, P., T.V. Thang, P. Carter, P. Barber & T. Spry (2005)- Petroleum prospectivity in the Indonesia/ Vietnam border region. Proc. 2005 SE Asia Petrol. Expl. Soc. (SEAPEX) Conf., Singapore, 12p.
(TGS Heimdal seismic survey)

Barckhausen, U., M. Engels, D. Franke, S. Ladage & M. Pubellier (2014)- Evolution of the South China Sea: revised ages for breakup and seafloor spreading. Marine Petroleum Geol. 58 B, p. 599-611.
(Continental breakup of S China Sea basin began in latest Cretaceous in NE and propagated S and W over possibly >40 My. Revised interpretation of seafloor spreading anomalies: onset of seafloor spreading in central SCS at 32 Ma. After ridge jump at 25 Ma spreading began in SW sub-basin, ending at 20.5 Ma in entire basin, followed by phase of magmatic seamount formation mainly along abandoned spreading ridge. Seafloor spreading ended probably because due to blocking of subduction zone along E and S margin by collision with N Palawan or part of Dangerous Grounds continental fragment (see also commentary by Chang et al. 2015))

Barckhausen, U., M. Engels, D. Franke, S. Ladage & M. Pubellier (2014)- Reply to Chang et al., 2014, Evolution of the South China Sea: revised ages for breakup and seafloor spreading. Marine Petroleum Geol. 59, p. 679-681.
(Chang et al. (2015) evidence for ~15 Ma end of seafloor spreading in S China Sea, based on age of E Taiwan Ophiolite, may be questioned because it is based on single K-Ar age of questionable accuracy and E Taiwan Ophiolite may not be obducted piece of S China Sea ocean floor)

Barckhausen, U. & H.A. Roeser (2004)- Seafloor spreading anomalies in the South China Sea revisited. In: P. Clift et al. (eds.) Continent-ocean interactions within East Asian marginal seas, American Geophys. Union (AGU), Geophys. Monograph 149, p. 121-125.
(Updated interpretation of seafloor spreading anomalies in S China Sea based on new magnetic data. Symmetric seafloor spreading of 5.6 cm/year full rate began at ~31 Ma at E-W trending ridge in central part of SCS. After ridge jump of ~50 km to S at 25 Ma spreading accelerated to 7.3 cm/ year. Second spreading center became active in SW part of SCS, which remained separated from original spreading axis. Formation of oceanic crust ended at 20.5 Ma at both axes (earlier than generally interpreted age of ~17-16 Ma; JTvG))

Ben-Avraham, Z. & S. Uyeda (1973)- The evolution of the China Basin and the Mesozoic paleogeography of Borneo. Earth Planetary Sci. Letters 18, p. 365-376.
(At least three stages in tectonic evolution of S China Sea basin: (1) N-S extension associated with formation of oceanic crust in middle Mesozoic; (2) and (3) stages of E-W compression associated with closing of China Basin in Tertiary, involving NW movement of Borneo toward Asia with underthrusting along Palawan Trough. Early Mesozoic paleogeographic reconstruction places Borneo adjacent to mainland China and Hainan. Opening of basin explained by simple rotation of small plate, which included Borneo and Natuna Islands)

Blanche, J.B. & J.D. Blanche (1997)- An overview of the hydrocarbon potential of the Spratly Islands archipelago and its implications for regional development. In: A.J. Fraser et al. (eds.) Petroleum geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 293-310.
(Hydrocarbon potential of Spratly Islands archipelago relatively unknown and in region of many territorial disputes. Surrounded by oil-producing areas of Vietnam, Natuna, NW Palawan, Luconia Shelf, etc.)

Bochu, Y. (1996)- Tectonic evolution of the South China Sea in Cenozoic. Marine Geol. Quaternary Geol. 16, 2, p. 1-13. *(In Chinese, with English Abstract)*
(S China Sea underlain by Cenozoic oceanic crust. Two episodes of spreading: (1) NW-SE spreading in Late Eocene- E Oligocene (42-35 Ma), producing NW and SW basins; (2) Late Oligocene- E Miocene (32-17 Ma), forming Central Basin. Tectonic evolution controlled by subduction of Pacific plate under Eurasian continent and collision of India plate with Asian continent)

Bochu, Y. (1999)- The geotectonic character of SE Asia and Cenozoic tectonic history of South China Sea. Gondwana Research 2, 4, p. 512-515. *(Extended Abstract)*
(Brief review of SE Asia blocks surrounding S China Sea. Three tectonic movements and two seafloor spreading events in Cenozoic in S China Sea area: (1) late Cretaceous E Tertiary Shenhu movement; (2) Late Eocene- Ey Oligocene Nanhai movement, with seafloor spreading in NW, SW and Zenmu sub-basins, possibly related to collision of Indian plate with Asian plate; (3) late Oligocene- E Miocene second phase of extension, separatiing Liyue-NE Palawan from S China block and forming Central basin. In late M Miocene (~13 Ma), Sulawesi block collided with Great Sunda block, at ~11 Ma, Liyue-NE Palawan block collided with Sulu block)

Bochu, Y., L. Wang, N. Wu & T. Dizhi (2005)- Cenozoic tectonic evolution and the 3D structure of the lithosphere of the South China Sea. Geol. Bull. China 24, 1, p. 1-8. *(In Chinese, with English Abstract)*

Bochu, Y., L. Wang & Z. Liu (2004)- Tectonic dynamics of Cenozoic sedimentary basins and hydrocarbon resources in the South China Sea. Earth Science. J. China University of Geoscience 29, 5, p. 543-549. *(In Chinese, with English Abstract)*

Bojesen-Koefoed, J.A., L.H. Nielsen, H.P. Nytoft, H.I. Petersen, Nguyen Thi Dau et al. (2005)- Geochemical characteristics of oil seepages from Dam Thi Nai, Central Vietnam: implications for hydrocarbon exploration in the offshore Phu Khanh Basin. J. Petroleum Geol. 28, p. 3-18.
(Active oil seepage on E coast of C Vietnam, adjacent to N part of offshore and largely unexplored Phu Khanh Basin. Petroleum generated from Tertiary marine marl source rock)

Bojesen-Koefoed, J.A, H.P. Nytoft & Nguyen Thi Dau (2009)- Petroleum composition in the Cuu Long Basin (Mekong Basin) offshore southern Vietnam. Marine Petroleum Geol. 26, p. 899-908.

(Cuu Long (Mekong) rift basin off S Vietnam important petroleum basin. Oils from four fields are highly paraffinic. Originated from lacustrine source rocks, presumably Oligocene lacustrine shales in syn-rift)

Boubacar, L., J. Ren, J. Zhang & C. Lei (2015)- En echelon faults and basin structure in Huizhou Sag, South China Sea: implications for the tectonics of the SE Asia. J. Earth Science (China) 26, 5, p. 690-699.
(Huizhou sag on N continental margin of S China Sea with en echelon fault distribution at margins of basin, suggesting oblique extension and caused by subduction of Proto-South China Sea towards NW Borneo. Tectonic evolution of basin: rifting (49–32 Ma), post-rift (32–15.5 Ma) and rapid subsidence (15.5-0 Ma))

Boulay, S., C. Colin, A. Trentesaux, S. Clain, Z. Liu & C. Lauer-Leredde (2007)- Sedimentary responses to the Pleistocene climate variations recorded in the South China Sea. Quaternary Research 68, 1, p. 162-172.

Braitenberg, C., S. Wienecke & Y. Wang (2006)- Basement structures from satellite-derived gravity field: South China Sea ridge. J. Geophysical Research 111B, p. 1-15.
(online at: https://www2.units.it/geodin/bib/JGR06.pdf)
(Satellite gravity shows linear feature of ~1000 km length, paralleling S China Sea extinct spreading center. Model crustal thickness between 8-12 km over oceanic, 10- 20 km over continental crust parts of S China Sea. Spreading center is continuous and bends from older E-W orientation to younger SW-NE orientation rather than being made up of two separate axis segments)

Briais, A. & G. Pautot (1990)- Reconstructions of the South China Sea from structural data and magnetic anomalies. In: X. Jin et al. (eds.) Proc. Symposium Recent contributions to the geological history of the South China Sea, Hangzhou 1990, p. 60-70.
(online at: https://epic.awi.de/38705/2/south-china-sea_1990.pdf)
(Oceanic spreading in S China Sea very asymmetric and at least one ridge jump. Spreading probably started at ~26 Ma and stopped synchronously along spreading ridge at ~15.5 Ma. Extension mostly related to extrusion of Indochina Block as consequence of India-Asia collision)

Briais, A., P. Tapponnier & G. Pautot (1989)- Constraints of Sea Beam data on crustal fabrics and seafloor spreading in the South China Sea. Earth Planetary Sci. Letters 95, p. 307-320.

Briais, A., P. Patriat & P. Tapponnier (1993)- Updated interpretation of magnetic anomalies and seafloor spreading stages in the South China Sea; implications for the Tertiary tectonics of Southeast Asia. J. Geophysical Research 98, p. 6299-6328.
(New set of magnetic profiles in NE and SW South China Sea. Spreading between 32-27 Ma created rel. smooth basement, now covered by thick sediments. Ridge jumped S and created rough basement, with thinner sediments than in N, from ~27-16 Ma, while spreading rate was slower. Spreading stopped at ~15.5 Ma. Reconstruction of Oligo-Miocene SE Asia blocks movements tied to extrusion of Indochina after India-Asia collision. Cessation of spreading after 16 Ma synchronous with final increments of left-lateral shear and normal uplift in Ailao Shan (18 Ma) and incipient Australian-Eurasian plates collisions)

Buhring, C., M. Sarnthein & H. Erlenkeuser (2004)- Toward a high-resolution stable isotope stratigraphy of the last 1.1 M.y.: Site 1144, South China Sea. In: W.L. Prell et al. (eds.) Proc. Ocean Drilling Program (ODP), Scientific Results 184, Chapter 2, p. 1-29.
(online at: www-odp.tamu.edu/publications/184_SR/VOLUME/CHAPTERS/205.PDF)
(High-resolution oxygen and carbon stable isotope statigraphy of 518m-long cored Quaternary section of ODP Site 1144 in northern S China Sea. One 5 cm thick layer with Australasian microtektites (386.18- 386.23 mcd) near Brunhes/Matuyama boundary and within transition of lower MIS 19- MIS 20 oxygen isotope stages. Proposed age model layer suggests age of microtektites layer 787 ka. Microtektite layer also in SONNE-95 core 17957 from southern SCS, within MIS 19–20 transition, 10 cm (~11.6 ky) below Brunhes/Matuyama reversal)

Bui Viet Dung (2011)- The Late Quaternary evolution of the southern Vietnamese continental shelf. Ph.D. Thesis, Christian-Albrechts Universitat, Kiel, p. 1-118.
(online at: http://d-nb.info/1013154398/34)

Bui Viet Dung, K. Stattegger, D. Unverricht, P. Van Phach & N.T. Thanh (2013)- Late Pleistocene-Holocene seismic stratigraphy of the Southeast Vietnam Shelf. Global Planetary Change 110, p. 156-169.
(Late Pleistocene-Holocene sequence of SE Vietnam Shelf with basal sequence boundary formed by subaerial exposure during Late Pleistocene sea-level fall and subsequent marine reworking during transgression. Northern incised-valley system narrow and deep V-shape in cross-section (<5 km wide, 10s of m deep) likely result of high-gradient of paleo-shelf. Off Mekong Delta and Ca Mau Peninsula low-gradient paleo-shelf created shallow incised-valleys (5-15 km wide, <15m deep. Lowstand ST prograding outer shelf delta-wedge formed during Last Glacial Maximum. Transgressive ST preserved in incised-valleys, with thickness 15-25m)

Bui Viet Dung, K. Stattegger, N.T. Thanh, P. Van Phach, T.T. Dung & B.X. Thong (2014)- Late Pleistocene-Holocene seismic stratigraphy of Nha Trang shelf, central Vietnam. Marine Petroleum Geol. 58, p. 789-800.
(Two sequences in Late Pleistocene-Holocene on steep and narrow shelf off Nha Trang. Relict beach ridge deposits ~130m below present water depth indicate Last Glacial Lowstand sea level in this area lower than in neighboring areas, probably resulting from subsidence due to high sedimentation rate and/or neotectonic movements of E Vietnam Fault System)

Calvert, S.E., T.F. Pedersen & R.C. Thunnell (1993)- Geochemistry of the surface sediments of the Sulu and South China Seas. Marine Geology 114, p. 207-231.

Cameselle, A.L., C.R. Ranero, D. Franke & U. Barckhausen (2017)- The continent-ocean transition on the northwestern South China Sea. Basin Research 29, S1, p. 73-95.

Cao, Y., C.F. Li & Y. Yao (2017)- Thermal subsidence and sedimentary processes in the South China Sea Basin. Marine Geology 394, p. 30-38.
(Differences in sedimentation rate changes and calculated subsidence between East and SW subbasins of S China Sea. Abrupt increase in sedimentation rates since Pliocene suggestst glacial-interglacial climate variability impacted erosion rates)

Chungkham, P. (2004)- Phu Khanh Basin, a frontier deepwater basin in Vietnam. SEAPEX Press 7, 3, p. 56-69.

Chang, J.H., H.H. Hsieh, A. Mirza, S.P. Chang, H.H. Hsu, C.S. Liu, C.C. Su, S.D. Chiu et al. (2017)- Crustal structure north of the Taiping Island (Itu Aba Island), southern margin of the South China Sea. J. Asian Earth Sci. 142, p. 119-133.
(Taiping Island in Spratly (Nansha) Islands in N part of S margin of SW Sub-basin of S China Sea. Basement highs dominated by fault blocks and volcanic basement structures)

Chang, J.H., T.Y. Lee & H.H. Hsu (2015)- Comment on Barckhausen et al., 2014- Evolution of the South China Sea: revised ages for breakup and seafloor spreading. Marine Petroleum Geol. 59, p. 676-678.
(Youngest available age for fragment of S China Sea (now part of E Taiwan ophiolite) is ~15 Ma, suggesting cessation of S China Sea seafloor spreading more consistent with previous studies than Barckhausen et al (2014) suggested age of 20.5 Ma (validity of K-Ar dating and interpretion of E Taiwan Ophiolite as piece of S China Sea oceanic crust questioned by Barckhausen et al. 2015; Reply))

Choi, T. & J. McArdle (2015)- Hydrocarbon prospectivity of the deep water Phu Kanh Basin. AAPG Asia Workshop, Tectonic evolution and sedimentation of South China Sea region, Kota Kinabalu, Sabah, Search and Discovery Art. 10751, 2p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2015/10751choi/ndx_choi.pdf)
(Frontier Phu Khanh Basin, offshore Vietnam, at transition zone between Indochina block and S China Sea margin. Post-2008 deep water wells proved working petroleum system. Two main depocentres with two syn-rift phases (Late Eocene- Oligocene and E-M Miocene). Several Late Oligocene inverted structures, related to opening of S China Sea. Basin history similar to NW Palawan Basin. Play types include basement play, Miocene reefal buildups, U Micene-Pliocene turbidite fans and Oligocene- E Miocene syn-rift clastics under major Mid-Miocene unconformity)

Chung, S.L., H. Cheng, B.M. Jahn, S.Y. OôReilly & B. Zhu (1997)- Major and trace element and Sr-Nd isotope constraints on the origin of Paleogene volcanism in South China prior to the South China Sea opening. Lithos 40, p. 203-220.
(Paleogene volcanics crop out in Sanshui, Heyuan and Lienping basins, in attenuated continental margin of S China. Bimodal lavas from Sanshui basin (64-43 Ma) bimodal, geochemically similar to Cretaceous A-type granites from nearby region. Paleogene volcanic activities resulted from lithospheric extension in S China that migrated S and eventually led to opening of S China Sea during ~ 30-16 Ma)

Clift, P.D. (2015)- Coupled onshore erosion and offshore sediment loading as causes of lower crust flow on the margins of South China Sea. Geoscience Letters 2, 13, p. 1-11.
(online at: https://link.springer.com/article/10.1186/s40562-015-0029-9)
(Several basins around S China Sea with accelerated phases of basement subsidence associated with phases of fast erosion onshore and deposition of thick sediments offshore, causing flow of ductile crust from offshore towards continental interior after end of active extension, partly reversing flow during continental breakup)

Clift, P.D. (2016)- Assessing effective provenance methods for fluvial sediment in the South China Sea. In: P.D. Clift et al. (eds.) River-dominated shelf sediments of East Asian seas, Geol. Soc., London, Spec. Publ. 429, p. 9-29.
(online at: http://www.geol.lsu.edu/pclift/pclift/Publications_files/2015_Clift_GSSP.pdf)
(Thermochronology methods best suited for provenance analysis in S China Sea, especially apatite fission track, which shows more diversity in sources than U-Pb zircon or Ar/Ar muscovite dating. Triassic Indosinian ages very common in many of source regions)

Clift, P.D., S. Brune & J. Quinteros (2015)- Climate changes control offshore crustal structure at South China Sea continental margin. Earth Planetary Sci. Letters 420, p. 66-72.
(online at: http://earthbyte.org/Resources/Pdf/Clift_etal_2015_Climate_changes_control_offshore_crustal_structure_SouthChinaSea.pdf)
(Rifted continental lithosphere subsides as consequence of combined crustal thinning and mantle lithosphere cooling, but some continental margin basins experience anomalous subsidence after active extension. Deep basins on N margin of S China Sea (Baiyun Sag, etc.) show basement subsidence accelerating after ~21 Ma, postdating extension by several million years. Sediment loading by increased sediment flux after faster onshore erosion following E Miocene monsoon intensification is viable trigger for ductile flow after active extension)

Clift, P., G.H. Lee, N.A. Duc, U. Barckhausen, H.V. Long & S. Zhen (2008)- Seismic reflection evidence for a Dangerous Grounds miniplate: no extrusion origin for the South China Sea. Tectonics 27, TC3008, p. 1-16.
(S boundary of Dangerous Grounds is subduction zone that jammed in M Miocene. Dangerous Grounds bounded by strike-slip zone, also active until ~16 Ma. W Baram Line originates as strike-slip fault in Dangerous Grounds and continuous with Red River Fault Zone. Because Dangerous Grounds independent of Sundaland until ~16 Ma, extrusion impossible as mechanism to rift S China Sea. SE motion by Dangerous Grounds and Sundaland suggests subduction (slab rollback?) main trigger for plate motions. Reconstruction places ~280km upper limit on motion on Red River Fault and ~1400km width to Paleo-S China Sea)

Clift, P. & J. Lin (2001)- Preferential mantle lithospheric extension under the South China margin. Marine Petroleum Geol. 18, p. 929-945.
(online at: www.whoi.edu/science/GG/people/jlin/papers/Clift&Lin_M&P.Geol.2001.pdf)
(Continental rifting in northern S China Sea culminated in seafloor spreading at ~30 Ma (Late Oligocene). Basin and margins classic break-up in juvenile arc crust environment. Extension of crust exceeded that in mantle lithosphere under S China Shelf, but depth-dependent extension rather than lithospheric-scale detachment. Timing of major extension is mid-late Eocene- Late Oligocene (~45-25 Ma))

Clift, P., J. Lin & U. Barckhausen (2002)- Evidence of low flexural rigidity and low viscosity lower continental crust during continental break-up in the South China Sea. Marine Petroleum Geol. 19, 8, p. 951-970.

(S China Sea formed by seafloor spreading in Late Oligocene at ~30 Ma following series of extensional events within Mesozoic continental arc crust. Study of faults on seismic reflection profiles from margins. Forward models based on upper crustal faulting underpredicted subsidence, especially towards continent-ocean transition (COT). Interpreted to indicate preferential extension of continental lower crust along COT on both margins. Forward models based on upper crustal faulting support idea of very weak continental crust)

Clift, P.D., J. Lin & ODP Leg 184 Scientific Party (2001)- Patterns of extension and magmatism along the continent-ocean boundary, South China margin. In: R.C.L. Wilson, R.B. Whitmarsh et al. (eds.) Non-volcanic rifting of continental margins: a comparison of evidence from land and sea, Geol. Soc. London, Spec. Publ. 187, p. 489-510.
(Early Oligocene sea-floor spreading in S China Sea preceded by Maastrichtian and Mid-Eocene continental extension that generated rift basins on margin and outer structural high. Seismic evidence of rift-related volcanic rocks~25 km landward of continent-ocean boundary. S China margin may be intermediate type of continental extension between Iberia-type non-volcanic and Greenland-type volcanic margin)

Clift, P.D. & Z. Sun (2001)- The sedimentary and tectonic evolution of the Yinggehai-Song Hong basin and the southern Hainan margin, South China Sea: implications for Tibetan uplift and monsoon intensification. J. Geophysical Research 111, B06405, 28p.
(Yinggehai-Song Hong large pull-apart basin along Red River fault zone in South China Sea, cross-cutting rifted margin of northern South China Sea. Basins started to open after ~45 Ma, especially after ~34 Ma. Yinggehai basin folded and inverted in M Miocene, after 21 Ma in N and 14 Ma in S, rapidly subsiding again after ~5 Ma. Sediment supply peak in M Miocene. Major uplift in Red River drainage in M Miocene or older)

Collins, D.S., A. Avdis, P.A. Allison, H.D. Johnson, J. Hill, M.D. Piggott, M.H.A. Hassan & A.R. Damit (2017)- Tidal dynamics and mangrove carbon sequestration during the Oligo-Miocene in the South China Sea. Nature Communications 8, 15698, p. 1-12.
(online at: https://www.nature.com/articles/ncomms15698.pdf)
(Evaluation of processes controlling productivity and preservation of mangrove-bearing successions in Oligo-Miocene of basins of S China Sea (Vietnam, Gulf of Thailand, N Borneo). High tidal ranges optimize mangrove development along tide-influenced tropical coastlines. Preservation of mangrove organic carbon promoted by high tectonic subsidence and fluvial sediment supply)

Cossey, S.P.J. & W.T. Valenta (1984)- Seismic hydrocarbon indicators in South China Sea. Oil and Gas J., 13 June 1984, p. 212-224.

Cullen, A., P. Reemst, G. Henstra, S. Gozzard & A. Ray (2010)- Rifting of the South China Sea: new perspectives. Petroleum Geoscience 16, 3, p. 273-282.
(Oligocene seafloor spreading and rift propagation in S China Sea critical tectonic events that overprint earlier regional extension. Two models proposed to explain opening of S China Sea. Sarawak Orogeny attributed to Eocene-Early Oligocene collision of Dangerous Grounds-Reed Bank with Sabah and Palawan. Oligo-Miocene subduction of oceanic crust under NW Borneo is minimal. Sabah Orogeny and younger inversion events related to underthrusting of Dangerous Grounds driven by both opening of the South China Sea and NW-directed subduction beneath SE Sabah in Semporna-Dent Peninsula)

Cuong, T.X. & J.K. Warren (2009)- Bach Ho field, a fractured granitic basement reservoir, Cuu Long basin, offshore SE Vietnam: a "buried-hill" play. J. Petroleum Geol. 32, 2, p. 129-156.
(Bach Ho field originally discovered by Mobil in 1975. Producing since mid-1980's from Late Cretaceous granite-granodiorite, associated with major NE-SW Late Oligocene transpressional fault with ~2000m of lateral displacement cross-cutting Central Block. 1000m liquids column, effective porosities 3-5%)

Dao, D.V. & T. Huyen (1995)- Heat flow in the oil basins of Vietnam. CCOP Techn. Bull. 25, p. 55-61.

Delescluse, M., T. Pichot, N. Chamot-Rooke, M. Pubellier, Y. Qiu, G. Sun, J. Wang & J.L. Auxietre (2015)- Seismic imaging of the SW South China Sea deep crustal structure shows evidence for a ductile lower crust

during rifting. AAPG Workshop 'Tectonic evolution and sedimentation of South China Sea region', Kota Kinabalu, Search and Discovery Art. 30404, 36p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2015/30404delescluse/ndx_delescluse.pdf)
(S China Sea very wide rifted continental crust margins (~400 km in N, nearly 800 km in SW). Rift-related normal faults of S China Sea rooted in mid-lower-crustal detachment. Extension of SW SCS margins distributed on small-scale and large-scale normal faulting with spacing of ~15-30 km and ~45-90 km, respectively, probably related to presence of competent layers (upper-middle crust and shallow upper mantle) separated by ductile lower crust)

Dien, Phan Trung (1995)- Some Cenozoic hydrocarbon bearing basins on the continental shelf of Vietnam. Bull. Geol. Soc.Malaysia 37, p. 33-54.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a03.pdf)
(Offshore basins of Vietnam contain hydrocarbon traps in Tertiary sediments and Pre-Cenozoic fractured basement (with Oligocene source rock and topseal). Basement composed of U Jurassic-Eocene meta-molasses and plutonic-volcanic arcs (45-168 Ma). Sedimentary basins continental shelf filled by Oligocene-Miocene marine and deltaic sediments, related to rifting of S China Sea. Main basins Cuulong, Nam Con Son)

Dien, P.T. (1996)- Some pre-Cenozoic petroleum plays on the continental shelf of Vietnam. Petrovietnam Rev. 1, p. 7-20.

Dien, P.T., C. Andersen, L.H. Nielsen, N.H. Quy, P.V. Tiem & P.S. Tai (2000)- Basin analysis and petroleum system of the Song Hong Basin. Proc. 36th Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Hanoi 1999, p. 1-33.
(Song Hong Basin series of complexly faulted sub-basins on NW margin S China Sea. In NE area oil play in U Devonian- Lw Carboniferous fractured carbonates, sourced from juxtaposed Oligocene syn-rift lacustrine shales. Also U Oligocene- Miocene clastics play)

Dien, P.T., P.S. Tai & N. Van Dung (1997)- Basin analysis and petroleum system of the Cuu Long Basin on the continental shelf of Vietnam. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 521-529.

Ding, W.W., D. Franke, J.B. Li & S. Steuer (2013)- Seismic stratigraphy and tectonic structure from a composite multi-channel seismic profile across the entire Dangerous Grounds, South China Sea. Tectonophysics 582, p. 162-176.
(500km long seismic profile across Dangerous Grounds and S China Sea. Two major phases of extension, separated by unconformity, which likely corresponds with beginning of sea-floor spreading in S China Sea. Early extension during continental rifting (Late Cretaceous- E Oligocene), with formation of half-grabens and rotated blocks. Extension continued in Late Oligocene- E Miocene. Dangerous Grounds magma-poor rift system at initial stage of mantle unroofing. Widespread carbonate platform developed across Dangerous Grounds, concurrent with seafloor spreading in SW Subbasin of S China Sea)

Ding, W.W. & J.B. Li (2011)- Seismic stratigraphy, tectonic structure and extension factors across the Dangerous Grounds: evidence from two regional multi-channel seismic profiles. Chinese J. Geophysics 54, 6, p. 921-941.
(online at: www.agu.org/wps/ChineseJGeo/54/06/dww.pdf)
(Two regional NW-SE seismic lines from Dangerous Grounds area to Borneo. Five tectono-stratigraphic units recognized, the SCS, together with seven sequence boundaries. Main extension during E Tertiary continental rifting and resulted in formation of half-grabens and rotated blocks, controlled by deeply rooted detachment system. Late Oligocene- E Miocene second extension phase)

Ding, W.W. & J.B. Li (2016)- Conjugate margin pattern of the Southwest Sub-basin, South China Sea: insights from deformation structures in the continent-ocean transition zone. Geological Journal 51, S1, p. 524-534.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/gj.2733/pdf)

Ding, W.W., J.B. Li, P.D. Clift & IODP Exp. 349 Scientists (2016)- Spreading dynamics and sedimentary process of the southwest Sub-basin, South China Sea: constraints from multi-channel seismic data and IODP Expedition 349. J. Asian Earth Sci. 115, p. 97-113.
(online at: www.whoi.edu/fileserver.do?id=226584&pt=2&p=68128)
(S China Sea three basement domains: hyper-stretched crust, exhumed subcontinental mantle and steady state oceanic crust. SW subbasin has asymmetric geometry and experienced detachment faulting in final stage of continental rifting and exhumation of continental mantle lithosphere. Mantle lithospheric breakup post-dates crustal separation, delaying establishment of oceanic spreading and steady state crust production)

Ding, W.W., J.B. Li, C. Dong & Y. Fang (2015)- Oligocene-Miocene carbonates in the Reed Bank area, South China Sea, and their tectono-sedimentary evolution. Marine Geophysical Res. 36, 2-3, p. 149-165.
(In Reed Bank area wide carbonate platform, developed in Late Oligocene and E Miocene (32-20 Ma), concurrent with opening of South China Sea. Top carbonates is regional unconformity, marking cessation of seafloor spreading with erosional/non-depositional hiatus, spanning 3 or My. Sharp increase in subsidence rate after end of spreading (17 Ma), causing carbonate platforms drowning, except at some structural highs where carbonate sedimentation continued to M Miocene)

Ding, W.W., J.B. Li, C. Dong, Y. Fang, Y. Tang & J. Fu (2014)- Carbonate platforms in the Reed Bank Area, South China Sea: seismic characteristics, development and controlling factors. Energy Exploration & Exploitation 32, 1, p. 243-261.
(Seismic characteristics of Late Oligocene- E Miocene carbonate platforms and other reef types in Reed Bank area. Reefal carbonate build-ups continued in structural highs almost up to M Miocene and to present in Reed Bank. Development of platforms and reefs controlled by tectonics and sea level. Thermal subsidence after cessation of S China Sea opening in E Miocene and rising sea level drowned carbonate platforms)

Ding, W.W., Z. Sun, K. Dadd, Y. Fang & J.B. Li (2018)- Structures within the oceanic crust of the central South China Sea basin and their implications for oceanic accretionary processes. Earth Planetary Sci. Letters 488, p. 115-125.
(online at: https://www.sciencedirect.com/science/article/pii/S0012821X18300736)
(On bright reflectors within Oligocene- M Miocene oceanic crust of S China Sea. Dipping reflectors generally confined to lower crust above Moho reflection)

Dmitriyevskiy, A.N., F.A. Kireyev, R.A. Bochko & T.A. Fedorova (1993)- Hydrothermal origin of oil and gas reservoirs in Basement rock of the South Vietnam continental shelf. Int. Geology Review 35, 7, p. 621-630.
(Oil-saturated granites, with mineral parageneses typical of hydrothermal metasomatism and leaching haloes, near faults in crystalline basement of S Vietnam continental shelf. Presence of native silver, barite, copper, etc., indicates deep origin for mineralizing fluids)

Dong, D.D., S.G. Wu, J.B. Li & T. Ludmann (2014)- Tectonic contrast between the conjugate margins of the South China Sea and the implication for the differential extensional model. Science China Earth Sciences 57, 6, p. 1415-1426.
(Conjugate margins of S China Sea strongly asymmetric)

Dorobek, S.L. (2000)- Cenozoic carbonate buildups of the South China Sea and the early post-rift history of passive continental margins. Geol. Soc. America (GSA), Ann. Mtg. 2000, Abstracts with Programs 32, 7, p. 226. *(Abstract only)*
(S China Sea underlain by Paleogene rifted continental and young (32-15 Ma) oceanic crust. Extensional basement highs became nucleation sites for carbonate sedimentation during latest syn-rift to early post-rift phases. Longest lived, largest and thickest buildups in most offshore rift basins. Large isolated platforms commonly coalescence from smaller buildups. Growth of buildups strongly influenced by long-term subsidence. Many of farthest offshore buildups still growing today. Termination of more inboard Cenozoic buildups due to hypernutrification or increasing turbidity from major river systems. Only in offshore Palawan and E parts of Dangerous Grounds tectonic subsidence rates rapid enough to drown carbonate buildups)

Du Bois, E.P. (1981)- Review of principal hydrocarbon-bearing basins of the South China Sea area. Energy 6, 11, p. 1113-1140.
(S China Sea area basins include: Thai, Malay, West Natuna and Penyu, Saigon and Mekong (Vung Tau), E Natuna, Greater Sarawak including C Luconia and Balingian provinces, Baram Delta/Brunei-Sabah and NW Palawan Shelf. Hydrocarbons commonly associated with M and Upper Miocene age rocks. Oligocene and Pliocene occurrences locally significant.)

Du Bois, E.P. (1985)- Review of principal hydrocarbon-bearing basins around the South China Sea. Bull. Geol. Soc. Malaysia 18, p. 167-209.
(online at: www.gsm.org.my/products/702001-101139-PDF.pdf)
(Review of ~12 basins around S China Sea in Thailand (Kharat, Thai), Malaysia (Malay, Penyu), Vietnam, N Borneo, E and W Natuna, Sarawak, Brunei-Sabah and NW Palawan)

Emery, K.O. & Z. Ben-Avraham (1972)- Structure and stratigraphy of China Basin. American Assoc. Petrol. Geol. (AAPG) Bull. 56, 5, p. 839-859.
(Early seismic interpretation of S China Sea. Acoustic basement in S part of basin that may be continuation of igneous and metamorphic rocks beneath adjacent shelf which were peneplaned during Late Cretaceous- Early Cenozoic. More irregular basement in N of basin may be oceanic basement, etc.)

Emery, K.O. & Z. Ben-Avraham (1972)- Structure and stratigraphy of the China Basin. United Nations ECAFE, CCOP Techn. Bull. 6, p. 117-140.
(Same paper Emery & Ben-Avraham (1972) above)

Fang, P., W. Ding, Y. Fang & Z. Zhao (2017)- Cenozoic tectonic subsidence in the southern continental margin, South China Sea. Frontiers of Earth Science 11, 2, p. 427-441.
(Tectonic subsidence history from seismic profiles across Dangerous Grounds and Reed Bank area in S China Sea. Delay of tectonic subsidence after break-up, likely related to major mantle convection during seafloor spreading. Stage with delayed subsidence rate in Reed Bank area 32-23.8 Ma, in the Dangerous Grounds 19-15.5 Ma, tied to rift propagation)

Flower, M.F.J., M. Zhang, C.Y. Chen, Kan Tu & G. Xie (1992)- Magmatism in the South China Basin: 2. Post-spreading Quaternary basalts from Hainan Island, south China. Chemical Geol. 97, p. 65-87.
(Cenozoic magmatism on N Hainan Island post-dates opening of S China Sea Basin. Tholeiite lava flows from WSW-ENE-trending fissures and interlayered with M Miocene-Quaternary sediments, forming 200-1000m sequence. With time basalts change from thin intercalated quartz tholeiite and alkali olivine basalt flows to more massive olivine tholeiites. Hainan basalts resemble Dupal-type oceanic island basalt)

Fontaine, H. (1980)- Pre-Tertiary hydrocarbon potential of the South China Sea. Proc. 17th Sess. CCOP, Bangkok 1980, p. 304-321.

Fontaine, H. & M. Mainguy (1981)- Pre-Tertiary hydrocarbon potential of the South China Sea. In: Proc. EAPI/CCOP Workshop, Energy 6, 11, p. 1165-1177.
(Mainly brief review of Paleozoic-Mesozoic geology of mainland SE Asia, Sumatra, Borneo and The Philippines. To NW and SE of S China Sea shows and potential have been noted in pre-Tertiary sections)

Fontaine, H. & M. Mainguy (1985)- Pre-Tertiary oil and gas potential in the South China Sea. In: Proc. 2nd EAPI/CCOP Workshop, Energy 10, 3-4, p. 403-412.
(Mainly addendum to paper above on distribution of pre-Tertiary sediments in SE Asia and petroleum potential. Permian limestone section probably best target for petroleum exploration. Pre-Tertiary rocks probably gas prone)

Franke, D. (2013)- Rifting, lithosphere breakup and volcanism: comparison of magma-poor and volcanic rifted margins. Marine Petroleum Geol. 43, p. 63-87.

(Volcanic rifted margins evolve by extension accompanied by extensive extrusive magmatism during breakup, (up to 15km volcanic flows, seaward dipping reflectors). Magma-poor rifted margins with wide domains of extended crust (rotated faults blocks with detachment surfaces near base of continental crust), but limited magmatism. South China Sea intermediate between above end-members, with basin-and-range type rifting followed by formation of oceanic crust)

Franke, D., U. Barckhausen, N. Baristeas, M. Engels, S. Ladage, R. Lutz, J. Montano, N. Pellejera, E.G. Ramos & M. Schnabel (2011)- The continent-ocean transition at the southeastern margin of the South China Sea. Marine Petroleum Geol. 28, 6, p. 1187-1204.
(S China Sea created by magma-poor rifting in Paleogene. Study of continent-ocean transition (COT) at S margin off NW Palawan between continental blocks of Reed Bank and Palawan- Calamian islands. Two major NE trending rifted basins. Continent-ocean transition interpreted at seaward limit of continental crust, but magnetic spreading anomalies terminate ~80-100 km farther N. Area in-between extensive volcanism (dykes, extrusive basaltic lava flows, occurring after breakup). COT varies from distinct outer ridge with steep seafloor relief to rotated fault blocks and half-grabens above eroded pre-rift basement and no seafloor relief. Gravity modelling shows extremely thinned crust across shelf)

Franke, D., D. Savva, M. Pubellier, S. Steuer, B. Mouly, J.L. Auxietre, F. Meresse & N. Chamot-Rooke (2014)- The final rifting evolution in the South China Sea. Marine Petroleum Geol. 58, B, p. 704-720.
(S China Sea ~30-40 Myrs of rifting. Initial latest Cretaceous- E Paleocene rift architecture preserved at distal margins. Rift basins bounded to crustal blocks by listric normal faults on either side and with Moho uplifts under major rift basins. Most basin-bounding faults sole out in middle crust. Only in region within ~50 km from Continent-Ocean Transition normal faults reach mantle, dipping seaward or landward, which may indicate presence of exhumed mantle bordering continental margins. Post-rift (Oligocene-E Miocene) platform carbonates indicate delay in subsidence during rifting. Symmetric process predominate in initial rift stage. Considerable along-margin variations suggested, with alternating 'upper and lower plate' margins. Breakup in major E subbasin of SCS in E Oligocene, breakup of SW subbasin in Late Oligocene)

Funnell, R., R. Allis & T. Huyen (1997)- Thermal regimes in two Vietnamese basins, Cuu Long and Nam Con Son, and implications for hydrocarbon generation. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 499-509.
(Steady-state surface heat flow ~70 ± 5 mW/m2 for hydrocarbon-producing Cuu Long Basin and 80 ± 8 mW/m2 for Nam Con Son Basin about 100 km to SE)

Fyhn, M.B.W., L.O. Boldreel & L.H. Nielsen (2009)- Tectonic and climatic control on growth and demise of the Phanh Rang carbonate platform offshore south Vietnam. Basin Research 21, 2, p. 225-251.
(Phanh Rang carbonate platform offshore S Vietnam >15,000 km2, one of largest in S China Sea. Platform growth initiated in late M Miocene and terminated in Pliocene. Late Miocene regional uplift and subaerial exposure, causing karstification. Deteriorated growth conditions and fast subsidence resulted in platform split-up, backstepping and local drowning. Isolated platforms nucleated on structural highs as transgression continued. Longest surviving platform now crops out at seafloor at ~500m depth)

Fyhn, M.B.W., L.O. Boldreel & L.H. Nielsen (2009)- Geological development of the central and south Vietnamese margin: implications for the establishment of the South China Sea, Indochinese escape tectonics and Cenozoic volcanism. Tectonophysics 478, p. 184-214.
(Vietnamese margin of S China Sea underlain by Paleogene rift basins established through SE-ward extrusion of Indochina. Late Oligocene, basin inversions offshore contemporaneously with initial right-lateral inversion along Mae Ping Shear Zone and onset of major uplift of metamorphic core complexes, probably in response to N-ward movement of India. Renewed rifting offshore after jump of SCS spreading axis and Neogene SW-ward propagation of continental break-up, consequence of slab-pull associated with subduction of proto-SCS under Borneo. Rifting and continued until end M Miocene. Termination of seafloor spreading marked by latest M Miocene unconformity in Nam Con Son and Phu Khanh basins. Neogene volcanism)

Fyhn, M.B.W., L.O. Boldreel, L.H. Nielsen, T.C. Giang, L.H. Nga, N.T.M. Hong, N.D. Nguyen & I. Abatzis (2013)- Carbonate platform growth and demise offshore Central Vietnam: effects of Early Miocene transgression and subsequent onshore uplift. J. Asian Earth Sci. 76, p. 152-168.
(online at: repository.vnu.edu.vn/bitstream/VNU_123/27728/1/BS2013.53.pdf)
(Miocene carbonate platforms off C Vietnam mainly on two regional platforms separated by E Vietnam Boundary Fault Zone: (1) Tuy Hoa Platform to W (platform growth E-M Miocene, terminated by M Miocene time regional uplift/ subaerial exposure) (2) Triton Platform in E (also initiated in E Miocene, partial drowning in M Miocene; repeated partial drowning events through M-L Miocene resulted in W-wards retreat of platform growth and eventual platform drowning and termination of carbonate deposition). Modern carbonate growth continues on isolated platforms of Paracel Islands)

Fyhn, M.B.W., L.H. Nielsen, L.O. Boldreel, L.D. Thang, J. Bojesen-Koefoed, H.I. Petersen, T.H. Nguyen et al. (2009)- Geological evolution, regional perspectives and hydrocarbon potential of the northwest Phu Khanh Basin, offshore Central Vietnam. Marine Petroleum Geol. 26, p. 1-24.
(Seismic stratigraphic and structural analyses of NW Phu Khanh Basin, off C Vietnam. Initial rifting in latest Cretaceous? or Paleogene controlled by left-lateral transtension. Rifting stopped due to M Oligocene transpression but resumed by left-lateral transtension in Late Oligocene. Thick lacustrine and alluvial sediments deposited in Paleogene rift periods. Late Oligocene rifting ended due to inversion, triggered by right-lateral wrenching near Oligo-Miocene boundary. Direct Hydrocarbon Indicators and oil-gas seeps)

Fyhn, M.B.W., L.H. Nielsen, H.I. Petersen, A. Mathiesen, L.O. Boldreel, J.A. Bojesen-Koefoed, H.P. Nytoft et al. (2010)- Geological evolution and aspects of the petroleum potential of the underexplored parts of the Vietnamese margin. Petrovietnam Journal 10, p. 2-19.
(online at: www.vpi.pvn.vn/Upload/TapChi/TCDK20110522080147.pdf)
(Vietnamese margin includes underexplored basins with significant hydrocarbon potential. Review of origin and petroleum potential of Song Hong, Phu Khanh, Malay-Tho Chu and Phu Quoc basins. Jurassic-Cretaceous magmatic arc (Paleo-Pacific subduction) underlies part of Vietnamese margin. Phu Quoc basin formed in response to magmatic arc and was inverted during Paleocene- E Eocene, plate collision. Eocene-Oligocene left-lateral strike-slip faulting along margin resulted in rifting and source-rock deposition. Widespread Miocene carbonate deposition along E Vietnamese margin. Magmatism affected the margin from Early Neogene; associated Late Neogene onshore uplift and denudation promoted offshore sedimentation)

Fyhn, M.B.W., H.I. Petersen, L.H. Nielsen, T.C. Giang, L.H. Nga, N.T.M. Hong, N.D. Nguyen & I. Abatzis (2012)- The Cenozoic Song Hong and Beibuwan Basins, Vietnam. Geol. Survey Denmark and Greenland Bull. 26, p. 81-84.
(online at: www.geus.dk/publications/bull/nr26/nr26_p81-84.pdf)
(Song Hong Basin offshore Vietnam in NW part of S China Sea with up to 15-20 km of Cenozoic sediment. Not clear yet whether this part of Vietnam margin is transform margin or oblique rift margin. Inverted Eo-Oligocene syn-rift succession outcrops on Bach Long Vi island 500m core demonstrates thick lacustrine section with oil-prone source-rock with 2-7% total organic carbon)

Glass, B.P. & C. Koeberl (2006)- Australasian microtektites and associated impact ejecta in the South China Sea and the Middle Pleistocene supereruption of Toba. Meteoritics Planetary Science 41, 2, p. 305-326.
(Australasian microtektites and associated unmelted ejecta in ODP holes in central S China Sea. Hole 1144A highest microtektites abundance of any known Australasian microtektite site, associated with partly melted particles with fractured mineral inclusions, probably close to source crater, possibly near 22° N/ 104° E. Parent material for Australasian tektites may be fine-grained (Jurassic?) sedimentary deposit. Size of source crater 43 ± 9 km, based on thickness of ejecta layers and distance from proposed source. Rhyolitic volcanic ash layer just above microtektite layer may be from supereruption of Toba caldera complex ~800 ka ago)

Granath, J.W., W.G. Dickson, J.M. Christ & M.E. Odegard (2004)- Exploration-scale features from high resolution gravity and topographic datasets and their derivatives. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), DFE04-PO-052, 11p.

(High-resolution gravity survey examples, mainly from S China Sea)

Guan, D., X. Ke & Y. Wang (2016)- Basement structures of East and South China Seas and adjacent regions from gravity inversion. J. Asian Earth Sci. 117, p. 242-255.

Hao, F. (1988)- Cenozoic reefs- new targets for oil fields in the northern part of the South China Sea. In: H.C. Wagner et al. (eds.) Petroleum Resources of China and related subjects, Circum-Pacific Council for Energy Mineral Resources, Earth Science Series, Houston, 10, p. 199-218.
(Seismic examples of Cenozoic reefs in Pearl River Mouth Basin and Yinggehai Basin in N part of S China Sea)

Hayes, D.E. & S.S. Nissen (2005)- The South China Sea margins: implications for rifting contrasts. Earth Planetary Sci. Letters 237, p. 601-616.
(Dramatic differences in crustal thicknesses along margin of S China. Continental crustal extension much less along E and C segments than W segment of margin. Differences accommodated by early formation of oceanic crust adjacent to E margin, with continued extension of continental crust to W. Two models predict oceanic crust of SCS basin toward W not forming until 6-12 My after initial formation to E (~32 Ma). Total crustal extension ~1100 km, remarkably consistent for all segments)

He, E., M. Zhao, X. Qiu, J.C. Sibuet, J. Wang & J. Zhang (2016)- Crustal structure across the post-spreading magmatic ridge of the East Sub-basin in the South China Sea: tectonic significance. J. Asian Earth Sci. 121, p. 139-152.
(Last phase of opening of S China Sea ~N145° direction of spreading. Seafloor spreading features of East Subbasin cut by post-spreading volcanic ridge, ~E-W in W part (Zhenbei-Huangyan seamounts chain))

He, L., K. Wang, L. Xiong & J. Wang (2001)- Heat flow and thermal history of the South China Sea. Physics Earth Planetary Interiors 126, p. 211-220.
(Heatflow values from S China Sea widely scattered, with mean of 77 mW/m2. Heat flow increases gradually from N margin to central basin, with two high heat flow centers. S margin average heat flow 80 mW/m2, similar to N margin. W margin (Manila trench) average 49 mW/m2. Thermal history inferred from multistage pure-shear extension model shows that since Late Miocene basement heat flow increased as result of greater extension. Present-day high heat flow primarily result of Pliocene extension)

He, L., J. Wang, X. Xu, J. Liang, H. Wang & G. Zhang (2009)- Disparity between measured and BSR heat flow in the Xisha Trough of the South China Sea and its implications for the methane hydrate. J. Asian Earth Sci. 34, p. 771-780.
(Calculated heat flow from depth of bottom-simulating seismic reflectors (BSRs) on seismic profile in Xisha Trough of S China Sea (32-80 mW/m2) lower than measured heat flow (83-112 mW/m2). Disparity between measured and BSR heat flows may be due to theoretical error. Based on theoretical model, assuming BSR at top of free gas zone, the methane flux along the Xisha seismic profile is estimated, and the thickness of the methane hydrate occurrence zone is predicted.

Hinz, K. & H.U. Schluter (1985)- Geology of the Dangerous Grounds, South China Sea, and the continental margin of southwest Palawan: results of Sonne cruises SO-23 and SO-27. Energy 10, p. 297-315.
(Seismic, magnetic and gravity data recorded along 51 profiles in SE part of S China Sea (Dangerous Grounds, Palawan Trough), combined with geological sampling. Five unconformities: (1) Miocene-Pliocene; (2) M Miocene, coinciding with end of seafloor spreading in S China Sea; (3) Lower Miocene, which often marks top of carbonate platform; (4) M-U Oligocene, representing transition from rift to drift phase in S China Sea; (5) Cretaceous-Paleocene, interpreted as onset of rifting. Dangerous Grounds and parts of Palawan Trough underlain by stretched continental crust. Oldest rocks in Dangerous Grounds of U Triassic-Jurassic age. U Oligocene- Lower Miocene carbonate platform extends from Dangerous Grounds E beneath Palawan Trough and C-S Palawan shelf. C-S Palawan part of microcontinent with Dangerous Grounds/Reed Bank, N Palawan and Calamian block. E edge of carbonate platform overlain by wedge of chaotically deformed allochthonous sediments, overthrust from S onto carbonate platform, implying Palawan Trough does not represent the location of ancient subduction zone but is elastic downwarp of crust below overthrust allochthonous wedge)

Hoang Ngoc Dang & C. Sladen (1997)- Petroleum geology of offshore Da Nang, Central Vietnam. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc., Jakarta 1997, p. 449-460.
(Offshore Da Nang area of Vietnamese S China Sea with gas fields in large Miocene carbonate platform/ buildups on Tri Ton Horst. Source rock most likely E Miocene marine source in Quang Ngai Graben to W and possibly Tri Ton Rift in E. Non-marine lacustrine and carbonaceous claystones source rocks (29m thick) encountered in well 118-CVX-1X beneath carbonates, but these are immature)

Holland, D.C., J.S. Dickens & A.D. Horbury (1992)- A case of drowning; death of a carbonate platform in the South China Sea. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015 *(Poster Abstract)*
(Da Nang carbonate platform in S China Sea off Vietnam with characteristics of terminal drowning event at variety of data scales. Seismic data show backstepping at large scale. Evolution of M Miocene drowning preserved in detail in changes in environmental stress of faunal assemblage, rates of sedimentation and facies, and cementation history. Biostratigraphic data indicate slightly different ages of platform termination at different locations. Exposure surfaces within carbonate, but transition from shallow water carbonate to deeper water carbonates and final covering by deep water clastic sediments without surface exposure)

Hsu, S.K., Y.C. Yeh, W.B. Doo & C.H. Tsai (2004)- New bathymetry and magnetic lineations identifications in the northernmost South China Sea and their tectonic implications. Marine Geophysical Res. 25, p. 29-44.
(Seafloor spreading of S China Sea (SCS) commonly believed to take place between ~32-15 Ma. New magnetic data in northernmost SCS suggests existence of E-W trending magnetic patterns and demonstrate oldest SCS oceanic crust could be Late Eocene (37 Ma, anomaly C17), with half-spreading rate of 44 mm/yr)

Hu, Y., L. Chen, D. Feng, Q. Liang, Z. Xia & D. Chen (2017)- Geochemical record of methane seepage in authigenic carbonates and surrounding host sediments: a case study from the South China Sea. J. Asian Earth Sci. 138, p. 51-61.

Huang, C.D., T.Y. Lee, C.H. Lo, S.L. Chung, J.C. Wu, C.L. Tien, M.W. Yeh et al. (2017)- Structural inversion in the northern South China Sea continental margin and its tectonic implications. J. Terrestrial Atmospheric Oceanic Sci. 28, 6, 891-922.
(online at: http://tao.cgu.org.tw/index.php/articles/archive/geology/item/download/2455_1ff873912a93c622810282017f1433cd)
(N continental margin of SCS active margin in Mesozoic. Seismic lines show structural inversion of older normal faults in Late Cretaceous. Inversion restricted to W Dongsha-Penghu Uplift and ~100 km in width. Inversion likely formed by collision of seamounts of current North Palawan block and continental margin)

Huang, C. & J. Zhong (1995)- Characteristics of Cenozoic sedimentary formation and tectonic evolution of South China Sea. In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. Southeast Asian basins; oil and gas for the 21st century, Kuala Lumpur 1994, Bull. Geol. Soc. Malaysia 37, p. 125-131.
(online at: www.gsm.org.my/products/702001-100957-PDF.pdf)
(Cenozoic sediments of S China Sea classified into three types, stable, substable and unstable, and two cycles, Lower (E1 -E2) and Upper (Q-E3) by Late Middle Eocene unconformity. Lower Cycle (Paleocene- Eocene) mainly fluvial-lacustrine facies. Upper Cycle is onlap sediment and mainly shallow marine or deep ocean. Central Ocean Basin formed after Mid-Oligocene, and nappe and obduction of Philippines Island-Arc and CCW rotation of Kalimantan resulted in gradual closing of Paleo-South China Sea)

Huang, C.Y., M. Zhao, C.C. Wang & G. Wei (2001)- Cooling of the South China Sea by the Toba eruption and correlation with other climate proxies 71,000 years ago. Geophysical Research Letters 28, 20, p. 3915-3918.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2000GL006113/pdf)
(Toba tephra layer identified in core MD972151 in southern S China Sea (SCS). Tied to 1° cooling for ~1 kyr following Toba eruption (71 ka) during marine isotope stage 5a-4 transition)

Huchon, P., T.N.H. Nguyen & N. Chamot-Rooke (1998)- Finite extension across the South Vietnam basins from 2D gravimetric modeling: relation to South China Sea kinematics. Marine Petroleum Geol. 15, p. 619-634.
(Crustal thickness map over S Vietnam basins from inversion used to estimate stretching: 190 km in E to 30 km in W. Comparison with S China Sea kinematics implies decoupling relative to Indochina block and supports formation of S China Sea in Late Oligocene- E Miocene by S-ward subduction of Proto-South China Sea)

Huchon, P., T.N.H. Nguyen & N. Chamot-Rooke (2001)- Propagation of continent break-up in the south-western South China Sea. In: R.C.L. Wilson et al. (eds.) Non-volcanic rifting of continental margins: a comparison of evidence from land and sea, Geol. Soc., London, Spec. Publ. 187, p. 31-50.
(Bathymetric, seismic and gravity data on SW tip of S China Sea oceanic basin, where propagation of continental break-up occurred before ~15 Ma. Oceanic domain V-shaped, typical of oceanic propagating rifts. Main stretching direction slightly oblique to rift axis. At continent-ocean boundary, continental crust stretched by factor 4, rapidly decreasing to ~2 over few 10s of km (corresponds to >1 Ma of break-up propagation)

Hui, G.G., S. Li, X. Li, L.L. Guo, Y.H. Suo, I.D. Somerville, S. Zhao, M. Hu, H. Lan & J. Zhang (2016)- Temporal and spatial distribution of Cenozoic igneous rocks in the South China Sea and its adjacent regions: implications for tectono-magmatic evolution. In: Evolution of West Pacific Ocean, South China Sea and Indian Ocean, Geological J. 51, Suppl. S1, p. 429-447.
(S China Sea marginal basins with >70 Cenozoic magmatic activities identified. Geodynamic evolution: (1) early bimodal volcanism (>32 Ma) mainly in Paleogene basins at N margin, under dextral transtensional regime from India- Eurasia collision; (2) syn-spreading igneous rocks, with magmatic emplacement resulting from NNE-trending dextral strike-slip pull-apart tectonics; (3) Quaternary E-W-trending post-spreading basalts, under extrusion regime from collision between Luzon–Taiwan Arc and Eurasian Plate. In Indochina and Malay Peninsula, widespread Cenozoic extensional post-spreading plutons possibly derived from mantle plume or controlled by Ailaoshan Red River left-lateral strike-slip fault zone)

Hutchison, C.S. (2004)- Marginal basin evolution: the southern South China Sea. Marine Petroleum Geol. 21, 9, p. 1129-1148.
(Southern S China Sea W of W Baram Line is Sundaland extinct passive margin, with rifting from Eocene (~46 Ma)- E Miocene (19-21 Ma). E of line is convergent margin that became collision zone in M Miocene. Oil-prolific Baram Delta, resulting from uplift and erosion of W Cordillera, built out to NW Borneo Trough. Passive margin continental rise (Dangerous Grounds) underthrust beneath Sabah to cause uplift of W Cordillera. W Baram Line now extinct major right-lateral transform fault)

Hutchison, C.S. (2014)- South China Sea carbonate build-up seismic characteristics. Bull. Geol. Soc. Malaysia 60 (C.S. Hutchison Memorial Issue), p. 19-26.
(online at: https://gsmpubl.files.wordpress.com/2015/04/bgsm2014002.pdf)
(More than 600 active reefs in Spratly Islands and 200 build-ups in C Luconia, buried in U Miocene, all begun at 'Middle Miocene Unconformity' (= late E Miocene). C Luconia build-ups buried by U Miocene influx from nearby Sarawak (Setap Shale). Build-ups at Dangerous Grounds and NW Borneo Trough drowned by rapidly deepening water. Spratly Islands reefs kept pace with deepening sea)

Hutchison, C.S. & V.R. Vijayan (2010)- What are the Spratly Islands? J. Asian Earth Sci. 39, p. 371-385.
(Spratly Islands, Dangerous Ground Province, are active carbonate build-ups that probably initiated in Miocene on NE-SW trending sea-floor cuestas that parallel magnetic anomalies of S part of S China Sea. Cuestas composed of Triassic and Cretaceous strata indicating Dangerous Ground is part of pre-rift Sundaland continent that included S China, Vietnam, Peninsular Malaysia, W Sarawak and possibly part of Sabah)

Janson, X., G.P. Eberli, A.J. Lomando & F. Bonaffe (2010)- Seismic characterization of large-scale platform-margin collapse along the Zhujiang carbonate platform (Miocene) of the South China Sea, based on Miocene outcrop analogs from Mut Basin, Turkey. In: W.A. Morgan, A.D. George et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 79-98.

(On carbonate platform margin collapse or slumps, seen on seismic sections across Lower Miocene Zhujiang Platform margin, subsurface Pearl River Mouth Basin. Truncation of margin suggests several slump scars, associated downslope with rotated and folded strata that are still connected to detachment surfaces)

Jian, Z., X. Cheng, Q. Zhao, J. Wang & P. Wang (2001)- Oxygen isotope stratigraphy and events in the northern South China Sea during the last 6 million years. Science in China 44, 10, p. 952-960.
(Stable isotopic analysis of foraminifera from ODP Site 1148 in N South China Sea (SCS). Before ~3.1 Ma SCS more influenced by warm intermediate Pacific water. Decrease in deepwater temperature between 3.1- 2.5 Ma demonstrates formation of N Hemisphere ice-sheet. Sea surface temperature reductions during E-M Pliocene may be related to Antarctic region ice-sheet growth)

Jian, Z., J. Tian and X. Sun (2009)- Upper water structure and paleo-monsoon. In: P. Wang & Q. Li (eds.) The South China Sea: paleoceanography and sedimentology. Springer, Developments in Paleoenvironmental Research 13, p. 297-394.
(Review of Late Cenozoic changes in paleo-sea surface temperature, thermocline depth and paleo-vegetation of the surrounding continents/islands on tectonic and orbital time scales in South China Sea marginal basin)

Jian, Z., P. Wang, M.P. Chen, B. Li, Q. Zhao, C. Buhring et al. (2000)- Foraminiferal response to major Pleistocene paleoceanographic changes in the southern China Sea. Paleoceanography 15, 2, p. 229-243.
(Age model for southern S China Sea core 17957-2 for last 1.5 Myr. δ18O record has clear ~100-kyr cycles after M Pleistocene Revolution near 900 ka. Planktonic foraminifera show increased sea surface temperature and dissolution after MPR)

Jin, X., H.R. Kudrass & G. Pautot (eds.) (1990)- Marine geology and geophysics of the South China Sea. Proceedings Symposium on the recent contributions to the geological history of the South China Sea, Hangzhou 1990, China Ocean Press, p. 1-266.
(online at: https://epic.awi.de/id/eprint/38705/2/south-china-sea_1990.pdf)
(Collection of papers on tectonics, geophysics, geochemistry and paleoceanography of South China Sea)

Johansen, K.B. (2011)- Phu Khanh Basin, offshore Vietnam; the last true frontier of the Vietnam East Sea margin- an insight into the petroleum system. SEAPEX Expl. Conf., Singapore 2011, Presentation 14, 44p.
(Presentation package. Phu Khanh Basin at W side of S China Sea, offshore Vietnam. Eocene- M Oligocene rift half-grabens with locally >3km of syn-rift sediment. Late Oligocene inversion event, E-M Miocene extension, M Miocene inversion, etc. Upper Miocene basin floor fan complexes. Numerous leads)

Katili, J.A. (1981)- Geology of Southeast Asia with particular reference to the South China Sea. In: Proc. EAPI/CCOP Workshop, Energy 6, 11, p. 1077-1091.
(Review of S China Sea- W Indonesia plate tectonics)

Katili, J.A. (1981)- Geology of Southeast Asia with particular reference to the South China Sea. Bull. Geol. Res. Dev. Center, Bandung, 4, p. 1-12)
(Same paper as above)

Kawagata, S., B.W. Hayward & W. Kuhnt (2007)- Extinction of deep-sea foraminifera as a result of Pliocene-Pleistocene deep-sea circulation changes in the South China Sea (ODP Sites 1143 and 1146). Quaternary Science Rev. 26, p. 808-827.
(Late Pliocene- M Pleistocene extinction of many elongate, cylindrical benthic foraminifera in deep South China Sea ODP Sites 1143 and 1146, as part of 'last global extinction' in deep sea. Pulsed decline in abundance and richness, mostly during glacials, particularly during M-Pleistocene Climate Transition (1.2-0.6 Ma). Result of the increased glacial cooling and increased ventilation of deep-sea water masses)

Kenyon, C.S. (1999)- The use of the petroleum system approach in exploration of the Southwest China Sea: an example from the Vung May Basin, offshore Vietnam. Offshore South East Asia Conf. 1998 (OSEA98), Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 234-255.

(Vung May basin ?Eocene- E Oligocene early synrift sequence, with likely lacustrine source rocks. Miocene-Pliocene carbonate buildups. Earliest Late Miocene inversion event, etc.)

Kienast, M. (2002)- Sedimentary biogeochemistry and palaeoceanography of the South China Sea during the late Pleistocene. Ph.D. Thesis University of British Columbia, p. 1-155.

Koloskov, A.V., P.I. Fedorov & V.A. Rashidov (2016)- New data on the composition of products of Quaternary volcanism at the northwestern margin of the South China Sea shelf zone and the problem of asthenospheric diapirism. Russian J. Pacific Geology 10, 2, p. 79-104.
(Young volcanics from S China Sea shelf zone (Thu, Cu-Lao Re, Hong Jo islands, Katuik- Ile des Cendres) related to same type of rift volcanism in onshore Vietnam, basaltoids of S China Sea, Thailand and N Hainan island, despite different structural zones. Leading role of mantle diapirism in evolution of Indochina volcanism)

Kudrass, H.R., M. Wiedicke, P. Cepek, H. Kreuzer & P. Muller (1986)- Mesozoic and Cainozoic rocks dredged from the South China Sea (Reed Bank area) and Sulu Sea and their significance for plate-tectonic reconstructions. Marine Petroleum Geol. 3, p. 19-30.
(Rocks dredged from NW flank of Reed Bank, S China Sea, include possible M-U Triassic claystone with molds resembling Halobia- Daonella, Late Triassic- E Jurassic deltaic clastics with Dictyophyllum-Clathropteris fern flora (Clathropteris cf. meniscoides leaf), E Cretaceous metamorphics (113-122 Ma) and latest Jurassic amphibolite schist (146 Ma) at NW flank Reed Bank. Late Oligocene- E Miocene carbonate platform developed on this S-drifting continental fragment during seafloor spreading in S China Sea. M Miocene andesite and E-M Miocene reefal carbonates recovered from Cagayan Ridge, Sulu Sea)

Kuhnt, W., A. Holbourn & Q. Zhaq (2002)- The early history of the South China Sea: evolution of Oligocene-Miocene deep water environments. Revue Micropaleontologie 45, 2, p. 99-159.
(Study of Early Oligocene- Miocene deep water benthic forams of ODP Site 1148 in northern S China Sea. 'Flysch-type' assemblages of 'Para-Tethys' character dominant in Oligocene; Miocene assemblages typically 'Pacific'. With detailed species descriptions)

Kullman, A.J., W. Dharmasamdhi, M. Jones, Nguyen Tran Nhu Ngoc, Nguyen Tien Long, Le Tuan Viet et al. (2017)- Low-cost exploration in a frontier area: breaking our model with data, Phu Khanh Basin, East Sea, Vietnam. In: SEAPEX Exploration Conference 2017, Singapore, Session 9, 10p. *(Extended Abstract)*
(Offshore E Vietnam Phu Khanh Basin last remaining true frontier basin in SE Asia. Seafloor coring identified Miocene-Pliocene stratigraphy and thermogenic hydrocarbons)

Lee, G.H. & J.S. Watkins (1998)- Seismic sequence stratigraphy and hydrocarbon potential of the Phu Khanh Basin, offshore central Vietnam, South China Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 82, p. 1711-1735.
(Phu Khanh Basin, offshore C Vietnam, is undrilled basin on Vietnam margin of S China Sea. Seismic data indicate typical rift-margin development. Initial rifting began in Late Cretaceous(?)- Paleogene. Rifting and uplift resumed or continued locally in Late Oligocene- E Miocene. Postrift sedimentation evolved from transgressive ramp phase (with carbonate buildups) to regressive shelf-slope phase. Regressive interval contains number of sequences. Potential source rocks synrift lacustrine sediments. Carbonate complexes, weathered basement, shallow-water sands, and basin-floor fans all have reservoir potential)

Lee, M.Y. & K.Y. Wei (2000)- Australasian microtektites in the South China Sea and the West Philippine Sea: implications for age, size, and location of the impact crater. Meteoritics Planetary Science 35, 6, p. 1151-1155.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1945-5100.2000.tb01504.x/epdf)
(Glassy microtektites from Pleistocene horizon of deep-sea cores in S China Sea and W Philippine Sea identified as belonging to Australasian tektite strewn field. Impact event dated at 793 ka, in upper Matuyama magnetic chron. Peak concentration of microtektites in S China Sea supports hypothesis of impact crater on Indochina Peninsula. Size of source crater estimated to be 90-116 km in diameter)

Lee, M.Y., K.Y. Wei & Y.G. Chen (1999)- High resolution oxygen isotope stratigraphy for the last 150,000 years in the southern South China Sea: Core MD972151. J. Terrestrial Atmospheric Oceanic Sci. 10, 1, p. 239-245.
(online at: http://ntur.lib.ntu.edu.tw/bitstream/246246/172571/1/07.pdf)
(d18O oxygen stratigraphy across last two glacial-interglacial cycles in southern S China Sea off SE Vietnam. Tephra layer of Toba eruption at 71ka helps anchor transition of O-isotope stages 5/4)

Lee, T.Y. & L.A. Lawver (1992)- Tectonic evolution of the South China Sea region. J. Geol. Soc. China 35, 4, p. 353-388.

Lee, T.Y. & L.A. Lawver (1994)- Cenozoic plate reconstruction of the South China Sea region. Tectonophysics 235, p. 149-180.
(Reconstructions of S China Sea region from 60 to 5 Ma. 2-3 stages of extension: (1) Late Cretaceous- Eocene NW-SE extension (proto-China Sea; probably consumed at Palawan Trough); (2) Late Eocene- E Miocene N-S extension. (3) post-Oligocene; probably NW-SE. Collision of N Palawan microcontinent with W Philippines block stopped opening of S China Sea at end of E Miocene. Spreading switched to Sulu Sea Basin in M Miocene but collision between Sulu Ridge and W Philippines at Mindanao halted opening of Sulu Sea at end M Miocene)

Lee, G.H., K. Lee & J.S. Watkins (2001)- Geologic evolution of the Cuu Long and Nam Con Son basins, offshore Southern Vietnam, South China Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 85, 6, p. 1055-1082.
(Cuu Long and Nam Con Son basins off S Vietnam, initial rifting in Eocene- E Oligocene, followed by uplift and rotation of crustal blocks in Late Oligocene. Erosion of uplifted blocks marks transition from rifting to regional subsidence in Cuu Long Basin. Second rift phase in Nam Con Son Basin until Late Miocene. M-L Miocene inversion in parts of Nam Con Son Basin. Cuu Long Basin oil-prone, with oil mainly in fractured basement highs; Nam Con Son Basin gas-prone, with gas in Miocene sands and Late Miocene carbonates)

Lei, J.P., S.H. Jiang; S.Z. Li, S. Gao, H.X. Zhang, G. Wang & F.Y. Zhao (2016)- Gravity anomaly in the southern South China Sea: a connection of Moho depth to the nature of the sedimentary basins' crust. In: Evolution of West Pacific Ocean, South China Sea and Indian Ocean, Geological J. 51, Suppl. S1, p. 244-262.
(On relationship between gravity-derived Moho depth and main sedimentary basins in southern S China Sea: crustal thickness of basins indicates transition from continental crust to transitional crust from N to S)

Li, B., Z. Jian, Q. Li, J. Tian & P. Wang (2005)- Paleoceanography of the South China Sea since the Middle Miocene: evidence from planktonic foraminifera. Marine Micropaleontology 54, p. 49-62.
(Late M Miocene- Pleistocene planktonic foraminifera at ODP Hole 1143, southern S China Sea, and age model for last 12 Ma. New ages for Top Globorotalia multicamerata (2.18 Ma), Base Sphaeroidinella dehiscens (3.6 Ma) and Base Globigerinoides conglobatus(6.6 Ma). Transition from Globorotalia siakensis-G. mayeri group to mixed-layer species in early Late Miocene (~9.6 Ma) reflects deepened upper water thermocline, possibly tied to closure of Indonesian seaway. Shoaling of thermocline in N after 3-2.5 Ma. Pleistocene microtektite layer at 42.8m (2cm) in Hole 1143, coinciding with Brunhes-Matuyama paleomagnetic boundary)

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(Decrease in deep-dwelling planktonic foram species after ~10 Ma interpreted to reflect depression of upper water thermocline, corresponding to closure of Indonesian Seaway, and initial formation of W Pacific 'warm pool'. Associated with disappearance of Globoquadrina dehiscens at 9.8 Ma. Microtektite layer of 0.79 Ma at ODP Sites 1143 (42.8m) and 1146 (115.85m), approximates Brunhes-Matuyama paleomagnetic boundary and above small Gephyrocapsa acme of 1.01 Ma)

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(online at: https://tos.org/oceanography/assets/docs/32-1_li.pdf)
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Li, C.F., J. Li, W. Ding, D. Franke, Y. Yao, H. Shi, X. Pang, Y. Cao, J. Lin, D.K. Kulhanek, T. Williams, R. Bao, A. Briais et al. (2015)- Seismic stratigraphy of the central South China Sea basin and implications for neotectonics. J. Geophysical Research, Solid Earth, 120, 3, p. 1377-1399.
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Li, C.F., J. Lin, D.K. Kulhanek and the Expedition 349 Scientists (2015)- Expedition 349 summary. Proc. Int. Ocean Discovery Program (IODP) 349, p. 1-43.
(online at: http://publications.iodp.org/proceedings/349/EXP_REPT/CHAPTERS/349_101.PDF)
(Summary of results of IODP 349 deep see drilling campaign in S China Sea. Five sites drilled, three recovered oceanic crust basalt basement near fossil spreading center. E Miocene (16-20 Ma) cessation age of spreading in both subbasins. At Site U1435 along continent/ocean boundary, ~33 Ma unconformity, with marine sediment above and littoral sandstones-mudstones below, likely related to continental breakup during initial opening of SCS. Onset of seafloor spreading therefore estimated to be at ~33 Ma. M-L Miocene (~8–13 Ma) volcaniclastic breccia suggesting 5 Myrs of seamount volcanism after cessation of seafloor spreading)

Li, C.F., X. Shi, Z. Zhou, J. Li, J. Geng & B. Chen (2010)- Depths to the magnetic layer bottom in the South China Sea area and their tectonic implications. Geophysical J. Int. 182, 3, p. 1229-1247.
(Depths to base of magnetic layer in S China Sea computed from total field magnetic anomalies. Most of central SCS ocean basin and northern continent-ocean transition zone significantly shallower magnetic base (~22 km; much larger than Moho depth) than surrounding continental block, where it is at ~34 km, close to Moho depth)

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(online at: http://link.springer.com/article/10.1007/s11434-012-5063-9)
(Estimates of oceanic crust age for S China Sea similar to Briais et al. (1993): E sub-basin 32-16 Ma; SW sub-basin 27-16 Ma)

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(online at: www.iodp.org/doc_download/3533-55-59sd14southchinaseapdf)
(Results of 2012 workshop, recommending IODP drilling in S China Sea oceanic crust, ages of which are only guestimates from magnetic anomaly interpretations)

Li, C.F., X. Xu, J. Lin, Z. Sun, J. Zhu, Y. Yao, X. Zhao, Q. Liu, D.K. Kulhanek, J. Wang et al. (2014)- Ages and magnetic structures of the South China Sea constrained by deep tow magnetic surveys and IODP Expedition 349. Geochem. Geophys. Geosystems 15, p. 4958-4983.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2014GC005567/epdf)
(Magnetic anomalies and IODP 349 cores show seafloor spreading started at ~33 Ma in NE S China Sea, but varied slightly by 1-2 Myr along N continent-ocean boundary. S-ward ridge jump of 20 km occurred at ~23.6 Ma in E Subbasin; coeval with onset of seafloor spreading in SW Subbasin, which propagated for ~400 km SW-ward from 23.6-21.5 Ma. End of seafloor spreading 15 Ma in E Subbasin and 16 Ma in SW Subbasin)

Li, C.F., Z. Zhou, H. Hao, H. Chen, J. Wang, B. Chen & J. Wu (2008)- Late Mesozoic tectonic structure and evolution along the present-day northeastern South China Sea continental margin. J. Asian Earth Sci. 31, p. 546-561.

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(Revision of Cenozoic evolution model of S China Sea from new high resolution gravity- magnetic data. Two major sea-floor spreading episodes, separated by tectonic-sedimentary event near 25 Ma: (1) E and NW sub-basins from ~33.5- 25 Ma, forming oceanic crust with E-W or NEE-oriented magnetic anomalies; (2) Since 25 Ma sea-floor spreading continued with NW-SE-oriented spreading until 16.5 Ma, forming central E and SW sub-basins. NNW-trending transform fault separated E and SW sub-basins, with 95 km sinistral offset of spreading ridge. Before collision of Luzon arc with Eurasia Plate, S China Sea was a gulf-shape marginal sea opening to Pacific Ocean, resulting from W-ward propagation of spreading center into Sunda Continent)

Li, J.B., W.W. Ding, Z.Y. Wu, J. Zhang & C.Z. Dong (2012)- The propagation of seafloor spreading in the southwestern subbasin, South China Sea. Chinese Science Bull. 57, p. 3182-3191.
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(online at: http://www.geol.lsu.edu/pclift/pclift/Publications_files/2013_Li_etal_MGR.pdf)
(SW South China Sea area of continental crust frozen immediately before onset of seafloor spreading. Major continental block separated from shelf margin by basin of hyperextended crust. Oligocene-E Miocene rifting followed by mild compression and inversion prior to 16 Ma, linked to Dangerous Grounds block- Borneo collision. Seafloor spreading continued until ~16 Ma. Scattered Late Miocene and Pliocene volcanic seamounts (~5-10 km across) in or on edge of deeper basins, not linked to tectonic activity. Further inversion of off-shelf in Pliocene, with no brittle faulting, possibly part of wider pattern of magmatism in S China Sea. Prograding clinoforms from shelf edge in S in Pliocene, after 5.3 Ma. Bulk of sediment from Mekong River, with additional supply from Borneo and Malay Peninsula via Molengraaff River and predecessors)

Li, L., P.D. Clift & H.T. Nguyen (2014)- Non-uniform hyper-extension in advance of seafloor spreading on the Vietnam continental margin and the SW South China Sea. Basin Research 26, p. 106-134.
(SW S China Sea preserves propagating oceanic spreading centre and associated continent-ocean transition at continental margin offshore SE Vietnam. Major normal faulting ceases after inversion event at ~16 Ma, main extension phase from ~28 Ma to 22-23 Ma. Depth-dependent extension required to explain depth of basins. Weak crust with high heatflow. Flow in ductile mid-lower crust responsible for much of subsidence before seafloor spreading, which extended ~300 km from tip of mid ocean ridge. Flow dominant towards spreading centre prior to 16 Ma. Extension in Continent-Ocean transition postdates seafloor spreading. Less extended crustal fragments form banks offshore Sunda shelf, surrounded by hyperextended crust of COT)

Li, Q., Z. Jian & X. Su (2005)- Late Oligocene rapid transformations in the South China Sea. Marine Micropaleontology 54, 1-2, p. 5-25.
(ODP Site 1148 unconformities at Lower/Upper Oligocene and Oligocene-Miocene boundaries plus two others in Upper Oligocene, together erasing sediment record of ~3 Ma in period of active seafloor spreading. Initial breakup of SCS probably at 34-33 Ma. Expanded Lower Oligocene section resulted from rifting between 33-29 Ma. Mid-Oligocene unconformity at 28.5 Ma probably related to initial collision between Indonesia and Australia. Narrowed Indonesian seaway may have accounted for Late Oligocene warming and chalk deposition in northern SCS. Unconformities near Oligocene- Miocene boundary probably correspond to changes in rotation of blocks and seafloor; also first New Guinea terrane docking at N Australian craton)

Li, Q., P. Wang, Q. Zhao, L. Shao, G. Zhong, J. Tian, X. Cheng et al. (2006)- A 33 Ma lithostratigraphic record of tectonic and paleoceanographic evolution of the South China Sea. Marine Geology 230, p. 217-235.

(ODP Site 1148 sequence show six major steps of S China Sea geohistory over past 33 Ma. Rapid deposition characterized Early Oligocene (33- 28.5 Ma) rifting. Slow sedimentation signifies S-ward stable seafloor spreading (28.5- 23 Ma) to end of spreading (23-15 Ma). Five major dissolution events. Return of high sedimentation in late Pliocene- Pleistocene caused by intensified down-slope transport)

Li, Q., P. Wang, Q. Zhao, J. Tian, X. Cheng, Z. Jian, G. Zhong & M. Chen (2008)- Paleoceanography of the mid-Pleistocene South China Sea. Quaternary Science Reviews 27, p. 1217-1233.

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(Terrains in S China Sea (Nansha Islands, etc.) were part of SE China continent, and their rift-departing process dominated formation and evolution of S China Sea. Terrains rift-departed before E Eocene (inferred from age interpretation of manganese crust and section of Sampaguita 1 well on Reed Bank))

Li, Q., Q. Zhao, G. Zhong, Z. Jian, J. Tian et al. (2007)- Deepwater ventilation and stratification in the Neogene South China Sea. J. China Univ. Geosciences 18, 2, p. 95-108.
(Three periods of deep water ventilation since Miocene in S China Sea, marked by red-brown sediment color: 21-17 Ma, 15-10 Ma, and 10-5 Ma. Pacific Bottom Water marker species rapidly increased since 6 Ma)

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(Review of Cenozoic biostratigraphy, lithostratigraphy and basins of South China Sea area)

Li, S., C. Lin, Q. Zhang, S. Yang & P. Wu (1989)- Episodic rifting of continental marginal basins and tectonic events since 10 Ma in the South China Sea. Chinese Sci. Bull. 44, 1, p. 10-23.

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(Variations in geochemistry and Nd isotopic in ODP Site 1148 sediments, S China Sea. Nd isotopes suggests pre-27 Ma sediments flowing into S China Sea dominantly from SW (Indochina-Sunda Shelf, possibly NW Borneo), post-23 Ma sediments N provenance (S China). Response to SE Asia plate reorganization at ~25 Ma)

Liang, D. & Z. Liu (1990)- The genesis of the South China Sea and its hydrocarbon-bearing basins. J. Petroleum Geol. 13, 1, p. 59-70.
(Formation of S China Sea in two phases of spreading of continental margin of Asia: (1) NeoCathaysian (E Cretaceous-Early Tertiary) and (2) Nanhai (Late Oligocene-Early Miocene) tectonic systems. Identified 33 sedimentary basins, 4 basin types)

Liang, X., G. Wei, L. Shao, X. Li and R. Wang (2001)- Records of Toba eruptions in the South China Sea. Chemical characteristics of the glass shards from ODP 1143A. Science in China, Ser. D, Earth Sciences, 44, 10, p. 871-878.
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(Three 2cm-thick layers of volcanic tephra from ODP 1143 Site in S China Sea dated as. 0.07, 0.8 and ~1.0 Ma by microbiostratigraphy, presumably from Toba eruption. Dominated by volcanic glass shards with median grain size of 70-75 μm)

Lin, A. T., A.B. Watts & S.P. Hesselbo (2003)- Cenozoic stratigraphy and subsidence history of the South China Sea margin in the Taiwan region. Basin Research 15, 4, p. 453-478.
(N margin of SCS in Taiwan region evolved from Paleogene rift to latest Miocene-Recent foreland basin, reflecting opening SCS and subsequent partial closure by Taiwan orogeny. Rifting (~58-37Ma) formed 4200 km wide extended zone. By ~37 Ma focus of rifting shifted to present-day continent-ocean boundary of S Taiwan,

which led to seafloor spreading of SCS at ~30 Ma. Rift-drift transition (~37-30 Ma) coeval with uplift of previously rifted margin, leading to erosion and breakup unconformity. Oligocene uplift followed by rapid, early post-breakup subsidence (~30-18 Ma). Subsidence of inner margin thermally controlled subsidence, subsidence in outer shelf accompanied by faulting during ~30-21 Ma. During ~21-12.5 Ma entire experienced broad margin thermal subsidence. At ~12.5 Ma rifting resumed and ceased at ~6.5Ma due to overthrusting of Luzon volcanic arc. Taiwan orogeny created foreland basin by loading rifted margin)

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(On SE-ward continuation Red River fault zone into S China Sea. RRFZ separates S China and Indochina block, then extends E along Yuedong fault offshore Vietnam, then continues S-ward and breaks off into two branches: Lupar fault (dies out beneath NW Borneo) and Tinjia fault (reaches Brunei-Sabah area))

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(online at: http://ir.gig.ac.cn:8080/bitstream/344008/13234/1/06204.pdf)
('Qiongnan (S Hainan Island) suture zone' in N South China Sea represents Indosinian (Triassic) suture and is remnant of Qiongnan ocean basin, which is extension of main Paleo-Tethys ocean basin in S China Sea)

Liu, H.L., P. Yan, B.Y. Zhang, Y. Sun, Y.Z. Zhang, L.S. Shu, X.L. Qiu & L.Z. Guo (2004)- Role of the Wan-Na fault system in the western Nansha Islands (Southern South China Sea). J. Asian Earth Sci. 23, p. 221-233.
(Seismic data off Nansha (Spratly) Islands, southern S China Sea (SCS). Wan-Na Fault Zone is plate-bounding dextral strike-slip system, with major activity in Eocene- E Miocene. Strike-slip system pull-apart duplex created Wan'an basin)

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(Basement of S China Sea (SCS) and adjacent areas six regions. Qiongnan (i.e. S Hainan) Suture Zone on N margin of S China Sea remnant of principal ocean basin of Paleo-Tethys. Meso-Tethys developed on S of S China Sea. Nansha Trough is remnant of N shelf of Meso-Tethys. Oceanic crust of Meso-Tethys subducted S-ward along S margin of Nansha Trough with subduction-pole opposite to those of Yarlung Zangbo-Mytkyina-Bago zone on W of S China Sea, and Meso-Tethyan suture zone in outer belt of Jurassic-E Cretaceous terrane group in SW Japan, on E of S China Sea)

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(online at: http://cdn.intechopen.com/pdfs/14079/...)
('Layer-block tectonics' interpretation of crustal layers evolution of continental Nansha microplate (= Luconia-Dangerous Ground-Palawan block at SE side of SCS oceanic basin), a Cenozoic micro-plate with Mesozoic

marine strata, magmatic rock and metamorphic basement. It is surrounded by several large plate-edge basins, such as Wan'an (W Vanguard bank), Zengmu (= Luconia Shelf?) and Nansha (Borneo-Palawan) Trough, etc.)

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(Review of modern fluvial sediment influx from all sides of S. China Sea and subsequent transport processes to continental shelf and abyssal basin, and effect of Late Quaternary glacial cycles. High diversity of clay mineralogical-geochemical compositions. Land-sea configuration dramatically changed during glacial conditions. In S clay minerals indicate intensive chemical weathering during interglacial periods and increased physical erosion during glacial periods. S-ward shift of Inter-tropical Convergence Zone at 16 ka caused increased sediment contribution from S China. Etc.)

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(Interpretation of SE Asia- South China Sea tectonics in terms of expanding earth. With Precambrian-Pleistocene SE Asia paleogeographic maps)

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(Miocene carbonate platforms on intrabasinal structural highs and along S margin of Nam Con Son Basin, SW S China Sea. Platforms initiated in late E Miocene and reached widest extent in M Miocene. Platform margins controlled by synsedimentary faults, associated with carbonate slope failure deposits and/or reef talus. Platform growth history 6 phases: start-up, second start-up, keep-up, exposure, renewal and drowning phases)

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(Seismic profiles on N continental margin of S China Sea permit show four Quaternary 4th order sequences, deposited during e past ~690 ky. Area off Hong Kong and Dongsha Islands two uplift episodes in past 5 Ma, at Miocene/Pliocene boundary and at end of lower M Pleistocene)

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(Facies maps of Oligocene lagoonal, lacustrine to deltaic sediments of Cuu Long Basin, which was closed at time of Oligocene deposition)

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(online at: https://www.sciencedirect.com/science/article/pii/S1871174X1730029X)
(Well XK-1 in Xisha (= Paracel) Islands, NW part of S China Sea, penetrated Miocene reef carbonate section with 66 species of larger foraminifera. Three assemblages: (1) 1256-1180m Spiroclypeus higginsi- Borelis pygmaeus (Te5, E Miocene); (2) 1031-577m Nephrolepidina- Miogypsina Assemblage (Tf, M Miocene), and 468-380m Cycloclypeus- Heterostegina Assemblage (Tg, Late Miocene). Facies backreef lagoon-shelf in E Miocene, normal-frontal reef in early M Miocene, backreef lagoon-shelf in later M Miocene, normal- frontal reef in early Late Miocene, and proximal forereef shelf in later Late Miocene)

Mai, H.A., Y.L. Chan, M.W. Yeh & T.Y. Lee (2017)- Tectonic implications of Mesozoic magmatism to initiation of Cenozoic basin development within the passive South China Sea margin. Int. J. Earth Sciences 107, 3, p. 1153-1174.
(S China Sea classic example of non-volcanic passive margin, situated within three tectonic plates. Reconstruction indicated SE margin of Asia had gone through two crustal thinning events (NW–SE extension in Late Cretaceous and Paleogene). Sites for rifting development controlled by localized thermal weakening of magmatism. Interaction of two continental stretching events by Pacific followed by Neotethys subduction with local magmatic thermal weakening is cause for non-volcanic nature of SCS)

Matthews, S.J., A.J. Fraser, S. Lowe, S.P. Todd & F.J. Peel (1997)- Structure, stratigraphy, and petroleum geology of the SE Nam Con Son Basin, offshore Vietnam. In A.J. Fraser et al. (eds.) Petroleum Geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 89-106.
(SE Nam Con Son Basin, offshore Vietnam, experienced rift pulses in Paleogene- earliest Late Miocene in response to interaction of S China Sea rift propagation and regional transtensional shear. Mild contractional deformation in M Miocene, synchronous with inversion structures in W Natuna. Oldest dated Tertiary rocks are Late Oligocene fluvio-deltaic sediments. E-M Miocene non-marine to outer shelf clastics, thickest in N-S to NE-SW-trending half grabens. Regional truncational unconformity of late M Miocene age. Late Miocene deepening of depositional environments, with growth of carbonate build-ups on structural highs, progradation of Paleo-Mekong delta system and associated deep-marine submarine channel development)

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(After end of seafloor spreading, residual magmatic activity still exists in deep basin of S China Sea)

Meyer, L., D. Walley, J. Sutton & M. Schapper (2017)- Ca Voi Xanh Field, Block 118, Offshore Da Nang, Vietnam: exploration highlights and development challenges. In: SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, Session 10, 1p. *(Abstract only)*

(Ca Voi Xanh field is largest gas discovery offshore Vietnam. Discovered in 2011 by 118-CVX-2X well in M Miocene Da Nang Carbonate, followed by two appraisal wells. Field lies along NW-SE trending Triton Horst structure. Gas with 30% CO2, decreasing from N to S. Still technical (reservoir) and commercial challenges)

Morley, C.K. (2016)- Major unconformities/termination of extension events and associated surfaces in the South China Seas: review and implications for tectonic development. J. Asian Earth Sci. 120, p. 62-86.
(S China Seas continental rifting began in E basins in Paleocene, propagating W-wards to Vietnam margin in Late Eocene. Continental breakup around 32-28 Ma caused regional reduction in extensional activity. Basins in slope and deepwater N of spreading centre reduced fault activity until 21-20 Ma. Propagation of oceanic crust W-ward between ~25-23 Ma. Termination of seafloor spreading between ~20.5-16 Ma. Dangerous Grounds area extension continued until ~16 Ma. End of seafloor spreading at ~20.5 Ma reflects loss of driving force as thinned continental crust entered NW Borneo subduction zone. Transitional period of ~5-7 my between onset of subduction of continental crust and final jamming of subduction zone (Deep Regional Unconformity). Last pulse of extension in W SCS ended at ~10.5 Ma. Escape tectonics not primary driving force for extension in S China Sea, although secondary role possible. Proto S China Sea development remains uncertain)

Morley, R.J., T. Swiecicki & D.T.T. Pham (2011)- A sequence stratigraphic framework for the Sunda region, based on integration of biostratigraphic lithological and seismic data from Nam Con Son Basin, Vietnam. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-002, 22p.
(Stratigraphic successions in Pattani, Malay, Penyu, W Natuna and Nam Com Son Basins many common features: Late Eocene- E Oligocene synrift followed by Late Oligocene and younger post-rift deposition. E-M Miocene variable degrees of inversion and also extension in Nam Con Son Basin, followed by Late Miocene and Plio-Pleistocene regional subsidence. Sequences closely parallel sequence biostratigraphic frameworks of W Natuna and Malay basins)

Morley, R.J., T. Swiecicki & P. Restrepo Pace (2015)- Correlation across the South China Sea using VIM transgressive-regressive cycles. AAPG Workshop 'Tectonic evolution and sedimentation of South China Sea region', Kota Kinabalu, Search and Discovery Art. 51109, 7p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2015/51109morley/ndx_morley.pdf)
(Determination of age and environments of deposition in S China Sea region problematic due to sporadic occurrence of marine index microfossils in Late Eocene- Miocene extensional basins from Gulf of Thailand to Nam Con Son and Sarawak-Sabah. Proposed correlations across Vietnam- Indonesia- Malaysia basins using transgressive-regressive cycles deduced from palynomorph and benthonic foraminiferal abundances. Many cycles ~400 ka cyclicity, suggesting glacio-eustacy as driving mechanism. Six main unconformities: (1) M Oligocene (onset of S China Sea spreading);(2) basal Miocene (end of Proto-South China Sea subduction); (3) E Miocene at ~18 Ma (onset of second rifting phase in Nam Con Son Basin and offshore Sarawak); (4) M Miocene at ~11-12 Ma (end of Nam Con Son and offshore Sarawak rifting); (5) one or more Late Miocene with time gaps at ~9, 7.2 and 5.5 Ma; (6) E Pliocene at ~3.5 Ma and also near base Quaternary)

Murray, M.R. & S.L. Dorobek (2004)- Sediment supply, tectonic subsidence, and basin-filling patterns across the Southwestern South China Sea during Pliocene to Recent time. In: P. Clift et al. (eds.) Continent-ocean interactions within East Asian marginal seas, American Geophys. Union (AGU), Geophys. Monograph Ser. 149, p. 235-253.
(Sediment flux to SW parts of S China Sea in Late Cenozoic reflects contributions from E Tibet, W Borneo, and smaller drainages of C Indochina, Vietnam, Malay Peninsula and W Indonesia. Updip basins (Malay, Cuu Long, W Natuna) became filled after Miocene inversion. Paleo-Mekong River and depositional system with probable headwaters on Malay Peninsula began supplying large volumes of sediment to N S China Sea in Late Miocene and Pliocene, respectively)

Nathan, S.A. & R.M. Leckie (2003)- Miocene planktonic foraminiferal biostratigraphy of sites 1143 and 1146. In: W.L. Prell, P. Wang et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 184, p. 1-43.
(online at: www-odp.tamu.edu/publications/184_SR/VOLUME/CHAPTERS/219.PDF)
(South China Sea Miocene planktonic foram biostratigraphy (N5-N19))

Ngo Thuong San, Nguyen Giao, Tran Le Dong & Hoang Phuoc Son (1997)- Pre-Tertiary Basement- the new objective for oil and gas exploration and production in the continental shelf of South Vietnam. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc., Jakarta 1997, p. 461-465.
(Continental shelf of S Vietnam common granitic rocks of E Cretaceous-Late Jurassic age (97-178 Ma). Early phase granodiorite, late phase consists of granite. Fracture zones and weathering caused basement to become an important oil-bearing reservoir. Oil discoveries include Bach Ho, Rong, Ruby and Rang Dong)

Ngo Van Dinh (1997)- Distribution and origin of carbon dioxide in the Song Hong Basin of Offshore Vietnam. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 511-513.
(Gas in wells in Miocene carbonates on Triton Horst in S part of Vietnam Song Hong Basin with 70-93% CO2. Rel. little CO2 in gas from N parts of basin. Deep faults, volcanic intrusions and thermodynamically induced mud flows in magmatically active S Song Hong Basin probable causes for CO2 in shallow reservoirs)

Ngoc, P.B., T. Nghi, N.T. Tin, T.V. Tri, N.T. Tuyen, T.T. Dung & N.T.P. Thao (2017)- Petrographic Characteristics and depositional environment evolution of Middle Miocene sediments in the Thien Ung- Mang Cau structure of Nam Con Son Basin. Indonesian J. Geoscience 4, 3, p. 143-157.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/387/245)
(M Miocene clastics and carbonates in wells of Thien Ung - Mang Cau structure inC area of Nam Con Son Basin, S China Sea)

Nguyen Du Hung & Hung Van Le (2004)- Petroleum geology of Cuu Long Basin- offshore Vietnam. AAPG Int. Conf., Barcelona 2003, AAPG Search and Discovery Art. 10062, p. 1-8.
(online at: www.searchanddiscovery.com/documents/2004/hung/images/hung.pdf)
(Cuu Long basin on S shelf of Vietnam formed during E Oligocene rifting. Late Oligocene- E Miocene inversion intensified fracturing of granite basement to become excellent reservoir. Five main oil fields produce mainly from basement (Bach Ho (White Tiger), Rong, Rang Dong, Ruby and Su Tu Den. Basement rocks usually overlain directly by prolific and widespread Upper Oligocene source rocks)

Nguyen Huy Ngoc, S.B. Aziz & Nguyen Anh Duc (2014)- The application of seismic attributes for reservoir characterization in Pre-Tertiary fractured basement, Vietnam-Malaysia offshore. Interpretation 2, 1, p. SA57-SA66.
(Seismic attributes (amplitude, coherence, curvature, secondary derivative) help predict basement rock type and fracture attributes)

Nguyen Ngoc Khoi (2014)- Mineral resources potential of Vietnam and current state of mining activity. Applied Environmental Research 36, 1, p. 37-46.
(online at: www.thaiscience.info/journals/Article/APER/10905841.pdf)

Nguyen Nhu Trung (2012)- The gas hydrate potential in the South China Sea. J. Petroleum Science Engineering 88-89, p. 41-47.
(Thickness of Gas hydrate stability zone (GHSZ) in S China Sea estimated to be ~225-365m)

Nguyen N.S., Nguyen Q.T., Nguyen H.N., Nguyen V.T., Phan G.L., Nguyen T.L., Le T.V., Nguyen X. P. & Tran N.L. (2017)- Ham Rong Dong & Ky Lan discoveries- a new significance and opening up vast opportunities in the northern offshore part of Song Hong basin. In: SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, Session 10, 12p.
(Previous discoveries in Song Hong Basin off N Vietnam, marginal-subcommercial, and mainly in Miocene inversion clastics or fractured/karstified Pretertiary carbonate basement plays. Recent discoveries: (1) Ham Rong Dong gas-condensate in Oligocene clastics overlying basement high; (2) Ky Lan gas in E-M Miocene sands in 4-way-dip closure. Recent E well on V Island with ~500m Oligocene lacustrine source rock with TOC up to 9% and mainly Type I and II kerogen)

Nguyen Quang Tuan & Tran Van Tri (2016)- Seismic interpretation of the Nam Con Son Basin and its implication for the tectonic evolution. Indonesian J. Geoscience 3, 2, p. 127-137.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/312/210)
(Nam Con Son Basin off Vietnam two extensional phases: (1) N-S extension, terminated at ~30 Ma, forming E-W trending grabens/half grabens with up to 5km of Eocene?- E Oligocene sediments; (2) graben reactivation during M Miocene NW-SE extension. Most faults inactive by U Miocene except N-S fault system active until recent. U Miocene -Recent post rift sequence associated with onshore uplift, causing increase in sediment supply to basin)

Nguyen Quang Tuan, Bui Viet Dung, Nguyen Thanh Tung & Tran Van Tri (2016)- Depositional environment evolution of the Cenozoic Nam Con Son basin, offshore Vietnam. Proc. GEOSEA XIV and 45th Ann. Conv. Indon. Assoc. Geologists (IAGI) (GIC 2016), Bandung, p. 562-564.

Nguyen, T.B.N., T.Q.C. Dang, W. Bac & X.H. Nguyen (2009)- A successful highlight of geological development for fractured granite reservoir. In: Proc. 2nd Reg. Conf. Interdisciplinary Research Natural Resources and Materials Engineering, Yogyakarta 2009, p. 133-139.
(online at: http://lib.ugm.ac.id/digitasi/upload/3114_MU.12110031-nguyen.pdf)
(White Tiger oil field is biggest of fractured granite and gneiss basement reservoirs on Vietnam continental shelf. Reservoir complicated structure, heterogeneous, high temperature and closure stress. Additional oil fields in fractured basement: Rang Dong, Phuong Dong, Ruby, Black Lion, Yellow Lion, Brown Lion, Yellow Tuna, Southern Dragon and Turtle)

Nguyen Thi Tham, Nguyen Van Su (2016)- Neogene calcareous nannofossils from the Nam Con Son Basin, offshore Vietnam. J. Nannoplankton Research, London, 36, 2, p. 151-160.
(online at: http://ina.tmsoc.org/JNR/online/36/Tham%20&%20Su%202016%20JNR%2036-2%20Neogene%20Vietnam%20[%C2%A7N2067].pdf)
(Calcareous nannofossils from60 wells in post-rift Neogene in Nam Con Son Basin, offshore Vietnam. Dua Fm spans NN2-NN4 (E Miocene), Thong-Mang Cau Fm NN5-NN7 (M Miocene), Nam Con Son Fm NN9-NN11 (Late Miocene) and Bien Dong Fm NN12-NN18 (Pliocene- Pleistocene))

Nguyen Trong Tin (1997)- Hydrocarbon trap styles of South Eastern Vietnam offshore basins. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc., Jakarta 1997, p. 515-520.

Nguyen Trong Tin & Nguyen Dinh Ty (1995)- Petroleum geology of the Nam Con Son Basin. Bull. Geol. Soc. Malaysia, 37, p. 1-11.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1995a01.pdf)

Nguyen, T.T.B., T. Tokunaga, N.R. Goulty, Hoang Phuoc Son & Mai Van Binh (2011)- Stress state in the Cuu Long and Nam Con Son basins, offshore Vietnam. Marine Petroleum Geol. 28, 5, p. 973-979.
(In situ stress data from petroleum wells suggest borderline normal/strike-slip stress regime in normally pressured sequences of Nam Con Son and Cuu Long basins)

Nguyen, V.G. & P.D. Rabinowitz (1999)- Gravity modeling of the Song Hong Basin, Offshore Vietnam. Proc. Offshore Technology Conf. (OTC), Houston, 10745-MS, 10p.
(Song Hong Basin, 200 x 600 km with up to 14 km of sediments. Gravity inversion and rift stretching models suggest basin is passive rift. Rift extension most probably linked to India- Eurasia collision)

Nielsen, L.H., A. Mathiesen, T. Bidstrup, O.V. Vejbaek, P.T. Dien & P.V. Tiem (1999)- Modelling of hydrocarbon generation in the Cenozoic Song Hong Basin, Vietnam: a highly prospective basin. J. Asian Earth Sci. 17, 1-2, p. 269-294.
(online at: http://www.ccop.or.th/pdf/icb/VIETNAM_PHU_QUOC/Nielsen_et_al_1999_JAES.pdf)
(Song Hong Basin on N part of Vietnamese shelf. Most likely source rocks (1) oil-prone Eocene-Lower Oligocene lacustrine mudstones and coals, (2) oil- and gas-prone M Miocene coal beds, (3) gas-prone Upper

Oligocene-Lower Miocene coals, and (4) gas- and oil-prone Miocene marine mudstones. Modelling demonstrates that the two first-mentioned source rock units are especially important)

Olson, C. (2001)- Timing and tectonic implications of basin inversion in the Nam Con Son basin and adjacent areas. M.S. Thesis, Texas A&M University, College Station, p. 1-352. *(Unpublished)*
(Nam Con Son Basin off SE Vietnam formed during Eocene?- Oligocene rifting. Following cessation of rifting at end Oligocene time W Sunda Shelf basins subjected to E-M Miocene inversions, progressing from W Natuna and W Nam Con Son into S Malay Basin. Most intense inversion in W Natuna Basin in E Miocene, with uplift of S Malay and W Natuna basins in M Miocene. Basin inversions attributed to collision-induced clockwise rotation of Borneo and attached, rigid Natuna Arch and Natuna Basement Ridge)

Parke, M.L., K.O. Emery, R. Szymankiewicz & L.M. Reynolds (1971)- Structural framework of the continental margin in the South China Sea. ECAFE CCOP Techn. Bull. 4, p. 103-142.
(Seismic and geomagnetic traverses in Gulf of Thailand, N Sunda Shelf and adjacent deep-sea show presence of three large sedimentary basins: Gulf of Thailand basin (from Bangkok to Singapore), Mekong and Brunei-Saigon basins. Deep-sea floor in NE contains abyssal plain and broad plateau dotted with seamounts, some of which capped with coral atolls. Prospects for oil and gas appear favorable)

Parke, M.L., K.O. Emery, R. Szymankiewicz & L.M. Reynolds (1971)- Structural framework of continental margin in South China Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 55, 5, p. 723-751.
(Same paper as above. Early mega-regional seismic interpretation of Gulf of Thailand- North Sunda Shelf to N Borneo)

Pautot, G. & C. Rangin (1989)- Subduction of the South China Sea axial ridge below Luzon. Earth Planetary Sci. Letters 92, p. 57-69.
(Scarborough Seamount chain at axis of extinct S China Sea spreading center is being subducted obliquely along Manila Trench)

Pautot, G., C. Rangin, A. Briais, P. Tapponnier, P. Beuzart, G. Lericolais, X. Mathieu, J. Wu, S. Han, H. Li, Y. Lu & J. Zhao (1986)- Spreading directions in the central South China Sea. Nature 321, 6066, p. 150-154.
(S China Sea is 'Atlantic-type' marginal basin of late Tertiary age. Magnetic anomalies in E part consistent with seafloor spreading directed ~N-S. Dominant normal fault scarps, striking N50° E, implying NW-SE spreading, at least in 150-200 km-wide axial region)

Pautot, G., C. Rangin, A. Briais, J. Wu, S. Han, H. Li, Y. Lu & J. Zhao (1990)- The axial ridge of the South China Sea: a seabeam and geophysical survey. Oceanologica Acta 13, p. 129-143.
(Last stage of spreading in S China Sea basin oriented NW-SE and created oceanic crust transected by NW-SE transform faults. Alkalic lavas of Scarborough Seamount chain injected along relict spreading axis and dated at 11-6 Ma, probably emplaced after cessation of spreading. Alternative kinematic interpretations for evolution of SCS basin involve extrusion of Sundaland along large strike-slip faults in response to the India-Asia collision, or 20-30° CCW rotation of rift axis with general kinematic reorganization around 20 Ma)

Pham Tuan Dung (2011)- Exploration and development of the Ca Ngu Vang field fracture basement reservoir. SE Asia Petroleum Soc. (SEAPEX) Exploration Conf. 2011, Singapore, Presentation 15, p. 1-30. *(Abstract + Presentation)*
(Ca Ngu Vang field offshore S Vietnam 2002 oil discovery with first oil in 2008 from Pre-Tertiary fractured granite reservoir and Lower Miocene sandstones)

Phong Van Phung, Anh Vu The & Tung Nguyen Thanh (2017)- The development of palaeokarst systems in the Middle Miocene carbonate reservoir, South Song Hong Basin. Int. J. Applied Engineering Research 12, 22, p. 12844-12851.
(online at: https://www.ripublication.com/ijaer17/ijaerv12n22_148.pdf)

(Numerous paleokarst features seen on offshore 3D seismic in M Miocene carbonate platform on Tri Ton high, S Song Hong Basin, Vietnam. Paleokarst networks beneath unconformity shows erosional topography, sinkholes, rivers/canyons and hills, revealing mature surface drainage system)

Pichot, T., M. Delescluse, N. Chamot-Rooke, M. Pubellier, Y. Qiu, F. Meresse, G. Sun et al. (2014)- Deep crustal structure of the conjugate margins of the SW South China Sea from wide-angle refraction seismic data. Marine Petroleum Geol. 58, p. 627-643.
(New 1000-km long wide-angle refraction seismic profile along conjugate margins of SW South China Sea used to derive 2D velocity model of crust and upper mantle. Most of continental crust deforms in brittle manner. Continent-Ocean Transitions narrow and slightly asymmetric ~60 km on N side and <30 km on S side. No direct indication for mantle exhumation. Moho interface remains rather flat over extended domain, suggesting decollement within ductile lower crust)

Pubellier, M., M. Aurelio & B. Sautter (2018)- The life of a marginal basin depicted in a structural map of the South China Sea. Episodes 41, 3, p. 139-142.
(online at: http://www.episodes.org/view/2068)
(CGMW 2017 1:3 M scale structure map shows location of rifting faults from normal to hyper-extended crust, oceanic crust and late involvement in convergent margin, reactivation of Mesozoic tectonostratigraphic setting (broad folds, granitic plutons) during rifting, and architecture of NW Borneo accretionary wedge)

Pubellier, M., M. Delescluse, D. Savva, D. Franke, F. Meresse, J.L. Auxietre, M. Aurelio, N. Chamot-Rooke, U. Nanni & L.S. Chan (2015)- Collapse and rifting in the South China Sea. AAPG Workshop 'Tectonic evolution and sedimentation of South China Sea region', Kota Kinabalu, Search and Discovery Art. 30406, 28p.
(Abstract + Presentation)
(online at: www.searchanddiscovery.com/documents/2015/30406pubellier/ndx_pubellier.pdf)
(S China Sea unusually long period of rifting. On upper plate of subduction zone in Mesozoic, then collapsed continental basin on edge of Yenshanian orogeny. Continental crust rifting from Paleocene- M Oligocene in E, continuing until M Miocene in SW. Sundaland rifting documented since E Eocene only. Jurassic and Cretaceous granites conditioned locations of extension. Morphology of sea floor reflects location of granites on which large reefal platforms developed. Some sub-basins extremely stretched crust (Phu Khanh, W Natuna, NW Palawan, Tainan) and upper mantle may be in contact with sediments. Early extension in Late Cretaceous - Paleocene (basement and Mesozoic granitoids exhumation), followed by E Eocene- M Miocene rifting (crust thinned to 12km over large areas by 'boudinage'). Extension continued after start of spreading and continued after regional MMU (15-12Ma). Structural configuration represents offshore 'Basin and Range'-style province)

Pubellier, M., N. Pinet & C. Rangin (1990)- Docking of the Philippine mobile belt aginst the Eurasian margin: closure of the South China Sea. In: X. Jin et al. (eds.) Proc. Symposium Marine geology and gephysics of the South China Sea, Hangzhou 1990, p. 71-82.
(online at: https://epic.awi.de/38705/2/south-china-sea_1990.pdf)
(Docking of Philippine Arc in late M Miocene in Luzon, Late Miocene (10 My) in Visayas (C Philippines) and Pliocene in Mindanao, and not yet completed in Molucca Sea. Docking rapidly followed by renewal of subduction along E edge of S China Sea, Sulu Sea and Celebes Sea, showing S-ward progression from 11 Ma in Manila Trench to 7 Ma in Negros Trench and Late Pliocene-Pleistocene in Celebes Sea. Subduction reversal from W subduction front (Manila, Negros and Sulu trenches) to Philippine Trench associated with beginning of activity along Philippine Fault s.s. and begins in late Pliocene. Decoupling between Philippine plate and Eurasian plate now along Philippine Trench and Philippine fault system)

Pubellier, M., D. Savva, M. Aurelio, F. Sapin et al. (2016)- Structural map of the South China Sea. Commision for the Geological Map of the World (CGMW), France.
(Detailed 1:3M scale structural elements map of South China Sea region)

Pugh, A. (2007)- Structural evolution of the Nam Con Son Basin: quantitative fault analysis applied to a 3-dimensional seismic dataset. Ph.D. Thesis University of Durham, p. 1-197.
(online at: http://etheses.dur.ac.uk/2497/)

(3-D seismic dataset from centre of Nam Con Son Basin used to build fault/horizon model of E-M Miocene syn-rift sequence. Fault orientations reflect ~NW-SE regional extension direction and N-S trending basement fabric. Dextral transtension for Nam Con Son Basin synchronous with opening of S China Sea)

Pupilli, M. (1973)- Geological evolution of South China Sea area- tentative reconstruction from borderland geology and well data. Proc. 2nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 223-241.
(Reconstruction of Paleozoic-Mesozoic tectonic elements of W Indonesia-Malaysia-Thailand. M Cretaceous arc in S China Sea suggested by monzonites and granodiorites in wells N of Anambas Islands (110 Ma age at Gabus, 92.4 Ma at AF-1X, 86 Ma at Anambas). Terubuk-1 well TD in metamorphosed lavas of probable andesitic nature and M Jurassic K-Ar age of 169±7 Ma, but could be equivalent of Late Triassic Serian volcanics of W Kalimantan. With SE Asia- W Indonesia tectonic elements maps for Lower Paleozoic, U Paleozoic, E-M Mesozoic, M-U Mesozoic and Tertiary)

Qian, Y. (1990)- Heat flow and age of crust of the South China Sea. In: B. Elishewitz (ed.) Proc. CCOP Heat flow workshop III, Bangkok 1988, CCOP Techn. Publ. 21, p. 79-89.
(S China Sea divided into 5 heatflow zones. Age of crust calculated from thermal models as 15 Ma (SW), 17 Ma (C) and 22 Ma (N))

Rangin, C., J.F. Stephan & C. Muller (1985)- Middle Oligocene oceanic crust of the South China Sea, jammed into Mindoro Collision Zone, Philippines. Geology 13, p. 425-428.
(Mindoro Island, S of Luzon is complex junction between Manila Trench and collision zone of N Palawan block with W Philippines mobile belt. M Oligocene ophiolites in suture coeval with oldest magnetic anomalies of S China Sea basin and are interpreted as fragments of S China Sea oceanic crust, now part of E-M Miocene boundary pile of terranes thrust above N Palawan block)

Rangin, C., M. Klein, D. Roques, X. Le Pichon & L.V. Truong (1995)- The Red River fault system in the Tongking Gulf, Vietnam. Tectonophysics 243, p. 209-222.
(Continuation of Red River fault system in Tonkin Gulf studied with seismic and well data. Continuous left-lateral strike-slip SW of Vinh Minh fault between 30 Ma- 5.5 Ma, but offset probably not more than few 10s of km. No sign of post-5.5 Ma right-lateral motion. Prior to 30 Ma widespread extension in 100-km-wide zone, possibly related to left-lateral motion. 15.5-Ma unconformity separates transtensional from transpressional regime, coinciding with cessation of sea-floor spreading in S China Sea)

Roques, D. (1996)- Tectonique Cenozoique de la marge centre Vietnam: implications pour l'ouverture de la Mer de Chine meridionale. Doct. Thesis, Universitie Pierre et Marie Curie, Paris VI, p. 1-430. *(Unpublished)*
('Cenozoic tectonics of the Central Vietnam margin: implications for the opening of the South China Sea')

Roques, D., S.J. Matthews & C. Rangin (1997)- Constraints on strike-slip motion from seismic and gravity data along the Vietnam margin offshore Da Nang; implications for hydrocarbon prospectivity and opening of the East Vietnam Sea. In: A.J. Fraser et al. (eds.) Petroleum geology of Southeast Asia, Geol. Soc. London, Spec. Publ. 126, p. 341-353.

Roques, D., C. Rangin & P. Huchon (1997)- Geometry and sense of motion along the Vietnam continental margin: onshore/offshore DaNang area. Bull. Soc. Geologique France 168, p. 413-422.

Roberts, D.G. (1988)- Basin evolution and hydrocarbon exploration in the South China Sea. In: H.C. Wagner et al. (eds.) Petroleum Resources of China and related subjects, Circum-Pacific Council for Energy & Mineral Resources, Earth Science Ser., Houston, 10, p. 157-177.
(S China Sea is back-arc basin formed by rifting, spreading, and subduction in response to collision between Asian, Indian and W Pacific plates. Hydrocarbon exploration offshore China, Sarawak and in S China Sea discussed in context of basin evolution as shown from sequence analysis)

Ru, K. & J.D. Pigott (1986)- Episodic rifting and subsidence in the South China Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 70, p. 1136-1155.

(S China Sea experienced at least 3 stages of rifting and two intervening stages of sea-floor spreading since E Cretaceous. Rifting and associated thermal activities initiated in Late Cretaceous (NE-SW trend; with widespread volcanic activity in SE China, Natuna arch and in SW Borneo regional Late Cretaceous uplift), Late Eocene and late Early Miocene (E-W trends). Heatflow data suggest oceanic crust in SW subbasin older (55 Ma) than in NW (35-36 Ma) or E (32 Ma))

Sattler, U., A. Immenhauser, W. Schlager & V. Zampetti (2009)- Drowning history of a Miocene carbonate platform (Zhujiang Formation, South China Sea). Sedimentary Geology 219, p. 318-331.
(Zhujiang carbonate platform (BP Liuhua 11-1 field, 220 km SE of Hongkong) succession of facies types, suggesting deepening-upward trend 1) grain facies with miogypsinid/lepidocyclinid fauna in oligotrophic back-reef setting; 2) in situ corals in patch-reef facies in oligotrophic lagoon (< 10m); 3) rhodoid facies, dominated by Heterostegina sp. and spiroclypeids, possibly capped by subaerial exposure surface; 4) pelagic marine shales burying platform after drowning. No evidence for meteoric diagenesis at drowning unconformity on top of carbonate platform)

Sattler, U., V. Zampetti, W. Schlager & A. Immenhauser (2004)- Late leaching under deep burial conditions: a case study from the Miocene Zhujiang carbonate reservoir, South China Sea. Marine Petroleum Geol. 21, 8, p. 977-992.
(Zhujiang E Miocene carbonates reservoir in Liuhua 11-1 field three porous zones of ~20m intercalated with tight zones, parallel to bedding. Majority of pores late leaching in deep burial settings. Tight zones lack porosity because of meteoric cementation prior to late leaching. Corrosive fluids migrated along bedding-parallel tight zone barriers and leached intervals in-between, emphasizing depositional pattern)

Savva, D., F. Meresse, M. Pubellier, N. Chamot-Rooke, L. Lavier, K. Wong Po, D. Franke, S. Steuer & F. Sapin (2013)- Seismic evidence of hyper-stretched crust and mantle exhumation offshore Vietnam. Tectonophysics 608, p. 72-83.
(Eocene-Recent Phu Khanh Basin opened during rifting of S China Sea, when continental crust ruptured along E-Vietnam Boundary Fault. Extreme crustal thinning and mantle uplift that sometimes places sediments in contact with Moho discontinuity mark central part of basin. Low-angle detachment fault separates several crustal blocks from Moho. Above mantle, upper and lower crusts form large crustal boudins. Three stages of extension: (1) rift sequence between tilted pre-rift basement and Oligocene (32 Ma); (2) Oligocene- Mid Miocene (15.5 Ma); (3) M Miocene- U Miocene (before 10.5 Ma). Two extension directions, N-S and NW-SE. Cessation of rifting not before 12-10.5 Ma)

Savva, D., M. Pubellier, D. Franke, N. Chamot-Rooke, F. Meresse, S. Steuer & J.L. Auxietre (2014)- Different expressions of rifting on the South China Sea margins. Marine Petroleum Geol. 58, B, p. 579-598.
(Different styles of rifting on continental margins of S China Sea. Inherited structures like granitic plutons or large folds condition geometry and location of normal faults and detachments. Evolution of rifting through time dependent of margins structure and thickness, and rifting migrated toward SW. Very shallow water depth or continental depositional environment characterize rifting until entire basin subsided in Late Miocene)

Schimanski, A. (2002)- Holocene sedimentation on the Vietnamese Shelf: from source to sink. Doct. Dissertation Christian-Albrechts Universitat, Kiel, 171p.
(online at: https://d-nb.info/972182144/34)
(Holocene deposits on Vietnamese shelf of S China Sea since last deglacial sea level rise. Sediments from 2 major rivers (Red River, Mekong; mainly deposited in deltas) and numerous small mountainous rivers)

Schimanski, A. & K. Stattegger (2005)- Deglacial and Holocene evolution of the Vietnam Shelf; stratigraphy, sediments and sea-level change. Marine Geol. 214, 4, p. 365-387.
(Shallow high-resolution seismic and sediment cores on Vietnam Shelf analyzed to unravel post-glacial evolution. Southern Shelf sedimentation with abundant incised valley fills, cut into late Pleistocene land surface by Paleo-Mekong River during sea level lowstands and filled with transgressive deposits. Central Shelf narrow and conformable strata. Northern Shelf with paleo-Red River channels incised valleys)

Schluter, H.U., K. Hinz & M. Block (1996)- Tectono-stratigraphic terranes and detachment faulting of the South China Sea and Sulu Sea. Marine Geology 130, p. 39-78.
(5 main terranes in S China Sea, 4 in Sulu Sea. Dangerous Grounds, Reed Bank, Palawan- NW Borneo Trough and Palawan continental terranes developed on proto-China margin by simple shearing in Late Cretaceous- E Paleocene. Rift was abandoned and new W-ward propagating rift system developed N of Dangerous Grounds-Reed Bank from M Eocene- E Miocene together with seafloor spreading in S China Sea. Leading edge of S-drifting continental terranes collided with Late Cretaceous- E Eocene subduction complex of N-most terrane of proto-Sulu Sea. Continuous convergence, back-arc spreading of SE Sulu Sea terrane and anti-clockwise rotation of Borneo responsible for compression structures of Sulu Sea terranes, including formation of splinters of oceanic crust. NNW-SSE right-lateral systems cut across most terranes, presumably ceasing at 12-16 Ma)

Shao, L., L. Cao, X. Pang, T. Jiang , P. Qiao & M. Zhao (2015)- Detrital zircon provenance of the Paleogene syn-rift sediments in the northern South China Sea. Geochem. Geophys. Geosystems 17, 2, p. 255-269.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2015GC006113)
(Zircon U-Pb geochronology of syn-rift sequences in northern S China Sea suggests significant intrabasinal provenances in addition to terrigenous supply from China margin in N. Dongsha Uplift considered to account for dominance of E Cretaceous zircons in Eocene samples. Episodic nature of rifting and erosion processes in early S China Sea cause of complex patterns in Paleogene provenance history)

Shao, L., L. Cao, P. Qiao, X. Zhang, Q. Li & D.J.J.van Hinsbergen (2017)- Cretaceous-Eocene provenance connections between the Palawan continental terrane and the northern South China Sea margin. Earth Planetary Sci. Letters 477, p. 97-107.
(Zircon U-Pb geochronology and heavy mineral analysis of Cretaceous and Eocene from northern S China Sea and Palawan continental terrane show similarities of Upper Cretaceous and Eocene, exclude possibility of latest Cretaceous drift of Palawan continental terrane in response to Proto-S China Sea opening. Zircon age signatures suggesting conjugate relationship between Palawan terrane and eastern Pearl River Mouth Basin and remained attached to S China margin until Oligocene oceanization of S China Sea)

Shao, L., A. Meng, Q. Li, P. Qiao, Y. Cui, L. Cao & S. Chen (2017)- Detrital zircon ages and elemental characteristics of the Eocene sequence in IODP Hole U1435A: implications for rifting and environmental changes before the opening of the South China Sea. Marine Geology 394, p. 39-51.
(Littoral M-L Eocene sandstone sequence in IODP Hole U1435A mainly composed of subangular quartz (70-80%) and K feldspar (10-15%), indicating proximal provenance of felsic rocks. Detrital zircon ages mainly Mesozoic (E Cretaceous peak at ~110 Ma, derived from China active continental margin arc). Some grains with ages between ~ 65- 38 Ma, indicating M-L Eocene deposition before opening of S China Sea)

Shi, X.B., X. Qiu, K. Xia & D. Zhou (2003)- Characteristics of surface heat flow in the South China Sea. J. Asian Earth Sci. 22, 3, p. 265-277.
(592 surface heatflow measurements in S China Sea. Oceanic basins, W part of S and W fault system high heat flow values. Heat flow in Nansha (Spratley) Islands ~60 mW/m2 or higher, decreasing from NW to SE. Heat flow on E margin and E part of S margin lower, especially in Luzon Trough (av.<40 mW/m2). Values in SW subbasin lower than predicted from age of ocean floor)

Shi, X.B., Qiu X.L., Xia K.Y. & Zhou D. (2003)- Heat flow characteristics and its tectonic significance of South China Sea. J. Tropical Oceanology 22, 2, p. 63-73.
(Same as Shi et al. 2003, above?)

Shiau, L.J., P.S. Yu, K.Y. Wei, M. Yamamoto, T.Q. Lee, T.E. Fang & M.T. Chen (2008)- Sea surface temperature, productivity and terrestrial flux variations of the southeastern South China Sea over the past 800 000 years (MIAGES MD972142). Terrestrial Atmospheric Oceanic Sci. 19, 4, p. 363-376.

Shoup, R.C. (1995)- Tertiary paleogeography of the East and South China Seas. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. Sequence stratigraphy in Southeast Asia, Jakarta 1995, Indon. Petroleum Assoc., p. 451-456.

(Paleogeographic maps for Late Cretaceous- E Paleocene. Late Paleocene- E Eocene, M Eocene, Late Eocene, Oligocene-E Miocene and Late Miocene of E and S China Seas)

Shyu, J.P., M.P. Chen, Y.T. Shieh & C.K. Huang (2001)- A Pleistocene paleoceanographic record from the north slope of the Spratly Islands, southern South China Sea. Marine Micropaleontology 42, p. 61-93.
(1.4 Ma paleoceanography history of offshore north-central Spratly islands, southern S China Sea)

Sibuet, J.C., Y.C. Yeh & C.S. Lee (2016)- Geodynamics of the South China Sea. Tectonophysics 692, B, p. 98-119.
(online at: http://archimer.ifremer.fr/doc/00316/42686/42059.pdf)
(Onset of seafloor spreading in S China Sea now established at 33 Ma. Chron 12 (32 Ma) is oldest chron identified. Crust of NE part of SCS N of chron C12 not oceanic but thinned continental crust intruded by volcanic elongated features emplaced at 17-22 Ma. End of SCS spreading either 15.5, 20.5 Ma or ?? Post-spreading magmatic activity (~13-3.5 Ma) masks spreading fabric. Bathymetric seafloor trends in C part of SCS, suggest extinct ridge axis trends N055°, with N145° transform faults. From Chron 10 until end of SCS opening, plate boundary between S South China Sea and EU plates jumped W-ward several times from Ulugan fault near Palawan to W limit of SW basin, explaining V-shape of SCS. Opening of SCS linked with N-ward subduction of proto-SCS whose suture is located S of Palawan and extends W in N Borneo)

Simon, B., H.L. ten Haven & C. Cramez (1997)- The petroleum systems of the South Con Son Basin, offshore South Vietnam. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 467-479.
(S Con Son Basin off SE Vietnam is Oligocene rift with tectonic readjustment in M Miocene. Importance of lacustrine source rock considered to be minor compared to terrigenous source rock)

Song, T. & C.F. Li (2015)- Rifting to drifting transition of the Southwest subbasin of the South China Sea. Marine Geophysical Res. 36, 2, p. 167-185.
(SW subbasin of S China Sea with very wide extended continental margins. Two major unconformities in conjugate margins: (1) breakup unconformity (BRU) at ~23 Ma (initial opening of NE S China Sea at ~33 Ma) (2) M Miocene unconformity erosional truncation. Local thick syn-rift and early spreading deposition beneath BRU only at seaward concave part of Continent- Ocean Boundary. End of S China Sea seafloor spreading is 15 Ma in E and SW subbasins)

Song, X.X., C.F. Li, Y. Yao & H. Shi (2017)- Magmatism in the evolution of the South China Sea: geophysical characterization. Marine Geology 394, p. 4-15.
(Most igneous emplacements in S China Sea margins after end of seafloor spreading, rare during rifting and spreading phases, supporting magma-poor margins before breakup of continental lithosphere. Post-spreading magmatic activities widespread in continental slope areas and central SCS, likely triggered by extension in relation to cooling and subsidence of oceanic and attenuated continental lithosphere. Possible total thermal contractional displacement up to 24 km)

Steinke, S., H.Y. Chiu, P.S. Yu, C.C. Shen, H. Erlenkeuser, L. Lowemark & M.T. Chen (2006)- On the influence of sea level and monsoon climate on the southern South China Sea freshwater budget over the last 22,000 years. Quaternary Science Reviews 25, p. 1475-1488.
(Changes in freshwater budget in S S China Sea over last 22,000 years from sediment core using Mg/Ca and O oxygen isotopes of planktonic foram Globigerinoides ruber. During Last Glacial Maximum higher freshwater contribution because closer to mouths of Baram, Rajang and N Sunda/ Molengraaff Rivers at that time)

Steinke, S., P.S. Yu, M. Kucera & M.T. Chen (2008)- No-analog planktonic foraminiferal faunas in the glacial southern South China Sea: implications for the magnitude of glacial cooling in the western Pacific warm pool. Marine Micropaleontology 66, p. 71-90.
(Planktonic foraminiferal abundances relatively unchanged in tropical S South China Sea during Last Glacial Maximum, except for relative high abundance of Pulleniatina obliquiloculata and Neogloboquadrina pachyderma (dextral) during glacials)

Steuer, S., D. Franke, F. Meresse, D. Savva, M. Pubellier & J.L. Auxietre (2014)- Oligocene-Miocene carbonates and their role for constraining the rifting and collision history of the Dangerous Grounds, South China Sea. Marine Petroleum Geol. 58B, p. 644-657
(Attenuated continental crust of Dangerous Grounds in SE part of S South China Sea affected by unconformities In NE Dangerous Grounds top of widespread Oligocene - E Miocene (18-20 Ma) carbonate platform. In SW Dangerous Grounds unconformity sealing tectonic activity known as 'M Miocene Unconformity', is of Early Miocene age. Luconia and S Dangerous Grounds sub-aerial during E Miocene, while Reed Bank, N Dangerous Grounds and parts of C Dangerous Grounds mostly submerged, except for some islands on W edge of Borneo-Palawan Trough (foreland basin, where flexural forebulge provided shallow marine conditions that promoted reef growth). Carbonate deposition migrated from Borneo-Palawan trough toward Dangerous Ground)

Su, D., X. Chen & Z. Liu (1995)- The gravity field and tectonics of the Nansha Islands (Dangerous Grounds). In: G.H. Teh (ed.) Proc. AAPG-GSM Int. Conf. Southeast Asian basins; oil and gas for the 21st century, Kuala Lumpur 1994, Bull. Geol. Soc. Malaysia 37, p. 117-123.
Gravity surveys of Nansha Islands in S part of S China Sea show three zones: (1) Zengmu (Sarawak) Basin, where gravity mostly controlled by sediment thickness; (2) Reed Bank Gravity High (highest gravity values in S China Sea), where gravity influenced mostly by deep crustal structure, and (3) Nansha (Palawan) Trough gravity low. Modelled crustal thickness ~25 km for Reed Bank, 20-25 km in reef areas, ~20 km in trough areas, and 17-20 km thick beneath Zengmu Basin)

Su, X., Y. Xu & Q. Tu (2004)- Early Oligocene- Pleistocene calcareous nannofossil biostratigraphy of the Northern South China Sea (Leg 184, sites 1146-1148). In: W.L. Prell et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 184, 224, p. 1-24.
(online at: /www-odp.tamu.edu/publications/184_SR/VOLUME/CHAPTERS/224.PDF)
(Oligocene-Pleistocene sequences at Sites 1146 and 1148, northern South China Sea, subdivided into 4 Paleogene and 21 Neogene zones of Martini. Unconformity at Oligocene-Miocene transition, with upper Zone NP25 and lower Zone NN1 missing (missing time span ~1 My))

Sun, W. (2016)- Initiation and evolution of the South China Sea: an overview. Acta Geochimica 35, 3, p 215-225.
(online at: http://english.gyig.cas.cn/pu/papers_CJG/201608/P020160809552862768935.pdf)
(Multiple models proposed for origin of S China Sea. Preferred model involves two-stage backarc extension, induced by N-ward subduction of Neotethys Plate, with normal subduction followed by ridge subduction/ flat subduction. First backarc extension responsible for formation of proto-SCS, second extension responsible for Shenhu event and ultimately formation of SCS)

Sun, X., X. Li & H. Beug (1999)- Pollen distribution in hemipelagic surface sediments of the South China Sea and its relation to modern vegetation distribution. Marine Geology 156, p. 221-226.
(online at: http://users.clas.ufl.edu/krigbaum/6930/Sun_etal_MarineGeology_1999.pdf)
(Distribution of pollen in surface sediments of S China Sea in 28 samples from water depths of 329-4307m)

Sun, X., Y. Luo & H. Chen (2003)- Deep-sea pollen research in China. Chinese Science Bull. 48, 20, p. 2155-2164.
(online at: www.scichina.com:8080/kxtbe/fileup/PDF/03ky2155.pdf)
(Study of pollen distributions in deep sea sediments of S China Sea and E China Sea (mainly Quaternary). Spectral analyses show Milankovich cyclicities in vegetation of surrounding land areas. Changes of herbs and pine pollen percentages in phase with d18O record. Not much detail)

Sun, X., Y. Luo, F. Huang, J. Tian & P. Wang (2003)- Deep-sea pollen from the South China Sea: Pleistocene indicators of East Asian monsoon. Marine Geology 201, p. 97-118.
(High-resolution pollen record from northern S China Sea ODP Site 1144, covers last 1.03 My. High, varying proportions of Pinus and herb pollen, forming base of 29 pollen zones that are closely correlated to Oxygen Isotope Stages (MIS) 1-29. Pinus dominant pollen zones correspond to interglacial periods, herb peaks relate to

heavier N18O stages assigned to glacials. Exposed N continental shelf covered by grassland during glacials. Relatively high fern percentage with smaller amplitude in variations before 600 ka may suggest more stable humid conditions before intensification of winter monsoon. Microtektites at 386.4m, part of Australasian strewnfield, close to Brunhes/Matuyama boundary (780 ka). Milankovich cyclicity)

Sun, Z., Z. Zhong, M. Keep, D. Zhou, D. Cai, X. Li, S. Wua & J. Jiang (2009)- 3D analogue modeling of the South China Sea: a discussion on breakup pattern. J. Asian Earth Sci. 34, p. 544-556.
(Modeling of S China Sea spreading history, from ~31-16 Ma. Breakup unconformities at ~30 Ma in N, and 23 Ma in S, similar to Briais et al. dating)

Sun, Z., D. Zhou, Z. Zhong, B. Xia, X. Qiu & J. Jiang (2006)- Research on the dynamics of the South China Sea opening: evidence from analogue modeling. J. Science in China, D 49, 10, p. 1053-1069.
(S China Sea continental rifting and early spreading from 32- 26 Ma. From 24 Ma on, spreading in NW-SE direction and ceased spreading at ~15.5 Ma. Early opening accompanied by ~15° CW rotation, while SE sub-sea basin opened with SE extension. Existence of rigid massifs changed orientations of some faults and rift belt, and led to deformation concentrated around massifs. Rifting and drifting of SCS might be caused by slab pull from proto S China Sea subducting toward Borneo and/or mantle flow caused by India-Asia collision)

Sun, Z., D. Zhou, S. Wu, Z. Zhong, M. Keep, J. Jiang & H. Fan (2009)- Patterns and dynamics of rifting on passive continental margin from shelf to slope of the northern South China Sea: evidence from 3D analogue modeling. J. Earth Science 20, 1, p. 136-146.

Tan, M.T. (1995)- Seismic stratigraphic studies of the continental shelf of Southern Vietnam. J. Petroleum Geol. 18, 3, p. 345-354.

Tang, Q. & C. Zheng (2013)- Crust and upper mantle structure and its tectonic implications in the South China Sea and adjacent regions. J. Asian Earth Sci. 62, p. 510-525.
(3D S-velocity model for crust and upper mantle of S China Sea area shows sea basinal regions, island arc and continental regions. Crustal thickness (~15- >50 km and lithospheric thicknesses ~60- >140km, thinnest in S China Sea, thickest in E Tibet and Yangtze Blocks. Results show: (1) Mesozoic subduction zone along S China margin; (2) influence of Indochina extrusion along Red River Fault limited; (3) slab remnant of proto-S China Sea beneath Borneo. With plate reconstructions at 150, 40, 30, 20, and 15 Ma)

Tang, X., L. Chen, S. Hua, S. Yang, G. Zhang, H. Shen, S. Rao & W. Li (2014)- Tectono-thermal evolution of the Reed Bank Basin, Southern South China Sea. J. Asian Earth Sci. 96, p. 344-352.
(Reed Bank Basin in S margin of S China Sea two stages of Paleogene rifting (~65.5-40.4 Ma and ~40.4-28.4 Ma) recognized from tectonic subsidence rates. Corresponding phases of heating with average basal paleo-heat flow values at end of rifting events ~60 and ~66.3 mW/m2. Thermal attenuation since ~28.4 Ma, with basal heat flow down to ~57.8-63.5 mW/m2 at present)

Taylor, B. & D.E. Hayes (1980)- The tectonic evolution of the South China Basin. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian Seas and Islands- 1, American Geophys. Union (AGU), Geophys. Monograph 23, p. 89-104.
(Magnetics patterns in S China Sea suggests active seafloor spreading from M Oligocene- E Miocene (32-17 Ma). Magnetic lineations trend E-W; position of relict spreading center coincides closely with E-trending linear chain of seamounts near 15°N. N Palawan was most likely attached to Reed-Bank Block and China Margin before M Oligocene. Limited data suggest change in spreading fabric in SW corner of basin)

Taylor, B. & D.E. Hayes (1983)- Origin and history of the South China Sea Basin. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands, 2, American Geophys. Union (AGU), Geophys. Monograph 27, p. 23-56.
(New magnetic anomaly data date seafloor spreading in S China Sea as M Oligocene- E Miocene (32-17 Ma). Thick sediments (1-2.5 km) and rel. smooth oceanic basement characterize older parts of basin; thinner sediments (300m-1 km) and blocky basement fabric characterize younger central part of basin. Opening of

basin moved microcontinental blocks (incl. N Palawan and Reed Bank) from Paleogene position adjacent to China mainland. Basin initially opened in N-S direction. Seafloor spreading in basin ended slightly before late M Miocene cessation of subduction at Palawan subduction zone to S)

Ten Haven, H.L. & J. Preston (1995)- Dai Hung oil field, offshore Southeast Vietnam: a case history of reservoir heterogeneity and mixed filling. In. J.O. Grimalt & C. Dorronsoro (eds.) Organic geochemistry: developments and applications to energy, climate, environment and human history, Proc. 17th Mtg. Organic Geochemistry (AIGOA), San Sebastian, p. 332-335.

Tian, J., P. Wang, R. Chen & X. Cheng (2005)- Quaternary upper ocean thermal gradient variations in the South China Sea: implications for east Asian monsoon climate. Paleoceanography 20, PA4007, p. 1-8.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2004PA001115/epdf)

Tjallingii, R., K. Stattegger, P. Stocchi, Y. Saito & A. Wetzel (2014)- Rapid flooding of the southern Vietnam shelf during the early to mid-Holocene. J. Quaternary Science, 29, 6, p. 581-588.
(New Holocene sea-level record derived from coastal deposits of S Vietnam shelf covers deglacial sea-level history between 13-9 ka. Relatively constant rate of sea-level rise, shoreline retreat of >200 km)

Tjallingii, R., K. Stattegger, A. Wetzel & Phung Van Phach (2010)- Infilling and flooding of the Mekong River incised valley during deglacial sea-level rise. Quaternary Science Reviews 29, p. 1432-1444.
(online at: https://earth.unibas.ch/sedi/Publications%20pdf/Tjallingii%202010%20Mekong%20incised%20valley%20infill%20Quat%20Sci%20Rev%2029.pdf
(Abrupt transition from fluvial mud to shallow marine carbonate sand deposition in incised-valley-fill from SE Vietnam shelf records Holocene postglacial transgression after 14 ka. Rapid aggradation of fluvial sediments at river mouth nearly completely filled Mekong incised valley prior to flooding between 13.0- 9.5 ka)

Tran Dai Thang, Nguyen Anh Duc, Mai Thanh Ha & Tran Ngoc Lan (2015)- Geological characteristics and hydrocarbon potential of Nam Con Son Basin deep water. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Confe. 2015, Singapore, 10.1, p. 1-5. *(Extended Abstract + Presentation)*
(Review of petroleum prospectivity of E part of Nam Con Son Basin, off S Vietnam. Two rift phases: Eocene- E Oligocene and late E Miocene- Middle Miocene)

Tran Khac Tan & Nguyen Quang Bo (1997)- Geological modelling and reservoir properties of basement rocks of the South Vietnam continental shelf. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 539-544.
(Basement rocks underlying Cuu Long and Nam Con Son basins mainly granites- granodiorites, but also some metamorphic rocks)

Tran Tuan Dung, Bui Cong Que & Nguyen Hong Phuong (2013)- Cenozoic basement structure of the South China Sea and adjacent areas by modeling and interpreting gravity data. Russian J. Pacific Geology 7, 4, p. 227-236.

Traynor, J.J. & C. Sladen (1997)- Seepage in Vietnam- onshore and offshore. Marine Petroleum Geol. 14, 4, p. 345-362.
(Onshore and offshore hydrocarbon seeps along coast and offshore Vietnam linked to migration from Tertiary source rocks. Residual oil in outcrop in breached traps in Tertiary sections and in exhumed 'buried hill' traps in pre-Tertiary rocks in onshore Hanoi Basin. Active oil seepage on W margin of offshore Phu Khanh Basin through fractured granites at basin margin. Onshore gas seeps in S Vietnam. Sea bed seeps not common)

Tri, Tri Van et al. (eds.) (2005)- Mineral resources of Viet Nam. Vietnam Dept. Geology and Mineral Resources, Hanoi, p. 1-214.

Tri, Tri Van & V. Khuc (eds.) (2012)- Geology and Earth resources of Vietnam. Publ. House Science and Technology, Hanoi, p. 1-646.

Wan, S., P.D. Clift, A. Li, T. Li & X. Yin (2010)- Geochemical records in the South China Sea: implications for East Asian summer monsoon evolution over the last 20 Ma. In: P.D. Clift et al. (eds.) Monsoon evolution and tectonics- climate Linkage in Asia, Geol. Soc., London, Spec. Publ. 342, p. 245-263.
(Asian summer monsoon intensity has decreased gradually from maximum in E Miocene but Asian winter monsoon shows phased enhancement since 20 Ma)

Wan, S., W.M. Kurschner, P.D. Clift, A. Li & T. Li (2009)- Extreme weathering/erosion during the Miocene climatic optimum: evidence from sediment record in the South China Sea. Geophysical Research Letters 36, L19706, doi:10.1029/2009GL040279, 5p.
(Rapid increase in weathering erosion and sedimentation around S China Sea around E-M Miocene boundary, (17.2- 15 Ma) correlates closely with Miocene Climate optimum, suggests extreme continental weathering and erosion at time of high temperature and strong precipitation)

Wan, S., A. Li, P.D. Clift & H. Jiang (2006)- Development of the East Asian summer monsoon: evidence from the sediment record in the South China Sea since 8.5 Ma. Palaeogeogr. Palaeoclim. Palaeoecology 241, p. 139-159
(Abrupt decreases in terrigenous accumulation rate grain size, smectite content, etc. in ODP site 1143 at ~5.2 Ma suggests source of Mekong River-derived terrigenous sediment between 8.5-5.2 Ma was mainly from area of surface uplift and M-L Miocene basaltic volcanism in S Vietnam. After 5.2 Ma Vietnam tectonic activity ceased and terrigenous sediment at Site 1143 increasingly dominated by erosion within Tibetan Plateau)

Wang, J., Q. Zhao, X. Cheng, R. Wang & P. Wang (2000)- Age estimation of the mid-Pleistocene microtektite event in the South China Sea: A case showing the complexity of the sea-land correlation. Chinese Science Bull. 45, p. 2277-2280.
(Stratigraphic position of M-Pleistocene microtektite layer estimated at 10-12 ka before Brunhes-Matuyama magnetic polarity reversal in deep sea cores from Indian Ocean, Sulu Sea, Celebes Sea and also in S China Sea, suggesting age of widespread Australasian meteorite impact is ~800-802 ka BP)

Wang, L., M. Sarnthein, H. Erlenkeuser, J. Grimalt, P. Grootes, S. Heilig, E. Ivanova, M. Kienast, C. Pelejero & U. Pflaumann (1999)- East Asian monsoon climate during the Late Pleistocene: high-resolution sediment records from the South China Sea. Marine Geol. 156, p. 245-284.
(Sediment cores from S China Sea (SCS) with proxy records of past changes in East Asian monsoon climate on millennial to bidecadal time scales over last 220,000 years. Two different regimes of monsoon circulation in SCS over last two glacial cycles: (1) glacial stages with stable estuarine circulation and strong O2-minimum layer via closure of Borneo sea strait; cool surface water during winter; large river input from emerged Sunda shelf; (2) Interglacials with strong inflow of warm water via Borneo sea strait, intense upwelling SE of Vietnam and continental wetness in China during summer; low seasonality)

Wang, L. & P. Wang (1990)- Late Quaternary paleoceanography of the South China Sea: glacial-interglacial contrasts in an enclosed basin. Paleoceanography 5, p. 77-90.

Wang, P. & Q. Li (eds.) (2009)- The South China Sea: paleooceanography and sedimentology. Developments in Paleoenvironmental Research 13, Springer Verlag, 506p.
(Extensive review of oceanography, stratigraphy, sedimentology and history of S China Sea)

Wang, P. & Q. Li (2009)- History of the South China Sea- a synthesis. In: P. Wang & Q. Li (eds.) The South China Sea: paleooceanography and sedimentology, Developments in Paleoenvironmental Research 13, Springer Verlag, p. 485-496.
(History of S China Sea three major stages: Early Paleogene pre-spreading rift stage (>37 Ma); (2) Late Eocene- E Miocene (37- 16 Ma) seafloor spreading phase, ending with collision of Nansha Plate and N Borneo; (3) post-spreading or closing stage since Middle-Late Miocene. Late Oligocene unconformity in many

basins (~25-23 Ma) probably related to major ridge jump and extrusion of Indochina and associated with shift of main sediment source from SW (Indochina-Sundaland) to North (mainland China). Reduction in clastic influx lead to widespread carbonate deposition in E-M Miocene. Collision of Asian Plate with at E side of SCS and Luzon Arc started at ~6.5 Ma)

Wang, P.X., C.Y. Huang, J. Lin, Z.M. Jian & M. Zhao (2019)- The South China Sea is not a mini-Atlantic: plate-edge rifting vs intra-plate rifting. Nat. Science Review (China) 6, 5, p. 902-913.
(online at: https://academic.oup.com/nsr/article/6/5/902/5567450)
(S China Sea plate-edge rift basin, while Atlantic Ocean is intra-plate rift basin. Intra-plate rifting occurred in Mesozoic and gave rise to large oceans. Plate-edge rifting mainly in mid-Cenozoic, mainly in W Pacific)

Wang, P.X., Q.Y. Li, J. Tian, Z.M. Jian, C.L. Liu, Li Li & W.T. Ma (2014)- Long-term cycles in the carbon reservoir of the Quaternary ocean: a perspective from the South China Sea. Nat. Science Review (China) 1, 1, p. 119-143.
(In last million-year two major changes in climate regime: mid-Pleistocene transition, centered at 0.9 Ma and the mid-Brunhes event at ~0.4 Ma)

Wang, P.X., L. Wang, Y. Bian & Z. Jian (1995)- Late Quaternary paleoceanography of the South China Sea: surface circulation and carbonate cycles. Marine Geology 127, p. 145-165.
(On Quaternary glacial-interglacial variations in sea surface circulation and carbonate cycles in S China Sea)

Wang, R., A. Abelmann, B. Li & Q. Zhao (2000)- Abrupt variations of the radiolarian fauna at Mid-Pleistocene climate transition in the South China Sea. Chinese Science Bull. 45, 10, p. 952-955.
(M Pleistocene changes in the radiolarian/foraminfera ratio, etc., related to global climate cooling of ~900 ka. Pronounced S-ward shift of North Equatorial Current led to lower sea-surface temperatures in S China Sea, with shift of tropical to subtropical radiolarian assemblages, increased radiolarian abundance, etc.)

Watts, K.J. (1997)- The Northern Nam Con Son Basin petroleum system, based on exploration data from Block 04-2 Vietnam. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc. (IPA), Jakarta 1997, p. 481-498.

Wei, X., A. Ruan, M. Zhao, X. Qiu, Z. Wu & X. Niu (2015)- Shear wave velocity structure of Reed Bank, southern continental margin of the South China Sea. Tectonophysics 644ï 645, p. 151-160.

White, J.M. & R.S. Wing (1978)- Structural development of the South China Sea with particular reference to Indonesia. Proc. 7th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 159-178.

Wiedicke, M.C. (1987)- Biostratigraphie, Mikrofazies und Diagenese Tertiarer Karbonate aus dem Sudchinesischen Meer (Dangerous Grounds-Palawan, Philippinen). Facies 16, 1, p. 195-302.
('Biostratigraphy, microfacies and diagenesis of Tertiary carbonates from the South China Sea'. Dangerous Grounds dredge samples compared to St Paul Limestone on Palawan and Nido Fm in wells on NW Palawan shelf. Most samples abundant Te5 (U Oligocene- Lower Miocene) larger foraminifera. Various shallow water facies. Carbonates represent drowned Oligocene-Miocene carbonate platform, now at water depths of 2400m. Carbonate stability ranking, from low to high stability: aragonitic skeletons (corals, bivalves), soritids, lepidocyclinids/ miogypsinids, Cycloclypeus, coralline algae, echinoderms, amphisteginids. Low Sr content points to 'marine' diagenesis)

Wirasantosa, S. (1992)- Cenozoic seismic stratigraphy and structure of the continental margin offshore Vietnam, South China Sea. Ph.D. Thesis Texas A&M University, p. 1-180.

Wong, H.K., T. Ludmann, C. Haft, A.M. Paulsen et al. (2003)- Quaternary sedimentation in the Molengraaff paleo-delta, Northern Sunda shelf (Southern South China sea). In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology, Soc. Econ. Geol. (SEPM), Spec. Publ. 76, p. 201-216.

(Seven seismic units below postglacial unit are prograding shelf-margin lowstand wedges, deposited during forced regressions. Oldest unit may reach back to 570 ka. Outer Sunda shelf was delta plain of Molengraaff river system during last glacial)

Worden, R.H., M.J. Mayall & I.J. Evans (1997)- Predicting reservoir quality during exploration: lithic grains, porosity and permeability in Tertiary clastic rocks of the South China Sea Basin. In: A.J. Fraser et al. (eds.) Petroleum Geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 107-115.
(Tertiary sandstones in Gulf of Thailand, Malay and South China Sea basins rich in pelitic metamorphic rock fragments, weathered basic igneous rock fragments and micaceous rock fragments. Rapid loss of porosity with depth at rate commensurate with sandstones with 20-40% ductile grains. Low permeabilities at shallow depths relative to other hydrocarbon provinces which have lower ductile grain contents)

Wright, C.M. (2006)- Neogene stratigraphic relationships within the Nam Con Son Basin, offshore Vietnam resulting from tectonics, eustasy and sediment flux. Ph.D. Thesis, Texas A&M University, p. 1-115.
(online at: http://oaktrust.library.tamu.edu/bitstream/handle/1969.1/ETD-TAMU-1128/WRIGHT-DISSERTATION.pdf?sequence=1)
(Nine sequence boundaries and associated sequences are recognized on seismic along Late Miocene-Pleistocene shelf in E Nam Con Son Basin. Ages assigned to horizons by correlating sequence boundaries with published sea level curves. Two primary Pliocene-Recent sediment sources to SW S China Sea, probably paleo-Mekong Delta and fluviodeltaic system from Sunda Shelf, such as Molengraaff River)

Wu, J. (1988)- Cenozoic basins of the South China Sea. Episodes 11, 2, p. 91-96.
(online at: /www.episodes.co.in/www/backissues/112/ARTICLES--91.pdf)
(37 Cenozoic sedimentary basins recognized in S China Sea, 18 of which with oil and gas. Grouped in 6 major depositional provinces. With small Eocene, Late Oligocene and M Miocene depositional facies maps)

Wu, J. (1994)- Evaluation and models of Cenozoic sedimentation in the South China Sea. Tectonophysics 235, p. 77-98.
(S China Sea marginal basin geologically complex and characterized by extensive distribution and complicated evolution of thick Cenozoic sediments. Cenozoic divided into eight sedimentary provinces. Line linking Taiwan and Natuna was sea-land boundary of S China Sea in early Cenozoic. Transgression cycle dominant W of this line, while regression prevails to E)

Wu, S., S. Yuan, G. Zhang, Y. Ma, L. Mi & N. Xu (2009)- Seismic characteristics of a reef carbonate reservoir and implications for hydrocarbon exploration in deepwater of the Qiongdongnan Basin, northern South China Sea. Marine Petroleum Geol. 26, 6, p. 817-823.
(Two areas of reef carbonate reservoirs in M Miocene in Qiongdongnan Basin, N S China Sea. Seismic character similar to LH11-1 reef reservoir in Dongsha Uplift and Island Reef of Salawati Basin, Indonesia)

Wu, S., Z. Yang, D. Wang, F. Lu, T. Ludmann, C. Fulthorpe & B. Wang (2014)- Architecture, development and geological control of the Xisha carbonate platforms, northwestern South China Sea. Marine Geology 350, p. 71-83.
(Architecture and evolution of isolated carbonate platforms on continental slope of N South China Sea. Xisha carbonate platforms initiated on Xisha Uplift, in E Miocene and remained active up to present)

Wu, S., X. Zhang, Z. Yang, T. Wu, J. Gao & D. Wang (2016)- Spatial and temporal evolution of Cenozoic carbonate platforms on the continental margins of the South China Sea:response to opening of the ocean basin. Interpretation 4, 3, p. SP1-SP19.
(Widespread and thick Cenozoic carbonate sequences along margins of S China Sea. Platforms developed during rifting and initiated on fault blocks of conjugate rift margins. Most carbonate platforms drowned afterM Miocene. Malampaya Carbonate >600m thick, developed on Oligocene rifted horst block. Subsidence, tectonic tilting, faulting, and foreland bulge controlled drowned carbonate platforms. The tectonic evolution and relative sea-level fluctuations controlled depositional cycles of carbonate platforms. Carbonate platforms flourished in M Miocene due to stable tectonic conditions and shrank during Late Miocene due to rapid

subsidence. Relative sea level exerted 2nd-order control on evolutionary trend of carbonate platforms and third-order control on evolutionary periods in each stage)

Wu, X., X. Pang, H. Shi, M. Hen, J. Shen, X. Zhang & D. Hu (2009)- Deep structure and dynamics of passive continental margin from shelf to ocean of the Northern South China Sea. J. Earth Sci. 20, 1, p. 38-48.
(online at: www.earth-science.net/ejournal/paper/2009-1-04.pdf)

Xia, B., Y. Zhang, X.J. Cui, B.M Liu, J.H. Xie, S.L. Zhang & G. Lin (2006)- Understanding of the geological and geodynamic controls on the formation of the South China Sea: a numerical modelling approach. J. Geodynamics 42, p. 63-84.

Xia, K.Y. & D. Zhou (1993)- The geophysical characteristics and evolution of northern and southern margins of the South China Sea. In: G.H. Teh (ed.) Proc. Symposium on tectonic framework and energy resources of the Western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 223-240.

Xia, K.Y., C.L. Huang, S.R. Jiang, Y.X. Zhang, D.Q. Su, S. Xia & Z. Chen (1994)- Comparison of the tectonics and geophysics of the major structural belts between the northern and southern continental margins of the South China Sea. Tectonophysics 235, p. 99-116.
(N margin of S China Sea is divergent margin, S margin (Palawan- Sabah- Sarawak) is convergent/collisional margin)

Xie, X, R.D. Muller, S. Li, Z. Gong & B. Steinberger (2006)- Origin of anomalous subsidence along the Northern South China Sea margin and its relationship to dynamic topography. Marine Petroleum Geol. 23, p. 745-765.
(Cenozoic stratigraphic sections and wells from N South China Sea margin used to assess mechanisms contributing to Late Tertiary tectonic subsidence)

Xu, G.Q., S.H. Wu, L. Zhang, X.G. Li, H. Yi, L. Lei & X. Xu (2013)- Stratigraphic division and depositional processes for the Mesozoic basin in Northern South China Sea. Marine Geophysical Res. 34, 3, p. 175-194.
(N China Sea margin Mesozoic section initial transgression in Late Triassic after Indosinian event, deepening to E Jurassic maximum flooding event. Followed by shallow marine M Jurassic, deep marine Late Jurassic- E Cretaceous, mainly non-marine deposition through Cretaceous. Volcanic episodes)

Xu, H.H., H. Ma, H.B. Song & A.H. Chen (2011)- Eastern South China Sea basin expansion numerical simulation. Chinese J. Geoph. 54, 6, p. 956-966.
(online at: www.agu.org/wps/ChineseJGeo/54/06/xhh.pdf)
(Expansion of S China Sea in E Oligocene- E Miocene (oceanic crust age ~32-15.5 Ma) includes at least one ridge transition. Common large seamounts rise 3000-4000m high above seafloor; much of seamount magmatic activity may be younger than oceanic spreading. Simulation results indicate ridge jump is important process of S China Sea expansion. forming magma chamber between two ridges, creating more submarine volcanoes and higher terrain between ridges)

Xu, H., J. Sun, J. Liao, G. Dong, J. Liu, H. Song, Z. Wang, Z. Sun et al. (2012)- Bioherm petroleum reservoir types and features in main sedimentary basins of the South China Sea. J. Earth Science 23, 6, p. 828-841.
(In S China Sea Neogene organic reefs are reservoirs of largest oil- gas fields, incl. Liuhua 11-1 oilfield in N and large L gas field in S. In SE and S S China Sea organic reefs built up earlier than N. Liuhua oilfield in Pearl River Mouth basin is mainly red algal bindstone. Malampaya buildup in N Palawan basin rich in red algal bindstone and green algal reef segmented rock. In Xisha Islands mainly Miocene red algal framestone and green algal segmented rock)

Xu, H., Y. Zhu, G. Eberli, W. Luo, X. Zhao, Y. Cai, L. Ying, X. Liu et al. (2015)- Characteristics of porosity and permeability layer of fossil *Halimeda* reef mineral rock of Miocene in the Xisha Islands and its genetic model. Acta Oceanologica Sinica 34, 4, p. 74-83.
(Halimeda one of the major reef-building algae in M Miocene of Xisha, making good oil- gas reservoirs)

Xu, J., P. Wang, B. Huang, Q. Li & Z. Jian (2005)- Response of planktonic foraminifera to glacial cycles: Mid-Pleistocene change in the southern South China Sea. Marine Micropaleontology 54, p. 89-105.
(Planktonic foraminifera from ODP Site 1143 in S South China Sea show faunal response to glacial cycles in last 2.1 Ma. Abundances of Globorotalia menardii high in interglacials and low in glacials. Pulleniatina obliquiloculata before Mid-Pleistocene Revolution also higher abundances during glacials)

Xu, Y.G., J.X. Wei, H.N. Qiu, H.H. Zhang & X.L. Huang (2012)- Opening and evolution of the South China Sea constrained by studies on volcanic rocks: preliminary results and a research design. Chinese Science Bull. 57, 24, p. 3150-3164.
(online at: http://download.springer.com/...)

Yan, P., H. Deng, H. Liu, Z. Zhang & Y. Jiang (2006)- The temporal and spatial distribution of volcanism in the South China Sea region. J. Asian Earth Sci. 27, p. 647-659.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.455.1789&rep=rep1&type=pdf)
(Very little Cenozoic volcanism associated with rifting and sea floor spreading in S China Sea. Large basement relief caused by extension formed major basins and continental-oceanic transitional zone in N margin reflects high crustal rigidity during rifting- drifting)

Yan, P. & H. Liu (2005)- Tectonic-stratigraphic division and blind fold structures in Nansha Waters, South China Sea. J. Asian Earth Sci. 24, 3, p. 337-348.
(Seismic data from Nansha waters (Spratley Islands; S margin South China Sea. Five tectonic belts: Palawan-Borneo Nappe (NW-thrusted antclines of Neogene sediments), Nansha Trough (deep, undisturbed Neogene), Nanwei-Liyue Compressive Belt (Late Mesozoic paleo-anticlines overlain by undeformed sediments with Paleogene hiatus), Zheng'he Extensional Belt (Paleogene half-grabens, recent reactivationd) and Circum-Southwest Subbasin Belt (Neogene draped on subsided fault blocks related to Late Oligocene-M Miocene seafloor spreading). Nansha Microcontinent Block is collision complex assembled in Late Mesozoic)

Yan, P., Y. Wang & H. Liu (2008)- Post-spreading transpressive faults in the South China Sea Basin. Tectonophysics 450, p. 70-78.
(S China Sea formed by Late Oligocene- M Miocene seafloor spreading. After cessation of spreading, compression due to NW-moving Taiwan-Luzon Arc causing strike-slip motion on E and W margins and basin-wide transpressive fault zones, and young volcanism)

Yan, P., D. Zhou & Z. Liu (2001)- A crustal structure profile across the northern margin of the South China Sea Basin. Tectonophysics 338, p. 1-21.

Yan Q.S., P. Castillo, X. Shi, L.L. Wang, L. Liao & J. Ren (2015)- Geochemistry and petrogenesis of volcanic rocks from Daimao Seamount (South China Sea) and their tectonic implications. Lithos 218-219, p. 117-126.
(Daimao Seamount (16.6 Ma) formed 10 My after cessation of 17°N spreading center. Basaltic breccia clasts in volcaniclastics suggest Daimao and other SCS seamounts typical ocean island basalt composition and 'Dupal' isotopic signature. Daimao Seamount formed through submarine explosive basaltic volcanism at 16.6 Ma. Seamount subsided rapidly, with deposition of shallow-water, coral-bearing carbonates around summit)

Yan, Q.S. & X.F. Shi (2009)- Characteristics of volcaniclastic rocks from seamounts in the South China Sea and its geological implications. Acta Petrologic Sinica 25, 12, p. 3327-3334. *(in Chinese)*
(Volcanoclastic rocks from two seamounts in S China Sea alkali basalts)

Yan, Q., X.F. Shi & P. Castillo (2014)- The late Mesozoic-Cenozoic tectonic evolution of the South China Sea: a petrologic perspective. J. Asian Earth Sci. 85, p. 178-201.
(Late Mesozoic Yanshanian granitoids in (SE China), Pearl River Mouth Basin, micro-block in S China Sea (Zhongsha, Nansha, N Mindoro), continental shelf and Dalat zone in SE Vietnam and Schwaner Mountains in W Kalimantan mainly I-type granites, formed in continental arc tectonic setting (~159-70.5 Ma, av. 100 Ma). Early bimodal volcanism (60-43 Ma or 32 Ma) at N margin of SCS, followed by passive style volcanism during

Cenozoic seafloor spreading (37 or 30-16 Ma) within SCS, post-spreading tholeiitic volcanism at 17-8 Ma (mantle plume?), followed by alkali series from 8 Ma- present in SCS region)

Yan, Q., X. Shi & N. Li (2011)- Oxygen and lead isotope characteristics of granitic rocks from the Nansha block (South China Sea): implications for their petrogenesis and tectonic affinity. Island Arc 20, 2, p. 150-159.
(Granitic samples dredged from NW margin of Nansha microblock in S China Sea emplaced between 157-127 Ma (Late Jurassic- E Cretaceous). Age and geochemistry similar to granites from Reed Bank and Yanshanian granites of E China. Isotope ratios tied to Mesozoic subduction zone in SE side of microblock, tectonically affiliated with Nanling-Hainan (S China) block)

Yan, Q., X. Shi, J. Liu, K. Wang & W. Bu (2010)- Petrology and geochemistry of Mesozoic granitic rocks from the Nansha micro-block, South China Sea: constraints on the basement nature. J. Asian Earth Sci. 37, p. 130-139.
(Nansha block one of several micro-blocks dispersed in S China Sea (Xisha-Zhongsha, Reed-NE Palawan block, etc.). Ages for granitic dredge samples of Nansha micro-block 159-127 Ma, comparable to Late Jurassic-E Cretaceous magmatic activity in N margin. Tonalitic and monzogranitic rock groups, related to calc-alkaline Pacific Plate subduction that existed across Taiwan, Palawan to S Vietnam)

Yan, Q.S., X.F. Shi, K.S. Wang, W.R. Bu & L. Xiao (2008)- Major element, trace element, and Sr, Nd and Pb isotope studies of Cenozoic basalts from the South China Sea. Science in China, D: Earth Sciences, 51, 4, p. 550-566.
(K-Ar ages of basalts from S China Sea basin 3.8- 7.9 Ma, suggesting intra-plate volcanism after cessation of spreading of S China Sea, comparable regions around SCS. Belong to alkali basalt series, similar to OIB-type basalt. Also geochemical constraints on Hainan mantle plume)

Yang, F., Z. Sun, Z. Zhou, Z. Wu, D. Gao & Q. Li (2013)- The evolution of the South China Sea basin in the Mesozoic-Cenozoic and its significance for oil and gas exploration: a review and overview. In: D. Gao (ed.) Tectonics and sedimentation: implications for petroleum systems, American Assoc. Petrol. Geol. (AAPG), Mem. 100, p. 397-418.
(Greater S China Sea Basin four evolutionary phases: (1) Late Triassic- M Jurassic divergent continental margin, (2) Late Jurassic- M Eocene convergent intracontinental setting, (3) late Eocene- Miocene divergent continental margin, and (4) Pliocene- Present convergent continental margin setting. (SW Borneo shown as part of mainland SE Asia since Late Triassic or earlier))

Yang, S. & N. Fang (2015)- Geochemical variation of volcanic rocks from the South China Sea and neighboring land: implication for magmatic process and mantle structure. Acta Oceanologica Sinica 34, 12, p. 112-124.
(online at: www.hyxb.org.cn/aosen/ch/...)
(Geochemical study of Kon Tum plateau, Sanshui basin and Daimao seamount volcanic rocks. Basaltic lavas indicate not deep-rooted plume origin, but shallower mantle domain)

Ye, Q., L. Mei, H. Shi, G. Camanni, Y. Shu, J. Wu, L. Yu, P. Deng & G. Li (2018)- The Late Cretaceous tectonic evolution of the South China Sea area: an overview, and new perspectives from 3D seismic reflection data. Earth-Science Reviews 187, p. 186-204.
(Three Late Cretaceous fault systems in N South China Sea margin, superimposed on Late Jurassic to Early Cretaceous (162-102 Ma) arc-related granitoids. WNW-striking thrust system formed as a result of sinistral transpressional event at ~100 Ma, likely related to oblique convergence between Paleo-Pacific Ocean and Eurasia Plates. Second phase at ~100- 72 Ma extensional, with ENE-striking extensional faults and basins, interpreted as back-arc extension/slab roll back of Paleo-Pacific Plate, eventually leading to opening of Proto-S China Sea. Third phase compressional event in Late Cretaceous (~72- 66 Ma), responsible for ENE-striking thrust system. Post-Yanshanian compressional event interpreted to have developed in response to ridge push)

Yu, H.S. (1994)- Structure, stratigraphy and basin subsidence of Tertiary basins along the Chinese southeastern continental margin. Tectonophysics 235, p. 56-76.

(Offshore Tertiary basins along broad shelf from Taiwan to Hainan Island with similar characteristics. Paleogene basins mainly NE-SW trending half-grabens and fault blocks)

Yu, X.Z., C. Xue, H. Shi, W. Zhu, Y. Liu & H. Yin (2017)- Expansion of the South China Sea basin: constraints from magnetic anomaly stripes, sea floor topography, satellite gravity and submarine geothermics. Geoscience Frontiers 8, 1, p. 151-162.
(online at: https://www.sciencedirect.com/science/article/pii/S1674987116000050)
(Model for Oligo-Miocene spreading in S China Sea basin. NW-SE expansion of SW subbasin later than N-S expansion of central basin; both expansions end at same time. Expansion of SW sub-basin similar to Japan Sea, likely caused by left-lateral strike slip on central fault zone in S China Sea)

Zampetti, V., U. Sattler & H. Braaksma (2005)- Well log and seismic character of Liuhua 11-1 Field, South China Sea; relationship between diagenesis and seismic reflections. Sedimentary Geology 175, p. 217-236.
(Seismic reflections in Miocene carbonate buildup of Liuhua 11-1 Field (220 km SE of Hongkong) image alternating tight and porous zones. Most porosity related to leaching in deep burial realm that postdates pressure solution, implying seismic reflections do not necessarily image depositional surfaces, although diagenetically induced porosity often follows primary depositional bedding)

Zeng, W., Z. Li, G. Wang & H. Huang (1996)- Global geoscience transect, Guangzhou-Palawan. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 421-442.
(Integrated geological-geophysical interpretation of NW-SE transect across South China Sea)

Zhang, C., S.M. Wu & X.L. Qiu (2007)- Formation of foreland basins in the South of the South China Sea. Marine Geology & Quaternary Geology 27, 1, p. 61-70. *(in Chinese with English Abstract)*
(Zhou 2009: Foreland basins in S SCS formed early in SW (Late Eocene) and later in NE (M Miocene), possibly indicating formation of subduction zone along S margin of SCS was from SW to NE)

Zhang, G., H. Qu, S. Liu, X. Xie, Z. Zhao & H. Shen (2016)- Hydrocarbon accumulation in the deep waters of South China Sea controlled by the tectonic cycles of marginal sea basins. Petroleum Research (Chinese Petrol. Soc.) 1, 1, p. 39-52.
(online at: www.sciencedirect.com/science/article/pii/S2096249517300297)
(Two tectonic cycles of marginal sea basins in S China Sea: Palaeo-SCS and Neo-SCS. N part of SCS is rifted continental margin; Nansha Block is drifting rift basin. S part compound compressional basin on active margin; W part is shear-extensional basin on transform continental margin; E part is accretionary wedge at subduction continental margin. Deep-water basins mainly on continental slope and Nansha Block. Three sets of source rocks in N continental margin: Eocene terrestrial facies, E Oligocene transitional and late Oligocene marine facies. Main hydrocarbon reservoir types related to structural traps, deep water fans and reefs)

Zhang, G., W. Tang, X. Xie, Z.G. Zhao & Z. Zhao (2017)- Petroleum geological characteristics of two basin belts in southern continental margin in South China Sea. Petroleum Exploration and Development (China) 44, 6, p. 899-910.
(online at: https://www.sciencedirect.com/science/article/pii/S1876380417301027)
(South China Sea 3 tectonic stages: (1) development of Proto-SCS, (2) subduction of Proto-SCS and (3) development of Neo-SCS (rapid subsidence followed by shrinking). Southern and Northern Tertiary basins belts in southern continental margin (N Borneo). Main source rocks in S basin belt Miocene coal, nearshore marine (oil) and offshore (gas). In N basin belt, source rocks Eocene -Oligocene, gas-prone, highly mature, with reefs and faulted blocks as main traps)

Zhang, G. & M. Yang (1997)- Study of overthrust nappes and its geodynamic mechanism along the southeastern margin of Nansha Trough. In: P. Dheeradilok et al. (eds.)Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 1, p. 327-336.

(SE margin of Nansha Trough foreland basin in S China Sea (= Palawan Trough) with common SE-to-NW directed thrust-nappe structuring along NW Borneo- Sabah margin. Two important detachment planes (re-interpretation of Hinz et al. 1985 seismic sections. Most nappe structures formed in E Pliocene)

Zhang, J. & J.B. Li (2011)- Gravity inversion and thermal modeling for the crust-mantle structure of the southwest subbasin in the South China Sea. Chinese J. Geophysics 54, 6, p. 907-920.
(online at: www.agu.org/wps/ChineseJGeo/54/06/zj.pdf)

Zhang, L. (2008)- The finding of microtektites from ODP Site 1144 and its significance. Natural Sciences and Museums, Beijing, 4, p. 137-141. *(in Chinese)*
(ODP Site 1144 in northern S China Sea with >969 microtektites and 1543 fragments in 10 cm interval (386.17- 386.27 mcd). All microtektites entirely glassy, mostly spherical and oval in shape and with many bubbles. Composition within the range of Australasian tektites. Source crater probably further to NE and more closer to South China than previously predicted. Size of the crater estimated 50-140 km)

Zhang, L., J. Liu, Q. Zhao & C. Li (2003)- Physicochemical properties and the complicity of parent materials of microtektites from ODP Site 1144. Geology-Geochemistry 31, 2, p. 64-72. *(In Chinese)*
(ODP Site 1144 in northern C China Sea with many microtektites at depths 386.17-386.27 mcd. Shapes mostly spherical and oval, but also teardrops, saddles, buns, dumbbells, disk shapes and fragments. Major elements geochem suggest Australasian microtektites. Parent material may include clastic sediments)

Zhang, X., Z. Du, Z. Luan, X. Wang, S. Xi, B. Wang, L. Li, C. Lian & Jun Ya (2017)- In situ Raman detection of gas hydrates exposed on the seafloor of the South China Sea. Geochem. Geophys. Geosystems 18, 10, p. 3700-3713.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2017GC006987/epdf)
(Gas hydrates usually buried in sediments, but found exposed on seafloor of S China Sea at water depth of 1130m. Likely cold seep of thermogenic hydrocarbons)

Zhang, Y. (1995)- The characteristics of the magnetic anomaly and magnetosphere structure in the Nansha islands and surrounding areas. Bull. Geol. Soc. Malaysia 37, p. 479-485.
(online at: www.gsm.org.my/products/702001-100933-PDF.pdf)

Zhang, Z.G., Y.S. Du, L.F. Gao, N.Q. Fang, S.X. Yang, J. Liu & C.B. Song (2012)- The Late Mesozoic granodiorites from the southwest basin in the South China Sea and its tectonic implication. J. Earth Science (China) 23, 3, p. 268-276.
(online at: http://en.earth-science.net/PDF/20140514053633.pdf)
(Granodiorite sample dredged from 3100m water depth at S margin of SW basin of S China Sea with 40Ar-39Ar ages of biotites of 110.3±0.5 Ma (Albian). Geochemistry suggest it may represent magmatism in arc or forearc setting)

Zhao, H., J. Deng, K. Li, Y. Di, J. Yu, J. Zhao & Y. Li (2002)- Cenozoic volcanism in South China Sea and its vicinity and South China Sea spreading. J. Earth Science (China) 27, 3, p. 217-224.
(online at: http://en.earth-science.net/WebPage/Article.aspx?id=123)

Zhao, Q. (2005)- Late Cainozoic ostracod faunas and paleoenvironmental changes at ODP Site 1148, South China Sea. In: Marine micropaleontology of the South China Sea, Marine Micropaleontology 54, p. 27-47.
(Earliest Oligocene-Recent deep water ostracod faunas in northern S China Sea suggest spreading of SCS Basin predates Oligocene. Three ostracod assemblages recognized, reflecting paleodepth changes from upper bathyal (<1500m) in Early Oligocene, lower bathyal (1500- 2500m) in Late Oligocene- early M Miocene (26-14 Ma) to depth similar to the present (>2500m) since the late M Miocene- Present)

Zhao, Q., Z. Jian, B. Li, X. Cheng & P. Wang (1999)- Microtektites in the Middle Pleistocene deep-sea sediments of the South China Sea. Science in China, D, 42, p. 531-535.

(Common microtektites at 7.8- 8.1 m depth of core S095-17957-2, S China Sea. Microtektite layer near Brunhes/Matuyama magnetic reversal boundary ~0.78 Ma)

Zheng, H., X. Sun, P. Wang, W. Chen & J. Yue (2019)- Mesozoic tectonic evolution of the Proto-South China Sea: a perspective from radiolarian paleobiogeography. J. Asian Earth Sci. 179, p. 37-55.
(Proto-South China Sea represents subducted lithosphere that formerly occupied region of present-day S China Sea. In Triassic in transition zone between Pacific and Tethys oceans. In E-M Jurassic well connected to Pacific Ocean and part of Paleo-Pacific slab. During Late Jurassic- E Cretaceous PSCS in semi-closed environment and part W-facing Andean-type subduction zone. In late Late Cretaceous in extensional setting)

Zhong, G., J. Geng, H.K. Wong, Z. Ma & N. Wu (2004)- A semi-quantitative method for the reconstruction of eustatic sea level history from seismic profiles and its application to the southern South China Sea. Earth Planetary Sci. Letters 223, p. 443-459.
(Eustatic sea level curve since Pliocene (5.3 Ma) derived from high-res seismic data from N Sunda Shelf/ South China Sea (SCS). 36 fourth order sea level cycles recognized with periods ranging from 0.08- 0.29 My)

Zhong, L.F., G.Q. Cai, A.A.P. Koppers, Y.G. Xu & B. Xia (2018)- 40Ar/39Ar dating of oceanic plagiogranite: constraints on the initiation of seafloor spreading in the South China Sea. Lithos 302-303, p. 421-426.
(Oceanic plagiogranite dredged from Penglai Seamount on 17°N fossil spreading center of East Sub-basin of SCS near Manila Trench. 40Ar/39Ar ages of 32.3 ± 0.5 Ma and 28.9 ± 1.9 Ma. Trace elements and isotopic composition similar to mid-oceanic ridge basalts. New geochronology demonstrates initial opening of S China Sea before 32 Ma (E Oligocene))

Zhou, D., H. Chen, S. Wu & H.S. Yu (2002)- Opening of the South China Sea by dextral splitting of the East Asian continental margin. Acta Geologica Sinica 76, 2, p. 180-190.
(Sea of Japan and S China Sea both West Pacific marginal seas with many common features, implying common origin. E Asian margin was split under the stress field of dextral transtension. Etc.)

Zhou, D., K. Ru & H.Z. Chen (1995)- Kinematics of Cenozoic extension on the South China Sea continental margin and its implications for the tectonic evolution of the region. Tectonophysics 251, p. 161-177.
(N South China Sea large Cenozoic sedimentary basins developed, characterized by episodic rifting, clockwise rotation of rifts, E-ward aging breakup unconformity and intensifying crustal extension to E. Maximum rifting N of maximum thermal subsidence, which was in turn N of seafloor opening. Nansha microcontinent in S of S China Sea dominated by compressional deformation. Asymmetric development of extensional structures around S China Sea Basin explained by Wernicke simple-shear model. Tectonic development of S China Sea consequence of interactions of three major plates: retreat of W Pacific subduction zone in Late Cretaceous, hard collision and impinging of India to Tibet since Late Eocene and fast N-ward subduction of Indian Ocean-Australian plate since late E Miocene)

Zhou, D., Z. Sun, H.Z. Chen, H.H. Xu, W.Y. Wang et al. (2008)- Mesozoic paleogeography and tectonic evolution of South China Sea and adjacent areas in the context of Tethyan and Paleo-Pacific interconnections. The Island Arc 17, 2, p. 186-207.
(Lithofacies maps of six Mesozoic time slices of S China Sea and SE Eurasian continent margin. In E Triassic, Paleotethys Ocean extended E to study area through Song Da passage. Then significant E-W differential evolution began. Late Triassic uplift of W area after collision between Indosinian and S China blocks. Transgression of Paleo-Pacific waters in E and SE formed `E Guangdong-NW Borneo Sea'. E Jurassic marine transgression more pronounced, resulting in connection with Mesotethys Ocean to W. In M Jurassic, short-lived transgression in E Mesotethys with formation of `Yunnan-Burma Sea'. Late Jurassic-E Cretaceous climax of subduction of Mesotethys and Paleo-Pacific towards Eurasian continent, leading to formation of `Circum SE Asia Subduction-Accretion Zone' in M or Late Cretaceous. Evidence for newly recognized segment of this Mesozoic subduction-accretion zone under Cenozoic sediments in NE S China Sea)

Zhou, D., W. Wang, J. Wang, X. Pang, D. Cai & Z. Sun (2006)- Mesozoic subduction-accretion zone in northeastern South China Sea inferred from geophysical interpretations. J. Science in China Series, D, Earth Sciences 49, 5, p. 471-482.
(Segment of Mesozoic subduction-accretion zone inferred from gravity- magnetics across NE S China Sea at ~NE45° orientation. This fills gap of Great Late Mesozoic Circum SE Asia subduction-accretion Zone, which extended from Sumatra, Java, SE Kalimantan to N Palawan, and from Taiwan, Ryukyu to SW Japan)

Zhou, D. & B. Yao (2009)- Tectonics and sedimentary basins of the South China Sea: challenges and progresses. J. Earth Science (China Univ. Geosciences) 20, 1, p. 1-12.
(online at: www.earth-science.net/ejournal/paper/2009-1-01.pdf)
(Introduction to special volume Tectonics and sedimentary basins of the South China Sea, with 19 papers. SCS has passive margin in N, convergent margin in S and E, and transform margin in W. Deepsea basin subdivided into sub-basins NW, E (central), and SW. Correlation of magnetic anomalies 11-5c in E subbasin indicates seafloor spreading from 30- 16 Ma. Wells on N SCS shelf commonly penetrate Late Cretaceous granites (70-105 Ma)

Zhu, M., S. Graham & T. MacHargue (2009)- The Red River Fault zone in the Yinggehai Basin, South China Sea. Tectonophysics 476, p. 397-417.
(Mapping of offshore part of Red River Fault in Yinggehai Basin. Two boundary faults and two basin-center faults mapped. Three deformation phases for offshore Red River Fault e: (1) sinistral movement from ~30-16 Ma, (2) slip reversal between 16-5.5 Ma, and (2) slow dextral movement after 5.5 Ma. Horizontal displacement of dextral movement ~10's of km. Before M Miocene, sinistral movement of Red River Fault likely linked to spreading of S China Sea ('continental extrusion). After M Miocene, distributed shortening explains low rate of dextral accommodation of Red River Fault in response to continuing India-Asia collision)

Zhu, W & Chao Lei (2013)- Refining the model of South China Seaǿs tectonic evolution: evidence from Yinggehai-Song Hong and Qiongdongnan Basins. Marine Geophysical Res. 34, 3-4, p. 325-339.

IX.8. The Philippines (General, Palawan, Luzon)

Abrajano, T.A., J.D. Pasteris & G.C. Bacuta (1989)- Zambales ophiolite, Philippines I. Geology and petrology of the critical zone of the Acoje massif. Tectonophysics 168, p. 65-100
(Acoje massif (northernmost massif of Zambales Ophiolite Complex) relatively intact fragments of Mesozoic oceanic lithosphere)

Abrajano, T.A., N.C. Sturchio, J.K. Bohlke, G.L. Lyon, R.J. Poreda & C.M. Stevens (1988)- Methane-hydrogen seeps, Zambales Ophiolite, Philippines: deep or shallow origin? Chemical Geology 71, p. 211-222.
(Isotopically anomalous CH4-rich gas escapes at low rate from seeps in serpentinized ultramafic rock in Zambales Ophiolite, W Luzon. Gas mainly methane/CH4 and H2 (55 and 42%). d13C-value of CH4 is -7.0‰, which is ~8‰ higher than highest published values for CH4 in other natural gases, but similar to values attributed to mantle carbon. Carbon and He isotopic data consistent with derivation directly from reduced mantle, but could also have been produced during low-T serpentinization of ophiolite)

Abrajano, T.A., N.C. Sturchio, B.M.Kennedy, G.L. Lyon, K. Muehlenbachs & J.K. Bohlke (1990)- Geochemistry of reduced gas related to serpentinization of the Zambales Ophiolite. Applied Geochem. 5, 5-6, p. 625-630.
(Methane-hydrogen gas seeps with mantle-like C and noble gas isotopes seep from partially serpentinized ultramafic rocks in Zambales ophiolite, Philippines. Gases products of periodotite hydration)

Acharya, H.K. (1980)- Seismic slip on the Philippine fault and its tectonic implications. Geology 8, 1, p. 40-42.
(Philippine fault is major left-lateral strike-slip fault between two opposing subduction zones along Manila Trench and Philippine Trench. Rate of motion on fault comparable to slip of Philippine and Eurasian plates)

Acharya, H.K. & Y.P. Aggarwal (1980)- Seismicity and tectonics of the Philippine Islands. J. Geophysical Research 85, B6, p. 3239-3250.
(Seismic and volcanic activity used to decipher tectonics of Philippines region. Active E-ward subduction of Eurasian plate along Manila trench near Luzon. Underthrusting of Eurasian plate may have occurred along all of W Philippines from Taiwan to Sulawesi. Subduction has ceased along sections where continental crust is present. Near E Philippines W-ward subduction of Philippine Sea plate)

Acosta, J.G. (2013)- Analysis of high amplitude anomalies of the Early-Middle Miocene Pagasa Formation, Southwest Palawan Basin, Philippines. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2013, Singapore, p. 1-41. *(Presentation)*
(Offshore SW Palawan E Sabina Block with M Miocene Pagasa Fm deep-water sands above Nido Lst. High amplitude anomalies can not be tied to good quality reservoirs)

Adams, G.I. (1909)- Geological reconnaissance of the island of Leyte- with notes and observations on the adjacent smaller islands and soutwestern Samar. Philippine J. Science 4, 5, p. 339-358.
(online at: https://nla.gov.au:443/tarkine/nla.obj-8832482)

Alcantara, P.M. (1980)- Tertiary larger foraminifera from the Argao-Dalaguete region, southern Cebu Island, Philippines. In: H. Igo & H. Noda (eds.) Professor Sabro Kanno Memorial Volume, Ibaraki, p. 221-232.

Almasco, J.N. (1994)- Paleomagnetism of Palawan Island: implications for the opening of the South China Sea and for Philippine geology. Ph.D. Thesis, University of Illinois, Chicago, p. 1-272.

Almasco, J.N., K. Rodolfo, M. Fuller & G. Frost (2000)- Paleomagnetism of Palawan, Philippines. J. Asian Earth Sci. 18, 3, p. 369-389.
(Paleomagnetic studies on Palawan and Busuanga. Cretaceous Espina Basalts of Calatuigas Ophiolite in S Palawan Block N-ward and rotated CCW by 66°±13°, suggesting obduction from S. Jurassic cherts and Cretaceous Guinlo Fm from Busuanga in N Palawan Block paleolatitude comparable to regions of pervasive

Cretaceous remagnetization in S China borderland and may reflect similar remagnetization, consistent with N Palawan Block's proposed S China origin)

Amato, F.L. (1965)- Stratigraphic paleontology in the Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 19, 1, p. 1-24.
(Eocene- Miocene 'Basic zonation' of planktonic forams presented for Philippines)

Amiscaray, E.A. (1987)- Permian fusulinids and other microfossils from northwestern Palawan. In: Pre-Jurassic evolution of Eastern Asia, IGCP Project 224, Report 2, p. 85-104.
(Lower part of Minilog Fm limestone blocks in Busuanga Island Late Jurassic accretionary prism contains Permian fusulinids Verbeekina verbeeki, Neoschwagerina megasphaerica and other N. spp., Nankinella orbicularia, Yabeina globosa, etc.)

Amiscaray, E.A. & M.S. Nilayan (1986)- *Orbitolina* from Tuburan, Cebu. Philippines. Bureau of Mines and Geo-Sciences, 67, 14p.
(Tuburan Limestone of Cebu Island with E Cretaceous Orbitolina and Late Cretaceous rudists. Possibly allochthonous olistoliths within Kansi volcanics and clasts in younger sediments)

Amiscaray, E.A. & F.P. Tumanda (1990)- Paleozoic and Mesozoic limestone of Calamian Island Group; its role in the tectonic development of the North Palawan Complex, Philippines. In: Pre Jurassic evolution of Eastern Asia, IGCP Project Report 224, Report 5, p. 81-95.

Amiscaray, E.A. & M.A. Zepeda (1990)- Southwestern Mindoro, part of the pre Tertiary North Palawan Complex (Philippines) and the role of the Jurassic Mansalay Formation on its evolution. In: K. Ichikawa (ed.) Pre Jurassic evolution of Eastern Asia, IGCP Project 224, Report 5, p. 97-109.

Andal, P.P. (1966)- A report on the discovery of fusulinids in The Philippines. The Philippine Geologist 20, 1, p. 14-22.
(First report of M Permian fusulinid foraminifera (Schwagerina, Pseudofusulina) in limestone pebbles in Eocene conglomerate from Carabao Island, SW Mindoro (see also Koike et at. 1968))

Andal, D.R., J.S. Esguerra, W. Hashimoto, B.P. Reyes & T. Sato (1968)- The Jurassic Mansalay Formation, Southern Mindoro, Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 179-197.
(Mansalay Fm thick series (few 1000's m, but intensely folded) of shales and sandstones near Mansalay, SE Mindoro, Age M Callovian- Oxfordian, based on abundant ammonites and pelecypods, all Pacific-type species. Possibly overlies metamorphic rocks, and overlain by Eocene limestone. U Oxfordian perisphinctid assemblage with Perisphinctes (Kranaosphinctes), Euaspidoceras and Taramelliceras comparable to Mefa Beds of Buru, E Indonesia (?; JTvG). Also faunal affinity with Japanese U Oxfordian. Jurassic unconformably overlain by Eocene limestone (presumably part of N Palawan Terrane; JTvG)

Andal, E.S., S. Arai & G.P.Yumul (2005)- Complete mantle section of a slow-spreading ridge-derived ophiolite: an example from the Isabela ophiolite in the Philippines. Island Arc 14, 3, p. 272-294.
(Isabela ophiolite complete ophiolite sequence along E coast of N Luzon, forming Cretaceous basement complex for NE Luzon block. At N end of trail of ophiolites along E margin of Philippine Mobile Belt. Petrological and mineral compositions suggest Isabela ophiolite of transitional subtype, with fertile lherzolites representing lower sections of mantle)

Antonio, L.R. (1972)- Geology and mineral resources of east Central Zamboanga Peninsula, Mindanao, Philippines. Philippines Bureau of Mines Report, Manilla, p. 1-87.

Arai, S. & M. Kida (2000)- Origin of fine-grained peridotite xenoliths from Iraya volcano of Batan Island, Philippines: deserpentinization or metasomatism at the wedge mantle beneath an incipient arc? Island Arc 9, 4, p. 458-471.

(Peridotite xenoliths from subarc mantle at Iraya volcano of Batan, Luzon arc mainly hartzburgites. F-type peridotite characteristic of upper mantle of island arc, especially incipient arc)

Arai, S., S. Takada, K. Michibayashi & M. Kida (2004)- Petrology of peridotite xenoliths from Iraya Volcano, Philippines, and its implication for dynamic mantle-wedge processes. J. Petrology 45, 2, p. 369-389.
(online at: https://academic.oup.com/petrology/article/45/2/369/1522080/Petrology-of-Peridotite-Xenoliths-from-Iraya)
(Two types of peridotite xenoliths in calc-alkaline andesites from Iraya volcano, NE Batan: C-type (coarse) and F-type (fine; with transitional types). C-type harzburgites similar to arc-type harzburgite and may be from sub-arc lithospheric mantle, strained and deformed during oblique subduction of S China Sea Plate)

Arcilla, C.A. (1991)- Lithology, age, and structure of the Angat Ophiolite, Luzon, Philippine Islands. M.Sc. Thesis, University of Illinois, Chicago, p. 1-212. *(Unpublished)*

Arcilla, C.A. (1998)- Mantle dynamic implications of Philippine arc volcanism. Ph.D. Thesis, University of Illinois, Chicago, p. 1-248. *(Unpublished)*
(Geochem study of 32 Pliocene- Recent volcanic centers of Philippines)

Arcilla, C.A., H.B. Ruelo & J. Umbal (1989)- The Angat ophiolite, Luzon, Philippines: lithology, structure, and problems in age interpretation. Tectonophysics 168, p. 127-135.
(Angat ophiolite complex overlain by sediments with Cretaceous radiolarians. Structural defomation by strike slip faulting in E-M Miocene)

Arfai, J., D. Franke, C. Gaedicke, R. Lutz, M. Schnabel, S. Ladage, K. Berglar, M. Aurelio, J. Montano & N. Pellejera (2011)- Geological evolution of the West Luzon Basin (South China Sea, Philippines). Marine Geophysical Res. 32, 3, p. 349-362.
(Seismic of offshore W Luzon forearc basin between Luzon island and outer arc high of W Luzon subduction zone. Basement, at ~6s TWT, dissected by normal faults, some inverted later. Five regional unconformities. Basin may be (partly) underlain by continental crust, affected by rifting during opening of S China Sea)

Aurelio, M.A. (1992)- Tectonics of the central segment of the Philippine Fault: structures, kinematics and geodynamic evolution. These Doct. Universite Paris 6, Universite Pierre et Marie Curie, T 92-22, Paris, p. 1-500. *(Unpublished)*

Aurelio, M.A. (1996)- A review of mechanisms of ophiolite emplacement: Philippine examples. J. Geol. Soc. Philippines 51, 3-4, p. 87-90.
(Ophiolites originate from oceanic crust- mantle, formed by seafloor spreading at oceanic ridges or marginal sea basins. Presence over volcanic arcs or continental crusts requires mechanism that can explain emplacement of dense ophiolite onto lighter material. In convergent margin setting ophiolites ride over long and flat-lying thrust faults (nappes). Ophiolite presence along shear zones may also suggest role by strike-slip movements)

Aurelio, M.A. (2000)- Tectonics of the Philippines revisited. J. Geol. Soc. Philippines 55, p. 119-183.

Aurelio, M.A. (2000)- Shear partitioning in the Philippines: constraints from Philippine Fault and global positioning system data. Island Arc 9, 4, p. 584-597.
(Philippine Fault is major left-lateral structure in an island arc setting, accommodating component of oblique convergence between Philippine Sea Plate and Philippine archipelago. Formation of fault marks onset of new geodynamic regime in Philippine region around 4 Ma, when Philippine Sea Plate changed relative movement with respect to Eurasia from N-ward to a NW-ward motion)

Aurelio M.A., E. Barrier, C. Rangin & C. Muller (1991)- The Philippine Fault in the late Cenozoic evolution of the Bondoc- Masbate- N. Leyte area, Central Philippines. J. Southeast Asian Earth Sci. 6, p. 221-238.

(In Bondoc-Masbate-N Leyte region Philippine Fault is active left-lateral slip fault, dissects a region of three compressive(M Oligocene, end-Miocene collision between N Palawan Block and W edge Philippine Mobile Belt and final phase associated with Philippine Fault) and two tensional tectonic events (Late Oligocene- M Miocene and Plio-Pleistocene). Present configuration of Philippine Fault not older than M Pliocene)

Aurelio, M.A., M.T. Forbes, K.J.L. Taguibao, R.B. Savella, J.A. Bacud & D. Franke (2014)- Middle to Late Cenozoic tectonic events in south and central Palawan (Philippines) and their implications to the evolution of the south-eastern margin of South China Sea: evidence from onshore structural and offshore seismic data. Marine Petroleum Geol. 58, B, p. 658-673.
(Cenozoic tectonic history of SE margin of S China Sea. S and C Palawan dominated by Mesozoic ophiolites, emplaced over syn-rift Eocene turbidites (Panas Fm). Thrusting sealed by E Miocene (~20 Ma) sediments, constraining younger age of ophiolite emplacement at end Oligocene (~23 Ma). Nido Carbonate underthrusting at end E Miocene (~16 Ma). Tectonic wedge built in M Miocene (~16-12 Ma), forming thrust-fold belt, truncated by M Miocene Unconformity. Continuous convergent regime affected SE margin of S China Sea between end Eocene- end M Miocene. Intensity of thrusting decreases to NE, from NW Borneo Trough area into offshore SW Palawan)

Aurelio, M.A., R.E. Pena & K.J.L. Taguibao (2013)- Sculpting the Philippine archipelago since the Cretaceous through rifting, oceanic spreading, subduction, obduction, collision and strike-slip faulting: Contribution to IGMA5000. J. Asian Earth Sci. 72, p. 102-107.
(Review paper. Philippine archipelago two tectono-stratigraphic blocks, Palawan-Mindoro Continental Block (PCB) and Philippine Mobile Belt (PMB). PCB originally part of Asian mainland that rifted away in Mesozoic and drifted during opening of S China Sea (SCS) in Oligocene. PMB developed mainly from island arcs and ophiolite terranes that started to form in Cretaceous. At present, PMB collides with PCB in Visayas)

Aurelio, M.A., C. Rangin, E. Barrier & C. Muller (1990)- Tectonique du segment central de la faille Philippine (Region de Bondoc-Masbate): un decrochement tres recent. Comptes Rendus Academie Sciences, Paris, 310 (II), p. 403-410.
('Tectonics of the central segment of the Philippine Fault (Bondoc-Masbate Region): a young strike-slip fault'. Central segment of Philippine Fault from Bondoc to Masbate is complex strike-slip fault with extensional and compressive features and events recorded in sediments since Oligocene)

Aurelio, M.A., K.J.L. Taguibao, E.B. Cutiongco & T.S. Bacolcol (2010)- Tectonic inversion processes in Southern Luzon, Philippines. In: C.P. Lee et al. (eds.) 6th Symp. Int. Geol. Correl. Progr. Project 516 (IGCP516), Geological anatomy of East and South Asia, Kuala Lumpur 2010, p. 32-33. *(Extended Abstract)*
(Marine seismic data offshore S Luzon)

Aurelio, M.A., K.J.L. Taguibao, E.B. Cutiongco, J.M. Foronda, Z.M. Calucin & M.T. Forbes (2013)- Structural evolution of Bondoc-Burias area (South Luzon, Philippines) from seismic data. J. Asian Earth Sci. 65, p. 75-85.
(2-D offshore seismic profiles between Bondoc Peninsula and Burias Island, S Luzon, Philippines, show two distinct seismic sequences: lower sequence correlative to Late Oligocene- E Miocene limestone observed onshore in Bondoc Peninsula and Burias Island. Upper sequence, correlative to turbiditic and shallower marine clastic deposits widely exposed in Bondoc Peninsula, affected by thrust faulting and tight folding)

Aurelio, M.A., K.J.L. Taguibao, A.A. Morado, S. Steuer, M. Pubellier, M.T. Forbes & D. Franke (2015)- Twisted Nido Limestone: mark of a mid Tertiary bimodal deformation at the thinned SE edge of Sundaland. 6 AAPG Asia Pacific Workshop Tectonic evolution and sedimentation of South China Sea Region, Kota Kinabalu, Search and Discovery Art. 90236, 4p. *(Extended Abstract)*
(Area of Late Oligocene- E Miocene Nido Lst 1000 km long from W of Calamian Islands in N Palawan to NW Borneo Trough in S. Onland carbonate outcrops in Sabang, C Palawan. S of Sabang, carbonate thrust under tectonic wedges formed between Eocene and M Miocene. Accretionary wedges are overlain by Late Cretaceous ophiolites that began obducting in Eocene. Bimodal deformation of SE Sundaland as S China Sea opened. In S limestone at tail-end of subducting proto S China Sea, pulled down in direction of subduction (SE) and

continued to underthrust as ophiolite obduction took place. N segment warping upwards in response to collision of rifted N Palawan continental block with W edge of Philippine arc)

Austria, B.S. & R.A. Reyes (1992)- Possibilities of W. Batangas Basin in Philippines South China Sea. Oil and Gas J. 90, 23, p. 74-80.

Bachman, S.B., S.D. Lewis & W.J. Schweller (1983)- Evolution of a forearc basin, Central Luzon Valley, Philippines. American Assoc. Petrol. Geol. (AAPG) Bull. 67, 7, p. 1143-1162.
(Luzon C Valley with 14 km-thick forearc basin sequence, floored by oceanic crust on seaward (W) side and older accreted terranes on arc (E) side. Initial sedimentation on oceanic crust during E Tertiary N-ward translation and emplacement of crust as ophiolite. Basal sediments pelagic limestones and thin ash layers, overlain by turbidites from uplift and progressive dissection of ophiolite. Arc-derived sediments >8 km thick, shed into E side of basin in late Paleogene- Quaternary convergence along W margin of Luzon. By M Miocene, C Valley became continuous, elongate basin fringed by extensive shelf deposits. Nonmarine deposition began in central portions of basin in Pliocene. Late Miocene- Recent movement along Philippine fault zone caused uplift- folding of adjacent parts of basin. Hydrocarbon potential of C Valley not determined adequately)

Bacud, J., A. Moore & C.S. Lee, C. (1997)- Tectonic structure and petroleum potential of Tayabas Bay southeast Luzon, Philippines. J. Southeast Asian Earth Sci. 15, 2, p. 195-215.
(On AGSO/ PDE marine geological survey in Tayabas Bay. No wells drilled offshore; seismic data tied to onshore Bondoc Peninsula wells and stratigraphy. Geochemistry data confirm presence of mature source rocks in M Miocene Vigo Fm and/or Late Oligocene- E Miocene Panaon Lst, and hydrocarbon migration. Major N-NW-trending strike-slip fault. Oligo-Miocene reefal carbonate reservoirs believed to be present)

Bacuta, G.C. (1979)- Geology of some alpine-type chromite deposits in the Philippines. J. Geol. Soc. Philippines 23, p. 44-81.

Bacuta, G.C., R.W. Kay, A.K. Gibbs & B.R. Lipin (1990)- Platinum-group element abundance and distribution in chromite deposits of the Acoje Block, Zambales Ophiolite Complex, Philippines. J. Geochemical Exploration 37, p. 113-145.
(Platinum-group elements (PGE) in ore-grade concentration in some chromite deposits related to ultramafic section of Acoje Block of Zambales Ophiolite Complex, Luzon. Deposits are of three types)

Balce, G.R., R.Y. Encina, A. Momongan & E. Lara (1980)- Geology of the Baguio District and its implications on the tectonic development of the Luzon Central Cordillera. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 265-287.

Alcantara, P.M. (1980)- Stratigraphic horizons and geologic ages of the Philippine Vicarya (Gastropoda).

Balce, G. R., R.Y. Encina, A.L. Momongan & E.D. Lara (1980)- Geology of the Baguio district and its implications on the tectonic development of Luzon Central Cordillera. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 265-287.
(Luzon C Cordillera is N-S ridge midway between opposite-dipping subduction zones (Manila trench, N extension of Philippine Trench). Oldest rocks Eocene- E Miocene Pugo Fm volcanoclastics with limestone)

Balce, G.R. & F.B. Esguerra (1972)- "Kuroko-type" ore deposits in Sulat Area, eastern Samar, Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 28, 1, p. 1-30.

Balce, G.R., A.L. Magpantay & A.S. Zanoria (1979)- Tectonic scenarios of the Philippines and northern Indonesian region. In: Proc. ESCAP CCOP-IOC Working Group Meeting on the Geology and tectonics of Eastern Indonesia, Bandung, Geol. Res. Dev. Centre, p. 9-14.
(First ophiolite zonation of the Philippines, from W to E: (1) Palawan; (2) western Luzon-Panay-Zamboanga-Sulu; (3) Masbate-Leyte- C Mindanao; and (4) Isabela-Bicol-Samar-E Mindanao)

Balce, G.R. & A.S. Zanoria (1982)- Geology and tectonics of the Luzon-Marianas region. Philippine SEATAR Committee Spec. Publ. 1, p. 1-243

Ballesteros, M. & P. Robinson (2012)- Insights into the petroleum potential of theWestern Philippines from new regional seismic data. AAPG Int. Conv. Exh., Singapore 2012, Search and Discovery Art. 10471, p. 1-6.
(online at: www.searchanddiscovery.com/documents/2012/10471ballesteros/ndx_ballesteros.pdf)

Balmater, H., D. Eslava, K. Queano, C. Dimalanta, N. Ramos, B. Payot & G. Yumul (2015)- Samar ophiolitic complex, central Philippines: fragment of a Mesozoic basin at the junction of eastern Neo-Tethys and Panthalassa. In: Proc. 4th Int. Symposium Int. Geosciences Program (IGCP) Project 589, Bangkok 2015, p. 4. *(Abstract only)*
(online at: http://igcp589.cags.ac.cn/4th%20Symposium/Abstract%20volume.pdf)
(Samar Ophiolitic Complex, exposed in eastern C Philippines, and part of Jurassic- Cretaceous ophiolitic belt that serves as basement to most E Philippines islands. Paleomagnetic studies on upper crust of ophiolite suggests paleolatitude of -14º± 6º. This, and results from E Indonesia evidence that ophiolites preserved along W and S margins of Philippine Sea Plate are remnants of Mesozoic oceanic basin E of eastern Neo-Tethys and W of Panthalassa. Cretaceous and Cenozoic intra-oceanic arcs associated with this basin part of the Amami-Daito region, E Philippines, E Indonesia and N New Guinea, and were separated by Eocene opening of PSP)

Balmater, H.G., P.C. Manalo, D.V. Faustino-Eslava, K.L. Queano, C.B. Dimalanta, J.M.R. Guotana, N.T. Ramos, B.D. Payot & G.P. Yumul (2015)- Paleomagnetism of the Samar Ophiolite: implications for the Cretaceous sub-equatorial position of the Philippine island arc. Tectonophysics 664, p. 214-224.
(Samar Ophiolite complete suite at Samar island in E part of C Philippines. K-Ar ages of ~100 and 98 Ma (~Cenomanian). Paleomagnetic data suggest ophiolite formed at paleolatitude of 14°S ± 6°, i.e. several degrees S of three other Mesozoic ophiolites of Philippine Mobile Belt. PMB ophiolites in E and C Philippines share common age, geochemistry and paleolatitude with Halmahera Ophiolite, suggesting origin at Mesozoic supra-subduction zone that extended from few degrees N of Equator to ~15°S)

Bandy, O.L. (1963)- Cenozoic planktonic foraminiferal zonation and basinal development in Philippines. American Assoc. Petrol. Geol. (AAPG) Bull. 47, 9, p. 1733-1745.
(also in J. Geol. Soc. Philippines 16, 2 (1962))
(Planktonic foraminifera zonation Late Oligocene-Pliocene of Central Valley, Luzon, and S Iloilo, Panay, is similar to that recognized in other tropical areas of world. Late Oligocene-Early Miocene commenced with shelf-type conditions and orbitoidal facies, changing upward into increasingly deeper-water bathyal facies. In Late Miocene Central·Valley paralic facies, in Iloilo deep basinal conditions until M Pliocene)

Barretto, J.A.L., C.B. Dimalanta & G.P. Yumul (2000)- Gravity variations along the Southeast Bohol Ophiolite Complex (SEBOC), Central Philippines: implications on ophiolite emplacement. Island Arc 9, 4, p. 575-583.
(Basement complex of Bohol Island consists of SE Bohol Ophiolite Complex, Cansiwang Melange and Alicia Schist. SEBOC is complete, but dismembered ophiolite with outcrops generally trending NE-SW and dipping NW. SEBOC thrusted onto Cansiwang Melange, which is thrusted onto Alicia Schist. Orientation of Bouguer highs suggests thrusting direction of ophiolite units was to SW, not to SE)

Barrier, E., M. Aurelio, C. Muller, M. Pubellier et al. (1990)- La faille philippine; un exemple de grand decrochement actif a l'arriere d'une zone de subduction. Comptes Rendus Academie Sci., Paris, 311 (II), p. 181-188.
('The Philippine Fault: an example of large active displacement behind a subduction zone')

Barrier, E., P. Huchon & M. Aurelio (1991)- The Philippine fault: a key for Philippines kinematics. Geology 19, p. 32-35.
(Motion between Philippine Sea plate and Eurasia is distributed on two boundaries: Philippine Trench and Philippine fault. Geologic data from Visayas provide age of 2 to 4 Ma for fault, in good agreement with

beginning of subduction in Philippine Trench. Origin of Philippine fault is flip of subduction from W to E after locking of convergence to W by collision of Philippine mobile belt with Eurasian margin)

Bassoulet, J.P. (1983)- Jurassic microfossils from The Philippines. CCOP Techn. Bull. 16, p. 31-38.
(Late Jurassic foraminifera and algae from samples collected by Fontaine from Ili Island and Cayatong. Ili Lst with typical Tethyan Late Jurassic forams Pseudocyclammina lituus and Nautiloculina oolithica and dasyclad algae Salpingoporella pygmaea (also known from Bau Limestone of W Sarawak and from Sumatra))

Bautista, B.C., M.L. Bautista, K. Oike, F.T. Wu & R.S. Punongbayan (2001)- A new insight on the geometry of subducting slabs in northern Luzon, Philippines. Tectonophysics 339, p. 279-310.
(Earthquake focal mechanisms used to model geometry of Eurasian plate subducted slab beneath N Manila Trench. Model suggests collision and partial subduction of buoyant plateau at around 20°N to explain sharp bend in trench line and shallow dip of subducted slab. Tear in slab evidenced by gap in strain energy release and change in dip. Gap in seismicity may be subducted extinct, but still hot mid-oceanic ridge. High heatflow along extinct MOR. Subducted part of MOR may serve as weakest zone where tear could be localized)

Beauvais, L. (1983)- Jurassic Cnidaria from the Philippines and Sumatra. CCOP Techn. Bull. 16, p. 39-76.
(Brief descriptions of U Jurassic coral and stromatoporoids from W Sumatra and M and U Jurassic corals from reefal limestones in Philippines. Upper Jurassic Ili Lst from Calamian Islands with Oxfordian- Kimmeridgean stromatoporoids (Cladocoropsis miriabilis, C. memoria-naumanni), sponges (Ptychochaetetes ponticus) and corals (Stylina limbata, Pseudocoenia brevisepta, etc.. Also M Jurassic (Bathonan?) corals from Bongabong River area, Mindoro)

Becker, G.F. (1901)- Report on the geology of the Philippine Islands. U.S. Geol. Survey (USGS), 21st Annual Report 1899-1900, III, Washington, p. 1-128.
(online at: http://books.google.com/books/...)
(First? review of Philippines geology and mineral resources (coal, gold, copper, lead, iron). Petroleum has been discovered, but not exploited. With appendix on Tertiary fossils (mainly molluscs) by K. Martin)

Bellon, H. & G.P. Yumul (2000)- Mio-Pliocene magmatism in the Baguio Mining District (Luzon, Philippines): age clues to its geodynamic setting. Comptes Rendus Academie Sciences, Paris, IIA, 331, 4, p. 295-302.
(Baguio Mining District in C Cordillera of Luzon evolved from Eocene marginal basin to Eo-Oligocene island arc setting above W-dipping subduction zone. E-ward subduction after polarity reversal in E Miocene (~17-19 Ma). Late Miocene- Quaternary magmatism and tectonics led to gold and copper mineralization, mainly at 4-2 Ma. Pugo Metavolcanics Fm unconformably overlain by Zigzag Fm with minor E Oligocene limestone units with Eulepidina and Nummulites)

Bellon, H. & G.P. Yumul (2001)- Miocene to Quaternary adakites and related rocks in Western Philippine arc sequences. Comptes Rendus Academie Sciences IIa, 333, 6, p. 343-350.
(Numerous Miocene- Quaternary adakites among calc-alkaline magmatism of W Philippines. Associated with three geodynamic settings: subduction, rifting and collision (Palawan indentation). Slab, lower crust and sediment melting, coupled with assimilation-fractional crystallization, and mantle metasomatism by magmatic liquids responsible for generation of these rocks. Adakite-gold-copper relationship makes these areas good metallogenic exploration targets)

Berger, B.R., R.W. Henley, H.A. Lowers & M.J. Pribil (2014)- The Lepanto Cu-Au deposit, Philippines; a fossil hyperacidic volcanic lake complex. J. Volcanology Geothermal Res. 271, p. 70-82.
(The ~2 Ma high-sulfidation Lepanto copper-gold deposit in Mankayan district was associated with hyperacidic volcanic lake complex)

Besana, G.M. & M. Ando (2005)- The Central Philippine Fault Zone: location of great earthquakes, slow events, and creep activity. Earth Planets and Space 57, p. 987-994.
(online at: www.terrapub.co.jp/journals/EPS/pdf/2005/5710/57100987.pdf)

Beyer, H.O. (1940)- Philippine tektites and the tektite problem in general. Contr. Society Research on Meteorites 2, 6, p. 157-163.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1945-5100.1940.tb00306.x/pdf)
(Philippines hosts world's largest known deposits of tektites. Part of Indo-Malaysianite great shower in mid-Pleistocene time. Largest known tektites in SE Luzon (Bikol Peninsula) up to 1070g and >4 inches in diameter, but average weight for region only 15-20 g)

Billedo, E. (1994)- Geologie de la Sierra Madre septentrionale et de l'archipel de Polillo (ceinture mobile Est Philippine): implications geodynamiques. Doct. Thesis Universite de Nice- Sophia Antipolis, p. 1-215. *(Unpublished)*
('Geology of the Northern Sierra Madre and the Polillo group of Islands (Eastern Philippine mobile belt): geodynamic implications'. Study of two regions in E Philippine Mobile Belt: (1) N Sierra Madre and (2) Polillo Archipelago in S. Five tectonic events distinguished in Late Cretaceous- Miocene. E Philippine composed of 3 zones: (1) Mesozoic ophiolitic basement (Casiguran Ophiolite, with 92 Ma radiometric age for amphibolite), (2) U Cretaceous pelagic limestones in pillow basalts with Globotruncana stuarti, etc. (also Aptian- Albian radiolarian cherts; see Queano, Ali et al. 2013), and (3) Eocene and Oligocene arc volcanics. Cenozoic history dominated by subduction with highly oblique convergence)

Billedo, E., J.F. Stephan, J. Delteil, H. Bellon, F. Sajona & G. Feraud (1996)- The Pre-Tertiary ophiolitic complex of Northeastern Luzon and the Polillo Group of islands, Philippines. J. Geol. Soc. Philippines 51, p. 95-114.
(N Sierra Madre area of NE Luzon with outcrops of basement complex, composed of three rock assemblages: (1) Jurassic?- E Cretaceous ophiolitic units (metamorphic Dibut Bay meta-ophiolite and non-metamorphic Casiguran ophiolitic belt); (2) Late Cretaceous metamorphosed volcanic arc (Lubingan Fm and Dalugan Metamorphics; (3) Late Cretaceous volcanic complex (Dibuakag VC). In Polillo Islands oldest rock units ultramafics and related metamorphics, correlatable with Dibut Bay Meta-ophiolite in NE Luzon and Lagonoy meta-ophiolite found in Caramoan Peninsula dated as Late Jurassic- E Cretaceous and are metamorphic equivalent of Casiguran Ophiolitic Belt.Ophiolitic units in fault contact with Eocene magmatic arc and both unconformably overlain by Late Oligocene - M Miocene clastics)

Bird, P.R., N.A. Quinton, M.N. Beeston & C.S. Bristow (1992)- Mindoro Island, a rifted microcontinent in collision with the Philippines volcanic arc: basin evolution and hydrocarbon potential. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015 *(Abstract only)*
(Mindoro Island is E-most part of Palawan-Mindoro microcontinent that rifted from S China margin in Early Oligocene. Sea floor spreading carried Mindoro S until Late Miocene collision with Philippines Arc began. Structural history 4 phases: (1) syn-rift, E Eocene- M Oligocene; (2) drift, Late Oligocene- M Miocene; (3) collision, M-L Miocene; (4) transpression, latest Miocene- Present)

Bird, P.R., N.A. Quinton, M.N. Beeston & C.S. Bristow (1993)- Mindoro: a rifted micro continent in collision with the Philippines volcanic arc; basin evolution and hydrocarbon potential. In: B.K. Tan et al. (eds.) Proc. 7th Conf. Geology, Mineral and Energy Res. SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 449-468.
(Mindoro Island is easternmost part of Palawan-Mindoro microcontinent that rifted from S China margin in latest Eocene-E Oligocene. Sea floor spreading carried Mindoro S-ward until Late Miocene, when collision with Philippines Arc in E, and other terranes to S began. Syn- and post-rift sedimentary sequences contain prospective source and reservoir intervals. Several oil seeps on Mindoro Island)

Biswas, B. (1986)- Frontier seismic geologic techniques and the exploration of the Miocene reefs in offshore Palawan, Philippines. J. Southeast Asian Earth Sci. 1, 4, p. 191-204.
(Mapping of porosity distribution and oil-water contact in and around the Tara and Libro Lower Miocene patch reefs of offshore Palawan. Maximum hydrocarbon fill in frontal line of traps near shelf-slope break, in lowest structural position and progressive dwindling of fill in structurally higher updip positions)

Bloomer, S.H. & R.L. Fisher (1988)- Arc volcanic rocks characterize the landward slope of the Philippine Trench off northeastern Mindanao. J. Geophysical Research 93, B10, p. 11961-11973.
(Dredge hauls from landward flanks (9300-3600m) of Philippine Trench NE of Mindanao with plagioclase-clinopyroxene phyric basalt, basaltic andesite, and andesite, with small amounts of diabase, identical to arc volcanic rocks from SE and NE Mindanao (Samar-E Mindanao arc, which collided with C Mindanao-Sangihe island arc in late Oligocene/ E Miocene and part of E margin of Samar-E Mindanao arc. After collision Philippine Trench initiated adjacent to arc massif; no evidence of accretion of subducted Philippine Sea crust)

Bomasang, R., F.K. Bandelon & D. M. Casupang (1987)- Der Kohlebergbau auf den Philippinen. Glueckauf 123, 14, p. 881-886.
('Coal mining in The Philippines')

Bosum, W., J.C. Fernandez, E.G. Kind & C.F. Theodoro (1972)- Aeromagnetic survey of the Palawan- Sulu offshore area of the Philippines. United Nations ECAFE, CCOP Techn. Bull. 6, p. 141-160.

Branson, D.M., P.J. Newman, M. Scherer, P.J. Stalder & R.G. Villafuerte (1997)- Hydrocarbon habitat of the NW Palawan Basin, Philippines. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australasia Conf., Indon. Petroleum Assoc.(IPA), Jakarta 1997, p. 815-828.
(NW Palawan Basin offshore exploration started in 1970's with drilling of Oligo-Miocene Nido Limestone build-ups in shallow water Nido Shelf part of basin, resulting in few small oil discoveries (Nido, Matinloc). Wells in deeper water W of Nido Shelf discovered mostly gas. With exception of Malampaya/Camago (3.4 Tcf gas) exploration results away from Nido Shelf have been disappointing, with few economic discoveries. Typing of oils in NW Palawan Basin identified three separate families, mainly from marine carbonate or marl source rock, probably of Eocene-Lower Miocene age, deposited in restricted rift half grabens and/or isolated restricted intrashelf basins in post-rift carbonate sequence)

Braxton, D.P. (2007)- Boyongan and Bayugo porphyry copper-gold deposits, NE Mindanao, Philippines: geology, geochemistry, and tectonic evolution.Ph.D. Thesis University of Tasmania, p. 1-277.
(online at: https://eprints.utas.edu.au/18070/1/Whole-Braxton-thesis.pdf)
(Recently discovered Boyongan and Bayugo porphyry copper-gold deposits part of emerging belt of M Pliocene intrusion-centered gold-rich deposits. Formed in association with composite diorite complex; U-Pb zircon ages from ~2.3- 2.1 Ma)

Braxton, D.P., D.R. Cooke, J. Dunlap, M. Norman, P. Reiners, H. Stein & P. Waters (2012)- From crucible to graben in 2.3 Ma: a high-resolution geochronological study of porphyry life cycles, Boyongan-Bayugo copper-gold deposits, Philippines. Geology 40, 5, p. 471-474.
(online at: https://instruct.uwo.ca/earth-sci/fieldlog/Min_Deposits/471.full.pdf)
(Boyongan and Bayugo porphyry copper-gold deposits of NE Mindanao geologically short life cycles: Late Pliocene emplacement (2.3-2.1 Ma) at 1.2-2.0 km depth, then exhumed, deeply weathered (600m thick) and buried. E-M Pleistocene supergene event followed period of rapid uplift and exhumation in NE Mindanao (2.5 km/Ma). Subsequent rapid subsidence (≥0.34 km/Ma) attributed to M Pleistocene shift from transpressional to present-day transtensional setting in NE Mindanao)

Braxton, D.P., D.R. Cooke, A.M. Ignacio, R.O. Rye & J. Waters (2009)- Ultra-deep oxidation and exotic copper formation at the Late Pliocene Boyongan and Bayugo porphyry copper-gold deposits, Surigao, Philippines: geology, mineralogy, paleoaltimetry, and their implications for geologic, physiographic, and tectonic controls. Economic Geology 104, 3, p. 333-349.
(Late Pliocene-age Boyongan and Bayugo porphyry copper-gold deposits intrusion-centered gold-rich deposits in NE Mindanao. Exhumation and weathering led to porphyry oxidation profile of 600m at Boyongan and 30-70m at adjacent Bayugo. Etc.)

Braxton, D.P., D.R. Cooke, A.M. Ignacio & J. Waters (2018)- Geology of the Boyongan and Bayugo porphyry Cu-Au deposits: an emerging porphyry district in Northeast Mindanao, Philippines. Economic Geology 113, 1, p. 83-131.

(Boyongan and Bayugo porphyry Cu-Au mineral deposits part of emerging belt of Au-rich Cu mineral deposits in NE Mindanao. Formation. Mineral deposits formed in E Pleistocene, in association with diorite complex containing at least 12 discrete intrusive stages. Repeated cycles transpired rapidly, between 2.3-2.1 Ma)

Bristow, C.S. & P.R. Bird (1994)- Sedimentology of the Semirara Formation in Semirara Island: implications for the Miocene sedimentation and tectonics of South Philippines. In: G.H. Teh (ed.) Proc. Symp. Tectonic framework and energy resources of the western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 21-32.
(online at: www.gsm.org.my/products/702001-101024-PDF.pdf)
(400m of Miocene sediments on Semirara Island S of Mindoro(W side of Philippines arc) exposed in coal mine at Unong, deposited in small rift basin, subsequently inverted)

Brown, G.F. (1950)- Summary of the geology of the Malangas Sibuguey coalfield, Zambeanga Province, Mindanao. Philippine J. Science 79, 2, p. 155-163.

Brownlee, D.N. & M.W. Longman (1981)- Depositional history of a Lower Miocene pinnacle reef, Nido B oilfield, The Philippines. In: E.D. Gomez et al. (eds.) Proc. 4th Int. Coral Reef Symposium, Manila, 1, p. 619-625.
(First commercial oil production in Philippines is from two Lower Miocene pinnacle reef complexes (Nido A and Nido B fields) in S China Sea ~50 km NW of Palawan. Reefs depth ~2073m, relief ~150-200m, and encased in Lower Miocene shales. Nido B-1 well near center of build-up with packstones- grainstones of benthic foraminifera and fragments of red algae and corals (back-reef sand flat). Nido B-2 cores with abundant corals, encrusting red algae (part of reef framework). Cores from Nido B-3A on edge of buildup shaly micrites rich in planktonic foraminifera, with lithoclast-intraclast packstones (proximal reef talus). Most porosity in back-reef sands is vuggy, moldic; in reef framework and proximal talus mainly in fractures)

Bryner, L. (1968)- Notes on the geology of the porphyry copper deposits of the Philippines. Mineral Engineering Mag. 19, 3, p. 12-23.

Bryner, L. (1969)- Ore deposits of the Philippines- an introduction to their geology. Economic Geology 64, 6, p. 644-666.
(Ore deposits in Philippinese genetically related toMesozoic- Tertiary magmatism and tectonism in Mobile Belt. Deposits considered here (a) chromite (two largest deposits Masinloc and Acoje in belts of peridotitic rock of Zambales ultramafic complex of W Luzon); (b) massive pyritic (Bagacay, Barlo, Hixbar; associated with Tertiary volcanic activity); (c) pyrometasomatic (Larap, Thanksgiving); (d) porphyry copper (8 or more deposits, associated with porphyritic dacite and andesite facies of diorite complexes near orogenic axis of archipelago; main copper mineral chalcopyrite), and (e) gold-bearing veins (enargite-luzonite-telluride deposit at Lepanto, quartz-telluride-gold of Baguio district, etc., related to centers of explosive volcanic activity)

Buchsel, P., M. Kerntke, F. Wolcke & G. Hillmer M. (1991)- Geologic development of Cebu Island/ Central Philippines- Group report. Mitteilungen Geol. Palaeont. Institut Universitat Hamburg 71, p. 53-60.
(Block diagrams illustrating (Jurassic-) E Cretacous to Miocene evolution of Cebu Island, C Philippines. Aptian-Albian island arc with associated carbonate platforms with caprinid rudists, etc.)

Buena, A.E., B.R.B. Villaplaza, B.D. Payot, J.A.S. Gabo-Ratio, N.T. Ramos, D.V. Faustino-Eslava et al. (2019)- An evolving subduction-related magmatic system in the Masara Gold District, Eastern Mindanao, Philippines. Journal of Asian Earth Sciences: X, 1, 100007, p. 1-16.
(online at: https://www.sciencedirect.com/science/article/pii/S2590056019300039)
(Masara Gold District in E Mindanao mineralization hosted in Eocene- Plio-Pleistocene andesitic rocks and diorites. Eocene magmatic suite tholeiitic, Miocene diorite and subvolcanic andesite pulses calc-alkaline Adakitic rocks emplaced in Late Miocene and Plio-Pleistocene. Mineralization in several Oligocene-Pliocene events. Epithermal gold mineralization in Masara closely related to Late Miocene magmatic rocks)

Bureau of Energy Development/ Robertson Research (1986)- Sedimentary basins of the Philippines: their geology and hydrocarbon potential. Manila, 12 vols. *(Unpublished)*

Bureau of Energy Development/ Robertson Research (1986)- Sedimentary basins of the Philippines, their geology and hydrocarbon potential, 3: Basins of Visayas and Mindanao. p. 1-305.

Bureau of Energy Development/ Robertson Research (1986)- Sedimentary basins of the Philippines, their geology and hydrocarbon potential, 2: Luzon Basins. p. 1-436.

Bureau of Mines and Geosciences (1972)- Geology and stratigraphy of some sedimentary basins in the Philippines. In: Proc. 4th Symposium on the Development and Petroleum Research in Asian and Far East Mineral and Resources Development Series, 41, Manila, p. 445-451.

Bureau of Mines and Geo-Sciences (1981)- Geology and mineral resources of the Philippines, 1, Geology, Bureau of Mines and Geo-Sciences, Manila, p. 1-406.
(First textbook of Philippines geology since Corby (1951), by staff of Bureau of Mines and Geo-Sciences. See also Second edition by Mines and Geosciences Bureau (2010)

Bureau of Mines Philippines (1986)- Geology and mineral resources of the Philippines, 2, Mineral resources. Bureau of Mines and Geo-sciences, Manila, p.

Caagusan, N.L. (1966)- Petrography of the metamorphic rocks of Northern Mindoro. Bull. Inst. Philippine Geology 1, p. 22-46.

Caagusan, N.L. (1978)- Source material, compaction history and hydrocarbon occurrence in the Cagayan Valley Basin, Luzon, Philippines. Proc. Offshore SE Asia Conf. 1978, Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), 20p.
(Cagayan Basin is 250 x 80km post-Oligocene trough in NE Luzon. Rapid deposition of turbiditic marine sediments. Organic matter mainly high-humic, land-derived material)

Caagusan, N.L. (1980)- Stratigraphy and evolution of the Cagayan Valley Basin, Luzon, Philippines. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 163-182.
(Cagayan Valley basin is post-Oligocene sedimentary Trough in NE Luzon. M Miocene limestone buildups main hydrocarbon exploration targets)

Caagusan, N.L. (1990)- Eocene Oligocene sandstone in buried hill play, Mindoro Basin, The Philippines. In: CCOP/WRGA Play modelling exercise 1989-1990, CCOP Techn. Publ. 23, p. 87-96.
(Description and hydrocarbon assessment of conceptual play in U Eocene- Lower Oligocene sandstones draped draped over Eocene tilted fault blocks on S and E Mindoro island, W Philippines)

Callow, K.J. (1967)- The geology of the Thanksgiving mine, Baguio district, Mountain Province, Philippines. Economic Geology 62, p. 472-481.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.922.822&rep=rep1&type=pdf)
(Thanksgiving mine in Baguio District, N Luzon, small sulfide orebodies mined since 1957 for gold, silver, zinc, copper, lead, sulfur and cadmium content. Ore as veins and pods along contacts between diorite porphyry dikes and E-M Miocene Mirador limestone)

Canto, A.P.B., J.T. Padrones, R.A.B. Concepcion, A.D.C. Perez, R.A. Tamayo., C.B. Dimalanta, D.V. Faustino-Eslava, K.L. Queano & G.P. Yumul (2012)- Geology of northwestern Mindoro and its offshore islands: Implications for terrane accretion in west Central Philippines. J. Asian Earth Sci. 61, p. 78-87.
(NW Mindoro Island two terranes: Amnay Ophiolite and Halcon Metamorphic terrane, separated by SW-verging thrust faults. Components of older Mangyan Ophiolitic Complex occur as disrupted bodies in Halcon Metamorphics schists. Late Eocene Lasala Fm has continent-derived character. Accretion of Cretaceous

Mangyan Ophiolitic Complex marks collision between Cretaceous oceanic lithosphere and mainland Asia, considered to be protolith of Halcon Metamorphics. Subsequent collision led to amalgamation of Amnay Ophiolite suite to metamorphosed terrane)

Cao, M.J., P. Hollings, D.R. Cooke, N.J. Evans, B.I.A. McInnes, K.Z. Qin, G.M. Li, G. Sweet & M. Baker (2018)- Physicochemical processes in the magma chamber under the Black Mountain porphyry Cu-Au deposit, Philippines: insights from mineral chemistry and implications for mineralization. Economic Geology 113, 1, p. 63-82.
(Black Mountain porphyry Cu-Au deposit in Baguio district, N Luzon, associated with Late Miocene- Pliocene intrusive rocks. Amphibole in felsic rocks aged ~6.4- 2.8 Ma suggest long-lived and hot felsic magma chamber. Large-scale mafic magma recharge (particularly at ~2.8 Ma), likely introduced ore-forming metals to felsic magma chamber, contributing to Cu-Au mineralization)

Cardwell, R.K., B.L. Isacks & D.E. Karig (1980)- The spatial distribution of earthquakes, focal mechanism solutions and subducted lithosphere in the Philippine and Northeastern Indonesian islands. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian Seas and Islands- I. American Geophys. Union (AGU), Geophys. Monograph 23, p. 1-35.
(Incl. data on geometry of 'double-dipping' Moluccas Sea subduction)

Carozzi, A.V. (1995)- Depositional models and reservoir properties of Miocene reefs, Visayan Islands, Philippines. J. Petroleum Geol. 18, 1, p. 29-48.
(Update of earlier depositional-diagenetic models for Miocene reefs in Visayan Islands. Reefs began to develop in E Miocene (Eulepidina, Nephrolepidina, Spiroclypeus, Austrotrillina). Reefs reached final and maximum development in M or M-L Miocene (Miogypsina indonesiensis, Lepidocyclina ferreroi, Katacycloclypeus). Not much specific on localities, thickness, fauna, etc.)

Carozzi, A.V., M.V. Reyes & V.P. Ocampo (1976)- Microfacies and microfossils of the Miocene reef carbonates of the Philippines. Philippines Oil Dev. Co., Manila, Spec. Publ. 1, p. 1-80.

Cena, S.V. S.G. Lastimosa & N.D. Miro (1967)- Investigation of the composition of two Philippine petroleums. The Philippine Geologist (J. Geol. Soc. Philippines) 22, 3, p.
(No commercial production of petroleum in onshore Philippines, but seeps are widely distributed throughout islands. Report of chemical composition of two samples of oil, from Quezon Province and Mindoro Oriental)

Chen, P.F., E.A. Olavere, C.W. Wang, B.C. Bautista, R.U. Solidum & W.T. Liang (2015)- Seismotectonics of Mindoro, Philippines. Tectonophysics 640-641, p. 70-79.
(Mindoro Island is where Palawan Continental Block indented into Philippine Mobile Belt in E Miocene and where Manila Trench terminates after collision ceased. Seismotectonics suggest that slab dips steepen, following decrease in convergence rates from Manila Trench offshore NW Mindoro to onshore SW Mindoro, initiating at ~200 km and propagating upwards. Down-dip extensional stress patterns suggest steepening of slab angles due to negative buoyancy of slab. C and S Mindoro Romblon group and NW Panay mainly characterized by sporadic strike-slip shallow earthquakes)

Cheng, Y. (1989)- Upper Paleozoic and Lower Mesozoic radiolarian assemblages from the Busuanga Islands, North Palawan Block, Philippines. Bull. Natl. Museum Natural Sci., Taiwan, Spec. Publ. 1, p. 129-175.

Cheng, Y. (1992)- Upper Jurassic Pantanelliidae (Pantanelliinae Pessagno, 1977 and Vallupinae Pessagno and MacLeod, 1987) from the Busuanga Islands, Philippines. Bull. Natl. Museum Natural Sci., Taiwan, 3, p. 1-49.
(online at: http://web2.nmns.edu.tw/PubLib/Library/research/199205-1.pdf)
(Diverse radiolarian faunas from bedded chert of Liminangcong Chert of Busuanga Island, N Palawan Block. Including low-latitude Vallupus group uppermost Liminangcong Chert. Six new species of Mesovallupus, nine of Protovallupus, and one of Vallupus, tentatively assigned to upper Tithonian)

Christian, L.B. (1964)- Post-Oligocene tectonic history of the Cagayan Basin, Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 18, 4, p. 114-147.
(Folds of Cagayan Valley, N Luzon, interpreted as gravity structures which slid off M Pleistocene Central Cordillera. Beneath and around edges of N-striking M Miocene-Recent Cagayan Basin are remnants of NE-trending E Miocene basin, parallel to Palawan-Visayan·Sulu system which still prevails W of Philippine Rift. Similar relict NE trends in pre-M Miocene rocks of C Luzon and S Mindoro, suggesting NE grain more general in Philippines prior to M Miocene)

Claveria, R.J. & H.H. Fischer (1991)- Characterization of the chromite pods and lenses associated with the Ulugan Bay peridotite, Palawan. J. Geol. Soc. Philippines 46, 3-4, p. 21-34.
(Chromitite pods and lenses in Ulugan Bay area occur as concordant and discordant bodies with respect to metamorphic banding in peridotite)

Concepcion, R., C. Dimalanta, G. Yumul, D. Faustino-Eslava, K. Queano, R. Tamayo & A. Imai. (2012)- Petrography, geochemistry, and tectonics of a rifted fragment of mainland Asia: evidence from the Lasala Formation, Mindoro Island. Philippines Int. J. Earth Sciences (Geol. Rundschau) 101, 1, p. 273-290.
(online at: http://basin.earth.ncu.edu.tw/download/courses/seminar_MSc/2012/1115_2_2.pdf)
(NW Mindoro Jurassic Halcon metamorphics, formed as result of arc-continent collision, overlain by Late Eocene Lasala Fm sandstones, shales, basalt flows, minor limestones (with Pellatispira) and conglomerates. Lasala clastics quartzose, mainly of continental, passive margin derivation. Suggests Mindoro is fragment of Mainland Asia similar to Palawan and Busuanga prior to 45 Ma opening of S China Sea)

Cooke, D.R.. & D.C. McPhail (2001)- Epithermal Au-Ag-Te mineralization, Acupan, Baguio district, Philippines: numerical simulations of mineral deposition. Economic Geology 96, p. 109-131.

Cooke, D.R., D.C. McPhail & M.S. Bloom (1996)- Epithermal gold mineralization, Acupan, Bagio district, Philippines: geology, mineralization, alteration and the thermochemical environment of ore deposition. Economic Geology 91, p. 243-272.

Corby, G.W. (1951)- Geology and oil possibilities of the Philippines. Philippine Bureau of Mines, Techn. Bull. 21, Manila, p. 1-363 + Plates volume
(Classic textbook describing geology and oil-gas seeps and wells of Philippines (not including Palawan, Mindanao). With brief review of oil producing areas in Netherlands East Indies. Numerous oil-gas seeps found throughout Philippines, but no commercial production yet. Tertiary sediment thickness in basins in Philippines <5000m, whereas in Netherlands Indies petroleum-producing basins thickness may be up to 7-9km. With cross-sections of main onshore basins)

Cosico, R., F. Gramann & H. Porth (1989)- Larger foraminifera from the Visaya Basin and adjacent areas of the Philippines (Eocene through Miocene). In: H. Porth & C.H. von Daniels (eds.) On the geology and hydrocarbon prospects of the Visayan Basin, Philippines, Geol. Jahrbuch B70, p. 147-205.
(35 species of larger foraminifera, incl. Eocene Pellatispira madaraszi, Discocylina and-Alveolina, Oligocene Nummulites fichteli and Lepidocyclina formosa, Miocene (Te- Lower Tf) Spiroclypeus margaritatus, Miogypsina polymorpha, etc.)

Crespin, I. (1956)- Notes on a *Lepidocyclina*- bearing rock from Cebu, Philippines. In: Papers on Tertiary micropalaeontology, Bureau Mineral Res. Geol. Geophysics, Canberra, Report 25, p. 43-46.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(Thin, large (up to 60mm), E Miocene (upper Te) Lepidocyclina (Eulepidina) badjirraensis Crespin from Magalambac, Mantalongan, Cebu, similar to specimens from type locality at Cape Range, Exmouth Gulf, NW Australia. Associated with Cycloclypeus eidae Miogypsina cf. kotoi, Lepidocyclina (N) borneensis)

Crispin, O.A. & H. Fuchimoto (1980)- K-Ar dating of some Philippine rocks. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 93-100.

(Results of K-Ar age dating of 66 samples from Philippines, ranging from Cretaceous- Miocene. Results often do not fit with associated stratigraphic/ paleontological data)

Dancer, N. (2003)- Reservoir characterisation of the Malampaya Field, a carbonate reefal build-up in the Philippines. Proc. 2003 SE Asia Petrol. Expl. Soc. (SEAPEX) Exploration Conf., Singapore, p. 1-36. *(Abstract+ Presentation)*
(Malampaya Field Oligo-Miocene carbonate reservoir with high porosity and large variation in permeability at depth of ~3000m TVDSS. Gas column 650m, oil rim 56m (API 29.4°). In-place reserves ~4.1 TCF gas and 300 MMBO. Porosity affected by diagenesis: (1) early cementation of flanks decreased porosity, meteoric leaching of lagoon increased porosity; (2) late stage burial decreased porosity with cementation along faults, porosity increased by late leaching by mixing of burial fluids and pore waters)

David, P.P. (1980)- Foraminiferal biostratigraphy of well Lagao No. 1, Sultan Sa Barongis, North Cotabato, Philippines. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 111-118.
(Entire 3657' drilled in Lagao 1 well, Cotabato Basin, SW Mindanao, of (Late) Pliocene-Pleistocene age. With Globoralia truncatulinoides and Gr. tosaensis in Nicaan Fm shales from 2210' to TD)

David, P.P. & H. Fontaine (1987)- Eocene limestone offshore Northeast Palawan Island, Philippines. Proc. 22nd Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Guangzhou 1985, 2, p. 341-345.
(Small islands off NE Palawan mainly composed of radiolarite and limestone with some ultrabasic rocks. Pabellion and Apulit small islands with steeply dipping E-M Eocene grey-black limestone with common Distichoplax biserialis algae, Nummulites, Discocyclina and Asterocyclina. Pellatispira, reported by Grey (1954), was not found again)

David, P.P. & H. Fontaine (1989)- Eocene limestone offshore Northeast Palawan Island, Philippines. Proc. 24th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bangkok 1987, 2, p. 130-134.
(Same paper as above)

David, S.D. (1994)- Geologie du Sud-Est de Luzon- contributions a l'etude geodynamique ante-Neogene de la Ceinture Mobile Est Philippine. Doct. Thesis Universite de Nice-Sophia Antipolis, Nice, p. 1-352.
('Geology of SE Luzon- contributions to the pre-Neogene geodynamics of the East Philippine Mobile Belt')

David, S.D., J.F. Stephan, J. Delteil, H. Bellon & F.G. Sajona (1996)- Geology, geochemistry, geochronology and structures of the ophiolites in Southeastern Luzon, Philippines. J. Geol. Soc. Philippines 51, p. 115-129.
(Ophiolites identified inW Caramoan Peninsula (Lagonoy Ophiolite) and in Cagraray, Batan and Rapu-Rapu islands. Exposures characterized by imbricated ultramafic rocks, gabbros, basalt flows with pillow structures and volcaniclastics. These are unconformably overlain by Late Cretaceous volcanic arc sequence. K-Ar dating of gabbro near Lagonoy yielded age of ~113 Ma (Aptian-Albian). On Rapu-Rapu diorite cutting ultramafic rocks dated as 77 Ma. Ophiolite sequences generally trend NE-SW, dipping to SW. Metamorphism and strike-slip faulting on ophiolites and overlying Late Cretaceous volcanic arc sequence sealed by M Eocene nummulitic limestone. Ophiolites in SE Luzon are pre-Late Cretaceous in age, probably formed in intra - arc oceanic setting and emplaced during pre-M Eocene)

David, S., J.F. Stephan, J. Delteil, C. Muller & J. Butterlin (1994)- The Tabgon Flysch and Ragas Point Olistostrome in the Caramoan Peninsula: nature, age, structures and their tectonic implications. J. Geol. Soc. Philippines 49, 1, p. 41-63.
(Flysch and matrix of overlying olistostrome sequence in E part of Caramoan Peninsula yielded latest M Eocene- earliest Late Eocene (zones NP17- NP18) nannofossils. Olistostrome with blocks of late Bartonian-E Lutetian limestones and nummulitic conglomerates as youngest olistoliths. Rocks represent important tectonic episode during M-L Eocene, probably corresponding to change in motion of Pacific Plate in M Eocene, which resulted in left lateral strike-slip faulting in E Philippine Mobile Belt)

David, S., J.F. Stephan, J. Delteil, C. Muller, J. Butterlin, H. Bellon & E. Billedo (1997)- Geology and tectonic history of Southeastern Luzon, Philippines. J. Asian Earth Sci. 15, 4-5, p. 435-452.
(SE Luzon in E Philippine Mobile Belt. Three units limited by two NW-SE trending strike-slip faults. N-C unit is M- early Late Cretaceous volcanic arc unconformably overlain by M-L Eocene volcanic arc, followed by E Oligocene intrusives. Median Unit underlain by Late Cretaceous volcanic arc. W unit is pre-Late Cretaceous ophiolitic suite unconformably overlain by Late Cretaceous volcanic arc sequence and M Eocene limestones. Units overlain by Late Oligocene- Pliocene carbonate and clastic sequence)

De Boer, J., L.A. Odom, P.C. Ragland, F.G. Snider & N.R. Tilford (1980)- The Bataan orogene: eastward subduction, tectonic rotations and volcanism in the Western Pacific (Philippines). Tectonophysics 67, p. 251-282.
(Philippine mobile belt crustal fragment between two subduction systems of opposite polarity. Eastern (Philippine-Quezon) system probably originated in Eocene during NW-SW spreading of W Philippine basin. Western (Manila-Bataan) system originated in Oligocene by spreading of S China Sea basin. Arcs migrated E from Miocene-Present, changing composition from tholeiitic via calc-alkaline to shoshonitic. C Luzon rotating counterclockwise due to differential spreading in S China Sea basin)

Defant, M.J., J. De Boer & D. Oles (1988)- The western Central Luzon arc, two arcs divided by rifting ? Tectonophysics 145, p. 305-317.
(W Central Luzon arc complex zone of volcanism. Volcanoes of N (Bataan) segment of arc along two semi-parallel lineaments. N segment cut off from S extension of arc by NE-SW 'cross arc' zone of volcanism, the Macolod Corridor. Volcanoes of S (Mindoro) segment of arc along two parallel lineaments)

Defant, M.J., R.C. Maury, J.L. Joron, M.D. Feigenson, J. Leterrier et al. (1989)- The geochemistry and tectonic setting of the northern section of the Luzon arc (Philippines and Taiwan). Tectonophysics 183, p. 187-205.
(Luzon Arc with Miocene (10 Ma)- Recent volcanism associated with E-ward subduction along Manila Trench for 1200 km, from Taiwan south to Mindoro. Volcanism clearly subduction-related with calc-alkaline affinities. Earliest phase of volcanism tholeiitic, mid-oceanic-ridge basalt-like)

Defant, M.J., R.C. Maury, E.M. Ripley, M.D. Feigenson & D. Jacques (1991)- An example of island-arc petrogenesis: geochemistry and petrology of the Southern Luzon Arc, Philippines. J. Petrology 32, 3. p. 455-500.
(Luzon arc volcanism associated with E-ward subduction of S China Sea floor along Manila Trench. Volcanic rocks typical arc phenocryst mineralogies: olivine, clinopyroxene, plagioclase and titanomagnetite in mafic rocks and clinopyroxene, plagioclase, orthopyroxene, titanomagnetite, amphibole in more felsic samples. Rocks range from basalts to rhyolites and show typical calc-alkaline features. Continental crustal material seems to play significant role, particularly in Macolod Corridor and Mindoro segment)

De Guzman, R.A. (1975)- Geotectonic development of Southern Mindoro geosyncline. The Philippine Geologist (J. Geol. Soc. Philippines) 29, 4, p. 1-19.
(S Mindoro geosyncline two major domains: Paleogene Eugeosynclinal and Neogene Miogeosynclinal)

De Leon, M.M. & P.J. Militante-Macias (1992)- Calcareous nannofossil biostratigraphy of the western part of Tarlac Province Central Luzon Basin. J. Geol. Soc. Philippines 47, 1-2, p.
(Calcareous nannofossils from outcrops of deep marine Aksitero, Moriones, Malinta and Tarlac Fms in W part of Tarlac Province, C Luzon. Represent 11 zones of 'standard' U Oligocene- U Miocene nannofossil zonation)

De Los Santos, V.C. & F.D. Spencer (1968)- Geology and resources of central Polillo Island, Quezon. Philippines Bureau of Mines, Spec. Project Series Publ. 15, Coal, p. 1-57.
(Hashimoto 1982: Includes record of Late Eocene Nummulites- Discocyclina- Pellatispira larger foram fauna in Babacolan Lst overlies meta-volcanic facies in area of Polillo coalfield. Also Late Oligocene Eulepidina-Spiroclypeus without Miogypsina from coal-bearing Burdeos Fm and E-M Miocene Austrotrillina- Miogypsina thecidaeformis from overlying Langoyen Lst))

Deng, J.H., X.Y. Yang, H. Qi, Z.F. Zhang, A.S. Mastoi & W. Sun (2017)- Early Cretaceous high-Mg adakites associated with Cu-Au mineralization in the Cebu Island, Central Philippines: implication for partial melting of the Paleo-Pacific Plate. Ore Geology Reviews 88, p. 251-269.
(E Cretaceous arc volcanics and diorites associated with large porphyry deposit in Cebu Island, C Philippines. Zircon U-Pb age of diorites ~110 Ma, close to formation age of Lutopan diorites in Atlas porphyry Cu-Au deposit. Successive generation of arc volcanics and adakites in Cebu Island responses to subduction and rollback of Paleo-Pacific Plate to proto-Philippine Sea Plate in E Cretaceous)

Deng, J.H., X.Y. Yang, Z.F. Zhang & M.Santosh (2015)- Early Cretaceous arc volcanic suite in Cebu Island, Central Philippines and its implications on paleo-Pacific plate subduction: constraints from geochemistry, zircon U-Pb geochronology and Lu-Hf isotopes. Lithos 230, p. 166-179.
(online at: http://icpms.ustc.edu.cn/laicpms/publications/2015-DengJH-lithos.pdf)
(E Cretaceous arc volcanic suite in Cebu Island of C Philippines with basalt, andesite, etc. (previously viewed as parts of ophiolite complexes). With zircon grains of ~126 and ~119 2 Ma (Aptian). Detrital zircons from river sand peak at ~118 Ma. Similar to E Cretaceous arc basalts in Amami Plateau in N and E Halmahera in S. Zircon Hf isotopes imply E Early Cretaceous subduction of Paleo-Pacific plate. Part of single subduction zone along S, W, N margin of W Philippine Basin before opening of Philippine Sea Plate)

Dickerson, R.E. (1922)- Review of Philippine paleontology. Philippine J. Science, Manila, 20, p. 195-229.
(online at: https://ia700802.us.archive.org/8/items/mobot31753002580576/mobot31753002580576.pdf)
(Paper describing economic uses of paleontology, and review of Mesozoic and Cenozoic fossils in Philippines. Mesozoic limited to ?Jurassic cherts on Panay with radiolaria Cenosphaera affinis and Dictyomitra tenuis. Cenozoic limited to Oligocene- Recent sediments, with fossils (mainly molluscs) at numerous localities)

Dickerson, R.E. (1924)- Tertiary paleogeography of The Philippines. Philippine J. Science, Manila, 25, 1, p. 11-50.
(Philippines sediments limited to chert of questionable Jurassic age, overlain by Miocene- Recent sediments and volcanics (incorrect: Cretaceous- Paleogene sediments also present; JTvG). With broad paleogeographic maps)

Diegor, W.G., P.C. Momongan & E.J. Mamaril-Diegor (1996)- Ophiolitic basement of Cebu. J. Geol. Soc. Philippines 51, 1-2, p.
(Cebu probably developed over oceanic crust. Cansi Volcanics (basic pillow lavas), Tunlob Schist, serpentinite diapirs (cold intrusion during wrench tectonics), Pandan Fm (incl. pillow basalt flow overlain by thin bedded cherts) all suggest ophiolitic affinity. Cansi Fm volcanism apparently began to pour over oceanic crust that may have previously been emplaced perhaps during E Cretaceous)

Dimalanta, C.B., D.V. Faustino-Eslava,, J.A.S. Gabo-Ratio, E.J. Marquez, J.T. Padrones et al. (2020)- Characterization of the proto-Philippine Sea Plate: evidence from the emplaced oceanic lithospheric fragments along eastern Philippines. Geoscience Frontiers 11, 1, p. 3-21.
(online at: www.sciencedirect.com/science/article/pii/S1674987119300349)
(Proto-Philippine Sea Plate proposed by several authors to account for origin of the Mesozoic supra-subduction ophiolites along Philippine archipelago and Halmahera. Nearly all crust-mantle sequences along E Philippines share Early to Late Cretaceous ages, and geochemical signatures reflect mid-oceanic ridge and supra-subduction signatures. Probably near-equatorial Mesozoic supra-subduction zone origin and likely fragments of Mesozoic Proto-Philippine Sea Plate)

Dimalanta, C.B., D.V. Faustino-Eslava, J.T. Padrones, K.L. Queano, R.A.B. Concepcion & S. Suzuki (2018)- Cathaysian slivers in the Philippine island arc: geochronologic and geochemical evidence from sedimentary formations of the west Central Philippines. Australian J. Earth Sciences 65, 1, p. 93-108.
(Clastic units from W Central Philippines (Mindoro, Panay and Palawan) likely from sources of Cathaysian origin. U-Pb dating peaks at 185-140 Ma, 140-120 Ma and 112-90 Ma, chronicling Yanshanian magmatic

events. Same formations also older intercept at 1.9-1.85 Ga, likely corresponding to orogenic episode in late Paleoproterozoic Cathaysian block. Also rel. strong continental chemical signature)

Dimalanta, C.B., E.G.L. Ramos, G.P. Yumul & H. Bellon (2009)- New features from the Romblon Island Group: key to understanding the arc-continent collision in Central Philippines. Tectonophysics 479, p. 120-129.
(Complete ophiolite sequence and melange in Romblon Island Group, C Philippines. Tablas, Romblon and Sibuyan Islands built on amalgamated crust and mantle rocks. Jurassic- Cretaceous age of formation and late E Miocene age of emplacement suggested for Sibuyan Ophiolite Complex. Emplacement of facilitated through displacements along E-verging thrust faults developed consequent to E Miocene arc-continent collision in C Philippines. K-Ar isotopic ages of 12 Ma for some metamorphic rocks in area)

Dimalanta, C.B., R.C. Salapare, D.V. Faustino-Eslava, N.T. Ramos, K.L. Queano, G.P. Yumul & T.F. Yang (2015)- Post-emplacement history of the Zambales Ophiolite complex: insights from petrography, geochronology and geochemistry of Neogene clastic rocks. J. Asian Earth Sci. 105, p. 215-227.
(Zambales Ophiolite Complex in Luzon made up of two blocks: (1) M Jurassic- E Cretaceous Acoje Block-San Antonio Massif of island arc tholeiite composition and (2) Eocene Coto Block-Cabangan Massif of transitional mid-ocean ridge basalt-island arc tholeiite affinity. Ophiolitic bodies overlain by Miocene- Pliocene sediments with varying quantities of ophiolitic and arc volcanic detritus)

Dimalanta, C.B., L.O. Suerte, G.P. Yumul, R.A. Tamayo & E.G.L. Ramos (2006)- A Cretaceous supra-subduction oceanic basin source for Central Philippine ophiolitic basement complexes: geological and geophysical constraints. Geosciences J. 10, 3, p. 305-320.
(online at: www.geosciences-journal.org/home/journal/...)
(C Philippines several Cretaceous oceanic ophiolite complexes. Antique Ophiolite along W side associated with blueschists, suggesting tectonic erosion accompanied subduction during emplacement. Ophiolites younger to E, indicating convergence accentuated by trench jumping. Oceanic lithosphere fragments in C Philippines probably derived from single Cretaceous ocean basin)

Dimalanta, C. & G. Yumul (2003)- Magmatic and amagmatic contributions to crustal growth of an island-arc system. The Philippine example. Int. Geology Review 45, 10, p. 922-935.
(Numerous volcanoes and ophiolite/ophiolitic complexes attests to significant role of arc magmatism and oceanic lithosphere emplacement to crustal growth in Philippines. Arc magmatism contributed more to crustal growth in Philippines than ophiolite emplacement)

Dimalanta, C.B. & G.P. Yumul (2004)- Crustal thickening in an active margin setting (Philippines): The whys and the hows. Episodes 27, 4, p. 260-264.
(online at: www.episodes.co.in/www/backissues/274/260-264%20Philippine.pdf)
(Significant portion of Philippine archipelago characterized by crust with thickness of ~25-30 km. Two zones with thicker crust (30-65 km): Luzon Central Cordillera and Bicol-Negros-Panay-Central Mindanao regions)

Dimalanta, C.B. & G.P. Yumul (2006)- Magmatic and amagmatic contributions to crustal growth in the Philippine island arc system: comparison of the Cretaceous and post-Cretaceous periods. Geosciences J. 10, 3, p. 321-329.

Dimalanta, C. & G. Yumul (2008)- Crustal thickness and adakite occurrence in the Philippines: is there a relationship? Island Arc 17, 4, p. 421-431.
(Adakites may form in variety of tectonic settings: partial melting of subducted young, hot oceanic slabs, oblique subduction, low-angle or flat subduction, or slab-tearing. Miocene-Recent adakites in Philippines may have not have formed through subduction of young oceanic crust, but are function of thickened crust)

Dimalanta, C. & G. Yumul (2015)- Understanding arc-continent collision and crustal growth: geochemistry of Philippine sedimentary rock sequences. ASEAN Engineering J., C, 2, 2, p. 40-53.
(online at: http://seed-net.org/wp-content/uploads/2015/12/Invited-Paper_UNDERSTANDING-ARC-CONTINENT-COLLISION-AND-CRUSTAL-GROWTH-GEOCHEMISTRY-OF-PHILIPPINE.pdf)

(Geochemistry of clastic rocks from Palawan, Buruanga and NW Mindoro confirms source from continental fragment. Sediments from Baguio (Klondyke, Amlang, Cataguintingan) geochemical signatures consistent with derivation from mafic igneous rocks in oceanic island arc setting)

Dimalanta, C.B., G.P. Yumul & A. Imai (2013)- Geodynamic evolution of the Baguio Mineral District: unlocking the Cenozoic record from clastic rocks. J. Asian Earth Sci. 65, p. 118-130.
(Sediments in Baguio Mineral District reflect change in sediment provenance from quartz-rich in Oligocene to quartz-deficit in Miocene)

Divis, A.F. (1980)- The petrology and tectonics of Recent volcanism in the Central Philippine Islands. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands, American Geophys. Union (AGU), Geophys. Monograph 23, p. 127-144.

Divis, A.F. (1983)- The geology and geochemistry of Philippine porphyry copper deposits. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands- II, American Geophys. Union (AGU), Geophys. Monograph 27, p. 173-216.
(Three-four major episodes of porphyry intrusion in Philippines, with >40 potential deposits reported and nine are or have been in production. Good correlation with periods of increased subduction rates)

Domingo, B.B. & W.F. Domasig (1996)- Co'O mine, a case history of gold exploration and mining in the Philippines. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Hawaii 1990, Circum-Pacific Council for Energy and Mineral Resources, Houston, p. 199-206.
(Co'O gold deposit on E Mindanao Ridge in S Philippines, associated with Late Pliocene arc volcanics(?))

Domingo, R.M.A. (1989)- Facies and diagenetic aspects of a Miocene carbonate sequence, Santan A- 1XA well, Visayas, Philippines. In: H. Porth & C.H. von Daniels (eds.) On the geology and hydrocarbon prospects of the Visayan Basin, Philippines, Geol. Jahrbuch B70, p. 277-302.
(Santan A-1XA well penetrated ~2500' of M-U Miocene carbonates (lower Tf- upper Tf). Core from top of carbonate rich in coral rubble. Diagenesis includes early freshwater leaching, followed by cementation)

Doo, W.B., S.K. Hsu & L. Armada (2015)- Philippine Island arc system tectonic features inferred from magnetic data analysis. Terrestrial Atmospheric Oceanic Sci. 26, 6, p. 679-686.
(online at: http://www.gep.ncu.edu.tw/upload/thesis/2015/thesis_1474424270.pdf)
(Positive magnetization distribution coincides closely with magmatic arcs. Philippine Fault main tectonic boundary, separating high/ low magnetization areas. Etc.)

Douville, H. (1911)- Les foraminiferes dans le Tertiaire des Philippines. Philippine J. Science 6, p. 53-80.
('The foraminifera in the Tertiary of the Philippines'. Larger foraminifera from samples collected by M. Warren D. Smith. Mainly Miocene Lepidocyclina species, also small Oligocene Nummulites)

Dreher, S.T., C.G. Macpherson, D.G. Pearson & J.P. Davidson (2005)- Re-Os isotope studies of Mindanao adakites: implications for sources of metals and melts. Geology 33, 12, p. 957-960.
(Osmium isotopic data for adakite samples from Mindanao conflict with slab-melting model. Os ratios inconsistent with partial melting of ~50 Ma Philippine Sea lithosphere, but similar to young mid-oceanic-ridge basalts and normal arc rocks, consistent with mantle source)

Durkee, E.F. (1992)- Oil, geology, and changing concepts in the SW Philippines (Palawan and the Sulu Sea). In: 9th SEAPEX Offshore Southeast Asia Conf. (OFFSEA 92), Singapore 1992, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 10, OSEA 92217, p. 75-96.
(Brief overview of Philippines basins and discoveries. SW Philippines offshore Palawan oil-gas producing trend in Oligocene- Lower Miocene limestone reefs (Nido, Malampaya, Matinloc) and overlying deep water turbiditic sequences (Galoc, W Linapacan))

Durkee, E.F. (1993)- Oil, geology, and changing concepts in the SW Philippines (Palawan and the Sulu Sea). In: Proc. Conf. Tectonic framework and energy resources of the westem margin of the Pacific Basin, Kuala Lumpur 1992, Geol. Soc. Malaysia Bull. 33, p. 241-262.
(online at: www.gsm.org.my/products/702001-101009-PDF.pdf)
(same as Durkee 1992, above)

Durkee, E.F. (2001)- With Malampaya producing, here are other Philippines exploration targets. Oil and Gas J. 99, 47, p. 46-50.
(Shell-operated Malampaya producing gas since September 2001. Two important areas for gas exploration Reed Bank and S Tanon Strait. Other possible areas Crescent, Santa Monica, N Coron, Amity, Cherry and Hippo. Possibility of oil leg under gas accumulation at Malampaya)

Durkee, E.F. & S.L. Pederson (1961)- Geology of northern Luzon, Philippines. American Assoc. Petrol. Geol. (AAPG) Bull. 45, p. 137-168.
(Luzon Cagayan Valley intermontane basin sediments accumulated in Miocene- Pliocene. E Miocene limestones, marine Miocene, marine- brackish U Miocene-Pliocene to fluviatile U Pliocene-Pleistocene)

Easton, W.H. & M.M. Melendres (1963)- First Paleozoic fossil from Philippine archipelago. American Assoc. Petrol. Geol. (AAPG) Bull. 47, 11, p. 1871-1873.
(Paleozoic cyathopsid coral (Gshelia? or Caninia) in cobble from Late Tertiary conglomerate at Punso, SE Mindoro. Coral probably of M-U Carboniferous age and first Paleozoic fossil derived from basement rocks)

Encarnacion, J.P. (1994)- Geochronological, geochemical and geological constraints on models of ophiolite generation and ARC growth: Evidence from the northern Philippines. Ph.D. Thesis University of Michigan, p. 1-132.
(On Eocene Zambales and Angat ophiolites of S Sierra Madre, Luzon. Zircon U-Pb ages from tonalite and plagiogranite of Zambales ophiolite ~44-45 Ma (M Eocene), Angat Ophiolite ~48 Ma, suggesting parts of a single plate, probably originated in backarc setting. Overlain by Eocene volcanic arc. Also Palawan Ophiolite which was obducted onto microcontinental fragment rifted from SE China)

Encarnacion, J. (2004)- Multiple ophiolite generation preserved in the northern Philippines and the growth of an island arc complex. Tectonophysics 392, p. 103-130.
(Oceanic arcs grow through addition of subduction-generated magmas, but in N Philippines also major contribution from repeated oceanic crust generation with subsequent preservation of basic-ultrabasic units in arc complex. At least five episodes of oceanic crust generation represented in N Philippines by ophiolitic sequences and recent intra-arc seafloor spreading. Ages pre-(?)Jurassic- Quaternary. Most ophiolites generated as back-arc, fore-arc, or intra-arc crust within Philippine arc complex)

Encarnacion, J. (2004)- Northern Philippine ophiolites: modern analogues to Precambrian ophiolites? In: T.M. Kusky (ed.) Precambrian ophiolites and related rocks, Elsevier Developments in Precambrian Geology 13, p. 615-626.
(N Philippines has ~150 My history of multiple, overlapping periods of oceanic crust generation, arc volcanism and deformation. At least five ophiolite complexes. Sedimentary basins probably floored by oceanic crust are dominated by immature sediments and volcanoclastics, locally up to 10 km thick. Entire arc-ophiolite complex being accreted to Eurasia since Miocene)

Encarnacion, J., E.J. Essene, S.B. Mukasa & C.H. Hall (1995)- High-pressure and -temperature subophiolitic kyanite-garnet amphibolites generated during initiation of Mid-Tertiary subduction, Palawan, Philippines. J. Petrology 36, 6, p. 1481-1503.
(Metamorphic rocks near base of pre-M Eocene ophiolite in C Palawan record conditions of ophiolite emplacement onto rifted SE margin of China (Palawan Block). Radiometric ages all around 34 Ma (~Eo-Oligocene boundary). P-T conditions and regional geology suggest metamorphism at depth >30 km in subduction zone. Rapid cooling and exhumation after peak metamorphic conditions in earliest Oligocene)

Encarnacion, J.P. & S.B. Mukasa (1997)- Age and geochemistry of an ánorogenicô crustal melt and implications for I-type granite petrogenesis. Lithos 42, p. 1-13.
(Capoas I-type biotite granite of Late M Miocene age (zircons 15± 3 Ma, monazites~13.4 Ma) at W side of N Palawan Continental Terrane. Intruded into Permian-Jurassic sedimentary rocks of N Palawan Continental Terrane (fragment of Mesozoic Andean margin of SE China that was separated from mainland during Late Oligocene- E Miocene opening of S China Sea). Composed mainly of older continental crust; probably calc-alkaline source rocks of Mesozoic Andean-type margin of S China that underwent partial melting in late M Miocene time in 'anorogenic' setting)

Encarnacion, J., S.B. Mukasa & C.A. Evans (1999)- Subduction components and the generation of arc-like melts in the Zambales ophiolite, Philippines: Pb, Sr and Nd isotopic constraints. Chemical Geology 156, p. 343-357.
(On M Eocene arc-like island arc tholeiites and minor boninitic rocks in Zambales Ophiolite Complex of C Luzon, which are less than ~1 Ma younger (44.2 Ma) than MORB-like sections (45.1 Ma))

Encarnacion, J.P., S.B. Mukasa & E.J. Obille (1993)- Zircon U-Pb geochronology of the Zambales and Angat ophiolites, Luzon, Philippines: evidence for an Eocene arc-back arc pair. J. Geophysical Research 98, p. 19991-20004.
(*Two basement terranes exposed on Luzon: Zambales ophiolite in W and Angat ophiolite in E, separated by 10 km thick and 100 km wide sedimentary basin. Zircon ages from plagiogranites in Zambales ophiolite ~45 Ma (M Eocene), in agreement with Late Eocene age of overlying Aksitero Fm. Zircons from Angat Ophiolite 48 Ma, younger than Late Cretaceous age based on radiolarian fauna from melange sequence SSE of main ophiolite. Small age difference between Zambales and Angat ophiolites suggests common origin. Zambales-Angat ophiolite represents preserved Eocene back-arc basin, formed behind Eocene arc, within Cretaceous oceanic basement, therefore not allochthonous terranes)*

Endo, R. (1968)- Fossil algae from Mindoro Oriental Province, Mindoro Island, the Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 211-219.
(Algae from conglomeratic beds near Mansalay Fm (probably Jurassic) at Agbahag Point, Mindoro Oriental. Incl. Archaeolithporella hidensis, Vermiporella nipponica (= Vermiporella sumatrana Pia 1937?; JTvG), Macroporella, etc. Most species known from Permian of Japan, suggesting Permian pebbles reworked into Jurassic sediments)

Esguerra, F.B. (1961)- Geochemistry and mineralogy of the Surigao nickeliferous laterites, Mindanao, Philippines. Philippine Geologist 15, p. 1-26.

Evans, C.A., G. Casteneda & H. Franco (1991)- Geochemical complexities preserved in the volcanic rocks of the Zambales Ophiolite, Philippines. J. Geophysical Research, Solid Earth 96, B10, p. 16251-16262.
(Geochemical characteristics of volcanic rocks from Zambales Ophiolite, Luzon, indicate oceanic crust now preserved in ophiolite generated in oceanic subduction zone environment. Volcanic rocks magnesian basalt (including MOR Basalt, island arc tholeiite, and boninite-like lavas) to andesite and dacite and have trace elements suggesting derivation from heterogeneous mantle source). Paleomagnetic studies suggest Zambales Ophiolite formed as oceanic crust in vicinity of present-day Celebes Sea)

Fan, J., S.G. Wu & G. Spence (2015)- Tomographic evidence for a slab tear induced by fossil ridge subduction at Manila Trench, South China Sea. Int. Geology Review 57, 5-8, p. 998-1013.
(Tomography of high-velocity subducted slab of S China Sea beneath Manila Trench. Angle of slab varies along trench: at ~16° N slab dips at 24° ~ 32° for 20-250 km depth. A ~17.5° slabs near vertical from 70-700 km depth, at 20° N from horizontal abruptly to near vertical to 500 km depth. Steepening may indicate slab tear, coincident with axis of fossil ridge in SCS slab at ~17° N. Low-velocity zones above 300 km may represent the formation of slab window. Slab tear could explain volcanic gap and geochemical difference between Miocene and Quaternary volcanoes in Luzon Arc, and distribution of adakites and related porphyry Cu-Au deposits in Luzon area. Initial time of ridge subductio possibly started at ~8 Ma)

Fan, J., D. Zhao & D. Dong (2016)- Subduction of a buoyant plateau at the Manila Trench: tomographic evidence and geodynamic implications. Geochem. Geophys. Geosystems 17, 2, p. 571-586.
(P-wave tomography shows changes in dip angle of subducted Eurasian Plate from N to S along N Manila Trench/ Luzon Arc, consistent with partial subduction of buoyant plateau. Slab tears along edges of plateau in subducted plate and subducted lithosphere may be absent below 250 km at ~19°N and ~21°N. Subducted plate at ~21°N steeper than at ~19°N. May explain ~5 km separation of W and E volcanic chains in Luzon Arc at ~18°N, converging N-ward. Low-velocity zone at 20-200 km beneath Manila Accretionary Prism at ~22°N, suggesting subduction may stop there. Taiwan Orogeny may originate from subduction of buoyant plateau)

Fan, J., D. Zhao, D. Dong & G. Zhang (2017)- P-wave tomography of subduction zones around the central Philippines and its geodynamic implications. J. Asian Earth Sci. 146, p. 76-89.
(Tomographic data show subducted S China Sea slab under S segment of Manila Trench steepens and tears, resulting in migration of active volcanism in Macolod Corridor, due to between Palawan block- Philippine Mobile Belt collision. Subduction of Philippine Sea Plate along Philippine Trench started at 10-12°N or S of 12°N from at least ~10 Ma. High-velocity anomaly near mantle transition zone interpreted as subducted Proto S China Sea slab, sinking deeper SE-ward, suggesting Palawan block collision younging from S to N (see also Wu & Suppe 2017))

Faure, M. & K. Ishida (1990)- The mid-Upper Jurassic olistostrome of the West Philippines: a distinctive key-marker for the North Palawan block. J. Southeast Asian Earth Sci. 4, 1, p. 61-67.
(N Palawan island mainly chaotic mix of turbidites, slumps, pebbly mudstone, sandstone and olistostrome, with exotic blocks of Permian- Triassic chert and limestone, M-U Jurassic limestone, acidic lava and volcanoclastic rocks. Callovian- Lower Kimmeridgian radiolarians in mudstone matrix. Olistostrome with exotic blocks overlain by Late Cretaceous-Eocene turbidites. Similar olistostrome at Calamian, Mindoro, Panay and Carabao islands (other authors view this as Jurassic accretionary complex?; JTvG))

Faure, M., Y. Marchadier & C. Rangin (1989)- Pre-Eocene synmetamorphic structure in the Mindoro-Romblon-Palawan area, West Philippines, and implications for the history of Southeast Asia. Tectonics 8, 5, p. 963-979.
(Pre-Eocene 'basement' in Mindoro-Lubang area: (1) pre-Eocene olistostrome; (2) ophiolitic nappe; (3) schistose sequence (pelites, sandstones, etc.); and (4) gneissic unit. Ophiolite and schistose sequence two thrust sheets of oceanic origin thrust upon gneissic unit considered part of continental basement called W Philippines Block. Mindoro metamorphics not younger than Eocene and probably not older than late Paleozoic)

Faustino-Eslava, D.V., A.d.C. Perez, K.L. Queano, R.C. Salapare, J.T. Padrones, C.B. Dimalanta, G.P. Yumul, N.T. Ramos, B.D. Payot & P.M. Operio (2013)- Low-latitude paleoceans in the Philippines. In: 2nd Int. Symposium Int. Geoscience Programme (IGCP) Project 589, Borocay, Philippines, p. 102-103. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/2nd%20Symposium/Abstract%20volume.pdf)
(Fragments of ancient oceanic crusts along entire Philippine Archipelago. Paleomagnetic data from ophiolites and associated formations in Luzon and C Philippines suggest older rocks formed closer to equatorial paleolatitudes: Cretaceous Mangyan meta-ophiolite (Mindoro; ~2.4°S- 1.3°N) and Cretaceous-Eocene Chico River pillow basalts (Luzon; ~6°N). Pillow basalts of Oligocene Amnay Ophiolite in Mindoro ~10°N. Oligo-Miocene-Pliocene rocks of Luzon close to original deposition (e.g. Moriones and Sta. Cruz Fms; ~15°N)

Faustino, D.V., G.P. Yumul, J.V. De Jesus, C.B. Dimalanta, J.C. Aitchison, M.F. Zhou, R.A. Tamayo & M.M. De Leon (2003)- Geology of southeast Bohol, Central Philippines: accretion and sedimentation in a marginal basin. Australian J. Earth Sci. 50, p. 571-583.
(SE Bohol composed of Cretaceous basement complex with Alicia Schist, overthrust by Cansiwang melange, structurally overlain by SE Bohol Ophiolite Complex. Overlain unconformably by ~2000m thick Lower Miocene- Pleistocene carbonate and clastic sediments and igneous units. Accretionary prism beneath ophiolite complex and presence of boninites suggest SE Bohol Ophiolite Complex emplaced in forearc setting. It formed in E Cretaceous in suprasubduction zone environment related to SE-facing arc)

Faustino, D.V., G.P. Yumul, C.B. Dimalanta, J.V. De Jesus, M.F. Zhou, J.C. Aitchison & R.A. Tamayo (2006)- Volcanic-hypabyssal rock geochemistry of a subduction-related marginal basin ophiolite: Southeast Bohol Ophiolite-Cansiwang melange complex, Central Philippines. Geosciences J. 10, 3, p. 291-303.
(E Cretaceous SE Bohol Ophiolite- Cansiwang Melange Complex and Alicia Schist form basement of SE Bohol Island. Four discrete groups in volcanic and ophiolite-melange complex: boninitic rocks, enriched and normal mid-ocean ridge basalts and high-magnesian andesites. Geochemical diversity best explained by supra-subduction zone environment of formation. Formation of Cansiwang Melange concurrent with ophiolite emplacement by subduction-accretion along forearc margin, which was later jammed into inactivity with entry of Alicia Schist that most likely was oceanic bathymetric high)

Fernandez, M.V., A.P. Sevilla & S. David (1994)- Notes on the Cretaceous carbonates in Catanduanes Island and Caramoan Peninsula, Philippines. J. Geol. Soc. Philippines 49, 4, p. 241-261.
(Cretaceous rocks of Catanduanes Island and Caramoan Peninsula contain (1) Aptian- Cenomanian shallow water carbonates with Orbitolina texana and Orbitolina cf. conoidea; (2) Late Campanian- E Maastrichtian pelagic wackestones with Globotruncana, etc.; and (3) Late Maastrichtian Lepidorbitoides (Asterorbis) sp. in shallow marine packstones with rudists (possibly reworked in M-U Eocene olistostrome?; JTvG))

Fernando, A.G.S., C.Y. Magtoto, J.D.S. Guballa & A.M. Peleo-Alampay (2016)- Calcareous nannofossils from Cretaceous units in Catanduanes Island. Bull. Natl. Museum Natural Sci., Ser. C, 42, p. 35-47.
(online at: http://www.kahaku.go.jp/research/publication/geology/download/42/BNMNS_C42_35-47.pdf)
(Cretaceous outcrops in Catanduanes Island, E Philippines with two distinct nannofossil assemblages:UC10-UC12 zones (Coniacian-Santonian) and Campanian-Maastrichtian. Previously unmapped black mudstone in N Catanduanes UC5c subzone (Cenomanian-Turonian boundary; possibly oceanic anoxic event 2 (OAE2))

Fernando, A.G.S., A.M. Peleo-Alampay, E.M. Francisco, E.J. Crisologo, M.E. Collado & F.P. Siringan (2007)- Calcareous nannofossils from the Opol Formation, Bukidnon Province (Northern Mindanao), Philippines. J. Geol. Soc. Philippines 63, 1-2, p. 39-50.
(Opol Fm of N Mindanao with Late Miocene- E Pliocene calcareous nannofossil assemblages of zones NN11-NN15, based on occurrence of Discoaster quinqueramus, D. berggrenii, Reticulofenestra pseudoumbilica, etc.)

Fernando, A.G.S., A. Raymund, C. Fernandez, Y. Maac-Aguilar, Y. Kurihara & T. Kase (2008)- Late Miocene calcareous nannofossils from Danao Basin, Bohol (VisayanBasin), Philippines. Bull. Natural Science Museum, Tokyo, C34, p. 27-38.
(online at: http://ci.nii.ac.jp/naid/110007342096/en)
(Shallow marine, mollusk-bearing clastics in Danao basin of C Bohol with Discoaster quinqueramus and D. berggrenii, suggestive of NN11, Late Miocene. Cooler oceanographic conditions suggested for LateMiocene in Visayan Basin)

Fernando, A.G.S., D.N. Tangunan, A.R.C. Fernandez, E.S. Lucero, J.A. Manzano, M.G.B. Collantes & L.S.J. Manzano (2013)- Calcareous nannofossil biostratigraphy of Indahag Limestone (Western Misamis Oriental, Northern Mindanao). J. Geol. Soc. Philippines 64, p. 12-21.
(Pliocene calcareous nannofossils from Indahag Lst (NN15-NN17), N Mindanao)

Florendo, F.F. (1981)- Preliminary report on the geology, geotectonic development and mineralization of western Panay. Proc. 8th Pacific Science Congress (U.S. Nat. Research Council) 2, p. 482-502.

Florendo, F.F. (1994)- Tertiary arc rifting in northern Luzon, Philippines. Tectonics 13, 3, p. 623-640.
(N Luzon Terrane one of largest arc terranes in Philippines. Late Eocene island arc system formed above subducting W Philippine plate. Bifurcating Late Eocene- Late Oligocene magmatic arcs separated by Cagayan basin, formed by Late Oligocene- E Miocene intra-arc rifting, with oceanic crust formed at SW end. Arc rifting may be manifestation of extensional tectonism that affected most of SE Asia in Late Oligocene- E Miocene, during which S China and SE Sulu basins formed. Subsequent to arc rifting, subduction of S China plate along Manila Trench, starting at ~15 Ma)

Florendo, F.F. & J.W. Hawkins (1992)- Comparison of the geochemistry of volcanic rocks of the Zambales Ophiolite, northern Luzon, Philippines: implications for tectonic setting. Acta Geol. Taiwanica, Sci. Reports Natl. Taiwan University, 30, p. 172-176.

Fontaine H. (1979)- Note on the geology of the Calamian Islands, North Palawan, Philippines. United Nat., ECAFE, CCOP Newsletter 6, 2, p. 40-47.
(Same paper as Fontaine 1990. Reconnaissance of geology of Calamian islands, W Philippines, between Mindoro and Palawan Islands)

Fontaine (1990)- Note on the geology of the Calamian Islands, North Palawan, Philippines. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 247-256.
(Reprint of Fontaine (1979) paper. Reconnaissance of geology of Calamian islands, W Philippines, between Mindoro and Palawan Islands. Widespread M Triassic? radiolarian chert. Presence of Rhaetian- Lower Jurassic limestones based on foraminifera described in Fontaine, Beauvais et al. 1979))

Fontaine, H. (1990)- Note on the Jurassic in the Philippines. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 257-260.
(Reprint of Fontaine (1978), CCOP Newsletter 5(3). Brief note on Jurassic rocks in Mansalay area of S Mindoro, with Callovian- Oxfordian ammonites (see also Hashimoto & Sato 1967, 1968). Mention of oil seeps in Jurassic region of Mindoro)

Fontaine, H., L. Beauvais, C. Poumont & D. Vachard (1979)- Donnees nouvelles sur le Mesozoique de 1'Ouest des Philippines. Decouverte de Rhetien marin. Comptes Rendus Somm. Soc. Geologique France 1979, 3, p. 117-121.
('New data on the Mesozoic of Western Philippines; discovery of marine Rhaetian'. Discoveries of M Jurassic limestone with corals (simple forms, Montlivaltiidae) on SE Mindoro. On Calamian islands, W Philippines: Busuanga with thick Upper Triassic siliceous clastics with radiolaria, on Malajon reefal limestone with massive corals (incl. Thaumatoporella) and Rhaetian foraminifera like Involutina, Triasina cf. hantkeni, etc.))

Fontaine, H., P. David & N.D. Tien (1983)- A note on the northwest Panay- Tablas area. CCOP Newsletter 10, p. 8-13.
(NW Panay- Carbao and Tablas islands part of continental 'Palawan Block'. Includes (1) pre-Permian meta-clastics; (2) upper M Permian limestone with fusulinids (Neoschwagerina haydeni), smaller forams (Tuberitina, Pachyploia, Pseudoendothyra, etc.) and dasyclad algae (Mizzia velebitana); (3) E-M Triassic radiolarites)

Fontaine, H., P. David & N.D. Tien (1990)- A note on the northwest Panay- Tablas area. In: H. Fontaine (ed.) Ten years of CCOP research on the Pre-Tertiary of East Asia, CCOP Techn. Publ. 20, p. 261-268.
(Reprint of Fontaine et al. 1983)

Fontaine, H., N.D. Tien & D. Vachard (1986)- Discovery of Permian limestone south of Tara Island in the Calamian Islands, Philippines. In: H. Fontaine (ed.) The Permian of Southeast Asia, CCOP Tech. Bull. 18, p. 161-167.
(Permian limestones in NE part of Calamian islands. Malemeglemeg and Botulan Islands Late Murgabian-Midian age wackestone with forams-algae, incl. Tubiphytes and fusulinids. Getche island oolitic grainstone may be Permian or Triassic)

Forbes, M.T., C.B. Mapaye & J.A. Bacud (2011)- Structural characterization of offshore Southwest Palawan, Philippines using the most recent 2D/3D seismic data. Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conference, Singapore, 16, 25p. *(Abstract + Presentation)*
(Improved seismic imaging allows identification of 4 major structures, Eocene half-graben with thick synrift deposits, varying deformational styles in fold-thrust belt, duplication of Oligo-Miocene Nido Lst reservoir, etc.)

Foronda, J. (1994)- Sequence stratigraphy of an Oligocene-Miocene mixed siliciclastic carbonate system, Visayan Basin, Central Cebu (Philippines). Doct. Thesis, Friedrich-Wilhelms-Universitat Bonn, Bonner Geowissensch. Schriften 11, p. 1-152. *(Unpublished)*

Foronda, J. (1996)- Depositional systems and coal cyclothems in the Upper Malubog Formation (Lower Miocene), Cebu, Central Philippines. In: C.A.Caughey et al. (eds.) Proc. Int. Symp. Sequence stratigraphy in Southeast Asia, Jakarta 1995, Indon. Petroleum Assoc. (IPA), p. 465-476.
(U Malubog Fm in C Cebu spans Lower Miocene NN2- NN3 nannoplankton zones. Thickness at least 620m. Composed of interbedded mudstones, siltstones, sandstones, minor carbonates and conglomerates. Represents single depositional sequence with shelf margin, transgressive, and highstand systems tracts. Coals cap two topmost deltaic cycles. During transgressive phase a retrograding barrier island system developed on top of deltaic deposits. Top of sequence is angular unconformity which represents NN4 hiatus in Visayan Basin)

Foronda, J.M., J.A. Bacud & C.F. Bastero (2007)- New potential plays in the syn-rift sequences in Offshore Palawan. Proc. 2007 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, p. 1-28. *(Abstract + Presentation)*
(Paleogene 'syn-rift' sequences off NW Palawan mainly marine deposits. M Oligocene unconformity in S China Sea Basin separates Syn-Rift from widespread Nido Lst platform carbonates. Exploration targets Nido Lst buildups and fractured platform carbonates and overlying Pagasa Fm turbidites. Outboard highs where most wells have been drilled, syn-rift low net/gross, giving perceived lack of reservoir sands. Potential lowstand plays basin floor fans, leveed channels and incised valley fills. Basin floor fan may reach several km along dip. Leveed channel complex irregular and discontinuous reflections with occasional channels almost 1 km wide. Incised valley fills typically >2.5 km wide. Exploration risks for syn-rift plays include lack of local condensed section above basin floor fans to serve as seal and drilling sand-poor fill in leveed channels and incised valleys)

Foronda, J.M. & W. Schoell (1987)- Microfacies types of Binangonan Formation, Antipolo-Teresa, Rizal Province. The Philippine Geologist (J. Geol. Soc. Philippines), 41, p. 40-78.
(U Oligocene- Lw Miocene Binangonan Fm carbonates grade up from proximal turbidites into reef buildup and reef-associated carbonates. Basin margin facies mainly planktonic forams. Foreslope facies mainly floatstones and packstones. Main organic buildups comprised of boundstones, and minor packstones/ grainstones)

Forster, H., D. Oles, U. Knittel, M.J Defant & R.C Torres (1990)- The Macolod Corridor: a rift crossing the Philippine island arc. Tectonophysics 183, p. 265-271.
(Macolod Corridor in SW Luzon is 40 km wide zone of active Quarternary volcanism which crosses island in NE-SW direction. Probably pull-apart zone formed by NW-SE oriented shearing)

Forster, M.A., R. Armstrong, B. Kohn, G.S. Lister,M.A. Cottam & S. Suggate (2015)- Highly retentive core domains in K-feldspar and their implications for 40Ar/39Ar thermochronology illustrated by determining the cooling curve for the Capoas Granite, Palawan, The Philippines. Australian J. Earth Sci. 62, p. 883-902.
(online at: http://searg.rhul.ac.uk/pubs/forster_etal_2015%20Capoas%20K-feldspar%20Palawan.pdf)
(K-feldspar from Late Miocene Capoas Granite on NW Palawan with retentive diffusion domains that are closed to argon diffusion at near-solidus temperatures during cooling. High closure T from Capoas Granite K-feldspar consistent with coincidence of 40Ar/39Ar ages with U-Pb zircon ages at ~13.5 ± 0.2 Ma. Cooling rate then accelerated, but slowed by ~12 Ma, then once again accelerated at ~11 Ma)

Fournier, F. (2004)- Evolution de l'edifice carbonate du champ de gaz de Malampaya, Tertiaire, offshore Palawan, Philippines. Implications pour la caracterisation du reservoir. Thesis University of Provence, p. 1-208. *(Unpublished)*
('Evolution of the carbonate buildup of the Malampaya gas field, Tertiary, offshore Palawan, Philippines; implicatons for reservoir characterization'. Malampaya gas field in 850-1200m of water, within Late Eocene- E Miocene shallow-water carbonates. Carbonate system initially developed on crest of tilted block during rifting of S China Sea. High-frequency subaerially exposed cycles in inner-shelf (time scale 10-100ka))

Fournier, F. & J. Borgomano (2007)- Geological significance of seismic reflections and imaging of the reservoir architecture in the Malampaya gas field (Philippines). American Assoc. Petrol. Geol. (AAPG) Bull. 91, 2, p. 235-258.
(North Palawan 1989 Malampaya oil-gas discovery in U Eocene- Lower Miocene carbonate buildup. Porosity distribution mainly controlled by meteoric diagenesis)

Fournier, F., J. Borgomano & L.F. Montaggioni (2005)- Development patterns and controlling factors of Tertiary carbonate buildups: insights from high-resolution 3D seismic and well data in the Malampaya gas field (Offshore Palawan, Philippines). Sedimentary Geology 175, p. 189-215.
(Malampaya buildup off NW Palawan internal carbonate platform architecture. Carbonate system initiated in Late Eocene (Pellatispira) as attached shelf influenced by clastic input. Late Eocene- E Oligocene syn-depositional extensional tectonics (E tilting and block faulting) favoured development of small buildups on highs. After E-ward reef progradation, aggrading shelf developed in Late Oligocene- E Miocene. Demise of buildup in late E Miocene from increase in subsidence and/or nutrient input. Eustacy, oceanographic conditions and type of carbonate producers played subordinate role in buildup development and demise)

Fournier, F., L. Montaggioni & J. Borgomano (2004)- Paleoenvironments and high-frequency cyclicity from Cenozoic south-east Asian shallow-water carbonates: a case study from the Oligo-Miocene buildups on Malampaya (offshore Palawan, Philippines). Marine Petroleum Geol. 21, p. 1-21.
(Malampaya- Camago oil-gas field in Nido carbonate buildup of Late Oligocene- E Miocene age. Microfacies assemblages described. High-frequency cyclicity recognized of 3-10m thick shallowing-upward cycles, often capped by paleosol, probably reflecting Milankovic scale sea level fluctuations)

Francisco, F.U. (1953)- The Pre-Tertiary rocks of Buruanga Peninsula, Panay Island, Philippines. Proc. 8th Pacific Science Congress 2, p. 482-498.
(Buruanga Peninsula of Panay, is uplifted crustal block composed of Mesozoic? Buruanga metamorphic complex, intruded by quartz diorites (probably also pre-Tertiary) in SE, and capped by Tertiary volcanic and sedimentary rocks (now viewed as part of Palawan- Mindoro terrane; JTvG))

Francisco, F.U. (1966)- A review and assessment of oil exploration in the Philippines, 1. Petroleum Division, Philippine Bureau of Mines, p. 1-193.

Francisco, F.U. (1975)- A review of oil exploration and stratigraphy of sedimentary basins of the Philippines, 2. Petroleum Division, Philippine Bureau of Mines, p. 1-95.

Fraser, A.R. & E.B. Guazon (1994)- Geology and petroleum potential of Northeast Palawan Shelf. Australian Geol. Survey Org. (AGSO), Canberra, Record 1994/41, Part 3, p. 1-47.
(online at: https://d28rz98at9flks.cloudfront.net/14753/Rec1994_041.pdf)

Fuller, M., R. Haston & J. Almasco (1989)- Paleomagnetism of the Zambales ophiolite, Luzon, northern Philippines. Tectonophysics 168, p. 171-203.
(Paleomagnetic data suggest CCW rotation and N-ward translation of Zambales ophiolite since Eocene)

Fuller, M., R. Haston & E. Schmidtke (1989)- Paleomagnetism in SE Asia: sinistral shear between Philippine Sea Plate and Asia. In: C. Kissel and C. Laj (eds.) Paleomagnetic rotations and continental deformation, Kluwer Academic Publishers, p. 411-430.
(Paleomagnetic data from Philippine Sea Plate indicate CW rotation since Oligocene. Sinistral shear zone between Philippine Sea Plate and Asia (incl. Philippines))

Fuller, M., R. McCabe, I.S. Williams, J. Almasco, R.Y. Encina, A.S. Zanoria & J.A. Wolfe (1983)- Paleomagnetism of Luzon. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian Seas and Islands- II, American Geophys. Union (AGU), Geophys. Monograph 27, p. 79-94.
(Paleomag of 50 Cenozoic sites in N Philippines. No distinguishable rotations in past 5 My. E-M Miocene results reveal CW rotation of ~20°, but no detectable N-S translation. Eocene sites from Zambales ophiolite and

overlying sediments indicate formation at equatorial latitudes. Tectonic model for past 17 My invokes NW motion of Philippine Sea Plate and pinning of N Philippines at S margin by collision with Calamian continental fragment. Continued advance of leading edge of Philippine Sea Plate causes CCW rotation of Luzon and Manila trench, until N end of trench pinned by collision with Taiwan)

Gabo, J.A.S., C.B. Dimalanta, M.G.S. Asio, K.L. Queano, G.P. Yumul & A. Imai (2009)- Geology and geochemistry of the clastic sequences from Northwestern Panay (Philippines): implications for provenance and geotectonic setting. Tectonophysics 479, p. 111-119.
(Whole-rock geochem of clastic sequences in NW Panay show different compositions for Buruanga Peninsula (continental margin provenance; part of Palawan Microcontinental Block) and Antique Range (oceanic island arc provenance; Philippine Mobile Belt))

Galgana, G., M. Hamburger, R. McCaffrey, E. Corpuz & Q. Chen (2007)- Analysis of crustal deformation of Luzon Island, Philippines using geodetic observations and earthquake focal mechanisms. Tectonophysics 432, p. 63-87.
(GPS velocities from Luzon and focal mechanism used to constrain tectonic deformation in plate boundary zone between Philippine Sea Plate and Eurasia (Sundaland block). Luzon is tectonically active plate boundary zone, comprising six mobile elastic tectonic blocks between two active subduction zones. Philippine Fault and associated intra-arc faults accommodate much of trench-parallel component of relative plate motion)

Gallagher, J.J. (1986)- Philippine Islands: a tectonic railroad siding. In: M.T. Halbouty (ed.) Future petroleum provinces of the world, American Assoc. Petrol. Geol. (AAPG), Mem. 40, p. 515-527.
(Philippine islands mix of continental and oceanic crust fragments. Carbonate and clastic sediments of main terranes currently deforming by strike-slip, subduction and extension. Complex tectonic history potentially limits size of hydrocarbon accumulations. With plate tectonic reconstructions M Jurassic- Recent: Mesozoic subduction complex, Late Cretaceous- E Eocene rift and strike slip, E Oligocene- M Miocene drift, M Miocene collision between Cuyo tectonic element and subduction complex to S, Late Miocene and younger accretion)

Gallagher, J.J. (1987)- Philippine microplate tectonics and hydrocarbon exploration. In: M.K. Horn (ed.) Trans. 4th Circum-Pacific Energy and Mineral Resources Conference, Singapore 1986, p. 103-119.
(Similar to Gallager (1986) paper. Early carbonate and clastic stratigraphic traps developed during Mesozoic and Early Cenozoic rifting. Hydrocarbons generated in deep rift basins and migrated to early traps during rifting and drifting. Later Cenozoic compressional activity may have destroyed some traps. With plate tectonic reconstructions Late Triassic- Recent)

Gan, R.M. & F. Rillera (1984)- Lower Miocene carbonates in West Palawan. In: Joint ASCOPE/CCOP Workshop on the hydrocarbon occurrence in carbonate rocks, Surabaya 1982, ASCOPE Techn. Paper 2, Jakarta, p. 433-444.
(On E Miocene Nido Limestone in Palawan area)

Garrison, R.E., E. Espiritu, L.J. Horan & L.E. Mack (1979)- Petrology, sedimentology, and diagenesis of hemipelagic limestone and tuffaceous turbidities in the Aksitero Formation, Central Luzon, Philippines. U.S. Geol. Survey (USGS) Prof. Paper 1112, p. p. 1-16.
(online at: http://pubs.usgs.gov/pp/1112/report.pdf)
(Aksitero Fm of C Luzon is U Eocene- Lower Oligocene sequence of hemipelagic limestone with thin tuffaceous turbidites, overlying Zambales ophiolitic basement complex. Limestone mainly planktonic foraminifera and calcareous nannofossils, with up to 30% volcaniclastic debris. Hydrocarbons migrated into tuffaceous layers early during diagenesis but subsequently flushed out and only bitumen coatings remain. Deposition of Aksitero Fm probably at >1000m water depth in subsiding basin adjacent to active island arc system)

Geary, E.E., T.M. Harrison & M. Heizler (1988)- Diverse ages and origins of basement complexes, Luzon, Philippines. Geology 16. 4, p. 341-344.
(40Ar/39Ar ages from two basement complexes in SE Luzon document first occurrences of pre-Late Cretaceous age rocks in E Philippines: Late Jurassic (Caramoan complex) to E Cretaceous and E Miocene (Camarines

Norte- Calaguas Islands complex). Philippine Archipelago amalgamation of allochthonous Mesozoic and Cenozoic island-arc, ocean-basin and continental fragments assembled during Tertiary)

Geary, E.E. & R.W. Kay (1989)- Identification of an Early Cretaceous ophiolite in the Camarines Norte-Calaguas Islands basement complex, eastern Luzon, Philippines. Tectonophysics 168, p. 109-126.
(Pre-Late Cretaceous ophiolite assemblage underlies much of metamorphic basement of E part of Camarines Norte-Calaguas Islands, SE Luzon. Ophiolite lithologies harzburgites, gabbros, pillow lavas, etc., structurally disrupted by W-ward directed thrusting. Minimum age of 100 Ma inferred from Ar/Ar analyses of amphibolites associated with gabbros)

Geary, E.E., R.W. Kay, J.C. Reynolds & S.M. Kay (1989)- Geochemistry of mafic rocks from the Coto Block, Zambales ophiolite, Philippines: trace element evidence for two stages of crustal growth. Tectonophysics 168, p. 43-63.
(Coto Block portion of Zambales ophiolite two-stage crustal history: (1) dominantly N-MORB type ocean crust formation at large or back-arc basin spreading center; (2) soon thereafter chemically modified by incipient island arc magmatism, most probably in proto-forearc setting)

Gervasio, F.C. (1966)- A study of the tectonics of the Philippine Archipelago. The Philippine Geologist (J. Geol. Soc. Philippines) 20, 2, p. 51-75.

Gervasio, F.C. (1966)- The age and nature of orogenesis of the Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 20, 4, p. 121-140.

Gervasio, F.C. (1967)- Age and nature of orogenesis of the Philippines. Tectonophysics 4, p. 379-402.
(Same paper as Gervasio (1966) above. Orogenesis of Philippines two geotectonic cycles: 'Variscan' Late Paleozoic folding and 'Alpine'. Early Mesozoic sedimentation cycle terminated by orogenic phase at close of Jurassic)

Gervasio, F.C. (1968)- Age and nature of orogenesis of the Philippines. United Nations ECAFE CCOP Techn. Bull. 1, p. 113-128.
(Same paper as Gervasio (1967) above)

Gervasio, F.C. (1971)- Geotectonic development of the Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 25, 1, p. 18-38.
(Geotectonic development of Philippines two long-term and several short-term cycles of crustal reorganization from Paleozoic to Recent)

Gervasio, F.C. (1971)- Ore deposits of the Philippines Mobile Belt. The Philippine Geologist (J. Geol. Soc. Philippines) 25, 3, p.

Gervasio, F.C. (1973)- Ore deposits of the Philippines Mobile Belt. In: N.H. Fisher (ed.) Metallic provinces and mineral deposits in the Southwest Pacific, Bureau Mineral Res., Geol. Geophysics, Bull. 141, p. 191-207.

Gervasio, F.C. (1973)- Geotectonic development of the Philippines. In: P.J. Coleman (ed.) The Western Pacific: island arcs, marginal seas, geochemistry, Western Australia University Press, p. 307-324.

Giese, U., U. Knittel & U. Kramm (1986)- The Paracale intrusion: geologic setting and petrogenesis of a trondhjemitic intrusion in the Philippine island arc. J. Southeast Asian Earth Sci. 1, p. 235-245.

Gonzales, B.A. (1962)- Foraminiferal zonation of SVOC Faire no. 1 well, Cagayan, Luzon. J. Geol. Soc. Philippines 16, 4, p.
(Stanvac Faire 1 well in Cagayan Valley seven M Miocene- Pleistocene foraminiferal zones and three formations. Repetition of beds occurs at 8530' indicated by recurrence of Late Miocene (Tf3) species)

Gonzales, B.A. (1969)- Development and status of paleontological research in the Philippines. United Nations ECAFE CCOP Techn. Bull. 2, p. 87-95.

Gonzales, B.A. (1969)- Development and status of micropaleontological research in the Philippines. J. Geol. Soc. Philippines 23, 4, p. 183-195.

Gonzales, B.A., S.G. Martin & E.P. Espiritu (1978)- Philippines; onshore stratigraphy of the Philippine Tertiary basins. Stratigraphic correlation between sedimentary basins of the ESCAP region V, ESCAP Atlas of stratigraphy I, UN ESCAP 44, p. 33-44.

Grey, R.R. (1956)- Eocene in the Philippines. Proc. Eighth Pacific Science Congress, Quezon City 1953, 2, p. 503-514.
(Eocene in Philippines very limited, and unconformable on Pre-Tertiary rocks. Hashimoto 1969: Occurrences of larger forams Discocyclina, Pellatispira, Nummulites, etc.)

Grey, R.R. (1967)- Time-stratigraphic correlation of Tertiary rocks in the Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 21, 1, p. 1-20.

Grotsch, J. & C. Mercadier (1999)- Integrated 3-D reservoir modelling based on 3-D seismic: the Tertiary Malampaya and Camago buildups, offshore Palawan, Philippines. American Assoc. Petrol. Geol. (AAPG) Bull. 83, 11, p. 1703-1728.
(On complex complex sedimentary geometries, diagenesis, etc. of Oligocene- E Miocene Malampaya and Camago reefal buildups, offshore NW Palawan. Thickest Nido Lst in area 700m thick. Distribution of reefal Nido Lst facies mainly controlled by underlying NE-SW trending, extensional basement faults. Buildups started in Oligocene (but also report Eocene Discocyclina; JTvG) and drowned in E Burdigalian. Porosity development in buildups predominantly early diagenetic (cementation and leaching during repeated subaerial exposure)

Guballa, J.D.S. & A.G.S. Fernando (2015)- Calcareous nannofossil biostratigraphic study of the Pugo River section of Amlang Formation in the Luzon Central Valley Basin, Philippines. Bull. Natl. Museum Nat. Sci., Tokyo, Ser. C, 41, p. 53-59
(online at: www.kahaku.go.jp/research/publication/geology/download/41/L_BNMNS_C41_53-59.pdf)

Guotana, J.M.R., B.D. Payot, C.B. Dimalanta, N.T. Ramos, D.V. Faustino-Eslava, K.L. Queano & G.P. Yumul (2016)- Petrological and geochemical characteristics of the ultramafic section of the Samar Ophiolite: Implications on the origins of the ophiolites in Samar and Leyte, Philippines. In: Development of the Asian Tethyan Realm: genesis, process and outcomes, 5th Int. Symposium Int. Geoscience Program (IGCP) Project 589, Yangon, p. 25-30. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/5th%20Symposium/Abstract%20Volume.pdf)
(late Early- early Late Cretaceous Samar Ophiolite part of Cretaceous belt of ophiolites and ophiolitic complexes along E Philippines. Peridotites, gabbros and massive flow and pillow lavas at S Samar Island represent mantle and crustal sections of Samar Ophiolite, with chemistry comparable to supra-subduction zone peridotites. Ophiolites also exposed in Leyte Island W of Samar (Tacloban and Malitbog Ophiolite Complexes), but strong affinity with abyssal peridotites)

Guotana, J.M.R., B.D. Payot, C.B. Dimalanta, N.T. Ramos, D.V. Faustino-Eslava, K.L. Queano & G.P. Yumul (2017)- Arc and backarc geochemical signatures of the proto-Philippine Sea Plate: insights from the petrography and geochemistry of the Samar Ophiolite volcanic section. J. Asian Earth Sci. 142, p. 77-92.
(Remnants of Cretaceous lithosphere of arc affinities at peripheries of W Philippine Basin: Amami Plateau, E Halmahera Ophiolite and SSZ ophiolites along E margin of Philippine archipelago (incl. early Late Cretaceous Samar Ophiolite))

Guotana, J.M.R., B.D. Payot, C.B. Dimalanta, N.T. Ramos, D.V. Faustino-Eslava, K.L. Queano & G.P. Yumul (2018)- Petrological and geochemical characteristics of the Samar Ophiolite ultramafic section: implications on the origins of the ophiolites in Samar and Leyte islands, Philippines. Int. Geology Review 60, 4, p. 401-417.
(On Samar, Tacloban and Malitbog Cretaceous ophiolite complexes in E Central Philippines)

Gutierrez, F.I. & P.J. Militante Matias (1991)- Oligo-Miocene events in the Binangonan Formation, Rizal Province, Philippines. J. Geol. Soc. Philippines 46, p.
(Teresa Tuffaceous Siltstone Mb of Binangonan Fm interbedded limestone with earliest Miocene Spiroclypeus, Miogypsina, etc. and tuffaceous siltstones rich in planktonic forams (Globigerinoides Globoquadrina, Catapsydrax, etc.), suggesting contemporaneous transfer of larger foraminifera from shallow to deeper waters)

Hamburger M., R. Cardwell & B. Isacks (1983)- Seismotectonics of the northern Philippine Island Arc. In: D.E. Hayes (ed.) The tectonics and geologic evolution of southeast Asean seas and islands II, American Geophys. Union Mon. 27, p. 1-22.

Hargreaves, T.J. et al. (1992)- The geology of the Caluit discovery NW Palawan, Philippines. Philippine Exploration Conf., Manila, 13p.

Hashimoto, W. (1969)- Paleontology of the Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 6, p. 293-329.
(Review of Carboniferous- Pliocene fossils assemblages from Philippines. Oldest rocks from Mansalay region on S Mindoro(1) Permian limestones with fusulinids and algae in Eocene conglomerate; (2) Jurassic with ammonoids Macrocephalites aff. keeuwensis, Perisphinctes taliabuticus, Oppelia, Phylloceras, also bivalve Trigonia mindoroensis, Inoceramus galoi, etc. (also Andal 1968). Cretaceous with larger foram Orbitolina on Cebu, Globotruncana marls overlain by Eocene limestones in Samaloc area, etc.)

Hashimoto, W. (1975)- Larger Foraminifera from the Philippines. Part IV. Larger Foraminifera from the Mountain Province. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 16, p. 127-139.

Hashimoto, W. (1980)- On the fundamental structural units of the Philippine basement and the extension to the neighbouring countries. In: T. Kobayashi, R. Toriyama et al. (eds.) Geology and Palaeontology of Southeast Asia, University Tokyo Press, 21, p. 303-317.
(Review of Philippines geology- stratigraphy. Oldest unit is Palawan orogenic belt with partly metamorphosed Carboniferous- Permian - E Triassic rocks and Jurassic Mansalay Fm; extends into Semitau metamorphic belt of Borneo? Next older unit Sulu Orogenic Belt)

Hashimoto, W. (1981)- Two types of Tertiary oil basins in the Philippines. Proc. 4th Regional Conf. Geology, Mineral and Energy Resources of Southeast Asia (GEOSEA IV), Manila 1981, p. 277-286.

Hashimoto, W. (1981)- Geologic development of the Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 22, p. 83-170.

Hashimoto, W. (1982)- Palaeontology of The Philippines, Supplement I. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 24, p. 129-166.
(Continuation of Hashimoto (1969) list. Rel. extensive review of paleontological papers from The Philippines published from 1969-1981 plus additions to the pre-1969 list)

Hashimoto, W., P.M. Alcantara, N. Aoki, G.R. Balce & P.P. David (1978)- *Nummulites* from the Lubingan crystalline schist of Bongabon, Nueva Ecija and their significance on the geologic development of the Philippines. Proc. Japan Academy 54, 1, p. 1-4.
(online at: https://www.jstage.jst.go.jp/article/pjab1977/54/1/54_1_1/_pdf)
Nummulites limestone as float and interbedded green schists NW of Dingalan in E Luzon. Presumably of Early Eocene age)

Hashimoto, W., N. Aoki, P.P. David, G.R. Balce & P.M. Alcantara (1978)- Discovery of *Nummulites* from the Lubingan crystalline schist exposed east of Bongabon, Nueva Ecija, Philippines and its significance on the geologic development of the Philippines. In: Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 57-63.

Hashimoto, W. & G.R. Balce (1975)- A new correlation scheme for the Philippine Cenozoic formations. In: H. Ujiie & T. Saito (eds.) Proc. 1st Int. Congress Pacific Neogene stratigraphy, Tokyo 1976, p. 119-132.
(Larger foram range chart and Philippines formations correlation table)

Hashimoto, W., N. Kitamura, G.R. Balce, K. Matsumara, K. Kurihara & E.Z. Aliate (1979)- Larger foraminifera from the Philippines. X. Stratigraphic and faunal breaks between the Maybangain and Kinabuan Formations in the Tanay region. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 20, p. 143-157.
(Tanai- Daraitan section E of Manila shows U Cretaceous Kinabuan Fm Globotruncana mudstones, unconformably overlain by Paleogene Mayabangain Fm sediments, with parts of Maastrichtian- E Paleocene missing. Masungit Lst Mb with 11 E-M Eocene(zone Ta2) larger foram species, incl. Asterocyclina spp., Fasciolites bosci, F. javana, Orbitolites, Nummulites perforatus, N. burdigalensis and other N. spp., Assilina spira (N.B.: no Late Eocene Pellatispira-Spiroclypeus limestone observed in region))

Hashimoto, W. & K. Matsumaru (1975)- Larger foraminifera from the Philippines. Part III. Limestone from eastern coastal ranges of north and central Luzon. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 16, p. 117-125.

Hashimoto W. & K. Matsumaru (1978)- Larger foraminifera from the Philippines, VIII: Larger Foraminifera from Central Samar. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, p. 81-88.
(Three Miocene species)

Hashimoto, W. & K. Matsumaru (1978)- Larger foraminifera from the Philippines. IX. Larger foraminifera found from the Zigzag limestone, south of Boguio, Benguest, Luzon, Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 89-96.
(Five species of lower Middle Miocene)

Hashimoto, W. & K. Matsumaru (1981)- Larger foraminifera from the Philippines. Part XII. Eocene limestone from southeastern Luzon. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 22, p. 63-73.

Hashimoto, W. & K. Matsumaru (1981)- Geological significance of the discovery of *Nummulites fichteli* (Michelotti) from the Sagada Plateau, Bontoc, Mountain Province, Northern Luzon, Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 22, p. 75-82.
(Discovery of generally rare E Oligocene/ zone Td reticulate Nummulites fichteli in N Luzon, in thin limestones in volcanoclastic Sagada Fm. Associated with Lepidocyclina(Eulepidina) and Cycloclypeus cf. oppenoorthi)

Hashimoto, W. & K. Matsumaru (1982)- Larger foraminifera from the Philippines. Part XIV. On some larger Foraminifera-bearing rocks from Palawan. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 24, p. 39-44.
(Three outcrop samples from Palawan with M-L Miocene larger foraminifera (Lepidocycline (Multilepidina) luxurians). No stratigraphic context)

Hashimoto, W. & K. Matsumaru (1984)- Mesozoic and Cenozoic larger Foraminifera of the Philippines and references to those found from Borneo by the APRSA's palaeontological reconnaissance. In: T. Kobayashi, R.

Toriyama & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 147-166.
(Review of Cretaceous (Orbitolina) and Tertiary larger foraminifera occurrences in The Philippines)

Hashimoto, W., K. Matsumaru & P.M. Alcantara (1982)- Larger foraminifera from the Philippines. Part XIII. Larger foraminifera from the Trankalan Limestone and the Escalante (Toboso) Formation, West of Lanao River Valley, northeastern Occidental Negros. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 24, p. 31-38.
(Trankalan Lst with Late Oligocene Te2-3- Te4 larger foraminifera (Lepidocyclina, Spiroclypeus, Miogypsinoides companatus, etc., Escalante Fm with Early Miocene Te4-Te5 forams (inc. Miogypsina))

Hashimoto, W., K. Matsumaru & H. Fuchimoto (1980)- Consideration on the stratigraphy of the Caraballo Range, Northern Luzon: larger foraminiferal ranges on the Cenozoic of the Philippines. In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 119-134.
(Caraballo Range of NE Luzon with larger foram-bearing limestones of different ages: low-metamorphic Lubingan Fm 'basement' with Eocene Nummulites Lst (= ~M Eocene metamorphism?). Mamparang Fm volcanics with Oligocene Eulepidina. Unconformably overlain by latest Oligocene- E Miocene (Te) Santa Fe Lst with Miogysinoides, Spiroclypeus, Eulepidian, etc., late E Miocene (Tf1) Natbang Fm)

Hashimoto, W., K. Matsumaru & K. Kurihara (1977)- Larger foraminifera from the Philippines. Part V. Larger Foraminifera from Cenozoic limestones in the Mansalay vicinity, Oriental Mindoro, with appendix "An orbitoid-bearing limestone from Barahid, Bongabong". In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 18, p. 59-76.

Hashimoto, W., K. Matsumaru & K. Kurihara (1978)- Larger foraminifera from the Philippines. Part VI. Larger foraminifera found from the Pinugay Hill Limestone, Tanay, Rizal, Central Luzon. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 65-72.
(Cosico et al 1989: occ. Late Cretaceous Lepidorbitoides, Omphalocyclus and Paleocene Ranikothalia, Distichoplax, Assilina on Luzon)

Hashimoto, W., K. Matsumaru & K. Kurihara (1978)- Larger foraminifera from the Philippines. Part VII. Larger Foraminifera found from the Lutak Hill Limestone, Pandan Valley, Central Cebu, Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 19, p. 73-80.

Hashimoto, W., K. Matsumara, K. Kurihara, P.P. David & G.R. Balce (1977)- Larger foraminiferal assemblages useful for the correlation of the Cenozoic marine sediments in the mobile belt of the Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 18, p. 103-124.
(Range charts, etc.) showing occurrences of 137 species of larger forams between Paleocene- Miocene, and correlation with planktonic foram zonation)

Hashimoto, W., K. Matsumaru & M. Sugaya (1982)- Larger Foraminifera from the Philippines. Part XI. On the Coal Harbor Limestone, Cagraray Island, Batan Island Group, Albay Province. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 22, p. 55-62.
(Five U Oligocene- M Miocene species of larger forams)

Hashimoto, W. & T. Sato (1968)- Contribution to the geology of Mindoro and neighboring islands, The Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 192-210.
(Mindoro and neighboring islands key area for early geologic history of Philippines, with crystalline schists, and folded Triassic, Jurassic and Eocene sediments. M-U Jurassic Mansalay Fm with conglomerates with

clasts of metamorphics and Permian fusulinid limestones. Thick Eocene clastics (>1000m) on N Mindoro, with Nummulites and Biplanispira?.)

Hashimoto, W. & T. Sato (1973)- Geological structure of North Palawan and its bearing on the geological history of the Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University Tokyo Press, 13, p. 145-161.
(N Palawan (mainly Malampaya Sound) low-metamorphic M Permian (with black fusulinid limestones, incl. Neoschwagerina, Verbeekina, Parafusulina)- M Triassic sediments, intensely folded, with NNW-SSE fold axes. In S Mindoro similar rocks unformably overlain by M and U Jurassic)

Hashimoto, W., T. Sato & S. Kanno (1984)- Geological summary of the APRSA activities in the Philippines. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University Press, Tokyo, 25, p. 61-108.
(Review of Japanese paleontological work in Philippines)

Hashimoto, S. G. Takizawa, G.R. Balce, E.A. Espiritu & C.A. Baura (1980)- Discovery of Triassic conodonts from Majalon and Uson Islands of the Calamian Island Group, Palawan Province, the Philippines, and its geological significance. Proc. Japan Academy 56, Ser. B, p. 69-73.
(online at: https://www.jstage.jst.go.jp/article/pjab1977/56/2/56_2_69/_pdf)
(Discovery of Epigondolella abneptis, a Lower Norian index conodont of Japan, in limestone at SE coast of Malajon Island, Calamian Islands, N of Palawan. These radiolarites appear to be unconformably overlain by latest Triassic- E Jurassic limestones and clastics described by Fontaine 1979)

Hatley, A.G. (1977)- The Nido reef oil discovery in the Philippines, its significance: Proc. ASEAN Council on Petroleum, Jakarta, p. 263-277.

Hatley, A.G. (1978)- The Nido reef discovery in the Philippines its significance. Oil and Gas J. 24, p. 13-16.

Hatley, A.G. (1978)- Palawan oil spurs Philippine action. Oil and Gas J., 27 Feb.1978, p. 112-118.

Hatley, A.G. (1980)- The Philippines Nido reef complex oil field: a case history of exploration and development of a small oil field. Offshore SE Asia Conf. 1980, Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 16-23.
(Nido complex 1976 oil discovery off NW Palawan. Reservoir two separate small Late Oligocene- E Miocene reefal buildups on E Oligocene carbonate platform. Field produced up to 40,000 barrels of oil/ day)

Hatley, A.G. (1992)- Finding oil where it shouldnôt be. In: A.G. Hatley (ed.) The oil finders, a collection of stories about exploration, Centex Press, Utopia, p. 119-140.
(History of Philippines Nido Field discovery)

Hatley, A.G. & R.Y. Harry (1979)- Exploration and development of the Nido Reef complex oil discovery, Philippines. CCOP/SOPAC Tech. Bull. 3, p. 253-260.

Hawkins, J.W. & C.A. Evans (1983)- Geology of the Zambales Range, Luzon, Philippine Islands: ophiolite derived from an island arc- back arc basin pair. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands- II. American Geophys. Union (AGU), Geophys. Monograph 27, p. 95-123.
(Geological and geochemical features of Acoje Block of Zambales ophiolite show volcanic arc signatures)

Hawkins, J.W., J.C. Moore, R. Villamor, C. Evans & E. Wright (1985)- Geology of the composite terranes of East and Central Mindanao. In: D.G. Howell (ed.) Tectonostratigraphic terranes of the Circum Pacific region 1, Circum-Pacific Council Energy and Mineral Resources, Earth Science Ser., p. 437-463.
(Phillippine Archipelago formed by amalgamation of many geologic terranes. E Mindanao two composite terranes, sutured together by mid-Tertiary (Late Oligocene?). W Mindanao terrane is extension of Sangihe Arc)

Hayami, I. (1968)- Some Jurassic bivalves from Mindoro. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 5, p. 173-185.
(Descriptions of 8 species of U Callovian- Oxfordian bivalves from dark grey mudstones of Mansalay Fm on Mansalay Island (part of Palawan Block, incl. Inoceramus cf. galoi, Aulacomyella, Plagiostoma, Astarte, Rutitrigonia, Myophorella, etc.)

Hayasaka, I. (1943)- On the Jurassic formation of the Philippines; with a note on *Trigonia*. Taiwan Tigaku Kidi, 14, p. 1-12.
(in Japanese, with English summary. Arkell 1956: Jurassic ammonites in shales of SE Mindoro Island, incl. Arietites, Oppelia, Macrocephalites, Peltoceras, Perisphinctes. Also bivalve Trigonia mindoroensis (see also Andal et al. 1968, Jurassic Mansalay Fm, ammonites interpreted as U Oxfordian in age)

Hayes, D.E. & S.D. Lewis (1984)- A geophysical study of the Manila trench, Luzon, Philippines. 1- Crustal structure, gravity and regional tectonic evolution. J. Geophysical Research, Solid Earth, 89, B11, p. 9171-9195.
(Manila Trench subduction zone is active convergent plate margin between S China Sea and N Philippines. With associated volcanic arc, E-dipping Benioff zone beneath Luzon, and well-developed fore arc basin system. Luzon Trough fore arc basins up to 4.5 km of Cenozoic sediments. Accretionary prism seaward of fore arc basin system. Uplifted Zambales ophiolite forms landward side of fore arc basin. Average convergence at Manila Trench 10-20 mm/yr and may be slowing in N due to collision of Taiwan with Eurasia (see also Lewis and Hayes 1989))

Hayes, D.E. & S.D. Lewis (1985)- Structure and tectonics of the Manila trench system, Western Luzon, Philippines. Energy 10, p. 263-279.
(Manila Trench active subduction zone W of Luzon is plate margin between S China Sea and N Philippines, with E-dipping Benioff zone beneath Luzon, accretionary prism of turbidite sediments, forearc basin with up to 4.5 km of Cenozoic sediments and volcanic arc. Subduction may have been active since Late Oligocene- E Miocene, synchronous with cessation of Paleogene subduction along E Luzon and similar to age of uplift and tilting of Zambales ophiolite. Trench strata folded and faulted at base of trench slope; major decollement usually near boundary between pelagic sediments and overlying turbidite sediments. Uplifted Zambales ophiolite forms landward side of forearc basin. Uplift of forearc basins only near intersection of relict spreading center of S China Sea plate)

Hayes, D.E. & W.J. Ludwig (1967)- The Manila Trench and West Luzon Trough- II. Gravity and magnetics measurements. Deep Sea Research 14, 5, p. 545-560.
(Manila Trench and W Luzon Troughs W of the Philippine Island Arc at Luzonwith free-air gravity anomalies of -80 mgal and -145 mgalrespectively. Magnetic anomalies cannot be correlated over appreciable distances and are much smaller E of the trench than W of it (see also companion paper of Ludwig et al. 1967)

Hedenquist, J.W., A. Arribas & M. Aoki (2017)- Zonation of sulfate and sulfide minerals and isotopic composition in the Far Southeast Porphyry and Lepanto epithermal Cu-Au deposits, Philippines. Resource Geology 67, 2, p. 174-196.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/rge.12127/epdf)
(On Far Southeast (FSE) porphyry system and adjacent Lepanto Lepanto Cu-Au high-sulfidation deposit of Mankayan mineral district of N Luzon. Age of mineralization ~1.3-1.4 Ma)

Hedenquist, J.W., A. Arribas & T.J. Reynolds (1998)- Evolution of an intrusion-centred hydrothermal system: far Southeast- Lepanto porphyry and epithermal Cu-Au deposits, Philippines. Economic Geology 93, p. 373-404.

Hillmer, G. (ed.) (1991)- Central Philippines: mapping, mining, modern reefs. Mitteilungen Geol.-Palaont. Inst. Universitat Hamburg 71, p. 1-506.

Hinz, K., E.H.K. Kempter & H.U. Schluter (1985)- The southern Palawan-Balabac area: an accreted or non-accreted terrane? Proc. 3rd Conf. Asian Council on Petroleum (ASCOPE), Kuala Lumpur, 2, p. 48-72.

(Palawan Trough not underlain by SW-subducting oceanic plate from which sediments were scraped off in pre-M Miocene time, as Hamilton (1979) a.o. suggested, but by N Palawan continental terrane, which underlies Palawan Trough, the W shelf of Palawan and NW Borneo. Strongly deformed and ophiolite-bearing equivalents of Cretaceous Chert-Spilite and Paleogene Crocker Fms of S and C Palawan were overthrusted in pre-M Miocene time onto N Palawan continental terrane)

Hinz, K. & H.U. Schluter (1985)- Geology of the Dangerous grounds, South China Sea, and the continental margin off southwest Palawan: results of SONNE cruises SO-23 and SO-27. Energy 10, 3-4, p. 297-315.
(Seismic, magnetic and gravity data along 51 profiles in SE S China Sea (Dangerous Grounds, Palawan Trough). Five regional unconformities: Miocene-Pliocene, M Miocene (end of S China Sea seafloor spreading), Lower Miocene (often top of carbonate platforms), M-U Oligocene (rift-drift transition S China Sea) and Cretaceous-Paleocene (onset of rifting). Dangerous Grounds and parts of Palawan Trough underlain by stretched continental crust. Oldest rocks sampled in Dangerous Grounds U Triassic- Jurassic. U Oligocene- Lw Miocene carbonate platform from Dangerous Grounds E under Palawan Trough and Palawan shelf. C and S Palawan part of microcontinent with Dangerous Grounds/Reed Bank, N Palawan and Calamian block. E edge of carbonate platform overthrust from S by chaotically deformed sediments, suggesting Palawan Trough not ancient subduction trench, but loading of overthrust wedge)

Hock, M. & G. Friedrich (1985)- Structural features of ophiolitic chromitites in the Zambales Range, Luzon, Philippines. Mineralium Deposita 20, p. 290-301.
(Chromitite-bearing peridotites of Zambales mafic-ultramafic complex form lowermost level of Zambales ophiolite, which exposes complete ophiolitic sequence. Chromitites close to peridotite/gabbro transition zone)

Hock, M., G. Friedrich, W.L. Pluger & A. Wichowski (1986)- Refractory- and metallurgical-type chromite ores, Zambales ophiolite, Luzon, Philippines. Mineralium Deposita 21, 3, p. 190-199.
(Zambales ophiolite the major source of chromite ore in Philippines. Chromitites are concordant cumulates associated with distinct chromitite-bearing sequences within mantle peridotites. Refractory and metallurgical chromite deposits spatially separated and related to different lithologic associations)

Hollings, P., D.R. Cooke, P.J. Waters & B. Cousens (2011)- Igneous geochemistry of mineralized rocks of the Baguio District, Philippines: implications for tectonic evolution and the genesis of porphyry-style mineralization. Economic Geology 106, 8, p. 1317-1333.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.827.8817&rep=rep1&type=pdf)
(Baguio district large copper-gold province in epithermal, porphyry, and skarn deposits that formed in last 3.5 My. Pliocene and Pleistocene igneous rocks associated with mineralization are intermediate- felsic low-medium K intrusions (contaminated by young arc crust), and mafic-intermediate, medium K-shoshonitic hornblende-phyric dikes (primitive mantle-derived melts). Philippine arc currently sandwiched between two active subduction zones)

Hollings, P., G. Sweet, M. Baker, D.R. Cooke & R. Friedman (2013)- Tectonomagmatic controls on porphyry mineralization: geochemical evidence from the Black Mountain porphyry system, Philippines. In: M. Colpron et al. (eds.) Tectonics, metallogeny, and discovery: the North American Cordillera and similar accretionary settings, Society of Economic Geologists, Spec. Publ. 17, p. 301-335.
(Black Mountain SE Cu-Au porphyry system of Baguio district, N Luzon, two orebodies, associated with 6 intrusive phases between ~4.7- 2.8Ma. Porphyry mineralization interpreted to have formed as result of underplating of felsic magma chamber by mafic magma, from mantle recharge related to subduction of aseismic Scarborough Ridge)

Hollings, P., R. Wolfe, D.R. Cooke & P.J. Waters (2011)- Geochemistry of Tertiary igneous rocks of Northern Luzon, Philippines: evidence for a back-arc setting for alkalic porphyry copper-gold deposits and a case for slab roll-back?. Economic Geology and Bull. Soc. Econ. Geol. 106, 8, p. 1257-1277.
(On Late Oligocene- E Miocene volcanic rocks in C Cordillera Range and Cagayan Valley of N Luzon)

Holloway, N.H. (1981)- The North Palawan block, Philippines: its relation to the Asian mainland and its role in the evolution of the South China Sea. Bull. Geol. Soc. Malaysia 14, p. 19-58.
(online at: www.gsm.org.my/products/702001-101199-PDF.pdf)
Mindoro, N Palawan and Reed Bank in SW Philippines form Palawan Block continental fragment. Permian-Paleogene rocks with 4 pre-Neogene unconformities suggest original pre-drift position against S China mainland. Tectonic history: (1) Jurassic-Cretaceous convergent continental margin; (2) Late Cretaceous inception of Philippine island arc system; (3) CCW rotation of arc from Late Eocene onwards; (4) Paleocene-M Miocene opening of South China Sea; (5) E-M Miocene collision with Palawan subduction system)

Holloway, N.H. (1982)- North Palawan Block, Philippines- its relation to Asian mainland and role in evolution of South China Sea. American Assoc. Petrol. Geol. (AAPG) Bull. 66, 9, p. 1355-1383.
(Same as Holloway (1981). See also critique of Wolfe (1984))

Ignacio, E.E. & H.G. Oesterle (1994)- Philippines/ Philippinen. In: H. Kulke (ed.) Regional petroleum geology of the world, I, Borntraeger, Berlin, p. 795-806.
(Review of oil-gas basins and fields of The Philippines)

Ilao, K.A., C.K. Morley & M.A. Aurelio (2018)- 3D seismic investigation of the structural and stratigraphic characteristics of the Pagasa Wedge, Southwest Palawan Basin, Philippines, and their tectonic implications. J. Asian Earth Sci. 154, p. 213-237.
(Pagasa Wedge deepwater orogenic wedge variously interpreted as accretionary prism, former accretionary prism modified by thrusting onto thinned continental margin, and gravity-driven fold-thrust belt. At least external part of wedge dominated by mass transport complexes. Accretionary prism stage (Oligocene) of C Palawan Ophiolite with N-vergent deformation. Deep Regional Unconformity (~17 Ma) likely indicates time when obduction ceased in Palawan. Pagasa Wedge is late-stage product of convergence history. Dominant NW transport of structures in wedge possibly related to gravity-driven structures responding to uplift of NE-SW Dangerous Grounds margin in M Miocene (related to slab breakoff?))

Imai, A. (2000)- Mineral paragenesis, fluid inclusions and sulfur isotope systematics of the Lepanto-Far Southeast porphyry Cu-Au deposit, Mankayan, Benguet, Philippines. Resource Geology 50, p. 151-168.

Imai, A. (2002)- Metallogenesis of porphyry Cu deposits of the Western Luzon Arc, Philippines: K-Ar ages, SO3 contents of microphenocrystic apatite and significance of intrusive rocks. Resource Geology 52, 2, p. 147-161.
(W Luzon arc has been generating porphyry Cu mineralization associated with intermediate-silicic magmatism related to E-ward subduction since Miocene. K–Ar ages of porphyry Cu deposits in W Luzon arc: Lobo-Boneng (10.5 Ma), Santo Nino (9.5Ma), Black Mountain (2.1 Ma), Dizon (2.5 Ma) and Taysan (7.3 Ma))

Imai, A. (2005)- Evolution of hydrothermal system at the Dizon porphyry Cu-Au deposit, Zambales, Philippines. Resource Geology 55, 2, p. 73-90.
(Dizon deposit Au-rich porphyry Cu deposits in W Luzon arc. K-Ar age of diorite porphyry 2.5 ± 0.2 Ma)

Irving, E.M. (1950)- Review of Philippine basement geology and its problems. Philippine J. Science 79, 3, p. 267-307.

Irving, E.M. (1952)- Geological history and petroleum possibilities of the Philippines. American Assoc. Petrol. Geol. (AAPG) Bull. 36, 3, p. 437-476.
(Philippine geology complex, with relatively small Neogene basins. Certain areas may possess reasonably attractive petroleum possibilities although exploratory efforts to date have been negative)

Irving, E.M. (1953)- A geologic map (biostratigraphic-lithologic) of The Philippines, scale 1:125,000. Philippine Bureau of Mines and US Geological Survey, Manilla.

Ishida, K., S. Suzuki, C. Dimalanta & G.P. Yumul (2011)- Radiolarian dating of ophiolites and the overlying turbidites in the Philippine Mobile Belt, Northern Luzon Island. In: GEOCON 2011, 24th Ann. Geol. Conv. Geol. Soc. Philippines, 2p. *(Abstract only)*
(Zambales Ophiolite Complex chert blocks in serpentinites with Tethyan Late Jurassic- E Cretaceous radiolarians. Montalban Ophiolitic Complex Kinabuan Fm sediment cover topped by radiolarian-bearing bathyal limestone with Santonian- E Maastrichtian planktonic foraminifera; Turonian age suggested by radiolarians and pelagic forams. N Sierra Madre at NW Dingalan red chert blocks in ophiolitic basic tuff phyllite dated as Late Jurassic- E Cretaceous)

Ishida, K., S. Suzuki, C. Dimalanta, G. Yumul & R. Pena (2013)- Radiolarian dating of ophiolite-cover turbidites in Rizal, southern Sierra Madre, central Luzon Island. In: 2nd Int. Symposium Int. Geoscience Programme (IGP) Project 589, Borocay Island, Philippines, p. 13-15. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/2nd%20Symposium/Abstract%20volume.pdf)
(Radiolarian dating of turbiditic carapace of Montalban Ophiolitic Complex in S Sierra Madre, Rizal area. M-U Maybangain Fm turbidites of M Eocene age with Podocyrtis, etc.. Paleocene radiolarians in similar volcaniclastic turbidites on pillow lava, tentatively distinguished as Alas Asin Unit. Montalban Ophiolitic Complex basalts overlain by Turonian- Coniacian turbidites, then Santonian- E Maastrichtian bathyal limestones. Sedimentation of volcanoclastic turbidites in Paleocene- M Eocene. Masungi Lst with M Paleocene-M Eocene larger foraminifera encountered as olistolithic slumps in Maybangain Fm turbidites)

Ishida, K., S. Suzuki, C. Dimalanta, G.P. Yumul, K. Queano, D. Faustino-Eslava et al. (2012)- Recent progress in radiolarian research for ophiolites and the overlying turbidites, Philippine Mobile Belt, Northern Luzon Island. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geoscientica Sinica 33, Suppl. 1, p. 29-31. *(Extended Abstract)*
(online at: http://igcp589.cags.ac.cn/pdf/15-ISHIDA%20et%20al%20LuzonRad.pdf)
(Basement of Philippine Mobile Belt mainly ophiolites, overlain by Paleogene- Miocene turbidites in C Luzon. Chert blocks part of sedimentary carapace of Acoje Block of Zambales Ophiolite Complex (ZOC), with M Jurassic- E Cretaceous radiolaria, much older than previously assigned Eocene age of Zambales Ophiolite Complex. Coto block of ZOC formed in Eocene. Late Mesozoic radiolaria from ZOC characterized by Archaeodictyomitra, Pseudodictyomitra, Xitus, Triactoma and Tetraditryma, which are common in Tethyan pelagic environment)

Ishida, K., S. Suzuki, C. Dimalanta, G.P. Yumul, L.R. Zamoras, M. Faure et al. (2015)- Discovery of Triassic microfossils from the Buruanga Peninsula, Panai Island, North Palawan Block, Philippines. Natural Science Research, University Tokushima 29, 2, p. 5-20.
(online at: http://web.ias.tokushima-u.ac.jp/bulletin/nat/nat29-2-1.pdf)
(Buruanga Peninsula of NW Panai Island is part of N Palawan Block. Contains common M and Late Triassic pelagic carbonates, earlier assigned to Jurassic and associated with basalts and cherts, contain late Anisian and late Norian conodonts and radiolarians (conodont zones Gladigondolella tethydis- Paragondolella excelsa). Bedded-chert units with radiolaria ranging from lower Ladinian to M Jurassic)

Ishida, K., S. Suzuki, G.P. Yumul & C.B. Dimalanta (2008)- New micropaleontological evidence for the Dingalan Formation, Central East Luzon, Philippine Mobile Belt. In: Proc. Int. Symp. Geoscience resources and environments of Asian terranes (GREAT 2008), 4th IGCP 516 and 5th APSEG, Bangkok, p. 192-194.
(Radiolarians from Dingalan Fm, Central E Luzon, correlative with M Eocene and <30° low paleolatitude)

Ishida, K., S. Suzuki, G.P. Yumul & C.B. Dimalanta (2011)- Middle Eocene low-paleolatitude radiolarian evidence for the Cabog Formation, Central East Luzon, Philippine Mobile Belt. Gondwana Research 19, 1, p. 61-70.
(Cabog Fm chert- siliceous shale distal turbidites exposed along S Dingalan Bay, C-E Luzon, with M Eocene radiolaria of D. mongolfieri Zone/ T. triacantha Zone, and with low paleolatitude affinity. Represents first depositional stage in early arc setting)

Ishijima, W. (1969)- Tertiary and Pleistocene algae from Mindoro, The Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 6, p. 277-291.
(Descriptions of mainly Eocene and Pleistocene calcareous algae from S part of Mindoro Island, with Archaeolithothamnium, Lithothamnium, Mesophyllum, Lithophyllum, Lithoporella, Amphiroa, Corallina, Jania, etc. Eocene samples associated with larger forams Pellatispira, Biplanispira, Nummulites, Discocyclina)

Ishijima, W. & W. Hashimoto (1969)- Discovery of *Distichoplax biserialis* Dietrich in Upper Eocene limestone lenses exposed in the valley of the Mangamnan River, Marinduque Island, The Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southest Asia, University of Tokyo Press, 7, p. 87-92.
(Occurrence of characteristic algae Distichoplax biserialis in Eocene limestone on Marinduque Island, associated with Pellatispira, Discocyclina, Nummulites, Assilina?. Previously reported from S Palawan, Cebu and Bicol by Villavicencio and Andal (1964), where associated with Paleocene foraminifera)

Ishiwada, Y. (1971)- Analysis of petroleum source rocks from the Philippines. United Nations ECAFE CCOP Techn. Bull. 4, p. 83-92.
(Summary of geochemical analyses of 60 outcrop samples from Luzon, Mindoro and Panay. Not very useful)

Isozaki, Y., E.A. Amiscaray & A. Rillon (1987)- Permian, Triassic and Jurassic bedded radiolarian cherts in North Palawan Block, Philippines: evidence of Late Mesozoic subduction-accretion. J. Geol. Soc. Philippines 41, p. 79-93.
(Paper also in Pre-Jurassic evolution of eastern Asia, Report IGCP Project 224, no. 3, p. 99-115). In Philippines, pre-Tertiary rocks mostly in SW part (N Palawan Block). Bedded radiolarian cherts have M-L Permian, M Triassic E Jurassic and Late Jurassic ages. Presence of Late Jurassic chert necessitates revision of tectono-sedimentary history of N Palawan Block)

Isozaki, Y., E.A. Amiscaray & A. Rillon (1988)- Permian, Triassic and Jurassic bedded radiolarian cherts in North Palawan Block, Philippines: evidence of Late Mesozoic subduction-accretion. In: K. Ichikawa (ed.) IGGP Project 224, Pre-Jurassic evolution of Eastern Asia, Rept. 3, p. 99-115.
(same paper as Isozaki et al. 1987)

Iwasaki, Y. (1970)- A Miocene molluscan fauna in The Philippines. Trans. Proc. Paleont. Soc. Japan, N.S., 77, p. 205-228.
(online at: www.palaeo-soc-japan.jp/download/TPPSJ/TPPSJ_NS77.pdf)
(Mollusc fauna from E Miocene lower Gumaca Fm (unconformable on basement) in Pitogo area, Tayabas Isthmus, SE Luzon, With 36 species, incl. gastropod Vicarya callosa, Anadara multiformis, Joannisiella cumingi, Strombus tjilonganensis, Paphia exarata, etc. Similar to faunas from Japan and W Java)

Javelosa, R.S. (1994)- Active Quaternary environments in the Philippine Mobile belt. Ph.D. Thesis Int. Training Centre for Aerial Survey (ITC), Enschede, p. 1-179. *(Unpublished)*

Jego, S., R.C. Maury, M. Polve, G.P. Yumul, H. Bellon, R.A. Tamayo & J. Cotten (2005)- Geochemistry of adakites from the Philippines: constraints on their origins. Resource Geology 55, p. 163-187.
(Late Miocene-Quaternary magmatic rocks with compositions within adakitic field (using Sr/Y ratios versus Y contents), found in four subduction zones: Manila Trench (Batan, Luzon), Negros and Sulu Trenches (Negros and W Mindano), Cotobato Trench (S Mindanao) and Philippine Trench (E Mindanao). Lavas from C Mindanao overlie deep remnants of Molucca Sea Plate, emplaced in post-collision setting. Model for genesis of 'typical adakites' is ~20% partial melting of subducted altered oceanic metabasalts converted to eclogite)

John, T.U. (1963)- Geology and mineral deposits of East-Central Balabac Island, Palawan Province, Philippines. Economic Geology 58, p. 107-130.
(Balabac Island part of W Luzon Arc, which continues into Kinabalu Range of N Borneo. East-central Balabac Oldest rocks steeply dipping, isoclinally folded and thrusted U Cretaceous- Lower Eocene chert-spilite Fm, dominated by submarine lava flows, also shales and bedded radiolarian cherts. Associated with ultramafics and copper mineralization. Overlain by less-deformed Miocene Balabac Sst, and Pliocene sandstone and mudstone

without economic mineralization. Structural trends similar to nearby Kudat Peninsula in N Borneo. Lorraine Orebody is massive pyrite-chalcopyrite replacement deposit in bedded cherts near Espina Point)

John, T.U. (1963)- Geology and mineral deposits of East-Central Balabac Island, Palawan Province, Philippines. J. Geol. Soc. Philippines 17, 1, p.
(Same as above)

Jurgan, H. & R.M.A. Domingo (1989)- Younger Tertiary limestone formations in the Visayan Basin, Philippines. In: H. Porth & C.H. von Daniels (eds.) On the geology and hydrocarbon prospects of the Visayan Basin, Philippines, Geol. Jahrbuch B70, p. 207-275.
(Outcrop study of M Oligocene- M Miocene carbonates on Cebu, Negros, Masbate, Leyte and Bohol)

Kanno, S., W. Hashimoto, N. Aoki, H. Noda & P.M. Alcantara (1980)- Stratigraphic horizons and geologic ages of the Philippine Vicarya (Gastropoda). In: T. Kobayashi, R. Toriyama et al. (eds.) Symposium on the geology and paleontology of SE Asia, Tsukuba 1978, Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 135-161.
(Tertiary gastropod Vicarya widely distributed in Indo-Pacific, incl. M-U Miocene of Philippines. V. callosa widely distributed in E-M Miocene (Te5- Tf3) of Philippines. (In Java, Indonesia viewed as Preangerian/ Tf2-3 marker species by Oostingh 1938)

Kanno, S., S. O'Hara & N.L. Caagusan (1982)- Molluscan fauna from the Tartaro Formation (Upper Miocene) of Central Luzon, Philippines. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 24, p. 51-128.
(Late Miocene- E Pliocene bivalve and gastropod molluscs from Madlum River, San Miguel, C Luzon. Mainly shallow and marginal marine taxa)

Karasawa, H., H. Kato, T. Kase, Y. Maac-Aguilar, M. Kurihara, H. Hayashi & K. Hagino (2008)- Neogene and Quaternary ghost shrimpsand crabs (Crustacea: Decapoda) from the Philippines. Bull. Nat. Science Museum, Tokyo, C34, p. 51-67.
(online at: http://ci.nii.ac.jp/naid/110007342090/en)

Karig, D.E. (1975)- Basin genesis in the Philippine Sea. In: Initial Reports Deep Sea Drilling Project (DSDP) 31, p. 857-879.
(online at: www.deepseadrilling.org/31/volume/dsdp31_42.pdf)
(Philippine plate marginal basins opened rapidly during height of volcanic pulses along associated arc system. Mariana Trough opening at rates up to 10 cm/yr or more during last 2-3 My. Combined Parece Vela-Shikoku basin opened from~25 to 18 Ma at 10 cm/yr. W Philippine Basin extension from ~45-37 Ma)

Karig, D.E. (1983)- Temporal relationships between back arc basin formation and arc volcanism with special reference to the Philippine Sea. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands- II. American Geophys. Union (AGU), Geophys. Monograph 27, p. 318-325.
(Back arc basin formation in Philippine Sea previously linked to minima in intensity of arc volcanism, but wordwide study of last 5 My and re-evalution of PS data suggest pulses of spreading and volcanism nearly synchronous)

Karig, D.E. (1983)- Accreted terranes in the northern part of the Philippine archipelago. Tectonics 2, 2, p. 211-232.
(Philippine Archipelago complex array of ophiolites, continental fragments and island arc elements, from W to E: Neogene accretionary prism of W Luzon Arc, Eocene Zambales ophiolite (E-dipping, 70° CCW rotation, exhumed in earliest Miocene). Late Cretaceous Angat ophiolite overlain by Maastrichtian- Eocene arc volcanic turbidites, and formed West of a Cretaceous- Early Tertiary subduction system along E coast of Luzon. Late Cretaceous- E Paleogene volcanic arc built on older East Luzon metamorphic belt. To S, W Luzon terranes juxtaposed against Mindoro metamorphic basement block, which is colliding with N Palawan microcontinent)

Karig, D.E., D.R. Sarewitz & G.D. Haeck (1986)- Role of strike-slip faulting in the evolution of allochthonous terranes in the Philippines. Geology 14, p. 852-855.
(In N Philippines, allochthonous terranes originated primarily within upper plate arc system, were translated along it by strike-slip faults, and 'emplaced' by cessation of that slip. Some originally vertical strike-slip boundaries may have evolved into shallow-dipping 'sutures marked by fold and thrust systems)

Keenan, T.E., J. Encarnacion, R. Buchwaldt, D. Fernandez, J. Mattinson, C. Rasoazanamparanye & P.B. Luetkemeyer (2016)- Rapid conversion of an oceanic spreading center to a subduction zone inferred from high-precision geochronology. Proc. National Academy Sciences USA 113, 47, p. E7359-E7366.
(online at: www.pnas.org/content/113/47/E7359.full.pdf)
(On initiation of subduction zones at spreading centers. In W Philippines oceanic crust was less than ~1 My old when it was underthrust and metamorphosed at onset of young, short-lived subduction in Palawan. Differences between ages of upper plate (Palawan ophiolite;35.2 Ma), subducting plate (protoliths of oceanic? sole,), and metamorphism (~34.2 Ma) of sole less than ~1 My. Young and positively buoyant, but weak, lithosphere was preferred site for subduction nucleation)

Kerntke, M. (1991)- Zur geotektonischen Entwicklung der Visayas/ Philippinen und ihres sudost-asiatischen Rahmens. Mitteilungen Geol. Palaeont. Institut Universitat Hamburg 71, p. 61-92.
('On the geotectonic development of the Visayas, Philippines and its SE Asian setting')

Kerntke, M. (1992)- Petrographische, geochemische und geochronologische Untersuchungen der Porphyr-Kupferlagerstatte Atlas Mining auf der Insel Cebu (Phillippinen). Doct. Dissertation Universitat Hamburg, 300p.

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('Geochemistry and geochronology of the magmatic rocks of Lutopan and Talmban, Cebu, Philippines'. First zircon U/Pb determination in Philippines shows age of 109 ± 2 Ma forBiga porphyries, Lutopan, which agrees with new Rb/Sr ages of 103.5- 106.5Ma (Albian))

Keston, S. (1981)- Geological relationship between Reed Bank and offshore western Palawan, Philippines. Proc. 4th Regional Conf. Geology, Minerals and Energy Resources of SE Asia (GEOSEA), Manila 1981, p. 829-834.

Kiessling, W. & E. Flugel (2000)- Late Paleozoic and Late Triassic limestones from North Palawan Block (Philippines): microfacies and paleogeographical implications. Facies 43, p. 39-78.
(Permian- Carboniferous limestones in El Nido area. Paglugaban Fm with M Carboniferous fusulinids (Pseudofusulinella). Permian Minilog Fm Guadalupian fusulinids (Verbeekina verbeeki, Colania douvillei, Parafusulina, Neoschwagerina) and dasycladacean wacke-packstones with Permocalculus, Shamovella (=Tubiphytes) and Mizzia velebitana and colonial coral Waagenophyllum. Busuanga Island Late Triassic (Rhaetian) limestones in reef and platform facies with Triasina hantkeni, etc., similar to E Sulawesi, Banda Basin, Malay Peninsula, Malay Basin, etc. (also Sambosan seamount reefs, SW Japan; Peybernes 2016). Carbonates formed on seamounts surrounded by deep water radiolarian cherts (now in Jurassic- E Cretaceous accretionary complex?). With Golonka Permian-Triassic plate recontructructions. Permian-Triassic carbonates contradict close paleogeographic connection between N Palawan Block collided with S China Block in Late Cretaceous (then separated again with S China Sea opening))

Kintanar (1976)- Petroleum geology of the Philippines. Proc. 2nd Geol. Conv. and 1st Symp. Geology and Mineral Resources of the Philippines, GPS, Manila, 1, p. 401-432.

Knittel, U. (2011)- 83 Ma rhyolite from Mindoro- evidence for Late Yanshanian magmatism in the Palawan continental terrane (Philippines). Island Arc 20, p. 138-146.

(Low-grade meta-rhyolite with age of 83 Ma documents Late Cretaceous magmatism in N Mindoro Island, at NE edge of Palawan Continental Terrane which rifted from SE China in Oligocene. Rhyolite volcanism widespread in SE China in Cretaceous. Provides further evidence that NE Mindoro is indeed part of Palawan Continental Terrane, not part of Philippine Mobile Belt to E)

Knittel, U. & U. Daniels (1987)- Sr-isotopic composition of marbles from the Puerto Galera area (Mindoro, Philippines); additional evidence for a Paleozoic age of a metamorphic complex in the Philippine island arc. Geology 15, p. 136-138.
(Sr-isotopic composition of marbles from metamorphic complex of Puerto Galera area, NE Mindoro, compatible with either Tertiary or Paleozoic age. Late Paleozoic age most likely, implying metamorphic complex not part of basement of Philippine arc, but is accreted terrane)

Knittel, U. & M.J. Defant (1988)- Sr isotopic and trace element variations in Oligocene to Recent igneous rocks from the Philippine island arc: evidence for recent enrichment in the sub-Philippine mantle. Earth Planetary Sci. Letters 87, p. 87-99.
(Oligocene- Miocene plutonic rocks from Philippine island arc and Pliocene-Recent Bicol volcanic chain of S Luzon have Sr isotopic ratios of 0.7035-0.7039 (controlled by fluids from subducting Philippine Sea plate basalt). Volcanics erupted in past 5 Ma in C Luzon, Marinduque and Mindoro have higher radiogenic Sr (0.7042-0.7054; controlled by fluids from subducted S China Sea crust))

Knittel, U., M.J. Defant & I. Raczek (1988)- Recent enrichment in the source region of arc magmas from Luzon island, Philippines: Sr and Nd isotopic evidence. Geology 16, p. 73-76.
(Luzon wedged between E- and W-directed subducting slabs. W-ward subduction resulted in pre-Miocene igneous rocks from N Luzon typical of intra-oceanic arcs. Pliocene-Holocene volcanoes generated by E-ward subduction along W coast (Bataan- Mindoro arc) and reflect larger amounts of sediment available for subduction in S China Sea (slivers of continental Mindoro-N Palawan terrane apparently carried down to mantle depths after collision with arc in Miocene)

Knittel, U., C.H. Hung, T.F. Yang & Y. Iizuka (2010)- Permian arc magmatism in Mindoro, the Philippines: an early Indosinian event in the Palawan continental terrane. Tectonophysics 493, p. 113-117.
(online at: https://pdfs.semanticscholar.org/f035/70ff0cfb93c8e998273eb5e47e4b2af13594.pdf)
(Dating of zircons from metamorphic complex of NE Mindoro (=Palawan Continental Terrane) reveal episode of M-L Permian (250-270 Ma) magmatism, suggesting they are part of rifted margin of SE China rather than oceanic arc-dominated Philippine Mobile Belt. Magmatic episode here coincides with arc magmatism in Hainan (China), expanding known extent of that continental arc along SE margin of S China)

Knittel, U., A.G. Trudu, W. Winter, T.F. Yang & C. M. Gray (1995)- Volcanism above a subducted extinct spreading center: a reconnaissance study of the North Luzon Segment of the Taiwan-Luzon volcanic arc (Philippines). J. Southeast Asian Earth Sci. 11, p. 95-109.
(Ridge system of S China Sea, extinct since ~17 Ma, subducts below C part of Taiwan-Luzon volcanic arc. Buoyancy of crust of ridge system may be responsible for high elevation of arc. Volcanism in this part of arc characterized by small volumes of intermediate-felsic magma)

Knittel, U., M. Walia, S. Suzuki, C.B. Dimalanta, R. Tamayo, T.F. Yang & G.P. Yumul (2017)- Diverse protolith ages for the Mindoro and Romblon Metamorphics (Philippines): evidence from single zircon U-Pb dating. Island Arc 26, 1, e12160, p.
(Metamorphic complexes exposed in NE part of Palawan Continental Terrane considered to be rifted parts of Asian margin. Mindoro and Romblon Metamorphics with protoliths of variable age: Late Carboniferous-Late Permian in NE Mindoro; Eocene or younger in NW Mindoro; Miocene at S margin of Mindoro metamorphics (detrital zircon ages 22-56 Ma); and Cretaceous or later on Tablas (zircons as young as 112 Ma). Presence of non-metamorphic sediments of Late Eocene- E Oligocene age in Mindoro (Lasala Fm) suggests metamorphism of sediments of Mindoro result of Palawan terrane collision in Late Miocene (similarities in age spectra of zircons from Eocene-Miocene metamorphics with Eocene - E Miocene Lasala Fm))

Kobayashi, T. (1957)- A trigonian faunule from Mindoro in the Philippine islands. J. Faculty of Science, University of Tokyo, Sect. 2, 10, 3, p. 351-365.
(online at: http://umdb.um.u-tokyo.ac.jp/DKoseibu/pdf/Ref_0151_.pdf)
(Two Jurassic ammonite zones on SE coast of Mindoro: Callovian(?) with Macrocephalites and Oppelia and Oxfordian(?) black shale with perisphinctids (also described by Sato 1961;JTvG). Also probably latest Jurassic age Trigonia- Myophorella mollusc fauna from Agama River)

Koike, T., W. Hashimoto & T. Sato (1968)- Fusulinid-bearing limestone pebbles found in the Agbahag conglomerate, Mansalay, Oriental Mindoro, Philippines. In: T. Kobayshi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 4, p. 198-210.
(M Eocene conglomerate at Agbahag Point on SE Mindoro Island contains Permian fusulinid limestone pebbles. With 13 species, incl. Pseudofusulina fusiformis, P. kraffti, Misellina claudiae, Pseudodoliolina, Neoschwagerina cf simplex, Schubertella giraudi, Yangchienia compressa. Age ~Kungurian, late E Permian)

Kolb, J. & S. Hagemann (2009)- Structural control of low-sulfidation epithermal gold mineralization in the Rosario-Bunawan district, East Mindanao Ridge, Philippines. Mineralium Deposita 44, 7, p. 795-815.

Ku, C.Y. & S.K. Hsu (2009)- Crustal structure and deformation at the northern Manila Trench between Taiwan and Luzon islands. Tectonophysics 466, p. 229-240.
(Philippine Sea Plate overrides Eurasian Plate along E-dipping Manila Trench between Taiwan and Luzon islands. From S to N plate convergence gradually evolves from normal subduction of S China Sea lithosphere to initial collision of Taiwan orogen. Accretionary prism dramatically wider toward Taiwan. Subducting crust in the N Manila Trench area three zones: normal fault zone (where crust starts to bend and induces gravity sliding of upper sedimentary layers), proto-thrust zone and thrust zone (with blind thrust faults along location of pre-existing normal faults)

Kucera, J. (2015)- Diatreme breccia-hosted epithermal gold deposit at Ridge Mountain, Eastern Mindanao, Philippines. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 587-592. *(Extended Abstract)*

Lagmay, A.M.F.A., M.L.G. Tejada, R.E. Pena, M.A. Aurelio et al. (2009)- New definition of Philippine Plate boundaries and implications to the Philippine Mobile Belt. J. Geol. Soc. Philippines 64, p. 17-30.
(Present-day active plate boundaries surrounding Philippine Mobile Belt revised; now does not include E portion of North Luzon)

Lallemand, S., M. Popoff, J.P. Cadet, B. Deffontaines, A.G. Bader, M. Pubellier & C. Rangin (1998)- The junction between the central and southern Philippine Trench. J. Geophysical Research 103, B1, p. 933-950.

Lee, C.S., N.D. Trinidad & M.C. Galloway (1993)- A preliminary result of the Ragay Gulf survey in the Philippines. In: G.H. Teh (ed.) Proc. Symposium on tectonic framework and energy resources of the Western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 289-301.
(Seismic and geochemical sniffer surveys by AGSO on NE Palawan shelf- Cuyo Platform and SE Luzon Ragay Gulf- Tayabas Bay. Ragay Bay data indicate presence of significant hydrocarbon source rocks)

Lee, C.S., M.C. Galloway, J.B. Willcox, A. R. Fraser, A.M.G. Moore, J.R.L. Aposto, N.D. Trinidad, R.P. Abando, D.V. Panganiban & E.B. Guazon (1994)- Geology and petroleum potential of Ragay Gulf. Australian Geol. Survey Org. (AGSO), Canberra, Record 1994/41, Part 1, p. 1-42.
(online at: https://d28rz98at9flks.cloudfront.net/14753/Rec1994_041.pdf)

Leith, A. (1938)- The geology of the Baguio gold district. Philippines Dept. Agriculture, Techn. Bull. 9, p. 1-91.

Lewis, S. D. (1997)- Philippines. In: Encyclopedia of European and Asian regional geology, Chapter 78, Springer, p. 591-604

Lewis, S. D. & D. E. Hayes (1983)- The tectonics of northward propagating subduction along eastern Luzon, Philippines islands. In: D. E. Hayes (ed.) The tectonic and geologic evolution of SE Asian seas and islands 2, American Geophys. Union (AGU) Geophys. Monograph 27, p. 57-78.

Lewis, S.D. & D.E. Hayes (1984)- A geophysical study of Manila trench Luzon, Philippines. 2. Forearc basin structural and stratigraphic evolution. J. Geophysical Research, Solid Earth, 89, B11, p. 9196-9214.
(Sediment distribution in Manila Trench subduction zone W of Luzon exerts strong influence on tectonic evolution of accretionary prism and fore arc basins. Up to 2600m of turbidites from uplifted collision zone of Taiwan overlie thin hemipelagic sediment layer and oceanic basement in N part of Manila Trench. Size of accretionary prism varies with thickness of turbidite sediments within trench. Thickness of >200m of trench turbidites probably required before accretion and uplift become dominant process in fore arc region)

Lewis, S.D. & D.E. Hayes (1985)- Forearc basin development along Western Luzon, Philippines. Energy 10, 3, p. 281-296.
(Seismic data show up to 2600m of Neogene turbiditic sediments over thin pelagic-hemipelagic sediments and oceanic basement in N part of Manila Trench, W of Luzon. Forearc basin system of Manila Trench receives sediment through submarine canyons incised into W Luzon continental slope. Size of accretionary prism varies along strike and correlates with thickness of turbidite sediments in trench)

Lewis, S.D. & D.E. Hayes (1989)- Plate convergence and deformation, North Luzon Ridge, Philippines. Tectonophysics 168, p. 221-237.
(Marine geophysical and earthquake data indicate N Luzon Ridge (volcano-capped bathymetric ridge system between Luzon and Taiwan) presently undergoing deformation in response to relative motion between Asian and Philippine Sea plates)

Li, F., Z. Sun, D. Hu & Z. Wang (2013)- Crustal structure and deformation associated with seamount subduction at the north Manila Trench represented by analog and gravity modeling. Marine Geophysical Res. 34, 3, p. 393-406.
(Study of deformation in the accretionary wedge associated with subducted seamounts in N Manila Trench)

Liu, W.N., C.F. Li, J. Li, D. Fairhead & Z. Zhou (2014)- Deep structures of the Palawan and Sulu Sea and their implications for opening of the South China Sea. Marine Petroleum Geol. 58, B, p. 721-735.
(Palawan Continental Block defined by quiet magnetic anomalies, etc. Continent-ocean transition zone between Palawan Block and S China Sea characterized by hyper-extended continental crust intruded with magmatic bodies. NW Sulu Sea interpreted as relict oceanic slice; spreading of SE Sulu Sea started in Late Eocene- E Oligocene due to subduction of Proto S China Sea and ended in M Miocene by obduction of NW Sulu Sea onto Palawan Continental Block)

Lloyd, R.M. (1996)- Criteria for successful exploration of Miocene reef production in the Philippines. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 537-541.
(Many well-defined carbonate buildups drilled in Philippines, but with only moderate success. Main reasons for failure are absence of competent drape seal over buildups and lack of direct access to mature source rocks)

Longman, M.W. (1980)- Carbonate petrology of the Nido B-3A core, offshore Palawan, Philippines. American Assoc. Petrol. Geol. (AAPG), Carbonate core workshop, 1980, p. 161-183.
(On carbonates from first commercial oil field in Philippines, in Lower Miocene atoll-like buildup. Upper part of Nido B carbonate buildup with larger forams Eulepidina, Mioypsina and Spiroclypeus (=upper Te). Overlying shale seal with planktonic forams including Globigerinoides sicanus, suggests late Early Miocene age. Core from margin of buildup in rel. tight forereef talus facies, with carbonate intraclast packstones with shaly matrix with planktonic foraminifera. Most primary porosity filled by marine calcite. Locally secondary vuggy porosity and hairline fractures)

Longman, M.W. (1982)- Fracture porosity in reef talus of a Miocene pinnacle-reef reservoir, Nido B Field, the Philippines. In: P.O. Roehl & P.W. Choquette (eds.) Carbonate Petroleum Reservoirs, Springer, New York, p. 549-560.
(Core of Nido B oil field off Palawan shows: 1) fore-reef talus susceptible to extensive marine cementation, 2) small fractures can form significant reservoir capable of producing >10 000 BO/D; and 3) when associated with interbedded shales, fore-reef talus susceptible to extensive fracturing by either overpressured fluids or flexure due to compaction)

Loudon, A.G. (1976)- Marcopper porphyry copper deposit, Philippines. Economic Geology 71, p. 721-732.
(Marcopper porphyry copper deposit on Marinduque island, 180 km S of Manila. Mineralization related to intermediate intrusives, on W margin of M Miocene quartz diorite stock, with most copper mineralization within granodiorite porphyry phase)

Loudon, A.G. (1981)- Marcopper porphyry copper deposit, Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 35, 2, p. 1-23.
(Marcopper porphyry copper near center of island of Marinduque. Mineralization related to M Miocene quartz diorite in Eocene- Oligocene metasediment)

Ludwig, W.J. (1970)- The Manila Trench and West Luzon Trough- III. Seismic-refraction measurements. Deep Sea Research 17, 3, p. 553-562.
(Seismic refraction profiles W of Luzon in S China Sea show E edge of S China Sea Basin has velocity-structure similar to normal oceanic crust, but thickness of main crustal layer 3 only half of normal thickness, and Moho-discontinuity shallower than normal by ~2-3 km. W Luzon Trough (fore-arc basin) with ~4 km of sediment)

Ludwig, W.J., D.E. Hayes & J.I. Ewing (1967)- The Manila Trench and West Luzon Trough- I. Bathymetry and sediment distribution. Deep Sea Research 14, p. 533-544.

Macpherson, C.G. (2008)- Lithosphere erosion and crustal growth in island arcs: insights from the nascent East Philippine margin. Geology 36, 4, p. 311-314.
(Philippine Trench marks nascent plate margin where subduction initiation is propagating from N to S. Magma compositions in E Philippine Arc record thinning of arc lithosphere as it is eroded from below. Lithosphere thicker beneath S part of arc, causing basaltic magma to stall and fractionate garnet at high pressure. In mature N section, basaltic magma differentiates at shallower levels, at pressures where garnet is not stable)

Macpherson, C.G., S.T. Dreher & M.F. Thirlwall (2006)- Adakites without slab melting: high pressure differentiation of island arc magma, Mindanao, the Philippines. Earth Planetary Sci. Letters 243, p. 581-593.
(Pleistocene magmatic rocks from Surigao Peninsula, E Mindanao, typical adakitic traits, but Sr and Nd Nd ratios do not support melting of subducted Philippine Sea Plate; resemble Pliocene arc lavas generated in same subduction zone. This suggests that any subduction zone has potential to produce adakitic magma if basalt crystallises at sufficient depth)

Madrid, A.P. (1985)- Deep-water hydrocarbon exploration in The Philippines. Energy 10, 3-4, p. 493-504.
(Deep-water drilling in Philippines began in 1979, 10 wells drilled over next three years. Primary targets Miocene reef limestones. Hydrocarbons of offshore areas >200m water depth include commercial oil discovery and non-commercial gas discovery in Lower Miocene turbidite sands and gas discovery in Lower Miocene reefal limestone off NW Palawan)

Maglambayan, V.B., D. Ishiyama, T. Mizuta, A. Imai & Y. Ishikawa (1998)- Geology, mineralogy, and formation environment of the disseminated gold-silver telluride Bulawan Deposit, Negros Occidental, Philippines. Resource Geology 48, 2, p. 87-104.
(Bulawan Au-Ag-Te deposit in porphyry copper belt of SW Negros Island, hosted in Miocene dacitic hydrothermal breccia pipes)

Maglambayan, V.B.,·S. Montes,·K. Hipol, M. Mamitag, R.P. Pineda, R. Rodolfo, N. Oliveros & A. Sy (2008)- Carlin-type gold prospects in Surigao del Norte, Mindanao Island, Philippines: their geology and mineralization potential. Resource Geology 55, 3, p. 145-154.
(Three Carlin type-like gold deposits on NE Mindanao in jasperoid lenses in marl of M Miocene Mabuhay Fm)

Magpantay, A.L., U.M. Palaganas, E.A. De Luna, J.L. Perez & E.C. del Rosario (1979)- Geology and mineral resources of Zambales Province. Philippines Bureau of Mines Rept. Inv. 95, p. 1-68.

Majima, R., T. Kase, S. Kawagata, Y.M. Aguilar, K. Hagino & M. Maeda (2007)- Fossil cold-seep assemblages from Leyte Island, Philippines. J. Geography 116, 5, p. 643-652.
(online at: https://www.jstage.jst.go.jp/article/jgeography1889/116/5/116_5_643/_pdf)
(In Japanese, with English Abstract. Fossilized chemosynthetic U Miocene- Lw Pliocene mollusc seep assemblages along coastal area of Tabango and Villaba, NW Leyte. Up to 5m big indurated carbonate blocks with beautifully preserved, large vesicomyid, lucinid, thyasirid and mytilid bivalves. No fossil illustrations)

Malihan, T.D. (1987)- The gold-rich Dizon porphyry copper mine in the western Central Luzon Island, Philippines: its geology and tectonic setting. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 303-307.

Manalo, P.C., C.B. Dimalanta, D.V. Faustino-Eslava, B.D. Payot, N.T. Ramos, K.L. Queano, A. Perez & G.P. Yumul (2015)- Geochemical and geophysical characteristics of the Balud Ophiolitic Complex (BOC), Masbate Island, Philippines: implications for its generation, evolution and emplacement. Terrestrial Atmospheric Oceanic Sci. 26, 6, p. 687-700.
(online at: http://tao.cgu.org.tw/index.php/articles/archive/geophysics/item/1360-geochemical-and-...)
(E Cretaceous Balud Ophiolitic Complex on island of Masbate in C Philippines, with only upper crustal section exposed. Pillow basalts transitional mid-oceanic ridge basalt- island arc tholeiitic compositions. Low Bouguer gravity anomaly values suggest highly dismembered nature, as thin crustal slivers)

Manalo, P.C., C.B. Dimalanta, D.V. Faustino-Eslava, N.T. Ramos, K.L. Queano & G.P. Yumul (2015)- Crustal thickness variation from a continental to an island arc terrane: clues from the gravity signatures of the Central Philippines. J. Asian Earth Sci. 104, p. 205-214.
(Significant differences in gravity anomalies between Palawan Microcontinental Block and Philippine Mobile Belt, with islands of Palawan Block (Mindoro, Tablas, Romblon, Sibuyan, W Panay) registering lower Bouguer anomalies. Crustal thickness thickest (~32 km) in areas with ophiolitic units emplaced during arc-continent collision. Relatively thin crust (~21 km) in collision zone coincides with areas attenuated by intra-arc rifting)

Manalo, P., C. Dimalanta, N. Ramos, D. Faustino-Eslava, K. Queano & G. Yumul (2016)- Magnetic signatures and Curie surface trend across an arc-continent collision zone: an example from Central Philippines. Surveys in Geophysics 37, 3, p. 557-578.
(In C Philippines striking differences between magnetic signatures of islands with continental affinity (negative magnetic anomalies) and island arc terranes (positive anomalies over Philippine Mobile Belt). Linear features in magnetic anomaly map coincide with Philippine Fault and its splays. Deepest point of magnetic crust is under Mindoro at 32 km. Curie surface shallows to E and is 21 km deep between Sibuyan and Masbate, and 18 km deep at junction of Buruanga Peninsula and Panay Island (boundary of the arc-continent collision, with obduction of mantle rocks over continental basement. Coincidence of magnetic boundary and density boundary supports compositional boundary that reflects the crust- mantle interface)

Mapaye, C.B., J.A. Bacud & R.B. Savella (2017)- Miocene clastic play in South West Palawan: a new playground for hydrocarbon exploration. In: SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, Session 3,p. 1- 37. *(Abstract + Presentation*
(Underexplored SW Palawan Basin clastic play in northern extension of active petroleum system in Sabah ('farm-in brochure'))

Marchadier, Y. & C. Rangin (1989)- Passage subduction-collision et tectoniques superposees a l'extremite meridionale de la fosse de Manille (Mindoro-Tablas, Philippines). Comptes Rendus Academie Sciences, Paris, 308, 2, p. 1715-1720.
('Transition between subduction and collision, and superposed tectonics at the southern end of the Manila Trench, Mindoro-Tablas: the Philippines')

Marchadier, Y. & C. Rangin (1990)- Polyphase tectonics at the southern tip of Manila trench, Mindoro-Tablas islands, Philippines. Tectonophysics 183, p. 273-287.
(S termination of Manila trench in S China Sea continental margin in Mindoro marked by complex polyphase tectonic fabric. Onshore S Mindoro with transpressive tectonic regime, active at least since Late Pliocene, overprinting collision of E Miocene volcanic arc with S China Sea continental margin (San Jose platform). Arc overlies metamorphic basement and Eocene clastics, probably drifted block of S China Sea continental margin)

Marini, J.C., C. Chauvel & R. Maury (2005)- Hf isotope compositions of northern Luzon arc lavas suggest involvement of pelagic sediments in their source. Contrib. Mineralogy Petrology 149, p. 216-232.

Mariotto, F.P. & A. Tibaldi (2003)- Do transcurrent faults guide volcano growth? The case of NW Bicol Volcanic Arc, Luzon, Philippines. Terra Nova 15, 3, p. 204-212.
(In NW Bicol Volcanic Arc (Luzon) Quaternary Labo and Caayunan volcanoes aligned with NW-striking transcurrent Philippine Fault System)

Marquez, E.J., J.C. Aitchison & L.R. Zamoras (2006)- Upper Permian to Middle Jurassic radiolarian assemblages of Busuanga and surrounding islands, Palawan, Philippines. In: Radiolaria- siliceous plankton through time, Eclogae Geol. Helvetiae 99, Suppl. 1, p. 101-125.
(online at: http://dx.doi.org/10.5169/seals-169257)
(N Palawan Block regarded as S-most continuation of Late Mesozoic Busuanga accretionary complex, part of ocean plate stratigraphy now in Jurassic-age subduction complex which developed along length of E Asian margin. Radiolarians record Late Permian-Late Jurassic pelagic deposition on oceanic plate, with subduction of plate starting by E Cretaceous. U Permian- M Jurassic radiolarians from 13 localities)

Martin, K. (1899)- Ueber tertiare Fossilien von den Philippinen. Sammlungen Geol. Reichs-Museums Leiden, ser. 1, 5, 3, p. 52-69.
(online at: www.repository.naturalis.nl/document/552417)
('On Tertiary fossils from The Philippines'. Many of Tertiary fossils in Semper collection from Philippines similar to Java, incl. Miocene gastropod Vicarya callosa, etc. Also in English as appendix in Becker (1901), p. 129-139)

Martin, S.G. (1976)- A review of oil exploration and stratigraphy of the sedimentary basins of the Philippines. United Nations ESCAP CCOP Techn. Bull. 10, p. 55-102.

Masse, J.P., M. Villeneuve, F. Tumanda, C. Quiel & W. Diegor (1996)- Plate-formes carbonatees a orbitolines et rudistes du Cretace inferieur dans l'ile de Cebu (Philippines). Comptes Rendus Academie Sciences, Paris, Ser. 2a, 322, p. 973-980.
('Lower Cretaceous carbonate platforms with orbitolinids and rudists on Cebu Island, Philippines'. Orbitolinid forams Mesorbitolina texana and Neorbitolinopsis conulus and rudist (similar to Pachytraga= Praecaprotina) limestones associated with island-arc volcanoclastics formerly ascribed to Lower Aptian, now assigned to Late Albian, based on orbitolinids and calcareous algae with Mediterranean or Caribbean affinity.)

Mathisen, M.E. (1984)- Diagenesis of Plio-Pleistocene nonmarine sandstones, Cagayan Basin, Philippines: early development of secondary porosity in volcanic sandstones. In: D.A. MacDonald et al. (eds.) Clastic Diagenesis, American Assoc. Petrol. Geol. (AAPG), Mem. 37, p. 177-193.
(Plio-Pleistocene non-marine vocanic sandstones of Cagayan basin significantly altered by early dissolution and cementation. Fluvial sandstones buried to 400-900m only slightly compacted, but with significant

authigenic pore-lining clay and zeolites. Early dissolution of plagioclase, heavy minerals and volcanic fragments in nearly all samples, dissolving up to half framework grains and increasing porosity to 40%)

Mathisen, M.E. & C.F. Vondra (1983)- The fluvial and pyroclastic deposits of the Cagayan basin, northern Luzon, Philippines: an example of non-marine volcaniclastic sedimentation in an interarc basin. Sedimentology 30, p. 369-392.
(Cagayan basin interarc basin of N Luzon 250km long and 80 km wide, contains 900m thick Plio-Pleistocene fluvial and pyroclastic deposits)

Matsukawa, M., S.V. Sendon, F.T. Mateer, T. Sato & I. Obata (2012)- Early Cretaceous ammonite fauna of Catanduanes Island, Philippines. Cretaceous Research 37, p. 261-271.
(Nine Aptian- E Albian ammonoid species from Yop Fm, SW side of Catanduanes Island, E of Luzon. Faunas resemble assemblages from E side of Japan. Were in warm current regime. Ammonite-bearing rocks possibility exotic blocks embedded in chaotic sediments (like Orbitolina-bearing limestone in same area))

Matsumaru, K. (1974)- Larger foraminifera from East Mindanao, the Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 14, p. 101-115.
(E Mindanao Cretaceous andesites and sediments, unconformably overlain by Tertiary clastics and carbonates. Larger foram assemblages Early Oligocene (Tcd/ with Nummulites fichteli and Borelis pygmaeus) and Miocene (Te1-4, Te5 and Tf1-2))

Matsumaru, K. (2011)- A new definition of the Letter Stages in the Philippine Archipelago. Stratigraphy 8, 4, p. 237-252.
(M Paleocene- Recent Letter Stages for Philippines re-defined in terms of 17 larger foram assemblage zones)

Matsumaru, K. (2017)- Larger Foraminifera from the Philippine Archipelago: Part 1, Late Cretaceous to Middle Eocene. Micropaleontology 63, 2-4, p. 77-148.
(192 Cretaceous- Recent larger foraminifera species from 265 samples from 15 islands of Philippine Archipelago, including 19 new species and 8 new genera)

Matsumaru, K. (2017)- Larger Foraminifera from the Philippine Archipelago: Part 2, Late Eocene to Quaternary. Micropaleontology 63, 2-4, p. 149-253.

Matsumaru, K. & B.M Barcelona (1982)- Tertiary stratigraphy of the Tayabas Isthmus and central part of Bondoc Peninsula, Luzon, the Philippines and larger foraminifera. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 23, p. 77-90.

Maury, R.C., F.G. Sajona, M. Pubellier, H. Bellon & M.J. Defant (1996)- Fusion de la croute oceanique dans les zones de subduction/ collision recentes: lôexemple de Mindanao, Philippines. Bull. Soc. Geologique France 167, p. 579-595.
('Fusion of oceanic crust in recent subduction/ collision zones: example of Mindanao, Philippines'. Adakites)

Maury, R.C., M.J. Defant, H. Bellon, D. Jacques, J.L. Joron, F. McDermott & P. Vidal (1998)- Temporal geochemical trends in northern Luzon arc lavas (Philippines); implications on metasomatic processes in the island arc mantle. Bull. Soc. Geologique France 169, p. 69-80.
(Neogene and Quaternary lavas from N Luzon arc (Batan, Babuyan de Claro, Camiguin, Calayan islands) display temporal increases in incompatible elements including Cs, Rb, Ba, K, La, Ce, Th, U, Ta, Hf and Zr from volcanoes >3 Ma to younger ones, suggesting hydrous fluids are not only metasomatic agents operating in mantle wedge but slab-derived melts (adakitic magmas) may also be involved)

McCabe, R., J. Almasco & W. Diegor (1983)- Geologic and paleomagnetic evidence for a possible Miocene collision in western Panay, Central Philippines. Geology 10, p. 325-329.
(Palawan metamorphic terrane, represented by Paleozoic basement on NW tip of Panay, collided with remainder of island between Late Oligocene and M Miocene. Evidence for collision is (1) juxtaposition of old

melange terrane against metamorphosed Paleozoic continental sediments similar to Palawan island, and (2) Miocene thrusting in melange terrane oriented parallel to suture. Paleomagnetic studies show Panay island rotated 20° CW since E Miocene, whereas N Philippines rotated CCW, consistent with collision of Philippine arc with NE-converging Palawan block)

McCabe, R., J.N. Almasco & G. Yumul (1985)- Terranes of the Central Philippines. In: D.G. Howell (ed.) Tectonostratigraphic terranes of the Circum Pacific Region, Circum-Pacific Council Energy and Mineral Resources, Earth Sci. Ser., p. 421-436.
(Philippine Archipelago is collection of volcanic arcs, ophiolite fragments and rifted continental blocks, welded together by Late Miocene. Five terranes in C Philippines: (1) C Philippine arc terrane with Lower Cretaceous-Recent island arc debris; (2) Mindoro-Panay disrupted terrane, related to Miocene collision between Philippine arc and N Palawan continental terrane; (3) N Palawan continental terrane with late Paleozoic and Mesozoic continental-derived sequences overlain by Cenozoic marine sediments; (4) S Palawan disrupted terrane and (5) Sulu-Zamboanga disrupted terrane. Two additional terranes classified as suspect: (1) East Luzon-Samar-Mindanao disrupted terrane and (2) Cagayan arc terrane, a volcanic ridge in central part of Sulu Sea, composed of Miocene volcanics and limestones)

McCabe, R., E. Kikawa, J.T. Cole, A.J. Malicse, P. Baldauf, J. Yumul & J. Almasco (1987)- Paleomagnetic results from Luzon and the Central Philippines. J. Geophysical Research 92, B1, p. 555-580.
(Plio-Pleistocene paleomagnetic data show no rotation, suggesting terranes that make up Philippine Arc behaved as single unit in past 5 My. Late Miocene sites two groups: W Luzon ~20° of CW rotation; Bicol region, Negros, Marinduque, and Mindanao not rotated. E Neogene results also two populations: Marinduque large CCW rotation, Panay, Cebu and Mindanao CW rotation. E Neogene data consistent with M-L Miocene collision of Palawan Continental Terrane and C Philippine Arc. Dikes of possible Oligocene age from Zambales Ophiolite rotated ~60° CW. VGP of Mindoro displaced S-ward from Late Jurassic VGP of S China, suggesting post-Jurassic S-ward migration of Mindoro)

McDermott, F., M.J. Defant, C.J. Hawkesworth, R.C. Maury & J.L. Joron (1993)- Isotope and trace element evidence for three component mixing in the genesis of the North Luzon lavas (Philippines). Contrib. Mineralogy Petrology 113, p. 9-23.
(Post-3Ma volcanics from N Luzon arc exhibit systematic variations in 87Sr/86Sr, 143Nd/144Nd and 208Pb/206Pb along arc over ~500 km. Reflect varying contributions from mantle wedge, slab-derived hydrous fluid, and isotopically enriched subducted S China Sea terrigenous sediment)

McGuinness, D. & J. Branson (1989)- Deep-water reservoir appraisal in the Philippines: an innovative extended test. Australian Petrol. Explor. Assoc. (APEA) J. 40, p. 24-32.

McMurtrie, G., R. Jason, C. Lambert & J. Pattillo (2011)- Deepwater potential the NW Palawan Basin, Philippines. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Expl. Conf., Singapore 2011, Presentation 17, 24p. *(Abstract +Presentation)*
(Undrilled deep water NW of Palawan Island. Present-day shallow-water reservoir fairways like Nido Limestone, extend into deepwater. Outbord half grabens with potential source rocks modeled to be oil-mature. Seabed coring indicates widespread thermogenic microseepage. Inversion structures, gas chimneys, etc.))

Meresse, F.;D. Savva, M. Pubellier, S. Steuer, D. Franke, F. Cordey, C. Muller et al. (2012)- Late tectonic uplift of an inverted oceanic basin in South East Asia: the case of Palawan Island (western Philippines). EGU General Assembly, Vienna 2012, p. 11644. *(Abstract Only)*
(Palawan island bounded by two marginal basins (S China Sea to N, Sulu Sea to S) composed of remnants of inverted Proto-South China Sea basin, thrusted onto margin of continental terrane which rifted away from Chinese- Vietnamese margin. Island consists of: (1) Palawan wedge (deformed Cretaceous- Tertiary slope to ocean deposits; (2) ophiolite bodies on top of wedge, comprising Albian ribbon cherts, likely relicts of subducted Proto S China Sea; (3) central and southern parts of island large wavelength antiform of NE-SW trend, sealed by E Pliocene marls unit; (4) necking zones bordered by N-S trending transform faults)

Metrich, N., P. Schiano, R. Clocchiatti & R.C Maury (1999)- Transfer of sulfur in subduction settings: an example from Batan Island (Luzon volcanic arc, Philippines). Earth Planetary Sci. Letters 167, p. 1-14.

Middleton, C., A. Buenavista, B. Rohrlach, J. Gonzalez, L. Subang & G. Moreno (2004)- A geological review of the Tampakan copper-gold deposit, southern Mindanao, Philippines. In: Proc. PACRIM 2004 Conf., Adelaide 2004, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 173-187.
(Tampakan copper-gold deposit on SE Mindanao major high-sulfidation epithermal deposit superimposed on an underlying porphyry copper system. Hosted by subaerial andesitic flows of highly eroded andesitic stratavolcanic complex of Pliocene age. Four volcanic cycles/ centres that sequentially developed and eroded)

Militante-Matias, P.J. (1995)- *Orbitolina*-bearing rocks of Philippines. Proc. 15th Int. Symp. Kyungpook National University, p. 257-264.
(On Early Cretaceous Tethyan larger foram Orbitolina in Philippines)

Militante-Matias, P.J., M.M. de Leon & E.J. Marquez (2000)- Cretaceous environments of the Philippines. In: H. Okada & N.J. Mateer (eds.) Cretaceous environments of Asia, Developments in Palaeontology and Stratigraphy 17, Elsevier, p. 181-200.
(Cretaceous rocks in Philippines exposed in several areas in C Philippines and Palawan. Composed of metamorphic basement rocks, crust-mantle sequences (Ophiolites?) and magmatic-volcanic arc complexes, generally capped by deep water pelagic cherts and limestones. Late Cretaceous more common shallow marine, locally with Orbitolina, rudists, etc., all suggesting tropical environments. Cretaceous sediments and volcanics often unconformably overlain by Eocene)

Milsom, J., J.R. Ali & K.L. Queano (2006)- Peculiar geometry of northern Luzon, Philippines: implications for regional tectonics of new gravity and paleomagnetic data. Tectonics 25, p. 1-14.
(N termination of Philippine Archipelago remarkably abrupt. Paleomagnetic data favor possibility that in Paleogene Central Cordillera and Sierra Madre were combined as parts of arc at S margin of Philippine Sea. Sicalao Ridge interpreted as rift margin feature, created during detachment of Luzon from continental Sundaland. With plate reconstructions 45-20 Ma)

Milsom, J., J. Barretto, N. Aguda, D. Bringas, R. Ho & J. Aitchison (2009)- The gravity fields of Palawan and New Caledonia: insights into the subsurface geometries of ophiolites. J. Geol. Soc., London, 166, p. 985-988.
(Palawan and New Caledonia similar ophiolites, both emplaced during arc-microcontinent collision and both ended subduction and also ended oceanic spreading that displaced microcontinent. Gravity data suggest both ophiolites derived from root zones just offshore on both islands, resting on basal surfaces that change abruptly in depth by up to 5 km. Geometries of thrust sheets are as important to understanding emplacement histories as exposure patterns)

Mines and Geosciences Bureau (2010)- Geology of the Philippines (2nd Edition). Mines and Gesciences Bureau, Quezon City, p. 1-532.
(Revised textbook of Philippines geology. Part 1 discusses major geological features, incl. tectonics, major faults, sedimentary basins and present-day plate motions. Part 2 is discussion of stratigraphy and petrology based on stratigraphic groupings)

Miranda, F.E. (1975)- Data on Philippine mineral resources. Bureau of Mines, Republic of the Philippines, Manila, Information Circular 22, p. 1-60.

Mitchell, A.G.H. & G.R. Balce (1990)- Geological features of some epithermal gold systems, Philippines. J. Geochemical Exploration 35, p. 241-296.
(Philippines numerous epithermal gold deposits, mainly in Cenozoic and locally Cretaceous arc systems, built on ophiolite and metamorphic basement rocks. Epithermal gold deposits mostly Pliocene, along axes of volcanic arcs)

Mitchell, A.H.G., F. Hernandez & A.P. de la Cruz (1986)- Cenozoic evolution of the Philippine archipelago. J. Southeast Asian Earth Sci. 1, 1, p. 3-22.
(Late Cretaceous or earliest Tertiary detachment of ophiolite, W-ward subduction and subsequent accretion of arc and continental fragments to E Philippines was followed by mid-Miocene collision of this arc with SE-facing Sulu-Masbate arc. Ophiolites in Zambales, Mindoro, Panay and Palawan interpreted as remnants of single slab of Paleocene oceanic lithosphere, emplaced onto Asian margin during collision starting in Late Eocene. Continued convergence during Late Oligocene- E Miocene opening of S China Sea. E-ward subduction of S China Sea basin in Manila Trench resulted in Pliocene collision in Taiwan. Late Eocene collision accompanied by back-thrusting which initiated NW subduction of Celebes Sea in Sulu Arc. SE Sulu Sea and N extension through Panay opened in Oligocene by back-arc spreading behind Sulu Arc. Panay segment of Sea closed by Pliocene collision, following E-ward subduction in Negros Trench)

Mitchell, A.G.H. & T.M. Leach (1991)- Epithermal gold in the Philippines: island arc metallogenesis, geothermal systems and geology. Academic Press, London, p. 1-457.
(Comprehensive account of Philippine gold deposits and geology)

Mitchell, A.G.H. & T.M. Leach (1991)- Outline of Philippine geology. In: Epithermal gold in the Philippines: island arc metallogenesis, geothermal systems and geology, Academic Press, London, p. 14-53.

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(online at: https://d28rz98at9flks.cloudfront.net/14753/Rec1994_041.pdf)

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(Extended Abstract + Presentation)
(NW Palawan area still considered to be attractive area for hydrocarbon exploration)

Morishita, T., E.S. Andal, S. Arai & Y. Ishida (2006)- Podiform chromitites in the lherzolite-dominant mantle section of the Isabela ophiolite, the Philippines. Island Arc 15, p. 84-101.
(Isabela ophiolite in E Luzon complete ophiolite sequence with lherzolite-dominated mantle section, probably formed at slow-spreading mid-ocean ridge, later intruded by arc magmatism in response to change in tectonic setting during its obduction at convergent margin. Several podiform chromitites. Large chromitites in relatively depleted harzburgite hosts)

Motegi, M. (1975)- Mineralization of the Philippines: a geohistorical review by. The Philippine Geologist (J. Geol. Soc. Philippines) 29, 4, p.
(also in Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 393-417)
(Eight Philippines mineralization periods: 1) Cretaceous-Paleogene eugeosynclinal basaltic volcanism forming bedded (strata-bound) ore deposits, 2) Paleogene diorite intrusives forming porphyry copper deposits, 3) Paleogene ultramatics forming chromite-nickel deposits, 4) Eocene-Oligocene diorites forming metasomatic iron deposits; 5) Post-Oligocene submarine acidic volcanism forming Kuroko-type ore deposits, 6) Miocene diorite intrusives forming many porphyry copper deposits and skarn type deposits, 7) Pliocene energite-luzonite deposits, and 8) Quaternary native copper mineralizations)

Motegi, M. (1977)- Porphyry copper deposits in Philippines- their tectonic setting and present status of development. Mining Geology 27, p. 221-230.

Mou, D.C. & D.F. Collins (1996)- Camago No. 1, a gas and condensate discovery along the deepwater Lower Miocene reef trend, NW Palawan offshore, Philippines. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 556-569.
(Camago 1 tested new deep water productive Lower Miocene pinnacle reef trend off NW Palawan, outboard of Nido- Pandan- Matinloc shelf margin. Gross wet gas column 655m. Flowed 24.6 MMCF and 809 B/ day)

Muller, C., H. Jurgan & H. Porth (1989)- Paleogeographic outlines of the Visayan Basin. In: H. Porth & C.H. von Daniels (eds.) On the geology and hydrocarbon prospects of the Visayan Basin, Philippines, Geol. Jahrbuch B70, p. 303-315.
(Visayan Basin in tectonically active region since Oligocene, resulting in rapid changes in sedimentary conditions. Predominantly clastic sediments, episodes of volcanic activity, carbonate buildups along shelf edges and on structural highs, etc.)

Muller, C. & C.H. von Daniels (1989)- Stratigraphical and paleoenvironmental studies (Oligocene-Quaternary) in the Visaya Basin, Philippines. Newsletters on Stratigraphy 10, 1, p. 2-64.
(Biostratigraphic- paleoenvironmental results from Visayan Basin, from calcareous nannoplankton and foraminifera. With geological evolution of basin from M Oligocene-Pleistocene)

Muller, C., C.H. von Daniels, P. Cepek, F. Gramann et al. (1989)- Biostratigraphy and paleoenvironmental studies in the Tertiary of the Visayan basin, Philippines. In: H. Porth & C.H. von Daniels (eds.) On the geology and hydrocarbon prospects of the Visayan Basin, Philippines. Geol. Jahrbuch B70, p. 89-145.

Murphy, R.W. (1973)- The Manila Trench- West Taiwan foldbelt: a flipped subduction zone. Bull. Geol. Soc. Malaysia 6, p. 27-42.
(online at: www.gsm.org.my/products/702001-101355-PDF.pdf)
(Manila Trench- W Taiwan Foldbelt is anomalous W-facing island arc segment of W Pacific, postulated to be young, E- dipping subduction zone which flipped in Pliocene from W-dipping position on E side of Luzon and Taiwan, where it probably formed continuous subduction zone with Ryukyu and Philippine Trenches)

Musper, K.A.F.R. (1937)- Das Erdol und seine Verwandten in den Philippinen. De Ingenieur in Nederlandsch-Indie (IV), 4, 8, p. 141-157.
('Oil and its relatives in the Phillipines'. Review of occurrences of oil and bitumens in The Philippines)

Navarro, F.A., L.M. Ostrea, A.G. Lasam, J.P.M. Micu & E.C. Jacobsen (1992)- The Octon discovery. In: 9th SEAPEX Offshore Southeast Asia Conf. (OFFSEA 92), Singapore 1992, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 10, p. 207-231.
(Octon 1 1990 gas discovery in NW Palawan province in E Miocene turbiditic sandstones of Galoc Clastic Unit)

Neuhaus, D., J. Borgomano, J.C. Jauffred, C. Mercadier, S. Olotu & J. Grotsch (2004)- Quantitative seismic reservoir characterization of an Oligocene- Miocene carbonate build-up, Malampaya Field, Philippines. In: G. Eberli et al. (eds.) Seismic imaging of carbonate reservoirs and systems, American Assoc. Petrol. Geol. (AAPG), Mem. 81, p. 169-184.
(Complex reservoir architecture of Malampaya carbonate buildup offshore Palawan, Philippines, initially controlled by rugged clastic basement morphology, which was overgrown by atoll structures in Oligocene and E Miocene. Additional factors are frequent and high-amplitude relative sea level fluctuations, ocean currents, and prevailing wind directions. Primary depositional reservoir-quality distribution overprinted by diagenetic events, primarily as result of repeated platform-top exposure and submarine cementation)

Neumann van Padang, M. (1953)- Catalogue of the active volcanoes of the world including solfatara fields. Part 2: Philippine Islands and Cochin, China. Int. Volcanological Assoc., Napoli, p. 1-49.

Noda, H. (1979)- Some Neogene Arcids from the Philippines. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 20, p. 159-176.
(Mainly systematic description of Miocene- Pliocene bivalves of Arca group from Bondoc Peninsula area, E Philippines. Miocene Anadara spp. from Batan Island associated with Vicarya callosa)

Ohara, J. (1969)- Heavy minerals in the Miocene Singit and Tarao Formations in Panay Island, The Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 7, p. 97-113.

(Analyses of heavy mineral assemblages in 43 sandstone samples from Miocene of Iloilo Basin, S Panay Island. Dominated by hornblende, pyroxene, magnetite and biotite, derived from andesite and schist sources)

Olfindo, V.S.V., B.D. Payot, G.T.V. Valera, E.G. Gadot, B.R.B.Villaplaza, K. Tani, C.B. Dimalanta & G.P. Yumul (2019)- Petrographic and geochemical characterization of the crustal section of the Pujada Ophiolite, southeastern Mindanao, Philippines: insights to the tectonic evolution of the northern Molucca Sea Collision Complex. J. Asian Earth Sci. 184, 103994, p.
(Molucca Sea Collision Complex (MSCC) preserves interaction between Eurasian, Philippine Sea and subducted Molucca Sea Plates. Pujada Ophiolite exposed in SE Mindanao, remnant of oceanic lithosphere with backarc affinity, with Late Cretaceous (90 Ma) zircon ages from gabbros. Pujada Ophiolite trapped fragment of the proto-Molucca Sea Plate that was thrust onto Halmahera Arc possibly during waning stages of collision between Sangihe and Halmahera Arcs)

Onoue, T, T. Nikaido, L.R. Zamoras & A. Matsuoka (2011)- Preservation of larval bivalve shells in a radiolarian chert in the Late Triassic (Early Norian) interval of the Malampaya Sound Group, Calamian Island, western Philippines. Marine Micropaleontology 79, p. 58-65.
(Silicified thin bivalve shells E Norian radiolarian chert of Malampaya Sound Gp, part of Late Jurassic- E Cretaceous subduction-related accretionary complex in N Palawan Block. Deep-sea sediment that accumulated in an open-ocean realm of Panthalassa Ocean)

Orberger, B. & J. Alleweldt (1994)- Mineralogical and geochemical characteristics of platinum, palladium and Ni-Cu-sulfide bearing black serpentinite of the Acoje ophiolite block, Zambales, Philippines: mineralogical and geochemical characteristics. J. Southeast Asian Earth Sci. 9, 3, p. 229-239.

Orberger, B., G. Friedrich & E. Woermann (1988)- Platinum-group element mineralization in the ultramafic sequence of the Acoje ophiolite block, Zambales, Philippines. In: H.M. Prichard et al. (eds.) Proc. Geo-Platinum 87, Elsevier, p. 361-380.

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(Black serpentinites with Ni-Cu sulfide, platinum and palladium mineralisation in Acoje ophiolite compared to non-mineralised green serpentinites. Study confirms magmatic character of Ni-Cu-sulfide mineralisation)

Pablico, E.F. & C.S. Lee (1994)- Geology and petroleum potential of Cuyo Platform. Australian Geol. Survey Org. (AGSO), Canberra, Record 1994/41, Part 4, p. 1-22.
(online at: https://d28rz98at9flks.cloudfront.net/14753/Rec1994_041.pdf)

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(Cenozoic sediments of S Samar Island in E Philippines record unroofing history of ancient arc terrane. Late Oligocene- E Miocene Daram Fm common chert and volcanic fragments, late M Miocene- E Pliocene Catbalogan Fm mainly composed of ultramafic components. Daram Fm eroded crustal portions of ophiolite, Catbalogan Fm represents later exhumation and erosion of ultramafic section. Oceanic island arc setting proposed for both formations)

Padrones, J.T., A. Imai & R. Takahashi (2017)- Geochemical behavior of Rare Earth Elements in weathered granitic rocks in Northern Palawan, Philippines. In: 5th Asia Africa Mineral Resources Conf., Quezon City, Philippines 2015, Resource Geology 67, 3, p. 231-253.
(Two geochemically similar plutons investigated for potential for placer-type LREE deposits on Palawan Block in Philippines: M Miocene Kapoas pluton (13.2 Ma) and Late Cretaceous Daroctan Granite (= Late Yanshanian of SE China))

Padrones, J.T., K. Tani, Y. Tsutsumi & A. Imai (2017)- Imprints of Late Mesozoic tectono-magmatic events on Palawan Continental Block in northern Palawan, Philippines. J. Asian Earth Sci. 142, p. 56-76.
(Late Cretaceous Daroctan Granite intruded Mesozoic melange in N-most Palawan Island. Monazite U-Th-Pb dating yielded Late Cretaceous age, similar to some Mesozoic granites surrounding S China Sea. Maximum ages of sediments and semi-schist Jurassic-E Cretaceous, with Late Cretaceous maximum age of deposition for meta-sediments. Palawan block accreted units possibly located at margin of continent-ocean collision in Mesozoic and eventually broke off from SE Eurasian margin)

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(On geochemical changes in C15+ hydrocarbon fraction of crude oil from water-washed carbonate reservoir in Cities Service wells Tara-1 and Libro-1, offshore NW Palawan)

Partridge, A.D. (1994)- Palynological analysis of San Francisco 1 and Katumbo Creek-1, Bondoc sub-basin, Luzon Island. Australian Geol. Survey Org. (AGSO), Canberra, Record 1994/41, Appendix 6, p. 1-25 +plates.
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(Scarborough Seamount chain at axis of extinct S China Sea spreading center subducted obliquely along Manila Trench. Fabric of ridge characterized by N60°E trending normal faults and N130°E transform faults. Ridge can be traced into forearc area, result of underplating of ridge fragments accreted to upper plate)

Payot, B.D., S. Arai, A. Tamura, S. Ishimaru & R.A. Tamayo (2009)- Unusual ultradepleted dunite from Sibuyan Island (The Philippines): a residue for ultra-depleted MORB? J. Mineralogical Petrological Sci. 104, p. 383-388.

Payot, B.D., S. Arai, R.A. Tamayo & G.P. Yumul (2009)- What underlies the Philippine island arc? Clues from the Calaton Hill, Tablas island, Romblon (Central Philippines). J. Asian Earth Sci. 36, p. 371-389.
(High-T metamorphic/ plutonic complex in Calaton Hill, Tablas island representative of lower crust underlying Philippine island arc)

Payot, B.D., S. Jego, R.C. Maury, M. Polve, M. Gregoire, G. Ceuleneer, R.A. Tamayo, G.P. Yumul, H. Bellon & J. Cotten (2007)- The oceanic substratum of Northern Luzon: Evidence from xenoliths within Monglo adakite (The Philippines). Island Arc 16, 2, p. 276-290.
(A 8.65 Ma adakitic intrusive sheet near Monglo in Baguio District of N Luzon contains ultramafic and mafic xenoliths. One amphibolite xenolith with K-Ar age of 115.6 Ma (Barremian). Carried by ascending adakitic magmas from Lower Cretaceous ophiolitic complex at depth)

Pena, R.E. (1998)- Further notes on the stratigraphy of Baguio District. J. Geol. Soc. Philippines 53, 3-4, p.

Pena, R. (1996)- On recent interpretations on the ophiolites of Central Luzon and ophiolite associations in northern Luzon. J. Geol. Soc. Philippines 51, 1-2, p. 37-47.
(Discussion of recent papers on ophiolites of Luzon by Encarnacion et al. (1993; proposing contemporaneous Eocene arc-back arc pair origin for Zambales and Angat ophiolites) and Florendo (1994; postulating Late Oligocene-Early Miocene intra-arc rifting in N Luzon that led to formation of oceanic crust represented by Itogon Ophiolite. Earlier studies clearly indicate Late Eocene sediment cover of Zambales ophiolite was deposited in deep open ocean, far from terrestrial/ arc sources. Cretaceous (Turonian-(Coniacian) dating of Angat Ophiolite well established by paleontologic dating of sedimentary cover. Etc.)

Pena, R.E. (2008)- Lexicon of Philippine Stratigraphy, 2008. Geol. Soc. Philippines, Manila, p. 1-364.

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(Sediments below M Miocene Kennon Lst mainly fluvial conglomerates, derived from volcanic terrain)

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(online at: https://www.solid-earth.net/9/713/2018/se-9-713-2018.pdf)
(Boninites are high-magnesium andesites that are key component of subduction-initiation suites, and is predominant in W Pacific forearc terranes. New discovery of boninite in Acoje Block of M Eocene (~44 Ma) Zambales ophiolite of W Luzon. Paleolatitudes place juvenile arc of N Zambales ophiolite in W margin of Philippine Sea plate, possibly in doubly vergent subduction initiation setting)

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Pinet N. (1993)- Repartition des mouvements decrochants et chevauchants le long de la frontiere NW de la plaque Mer des Philippines. Comptes Rendus Academie Sci., Paris, 316, p. 217-223.

Pinet, N. & J.F. Stephan (1990)- The Philippine wrench fault system in the Ilocos Foothills, northwestern Luzon, Philippines. Tectonophysics 183, 1, p. 207-224.
(On Luzon Philippine Fault runs parallel to Philippine archipelago for >1300 km, and is active, left-lateral, strike-slip fault which forms a braided system. In Ilocos Foothills faults pattern results from two major tectonic episodes:(1) late M- Late Miocene episode Abra River strike-slip faulting; (2) The Pliocene(?)- Quaternary strike-slip activity propagating W-ward from Abra River Fault to Vigan-Aggao wrench fault)

Polve, M. R.C. Maury, S. Jego, H. Bellon, A. Margoum, G.P. Yumul, B.D. Payot, R.A. Tamayo & J. Cotten (2007)- Temporal geochemical evolution of Neogene magmatism in the Baguio gold-copper mining district (Northern Luzon, Philippines). Resource Geology 57, 2, p. 197-218.
(Baguio porphyry copper-epithermal gold province in N Luzon, associated with E Miocene- Quaternary calc-alkaline and adakitic intrusions. Three magmatic pulses: E Miocene (21.2-18.7 Ma; related to W-dipping subduction of W Philippine Basin), M-L Miocene (15.3-8 Ma; subduction of S China Sea along Manila Trench) and Pliocene-Quaternary (3-1 Ma). Quiescence period, from 8-3 Ma possible consequence of docking of Zambales ophiolitic terrane to N Luzon)

Popenoe, W.P. & R.M. Kleinpell (1978)- Age and stratigraphic significance for Lyellian correlation of the fauna of the Vigo Formation, Luzon, Philippines. Occasional Papers California Academy Sci. 129, p. 1-73.
(online at: http://archive.org/details/occasionalpapers129cali.pdf
(On Miocene molluscs and foraminifera from Vigo Group, Bondoc Peninsula, and comparisons with faunas and zonations from Indonesia)

Porth, H. (1989)- On the petroleum prospects of the Visayan Basin, Philippines. In: H. Porth & C.H. von Daniels (eds.) (1989)- On the geology and hydrocarbon prospects of the Visayan Basin, Philippines. Geol. Jahrbuch B70, p. 385-406.
(Numerous oil seeps known from Cebu, NW Leyte and NE Negros islands. First oil exploration well in Visayan Basin drilled at oil seep near Toledo, Cebu. 208 wells drilled by 1980 in Visayan region, some with oil and gas shows or minor production, but no commercial oil or gas discoveries yet. Offshore basins up to 5-6 km of Tertiary sediments. Sandstones commonly rich in volcanoclastics, with poor permeability. Main reservoir potential in Miocene carbonate buildups)

Porth, H. & C.H. von Daniels (eds.) (1989)- On the geology and hydrocarbon prospects of the Visayan Basin, Philippines. Geol. Jahrbuch B70, 428p.

(Collection of papers from German- Philippine co-operation project on geology, stratigraphy, biostratography of the Visayan islands, C Philippines)

Porth, H., C. Muller & C.H. von Daniels (1989)- The sedimentary formations of the Visayan region. In: H. Porth & C.H. von Daniels (eds.) (1989)- On the geology and hydrocarbon prospects of the Visayan Basin, Philippines. Geol. Jahrbuch B70, p. 29-87.
(Visayan basin Basement folded, low metamorphic Cretaceous volcanics and sediments, incl. Aptian-Albian Orbitolina limestone. Overlain by rare M-L Eocene limestone, M Oligocene limestone and widespread Late Oligocene-Recent sediments. Three phases of uplift-erosion: E-M Miocene boundary, M-L Miocene boundary, Late Pliocene)

Pratt, W.E. (1915)- Petroleum and residual bitumens in Leyte. Philippine J. Science, A, 10, 4, p. 241-279.
(online at: http://ia902605.us.archive.org/0/items/philippinejo101915phil/philippinejo101915phil.pdf)

Pratt, W.E. (1915)- On the occurrence of petroleum in the provinces of Cebu. Philippine J. Science, A, 10, 4, p. 281-287.

Pratt, W.E. (1915)- The persistance of Philippine coal beds. Philippine J. Science, A, 10, 5, p. 289-301.
(online at: http://ia902605.us.archive.org/0/items/philippinejo101915phil/philippinejo101915phil.pdf)

Pratt, W.E. & W.D. Smith (1913)- The geology and petroleum resources of the southern part of Bondoc Peninsula, Tayabas Province, P.I.. Philippine J. Science, A, 8, 5, p. 301-376.
(online at: http://ia600202.us.archive.org/21/items/philippinejourna81913phil/philippinejourna81913phil.pdf)

Pratt, W.E. & W.D. Smith (1913)- Petroleum on Bondoc Peninsula, Tayabas Province, Philippines. In: The mineral resources of the Philippine islands for the year 1912.The Bureau of Science, Manila, p. 49-57.
(Light oil proven present in seeps and shallow wells on Bondoc Peninsula, not in commercial quantities. Miocene Globigerina-rich Vigo Shale may be source of oil)

Pubellier, M., B. Deffontaines, R. Quebral & C. Rangin (1994)- Drainage network analysis and tectonics of Mindanao, southern Philippines. Geomorphology 9, p. 325-342.
(Mindanao, S Philippines, is site of arc-continent collision which began in Late Pliocene. Tectonic features not easily detectable due to cover of Pleistocene- Holocene sediments and volcanics. Study of drainage pattern in Agusan-Davao and Cotabato Basins compared with other data enables a correlation of distant seismic lines)

Pubellier, M., R. Quebral, M. Aurelio & C. Rangin (1996)- Docking and post-docking escape tectonics in the southern Philippines. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc, London, Spec. Publ. 106, p. 511-523.
(Philippine archipelago structure results from juxtaposition of volcanic belt against Eurasian margin fragments and associated marginal basins. Docking compression began in early Late Miocene. Post-dockingbegan in E Pleistocene, in N Mindanao represented by paired subduction zone and strike-slip fault)

Pubellier, M., R.D. Quebral, B. Deffontaines & C. Rangin (1993)- Neotectonic map of Mindanao Island Philippines (1:800,000). Explanatory notes, 22p.

Pubellier, M., R. Quebral, C. Rangin, B. Deffontaines, C. Muller & J. Butterlin (1991)- The Mindanao collision zone: a soft collision event within a continuous Neogene strike-slip setting. J. Southeast Asian Earth Sci. 6, p. 239-248.
(Two volcanic belts presently juxtaposed on Mindanao in S Philippines. To S collision still active in Molucca Sea zone of doubly verging subduction. Philippine Fault is neotectonic feature. Mindanao two composite terranes (1) W: Eurasian margin continental terrane (N-ward extension of Sangihe arc; Kudarat Plateau and Zamboanga Peninsula; (2) E: oceanic terrane (Philippine Mobile Belt- Halmahera arc). Since Late Pliocene- both terranes affected by NNE and E-W compression)

Queano, K.L. (2005)- Upper Miocene to Lower Pliocene Sigaboy Formation turbidites, on the Pujada Peninsula, Mindanao, Philippines: internal structures, composition, depositional elements and reservoir characteristics. J. Asian Earth Sci. 25, p. 387-402.
(Turbidites of U Miocene- Lw Pliocene Sigaboy Fm on Pujada Peninsula, SE Mindanao, overlie ophiolite. Channelized and unchannelized of submarine fan deposits, derived from Sangihe arc and its uplifted outer arc ridge (now Pujada Peninsula), following initial subduction of Snellius Plateau- Halmahera Arc in Mindanao (latest M Miocene) and prior to initiation of Philippine Trench (<5 Ma). Porosity very low, rarely >5%.)

Queano, K., J. Ali, J. Aitchison, G. Yumul, M. Pubellier & C. Dimalanta (2008)- Geochemistry of Cretaceous to Eocene ophiolitic rocks of the Central Cordillera: implications for Mesozoic-Early Cenozoic evolution of the Northern Philippines. Int. Geology Review 50, 4, p. 407-421.
(Central Cordillera in N Philippines underlain mainly by Cretaceous- Eocene ophiolitic basement, with supra-subduction signature and generated in back-arc setting. Relationships similar to Cretaceous- Eocene Lepanto Metavolcanics and Pugo Fm, comprising ophiolitic basement in S portions of range, suggesting C Cordillera floored by common volcanic basement)

Queano, K.L., J.R. Ali, J. Milsom, J.C. Aitchison & M. Pubellier (2007)- North Luzon and the Philippine Sea plate motion model: insights following paleomagnetic, structural, and age-dating investigations. J. Geophysical Research 112, B05101, p. 1-44.
(Paleomagnetic data from N Luzon show combination of major plate and local rotations in CW and CCW directions. Inclination data suggest N Luzon traveled as part of Philippine Sea Plate for most of Eocene-Pliocene history. N Luzon is placed on W edge of Philippine Sea Plate, just W of where Benham Plateau formed at ~40 Ma. Substantial N-ward migration since start of Neogene, with earlier interval stretching back to equatorial latitudes in mid-E Cretaceous. Post-15 Ma motion of plate involved indentation of Palawan microcontinent into W side of Philippine Archipelago)

Queano, K.L., J.R. Ali, M. Pubellier, G.P. Yumul & C.B. Dimalanta (2009)- Reconstructing the Mesozoic-early Cenozoic evolution of northern Philippines: clues from palaeomagnetic studies on the ophiolitic basement of the Central Cordillera. Geophysical J. Int. 178, 3, p. 1317-1326.
(First paleomagnetic data from Cretaceous Eocene ophiolitic basement (pillow basalts, diabase dykes) in C Cordillera on N Luzon suggest ophiolitic rocks formed at subequatorial latitudes (6.3°N ± 3.1°), close to where island was during E Cenozoic. These rocks could be relicts of proto-Philippine Sea Plate)

Queano, K.L. C.B. Dimalanta, G.P. Yumul, D.V. Faustino-Eslava, E.J. Marquez, N.T. Ramos, K. Ishida et al. (2012)- The Zambales Ophiolite Complex, Philippines revisited: implications for its Tethyan origin. Proc. First Int. Symposium of IGCP-589, Xi'an, China 2012, Acta Geoscientica Sinica 33, Suppl. 1, p. 58. (Abstract)
(Zambales Ophiolite Complex needs to be deconstructed into M Jurassic- Lower Cretaceous Acoje Ophiolite and Eocene Coto Ophiolite)

Queano, K.L. C.B. Dimalanta, G.P. Yumul, E.J. Marquez, D.V. Faustino-Eslava, S. Suzuki & K. Ishida (2017)- Stratigraphic units overlying the Zambales Ophiolite Complex (ZOC) in Luzon, (Philippines): tectonostratigraphic significance and regional implications. J. Asian Earth Sci. 142, p. 20-31.
(Zambales Ophiolite Complex on W Luzon several massifs. Coto Block overlain by clastic sediments previously dated as Eocene, with similar ages obtained from diabase, granodiorites, etc., suggesting Eocene age for ZOC. Radiolarian cherts in E-M Miocene clastics, derived from Acoje Block of ZOC, suggest Late Jurassic- E Cretaceous age)

Queano, K.L., E.J. Marquez, J.C. Aitchison & J.R. Ali (2013)- Radiolarian biostratigraphic data from the Casiguran Ophiolite, northern Sierra Madre, Luzon, Philippines: stratigraphic and tectonic implications. J. Asian Earth Sci. 65, p. 131-142.
(Cherts- limestones overlying Casiguran Ophiolite, Luzon, with Lower Cretaceous radiolarian assemblages (U Barremian- Aptian/Albian; incl. several 'Tan Sin Hok species'), older than U Cretaceous stratigraphic range previously reported in region, providing additional evidence for Mesozoic oceanic substratum upon which

Luzon and neighboring regions of Philippine archipelago were likely built. Age closely resembles ages of ophiolite in SE Luzon, oceanic crust of Huatung Basin E of Taiwan and ophiolites in E Indonesia)

Queano, K.L., E.J. Marquez, C.B. Dimalanta J.C. Aitchison, J.R. Ali & G.P. Yumul (2017)- Mesozoic radiolarian faunas from the northwest Ilocos region, Luzon, Philippines and their tectonic significance. Island Arc 26, 4, e12195, p. 1-10.
(Dos Hermanos melange in NW Ilocos Norte, NW Luzon, with peridotites and metamorphic rocks blocks in sheared sandy matrix. Thrust onto the Eocene Bangui Fm turbidite succession and capped by U Miocene Pasuquin Limestone. With uppermost Jurassic- Lower Cretaceous radiolarian assemblages in deep marine bedded chert blocks (incl. many 'Tan Sin Hok species'. Tectonic melanges in C Philippines attributed E-M Miocene arc-continent collision involving Philippine Mobile Belt and Palawan Microcontinental Block)

Quebral R., M. Pubellier & C. Rangin (1996)- The onset of movement on the Philippine fault in eastern Mindanao: a transition from a collision to strike slip environment. Tectonics 15, 4, p. 713-726.
(Evolution of Philippine fault in E Mindanao from zone of active arc-arc collision to strike-slip environment. Diachronous unconformity along Philippine Fault marking end of collision-related deformation reflects S-ward propagating nature of collision and provides limits on age of initiation of Philippine Fault)

Querubin, C.L. & G.P. Yumul (2001)- Stratigraphic correlation of the Malusok volcanogenic massive sulfide deposits, Southern Mindanao, Philippines. J. Resource Geology 51, 2, p. 135-144.
(Volcanogenic massive to semi-massive sulfide lenses in Main and SE Malusok areas confined within single stratigraphic interval)

Rammlair, D. (1987)- The evolution of the Philippine Archipelago in time and space: a plate-tectonic model. Geol. Jahrbuch B81, p. 3-48.

Rammlair, D., H. Raschka & L. Steiner (1987)- Systematics of chromitite occurrences in Central Palawan, Philippines. Mineralium Depositae 22, 3, p. 190-197.
(Chromitite occurrences in C Palawan ophiolite classified into four groups)

Ramos, S.G., J.B. Rosell, A.M. de Guzman & A.P. Revilla (2003)- Sedimentological and biostratigraphic details of well Fuga-1, Babuyan Channel, Philippines. In: B. Ratanasthien et al. (eds.) Pacific Neogene paleoenvironments and their evolution, 8th Int. Congress on Pacific Neogene Stratigraphy, Chiang Mai, 2003, p.
(Fuga-1 well drilled to 5892'on Fuga island, Babuyan Channel, to test gas potential of M Miocene Sicalao Limestone. Encountered E Miocene- Pleistocene neritic-bathyal clastics. Carbonates at N17-Tf3 boundary at 1970' and within the Middle Miocene sequence at 3290'-4500'. E Miocene (NN1-NN4) clastics from 4500' to 5892' consist of basaltic hyaloclastite and volcanic conglomerate in the upper part and fine-grained clastics in the lower section. Top Late Miocene- E Pliocene sedimentation influenced by episodic andesitic volcanism)

Rangin, C. (1991)- The Philippine Mobile Belt: a complex plate boundary. J. Southeast Asian Earth Sci. 6, p. 307-318.
(Philippine archipelago is product of Late Cenozoic oblique collision of Philippine Sea Plate with thinned margin of Eurasia. Philippine Mobile Belt mainly composed of Philippine arc (Paleogene volcanic arc belonging to Philippine Sea Plate) and crustal fragments belonging to Eurasian Plate)

Rangin, C., C. Muller & H. Porth (1989)- Neogene geodynamic evolution of the Visayan region. In: H. Porth & C.H. von Daniels (eds.) (1989)- On the geology and hydrocarbon prospects of the Visayan Basin, Philippines. Geol. Jahrbuch B70, p. 7-27.

Rangin, C. & M. Pubellier (1990)- Subduction and accretion of oceanic fragments along the Eurasian margin: southern Japan- Philippine region. Some constraints for continental growth. In: J. Aubouin & J. Bourgois (eds.) Tectonics of Circum Pacific Continental margins, VSP Int. Publ., Utrecht, p. 139-164.

Rangin, C., J.F. Stephan, R. Blanchet, D. Baladad, P. Bouysee et al. (1988)- Seabeam survey at the southern end of the Manilla trench. Transition between subduction and collision processes, offshore Mindoro Island, Philippines. Tectonophysics 146, p. 261-278.
(S tip of the Manila trench subduction-collision transition zone. Where oceanic crust is subducted, simple accretionary prism-fore arc basin pattern is developed. Where continental margin is subducted, intraplate deformation is randomly distributed across fore arc area which is fragmented into various crustal microblocks)

Rangin, C., J.F. Stephan, J. Butterlin, H. Bellon, C. Muller, J. Chorowicz & D. Baladad (1991)- Collision neogene dôarcs volcaniques dans le centre des Philippines: stratigraphie et structures de la chaine dôAntique (ile de Panay). Bull. Soc. Geologique France 162, 3, p. 465-477.
('Neogene volcanic arc collision in C Philippines: stratigraphy and structures of the Antique Range, Panay'. Antique Range of W Panay is boundary between Eurasia and Philippine Sea plates, and represents Neogene accretion of intra-oceanic arc terrane to continental margin previously affected by rifting and spreading)

Rangin, C., J.F. Stephan & C. Muller (1985)- Middle Oligocene oceanic crust of the South China Sea, jammed into Mindoro Collision Zone, Philippines. Geology, 13, p. 425-428.
(Mindoro Island is between Manila Trench and collision zone of N Palawan block with W Philippines mobile belt. M Oligocene ophiolites in suture part of terranes thrust above N Palawan block at E-M Miocene boundary. Ophiolites interpreted as fragments of S China Sea oceanic crust between two continental blocks)

Ranneft, T.S.M., R.M.J. Hopkins, A.J. Froelich & J.W. Gwinn (1960)- Reconnaissance geology and oil possibilities of Mindanao. American Assoc. Petrol. Geol. (AAPG) Bull. 4, p. 529-568.
(Structural features in E Mindanao strongly influenced by active Philippine rift. W and C Mindanao reflect merging of diverse tectonic and volcanic trends. Two major sedimentary basins: Agusan-Davao Trough and Cotabato basin with 6000-15000' of mostly Miocene- Pliocene deep marine strata, both with possibilities for commercial hydrocarbon accumulations. Eocene limestone in Agusan-Davao Trough, contemporaneous with volcanism and intrusion in W Mindanao.)

Raschka, H., E. Nacario, D. Rammlmair, C. Samonte & L. Steiner (1985)- Geology of the ophiolite of Central Palawan Island, Philippines. Ofioliti B10, 2-3, p. 375-390.
(C Palawan Island with ophiolitic rocks over ~100 km in SW-NE direction. Ophiolite suite of basal tectonized peridotite, grading upward to foliated gabbro to pillow basalts with associated cherts. Sheeted dyke complex missing. Ophiolite overlain by Late Cretaceous-Oligocene flysch-type sediments (radiolarian ages?), covered by younger shallow water sediments. Intensely foliated rocks of mainly basaltic origin at peridotite contacts towards flysch (metamorphosed in amphibolite and greenschist facies, with K/Ar ages of ~40 Ma))

Rehm, S.K. (2003)- The Miocene carbonates in time and space on- and offshore SW Palawan, Philippines. Ph.D. Dissertation, Christian-Albrechts Universitat, Kiel, p. 1-242.
(online at: http://eldiss.uni-kiel.de/)
(Late Early- Middle Miocene carbonates on Palawan compared to equivalent deposits offshore. Laterally extensive platform carbonates unconformably overlie Cretaceous- Lower Tertiary clastics. Some isolated reefal buildups formed on top of platform during M Miocene drowning. Carbonate thickness ~650-1000m, displaying overall deepening-upward facies. Carbonates covered by Late Miocene-Recent prograding clastics)

Reyes, M.V. (1977)- Cenozoic reef developments in the Visayas, Philippine Islands. Proc. First ASCOPE Conf., Jakarta, 1, p. 253-261.

Reyes, M.V. & E.P. Ordonez (1970)- Philippine Cretaceous smaller foraminifera. The Philippine Geologist (J. Geol. Soc. Philippines) 24, 2, p. 1-67.

Reyes, R.A. (1979)- Hydrocarbon distribution and carbon isotope variations in the surface petroleum occurrences and potential sources rocks in Northwest Leyte. The Philippine Geologist (J. Geol. Soc. Philippines) 33, 1, p.

(Analyses of surface seeps and potential source rocks in NW peninsula of Leyte suggest: (1) land·derived organic matter contributed strongly to potential source of Taog, Tagnocot, Bata Fms (2) bitumen in Bata Fm sandstone not autochthonous and migrated from prolific source rock (3) surface hydrocarbon occurrences originated from common source, possibly from mature Taog Fm)

Reynolds, N.A., R. Ayres, R.N.McLean & G. Maude (2015)- The Mabilo copper-gold-iron deposit- a new skarn discovery in The Philippines. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 431-437.
(Mabilo skarn deposit in S of Pacarale mineral district in Luzon, 200km ESE of Manila. Mineralized skarn replaces dipping Tumbaga Fm Eocene limestone/ volcanics in aureole of Miocene quartz-diorite intrusion)

Ribeiro, J.M., R.C. Maury & M. Gregoire (2016)- Are adakites slab melts or high-pressure fractionated mantle melts? J. Petrology 57, 5, p. 839-862.
(Adakites are unusual felsic igneous rocks commonly associated with asthenospheric slab window opening or fast subduction of young (<25 Ma) oceanic plate that may allow slab melting at shallow depths (in forearc settings). Incl. examples from Philippines)

Ringenbach, J.C., N. Pinet, J.F. Stephan & J. Delteil (1993)- Structural variety and tectonic evolution of strike slip basins related to the Philippine fault system, northern Luzon, Philippines. Tectonics 12, 1, p. 187-204.
(N part of Philippine fault zone in Luzon complex system of left-lateral strike-slip faults, with strike-slip basins along main splays of fault zone. Those located along N striking cordilleran faults formed in late E Pliocene-Pleistocene time when Philippine fault initiated. Structural setting result of E Miocene collision between Benham Rise and E margin of Luzon, and subsequent inception of NW striking strand of Philippine fault)

Roberts, M. (1983)- Seismic example of complex faulting from NW shelf of Palawan. In A.W. Bally (ed.) Seismic expression of structural styles, American Assoc. Petrol. Geol. (AAPG), Studies in geology 15, 3, 4.2, p. 18-24.
(N Palawan-Calamian block separated from S China by N-S seafloor spreading beginning in M Oligocene. Spreading in ceased in E Miocene, but tectonism on NW shelf of NPC block continued into latest Miocene. Subsidence of at least outer shelf area in late E Miocene, synchronous with cessation of sea floor spreading, followed by M and L Miocene uplifts. Late Miocene events marked by high-angle basement faulting, here interpreted as wrench and reverse faulting, possibly resulting from collision between NPC block and main Philippine arc in SW Luzon-Mindoro-Panay region. Parts of crust of Mindoro and Panay may have been continuous with NPC block crust. Reed Bank and Dangerous Ground areas W and SW of NPC block, also thought to have separated from China (and Indochina) by sea-floor spreading, but drift not well documented)

Roeder, D. (1977)- Philippine arc system- collision or flipped subduction zone? Geology 5, p. 203-206.
(Between Taiwan and Molucca strait, an arc-arc collision migrating southward between Late Oligocene and E or M-Pliocene time was followed by renewed subduction at former sites of arc-associated wrenching. Possibly triggered by polarity changes along strike of collision, post-collisional trenches offset and of opposed polarity)

Roque, V.P., B.P. Reyes & B.A. Gonzales (1972)- Report on the comparative stratigraphy of the east and west sides of the mid-Luzon Central Valley, Philippines. Mineral Engin. Mag., September 1972, p. 11-51.

Rossman, D.L., G.C. Castanada & G.C. Bacuta (1989)- Geology of the Zambales ophiolite, Luzon, Philippines. Tectonophysics 168, p. 1-22.
(Zambales ophiolite complex of W Luzon. Age established by limiting strata is Late Eocene. Ophiolitic rocks exposed by uplift; ultramafic part exposed to erosion in earliest Miocene or Late Oligocene)

Rutland, R.W.R. (1967)- A tectonic study of part of the Philippine Fault Zone. J. Geol. Soc. London 123, p. 293-323.
(Philippine Fault Zone trends N40°W is major strike-slip fault comparable to San Andreas fault. In SE Luzon, low-grade metamorphic rocks, of probable pre-Tertiary age, occur on NE side of Rift. Two main episodes of

faulting: (1) Late Miocene on northerly faults and (2) Plio-Pleistocene on NW faults. Structural relations argue against major post-Miocene strike-slip movements)

Rutland, R.W.R. & M.R. Walter (1974)- Philippine Archipelago. In: A.M. Spencer (ed.) Mesozoic-Cenozoic orogenic belts, Geol. Soc., London, Spec. Publ. 4, p. 491-500.
(Brief review of Phillippines geology. Cretaceous-Tertiary orogen of the Philippines forms link between mobile regions of Taiwan to N and Sulawesi/W Irian to S. Basement of belt is Carboniferous -Permian ophiolitic rocks and flysch metamorphosed to amphibolite facies. Overlying basement are Triassic conglomerates and Jurassic greywackes and shales, locally with spilites. These were folded at end Jurassic and are overlain by Cretaceous)

Sajona, F., H. Bellon, R.C. Maury, M. Pubellier, J. Cotton & C. Rangin (1994)- Magmatic response to abrupt changes in geodynamic settings: Pliocene-Quaternary calc-alkaline and Nb-enriched lavas from Mindanao (Philippines). Tectonophysics 237, p. 47-72.

Sajona, F.G., H. Bellon, R.C. Maury, M. Pubellier, R.D. Quebral, J. Cotton et al. (1997)- Tertiary and Quaternary magmatism in Mindanao and Leyte (Philippines): geochronology, geochemistry and tectonic setting. J. Asian Earth Sci. 15, 2-3, p. 121-153.
(Several volcanic sectors in Leyte, Daguma and Mindanao. Composition of Tertiary-Recent arc magmatism linked to tectonic settings and used to refine reconstruction of tectonic history of Philippine archipelago. Identification of adakites used to date timings of subduction initiations and arc polarity reversals. In Daguma area (S Mindanao) Oligocene (30 Ma) arc tholeiitic diorites intrude older arc sequences. Miocene (17-7.7 Ma) calc-alkaline andesites with minor adakites at 18 Ma. Calc-alkaline volcanic substratum of Pliocene-Recent volcanoes(1.8 Ma -present) 8-6 Ma old. C Mindanao, Miocene andesites (20, 16 Ma), Pliocene (2.5 Ma) calk-alkaline volcanism and Quaternary lavas (1 Ma- present))

Sajona, F.G. & R.C. Maury (1998)- Association of adakites with gold and copper mineralization in the Philippines. Comptes Rendus Academie Sciences, Paris, IIA, 326, 1, p. 27-34.
(Adakites are intermediate- acidic volcanic and plutonic rocks derived from partial melting of subducted oceanic crust when subducting slab is young (< 20 Ma) and hot, at start and end of subduction. In Philippines most porphyry Cu and epithermal Au deposits related with these and related magmas (Nb-enriched basalts and adakite-linked andesites). E Luzon arc is example of adakite-Cu-Au area underthrusted by young crust)

Sajona, F.G., R.C. Maury, H. Bellon, J. Cotton & M. Defant (1996)- High field strengh element enrichment of Pliocene-Pleistocene island arc basalts, Zamboanga Peninsula, western Mindanao (Philippines). J. Petrology 37, p. 693-726.

Sajona, F.G., R. Maury, H. Bellon, J. Cotten, M. Defant & M. Pubellier (1993)- Initiation of subduction and the generation of slab melts in western and eastern Mindanao, Philippines. Geology 21, p. 1007-1010.
(Adakite in E and W Mindanao Island, with low heavy rare earth elements, high Sr/Y ratios, etc., considered to be result of melting of young subducted oceanic crust, leaving eclogite residue. Pliocene-Quaternary adakites from W Mindanao probably from melting of Miocene Sulu Sea crust, currently subducting under Zamboanga. In E Mindanao, Pliocene-Quaternary adakites mark trace of Philippine fault. Underlying Philippine Sea crust of Eocene age cannot melt under normal subduction thermal conditions, but thermal models indicate melting at start of subduction can occur. Subduction of Philippine Sea plate began at 3-4 Ma beneath E Mindanao)

Sajona, F.G., R.C. Maury, M. Pubellier, J. Leterrier, H. Bellon & J. Cotton (2000)- Magmatic source enrichment by slab-derived melts in a young post-collision setting, central Mindanao (Philippines). Lithos 54, p. 173-206.
(C Mindanao was place of Pliocene (4-5 Ma) arc- arc collision event followed by basaltic to dacitic magmatism starting at 2.3 Ma. Lavas calc-alkaline to shoshonitic, including adakites and Nb-enriched basalts. Chemistry attributed to interaction of slab-derived melts, i.e., adakites, with arc mantle)

Salapare, R.C., C.B. Dimalanta, N.T. Ramos, T. Noelynna, P.C. Manalo, D.V. Faustino-Eslava, K.L. Queano & G. Yumul (2015)- Upper crustal structure beneath the Zambales Ophiolite Complex, Luzon, Philippines inferred from integrated gravity, magnetic and geological data. Geophysical J. Int. 201, 3, p. 1522-1533.
(Zambales Ophiolite Complex in W Luzon, exposure of emplaced crust-upper mantle ophiolitic sequences. Two juxtaposed blocks: (1) Acoje Block (NW; M Jurassic- E Cretaceous; island arc tholeiite composition) with low Bouguer gravity (<135 mGal) and magnetic (<69 nT) anomalies and (2) Coto Block (SE; Eocene; transitional mid-oceanic ridge-basalt/island arc composition) with high Bouguer gravity (>150 mGal) and magnetic (>110 nT) anomalies. Blocks separated by Lewis Fault Zone, with right lateral and vertical displacements)

Saldivar-Sali, A. et al. (1983)- Geology of offshore NW Palawan. Oil and Gas J., Nov 30, 1983, p. 119-128.

Saldivar-Sali, A., N.L. Caagusan & R.S. Rieza (1981)- Paleogene petroleum possibilities in the Philippines. In: M.J. Valencia (ed.) Proc. EAPI/CCOP Workshop, Honolulu 1980, Energy 6, 11, p. 1207-1224.
(Older Paleogene section is most probable source rock for hydrocarbons produced from Lower Miocene carbonates in Philippines. Paleogene sandstone also probably cleaner (less volcanic) than Neogene sandstones. With Cretaceous- Recent stratigraphic section of Reed Bank well Sampaguita 1, S China Sea)

Saldivar-Sali, A., A.P. Madrid, R.A. Reyes & L.G. Flower (1987)- Tectonic setting and petroleum possibilities of Philippine sedimentary basins. In: M.K. Horn (ed.) Trans. 4th Circum Pacific Energy Mineral Resources Conf., Singapore 1986, p. 223-242.
(Philippines consist of island arc systems, microcontinental plates and 13 associated sedimentary basins. Basins classified as forearc, backarc (associated with arcs) and rift basins (associated with microcontinents). Numerous potential hydrocarbon plays. With Paleogene- Miocene paleogeographic maps and paleotectonic schematic profiles)

Saldivar-Sali, A., H.G. Oesterle & D.N. Brownlee (1981)- The geology of offshore Northwest Palawan, Philippines. Proc. 2nd Asian Council on Petroleum (ASCOPE) Conf. Exhib., Manila 1999, p. 99-123.

Saldivar-Sali, A., J. Suppe & R.E. Bischke (1996)- A Middle Miocene reconstruction of the Philippines and its consequences concerning petroleum exploration. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 617-625.
(Middle Miocene reconstruction of Philippines. Continental Palawan-Mindoro blocks collided with Visaya Islands (also with contain continental affinities) in ~M Miocene, uplifting C Mindoro and deforming basement and sediments along line from N Luzon to Negros. Oligo-Miocene volcanic arc formed during subduction along ancestral Manila trench. Etc.)

Sales, A.O., E.C. Jacobsen, A.A. Morado, J.J. Benavidez, F.A. Navarro & A.E. Lim (1997)- The petroleum potential of deepwater northwest Palawan block GSEC 66. J. Asian Earth Sci. 15, p. 217-240.

Samaniego, R.M. (1964)- The occurrence of *Globorotalia velascoensis* in the Philippines. Philippine Geologist (J. Geol. Soc. Philippines) 18, 3, p. 65-74.
(First record of Paleocene planktonic foraminifera in S Palawan)

Sano, S.I., Y. Iba, P.W. Skelton, J.P. Masse, Y.M. Aguilar & T. Kase (2014)- The evolution of canaliculate rudists in the light of a new canaliculate polyconitid rudist from the Albian of the Central Pacific. Palaeontology 57, 5, p. 951-962.
(New polyconitid rudist Magallanesia canaliculata of probable Late Albian age from Pulangbato, C Cebu Island, Philippines and Takuyo-Daini Seamount, now in NW Pacific. It is similar to Praecaprotina Yabe and Nagao, 1926, a Japanese- C Pacific endemic genus of late Aptian- E Albian age. Cebu rudists few genera of polyconitids and a requieniid in 10m thick limestone in volcanoclastic sequence (not melange))

Santos, G. (1974)- Mineral distribution and geological features of the Philippines. In: W. Petrascheck (ed.) Metallogenetic and geochemical provinces, Symposium Leoben 1972, Osterreichische Akademie Wissenschaften, Vienna, Springer Verlag, p. 89-105.

(Philippine mineral deposits divided into two main groups: (1)' frontal arc suite': nickel, laterite, chromite and cupriferous massive sulfide, associated with ultrabasic and basic volcanics and subordinate intermediate intrusive-metamorphic (schist) rocks; (2) 'third arc suite': mainly gold-bearing copper sulfides with pyrite and minor magnetite and molybdenite, related to intermediate intrusives and volcanics. Sulu Sea Basin may have formed as result of extensional rifting of part of frontal arc)

Santos, R.A. (1997)- Chromite and platinum group mineralization in arc-related ophiolites: constraints from Palawan and Dinagat Ophiolite Complexes, Philippines. Ph.D. Thesis, University of Tokyo, p. 1-193. *(Unpublished)*

Sarewitz, D. & D.E. Karig (1986)- Processes of allochthonous terranes evolution in Mindoro Island, Philippines. Tectonics 5, 4, p. 525-552.
(Two tectonostratigraphic terranes on Mindoro Island, with unclear relationships: (1) N Palawan block rifted off S China in Oligocene, and comprises most of shallow S end of S China Sea. E part includesM-L Jurassic Mansalay Fm (NW dipping) and Eocene- E Oligocene Caguray Fm quartz-rich clastics and limestone, thick Lumintao complex mid-Oligocene submarine rift basalts and U Oligocene-Miocene graben fill deposits. (2) Mindoro block, with lower greenschist facies metamorphic basement (protoliths submarine arc volcanics?) with tectonic slices of serpentinite, overlain by U Cretaceous and U Eocene strata, recording several episodes of intense deformation of Mesozoic and Tertiary age. Mindoro Suture steeply dipping faults with serpentinized ultramafic rock, amphibolite, and rocks derived from both bounding terranes, probably mid-Tertiary transcurrent faulting. W side of C Philippine archipelago was left-lateral transform boundary)

Sarewitz, D.R. & D.E. Karig (1986)- Geologic evolution of western Mindoro Island and the Mindoro suture zone, Philippines. J. Southeast Asian Earth Sci. 1, p. 117-141.
(Two tectonostratigraphic terranes on Mindoro Island: N Palawan and Mindoro blocks, separated by steeply-dipping Mindoro Suture Zone. N Palawan block is continental fragment rifted off Eurasia when S China Basin opened in mid Tertiary, with evidence of crustal stretching starting in Late Eocene or earlier. Large volumes of basalt extruded in mid Oligocene. Mindoro block with pre-upper Cretaceous Mindoro Metamorphic basement. Mindoro Suture Zone active in Late Paleogene- E Neogene. Numerous large bodies of serpentinized ultramafic rock along suture. Interpreted as strike-slip boundary, juxtaposing Mindoro and N Palawan blocks in M-L Miocene. Subsequent latest Miocene and younger W-vergent thrust faulting between Mindoro Suture Zone and Manila Trench)

Sarewitz, D.R. & S.D. Lewis (1991)- The Marinduque intra-arc basin, Philippines: Basin genesis and in situ ophiolite development in a strike-slip setting. Geol. Soc. America (GSA) Bull. 103, 5, p. 597-614.
(Marinduque marine intra-arc basin in N-C Philippine volcanic arc system. Rhombic in shape, with long axis trending N-NW, with ENE trending volcanic ridge dividing it into two depocenters. Magnetic anomalies parallel to central volcanic ridge indicate it formed by extension in N-S direction by process analogous to sea-floor spreading. Marinduque basin is composite pull-apart basin whose floor is in part composed of oceanic-type crust. Evolution of central volcanic ridge presents actualistic model for development and emplacement of ophiolites in island-arc setting. Overall history of Marinduque basin suggests strike-slip processes may play important role in origin of intra-arc basins)

Sato, T. (1961)- Les ammonites oxfordiennes de l'ile de Mindoro. Japan J. Geol. Geography 32, 1, p. 141-143.
('The Oxfordian ammonites of Mindoro Island'. Incl. Parawedekindia arduennensis, Pseudopeltoceras from thick (but intensely folded) interbedded sandstone-shales in Mansalay area of SE Mindoro. First ammonites described from Philippines (see also Sato et al. 2012))

Sato, T., T. Kase, Y. Shigeta, R.S.P. De Ocampo, P.A. Ong, Y.M. Aguilar & W. Mago (2012)- Newly collected Jurassic ammonites from the Mansalay Formation, Mindoro Island, Philippines. Bull. Natl. Museum Natural Sci., Taiwan, Ser. C, 38, p. 63-73.
(online at: www.kahaku.go.jp/research/researcher/papers/123549.pdf)
(Four species of Jurassic ammonite from Mansalay area in SE Mindoro Island, Philippines: Physodoceras cf. gortanii and Perisphinctes (Liosphinctes) sp. from Amaga River valley near Mansalay, and P. (L.) cf.

laevipickeringius and unidentifiable perisphinctid from Colasi Point. Assemblage indicative of M Oxfordian age and close affinity with Tethys-Pacific faunas)

Sato, T. & Y. Seki (1972)- Finding of lawsonite-bearing rock as a pebble in a Jurassic conglomerate bed in the southeastern part of Mindoro Island, Philippines. Proc. Japan Academy 48, 7, p. 495-499.
(online at: https://www.jstage.jst.go.jp/article/pjab1945/48/7/48_7_495/_pdf
(Lawsonite-bearing metavolcanic rock pebble in conglomerate in M Jurassic Mansalay Fm in SE Mindoro. Associated pebbles volcanics, schists, red chert, slate and Permian fusulinid-bearing limestones (Mindoro probably fragment of Mainland Asia similar to Palawan and Busuanga; JTvG))

Schweller, W.J. & D.E. Karig (1982)- Emplacement of the Zambales Ophiolite into the West Luzon margin. In: J.L. Watkins & C.L Drake (eds.) Studies in continental margin geology, American Assoc. Petrol. Geol. (AAPG), Mem. 34, p. 441-454.
(Zambales Ophiolite >10 km thick igneous sequence, formed in Late Eocene. It is a large fragment of oceanic crust, uplifted several km without being obducted onto continental margin. 120m of Late Eocene- Oligocene pelagic limestone on ophiolite changes to ophiolite- derived clastics in E Miocene)

Schweller, W.J., D.E. Karig & S.B. Bachman (1983)- Original setting and emplacement history of the Zambales Ophiolite, Luzon, Philippines, from stratigraphic evidence. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian seas and islands- II, American Geophys. Union (AGU), Geophys. Monograph 27, p. 124-138.
(Oldest sediments above Zambales ophiolite U Eocene pelagic limestone. M-Late Oligocene increasing dilution of limestone pelagic limestone with volcanoclastic turbidites. Thick Lower Miocene sandstone changes from volcanoclastic to ophiolitic composition over few Myrs, indicating rapid ophiolite uplift)

Schweller, W.J., P.H. Roth, D.E. Karig & S.B. Bachman (1984)- Sedimentation history and biostratigraphy of ophiolite-related Tertiary sediments, Luzon, Philippines. Geol. Soc. America (GSA) Bull. 95, 1, p. 1333-1342.
(Late Eocene- E Oligocene pelagic limestone of Lower Aksitero Fm caps volcanic complex of Zambales Ophiolite. U Aksitero Fm with volcaniclastic sandy turbidites in M-U Oligocene. Lower Miocene Moriones Fm clastics characteristic of deep-sea fans with debris of serpentine and other ultramafic components. Zambales deeply eroded by E Miocene and probably first emerged above sea level in M-L Oligocene, only 10 to 15 My after it formed as new ocean crust. Zambales Ophiolite originally part of marginal basin, not island arc)

Sevillo, D., J.F. Stephan, J. Delteil, C. Muller, J. Butterlin, H. Bellon & E. Billedo (1997)- Geology and tectonic history of Southeastern Luzon, Philippines. J. Asian Earth Sci. 15, p. 435-452.
(SE Luzon part of E Philippine Mobile Belt. Three major units limited by NW-SE left-lateral strike-slip faults. North-central Catanduanes Structural Unit characterized by M- early Late Cretaceous volcanic arc sequence unconformably overlain by M- L Eocene arc sequence, followed by E Oligocene intrusives. Median Structural Unit underlain by Late Cretaceous volcanic arc sequence followed by two chaotic sequences from end Cretaceous- Paleocene and latest Middle Eocene-earliest Late Eocene. W Caramoan Structural Unit pre-Late Cretaceous ophiolitic suite unconformably overlain by Late Cretaceous volcanic arc sequence and M Eocene limestones. All units overlain by Late Oligocene to Pliocene carbonate and detrital sequence. Polyphase left-lateral strike-slip faulting recorded from end of Cretaceous to Early-Late Oligocene boundary. Faults probably represent traces of Proto-Philippine Fault System in SE Luzon)

Sheldon, R.A. (1973)- Stratigraphy and petroleum prospects of Southwestern Cebu, Philippines. American Assoc. Petrol. Geol. (AAPG) Bull., p. 1343-1347.
(First recorded indication of oil in Philippines well was near Toledo, Cebu, in 1896 in folded Lower Miocene sediments. Since that time sporadic and unsuccessful efforts to discover commercial accumulations of oil throughout Philippines. 51 wells drilled in Toledo-Cletom area, 23 of which reported shows of oil or gas. Hydrocarbons present in Miocene clastics of SW Cebu, but basin structure rel. complex and relatively cool (?). Crude oils paraffinic with a pour-point 75-100°F and API gravity of 38-44°)

Sherlock, R.L. & T.J. Barrett (2003)- Geology and volcanic stratigraphy of the Canatuan and Malusok volcanogenic massive sulfide deposits, southwestern Mindanao, Philippines. Mineralium Deposita 39, 1, p. 1-20.

Sherlock, R.L., T.J. Barrett & P.D. Lewis (2003)- Geological setting of the Rapu Rapu gold-rich volcanogenic massive sulfide deposits, Albay Province, Philippines. Mineralium Deposita 38, 7, p. 813-830.
(Gold-rich Fe-Cu-Zn volcanogenic massive sulfide deposits hosted by dacitic volcanic rocks of probable Jurassic age on E Rapu Rapu Island, off SE Luzon, at S end of NW-trending Eastern Regional metamorphic complex)

Shuto, T. (1969)- Neogene gastropods from Panay Island, the Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 6, p. 1-250.
(136 species of Miocene- Pleistocene gastropods from E margin of Iloilo Basin, Panay Island)

Shuto, T. (1969)- Neogene gastropods from Panay Island, the Philippines. Mem. Fac. Science, Kyushu University, ser. D., Geol. 19, 1, p. 1-250.
(Same paper as Shuto 1969 above; 136 species of Miocene- Pleistocene gastropods from E margin of Iloilo Basin, Panay Island)

Shuto, T. (1971)- Neogene bivalves from Panay Island, the Philippines. Mem. Fac. Science, Kyushu University, ser. D, Geol., 21, 1, p. 1-73.

Shuto, T. (1982)- Miocene molluscs from the Macasilao and Paghu Mayan Formations, Negros Island, the Phlilippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 23, p. 101-135.

Sibuet, J.C. & S.K. Hsu (1997)- Geodynamics of the Taiwan arc-arc collision. Tectonophysics 274, p. 221-251.
(Luzon arc entered into collision with subduction zone in Late Miocene. With Miocene-Recent plate reconstructions of greater South China Sea area)

Sibuet, J.C. & S.K. Hsu (2004)- How was Taiwan created? Tectonophysics 379, p. 159-181.

Sillitoe, R.H., C.A. Angeles, G.M. Comia, E.C. Antioquia & R.B. Abeya (1990)- An acid-sulphate-type lode gold deposit at Nalesbitan, Luzon, Philippines. J. Geochemical Exploration 35, p. 387-411.
(Nalesbitan lode gold deposit on Bicol peninsula of SE Luzon, Philippines is of acid-sulphate type, with ~15 tonnes of Au. Mineralization hosted by Pliocene andesitic volcanic rocks transected by NW-striking sinistral strike-slip fault zone)

Sillitoe, R.H. & I.M. Gappe (1984)- Philippine porphyry copper deposits: geologic setting and characteristics. UNDP Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP) Techn. Bull. 14, p. 1-89.
(Comprehensive review of 48 porphyry Cu-Au deposits in Philippines)

Smith, W.D. (1906)- *Orbitoides* from the Binangonan Limestone (with some notes on early connections between Formosa, The Philippines and Java). Philippine J. Science 1, p. 203-209.
(Description of Orbitoides richthofeni n.sp. from Binangonan Peninsula (= Oligo-Miocene Lepidocyclina (Eulepidina); JTvG)

Smith, W.D. (1908)- The mineral resources of the Philippine islands, with a statement of the production of commercial mineral products during the year 1907. The Bureau of Science, Manila, p. 1-39.
(online at: http://archive.org/details/acc6331.1907.001.umich.edu)

Smith, W.D. (1910)- The mineral resources of the Philippine islands, with a statement of the production of commercial mineral products during the year 1909. The Bureau of Science, Manila, p. 1-81.

Smith, W.D. (1911)- The mineral resources of the Philippine islands, with a statement of the production of commercial mineral products during the year 1910. The Bureau of Science, Manila, p. 1-80.

Smith, W.D. (1912)- The mineral resources of the Philippine islands for the year 1911. The Bureau of Science, Manila, p. 1-99.

Smith, W.D. (1913)- The mineral resources of the Philippine islands for the year 1912. The Bureau of Science, Manila, p. 1-76.

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(online at: http://ia600202.us.archive.org/21/items/philippinejourna81913phil/philippinejourna81913phil.pdf)
(Early review of geological and paleontological studies in Philippines)

Smith, W.D. (1915)- Notes on the geology of Panay. Philippines J. Sci, A, 10, 3, p. 211-230.
(online at: http://ia902605.us.archive.org/0/items/philippinejo101915phil/philippinejo101915phil.pdf)

Smith, W.D. (1922)- Geological reconnaissance of the Pidatan Oil Field, Cotabato Province, Mindanao. Philippine Jour. Sci. 20, p. 23-44.

Smith, W.D. (1925)- Geology and mineral resources of the Philippine islands. Bureau of Mines, Manila, Publ. 19, p. 1-529.
(online at: https://ia800308.us.archive.org/19/items/acw7735.0019.001.umich.edu/acw7735.0019.001.umich.edu.pdf)

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(online at: http://pubs.usgs.gov/of/2010/1083/m/)
(Earthquake distribution around Philippine sea Plate, which is bordered by Pacific, Eurasia and Sunda plates. All borders zones of plate convergence)

Sofer, Z. (1985)- An unusual occurrence of light hydrocarbon gases in a well offshore Northeast Palawan Island, the Philippines. Precambrian Research 30, 3, p. 179-188.

Sonntag, I., R. Kerrich & S.G. Hagemann (2011)- The geochemistry of host arc volcanic rocks to the Co-O epithermal gold deposit, Eastern Mindanao, Philippines. Lithos 127, p. 564-580.
(Mindanao island in S Philippines comprises suture zone between Eurasian and Philippine plates (Philippine Mobile Belt). E Mindanao Philippine Mobile Belt outcrops mainly Eocene- Pliocene arc volcanics and sediments. Co-O epithermal Au deposit hosted in Oligocene volcanic series)

Sonntag, I., C. Laukamp & S.G. Hagemann (2012)- Low potassium hydrothermal alteration in low sulfidation epithermal systems as detected by IRS and XRD: an example from the Co-O mine, Eastern Mindanao, Philippines. Ore Geology Reviews 45, p. 47-60.

Spencer, F.D. & J.F. Vergara (1957)- Coal resources of The Philippines. Philippine Bureau Mines, Spec. Project Ser. 20, p. 1-52.

Sta. Ana, M.C. (2006)- Characterization of Miocene-Pliocene carbonate platforms, Southern Southwest Palawan Basin, Philippines. M.Sc. Thesis University of Texas, p. 1-59. *(Unpublished)*
(online at: http://txspace.tamu.edu/bitstream/handle/1969.1/ETD-TAMU-1796/STA.-ANA-THESIS.pdf)
(Seismic examples of Middle-Late Miocene carbonate buildups)

Stephan, J.F., R. Blanchet, C, Rangin, B. Pelletier, J. Letouzey & C. Muller (1986)- Geodynamic evolution of the Taiwan-Luzon-Mindoro belt since the Late Eocene. Tectonophysics 125, p. 245-268.
(Geodynamic evolution of boundary between Eurasia and Philippine Sea plates from Eocene- Recent. Major geodynamic events (1) opening of S China Sea in Lower Oligocene, contemporaneous with obduction of Zambales and Angat ophiolites on Luzon; (2) subduction of Mesozoic? oceanic basin along proto-Manila trench from U Oligocene- Lower Miocene; (3) obduction of S China Sea oceanic crust onto Chinese and Reed Bank- Calamian passive margins in M Miocene (14-15 Ma) related to major kinematic reorganization (end of opening of SCS); (4) beginning of collision between Luzon microblock and two margins of SCS in U Miocene (~7 Ma). Collision still active in Taiwan whereas it stopped in Mindoro in Pliocene)

Stephan, J.F., R. Blanchet, C.Rangin, B. Pelletier, J. Letouzey & C. Muller (1986)- Geodynamic evolution of the Taiwan-Luzon-Mindoro belt since the Late Eocene. Mem. Geol. Soc. China 7, p. 69-90.
(online at: http://twgeoref.moeacgs.gov.tw/star/1986/19860301/0069.pdf)
(Same paper as above)

Stephan, J.F. & C. Rangin (1984)- Superimposed collision episode in the northeastern part of the Sulu Sea from Middle Miocene to Present, Panay Island, Central Philippines. In: Symposium on Geodynamics of the Eurasian-Philippines Plateboundary, p. 69. *(Abstract only?)*

Steuer, S., D. Franke, F. Meresse, D. Savva, M. Pubellier & L. Auxietre (2012)- Time constraints on the evolution of Southern and Central Palawan Island from correlation of Miocene limestone formations. AAPG Int. Conf. Exh., Singapore 2012, Search and Discovery Art. 50772, 18p.
(online at: www.searchanddiscovery.com/documents/2012/50772steuer/ndx_steuer.pdf)
(Palawan offshore wedge is continuation of Palawan fold-thrust belt and ties Borneo-Palawan Trench to Dangerous Grounds and to Palawan Island. Development of wedge constrained by ages of overlying Tabon Lst (U Miocene- Lw Pliocene; ~9-4 Ma) and underlying E-M Miocene Nido Lst: wedge deformation started in upper M Miocene (~12 Ma) and continued to W until latest Miocene- E Pliocene (~5 Ma). S and C Palawan formed in second pulse of compression and uplift in Late Pliocene)

Steuer, S., D. Franke, F. Meresse, D. Savva, M. Pubellier, J.L. Auxietre & M. Aurelio (2013)- Time constraints on the evolution of Southern Palawan Island, Philippines from onshore and offshore correlation of Miocene Limestones. J. Asian Earth Sci. 76, p. 412-427.
(Timing of deformation of S and C Palawan Island fold- thrust belt and adjacent offshore wedge constrained by ages of E Miocene Nido Limestone (pre-deformation) and overlying LateMiocene- E Pliocene Tabon Lst (post-deformation))

Stoll, W.C. (1958)- Geology and petrology of the Masinloc chromite deposit, Zambales, Luzon, Philippine Islands. Bull. Geol. Soc. America (GSA) 69, p. 419-448.
(Masinloc mine at Goto, Zambales, Luzon, is world's largest producer of refractory-grade chrome ore. Ore occurs with other chromite deposits in layered ultramafic complex, overlapped by Miocene sediments. Ultramafics composed of gneissose norite, olivine gabbro, massive saxonite serpentine and dunite serpentine)

Suerte, L.O., A. Imai & S. Nishihara (2009)- Geochemical characteristics of intrusive rocks, Southeastern Mindanao, Philippines; implication to metallogenesis of porphyry copper-gold deposits. Resource Geology 59, 3, p. 244-262.
(Intrusive rocks associated with porphyry copper deposits in SE Mindanao include biotite and hornblende-bearing diorite porphyry (Kingking deposit) and other diorite porphyry and quartz diorite in other areas in SE Mindanao. They are adakitic in Sr/Y-Y diagram, but not in La/Yb-Yb diagram. Oligocene-Miocene diorite intrusive complex associated with porphyry-type copper-gold mineralization)

Suerte, L.O., S. Nishihara, A. Imai, K. Watanabe, G.P. Yumul & V.B. Maglambayan (2007)- Occurrence of ore minerals and fluid inclusion study on the Kingking porphyry copper-gold deposit, Eastern Mindanao, Philippines. Resource Geology 57, 2, p. 219-229.

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(online at: http://igcp589.cags.ac.cn/2nd%20Symposium/Field%20Guidebook.pdf)

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(Age and origin of oceanic basement of C Philippines ophiolitic massifs debated. Tacloban Ophiolite Complex NW-SE trending massif in NE Leyte Island, with U-Pb ages of zircons in gabbro of ~145 and 125 Ma (E Cretaceous). Overlain by several 10's m of Cretaceous red siliceous pelagic Palanog Sediments, unconformably overlain by Miocene-Pliocene marine sediments and Pleistocene volcaniclastics. Ophiolite suite of subduction-related origin, generated in marginal basin, with Late Miocene minimum age of emplacement. E Cretaceous age limits possible progenitor of ophiolite to proto-Philippine Sea Plate)

Suggate, S.M., M.A. Cottam, R. Hall, I. Sevastjanova, M.A. Forster, L.T. White, R.A. Armstrong, A. Carter & E. Mojares (2014)- South China continental margin signature for sandstones and granites from Palawan, Philippines. Gondwana Research 26, 2, p. 475-491.
(online at: http://searg.rhul.ac.uk/pubs/suggate_etal_2014%20Palawan.pdf)
(N Palawan Continental Terrane metasediments derived mainly from granitic and metamorphic rocks of continental character, with zircons indicating Late Cretaceous maximum depositional age and S China origin. S Palawan Terrane Miocene sandstones similar heavy mineral assemblages. Also similar to Lower Miocene Kudat Fm sandstones of N Borneo, suggesting short-lived episode of sediment transport from Palawan to Borneo in E Miocene following arc-continent collision. U-Pb dating of zircons show Central Palawan granite is Eocene (42 Ma). Capoas granite 13.8- 13.5 Ma. Inherited zircon ages from Capoas granite imply melting of continental crust from S China margin and Cenozoic rift-related and arc material)

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(On Miocene-Recent collisions of Philippine-Taiwan island arc system with China and its rifted margins)

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(online at: http://rwg-tag.bravehost.com/Conferences/geocon/ppt/1100-1120%20Suzuki.pdf)

Suzuki, S., R.E. Pena, T.A. Tam, G.P. Yumul, C.B. Dimalanta, M. Usui & K. Ishida (2017)- Development of the Philippine Mobile Belt in northern Luzon from Eocene to Pliocene. J. Asian Earth Sci. 142, p. 32-44.
(N Luzon in central part of Philippine Mobile Belt with pre-Paleocene ophiolitic complex, Eocene sediments, Eocene-Oligocene igneous complex and late Oligocene-E Pliocene sediments. In M Eocene PMB was primitive island arc. Late Oligocene- E Miocene time volcanic island arc setting. In M Miocene- Pliocene remained as mafic volcanic island arc)

Suzuki, S., S. Takemura, G.P. Yumul, D.D. Sevillo & D.K. Asiedu (2000)- Composition and provenance of the Upper Cretaceous to Eocene sandstones in Central Palawan, Philippines: constraints on the tectonic development of Palawan. The Island Arc 9, 4, p. 611-626.
(U Cretaceous- Eocene turbiditic sandstones from C Palawan common quartz, acidic volcanics, K-feldspar and granitic rock fragments. Derived from continental source region, probably continental margin of S China)

Suzuki, S., G.P. Yumul, C.B. Dimalanta, R.E. Pena, T. Tam & K. Isihida (2013)- Sandstone composition of the upper Cretaceous to Neogene successions of the Philippine Mobile Belt and the Palawan Continental Block. Proc. 2nd lnt. Symposium Int. Geoscience Programme (IGP) Project 589, Borocay Island, p. 28-31. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/2nd%20Symposium/Abstract%20volume.pdf)
(Sandstone compositions of Philippine Mobile Belt suggest it formed in Eocene as primitive basaltic volcanic arc and developed to basaltic-andesitic arc in Oligocene-Pliocene time. Sandstones from U Cretaceous in Palawan Continental Block rich in quartz and felsic volcanic rock fragments, suggesting PCB was part of continent and supports idea that PCB collided with PMB to form Philippine Archipelago)

Taguibao, K.J.L. & R. Takahashi (2018)- Whole-rock geochemistry of host rocks and K/Ar Age of hydrothermal mineral of the Co-O epithermal gold deposit, Mindanao, Philippines. Open J. of Geology 8, p. 383-398.
(online at: https://file.scirp.org/pdf/OJG_2018041215444466.pdf)
(Co-O epithermal gold deposit located along Pliocene-Quaternary calc-alkaline magmatic zone at E Mindanao. Intermediate sulfidation epithermal Au quartz vein type, hosted in Eocene- Oligocene island arc basaltic-andesitic volcanics and volcaniclastic rocks. K/Ar ages of hydrothermal minerals ~28.6 Ma (Late Oligocene) and ~31.7 Ma (E Oligocene))

Takanyagi, Y., T. Takayama & M. Oda (1977)- Notes on the Late Cenozoic planktonic foraminifera and calcareous nannofossils from Panay, Philippines. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 18, p. 77-86.

Tamayo, R.A., P.Y. Graciano, R.C. Maury, H. Bellon, J. Cotten, M. Polve T. Juteau & C. Querubin (2000)- Complex origin for the south-western Zamboanga metamorphic basement complex, western Mindanao, Philippines. The Island Arc 9, p. 638-652.
(N portion of SW Zamboanga metamorphic basement complex, W Mindanao, amphibolites with relict textures from cumulate gabbro protoliths and with magmatic arc-related signature. Unconformably overlain by metasedimentary quartz-muscovite-feldspar-kyanite schist of continental basement origin. Metamorphism at T 550-700°C and P of 5-9 kbar. K-Ar ages of metamorphic event 24.6, 22.2 and 21.2± 1.2 Ma. Results in agreement with plate tectonic models describing SW Zamboanga metamorphic basement as continental terrane with slivers of magmatic arc crust)

Tamayo, R.A., R.C. Maury, G.P. Yumul, M. Polve, J. Cotten, C.B. Dimalanta & F.O. Olaguera (2004)- Subduction-related magmatic imprint of most Philippine ophiolites: implications on the early geodynamic evolution of the Philippine archipelago. Bull. Soc. Geologique France 175, 5, p. 443-460.
(Basement complexes of Philippines at least 20 ophiolitic complexes, with volcanic sequences similar to MORB, transitional MORB-island arc tholeiites and arc volcanic rocks originating from modern Pacific-type oceans, back-arc basins and island arcs. Most volcanic sequences in Philippine ophiolites formed in subduction settings. Associated gabbros and peridotites tie to supra-subduction zone environments. Early geodynamic evolution of Philippines dominated by opening and closing of oceanic basins, providing substratum of Cretaceous -Recent volcanic arcs)

Tamayo, R.A., G.P. Yumul, R.C.Maury, M. Polve, M. Cotton & M. Bohn (2001)- Petrochemical investigation of the Antique Ophiolite (Philippines): implications on volcanogenic massive sulfide and podiform chromitite deposits. Resource Geology 51, p. 145-164.
(Antique Ophiolite of W Panay in E Miocene suture zone between Philippine Mobile Belt and 'Eurasian' N Palawan Block, E of Sulu Sea/ Negros Trench. Includes dismembered fragments of basaltic sequence, sheeted dikes, gabbros, mafic-ultramafic rock sequences and serpentinites, mostly as clasts and blocks within serpentinites. Ophiolite probably represents mix of oceanic ridge and fore-arc crust fragments. Overlying basal conglomerate of M Miocene age, suggesting exhumation no later than M Miocene. Volcanic rock chemistry intermediate between MORB and island arc basalt. Volcanogenic massive sulfide-copper deposits occur near the contact between pillow basalts and overlying sediments or interbedded with sediments)

Tamesis, E.V. (1981)- Hydrocarbon potential of Philippine basins. In: M.J. Valencia (ed.) Proc. EAPI/CCOP Workshop, Honolulu 1980, Energy 6, 11, p. 1181-1206.
(First oil exploration well in Philippines in 1896 in Visayan Region, Cebu Island. Since then >367 exploratory wells drilled in 12 basins. First commercial oil discovery 1976 Nido field off Palawan. Philippine sedimentary basins in complexly deformed zone between Philippine Sea Plate and Eurasian Plate. Main plays pursued are Oligocene- M Miocene carbonate buildups. Clastic reservoir plays in structural traps not encouraging due to rapid facies changes and low permeabilities of sands, mostly derived from volcanic detritus)

Tamesis, E. V., R.A. Lorentz, R.V. Pascual & E. M. Dizon (1982)- Stratigraphy and geologic structures of the Central Valley Basin, Luzon, Philippines. In: Geology and Tectonics of the Luzon-Marianas Region, Proc. CCOP-IOC-SEATAR Workshop, Philippines 1981, Manila, p. 83-118.

Tamesis, E.V., E.V. Manalac, C.A. Reyes & L.M. Ote (1973)- Late Tertiary geological history of the continental shelf off northwestern Palawan, Philippines. In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 165-176.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973012.pdf)

Tangunan, D.N., A.M. Peleo-Alampay, J.B. Abuda, L.A.T. Mambuay, C.R.A. Ramos, A.G.S. Fernando et al. (2014)- Post-collision deposition of Balanga Formation in Northwest Mindoro, Philippines. Stratigraphy 11, 3-4, p. 235-243.
(Calcareous nannofossils from Balanga Fm calcareous sedimentary sequence in Mamburao, NW Mindoro (Palawan Block). Late Pliocene- E Pleistocene age (NN14- NN19; 1-~1.7- 4.1 Ma), formed after E-M Miocene collision of Palawan-Mindoro Block with Philippine Mobile Belt)

Tangunan, D.N., A.G.S. Fernando & C.A. Arcilla (2013)- Occurrence of Cretaceous calcareous nannofossils from Codon Formation, Catanduanes, Philippines. J. Geol. Soc. Philippines 64, p. 35-39.
(Cretaceous calcareous nannofossils from limestone units of Codon Fm in Codon Point, SW Catanduanes. Occurrence of M. prinsii suggests Late Maastrichtian age (in N Catanduanes also Yop Fm with mid-Cretaceous Orbitolina))

Tangunan, D.N., R.J.M. Antonio, A.R.C.Fernandez, A.C. Balota, M.L.C. Abad, A.M. Peleo-Alampay & A.G.S.F. Fernando (2013)- The Catbalogan Formation (Northern Samar, Philippines): new age data from calcareous nannofossils. J. Geol. Soc. Philippines 64, p. 40-47.
(Catbalogan Fm clastics in N Samar late E Miocene- early Late Miocene calcareous nannofossils (NN4- NN9))

Teodosio, N.R. (1987)- An overview of coal deposits in the Philippines. ESCAP Series on Coal. 5, p. 142-150.

Teves, J.S. (1953)- The pre-Tertiary geology of southern Oriental Mindoro. Philippine Geologist 8, 1, p. 1-36.

Teves, J.S. (1955)- Philippine structural history and relation with neighboring areas. Philippine Geologist 9, 2, p. 18-41.
(Philippine Archipelago structural lines are mainly N-S trending extensions of mainly E-W structures of Indonesia. Major structural development in mid-Tertiary)

Teves, J.S. (1957)- Philippines. In: Lexique Stratigraphique Int., Congress Geol. Int., Commision de Stratigraphie, Paris, III, Asie 5, p. 1-167.
(Stratigraphic lexicon of The Philippines. Alphabetical listing and descriptions of stratigraphic units. With correlation chart of Tertiary- Quaternary formations. Updated in 2008)

Tumanda, F.P. (1991)- Permian to Jurassic radiolarian biostratigraphy of Busuanga Island, Palawan, Philippines. Doct. Science Dissertation, University of Tsukuba, p. 1-270.
(see also Marquez et al. 2009)

Tumanda, F.P. (1991)- Radiolarian biostratigraphy in central Busuanga Island, Palawan, Philippines. J. Geol. Soc. Philippines 46, p. 49-104.
(Permian-Jurassic radiolarian biostratigraphy (see also Marquez et al. 2006))

Tumanda, F.P. (1994)- Permian radiolarian from Busuanga Island, Palawan, Philippines. J. Geol. Soc. Philippines 49, p. 119-193.
(Permian radiolarians in chert from five sections in C Busuanga lsland suggest four Permian interval zones: Follicucullus monacanthus (late Early Permian), Follicucullus scholasticus (early Late Permian) Latentifistula similicutis (middle Late Permian), and Neoalbaillella ornithoformis (late Late Permian))

Tumanda-Mateer, F., K. Sashida & H. Igo (1996)- Some Jurassic radiolarians from Busuanga Island, Calamian Island Group, Palawan, Philippines. In: H. Noda & K. Sashida (eds.) Professor H. Igo Commemorative volume on Geology and Paleontology of Japan and Southeast Asia, Gakujyutsu Tosho Insatsu, Tokyo, p. 165-191.
(see also Yeh and Cheng (1996), etc.)

Ujie, H. & T. Samata (1973)- Pliocene- Upper Miocene planktonic foraminiferal faunas Northern Mindanao, Philippines. In: T. Kobayasi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 13, p. 129-144.
(Planktonic foraminifera spanning zones upper N17- lower N21 in Opol Fm of N Mindanao)

United Nations Development Program (1987)- Geology and mineralization in the Baguio area, Northern Luzon. UNDP Tech. Rept. 5, p. 1-82.

Vargas, E.P., D.N. Tangunan, A.M. Peleo-Alampay, J.B. Abuda, L. A.T. Mambuay, C.R.A. Ramos, A.G.S. Fernando, C.B. Dimalanta, D.V. Faustino-Eslava & C.S. Pascua (2014)- Post-collision deposition of Balanga Formation in northwest Mindoro, Philippines: calcareous nannofossil evidence. Stratigraphy 11, 3-4, p. 235-243.
(Calcareous sedimentary sequence exposed in Mamburao foraminifera-rich mudstones and sandstones with nannofossils of Late Pliocene- E Pleistocene age (~1.67 to 4.13 Ma). Formed after Miocene collision of Palawan-Mindoro Block with Philippine Mobile Belt)

Villaplaza, B.R.B., A.E. Buena, N.A.D. Pacle, B.D. Payot, J.A.S. Gabo-Ratio, N.T. Ramos et al. (2017)- Alteration and lithogeochemistry in the Masara gold District, Eastern Mindanao, Philippines, as tools for exploration targeting. Ore Geology Reviews 91, p. 530-540.
(Intermediate-low sulfidation epithermal gold deposit in Masara, E Mindanao, associated with diorite porphyry of Late Miocene Lamingag Intrusive Complex. Five major alteration zones, at least two mineralizing events)

Villavicencio, M.L. & P.P. Andal (1964)- *Distichoplax biserialis* Dietrich in the Philippines. Philippine Geologist (J. Geol. Soc. Philippines) 18, 4, p. 103-113.
(First report of Paleocene- Lower(?) Eocene (Ta) index algal genus Distichoplax biserialis from Philippines. In S Palawan associated with Discocyclina, Miscellanea and small Paleocene foraminifera. Also found in Cebu and Bicol)

Vogel, T., T. Flood, L. Patino, M. Wilmot, R. Maximo, C. Arpa, C. Arcilla & J. Stimac (2006)- Geochemistry of silicic magmas in the Macolod Corridor, SW Luzon, Philippines: evidence of distinct, mantle-derived, crustal sources for silicic magmas. Contrib. Mineralogy Petrology 151, 3, p. 267-281.
(Silicic volcanic deposits relatively abundant in Macolod Corridor, SW Luzon. Possibly from partial melting of mantle-derived, moderate to K-rich calc-alkaline magmas that ponded and crystallized in mid-crust)

Walia, M., U. Knittel, S. Suzuki, S.L. Chung, R.E. Pena & T.F. Yang (2012)- No Paleozoic metamorphics in Palawan (the Philippines)? Evidence from single grain U-Pb dating of detrital zircons. J. Asian Earth Sci. 52, p. 134-145.
(Palawan Continental Terrane is fragment of margin of SE China that drifted S as result of Cenozoic opening of S China Sea. Presence of non-metamorphic Permian and Triassic sediments in N of island suggested Paleozoic

age for metamorphics. Detrital zircons as young as 80-98 Ma in all metamorphic units, suggesting Late Cretaceous or younger age, so Caramay Schist not basement for rest of units in C Palawan. Zircon ages two major peaks, at ~115 Ma and 1.8 Ga. Source of zircons N part of Cathaysia Block, S China)

Walia, M., T.F. Yang, U. Knittel, T.K. Liu, C.H. Lo, S.L. Chung, L.S. Teng, C.B. Dimalanta, G.P. Yumul & W.M. Yuan (2013)- Cenozoic tectonics in the Buruanga Peninsula, Panay Island, Central Philippines, as constrained by U-Pb,40Ar/39Ar and fission track thermochronometers. Tectonophysics 582, p. 205-220.
(Buruanga Peninsula at westernmost Panay Island is part of Palawan Continental Terrane, formerly attached to SE China. Collided with Philippine Mobile Belt. Paleoproterozoic and Permian zircon U-Pb ages from Saboncogon Fm emphasize derivation from SE China. Zircon and AFT ages of 51 Ma and 16 Ma constrain exhumation age. Age data suggest tectonic events at ~14 Ma, ~11-12 Ma and ~7-8 Ma, following intrusive activity at ~18 Ma (Patria-Diorite). Collision started at ~14-15 Ma and ended before 8 Ma)

Walston, V.A. & H. Oesterle (1992)- Geology of the West Linapacan 'A' Field, Offshore Palawan, Philippines. In: 9th Offshore Southeast Asia Conf., Singapore 1992, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 10, OSEA 92171, p. 67-74.
(West Linacapan A field 1990 discovery off N tip Palawan Structure is large wrench fault-related anticline. Hydrocarbons in Lower Miocene Galoc Fm deep water sands and underlying fractured deep water Linacapan Limestone, which is rich in planktonic foraminifera (zones N4-N6). Oil API gravity 28.5°, sulfur content 2.6%. Recoverable reserves ~100 MBO (but cumulative production 1992-1996 only 8.6 MBO, then shut-in; JTvG))

Walther, H.W., H. Forster, W. Harre, H. Kreuzer, H. Lenz, P. Muller & H. Raschka (1981)- Early Cretaceous porphyry copper mineralization on Cebu island, Philippines, dated with K/Ar and Rb/Sr methods. Geol. Jahrbuch D48, p. 21-35.
(K/Ar dates on biotites from Tapian mine, Marinduque (21 Ma) and Sipalay mine, Negros Occidental (30 Ma) in agreement with geological knowledge. On Cebu Island Atlas porphyry-Cu mineralization dated by K/Ar and Rb/Sr methods as late Early Cretaceous (~108 Ma= Albian), probably related to conformity between E Cretaceous Cansi Fm and overlying Pandan Fm)

Waters, P.J., D.R. Cooke, R.I. Gonzales & D. Phillips (2011)- Porphyry and epithermal deposits and 40Ar/39Ar geochronology of the Baguio District, Philippines. Economic Geology and Bull. Soc. Econ. Geol. 106, 8, p. 1335-1363.
(Baguio district in C Cordillera of N Luzon numerous Pliocene-Pleistocene porphyry copper-gold, epithermal gold-silver and skarn gold-lead-zinc deposits. District floored by Cretaceous-Eocene metavolcanic and metasediments, overlain by E Miocene-Pliocene sediments and volcanics. Arc magmatism related to E-directed subduction of S China Sea plate along Manila Trench produced major E Miocene batholith (Ar/Ar ages ~20-23 Ma). Porphyry copper-gold and skarn deposits formed around 3.1-2.8 Ma, 1.5 Ma, 1.1 Ma and 0.5 Ma. Mineralization in district triggered by E-directed subduction of Scarborough Ridge, causing decrease in subduction angle. Fertile magmas emplaced into transtensional strike-slip relay basins)

Wehner, H. (1989)- Organic-geochemical studies in Visayan Basin, Philippines. In: H. Porth & C.H. von Daniels (eds.) On the geology and hydrocarbon prospects of the Visayan Basin, Philippines, Geol. Jahrbuch B70, p. 317-348.
(Geochemical analyses of Tertiary sediments and oils from seeps and wells of Visayan islands)

Withjack, E.M. (1985)- Analysis of naturally fractured reservoirs with bottomwater drive: Nido A and B fields, offshore Northwest Palawan, Philippines. J. Petroleum Technology 37, 8, p. 1481-1490.
(Computer simulations of influence of reservoir characteristics on performance of naturally fractured reservoirs with bottom water drive in Nido A and B fields off Palawan, Philippines)

Williams, H.H. (1997)- Play concepts- Northwest Palawan, Philippines. J. Asian Earth Sci. 15, p. 251-273.
(NW Palawan offshore with 4 proven exploration plays: (1) pinnacle reefs on Nido carbonate platforms (Nido, Matinloc, Cadlao); (2) seaward horst block reef fairway with large pinnacle reefs (Malampaya-Camago trend); (3) E Miocene Galoc Clastics turbidites (Octon, Galoc); and (4) four-way dip closures (W Linapacan, Octon).

Recent discovery at Calauit Field shows potential exploration play in deep-water Nido Lst turbidites. To date, only economically productive play has been Nido Lst reefs)

Williams, H., E.N. Reyes & R.T. Eubank (1992)- Geochemistry of Palawan oils, Philippines: source implications. In: Offshore SE Asia Conf. 1992, Proc. 9th SE Asia Petroleum Expl. Soc. (SEAPEX), Singapore, p. 115-129.
(Palawan non-waxy oils traditionally interpreted as marine sourced. Oils from recent Calauit fields characteristics of non-marine algal source)

Willis, B. (1937)- Geologic observations in the Philippines Islands. Nat. Res. Council Philippines Bull. 13, p. 1-127.

Willis, B. (1939)- The Philippine Archipelago: an illustration of continental growth. Proc. 6th Pacific Science Congress, California, 1, p. 185-200.

Wolcke, F. (1991)- Geologische und hydrogeologische Untersuchungen im Gebiet nordlich von Cebu City (Philippinen). Mitteilungen Geol. Palaeont. Institut Universitat Hamburg 71, p. 121-241.
('Geological and hydrogeological investigations in the area north of Cebu city, Philippines')

Wolcke, F. & J. Scholz (1988)- Uber die palaeobiogeographische Bedeutung eines Vorkommens caprinider Rudisten aus der Unterkreide von Cebu (Philippinen). Mitteilungen Geol. Palaeont. Inst. Universitat Hamburg 67, p. 121-133.
('On the paleobiogeographic significance of an occurrence of caprinid rudists from the Lower Cretaceous of Cebu, Philippines'. Rudists from Barremian-Aptian Pandan Fm reefal limestones in volcanoclastic succession, Pulanbato area, Central Cebu (?Amphitriscoelus sp., ?Polyconites sp.), associated with larger foram Palorbitolina lenticularis (now believed to be seamount fauna of Albian age; Skelton et al. 2013))

Wolfart, R., P. Cepek, F. Gramann, E. Kemper & H. Porth (1986)- Stratigraphy of Palawan Island. Newsletters Stratigraphy 16, p. 19-48.
(North Palawan: Miniloc Lst with Late Permian fusulinids and E-M Triassic conodonts. Liminangcong Fm rich radiolarian assemblages with M Triassic and M Jurassic ages. Overlying Coron Lst Fm with Girvanella, forams Hemigordius and Triasina and pelecypod Paramegalodus suggests Late Triassic (Rhaetian) age. S-C Palawan: sedimentary succession rel. young; Late Cretaceous/ ?earliest Tertiary 'Espina Fm' chert- shale, oldest rock unit in South/Central Palawan)

Wolfe, J.A. (1972)- Potassium-Argon dating in the Philippines. The Philippine Geologist (J. Geol. Soc. Philippines) 26, 2, p. 11-22.
(K-Ar dating on Philippine igneous rocks suggest oldest diorite intrusion cycle was at ~60 Ma ago (end-Paleocene). Datings of andesites and diorites scattered through Eocene-Miocene with peak of ~9 Ma)

Wolfe, J.A. (1981)- Philippine geochronology. The Philippine Geologist (J. Geol. Soc. Philippines), 35, 1, p. 1-35.

Wolfe, J.A. (1983)- Origin of The Philippines by accumulation of allochthons. The Philippine Geologist (J. Geol. Soc. Philippines) 37, 3, p. 17-33.

Wolfe, J.A. (1984)- North Palawan Block, Philippines- its relation to Asian mainland and role in evolution of South China Sea: Discussion. American Assoc. Petrol. Geol. (AAPG) Bull. 68, 7, p. 914-915.
(Critique of Holloway (1982). Philippines thought to have nucleated around Cretaceous fragments as result of formation of E-facing trench near present location of Luzon at ~50 Ma. Archipelago accumulated as allochthons in 'eddy' between 3300 km W-ward and 3300 km N-ward motion of ocean plates. Igneous activity welded islands together, and sediment has been shed into intervening basins)

Wolfe, J.A. (1988)- Arc magmatism and mineralization in North Luzon and its relationship to subduction at the East Luzon and North Manila Trenches. J. Southeast Asian Earth Sci. 2, 2, p. 79-93.
(Oligocene phase of subduction on E Luzon Trench coincided with opening of S China Sea and both activities ceased when spreading of S China Sea ceased. Period of porphyry copper mineralization in graben at Baguio from 8-10 Ma relates to Manila Trench on W side of Luzon, with igneous activity starting at ~15 Ma)

Wolfe, J.A. & S. Self (1983)- Structural lineaments and Neogene volcanism in southwestern Luzon. In: D. Hayes (ed.) The tectonics and geological evolution of Southeast Asian seas and islands 2, American Geophys. Union (AGU), Mon. 27, p. 157-172.

Wolfe, R.C. (2001)- Geology of the Dipidio region and paragnesis of the Dinkidi Cu-Au porphyry deposit. Ph.D. Thesis, University of Tasmania, p. 1-200.
(online at: http://eprints.utas.edu.au/11283/2/Wolfe_-Whole.pdf)
(Dinkidi Cu-Au porphyry deposit in N Luzon, Philippines. Hosted within Late Oligocene- E Miocene multi phase intrusive Didipio Igneous Complex, formed during alkaline magmatism related to Late Oligocene rifting event that formed Cagayan Valley Basin, and to final stages of W-directed subduction along E Luzon trench)

Wu, W.N., C.L. Lo & J.Y. Lin (2017)- Spatial variations of the crustal stress field in the Philippine region from inversion of earthquake focal mechanisms and their tectonic implications. J. Asian Earth Sci. 142, p. 109-118.

Yabe, H. (1919)- Notes on a *Lepidocyclina*-limestone from Cebu. Science Reports Tohoku Imperial University, 2nd ser. (Geol.), 5, 2, 15p.
(online at: http://ir.library.tohoku.ac.jp/re/bitstream/10097/30169/1/KJ00004176245.pdf)
(Late Oligocene- E Miocene limestone, overlying coal-bearing series of Cebu coalfield, at Pauting Botow near city of Cebu. With common Lepidocyclina (Eulepidina) formosa and other spp., L. (Nephrolepidina) angulosa, Spiroclypeus margaritatus, etc.)

Yabe, H. & S. Hanzawa (1925)- Notes on some Tertiary foraminiferous rocks of the Philippines. Science Reports Tohoku Imperial University, 2nd Ser. (Geol.), 7, 4, p. 97-109.
(online at: http://ir.library.tohoku.ac.jp/re/bitstream/10097/30184/1/KJ00004177562.pdf)
(Miocene lepidocyclinids in rocks collected by Dickerson)

Yabe, H. & S. Hanzawa (1929)- Tertiary foraminiferous rocks of the Philippines. Science Reports Tohoku Imperial University, 2nd Ser. (Geol.), 11, 3, 54p.
(online at: http://ir.library.tohoku.ac.jp/re/handle/10097/30209)
(Eocene and younger limestone samples collected by Dickerson from various Philippines islands))

Yan, Y., D. Yao, Z. Tian, C. Huang, W. Chen, M. Santosh, G.P. Yumul, C.B. Dimalanta & Z. Li (2018)- Zircon U-Pb chronology and Hf Isotope from the Palawan-Mindoro Block, Philippines: implication to provenance and tectonic evolution of the South China Sea. Tectonics 37, 4, p. 1063-1076.
(Palawan-Mindoro Block drifted from mainland Asia with spreading of S China Sea. U-Pb age and Hf isotopic data on detrital zircon grains from Eocene-Miocene sediments in Palawan-Mindoro Block show four major age groups (80-120, 160-180, 1600-2100 and 2200-2700 Ma). Eocene samples from Palawan-Mindoro similar to Taiwan, suggesting P-M Block still attached to South China margin in Eocene. Different zircons in Miocene samples reflect S-ward drifting of Palawan-Mindoro Block at or before that time)

Yang, T.F., T. Lee, C.H. Chen, S.N. Cheng, U. Knittel, R.S, Punongbayan & A. Rasdas (1996)- A double island arc between Taiwan and Luzon: consequence of ridge subduction. Tectonophysics 258, p. 85-101.
(Taiwan-Luzon Arc between Taiwan and Luzon double arc structure: two volcanic chains separated by 50 km N of Luzon (18°N), and converge near 20°N. Islets in W chain older and mainly Miocene- Pliocene volcanics; E chain mainly Quaternary active volcanoes. Double arc structure where Benioff zone suddenly changes, and possibly tectonic manifestation of subduction of Scarborough Seamount Chain, the extinct mid-ocean ridge of S China Sea. When ridge reached subduction zone at 5-4 Ma, its buoyancy temporarily interrupted subduction,

caused regional uplift and massive reef formation in W chain. When subduction started again, dip angle became shallower in response to buoyancy of downgoing ridge, leading to E-ward shift of volcanic front)

Yeh, K.Y. (1990)- Taxonomic studies of Triassic radiolaria from Busuanga Island, Philippines. Bull. Natl. Museum Natural Sci., Taiwan, 2, p. 1-63.
(online at: http://web2.nmns.edu.tw/PubLib/Library/research/199012-1.pdf)
(Liminangcong Fm bedded chert on SE Busuanga Island often with rich M-U Triassic radiolaria. Three assemblages: Ladinian Busuanga cheni, Carnian Trialatus megacornutus and Upper Norian Livarella sp. assemblages (part of continuous L Permian- Jurassic deep sea series with radiolaria; part of convergent margin of SE Asia that stretches from Japan to Borneo)

Yeh, K.Y. (1992)- Triassic radiolaria from Uson Island, Philippines. Bull. Natl. Museum Natural Sci., Taiwan, 3, p. 51-91.
(online at: http://web2.nmns.edu.tw/PubLib/Library/research/199205-51.pdf)
(Late Ladinian- E Rhaetian radiolaria from bedded chert on S Uson island, just S of Busuanga Island. Cherts lithologically similar to those from Busuanga island and believed to be part of Late Permian-Jurassic Liminangcong cherts of N Palawan Block)

Yeh, K.Y. & Y.N. Cheng (1996)- An Upper Triassic (Rhaetian) radiolarian assemblage from Busuanga Island, Philippines. Bull. Natl. Museum Natural Sci., Taiwan, 7, p. 1-43.
(E Rhaetian radiolarian faunas from red chert on Busuanga Island, NW Philippines, closely resemble Rhaetian radiolaria from Japan)

Yeh, K.Y. & Y.N. Cheng (1996)- Jurassic radiolarians from the Northwest Coast of Busuanga Island, North Palawan Block, Philippines. Micropaleontology 42, 2, p. 93-124.
(M Jurassic (Aalenian) radiolarians from Liminangcong red ribbon chert in Palawan olistostrome (part of Late Permian-Late Jurassic ocean plate stratigraphy at edge of N Palawan block). 56 species, with multicyrtid nassellarians (Praeparvicingula, H suum, Elodium). Similar to C and SW Japan. Presence of common Praeparvicingula and abundant pantanellids indicates N Tethyan or S Tethyan assemblage (~22-30°N or S)

Yeh, K.Y. & Y.N. Cheng (1998)- Radiolarians from the Lower Jurassic of the Busuanga Island, Philippines. Bull. Natl. Museum Natural Sci., Taiwan, 11, p. 1-65.

Yokoyama, K., Y. Tsutsumi, T. Kase K.L. Queano & M.A. Yolanda (2012)- Provenance study of Jurassic to Early Cretaceous sandstones from the Palawan Microcontinental Block, Philippines. Mem. Nat. Museum Nat. Science, Tokyo, 48, p. 177-199.
(online at: http://www.kahaku.go.jp/research/publication/memoir/download/48/4811.pdf)
(Palawan microcontinental block in Philippines separated from SW coast of Asian continent during opening of S China Sea in Oligocene-Miocene times. Jurassic- E Cretaceous sandstones from Palawan block (Busuanga, Mindoro, Panay islands) with bimodal age distribution of detrital monazites: 140-260 Ma and 1800-2000 Ma. Pattern unlike SE China Sea or Indochina Peninsula, but similar to Korean Peninsula and in Zhejiang Province in E China. Jurassic- E Cretaceous sandstones of Palawan area deposited on E side of present-day Taiwan?)

Yoshida, K., N. Pulido & E. Fukuyama (2016)- Unusual stress rotations within the Philippines possibly caused by slip heterogeneity along the Philippine fault. J. Geophysical Research, Solid Earth, 121, 3, p. 2020-2036.

Yu, S.B, Y.J. Hsu, T. Bacolcol, C.C. Yang, Y.Ch. Tsai & R. Solidum (2013)- Present-day crustal deformation along the Philippine Fault in Luzon, Philippines. J. Asian Earth Sci. 65, p. 64-74.
(Left-lateral Philippine Fault results from oblique convergence between Philippine Sea Plate and Sunda Block/Eurasian Plate, transecting Philippine archipelago from NW corner of Luzon to SE end of Mindanao for about 1200 km. GPS results show horizontal velocities with respect to Sunda Block gradually decrease from N to S along W Luzon at rates of 85-49 mm/yr in WNW direction)

Yumul, G.P. (1993)- Angat Ophiolitic Complex, Luzon, Philippines: a Cretaceous dismembered marginal basin ophiolitic complex. In: B.K. Tan et al. (eds.) Proc. 7th Conf. Geology, Mineral and Energy Res. SE Asia (GEOSEA VII), Bangkok 1991, J. Southeast Asian Earth Sci. 8, p. 529-537.
(Geochemistry of Angat Ophiolite Complex suggests formation in environment with both Mid-Ocean Ridge Basalt and Island Arc tholeiite signatures, probably in marginal basin setting)

Yumul, G.P. (1994)- A Cretaceous to Paleocene- Eocene South China Sea Basin origin for the Zambales Ophiolite Complex, Luzon, Philippines? Island Arc 3, 1, p. 35-47.
(Eocene Zambales Ophiolite Complex with transitional mid-ocean ridge basalt/ island arc tholeiite characteristics, formed in subduction-related marginal basin. Geophysical evidence suggests SW sub-basin of S China Sea Basin is probably Cretaceous to Paleocene-Eocene in age; Zambales Ophiolite Complex could have come from this sub-basin)

Yumul, G.P. (1994)- A marginal basin crust basement for the Baguio Mining District, Luzon, Philippines. J. Geol. Soc. Philippines 49, p. 79-87.

Yumul, G.P. (1994)- The Acoje Block platiniferous dunite horizon, Zambales Ophiolite Complex, Philippines: melt type and associated geochemical controls. Resource Geology 51, 2, p. 165-174.
(Zambales Eocene-age supra-subduction zone ophiolite complex made up of mid-ocean ridge-related Coto block and island arc-related Acoje block. Platinum-group elements in Acoje block in nickel sulfides and chromitite deposits of high-MgO basalt to boninitic magmas. Main platiniferous zone in Acoje block transition zone dunite)

Yumul, G.P. (2003)- The Cretaceous Southeast Bohol ophiolite complex, Central Philippines: a highly disaggregated supra-subduction zone ophiolite. J. Asian Earth Sci. 21, 8, p. 957-965.
(SE Bohol (NW of Mindanao) Ophiolite Complex complete ophiolite sequence with pelagic chert cap yielding E Cretaceous age. Basement is Cretaceous-Paleogene Alicia Schist. Peridotite suite dominated by harzburgite with rare lherzolite and dunite pods. Includes sheeted dike complex and preponderance of sheet flows over pillow lavas in volcanic section. Geochemical affinities transitional between Mid-Ocean Ridge basalt and island arc tholeiite, suggesting formation in subduction-related marginal basin. Formed in a fast-spreading center, emplacemed as forearc ophiolite)

Yumul, G.P. (2007)- Westward younging disposition of Philippine ophiolites and its implication for arc evolution. Island Arc 16, 2, p. 306-317.
(Philippine island arc system made up of 2 main blocks: Philippine Mobile Belt and Palawan microcontinental block in W. Ophiolites in Mobile Belt younging W-ward, resulting from CW rotation of Philippine arc system during NW-ward translation in Eocene, resulting in W boundary collision with Sundaland-Eurasian margin, causing accretion of ophiolites/ melanges along W side. New zonation with four belts: (1) Late Cretaceous ophiolite complexes/ metamorphic soles along E Philippines; (2) Cretaceous dismembered ultramafic-mafic complexes/ melanges exposed W of E Philippines; (3) Cretaceous- Eocene to Oligocene ophiolites, emplaced between Philippine Mobile Belt and Sundaland-Eurasian margin; (4) ophiolite complexes emplaced along continental margins (Palawan and Zamboanga-Sulu). Whole Philippine Mobile Belt, except strike-slip fault bounded Luzon Eocene Zambales ophiolite complex, may be underlain by Cretaceous proto-Philippine Sea Plate fragments)

Yumul, G.P. & G.R. Balce (2003)- Supra-subduction zone ophiolites as favorable hosts for chromitite, platinum and massive sulfide deposits. J. Southeast Asian Earth Sci. 10, p. 65-97.
(Supra-subduction zone ophiolites, as exemplified by Zambales Ophiolite Complex, Philippines, host extensive chromitite, volcanic-hosted massive sulfide deposits and, to a lesser degree, platinum-group minerals. Mid-ocean ridge basalt ophiolites almost barren of economic mineral deposits. Marginal basins more easily emplaced than large, open sea oceanic basin ophiolites which are usually subducted)

Yumul, G.P., G.R. Balce & R.T. Datuin (1993)- Ophiolites and ophiolitic complexes in the Philippines as viable exploration targets. J. Geol. Soc. Philippines 48, p. 35-54.

(Twenty ophiolitic complexes in Philippines. Ultramafic-mafic complexes with complete oceanic crust-mantle sequences classified as Tethyan, incomplete dismembered ones grouped as Cordilleran. Majority of Philippine ophiolitic complexes are supra- subduction zone (SSZ) ophiolites, exhibiting subduction related affinity. Most of` economically viable chromitite, massive nickel- copper sulfides and platinum group minerals hosted by these SSZ ophiolites)

Yumul, G.P., G.R. Balce, C. Dimalanta & R.T. Datuin (1997)- Distribution, geochemistry and mineralization potentials of Philippine ophiolite and ophiolitic sequences. Ofioliti 22, p. 47-56.
(Philippines ophiolites range from complete oceanic crust-mantle sequences (Tethyan type) to incomplete dismembered ones (Cordilleran type). Majority subduction-related. With viable chromitite, volcanic/ ultramafic-hosted massive nickel-copper sulfide and platinum-group mineral deposits. Subduction-related ophiolitic sequences better exploration targets for metallic mineral deposits than mid-ocean ridge ophiolites)

Yumul, G.P., W.W. Brown, C.B. Dimalanta, C.A. Ausa, D.V. Faustino-Eslava, B.D. Payot, N.T. Ramos, A.N.L. Lizada et al. (2017)- Adakitic rocks in the Masara gold-silver mine, Compostela Valley, Mindanao, Philippines: different places, varying mechanisms? J. Asian Earth Sci. 142, p. 45-55.

Yumul, G.P., R.T. Datuin & J.C. Manipon (1990)- Geology and geochemistry of the Cabangan- San Antonio massifs, Zambales Ophiolite Complex, Philippines: tectonically juxtaposed marginal basin island arc terranes. J. Geol. Soc. Philippines 45, p. 69-100.
(San Antonio part of Zambales Ophiolite complex with arc-like geochemistry)

Yumul, G.P., J.V. De Jesus & F.A. Jimenez (2001)- Collision boundaries along the Western Philippine Archipelago. Gondwana Research 4, p. 837-838. *(Extended Abstract)*
(Philippines island arc system interaction of two plates, Sundaland in W, Philippine Sea Plate in E. Part of Sundaland (S China Sea) subducts along Manila Trench since E Miocene, ocean floor in C-S Philippines (SE Sulu Sea, Celebes Sea) goes down along Negros-Cotabato Trench. Philippine Sea plate subducts obliquely along Philippine Trench since ~5 Ma))

Yumul, G.P. & C.B. Dimalanta (1997)- Geology of the southern Zambales ophiolite complex (Philippines): juxtaposed terranes of diverse origin. J. Southeast Asian Earth Sci. 15, p. 413-421.
(Eocene Zambales Ophiolite Complex three massifs, generated in subduction-related marginal basin)

Yumul, G.P., C.B. Dimalanta, H. Bellon, D.V. Faustino, J.V. De Jesus et al. (2000)- Adakitic lavas in the Central Luzon back-arc region, Philippines: lower crust partial melting products? Island Arc 9, 4, p. 499-512.
(Volcanism in the back-arc region of C Luzon, behind Manila Trench, characterized by fewer and smaller volume volcanic centersthan forearc side volcanic arc rocks. Back-arc side volcanics include basalts, andesites and dacites with adakite-like geochemical characteristics, most probably formed by partial melting of garnet-bearing amphibolitic lower crust. Adakitic lavas not necessarily arc–trench gap region slab melts)

Yumul, G.P., C.B. Dimalanta, J.V. De Jesus, D.V. Faustino, E.J. Marquez, J.L. Barretto, K.L. Queano & F.A. Jimenez (1999)- Geochemistry of arc volcanic rocks in Central Luzon, Philippines. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 77-84.
(online at: www.gsm.org.my/products/702001-100832-PDF.pdf)
(C Luzon volcanoes in two volcanic chains: W and E Volcanic Chains. W Chains include volcanics generated in forearc and main volcanic arc regions with respect to Manila Trench, E Chains extruded on back arc side. Across- and along-arc variation, with adakites and adakitic rocks in forearc, main volcanic arc and back-arc region. All siliceous rocks exhibit island arc affinity)

Yumul, G.P., C.B. Dimalanta, J.V. De Jesus, D.V. Faustino, E.J. Marquez, J.L. Barretto, R.A. Tamayo, K.L. Queano & F.A. Jimenez (1999)- Subic Bay fault zone: its role in the geologic history of the Zambales Ophiolite Complex, Philippines. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 85-94.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999009.pdf)

Yumul, G.P., C.B. Dimalanta, D.V. Faustino & J.V. De Jesus (1998)- Translation and docking of an arc terrane: geological and geochemical evidence from the southern Zambales Ophiolite Complex, Philippines. Tectonophysics 293, p. 255-272.
(Zambales Ophiolite Complex three massifs: Masinloc, Cabangan and San Antonio. San Antonio is rifted terrane from Acoje block, translated S to present position through W Luzon Shear- Subic Bay Fault Zone)

Yumul, G.P., C.B. Dimalanta & F.T. Jumawan (2000)- Geology of the southern Zambales Ophiolite Complex, Luzon, Philippines. Island Arc 9, 4, p. 542-555.
(Zambales Ophiolite Complex attained present-day configuration through juxtaposition of arc terrane (San Antonio massif) to back-arc crust (Cabangan massif). Massifs separated by left-lateral strike-slip fault)

Yumul, G.P., C.B. Dimalanta, V.B. Maglambayan & E.J. Marquez (2008)- Tectonic setting of a composite terrane: a review of the Philippine island arc system. Geosciences J. 12, 1, p. 7-17.
(online at: www.geosciences-journal.org/home/journal ...)
(Modern review of Philippines tectonic evolution, as result of interplay of arc magmatism, ophiolite accretion, ocean basin closure and other tectonic processes, related to interaction of four major plates: Sundaland, Philippine Mobile Belt, Philippine Sea and Indo-Australian plate. Collision zones system characterized by involvement of oceanic bathymetric highs (seamounts, spreading ridge, submerged continental fragment). Philippine Fault Zone major strike-slip fault traversing entire archipelago)

Yumul, G.P., C.B. Dimalanta, V.B. Maglambayan & R.A. Tamayo (2003)- Mineralization controls in island arc settings: insights from Philippine metallic deposits. Gondwana Research 6, p. 767-776.
(Review of gold-copper, volcanogenic massive sulfide and ultramafic-hosted deposits in Philippines)

Yumul, G.P., C.B. Dimalanta, E.J. Marquez & K.L. Queano (2009)- Onland signatures of the Palawan microcontinental block and Philippine mobile belt collision and crustal growth process: a review. J. Asian Earth Sci. 34, 5, p. 610-623.
(Collision of Palawan microcontinent with Philippine mobile belt multiple events with several fragments. Late Early-early M Miocene age (20-16 Ma) for major collision between Palawan indenter and Philippine mobile belt. Collision boundary from N Mindoro through Central mountain range swinging E of Sibuyan Island, along Buruanga Peninsula and E side of Antique Ophiolite Complex before connecting with Negros Trench)

Yumul, G.P., C.B. Dimalanta, T.A. Tam & E.G.L. Ramos (2008)- Baguio Mineral District: an oceanic arc witness to the geological evolution of northern Luzon, Philippines. Island Arc 17, p. 432-442.
(Baguio gold-copper mining district rocks evidence evolution from subduction-related marginal basin to island arc setting. E- M Miocene arc polarity reversal from E (termination of subduction along proto-E Luzon Trough) to W (initiation of subduction along Manila Trench))

Yumul, G.P., C.B. Dimalanta & R.A. Tamayo (2005)- Indenter-tectonics in the Philippines: example from the Palawan microcontinental block- Philippine Mobile Belt collision. Resource Geology 55, 3, p. 189-198.
(Aseismic Palawan microcontinental block collided with Philippine Mobile Belt since E Miocene. Tectonic microblocks N (Luzon) and S (W Visayas Block) of collision front rotated in opposite senses. Rotation converted adjacent strike-slip faults to subduction zones (Manila and Negros Trenches))

Yumul, G.P., C.B. Dimalanta, R.A. Tamayo & J.A.L. Barretto (2000)- Contrasting morphological trends of islands in Central Philippines: speculation on their origin. The Island Arc 9, 4, p. 627-637.
(Palawan microcontinental block collided with Philippine Mobile Belt, resulting in CCW rotation of Mindoro-Marinduque and CW rotation of Panay. Collision also caused CW rotation of NE Negros, Cebu, NW Masbate and Bohol (W Visayan block), resulting into present-day NE-SW trend. SE Sulu Sea sub-basin is inferred to have undergone CW rotation which can account for E-W magnetic lineations. Paleomagnetic data suggest collision-related rotation commenced during E -M Miocene and had ceased by Late Miocene)

Yumul, G.P., C.B. Dimalanta, R.A. Tamayo & H. Bellon (2003)- Silicic arc volcanism in Central Luzon, Philippines: characterization of its space, time and geochemical relationship. The Island Arc 12, 2, p. 207-218.
(In C Luzon volcanic centers dated to ~5 Ma are silicic in composition, those between 5- 1 Ma expose basaltic to andesitic rocks. Volcanic centers of <1 Ma range from basaltic through andesitic to dacitic. Also W-ward shift in location of volcanic centers, attributed to changes in dip of subduction of S China Sea crust along Manila Trench. Flat subduction resulted from subduction of Scarborough Seamount Chain along Manila Trench W of N Luzon)

Yumul, G.P., C.B. Dimalanta, R.A. Tamayo & D.V. Faustino-Eslava (2013)- Geological features of a collision zone marker: The Antique Ophiolite Complex (Western Panay, Philippines). J. Asian Earth Sci. 65, p. 53-63.
(Antique Ophiolite Complex exposed on W side of Panay, C Philippines, derived from Jurassic- Cretaceous proto-S China Sea oceanic leading edge of Palawan microcontinental block. Closure of ocean basin resulted in emplacement of ophiolite fragment along boundary of microcontinental block and Philippine mobile belt. Transitional mid-ocean ridge-island arc geochemistry characterize ophiolite rocks)

Yumul, G.P., C.B. Dimalanta, R.A. Tamayo & R.C. Maury (2003)- Collision, subduction and accretion events in the Philippines: a synthesis. The Island Arc 12, p. 77-91.
(Baguio District in N Luzon, Palawan-Central Philippine region and Mati-Pujada area in SE Mindanao resulted from events related to subduction polarity reversal leading to trench initiation, continent-arc collision and autochthonous oceanic lithosphere emplacement. Baguio District E Miocene trench initiation for E-dipping Manila Trench after Late Oligocene cessation of subduction alongW-dipping proto- E Luzon Trough. Manila Trench initiation attributed to collision of Palawan microcontinental block with Philippine Mobile Belt. Several collision-related accretionary complexes in Palawan- C Philippine region)

Yumul, G.P., C.B. Dimalanta, R.A. Tamayo, R.C. Maury, R.C. Bellon, M. Polve et al. (2004)- Geology of the Zamboanga Peninsula, Mindanao, Philippines: an enigmatic South China continental fragment? In: J. Malpas et al. (eds.) Aspects of the tectonic evolution of China, Geol. Soc., London, Spec. Publ. 226, p. 289-312.
(Mindanao Island in S Philippines two blocks: (1) E-C Mindanao island arc block and (2) continental Zamboanga Peninsula with several ophiolitic bodies and melanges, separated by NW-SE M Miocene Siayan-Sindangan collision suture zone, a subduction zone complex reactivated as sinistral strike-slip fault. M-Late Miocene lava flows from Zamboanga Peninsula consistent with possible existence of E Miocene Sulu Trench. Zamboanga Peninsula possibly part of Palawan microcontinental block)

Yumul, G.P., C.B. Dimalanta, R.A. Tamayo & M.F. Zhou (2006)- Geology and geochemistry of the Rapu-Rapu Ophiolite Complex, Eastern Philippines: possible fragment of the Proto-Philippine Sea Plate. Int. Geology Review 48, 4, p. 329-348.
(E Cretaceous Rapu-Rapu ophiolite complex is dismembered ophiolite, formed at intermediate- fast spreading center and interpreted as supra-subduction zone ophiolite. Volcanic and gabbroic rocks show predominance of a marginal basin geochemical signature, but spinels more indicative of mid-ocean ridge affinities. Together with other fragments of oceanic lithosphere exposed along E Philippine Ophiolite belt, probably derived from proto-Philippine Sea plate)

Yumul, G.P., F.T. Jumawan & C.B. Dimalanta (2009)- Geology, geochemistry and chromite mineralization potential of the Amnay ophiolitic complex, Mindoro, Philippines. Resource Geology 59, 3, p. 263-281.
(Amnay Ophiolitic Complex in Mindoro emplaced Cenozoic S China Sea oceanic lithosphere as result of collision between Palawan microcontinental block and Philippine mobile belt. M Oligocene sediments intercalated with MORB-like pillow lavas suggest generation of ophiolite complex in spreading ridge in back-arc basin setting. Volcanic rock geochemistry suggests supra-subduction zone ophiolite)

Yumul, G.P., M.F. Zhou, R.A. Tamayo, R.C. Maury, D.V. Faustino, F.O. Olaguera & J. Cotton (2001)- Onramping of a cold oceanic lithosphere in a forearc setting, the Southeast Bohol Ophiolite Complex, Central Philippines. Int. Geology Review 43, p. 850-866.
(E Cretaceous ophiolite complex on SE Bohol island formed in subduction-related marginal basin. Negative Nb, Zr, and Ti anomalies, suggest island-arc affinity. Ophiolite thrust on top of Cansiwang tectonic melange,

which is thrust over Alicia Schist (metamorphosed oceanic crust sliver of chlorite, amphibolite and quartz-sericite schist). Serpentinite between ophiolite and Alicia Schist indicates amphibolite schists not emplacement-related metamorphic sole of ophiolite. Crust-mantle sequence emplaced at relatively low T (<500°C). Onramping of SE Bohol Ophiolite Complex as forearc ophiolite, followed by collision and suturing with Alicia Schist in Late Cretaceous. Ophiolite may represent fragment of Cretaceous proto-Philippine Sea plate)

Zamoras, L.R. (2000)- Jurassic-Early Cretaceous accretionary complex in the Calamian Islands, North Palawan Block (Philippines). Ph.D. Thesis, Niigata University, p. 1-120. *(Unpublished)*
(Study of part of Jurassic- E Cretaceous 'East Asian subduction zone' on SE margin of Indochina and S China blocks, now NE part of Palawan Block (Late Permian- Late Jurassic/E Cretaceous deep marine sediments of NNW-traveling Izanagi oceanic plate, imbricated in Jurassic- Cretaceous)

Zamoras, L.R. (2013)- Accretion and post-accretion tectonics of the North Palawan Block. Proc. 2nd lnt. Symposium lnternational Geoscience Programme (IGP) Project 589, Borocay Island, p. 19-20. *(Abstract)*
(online at: http://igcp589.cags.ac.cn/2nd%20Symposium/Abstract%20volume.pdf)
(N Palawan Block 4 episodes: M Permian- Jurassic oceanic plate travel, with deposition of chert and clastics; (2) M-Jurassic- E Cretaceous accretion of chert-clastic sequences at E Asian continental margin during Paleo-Pacific subduction; (3) M Oligocene- E Miocene opening of S China Sea, resulting in S-ward movement of N Palawan Block; (4) M Miocene collision between N Palawan Block and Philippine Island Arc)

Zamoras, L.R. & A. Matsuoka (2000)- Early Late Jurassic radiolarians from the clastic unit in Busuanga Island, North Palawan, Philippines. Science Reports, Niigata University, E (Geology), 15, p. 91-109.
(At least 60 species of radiolarians in siliceous mudstone of Tulbuan Plain, Busuanga Island. Assemblages dominated by smaller nassellarians. Abundance of Stylocapsa(?) spiralis indicates zone JR6 of Matsuoka (1995). Associated occurrence of Stylocapsa tecta, Dicolocapsa conoformis, Guexella nudata, etc., narrows age down to lower part of zone, of Late Callovian or E Oxfordian age (see also Marquez et al. 2006; JTvG))

Zamoras, L.R. & A. Matsuoka (2001)- Malampaya Sound Group: a Jurassic-Early Cretaceous accretionary complex in Busuanga Island, North Palawan Block (Philippines). J. Geol. Soc. Japan, 107, p. 316-336.
(online at: https://www.jstage.jst.go.jp/article/geosoc1893/107/5/107_5_316/_pdf/-char/en)
(Busuanga Island accretionary complex, collectively called Malampaya Sound Gp, with M Permian- Jurassic radiolarian cherts, M Jurassic- E Cretaceous clastics and various-age limestones, with minor melange bodies. Incl. M Permian limestone with fusulinids (Verbeekina verbeeki, Neoschwagerina spp.) and U Jurassic limestone with Cladocoropsis miriabilis, Pseudocyclammina lituus, Salpingoporella. Rocks are off scraped sedimentary deposits from subducted oceanic plate, imbricated during Jurassic- E Cretaceous accretion. Transition from chert to siliceous mudstone to terrigenous clastics indicates change from open ocean to subduction zone sedimentation, and is younging to N)

Zamoras, L.R. & A. Matsuoka (2004)- Accretion and postaccretion tectonics of the Calamian Islands, North Palawan Block (Philippines). Island Arc 13, p. 506-519.
(Accretionary complex of N Palawan block with U Paleozoic-Mesozoic sequences of chert (Liminangcong Fm), clastics (Jurassic-Cretaceous Guinlo Fm) and limestones. Three accretionary belts on Busuanga Island (all with N-dipping beds, steepest in N; extent of complex ~22-25 km): (1) N Busuanga Belt (M Jurassic; with Permian- Aalenian pelagic sediments and Bathonian- Callovian clastics), (2) M Busuanga Belt (Late Jurassic; with M Permian- Bajocian cherts, overlain by Bathonian- Oxfordian clastics) and (3) S Busuanga Belt (E Cretaceous; with Triassic- Jurassic cherts, U Tithonian sandstones). Age progression reflects facies changes by gradual plate movement from remote oceanic environment towards subduction zone. Limestone blocks that formed over seamounts became juxtaposed with chert-clastic sequence during accretion. In Late Cretaceous accretion-subduction along E Asian margin subsided. M Oligocene seafloor spreading disconnected N Palawan block from Asian mainland, which then migrated S. Collision between N Palawan block and Philippine Island Arc in M Miocene generated megafold structure in Calamian Islands as result of CW turn of accretionary belts in E Calamian from NE-SW to NW-SE)

Zhu, J., Z. Sun, H. Kopp, X. Qiu, H. Xu, S. Li & W. Zhan (2013)- Segmentation of the Manila subduction system from migrated multichannel seismics and wedge taper analysis. Marine Geophysical Res. 34, 3-4, p. 379-391.

Zamoras, L.R., M.G.A. Montes, K.L. Queano, E.J. Marquez, C.B. Dimalanta, J.A.S. Gabo & G.P. Yumul (2008)- Buruanga Peninsula and Antique Range: two contrasting terranes in Northwest Panay, Philippines, featuring an arc- continent collision zone. Island Arc 17, 4, p. 443-457.
(Buruanga Peninsula of NW Panay with Jurassic pelagic rocks as part of ocean plate stratigraphy of N Palawan terrane. Differ from Antique Range M Miocene basaltic to andesitic pyroclastic and lava flow deposits with reefal limestone and arkosic sandstone of Philippine Mobile Belt (see also Ishida et al. 2015; Jurassic pelagics= M-L Triassic?; JTvG))

Zhu, J., Z. Sun, H. Kopp, X. Qiu, H. Xu, S. Li & W. Zhan (2013)- Segmentation of the Manila subduction system from migrated multichannel seismics and wedge taper analysis. Marine Geophysical Res. 34, 3-4, p. 379-391.
(Manila subduction system three segments: (1) N Luzon, (2) seamount chain segment and (3) Luzon segment)

IX.9. South Philippines (Celebes Sea, Sulu Sea, Sandakan)

Abando, R.P. & G.H. Ansay (2002)- Sulu Sea- East Palawan Basins: frontier basin case study. Coord. Comm. Geosc. Programs in East and SE Asia, 15p.
(at: www.ccop.or.th/projects/PPM/Case_Study_Phillipines_files/SuluSeaBasin.pdf)
(Discussion of petroleum potential in Sulu Sea (Sandakan sub-basin) and East Palawan Basin (Balabac and Bancauan subbasins))

Andrews, J.E. (1980)- Morphologic evidence for Celebes and Sulu marginal basins: constraints from ODP Leg 124. Geology 8, p. 140-143.

Beddoes, L.R. (1976)- The Balabac Sub-Basin, Southwestern Sulu Sea, Philippines. Offshore South East Asia Conf. 1976, Singapore, SE Asia PetroleumExpl. Soc. (SEAPEX), Paper 15, p. 1-22.
(Balabac sub-basin rel. small wrench-faulted M Miocene- E Pliocene depression in NW Sulu Sea, with up to 7000m of sediments. Underlain by E Miocene deep-water shale (probably deformed Rajang Gp; Hutchison 2005), acting as 'acoustic basement'. Overlain by Late Pliocene- Recent shallow water carbonates)

Beiersdorf, H. (1993)- Tectonic and sedimentary processes at the submarine Antique Ridge and the accretionary wedge of Negros (Sulu Sea, Philippines): results of an underwater television and photographic survey by R/V Sonne. The Island Arc 2, 3, p. 116-125.
(Numerous Neogene/Quaternary marl outcrops of submarine Antique Ridge and S Negros accretionary complexes (Sulu Sea, Philippines) formed by oversteepening of slope by collision with Cagayan Ridge and Cuyo Platform and by erosion)

Beiersdorf, H., W. Bach, G. Delisle, E. Faber, P. Gerling, K. Hinz et al. (1997)- Age and possible modes of formation of the Celebes Sea basement, and thermal regimes within the accretionary complexes off SW Mindanao and N Sulawesi. In: P. Dheeradilok et al. (eds.) Proc. Int. Conf. Stratigraphy and tectonic evolution of Southeast Asia and the South Pacific (GEOTHAI'97), Dept. Mineral Resources, Bangkok, 1, p. 369-387.
(E Celebes Sea floor generated by seafloor spreading. Crustal age of 43 Ma at ODP Sites 767 and 770 places chron 20 along latitude 5°30' N. Celebes Sea crust moved over hotspot along E-W path, still active around 40 Ma (seamount chain near latitude 3°N). New anomaly pattern places central seafloor spreading anomaly at 4°N, created possibly at 39 Ma (chron 18). Positive magnetic anomalies N and S of chron 20 identified as chron 21 and provide highest age of E Celebes Sea crust (~48 Ma), with spreading rate of 4 cm/yr. Cessation of seafloor spreading between 34-40 Ma. Central seafloor anomaly obscured by NW-trending wrench fault. Possible large crustal splinter of oceanic crust in accretionary prism off Mindanao. Locally high methane concentrations at lower slope off Sulawesi)

Bell, R.M. & R.G.C. Jessop (1974)- Exploration and geology of the west Sulu Sea, Philippines. The Australian Petrol. Explor. Assoc. (APPEA) J. 14, 1, p. 21-28.
(West Sulu Basin in W part of Sulu Sea. Minor M-L Miocene inversion and wrench structures in Sandakan and Bancauan basins)

Bellon, H. & C. Rangin (1991)- Geochemistry and isotopic dating of Cenozoic volcanic arc sequences around the Celebes and Sulu Seas. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 124, p. 321-338
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_23.pdf)
(K-Ar ages >50 igneous rocks from onshore Philippines, Sabah and N Sulawesi. Onshore ages 32- near 0 Ma. Two types of island arcs: those related to progressive closing of Celebes and Sulu marginal basins and those belonging to Philippine Sea Plate. Sulu Sea/ Cagayan Ridge volcanics E-M Miocene, 13.8- 21 Ma)

Belviso, S., P. Jean-Baptiste, B.C. Nguyen, L. Merlivat & L. Labeyrie (1987)- Deep methane maxima and 3He anomalies across the Pacific entrance to the Celebes Basin. Geochimica Cosmochimica Acta 51, 10, p. 2673-2680

(Several methane seeps along flanks of two S Mindanao submarine ridges (Sangihe and Talaud East-Mindanao), at 2000-3000 meter depth. Isotopic ratio of added δ3He indicates input of hydrothermal fluids, both mantle and crustal/ sedimentary components. Methane anomalies partially associated with 3He excess, comparable to observed in spreading axis hydrothermal fields. Also major methane anomaly few 10's of km from Sangihe Ridge with no 3He enrichment, that could originate largely from shallow sedimentary layers)

Berner, U. & P. Bertrand (1991)- Light hydrocarbons in sediments of the Sulu Sea basin (Site 768); genetic characterization by molecular and stable isotope composition. Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 227-231.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_16.pdf)
(Gases and interstitial waters from ODP Site 768 in Sulu Trench/Philippines points in-situ generation of methane down to sub-bottom depth of ~720m. Below this depth hydrogen isotope data indicate migration of light hydrocarbons into sediments. Occurrence of propane-pentane coincides with vertical distribution of mature organic matter. Gases in this zone of mixed microbial and thermal origin)

Bertrand, P., U. Berner & E. Lallier-Verges (1991)- Organic sedimentation in Celebes and Sulu basins: type of organic matter and evaluation of organic carbon accumulation rates. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP) 124, Scient. Results, p. 217-225.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_15.pdf
(Organic matter in wells of ODP sites 767 (Celebes Sea) and Site 768 (Sulu Sea) mainly of terrestrial origin with the highest TOC in M Miocene turbiditic sequences that reflect major compressive event between Philippine Mobile Belt and Palawan, Cagayan, and Sulu Ridges. Eocene and Lower Miocene in Celebes Sea low TOC and only highly degraded terrestrial particles, suggesting poor preservation conditions for organic carbon during open-ocean phase of Celebes Basin. Better preservation in younger sediments)

Bertrand, P., E. Lallier-Verges, F. Laggoun-De Farge, M. Pubeller, U. Berner, M. von Breymann & A. Desprairies (1996)- Organic sedimentation response to tectonic and paleogeographic influences in Celebes and Sulu basins, West Pacific (ODP Leg 124). In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 23-29.
(In Celebes (Site 767) and Sulu Sea (Site 768) sediments organic matter mainly of terrestrial origin, with highest concentrations and accumulation rates in M Miocene turbiditic sequences; autochthonous marine amorphous organic material more common in younger sediments. Massive turbiditic inputs related to major compressive event between Philippine Arc and Palawan/Cagayan/ Sulu ridges in M-L Miocene times. Thermal maturities indicates much higher paleogeothermal gradient in Sulu than in Celebes Sea)

Betzler, C., A.J. Nederbragt & G.J. Nichols (1991)- Significance of turbidites at Site 767 (Celebes Sea) and Site 768 (Sulu Sea). In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 124, p. 431-446.
(online at: www-odp.tamu.edu/Publications/124_SR/VOLUME/CHAPTERS/sr124_32.pdf)
(Mio-Pliocene turbidites deposition in Celebes- Sulu Sulu Seas tied to eustatic and tectonic events. Three types of source of siliciclastics in Celebes Sea Site 767: (1) dominated by mature quartz and quartz-lithic clasts with abundant plant debris, probably reworked shallow marine/continental environment with abundant vegetation; (2) change in source area indicated by paucity of quartz in upper system B and relative abundance of chert and other rock fragments (Sabah?); (3) clastic source from volcanic terrain. Also carbonate turbidites)

Burton, C.K. (1986)- Geological evolution of the Southern Philippines.In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 87-102.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986008.pdf)
(Philippines is collage of geologic terranes of disparate origin, with at least one continental fragment)

Castillo, P.R., P.E. Janney & R. Solidum (1999)- Petrology and geochemistry of Camiguin Island, southern Philippines: insights into the source of adakite and other lavas in a complex arc tectonic setting. Contrib. Mineralogy Petrology 134, 1, p. 33-51.

(Some young Camiguin high-silica lavas similar to high-silica lavas from Mindanao, formerly identified as 'adakites', derived from direct melting of subducted basaltic crust (butMindanao adakites not pure slab melts))

Castillo, P.R., S.J. Rigby & R.U. Solidum (2007)- Origin of high field strength element enrichment in volcanic arcs: geochemical evidence from the Sulu Arc, southern Philippines. Lithos 97, 3, p. 271-288.
(Lavas from active Sulu Arc, S Philippines, enriched in high field strength elements (HFSE), not typical volcanic arc geochemical signature. May be from metasomatism of mantle wedge peridotites by melts derived from subducting oceanic lithosphere, through formation of amphibole, etc.. From subduction of Sulu Sea crust)

Castillo, P.R. , R.U. Solidum & R.S. Punongbayan (2002)- Origin of high field strength element enrichment in the Sulu Arc, Southern Philippines, revisited. Geology 30, p. 707-710.
(HFSE enrichment in Sulu Arc lavas unlikely sourced from subducted Sulu Sea basaltic crust, but from melting of geochemically enriched component in mantle wedge)

Desprairies, A., M. Riviere & M. Pubellier (1991)- Diagenetic evolution of Neogene volcanic ashes (Celebes and Sulu Seas). In: E.A.Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 124, p. 489-503.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_36.pdf)
(Forty Late Miocene (8 Ma)- Pleistocene ash layers in Celebes and Sulu Seas Sites 767, 768, 769. Replacement of volcanic glass by smectite-phillipsite in tephra layers dated at 3.5-4 Ma. Also M Eocene to E Miocene ash beds in brownish pelagic claystones from Celebes Sea Site 767. In M Miocene no volcanic activity)

Durkee, E.F. (1993)- Oil, geology and changing concepts in the southwest Philippines (Palawan and the Sulu Sea). In: G.H. Teh (ed.) Proc. Symp. Tectonic framework and energy resources of the Western margin of the Pacific Basin, 1992, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia, Spec. Publ. 33, p. 241-262.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1993018.pdf)
(Review of oil-gas potential in S Philippines. Palawan shelf Oligocene- E Miocene reef play with proven discoveries in NW. Sulu Sea basins Balabac, Bancauan and Sandakan in SE poorly explored)

Fitch, F.H. (1963)- Geological relationship between the Philippines and Borneo. Philippine Geologist (J. Geol. Soc. Philippines) 17, 2, p. 41-47.
(Two major geosynclines from Cretaceous to mid-Tertiary: (1) NW Borneo geosyncline, probably extending NE-ward between Palawan island and Sulu deep rather than in Panay or Negritos; (2) Philippine geosyncline, probably extending SE in E Kalimantan)

Fontaine, H., A.A. Amiscaray & J.R. Sta. Cruz (1987)- Note on the Cuyo Archipelago, Sulu Sea, Philippines. Proc. 22nd Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Guangzhou 1985, 2, p. 333-339.
(Cuyo Archipelago in N part Sulu Sea formed by Pre-Tertiary metamorphosed limestones and radiolarite, intruded by M Miocene (15 Ma) diorite. Locally overlain by Quaternary basalts)

Futalan, K., A. Mitchell, K. Amos & G. Backe (2012)- Seismic facies analysis and structural interpretation of the Sandakan sub-basin, Sulu Sea, Philippines. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 30254, p. 1-18.
(online at: www.searchanddiscovery.com/documents/2012/30254futalan/ndx_futalan.pdf)
(Summary of seismic facies mapping work in Sandakan Sub-basin. Basin evolved from Late-Middle Miocene actively prograding fluvio-deltaic system, mainly fed by Kinabatangan River in Borneo, to Pliocene-Pleistocene shelfal carbonate environment)

Graves, J.E. & D.A. Swauger (1997)- Petroleum systems of the Sandakan Basin, Philippines. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems SE Asia & Australia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 799-813.
(Geochemical analyses reveal mid-Miocene mixed oil-gas prone marginal marine mudstones. Distribution of hydrocarbon indicators on seismic suggests marginal marine source, along with migration-bounding listric

normal faults, limit significant hydrocarbon entrapment to distal delta complex. Extensive Miocene uplift, erosion, and redistribution of Eocene-Oligocene Crocker Fm siliciclastics account for most of Sandakan Basin fill. Stacked 5-30 m thick sandstone reservoirs, with expected 20-25% porosity and 200-500 mD perm at target depths. Structures include normal faults, shale diapirs and ridges, and distal toe-of-slope compressional folds and thrusts, all probably formed in response to rapid sedimentation rates (1m/1000 yrs)).

Hinz, K. & M. Block (1990)- Summary of geophysical data from the Sulu and Celebes Seas. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Initial Reports, 124, p. 87-92.
(online at: www-odp.tamu.edu/publications/124_IR/VOLUME/CHAPTERS/ir124_05.pdf)
(Brief report on geophysical site survey for ODP Leg 124 wells. With seismic line showing thrusting of crustal sliver in Sulu Trench inner wall)

Hinz, K., M. Block, H.R. Kudrass & H. Meyer (1991)- Structural elements of the Sulu Sea, Philippines. Geol. Jahrbuch A 127, p. 483-506.
(Structure and tectonic history of Sulu Sea marginal oceanic basin between Sabah in SW and Philippines in NE, from seismic and ODP 124 well data. SE Sulu Sea basin underlain by Late Oligocene- E Miocene oceanic crust, now being subducted under Sulu Ridge (remnant part of Borneo Microplate). NW Sulu basin older, and part of N Borneo- Sulu collisional belt with occurrences of E Cretaceous-age ophiolites)

Hsu, V., H. Shibuya & D.L. Merrill (1991)- Paleomagnetic study of deep-sea sediments from the Cagayan Ridge in the Sulu Sea: results of Leg 124. In: E.A. Silver, C. Rangin et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 511-516.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_38.pdf)
(Sulu Sea Cagayan Ridge is volcanic arc that became inactive around 18 Ma. Soft sediment cover shows no noticeable rotation/ migration in paleomag data for last 9 My, suggesting spreading of Sulu Sea backarc basin did not cause rotation. Nearby Philippine Islands and Celebes Sea did have CCW rotation in their history)

Huang, Z., F.M. Gradstein & K.E. Louden (1991)- Subsidence and sedimentation analysis of marginal basins: Celebes Sea and Sulu Sea, Leg 124, Sites 767 and 768. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 124, p. 399-408.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_30.pdf)
(Celebes Sea Site 767: Basalts from normal MORB (mid-ocean ridge basalt), overlain by M Eocene oceanic reddish brown claystones. Sulu Sea ODP Site 768: intra-arc or back arc E Miocene age basalt transitional between MORB and island-arc tholeites, overlain by thin E Miocene oceanic brown/red claystone, then ~200m of pumice-rich marine tuffs, overlain by ~800m M Miocene- Recent pelagic sediments)

Hutchison, C.S. (1992)- The Southeast Sulu Sea, a Neogene marginal basin with outcropping extensions in Sabah. Bull. Geol. Soc. Malaysia 32, p. 89-108.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1992017.pdf)
(Sulu Sea marginal basin resulting from E Miocene intra-arc rifting. Sabah ophiolite complex predates late early Miocene opening of Sulu Sea basin and represents Lower Cretaceous ocean floor on which arc was built)

Hutchison, C.S. (ed.), R. Sukamto, A.P. Madrid & C.S. Hutchison et al. (1995)- Studies in East Asian tectonics and resources (SEATAR), Crustal transect VIII, South China-Sulu-Sulawesi-Maluku-Philippine seas. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 20, p. 1-45.

Jezek, P.A., D.J. Whitford & J.B. Gill (1981)- Geochemistry of recent lavas from the Sangihe-Sulawesi arc, Indonesia. In: A.J. Barber & S. Wiryosujono (eds.) Geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre, Spec. Publ. 2, p. 383-389.

John, T.U. (1963)- Geology and mineral deposits of East- Central Balabac island, Palawan Province, Philippines. Economic Geology 58, 1, p. 107-130.
(Balabac Island SW of Palawan (SW-most island of Philippines), comprises Upper Cretaceous- Lower Eocene chert-spilite formation, highly deformed with serpentinite masses, and Miocene Balabac sandstone. Structural

trends similar to nearby N Borneo Kudat Peninsula. Lorraine pyrite-chalcopyrite ore body in bedded cherts near Espina Point)

Jong, J. & K. Futalan (2015)- Structural interpretation, seismic facies analysis and depositional model of offshore Sandakan Sub-Basin. In: Asia Petroleum Geoscience Conf. Exh. (APGCE 2015), Kuala Lumpur, p. 443-447.
(Sandakan sub-basin in Sulu Sea off NE Sabah relatively under-explored. Paleogeography of Sandakan sub-basin evolved from active fluvio-deltaic progradation setting in late E Miocene- early Late Miocene to shelfal marine deposition in Pliocene)

Kaminski, M.A. & Z. Huang (1991)- Biostratigraphy of Eocene to Oligocene deep water agglutinated foraminifers in the red clays from Site 767, Celebes Sea. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 171-180.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_12.pdf)
(Deep water agglutinated benthic foraminifera in Celebes Sea ODP site 767 similar to assemblages in Carpathians and Atlantic Ocean. Three zones/ assemblages: (1) Paratrochamminoides- Hormosina ovulum assemblage: tubular genera and Spiroplectammina spectabilis; Early Eocene; (2) Reophax elongatus; latest E Eocene- E Oligocene and (3) low diversity assemblage of long-ranging forms, including Rhizammina, Reophax, Glomospira and Reticulophragmium amplectens; ?Oligocene. Basal assemblage probably Early Eocene age, suggesting underlying oceanic crust E Eocene age or older)

Koaler, F.C., D. Almogela, P. Estupigan, N.F. Exon, M. Hartmann, P.J. Muller & M.J. Whiticar (1979)- The Sulu Sea Basin: R.V. Valdivia cruise report and preliminary results. CCOP Newsletter 6, 1, p. 43-52.

Kopp, C., E.R. Flueh & S. Neben (1999)- Rupture and accretion of the Celebes Sea crust related to the North-Sulawesi subduction: combined interpretation of reflection and refraction seismic measurements. J. Geodynamics 27, p. 309-325.
(New seismic suggests N Sulawesi accretionary wedge entirely sedimentary. Celebes Sea typical oceanic crust, but thickens from 7 to 12 km below accretionary wedge)

Krause, D.C. (1966)- Tectonics, marine geology, and bathymetry of the Celebes Sea- Sulu Sea region. Geol. Soc. America (GSA) Bull. 77, p. 813-818.
(Rel. dated paleobathymetry maps Celebes Sea and surrounding seas)

Ku, Y.P., C.H. Chen, S.R. Song, Y. Iizuka & J.S. Shen (2009)- Late Quaternary explosive volcanic activities of the Mindanao-Molucca Sea collision zone in the Western Pacific as inferred from marine tephrostratigraphy in the Celebes Sea. Terrestrial Atmospheric Oceanic Sci. 20, 4, p. 587-605.
(Long piston core from E Celebes Sea basin provides high resolution 350 kyr marine tephrostratigraphy: 65 tephra layers, probably from volcanoes in Mindanao-Molucca Sea collision zone (S Philippine, Sangehi Arc, Halmahera Arc). Declining trend of explosive volcanism after ~180 ka, Late M Pleistocene. Shoshonitic volcanism in C Mindanao became extinct at ~151 ka, much younger than reported)

Kudrass, H.R., P. Muller, H. Kreuzer & W. Weiss (1990)- Volcanic rocks and Tertiary carbonates dredged from the Cagayan Ridge and the Southwest Sulu Sea, Philippines. In: C. Rangin et al. (eds.) Proc. Ocean Drilling Program (ODP), Initial Reports 124, p. 93-100.
(online at: www-odp.tamu.edu/Publications/124_IR/VOLUME/CHAPTERS/ir124_06.pdf)
(Dredged calkalkaline rocks suggest Cagayan Ridge originated as volcanic arc. K-Ar dates of basaltic rocks from N end of Ridge suggest volcanic activity at ~10-20 Ma. Shallow-water carbonates dredged from N end of Ridge at 1600-3800m depth with foraminifera Lepidocyclina, Cycloclypeus, indicating E-M Miocene age)

Kudrass, H.R., M. Wiedicke, P. Cepek, H. Kreuzer & P. Muller (1986)- Mesozoic and Cainozoic rocks dredged from the South China Sea (Reed Bank area) and Sulu Sea and their significance for plate-tectonic reconstructions. Marine Petroleum Geol. 3, 1, p. 19-30.

(Dredging and coring in S China Sea and Sulu Sea. Late Triassic deltaic sandstones with plant remains are oldest sediments recovered. Late Jurassic/Early Cretaceous metamorphism indicated by schists on NW flanks Reed Bank. These rocks, with gabbro, diorite, dacite, rhyolite and siliceous shale prove Dangerous Grounds and Reed Bank underlain by continental fragment. During seafloor spreading in S China Sea Late Oligocene- E Miocene carbonate platform developed on this SW-drifting continental fragment, which subsided in M Miocene. M Miocene andesite and E-M Miocene reefal carbonates recovered from Cagayan Ridge in Sulu Sea)

Lewis, S.D. (1991)- Geophysical setting of the Sulu and Celebes Seas. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 124, p. 65-73.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_05.pdf
(Celebes Sea oceanic basement mainly Middle Eocene age; Sulu Sea younger, late E to early M Miocene. No clearmagnetic patterns over Sulu Sea crust)

Mascle, A. & P.A. Biscarrat (1978)- The Sulu Sea: a marginal basin in Southeast Asia. In J. S. Watkins, L. Montadert & P.W. Dickerson (eds.) Geological and geophysical investigations of the continental margins. American Assoc. Petrol. Geol. (AAPG), Mem. 29, p. 373-381.
(Sulu Sea marginal sea with two basin types: (1) Outer Sulu Sea basin, formed inside old Palawan island arc ; (2) Inner Sulu Sea basin with oceanic crust. It is fringed to SE and E by active margin, the remains of larger Tertiary active margin which extended along W side of Philippines from Luzon to Negros and perhaps from Sulu Archipelago to NE part of Sabah)

Metzger, E.J. & H.E. Hurlburt (1996)- Coupled dynamics of the South China Sea, the Sulu Sea and the Pacific Ocean. J. Geophysical Research 101, p. 12331-12352.
(Modeling of water circulation in S China Sea, Sulu Sea, and area around Philippine Islands)

Mubandi, A.S.S., Y.S. Djajadihardja & B.M. Ganie (1999)- Petrogenesis of basic igneous rock of the Celebes Sea Basement. In: I. Busono & H. Alam (eds.) Developments in Indonesian tectonics and structural geology, Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 113-120.
(Basaltic rocks dredged from NE and SE Celebes Sea seamounts by SONNE 98 cruise charateristics of ocean island tholeiite. M Eocene radiometric age (44.9 ± 1.5 Ma))

Muller, C.M. (1991)- Biostratigraphy and geological evolution of the Sulu Sea and surrounding area. Proc. Ocean Drilling Program (ODP), Scient. Results, 124, p. 121-131.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_09.pdf)
(Biostratigraphic and lithologic data from Leg 124 in Sulu Sea, placed in context of surrounding areas: Palawan, N Borneo and Zamboanga Peninsula. Main events: (1) M Eocene emplacement of ophiolites in Palawan and Sabah; (2) opening of S China Sea since late Oligocene, linked to subduction of proto China Sea; (3) opening of Sulu Sea since E Miocene, (4) cessation of volcanic arc activity in Sulu Sea in early M Miocene (nannofossil zone NN5), possibly related to collision of Cagayan volcanic arc with drifted Chinese continental margin, and ending spreading in S China Sea; (5) subduction of oceanic crust of SE Sulu Sea Basin to S probably since latest Miocene and initiation of Sulu volcanic arc. Includes geological cross-sections from N Borneo to Sulu Sea)

Murauchi, S., W.J. Ludwig, N. Den, H. Hotta, T. Asanuma, T. Yoshii, A. Kubotera & K. Hagiwara (1973)- Structure of the Sulu Sea and the Celebes Sea. J. Geophysical Research 78, 17, p. 3437-3447.
(Seismic refraction profile through Sulu Sea and Celebes Sea marginal basins. NW part of Sulu Sea basin part of Palawan-Calamianes archipelago ridge that subsided. Deeper SE part of Sulu Sea basin and Celebes Sea basin oceanic crust. Sulu archipelago ridge characteristic of island arc, upon which sedimentation has produced flat sea floor in most places)

Murray, C. (2015)- Deepwater Sandakan Basin, Philippines: exploration of a new gas frontier. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2015, Singapore, 7.3, p. 1-6. *(Extended Abstract)*

(Sandakan Basin prospective, under-explored deep water basin in SW Sulu Sea, sharing similarities with other circum-Borneo Basins, where oil and gas fields discovered in Late Miocene turbidite reservoirs outboard of major delta systems, sourced from terrestrially derived kerogens)

Nagasaka, K., J. Francheteau & T. Kishii (1970)- Terrestrial heat flow in the Celebes and Sulu Seas. Marine Geophysical Res. 1, p. 99-103.
(Two heat flow measurements in Celebes Sea and three in Sulu Sea show mean values of 2.0 μcal/cm2 sec, higher than overall mean heat flow of oceans and close to mean value for marginal seas. Celebes Sea values (1.5) cooler than Sulu Sea (2.2- 2.6 mcal/cm sec°C)

Nederbragt, A.J. (1991)- Distribution and preservation of Cenozoic planktonic foraminifers from the Celebes and Sulu seas, Leg 124. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 159-170.
(Celebes Sea sites 770 and 767 M Eocene- Recent pelagic carbonates and marls on late M Eocene mid-oceanic ridge basalts. Sulu Sea late E Miocene- Recent sediment, with pelagic carbonates only in Late Pliocene and Pleistocene, suggesting falls in carbonate compensation depths at ~3.5 Ma, 2.4 Ma, 1.6 Ma, etc.)

Nichols, G., C. Betzler, G. Brass, Z. Huang, B. Linsley, D. Merril, C. Muller et al. (1990)- Depositional history of the Sulu Sea from ODP Sites 768, 769 and 771. Geophysical Research Letters 17, 11, p. 2065-2068.
(ODP Site 768 in SE sub-basin and Sites 769 and 771 on flanks of Cagayan Ridge. SuIu Basin originated in late E Miocene (~18.8 Ma) in backarc setting. Cagayan Ridge was site of E- early M Miocene arc volcanism with thick andesitic to basaltic volcaniclastics. Basin center E Miocene pelagic sequence interrupted by rhyolitic-dacitic pyroclastic flows. M-L Miocene sedimentation more continental, with thick quartz-rich turbidites. Decrease in supply from arc and continental sources and Late Pliocene change in carbonate compensation depth resulted in Late Pliocene- Pleistocene pelagic carbonate deposition)

Nichols, G. & R. Hall (1999)- History of Celebes Sea basin based on its stratigraphic and sedimentological record. J. Asian Earth Sci. 17, p. 47-59.
(online at: http://searg.rhul.ac.uk/pubs/nichols_hall_1999%20Celebes%20Sea.pdf)
(Oceanic Celebes Sea Basin between N Borneo and N Sulawesi opened in M Eocene (50-37 Ma), formed by spreading behind N-dipping subduction zone accommodating N-ward movement of Indian Ocean Plate. Sites 767 and 770 basement basalt with MORB affinity, overlain by late M Eocene pelagic mudstones, followed by condensed pelagic sequence (90m in 20 Ma) below CCD until E Miocene. M-L Miocene quartz-rich turbidites probably from E Borneo, peaking at ~10 Ma, caused by collision events on island. Clastic supply ended in Late Miocene, as S-ward subduction of Celebes Sea oceanic crust beneath N arm of Sulawesi began)

Oda, H., H. Shibuya & V. Hsu (2000)- Palaeomagnetic records of the Brunhes/Matuyama polarity transition from ODP Leg 124 (Celebes and Sulu seas). Geophysical J. Int. 142, p. 319-338.
(Paleomagnetic records of Brunhes/Matuyama geomagnetic polarity transition (0.78 Ma) in deep-sea sediment cores of ODP Leg 124 in Celebes and Sulu seas. Microtektite layer at Site 769A with sharp magnetic intensity peak, pegged at 789.5 ka)

Oke, B., J. Keall, P. Carroll, R. Noble & T. Setzer (2004)- Zebra Prospect- reading between the stripes. In: R.A. Noble et al. (eds.) Proc. Deepwater and Frontier Exploration in Asia & Australia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), DFE04- OR-048, 13p.
(Sandakan Basin off N Borneo Pliocene seismic amplitude anomalies corresponded to uneconomic, thin, gas-bearing, very fine sand-silt units)

Oppo, D.W., B.K. Linsley, Y. Rosenthal, S. Dannenmann & L. Beaufort (2003)- Orbital and suborbital climate variability in the Sulu Sea, western tropical Pacific. Geochem. Geophys. Geosystems 4, 1, 1003, p. 1-20.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2001GC000260/epdf)
(Planktonic δ18O from sediment core MD97-2141 in Sulu Sea reveals that for past 400 kyr, δ18O variability on orbital timescales similar to that caused by changes in ice volume alone)

Pederson, S.L. (1996)- Hydrocarbon potential, Southwest Sulu Sea, Philippines. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 587-594.
(SW Sulu Sea in Philippine Territorial waters three Tertiary subbasin, from NWto SE: Balabac, Bancauan and Sandakan. Gas-condensate tested in Sabah sector of Sandakan basin at Nymphe Norde 1. Oil and gas in Superior 333-1 well in Philippine sector of Sandakan subbasin)

Poblete, R.G. & A.A. Morado (1999)- The NW Sulu Sea Basin, Philippines: an attractive frontier area for petroleum exploration. Proc. Palawan 99 Conference, 12p.

Pouclet, A., M. Pubellier & P. Spadea (1991)- Volcanic ash from Celebes and Sulu Sea basins off the Philippines (Leg 124): petrography and geochemistry. In: E.A. Silver et al., Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 467-487.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_35.pdf)
(Volcanic material in deep-sea sediments Late Oligocene (32, 25 Ma) in Celebes Sea and E Miocene (18, 10 Ma) in Sulu Sea. Late E Miocene Sulu Sea tuffs from Cagayan arc, early Late Miocene ashes from Sulu arc. All ash compositions calc-alkaline and arc-related. E Pliocene activity in Celebes and Sulu Seas from new Sangihe arc and from Sulu, Zamboanga and Negros arcs. Late Pliocene- E Pleistocene renewal of activity in Sangihe-Cotobato and Sulu and Negros arcs. Last volcanic pulse in late Pleistocene)

Pubellier, M., P. Spadea, A. Pouclet, R. Solidum, A. Desprairies & H. Cambray (1991)- Correlations of tephras in Celebes and Sulu Sea basins; constraints on geodynamics. In: E.A.Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 459-465.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_34.pdf)
(In Eocene and Oligocene Celebes Basin recorded activity of large volcanic arc that could be Philippine or more likely Sunda arc. W Philippine Basin decrease of ash component in E Oligocene, with no volcanic activity until latest Miocene except pyroclastic flows on flank of Cagayan Ridge and Sulu Basin. Volcanic series known in Philippines and on Sabah in E Miocene (21-17 Ma) and M Miocene (15-11 Ma) may not have produced explosive volcanism. E Pliocene basaltic tephras may tie to volcanic ridges of N Zamboanga. Pleistocene renewal of volcanic activity from two different magmatic series compatible with incipient volcanism along Cotabato Trench and with basaltic plateaus of Central cordillera of Mindanao. New geodynamic framework consistent with new subduction along Philippine Trench around 4 Ma)

Rabinowitz, P.D., F.H. Syed & R. McCabe (1998)- Gravity studies across the Sula Arc. Proc. Offshore Technology Conf. (OTC), Houston 1998, 1, 8891-MS, p. 647-656.
(Should be Sulu arc. Three models proposed for tectonic origin of Sulu and Celebes Seas basins: (1) trapped fragments of oceanic plate, (2) back-arc spreading, and (3) rifting from SE Asia margin. Basins are separated by shallow partly emerged Sulu volcanic Ridge extending from W Mindano to NE Borneo. Gravity observations across Sulu Arc and adjacent basinal structures consistent with subduction zones along both flanks of Sulu Arc and also that extinct spreading centers exist in both Sulu and Celebes Seas)

Rangin, C. (1989)- The Sulu Sea, a back-arc basin setting within a Neogene collision zone. Tectonophysics 161, p. 119-141.
(SE Sulu Sea small oceanic basin that opened in M Miocene in back-arc setting along Sundaland margin during subduction of Celebes Sea plate beneath Sulu arc. Back-arc extension post-dates early M Miocene compression. Progressive, still incomplete closing of basin, initiated in Late Miocene, result of collision of exotic terranes with Sundaland margin, which also induced flipping of the Sulu subduction zone. Evolution of Sulu Sea modern example of how young oceanic crust can be incorporated in orogenic belt. Nice geologic cross-sections)

Rangin, C. (1991)- Southeast Asian marginal basins (South China, Sulu and Celebes Seas): new data and interpretations. CCOP Techn. Publ. 24, 25th Anniversary Volume, p. 156-174.
(Celebes and S China Seas rifted from Asian continental margin in Paleogene. Proto-South China Sea, now completely subducted, probably had same origin. Paleogene was period of intense stretching of Eurasian

margin and opening of marginal basins, Neogene corresponds to progressive subduction of these oceanic basins)

Rangin, C. & E.A. Silver (1991)- Geological setting of the Celebes and Sulu Sea. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Initial Reports, 124, p. 35-42.
(online at: www-odp.tamu.edu/Publications/124_IR/VOLUME/CHAPTERS/ir124_03.pdf)
(Celebes and Sulu Seas are deep restricted basins between Borneo and Philippine Archipelago. They are part of succession of trending NE subparallel oceanic basins. Separating basins from S China to Banda are ridges such as Cagayan Ridge, Palawan and Sulu archipelagos, arms of Sulawesi, and Sula platform)

Rangin, C. & E.A. Silver (1991)- Neogene tectonic evolution of the Celebes-Sulu basins: new insights from Leg 124 drilling. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 51-63.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_04.pdf)
(Synthetic cross section from S China Sea to Sulawesi, and correlation of major magmatic and tectonic events. Basins and their margins (Celebes-Sulu block) collided with rifted margin of China (Reed Bank) around 16 Ma. Submarine pyroclastics emplacement coincided with this collision. Sulu Basin probably opened in back-arc position for Cagayan volcanic arc in Early Miocene. Incipient closing of Sulu and Celebes basins still active)

Rangin, C., E. Silver and Leg 124 Team (1989)- Forages dans les bassins marginaux du SE Asiatique: resultats preliminaires du leg 124 (Ocean Drilling Program), Comptes Rendus Academie Sciences, Paris, Ser. II, 309, 12, p. 1333-1339.
('Wells in the marginal basins of SE Asia: preliminary results of ODP Leg 124'. ODP Leg 124 determined ages of Sulu Sea (E Miocene or E-M Miocene boundary) and Celebes Sea (M Eocene). Both basins record significant and synchronous influx of quartz-rich terrigeneous material at end of M Miocene, in response to major compressive tectonic event corresponding to closure of these SE Asian marginal basins (see also Rangin and Silver 1991)

Rangin, C., E. Silver, M.T. von Breymann et al. (eds.) (1991)- Volume 124 Scientific Results. Proc. Ocean Drilling Program (ODP), Initial Reports, 124, College Station, Tx, p. 1-552.
(online at: www-odp.tamu.edu/publications/124_SR/124TOC.HTM)
(Scientific results from wells and studies of ODP Leg 124 in Sulu and Celebes Seas)

Roeser, H.A. (1991)- Age of the crust of the Southeast Sulu Sea basin based on magnetic anomalies and age determined at Site 768. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 339-343.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_24.pdf)
(Age of Sulu Sea oceanic crust at ODP site 768 about 17-15 Ma. Magnetic anomalies rel. weak and not parallel to Palawan/ Cagayan Ridge/ Sulu Archipelago, but suggest N-S spreading direction. Sulu Sea probably started to open at 30-35 Ma (E. Oligocene= too early?; JTvG). Spreading continued until 10 Ma (Late Miocene). Most oceanic crust already subducted)

Scherer, R.P. (1991)- Radiolarians of the Celebes Sea, Leg 124, Sites 767 and 770. In: E.A. Silver, C. Rangin et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 345-357.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_25.pdf)
(Celebes Sea ODP Sites 767 and 770 brown clays over basalt at both sites contain radiolarians of late M Eocene Podocyrtis chalara Zone. No Late Eocene radiolarians due to probable hiatus or condensed section. Oligocene represented by Theocyrtis tuberosa and Dorcadospyris ateuchus zones. Pelagic sedimentation until E Miocene, when sedimentation became strongly influenced by continentally derived material)

Scherer, R.P. (1991)- Miocene radiolarians of the Sulu Sea, Leg 124. In: E.A. Silver, C. Rangin et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 359-368.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_26.pdf)
(Radiolarians generally rare in ODP Leg 124 sediments from Sulu Sea)

Schluter, H.U., M. Block, K. Hinz, S. Neben, D. Seidel & Y. Djajadihardja (2001)- Neogene sediment thickness and Miocene basin-floor fan systems of the Celebes Sea. Marine Petroleum Geol. 18, 7, p. 849-861.
(M Miocene turbidites correlated from ODP site 767 throughout Celebes Sea basin study area. Differences in thickness and distribution indicate two source areas: (1) M Miocene fans of C and S Celebes Sea basin controlled by paleo-Tarakan Delta system, tectonic events and basin floor morphology; (2) area along S Sulu Arc sourced from Mindanao. Correlations suggest post-M Miocene to pre-Pliocene age for Cotabato Trench accretionary wedge and Plio-Pleistocene age for N Sulawesi subduction wedge)

Schluter, H.U., K. Hinz & M. Block (1996)- Tectono-stratigraphic terranes and detachment faulting of the South China Sea and Sulu Sea. Marine Geology 130, p. 39-78.
(Five main tectono-stratigraphic terranes defined for S China Sea and four for Sulu Sea. Dangerous Grounds, Reed Bank, Palawan-NW Borneo Trough and Palawan Island continental terranes, developed on proto-China margin by simple shearing in Late Cretaceous-E Paleocene)

Schneider, D.A., D.V. Kent, & G.A. Mello (1992)- A detailed chronology of the Australasian impact event, the Brunhes-Matuyama geomagnetic polarity reversal, and global climate change. Earth Planetary Sci. Letters 111, p. 395-405.
(Australiasian microtektite peak layers in Sulu Sea ODP Holes 767B (49.63 mbsf) and 769A (61.31 mbsf))

Scibiorski, J., J. Jong, J. Rosser, P. Boss & B. Cassie (2009)- Prospectivity and exploration challenges of SC41 deepwater Sandakan Basin, South Sulu Sea. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2009, Singapore, p. 1-38. *(Abstract + Presentation)*
(Sandakan Basin off NE Sabah mainly in Philippine waters. Under-explored Tertiary sag basin with up to 6 km of Miocene -Pliocene deltaic and deepwater sediments. Previous exploration in basin focused on shallow water deltaic and carbonate plays; failure attributed to seal failure due to high sand content and cross fault leakage)

Serri, G., P. Spadea, L. Beccaluva, L. Civetta, M. Coltorti et al. (1991)- Petrology of igneous rocks from the Celebes Sea basement. In: E.A.Silver, C. Rangin et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 271-296.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_20.pdf)
(ODP Site 770 basaltic basement below M Eocene radiolarian-bearing red clays drilled for 106 mainly pillow lavas and pillow breccias, intercalated with massive amygdaloidal lavas. Two dolerite sills also recognized. All rocks studied show effect of low-temperature seafloor alteration, causing almost total replacement of olivine and glass. Textural and mineralogical features and crystallization sequences analogous to primitive or weakly fractionated mid-ocean-ridge basalts (MORBs). No detectable influence of subduction-related component)

Shibuya, H., V. Hsu, D. Merrill & ODP Leg 124 scientists (1989)- Paleomagnetic results of ODP Leg 124, Celebes and Sulu Seas. EOS 70, 43, p. 1365.

Shibuya H, D.L. Merill, V. Hsu & Leg 124 party (1991)- Paleogene counterclockwise rotation of the Celebes Sea-orientation of ODP cores utilizing the secondary magnetization. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 519-523.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_39.pdf)
(Paleomag work suggesting Celebes Sea Site 770 rotated up to 60° CCW between M Eocene and Late Oligocene. No rotation indicated after Late Oligocene)

Shyu, J.P. D. Merrill, V. Hsu, M.A. Kaminski, C.M. Muller, A.J. Nederbragt et al. (1991)- Biostratigraphic and magnetostratigraphic synthesis of the Celebes and Sulu Seas. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 11-35.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_02.pdf)
(Summary of ODP Leg 124 late M Eocene- Quaternary biostratigraphic and paleomagnetic studies)

Shyu, J.P. & C.M. Mueller (1991)- Calcareous nannofossil biostratigraphy of the Celebes and Sulu Seas. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 133-159.

(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_10.pdf)
(Sites 767 and 771 in Celebes Sea post-Oligocene sediments below carbonate compensation depth (CCD) and calcareous nannofossils recovered only from turbidites. From late M Eocene to Late Oligocene Site 771 was above CCD and accumulated pelagic clay. Highest occurrence of Chiasmolithus grandis just above basement and indicates late M Eocene age for Celebes Sea Basin crust. In SE Sulu Basin nannofossils preserved only in post- early M Miocene. Base Gephyrocapsa oceanica s.l. closest datum to top Olduvai paleomagnetic event and most suitable biohorizon for approximating Pliocene-Pleistocene boundary in Celebes and Sulu Seas)

Silver, E.A. & C. Rangin (1989)- Celebes and Sulu marginal basins: constraints from ODP Leg 124. EOS Transactions, AGU, 70, 43, p. 1365.
(Sites 767 and 770 in Celebes basin recovered M Eocene radiolarian red clay above MORB-type basaltic basement. Paleomag shows little change in latitude throughout its history. Site 768 in Sulu basin drilled 1271m, including 222m of basaltic basement, transitional between MORB and arc tholeite. Late E or early M Miocene brown claystone above and below 200m of rhyolitic pyroclastic deposits. Sites 769 and 771 on Cagayan ridge M Miocene and younger pelagic sediments above andesitic- basaltic tuffs, indicating cessation of Cagayan arc volcanism close to time of formation of Sulu basin. Both basins abundant terrigenous turbidites in M Miocene, with quartz sands and wood fragments, indicating a major collision event in Borneo or Philippines)

Silver, E.A. & C. Rangin (1991)- Leg 124 tectonic synthesis. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 3-9.
(online at: www-odp.tamu.edu/Publications/124_SR/VOLUME/CHAPTERS/sr124_01.pdf)
(Plate tectonic setting of M Eocene Celebes Sea oceanic crust ambiguous, but do not favor origin as fragment of Indian Ocean or W Philippine Sea plates. We cannot exclude origin as fragment of mostly subducted Molucca Sea Plate or basin rifted from edge of E Asian mainland. Sulu Sea likely to formed by back-arc spreading behind Cagayan Ridge in E Miocene. Cessation of spreading in Sulu Sea and volcanic activity on Cagayan Ridge were coeval, possibly related to collision between Palawan and Cagayan ridges)

Silver, E.A. & C. Rangin (1991)- Development of the Celebes Basin in the context of Western Pacific marginal basin history. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 39-49.
(online at: www-odp.tamu.edu/Publications/124_SR/VOLUME/CHAPTERS/sr124_03.pdf)
(Celebes Sea marginal basin origin still uncertain.Little paleomagnetic evidence of latitudinal change. Clay minerals no change from red to green claystones. Eocene-Oligocene sediments indicate open ocean origin for early basin history. If formed by rifting of edge of SE Asia, it did so without terrigenous input and allowed free interchange with ocean waters. Celebes Sea presently subducting, as are many W Pacific marginal basins)

Silver, E.A. & C. Rangin (1996)- Origin and history of the Sulu and Celebes basins: ODP Leg 124. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 51-60.
(Celebes basin formed in M Eocene time in environment protected from terrigenous sedimentation (red clay deposition until E Miocene. Gradually increasing influx of terrigenous sediments to high sedimentation rates in late M Miocene. Basement rocks MORB tholeiites, including pillow basalts, sheet flows, and sills. SE Sulu basin formed in intra-arc environment (200m of rhyolitici dacitic tuffs above basement in radiolarian brown claystone section. Activity in adjacent Cagayan arc ceased shortly after the opening of Sulu Sea. Both basins high rates of terrigenous turbidites in M Miocene, correlative with tectonism in Sabah and possibly Philippines)

Smith R.B., G.W. Betzler, G.W. Brass, Z. Huang et al. and Leg 124 Scientific Party (1990)- Depositional history of the Celebes Sea from ODP Sites 767 and 770. Geophysical Research Letters 17, 11, p. 2065-2068.
(Sites 767 and 770 in N Celebes Sea reached late M Eocene basaltic basement. From late M Eocene to Early Miocene pelagic sedimentation prevailed with little influence from continental or volcanic arc sources. First major continental influence in M Miocene time as thick sequence of quartzose turbidites on basin floor, possibly in response to M Miocene orogeny in N Borneo.Late Miocene arc volcanism began to contribute hemipelagic sediments and ash layers and remained dominant sediment to present. Celebes Sea now surrounded by volcanic arcs, but absence of volcanoclastics in Eocene- E Miocene suggests basin did not form by back-arc spreading)

Smith R.B., M. von Breymann & Z. Huang (1991)- Site backtracking and the Eocene- Oligocene calcite compensation depth in the Celebes Sea. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling program (ODP), Scient. Results 124, p. 447-457.
(online at: www-odp.tamu.edu/publications/124_sr/volume/chapters/sr124_33.pdf)
(Oceanic crust at Sites 767 and 770 in N Celebes Sea overlain by Eocene-Oligocene pelagic sediments. Brown clay accumulated below the calcite compensation depth (CCD) at deeper Site 767 throughout this time interval. Shallower Site 770 brief episode of non-calcareous clay deposition in earliest Oligocene, indicating abrupt lowering of the CCD by 500m, synchronous with drop in CCD in Pacific and Atlantic Oceans, showing open deep-water connections between Celebes Sea and Pacific or Indian Oceans in Eocene-Oligocene)

Smith, T.E., C.H. Huang & F.G. Sajona (1991)- Geochemistry and petrogenesis of basalts from Holes 767C, 770B and 770C, Celebes Sea. In: E.A. Silver, C. Rangin et al. (eds.) Proc. Ocean Drilling program (ODP), Scient. Results 124, p. 311-320.
(online at: www-odp.tamu.edu/Publications/124_SR/VOLUME/CHAPTERS/sr124_22.pdf)
(Compositionally Celebes Sea basalts very similar to normal mid-ocean ridge basalts. Celebes Sea interpreted as fragment of basement of Jurassic Argo abyssal plain trapped during Eocene (most unlikely; JTvG)).

Spadea, P., L. Beccaluva, L. Civetta, M. Coltorti, J. Dostal et al. (1991)- Petrology of basic igneous rocks from the floor of the Sulu Sea. In: E.A. Silver, C. Rangin et al. (eds.) Proc. Ocean Drilling program (ODP), Scient. Results 124, p. 251-269.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_19.pdf)
(Sulu Sea basement rocks, cored for ~220m beneath late E Miocene pelagic sediments, consist of pillow basalts, dolerite microgabbro. Basalts and dolerites suffered seawater alteration (secondary fill of cracks and amygdaloidal textures by carbonate, zeolites, and clay minerals) and low-grade greenschist facies oceanic metamorphism (chlorite, serpentine, etc.). E Miocene oceanic crust creation in Sulu Basin (Site 768) from basaltic MORB-like mantle sources, modified by subduction-related geochemical components)

Spadea, P., M. D'Antonio & M.F. Thirlwall (2004)- Source characteristics of the basement rocks from the Sulu and Celebes Basins (Western Pacific): chemical and isotopic evidence. Contrib. Mineralogy Petrology 123, 2, p. 159-176.
(Sulu Basin developed ~18 Ma as backarc basin, associated with Cagayan Ridge Arc. Celebes Sea Basin formed ~43 Ma, subsequently developing as open ocean until M Miocene. In both basins late M Miocene collision and Late Miocene onset of volcanic activity on adjacent arcs. Sulu and Celebes Sea Basins basalts isotopically similar to depleted Indian Ocean MORB, and distinct from E Pacific Rise MORB. Signature possibly inherited by Indian Ocean mantle during rupture of Gondwanaland, when fragments of this mantle may have migrated to position of Celebes, Sulu and Cagayan sources)

Subandrio, A.S., Y. Jayadiharja & B.M. Ganie (1999)- Petrogenesis of basaltic rock of Celebes Sea floor. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. .

Szarek, R., H. Nomaki & H. Kitazato (2007)- Living deep-sea benthic foraminifera from the warm and oxygen-depleted environment of the Sulu Sea. Deep Sea Research, II, 54, p. 145-176
(Sulu Sea is semi-enclosed oceanic basin with warm (~10°C) and oxygen depleted deep waters. Samples from water depths 534-4635m. Foraminifera assemblages above 3000m dominated by Angulogerina, bolivinids (Bolivina pacifica, B. spathulata) and uvigerinids (U. auberiana, Neouvigerina ampullacea). Below 3000m foram faunas mainly agglutinants (Spiroplectammina, Ammoscalaria, Reophax). Most living foraminifera in top 2cm of sediment, except Valvulineria and Globobulimina pacifica. Tubular arenaceous tubular forams (e.g. Hyperammina, Rhabdammina, Rhizammina) common at all sites)

Tamesis, E.V. (1990)- Petroleum geology of the Sulu Sea Basin, Philippines. In: 8th Offshore South East Asia Conf., Proc. SE Asia Petroleum Expl. Soc. (SEAPEX), Singapore, 9, p. 45-54.
(Sulu Sea several NE trending sub-basins (NW and SW Sulu) and three W Sulu small basins on Sabah shelf (Balabac, Bancauan, Sandakan). W Sulu Sea 21 wells. Basins inception in Late Paleogene, followed by

Neogene subsidence. Miocene- Pliocene fluvio-deltaics with oil and gas shows and Pliocene regional marine transgression with Late Pliocene- Pleistocene carbonate deposition)

Trinidad, N.D. & R.T. Barcelona (1999)- Notes on the geology and hydrocarbon potential of the Sibutu block, southern Philippines. In: Proc. Palawanõ99 Int. Conf. Tectonics, stratigraphy and petroleum and mineral systems of Palawan, Borneo and surrounding areas, Palawan Island, Philippines, 8p.

Van der Kaars, W.A. (1991)- Palynological aspects of Site 767 in the Celebes Sea. In: E.A. Silver et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 124, p. 369-374.
(online at: www-odp.tamu.edu/publications/124_SR/VOLUME/CHAPTERS/sr124_27.pdf)
(Palynological study of ODP Site 767 in Celebes Sea indicates presence of extensive wetlands in area in Middle and Late Miocene. At start of Late Pleistocene montane vegetation expanded, probably due to tectonic upheaval)

Walker, T.R., A.F. Williams, D. Wong, M. Kadir, A. Khair & R.H.F. Wong (1992)- Hydrocarbon potential of the southern Sandakan Basin, Eastern Sabah, Malaysia. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Abstract only)*
(Sandakan Basin is largest of three basins in SW Sulu Sea, with up to 6-8 km of Lower Miocene -Recent sediments. Complex history involving Paleogene arc tectonism and subbasin formation punctuated by obduction and transpressional events. Deltaic sedimentation with outer shelf reef growth characterized Neogene. Reservoir and intra-formational seals are ubiquitous. Source rocks are deltaics, similar to Baram and Mahakam Deltas. 15 exploration wells, 11 of these invalid tests. Similarities in stratigraphic and structural style between Baram Delta and Sandakan Basin suggest significant hydrocarbon potential)

Weissel, J.K. (1980)- Evidence for Eocene oceanic crust in the Celebes Basin. In: D.E. Hayes (ed.) The tectonic and geologic evolution of Southeast Asian Seas and Islands- I. American Geophys. Union (AGU), Geophys. Monograph 23, p. 37-47.
(Celebes Sea magnetic lineations striking N65°E mapped as anomalies 18-20, suggesting oceanic crust is of Eocene age. Magnetic anomaly shapes suggests little net change in latitude since Eocene. Intermediate heatflow of 1.58 HFU average corresponds to age of 51 Ma)

IX.10. SW Pacific (incl. New Caledonia, Solomon Islands)

Acharya, H.K. (1979)- Seismicity of the Southern Philippine Sea. Marine Geology 29, p. 25-32.
(Philippine Sea Plate almost completely surrounded by island arcs. Earthquake activity in S Philippine Sea at low-to-moderate levels at Palau-Kyushu Ridge, Central Basin Fault and W Philippine Basin)

Adachi, Y., H. Inokuchi, Y. Otofuji, N. Isezaki & K. Yaskawa (1987)- Rotation of the Philippine Sea Plate inferred from paleomagnetism of the Palau and Yap islands. Rock magnetism and paleogeophysics, Japan, 14, p. 72-74.
(online at:
http://peach.center.ous.ac.jp/rprep/Rock%20Magnetism%20and%20Paleogeophysics%20vol14%201987.pdf)
(Paleomag work on 16 sites in Palau Islands on S end of Kyushu-Palau Ridge suggest ~60°CW rotation, similar to results from other parts of W Philippine Sea)

Adams, C.J. (2010)- Accretionary complexes in eastern Australia and New Zealand: matching their sediment sources and destinations. In: S. Buckman & P.L. Blevin (eds.) Proc. Conf. New England Orogen 2010 (NEO 2010), Armidale, p. 5-11.
(Accretionary rocks of Carboniferous-Cretaceous in Torlesse Terrane of New Zealand derived from continental sources of plutonic and metamorphic rocks. Sources must be dominated by Permian-Triassic granitoids, and thought to originate at E Australian continental margin. Detrital zircon age patterns in sandstones from New England Orogen (NEO) and Torlesse Terrane suggest common sediment sources in Carboniferous magmatic arcs in NEO, but Late Permian-Cretaceous of Torlesse with major 230-265 Ma age peak suggests displacement of accretionary activity, outboard of NEO in Middle-Late Permian, after E Permian rift event)

Adams, C.J. (2011)- Lost terranes of Zealandia: possible development of late Paleozoic and early Mesozoic sedimentary basins at the Southwest Pacific margin of Gondwanaland, and their destination as terranes in southern South America. Andean Geol. 37, 2, p. 442-454.
(Metasedimentary rocks in Chilean archipelago have significant Mesoproterozoic, latest Neoproterozoic-Cambrian and Devonian-Carboniferous detrital zircon age components in common with 'lost terranes of Zealandia')

Adams, C.J., M.E. Barley, I.R. Fletcher & A.L. Pickard (1998)- Evidence from U-Pb zircon and 40Ar/39Ar muscovite detrital mineral ages in metasandstones for movement of the Torlesse suspect terrane around the eastern margin of Gondwanaland. Terra Nova 10, 4, p. 183-189.
(Detrital zircon and Ar/Ar muscovite ages from Triassic metasandstones of New Zealand Torlesse Terrane four components: (1) major Triassic-Permian (210-270 Ma), (2) minor Permian-Carboniferous (280-350 Ma) granitoids, (3) minor E-M Paleozoic metamorphics (420-460 Ma) and (4) minor Late Precambrian-Cambrian igneous and metamorphic complexes (480-570 Ma). Ages compatible with granitoid terranes of N New England Orogen in NE Australia. Torlesse Terrane originated at NE Australian margin, then moved 2500 km S by Late Cretaceous (90 Ma) (Conclusion questioned by Murray (2003): although similar age range, little or no muscovite in Permian Triassic granites of New England foldbelt))

Adams, C.J., H.J. Campbell, I.J. Graham & N. Mortimer (1998)- Torlesse, Waipapa and Caples suspect terranes of New Zealand: integrated studies of their geological history in relation to neighbouring terranes. Episodes 21, 4, p. 235-240.
(Review of Permian-Cretaceous of Torlesse, Waipapa and Caples sedimentary terranes of E New Zealand, originally part of E Gondwana margin)

Adams, C.J., H.J. Campbell & W.L. Griffin (2007)- Provenance comparisons of Permian to Jurassic tectonostratigraphic terranes in New Zealand: perspectives from detrital zircon age patterns. Geol. Magazine 144, 4, p. 701-729.
(Zircon ages for 20 Cretaceous-Carboniferous sandstones from 7 terranes of E New Zealand. Persistent, large Triassic-Permian (main peaks in ~240-265 Ma range) and few Devonian-Silurian populations. Extensive

Triassic-Permian zircon sources only in New England Fold Belt and Hodgkinson Province of NE Australia and continuations into Tasman Sea)

Adams, C.J., H.J. Campbell, N. Mortimer & W.L. Griffin (2016)- Perspectives on Cretaceous Gondwana break-up from detrital zircon provenance of southern Zealandia sandstones. Geol. Magazine 154, 4, p. 661-682.
(online at: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/ etc.)
(Detrital zircon U-Pb ages in from late Early- Late Cretaceous marine and non-marine sandstones across S Zealandia indicate provenance from local basement within present-day Zealandia, which fits interpretation of Late Cretaceous deposition in rift-controlled basins during pre-Gondwana break-up regional extension)

Adams, C.J., D. Cluzel & W.L. Griffin (2009)- Detrital-zircon ages and geochemistry of sedimentary rocks in basement Mesozoic terranes and their cover rocks in New Caledonia, and provenances at the eastern Gondwanaland margin. Australian J. Earth Sci. 56, p. 1023-1047.
(Older (>250 Ma), zircons in New Caledonia sediments >90% Early Paleozoic and Precambrian ages (500-700 Ma). Surprisingly few zircons in M Permian- E Triassic (245-270 Ma) age range, presumably due to depocenters and barriers between area and New England Orogen)

Adams, C.J. & S. Kelley (1998)- Provenance of Permian-Triassic and Ordovician metagraywacke terranes in New Zealand: evidence from 40Ar/39Ar dating of detrital micas. Geol. Soc. America (GSA) Bull. 110, p. 422-432.
(Permo-Triassic ages of detrital muscovite in New Zealand Torlesse terrane similar to ages of granites in New England foldbelt (but these granites contain very rare muscovite; Murray 2003))

Adams, C.J., R.J. Pankhurst, R. Maas, I.L. Millar (2005)- Nd and Sr isotopic signatures of metasedimentary rocks around the South Pacific margin and implications for their provenance. Geol. Soc., London, Spec. Publ. 246, p. 113-141.
(Nd-Sr isotope database of Paleozoic- Mesozoic metasedimentary successions enables characterization of New Zealand terranes)

Agard, P. & A. Vitale-Brovarone (2013)- Thermal regime of continental subduction: the record from exhumed HP-LT terranes (New Caledonia, Oman, Corsica). Tectonophysics 601, p. 206-215.
(Thermal evolutions of shift from oceanic subduction to continental collision retrieved from three well-documented fossil settings, incl. New Caledonia, that were not modified by later collision or metamorphism. Continental cover units subducted over short time (~10 My) represent cold underplated material that buffers subduction thermal regime)

Aitchison, J.C., G. L. Clarke, S. Meffre & D. Cluzel (1995)- Eocene arc-continent collision in New Caledonia and implications for regional southwest Pacific tectonic evolution. Geology 23, 2, p. 161-164.
(New Caledonia geology four main tectonic phases: (1) E Mesozoic development of subduction-related terranes and accretion to Gondwana (NE Australia) margin; (2) Late Cretaceous passive margin development and sea-floor spreading during Gondwana breakup; (3) Late Eocene arrival of thinned Gondwana margin crust at SW-facing subduction zone (Loyalty-D'Entrecasteaux arc), resulting in collisional orogenesis and obduction of ophiolitic nappe from NE; and (4) detachment faulting during extensional collapse, resulting in unroofing of metamorphic core complexes)

Aitchison, J.C., T.R. Ireland, G.L. Clarke, D. Cluzel, A.M.Davis & S. Meffre (1998)- Regional implications of U/Pb SHRIMP age constraints on the tectonic evolution of New Caledonia. Tectonophysics 299, 4, p. 333-343.
(Ages for zircons from plagiogranites (considered to be late stage differentiates of basic magma in ophiolite complex) indicate latest Carboniferous- earliest Permian age for basement of Koh terrane in Central Chain Mts of New Caledonia (pre-Upper Cretaceous obduction). Ophiolites ages of 302±7 Ma and 290±5 Ma, respectively. Similar to plagiogranites in Dun Mountain Ophiolite Belt/ Maitai terrane of New Zealand)

Aitchison, J.C., S. Meffre & D. Cluzel (1995)- Cretaceous/Tertiary radiolarians from New Caledonia. Geol. Soc. New Zealand, Misc. Publ. 81A, p. 1-70.

Ali, J.R. & J.C. Aitchison (2000)- Significance of palaeomagnetic data from the oceanic Poya Terrane, New Caledonia, for SW Pacific tectonic models. Earth Planetary Sci. Letters 177, p. 153-161.
(Paleomagnetic study of pillow basalts and associated pelagic sediments of Late Cretaceous-Paleocene Poya Terrane nappe that was thrust SW over New Caledonia island in M Eocene. Data from four outcrops suggests formation at ~37.8° (± 12.1°). S. Poya Terrane formed close to New Caledonian portion of Indo-Australia plate, consistent with tectonic models suggesting Poya Terrane formed in marginal basin NE of New Caledonia during break-up of E Gondwana)

Ali, J.R. & J.C. Aitchison (2002)- Paleomagnetic-tectonic study of the New Caledonia Koh Ophiolite and the mid-Eocene obduction of the Poya Terrane. New Zealand J. Geol. Geophysics 45, p. 313-322.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.2002.9514976)
(Paleomagnetic study on allochthonous Late Paleozoic Koh Ophiolite of New Caledonia. Large spread of directions, impossible to deduce latitude of ophiolite formation: 'subequatorial to mid-latitude S Hemisphere location' strongest justifiable statement. Overprint equates to paleolatitude of 37.6 ± 6.2°S and may correspond to position of New Caledonia when overthust by oceanic Poya Terrane in M Eocene)

Aronson, J.L. & G.R. Tilton (1971)- Probable Precambrian detrital zircons in New Caledonia and Southwest Pacific continental structure. Geol. Soc. America (GSA) Bull. 82, p. 3449-3456.
(Detrital zircons from Cretaceous arkosic sandstone of SW New Caledonia mainly clear, euhedral and of Late Cretaceous ago. Also 1% rounded colored grains, probably with age of 1000 Ma or more. Old grains probably derived from Lord Howe Rise, a foundered extension of Australian continent)

Audet, M.A. (2009)- Le massif du Koniambo, Nouvelle-Caledonie. Formation et obduction dŏun complexe ophiolitique du type SSZ. Enrichissement en nickel, cobalt et scandium dans les profils residuels. Doct. Thesis Universite de Quebec, Montreal, p. 1-294. *(Unpublished)*
(online at: http://portail-documentaire.univ-nc.nc/userfiles/TheseMarcAntoineAudet2008.pdf)
(On Koniambo ophiolitic complex in New Caledonia and distribution of nickel, cobalt, scandium in weathered profile. Various geological units in study area are inverted structural assemblages of ophiolite suite, affected by passage through supra-subduction environment. Contrast with less dismembered ultramafic sequences of Massif du Sud. Late Eocene obduction)

Auzende, J.M., G. Beneton, G. Dickens, N. Exon, C. Francois, D. Hodway, F. Juffroy, Y. Lafoy, A. Leroy, S. van de Beuque & O. Voutay (2000)- Mise en evidence de diapirs mesozoiques sur la bordure orientale de la ride de Lord Howe (Sud-Ouest Pacifique): campagne ZoNeCo 5. Comptes Rendus Academie Sciences, Paris, Ser. 2, 330, 3, p. 209-215.
('Evidence of Mesozoic salt or mud diapyrs on the eastern side of the Lord Howe Rise')

Auzende, J.M., G.R. Dickens, S. Van de Beuque, N.F. Exon, C. Francois, Y. Lafoy & O. Voutay (2000)- Thinned crust in southwest Pacific may harbor gas hydrate. EOS, Trans. AGU, 81, 17, p. 182-185.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/00EO00127/pdf)
(Lord Howe Rise large, complex, and poorly studied fragment of thinned continental crust submerged 750-3000m beneath C Tasman Sea. Deep seismic profiles revealed extensive bottom simulating reflector at E slope of LHR, likely representing base of gas hydrate)

Auzende, J.M., L. Kroenke, J. Collot, Y. Lafoy & B. Pelletier (1996)- Compressive tectonism along the eastern margin of Malaita Island (Solomon Islands). Marine Geophysical Res. 18, p. 289-304.

Auzende, J.M., S. Van de Beuque, M. Regnier, Y. Lafoy & P. Symonds (2000)- Origin of the New Caledonian ophiolites based on a French- Australian seismic transect. Marine Geology 162, p. 225-236.
(New deep-seismic profiles between New Hebrides Arc and Australian margin S of New Caledonia image S prolongation of overthrusted ophiolites and allow new interpretation of Eocene compressive tectonism along New Caledonia-Norfolk Ridge. Obduction of entire oceanic lithosphere of Loyalty Basin is consistent with age

and origin of ophiolite. Variations in tectonic style along strike in N-S trending part of Norfolk Ridge produced ophiolite exposures related to uplifted and partially overthrust upper mantle slivers in S part of Loyalty Basin)

Avias, J. (1953)- Contribution a l'etude stratigraphique et paleontologique de la Nouvelle-Caledonie centrale. Sciences de la Terre, Nancy 1, p. 1-276.
('Contribution to the study of the stratigraphy and paleontology of Central New Caledonia'. Stratigraphy of mainly NE dipping sediments outcropping SW of main ophiolite belt. Youngest folded sediments of Eocene age, unconformably overlain by ?Miocene. Carboniferous-Permian multi-colored tuffs and greywackes with mollusc Maitaia trechmanni (=Atomodesma), M-Late Triassic greywackes with Halobia and Spiriferina, etc., Late Triassic greywackes with Monotis and Clavigera, E Jurassic greywackes with ammonites (Arnioceras and others), Late Jurasic greywackes with Belemnopsis, Cretaceous sands and carbonaceous shales with Kossmaticeratidae, Trigoniidae, etc., Eocene shales and tuffs with calcareous lenses, etc.)

Avias, J. (1961)- On some new points of view adopted concerning the stratigraphic and correlative knowledge of the sedimentary structures of New Caledonia. Proc. 9th Pacific Science Congress Bangkok 1957, 12, p. 325-327.
(online at: http://archive.org/details/geologyandgeophy032600mbp)
New review of cephalopods from New Caledonia confirms presence of Lower Triassic Meekoceras. Great similarities between U Permian and Lw Trias of New Caledonia and "ceratites sandstones" of Himalayan Salt Range and rocks of same age on Timor. During most of Cretaceous New Caledonia was emerged, with sedimentation re-starting with great Senonian transgression. Main time of folding is Oligocene. Angular unconformity at base U Triassic suggest orogenic phase similar to Lower Bowen orogeny in E Australia)

Avias, J. (1967)- Overthrust structure of the main ultrabasic New Caledonian massives. Tectonophysics 4, p. 531-541.
(Great New Caledonian ultrabasic massifs are E-to-W overthrusted masses of peridotites on sedimentary and volcano-sedimentary basement of island)

Bache, F., N. Mortimer, R. Sutherland, J. Collot, P. Rouillard, V. Stagpoole & A. Nicol (2014)- Seismic stratigraphic record of transition from Mesozoic subduction to continental breakup in the Zealandia sector of eastern Gondwana. Gondwana Research 26 (2014) 1060ï 1078.
(SW Pacific between Australia, New Zealand and New Caledonia is block of continental crust (Zealandia) that moved away from Australia and Antarctica after long period of subduction beneath E Gondwana. Seismic-profiles identify intra-continental basins related to Gondwana margin, overlain by ~mid-Cretaceous breakup/ separation erosional unconformity and Cretaceous- Eocene retrogradational megasequence, overlain by pelagic carbonate rocks)

Baker, P.E., M. Coltorti, L. Briqueu, T. Hasenaka, E. Condliffe & A.J. Crawford (1994)- Petrology and composition of the volcanic basement of Bougainville Guyot, Site 831. In: J.Y. Collot et al. (eds.) Proc. Ocean Drilling Program (ODP), Initial Reports 134, p. 363-373.
(online at: www-odp.tamu.edu/publications/134_sr/volume/chapters/sr134_18.pdf)
(Basement of Bougainville Guyot andesitic hyalobreccias derived from submarine arc volcano. Dated by K/Ar at ~37Ma. Formation attributed to reaction of andesitic magma and seawater. More mafic andesites at base, to overlying more acid andesites. Andesites have affinities with low-K arc tholeiite series. Bougainville Guyot may form part of Eocene proto-island arc along S side of d'Entrecasteaux Zone, above S-dipping subduction zone)

Baldwin, S.L., T. Rawling & P.G. Fitzgerald (2007)- Thermochronology of the New Caledonia high-pressure terrane: implications for Middle Tertiary plate boundary processes in the Southwest Pacific. In: M. Cloos et al. (eds.) Convergent margin terranes and associated regions, Geol. Soc. America, Spec. Publ. 419, p. 117-134.
(Young blueschist- eclogite facies rocks in NE New Caledonia record Eocene subduction metamorphism (44 Ma) and exhumation (40-34 Ma) and Oligocene (<34 Ma) juxtaposition against other basement terranes)

Ballance, P.F. (1999)- Simplification of the Southwest Pacific Neogene arcs: inherited complexity and control by a retreating pole of rotation. In: C. MacNiocaill (ed.) Continental tectonics, Geol. Soc. London, Spec. Publ. 164, p. 7-19.
(Neogene arc activity in SW Pacific began simultaneously at 25 Ma on three differently oriented sectors, Norfolk-Three Kings, Colville, Northland-Reinga. Inception of arc magmatism at 25 Ma triggered by 20° increase in convergence angle between N- moving Australia and NW-moving Pacific plate, and increase in convergence rate from ~20 to 30-40 mm/yr. Between 25-15 Ma three subduction zones required)

Ballance, P.F., D.W. Scholl, T.L. Vallier, A.J. Stevenson, H. Ryan & R.H. Herzer (1989)- Subduction of a Late Cretaceous seamount of the Louisville chain at the Tonga Trench: a model of normal and accelerated tectonic erosion. Tectonics 8, p. 953-962.
(Louisville Ridge is 4000 km long, NNW-trending chain of seamounts (2-2.5 km high, 10-40 km diameter), with underlying crustal swell (1.5 km high and 100+ km wide) in SW Pacific. NW end of Ridge collides with deep Tonga Trench (>10 km), which lacks accretionary complex. Effects of hotspot-ridge collision with sediment-starved trench: (1) impacting seamounts are subducted rather than accreted; (2) inner trench wall is tectonically eroded arc-ward, possibly at 50 km/My. Arc substrate rocks uplifted by impacting seamounts)

Barclay, W., J.A. Rodd, J.C. Pflueger, K.R. Havard & S.P. Helu (1993)- Oil plays in the kingdom of Tonga, Southwest Pacific. Petroleum Expl. Soc. Australia (PESA) Journal 21, p. 79-92.
(Tonga area in SW Pacific in E part of long Tertiary island-arc chain extending from PNG to New Zealand. Within chain basins with Tertiary reef developments, some with commercial oil and gas accumulations. On Tongatapu Island five wells drilled near oil seeps, but none reached Eocene reef limestone target)

Barker, S.J., C.J.N. Wilson, J.A. Baker, M.A. Millet, M.D. Rotella, I.C. Wright & R.J. Wysoczanski (2013)- Geochemistry and petrogenesis of silicic magmas in the intra-oceanic Kermadec Arc. J. Petrology 54, 2, p. 351-391.

Baubron, J.C., J.H. Guillon & J. Recy (1976)- Geochronologie par la methode K-Ar du substrat volcanique de l'ile Mare, Archipel des Loyaute (Sud-Ouest Pacifique). Bull. Bur. Rech. Geol. Minieres (2), sect. 4, 3, p. 165-175.
('Geochronology by the K-Ar method of the substrate of the volcanic island of Mare, Loyalty Islands archipelago (Southwest Pacific)'. Basalt outcrops in center of uplifted atoll of Mare Island, Loyalty Islands, show final of volcanic edifice were oceanic basalts of 9-11 Ma))

Beavan, J., P. Tregoning, M. Bevis, T. Kato & C. Meertens (2002)- Motion and rigidity of the Pacific Plate and implications for plate boundary deformation. J. Geophysical Research 107, B10, 2261, p. 19/1- 19/15.

Beckmann, J. P. (1976)- Shallow water foraminifers and associated microfossils from Sites 315, 316 and 318, DSDP Leg 33. In: S.O. Schlanger et al. (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 33, p. 467-489.
(online at: www.deepseadrilling.org/33/volume/dsdp33_13.pdf)
(Shallow-water fossils at C Pacific DSDP Sites 315-316 include Late Cretaceous larger foraminifera Pseudorbitoides, Asterorbis and Sulcoperculina, partly reworked into Tertiary. At Site 318 it ranges from Eocene to Plio-Pleistocene)

Belasky, P. & B.N. Runnegar (1993)- Biogeographic constraints for tectonic reconstructions of the Pacific region. Geology 21, p. 979-983.
(Suspect terranes in W North America contain Permian and Triassic genera endemic to Tethyan region)

Bell, T.H. & R.N. Brothers (1985)- Development of P-T prograde and P-retrograde, T-prograde isogradic surfaces during blueschist to eclogite regional deformation/metamorphism in New Caledonia, as indicated by progressively developed porphyroblast microstructures. J. Metamorphic Geol. 3, p. 59-78.
(N New Caledonian Eocene schist belt four phases of metamorphism: D1-D2 increasing P and T from lawsonite-albite chlorite assemblages through lawsonite-glaucophane-Mn garnet rocks (blueschists) to deeper lawsonite omphacite-almandine jadeite gneisses (lawsonite eclogites), followed byD3-D4 phase of recrystallization, under

P retrograde but T prograde conditions, generating coarse deeper gneisses as pressure-retrogressed eclogites)

Bergen, J.A. (2004)- Calcareous nannofossils from ODP Leg 192, Ontong Java Plateau. In: J.G. Fitton, et al. (eds.) Origin and evolution of the Ontong Java Plateau, Geol. Soc. London, Spec. Publ. 229, p. 113-132.
(M Miocene- Aptian nannofossils from ODP Leg 192 sites 1183-1187, Ontong Java Plateau, SW Pacific)

Black, P.M. (1970)- Coexisting glaucophane and riebeckite-arfvedsonite from New Caledonia. American Mineralogist 55, p. 1061-1064.

Black, P.M. (1977)- Regional high-pressure metamorphism in New Caledonia: phase equilibria in the Ouegoa district. Tectonophysics 43, p. 89-107.
(In N New Caledonia 150km long high-pressure metamorphic belt. Appearance/disappearance of pumpellyite, lawsonite, Na-amphibole, omphacite, graphite, epidote, almandine and barroisitic hornblende show NE-ward progressive metamorphic sequence from lawsonite-albite schists to glaucophane-albite-epidote-almandine schists to eclogitic graphitic quartzo-feldspathic gneiss. T estimations from oxygen isotopes 250°C for lawsonite, 380°C for epidote and 400°C for almandine isograds and 550°C for highest grade rocks)

Black, P.M. (1993)- Tectonism, magmatism and sedimentary basin development, Paleozoic to Paleogene, New Caledonia. In: G.H. Teh (ed.) Proc. Symposium on the Tectonic framework and energy resources of the western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 331-341.
(online at: www.gsm.org.my/products/702001-101004-PDF.pdf)
(New Caledonia is emergent portion of Norfolk Ridge N of New Zealand. Three pre-Cretaceous basement terranes, stitched together by E Cretaceous metamorphism, deformation and intrusions. Late Cretaceous-Paleogene extensional sedimentary basin formation, followed by E Oligocene obduction of New Caledonian ultramafic sheet. West Caledonian Fault)

Black, P.M. & R.N. Brothers (1977)- Blueschist ophiolites in the melange zone, northern New Caledonia. Contrib. Mineralogy Petrology 65, p. 69-78.
(Regional melange zone, 150 km long x 30 km wide, forms S boundary and structural capping to high-pressure blueschist belt in N New Caledonia. Disrupted country rocks in melange zone are Mesozoic metagreywackes and Eocene chert-limestone sequences, penetrated from below by tectonically injected ophiolite slivers containing metamorphosed serpentinite, gabbro, dolerite, basalt, tuff, chert and shale (ocean crust). Age (41 Ma), metamorphic environment (350° C at 7 kb), and mineral association (acmitic jadeite- epidote-lawsonite-high Si phengite) different from adjacent high-pressure schist belt, indicating separate structural site)

Black, P.M. & R.N. Brothers (1989)- High pressure metamorphism of ophiolites in Northern New Caledonia. Ofioliti 13, p. 89-99.

Black, P.M., R.N. Brothers & K. Yokoyama (1988)- Mineral parageneses in eclogite-facies meta-acidites in northern New Caledonia. In: D.C. Smith (ed.) Eclogites and eclogite facies rocks, Developments in Petrology 12, Elsevier, Amsterdam, p. 271-289.

Black, P.M., P. Maurizot, E.D. Ghent, & M.Z. Stout (1993)- Mg-Fe carpholites from aluminous schists in the Diahot region and implications for preservation of high-pressure/low-temperature schists, northern New Caledonia. J. Metamorphic Geol. 11, p. 455-460.
(Mg-Fe carpholite common in Diahot region of N New Caledonia in aluminous schists, indicating T of 230-320° C and P >7 kbar. High-P/low-T schists owe rapid uplift and preservation to vertical component of transcurrent faulting)

Blake, M.C., R.N. Brothers & M.A. Lanphere (1977)- Radiometric ages of blueschists in New Caledonia. In: Proc. Int. Symposium on Geodynamics in the South West Pacific, Noumea, Technip, Paris, p. 276-282.

Blake, M.C., W.P. Irwin & R.G. Coleman (1969)- Blueschist-facies metamorphism related to regional thrust faulting. Tectonophysics 8, 3, p. 237-246.

Bloomer, S.H., B. Taylor, C.J. MacLeod, R.J. Stern, P. Fryer, J.W. Hawkins & L. Johnson (1995)- Early arc volcanism and the ophiolite problem: a perspective from drilling in the Western Pacific. In: B. Taylor & J. Natland (eds.) Active margins and marginal basins of the Western Pacific, American Geophys. Union (AGU) Geophys. Monograph 88, p. 1-30.
(Initial phases of volcanism in intra-oceanic Izu-Bonin-Mariana forearcs developed nearly synchronously in M-L Eocene over zone 1000s of km long and up to 300km wide)

Brocher, T.M. (ed.) (1985)- Investigations of the Northern Melanesian Borderland. Circum-Pacific Council Energy Mineral Resources, Houston, Earth Science Ser. 3, p. 1-199.

Brothers, R.N. (1970)- Lawsonite-albite schists from northernmost New Caledonia. Contrib. Mineralogy Petrology 25, 3, p. 185-202.
(In NW New Caledonia metamorphism of Cretaceous-Eocene sediments-volcanics, related to large peridotite bodies. Three metamorphic zones E of ultramafic line: aragonite-lawsonite, calcite-lawsonite, and calcite-lawsonite-glaucophane. Highest ratio of P to T (aragonite-lawsonite zone) adjacent to peridotites)

Brothers, R.N. (1974)- High-pressure schists in Northern New Caledonia. Contrib. Mineralogy Petrology 46, 2, p. 109-127.
(Regional Oligocene- E Miocene (38-21 Ma) high-P metamorphism in NE (oceanward) dipping convergence zone produced schist belt adjacent to thrust-melange zone along NE margin of New Caledonia. At same time W-ward obduction of basalt-gabbro-peridotite massif. Continuous progression from lawsonite-albite facies through glaucophane greenschists to eclogitic albite-epidote amphibolites)

Brothers, R.N. (1987)- Regional geology of New Caledonia and northern North Island, New Zealand. In: Pacific Rim Congress 87, Gold Coast 1987, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 61-63.
(New Caledonia and N New Zealand similar Late Paleozoic- Paleocene rock units, but differ in subsequent geological histories. New Caledonia Late Eocene obduction of oceanic crust. N New Zealand Late Oligocene ophiolite obduction and extensive Late Tertiary- Quaternary volcanics)

Brothers, R.N. & M.C. Blake (1973)- Tertiary plate tectonics and high-pressure metamorphism in New Caledonia. Tectonophysics 17, p. 337-358.
(Sialic basement of New Caledonia is Permian-Jurassic greywacke sequence, folded and metamorphosed to prehnite-pumpellyite or greenschist facies by Late Jurassic. Cretaceous-Eocene sediments unconformably overlie basement and extend outwards onto oceanic crust. Tertiary tectonism in three phases. (1) Late Eocene obduction of peridotite nappe onto S New Caledonia from NE, without significant metamorphism in underlying rocks; (2) Oligocene thrust tectonics in N part of island accompanied major E-W subduction zone, at least 30 km wide, with imbricate system of melanges and high-P lawsonite-bearing assemblages, overprinted on Mesozoic prehnite-pumpellyite metagreywackes; (3) Post-Oligocene transcurrent faulting along NW-SE line parallel to W coast, causing 150 km of dextral offset of front of Eocene ultramafic nappe)

Brothers, R.N. & A.R. Lillie (1988)- Regional geology of New Caledonia. In: A.E.M. Nairn, F.G. Stehli & S. Uyeda (eds.) The ocean basins and margins 7, The Pacific Ocean, Plenum Press, New York, p. 325-374.
(see also Lillie & Brothers, 1970)

Brothers, R.N. & K. Yokoyama (1982)- Comparison of the high-pressure schist belts of New Caledonia and Sanbagawa, Japan. Contrib. Mineralogy Petrology 79, 2, p. 219-229.
(High-pressure schist terranes of New Caledonia and Sanbagawa developed along oceanic sides of sialic forelands by tectonic burial metamorphism. Parent rocks chemically similar (volcanic-sedimentary trough or trench sequences). Total pressures higher for New Caledonia, etc.)

Brown, J.L., A.G. Christy, D.J. Ellis & R.J. Arculus (2014)- Prograde sulfide metamorphism in blueschist and eclogite, New Caledonia. J. Petrology 55, 3, p. 643-670.

(Sulfide inclusions in New Caledonia blueschist and eclogite)

Bruns, T.R., A.K. Cooper, D.M. Mann & J.G. Vedder (1986)- Seismic stratigraphy and structure of sedimentary basins in the Solomon Islands region. In: J.G. Vedder et al. (eds.) Geology and offshore resources of Pacific island arcs - central and western Solomon Islands, Circum-Pacific Council Energy and Mineral Resources, Earth Sci. Ser. 4, p. 177-223.

Bruns, T.R., J.G. Vedder & R.C. Culotta (1989)- Structure and tectonics along the Kilinailau Trench, Bougainville-Buka region, Papua New Guinea. In: J.G. Vedder & T.R. Bruns (ed.) Geology and offshore resources of Pacific Island arcs; Solomon Islands and Bougainville, Papua New Guinea regions, Circum-Pacific Council Energy and Mineral Resources, Earth Sci. Ser. 12, p. 93-123.

Buys, J., C. Spandler, R.J. Holm & S.W. Richards (2014)- Remnants of ancient Australia in Vanuatu: implications for crustal evolution in island arcs and tectonic development of the southwest Pacific. Geology 42, p. 939-942.
(W belt of Vanuatu intra-oceanic arc with Late Eocene- Miocene Ar-Ar ages. Island arc chemistry, but inherited zircon grains with age populations at ~2.8-2.5 Ga, 2.0-1.8 Ga, 1.75-1.5 Ga, 850-700 Ma, 530-430 Ma and 330-220 Ma, generally matching ages of crustal blocks of Australian continent. Part of Vanuatu arc basement probably comprises NE Australian continental material, that was rifted prior to Cenozoic)

Burns, R.E. & J.E. Andrews (1973)- Regional aspects of deep sea drilling in the southwest Pacific. Initial Reports Deep Sea Drilling Project (DSDP) 21, p. 897-906.

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(Distributional patterns of 125-ka-old reef bodies around New Caledonia suggest increasing tendency of island subsidence to N, SW and more markedly seaward, controlled by isostatic readjustments and margin collapse)

Calmant, S., B. Pelletier, P. Lebellegard, M. Bevis, F.W. Taylor & D.A. Phillips (2003)- New insights on the tectonics along the New Hebrides subduction zone based on GPS results. J. Geophysical Research 108, B6, 2319, 17, p. 1-22.

Cameron, W.E. (1989)- Contrasting boninite-tholeiite associations from New Caledonia. In: A.J. Crawford (ed.) Boninites, Unwin Hyman, London, p. 314-336.

Campbell, H.J. (1994)- The Triassic bivalves *Daonella* and *Halobia* in New Zealand, New Caledonia, and Svalbard. New Zealand Geol. Survey Paleont. Bull. 66 (Inst. Geol. & Nuclear Sciences Mon. 4), p. 1-165.
(All but two of New Zealand and New Caledonian Triassic halobiids are cosmopolitan. Ladinian-Norian)

Campbell, H.J. (1995)- Permian-Triassic links between Southeast Asia and New Zealand. In: Proc. Int. Symposium Geology of SE Asia and adjacent areas, J. Geology, Geol. Survey Vietnam, Hanoi, 5-6, p. 304-305.
(Abstract only; Permian- Triassic marine sequences in New Zealand two tectonostratigraphic terranes. W Province is continental fragment of Australian Gondwana. E Province is series of accreted terranes: island arcs with Permian- Jurassic histories and sedimentary complex derived from Permo-Triassic granitoid source. Origin of these terranes may be near N Queensland or SE Asia)

Campbell, H.J. & J.A. Grant-Mackie (1984)- Biostratigraphy of the Mesozoic Baie de St.-Vincent Group, New Caledonia. J. Royal Soc. New Zealand 14, 4, p. 349-366.
(Upper Triasssic (with widespread Halobia, Monotis)- Lower Jurassic marine succession, >1000m thick)

Campbell, H.J., J.A. Grant-Mackie & J.P. Paris (1985)- Geology of the Moindou-Teremba area, New Caledonia. Stratigraphy and structure of the Teremba Group (Permian- Lower Triassic) and Baie de St-Vincent Group (Upper Triassic- Lower Jurassic). Geologie de la France, BRGM, 1, p. 19-36.

Campbell, J.D. (1974)- *Heterastridium* (Hydrozoa) from Norian sequences inNew Caledonia and New Zealand. J. Royal Soc. New Zealand 4, 4, p. 447-453.
(online at: www.tandfonline.com/doi/pdf/10.1080/03036758.1974.10419387)
(Globular fossils with vermicularly-sculptured surfaces identified as pelagic hydrozoan Heterastridium conglobatum in Upper Norian Monotis shell bed on l'Ile Hugon, New Caledonia. Less well-preserved specimens in Nelson and Southland, New Zealand (also known from U Triassic limestones on Timor, Ceram, Hallstatt Limestone of Alps, etc.; JTvG)

Carson, C.J., G.L. Clarke & R. Powell (2000)- Hydration of eclogite, Pam Peninsula, New Caledonia. J. Metamorphic Geol. 18, p. 79-90.
(Garnet glaucophanite and greenschist facies assemblages formed by recrystallization of barroisite-bearing eclogite facies metabasites in N New Caledonia. Eclogite preserved in domains that experienced no fluid influx following loss of this fluid. Garnet glaucophanite formed at P≈16 kbar during semi-pervasive fluid influx. Fluid influx focused in shear zones resulted in chlorite-albite greenschist facies minerals that reflect P≈9 kbar)

Carson, C.J., R. Powell & G.L. Clarke (1999)- Calculated mineral equilibria for eclogites in CaO-Na2O-FeO-MgO-Al2O3-SiO2-H2O: application to the Pouebo Terrane, Pam Peninsula, New Caledonia. J. Metamorphic Geol.17, 1, p. 9-24.
(High-P, medium T metamorphics of Pouebo terrane of Pam Peninsula, NE New Caledonia with barroisite- and glaucophane-bearing eclogite. Metamorphic evolution experienced clockwise P-T path that reached P=19 kbar and T =600°C. Eclogitic mineral assemblages preserved because decompression consumed rocks' fluid. (19 kbar = ~70 km at 10 kbar per 35-40km; JTvG))

Cathelineau, M., B. Quesnel, P. Gautier, P. Boulvais, C. Couteau & M. Drouillet (2016)- Nickel dispersion and enrichment at the bottom of the regolith: formation of pimelite target-like ores in rock block joints (Koniambo Ni deposit, New Caledonia). Mineralium Deposita 51, 2, p. 271-282.
(In New Caledonia richest Ni silicate ores occur in fractures within bedrock and saprolite, generally several 10's- 100m below present-day surface)

Cawood, P.A., C.A. Landis, A.A. Nemchin & S. Hada (2002)- Permian fragmentation, accretion and subsequent translation of a low latitude Tethyan seamount to the high-latitude east Gondwana margin: evidence from detrital zircon age data. Geol. Magazine 139, p. 131-144.
(New Zealand S Island Te Akatarawa Terrane, enclosed in Torlesse Terrane: Late Permian detrital zircons from turbidites above fusulinid-coral limestone block melange 15 My younger than Kungurian fusulinid limestone, indicating collapse of Permian oceanic seamount on entering subduction zone along Gondwana Pacific margin. N New England Orogen most likely source for Te Akatarawa sandstones. Turbidites differ from adjoining Torlesse Permian- M Triassic sands, which also have colder water affinities. Warm-water limestones and 15 My period between sedimentation and accretion onto continental margin require limestone formed in low-latitude, probably off NE Australian- New Guinea margin)

Chablais, J., T. Onoue & R. Martini (2010)- Upper Triassic reef-limestone blocks of southwestern Japan: new data from a Panthalassan seamount. Palaeogeogr. Palaeoclim. Palaeoecology 293, p. 206-222.
(Norian-Rhaetian reef-limestone in Sambosan Accretionary Complex, S Japan formed in atoll-type system on mid-oceanic seamount surrounded by deep-water radiolarian cherts in Panthalassic Ocean. Reef-boundstone facies framebuilders are abundant coralline sponges and microbial crusts. Rare corals and algae. Similarities with coeval Upper Triassic reefs of S Peri-Tethys area, especially with Omani seamounts, suggest more S Hemisphere origin for U Triassic Japanese reefs than predicted by previous reef studies)

Chaisson, W.P. & R.M. Leckie (1993)- High resolution Neogene planktonic foraminifer biostratigraphy of Site 806, Ontong Java Plateau (Western Equatorial Pacific). In: W.H. Berger et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 130, College Station, Texas, p. 137-178.
(online at: www-odp.tamu.edu/publications/130_SR/VOLUME/CHAPTERS/sr130_10.pdf)
(E Miocene- Pliocene planktonic foram biostratigraphy of Site 806. Dominance of surface dwellers (P. kugleri, P. mayeri, D. altispira, Globigerinoides spp.) in E-M Miocene replaced by more equitable distribution of

surface, intermediate (G. menardii), and deep (Streptochilus spp.) dwellers in Late Miocene, reflecting shoaling of thermocline along Equator following closing of Indo-Pacific Seaway (Late Miocene, ~8-10 Ma) and initiation of large-scale glaciation in Antarctic (latest Miocene; ~5-6 Ma))

Challinor, A.B. & J.A. Grant-Mackie (1989)- Jurassic Coleoidea of New Caledonia. Alcheringa 13, 4, p. 269-304.
(Coleoid belemnites of New Caledonia widespread in W Coast M Jurassic tuffaceous sst, but rare in Central Chain U Jurassic offshore facies. Strong development of Dicoelites suggests Indonesian affinity, but New Caledonian taxa cannot be confidently assigned to either New Zealand or Indonesian belemnite subprovince)

Chandler, M.T., P. Wessel, B. Taylor. M. Seton, S.S. Kim & K. Hyeong (2012)- Reconstructing Ontong Java Nui: implications for Pacific absolute plate motion, hotspot drift and true polar wander. Earth Planetary Sci. Letters 331, p. 140-151.
(Ontong Java-Manihiki-Hikurangi super-plateau model)

Chandler, M.T., P. Wessel & W.W. Sager (2013)- Analysis of Ontong Java Plateau palaeolatitudes: evidence for large-scale rotation since 123 Ma? Geophysical J. Int. 194, 1, p. 18-29.
(Ontong Java Plateau paleolatitudes suggest ~40° of CW rotation since formation at ~123 Ma. Mean paleolatitude value of Ontong Java remains largely unchanged)

Chapman, F. (1932)- On a rock containing *Discocyclina* and *Assilina* found near Mt. Oxford, South Island, New Zealand. Records Canterbury (N.Z.) Museum 3, p. 483-489.
(Records of Assilina, Heterostegina, and Discocyclina from Eyre River, N Canterbury. With new species Discocyclina speighti and D. novaezelandiae (all seven species united in Asterocyclina speighti by Finlay (1946) and Cole (1962))

Chaproniere, G.C.H. (1994)- Middle and Late Eocene larger foraminifers from Site 841 (Tongan Platform). In: J. Hawkins et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 135, p. 231-243.
(online at: www-odp.tamu.edu/publications/135_SR/VOLUME/CHAPTERS/sr135_15.pdf)
(Eocene (Lutetian) larger foraminifera Nummulites, Discocyclina, Asterocyclina, Halkyardia in ODP Hole 841B, NE of New Zealand. Lack of Pellatispira- Spiroclypeus suggests zone Ta. Reworked Eocene Pellatispira in Upper Miocene)

Chaproniere, G.C.H. (1994)- Middle and Late Eocene, Neogene and Quaternary foraminiferal faunas from Eua and Vavau islands, Tonga Group. In: A.J. Stevenson et al. (eds.) Geology and submarine resources of the Tonga-Lau-Fiji region. SOPAC Techn. Bull. 8, p. 21-44.
(Two larger foram assemblages in Eocene limestones on Eua Island, Tonga: (1) late M Eocene zones Ta3/ P14 without Pellatispira and (2) latest Eocene/Tb/P17 with Pellatispira). M Miocene/N14 deep-water volcaniclastics with evidence for reworking from Zones N9 -N10. Pliocene-Pleistocene reefal limestones often contain larger forams from Eocene. All samples from Vavau with Plio-Pleistocene shallow water forams)

Chaproniere, G.C.H. & C. Betzler (1993)- Larger foramineral biostratigraphy of Sites 815, 816, and 826, Leg 133, northeastern Australia. In: J.A. McKenzie et al. (eds.) Proc. Ocean Drilling Project (ODP), Scient. Results 133, p. 39-49.
(Marion Plateau large carbonate platform off NE Queensland. Shallow water carbonates of early M Miocene (N9-N12) age (lower Tf stage). Coralline algae and Halimeda main bioclasts)

Chardon, D., J.A.J. Austin, G. Cabioch, B. Pelletier, S. Saustrup & F. Sage (2008)- Neogene history of the northeastern New Caledonia continental margin from multichannel reflection seismic profiles. Comptes Rendus Geoscience 340, 1, p. 68-73.
(Seismic profiles along NE margin of New Caledonia Ridge show Late Miocene extensional faulting that disrupted E-M-Miocene clastic wedge, etc.)

Chardon, D. & V. Chevillotte (2006)- Morphotectonic evolution of the New Caledonia Ridge (Pacific southwest) from post-obduction tectonosedimentary record. Tectonophysics 420, p. 473-491.
(Study of two post-obduction fluvial sedimentary systems on mainland New Caledonia and offshore seismic lines. Two regional river aggradation cycles, each preceded by deep river incision phase, in Chattian and in E Miocene. Extensional tectonics initiated in E Neogene led to collapse of latest Oligocene phase of planation. Early slip on normal faults associated with ridge-normal extension, later faults ridge-parallel to ridge-oblique extension, resulting from shift to transtensional regime driven by initiation of E-verging subduction of Australian plate beneath Pacific plate starting in late M Miocene)

Chen, M.C., C. Frohlich, F.W. Taylor, G. Burr & A. Quarles van Ufford (2011)- Arc segmentation and seismicity in the Solomon Islands arc, SW Pacific. Tectonophysics 507, p. 47-69.
(16 segments identified in Solomon Islands Arc, mainly based on seismicity patterns and drowning/ uplift of coral reef terraces. Average length 75km (30-130km). Grouped in 3 supersegments correspond to forearc areas of the Bougainville Islands, New Georgia islands and Guadalcanal-Makira. Main convergence from SSW (San Cristobal Trench), but before ~5 Ma subduction polarity reversal mainly from NNE? (North Solomons Trench))

Chevillotte, V., D. Chardon, A. Beauvais, P. Maurizot & F. Colin (2006)- Long-term tropical morphogenesis of New Caledonia (Southwest Pacific): importance of positive epeirogeny and climate change. Geomorphology 81, 3-4, p. 361-375.
(Mapping of relict lateritic land surfaces over 1600m of relief of mainland New Caledonia to evaluate morphogenesis of island since emergence in E Oligocene. Eight island-scale erosion levels)

Chevillotte, V., P. Douillet, G. Cabioch, Y. Lafoy, Y. Lagabrielle & P. Maurizot (2005)- Evolution geomorphologique de l'avant-pays du Sud-Ouest de la Nouvelle-Caledonie durant les derniers cycles glaciaires. Comptes Rendus Geoscience 337, 7, p. 695-701.
('Geomorphological evolution of the foreland of SW New Caledonia during the last glacial cycles')

Chun, Y.Y. & L.W. Kroenke (1993)- A plate tectonic reconstruction of the Southwest Pacific, 0-100 Ma. Proc. Ocean Drilling Project (ODP), Leg 130, Scient. Results, p. 697-709.
(online at: www-odp.tamu.edu/publications/130_SR/VOLUME/CHAPTERS/sr130_43.pdf)
(Reconstructions of SW Pacific paleogeography back to 100 Ma. Successive periods of convergence along five paleo-subduction zones that formed concomitantly with changes in Indo-Australia and Pacific plate motions from Eocene to Late Miocene. Episodes of basin formation along W and SW margins of Pacific Plate and along E and NE margins of Indo-Australian Plate since Late Cretaceous include Tasman (85-55 Ma), New Caledonia (74-65 Ma), Coral Sea (63-53 Ma), Loyalty (52-40 Ma), d'Entrecasteaux (34-28 Ma), Caroline (34-27 Ma), Solomon Sea (34-28 Ma), S Fiji (34-27 Ma), N Fiji (10-0 Ma), and Lau, Woodlark, and Manus (5.5-0 Ma) basins. Seamount chains developed over Tasmantid, Lord Howe, Louisville and Samoa hotspots)

Cisowski, S.M., M. Fuller, R.B. Haston & M. Koyama (1990)- Paleomagnetic evidence from land-based and ODP cores for clockwise rotation and northward translation of the Phillippine Sea plate. In: Fifth Circum-Pacific Energy and Mineral Resources Conference, Honolulu, Hawaii, AAPG Search and Discovery Art. 90097. *(Abstract only)*
(Onland and deep-sea core paleomagnetic data from around Philippine Sea plate. Data from Palau islands suggest 70°CW rotation and N-ward translation since M Oligocene. Data from Guam, Saipan, ODP Leg 126, all support 70-110° CW rotation and ~15° N-ward translation of W Philippine Sea plate since M Oligocene of the Philippine Sea plate since the mid-Oligocene. N-ward translation and clockwise rotation of Philippine Sea plate established oblique subduction along proto-Philippine margin, which could account for 600 km of subducted slab beneath E Celebes Sea)

Clarke, G.L., J.C. Aitchison & D. Cluzel (1997)- Eclogites and blueschists of the Pam Peninsula, NE New Caledonia: a reappraisal. J. Petrology 38, 7, p. 843-876.
(online at: http://petrology.oxfordjournals.org/content/38/7/843.full.pdf+html)
(Late Eocene high-P rocks of Pam Peninsula three zones: (1) uppermost ferroglaucophane-lawsonite zone of Cretaceous-Eocene metasediments and metavolcanics (2) blueschist facies (3) lowermost metabasic eclogites of

uncertain age. Metamorphism and deformation tied to 44-51 Ma (M Eocene) thrusting of sedimentary and ophiolitic nappes over eclogites in SW direction. Mica ages constrain end of metamorphism by 37 Ma)

Cloud, P.E., R.G.Schmidt & H.W. Burke (1956)- Geology of Saipan, Mariana Islands; Part 1, General geology. U.S. Geol. Survey (USGS) Prof. Paper, 280-A, p. 1-123.
(online at: http://pubs.usgs.gov/pp/0280a/report.pdf
(Saipan is one of more southerly of Mariana Islands at E side of Philippine Sea. Consists of Eocene volcanic core enveloped by Late Eocene- Early Miocene limestones. See also papers on smaller and larger foraminifera (Todd 1957, Cole 1957, calcareous algae (Johnson 1957) etc.))

Cluzel, D. (1998)- Le 'flysch post-obduction' de Nepoui, un bassin transporte? Consequences sur l'age et les modalites de l'obduction tertiaire en Nouvelle-Caledonie (Pacifique sud-ouest). Comptes Rendus Academie Sciences, Paris, IIA, 327, 6, p. 419-424.
('The 'post-obduction flysch' of Nepoui, a transported basin? Inference on age and setting of the Tertiary obduction in New Caledonia (SW Pacific)'. Bartonian Nepoui flysch not of post-obduction character; only Miocene conglomerate with erosion products of ophiolitic nappe. Nepoui flysch older than parts of autochthonous terranes and unlikely post-dates obduction. May be piggy-back basin transported by Poya Nappe during obduction. Obduction probably younger than previously postulated pre-U Bartonian age)

Cluzel, D., C.J. Adams, S. Meffre, H. Campbell & P. Maurizot (2010)- Discovery of Early Cretaceous rocks in New Caledonia: new geochemical and U-Pb zircon age constraints on the transition from subduction to marginal breakup in the Southwest Pacific. J. Geology 118, 4, p. 381-397.
(Zircon dating of Permian-Mesozoic arc volcanics suggests subduction in New Caledonia not extinct in Late Jurassic (~150 Ma), but still active in late Early Cretaceous (~130-95 Ma). Rift magmatism that preceded margin breakup migrated E from ~130 Ma in E Australia to 110 Ma (110-82 Ma) in New Zealand, to ~89 Ma (89-83 Ma) in New Caledonia, generating large volumes of silicic magma. Marginal basins opened synchronously at ~83 Ma. Australian marginal breakup final effect of S-ward unzipping of Gondwana)

Cluzel, D., C.J. Adams, P. Maurizot & S. Meffre (2011)- Detrital zircon records of Late Cretaceous syn-rift sedimentary sequences of New Caledonia: an Australian provenance questioned. Tectonophysics 501, p. 17-27.
(Late Cretaceous coastal clastics of New Caledonia contemporaneous with latest stages of E Australian marginal rifting. Detrital zircon populations dominated by E Cretaceous, E Paleozoic and Precambrian and may be local recycled provenance. New Caledonia already isolated from Australia in Coniacian (~89-85 Ma), consistent with faunal and floral endemism at that time)

Cluzel, D., J.C. Aitchison, G.L. Clarke, S. Meffre & C. Picard (1994)- Point de vue sur lœvolution tectonique et geodynamique de la Nouvelle-Caledonie. Comptes Rendus Hebd. Seances Academie Sciences, Paris, ser. 2, 319, p. 683-690.
(Brief summary of tectonic-geodynamic evolution of New Caledonia: (1) Permian- Late Jurassic intra-oceanic arc deposits obducted onto 'pre-Permian' metamorphic terrane; (2) accretion to E Gondwana in latest Jurassic; (3) Late Cretaceous- Paleocene breakup of Gondwana margin; (4) collision with Eocene subduction zone of Loyalty Basin; (5) Late Eocene ophiolite obduction)

Cluzel, D., J.C. Aitchison, G.L. Clarke, S. Meffre & C. Picard (1995)- Denudation tectonique du complexe a noyau metamorphique de haute pression tertiaire (Nord de la Nouvelle-Caledonie, Pacifique, France), Donnees cinematiques. Comptes Rendus Academie Sciences, Paris 321, p. 57-64.
('Tectonic denudation of the high pressure Tertiary metamorphic core complex (North New Caledonia)')

Cluzel, D.J., C. Aitchison & C. Picard (2001)- Tectonic accretion and underplating of mafic terranes in the Late Eocene intraoceanic fore-arc of New Caledonia (Southwest Pacific): geodynamic implications. Tectonophysics 340, p. 23-59.
(Late Eocene tectonic accretion, subduction, underplating and obduction of mafic terranes in intra-oceanic forearc setting in New Caledonia. Late Eocene tectonic complex three major terranes: (1) overlying ultramafic mainly harzburgitic allochthonous Ophiolitic Nappe (2) Poya Terrane intermediate mafic, mainly basaltic off-

scraped melange with km-scale slices of oceanic upper crust, (originally formed as Campanian- Late Paleocene S Loyalty oceanic marginal basin that opened at same time as Tasman Sea), parts of which metamorphosed into eclogite/blueschist facies metamorphic complex (Pouebo Terrane) and (3) lower, continental basement, which is northern part of the Norfolk Ridge terrane(s))

Cluzel, D., D. Bosch, J.L. Paquette, Y. Lemennicier et al. (2005)- Late Oligocene post-obduction granitoids of new Caledonia: a case for reactivated subduction and slab break-off. The Island Arc 14, p. 254-271.
(In S New Caledonia, Late Oligocene granodiorite and adamellite intruded into ultramafic allochthon emplaced in Late Eocene. High-medium-K calc-alkaline granitoids geochemical and isotopic features of volcanic arc magmas uncontaminated by crust-derived melts, probably generated in post- Eocene and pre-Miocene subduction. Late Oligocene subduction described here may be extended S into N New Zealand allochthons)

Cluzel, D., D. Chiron & M.D. Courme (1998)- Discordance de lôEocene superier et evenements pre-obduction en Nouvelle-Caledonie (Pacifique sud-ouest). Comptes Rendus Academie Sciences, Paris 327, p. 485-491.
('Upper Eocene unconformity and pre-obduction events on New Caledonia'. New Caledonia intra-Eocene unconformity with ~50m thick U Eocene (Tb) carbonates and >400m of Upper Priabonian flysch and olistostrome unconformably overlies eroded pre-Cretaceous- M Eocene rocks (in pelagic facies) (= foreland basin phase during ophiolite obduction?; JTvG))

Cluzel, D., F. Jourdan, S. Meffre, P. Maurizot & S. Lesimple (2012)- The metamorphic sole of New Caledonia ophiolite; 40Ar/39Ar, U-Pb, and geochemical evidence for subduction inception at a spreading ridge. Tectonics 31, 3, TC3016, p. 1-16.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2011TC003085/pdf)
(Amphibolite lenses below serpentinite sole at base of Peridotite Nappe recrystallised in high-T amphibolite facies, unlike blueschists and eclogites of Eocene metamorphic complex. Amphibolites MORB geochemical features, similar to Late Paleocene-Eocene BABB components of allochthonous Poya Terrane. Mafic rocks recrystallised at ~56 Ma and belong to oceanic crust of lower plate of subduction/obduction system and recrystallised when subducted below young-hot oceanic lithosphere. This and occurrence of slab melts at ~53 Ma suggest subduction inception near spreading ridge of S Loyalty Basin at ~58 Ma)

Cluzel, D., P. Maurizot, J. Collot & B. Sevin (2012)- An outline of the geology of New Caledonia; from Permian-Mesozoic Southeast Gondwanaland active margin to Cenozoic obduction and supergene evolution. Episodes 35, 1, p. 72-86.
(online at: www.episodes.co.in/Contents/2012/march/p72-86.pdf)
(Recent review of New Caledonia geology. Three phases: (1) E Permian-E Cretaceous Gondwanan phase, marked by subduction along SE Gondwaland margin, with New Caledonia located in fore-arc region in which volcanic-arc detritus accumulated; (2) Late Cretaceous- Eocene marginal rifting isolated with short period of shallow water terrigenous sedimentation associated with minor volcanic activity, followed by pelagic sediments; (3) NE-dipping Eocene subduction zone to E of New Caledonia consumed E Australian Plate and ended with Late Eocene obduction when Norfolk Ridge blocked subduction zone)

Cluzel, D. & S. Meffre (2002)- L'unite de la Boghen (Nouvelle-Caledonie, Pacifique sud-ouest): un complexe d'accretion jurassique. Donnees radiochronologiques preliminaires U-Pb sur les zircons detritiques. Comptes Rendus Geoscience 334, p. 867-874.
('The Boghen terrane (New Caledonia, SW Pacific): a Jurassic accretionary complex; preliminary U-Pb radiochronological data on detrital zircons'. Presence of 191-200 Ma detrital zircons in Boghen terrane metasediments that were metamorphosed at 150 Ma suggests Jurassic sedimentary precursors (probably as Jurassic accretionary complex along E Gondwana active margin), metamorphosed soon after deposition. Terrane formerly considered 'pre-Permian basement'. Detrital zircons three zircon age populations: Late Carboniferous- Liassic (190-305 Ma; 23%), Neo- Mesoproterozoic (540-1400 Ma; 54%) and Paleoproterozoic (1800-2300 Ma; 23%), consistent with derivation from Permian- Mesozoic SE Gondwana arc system and Antarctic continent)

Cluzel, D., S. Meffre, P. Maurizot & A.J. Crawford (2006)- Earliest Eocene (53 Ma) convergence in the Southwest Pacific: evidence from pre-obduction dikes in the ophiolite of New Caledonia. Terra Nova 18, 6, p. 395-402.
(Chemistry and age of mafic and felsic dikes of supra-subduction zone character in mantle peridotite of S New Caledonia ophiolite, with zircon ages of 52.8 ± 0.2 Ma (no inherited zircons). Suggest subduction-related magmatism began before 53 Ma. Obduction in SW Pacific unrelated to reorientation of Pacific plate motion at ~43 Ma. Post-obduction granitoids intruded ophiolite and autochthonous basement at ~27-24 Ma)

Cluzel, D., M. Ulrich, F. Jourdan, S. Meffre, J.L. Paquette, M.A. Audet, A. Secchiari & P. Maurizot (2016)- Early Eocene clinoenstatite boninite and boninite-series dikes of the ophiolite of New Caledonia; a witness of slab-derived enrichment of the mantle wedge in a nascent volcanic arc. Lithos 260, p. 429-442.
(Clinoenstatite-bearing boninites from serpentinite sole of Cenozoic ophiolite of New Caledonia Ar/Ar dated as ~47.4 and 50.4 Ma. Coarser grained, similar felsic dikes with U-Pb zircon ages of ~54 Ma. Geochemical features similar to Cape Vogel boninites and similarly generated by hydrous melting of depleted peridotite. Magmas generated by slab melting during early stages of intra-oceanic subduction)

Cluzel, D., M. Whitten, S. Meffre, J.C. Aitchison & P. Maurizot (2018)- A reappraisal of the Poya Terrane (New Caledonia): accreted Late Cretaceous-Paleocene marginal basin upper crust, passive margin sediments, and Early Eocene E-MORB sill complex. Tectonics 37, p. 48-70.
(online at: https://espace.library.uq.edu.au/view/UQ:725361/UQ725361_OA.pdf)
(Poya Terrane mafic allochthon of New Caledonia under Peridotite Nappe. Composed of (1) Campanian-Paleocene mid-ocean ridge basalt, back-arc basin basalt and abyssal argillite and (2) Coniacian-Santonian sandstone, turbidites, and abyssal argillite (Kone Facies), intruded by E Eocene E-MORB sills. Poya Terrane was eventually thrust onto Norfolk Ridge when latter reached subduction zone and debris from thrust sheet fed M-L Eocene syntectonic basins. Mafic portions of Poya Terrane were subducted and recrystallized into eclogite facies, mixed with serpentinite (Pouebo melange), then exhumed in fore-arc region)

Coleman, P.J. (1962)- An outline of the geology of Choiseul, British Solomon Islands. J. Geol. Soc. Australia 8, 2, p. 135-157.
(Choiseul island 100 x 20 miles in size, one of larger of Solomon Islands. Structurally the island is a mass of fault blocks, active from E Miocene -present. Basement amphibolite schists, overlain by >2000' thick andesites, basalts and basaltic pillow lavas, with minor intrusives; Lower Miocene grits and ~300' thick biostromal calcarenite on lavas; >1000' of subgreywackes and volcanic sandstones; ~2000' of Pliocene calcarenites and calcilutites; Quaternary volcanics from two extant volcanic cones and slabs of uplifted limestone reef masses. Also slab-like body of flat-lying, ~500' thick pre-Miocene? Siruka serpentinitic peridotites overlying schists)

Coleman, P. (1963)- Tertiary larger Foraminifera of the British Solomon Islands, Southern Pacific. Micropaleontology 9, p. 1-38.
(U Oligocene- Recent sedimentary successions in British Solomon Islands with 32 species of larger foraminifera, including Cycloclypeus, Katacycloclypeus, Lepidocyclina, Miogypsina, Miogypsinoides and Spiroclypeus. Three distinct faunas: Aquitanian, Burdigalian and Pliocene-Recent)

Coleman, P.J. (1966)- Upper Cretaceous (Senonian) bathyal pelagic sediments with *Globotruncana* from the Solomon Islands. J. Geol. Soc. Australia 13, 2, p. 439-447.
(Pelagic oozes overlying basal basaltic lavas on Malaita, Solomon Islands, contain up to 20% planktonic foraminifera, <5% acid-insoluble clay, associated with radiolarian chert and with finely disseminated manganese. Foraminifera include Globotruncana arca, G. havanensis, G. lapparenti and G. tricarinata, indicating probably Late Senonian age. These sediments are oldest in Solomon group)

Coleman, P.J. (1966)- The Solomon Islands as an island arc. Nature 211, p. 1249-1251.
(Solomon Islands ~800 mile long chain in SW Pacific, mainly composed of arc volcanics. On Pacific side (north) with Lower Cretaceous- Eocene basic, submarine lavas. Central region with widespread Lower Eocene metamorphics (Choiseul schists), intruded and overlain by U Eocene- Oligocene andesites. Etc.)

Coleman, P.J. (1970)- Geology of the Solomon and New Hebrides Islands as parts of the Melanesian re-entrant, Southwest Pacific. Pacific Science 24, p. 284-314.
(Solomon Islands and New Hebrides Archipelago examples of fractured island arcs. Both are crustal blocks, 20-30 km thick, and isolated from neighboring blocks. Their generalized stratigraphic columns remarkably similar and complete. Deep fracturing is dominant structural style, with differential uplifts of up to 6000m)

Coleman, P.J. (1978)- Reflections on outer Melanesian Tertiary larger foraminifera. Bull. Bureau Mineral Res. Geol. Geophys. 192 (Crespin Volume), p. 31-36.
(Four main Tertiary larger foraminifera assemblages between N coast New Guinea and Fiji: Late Eocene, Late Oligocene- E Miocene, E-M Miocene and Late Miocene)

Coleman, P.J. (1980)- Plate tectonics background to biogeographic development in the Southwest Pacific over the last 100 million years. Palaeogeogr. Palaeoclim. Palaeoecology 31, p. 105-121.
(India, Australia, Greater New Zealand and Antarctica all part of Gondwana in Jurassic. N margin of NE Gondwana (New Guinea), E (New Caledonia-Norfolk Ridge) and SE margins (New Zealand) were active margins. New Guinea edge was volcanic island arc setting. Bordering arc system along New Caledonia- New Zealand E edge made up Inner Melanesian Arcs. Rangitata Orogeny culminated in E Cretaceous, followed by uplift, metamorphism and regression, over much of Greater New Zealand. Regression in Australia in Late Cretaceous (100-65 m.y.). Main Late Cretaceous event was creation of Tasman Sea (78-56 Ma). Coral Sea opened by spreading and sinistral strike-slip of part of New Guinea N of Papuan Mobile Belt at same time)

Coleman, P.J. (1989)- Petroleum potential of Solomon Islands, a review of opportunities for exploration. Bureau Mineral Res., Canberra, p. 1-24.
(online at: http://ict.sopac.org/VirLib/CP0011a.pdf)
(Solomon Islands arc system has an igneous basement of arc tholeiites and basalts and intrusives, mostly of E Tertiary age, overlain by sedimentary-volcanic section extending through Holocene. Most of basinal areas younger than Late Oligocene)

Coleman, P.J. (1991)- Dynamic strike-slip fault systems with respect to the Solomon Islands, and their effect on mineral potential. Marine Geology 98, p. 167-176.
(Solomon Islands example of volcanic arc split by major strike-slip faults along obliquely convergent boundary)

Coleman, P.J. (1997)- Australia and the Melanesian arcs: a review of tectonic settings. AGSO J. Australian Geol. Geophysics 17, 1, p. 113-125.
(online at: www.ga.gov.au/corporate_data/81483/Jou1997_v17_n1_p113.pdf)
(Review of pre- and post-plate tectonic interpretations of NE Australia- SW Pacific area))

Coleman, P.J. & B.D. Hackman (1974)- Solomon Islands. In: A.M. Spencer (ed.) Mesozoic-Cenozoic orogenic belts: data for orogenic studies, Geol. Soc., London, Spec. Publ., p. 453-461.
(Solomon islands double chain of islands trending WNW-ESE ~800 km E of PNG, but connected with it by Bismarck Archipelago. Mobile belt in intra-oceanic setting. Three zones (1) SW: Plio-Pleistocene volcanoes (2) Central: thick Tertiary volcaniclastics and lavas on partly metamorphic 'Basement' (3) NE: Pacific Province with U Cretaceous- Tertiary pelagic sediments on lavas. Deformation by faulting began in late Cretaceous and Paleocene times with further phases in Oligocene, U. Miocene/L. Pliocene and Quaternary)

Coleman, P. and L. Kroenke (1981)- Subduction without volcanism in the Solomon Islands arc. Geo-Marine Letters 1, p. 129-134.
(Solomon arc lacks subduction-associated volcanism in E part, due to collision of submarine Ontong Java Plateau with Solomon arc at ~8 Ma and consequent flip in subduction. Collision most forceful over E half, so new, N-plunging slab of lndo-Australian plate remained in collisional contact with thick oceanic crust (>40 km) and lithosphere of Ontong Java Plateau along face of cooled depleted refractory mantle; there is no intervening asthenospheric wedge, and therefore no magma production)

Coleman, P. & R.A. MacTavish (1964)- Association of larger and planktonic foraminifera in single samples from Middle Miocene sediments, Guadalcanal, Solomon Islands, Southwest Pacific. Royal Soc. Western Australia 47, 1, p. 13-24.

Coleman, P. & R.A. McTavish (1967)- Association of Early Miocene planktonic and larger foraminifera from the Solomon Islands, Southwest Pacific. Australian J. Sci. 29, 10, p. 373-375.

Coleman, P.J. & G.H. Packham (1976)- The Melanesian borderlands and India-Pacific platesô boundary. Earth-Science Reviews 12, p. 197-233.
(Melanesian Borderlands extend from New Guinea to Tonga and occupy border position between India and Pacific plates. Seven regions: Bismarck Sea, Solomon Block, Coral Sea, New Hebrides and S Fiji Basins, New Hebrides Block, Fiji Plateau and Lau Basin, Fiji Platform and Lau and Tonga Ridges)

Coleman, R.G. (1967)- Glaucophane schists from California and New Caledonia. Tectonophysics 4, 4-6, p. 479-498.
(In California and New Caledonia outcrop patterns and structures show belt of blueschist facies metamorphism of eugeosynclinal rocks parallel to large ultramafic bodies, indicating tectonic relationship between metamorphism and tectonic emplacement. Mineral assemblages in blueschist facies under conditions where pressure is dominant over temperature, requiring extremely low thermal gradients. In New Caledonia age of metamorphism 21-38 Ma from radiometric dating of on muscovite and glaucophane in high-P schist belt)

Coleman, R.G. (1971)- Plate tectonic emplacement of upper mantle peridotites along continental edges. J. Geophysical Research 76, 5, p. 1212-1222.
(Large oceanic-mantle crustal slabs thrust over or into continental edges contemporaneously with blueschist metamorphism in New Caledonia and New Guinea. 'Obduction' zones lack volcanic activity, and may result from initial stage of compressional impact between oceanic and continental lithospheric plate. Serpentinites represent alteration developed during tectonic emplacement into wet sediments of continental plate, which produces less dense and plastic envelope that facilitates further tectonic movement)

Colley, H. (1984)- An ophiolite suite in Fiji? In: Ophiolites and oceanic lithosphere, Geol. Soc. London, Spec. Publ. 13, p. 333-340.
(In SW Viti Levu rocks formerly described as part of island-arc succession may be upper part of ophiolite suite. Foraminiferal oozes, cherts, red clays, Fe-Mn metalliferous sediments, fine-grained volcanic turbidites and reworked polymict lapillistones can be equated with Layer 1 of oceanic lithosphere)

Colley, H. & W.H. Hindle (1984)- Volcano-tectonic evolution of Fiji and adjoining marginal basins. In: B.P. Kokelaar & M.F. Howells (eds.) Marginal basin geology: volcanic and associated sedimentary and tectonic processes in modern and ancient marginal basins, Geol. Soc., London, Spec. Publ. 16, p. 151-162.
(From Eocene- M Miocene, Fiji was part of N-facing Outer Melanesia arc system, stretching from PNG to Tonga. Oligocene back-arc spreading S of Fiji led to formation of Minerva Plain (S Fiji Basin). M Miocene polarity reversal in arc segments W of Fiji. Fiji compressive event followed by progressive isolation from subduction regime as arc segments rotated away. Change in Fiji volcanism from arc andesites and tholeiites to alkalic ocean island basalts. Most recent arc rotation resulted in opening of Lau Basin between Fiji and Tonga, and divorce of Fiji from subduction influence with start of ocean island basalt volcanism in M Pliocene)

Collignon, M. (1977)- Ammonites neocretacees de la Nouvelle-Caledonie. Bull. Bur. Rech. Geol. Minieres (France), sect. 4, 1, p. 7-36.
('Upper Cretaceous ammonites from New Caledonia'. Coniacian- Campanian ammonites in quartz-rich shallow marine sediments overlying Koh ophiolite. Includes new species Caledonites australis, etc)

Collot, J. (2009)- Evolution geodynamique du domaine Ouest offshore de la Nouvelle-Caledonie et de ses extensions vers la Nouvelle-Zelande. Ph.D. Thesis, Universite de Bretagne Occidentale, Brest, p. 1-290.
(online at: http://tel.archives-ouvertes.fr/docs/00/54/01/73/PDF/JCOLLOT-PhD-2009-light.pdf)

('Geodynamic evolution of the western offshore domain of New Caledonia and its extensions towards New Zealand'. Major review of New Caledonia area geology/ geodynamics. Updated chronostratigraphy of Fairway and New Caledonia basins and associated ridges. Phases of basins evolution: (1) M Cretaceous formation of Fairway-Aotea Basin in continental intra-arc or backarc position; (2) Latest Late Eocene deformation of N New Caledonia Basin, synchronous with New Caledonia ophiolite obduction; (3) Regional Eocene-Oligocene subsidence of Lord Howe Rise, Fairway-Aotea Basin, Fairway Ridge, New Caledonia Basin, Norfolk Ridge)

Collot, J.Y. & M.A. Fischer (1989)- Formation of forearc basins by collision between seamounts and accretionary wedges: an example from the New Hebrides subduction zone. Geology 17, p. 930-933.
(Seamounts that collide with accretionary wedges can cause deep, sub-circular reentrants at ~4km depth in lower forearc slope of New Hebrides Arc that eventually fill to become forearc basins. Reentrants result from tectonic erosion as wedge rocks are oversteepened and jostled aside by the subducting seamount)

Collot, J.Y. & M.A. Fischer (1991)- The collision zone between the North d'Entrecasteaux Ridge and the New Hebrides Island Arc: 1. Sea Beam morphology and shallow structure. J. Geophysical Research 96, B3, p. 4459-4478.

Collot, J.Y. & M.A. Fischer (1994)- The D'Entrecasteaux zone- New Hebrides island arc collision zone: an overview. In: J.Y. Collot et al. (eds.) Proc. Ocean Drilling Program (ODP), Initial Reports 134, p. 19-31.
(online at: www-odp.tamu.edu/Publications/134_IR/VOLUME/CHAPTERS/ir134_02.pdf)
(On colliding d'Entrecasteaux Zone (with N d'Entrecasteaux Ridge with Paleogene MORB basement and Bougainville Guyot M Eocene volcano) and C New Hebrides Island Arc. N d'Entrecasteaux Ridge collision deforming island-arc basement. Bougainville Guyot clogged trench and indented arc slope by 10km. Landward of Bougainville Guyot, 500m-thick wedge, including imbricated U Oligocene- Lw Miocene reefal limestones with U Eocene reefal debris and M Eocene pelagic sediments, possibly formed by tectonic accretion of guyot material)

Collot, J., L. Geli, Y. Lafoy, R. Vially, D. Cluzel, F. Klingelhoefer & H. Nouze (2008)- Tectonic history of northern New Caledonia Basin from deep offshore seismic reflection: relation to late Eocene obduction in New Caledonia, Southwest Pacific. Tectonics 27, 6, p. 1-20.
(Seismic data from W New Caledonia offshore allow correlation between DSDP hole 208 on Lord Howe Rise and deep water New Caledonia Basin. Eocene/Oligocene unconformity deeper than previously thought. S Loyalty Basin obducted in Early Oligocene, New Caledonia Basin subsided under effect of loading)

Collot, J.Y., H.G. Greene, M.A. Fisher, and E. Geist (1994)- Tectonic accretion and deformation of the accretionary wedge in the North dŒntrecasteaux Ridge- New Hebrides island arc collision zone: evidence from multichannel seismic reflection profiles and Leg 134 Results. In: J.Y. Collot et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 134, p. 363-373.

Collot, J., R.H. Herzer, Y. Lafoy & L. Geli (2009)- Mesozoic history of the Fairway- Aotea Basin: implications regarding the early stages of Gondwana fragmentation, Geochem. Geophys. Geosystems 10, Q12019, p. 1-24.
(Fairway Ridge is buried continental ridge, separating Late Cretaceous Fairway Basin from New Caledonia Basin. Opening of Fairway-Aotea Basin predates opening of Tasman Sea. Lord Howe, Fairway and Norfolk ridges part of remnant late Early Cretaceous continental arc, fragmented into three pieces in mid-Cretaceous in slab retreat process)

Collot, J., Y. Lafoy & L. Geli (2011)- Structural provinces of the Southwest Pacific, explanatory notes. Geol. Survey of New Caledonia-DIMENC/ Ifremer, Noumea, p. 1-39. *(online at: www.dimenc.gouv.nc/portal/page/portal/dimenc/telechargements/tele_geologie/NEWCALEDONIA_ang-A5-v18.pdf)*
(Useful review and synthesis of SW Pacific oceanic basins, continental ribbon-like terranes derived from active Gondwana margin, tectonic events, etc.)

Collot, J.Y., S. Lallemand, B. Pelletier, J.P. Eissen, G. Glacon, M.A. Fisher, H.G. Greene et al. (1992)- Geology of the d'Entrecasteaux-New Hebrides arc collision zone: results from a deep submersible survey. Tectonophysics 212, 3-4, p. 213-241.
(Seven submersible dives in water depths 900- 5350m over New Hebrides island arc- d'Entrecasteaux Zone collision zone. Bougainville guyot is M Eocene island arc volcano, capped with Late Oligocene and younger reef limestones, and in early stage of subduction. Guyot possibly emerged above ea level in M-L Miocene)

Collot, J.Y., A. Malahoff, J. Recy, G. Latham & F. Missegue (1987)- Overthrust emplacement of New Caledonia ophiolite: geophysical evidence. Tectonics 6, 3, p. 215-232.
(Geophysical studies support inferences from outcrop geology that in Late Eocene an ophiolite sheet exposed on New Caledonia was thrust S-ward over Pre-Permian- Eocene sedimentary, volcanic, and metamorphic rocks. Outcropping ultramafic complex consists of ~3 km thick layered sequence of harzburgite, dunite, wehrlite, serpentinite, and gabbro. Absence of pillow basalts and sheeted dikes on land suggests removal by thrust faulting or erosion. Geological model shows 10km-thick slab of oceanic crust and mantle material extending continuously from ophiolite on New Caledonia to oceanic crust of Loyalty Basin)

Collot, J.Y., F. Missegue & A. Malahoff (1982)- Anomalies gravimetriques et structure de la croute dans la region de la Nouvelle-Caledonie: enracinement des peridotites. Travaux Doc. Orstom 147, p. 549-564.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_6/Tra_d_cm/02429bis.pdf)
('Gravity anomalies and structure of the crust in New Caledonia area: roots of peridotites'. Late Eocene obduction of 10km thick ophiolite complex onto New Caledonia from N. Initially rigid sheet broken up by extensional tectonics)

Collot, J., M. Patriat, S. Etienne, P. Rouillard, F. Soetaert, C. Juan, B. Marcaillou et al. (2017)- Deepwater fold-and-thrust belt along New Caledonia's western margin: relation to post-obduction vertical motions. Tectonics 36, 10, p. 2108-2122.
(W margin of New Caledonia with 200 km long deepwater fold-and-thrust belt interpreted as gravity-driven system, after oversteepening of margin slope by post-obduction isostatic rebound. the margin. Thrust faults deeply rooted along low-angle floor thrust and connected to New Caledonia Island along major detachment)

Collot, J.Y., P. Rigolot & F. Missegue (1988)- Geologic structure of the northern New Caledonia Ridge, as inferred from magnetic and gravity anomalies: Tectonics 7, p. 991-1013.
(Bathymetric, gravity and magnetic data over N New Caledonia ridge show geological units of New Caledonia island extend N-ward under Grand Lagon Nord, Grand Passage and d'Entrecasteaux reefs. Cretaceous- Eocene basaltic complex of coastal area overlain by ophiolite remnants as far N as W d'Entrecasteaux reefs)

Collot, J., M. Vende-Leclerc, P. Rouillard, Y. Lafoy & L. Geli (2011)- Structural provinces of the Southwest Pacific, Map. Geol. Survey of New Caledonia/ Ifremer.
(online at: wwz.ifremer.fr/drogm_eng/content/download/44864/634564/file/SWPAC_StructuralProvinces _Map_v1-HighResv2.pdf

Collot, J., M. Vende-Leclerc, P. Rouillard, Y. Lafoy & L. Geli (2012)- Map helps unravel complexities of the southwestern Pacific Ocean, EOS Transactions AGU, 93, 1, p. 1-2.

Covellone, B.M., B. Savage & Y. Shen (2015)- Seismic wave speed structure of the Ontong Java Plateau. Earth Planetary Sci. Letters 420, p. 140-150.
(Ontong Java Plateau formed around 120 Ma. Region of fast shear wave speeds (>4.75 km/s)down to >100km beneath plateau. Wave speeds similar to cratonic environments and consistent with compositional anomaly that resulted from residuum of eclogite entrainment during plateau formation. Surfacing plume head entrained eclogite from deep mantle and accounts for anomalous buoyancy of plateau and fast wave speeds)

Cowley, S., P. Mann, M.F. Coffin, F. Millard & T.H. Shipley (2004)- Oligocene to Recent tectonic history of the central Solomon intra-arc basin as determined from marine seismic reflection data and compilation of onland geology. Tectonophysics 389, p. 267-307.

(Reflection seismic from C Solomon intra-arc basins constrains Tertiary sedimentary and tectonic history of Solomon Island arc and its convergent interaction with Cretaceous Ontong Java oceanic plateau. Four distinct tectonic phases, from Paleocene-Miocene extension to Pliocene Ontong Java- Solomon Arc collision, Late Pliocene- Pleistocene subduction along San Christobal Trench and late basin subsidence)

Crawford, A.J., L. Beccaluva & G. Serri (1981)- Tectono-magmatic evolution of the West Philippine-Mariana region and the origin of boninites. Earth Planetary Sci. Letters 54, 2, p. 346-356.
(In W Philippine-Mariana region Tertiary arc magmatism and back-arc extensional pulses not synchronous. Arc volcanism ceases within few Myrs of development of back-arc basin and recommences oceanward on new arc during final stages in development of back-arc basin. Boninites appear to be erupted after arc magmatism and immediately before eruption of MORB-type lavas)

Crook, K.A.W. & L. Belbin (1978)- The Southwest Pacific area during the last 90 million years. J. Geol. Soc. Australia 25, 1, p. 23-40.
(Maps of SW Pacific area at 90, 60, 53, 83, 29, 21 and 10 Ma. Four stages in regional paleogeographic development:I (80-60 Ma): Tasman Basin and New Caledonia Trough formed; II (60-53 Ma): Coral Sea Basin formed; III (53-21 Ma): Great Melanesian marginal sea formed, bounded by Cenozoic island arcs IV (21 Ma-present): Much of N part of Melanesian marginal sea consumed during retrograde motion of island arcs)

DôAntonio, M., I. Savov, P. Spadea, R. Hickey-Vargas & J. Lockwood (2006)- Petrogenesis of Eocene oceanic basalts from the West Philippine Basin and Oligocene arc volcanics from the Palau-Kyushu Ridge drilled at 20°N, 135°E (Western Pacific Ocean). Ofioliti 31, 2, p. 157-171.
(W Philippine Basin back-arc basin opened within Philippine Sea Plate (PSP) between current position of Palau-Kyushu Ridge (PKR) and margin of E Asia. Spreading at Central Basin Fault from 54-30 Ma. PKR active since ~48-35 Ma constituting single volcanic arc with Izu-Bonin-Mariana (IBM) Arc. At ~42 Ma spreading direction changed from NE-SW to N-S, stopping at ~30 Ma. Late phase of spreading and volcanism between 30-26 Ma (M Oligocene). ODP Leg 195 Site 1201 is in WPB, ~100 km W of PKR, on 49 Ma crust. From ~35 to 30 Ma, pelagic sedimentation at Site 1201 was followed by turbidite sedimentation, fed mostly by arc-derived volcanics. PKR volcanics are porphyritic basalts and andesites. New isotope data point to Indian Ocean MORB-like character of Site 1201 basement basalts, suggesting WPB volcanism tapped upper mantle domain distinct from Pacific Plate)

Davey, F.J. (2005)- A Mesozoic crustal suture on the Gondwana margin in the New Zealand region. Tectonics 24, 4, TC4006, p. 1-17.
(Seismic data offshore South Island suggests NE dipping paleosubduction zone, possibly related to docking of Brook Street oceanic island arc terrane to Gondwana margin in Triassic)

De Broin, C.E., F. Aubertin & C. Ravenne (1977)- Structure and history of the Solomon-New Ireland region. In: Int. Symposium on Geodynamics in South-West Pacific, Technip, Paris, p. 37-49.

De Chetelat, E. (1947)- La genese et l'evolution des gisements de nickel de la Nouvelle-Caledonie. Bull. Soc. Geol. France, ser. 5, 17, p. 105-160.
('The genesis and evolution of the nickel deposits of New Caledonia')

De Jersey, N.J. & J.A. Grant-Mackie (1989)- Palynofloras from the Permian, Triassic and Jurassic of New Caledonia. New Zealand J. Geol. Geophys. 32, p. 463-476.
(online at: www.tandfonline.com/doi/abs/10.1080/00288306.1989.10427554)
(Late Permian- M Jurassic palynomorphs from 33 marine sediment samples, similar to age-equivalent floras from New Zealand and E Australia. Triassic palynoflora assigned to cool-temperate Ipswich microflora, compositionally intermediate between SE Queensland and New Zealand palynofloras. Oldest sample Permian with Alisporites (= Falcisporites) australis, and without Lunatisporites pellucidus, suggesting upper Upper Stage 5 or Playfordiaspora crenulata and Protohaploxypinus microcorpus Zone. Also E Triassic P. samoilovichii Zone, without Alisporites australis. Etc.)

Deprat, J. (1905)- Les depots eocenes neo-caledoniens et leur analogie avec ceux de la region de la Sonde. Bull. Soc. Geologique France, ser. 4, 5, p. 485-516.
(online at: http://ia802704.us.archive.org/2/items/bulletindelasoci451905soci/bulletindelasoci451905soci.pdf)
'The Eocene deposits of New Caledonia and their analogy to the Sunda region'. Conglomerates, sandstones, tuffs and limestones with Eocene LF Orthophragmina (= Discocyclina and Asterocyclina; incl. new species umbilicata), Nummulites and rare Alveolina. Faunas very similar to those described from Java by Verbeek)

Deprat, J. (1909)- Sur la presence de *Pellatispira* dans lŒocene de Nouvelle Caledonie. Bull. Soc. Geologique France, ser. 4, 9, p. 288-289.
('On the presence of Pellatispira in the Eocene of New Caledonia'. Short note on occurrence of Eocene larger foram Pellatispira, associated with Discocyclina and Nummulites in New Caledonia)

Deschamps, A. & S. Lallemand (2002)- The West Philippine Basin: an Eocene to Early Oligocene back arc basin opened between two opposed subduction zones. J. Geophysical Research 107, B12, p. 1-24.
(W Philippine Basin back arc basin developed between two opposed subduction zones. Rifting started at 55 Ma, spreading ended at 33/30 Ma. Initial spreading axis parallel to paleo-Philippine Arc, new spreading ridge propagated from E part of basin. Spreading mainly from second axis with CCW rotation of spreading direction. Gagua and Palau-Kyushu ridges transform margins accommodating opening. Arc volcanism along Palau-Kyushu Ridge (E margin) during opening, paleo-Philippine Arc decreased activity between 43-36 Ma. W margin compressive event in Late Eocene- E Oligocene. In W of basin, spreading system disorganized due to presence of mantle plume. After end of spreading, amagmatic extension between 30-26 Ma in central basin)

Deschamps, A. & S. Lallemand (2003)- Geodynamic setting of Izu-Bonin-Mariana boninites. In: R.D. Larter & P.T. Leat (eds.) Intra-oceanic subduction systems; tectonic and magmatic processes, Geol. Soc., London, Spec. Publ. 219, p. 163-185.
(online at: www.gm.univ-montp2.fr/IMG/pdf/Deschamps_Lallemand_2003_GeolSocLondon.pdf)
(Izu-Bonin-Mariana forearc characterized by occurrence of boninite-like lavas (mainly M-L Eocene age). Three tectonic settings that favor formation of boninites in back-arc basins. Boninites in Bonin Islands probably formed near termination of volcanic arc, at transition between subduction zone and transform fault)

Deschamps, A., S. Lallemand & S. Dominguez (1999)- The last spreading episode of the West Philippine Basin revisited. Geophysical Research Letters 26, 14, p. 2073-2076.
(Bathymetric data and backscatter imagery reveal fine structures of fossil spreading axis, from which we infer episodes of oblique deformation and diminished magmatic supply resulting from cessation of spreading. NE-SW seafloor fabric NE of Benham volcanic plateau, oblique to more common E-W and NW-SE fabrics known in WPB. Cross-cut during final, amagmatic, extensional phase to produce a N130° -trending deep rift valley)

Deschamps, A., P. Monie, S. Lallemand, K. Hsu & K.Y. Yeh (2000)- Evidence for Early Cretaceous oceanic crust trapped in the Philippine Sea Plate. Earth Planetary Sci. Letters 179, p. 503-516.
(online at: www.gm.univ-montp2.fr/IMG/pdf/Deschamps.pdf)
(N Huatung Basin small oceanic basin E of Taiwan. New Early Cretaceous Ar/Ar ages of gabbros dredged on oceanic basement highs. Old ages consistent with E Cretaceous ages of Lanyu Island (Luzon Arc) radiolarian assemblages. Best fit of magnetic anomalies is opening of Huatung Basin in E Cretaceous (131-119 Ma). Basin may be fragment of 'proto-South China Sea' or possibly 'New Guinea Basin' trapped by Philippine Sea Plate)

Deschamps, A., K. Okino & K. Fujioka (2002)- Late amagmatic extension along the central and eastern segments of the West Philippine Basin fossil spreading axis. Earth Planetary Sci. Letters 203, p. 277-293.
(Tectono-magmatic processes along spreading axis of W Philippine Basin during conclusion of last spreading phase at 33/30 Ma. Opening from E-W-trending spreading system followed by late phase of NE-SW extension in C and E parts of basin. Late event probably associated with onset of E-W opening of Parece-Vela Basin along E border of WPB at 30 Ma)

Deschamps, A., R. Shinjo, T. Matsumoto, C.S. Lee, S.E. Lallemand & S. Wu (2008)- Propagators and ridge jumps in a back-arc basin, the West Philippine Basin. Terra Nova 20, 4, p. 327-332.

(New bathymetric data from western W Philippine Basin suggests 5 sequences of propagating rifts, probably triggered by mantle flow away from thermal anomaly responsible for origin of Benham and Urdenata plateaus. NE of Benham plateau, a left-lateral fracture zone turned into NE-SW-trending spreading axis)

Dickinson W.R. (2008)- Tectonic lessons from the configuration and internal anatomy of the Circum-Pacific orogenic belt. In: J.E. Spencer & S.R. Titley (eds.) Ores and orogenesis: Circum-Pacific tectonics, geologic evolution and ore deposits, Arizona Geol. Soc. Digest 22, p. 5-18.

Diessel, C., R. Brothers & P. Black (1978)- Coalification and graphitization in high-pressure schists in New Caledonia. Contrib. Mineralogy Petrology 68, p. 63-78.
(N portion of Tertiary high P schist belt in New Caledonia metamorphic progression from W to E from lawsonite-albite facies through glaucophanitic greenschists to eclogitic albite-epidote amphibolites: Belt flanked to W by Upper Cretaceous-Eocene metasediments of prehnite-pumpellyite grade, with abundant carbonaceous material showing progressive metamorphism from coal to graphite. In prehnite-pumpellyite metasediments phytoclasts progressively coalified to anthracite. Graphite first appears at lawsonite isograd. Beyond ferroglaucophane isograd all phytoclasts completely graphitized)

Dimalanta, C., A. Taira, G.P. Yumul, H. Tokuyama & K. Mochizuki (2002)- New rates of western Pacific island arc magmatism from seismic and gravity data. Earth Planetary Sci. Letters 202, p. 105-115.
(Oceanic island arcs in SW Pacific study area with crustal thickness of 20-30 km. Arc magmatic addition rates of 30-95 km3/km/Myr, nearly twice as high as previous estimates of arc magmatic addition rates)

Dubois, J., C. Ravenne, A. Aubertin, J. Louis, R. Guillaume, J. Launay & L. Montadert (1974)- Continental margins near New Caledonia. In: C.A. Burk & C.L. Drake (eds.) The geology of continental margins, Springer, New York, p. 521-535.

Dubois, J., J. Launay & J. Recy (1974)- Uplift movements in New Caledonia- Loyalty Islands area and their plate tectonics interpretation. Tectonophysics 25, p. 133-150.
(Four phases of uplift identified on New Caledonia: (1) Peneplanation of peridotites: peridotites subjected to intense erosion since E Miocene; (2) Post-Miocene asymmetrical uplift after peneplanation to elevations up to 1300m and possible tilt to W, possibly partly post-erosional isostatic re-equilibrium; (3) Recent subsidence phase of ~200m and (4) Recent uplifted coastal terraces 2-6m asl. Loyalty Archipelago series of uplifted atolls since 2 Ma, with decreasing altitudes from SE to NW)

Dugas, F. & J.F. Parrot (1978)- Reconstitution de la ceinture eocene du Sud-Ouest Pacifique. Comptes Rendus Academie Sciences, Paris, D 287, 7, p. 671-674.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_5/b_fdi_08-09/09434.pdf)
('Reconstruction of the Eocene belt of the SW Pacific'. Originally straight and continuous NE-dipping Eocene subduction zone from E New Guinea to Solomon Islands, New Hebrides and New Caledonia, now modified by Oligo-Miocene and Recent subduction zones and transcurrent faults. Ophiolitic massifs and metamorphic soles obducted to S/ SW linked to this Eocene intra-oceanic subduction zone)

Dupuy, C., J. Dostal & M. Leblanc (1981)- Geochemistry of an ophiolitic complex from New Caledonia. Contrib. Mineralogy Petrology 76, p. 77-83.
(Ophiolites of New Caledonia composed of ultramafics overlain by mafic rocks, all affected by low P metamorphism. Mafic rocks similar to recent mid-ocean ridge rocks)

Eade, J.V. (1988)- The Norfolk Ridge system and its margins. In: A.E.M. Nairn, F.G. Stehli & S. Uyeda (eds.) The ocean basins and margins 7, The Pacific Ocean, Plenum Press, New York, p. 303-324.

Eissen, J.P., A.J. Crawford, J. Cotten S. Meffre, H. Bellon & M. Delaune (1998)- Geochemistry and tectonic significance of basalts in the Poya Terrane, New Caledonia. Tectonophysics 284, p. 203-219.
(Widespread 'West Coast basalt' part of 20-500m-thick nappe below ophiolite nappe of New Caledonia (Poya Terrane basalts; PTB). Interbedded radiolarian cherts of Late Cretaceous (Campanian) age, but K-Ar ages

almost all Eocene (~39-49 Ma), presumably reflecting resetting related to emplacement of overriding harzburgite nappe. PTB form parautochthonous sheet below main harzburgitic nappe of New Caledonian ophiolite, genetically unrelated to ophiolite, and interpreted to be 70-85-Ma-old rift tholeiites formed during opening E New Caledonia Basin)

Emery, K.O., J.I. Tracey & H.S. Ladd (1954)- Geology of Bikini and nearby atolls, Marshall Islands. U.S. Geol. Survey (USGS) Prof. Paper 260-A, p. 1-264.
(online at: http://pubs.usgs.gov/pp/0260a/report.pdf)
(Drilling on Bikini island to depth of 2556', encountered Oligocene (?)- Recent limestone: 0-850', Recent and Plio-Pleistocene- Recent; 850-2070' Miocene; 2070-2556' Oligocene(?). Entire section accumulated in shallow water, lagoonal environment, indicating continuing or periodic submergence)

Exon, N.F., G.R. Dickens, J.M. Auzende, Y., Lafoy, P.A. Symonds & S. Van de Beuque (1998)- Gas hydrates and free gas on the Lord Howe Rise, Tasman Sea. Petroleum Expl. Soc. Australia (PESA) Journal 26, p. 148-158.

Exon, N.F., Y. Lafoy, P.J. Hill, G.R. Dickens & I. Pecher (2007)- Geology and petroleum potential of the Fairway Basin in the Tasman Sea. Australian J. Earth Sci. 54, 5, p. 629-645.
(Fairway Basin poorly known N-S-trending basin in 1500-3000m of water on E slope of Lord Howe Rise. Three segments, probably formed by thinning of continental crust during Late Cretaceous- Paleocene breakup of Lord Howe Rise and surrounding continental ridges. Eocene compression (tied to overthrusting on New Caledonia?) lead to uplift and erosion of N Lord Howe Rise, and reversal of faulting in basin. By Oligocene time area again in bathyal depths, with pelagic ooze and turbidites accumulation. Cretaceous- Recent sediments 2000-4000m thick)

Exon, N.F., P.G. Quilty, Y. Lafoy, A.J. Crawford & J.M. Auzende (2004)- Miocene volcanic seamounts on northern Lord Howe Rise: lithology, age and origin. Australian J. Earth Sci. 51, 2, p. 291-300.
(Small volcanic cones on NE Lord Howe Rise in water depths 750-1150m. Interbedded E Miocene micrites(N8?; ~16-15 Ma) in upper volcaniclastics represent calcareous ooze deposited with (or later than) volcanic pile, in pelagic depths. Covered with ferromanganese crust up to 7cm thick)

Falloon, T.J., L.V. Danyushevsky, A.J. Crawford, S. Meffre, J.D. Woodhead & S.H. Bloomer (2008)- Boninites and adakites from the northern termination of the Tonga Trench: implications for adakite petrogenesis. J. Petrology 49, 4, p. 697-715.
(online at: https://academic.oup.com/petrology/article/49/4/697/1467522/Boninites-and-Adakites-from-the-Northern)
(Adakitic rocks dredged from N termination of Tonga Trench. Zircon ages 2.5 Ma, contemporaneous with boninite magmatism in area. High-SiO2 adakites in area where transition from steep Pacific subduction to transform fault plate boundary created slab window/ slab edge. Adakites result from direct melting of slab edge as result of juxtaposition of subducting slab against hot mantle derived from Samoan plume)

Falvey, D.A., J.B. Colwell, P.J. Coleman, H.G. Greene et al. (1991)- Petroleum prospectivity of the Pacific island arcs: Solomon islands and Vanuatu. Australian Petrol. Expl. Assoc. (APEA) J. 1991, p. 191-212.

Fang, Y., J. Li, M. Li, W. Ding & J. Zhang (2011)- The formation and tectonic evolution of Philippine Sea Plate and KPR. Acta Oceanologica Sinica 30, 4, p. 75-88.
(Philippine Sea Plate oceanic plate almost entirely surrounded by subduction zones. Kyushu-Palau Ridge believed to be remnant arc on oceanic plate, formed during opening of Parece Vela and Shikoku Basins)

Fisher, M.A., J.Y. Collot & E.L. Geist (1991)- Structure of the collision zone between Bougainville Guyot and the accretionary wedge of the New Hebrides island arc, southwest Pacific. Tectonics 10, 5, p. 887-903.
(Bougainville guyot fills New Hebrides trench, stands ~3 km above abyssal ocean plain, and is capped by broad carbonate platform Seismic data showing structure in island arc-guyot collision zone. Contact zone marked by discontinuous antiforms)

Fisher, M.A., J.Y. Collot & E.L. Geist (1991)- The collision zone between the North d'Entrecasteaux Ridge and the New Hebrides Island Arc. Part 2: Structure from multichannel seismic data. J. Geophysical Research 96, B3, p. 4479-4495.
(D'Entrecasteaux zone (DEZ) collides with C New Hebrides island arc and consists of two subparallel ridges that strike east-west, stand 1-2 km above the surrounding oceanic plate, and subduct obliquely (15°)N-ward beneath arc. Rocks dredged from N ridge indicates volcanic origin. Mass wasting deposits locally make up most of accretionary wedge)

Fitton, J.G. & M. Godard (2004)- Origin and evolution of magmas on the Ontong Java Plateau. In: J.G. Fitton, et al. (eds.) Origin and evolution of the Ontong Java Plateau. Geol. Soc. London, Spec. Publ. 229, p. 151-178.
(E Cretaceous basalts of oceanic Ontong Java Plateau homogeneous composition, mainly low-K tholeiite. Formed in short time (<10 My) around 122 Ma. Most or all of volcanics erupted well below sea level)

Fitton, J.G., J.J. Mahoney et al. (eds.) (2004)- Origin and evolution of the Ontong Java Plateau. Geol. Soc. London, Spec. Publ. 229, p. 1-374.
(Collection of papers on Ontong Java Plateau in W Pacific, world's largest igneous province in oceanic environment. Mainly formed around 120- 90 Ma, mid-Cretaceous)

Fitton, J.G., J.J. Mahoney, P.J. Wallace & A.D. Saunders (2004)- Leg 192 synthesis: origin and evolution of the Ontong Java Plateau. In: J.G. Fitton et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 192, p. 1-18.
(online at: www-odp.tamu.edu/publications/192_SR/VOLUME/SYNTH/SYNTH.PDF)
(Mid-Cretaceous Ontong Java Plateau is most voluminous of world's large igneous provinces and represents by far largest known magmatic event on Earth (comparable in size to W Europe). Formed rapidly around 120 Ma (122- >112 Ma). Collision with old Solomon arc resulted in uplift of OJP S margin to create onland exposures of basaltic basement in Solomon Islands (Malaita, Santa Isabel, San Cristobal). Biostratigraphic dating of pelagic sediment intercalated with lava flows suggests magmatism on high plateau extended from ~122–112 Ma, but ReOs isotopic data on basalts from same sites single isochron age of 121.5 ± 1.7 Ma)

Fitzherbert, J.A., G.L. Clarke & R. Powell (2003)- Lawsonite-omphacite-bearing metabasites of the Pam Peninsula, NE New Caledonia: evidence for disrupted blueschist- to eclogite-facies conditions. J. Petrology 44, 10, p. 1805-1831.
(online at: https://academic.oup.com/petrology/article/44/10/1805/1493887)
(Diahot terrane of N New Caledonia with interbedded Cretaceous-Eocene metasediments and metavolcanics that experienced late M Eocene (~40 Ma) high-P metamorphism. Steeply SW-dipping S2 foliation progressively more intense to NE over 15 km. Four zones of metabasites, from SW to NE: (1) Lawsonite blueschist (with omphacite, glaucophane; P=1.0 GPa, T=400°C); (2) Epidote blueschist (lawsonite-clinozoisite-spessartine; 1.4-1.5 GPa, 450-500°C); (3) Almandine-hornblende blueschist (clinozoisite-hornblende–almandine; 1.5-1.6 GPa, 550-580°C); (4) Hornblende-paragonite eclogite (clinozoisite-almandine-omphacite; 1.7 GPa, 600-620°C). P-T array disrupted by tectonic thinning during exhumation. Adjacent Pouebo terrane metabasic eclogite/ glaucophanite (1.9 GPa, 590°C), developed at similar depths of 50-60km in subducted leading edge)

Fitzherbert, J.A., G.L. Clarke & R. Powell (2005)- Preferential retrogression of high-P metasediments and the preservation of blueschist to eclogite facies metabasite during exhumation, Diahot terrane, NE New Caledonia. Lithos 83, p. 67-96.
(High-P metabasites of Diahot terrane, N New Caledonia occur as spatially restricted lenses, boudins and layers in psammitic to pelitic metasediments. Although interlayered, two types preserve distinct, tectonically disrupted metamorphic profiles in transition from lawsonite blueschist in SW to low-T eclogite in NE)

Folcher, N., B. Sevin, F. Quesnel, V. Lignier, M. Allenbach, P. Maurizot & D. Cluzel (2015)- Neogene terrestrial sediments: a record of the post-obduction history of New Caledonia. Australian J. Earth Sci. 62, 4, p. 479-492.

(Thin, poorly studied iron-rich fluvio-lacustrine sediments, mainly derived from erosion of ultramafic regolith in S part of Grande Terre of New Caledonia, document 25 Ma of geological history of island. Ages of formation poorly constrained. Several episodes of post-obduction erosion and sediment fill. Correlation with E Miocene slab break-off, which may have triggered first stage of erosion. Etc.)

Freinex, S. (1980)- Bivalves neocretaces de Nouvelle-Caledonie. signification biogeographique, biostratigraphique, paleoecologique. Annales Paleontologie (invertebres) 66, 2, p. 67-134.
('Late Cretaceous bivalves of New Caledonia; biogeographic and paleoecologic significance')

Freinex, S. (1981)- Faunes de bivalves du Senonien de Nouvelle-Caledonie. Analyses paleobiogeographique, biostratigraphique, paleoecologique. Annales Paleontologie (invertebres) 67, 1, p. 13-32.
('Senonian bivalves of New Caledonia; paleobiogeographic, biostratigraphic and paleoecologic analysis')

Freinex, S., J.A. Grant-Mackie & J. Lozes (1974)- Presence de *Malayomaorica* (Bivalvia) dans le Jurassique superieur de la Nouvelle-Caledonie. Bull. Soc. Geologique France, 16, 4, p. 456-464.
('Presence of Malayomaorica malayomaorica in the Upper Jurassic of New Caledonia'. New subspecies novocaledonica. This Kimmeridgean bivalve genus (originally assigned to Aucella, then Buchia) is widely distributed along margins of Late Jurassic Gondwanaland; JTvG)

Frost, B. R. K.A. Evans, S.S. Swapp, J.S. Beard & F.E. Mothersole (2013)- The process of serpentinization in dunite from New Caledonia. Lithos 178, p. 24-39.

Fryer, P.B., & M.H. Salisbury (2006)- Leg 195 synthesis: Site 1200- Serpentinite seamounts of the Izu-Bonin/Mariana convergent plate margin (ODP Leg 125 and 195 drilling results). In: M. Shinohara et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 195, p. 1-30.
(online at: www-odp.tamu.edu/publications/195_SR/VOLUME/SYNTH/SYNTH1.PDF)
(Izu-Bonin/Mariana convergent plate margin characterized by non-accretionary forearc with numerous serpentinite seamounts distributed over 90 km wide zone in Mariana system. Seamounts formed primarily by mud volcanism. Mud flows with altered mafic rocks of oceanic plate and island arc origin and slab-derived fragments of high P- low T metabasites (incl. glaucophane schist) that reflect conditions of subduction zone.)

Gautier, P., B. Quesnel, P. Boulvais & M. Cathelineau (2016)- The emplacement of the peridotite nappe of New Caledonia and its bearing on the tectonics of obduction. Tectonics 35, 12, p. 3070-3094.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2016TC004318/pdf)
(Peridotite Nappe of New Caledonia one of few ophiolites worldwide that escaped collisional orogeny after obduction. Klippes of peridotite nappe in NW New Caledonia flat lying and involve S/SW vergent reverse-slip shear zones of compressional origin. Further NE nappe folded in association with steep schistosity in low-grade metasediments. Peridotite Nappe experienced compression at greater depths toward root zone, suggesting "push from the rear" mechanism of emplacement. Obduction in New Caledonia occurred through dextral oblique convergence between subduction trench and continental ribbon)

Genna, A., P. Maurizot, Y. Lafoy & T. Auge (2005)- Controle karstique de mineralisations nickliferes de Nouvelle-Caledonie. Comptes Rendus Geoscience, Paris, 337, 3, p. 367-374.
('Karst controls on nickel-bearing mineralizations of New Caledonia')

Ghent, E.D., J.C. Roddick & P.M. Black (1994)- 40Ar/39Ar dating of white micas from the epidote to omphacite zones, northern New Caledonia: tectonic implications. Canadian J. Earth Sci. 31, p. 995-1001.
(N New Caledonian high-pressure metamorphicss yield Ar/Ar ages of 37±1 Ma (late M Eocene) from white micas in epidote and omphacite zone samples, Whole-rock samples from lawsonite zone 44-51 Ma, probably reflecting detrital and newly grown micas. Epidote and omphacite zone rocks cooled through muscovite closure temperature (~350°C) as coherent cooling unit. Lawsonite zone rocks structurally within ~0.5km of garnet-omphacite rocks, suggesting possibility of post-metamorphic tectonic displacement)

Gill, J.B. (1987)- Geodynamic and geochemical evolution of the Fiji region. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 125-128.

Gill, J.B. & I. McDougall (1973)- Biostratigraphic and geological significance of Miocene- Pliocene volcanism in Fiji. Nature 241, p. 176-180.
(Dating of Fijian volcanic rocks enables estimate of 4.9±0.4 Ma for age of Miocene-Pliocene boundary, as defined by first appearance of Sphaeroidinella dehiscens. Change in composition of volcanism in Fiji between ~5-6 Ma may result from migration of site of subduction)

Gladczenko, T.P., M.F. Coffin & O. Eldholm (1997)- Crustal structure of the Ontong Java Plateau: modeling of new gravity and existing seismic data. J. Geophysical Research 102, B10, p. 22711-22729.
(Seismic refraction and gravity data of large (>18,000 km2), basaltic Early Cretaceous Ontong Java Plateau, NE of Papua New Guinea, has crustal thickness of ~30km)

Glasby, G.P. (1988)- Manganese in the SW Pacific; a brief review. Ore Geology Reviews 4, p. 125-133.
(Terrestrial manganese occurs as relatively small-scale deposits in SW Pacific area and was mined in Vanuatu, Fiji, New Caledonia, New Zealand and PNG (E-M Eocene Rigo deposits SE of Port Moresby, associated with E-M Eocene cherts. Manganese nodule widespread on seafloor of equatorial SW Pacific (not elaborated here))

Glasby, G.P. (1988)- Manganese deposition through geological time: dominance of the post-Eocene deep-sea environment. Ore Geology Reviews 4, p. 135-143.
(Development of widespread Cenozoic deep-sea manganese nodules is reflection of global cooling and development of post-Eocene ocean with cold, well-oxygenated bottom currents. Giant shallow-water manganese deposits of Lower Jurassic to Oligocene associated with anoxia and high sea-level stands. Formation of Cretaceous manganese nodules in Timor may be related to cold bottom waters. Scale of present-day deep-sea manganese nodule formation suggests we live in manganese era)

Glickson, M. (1988)- Miocene reef-derived deposits in Vanuatu- possible petroleum source rocks. In: H.G. Greene & F.L. Wong (eds.) Geology and offshore resources of Pacific island arcs- Vanuatu Region, Circum-Pacific Council Energy Min Res., Houston, Earth-Sci. Ser. 8, p. 267-274.

Gonord, H. (1970)- Sur la presence dôolistolites et sur la mise en place probable de nappes de glissement dans le flysch eocene du bassin tertiaire de Noumea-Bouloupari (Nouvelle-Caledonie). Comptes Rendus Academie Sciences, Paris, 270, D, p. 3010-3013.
('On the presence of olistoliths and the likely emplacement of nappes in the Eocene of the Tertiary basin of Noumea-Bouloupari (New Caledonia)'. Latest Eocene flysch and olistostrome with ophiolite blocks probably represent time of ophiolite emplacement)

Gorbatov, A. & B.L.N. Kennett (2003)- Joint bulk-sound and shear tomography for Western Pacific subduction zones. Earth Planetary Sci. Letters 210, p. 527-543.
(Tomographic inversion reveals penetration of subducted slab below 660 km discontinuity at Kurile-Kamchatka trench. Flattening of slabs above this depth observed in Japan and Izu-Bonin subduction zones. Penetration of subducted slab down to 1200 km below S Bonin trench, Mariana, Philippine, and Java subduction zones)

Grandcolas, P., J. Murienne, T. Robillard, L. Desutter-Grandcolas, H. Jourdan, E. Guilbert & L. Deharveng (2008)- New Caledonia: a very old Darwinian island? Philos. Trans. Royal Soc., London, B 363, p. 3309-3317.
(New Caledonia long considered to be continental island with biota dating back to Gondwanan times, but geological evidence indicate island no older than Oligocene. Local richness can be explained by local radiation and adaptation after colonization but also by many dispersal events)

Gray, G.G. & I.O. Norton (1988)- A palinspastic Mesozoic plate reconstruction of New Zealand. Tectonophysics 155, p. 391-399.
(Restoration of New Zealand into pre-breakup Gondwanaland configuration. Used trend of Permian ophiolite fragments and their offshore magnetic expressions as datum)

Greene, H.G., J.Y. Collot, M.A. Fisher & A.J. Crawford (1994)- Neogene tectonic evolution of the New Hebrides island arc: a review incorporating ODP drilling results. In: J.Y. Collot et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 134, p. 19-46.
(online at: www-odp.tamu.edu/publications/134_sr/VOLUME/CHAPTERS/sr134_02.pdf)

Greene, H.G. & F.L. Wong (eds.) (1988)- Geology and offshore resources of Pacific island arcs- Vanuatu region. Circum-Pacific Council Energy Min Res., Houston, Earth Science Ser. 8, p. 1-442.

Grekoff, N. & Y. Gubler (1951)- Donnees complementaires sur les terrains tertiaires de la Nouvelle-Caledonie. Revue Inst. Francais Petrole 6, 8, p. 283-293.
('Additional data on the Tertiary areas of New Caledonia'. New Caledonia West Coast Tertiary basins with U Eocene (Tb) in reefal (with Pellatispira) and paralic facies, and Miocene (Te-Tf). Oligocene absent. Close lithologic and microfaunal similarity to petroliferous Tertiary of E Borneo, N Celebes and SE New Guinea)

Griffiths, J.R. (1971)- Reconstruction of the South-West Pacific margin of Gondwanaland. Nature 234, p. 203-207.

Grotsch, J. & E. Flugel (1992)- Facies of sunken Early Cretaceous atoll reefs and their capping Late Albian drowning succession (Northwestern Pacific). Facies 27, p. 153-174.

Grover, J.C. (1955)- Geology, mineral deposits and prospects of mining development in the British Solomon Islands Protectorate. Geological Survey of the British Solomon Islands, Western Pacific Commission, Memoir 1, p. 1-108.

Grover, J.C., P.A. Pudsey-Dawson & R.B.M. Thompson (1958)- The Solomon Islands: Geological exploration and research, 1953-1956. Geological Survey of the British Solomon Islands. Memoir, 2, p. 1-151.

Grover, J.C., P.J. Coleman, P.A. Pudsey-Dawson et al. (1960)- The British Solomon Islands, Geological record 1957-1958, Reports on investigations into the geology and mineral resources of the protectorate. Geological Survey of the British Solomon Islands, 3, p. 1-113.
(online at: https://openresearch-repository.anu.edu.au/...)
(Collection of 1957-1958 survey reports)

Grover, J.C., R.B. Thompson, P.J. Coleman, R.L. Stanton & J.D. Bell (1965)- The British Solomon Islands Geological Record, Vol. II- 1959-62. Reports on the geology, mineral occurrences, petroleum possibilities, volcanoes and seismicity in the Solomon Islands. High Commissioner for the Western Pacific, p. 1-232.

Guillon, J.J. (1969)- Donnees nouvelles sur la composition et la structure du grand massif peridotique de Sud de la Nouvelle Caledonie. Cahiers ORSTOM, ser. Geol., 1, 1, p. 7-25.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/cahiers/geologie/14988.pdf)
('New data on the composition and structure of the large peridotite massif of the South of New Caledonia'. The large peridotite massif of the South rests on various terrains of folded Cretaceous and Eocene rocks, with gently dipping or horizontal basal contact. Mainly composed of hartzburgites with layers of dunites and pyroxenites, In upper parts noritic gabbros. Calc-alkaline sills. Emplacement/ uplift after Late Eocene, but before Miocene as it contains first debris from peridotites)

Guillon, J.H. (1972)- Essai de resolution structurale d'un appareil ultramafique d'age alpin: les massifs de Nouvelle Caledonie. Implications concernant la structure de l'arc melanesien. Comptes Rendus Academie Sciences, Paris, 274, p. 3069-3072.
('Attempt of structural resolution of an ultramafic unit of Alpine age: the massifs of New Caledonia. Implications for the structure of the Melanesian arc')

Guillon, J.H. (1974)- New Caledonia. In: A.M. Spencer (ed.) Mesozoic- Cenozoic orogenic belts, Geol. Soc. London, Spec. Publ. 4, p. 445-452.
(Brief review of New Caledonia geology. Complex orogenic belt, flanked by deep oceans. Geology dominated by 'gliding nappes'. Phases of metamorphism in late Jurassic and Late Eocene. Known geological history of New Caledonia started in Permian with deposition of tuffs. Orogenic phase between Permian-Trias, corresponding to 'Hunter-Bowen orogeny' of E Australia. Thick series of Triassic-Oxfordian greywackes. First phase of metamorphism in U Jurassic. Sedimentation resumed in U Cretaceous, with conglomeratic bed, overlain by pelites. Cretaceous overlain by Eocene cherts and globigerinid limestones, then by (M. Eocene?) flysch-type series. Eocene peridotite emplacement. Etc.)

Guillon, J.H. (1974)- Les massifs peridotiques de Nouvelle Caledonie- type d'appareil ultrabasique stratiforme de chaine recente. Mem. Office Rech. Scient. Techn. Outre-Mer (ORSTOM) 76, Paris, p. 1-116.
('The peridotite massifs of New Caledonia- stratiform ultrabasic body')

Guillon, J.H. & H. Gonord (1972)- Premieres donnees radiometriques concernant les basaltes de Nouvelle Caledonie, leurs relations avec les grands evenements de lȁhistoire geologique de lȃarc Melanesien interne au Cenozoique. Comptes Rendus Academie Sci. Paris, D 275, p. 309-312.
('First radiometric dates on the basalts of New Caledonia, their relationships with the great events of the structural history of the internal Melanesian arc in the Cenozoic'. Includes 32 Ma date for plagiogranite (viewed as 'thrusting intrusions by Parrot and Dugas 1980?))

Guillon, J.H. & P. Routhier (1971)- Les stades d'evolution et de mise en place des massifs ultramafiques de Nouvelle Caledonie. Bull. Bur. Rech. Geol. Minieres (France) 15, IV, 2, p.
(The stages of evolution and emplacement of the ultramafic massifs of New Caledonia'. Emplacement of peridotites-basalts of New Caledonia, which cover 7000km2 of island, probably in Oligocene time)

Hackney, R., R. Sutherland & J. Collot (2012)- Rifting and subduction initiation history of the New Caledonia Trough, southwest Pacific, constrained by process-oriented gravity models. Geophysical J. Int. 189, p. 1293-1305.
(New Caledonia Trough 200-300 km wide, 2300 km long and 1.5-3.5 km deep between New Caledonia and New Zealand. Stratigraphic units: Cretaceous rift sediments, Late Cretaceous- Eocene pelagic drape and ~1.5 km thick Oligocene-Quaternary trough fill contemporaneous with Tonga-Kermadec subduction. Positive free-air gravity anomaly associated with Trough best explained by two-phase model with initial Cretaceous crustal thinning. May also be related to Eocnee onset of Tonga-Kermadec subduction zone)

Hamburger, M.W. & B.L.Isacks (1988)- Diffuse backarc deformation in the Southwestern Pacific. Nature 332, p. 599-604.
(Earthquake distribution and focal mechanisms from Lau and N Fiji back-arc basins indicate diffuse and shear-dominated deformation. Back-arc region between Tonga and New Hebrides arcs more realistically modelled as giant pull-apart basin, along left step in transform boundary between Pacific Indo-Australian plates)

Hammarstrom, J.M., C.L. Dicken, G.R. Robinson & A.A. Bookstrom (2013)- Porphyry copper assessment for Tract 009pCu7210, Outer Melanesian Arc II- Melanesia (Solomon Islands, Vanuatu, and Fiji). In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix V, p. 303-329.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of Eocene-Oligocene to late Miocene-Pleistocene porphyry coppers in Outer Melanesian magmatic arc in Solomon Islands, Vanuatu, and Fiji. Originally part of Eocene- E-M Miocene 'Vitiaz Arc, formed by subduction of Pacific Plate beneath Indo-Australian Plate along Vitiaz-Tonga Trench system until subduction reversal due to E-M Miocene collision of Ontong Java Plateau (incl. included New Ireland, Bougainville, Solomon Islands, Vanuatu, Fiji). Three known Pliocene porphyry copper deposits: Mt Koloula (Guadalcanal in Solomon Islands), Namosi and Waivaki (Viti Levu, Fiji) (Outer Melanesian in PNG with Panguna deposit on Bougainville and Arie deposit on Manus). Many other prospects))

Hanzawa, S. (1947)- Eocene foraminifera from Haha-Jima (Hillsborough Island). J. Paleontology 21, 3, p. 254-259.
(Haha-jima (Bonin Islands) entirely formed of Eocene rocks. Uppermost horizon Priabonian limestone with Biplanispira. Underlying Lutetian friable rock with Nummulites boninensis n.sp. in lower half, Aktinocyclina predominant in upper half, Alveolina javanus var. and Eorupertia boninensis persist throughout Lutetian (see also Ujie & Matsumaru, 1977))

Hanzawa, S. (1957)- Cenozoic foraminifera from Micronesia. Geol. Soc. America (GSA) Mem. 66, p. 1-163.

Hanzawa, S. (1961)- Facies and micro-organisms of the Paleozoic, Mesozoic and Cenozoic sediments of Japan and her adjacent islands. Brill, Leiden, p. 1-420.

Hanzawa, S. (1967)- Three new Tertiary foraminiferal genera from Florida, Saipan and Guam. Trans. Proc. Paleont. Soc. Japan, N.S., 65, p. 19-25.
(online at: https://www.jstage.jst.go.jp/article/prpsj1951/1967/65/1967_65_19/_pdf)
(Incl. new genus Tayamaia from Aquitanian of Saipan and Quasirotalia from Pliocene of Guam)

Harrington, H.J. (1998)- The basement geology of Lord Howe Rise and Norfolk Ridge predicted by projections from Australia, New Zealand and New Caledonia. South Pacific Technology Conference Abstracts, South Pacific Commission, Suva, p. 33-36.

Haston, R.B. & M. Fuller (1991)- Paleomagnetic data from the Philippine Sea Plate and their tectonic significance. J. Geophysical Research- Solid Earth, 96, B4, p. 6073-6098.
(Paleomagnetic data from Guam and Saipan can be interpreted as (1) small scale local rotation of blocks along plate margin, or (2) rotation of Philippine Sea plate as a whole. Reconstruction model suggests Philippine Sea plate rotated up to 80° CW and moved N ~20° since Eocene. Data cannot distinguish between backarc origin or trapped crust origin for W Philippine Sea province)

Haston, R., M. Fuller & E. Schmidtke (1988)- Paleomagnetic results from Palau, West Caroline islands: a constraint on Philippine Sea plate motion. Geology, 16, p. 654-657.
(Paleomagnetic results from the Palau Islands indicate 60°-70° CW rotation since M Oligocene time. Rotation interpreted to represent motion of Philippine Sea plate and not local rotation (ubiquitous CW rotations in paleomagnetic data from around Philippine Sea plate. This strong clockwise rotation of the Philippine Sea plate provides a mechanism for oblique subduction and related transcurrent motion along the margin of the Philippine archipelago)

Hegarty, K.A. & J.K. Weissel (1988)- Complexities in the development of the Caroline plate region, western equatorial Pacific. In: A.E.M. Nairn & F.G. Stehli (eds.) The Ocean Basins and Margins 7B, The Pacific Ocean, Plenum, New York, p. 277-301.

Hermelin, J.O.R. (1989)- Pliocene benthic foraminifera from the Ontong-Java plateau (Western Equatorial Pacific Ocean): faunal response to changing paleoenvironments. Cushman Foundation Foraminiferal Research, Spec. Publ. 26, p. 1-143.
(online at: www.cushmanfoundation.org/specpubs/sp26.pdf)
(Pliocene benthic foraminifera from DSDP Hole 586A on Ontong Java Plateau, NE of New Guinea. Benthic fauna 262 taxa. Three assemblages: (1) Nuttallides umbonifera-dominated assemblage, reflecting well-oxygenated water, undersaturated with respect to calcite, (2) Cibicidoides wuellerstorfi, Epistominella exigua, Globocassidulina subglobosa, Oridorsalis umbonatus and Pullenia bulloides, similar to present fauna on Ontong Java Plateau, associated with deep oxygen minimum layer of Pacific Intermediate Water, reflecting reduced O2 content associated with episodes of upwelling; (3) Uvigerina peregrina-dominated assemblage reflects episodes of further depletion in O2 due to intensified upwelling or changes in thermohaline circulation)

Hickey-Vargas, R. (1991)- Isotope characteristics of submarine lavas from the Philippine Sea: implications for the origin of arc and basin magmas of the Philippine tectonic plate. Tectonophysics 107, p. 290-304.

(Igneous rocks from Philippine Sea tectonic plate from DSDP Legs 31, 58 and 59 analyzed for Sr, Nd and Pb isotope ratios. Four geochemically distinct magma sources required for Philippine plate magmas).

Hickey-Vargas, R. (1998)- Origin of the Indian Ocean-type isotopic signature in basalts from Philippine Sea plate spreading centers: an assessment of local versus large-scale processes. J. Geophysical Research 103, B9, p. 20963-20979.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/98JB02052/epdf)
(Basalts erupted from spreading centers on Philippine Sea plate between 50 Ma- present have the distinctive isotopic characteristics of Indian Ocean mid-ocean ridge basalt, such as high 208Pb/204Pb and low 143Nd/144Nd. This may indicate that upper mantle of Philippine Sea plate originated as part of existing Indian Ocean domain, or, less likely, that local processes duplicated these isotopic characteristics in sub-Philippine Sea plate upper mantle. Philippine Sea plate MORB likely originated over rapidly growing Indian Ocean upper mantle domain that had spread into area between Australia/New Guinea and SE Asia before 50 Ma)

Hickey-Vargas, R. (2005)- Basalt and tonalite from the Amami Plateau, northern West Philippine Basin: new Early Cretaceous ages and geochemical results, and their petrologic and tectonic implications. Island Arc 14, p. 653-665.
(Basalts and tonalites dredged from Amami Plateau in N West Philippine Basin geochemical characteristics of intra-oceanic island arc rocks. Hornblende 40Ar/39Ar isochron ages of ~115-118 Ma. W Philippine Basin opened within complex of Jurassic- Paleocene island arc terranes, now scattered in northern West Philippine Basin, the Philippine Islands and Halmahera)

Hickey-Vargas, R., M. Bizimis & A. Deschamps (2008)- Onset of the Indian Ocean isotopic signature in the Philippine Sea Plate: Hf and Pb isotope evidence from Early Cretaceous terranes. Earth Planetary Sci. Letters 268, 3, p. 255-267.
(Basalts from Paleocene-Recent Philippine Sea Plate back arc basins have Pb/ Hf-Nd isotopic characteristics of Indian Ocean mid-ocean ridge basalts. Isotopic composition of E Cretaceous terranes in Philippine Sea Plate (Huatung Basin) have Indian MORB Hf-Nd isotopic signature, but Pb isotope ratios intermediate between Indian and Pacific MORB. W Philippine Basin basalts stronger Indian Pb isotope signature than Huatung Basin rocks. Indian MORB characteristics of E Cretaceous Huatung Basin support idea that mantle sources with signature existed prior to opening of present day Indian Ocean and that Tethyan oceanic basalts, now found throughout S Eurasia, shared them)

Hickey-Vargas, R., J.M. Hergt & P.Spadea (1995)- The Indian Ocean-type isotopic signature in western Pacific marginal basins; origin and significance. In: B. Taylor & N. James (eds.) Active margins and marginal basins of the western Pacific, American Geophys. Union (AGU), Geophys. Monograph 88, p. 175-197.
(W Pacific marginal basins floored by basalts with Indian Ocean Sr-Nd-Pb isotopic characteristics, suggesting their spreading ridges tap into Indian Ocean upper mantle domain, which must extend to E side of Philippine Sea and Indo-Australian plates and extends below W Philippine and Celebes Sea basins at time of opening. Basalts from Celebes Sea (ODP sites 767, 770) N-MORB character, with Sr, Nd and Pb isotope ratios close to Indian Ocean MORB)

Hilde, T.W.C. (1983)- Sediment subduction versus accretion around the Pacific. Tectonophysics 99, p. 381-397.
(Sediment subduction common around Circum-Pacific. Bending-induced graben structures of subducting plates major factor for sediment subduction and tectonic erosion)

Hilde, T.W.C. & C.S. Lee (1984)- Origin and evolution of the West Philippine Basin: a new interpretation. Tectonophysics 102, p. 85-104.
(W Philippine Basin two distinct spreading phases. From 60-45 Ma spreading NE-SW, relative to present orientation. At ~45 Ma spreading direction changed to more N-S direction with reconfiguration of C Basin Spreading Center into short E-W segments offset by closely spaced N-S transform faults. Spreading slowed and ceased at 35 Ma B.P. Thus, W Philippine Basin originated at 45 Ma by trapping of normal ocean crust W of initial subduction along Palau-Kyushu trend. 45-35 Ma period represents dying phase of spreading on C Basin Spreading Center following isolation of W Philippine Basin from plate driving forces of Pacific)

Hilde, T.W.C. & S. Uyeda (1983)- Trench depth: variation and significance. In: T.W.C. Hilde & S. Uyeda (eds.) Geodynamics of the Western Pacific-Indonesian region, American Geophys. Union (AGU) and Geol. Soc. America (GSA) Geodyn. Ser. 11, p. 75-89.
(Circum-Pacific trench depths ~5-11km and increase with age. Subduction rates also greater with greater trench depth, suggesting negative buoyancy is significant driving force for plate motion. Backarc region trenches deeper than Pacific basin perimeter trenches, partly due to increased depth of backarc basins, which results from compensation of non-equilibrated portions of subducted lithosphere in asthenosphere under backarc regions. Indonesian trenches unusually shallow for age of subducting oceanic crust)

Hilde, T.W.C., S. Uyeda & L. Kroenke (1976)- Tectonic history of the Western Pacific. In: C.L. Drake (ed.) Geodynamics: progress and prospects, American Geophys. Union (AGU), Spec. Publ. 5, p. 1-15.
(Plate reconstructions of W Pacific region since Jurassic. Showing Borneo as part of Indochina margin in Jurassic-Cretaceous, until Late Cretacous rifting-opening of South China Sea)

Hilde, T.W.C., S. Uyeda & L. Kroenke (1977)- Evolution of the Western Pacific and its margins. Tectonophysics 38, p. 145-165.
(Evolution of W Pacific since M Mesozoic. Subduction along Asian plate margin throughout this time has resulted in general N-ward movement of plates surrounding Asia. An E-W spreading ridge system extended from Pacific into Tethys Sea and migrated N as oceanic plates subducted along Asia. As plates S of these ridge segments started to subduct at Asian margin, new spreading ridges formed far to S, rifting India from Antarctica at ~100 Ma and Australia from Antarctica at ~52 Ma. Subduction of Pacific ridge system in N and SW Pacific resulted in change of direction in Pacific plate motion from NNW to WNW at ~45 Ma. Etc.)

Hodell, D.A. & A.Vayavananda (1993)- Middle Miocene paleoceanography of the western Equatorial Pacific (DSDP Site 289) and the evolution of *Globorotalia (Fohsella)*. Marine Micropaleontology 22, 4, p. 279-310.
(Evolution of planktonic foram lineage Globorotalia (Fohsella) Miocene between 23.7-11.8 Ma, which forms basis for subdivision of early M Miocene zones N10-N12. Most rapid changes in morphology of Fohsella between 13- 12.7 Ma, coinciding with increase in d18O ratios. O values suggest change in depth stratification associated with expansion of thermocline in W Equatorial Pacific. After adapting to deeper water habitat at 13.0 Ma, Fohsella lineage became extinct at 11.8 Ma during period of shoaling of thermocline)

Hoernle, K., F. Hauff, P. van den Bogaard, R. Werner, N. Mortimer, J. Geldmacher, D. Garbe-Schonberg & B. Davy (2010)- Age and geochemistry of volcanic rocks from the Hikurangi and Manihiki oceanic plateaus. Geochimica Cosmochimica Acta 74, 24, p. 7196-7219.
(Ar/Ar age and geochemical data show Hikurangi Plateau basement lavas (118-96 Ma) similar to Ontong Java Plateau (~120 and 90 Ma; primarily Kwaimbaita-type composition). Manihiki Plateau Site 317 lavas (117 Ma) similar to Singgalo lavas on Ontong Java Plateau. Alkalic seamount lavas (99-87 Ma and 67 Ma) on Hikurangi Plateau and adjacent Kiore Seamount derived from different mantle source (see also Timm et al. 2011)

Hoffmeister, J.E. (1932)- Geology of Eua, Tonga. Bernice P. Bishop Museum Bull. 96, p. 1-93.
(online at: http://hbs.bishopmuseum.org/pubs-online/pdf/bull96.pdf)
(Report of 1926 and 1928 surveys of Eua at S end of Tongan archipelago. Nucleus of volcanics, with coating of limestone, of Late Eocene and Late Tertiary ages. Six terraces, up to 760' altitude. Includes chapter by G.L. Whipple (p. 79-86) on Late Eocene larger forams from Eua, incl. Nummulites, Asterocyclina, Pellatispira rutteni and new species Pellatispira fulgeria (=Biplanispira) (see also Cole 1970))

Honza, E. (1991)- The Tertiary Arc Chain in the Western Pacific. Tectonophysics 187, p. 285-303.
(Reconstruction of Tertiary Arc Chain of W and SW Pacific rim since initiation in Eocene-Oligocene. From W Pacific to E margin of Australia: Bonin, Mariana, Yap, Palau, Halmahera, N New Guinea- W Melanesia, Solomon, Vanuatu, and Tonga-Kermadec Arcs. Associated with formation and consumption of backarc basins. Four stages in evolution: (1) arc chain from M Eocene- earliest Oligocene; (2) Oligocene formation of backarc basins; (3) occurrence of double arcs on inner side of arc chain in E-M Miocene and (4) reversal of arc polarities due to collisions since late Miocene. Backarc basins open 15 My after initiation of volcanic arc.

Several to 10 Myrs after opening, backarc spreading terminates. In case of arc collision, reversal of arc polarity occurs if there is oceanic crust on backarc side)

Horibe, Y., K.R. Kim & H. Craig (1987)- Hydrothermal methane plumes in the Mariana back-arc spreading center. Nature 324, p. 131-133.
(Large plumes of methane-enriched water in Mariana Trough back-arc basin and also in summit crater of Loihi Seamount (present site of Hawaiian hotspot). Mariana vents enriched in methane without corresponding enrichment in 3He)

Hottinger, L. (1975)- Late Oligocene larger foraminifera from Koko Guyot, Site 309. Initial Reports Deep Sea Drilling Project (DSDP) 32, p. 825-826.
(online at: www.deepseadrilling.org/32/volume/dsdp32_32.pdf)
(Occ. Late Oligocene Spiroclypeus tidoenganensis and Heterostegina assilinoides on top of Koko Guyot seamount between Japan and Hawai)

Howell, D.G. (1980)- Mesozoic accretion of exotic terranes along the New Zealand segment of Gondwanaland. Geology 8, 10, p. 487-491.
(Permian- M Cretaceous strata in New Zealand grouped in 4 tectonostratigraphic terranes. Present distribution of terranes inferred to represent accretionary processes along Gondwanaland margin. Accretion intermittent until M Cretaceous time, followed by rifting that broke New Zealand away from Australia)

Howell, D.G., E.R. Schermer, D.L. Jones, Z. Ben-Avraham & E. Scheibner (1985)- Preliminary tectonostratigraphic terrane map of the Circum-Pacific. Region. Circum-Pacific Council for Energy and Mineral Resources, American Assoc. Petrol. Geol. (AAPG), Tulsa.
(Map at 1:17M scale and explanatory notes by US Geological Survey personnel)

Huang, C.Y., Y. Yen, P.M. Liew, D.J. He, W.R. Chi & M.S. Wu (2013)- Significance of indigenous Eocene larger foraminifera *Discocyclina dispansa* in Western Foothills, Central Taiwan: a Paleogene marine rift basin in Chinese continental margin. J. Asian Earth Sci. 62, p. 425-437.
(Early M Eocene larger foram Discocyclina dispansa in inner shelf sediments of C Taiwan. Calcareous nannoplankton of zones NP14-15 in overlying clastics. Part of M Eocene syn-rift sequence, unconformably covered by latest Oligocene-Miocene post-rift sequence)

Hughes, G.W. (1989)- The micropaleontology of sedimentary units from the Solomon Islands. In: J.G. Vedder & T.R. Bruns (ed.) Geology and offshore resources of Pacific Island arcs; Solomon Islands and Bougainville, Papua New Guinea regions, Circum-Pacific Council Energy and Mineral Resources, Earth Sci. Ser. 12, p. 227-237.
(Brief review of Solomon Island Island micropaeontological work. Mainly Plio-Pleistocene with planktonic foraminifera, also Late Oligocene and E Miocene limestone with Lepidocyclina)

Hughes, G.W. (2004)- Accretion of the Ontong Java plateau to the Solomon arc: a historical perspective. Tectonophysics 389, p. 127-136.
(On geologic fieldwork on N Malaita island, Solomon Islands. Mainly Cretaceous pillow basalts and pelagic limestones, part of now-exposed mid-Cretaceous ocean floor)

Hutchison C.S. (1987)- Displaced terranes of the Southwest Pacific. In: Z. Ben Avraham (ed.) The evolution of the Pacific Ocean margins, Oxford Monographs Geol. Geophysics 8, p. 161-175.

Iaffaldano, G. (2012)- The strength of large-scale plate boundaries: constraints from the dynamics of the Philippine Sea plate since ~5Ma. Earth Planetary Sci. Letters 357-358, p. 21-30.
(On convergence of fast-moving Philippine Sea plate towards Eurasia since subduction initiation at ~5 Ma. Because Philippine slab reaches depths shallower than 410km transition zone in upper mantle, its weight unlikely to provide sufficient driving force to shear trailing plate over viscous mantle at observed rates)

Iba, Y. & S. Sano (2007)- Mid-Cretaceous step-wise demise of the carbonate platform biota in the Northwest Pacific and establishment of the North Pacific biotic province. Palaeogeogr. Palaeoclim. Palaeoecology 245, p. 262-282.
(Cretaceous carbonate platform biota flourished from Berriasian- E Albian interval in Japan, Sakhalin, indicating Tethyan biotic realm. Step-wise disappearance in latest Aptian- M Albian of rudists, dasycladacean and red algae, hermatypic corals, stromatoporoids, nerineacean gastropods, orbitolinid foraminifera, etc.)

Ishikawa, A., T. Kuritani, A. Makishima & E. Nakamura (2007)- Ancient recycled crust beneath the Ontong Java Plateau: isotopic evidence from the garnet clinopyroxenite xenoliths, Malaita, Solomon Islands. Earth Planetary Sci. Letters 259, p. 134-148.
(Sr, Nd, Hf and Pb isotope investigation of garnet clinopyroxenite xenoliths from Malaita, Solomon Islands, indicate pollution of S Pacific mantle by the subduction or delamination of Neoproterozoic granulitic lower crust (0.5-1 Ga).Crustal recycling possibly around suture of Rodinia supercontinent, part of which resurfaced during mantle upwelling responsible for creating Cretaceous Ontong Java Plateau)

Ishikawa, A., E. Nakamura & J.J. Mahoney (2005)- Jurassic oceanic lithosphere beneath the southern Ontong Java Plateau: evidence from xenoliths in alnoite, Malaita, Solomon Islands. Geology 33, 5, p. 393-396.
(Xenoliths of spinel lherzolite and gabbro from alnoite intrusion in S Ontong Java Plateau on Malaita yield Sm-Nd age of ~160 Ma and initial εNd value of ∼+8. Plateau basement is ~120 Ma with initial εNd of +3.7- +6.5. Xenoliths appear to represent normal Pacific oceanic lithosphere, formed ∼40 My before plateau, indicating S part of plateau was emplaced off axis on mature seafloor. Closest 160 Ma seafloor to Malaita is >1800 km to N)

Ishikawa, A., D.G. Pearson & C.W. Dale (2011)- Ancient Os isotope signatures from the Ontong Java Plateau lithosphere: tracing lithospheric accretion history. Earth Planetary Sci. Letters 301, p. 159-170.
(Re-Os isotopes in peridotite xenoliths from Malaita, Solomon Islands suggest xenoliths represent virtually entire thickness of S part of subplateau lithospheric mantle (<120 km). Shallowest plateau lithosphere (< 85 km) dominated by fertile lherzolites from ~160 Ma Pacific lithosphere. Basal section of subplateau lithospheric mantle (~95-120 km) enriched in refractory harzburgites with Proterozoic model ages of 0.9-1.7 Ga)

Ishizuka, O., R.N. Taylor, M. Yuasa & Y. Ohara (2011)- Making and breaking an island arc: a new perspective from the Oligocene Kyushu-Palau arc, Philippine Sea. Geochem. Geophys. Geosystems 12, 5, p. 1-40.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2010GC003440)
(Kyushu-Palau Ridge is 2600km long remnant island arc, separated from active Izu-Bonin-Mariana arc by Shikoku and Parece Vela spreading-rift basins at ~25 Ma. KPR active between 25-48 Ma, but majority of exposed volcanism between 25-28 Ma)

Itaya, T., R. Brothers & P. Black (1985)- Sulfides, oxides and sphene in high-pressure schists from New Caledonia. Contrib. Mineralogy Petrology 91, 2, p. 151-162.
(In New Caledonia high-pressure schists pyrite, pyrrhotite, chalcopyrite, rutile and sphene are common)

Ito, G. & P.D. Clift (1998)- Subsidence and growth of Pacific Cretaceous plateaus. Earth Planetary Sci. Letters 161, p. 85-100.
(On creation and subsidence of mid-Cretacoeus Ontong Java, Manihiki, and Shatsky oceanic plateaus)

Johnson, H. (1991)- Petroleum geology of Fiji. Marine Geology 98, p. 313-352.
(Most petroleum exploration in Fiji in shallow-water basins around Viti Levu, Bligh Water and Bau Waters Basins. Five deep wells drilled offshore and on Viti Levu in 1980-1982, all dry, with minor shows of gas and oil fluorescence. Wells with >2500m of mainly Miocene and younger sediments, but some Oligocene or older volcanogenic rocks also intersected. mainly volcaniclastics. E-M Miocene shallow-water limestone targets not encountered. No source rocks identified in wells or outcrops, but anomalous amounts of pentane in seabed sediments off N Viti Levu suggest that thermogenic hydrocarbons generated)

Johnson, H. & J. Pflueger (1991)- Potential Mio-Pliocene reef traps in the Iron Bottom Basin, Solomon Islands. In: K.A.W. Crook (ed.) The geology, geophysics and mineral resources of the South Pacific, Marine Geology 98, p. 177-186.
(Iron Bottom Basin N of Honiara, Guadalcanal, C Solomons Trough, with up to 4.5 km of Late Oligocene-Quaternary sediments with potential for hydrocarbons. Seismic profiles with mound-like anomalies, possibly Mio-Pliocene and Pliocene shelf-edge reefs, forming potential traps for hydrocarbons)

Johnson, J.H. (1954)- Fossil calcareous algae from Bikini atoll. U.S. Geol. Survey (USGS) Prof. Paper, 260-M, p. 537-543.
(online at: http://pubs.usgs.gov/pp/0260m/report.pdf)

Johnson, J.H. (1957)- Geology of Saipan, Mariana Islands, Part 3. Paleontology, E. Calcareous algae. U.S. Geol. Survey (USGS) Prof. Paper, 280-E, p. 209-243.
(online at: http://pubs.usgs.gov/pp/0280e-j/report.pdf)
(Eocene- Recent algae from Saipan are mainly red algae, some are green. 18 genera and 88 species described. Calcareous algae can be rock builders. Main use is in paleoecology; of limited use in stratigraphy)

Johnson, J.H. & B.J. Ferris (1950)- Tertiary and Pleistocene coralline algae from Lau, Fiji. Bernice P. Bishop Museum Bull. 201, p. 1-27.

Johnston, S.T. (2004)- The New Caledonia- DœEntrecasteaux orocline and its role in clockwise rotation of the Vanuatu- New Hebrides Arc and formation of the N Fiji Basin. In: A.J. Sussman & A.B.Weil (eds.) Orogenic curvature: integrating paleomagnetic and structural analyses, Geol. Soc. America (GSA), Spec. Paper 383, p. 225-236.
(Bend of N end of ribbon continent extending N from Northland Peninsula, New Zealand, through New Caledonia and Loyalty Islands and into submarine d'Entrecasteaux ridge (the NNNCd'E ribbon continent) formed as result of oroclinal orogeny))

Johnson, T. & P. Molnar (1972)- Focal mechanisms and plate tectonics of the southwest Pacific. J. Geophysical Research 77, 26, p. 5000-5032.
(Australian plate underthrusts Pacific plate to the ENE under Solomon and New Hebrides islands and overthrusts Pacific to E along Tonga-Kermadec arc and New Zealand North Island. Also NNE-SSW convergence of Pacific and Australian plates in NW New Guinea. Plate motions near Bismarck Archipelago complex because of presence of at least three additional small plates. Solomon Sea plate moving ~NW with respect to Australian plate and underthrusting Pacific plate to NE along Solomon arc)

Jolivet, L., P. Huchon & C. Rangin (1989)- Tectonic setting of Western Pacific marginal basins. Tectonophysics 160, p. 23-47.
(Reconstructions of W Pacific marginal basins between 56 Ma- Present, accounting for rapid motion of 'exotic terranes' along W Pacific convergent zone. Marginal basins may open in variety of tectonic settings).

Joplin, G.A. (1937)- An interesting occurrence of lawsonite in glaucophane-bearing rocks from New Caledonia. Mineralogical Mag. 24, p. 534-537.
(online at: www.minersoc.org/pages/Archive-MM/Volume_24/24-157-534.pdf)

Kamp, P.J.J. (1986)- Late Cretaceous-Cenozoic tectonic development of the Southwest Pacific region. Tectonophysics 121, p. 225-251.
(new model of the plate tectonic development of the southwest Pacific integrates the continental
geology of New Zealand with the age structure of the surrounding oceanic crust

Karig, D.E. (1971)- Origin and development of marginal basins in the western Pacific. J. Geophysical Research 76, 11, p. 2542-2561.

(One of first models to propose origin of W Pacific/ Indonesian marginal oceanic basins by back-arc extension due to retreat of subduction trench and volcanic arc. Marginal basins in Indonesia now inactive; no new crust oceanic-type is generated)

Karig, D.E. (1974)- Evolution of arc systems in the Western Pacific. Annual Review Earth Planetary Sci. 2, p. 51-75.

Kelley, K.A., T. Plank, T.L. Grove, E.M. Stolper, S. Newman & E. Hauri (2006)- Mantle melting as a function of water content beneath back-arc basins. J. Geophysical Research 111, B09208, p. 1-27.
(Mainly based on data from Pacific marginal basins. Subduction zone magmas are characterized by high concentrations of water, more than Mid-Ocean Ridge Basalts. In magmatic arc systems magma genesis is caused by flux of water from dehydrating, subducting slab, lowering mantle solidus, which drives melting of mantle wedge. In back-arc basins H2O % decreases with distance from volcanic arc)

Kleinpell, R.M. (1954)- Neogene smaller Foraminifera from Lau, Fiji. Bernice P. Bishop Museum Bull. 211, p. 1-96.
(Descriptions of M Miocene- Pleistocene smaller foraminifera from Lau Islands, E of Fiji. Shallow marine faunas, associated with larger foraminifera Lepidocyclina, Miogypsina, etc.)

Klingelhoefer, F., Y. Lafoy, J. Collot, E. Cosquer, L. Geli, H. Nouze & R. Vially (2007)- Crustal structure of the basin and ridge system west of New Caledonia (Southwest Pacific) from wide angle and reflection seismic data. J. Geophysical Research 112, B11102, p. 1-18.
(Two 2004 deep offshore reflection seismic profiles SW and S of New Caledonia: (1) N profile across Lord Howe Rise (crustal thickness 23 km and continental crust velocities), Fairway Basin (crust 12-15 km; thinned continental origin), Fairway Rise (22 km, continental) and New Caledonian Basin (crust 10 km thick, high velocities, uncharacteristic for either thinned continental or oceanic crust); (2) S profile through Norfolk Rise (continental), New Caledonia Basin (velocities, crustal thickness and basement roughness typical oceanic crust), Fairway Basin. Deep reflector in upper mantle imaged under New Caledonian Basin on N profile)

Knesel, K. M., B.E. Cohen, P.M. Vasconcelos & D.S. Thiede (2008)- Rapid change in drift of the Australian plate records collision with Ontong Java plateau. Nature 454, p. 754-757.
(Short-lived slowdown in N-ward motion and W-ward deflection of Australian plate between 26-23 Ma, tied to arrival of Greenland-sized volcanic Ontong Java Plateau at Melanesian (N Solomon/ Vitiaz) Trench)

Knight, C.L., R.B. Fraser & A. Baumer (1973)- Geology of the Bougainville copper orebody, New Guinea. In: N.H. Fisher (ed.) Metallic provinces and mineral deposits in the Southwest Pacific, Bureau Mineral Res., Geol. Geophysics, Bull. 141, p. 59-67.
(online at: https://d28rz98at9flks.cloudfront.net/108/Bull_141.pdf)
(Cu-Au-Mo 'porphyry copper' orebody near E coast of Bougainville Island, at S side of complex intrusive into Miocene andesitic volcanic suite)

Kodama, K., B.H. Keating & C.E. Helsley (1983)- Paleomagnetism of the Bonin Islands and its tectonic significance. Tectonophysics 95, p. 25-42.
(Bonin Islands on NE margin (27°N) of Philippine Sea. Composed of Eocene arc volcanics, with interbedded limestones classic M and Late Eocene larger foram assemblages, incl. Pellatispira. Islands have undergone N-ward migration of at least 30° from equatorial region, together with (possibly clockwise) rotation of 30°->90°)

Komiya, T. & S. Maruyama (2007)- A very hydrous mantle under the western Pacific region: implications for formation of marginal basins and style of Archean plate tectonics. Gondwana Research 11, p. 132-147.

Konter, J.G. (2007)- The origin and geologic evolution of seamounts in the Pacific Ocean. Ph.D. Thesis University of California, San Diego, p. 1-207.

Korenaga, J. (2005)- Why did not the Ontong Java Plateau form subaerially? Earth Planetary Sci. Letters 234p. 385-399.
(Bulk of gigantic Ontong Java oceanic plateau formed at ~120 Ma in submarine environment. Rapid construction of massive igneous body below sea level impossible to explain with proposed plume head or bolide impact hypotheses. Entrainment of dense fertile mantle by rapid seafloor spreading proposed to account for voluminous magmatism in submarine environment. Dense source mantle may explain anomalous subsidence history as well as minor magmatism at ~90 Ma)

Koyama, M., S.M. Cisowski & P. Pezard (1992)- Paleomagnetic evidence for northward drift and clockwise rotation of the Izu-Bonin forearc since the Early Oligocene. In: B. Taylor et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 126, p. 353-370.
(online at: www-odp.tamu.edu/publications/126_SR/VOLUME/CHAPTERS/sr126_24.pdf)
(Paleomagnetic study of deep-marine sediments and volcanic rocks drilled by ODP Leg 126 in Izu-Bonin forearc suggest 10°-14° N-ward drift since Oligocene- E Miocene and up to ~80°clockwise rotation since E Oligocene time, possibly reflecting large CW rotation of entire Philippine Sea Plate over past 40 My)

Krebs, W. (1975)- Formation of Southwest Pacific island arc-trench and mountain systems: plate or global-vertical tectonics? American Assoc. Petrol. Geol. (AAPG) Bull. 59, 9, p. 1639-1666.
(Origin of SW Pacific island arc-trench systems explained in terms of 'global vertical tectonics')

Kroenke, L.W. (1972)- Geology of the Ontong Java Plateau. Hawaii Institute of Geophysics, Techn. Rept. HIG 72-5, p. 1-118.

Kroenke, L.W. (1984)- Cenozoic tectonic development of the Southwest Pacific. UN Econ. Social Comm. Asia Pacific (CCOP/SOPAC), Fiji, Techn. Bull. 6, p. 1-112.
(online at: http://ict.sopac.org/VirLib/TB0006.pdf)
(Including chapter 3: Papua New Guinea: a montage of island arcs, incl. Late Eocene (Bewani- Torricelli), Oligocene (Finisterre-New Britain), Miocene (New Guinea Mobile Belt), Pliocene- Holocene (Schouten- New Britain))

Kroenke, L.W., J.M. Resig & R.M. Leckie (1993)- Hiatus and tephrochronology of the Ontong Java Plateau: correlation with regional tectono-volcanic events. In: W.H. Berger et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 130, p. 423-444.
(online at: www-odp.tamu.edu/publications/130_SR/VOLUME/CHAPTERS/sr130_25.pdf)
(Hiatus in sedimentary section and ash occurrences in SW Pacific correlate well with changes in plate motion of Indo-Australian and Pacific plates, seafloor-spreading history, initiation and cessation of SW Pacific subduction events, related periods of explosive arc volcanism and proximal intraplate volcanism)

Kroenke, L.W., P. Wessel & A. Sterling (2004)- Motion of the Ontong Java Plateau in the hot-spot frame of reference: 122 Ma- present. In: J.G. Fitton et al. (eds.) Origin and evolution of the Ontong Java Plateau, Geol. Soc., London, Spec. Publ. 229, p. 9-20.
(New model of Pacific absolute plate motion between 140- 0 Ma used to track paleogeographic positions of Ontong Java Plateau (OJP) from the time (~122 Ma) and location (~43°S) of formation to present location N of Solomon Islands)

Lacroix, A. (1941)- Les glaucophanites de la Nouvelle Caledonie et les roches qui les accompagnent, leur composition et leur genese. Mem. Acad. Sciences France 65, p. 1-103.
('The glaucophane-bearing rocks of New Caledonia and associated rocks, their composition and genesis')

Lacroix, A. (1942)- Les peridotites de la Nouvelle Caledonie, leurs serpentinites et leurs gites de nickel et de cobalt, les gabbros qui les accompagnent. Mem. Acad. Sciences France 66, p. 1-143.
('The peridotites of New Caledonia, their serpentinites and their associated layers of nickel and cobalt and gabbros')

Ladd, H.S. & J.E. Hoffmeister (1945)- Geology of Lau, Fiji. Bernice P. Bishop Museum Bull. 181, p. 1-399.

Lafoy, Y. & J.M. Auzende (2000)- Les hydrates de gaz: generalites et specificite du gisement potentiel de la zone economique de la Nouvelle-Caledonie. Report Service des Mines Energie Nouvelle-Caledonie, p. 1-26.
(online at: www.zoneco.nc/IMG/pdf/lafoy_et_al_2000_les_hydrates_de_gaz_en_nouvelle_caledonie.pdf)
(On gas hydrates in the economic zone SW of New Caledonia. Deep water Bottom Simulating Reflector indicate gas hydrates layers, possibly related to degasing of underlying hydrocarbon basin)

Lafoy, Y., I. Brodien, R. Vially & N.F. Exon (2005)- Structure of the basin and ridge system west of New Caledonia (Southwest Pacific): a synthesis. Marine Geophysical Res. 26, p. 37-50.
(Development of Fairway Basin in Late Cretaceous (95-65 Ma) by continental stretching. End of continental stretching in Fairway and W Caledonia Basins (65-62 Ma) contemporaneous with onset of Paleocene oceanic spreading in New Caledonia Basin central segment (62-56 Ma), isolating Gondwanaland block to W from Norfolk block to E)

Lafoy, Y., B. Pelletier, J.M. Auzende, F. Missegue & L. Mollard (1994)- Tectonique compressive Cenozoique sur les rides de Fairway et Lord Howe entre Nouvelle-Caledonie et Australie. Comptes Rendus Academie Sciences Paris, IIa, 319, p. 1063-1069.
('Cenozoic compressional tectonics on the Fairway and Lord Howe Ridges between New Caledonia and Australia')

Lagabrielle, Y. & A. Chauvet (2008)- The role of extensional tectonics in shaping Cenozoic New-Caledonia. Bull. Soc. Geologique France 179, 3, p. 315-329.
(New-Caledonia island with ultramafic nappe thrusted over continental and arc-derived basement as result of the closure of back-arc basin in Late Eocene. W and E edges of island are delineated by N140 trending normal faults. Onland main boundary of ultramafic nappe, also trend N140, all reflecting faults that accommodated extension and tectonic thinning peridotite nappe and its basement)

Lagabrielle, Y., A. Chauvet, M. Ulrich & S. Guillot (2013)- Passive obduction and gravity-driven emplacement of large ophiolitic sheets: The New Caledonia ophiolite (SW Pacific) as a case study? Bull. Soc. Geologique France 184, p. 545-556.
(300km long New Caledonia ophiolite: (1) lacks sheeted dykes and pillow basalts; (2) peridotite nappe thrusted over basaltic formations of Poya terrane formerly thought to be from different oceanic environment; (3) flat basal contact of ultramafic sheet and peridotite nappe not thickened during obduction but experienced extension. This suggests peridotites not emplaced by tectonic force applied to rear. Poya terrane basalts may originate from same oceanic basin as peridotites and may represent original cover of Peridotite nappe. Continuous passive uplift of subducted units beneath oceanic lithosphere drove uplift of ophiolite and led to erosion and to initiation of sliding of basaltic layer. In Priabonian (end Eocene), products of erosion of basaltic layer deposited together with sediments from Norfolk passive oceanic margin, now in accretionary wedge. Obduction process ended with gravity sliding of oceanic mantle sheet, contemporaneous with exhumation of HP-LT units of Pouebo and Diahot. Gravity sliding by occurrence of continuous serpentine sole)

Lagabrielle, Y., P. Maurizot, Y. Lafoy, G. Cabioch, B. Pelletier, M. Regnier, I. Wabete & S. Calman (2005)- Post-Eocene extensional tectonics in Southern New Caledonia (SW Pacific): insights from onshore fault analysis and offshore seismic data. Tectonophysics 403, p. 1-28.
(Extensional events affected New Caledonia after Late Eocene obduction of peridotite nappe, in sedimentary pile and ophiolites. Extensional faulting in S New Caledonia started probably in Oligocene and still active after M Miocene)

Laird, M.G. & J.D. Bradshaw (2004)- The break-up of a long-term relationship: the Cretaceous separation of New Zealand from Gondwana. Gondwana Research 7, 1, p. 273ï 286.
(New Zealand part of Late Paleozoic- Mesozoic Gondwana convergent margin, with terrane accretion, uplift and erosion. Rapid change to extensional tectonics in mid-Cretaceous (Albian), marked by angular unconformity separating deformed 'basement' from less-deformed 'cover' strata. Coniacian uplift and erosion

just prior to sea-floor spreading, resulted in 'break-up' unconformity. In Late Santonian (~85 Ma) diachronous, widespread low-relief erosion surface, overlain by fine-grained deposits coincided with onset of sea-floor spreading, passive margin subsidence, and final separation of New Zealand from Gondwana)

Lallemand, S. (2016)- Philippine Sea Plate inception, evolution, and consumption with special emphasis on the early stages of Izu-Bonin-Mariana subduction. Progress in Earth and Planetary Science 3, 15, p. 1-26.
(online at: http://progearthplanetsci.springeropen.com/articles/10.1186/s40645-016-0085-6)
(Izanagi slab detachment beneath E Asia margin at ~60-55 Ma likely triggered splitting of proto-PSP under plume influence at ∼54-48 Ma, leading to formation of long-lived W Philippine Basin and short-lived oceanic basins. Shortening across paleo-transform boundary evolved into thrusting within Pacific Plate at ∼52-50 Ma, allowing it to subduct beneath newly formed PSP, which was composed thick Mesozoic terranes and thin oceanic lithosphere. First magmas from subducting Pacific crust beneath young oceanic crust near upper plate spreading centers at ∼49 Ma were boninites. As Pacific crust reached greater depths at ∼45 Ma composition of lavas evolved into high-Mg andesites, then arc tholeiites and andesites. Serpentinite mud volcanoes in Mariana fore-arc may have formed above remnants of paleo-transform boundary between proto-PSP and Pacific Plate)

Landmesser, C.W. (1977)- Evaluation of potential hydrocarbon occurrence in the Solomon Islands. South Pacific. Marine Geol. Notes 1, 5, p. 47-53.

Langmuir, C.H., A. Bezos, S. Escrig & S.W.Parman (2006)- Chemical systematics and hydrous melting of the mantle in back-arc basins. In: Back-Arc Spreading Systems: Geological, Biological, Chemical, and Physical Interactions, American Geophys. Union (AGU), Geophys. Monograph 166, p. 87-146.
(Chemical systematics of Scotia, Mariana, Lau, and Manus back-arc basins. In back-arcs basins, on the arc side of spreading center, where water is added, shallow hydrous melting is important. On back side, dry melting under relatively anhydrous conditions occurs, similar to open ocean ridges. Mixing between melts from dry and wet sides leads to characteristic spectra of parental BABB compositions)

Larson, R.L. & C.G. Chase (1972)- Late Mesozoic evolution of the western Pacific Ocean. Geol. Soc. America (GSA), Bull. 83, p. 3627-3644.
(Three sets of Late Mesozoic magnetic anomalies in Pacific Ocean suggests five spreading centers, joined at two triple points. Oldest part of Pacific Ocean just E of Mariana Trench and E Jurassic in age)

Larson, R.L. (1991)- Latest pulse of Earth: evidence for a mid-Cretaceous superplume. Geology 19, p. 547-550.
(Between 120-80 Ma 50-75% increase in Earth's oceanic crust formation, with spreading rate increases (especially in Pacific Ocean). Pulse decreased from 100-80 Ma, dropped significantly at 80 Ma, and continued decrease from 80-30 Ma. Mid-Cretaceous pulse interpreted as response to superplume that originated at ~125 Ma and erupted beneath mid-Cretaceous Pacific basin)

Larson, R.L. (1997)- Superplumes and ridge interactions between Ontong Java and Manihiki Plateaus and the Nova-Canton Trough. Geology 25, 9, p. 779-782.
(Initial pulse of volcanism on Ontong Java and Manihiki Plateaus before 123-124 Ma and largely ceased by ~122 Ma, while intervening Pacific-Phoenix spreading ridge probably disrupted between 120-115 Ma by formation of Nova-Canton Trough rift system)

Lee, C.S. (1983)- Origin and evolution of the West Philippine Basin (tectonics, magnetics). Ph.D. Thesis Texas A&M University, College Station, p. 1-120.
(West Philippine Basin formed by seafloor spreading from Central Basin Spreading Center in two different spreading phases: NE-SW symmetric spreading at 60-45 Ma and N-S oriented spreading from 45-35 Ma)

Leitch, E.C. (1984)- Marginal basins of the SW Pacific and the preservation and recognition of their ancient analogues: a review. In: B.P. Kokelaar & M.F. Howells (eds.) Marginal basin geology, Geol. Soc., London, Spec. Publ. 16, p. 97-108.
(SW Pacific marginal basins floored by oceanic lithosphere formed by (1) sea-floor spreading behind active magmatic arcs (back-arc basins) and (2) rifting of continental crust without obvious connection to arc (small

ocean basins). Basins opened rapidly. Thick sediment piles adjacent to emergent continental margins or active arcs, with thin pelagic sediments, ash, and fine grained turbidites on basin floors. Ancient back-arc basins identifiable on basis of temporal relations to magmatic arcs and volcanic influence in sedimentary sequence, but distinguishing between small and major ocean basins often difficult. Most basins close by subduction)

Lewis, S.D., D.E. Hayes & C. L. Mrozowski (1982)- The origin of the West Philippine basin by inter-arc spreading In: G. R. Balce &d F. Zanoria (eds.) Geology and tectonics of Luzon and Marianas region, Proc. CCOP-IOC-SEATAR Workshop, Manila, Spec. Publ., 1, p. 31-51.

Li, R.Q. & K. Sashida (2011)- Additional note on Earliest Cretaceous Entactinarians (Radiolaria) from the Mariana Trench. Paleontological Research 16, 1, p. 26-36.
(Well-preserved earliest Cretaceous radiolarians from tuffaceous claystone sample collected from seamount flank of Mariana Trench slope. Several new genera)

Li, R.Q. & K. Sashida (2013)- Morphological variability and phylogeny of the Upper Tithonian?-Berriasian Vallupinae (Radiolaria) from the Mariana Trench. J. Paleontology, 87, 6, p. 1186-1194.
(Common U Tithonian- Berriasian Vallupinae radiolaria in tuffaceous claystone from Mariana Trench. 17 radiolarian species, including three new)

Li, R.Q. & K. Sashida & Y. Ogawa (2011)- Earliest Cretaceous initial spicule-bearing spherical radiolarians from the Mariana Trench. J. Paleontology, 85, p. 92-101.
(Well-preserved earliest Cretaceous radiolarians from tuffaceous claystone from seamount flank of Mariana Trench. Families Centrocubidae and probably Entactiniidae identified)

Li, Y.B., J.I. Kimura, S. Machida, T. Ishii, A. Ishiwatari, S. Maruyama, H.N. Qiu, T. Ishikawa et al. (2013)- High-Mg adakite and low-Ca boninite from a Bonin fore-arc seamount: Implications for the reaction between slab melts and depleted mantle. J. Petrology 54, 6, p. 1149-1175.
(online at: https://academic.oup.com/petrology/article/54/6/1149/1409047)
(In Izu-Bonin-Mariana initial subduction-related boninitic magmatism between 48-44 Ma. High-Mg adakites and low-Ca boninites dredged from Bonin Ridge fore-arc seamount, with overlapping ages or adakite magmatism occurred slightly later than boninite magmatism. Both magma types could be generated by partial melting of depleted mantle source fluxed by water-rich slab-derived melts in subduction environment)

Lillie, A.R. (1970)- The structural geology of lawsonite and glaucophane schists of the Ouegoa district, New Caledonia. New Zealand J. Geol. Geophysics 13, 1, p. 72-116.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1970.10428207)
(In N New Caledonia glaucophane in variety of layered rocks ranging from phyllites with Cretaceous Inoceramus fossils to coarsely crystalline gneisses. Lawsonite in finer-grained rocks. Age of metamorphism probably Oligocene. Coarse glaucophanites and gneisses among serpentinites. No clear evidence of vast, overthrust ultrabasic sheet directed to W or SW as cause for high-pressure metamorphis.)

Lillie, A.R. (1975)- Structures in the lawsonite- glaucophane schists of New Caledonia. Geol. Magazine 112, p. 225-234.
(General strike of bedding and foliation is NW-SE and dip to SW or SSW or vertical, but most folds and lineations plunge roughly to SW. This pattern of folds preceded and succeeded by regional folding along horizontal axes)

Lillie, A.R. & R.N. Brothers (1970)- The geology of New Caledonia. New Zealand J. Geol. Geophysics 13, 1, p. 145-183.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1970.10428210)
(Extensive review of New Caledonia geology. See also Brothers & Lillie (1988))

Lister, G.S. L.T. White, S Hart & M.A Forster (2012)- Ripping and tearing the rolling-back New Hebrides slab. Australian J. Earth Sci. 59, 6, p. 899-911.

(Modeling of evolution of New Hebrides slab suggests Australian lithosphere tore as it began to subduct, and is still ripping today. S-ward motion of N-dipping flap enabled by W-ward propagation of active rip, accompanied by S-ward foundering of new transform segments. Subduction transform foundering reflected by steps in height of subducted slab)

Loocke, M., J.E. Snow & Y. Ohara (2013)- Melt stagnation in peridotites from the Godzilla Megamullion Oceanic Core Complex, Parece Vela Basin, Philippine Sea. Lithos 182-183, p. 1-10.
(Godzilla Megamullion in Parece Vela backarc basin of Izu-Bonin-Mariana system largest known example of Oceanic Core Complex (OCC) (55x155km) in extinct Miocene backarc spreading ridge. Peridotites recovered include fertile (lherzolites), depleted (harzburgites) and plagioclase-bearing groups. Melt stagnation studied via incidence of plagioclase-bearing peridotites and chemistry of Cr-spinels in plag-bearing samples)

Lytle, M.L. (2013)- Geochemical constraints on mantle sources and melting conditions in Pacific back-arc basins. Ph.D. Thesis, University of Rhode Island, p. 1-406.

Macpherson, C.G. & R. Hall (2001)- Tectonic setting of Eocene boninite magmatism in the Izu-Bonin-Mariana forearc. Earth Planetary Sci. Letters 186, p. 215-230.
(online at: http://searg.rhul.ac.uk/pubs/macpherson_hall_2001%20IBM%20boninites.pdf)
M Eocene boninites generated over large region during early history of Izu-Bonin Mariana (IBM) arc, but boninites not recognised in younger subduction zones. Thermal anomaly or mantle plume influenced magmatic and tectonic development of W Pacific from M Eocene until present day)

Madrigal, P., E. Gazel, K.E. Flores, M. Bizimis & B. Jicha (2016)- Record of massive upwellings from the Pacific large low shear velocity province. Nature Communications 7, 13309, p. 1-12.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5105175/pdf/ncomms13309.pdf)

Mahoney, J., D.M. Storey, K. Spencer & M. Pringle (1993)- Geochemistry and age of the Ontong Java Plateau. In: M.S. Pringle et al. (eds.) The Mesozoic Pacific: geology, tectonics and volcanism, American Geoph. Union (AGU) Geophys. Monograph 77, p. 233-261.
(online at: www.mantleplumes.org/WebDocuments/Mahoney93_GeoMon77.pdf)
(Basement rocks of Ontong Java Plateau tholeiitic basalts that appear to record very hig degree of partial melting, like thise found in Iceland. Mean Ar/Ar ages of ODP Site 807 lavas and basement from Malaita island 122.4 ± 0.8 Ma (Aptian). Pb-Nd-Sr isotopes indicate hotspot-like source)

Mallick, D.L.J. (1973)- Review of the mineral deposits of the New Hebrides. In: N.H. Fisher (ed.) Metallogenic provinces and mineral deposits in the Southwestern Pacific, Bureau Mineral Res. Geol. Geophysics, Bull. 141, p. 13-31.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=108)

Mann, P. & A. Taira (2004)- Global tectonic significance of the Solomon Islands and Ontong Java Plateau convergent zone. Tectonophysics 389, p. 137-190.
(Ontong Java Plateau of SW Pacific Ocean is largest and thickest oceanic plateau on Earth. Currently colliding with Solomon Islands island arc. 80% of Ontong Java Plateau crust is subducted under Solomon island arc; only uppermost basaltic and sedimentary part of crust (~7 km) preserved on overriding plate by subduction-accretion processes (consistent with observed imbricate structural style of plateaus and seamount chains preserved in other orogenic belts))

Marlow, N.S., S.V. Dadisman & N.F. Exon (eds.) (1988)- Geology and offshore resources of Pacific Islands arcs- New Ireland and Manus region, Papua New Guinea. Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 1-288.

Matsubara, Y. & T. Seno (1980)- Paleogeographic reconstruction of the Philippine Sea plate at 5 m.y. Earth Planetary Sci. Letters 51, p. 406-414.

Matsuoka, A. (1991)- Middle Jurassic radiolarians from the Western Pacific. In: Proc. Shallow Tethys 3, Sendai 1990, Saito Ho-on Kai Spec. Publ. 3, p. 697-707.
(First record of Jurassic sediments in W Pacific at ODP Site 801, C Pigafetta basin. Oldest faunas of Tricolocapsa conexa Zone, Bathonian-Callovian age. Faunas compare well with Tethyan and Japanese faunas)

Matsuoka, A. (1992)- Jurassic and Early Cretaceous radiolarians from Leg 129, Sites 800 and 801, Western Pacific Ocean. In: R.L. Larson et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 129, p. 203-220.
(online at: www-odp.tamu.edu/publications/129_SR/VOLUME/CHAPTERS/sr129_10.pdf)
(Seven M Jurassic - Lower Cretaceous radiolarian zones from Sites 800 and 801, ODP Leg 129 in W Pacific: Dibolachras tytthopora (Hauterivian), Cecrops septemporatus, (U. Valanginian), Pseudodictyomitra carpatica (Berriasian- E Valanginian), P. primitiva, (Kimmeridgean-Tithonian), Cinguloturris carpatica Oxfordian), Stylocapsa spiralis (~U Callovian) and Tricolocapsa conexa (Bathonian- E Callovian). (Most Tan Sin Hok (1927) species of Archaeodictyomitra (A. brouweri= Eucyrtidium brouweri, A. excellens= Lithomitra excellence, A. pseudoscalaris= Stichomitra pseudoscalaris), Eucyrtis (E. hanni= Lithocampe hanni) and Pseudodictyomitra (P. lilyae= Dictyomitra lilyae) range up into D. tytthopora/Hauterivian and down through P. carpatica/ Berriasian; P. lilyae only in U Valanginian-Hauterivian; JTvG)

Matsuoka, A. (1995)- Late Jurassic tropical Radiolaria: *Vallupus* and its related forms. Palaeogeogr. Palaeoclim. Palaeoecology 119, p. 359-369.
(Vallupus Territory is tropical radiolarian realm of Panthalassa and Tethys in Latest Jurassic- early Cretaceous. Vallupinae radiolarian subfamily restricted to Late Jurassic in low- and middle-latitudes of W Pacific, E Asia, Mediterranean regions, etc.. Probably accumulated within 25° of Jurassic paleoequator)

Matthews, K.J., M. Seton, N. Flament & R.D. Muller (2012)- Late Cretaceous to present-day opening of the Southwest Pacific constrained by numerical models and seismic tomography. In: Eastern Australasian Basins Symposium IV, Brisbane 2012, p. 1-15.

Matthews, K.J., S.E. Williams, J.M. Whittaker, D. Muller, M. Seton & G.L. Clarke (2015)- Geologic and kinematic constraints on Late Cretaceous to mid Eocene plate boundaries in the Southwest Pacific. Earth-Science Reviews 140, p. 72-107.
(New plate tectonic reconstruction for Late Cretaceous- M Eocene (~85-45 Ma) of SW Pacific. Subduction has been active E of Lord Howe Rise and N of New Zealand since at least 85 Ma. From >85 Ma, and possibly 100 Ma, until 55 Ma S Loyalty Basin opened to E of New Caledonia associated with W-directed slab roll-back. At ~55 Ma NE dipping subduction initiated in S Loyalty Basin and consumed basin between ~55-45 Ma)

Maurizot, P. (2011)- First sedimentary record of the pre-obduction convergence in New Caledonia: formation of an Early Eocene accretionary complex in the north of Grande Terre and emplacement of the óMontagnes Blanchesô nappe. Bull. Soc. Geologique France 182, 6p. 479-491.
(New Caledonia lies at N tip of Norfolk ridge continental fragment, which separated from E Gondwana margin in Late Cretaceous. Late Cretaceous- Paleogene sedimentary succession of N New Caledonia mainly pelagics with minimal terrigenous input, deformed in M Eocene SW-verging accretionary complex. Change to active-margin regime flysch-type deposits as refected in change from with pelagic micrites to pink marls at end of E Eocene (Late Ypresian, zone E7; ~50 Ma). System prograded S-wards until Late Eocene collisional stage, when continental Norfolk Ridge entered convergence zone and blocked it)

Maurizot, P. & M. Vende-Leclerc (2009)- New Caledonia Geological map, 1:500,000. Direction de l'Industrie et des Mines, New Caledonia.
(online at: https://dimenc.gouv.nc/sites/default/files/download/13036078.pdf)

McDougall, I., B.J.J. Embleton & D.B. Stoen (1981)- Origin and evolution of Lord Howe Island, Southwest Pacific. J. Geol. Soc. Australia 28, 1-2, p. 155-176.
(Lord Howe Island eroded remnant of Late Miocene shield volcano (~6.4-6.9 Ma) on Lord Howe seamount chain, produced by movement of Australian plate over magma source/ hot spot. Nova Bank, at N end of chain,

may reflect volcanic activity at ~23 Ma. Adjacent Lord Howe Rise is continental crustal block that separated from E Australia by Tasman Sea seafloor spreading between 80-60 Ma (Late Cretaceous- E Tertiary))

McDougall, I. & G.J. van der Lingen (1974)- Age of the rhyolites of the Lord Howe Rise and the evolution of the southwest Pacific Ocean. Earth Planetary Sci. Letters 21, p. 117-126.
(On Mid-Cretaceous pre-Tasman breakup rhyolitic volcanism. Drilling at DSDP site 207 on Lord Howe Rise bottomed in rhyolitic rocks, dated as 93.7 ± 1.1 Ma. At this time Lord Howe Rise, with continental-type structure, thought to have been emergent and adjacentE margin of the Australian-Antarctic continent. After 94 Ma and before deposition of Maastrichtian (70-65 Ma) rifting and formation of Tasman Basin began)

McNeill, D.F. & A. Pisera (2010)- Neogene lithofacies evolution on a small carbonate platform in the Loyalty Basin, Mare, New Caledonia. In: W.A. Morgan, A.D. George et al. (eds.) Cenozoic carbonate systems of Australasia, Soc. Sedimentary Geology (SEPM), Spec. Publ. 95, p. 243-255.
(Biofacies succession of 40 km wide Mio-Pliocene Mare carbonate platform in Loyalty Islands. Change in biotic assemblages across subaerial discontinuity from Late Miocene fringing reef and rhodolith shelf built around volcanic core, to 2m thin bed of E Pliocene acervulinid foraminifera-algal (foralgalith) macroids that forms base of massive coral-dominated atoll. Mio-Pliocene boundary subaerial exposure followed by reflooding in E Pliocene. Switch to coral-dominated atoll in Pliocene likely reflects (global?) trend of decreased coralline red algae)

McTavish, R.A. (1966)- Planktonic foraminifera from the Malaita Group, British Solomon Islands. Micropaleontology 12, p. 1-36.
(Malaita Gp. of Malaita Island rel. uninterrupted deep marine section from U Eocene (Globigerina linaperta and G. ampliapertura zones) to U Miocene-Pliocene (Sphaeroidinellopsis seminulina and Globigerina dutertrei zones))

Meffre, S. (1995)- The development of arc-related ophiolites and sedimentary sequences in New Caledonia. Ph.D. Thesis, University of Sydney, p. 1-236. *(Unpublished)*

Meffre, S., J.C. Aitchison & A.J. Crawford (1996)- Geochemical evolution and tectonic significance of boninites and tholeiites from the Koh ophiolite, New Caledonia. Tectonics 15, p. 67-83.
(online at: https://espace.library.uq.edu.au/view/UQ:366623/UQ366623_OA.pdf)
(Central Chain ophiolites in New Caledonia are fragments of supra-subduction zone ophiolite, overlain by pelagic cherts and thick M Triassic- U Jurassic volcaniclastic sequence. Koh ophiolite formed by two tholeiitic magmatic episodes separated by boninites: (1) cumulate gabbros, dolerites, plagiogranites and pillow lava sequence; (2) high-Ca boninitic unit (3) tholeiitic pillow basalts and dykes. Boninitic volcanics formed during initiation of rifting of young oceanic crust, associated with propagation of back arc basin spreading centre. Thick blanket of calc-alkaline volcaniclastic sediments above ophiolite indicates proximity to mature arc)

Meffre, S., A.J. Crawford & P.G. Quilty (2006)- Arc-continent collision forming a large island between New Caledonia and New Zealand in the Oligocene. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2006), Melbourne, p. 1-4. *(Extended Abstract)*
(Dredge samples from Three Kings Ridge between New Caledonia and New Zealand show presence of old collisional orogen: 38 Ma high-P metamorphic rocks, mantle peridotite (from forearc of island arc) and continental-derived rocks with Cretaceous and older Gondwanan zircons and Late Oligocene- E Miocene fossil leaves. Large island E of Three Kings Ridge between 38-21 Ma, subsided with opening of S Fiji basin)

Meister, C., P. Maurizot & J.A. Grant-Mackie (2010)- Early Jurassic (Hettangian-Sinemurian) ammonites from New Caledonia (French Overseas Territory, Western Pacific). Paleontological Research 14, 2, p. 85-118.
(17 Hettangian- E Sinemurian ammonite taxa from SW coast of New Caledonia in Triassic- M-Jurassic volcanoclastic turbidites series named New Zealand graywacke. Strong paleogeographic affinities with W Tethys, less strong affinities with E Pacific areas, and endemic elements. Part of collage of terranes accreted during Permian-Lower Cretaceous on E Gondwanan margin)

Meijer, A. (1980)- Primitive arc volcanism and a boninite series; example from western Pacific Island arcs. In: The tectonic and geologic evolution of Southeast Asian seas and islands, American Geophys. Union (AGU), Geophys. Monograph Ser. 23, p. 269-282.
(Several W Pacific islands of Mariana-Bonin arcs with olivine-bronzite andesites, known as boninites. Production of boninite may require high geothermal gradients in mantle overlying subduction zone, as in subduction under young, hot Philippine Sea plate)

Meijer, A., M. Reagan, H. Ellis, M. Shafiqullah, J. Sutter, P. Damon & S. Kling (1983)- Chronology of volcanic events in the Eastern Philippine Sea. In: The tectonic and geologic evolution of Southeast Asian seas and islands: Part 2, American Geophys. Union (AGU), Geophys. Monograph Ser. 27, p. 349-359.
(Radiometric and paleontologic ages of samples from chiefly volcanic sections on Guam, Saipan, and Palau Islands: Facpi Fm on Guam dated at ~43.8 Ma (late M Eocene); Palau Islands volcanic units of late Eocene(?), E Oligocene and E Miocene age; Mariana active arc minimum age of 1.3 Ma)

Miller, M.S., B.L.N. Kennett & V.G. Toy (2006)- Spatial and temporal evolution of the subducting Pacific plate structure along the western Pacific margin. J. Geophysical Research, Solid Earth, 111, 2, B02401, p. 1-14.
(Tomographic images of subducting Pacific plate beneath Izu-Bonin-Mariana arc show progression from shallow dipping to vertical from N to S along arc)

Mitchell, A.H.G. (1970)- Facies of an Early Miocene volcanic arc, Malekula Island, New Hebrides. Sedimentology 14, p. 201-243.
(On Malekula Island pre-Miocene pelagic red mudstones in tectonic contact with thick marine E Miocene island arc succession of volcanoclastic rocks (intruded by basaltic and andesitic dykes and sills), detrital limestones, pelagic sediments and rare lava flows. Carbonate detritus from reefs bordering volcanic islands)

Mohiuddin, M.M., Y. Ogawa & K. Matsumaru (2000)- Late Oligocene larger foraminifera from the Komahashi-Daini Seamount, Kyushu-Palau Ridge and their tectonic significance. Paleont. Research (Pal. Soc. Japan) 4, 3, p. 191-204.
(Typical low-latitude Late Oligocene larger foram assemblage with Miogypsinoides, Spiroclypeus, Eulepidina, etc., from dredge samples in ~2500m of water on flank of seamount on Kyushu-Palau Ridge)

Monzier, M., J. Boulin, J.Y. Collot, J. Daniel, S. Lallemand & B. Pelletier (1989)- Premiers resultats des plongees Nautile de la Campagne SUPSO1 sur la zone de collision ride des Loyaute arc des Nouvelles Hebrides (Sud-Ouest Pacifique). Comptes Rendus Academie Sciences, Paris, II, 309, p. 2069-2076.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_5/b_fdi_20-21/27565.pdf)
('Initial results of the Nautile dives Campaign SUPSO1 ride on the collision zone of the Loyalty Arc of the New Hebrides (SW Pacific)'. Pelletier 2007: Submersible dives off Mare Island along E flank of ridge recoverd volcanic breccias (32 Ma), alkaline rhyolites, U Oligocene (27 Ma) alkali basalts, E Miocene (20 Ma) backarc basalts and algae and reefal limestones with reworked Eocene- Oligocene and Mio-Pliocene fauna)

Monzier, M., J. Daniel & P. Maillet (1990)- La collision 'Ride de Loyaute/ Arc de Nouvelles Hebrides' (Pacifique Sud-Ouest). In: Actes du Colloque Tour du Monde Jean Charcot, Paris 1989, Oceanologica Acta, Spec. Vol. 10, p. 43-56.
('The collision of the Loyalty Ridge and New Hebrides arc (SW Pacific)'. Collision between Loyalty Ridge (part of Indo-Australian Plate) and S end of New Hebrides arc started ~300,000 years ago)

Mortimer, N. (2004)- New Zealandôs geological foundations. Gondwana Research 7, p. 261-272.
(New Zealand is fragment of Gondwana that, before Late Cretaceous sea floor spreading, was contiguous with Australia and Antarctica. Only about 10% of continental crust in wider New Zealand region (Zealandia) emergent above sea level as North and South Islands. Cambrian- E Cretaceous basement nine major volcano-sedimentary terranes, three composite regional batholiths, and three regional metamorphic-tectonic belts that overprint terranes and batholiths)

Mortimer, N., P.B. Gans, M. Palin, S. Meffre, R.H. Herzer & D.N.B. Skinner (2010)- Location and migration of Miocene-Quaternary volcanic arcs in the SW Pacific region. J. Volcanology Geothermal Res. 190, p. 1-10.
(New radiometric ages from rocks in SW Pacific region. Ssynthesis of available SW Pacific data show reasonably complete record of subduction-related volcanism from at least 23 Ma-now, but process of back-arc basin formation is highly episodic and asymmetric)

Mortimer, N., I.J. Graham, C.J. Adams, A.J. Tulloch & H.J. Campbell (2005)- Relationships between New Zealand, Australian and New Caledonian mineralised terranes: a regional geological framework. In: Proc. 2005 New Zealand Minerals and Mining Conf., p. 151-159.
(online at: www.nzpam.govt.nz/cms/pdf-library/minerals/conferences-1/151_papers_42.pdf)
(Reconstruction of New Zealand, New Caledonia, etc. terranes, all part of E Gondwanan active margin prior to opening of Tasman Sea in Cretaceous after 90 Ma (partly based on Gaina et al. 1998))

Mortimer, N. & D. Parkinson (1996)- Hikurangi Plateau: a Cretaceous large igneous province in the southwest Pacific Ocean. J. Geophysical Research 101, B1, p. 687-696.
(First dredge samples s from Hikurangi Plateau basement volcanics/volcaniclastics of pre-Late Cretaceous age. All samples extensive seafloor weathering to phyllosilicate- and zeolite-bearing assemblages. Petrology similar to other Cretaceous large igneous provinces in W Pacific (e.g., Manihiki, Ontong Java Plateaus)

Mortimer, N. & A. Tulloch (1996)- The Mesozoic basement of New Zealand. In: Mesozoic Geology of the Eastern Australia Plate Conference, Geol. Soc. Australia, Extended Abstract 43, p. 391-399.

Mortimer, N., A.J. Tulloch & T.R. Ireland (1997)- Basement geology of Taranaki and Wanganui basins, New Zealand. New Zealand J. Geol. Geophysics40, p. 223-236.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1997.9514754)
(Pre-Late Cretaceous Torlesse and Waipapa basement terranes identified in Wanganui Basin, and Murihiku Terrane in eastern Taranaki Basin)

Mortimer, N., P. van den Bogaard, K. Hoernle, C. Timm, P.B. Gans, R. Werner & F. Riefstahl (2019)- Late Cretaceous oceanic plate reorganization and the breakup of Zealandia and Gondwana. Gondwana Research 65, p. 31-42.
(online at: https://www.sciencedirect.com/science/article/pii/S1342937X18302284)

Mosher, D.C. (1993)- Seismic stratigraphy of the Ontong Java Plateau, western equatorial Pacific: its paleoceanographic significance. Ph.D. Thesis Dalhousie University, Halifax, p. 1-191.
(Seismic stratigraphy study of flank of large deep water carbonate Ontong Java Plateau. Sediment column >1000m thick at top of plateau, consisting of mainly pelagic sediments)

Moutte, J. (1982)- Chromite deposits of the Tiebaghi ultramafic massif, New Caledonia. Economic Geology and Bull. Soc. Economic Geology 77, p. 576-591.
(Tiebaghi ultramafic massif in N New Caledonia produced 80% of chromite of island. Part of large ultramafic nappe with complex tectonic history, involving several phases of folding and fracturing. Tiebaghi Series with successive upward appearance of olivine and spinel, orthopyroxene, clinopyroxene. Succession, on cm-m scale, of dunite, peridotite, and pyroxenite. Chromite deposits at three levels, mainly near transition harzburgite and lherzolite, with chromite-rich layers of large lateral extent)

Mrozowski, C.L. & D.E. Hayes (1979)- The evolution of the Parece Vela Basin, Eastern Philippines. Earth Planetary Sci. Letters 46, p. 49-67.
(Parece Vela Basin is oceanic back-arc basin in E Philippine Sea)

Mrozowski, C.L., S.D. Lewis & D.E. Hayes (1982)- Complexities in the tectonic evolution of the West Philippine Basin. Tectonophysics 82, p. 1-24.
(Oceanic W Philippine Basin three sub-basins with different tectonic histories. Magnetic anomalies 21(?)-17 in main basin and do do not extend into S or NW sub-basin. S sub-basin may have formed immediately before

ridge jump to main basin spreading axis or may be younger than main basin. NW sub-basin originated as part of main basin, but has undergone deformation which did not affect main basin, possibly related to subduction along E Luzon margin in mid-Tertiary. Gagua Ridge is uplifted sliver of oceanic crust)

Muir, R.J., T.R. Ireland, S.D. Weaver, J.D. Bradshaw et al. (1998)- Geochronology and geochemistry of a Mesozoic magmatic arc system, Fiordland, New Zealand. J. Geol. Soc., London, 155, p. 1037-1053.
(Median Tectonic Zone in E Fiordland, SW New Zealand is tectonically disrupted belt of mainly M-Jurassic- E Cretaceous (168–137 Ma) I-type magmatic arc rocks related to subduction along Palaeo-Pacific margin of Gondwana. Carboniferous age granitoids in SW Fiordland along W side and within zone. Triassic plutonic rocks E of zone)

Murphy, M., H. Parker, A. Ross & M.A. Audet (2013)- Ore-thickness and nickel grade resource confidence at the Koniambo nickel laterite (a conditional simulation voyage of discovery). Geostatistics Banff 2004, 1, Springer Verlag, p. 469-478.

Musgrave, R.J. (2013)- Evidence for Late Eocene emplacement of the Malaita Terrane, Solomon Islands: implications for an even larger Ontong Java Nui oceanic plateau. J. Geophysical Research 118, 6, p. 2670-2686.
(Most tectonic models for Solomon Islands Arc invoke Miocene collision with Ontong Java Plateau to halt cessation of Pacific Plate subduction, initiate Australian Plate subduction, and emplace Malaita Terrane, which shares basement age and geochemistry of OJP. Paleomagnetic evidence required Malaita Terrane to have been fixed to Solomon arc from at least Late Eocene, supported by arc-derived turbidites within Late Eocene-Miocene limestones. OJP may have formed part of larger Ontong Java Nui, which separated by spreading during Cretaceous)

Nairn, A.E.M., F.G. Stehli & S. Uyeda (eds.) (1985)- The ocean basins and margins 7A, The Pacific Ocean-part 1. Plenum Press, New York, p. 1-748.

Nairn, A.E.M., F.G. Stehli & S. Uyeda (eds.) (1988)- The ocean basins and margins 7B, The Pacific Ocean-part 2. Plenum Press, New York, p. 1-642.

Neal, C.R., J.J. Mahoney, L.W. Kroenke, R.A. Duncan & M.G. Petterson (1997)- The Ontong Java Plateau. In: J. Mahoney & F. Coffin (eds.) Large Igneous Provinces: continental, oceanic, and planetary flood volcanism, American Geophys. Union (AGU), Geophys. Monograph 100, p. 183-216.
(Alaska-size Ontong Java Plateau basalt province in SW Pacific two principal ages: ~122 and ~90 Ma, probably from single mantle plume)

Neall, V.E. & S.A. Trewick (2008)- The age and origin of the Pacific islands: a geological overview. Philos. Trans. Royal Soc. London, B 363, p. 3293-3308.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2607379/pdf/rstb20080119.pdf)
(Pacific Ocean evolved from Panthalassic Ocean that first formed at ~750 Ma with breakup of Rodinia. First ocean floor ascribed to current Pacific plate formed by 160 Ma, W of spreading centre in C Pacific. Islands of Pacific originated as: linear chains of volcanic islands (mantle plume or propagating fracture origin), atolls, uplifted coralline reefs, fragments of continental crust (New Zealand, Chatham Islands, New Caledoni), obducted portions of adjoining lithospheric plates and islands resulting from subduction along convergent plate margins. 11 linear volcanic chains identified)

Nicholson, K.N., P. Maurizot, P.M. Black, C. Picard, A. Simonetti, A. Stewart & A. Alexander. (2011)- Geochemistry and age of the Noumea Basin lavas, New Caledonia: evidence for Cretaceous subduction beneath the eastern Gondwana margin. Lithos 125, p. 659-674.
(Noumea Basin, SW New Caledonia, contains lavas with continental arc signatures. Arc volcanism active during Late Cretaceous (88-103 Ma= late Albian-Turonian). Subduction along E Gondwana margin may have extended to New Zealand. Bimodal chemistry in NZ and NC may be result of slab detachment and roll-back)

Nicolas, A. (1989)- Bogota Peninsula and NE Districts of New Caledonia- Wadi Tayin in Oman coastal complex of Newfoundland: possible origin in transform faults. In: Structures of ophiolites and dynamics of oceanic lithosphere, Chapter 4, Kluwer Academic Publ., p. 127-157.

Nicora, A., I. Premoli Silva & A. Arnaud Vanneau (1995)- Paleogene larger foraminifer biostratigraphy from Limalok Guyot, Site 871. In: J.A. Haggerty et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 144, p. 127-139.
(online at: www-odp.tamu.edu/publications/144_sr/VOLUME/CHAPTERS/sr144_06.pdf
(E-M Eocene platform limestone with Discocyclina, Asterocyclina, Nummulites, Alveolina, overlying Cretaceous volcanics and limestones on guyot in Marshall Islands)

Nishimura, A. (1992)- Carbonate bioclasts of shallow-water origin at Site 793. In: B. Taylor, K. Fujioka et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 126, p. 231-234.
(online at: www-odp.tamu.edu/publications/126_SR/VOLUME/CHAPTERS/sr126_15.pdf)
(Occ. Late Eocene limestone clasts with larger foraminifera Pellatispira, Biplanispira and Asterocyclina found reworked as gravity flows in deeper water Oligocene sediments at W Pacific Site 793 on Izu-Bonin Arc at 31°N)

Nishiwaki, C. (1981)- Tectonic control of porphyry copper genesis in the Southwestern Pacific island arc region. Mining Geology 31, 167, p. 131-146.
(online at: www.journalarchive.jst.go.jp/..)
(In Japanese with English abstract) (Distribution of porphyry coppers in SW Pacific region confined to island arcs in collisional tectonic regime, including: (1) mobile zone between two facing subduction zones (Philippines, Solomons); (2) Arc-arc collision (Sabah); (3) Continent-arc collision (Papua New Guinea). Many other island arcs like Kuril, Japan, Izu-Bonin, Mariana, Ryukyu, Sunda and Sumatra no large concentration of copper of this type)

Norton, I.O. (1995)- Plate motions in the North Pacific: the 43 Ma nonevent. Tectonics 14, 5, p. 1080-1094.
(Hawaiian-Emperor seamount chain in N Pacific Ocean commonly considered produced by motion of Pacific plate over hotspot. If hotspot remained fixed, 60° change in trend between Hawaiian and Emperor portions of chain results from change in direction of Pacific plate relative to mantle at 43 Ma (M Eocene). However, no significant plate reorganizations in Pacific and surrounding plates after this, so Emperor portion of seamount chain probably formed by non-stationary hotspot)

Norvick, M.S., R.P. Langford, N. Rollet, T. Hashimoto, K.L. Higgins & M.P. Morse (2008)- New insights into the evolution of the Lord Howe Rise (Capel and Faust basins), offshore eastern Australia, from terrane and geophysical data analysis. In: J.E. Blevin et al. (eds.) Eastern Australasian basins symposium III, Energy security for the 21st century, Sydney, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 291-310.
(Capel and Faust basins off NE Australia. Capel Basin with several depocentres up to 150x40 km wide, with Lower Cretaceous synrift volcanics, Turonian-Maastrichtian synrift clastic megasequences and Maastrichtian-Recent postrift bathyal phase. Smaller graben characterise Faust Basin to E and S. Stratigraphic complexity was driven by multiple extension events. Subsequent discrete seafloor spreading events. Etc.)

Nouze, H., E. Cosquer, J. Collot, J.P. Foucher, F. Klingelhoefer, Y. Lafoy & L. Geli (2009)- Geophysical characterization of bottom simulating reflectors in the Fairway Basin (off New Caledonia, Southwest Pacific), based on high resolution seismic profiles and heat flow data. Marine Geol. 266, p. 80-90.
(Seismic data collected to investigate nature of Bottom Simulating Reflector in part of Fairway Basin on E flank of Lord Howe Rise SW of New Caledonia. Two main reflectors documented. Deeper BSR likely diagenetic, related to Opal-A/ Opal-CT transition front (too deep to be related to methane hydrates))

Oakley, A.J., B. Taylor & G.F. Moore (2008)- Pacific Plate subduction beneath the central Mariana and Izu-Bonin fore arcs: new insights from an old margin. Geochem. Geophys. Geosystems 9, 6, doi:10.1029/2007GC001820, p. 1-28.

Ohara, Y. (2006)- Mantle process beneath Philippine Sea back-arc spreading ridges: a synthesis of peridotite petrology and tectonics. Island Arc 15, p. 119-129.

Ohara, Y. (2016)- The Godzilla Megamullion, the largest oceanic core complex on the earth: a historical review. Island Arc 25, 3, p. 193-208.
(Godzilla Megamullion in Parece Vela Basin in Philippine Sea is largest known oceanic core complex on Earth. Philippine Sea evolved with E-ward progression of backarc spreading and arc migration. Presence of abundant plagioclase-bearing peridotite and systematic temporal changes in deformation microstructures and composition of plagioclase and amphibole in gabbroic mylonites and ultramylonites. Zircon U-Pb ages of gabbroic and leucocratic rocks indicate terminal phase of Parece Vela Basin spreading was with significant decline in spreading rate and asymmetry accompanying formation of Godzilla Megamullion)

Ohara, Y., K. Fujioka, T. Ishii & H. Yurimoto (2003)- Peridotites and gabbros from the Parece Vela backarc basin: unique tectonic window in an extinct backarc spreading ridge. Geochem. Geophys. Geosystems 4, 7, p. 1-22.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2002GC000469/epdf)
(Serpentinized peridotite and gabbro from extinct Parece Vela Basin spreading ridge in Philippine Sea. Small degree of mantle melting, including presence of huge mullion structure (Godzilla Mullion))

Ohara, Y., K. Fujioka, O. Ishizuka & T. Ishii (2002)- Peridotites and volcanics from the Yap arc system: implications for tectonics of the southern Philippine Sea Plate. Chemical Geology 189, p. 35-53.
(Metamorphosed rocks and gabbros of Parece Vela Basin origin predominate on Yap Islands and for upper part of forearc remnant arc volcanics of ~25 Ma age exist. Also arc volcanics of 11-7 Ma age in forearc. Depleted arc-type mantle peridotites exposed along faults in lower part of forearc landward slope. Yap arc- N Yap Escarpment system may form as incipient arc at propagating tip of Parece Vela Rift at ~25 Ma)

Ohara, Y., S. Kasuga & T. Ishii (1996)- Peridotites from the Parece Vela Rift in the Philippine Sea: upper mantle material exposed in an extinct backarc basin. Proc. Japan. Academy, Ser. B, 72, p. 118-123.
(online at: https://www.jstage.jst.go.jp/article/pjab1977/72/6/72_6_118/_pdf)
(First? report of serpentinized peridotites and gabbros dredged from axial zone of Parece Vela Basin in 1995. Central zone of the Parece Vela Basin characterized by N-S trending chain of depressions forming right-step en-echelon alignment. Peridotites residues of partial melting of primitive mantle peridotites)

Ohara, Y., K. Okino & J.E. Snow (2011)- Tectonics of unusual crustal accretion in the Parece Vela Basin. In: Y. Ogawa et al. (eds.) Accretionary prisms and convergent margin tectonics in the Northwest Pacific Basin, Modern Approaches in Solid Earth Sciences 8, Springer, p. 149-168.

Ohara, Y., T. Yoshida, Y. Kato & S. Kasuga (2001)- Giant megamullion in the Parece Vela backarc basin. Marine Geophysical Res. 22, 1, p. 47-61.
(High-resolution bathymetric studies of extinct intermediate-spreading Parece Vela Basin identified large mullion structure, here termed a giant megamullion, order of magnitude larger than similar structures in slow-spreading Mid-Atlantic Ridge. Giant megamullion slightly elevated mantle Bouguer anomaly, and yields serpentinized peridotites and gabbros, suggesting exposed oceanic crust and upper mantle. Also off-axis rugged 'chaotic terrain' of isolated and elevated blocks capped by corrugated lineations)

Ohde, S. & H. Elderfield (1992)- Strontium isotope stratigraphy of Kita-daito-jima Atoll, North Philippine Sea: implications for Neogene sea-level change and tectonic history. Earth Planetary Sci. Letters 113, 4, p. 473-486.
(Chronology of 432 m Late Oligocene- Recent core from Kita-daito-jima atoll on Philippine Sea plate. Atoll growth continuous between 18.8-24.3 Ma. Hiatuses and ages of dolomitization indicate sea-level falls of ~80m at ~17-16 Ma, ~30m at ~16-15 Ma, ~125m at ~11 Ma, and ~90m at ~5 Ma and at ~2 Ma)

Okino, K. & K. Fujioka (2003)- The Central Basin spreading center in the Philippine Sea: structure of an extinct spreading center and implications for marginal basin formation. J. Geophysical Research 108, B1, 2040, p. 1-18.

(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2001JB001095)
(Central Basin Spreading Center is extinct spreading axis of West Philippine Basin (WPB), with along-axis variations of spreading style: in E slow-spreading (deep rift valleys and nodal basins, rough abyssal hills on ridge flanks, and mantle Bouguer anomaly lows beneath segment centers); in W fast-spreading (overlapping spreading centers, volcanic axial ridges, and smooth abyssal hill fabric, with higher melt supply)

Okino, K., Y. Ohara, T. Fujiwara, S.M. Lee, K. Koizumi, Y. Nakamura & S. Wu (2009)- Tectonics of the southern tip of the Parece Vela Basin, Philippine Sea Plate. Tectonophysics 466, p. 213-228.
(Parece Vela Basin formed as backarc basin behind proto Mariana arc from late Oligocene- M Miocene)

Okino, K., Y. Ohara, S. Kasuga & Y. Kato (1999)- The Philippine Sea: new survey results reveal the structure and the history of the marginal basins. Geophysical Research Letters 26, 15, p. 2287-2290.
(New bathymetric and magnetic maps of Philippine Sea seafloor suggest more complicated history than proposed before)

Onoue, T., J. Chablais & R. Martini (2009)- Upper Triassic reefal limestone from the Sambosan accretionary complex in Japan and its geological implication. J. Geol. Soc. Japan, 115, 6, p. 292-295.
(online at: https://archive-ouverte.unige.ch/unige:3944)
(U Triassic massive reefal limestone in latest Jurassic- earliest Cretaceous Sambosan Sambosan accretionary complex in Japan accumulated on mid-oceanic seamount in Panthalassa Ocean. Smaller foraminifera include Alpinophagmium perforatum, Agathammina austroalpina, Aulatortus sinuosus, etc. Corals dominated by Retiophyllia)

Onoue, T. & H. Sano (2007)- Triassic mid-oceanic sedimentation in Panthalassa Ocean: Sambosan accretionary complex, Japan. Island Arc 16, 1, p. 173-190.
(Sambosan accretionary complex of SW Japan formed in latest Jurassic earliest Cretaceous time. Four stratigraphic successions: (1) M-U Triassic (Carnian) basalts (oceanic island basalt); (2) U Triassic shallow-water limestone and (3) limestone breccia (seamount-top and upper seamount-flank); and (4) middle M Triassic- lower U Jurassic siliceous rocks and pelagic carbonates (ocean floor))

Onoue, T. & G.D. Stanley (2008)- Sedimentary facies from Upper Triassic reefal limestone in the Sambosan accretionary complex in Japan. Facies 54, p. 529-547.
(Microfacies of E- M Norian reefal limestone of Sambosan Accretionary Complex, SW Japan. Seven major facies types, recording patch reef development on mid-oceanic seamount in Panthalassa Ocean. Strong Tethyan affinities of corals (dominated by Retiophyllia, also Distichophyllia norica = 'Montlivaltia norica Frech' also known from Timor, Austria) and foraminifera (incl. Agathammina austroalpina))

Onoue, T., T. Nikaido, L.R. Zamoras & A. Matsuoka (2011)- Preservation of larval bivalve shells in a radiolarian chert in the Late Triassic (Early Norian) interval of the Malampaya Sound Group, Calamian Island, western Philippines. Marine Micropaleontology 79, 1, p. 58-65.
(Thin larval bivalve shells occur in E Norian radiolarian chert in Liminangcong Fm, part of Late Jurassic to Early Cretaceous subduction-related accretionary complex in N Palawan Block. 'Bivalve chert' accumulated in open-ocean realm of Panthalassa Ocean. Possibly halobiid bivalves with planktonic larval mode of life)

Otsuki, K. (1990)- Westward migration of the Izu-Bonin Trench, northward motion of the Philippine Sea Plate, and their relationships to the Cenozoic tectonics of Japanese island arcs. Tectonophysics 180, p. 351-367.
(Izu-Bonin Trench wandered ~400 km E froms present position during Paleogene and migrated W thereafter)

Ozawa, T. & K. Kanmera (1984)- Tectonic terranes of Late Paleozoic rocks and their accretionary history in the Circum-Pacific region viewed from fusulinacean paleobiogeography. In: Proc. Circum-Pacific Terrane Conference1983, Stanford University Publ., Geol. Sciences 28, p. 158-160. *(Abstract only?)*

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(Serpentine muds from South Chamorro Seamount contain metamafic clasts that experienced blueschist-facies metamorphism. Schists represent fragments from slab-mantle interface at ~27 km depth)

Packham, G.H. (1973)- A speculative Phanerozoic history of the South-west Pacific. In: P.J. Coleman (ed.) The Western Pacific, island arcs, marginal seas, geochemistry, University of Western Australia Press, Perth, p. 369-388.

Paris, J.P. (1981)- Geologie de la Nouvelle-Caledonie; un essai de synthese. Mem. Bureau Rech. Geol. Minieres (BRGM) 131, p. 1-279.
('Synthesis of the geology of New Caledonia'. Includes record of Turonian to Campanian inoceramids)

Paris, J.P., P. Andreieff, & J. Coudray (1979)- Sur lôage Eocene superieur de la mise en place de la nappe ophiolitique de Nouvelle Caledonie, unite du charriage oceanique periaustralien, deduit dôobservations nouvelles sur la Serie de Nepoui. Comptes Rendus Academie Sci., Paris, 288, 22, p. 1659-1661.
('On the Eocene age of the ophiolite nappe emplacement of New Caledonia, peri-Australian oceanic nappe, deducted from new observations on the Nepoui series')

Paris, J.P. & J.D. Bradshaw (1981)- Paleogeography and geotectonics of New Caledonia and New Zealand in the Triassic and Jurassic. In: Int. Symp. Geodynamics in the Southwest Pacific, Noumea, New Caledonia, Editions Technip, Paris, p. 209-216.

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('New Caledonia from the Permian to the Miocene: cartographic data and geotectonic hypotheses')

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Park, C.H., K. Tamaki & K. Kobayashi (1990)- Age-depth correlation of the Philippine Sea back-arc basins and other marginal basins in the world. Tectonophysics 181, p. 351-371.
(Basement depths of Philippine Sea range from 3200-6000m, with ages from 0-60 Ma. Depth of Philippine Sea ~800m deeper than that of major ocean floors of same age. Young back-arc basins (<10 Ma) both shallower and deeper than major oceans, depending on dip angles of corresponding subducting slabs: shallower back-arc basins above gently dipping slabs, deeper basins over steeply dipping slabs. Back-arc basins older than 15 Ma, always deeper than major oceans and follow age-depth curve of Philippine Sea back-arc basins)

Parrot, J.F. & F. Dugas (1980)- The disrupted ophiolitic belt of the southwest Pacific: evidence of an Eocene subduction zone. Tectonophysics 66, 4, p. 349-372.
(PNG, Solomon, New Hebrides and New Caledonia ophiolitic massifs formed in intra-oceanic subduction zone in Eocene in SW Pacific, as suggested by age of ophiolite-related metamorphic soles. When subduction involves continental crust, amphibolites-blueschists form (PNG, New Caledonia). When subduction in intra-oceanic environment (Solomon islands, New Hebrides) only amphibolites and greenschists formed. Ophiolitic belt created by Eocene subduction disrupted by later transcurrent faults, more recent spreading phenomena and two other subductions (Oligocene-Miocene and Recent))

Pearce, J.A., P.D. Kempton & J.B. Gill (2007)- Hf-Nd evidence for the origin and distribution of mantle domains in the SW Pacific. Earth Planetary Sci. Letters 260, p. 98-114.
(Pb and Hf-Nd isotopes can be used to distinguish lavas of SW Pacific as derived from two mantle domains: (1) Pacific-like character and (2) Indian-like character (present today under Lau Basin, Fiji and N Fiji Basin))

Pearson, P.N. (1995)- Planktonic foraminifer biostratigraphy and the development of pelagic caps on guyots in the Marshall Islands Group. In: J. Haggerty et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 144, p. 21-59.
(online at: www-odp.tamu.edu/publications/144_sr/VOLUME/CHAPTERS/sr144_02.pdf)
(Five Marshall Islands group seamounts drilled on ODP Leg 144, three with thick caps of unconsolidated latest Oligocene- Holocene pelagic sediment (Limalok/ Site 871, Lo-En/ Site 872, Wodejebato/ Site 873). Significant hiatus between drowning of M Eocene carbonate platform/ Cretaceous volcanics and onset of pelagic sediment accumulation)

Pelletier, B. (2007)- Geology of the New Caledonia region and its implications for the study of the New Caledonian biodiversity. In: C. Payri & B. Richer de Forges (eds.) Compendium of marine species in New Caledonia, Forum BIOdiversite des Ecosystemes coralliens, Documents Scient. Techn. IRD, 117, p. 19-32.
(online at: http://nouvelle-caledonie.ird.fr/science-en-partage/editions/....)
(Concise review of New Caledonia geology. Loyalty Ridge considered to be Eocene island Arc in most reconstructions; possibly liks to Eocene D'Entrecasteaux zone subduction zone)

Pelletier, B., M. Meschede, T. Chabemaud, P. Roperch & X. Zhao (1994)- Tectonics of the Central New Hebrides Arc, North Aoba Basin. In: H.G. Greene et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 134, p. 431-444.
(online at: www-odp.tamu.edu/publications/134_sr/volume/chapters/sr134_24.pdf)
(Late Miocene- Pleistocene tectonic history recorded in N Aoba Basin and relation to onshore geology of New Hebrides Island Arc-d'Entrecasteaux Zone collision)

Petterson, M.G. (2004)- The geology of north and central Malaita, Solomon Islands; the thickest and most accessible part of the world's largest (Ontong Java) ocean plateau. In: J.G. Fitton et al. (eds.) Origin and evolution of the Ontong Java Plateau, Geol. Soc., London, Spec. Publ. 229, p. 63-81.
(Geology of Malaita reflects position as obducted part of Ontong Java Plateau. Cretaceous deep water basalt basement sequence up to 3-4 km thick, overlain by 1-2 km-thick Cretaceous-Pliocene pelagic sediments. Pelagic section starts with Aptian-Albian bedded radiolarian chert and is punctuated by alkaline basalt volcanism in Eocene (44 Ma) and intrusion of alnoites in Oligocene. All deformed by intense M Pliocene event)

Petterson, M.G., T. Babbs, C.R. Neal, J.J. Mahoney et al. (1999)- Geological-tectonic framework of Solomon Islands, SW Pacific: crustal accretion and growth within an intra-oceanic setting. Tectonophysics 301, p. 35-60.
(Solomon Islands complex collage of crustal units or terrains (here called 'Solomon block'), formed and accreted within an intra-oceanic environment since Cretaceous)

Petterson, M.G., C.R. Neal, J.J. Mahoney, L.W.Kroenke, A.D. Saunders, T.L. Babbs et al. (1997)- Structure and deformation of north and central Malaita, Solomon Islands: tectonic implications for the Ontong Java Plateau-Solomon arc collision, and for the fate of oceanic plateaus. Tectonophysics 283, p. 1-33.
(Island of Malaita represents obducted S margin of Ontong Java Plateau. Basement of Malaita formed during first plateau-building magmatic event at ~122 Ma (~Aptian), then drifted N, amassing a 1-2 km of Cretaceous-Pliocene pelagic sediment (Aptian radiolarian chert and U Aptian-Eocene planktonic foram limestones), punctuated by alkaline basalt volcanism in Eocene at ~44 Ma and ultramafic (alnoite) intrusive activity in Oligocene at ~34 Ma. Short compressive to transpressive deformation event in M Pliocene)

Phinney, E., P. Mann, M.F. Coffin & T.H. Shipley (1999)- Sequence stratigraphy, structure, and tectonic history of the southwestern Ontong Java Plateau adjacent to the North Solomon Trench and Solomon Island Arc. J. Geophysical Research 104, B9, p. 20449-20446.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1999JB900169/pdf)
(Ontong Java Plateau is largest and thickest oceanic plateau on Earth and actively converging on Solomon island arc. Seismic data from SW Ontong Java Plateau/ N Solomon Trench show 3 megasequences:OJ1 E Cretaceous upper igneous crust of OJ Plateau and correlates with basalt dated at 122-125 Ma on Malaita island; OJ2 late Cretaceousmarine mudstone (122 -92 Ma); OJ3 late Cretaceous- Quaternary pelagic cover. At 92 Ma second mantle plume caused widespread volcanism on plateau. At ~15 Ma S Ontong Java Plateau

deformed by normal faults during approach toN Solomon Trench. From 4 to 0 Ma, Malaita Accretionary Prism formed during collision)

Phinney, E., P. Mann, M.F. Coffin & T.H. Shipley (1999)- Sequence stratigraphy, structural style, and age of deformation of the Malaita accretionary prism (Solomon arc-Ontong Java Plateau convergent zone). Tectonophysics 389, p. 221-246.
(Malaita accretionary prism formed during late Neogene (5-0 Ma) convergence between ~33km thick crust of Ontong Java oceanic plateau and 15km thick Solomon island arc)

Pickard, A.L., C.J. Adams & M.E. Barley (2000)- Australian provenance for Upper Permian to Cretaceous rocks forming accretionary complexes on the New Zealand sector of the Gondwanaland margin. Australian J. Earth Sci. 47, 6, p. 987-1007.
(Detrital zircon ages for Permian-Cretaceous turbiditic quartzo-feldspathic sandstones from Torlesse and Waipapa terranes of New Zealand. Major Permian-Triassic (especially ~240-250 Ma) and minor E Paleozoic-Mesoproterozoic age peaks indicate sediment from New England Orogen, NE Australia. Late Permian- M Triassic Torlesse/ Waipapa turbidite fans linked to uplift of orogen during 265-230 Ma (Late Permian- M Triassic) Hunter-Bowen event. Post-Triassic depocentres received sediment from relict orogen and from Jurassic and Cretaceous volcanic provinces now offshore from S Queensland and N NSW. Meso- and Neoproterozoic age components cannot be matched with source terranes in Australian-Antarctic Precambrian craton, and possibly originated in Proterozoic cores of Cathaysia and Yangtze Blocks of SE China)

Pillet R., D. Rouland, G. Roult & D.A. Wiens (1999)- Crust and upper mantle heterogeneities in the Southwest Pacific from surface wave phase velocity analysis. Physics Earth Planetary Interiors 110, p. 211-234.
(New tomographic imaging shows large velocities contrasts along Solomon, New Hebrides and Fiji-Tonga trenches. Lowest anomalies under N and S Fiji basins and Lau Basin, highest values beneath Pacific plate and E part of Indian plate downgoing under N Fiji Basin. Continental regions (E Australia, New Guinea, Fiji Islands, New Zealand) low velocities, due to thick continental crust, whereas Tasmanian, D'Entrecasteaux and N and Fiji basins suggestive of thinner oceanic crust)

Pirard, C., J. Hermann & H. St.C. OόNeill (2015)- Petrology and geochemistry of the crust-mantle boundary in a nascent arc, Massif du Sud Ophiolite, New Caledonia, SW Pacific. J. Petrology, 54, 9, p. 1759-1792.
(online at: http://petrology.oxfordjournals.org/content/early/2013/05/30/petrology.egt030.full.pdf)
(Massif du Sud ophiolite, New Caledonia, one of largest exposed ultramafic bodies on Earth. Ophiolite consists of mantle section of ultra-depleted harzburgite, overlain by large dunite zone and with gabbros at top of massif. Massif du Sud represents crust- mantle section in nascent arc)

Pirard, C. & C. Spandler (2017)- The zircon record of high-pressure metasedimentary rocks of New Caledonia: implications for regional tectonics of the south-west Pacific. Gondwana Research 46, p. 79-94.
(Zircon ages from clastic metasediments across high-P metamorphic belt of N New Caledonia. Bulk of low-metamorphic Koumac and blueschist-facies Diahot sequences erosional products of Norfolk Ridge, transported E-wards and accumulated into E New Caledonia Basin. Paleozoic and Precambrian zircons were originally sourced from Paleozoic orogenic belts of E margin of Australia, and possibly from now-submerged continental ridges. Mesozoic zircons (140-80 Ma) derived from volcanic arc activity on E margin of Gondwana)

Piroutet, M. (1917)- Etude stratigraphique sur la Nouvelle Caledonie. Thesis Doct. Sciences, Faculte Sci. Paris, Protat Freres, Macon, p. 1-313. *(Unpublished)*
('Stratigraphic studies of New Caledonia')

Potel, S. (2001)- Very low-grade metamorphism of northern New Caledonia. Ph.D. Thesis Universitat Basel, p. 1-206.
(online at: http://www1.uni-giessen.de/fbr08/geolith/pdf-homepage/Thesis%20Potel.pdf)

Potel, S. (2007)- Very low-grade metamorphic study in the pre-Late Cretaceous terranes of New Caledonia (southwest Pacific Ocean). Island Arc 16, p. 291-305.

(Pre-Late Cretaceous terranes from C New Caledonia metamorphosed under very low-grade conditions by two high-P/low-T events: (1) Late Jurassic (2) Eocene, overprinting Late Jurassic metamorphism in N part of area)

Potel, S., R. Ferreiro Mahlmann, W.B. Stern, J. Mullis & M. Frey (2006)- Very low-grade metamorphic evolution of pelitic rocks under high-pressure/ low-temperature conditions, NW New Caledonia (SW Pacific). J. Petrology 47, 5, p. 991-1015.
(online at: http://petrology.oxfordjournals.org/content/47/5/991.full.pdf+html)
(P-T gradient in Late Eocene low-T/high-P metamorphic belt in N New Caledonia increases from SW to NE. Metapelites in pumpellyite-prehnite and blueschist zones contain lawsonite, Mg-carpholite, Fe-stilpnomelane and Fe-glaucophane, indicating progression of metamorphic conditions from<0·3 GPa/ 250°C in kaolinite-rock in SW, up to 1·5 GPa/ 410°C in lawsonite- glaucophane-bearing sample in NE of Diahot terrane)

Pownall, J.M., G.S. Lister & W. Spakman (2017)- Reconstructing subducted oceanic lithosphere by ŕreverse-engineeringô slab geometries: The northern Philippine Sea Plate. Tectonics 36, 9, p. 1814-1834.
(On restoring pre-subduction configuration of Ryukyu and Shikoku slabs, NW Philippine Sea)

Premoli, C. (1987)- Gold mineralization of New Caledonia. In: Pacific Rim Congress 87, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 373-378.

Premoli Silva, I. (1986)- A new biostratigraphic interpretation of the sedimentary record recovered at Site 462, Leg 61, Nauru Basin, Western Equatorial Pacific. Initial Reports Deep Sea Drilling Project (DSDP) 89, p. 311-319.
(online at: www.deepseadrilling.org/89/volume/dsdp89_07.pdf)
(Upper Cretaceous- Pleistocene section above basaltic complex in Hole 462 in Nauru Basin, S of Marshall Islands. Campanian- Maastrichtian with larger foraminifera Pseudorbitoides, Vaughanina, Lepidorbitoides(?), Orbitocyclina, Asterorbis and Sulcoperculina. Late Oligocene with Miogypsina ubaghsi and reworked Eocene)

Premoli Silva, I. & C. Brusa (1981)- Shallow-water skeletal debris and larger foraminifers from Deep Sea Drilling Project Site 462, Nauru Basin, Western Equatorial Pacific. Initial Reports Deep Sea Drilling Project (DSDP) 61, p. 439-473.
(online at: www.deepseadrilling.org/61/volume/dsdp61_05.pdf)
(U Cretaceous- Pleistocene section above basaltic complex in Hole 462 in Nauru Basin, S of Marshall Islands)

Premoli Silva, I., A. Nicora & A. Arnaud Vanneau (1995)- Upper Cretaceous larger foraminifer biostratigraphy from Wodejebato Guyot, Sites 873 through 877. In: J.A. Haggerty et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 144, p. 171-197.
(online at: www-odp.tamu.edu/publications/144_sr/VOLUME/CHAPTERS/sr144_09.pdf)
(occ. Pseudorbitoides, Omphalocyclus, Orbitoides, Asterorbis, Sulcoperculina off N Marshall Islands)

Premoli Silva, I., A. Nicora, A. Arnaud Vanneau, A.F. Bud, G.F. Caiman & J.P. Masse (1995)- Paleobiogeographic evolution of shallow-water organisms from the Aptian to the Eocene in the western Pacific. In: J.A. Haggerty, I. Premoli Silva et al. (eds.) Proc. ODP, Scient. Results 144, p. 887-893.
(Shallow-water organisms from four guyots in W Pacific show changes in bioprovinces through time. Tethyan low-latitude bioprovince characterizes Early Aptian worldwide. Late Albian mainly cosmopolitan forms, with elements restricted to Caribbean-C American region or Mediterranean, suggest two bioprovinces differentiated at low latitude. Late Campanian-Maastrichtian under influence of Caribbean, but foram assemblages also include Mediterranean elements, suggesting colonization occurred both W-ward and E-ward. In latest Paleocene-early M Eocene prevalent migration from Mediterranean to Pacific)

Prinzhofer, A. (1981)- Structure et petrologie d'un cortege ophiolitique: le Massif du Sud (Nouvelle Caledonie). Doct. Thesis Thesis Ecole Nat. Super. Mines Paris, p. 1-237. *(Unpublished)*
(Cluzel et al. (2012): Only known attempt to radiometric dating of New Caledonia ultramafic complex. Gabbro sample yielded Sm-Nd age of Early Cretaceous (131± 5 Ma), but deemed to be less reliable)

Prinzhofer, A. & A. Nicolas (1980)- The Bogota Peninsula, New Caledonia: a possible oceanic transform fault. J. Geology 88, p. 387-398.
(N part of Bogota Peninsula at NE coast of New Caledonia dextral shear zone within ultramafic nappe of sheared peridotites with syntectonic dikes and hydrothermal alteration that occurred in oceanic upper mantle environment (transform fault))

Prinzhofer, A., A. Nicolas, D. Cassard, J. Moutte, M. Leblanc, J.P. Paris & M. Rabinovitch (1980)- Structures in the New Caledonia peridotites-gabbros: implications for oceanic mantle and crust. Tectonophysics 69, p. 85-112.
(Peridotite-gabbro nappe of Massif du Sud remarkably homogeneous structures over 6000 km2.Contacts between lithological units horizontal. Flow lineations in mantle rocks oriented N-S, suggesting E-W trending oceanic ridge)

Quesnel, B. (2015)- Alteration supergene, circulation des fluides et deformation interne du massif de Koniambo, Nouvelle-Caledonie: implication sur les gisements nickeliferes lateritiques. Doct. Thesis Universite Rennes, p.
(online at: https://core.ac.uk/download/pdf/46807769.pdf)
('Supergene alteration, circulation of fluids and internal deformation of the Koniambo Massif, New Caledonia: implication for the nickeliferous lateritic deposits')

Quesnel, B., C.L.C. de Veslud, P. Boulvais, P. Gautier, M. Cathelineau & M. Drouillet (2017)- 3D modeling of the laterites on top of the Koniambo Massif, New Caledonia: refinement of the per descensum lateritic model for nickel mineralization. Mineralium Deposita 52, 7, p. 961-978.
(Weathering of peridotite nappe in New Caledonia created common laterites and some of largest nickel deposits in world. Koniambo nickel ore deposit three kinds of geometry: (1) thick (20-40m) laterite over saprolite, mainly on topographic highs; (2) a thin laterite cover on areas with gentle slopes; (3) exposure of saprolite without laterite cover. Highest Ni on slopes where laterite cover thin or absent, lowest Ni in topographic highs under thickest laterite cover)

Quesnel, B., P. Gautier, P. Boulvais, M. Cathelineau, P. Maurizot, D. Cluzel, M. Ulrich et al. (2013)- Syn-tectonic, meteoric water-derived carbonation of the New Caledonia peridotite nappe. Geology, 41, 10, p. 120-125.
(Serpentine sole of New Caledonia peridotite nappe at Koniambo with many magnesite veins, emplaced during pervasive top-to-SW shear deformation. O and C isotopes of magnesite suggest origin from meteoric fluids)

Quesnel, B., P. Gautier, M. Cathelineau, P. Boulvais, C. Couteau & M. Drouillet (2016)- The internal deformation of the peridotite nappe of New Caledonia: a structural study of serpentine-bearing faults and shear zones in the Koniambo Massif. J. Structural Geol. 85, p. 51-67.
(Koliambo peridotite nappe upper level at least two deformation events(1) with growth of antigorite (WNW-ESE extension), (2) with growth of polygonal serpentine (NW-SE compression). Lower level coincides with the 'serpentine sole' of nappe, consisting of massive tectonic breccias overlying layer of mylonitic serpentinites. Intermediate level with several m-thick conjugate shear zones accommodating NE-SW shortening)

Quilty, P.G. (1993)- Tasmantid and Lord Howe seamounts: biostratigraphy and palaeoceanographic significance. Alcheringa 17, p. 27-53.

Quinn, T.M., F.W. Taylor & A.N. Halliday (1994)- Strontium-isotopic dating of neritic carbonates at Bougainville Guyot (Site 831), New Hebrides Island Arc. In: J.Y. Collot et al. (eds.) Proc. Ocean Drilling Program (ODP), Initial Reports 134, p. 89-95.
(online at: www-odp.tamu.edu/publications/134_sr/VOLUME/CHAPTERS/sr134_06.pdf)
(ODP Site 831 penetrated 727.5 m of carbonate over andesite basement, 707.5 m of neritic carbonates overlain by 20m of pelagic carbonate. Basal 497m of neritic limestone totally calcitized. Sr isotopes stratigraphic conclusions: (1) Pleistocene (102.4-391.1 mbsf); (2) Miocene (410.3- 669.5 mbsf); and (3) Oligocene (678.8-

727.50 mbsf. Several samples near bottom show reversed age vs. depth trend, probably product of post-depositional rock-water interaction)

Rangin, C., E.A. Silver & K. Tamaki (1995)- Closure of Western Pacific marginal basins: rupture of the oceanic crust and the emplacement of ophiolites. In: B. Taylor & J. Natland (eds.) Active margins and marginal basins of the Western Pacific, American Geophys. Union (AGU), Geophys. Monograph 88, p. 405-417.
(Most marginal basins of W Pacific region opened in Cenozoic time and many presently closing (Celebes Sea, Sulu Sea, Japan Sea). Oceanic floors of marginal basins deformed locally before consumed along young subduction zones, with parts of sedimentary section and crust incorporated into accretionary wedges. Initial flexural stage affecting crust before rupture local process)

Ranken, B., R.K. Cardwell & D.E. Karig (1984)- Kinematics of the Philippine Sea Plate. Tectonics 3, 5, p. 555-575.
(Philippine Sea Plate of SW Pacific. New set of Eurasia-Philippine, Pacific-Philippine and Caroline-Pacific plate rotation vectors)

Rawling, T.J. (1998)- Oscillating orogenesis and exhumation of high-pressure rocks in New Caledonia, SW Pacific. Ph.D. Thesis, Monash University, Melbourne, p. *(Unpublished)*

Rawling, T.J. & G.S. Lister (1999)- Oscillating modes of orogeny in the Southwest Pacific and the tectonic evolution of New Caledonia. In: U. Ring et al. (eds.) Exhumation processes: normal faulting, ductile flow and erosion, Geol. Soc., London, Spec. Publ. 154, p. 109-127.
(High-pressure schist of New Caledonia reflects two switches from large-scale crustal shortening to extensional tectonism: (1) high P metamorphism associated with ophiolite obduction from NE, followed by exhumation in late Middle- Late Eocene (~40-36 Ma); (2) mega- folding, followed by M-L Miocene?basin and range style normal faulting)

Rawling, T.J. & G.S. Lister (2002)- Large-scale structure of the eclogite-blueschist belt of New Caledonia. J. Structural Geol. 24, 8, p. 1239-1258.
(Eclogite-blueschist belt of New Caledonia. Early shear zones and high-P metamorphism associated with M Eocene (~38-45 Ma) overthrusting of ultramafic sheet. Extensional tectonism plays major role in exhumation and final exposure of high-P metamorphic rocks. Middle-stage shear zones related to large-scale continental extension, during which high-P rocks were exhumed. Extended crust subsequently folded during renewed compression, producing orogen-scale antiform throughout high-P belt. Late stage shear zones formed during younger extension. Young normal faults caused late block-faulting. Earlier interpretations of Oligocene metamorphic core complex model rejected: allochthonous slices of high-P rocks are draped over younger, lower-grade rocks in core of antiform)

Regnier, M (1988)- Lateral variation of upper mantle structure beneath New Caledonia determined from P-wave receiver function: evidence for a fossil subduction zone. Geophysical J. Int. 95, p. 561-577.
(P wave velocities from earthquakes suggest N-dipping low velocity zone below New Caledonia, possibly remnant of Eocene subduction zone below New Caledonia continental block (which separated from Gondwana in Late Cretaceous))

Resig, J.M., V. Buyannanonth & K.J. Roy (1976)- Foraminiferal stratigraphy and depositional history in the area of the Ontong Java Plateau. Deep Sea Research 23, 5, p. 441-456.
(Foraminifera from 54 cores from Ontong Java Plateau identified outcrops as old as Late Eocene. Relationship between radiolarian concentrations and bathymetry suggest slopes accumulated in deeper water than synchronous deposits on plateau surface, indicating topographic high existed at least since Early Tertiary)

Richards, J.R., J.A. Cooper & P.J. Coleman (1966)- Potassium- Argon measurements of the age of basal schists in the British Solomon Islands as an island arc. Nature 211, 5055, p. 1251-1252.
(Basal schists of Choiseul Island mainly amphibilites, probably derived from basic lavas. Radiometric ages)

Richter, C. & J.R. Ali (2015)- Philippine Sea Plate motion history: Eocene-Recent record from ODP Site 1201, central West Philippine Basin. Earth Planetary Sci. Letters 410, p. 165-173.
(Sediments at ODP Site 1201 lower sequence of volcaniclastic turbidites sourced from Palau-Kyushu Ridge and upper succession of Late Oligocene- E Pliocene red deep-sea clays. Paleolatitudes derived from sediments support N-ward movement of plate since Eocene. Basaltic basement indicates paleoposition of ~7.1° S in M Eocene)

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(Present double chain configuration of Solomon Island arc can be explained by Neogene displacement of formerly single linear chain of islands. Central part of original arc (Bougainville, Choiseul, Santa Ysabel, Guadalcanal and San Cristobal) displaced to NE as consequence of attempted subduction of Woodlark spreading system. Malaita arose on NE side of arc due to interaction between arc and Pacific Ocean floor. Volcanic islands of New Georgia group formed to SW in response to subduction of spreading ridge)

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(Well-preserved radiolarian faunas in Albian pelagic sediments above basalt from four DSDP Leg 62 sites in W Pacific. 21 new species, but also presence of many 'Tan Sin Hok 1927 species', incl. Conosphaera tuberosa, Archaeodictyomitra pseudoscalaris, Cyrtocapsa asseni, C. grutterinki, C. houwi, C. molengraaffi, Eucyrtidium thiensis, Eucyrtis molengraaffi, Lithocampe pseudochrysali, Pseudodictyomitra lilyae + ~10 others)

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(Silicic caldera-forming eruptions can be significant component of oceanic subduction systems. Kermadec arc in SW Pacific is in intra-oceanic convergent system, with mainly submarine volcanoes. Despite simple oceanic tectonic setting, felsic magmatism widespread. Probably result of crustal anatexis)

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(Eclogite-facies metapelite from N New Caledonia yields zircon SHRIMP U-Pb ages of 44 Ma (M Eocene). Protoliths of eclogite facies rocks are sediments formed between 85-55 Ma in back-arc basin. Subduction initiated at ~55 Ma and stopped at 44 Ma during attempted subduction of Norfolk Ridge continental crust. The 44 Ma age for peak HP-LT metamorphism predates by 10 My Late Eocene obduction of New Caledonia ultramafic nappe. Revised model for New Caledonia with multiple Eocene compression and extension episodes)

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(Progressive movement of Gondwana away from Carboniferous-Permian South Pole-centred position led to disappearance of temperature barriers and climate equalization across E Gondwana. Cold-temperate Triassic-E Jurassic 'Maorian' faunas of New Zealand gave way to subtropical/warm-temperate 'Tethyan' faunas in M-L Jurassic)

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(Ammonite assemblages of Late Jurassic of New Zealand contain Tethyan elements (PNG, Indonesia, Himalayas, Middle East, etc.). Leiostraca (Phylloceras, Lytoceras, etc.) are essentially circum- Gondwanan. Trachyostraca more restricted affinities. Most paleogeographical reconstructions of Late Jurassic show New Zealand close to South Pole, but more likely in mid-latitudes (~40°-50°S))

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(Deep water New Caledonia Trough and Norfolk Ridge formed in Eocene and Oligocene, associated with onset of subduction and back-arc spreading at Australia-Pacific plate boundary. Tectonic model involves initial Cretaceous rift, strongly modified by Cenozoic subduction initiation)

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(Godzilla megamullion largest known oceanic core complex, adjacent to extinct backarc spreading center of Parece Vela Basin in Philippine Sea. Zircon U-Pb dating of gabbroic and leucocratic rocks suggest fault-induced spreading over ~125 km lasted for ~4 Myrs, with continuous magmatic accretion at spreading axis. Latest magmatism constrains cessation of spreading to ~7.9 Ma or later)

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(online at: https://www.bgs.ac.uk/research/bufi/downloads/S176SimonTapster2014Thesis.pdf)
(Convergence between Ontong Java Plateau (world's largest and thickest oceanic plateau) and intra-oceanic Solomon Island Arc, represents youngest arc- plateau collision, and prime example of subduction zone polarity reversal. Collision implicated as cause of several Cenozoic plate motion changes. Guadalcanal Island magmas emplaced at ~23.7 Ma contain Eocene-Archean-aged zircons first evidence of continent-derived material in Solomon Island Arc. Microcontinental plateau- arc collision likely caused transfer of zircons to Guadalcanal's crust and triggered Eocene-aged ophiolite obduction in arc. Changes to magma geochemistry at ~23 Ma coeval with resumption of typical plate motions, following slowing and deflection of Australian Plate at ~26–23 Ma and slab detachment at ~23 Ma, after Ontong Java Plateau collision. Arc magmatism rejuvenated before ~7.7 Ma. Slab detachment crucial for causing M Miocene reversal of subduction zone polarity)

Tapster, S., N.M.W. Roberts, M.G. Petterson, A.D. Saunders & J. Naden (2014)- From continent to intra-oceanic arc: zircon xenocrysts record the crustal evolution of the Solomon island arc. Geology 42, 12, p. 1087-1090.

(Latest Oligocene (26-24 Ma) Umasani pluton on Guadalcanal in intra-oceanic Solomon island arc (SW Pacific Ocean) with Eocene- Archean-age zircon xenocrysts. Older zircon populations of ~39-33 Ma, 71-63 Ma correlate with previous magmatism in arc. ~96 Ma zircon population may be derived from Cretaceous ophiolite basement crust or region-wide continental rift-related magmatism. E Cretaceous- Archean zircon xenocryst ages imply continental origins and cryptic source within arc crust. Caution with use of zircons to determine provenance and setting of ancient arc terranes)

Tarduno, J.A., W.V. Sliter, L. Kroenke, M. Leckie, H. Mayer, J.J. Mahoney et al. (1991)- Rapid formation of Ontong Java Plateau by Aptian mantle plume volcanism. Science 254, 5030, p. 399-403.
(Timing of flood basalt volcanism of Ontong Java Plateau estimated from paleomagnetic and paleontologic data. Much of plateau formed rapidly in <3 Myrs in E Aptian. Origin tied to impingement at base of oceanic lithosphere by head of large mantle plume. Formation of OJP may have led to rise in sea level that induced global oceanic anoxia. Carbon dioxide emissions likely contributed to mid-Cretaceous greenhouse climate, but did not provoke major biologic extinctions)

Taylor, B. (2006)- The single largest oceanic plateau: Ontong Java-Manihiki-Hikurangi. Earth Planetary Sci. Letters 241, p. 372-380.
(Ontong Java Plateau is largest oceanic mafic igneous province. Emplaced at ~120 Ma, with smaller magmatic pulse of ~90 Ma. Manihiki and Hikurangi Plateaus now separated from OJP by ocean basins, but originally formed as one plateau with Ontong Java)

Taylor, B. & A.M. Goodliffe (2004)- The West Philippine Basin and the initiation of subduction, revisited. Geophysical Research Letters 31, 12, L12602, p. 1-4.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2004GL020136/epdf)
(New bathymetry and existing geophysical data suggest direction of W Philippine Basin seafloor spreading rotated 100° CCW between 49 and 33 Ma. Mindanao Fracture Zone separates WPB from Palau Basin to S. WPB opening was contemporaneous with early Izu-Bonin-Mariana subduction, whose arc volcanism began by 50 Ma, producing >1000 km of arc-parallel spreading in Mariana segment of Eocene IBM arc/forearc. Initial IBM subduction cut across pre-existing structures (remnant arcs, fracture zones and spreading fabric))

Taylor, B. & F. Martinez (2003)- Back-arc basin basalt systematics. Earth Planetary Sci. Letters 210, p. 481-497.
((see also corrigendum, vol. 214, p. 679) Mariana, E Scotia, Lau and Manus back-arc basins spreading rates from slow (<50 mm/yr) to fast (>100 mm/yr) and extension axes located from 10-400 km behind their island arcs. Composition of lavas from active backarc basin spreading centers include arc-like components and MORB-like end-members. Axial lava compositions from these basins indicate melting of mid-ocean ridge basalt-like sources, but with added previously depleted, water-rich arc-like components)

Tejada, M.L.G., J.J. Mahoney, R.A. Duncan & M.P. Hawkins (1996)- Age and geochemistry of basement and alkalic rocks of Malaita and Santa Isabel, Solomon Islands, southern margin of Ontong Java Plateau. J. Petrology 37, 2, p. 361-394.
(online at: http://petrology.oxfordjournals.org/content/37/2/361.full.pdf)
(Basaltic basement of Malaita and Santa Isabel islands part of Ontong Java plateau magmatism, 1600km away. Ar-Ar ages of Malaita Older Series and Sigana Basalt lavas 121.3 ± 0.9 Ma and 92.0 ± 1.6 Ma, suggesting two short-lived, voluminous plateau-building episodes. Younger Series in S Malaita Ar- Ar age of 44 Ma. Juxtaposed against OJP crust in Santa Isabel is ~62-46 Ma 'ophiolitic' assemblage of Pacific MORB-like basalts, probably formed in arc-backarc setting before Late Tertiary collision of OJP and old N Solomon Trench)

Tejada, M.L.G., J.J. Mahoney, C.R. Neal, R.A. Duncan & M.G. Petterson (2002)- Basement geochemistry and geochronology of Central Malaita, Solomon Islands, with implications for the origin and evolution of the Ontong Java Plateau. J. Petrology 43, 3, p. 449-484.
(online at: http://petrology.oxfordjournals.org/content/43/3/449.full.pdf+htm)
(Sections of basalt basement in C Malaita 0·5–3.5 km thick and resemble expanded version of Ontong Java Plateau at ODP Site 807. Ar-Ar ages of 121-125 Ma identical to Site 807, S Malaita, Ramos, Santa Isabel and

DSDP Site 289. The ~90 Ma eruptive episode seen in Santa Isabel, San Cristobal, and Sites 803 and 288 not present. C Malaitan basalts two distinct ocean-island-like mantle sources, not from normal ocean-ridge-type mantle. Plume-head may account for geochemical characteristics, but observed stratigraphic succession requires special conditions for latter model. Other features of Ontong Java Plateau that do not fit plume-head model: at least two important, geochemically similar eruptive episodes ~30 My apart, lack of obvious plume-tail trace, and lack of evidence for emergence/uplift)

Timm, C., B. Davy, K. Haase, K.A. Hoernle, I.J. Graham, C.E.J. de Ronde, J. Woodhead, D. Bassett et al. (2014)- Subduction of the oceanic Hikurangi Plateau and its impact on the Kermadec arc. Nature Communications 5, 4923, p. 1-9.
(online at: www.nature.com/articles/ncomms5923)
(Large igneous province subduction at oceanic Hikurangi Plateau beneath S Kermadec arc, off N New Zealand. Large portion of Hikurangi Plateau (missing Ontong Java Nui piece) already subducted)

Timm, C., K. Hoernle, R. Werner, F. Hauff, P. van den Bogaard, P. Michael, M.F. Coffin & A. Koppers (2011)- Age and geochemistry of the oceanic Manihiki Plateau, SW Pacific: new evidence for a plume origin. Earth Planetary Sci. Letters 304, p. 135-146.
(Basement samples from Manihiki Plateau mainly tholeiites with minor basaltic andesites and hawaiites, with mean age of 124.6 ± 1.6 Ma. Geochemistry of Manihiki Plateau best explained by plume with three components, including recycled oceanic crustal-type component. Similarity in age and geochemical composition of Manihiki, Hikurangi and Ontong Java basement lavas)

Tissot, B. & A. Noesmoen (1958)- Les bassins de Noumea et de Bourail (Nouvelle Caledonie). Revue Inst. Francais Petrole 13, 5, p. 739-760.
('The Noumea and Bourail basins, New Caledonia'. Study of Eocene foreland basin)

Titus, S.J., S.M. Maes, B. Benford, E.C. Ferre & B. Tikoff (2011)- Fabric development in the mantle section of a paleotransform fault and its effect on ophiolite obduction, New Caledonia. Lithosphere 3, 3, p. 221-244.
(Bogota Peninsula shear zone interpreted as paleotransform fault in mantle section of New Caledonia ophiolite, with rotated foliation, pyroxenite dikes and 3km wide mylonitic zone. Ophiolite obduction and Neogene extension may have been controlled by preexisting fabrics and structures in oceanic lithosphere)

Todd, E. (2011)- The youngest rocks from an old arc and the oldest rocks from a juvenile one: the memoirs of a SW Pacific subduction zone. Ph.D. Thesis University of California, Santa Cruz, p. 1-275.
(History of Fiji-Tonga-Kermadec volcanic arc system, active for at least 50 My, resulting from W-ward subduction of Pacific Plate beneath Australian Plate)

Todd, R. (1957)- Geology of Saipan, Mariana Islands, Part 3. Paleontology, Smaller foraminifera. U.S. Geol. Survey (USGS) Prof. Papers, 280-H, p. 265-320.
(online at: http://pubs.usgs.gov/pp/0280e-j/report.pdf)
(Descriptions of planktonic and smaller benthic foraminifera from Late Eocene (172 species), Late Oligocene (61 species) E-M Miocene (161 species) sediments. Recent foram faunas dominated by Indo-Pacific reef genera Calcarina, Baculogypsina and also Marginopora)

Todd, R. (1966)- Smaller foraminifera from Guam. U.S. Geol. Survey (USGS) Prof. Paper 403-I, p. 113-141.
(online at: http://pubs.usgs.gov/pp/0403i/report.pdf)
(Eocene- Recent smaller foraminifera from Guam; see also Cole 1966)

Todd, R. (1970)- Smaller foraminifera of Late Eocene age from Eua, Tonga. U.S. Geol. Survey (USGS) Prof. Paper 640-A, p. 1-21.
(online at: http://pubs.usgs.gov/pp/0640a/report.pdf)
(Rich foram fauna, 95% planktonics, 16 species, incl. Hantkenina, Pseudohastigerina, Globorotalia cerroazulensis, Globigerina ampliapertura, G. gortanii, etc., Probably latest Eocene G. gortanii zone. Also

diverse smaller benthic foram fauna, dominated by Lenticulina, also nodosarids, buliminids, Oridorsalis, Asterigerina, Gyroidina, etc. Depth of deposition probably 200m or more)

Todd, R. & R. Post (1954)- Smaller foraminifera from Bikini drill holes. U.S. Geol. Survey (USGS) Prof. Paper, 260-N, p. 547-568.
(online at: http://pubs.usgs.gov/pp/0260m/report.pdf)
(Miocene- Recent smaller foram faunas from Bikini Atoll dominated by miliolids and peneroplids. Upper 95' of wells dominated by Calcarina spengleri (reef deposition). Deeper also C. hispida, Baculogypsina sphaerulata (reef; 115-136', Rotalia calcar and Calcarina delicata n. sp. (below 179'). Austrotrillina striata n.sp.)

Tommasi, A. & A. Ishikawa (2014)- Microstructures, composition, and seismic properties of the Ontong Java Plateau mantle root. Geochem. Geophys. Geosystems 15, p. 4547-4569.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2014GC005452)
(Study of peridotites and pyroxenite mantle xenoliths on Malaita, Ontong Java Plateau in W Pacific. Most of plateau thought to have formed in single massive E Cretaceous volcanism episode at ~122 Ma)

Tregoning, P. (2002)- Plate kinematics in the western Pacific derived from geodetic observations. J. Geophysical Research 107, B1, 2020, p. 7/1- 7/8.

Tregoning, P., F. Tan, J. Gilliland, H. McQueen & K. Lambeck (1998)- Present-day crustal motion in the Solomon Islands from GPS observations. Geophysical Research Letters 25, 19, p. 3627-3630.
(Global Positioning System measurements in Solomon Islands show active deformation between Pacific Plate and Solomon Arc block. Convergence at San Cristobal Trench ~52±4 mm/yr, with no apparent local deformation. Guadalcanal and Makira islands mainly moving with Pacific Plate, but probably minor decoupling from Pacific Plate of 14-23 mm/yr in direction of 75-85°)

Trescases, J.J. (1975)- Lœvolution geochimique supergene des roches ultrabasiques en zone tropicale- Formation des gisements nickeliferes de Nouvelle-Caledonie. Memoires ORSTOM 78, p.
(online at: https://dimenc.gouv.nc/sites/default/files/download/trescases.pdf)
('The supergene geochemical evolution of ultrabasic rocks in tropical zones - Formation of the nickel-bearing deposits of New Caledonia')

Tulloch, A.J., D.L. Kimbrough & R.A. Wood (1991)- Carboniferous granite basement dredged from a site on the southwest margin of the Challenger Plateau, Tasman Sea, New Zealand J. Geol. Geophysics 34, 2, p. 121-126.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1991.9514449)
(Granite dredged off basement horst on W margin of Challenger Plateau W of New Zealand yields 335 ± 7 Ma crystallisation age. Granite brecciated and hydrothermally altered around 95 Ma (major extension event?))

Tulloch, A.J., J. Ramezani, N. Mortimer, J. Mortensen, P. van den Bogaard & R. Maas (2009)- Cretaceous felsic volcanism in New Zealand and Lord Howe Rise (Zealandia) as a precursor to final Gondwana breakup. In: U. Ring & B. Wernicke (eds.) Extending a continent: architecture, rheology and heat budget. Geol. Soc. London, Spec. Publ. 321, p. 89-118.
(New radiometric ages for seven Cretaceous rhyolites, tuffs and granites from Zealandia spanning 30 Ma period from arc magmatism to continental break-up. 112 Ma tuffs known only from E Province, with Cretaceous normal fault system. 101 and 97 Ma rhyolites and tuffs occur across entire width and half length of Zealandia from near paleotrench to continental interior, indicating widespread and instantaneous extension. Extension directions all oriented ~30° oblique to margin. Zealandia rifting controlled by either >83 Ma capture of Zealandia by Pacific Plate and/or <83 Ma Zealandia-West Antarctica spreading)

Turner, C.C. & G.W. Hughes (1982)- Distribution and tectonic implications of Cretaceous-Quaternary sedimentary facies in Solomon Islands. Tectonophysics 87, p. 127-146.
(Sedimentary rocks of Solomon Islands- Bougainville Arc include Early Cretaceous- Eocene deep marine pelagic ooze, Oligocene- Miocene calcisiltite with thin tuffaceous beds, open marine Oligocene to Recent

hemipelagics and volcanogenic clastics, and Late Oligocene- Recent shallow marine carbonates. Pre-Oligocene pelagic sediments deposited contemporaneously with, and subsequent to, extrusion of oceanic tholeiite. Island arc volcanism commenced along length of Solomons in Oligocene)

Ujie, H. & K. Matsumaru (1977)- Stratigraphic outline of Haha-Jima (Hillsborough Island). Bonin Islands. Mem. Nat. Science Museum, Tokyo, 10, p. 5-18. *(in Japanese)*
(online at: http://ci.nii.ac.jp/naid/110004312860)
(Haha-Jima Island in S Japan Izu-Bonin arc, Philippine Sea, with 21 species of Eocene larger foraminifera in limestones associated with Eocene arc volcanics. M Eocene (Lutetian- Biarritzian) assemblages with large Nummulites boninensis, N. perforatus, Asterocyclina, etc. Late Eocene oolitic calcarenite rich in Pellatispira, Fasciolites javana boninensis, Fabiania, etc.)

Ulrich, M. (2010)- Peridotites et serpentinites du complexe ophiolitique de la Nouvelle-Caledonie. Etudes petrologiques, geochimiques et mineralogiques sur l'evolution d'une ophiolite de sa formation a son alteration. Doct. Thesis Universite de la Nouvelle Caledonie and Universite Joseph Fourier, Grenoble, p. 1-273.
(online at: http://tel.archives-ouvertes.fr/docs/00/50/98/48/PDF/Ulrich.pdf)
('Peridotites and serpentinites of the ophiolitic complex of New Caledonia- petrographic, geochemical and mineralogical studies of the evolution of the ophiolite from its formation to its alteration'. New Caledonia one of world's largest ophiolites (500km long, 50km wide' 2 km thick). Emplaced during Eocene, ophiolite is thrust over magmatic Poya terrane, composed of basalts from mid-ocean ridges, back arc basins and ocean islands. Age of ophiolite formation Late Cretaceous to E Eocene. Obduction completed by ~34 Ma)

Ulrich, M., C. Picard, S. Guillot, C. Chauvel, D. Cluzel & S. Meffre (2010)- Multiple melting stages and refertilization as indicators for ridge to subduction formation: the New Caledonia ophiolite. Lithos 115, p. 223-236.
(Two periods in tectonic evolution of SW Pacific: Campanian-Paleocene opening of marginal basins, followed by convergence during starting at Paleo-Eocene boundary (~55 Ma). Lherzolites from N part of New Caledonia ophiolite may be comparable to abyssal peridotites, formed in Late Cretaceous -Paleocene during opening of S Loyalty Basin (Poya terrane). Lherzolites underwent second stage of partial melting during E Eocene in forearc environment, responsible for boninitic melts and depleted peridotites (i.e. harzburgites) of bulk of ophiolite)

Ueda, Y. (2004)- Paleomagnetism of seamounts in the West Philippine Sea as inferred from correlation analysis of magnetic anomalies. Earth Planets and Space 56, p. 967-977.
(online at: www.terrapub.co.jp/journals/EPS/pdf/2004/5610/56100967.pdf)

Uruski, C. (2015)- The contribution of offshore seismic data to understanding the evolution of the New Zealand continent. In: G.M. Gibson et al. (eds.) Sedimentary basins and crustal processes at continental margins: from modern hyper-extended margins to deformed ancient analogues, Geol. Soc., London, Spec. Publ. 413, p. 35-51.

Uyeda, S. & Z. Ben-Avraham (1972)- Origin and development of the Philippine Sea. Nature 240, p. 176-178.

Uyeda, S. & R. McCabe (1983)- A possible mechanism of episodic spreading of the Philippine Sea. In: M. Hashimoto & S. Uyeda (eds.) Accretion tectonics in the Circum-Pacific Regions, Terrapub, Tokyo, p. 291-306.

Van de Beuque, S. (1999)- Evolution geologique du domaine peri-caledonien (Sud Ouest Pacifique). Ph.D. Thesis, Universite de Bretagne Occidentale, Brest, p. 1-270. *(Unpublished)*
('Geologic evolution of the peri-Caledonian domain (SW Pacific)')

Van de Beuque, S., J.M. Auzende, Y. Lafoy, G. Bernardel, A. Nercessian, M. Regnier et al. (1998)- Transect sismique continu entre lôarc des Nouvelles-Hebrides et la marge orientale de lôAustralie: programme FAUST (French Australian Seismic Transect). Comptes Rendus Academie Sciences Paris, Ser. 2, 327, p. 761-768.
('Continuous seismic transect between the New Hebrides Arc and the eastern Australian Margin: FAUST (French Australian Seismic Transect) program')

Van de Beuque, S., J.M. Auzende, Y. Lafoy & F. Missegue (1998)- Tectonique et volcanisme tertiare sur la ride de Lord Howe (Sud-Ouest Pacifique). Comptes Rendus Academie Sciences, Paris, Ser. 2, 326, p. 663-669.
('Tectonics and volcanism on the Lord Howe Rise (SW Pacific)')
(Geophysical data suggests two major events on Lord Howe Rise: (1) U Eocene- M Oligocene erosional phase due to emersion, synchroneous with U Eocene obduction of New Caledonian ophiolites; (2) volcanic phase from U Oligocene to end of subsidence of ridge)

Van de Beuque, S., H.M. Stagg, J. Sayers, J.B. Willcox & P.A. Symonds (2003)- Geological framework of the northern Lord Howe Rise and adjacent areas. Geoscience Australia, Canberra, Record 2003/01, p. 1-92.
(online at: https://www.ga.gov.au/products/servlet/controller?event=FILE_SELECTION&catno=41856)
(Lord Howe Rise 1600km long, and underlain by continental crust detached from E Australia during Tasman Sea margin breakup from 85-52 Ma). In E shallow, planated ?Paleozoic basement overlain by few 100m of Cenozoic oozes. In center rift basin(s) (Capel, Gower, Monawai). In W Dampier Ridge system of unknown origin. DSDP Site 208 penetrated U Cretaceous (Maastrichtian) sediments in central rift of Lord Howe Rise)

Van der Linden, W.J.M. (1969)- Extinct mid-ocean ridges in the Tasman Sea and in the Western Pacific. Earth Planetary Sci. Letters 6, p. 483-491.
(Recent magnetic surveys in the Tasman Sea suggest Dampier Ridge is extinct or dormant mid-ocean ridge)

Van Deventer, J. & J.A. Postuma (1973)- Early Cenomanian to Pliocene deep-marine sediments from North Malaita, Solomon Islands. J. Geol. Soc. Australia 20, 2, p. 145-150.
(Carbonates with volcanic lithic components deposited in deep-water environment in Tomba Anticline, NW Malaita. Pelagic Foraminifera indicate U Albian age for oldest rocks of Kwai River section (Planomalina buxtorfi, Rotalipora ticinensis, etc.), also Senonian- Maastrichtian (Globotruncana), Paleocene, Eocene, M and U Miocene and Pliocene. Suggests uninterrupted deep-water sedimentation from Albian- Pliocene in this area)

Varol, O. (1989)- Calcareous nannofossil study of the central and western Solomon Islands. In: J.G. Vedder & T.R. Bruns (eds.) Geology and offshore resources of Pacific Island arcs; Solomon Islands and Bougainville, Papua New Guinea regions, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser.12, p. 239-268.
(Latest Cretaceous- Late Pleistocene calcareous nannofossils identified from Solomon Islands. 18 new species)

Vially, R., Y. Lafoy, J.M. Auzende & R. France (2003)- Petroleum potential of New-Caledonia and its offshore basins. AAPG Int. Conf., Barcelona 2003, p. 1-6. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/abstracts/pdf/2003/intl/extend/ndx_83008.pdf)
(Unexplored New-Caledonia deep offshore basins appear to have petroleum potential, and can be considered as frontier basins for hydrocarbon exploration. N part (Grande Terre latitude) main target for conventionnal exploration with thick sedimentary layers and tilted fault blocks traps)

Vitale Brovarone, A. & P. Agard (2013)- True metamorphic isograds or tectonically sliced metamorphic sequence? New high-spatial resolution petrological data for the New Caledonia case study. Contrib. Mineralogy Petrology 166, 2, p. 451-469.
(Metamorphic belt of N New Caledonia HP metamorphism marked by gradual evolution from very low-grade lawsonite-bearing to high-grade epidote-bearing eclogite assemblages. New metamorphic dataset indicates two tectono-metamorphic domains, separated by P gap of 0.6 GPa, or ~20 km, but no T gap: (1) rich in metasediments with continuous metamorphic gradient starting at ~300°C and 0.8 GPa, reaching blueschist-eclogite transition at 500-520°C and 1.8 GPa; (2) rich in meta-ophiolites with constant metamorphism at 520-550°C and ~2.4 GPa. Isograds in blueschist, metasediment continuous metamorphic gradient corresponding to ~35 km of accreted material, later affected by decompressional thinning. Most significant metamorphic break lithological contrast (metasediment-rich vs. metamafic/ultramafic-rich domains))

Von Stackelberg, U. & U. von Rad (1990)- Geological evolution and hydrothermal activity in the Lau and North Fiji Basins, Southwest Pacific Ocean. Geol. Jahrbuch D92, p. 1-660.

Vozenin-Serra, C. & S.M. Cheboldaeff (1993)- Paleoxylologie du Trias superieur de Nouvelle-Caledonie; les bois a vaisseaux fibriformes et leur interet phylogenetique. Comptes Rendus Academie Sciences, Paris, Ser 2, 316, 6, p. 861-865.
(Occurrence of fibriform vessel-bearing woods in Late Triassic of Moindou area, SW New-Caledonia, suggests possible origin of Angiosperms in this area)

Vozenin-Serra, C. & J. Grant-Mackie (1996)- Les bois noriens des terrains Murihiku- Nouvelle-Zelande- interet paleophytogeographique. Palaeontographica B 241, 5-6, p. 99-125.
('The Norian wood fossils from the Murihiku- New Zealand terranes; phytogeogeographic significance')

Wandres, A.M. (2002)- Provenance study of the Torlesse Terranes and implications for the origin of the continental crust of eastern New Zealand. Ph.D. Thesis University of Canterbury, p. 1-241.
(online at: http://ir.canterbury.ac.nz/handle/10092/5730)
(Torlesse terranes in New Zealand E Province are large accretionary complexes with quartzo-feldspathic sandstones. Two terranes in South Island: Permian-Late Triassic Rakaia terrane and Late Jurassic- Early Cretaceous Pahau terrane. All studies point to continental arc/cratonic provenance)

Wandres, A.M. & J.D. Bradshaw (2005)- New Zealand tectonostratigraphy and implications of conglomeratic rocks for the configuration of the SW Pacific of Gondwana. In: A.P.M. Vaughan et al. (eds.) Terrane proceses at the margins of Gondwana, Geol. Soc., London, Spec. Publ. 245, p. 179-216.
(Overview of New Zealand tectonics, as part of Paleozoic- mid-Cretaceous Gondwana active margin, now dispersed in E Australia, SW Pacific, New Zealand and Antarctica)

Wandres, A.M., J.D. Bradshaw, S. Weaver, R. Maas, T. Ireland & N. Eby (2004)- Provenance of the sedimentary Rakaia sub-terrane, Torlesse Terrane, South Island, New Zealand: the use of igneous clast compositions to define the source. Sedimentary Geology 168, p. 193-226.
(Permian to Late Triassic Rakaia sub-terrane is accretionary complex with large volume of quartzo-feldspathic sandstones. Zircon ages of igneous clasts define 3-4 periods of magmatism: minor Early Permian (292-277 Ma) and major Late Permian- M Triassic (258-243 Ma), Carboniferous (356-325 Ma) and Cambrian. Broad correlation with Amundsen and Ross provinces of Marie Byrd Land, Antarctica)

Weissel, J.K. (1981)- Magnetic lineations in marginal basins of the Western Pacific. Philosophical Trans. Royal Soc. London, A, 300, 1454, p. 223-247.
(Small basins of W Pacific Ocean classified into (1) probable marginal basins formed through back-arc extension (Bismarck, Fiji, Lau, Japan Sea, etc.), (2) possible back-arc basins (Andaman, Sulu, Celebes, W Philippine, Banda, Caroline, S Fiji, New Hebrides) and (3) not back-arc (Woodlark, S China Sea, Coral Sea, Solomon, Tasman). Magnetic lineations in back-arc basins, resembling mid-oceanic spreading systems)

Weissel, J.K. & R.N. Anderson (1978)- Is there a Caroline plate? Earth Planetary Sci. Letters 41, p. 143-159.
(Marine geophysical data from Caroline Sea region suggest separate Caroline plate currently exists. Interaction with Philippine Plate along S Yap Trench, Palau Trench and rift system in Ayu Trough)

Wells, R.E. (1989)- The oceanic basalt basement of the Solomon Islands arc and its relationship to the Ontong Java Plateau-insights from Cenozoic plate motion models. In: J.G. Vedder & T.R. Bruns (ed.) Geology and offshore resources of Pacific Island arcs; Solomon Islands and Bougainville, Papua New Guinea regions, Circum-Pacific Council Energy and Mineral Resources, Earth Sci. Ser. 12, p. 7-22.

Wessel, P. & L.W. Kroenke (1998)- The geometric relationship between hot spots and seamounts: implications for Pacific hot spots. Earth Planetary Sci. Letters 158, 1-2, p. 1-18.
(Hot spots and seamounts produced by them provide geometric and temporal evidence for changes in absolute plate motion. Main limitation in using hot-spot-produced seamounts in plate tectonic reconstructions arises from sources of error and ambiguity of radiometric age estimates. Hotspot-produced seamounts have seafloor crustal flow lines that intersect at hot spot location. Hawaii, Louisville, Caroline, Cobb and Bowie hot spots have clear representations in Cumulative Volcano Amplitude images)

Wessel, P. & L.W. Kroenke (2000)- Ontong Java Plateau and late Neogene changes in Pacific plate motion. J. Geophysical Research, Solid Earth, 105, B12, p. 28255-28277.
(Late Neogene collision between Ontong Java Plateau and N margin of Australia plate, starting at 6 Ma, intensifying at 4-2 Ma, still continuing causing CCW rotation of Pacific plate, as inferred from hotspot volcanism, inducing right-lateral shear stress along Pacific plate divergent boundary (San Andreas, Alpine faults). Also triggered circum-Pacific tectonism, with trench migration and back arc rifting. Slab pull dominant plate tectonic driving force)

Wessel, P. & L.W. Kroenke (2007)- Reconciling late Neogene Pacific absolute and relative plate motion changes. Geochem. Geophys. Geosystems 8, 8, p. Q08001, p. 1-12.
(New models of Pacific absolute plate motion relative to hot spots, etc., suggest significant change in late Neogene (5.9 Ma; Chron 3A), reflecting more northerly absolute motion than previously determined)

Wessel, P. & S. Lyons (1997)- Distribution of large Pacific seamounts from Geosat/ERS-1: implications for the history of intraplate volcanism, J. Geophysical Research 102, B10, p. 22459-22476.
(8882 individual seamounts identified on Pacific Ocean Plate. Seamount density greatest in C Pacific. Majority of large seamounts in W region of Pacific Plate, on older crust. Seamount density, peaks at 100-130 Ma crust, suggesting highest magmatism in Cretaceous. Seamount heights tend to increase with increasing age of lithosphere at time of seamount formation. Seamount intraplate volcanism at maximum level in M-Late Cretaceous (~70-120 Ma))

Westermann, G.E.G., N. Hudson & J. Grant-Mackie (2000)- Bajocian (Middle Jurassic) Ammonitina of New Zealand. New Zealand J. Geol. Geophysics 43, p. 33-57.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.2000.9514869)
(Relatively rich, previously unknown fauna of Ammonitina from Bajocian of SW Auckland. No obvious similarities with New Guinea faunas)

Westermann, G.E.G., N. Hudson & J. Grant-Mackie (2002)- New Jurassic Ammonitina from New Zealand: Bathonian-Callovian Eurycephalitinae. New Zealand J. Geol. Geophysics 45, 4, p. 499-525.
(online at: www.tandfonline.com/doi/abs/10.1080/00288306.2002.9514988)
(Low diversity M Jurassic ammonoid fauna from SW Auckland province, North Island, New Zealand)

Whattam, S.A. (2009)- Arc-continent collisional orogenesis in the SW Pacific and the nature, source and correlation of emplaced ophiolitic nappe components. Lithos 113, p. 88-114.
(SW Pacific ophiolitic nappes of Papua-New Guinea, New Caledonia and Northland (New Zealand), emplaced on former margin of E Australia, provide record of Paleogene cyclical episodes of arc-continent collisional orogenesis)

Whattam, S.A., J. Malpas, J.R. Ali & I.E.M. Smith (2008)- New SW Pacific tectonic model: cyclical intraoceanic magmatic arc construction and near-coeval emplacement along the Australia-Pacific margin in the Cenozoic. Geochem. Geophys. Geosystems 9, 3, Q03021, p. 1-34.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2007GC001710/epdf)
(Reconstructions for NE margin of Australia- E-most PNG, where Papua Ultramafic Belt, New Caledonia and Northland ophiolites formed and emplaced in cyclical fashion above extensive NE dipping Cenozoic intra-oceanic arc system which diachronously propagated (N-S) along E margin of Australian Plate. These 'infant arc' ophiolites are fragments of supra-subduction zone lithosphere, generated in earliest stages of magmatic arc formation that were emplaced shortly after (<20 Ma) as result of forearc-Australian Plate collision)

Wheat, C. G., P. Fryer, K. Takai & S. Hulme (2010)- South Chamorro Seamount, 13°7.00'N, 146°00.00'E. Oceanography 23, 1, p. 174-175.
(online at: www.tos.org/oceanography/archive/23-1_wheat.pdf)
(Sixteen large, active serpentinite mud volcanoes in Mariana forearc, between Mariana Trench and volcanic island arc (Fryer et al., 2006). Up to 50 km in diameter and rising up to 2.4km above seafloor)

White, N.C., M.J. Leake, S.N. McCaughey & B.W. Parris (1995)- Epithermal gold deposits of the Southwest Pacific. J. Geochemical Exploration 54, 2, p. 87-136.
(BHP data tabulation for 137 epithermal gold deposits and prospects in Australia (30), Fiji (2), Indonesia (43), New Zealand (22), Palau and Yap (2), Papua New Guinea (18), Philippines (19) and Solomon Islands (1). Epithermal deposits in SW Pacific similar to other regions, but low-sulfidation style deposits formed at deeper levels than typical elsewhere; high-sulfidation deposits more common than along NE Pacific margin. Differences can be partly understood in terms of tectonic setting and evolution of volcanic arcs of SW Pacific))

Wilckens, O.R. (1925)- Stratigraphie und Bau von Neu-Caledonien. Geol. Rundschau 16, 2, p. 128-142.
(online at: https://www.digizeitschriften.de/dms/img/?PID=PPN345572157_0016%7Clog26)
('Stratigraphy and structure of New Caledonia'. Mainly literature compilation. Peridotites not Pre-Tertiary, but post-Eocene)

Willcox, J.B. & J. Sayers (2002)- Geological framework of the Central Lord Howe Rise (Gower Basin) region with consideration of its petroleum potential. Geoscience Australia Record 2002/011, p. 1-49.
(Online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=36063)
(Undrilled deep water Gower Basin forms part of 'Central Rift Zone' in Tasman Sea formed during separation of Lord Howe Rise from NE Australia continent (New England foldbelt) by oblique extension. Lord Howe Rise is 'ribbon' of crust ~1600 km x 250-600 km wide. Rifting probably started in Late Jurassic, followed by breakup and dispersal in latest Santonian- E Eocene. Gower Basin sediment fill 1.5-3.0 km, maximum 4+ km)

Willcox, J.B., J. Sayers, H.M.J. Stagg & S. van de Beuque (2001)- Geological framework of the Lord Howe Rise and adjacent ocean basins. In: K.C. Hill & T. Bernecker (eds.) Eastern Australasian Basins Symposium, a refocused energy perspective for the future, Petroleum Expl. Soc. Australia (PESA), Spec. Publ. p. 211-225.

Wilson, G.J. (1984)- New Zealand Late Jurassic to Eocene dinoflagellate biostratigraphy- a summary. Newsletters Stratigraphy 13, 2, p. 104-117.

Winterer, E.L. (1991)- The Tethyan Pacific during Late Jurassic and Cretaceous times. Palaeogeogr. Palaeoclim. Palaeoecology 87, p. 253-265.

Wood, R.A. (1991)- Structure and seismic stratigraphy of the western Challenger Plateau. New Zealand. J. Geol. Geoph. 34, 1, p. 1-9.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1991.9514433)
(Challenger Basin at W margin of the Challenger Plateau, >2 km of sediment, probably formed in early stages of Late Cretaceous rifting in Tasman Sea. Major phase of submarine basaltic volcanism at ~38 Ma. Challenger Plateau is thinned continental crust, separated from Antarctica-Australia when Gondwana margin fragmented in Late Cretaceous (with basement including Carboniferous granite; Tulloch et al. 1991))

Wood, R.A. (1993)- The Challenger Plateau. In: P.F. Balance (ed.) South Pacific sedimentary basins, Sedimentary Basins of the World, Elsevier, p. 351-364.

Woodhall, D. (1985)- Geology of the Lau Ridge. In: D.W. Scholl & T.W. Vallier (eds.) Geology and offshore resources of Pacific island arcs- Tonga Region, Circum-Pacific Council Energy Min Res., Earth-Sci. Ser. 2, p. 351-378.

Wright, N.M., R.D. Muller, M. Seton & S.E. Williams (2015)- Revision of Paleogene plate motions in the Pacific and implications for the Hawaiian-Emperor bend. Geology 43, 5, p. 455-458.
(Modeling of Farallon/Vancouver-Pacific-Antarctic seafloor spreading history from 67 to 33 Ma based on magnetic anomalies and fracture identifications. Increase from 75 to 182 mm/yr in Pacific-Farallon spreading rates between 57-40 Ma, not accompanied by changes in spreading direction)

Wright, N.M., M. Seton, S.E. Williams & R.D. Muller (2016)- The Late Cretaceous to recent tectonic history of the Pacific Ocean basin. Earth-Science Reviews 154, p. 138-173.

Yamazaki, T., M. Takahashi, Y. Iryu, T. Sato, M. Oda, H. Takayanagi et al. (2010)- Philippine Sea Plate motion since the Eocene estimated from paleomagnetism of seafloor drill cores and gravity cores. Earth Planets and Space 62, p. 495-502.
(online at: www.terrapub.co.jp/journals/EPS/pdf/2010/6206/62060495.pdf)
(Paleomag data suggest N part of Philippine Sea Plate was near equator at 50 Ma, majority of N-ward shift between ~50-25 Ma and very little N-ward movement after 15 Ma. Clockwise rotation of ~90◦ since Eocene)

Yan, C.Y. & L.W. Kroenke (1993)- A plate tectonic reconstruction of the SW Pacific 0-100 Ma. In: E.M. Maddox (ed.) Proc. Ocean Drilling Program (ODP), Scient. Results, 130, p. 697-709.
(online at: www-odp.tamu.edu/publications/130_SR/VOLUME/CHAPTERS/sr130_43.pdf)
(Reconstruction of SW Pacific paleogeography back to 100 Ma. Eocene- Late Miocene phases of convergence along five different paleo-subduction zones that formed with changes in Indo-Australian and Pacific plate motions: Papuan-Rennell-New Caledonia-Norfolk (55-40 Ma), Manus-N Solomon-Vitiaz (43-25 Ma), New Guinea- proto-Tonga-Kermadec (27-10 Ma), New Britain-San Cristobal-New Hebrides (12-0 Ma), and Tonga-Kermadec (10-0 Ma) trenches. Episodes of basin formation since Late Cretaceous: Tasman (85-55 Ma), New Caledonia (74-65 Ma), Coral Sea (63-53 Ma), Loyalty (52-40 Ma), d'Entrecasteaux (34-28 Ma), Caroline (34-27 Ma), Solomon Sea (34-28 Ma), S Fiji (34-27 Ma), N Fiji (10-0 Ma), and Lau, Woodlark, and Manus (5.5-0 Ma) basins. Seamount chains developed over Tasmantid, Lord Howe, Louisville and Samoa hotspots)

Yen, H.Y., Y.S. Lo, Y.L. Yeh, H.H. Hsieh, W.Y. Chang, C.H. Chen, C.R. Chen & M.H. Shih (2015)- The crustal thickness of the Philippine Sea Plate derived from gravity data. Terrestrial Atmospheric Oceanic Sci. 26, 3, p. 253-259.
(Gravity modeling indicates crustal thickness in Spart of W Philippine Basin nearly homogeneous at ~5km. Average crustal thickness of Palau Kyushu Ridge >10 km. In E PSP crustal thickness increases to E. Also relatively thin and low density mantle under Parece Vela Basin as consequence of back-arc spreading)

Yokoyama, K., R.N. Brothers & P.M. Black (1986)- Regional eclogite facies in the high pressure metamorphic belt of New Caledonia. In: B.E. Evans & E.H. Brown (eds.) Blueschists and eclogites, Geol. Soc. America (GSA) Mem. 164, p. 407-423.
(New Caledonia mid-Tertiary metamorphic belt continuous progression from lawsonite zone through epidote zone (blueschist facies) into omphacite zone (eclogite facies). Isogradic surfaces dips 10° to SW. Epidote zone thickness 300-500m and omphacite zone 500m)

Zellmer, K. & B. Taylor (2001)- A three-plate kinematic model for Lau Basin opening. Geochem. Geophys. Geosystems 2, 2000GC000106, p. 1-26.

Zhang, G.L. & C. Li (2016)- Interactions of the Greater Ontong Java mantle plume component with the Osbourn Trough. Nature, Scientific Reports 6, 37561, p. 1-8.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5116616/pdf/srep37561.pdf)
(Ontong Java-Manihiki-Hikurangi plateau originated from Cretaceous mantle plume, and rifted apart by two spreading ridges. Manihiki-Hikurangi plateaus rifted apart by Osbourn Trough, with basaltic crust of 103.7 ± 2.3 Ma. Osbourn Trough is abandoned segment of early Pacific spreading ridge)

Zhang, Y., S.Z. Li, Y.H.Suo, L.L. Guo, S. Yu, S. J. Zhao, I D.Somerville, R.H. Guo, Y.B. Zang, Q.L. Zheng & D.L. Mu (2016)- Origin of transform faults in back-arc basins: examples from Western Pacific marginal seas. Geological J. 51, Suppl. 1, p. 490-512.
(Study of transform faults in 4 marginal basins in W Pacific, i.e. S China Sea, Okinawa Trough, W Philippine Basin and Shikoku-Parece Vela Basin. Transform faults in all basins generally NNE-trending)

Zhong, S., M. Ritzwoller, N. Shapiro, W. Landuyt, J. Huang & P. Wessel (2007)- Bathymetry of the Pacific plate and its implications for thermal evolution of lithosphere and mantle dynamics. J. Geophysical Research, Solid Earth, 112, B6, B06412, 18p.
(After removing effects of sediments, seamounts, and large igneous provinces, ocean depths increase uniformly with age from ~2700-3100m at mid-ocean ridges to >5000m after ~70 Ma. Increasings more slowly after that)

Zonenshayn, L.P. & V.V. Khain (1990)- Eocene-Miocene plate tectonic history of Melanesia. Int. Geology Review 32, 6, p.565-577.
(Late Cretaceous-Eocene Melanesian island arc with subduction zone dipping NE beneath Pacific Ocean been reconstructed from distribution of island-arc complexes in N New Guinea, New Caledonia and North Island of New Zealand. Marked change in movement of Pacific plate with respect to Australia and Eurasia at 43 Ma. E Miocene collision between Melanesian arc and passive margin of Australia. At same time, spreading axis was at rear of Melanesian arc, from which Caroline basin was formed)

IX.11. Papua New Guinea (East New Guinea main island)

Abbott, L.D. (1995)- Neogene tectonic reconstruction of the Adelbert-Finisterre-New Britain collision, northern Papua New Guinea. J. Southeast Asian Earth Sci. 11, p. 33-51.
(Finisterre terrane colliding with Australian continent in N PNG today. Exposed in Adelbert and Finisterre blocks. Provenance shifts date collision at 3.0-3.7 Ma. Late Pliocene deep water basin between Adelbert block and continent. Deep marine sediments overthrust by older lithologies of Adelbert block. Collision of E part Adelbert block in M-Late Pliocene. W Adelbert block probably collided in latest Miocene. Collision of Adelbert block and most of Finisterre block above single, N-dipping subduction zone. Double subduction in Solomon Sea never extended >20 km W of present location)

Abbott, L.D. & E.A. Silver (1991)- Geology of the southern Finisterre Range: a case history of modern arc-continent collision. In: R. Rogerson (ed.) Proc. PNG Geology Exploration and Mining Conf., Rabaul 1991. Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 1-7.
(Finisterre Range on N coast of PNG is uplifted forearc region of modern arc-continent collision. Range core composed of Finisterre Volcanics (Oligocene arc terrane), S flank is uplifted accretionary wedge and collision complex, with most thrusts dipping steeply N. Melange fabric near major thrusts. Abrupt change in S Finisterre sandstone provenance from external, orogenic source to Finisterre arc itself in Late Pliocene indicates collision of Finisterre Range younger than previously asusmed)

Abbott, L.D., E.A. Silver, R.S. Anderson, R. Smith, J.C. Ingle, S.A. Kling, D. Haig et al. (1997)- Measurement of tectonic surface uplift rate in a young collisional mountain belt. Nature 385, p. 501-507.
(Finisterre Range in NE PNG (=uplifted forearc region of collided W Bismarck Arc) current tectonic uplift rate 0.8- 2.1 mm/yr)

Abbott, L.D., E.A. Silver & J. Galewsky (1994)- Structural evolution of a modern arc-continent collision in Papua New Guinea. Tectonics 13, p. 1007-1034.
(N PNG Finisterre Mts- W Solomon Sea site of young, active, oblique collision of Finisterre arc terrane, progressing from NW to SE through time. Accretionary wedge complex of SW-ward younging imbricate thrust sheets alongW-ward extension of New Britain Trench and outcrops in Finisterre Mts as Erap Structural Complex. Collision doubled crustal thickness to 50-52 km)

Abbott, L.D., E.A. Silver, P.R. Thompson, M.V. Filewicz, C. Schneider & Abdoerrias (1994)- Stratigraphic constraints on the development and timing of the arc-continent collision in northern Papua New Guinea. J. Sedimentary Res. B64, p. 169-183.
(Two sandstone provenance shifts on S flank Finisterre Range. First shift at ~16-18 Ma, from volcanolithic sediments to mixed-provenance rich in quartz and metasedimentary lithics, probably derived from orogenic belt active along Australian continental margin at that time. At 3.0-3.7 Ma volcanic source rejuvenated, reflecting initial collision/ uplift of SE-propagating Finisterre terrane and Australian continental margin. Finisterre terrane composed of Paleogene- Early Miocene volcanic arc rocks, overlain by Miocene- Pleistocene limestones and probably part of larger Outer Melanesian Arc)

Abers, G.A. (1989)- Active tectonics and seismicity of New Guinea. Ph.D. Thesis, Massachusetts Inst. Technology (MIT), p. 1-255.

Abers, G.A. & H. Lyon-Caen (1990)- Regional gravity anomalies, depth of the foreland basin and isostatic compensation of the New Guinea highlands. Tectonics 9, 6, p. 1479-1493.
(New Guinea foreland basin thickens from <200m in E PNG to 1 km in C PNG to >5km in W New Guinea, reflecting thrust loading of increasingly stronger lithosphere to W. PNG also lower elevations and young volcanism)

Abers, G. & R. McCaffrey (1988)- Active deformation in the New Guinea fold-and-thrust belt: seismological evidence for strike-slip faulting and basement-involved thrusting. J. Geophysical Research 93, B11, p. 13332-13354.

(New Guinea fold-and-thrust belt trend oblique to predicted convergence direction. Large component of left-lateral shear expected, but little geological evidence for such motion. Earthquake mechanisms in New Guinea foldbelt since 1964 indicate thrust events, with steeply dipping fault planes, 11-25 km deep, showing thrust faulting penetrates crystalline basement at high angles. Most earthquakes in W half of thrust belt show E-W oriented, left lateral strike-slip faulting. Translation by strike-slip faulting may play greater role than previously recognized)

Abers, G. & R. McCaffrey (1994)- Active arc-continent collision: earthquakes, gravity anomalies and fault kinematics in the Huon-Finisterre collision zone, Papua New Guinea. Tectonics 13, 2, p. 227-245.
(Huon-Finisterre island arc terrane actively colliding with N edge of Australian continent. Thrust faulting along Ramu-Markham thrust fault zone accomodates most of H-F terrane overthrusting. Thrust earthquakes at depth of 35 km below Huon Peninsula. Thrust earthquake movement produces Pleistocene terrace upliftment on N Huon Peninsula. Much of terrane crust, but little of its mantle being added to Australian continent

Abers, G.A. & S.W. Roecker (1991)- Deep structure of an arc-continent collision: earthquake relocation and inversion for upper mantle P and S wave velocities beneath Papua New Guinea. J. Geophysical Research 96, B4, p. 6379-6401.
(E PNG earthquakes and seismic velocities used to define subduction zones. Hypocenters show seismic zone dipping vertically or steeply to N beneath N Finistere-Huon ranges from 125-250 km depth, continuous along strike with New Britain seismic zone to E. No evidence for arc polarity reversal from seismicity)

Adams, C.G. & D.J. Belford (1979)- A new foraminifer from the Middle Eocene of Papua New Guinea. Palaeontology 22, 1, p. 181-187.
(Reticulogyra mirata, a new complex miliolid species from Middle Eocene Lower Chimbu limestone. Associated larger forams include Fasciolites, Nummulites javanus, Dictyoconus chimbuensis)

Afenya, P.M. (1986)- Chromite deposits of Papua New Guinea- a future potential source of chrome. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 303-314.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986021.pdf)
(Chromite deposits associated with New Guinea ophiolite belt in SE PNG. Two main deposits, Ramu chromite and Hessen Bay chromite. Both with characteristics of podiform chromites. Uneconomic in primary form, but higher concentrations in weathered zones)

Aharon, P. & J. Chappell (1986)- Oxygen isotopes, sea level changes and the temperature history of a coral reef environment in New Guinea in the last 100,000 years. Palaeogeogr. Palaeoclim. Palaeoecology 56, p. 337-379.
(Seven reef terraces up to to 370m elevation along raising coast of Huon Peninsula, PNG. Spaced at 20 kyr intervals)

Ahmed, M., S.A. Barclay, S.C. George, B. McDonald et al. (2004)- The distribution and isotopic composition of sulfur in solid bitumens from Papua New Guinea. In: R.J. Hill et al. (eds.) Geochemical investigation in earth and space science, a tribute to I.R. Kaplan. Geochem. Soc. Spec. Publ. 9, Elsevier, p. 51-58.

Ahmed, M., H. Volk, T. Allan & D. Holland (2012)- Origin of oils in the Eastern Papuan Basin, Papua New Guinea. Organic Geochem.53, p. 137-152.
(Geochemical characteristics of 16 oils/condensates/seep oil/oil shows from E Papuan Basin and one seep oil from W Papuan Basin integrated with data from previous studies show two hydrocarbon families. Family A oils, mostly in WPB region generated from marine source rocks with higher plant derived organic matter, deposited in sub-oxic to oxic environment (likely M-U Jurassic). Family B oils mainly in EPB, generated from Cretaceous or younger marine carbonate source rocks deposited under anoxic- suboxic conditions, and containing mainly prokaryotic OM. Exact source rock formation still unidentified. Both families generated at similar thermal maturities of 1.0-1.3% vitrinite reflectance equivalent)

Allan, T., M. Korsch & D. Whitford (2012)- Larger foraminiferal extinctions as indicators of eustatic sea level fall; new strontium isotope age evidence from the middle Miocene of the Papuan Basin, Papua New Guinea. In: Proc. 34th Int. Geological Congress, Abstracts, p. 2961. *(Abstract only)*
(Age range of three index taxa of Miocene larger foraminfera calibrated to geological timescale using Sr isotope stratigraphic studies of Darai Limestone. Extinction of Austrotrillina and Miogypsina coincident with M-L Miocene boundary (11.0-11.5 Ma) and large eustatic 3rd order sea level fall. Disappearance of Miogypsina at approximately same age on N Marion Plateau. Disappearance of Lepidocyclina at ~7.5 Ma in PNG and S Marion Plateau may also reflect eustatic event)

Allan, T.L., J.A. Trotter, D.W. Whitford & M.J.Korsch (2000)- Strontium isotope stratigraphy and the Oligocene-Miocene T-Letter 'Stages' in Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaǿs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 155-168.
(Strontium isotopes used to calibrate ages of Oligocene- early Late Miocene Darai Limestone. Age of larger foram zonal boundary Tf1/Tf2 (12.2 Ma) younger than generally accepted age of 15.0 Ma. Te/Tf1 boundary older (20.3 Ma) than generally accepted age of 18.5 Ma. Nummulites possibly ranges in Late Oligocene)

Allan, T., D.J. Whitford, G. Morgan, D.J. Holland & D.P. Leech (2006)- Tertiary stratigraphy of the Papuan Basin: insights from Strontium dating. AAPG Perth Int. Conf., p. *(Abstract only)*
(Three regressive cycles in Oligo-Miocene Darai Lst, each ending with shallow water limestones for which cycles are named: Mid Darai (28.5-17.5 Ma), Mala (17.5-14 Ma) and Warre (14.0-7.1 Ma). Warre Cycle marks top of Darai Lst. Early Oligocene widespread in basal Darai Lst, with significant Eocene reworking, and recycling of quartz sand from Cretaceous into Eocene and Oligocene units. Last appearances of index foraminifera marking T-Letter stage boundaries coincide with lower Mid Darai and lower- upper Warre Cycle boundaries. In Papuan Foreland, cycle boundaries are correlated with 3rd order seismic sequences, including major off-platform Miocene erosional events. Eustatic sea level falls possible factor in faunal 'turnovers')

Anfiloff, V. & A.J. Flavelle (1982)- Formal gravity interpretation over the 800-m Darai Escarpment in New Guinea. Geophysics 47, 7, p. 1091-1099.
(Gravity traverse over 800m Darai escarpment shows fault near base of escarpment. No vertical continuation bump directly over fault. Upthrown basement at depth of roughly 2500m. Fault position near base of escarpment suggests history of repetitive crustal movements)

APC- Australasian Petroleum Company (1961)- Geological results of petroleum exploration in western Papua 1937-1961 (compilers C.A.E. O'Brian, K.W. Gray & I. Gillipie). J. Geol. Soc. Australia 8, 1, p. 1-133.
(Compilation of previously unpublished PNG oil exploration and well data generated by APC. Principal reference for Papuan Basin stratigraphy.)

APC- Australasian Petroleum Company (1961)- Puri No. 1 well, Papua. Bureau Mineral Res. Geol. Geophysics, p. 1-59.
(Final well report of APC Puri 1 well, drilled in 1958 on thrust-faulted anticline with repeated stratigraphy at E end of Kereri Range, PNG Highlands. TD 10,100' in Cretaceous. In hanging wall ~1600' of Eocene- Miocene limestone with Discocyclina, Eorupertia and Distichoplax biserialis near base (= Late Paleocene or E Eocene; JTvG), overlain by Late Oligocene with Heterostegina borneensis (Late Eocene-E Oligocene not documented; JTvG). Tested wet gas below 7425' in sub-thrust Oligo-Miocene limestone)

APOC- Anglo-Persian Oil Company (1930)- Oil exploration work in Papua and New Guinea, conducted by the Anglo-Persian Oil Company on behalf of the government of the Commonwealth of Australia, 1920-1929, vol. 1, Harrison and Sons Ltd., London, p.
(First of 4 volumes and 2 Atlases describing oil exploration work by Anglo-Persian (predecessor company of BP) between 1920-1929. Volume 1 contains Part. 1. Historical outline; Part 2. Reports of the first geological expedition, 1920-1923; Part 3. Drilling operations at Popo, 1922-1929)

APOC- Anglo-Persian Oil Company (1930)- Oil exploration work in Papua and New Guinea, conducted by the Anglo-Persian Oil Company on behalf of the government of the Commonwealth of Australia, 1920-1929, vol. 2, Harrison and Sons Ltd., London, p.
(Volume II contains Part 4. Reports of the second geological expedition, 1927-1929: Oriomo, Cape Vogel, Barnum river, Sepik, Hansemann coast)

APOC- Anglo-Persian Oil Company (1930)- Oil exploration work in Papua and New Guinea, conducted by the Anglo-Persian Oil Company on behalf of the government of the Commonwealth of Australia, 1920-1929. vol. 3, Harrison and Sons Ltd., London, p.
(Volume III contains Part 4 (cont.) Geology of the Finsche coast area, north-west New Guinea)

APOC- Anglo-Persian Oil Company (1930)- Oil exploration work in Papua and New Guinea, conducted by the Anglo-Persian Oil Company on behalf of the government of the Commonwealth of Australia, 1920-1929, vol. 4, Harrison and Sons Ltd., London, p.
(Volume IV contains Part 5. A contribution to the tertiary geology of Papua, 1929-1930; Part 6. A brief review of the oil prospecting work at Upoia, 1911-1920; Part 7. A critical study of the geology and oil prospects of Papua and New Guinea as revealed by the work of the Anglo-Persian Oil Company, 1920-1929)

Arculus R.J., R.W. Johnson, B.W. Chappell, C.O. McKee & H. Sakai (1983)- Ophiolite-contaminated andesites, trachybasalts, and cognate inclusions of Mt. Lamington, Papua New Guinea: anhydrite-amphibole-bearing lavas and the 1951 cumulodome. J. Volcanology Geothermal Res. 18, p. 215-247.

Arnold, G.O., T.J. Griffin & C.C. Hodge (1979)- Geology of the Ok Tedi and southern Atbalmin, 1:100 000 sheet. Geological Survey of Papua New Guinea, Report 79/3, p.

Arnold, G.O. & T.J. Griffin (1978)- Intrusions and porphyry copper prospects of the Star Mountains, Papua New Guinea. Economic Geology 73, 5, p. 785-795.
(Star Mountains of west PNG is copper province with Mount Fubilan (Ok Tedi) deposit and 10 other prospects. Wide range of calc-alkaline intrusions emplaced into Jurassic-Miocene shelf sediments at time of Plio-Pleistocene thrust faulting. Copper mineralization in skarns and disseminated in porphyry stocks)

Asami, N. & R.M. Britten (1980)- The porphyry copper deposits at the Frieda River Prospect, Papua New Guinea. In: S. Ishihara & S. Takenouchi (eds.) Granitic magmatism and related mineralization. Mining Geology, Tokyo, Spec. Issue, 8, p. 117-139.
(see also Whalen et al. 1982)

Australasian Institute of Mining and Metallurgy (1998)- Geology of Australian and Papua New Guinean mineral deposits, AusIMM, Parkville, Mon. 22, p.

Ayyasami, K. & D.W. Haig (1997)- New evidence for Jurassic age of the lower Wahgi Group, northern flank of Kubor Anticline, Papua New Guinea. Neues Jahrbuch Geol. Palaont., Monatshefte 10, p. 575-584.
(Lower Maril Shale, overlying Omung Metamorphics on N flank Kubor Anticline, is Mid or Late Jurassic age, not Triassic as suggested by Francis et al. 1990)

Azizi-Yarand, S.A. (1996)- Integrated geological and engineering evaluation of the Gobe Fields: Part II. Reservoir simulation and development plan. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 531-544.

Azizi-Yarand, S.A. & J.E. Livingston (1996)- Iagifu 3X/8X Toro block reservoir performance evaluation- case study. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 563-571.
(Oil production from Iagafu 3X/8X Toro Block started in mid-1992. Initial oil flow rates in 3 wells 6000-8000 B/D, but sharp decline in reservoir pressure in 3Q 1994))

Bachmann, H.G. (1988)- Exploration auf Platinmetalle in Papua Neuguinea. Die Geowissenschaften (Weinheim) 6, 5, p. 151-156.
('Exploration of platinum metals in PNG')

Bain, J.H.C. (1973)- A summary of the main structural elements of Papua New Guinea. In: P.J. Coleman (ed.) The Western Pacific: island arcs, marginal seas, geochemistry. Western Australia University Press, Perth, p. 147-161. *(also as BMR Geol. Geoph. Record 1973/30. Summary of PNG geology, to accompany 1972 1:1M scale geologic map of PNG))*

Bain, J.H.C. & J.G. Binnekamp (1973)- The foraminifera and stratigraphy of the Chimbu Limestone, New Guinea. Geological Papers 1970-71, Bull. Bureau Mineral Res. Australia 139, p. 1-12.
(online at: www.ga.gov.au/corporate_data/106/Bull_139.pdf)
(~300m of M Eocene/Ta3- E Oligocene/Tc limestone in Chimbu River Gorge (Kubor Anticline?), para-conformable on U Cretaceous. M Eocene (Ta3-Tb) with Lacazinella, Fasciolites/ Alveolina, Nummulites javanus, Discocyclina (no Pellatispira/ Biplanispira present, as reported by Crespin, 1938), overlain by E Oligocene with Nummulites intermedius. Overlain by E Miocene (incl. latest Oligocene Te4?; JTvG) limestones with Miogypsinoides, Miogypsina, Heterostegina borneensis and Eulepidina, sometimes separated by mudstones)

Bain, J.H.C., H.L. Davies, P.D. Hohnen, R.J. Ryburn, I.E. Smith, R. Grainger, R.J. Tingey & M.R.Moffat (1972)- Geologic map of Papua New Guinea (map 1:1,000,000). Bureau Mineral Res. Geol. Geophysics, Canberra.
(Geologic map of PNG in 4 sheets)

Bain, J.H.C. & D.E. MacKenzie (1974)- Karimui, Papua New Guinea Sheet SB/55-9. Papua New Guinea 1:250,000 Geological series and Explanatory Notes. Bureau Mineral Res., Canberra, p. 1-39.
(Geologic map and explanatory notes of area North side of PNG Central Highlands, between 6-7° S and 144° - 145°30'E. In N of area Kubor Anticline with Late Paleozoic Omung metamorphics and Kubor granodiorite exposed in core. In S eastern end of Central Range foldbelt)

Bain, J.H.C. & D.E. MacKenzie (1975)- Ramu, Sheet SB/55-5. Papua New Guinea 1:250 000 Geological Series and Explanatory Notes, Bureau Mineral Res., Canberra.
(Geologic map and explanatory notes of area North side of PNG Central Highlands, between 5-6° S and 144° - 145°30'E. In SW of area Kubor Anticline with Late Paleozoic Omung metamorphics and Kubor granodiorite, Triassic Kana Volcanics, etc. exposed in core. Towards NE ultrabasics belt and Mio-Pliocene Ramu Basin)

Bain, J.H.C., D.E. MacKenzie & R.J. Ryburn (1970)- Geology of the Kubor anticline, Central Highlands of Papua New Guinea. Bureau Mineral Res., Geol. Geophysics, Record 1970/79, p. 1-85 + 17 map sheets
(online at: www.ga.gov.au)
(Manuscript for Bain et al. 1975 Kubor Anticline publication)

Bain, J.H.C., D.E. MacKenzie & R.J. Ryburn (1975)- Geology of the Kubor anticline, Central Highlands of Papua New Guinea. Bureau Mineral Res., Geol. Geophysics, Bull. 155, p. 1-106.
(online at: www.ga.gov.au/corporate_data/98/Bull_155.pdf)
(With Karimui, Ramu 1:250,000 PNG geology maps. Kubor Anticline N of main PNG detached foldbelt is basement-involved anticline with core of Omung Metamorphics, intruded by Late Permian? Kubor granodiorite. Both unconformably overlain by 30-250m Late Triassic Kuta Fm biohermal-reefal limestone with basal conglomerate containing igneous and metamorphic clasts and U Triassic dacites and basalts (Kana Volcanics. Overlain unconformably by ~7000m of U Jurassic- Upper Cretaceous clastic and volcanic rocks, U Paleocene? clastics (Pima Sst) and Eocene-Oligocene limestone (Nebilyer Lst) respectively. At NE end Upper Cretaceous rocks overlain with slight unconformity by ~300m of Eocene-Oligocene foraminiferal Chimbu Lst, Eocene-Oligocene limestones everywhere overlain by Miocene limestone or clastics)

Bainbridge, A.L., G.J. Corbett & T.M. Leach (1994)- The Nena high sulfidation system, Frieda River Copper, Papua New Guinea. In: R. Rogerson (ed.) Proc. Geology, exploration and mining conference, June 1994, Lae, PNG 1994, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 131-137.

Bainbridge, A.L., S.P. Hitchman & G.J.DeRoss (1998)- Nena copper-gold deposit. In: D.A. Berkman and D.H. Mackenzie (eds.) Geology of Australian and Papua New Guinean mineral deposits, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Monogr. 22, p. 855-861.

Bamford, R.W. (1972)- The Mount Fubilan (Ok Tedi) porphyry copper deposit, Territory of Papua and New Guinea. Economic Geology 67, 8, p. 1019-1033.
(Mt. Fubilan deposit (= Ok Tedi) is very young porphyry copper system in NW PNG, within WNW trending fold belt with numerous small Plio-Pleistocene intrusions. Fold belt on continental side of narrow transition zone between continental crust in S and possibly oceanic crust in N, which became site of Miocene island arc collision. Central orthoclase-rich intrusion contains most of disseminated copper mineralization. Associated peripheral mineralized skarn bodies with high copper grades and massive sulfide body)

Barclay, S.A., K. Liu & D. Holland (2003)- Reservoir quality, diagenesis and sedimentology of the Pale and Subu sandstones: re-visiting the eastern Papuan basin, Papua New Guinea. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 43, p. 515-535.
(Campanian Pale sandstone in E Papuan foldbelt 160m thick shallow marine delta front-shoreface facies, porosity 5-16%, with biodegraded oil in outcrop)

Barndollar, P. (1993)- Hydrocarbon prospectivity of the Papuan Foreland. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby 1993, p. 517-525.
(Recent Papuan foldbelt discoveries with proven reserves of 14.5 TCF gas, 284 MMB Condensate and 395 MMB Oil)

Barrett, R.A. (1996)- A petroleum systems analysis of the Sepik and Ramu basins of Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 495-509.
(Basins on N margin PNG, formed by complex series of Tertiary tectonic events. Up to 10 km of Mio-Pliocene sediments. Formation of several deep Late Oligocene- E Miocene basins overprinted by Late Miocene and younger compression. Potential plays Miocene carbonate buildups and Mio-Pliocene sandstones)

Barrett, R.A. (1997)- Petroleum systems analysis of the Sepik and Ramu basins of Papua New Guinea: implications for Irian Jaya. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australia Conf., Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 247-260.
(Possible hydrocarbon systems in largely untested Tertiary basins of N New Guinea. Main targets Miocene carbonate buildups. Ramu Basin hundreds of biogenic gas seeps. Meervlakte Basin may be similar to Salawati and PNG Sepik basins and have well developed Miocene buildups. N Coast basin similar to PNG Ramu Basin and may have gas play in structured Plio-Pleistocene turbidites)

Barrett, R.A. (1999)- Play concepts of the northern basins of New Guinea Island. AAPG Ann. Mtg. Abstract, American Assoc. Petrol. Geol. (AAPG) Bull. 83, p. *(Abstract only)*

Barrett, R.A. (1999)- Plio-Pleistocene sedimentation and biogenic gas generation Waropen and Ramu Basins, NeuGuinea (Irian) Island. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 87. *(Abstract only)*.
(Waropen and Ramu basins along N margin of New Guinea formed in Neogene. Characterized by extremely high Plio-Pleistocene sedimentation rates, of mainly marine turbiditic deposits: up to 12km in Waropen basin, up to 7km of Pleistocene in Ramu Basin. Common organic (plant) material. Waropen basin with biogenic methane flows in wells and seeps)

Barrows, T.T., G.S. Hope, M.L. Prentice, L.K. Ffield & S.G. Tims (2011)- Late Pleistocene glaciation of the Mt. Giluwe volcano, Papua New Guinea. Quaternary Science Reviews 30, 19, p. 2676-2689.
(Mt Giluwe shield volcano largest area glaciated in PNG in Pleistocene. During Last Glacial Maximum glaciers reached down to 3200m. Ice caps formed on flanks of mountain at 4 occasions: 293-306 ka (Gogon Glaciation), 136-158 ka (Mengane Glaciation), ~62 ka (Komia Glaciation; >20.3-11.5 ka (Tongo Glaciation))

Baylis, S.A., S.J. Cawley, C.J. Clayton & M.A. Savell (1997)- The origin of unusual gas seeps from onshore Papua New Guinea. Marine Geology 137, p. 109-120.
(Gas seeps with associated oils and waters from onshore Aure Thrust Belt. Oils biodegraded and from dominantly marine source, some with evidence of higher land plant input. Thermal maturity low to moderately high. Some gases biogenic, some thermogenic and some mixed. Two biogenic groups, one with high CO_2 - light δD (acetate fermentation in low salinity), one with lower CO_2- heavier δD (biogenic CO_2 reduction associated with higher salinity, marine environments). Thermogenic gases associated with intermediate salinity and have exceptionally heavy d13C in CO_2).

Bee, A.G. (1982)- A review of Mesozoic and Cenozoic stratigraphy of Southwest Papua New Guinea. Australasian Petrol. Co., PNG Geol. Survey, Port Moresby, p.

Belford, D.J. (1957)- Micropalaeontological examination of samples from the Tabu area, Permit 22, Papua. Bureau Mineral Res. Geol. Geophysics, Records 1957/029, p. 1-4.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10228)
(Micropal analysis of 26 samples from Tubu area, Permit 22, 47 m NW of Port Moresby and 10m NE of Cape Suckling, collected by Papuan Apinaipi Petroleum Ltd. All material M Miocene- Pliocene age)

Belford, D.J. (1958)- Micropalaeontology of samples from Kaufana No. 1 well, Papua. Bureau Mineral Res. Geol. Geophysics, Records 1958/9, p. 1-6.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10317)
(Papuan Apinaipi Petroleum Co. Kaufana 1 well with diverse M Miocene and younger bathyal marine calcareous forams above 600' (incl. Miocene Lepidocyclina at 350'). From 640-3348' (TD) poor deep arenaceous water foram faunas only, probably all still of Miocene age)

Belford, D.J. (1958)- Micropalaeontology of samples from the Karema-Karova Creek and Malalaus-Saw Mountains areas, Papua. Bureau Mineral Res. Geol. Geophysics, Records 1958/94, p. 1-3.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10402)
(All rel. deep marine sediments of M Miocene- Pliocene age)

Belford, D.J. (1959)- Lower Miocene foraminifera from the Milne Bay area, Papua. Bureau Mineral Res. Geol. Geophysics, Records 1959/99, p. 1-2.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10530)
(Tuffaceous limestones collected by J.E. Thompson at Milne Bay (SE tip of PNG mainland) probably all of E Miocene age (Upper Te with Spiroclypeus, Lepidocyclina (E.), Miogypsina))

Belford, D.J. (1959)- Foraminifera from the Middle Purari River area, Papua. Bureau Mineral Res. Geol. Geophysics, Records 1959/157, p. 1-4.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10586
(Miocene- Pliocene sediments)

Belford, D.J. (1959)- Miocene foraminifera from the Wira Anticline, Puri-Purari River area, Papua. Bureau Mineral Res. Geol. Geophysics, Records 1959/105, p. 1-6.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10588)
(Samples from Wira anticline all Late Miocene- Pliocene deep marine faunas)

Belford, D.J. (1962)- Miocene and Pliocene planktonic foraminifera from Papua New Guinea. Bull. Bureau Mineral Res. Australia 62, p. 1-35.
(online at: https://d28rz98at9flks.cloudfront.net/253/Bull_062.pdf)
(Thirty-four species of planktonic foraminifera described from Miocene-Pliocene beds of PNG. Little or no info on localities, stratigraphy, ages)

Belford, D.J. (1963)- Foraminifera from Mutare No. 1 bore, Papua. Bureau Mineral Res. Geol. Geophysics, Record 1963/170, p. 1-4.
(online at: www.ga.gov.au/)
(Basal Miocene carbonates on unidentified Mesozoic section)

Belford, D.J. (1965)- Foraminifera from the Port Moresby area. Bureau Mineral Res. Geol. Geophysics, Record 1965/102, p. 1-6.
(online at: https://d28rz98at9flks.cloudfront.net/11555/Rec1965_102.pdf)
(43 outcrop samples collected during Astrolabe Mineral Field survey, ranging in age from U Cretaceous (with Globotruncana) to E Miocene/ Te. Paleo-Eocene larger foram limestone with Halkyardia bikiniensis and Distichoplax biserialis. Reworked Eocene Pellatispira and Nummulites spp in 'E Miocene' Dokuna Tuff with Heterostegina borneensis (= Lower Te= Late Oligocene; JTvG))

Belford, D.J. (1965)- Foraminifera from the Wuroi No. 1 well, Papua. Bureau Mineral Res. Geol. Geophysics, Record 1965/103, p. 1-3.
(online at: www.ga.gov.au/)
(Seven cores from Oil Search well Wuroi 1, ranging in age from M Miocene- Mesozoic)

Belford, D.J. (1965)- Foraminifera from outcrop samples, Star Mountains, Papua-New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1965/233, p. 1-3.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=11686)
(Very brief report on outcrop samples from Star Mountains. Mainly E-M Miocene limestones, overlain(?) by zoneN8 planktonics from'Iwoer Fm')

Belford, D.J. (1966)- Miocene and Pliocene smaller foraminifera from Papua and New Guinea. Bull. Bureau Mineral Res. Australia 79, p. 1-223.
(online at: www.ga.gov.au/corporate_data/188/Bull_079.pdf)
(Comprehensive taxonomy/ descriptions of 156 Mio-Pliocene marine benthic foram species. Little or no stratigraphic info)

Belford, D.J. (1967)- Paleocene planktonic foraminifera from Papua and New Guinea. Austral. Bur. Min. Res. Bull. 92, p. 1-33.
(online at: https://d28rz98at9flks.cloudfront.net/168/Bull_092.pdf)
(Paleocene planktonic forams described from PNG areas Wabag in W Highlands and Cape Vogel in SE. Fourteen species assigned to Subbotina, Globigerina, Globorotalia and Chiloguembelina. Mainly from Globorotalia pseudomenardii Subzone; oldest beds may be Globigerina daubjergensis- G. trinidadensis Zone)

Belford, D.J. (1967)- Additional Miocene and Pliocene planktonic foraminifera from Papua and New Guinea. Austral. Bur. Min. Res. Bull. 92, p. 35-48.
(online at: https://d28rz98at9flks.cloudfront.net/168/Bull_092.pdf)
(Three more species of Mio-Pliocene planktonic foraminifera recorded and figured from PNG: Globorotalia crassaformis, G. archaeomenardii and Sphaeroidinellopsis kochi (mainly from Ramu Atitau area))

Belford, D.J. (1976)- Foraminifera and age of samples from southeastern Papua. Bureau Mineral Res. Geol. Geophysics Bull. 165, p. 73-86.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=76)

(Appendix in Smith & Davies (1976). Listings and illustrations of Upper Cretaceous planktonic foraminifera, Eocene planktonic and larger foraminifera, Late Oligocene- Miocene larger foraminifera and Plio-Pleistocene planktonics and smaller benthics from SE PNG)

Belford, D.J. (1977)- *Quasicyclammina* gen. nov. and *Thalmannammina* (Foraminiferida) from the Paleocene of Papua New Guinea. BMR J. Australian Geol. Geophysics 2, 1, p. 35-42.
(online at: www.ga.gov.au/corporate_data/80906/Jou1977_v2_n1_p035.pdf
(New genus and species of cyclamminid agglutinated foraminifera from Upper Paleocene Lagaip Beds N of Central Range, NW of Mt. Hagen, PNG. Planktonic foraminifera from same area described by Belford (1967))

Belford, D.J. (1978)- The genus *Triplasia* (Foraminiferida) from the Miocene of Papua New Guinea. Bureau Mineral Res. Geol. Geophys. Bull. 192 (Crespin Volume), p. 1-7.
(online at: https://d28rz98at9flks.cloudfront.net/68/Bull_192.pdf)
(Three species of small benthic agglutinated foram Triplasia in Lower Miocene Yangi beds in Wabag area)

Belford, D.J. (1982)- *Planorbulinella solida* sp. nov. (Foraminiferida) from the Miocene of Papua New Guinea. BMR J. Australian Geol. Geophysics 7, 4, p. 321-325.
(online at: www.ga.gov.au/corporate_data/81128/Jou1982_v7_n4_p321.pdf)
(New species name for Linderina sp.indet. as recorded from Cape Vogel area, PNG. Rel. widespread in Early Miocene (Te5-Tf1) of PNG)

Belford, D.J. (1984)- Tertiary foraminifera and age of sediments, Ok-Tedi-Wabag, Papua New Guinea. Bureau Mineral Res. (BMR) Geol. Geophysics Bull. 216, p. 1-52.
(online at: www.ga.gov.au/corporate_data/16/Bull_216.pdf)
(Paleocene- Pliocene planktonic foraminifera distribution from outcrop samples in Ok Tedi and Wabag map sheets. Top larger foram zone Te correlated to planktonic foram zones N6-N7, with zone N8 planktonics overlying top Darai limestone Lower Tf assemblages. Occurrence of Lacazinella near Telefomin)

Belford, D.J. (1985)- Late Albian planktonic foraminifera, Strickland River, Papua New Guinea. Bureau Mineral Res. J. Australian Geol. Geoph. 9, 2, p. 183-189.
(online at: www.ga.gov.au/corporate_data/81181/Jou1984_v9_n2_p183.pdf)
(Late Albian planktonic foraminifera assemblage with Globigerinelloides, Hedbergella spp., Planomalina buxtorfi, Praeglobotruncana stephani, Rotalipora apenninica and R. ticinensis from Ieru Fm at S side of Mueller Anticline, Central Range, PNG. Tropical assemblage, unlike temperate Queensland fauna)

Bennett, D.J., R.P. Brand, C.R. Mills & B.D Morris (2000)- Exploration potential of the West Bosavi area, Papuan foreland basin, Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaꞔs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 139-154.
(Geology and exploration potential of Papuan foreland basin W of Bosavi lineament. Structure rel. simple. Main plays are compactional drapes over basement highs and tilted fault blocks. Reservoir targets mainly E Cretaceous Toro Sst, with deeper targets in Late Jurassic Digimu Fm sandstones)

Best, J.G. (1964)- Regional geology - Markham Valley, Territory of Papua and New Guinea (1:250,000 Sheet SB 55-10). Bureau Mineral Res. Geol. Geophysics, Record 1964/80, p. 1-6.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=11337)
(Brief report in conjunction with groundwater drilling. Mountains at E end of Markham Valley mainly Kaindi Metamorphics, tightly folded and NNE striking, intruded by Morobe granodiorite. In SW ?Paleozoic metamorphics. Northern Finisterre- Saruwaged Range folded-faulted WNW trending Mio-Pliocene sediments)

Bickel, R.S. (1974)- Reconnaissance geology of the Cape Vogel Basin, Papua New Guinea. American Assoc. Petrol. Geol. (AAPG) Bull. 52, 12, p. 2477-2489.
(Cape Vogel basin extends for 400 km along NE side of E PNG, 80% offshore. Three subbasinal areas. Basins overlie obducted plate of oceanic mantle and crust that was thrust SW onto Mesozoic Owen Stanley

metamorphic rocks. Tertiary sediments: Late Oligocene Iauga Fm volcanics and deep-marine deposits, overlain unconformably by early M Miocene limestone, overlain by >4000m thick U Miocene-Pliocene clastics)

Bickel, R.S. (1976)- Cape Vogel Basin. In: R.B. Leslie et al. (eds.) Economic geology of Australia and Papua New Guinea, Vol. 3, Petroleum. Australasian Inst. of Mining and Metallurgy (AusIMM), Monogr. 7, p. 506-513.

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(online at: www.iagi.or.id/fosi/files/2015/09/BS33-Marine-Geology-of-Indonesia-II-R1.pdf)
(Ages of Late Jurassic- E Cretaceous marine sandstones of PNG and Australian NW Shelf. PNG Late Jurassic: Koi-Lange, Iagafu and Hedinia Sst. E Cretaceous:Berriasian Digimu, Toro Sst, Valanginian- Hauterivian Alene Sst. Sandstones in Titanichthys-1 well on NW Shelf can be correlated to PNG sand cycles)

Bik, M.J.J. (1967)- Structural geomorphology and morphoclimatic zonation in the central highlands, Australian New Guinea. In: J.N. Jennings & J.A. Mabbutt (eds.) Landform studies from Australia and New Guinea, Australian National University Press, p. 26-47.

Binnekamp, J.G. (1970)- Foraminifera and age of samples from the Star Mountains, Territory of Papua New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1970/14, p. 1-8.
(online at: www.ga.gov.au/products-services/legacy-publications.html)
(Foraminifera from 56 limestone outcrop samples from PNG Central Range, close to West Papua border. Mainly Late Oligocene- E-M Miocene (Te- lower Tf) ages, some Oligocene Tcd)

Binnekamp, J.G. & D.J. Belford (1970)- Foraminifera and age of outcrop samples collected during the Kubor survey 1968, Central Highlands, New Guinea. Bureau Mineral Res., Geol. Geophysics, Record 1970/012, p. 1-32.
(online at: www.ga.gov.au/products-services/legacy-publications.html)
(Foraminifera from 158 Kubor Range outcrop samples. Oldest rocks Cretaceous Chim Fm with Cenomanian-Turonian planktonics. Most samples hard limestones with larger foraminifera. Eocene-E Oligocene Chimbu Lst with M-U Eocene Alveolina, Dictyoconus, Nummulites, Asterocyclina and Lacazinella wichmanni. Darai Lst in S of area with E Miocene with Miogypsina near top. Oligocene age rocks rel. rare. Reworking of Eocene larger forams into E Miocene in SE of area (in 'Movi Beds/ Omaura greywacke' which unconformably overlie Eocene--E Oligocene Chimbu Lst; Bain et al. (1974)?; incl. Biplanispira; p. 22, Pellatispira, p. 26). Aure Group deeper water facies of M Miocene age (zone N11-12; with Gr. fohsi group. For locality map see Bain et al. 1970))

Bird, K.J. & R. Seggie (1990)- Barikewa and Iehi gas fields revisited. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 551-565.
(Barikewa and Iehi gas fields discovered in 1958 and 1960 in foreland of Papuan foldbelt. Berriasian-Valanginian Toro Fm reservoir section shows 3 coarsening-upward cycles)

Blake, D.H. & E. Loffler (1971)- Volcanic and glacial landforms on Mount Giluwe, Territory of Papua and New Guinea. Geol. Soc. America (GSA) Bull. 82, p. 1605-1614.
(During maximum Pleistocene glaciation up to 400m thick glaciers extended down to 2750-3000m elevation on slopes of 4368m high Mount Giluwe volcano)

Blenkinsop, T., G. Tripp & D. Gillen (2017)- The relationship between mineralization and tectonics at the Kainantu gold-copper deposit, Papua New Guinea. In: K. Gessner et al. (eds.) Characterization of ore-forming systems from geological, geochemical and geophysical studies, Geol. Soc., London, Spec. Publ. 453 p. 269-288.
(Epithermal veins and breccias at Kainantu gold-copper deposit in PNG host gold mineralization in NW-SE steeply dipping lodes, parallel to pre-mineralization dextral strike-slip shear-zone network)

Blong, R.J. & C.F. Pain (1976)- The nature of highland valleys, Central Papua New Guinea. Erdkunde 30, 3, p. 212-217.

Bloom, A.L., W.S. Broecker, J.M.A. Chappell, R.K. Matthews & K.J. Mesolella (1974)- Quaternary sea level fluctuations on a tectonic coast: new 230Th/234U dates from the Huon Peninsula, New Guinea. Quaternary Research 4, p. 185-205.

Boult, P.J. (1993)- The reservoir potential of the Imburu, Toro and Ieru Formations in the Ok Menga area, PNG. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 191-200.
(Outcrop study of reservoir sandstones in Ok Menga area, SW of Hindenburg wall. Basal Cretaceous Toro Fm 141m thick (net sand 88m), underlying Imburu Fm 65m net sand)

Boult, P.J. (1997)- A review of the petroleum potential of Papua New Guinea with a focus on the eastern Papuan Basin and the Pale sandstones as a potential reservoir fairway. In: A.J. Fraser et al. (eds.) Petroleum geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 281-291.
(Overview of PNG plays, with schematic paleogeographic maps for Late Jurassic Imburu- Toro and Campanian Pale Sandstone)

Boult, P.J. & G.J. Carman (1993)- The sedimentology, reservoir potential and seal integrity of the Pale sandstone at the Aure Scarp, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 125-137.
(Coral Sea syn-rift sediments exposed at Aure Scarp in E Papuan Basin include up to 200m thick marginal marine Campanian Pale Sst, Quartz-rich, clean, porosity ~20%, perm. 750 mD. Underlain by Albian marine shelfal deposits and basalts with K/Ar age of 88 Ma; overlain by M-L Paleocene Mendi Fm limestone. Source of sand probably from Omung Metamorphics along Kubor trend to N)

Boult, P.J., G.J. Carman & S.E. Phillips (1992)- Sedimentology, reservoir potential, and seal integrity of the Pale Sandstone, Eastern Papuan Basin, Papua New Guinea. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015 *(Abstract only)*
(Coral Sea syn-rift sediments exposed at Aure scarp in E Papuan basin include Campanian Pale Sst fluvial to barrier island facies, mature quartz arenite, probably derived from Paleozoic Omung Metamorphics along Kubor trend to N. Up to 190m thick, av. porosity 20%, 750 md. Overlain by Paleogene Mendi Group Lst)

Bowen, R. (1961)- Paleotemperature analyses of Mesozoic Belemnoidea from Australia and New Guinea. Geol. Soc. America (GSA) Bull. 72, 5, p. 769-773.
(Includes oxygen isotope analysis of U Jurassic Belemnopsis gerardi fron Kuabgen Gp, Upper Fly River, suggesting paleotemperature of 15.9 °C)

Boyd, G., V. Donagemma, J. McPherson, M. Dubsky, Y. Sun & S. Barclay (2015)- Innovative 3D reservoir characterization in the Papua New Guinea Fold belt. In: Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 289-296
(Reservoir models of latest Jurassic Imburu Fm (Iagifu, Hedinia, Digimu members) and earliest Cretaceous Toro Sst, using data from 156 wells in PNG foldbelt, from P'nyang in NW to Iehi Field in SE. Deposited in two depositional settings: (1) prograding, shallow marine or nearshore, and (2) outer estuarine mouth bar environment. Key reservoir sandbodies composed of stacked sequences of uniform sandstones, with lateral and vertical continuity of nearshore and incised valley fill deposits for 10's- 100's km along foldbelt. In Juha Field elevated temperatures (probably burial related) significantly reduced rock quality)

Boyd, G.A., V. Donagemma, J.G. McPherson, M.K. Dubsky, Y. Sun & S.A. Barclay (2016)-Innovative 3-D reservoir characterization in the Papua New Guinea fold belt. AAPG/SEG Int. Conf. Exhibition, Melbourne, Search and Discovery Article 30440, 9p.
(online at: http://www.searchanddiscovery.com/pdfz/documents/2016/30440boyd/ndx_boyd.pdf.html)
(Same paper as Boyd et al. (2015, above))

Bradey, K., K. Hill, D. Lund, N. Williams, T. Kivior & N. Wilson (2008)- Kutubu oil field, Papua New Guinea- a 350 MMbbl fold belt classic. In: J.E. Blevin et al. (eds.) Third Eastern Australasian Basins Symposium, Sydney, Petroleum Expl. Soc. Australia (PESA) Spec. Publ., p. 239-246.
(First discovered in 1986 in PNG foldbelt, Kutubu oil fields Iagifu and Hedinia produced >300 MMbbl since 1992. Production from Late Jurassic- E Cretaceous Toro, Digimu and Iagifu sand reservoirs, sourced from M Jurassic black shales, and regionally sealed by E Cretaceous Ieru shales. Structures formed by oblique collision of island arcs with Australian Plate in Late Miocene- E Pliocene)

Britten, R.M. (1981)- The geology of the Frieda River Copper prospect, Papua New Guinea. Ph.D. Thesis, Australian National University (ANU), Canberra, p. 1-395.
(online at: https://digitalcollections.anu.edu.au/handle/1885/10714)
(Frieda River Prospect in structurally disrupted M Miocene eugeosynclinal sediments of New Guinea Mobile Belt in W Sepik District, PNG. Epithermal copper-gold and porphyry copper deposits associated with Frieda River Complex intrusives and remnants of nearshore stratovolcano at S margin of submerging trough. K-Ar ages of igneous activity: early intrusion 17.3-16.8 Ma, main intrusion 16.8-13.1 Ma)

Brocard, G., S. Zahirovic, T. Salles & P. Rey (2018)- Plio-Pleistocene river drainage evolution in New Guinea. Implications for reservoir mineralogy predictions. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, p. 1-6. *(Extended Abstract)*
(online at: www.publish.csiro.au/EX/ASEG2018abT5_1A)
(River drainage of New Guinea evolved rapidly since Pliocene time. Relief growth initiated in accreted oceanic terranes in N and migrated into Australian margin interior over time. Rise of Highlands and Papuan Peninsula spurred drainage reorganization, and affected composition of clastic sediments delivered to shelves)

Brown, C.M. (1977)- Yule, Papua New Guinea- 1:250,000 geological series. Bureau Mineral Res., Geology & Geophysics, Australia, Explanatory Notes, SC/55-2.

Brown, C.M (1978)- Mesozoic geology of Papua New Guinea. Geol. Survey Papua New Guinea, Dept. Minerals and Energy, p.

Brown, C.M. (1982)- Kavieng, Papua New Guinea- 1:250,000 geological series. Geol. Survey Papua New Guinea, Explanatory Notes, SA/56-9.

Brown, C.M., P.E. Pieters & G.P. Robinson (1975)- Stratigraphic and structural development of the Aure Trough and adjacent shelf and slope areas. Australian Petrol. Explor. Assoc. (APEA) J. 15, 1, p. 61-71.

Brown, C.M., C.J. Pigram & S.K. Skwarko (1980)- Mesozoic stratigraphy and geological history of Papua New Guinea. Palaeogeogr. Palaeoclim. Palaeoecology 29, p. 301-322.
(Two distinct Mesozoic successions: 'Fly Association' (S part foldbelt- Papuan platform; derived from Australian continent) and 'Sepik Association' (N and E parts of foldbelt; around margins of volcanic arc))

Brown, C.M. & G.P. Robinson (1982)- Kutubu, Papua New Guinea - 1:250,000 geological series. Geol. Survey of Papua New Guinea, Explanatory Notes, SB/54-12, p. 1-43.
(Geologic map and explanatory notes of Southern Highlands, between 6-7° S and 142°30'- 144° E. Most of area Central range foldbelt, with outcrops of Miocene Darai Limestone, overlain by major Late Pliocene-Quaternary dormant volcanic centers (Bosavi, Kerewa, Giluwe, etc.). Oldest rocks exposed in anticlines in NE part of area (Upper Cretaceous))

Buchanan, P.G. & J. Warburton (1996)- The influence of pre-existing basin architecture in the development of the Papuan fold and thrust belt: implications for petroleum prospectivity. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in PNG, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 89-109.

(Many of young surface anticlines in Papuan foldbelt believed to be inversions of Triassic- M Jurassic rifts/ half grabens (not like previous thin-skinned structural models of Hobson (1986) and Hill (1991))

Buddin, T. (1993)- Petroleum evaluation of the Aure thrust belt, Gulf of Papua, Papua New Guinea. Simon Petrol. Techn. Ltd., SOPAC Techn. Report 183, p. 1-39.
(online at: www.sopac.org/data/virlib/TR/TR0183.pdf)
(Aure Thrust Belt is SE continuation of producing Papuan Fold Belt. Late Miocene Talama Fm volcanics (6-7 Ma) mark top of pre-deformational sequence, Pliocene Orubadi Beds exhibit marked growth sequences. ATB likely to be gas province, charged from Miocene Aure Fm source rocks)

Burns, B.J. & J. Bein (1980)- Regional geology and hydrocarbon potential of the Mesozoic of the western Papuan Basin. Australian Petrol. Explor. Assoc. (APEA) J. 20, 1, p. 1-15.

Caffi, P. (2008)- Evolution of an active metamorphic core complex, Suckling-Dayman Massif, eastern PNG B.S. Honours Thesis, Macquarie University, Sydney, p. 1-165.

Callot, J.P., K.C. Hill, R. Divies, S. Wood, F. Roure & W. Sassi (2015)- Pressure and basin modeling in foothills: a study of the Kutubu area, Papua New Guinea fold and thrust belt. AAPG/SEG Int. Conf. Exhibition, Melbourne, 23p. *(Extended abstract)*
(online at: www.searchanddiscovery.com/documents/2015/30431callot/ndx_callot.pdf)
(PNG petroleum system studied along 200 km transect in frontal fold-thrust belt, based on regional balanced cross section. Scenario integrates Jurassic rifting and passive margin stage, uplift related to Coral Sea rifting and Plio-Pleistocene shortening, together with U Cretaceous erosion (600-1300m), and early growth of Hedinia Anticline. Deep type III source rock explains small extent of maturation. Type II/III Cretaceous source rock maturation starts in M Cretaceous with strong increase during late tectonic burial (50% in last 7 Ma))

Callot, J.P., W. Sassi, F. Roure, K.C. Hill, N. Wildon & R. Divies (2017)- Pressure and basin modeling in foothill belts: a study of the Kutubu Area, Papua New Guinea fold and thrust belt. In: M.A. AbuAli et al. (eds) Petroleum systems analysis- case studies, AAPG Memoir 114, Chapter 7, p. 165-190.
(Full paper of Callot et al. 2015 Abstract above)

Carey, S.W. (1937)- The morphology of New Guinea. Australian Geographer 3, 5, p. 5-31.

Carey, S.W. (1938)- Tectonic evolution of New Guinea and Melanesia. D.Sc. Thesis, University of Sydney, p. 1-200. *(Unpublished)*

Carey, S.W. (1945)- Notes on Cretaceous strata in the Purari Valley, Papua. Proc. Royal Soc. Victoria 56, 2, p. 123-130.
(Cretaceous 6000' dark, thick massive or thick-bedded sandstones and dark thin-bedded shales in SE Highlands. Except for one 10' thick 'Exogyra' mollusc bed and sandstone with belemnite Tetrabelus macgregori and plant material, sandstones unfossiliferous and shales have poor fauna. Cretaceous unconformably overlain by Eocene limestone (Lacazina limestone; known from loose blocks only?))

Carey, S.W. (1990)- Fifty years of oil search. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby 1990, p. 17-26.

Carman, G.J. (1987)- The stratigraphy of the Aure Scarp, Papua New Guinea. Petroleum Expl. Soc. Australia (PESA) Journal 11, p. 26-35.
(Aure Scarp/fault in NE Papuan Fold Belt defines major thrust which displaces at least 4450m of stratigraphic slab. Exposures with 500m of Cretaceous Ieru Fm marine siltstones/ mudstones, 950m of Paleocene-Oligocene Mendi Fm carbonates (micrites and cherty limestones) and ~3000m of Miocene Aure beds. Pale Sandstone Mb proposed for Campanian barrier bar or beach deposit at top Ieru Fm: 150m of m-c quartz sst in 1-2m coarsening-upward beds. Puri oil well, 40 km W of Aure Scarp, flowed oil 1610 BOD from similar carbonate. Major decollement below Pale Sst)

Carman, G.J. (1990)- Occurrence and nature of Eocene strata in the eastern Papuan Basin. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby 1990, p. 169-183.
(M Eocene bioclastic, siliceous and cherty limestones occur along 1000km of E Papuan Basin from Mendi/ Kagua to Aure Scarp. Chimbu Lst with Lacazinella and Nummulites neritic, most others deep marine? with radiolaria, planktonic foraminifera)

Carman, G.J. (1993)- Palaeogeography of the Coral Sea, Darai and foreland megasequences in the eastern Papuan basin. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, PNG Chamber of Mines and Petroleum, p. 291-309.

(Late Cretaceous (88 Ma) pillow basalts on Aure Scarp record onset and N-most locality for Coral Sea rift. Campanian Pale sst and Barune Sst interpreted to be synrift sediments. Maastrichtian-Paleogene shallow carbonates on Cretaceous rift shoulder. With Campanian- Pliocene paleogeographic maps of S PNG)

Carman, G.J. & N.W. Archbold (1990)- Macrofossil evidence for a palaeo-high, Erun Anticline, PNG. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea. Proc. First PNG Petroleum Convention, Port Moresby, p. 397-402.
(Erun anticline at E side of Crater Montain volcano (presumably frontal Aure foldbelt- SE end of Kubor Terrane?) with relatively shallow marine Aptian- Cenomanian (Turonian?) marls with Pecten-type mulluscs in core of anticline. Unconformably overlain by Late Eocene- E Oligocene Chimbu Limestone with Discocyclina (and Biplanispira?))

Carne, J.E. (1913)- Notes on the occurrence of coal, petroleum and copper in Papua. Australia Dept. of External Affairs, Melbourne, Bull. 1, p. 1-116.
(online at: https://nla.gov.au/nla.obj-52797997/view?partId=nla.obj-95409124page/n2/mode/1up)
(First verification of reported oil -gas seeps and coal occurrences in PNG by Australian Government officer. Most of book is description of gas and oil seeps at Opa and Akauda (off Vailala River), with comparisons to Indonesian oil fields and oil types. Also reviews of Astrolabe copper field, coal at Purari, etc.. (follow-up historic reports by Stanley ( ) and Wade (1927))

Causebrook, R.M. & G.J. Solomon (1990)- Hydrocarbon exploration and structure of the Northwest Darai Plateau. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petrol. Convention, Port Moresby, p. 337-350.
(Darai Plateau is deeply karstified NW-SE trending elevated block, S of Papuan foldbelt oil-gas gas fields Iagafu and Hedinia. Miocene Darai Limestone at surface. Structure interpeted as relatively simple Miocene inversion of Mesozoic rift)

Challinor, A.B. (1990)- A belemnite biozonation of the Jurassic-Cretaceous of Papua New Guinea and a faunal comparison with Eastern Indonesia. BMR J. Australian Geol. Geophysics 11, p. 429-447.
(online at: www.ga.gov.au/corporate_data/81270/Jou1990_v11_n4_p429.pdf)
(Central PNG highlands belemnites show Bathonian-Tithonian age for Maril shale, Berriasian Toro sst, etc. Belemnite succession of PNG resembles that of E Indonesia Sula islands)

Chapman, F. (1914)- Description of a limestone of Lower Miocene age from Bootless Inlet, Papua. Proc. Royal Soc. New South Wales, Sydney 48, p. 281-301.
(online: https://ia801701.us.archive.org/5/items/journalproceedi481914roya/journalproceedi481914roya.pdf)
(One of earliest micropaleontological papers on PNG rocks, in SE PNG. Little or no locality information, but adequate descriptions of larger foraminifera (presence of Lepidocyclina (Eulepidina) and possible Heterostegina borneensis indicate Lower Te letter stage, now assigned to latest Oligocene; JTvG))

Chapman, F. (1925)- On some palaeontological and stratigraphical relations of the Cainozoic rocks of Papua and New Guinea with these of the East Indies. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 8 (Verbeek volume), p. 81-88.
(Brief discussion of Cenozoic rocks and macrofossils known from PNG, and comared to Indonesian faunas)

Chapman, F. & A. Wade (1918)- Report on a collection of Cainozoic fossils from the oil-fields of Papua. Bull. Territory of Papua 5, Melbourne, p. 1-17.

Chappell, J. (1974)- Geology of coral terraces, Huon Peninsula, New Guinea: a study of Quaternary tectonic movements and sea-level changes. Geol. Soc. America (GSA) Bull. 85, p. 553-570.
(More than 20 offlapping Late Pleistocene coral terraces, up to 220 kyr old and up to 600m in elevation, formed during uplift of NE Huon Peninsula in NE PNG)

Chappell, J. (1974)- Upper mantle rheology in a tectonic region: evidence from New Guinea. J. Geophysical Research 79, 2, p. 390-398.
(Deformed coral terraces on NE New Guinea coast provide opportunity for estimating lithosphere-asthenosphere rheology in tectonic region. Terraces can be traced for ~130 km and extrapolated to point of convergence ~55 km beyond zone of least rapid uplift)

Chappell, J. (1983)- A revised sea-level record for the last 300,000 years from Papua New Guinea. Search 14, p. 99-101.

Chappell, J. (1993)- Contrasting Holocene geologies of lower Daly River, northern Australia, and lower Sepik-Ramu, Papua New Guinea. Sedimentary Geology 83, p. 339-358.
(Holocene geology of Sepik and Ramu River systems strongly affected by post-glacial sealevel changes, and differs from N Australia Daly River)

Chappell, J., A. Omura, T. Esat, M. McCulloch, J. Pandolfi, Y. Ota & B. Pillans (1996)- Reconciliation of late Quaternary sea levels derived from coral terraces at Huon Peninsula with deep sea oxygen isotope records. Earth Planetary Sci. Letters 141, p. 227-236.
(Late Quaternary sea level changes from 120ka- now derived from raised coral reef terraces at Huon Peninsula in PNG now good correspondence with trends derived from oxygen isotopes in deep sea cores)

Chappell, J., Y. Ota & K. Berryman (1996)- Late Quaternary coseismic uplift history of Huon Peninsula, Papua New Guinea. Quaternary Science Reviews 15, 1, p. 7-22.
(Huon Peninsula episodic uplift shown by regressive terraces cut into raised late Quaternary reef tracts. Uplift events believed to be coseismic. Amplitude of uplift events averages ~3 m and increases from NW to SE)

Chappell, J., Y. Ota & C. Campbell (1998)- Decoupling post-glacial tectonism and eustasy at Huon Peninsula, Papua New Guinea. In: I.S. Stewart & C. Vita-Finzi (eds.) Coastal tectonics, Geol. Soc, London, Special Publ. 146, p. 31-40.

Chappell, J. & H.A. Polach (1976)- Holocene sea-level change and coral reef growth at Huon Peninsula, Papua New Guinea. Geol. Soc. America (GSA) Bull. 87, p. 235-240.
(At tectonically rising terraced coast of Huon Peninsula Holocene reef emerged by 12m. Uplift of Pleistocene reefs in area ~1.9 m/1000 yr. If uplift uniform rate, position of sea level at 6000 yrs ago ~ -4m; 8000 yr ago~ -14m)

Chivas, A.R., J.R. O'Neil & G. Katchan (1984)- Uplift and submarine formation of some Melanesian porphyry copper deposits: stable isotope evidence. Earth Planetary Sci. Letters 68, p. 326-334.
(Hydrogen and oxygen isotope from young porphyry copper deposits in PNG (Ok Tedi; 1.2 Ma and Yandera; 6.5 Ma), Solomon Islands (Koloula; 1.6 Ma), etc. indicate mixing with meteoric water with isotopic signature of consistent with elevation of 200m a.s.l. or less at time of mineralization; exposed deposit now at 1800m a.s.l.

Influx of meteoric water at Yandera when ground surface above deposit was at ~600m a.s.l. Deposit now at 1600m indicating uplift of ~2.2 km, with removal of 1.2 km of overburden by erosion)

Christopherson, K.R. (1991)- Applications of magnetotellurics to petroleum exploration in Papua New Guinea; a model for frontier areas. The Leading Edge 10, 4, p. 21-27.

Cole, J.P., M. Parish & D. Schmidt (2000)- Sub-thrust plays in the Papuan fold belt: the next generation of exploration targets. In: P.G. Buchanan et al. (eds.) Papua New Guineaôs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, PNG Chamber of Mines, p. 87-100.

Connelly, J.B. (1979)- Mode of emplacement of the Papuan ultramafic belt. BMR J. Australian Geol. Geophysics 4, p. 57-65.
(online at: https://d28rz98at9flks.cloudfront.net/80985/Jou1979_v4_n1_p057.pdf)
(Papuan Ultramafic Belt probably overthrust sheet of oceanic crust and mantle, with thicker crustal section than normal oceanic crust. Left-lateral faulting of Belt after emplacement evident from displacement of ultramafic bodies. Belt aligned N-S when originally emplaced, and emplaced from W, 30° S of present latitude, before Australian Plate started to move N at ~55 Ma. Estimated uplift of presently exposed part up to 10 km)

Conybeare, C.E.B. & R.G.C. Jessop (1972)- Exploration for oil bearing sand trends in the Fly River area, western Papua. Australian Petrol. Explor. Assoc. (APEA) J. 12, 1, p. 69-73.

Cooper, G.T., K.C. Hill & K. Baxter (1996)- Rifting in the Timor Sea and New Guinea; a template for compressional forward modelling. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 133-146.
(Foldbelt of New Guinea underlain by Mesozoic rifts, along strike to Late Jurassic Vulcan sub-basin of Australia NW Shelf (but New Guinea margin rifting/ breakup Triassic?))

Cooper, G., D. Kendrick, F. Waina, C. Hamilton & M. Nongkas (2012)- New insights in to the structural and thermal development of the Papuan Foreland: implications for hydrocarbon charge and prospectivity. In: Eastern Australian Basins Symposium (EABS) IV, Brisbane, Petroleum Expl. Soc. Australia (PESA), 14p.
(Thermochronological data for 29 wells in Papuan Foreland show present-day heat flow consistent with median values for Australian continental plate. Paleothermal data suggest Cecilia Trough and Morehead Graben presently at maximum temperatures, but wells in central Foreland much higher temperatures in past, suggesting either km-scale uplift and erosion or (less likely) elevated heat flows associated with Coral Sea Rifting in Late Cretaceous-Paleocene)

Cooper, P. & B. Taylor (1987)- Seismotectonics of New Guinea: a model for arc reversal following arc continent collision. Tectonics 6, 1, p. 53-68.
(Seismicity shows active subduction zones. E of 149°E Solomon Plate subducted to N and S. W of 149°E forearcs collided and override doubly subducted Solomon Plate. Ramu-Markham suture plunges W at 5° angle below N New Guinea coastal ranges. From 144°-148° E convergence between Bismarck and Indo-Australian plates accommodated by thrusting in Finisterre and Adelbert ranges and compression of New Guinea orogenic belt, together with basement-involved foreland folding/ thrusting to S. Finisterre block overthrusts New Guinea foldbelt, Adelbert block sutured to New Guinea and overthrusts oceanic lithosphere of Bismarck Sea. W of 144°E seismicity defines S-dipping Benioff zone and oblique subduction along New Guinea Trench)

Corbett, D.W.P. (1962)- Geological reconnaissance in the Ramu Valley and adjacent areas, New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1962/032, p. 1-14.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10922)
(Survey at NE coastal area of PNG around Lower Ramu Valley. At S side NE foothills of Schrader Ranges all greenschist facies unfossiliferous greywackes/ siltstones. In N Adelbert Mts (Miocene-Recent volcanics-dominated sediments))

Corbett, G.J. (1994)- Regional structural control of selected Cu/Au occurrences in Papua New Guinea. In: R. Rogerson (ed.) Proc. PNG Geology, exploration and mining conference, Lae 1994, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 57-70.
(NE-trending structural grain in Papuan Fold Belt and relation to copper-gold deposits)

Corbett, G.J. (2005)- The geology and mineral potential of Papua New Guinea. Papua New Guinea Department of Mining, Port Moresby, p. 1-152.

Corbett, G.J. (2009)- Tectonic/structural control to Papua New Guinea Au-Cu mineralisation. *(Abstract Only)*
(online at: www.smedg.org.au/Corbett%20Au-Cu%20in%20PNG%20May09.pdf)

Corbett, G.J., T.M. Leach, R. Stewart & B. Fulton (1995)- The Porgera gold deposit: structure, alteration and mineralisation. In: Proc. Pacific Rim Congress 95, Auckland 1995, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 151-156.

Craig, M.S. & K. Warvakai (2009)- Structure of an active foreland fold and thrust belt, Papua New Guinea. Australian J. Earth Sci. 56, 5, p. 719-738.
(Seismic lines across foreland at SW side of Papuan foldbelt show en echelon anticlines: Strickland, Cecilia, and Wai Asi. Folding mainly in upper 2000m, which consist of Darai Lst overlain by Miocene- Quaternary siliciclastics. Competent Darai Lst ~1000m thick, overlying similar thickness of relatively incompetent Cretaceous Ieru Fm. Age of folding Late Pliocene and Pleistocene)

Craig, M.S., K. Warvakai & H.L. Davies (2000)- Seismic structure of the Strickland Anticline, Papuan fold belt. In: P.G. Buchanan et al. (eds.) Papua New Guinea's petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 443-456.

Crespin, I. (1938)- The occurrence of *Lacazina* and *Biplanispira* in the Mandated Territory of New Guinea. Bureau Mineral Res., Canberra, Palaeont. Bull. 3, p. 3-8.
(online at: www.ga.gov.au/corporate_data/200/Bull_003.pdf)
(Eocene limestone near Chimbu aerodrome, PNG, with abundant calcareous algae (Lithothamnium), common larger forams Lacazina and also Pellatispira and rare Biplanispira. These genera not normally found associated (illustrations on Plate 2 look convincing, but Pellatispira/Biplanispira not seen in these rocks by Bain & Binnekamp 1973; JTvG)

Crespin, I. (1938)- A Lower Miocene limestone from the Ok Ti River, Papua. Bureau Mineral Res., Canberra, Palaeont. Bull. 3, p. 9-12.
(online at: www.ga.gov.au/corporate_data/200/Bull_003.pdf)
(Limestone beneath 'mudstone grit series' at W bank Ok Ti River (= Upper Tedi River; near Irian Jaya border, with headwaters in Star Mts). Assemblage of Heterostegina borneensis, Borelis pygmaeus and Eulepidina (practically identical to assemblages from W Java Rajamandala Limestone= Te1, Latest Oligocene; JTvG))

Crespin, I. (1958)- Microfossils in Australian and New Guinea stratigraphy. J. Proc. Royal Soc. New South Wales 92, 4, p. 133-147.
(Review of progress of micropalaeontology in Australia and New Guinea, with bibliography of key papers. Groups of microfossils recognized foraminifera, radiolaria, calpionellidae, holothurian sclerites, alcyonarian sclerites, sponge spicules, conchostraca, ostracoda, microplankton, conodonts, spores-pollens, diatoms)

Crespin, I. (1962)- *Lacazinella*, a new genus of trematophore Foraminifera. Micropaleont. 8, p. 337-342.
(New genus name for Lacazina wichmanni from Upper Eocene limestone near Chimbu aerodrome in PNG)

Crespin, I. & D.J. Belford (1955)- Foraminifera from the Upper Sepik River, Western New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1955/46, p.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=9037)
(Brief report on samples from river float, derived from Central Range near W Papua border. Of limited use)

Crespin, I. & D.J. Belford (1955)- Micropalaeontological examination of rock samples from the Cape Vogel area, Papua. Bureau Mineral Res. Geol. Geophysics, Record 1955/96, p.
(online at: www.ga.gov.au/corporate_data/8990/Rec1955_096.pdf)
(107 samples collected by J.E. Thompson from Cape Vogel area, E end of Papuan Peninsula, are mainly U Miocene- Pliocene open marine fauna. A few limestones contain Lower Tf (M Miocene) larger forams, incl. Miogypsina polymorpha, Katacycloclypeus, etc.))

Crespin, I. & D.J. Belford (1956)- Micropalaeontological examination of rock samples from the Upper Sepik-August River area, New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1956/20, p. 1-5.
(online at: www.ga.gov.au/corporate_data/10180/Rec1956_020.pdf)
(Samples of E and M Miocene limestones, clastics with common reworked U Cretaceous and Paleocene planktonics, etc. For geology of area see Perry (1956))

Crespin, I. & D.J. Belford (1957)- Micropalaeontological examination of rock samples from the Central Highlands, New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1957/91, p. 1-6.
(online at: www.ga.gov.au/corporate_data/10290/Rec1957_091.pdf)
(Micropaleontological analysis of outcrop samples collected by McMillan & Johnson (1960) around E part of Bismarck Range/ Goroka Valley. In Watabung and Bena-Bena area at S side of Bismarck anticline U Cretaceous with Pseudorbitoides, Eocene pebbles with Nummulites, Discocyclina and Pellatispira spp, Oligocene and Miocene with Lepidocyclina, Miogypsina, etc.. No locality maps)

Crespin, I. & G.A.V. Stanley (1965)- Palaeontological investigations, Papua and New Guinea. A revision of list in BMR Report 20, with additions to the end of 1965. Bureau Mineral Res. Geol. Geophysics, Record 1965/186, p. 1-44.
(online at: www.ga.gov.au/corporate_data/11639/Rec1965_186.pdf)
(Comprehensive listing of paleontological reports for PNG by Bureau of Mineral Resources, 1922-1965)

Crook, K.A.W. (1961)- Diagenesis in the Wahgi valley sequence, New Guinea. Proc. Royal Soc. Victoria 74, 1, p. 77-81.
(Wahgi valley sequence Permian- U Jurassic-Miocene sediments on Paleozoic basement. In Chim and Wahgi valleys 24.800' of pre-Miocene sediments, once overlain by probable 10,000' of Miocene shales-greywackes. Sediments that were buried to depths of 13,000'- 28,000' show diagenesis characteristic of laumontite facies. Sediments buried below 28,000' in prehnite-pumpellyite facies of diagenesis)

Crook, K.A.W. (1989)- Suturing history of an allochthonous terrane at a modern plate boundary traced by flysch-to-molasse facies transitions. Sedimentary Geology 61, p. 49-79.
(S boundary of S Bismarck plate in PNG (Ramu-Markham FZ) changes character from W to E as result of oblique collision and suturing of Finisterre Terrane with New Guinea margin. Correlations between facies and tectonic settings: (1) terrane yet to dock, western New Britain Trench: conglomeratic flysch; (2) terrane now docking, Huon Gulf: marine molasse (3) terrane already docked, Markham Valley: fluvial molasse)

Crowhurst, P.V. (1999)- The tectonic history of Northern Papua New Guinea. Ph.D. Thesis, La Trobe University, Melbourne, p. 1-414. *(Unpublished)*

Crowhurst, P.V., K.C. Hill, D.A. Foster & A.P. Bennett (1996)- Thermochronological and geochemical constraints on the tectonic evolution of northern Papua New Guinea. In: R. Hall & D. Blundell (eds.) Tectonic evolution of Southeast Asia, Geol. Soc., London, Spec. Publ. 106, p. 525-537.
(Bewani-Torricelli Mts along N margin of PNG formed as island arc in Late Eocene- E Oligocene and accreted to margin by Late Oligocene. E Miocene extension due to inferred rollback of subducting slab beneath New Guinea. Two inferred metamorphic core complexes rapid cooling from 27-23 Ma and 20-18 Ma. Continued subduction beneath New Guinea resulted in Maramuni Arc in M Miocene and end of extension. Collision of Melanesian Arc caused regional uplift of N PNG, mainly from 8-5 Ma, with >3-4 km of denudation)

Crowhurst, P.V., R. Maas, K.C. Hill, D.A. Foster & C.M. Fanning (2004)- Isotopic constraints on crustal architecture and Permo-Triassic tectonics in New Guinea: possible links with eastern Australia. Australian J. Earth Sci. 51, 1, p. 107-124.
(New ages for Triassic igneous and metamorphic rocks. Triassic volcanic arc in N New Guinea intrudes high-grade metamorphic rocks probably resulting from Late Permian- E Triassic (~260-240 Ma) orogenesis, as recorded in New England Fold Belt. Late Triassic magmatism in New Guinea (~220 Ma) related to coeval extension and rifting as precursor to Jurassic breakup of Gondwana margin. Amanab- Idenburg metadiorite near PNG border ~240 Ma. Second magmatic event in Late Triassic ~220 Ma (Kubor granodiorite, Strickland granite, etc.). Evidence for two metamorphic events in Amanab block: one high-grade before 240 Ma (Late Permian- E Triassic) and lower grade event in Miocene)

Cullen, A.B. (1991)- The North New Guinea Basin, Papua New Guinea; a case study of basin evolution at a modern accretionary plate boundary. Ph.D. Thesis, University of Oklahoma. Norman, p. 1-313. *(Unpublished)*

Cullen, A.B. (1991)- Neogene tectonic evolution of the Ramu Basin, Papua New Guinea; evidence of subsidence analysis of the Tsumba 1 Well. The Compass (University of Oklahoma) 68, 3, p. 181-190.

Cullen, A.B. (1996)- Ramu Basin, Papua New Guinea: a record of Late Miocene terrane collision. American Assoc. Petrol. Geol. (AAPG) Bull. 80, 5, p. 663-684.
(Ramu Basin Late Miocene collisional successor basin developed as Finisterre/Adelbert terrane collided with Maramuni arc. Age of arc volcanism Late Oligocene- M Miocene. Subduction polarity uncertain)

Cullen, A.B. & J.D. Pigott (1989)- Post-Jurassic tectonic evolution of Papua New Guinea. Tectonophysics 162, p. 291-302.
(Series series of kinematically constrained tectonic reconstructions of PNG, documenting post-Jurassic evolution of N margin Australian plate from rifted, passive continental margin to one composed of accreted, tectonostratigraphic terranes undergoing sinistral oblique transpression. Allochthonous terranes represent marginal basins and fringing island arcs which began docking to Australian plate in Miocene. At present, assemblage forms diffuse suture zone between Australian and Pacific plates)

Daczko, N.R., P. Caffi, J.A. Halpin & P. Mann (2009)- Exhumation of the Dayman dome metamorphic core complex, eastern Papua New Guinea. J. Metamorphic Geol. 27, 6, p. 405-422.
(∼750 km2 Dayman dome of Late Cretaceous Suckling-Dayman massif, E PNG rises 2850m high, with >1000m high fault scarp at N edge, which is part of microplate boundary separating continental crust of New Guinea highlands from continental and oceanic crust of Woodlark microplate. Eclogite-bearing core complexes NE of Dayman dome exhumed from 24-28 kbar in last few millions of years. Pumpellyite-actinolite facies assemblages with local lawsonite and/or glaucophane in core of complex indicate exhumation from depths of 20-30 km)

Daczko, N.R., P. Caffi & P. Mann (2010)- Structural evolution of the Dayman dome metamorphic core complex, eastern Papua New Guinea. Geol. Soc. America (GSA) Bull. 123, p. 2335-2351.
(Shallow-dipping ductile mylonitic shear zone and concordant brittle detachment fault (Mai'iu fault) control orientation of dip slopes on flanks of Mt Dayman, E Papuan Peninsula, PNG. Dip slopes in all directions. Orientation of megacorrugations on Mt Dayman domed surface (footwall) consistent with NNE-directed transport of hanging-wall block of low-grade volcanic and sedimentary rocks and minor ultramafic rocks. Previously documented as thrust surface, but more likely extensional origin (boudinaged veins, etc.))

Dalrymple, R.W., E.K. Baker, P.T. Harris & M.G. Hughes (2003)- Sedimentology and stratigraphy of a tide-dominated foreland-basin delta (Fly River, Papua New Guinea). In: F.H. Sidi, D. Nummedal et al. (eds.) Tropical deltas of Southeast Asia- sedimentology, stratigraphy and petroleum geology, SEPM Spec. Publ. 76, p. 147-173.

Daniels, M.C. (1993)- Formation pressure measurements and their use in oil exploration in the Kutubu project, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum Exploration and Development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby 1993, p. 579-588.

Daniels, M.C. & N.I. Duncan (1990)- The application of gas ratios in Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 83-94.

Daniels, M., M.I. Jacobson, J.D. Lee, D.T. Moffat & K.C. Richards (2000)- The application of exploration principles to define the potential of the S.E. Gobe field forelimb. In: P.G. Buchanan et al. (eds.) Papua New Guineaös petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby 2000, p. 369-383.

Darnault, R& K.C. Hill (2020)- Four-dimensional analog and geometrical modeling of the Hides anticline, Papua New Guinea: structure of a giant gas field. American Assoc. Petrol. Geol. (AAPG) Bull. 104, 4, p. 961-985.
(Hides anticline in PNG foldbelt underlain by basement normal fault that was mildly inverted before onset of pure compression deformation in sediment section. Main detachment level just above basement at ~8-10 km below surface, ramped up at basement fault, creating triangle-zone faults through overlying section. Early inversion initiatied back thrust and hinterland-verging tight fold in Mesozoic section. Deformation in overlying Miocene carbonates detached from underlying reservoir along U Cretaceous mudstone. Mesozoic structure verges NE, overlying Miocene structure verges SW)

Darnault, R., K. Hill, J.M. Mengus, J.M. Daniel, J.P. Callot & J.C. Ringenbach & (2015)- Analogue modelling of the Papua New Guinea fold and thrust belt. 77th EAGE Conf. Exhib., Madrid, WS04-P01, 5p. *(Extended Abstract*
(Brief review of IFP sandbox modeling of PNG foldbelt structure. Many folds formed as inversions of basement normal faults)

Darnault, R., K.C. Hill, J.M. Mengus, J.M. Daniel & N. Wilson (2016)- Analogue modeling of the Papua New Guinea fold and thrust belt. AAPG/SEG Int. Conf. Exhibition, Melbourne 2015, Search and Discovery Art. 30439, p. *(Extended abstract)*
(online at: www.searchanddiscovery.com/documents/2016/30439darnault/ndx_darnault.pdf)
(Sandbox experiments to model PNG foldbelt structures. Pre-existing normal fault in basement led to development of detachment fold in cover abutting the basement in footwall. Development of overturned detachment fold enhanced when basement fault was first partially inverted)

Darnault, R., K.C. Hill, J.M. Mengus & N. Wilson (2015)- Analogue modeling of the Papua New Guinea fold and thrust belt. In: Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 249-254.
(Similar to Darnault et al. 2015, 2016)

Davey, R.J. (1988)- Palynological zonation of the Lower Cretaceous, Upper and uppermost Middle Jurassic in the northwestern Papuan Basin of Papua New Guinea. Geol. Survey Papua New Guinea, Port Moresby, Memoir 13, p. 1-77.
(Robertson Research Jurassic-Cretaceous marine dinoflagellate zonation, from samples along Strickland River in W PNG. Similar to Helby, Morgan, Partridge (1987) zonation, but more elaborate (12 zones in Callovian-Ttihonian). (See also revised Helby et al. zonations updated in 2004 and 2006; JTvG))

Davey, R.J. (1999)- Revised palynological zonation for the Late Cretaceous and Late Jurassic of Papua New Guinea. Geol. Survey Papua New Guinea, Port Moresby, Memoir 17, p. 1-51.

Davies, H.L. (1968)- Papuan ultramafic belt. Proc. 23rd Sess. Int. Geological Congress, Prague 1968, 1, p. 209-230.
(Papuan Ultramafic Belt along NE side of the Owen-Stanley Range in SE PNG ~400 km long and 40 km wide, composed of gabbro and peridotite. Thought to represent fragment of oceanic crust and mantle that moved W-ward since Cretaceous and forced upward after collision with sialic core of PNG))

Davies, H.L. (1969)- Peridotite-gabbro-basalt complex in eastern Papua; an overthrust plate of oceanic mantle and crust. Ph.D. Thesis, Stanford University. Stanford, p. 1-88. *(Unpublished)*
(online at: http://sul-derivatives.stanford.edu/derivative?CSNID=00018812&mediaType=application/pdf)
(Early investigation of 400km long and 40km wide Papuan Ultramafic Belt, a peridotite-gabbro-basalt complex, thought to be part of plate of Cretaceous oceanic mantle and crust. NW-SE trending outcrop belt 400 km long, 40 km wide, on NE side of Owen Stanley Range in E PNG. Ultramafics thrusted over generally sialic metamorphic rocks in Eocene or Oligocene (Cretaceous sediments?, now in blueschist and greenschist facies)

Davies, H. L. (1969)- Notes on Papuan Ultramafic Belt mineral prospects, Territory of Papua and New Guinea Bureau Mineral Res., Canberra, Record 1969/67, p. 1-19.
(online at: https://d28rz98at9flks.cloudfront.net/12326/Rec1969_067.pdf)
(Presence of nickel sulphide and chromitite lenses. Lateritic nickel prospects in Ultramafic Belt deemed uneconomic)

Davies, H.L. (1971)- Peridotite-gabbro-basalt complex in Eastern Papua: an overthrust plate of oceanic mantle and crust. Bureau Mineral Res. Geol. Geophysics, Bull. 128, p. 1-48.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/145/)
(Similar to above. Papuan Ultramafic Belt peridotite-gabbro-basalt complex thought to be part of overthrust sheet of Cretaceous oceanic mantle and crust. From top to bottom complex consists of (1) Basalt zone (Basalt and spilite, massive and as pillow lavas, some dacite, 4-6 km thick); (2) Gabbro zone (4 km); (3) Ultramafic zone (cumulates, up to 0.5 km; noncumulates: harzburgite, etc., with metamorphic textures; 4-8 km thick)

Davies, H.L. (1976)- Papua New Guinea Ophiolites. 25th Int. Geological Congress, Sydney, Excursion Guide 52A, p. 1-16.

Davies, H.L. (1978)- Geology and mineral resources of Papua New Guinea. In: P. Nutalaya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, Asian Inst. Techn., p. 685-699.
(Early review of PNG geology)

Davies, H.L. (1980)- Folded thrust fault and associated metamorphics in the Suckling-Dayman Massif, Papua New Guinea. American J. Science 280-A, p. 171-191.
(Suckling-Dayman Massif in SE PNG mainly metamorphosed Late Cretaceous basalt and limestone, apparently metamorphosed by underthrusting to 25-35 km depth in N-dipping Eocene subduction system. Massif partly surrounded by ophiolite outcrops and in places overlain by ultramafic rocks)

Davies, H.L. (1980)- Crustal structure and emplacement of ophiolite in southeastern Papua New Guinea. In: C. Allegre & J. Aubouin (eds.) Orogenic mafic ultramafic association, Colloques Int. Centre Nat. Recherches Scient. (CNRS), Paris, 272, p. 17-33.

Davies, H.L. (1981)- The major ophiolite complex in Southeastern Papua New Guinea. In: A.J. Barber & S. Wiryosujono (eds.) The geology and tectonics of Eastern Indonesia, Proc. CCOP-IOC SEATAR Working Group Mtg., Bandung 1979, Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 2, Bandung, p. 391-408.
(Papuan Ultramafic Belt NE of Owen Stanley Range simple layered sequence of basalt (4 km), gabbro (4 km) and ultramafic rocks (4-8 km). Ophiolite complex thought to represent Jurassic and/or Cretaceous Pacific oceanic crust, juxtaposed with Cretaceous sediments of NE Australian continental margin in NE-dipping subduction zone in E or M Eocene, choking subduction here ('choked subduction zone model' of ophiolite emplacement and uplift). Complex exposed by vertical movements in Neogene. NE dipping ophiolite complex continuous with crust and upper mantle of Solomon Sea Basin)

Davies, H.L. (1982)- The Papua New Guinea thrust belt, longitude 141-144 East. Bureau Mineral Res., Geol. Geophysics, Canberra, Record 1982/3, p. 1-24.

Davies, H.L. (1982)- Mianmin, Papua New Guinea. 1:250,000 Geological Series- Explanatory notes. Dept. Minerals and Energy, Geol. Survey Papua New Guinea, SB/54-3, p. 1-44.
(PNG map sheet immediately E of W Papua border, N side of Central Range. Three geologic units: Papuan Basin(Pliocene thrust belt) in S, Central basement massif (with ultramafics, Ambunti metamorphics, Jurassic black phyllite/ schist (Om Beds), Cretaceous- Eocene Salumei Fm volcanic arc/ arc trench deposits, Tau blueschist, etc.) and Lumi Trough (Sepik) Neogene basin in N (oldest recorded sediments M Miocene). M Miocene Frieda dioritic complex with porphyry copper mineralization. In SW corner Late Miocene Pliocene Antares monzodiorite complex (= Star Mountains; ~8- 4 Ma))

Davies, H.L. (1983)- Wabag, Papua New Guinea. 1:250,000 Geological Series- Explanatory notes. Dept. Minerals and Energy, Geol. Survey Papua New Guinea, SB/54-8, p. 1-84.
(PNG map sheet in NW part of Central Range thrust belt. Two main provinces, separated by Stolle- Lagaip-South Kubor Fault Zone: (1) Papuan Basin in SW (Central Range thrust belt; with M Jurassic - Tertiary Australian margin shelf sediments), and (2) Central orogenic Belt in NE ('mobile zone'; with M-L Triassic sediments and volcanics). Most faults NE-dipping reverse/ thrust faults, with possible 70km of left-lateral strike slip along Stolle-Lagaip-South Kubor fault. With Porgera gold mine, associated with M-L Miocene diorite intrusives into folded Late Cretaceous Chim Fm sediments. Oil seeps in SW)

Davies, H.L. (1990)- Structure and evolution of the border region of New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 245-269.
(Geology and stratigraphy of border region between W Papua and PNG, from Australian craton in S, across foldbelt, to accreted terranes in N. Disconformity at K-T boundary, spanning latest Maastrichtian- E Paleocene zone P2. Transcurrent faulting and narrowing of foldbelt at PNG- W Papua border may coincide with E border of more rigid Precambrian craton. Major M Miocene calc-alkaline volcanics in border regions (Maramuni Arc) and common Late Miocene- younger intrusives. Main development of PNG foldbelt 4-2 Ma, still continuing. Bismarck-Kubor moved relative to Fly Platform (paleomag suggests large Pliocene CCW rotation))

Davies, H.L. (1991)- Regional geologic setting of some mineral deposits of the New Guinea region. In: R. Rogerson (ed.) Proc. PNG Geology, Exploration and Mining Conf. 1991, Rabaul, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 49-57.
(Mineral deposits in C New Guinea associated with Neogene intrusions of magma of mantle origin that penetrated thick Precambrian and Paleozoic continental crust. Magmatism not obviously subduction-related)

Davies, H.L. (1992)- Mineral and petroleum resources of Papua New Guinea with notes on geology and history. Department of Geology, University of Papua New Guinea, 35p.

Davies, H.L., W.J.S. Howell, R.S.H. Fardon, R.J. Carter & E. Bumstead (1978)- History of the Ok Tedi copper prospect, Papua New Guinea, I: The years 1966-1976 and II: The years 1975-1978. Economic Geology 73, p. 796-809.
(Ok Tedi porphyry copper-gold deposit at Mt Fubilan in Star Mts of W PNG discovered and tested by Kennecott Copper subsidiary in 1968-1971. Mining operation negotiations failed in March 1975. In 1976 PNG government entered into agreement with BHP-led consortium)

Davies, H.L. & D.S. Hutchison (1982)- Ambunti, Papua New Guinea- 1:250,000 geological series with Explanatory Notes. Geol. Survey of Papua New Guinea, Port Moresby, SB/54-4, p.
(Map sheet in Sepik River region, N PNG)

Davies, H.L. & A.L. Jaques (1984)- Emplacement of ophiolite in Papua New Guinea. In: I.G. Gass et al. (eds.) Ophiolites and oceanic lithosphere, Geol. Soc. London, Spec. Publ. 13, p. 341-349.
(Major ophiolite complexes of PNG on NE margin of Australian craton and flanked by Paleogene volcanic arcs. Ophiolites are segments of oceanic lithosphere, in forearc zone prior to arc-continent collision. Central Range ophiolite (April ultramafics) complex structure and probably developed as series of thrust sheets in subduction system; thrust sheets subjected to renewed deformation after arc-continent collision)

Davies, H.L., J. Lock, D.L. Tiffin, E. Honza, Y. Okuda, F. Murakami & K. Kisimoto (1987)- Convergent tectonics in the Huon Peninsula region, Papua New Guinea. Geo-Marine Letters 7, 3, p. 143-152.
(Anticlinal nappe forming Huon Peninsula and adjacent ranges extends offshore as Huon Ridge. Frontal thrust of nappe is Ramu-Markham Fault (onshore) and deformation front along line of Markham Canyon (offshore). Timing and geometry of Finisterre arc-continent collision controversial, and origin of Finsch Deep unresolved)

Davies, H.L. & M. Norvick (1974)- Blucher Range, Papua New Guinea. BMR and Geol. Survey of PNG, 1:250,000 Geological Map series and explanatory notes, sheet SB/54-7, p. 1-29.
(Geologic map and explanatory notes of PNG Central Highlands, E of Indonesia border, between 5-6° S and 141° - 142°30'E. Major anticlines like Muller Anticline with Jurassic- Cretaceous section exposed in core)

Davies, H.L. & M. Norvick (1977)- Blucher Range stratigraphic nomenclature. Geol. Survey Papua New Guinea, Report. 77-14, p. 1-43.

Davies, H.L., R.C.B. Perembo, R.D. Winn & P. Kengemar (1997)- Terranes of the New Guinea Orogen. In: G.E. Hancock (ed.) Proc. Papua New Guinea Geology, Exploration and Mining Conference 1997, Madang, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 61-66.
(History of terrane accretion to N margin of Australian craton starts earlier (Late Cretaceous) than previously suggested. Collisions in C Highlands in Late Paleocene-E Eocene and Finisterre collision that precedes and is distinct from Pliocene Bismarck volcanic arc collision)

Davies, H.L. & I.E. Smith (1970)- Geology of Eastern Papua: a synthesis. Bureau Mineral Res. Geol. Geophysics, Canberra, Record 1970/116, p. 1-27.
(online at: www.ga.gov.au/corporate_data/12529/Rec1970_116.pdf)
(Brief review of geology of SE PNG mainland with Owen Stanley Range and nearby D'Entrecasteaux, Woodlark and Louisiade islands, All with rel. widespread metamorphic and ultramafic rocks)

Davies, H.L. & I.E. Smith (1971)- Geology of Eastern Papua. Geol. Soc. America (GSA) Bull. 82, p. 3299-3312.
(Geology of E Papua Peninsula around Owen Stanley Range. Core of mainly Cretaceous sialic rocks metamorphosed in early Eocene, at time of emplacement of Papuan ultramafic belt, flanked by Mesozoic and younger mafic rocks)

Davies, H.L. & I.E. Smith (1974)- Tufi-Cape Nelson, Papua New Guinea- 1:250,000 Geol. Map Series. Bureau Mineral Res., Canberra, and Geol. Survey of Papua New Guinea, Explanatory Notes, SC/55-84, p. 1-34.

Davies, H.L., I.E. Smith, G. Cifali & D.J. Belford (1968)- Eastern Papua geological reconnaissance. Bureau Mineral Res. (BMR) Geol. Geophysics, Canberra, Record 1968/66, p. 1-31.
(Geology of SE 'tail' of PNG mainland)

Davies, H., M. Swift & L. Jonda (2014)- Puzzling juxtaposition of extensional and contractional tectonics in southeastern Papua New Guinea. Proc. 6th Research Science Technology (RST) Conf. University PNG, 141119, p. 1-5.
(SE one-third of Peninsula shows extensional tectonics N of ~10°S, with outcrops of ophiolite and metamorphic rocks, and contractional tectonics S of that line. Extensional tectonics reflect W-ward propagation of Woodlark Rift, contractional structures due to convergence between Papuan Plateau and Papuan Peninsula)

Davies, H.L. & A.N. Williamson (2001)- Buna, PNG 1:250,000 Geological map series, Sheet SC/55-3, Explanatory Notes to accompany Buna 1:250,000 geologic map, Geol. Survey Papua New Guinea, Port Moresby, p. 1-23.

Davies, H.L., R.D. Winn & P. KenGemar (1996)- Evolution of the Papuan Basin: a view from the orogen. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 53-62.
(New Guinea orogen formed by succession of collisions of Australian craton with microcontinents and volcanic island arcs, from Late Cretaceous- today. Five main collision events: (1) Irian ophiolite event (end-Cretaceous collision of Australian craton and volcanic island arc, wih K-Ar ages of metamorphic sole 61-68 Ma); (2) Late Paleocene- E-M Eocene Kami event (closing of Kami small ocean basin and suturing of (para-autochthonous?) Bena Bena, Jimi and Kubor terranes with Australian craton); (3) Late Eocene- Oligocene Sepik collision of Australian continent and major volcanic arc(s), accomodating foreland loading and deposition of Darai Limestone; (4) Late Oligocene collision of East Papua Composite Terrane and (5) E Miocene collision of Oligocene- E Miocene Finisterre volcanic arc, with downwarping of continental margin creating Ramu-Markham basin. Often delay in time between collision and uplift)

Davis, K., K. Pedersen, B. Todd & K. Wall (2000)- Integrated geological and engineering evaluation of Central Moran field, Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaȏs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby 2000, p. 397-425.
(Moran Field in S highlands of PNG is 1996 oil discovery in E Cretaceous Toro and Digimu Fms sands. Narrow, SW vergent anticline with overturned forelimb)

Dekker, F., H. Balkwil, A. Sister, R. Herner & W. Kampschuur (1991)- A structural interpretation of the Onshore Eastern Papuan fold belt, based on remote sensing and fieldwork. In: G.J. & C.Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 319-336.

Dekker, F., H.R. Balkwill, A. Slater, R.R. Herner & W. Kampschuur (1991)- Exploring Papua New Guinea with remote sensing field work. World Oil 212, p. 71-86.

Denison, C.N. & J.S. Anthony (1991)- New Late Jurassic subsurface lithostratigraphic units, PPL-100, Papua New Guinea. In: G.J. & C.Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Port Moresby 1990, Proc. First PNG Petroleum Convention, Port Moresby, p. 153-158.
(Kimmeridgean- Tithonian lithostratigraphic- biostratigraphic units of PNG)

DesOrmeau, J.W., S.M. Gordon, T.A. Little & S.A. Bowring (2014)- Tracking the exhumation of a Pliocene (U)HP terrane: U-Pb and trace-element constraints from zircon, D'Entrecasteaux Islands, Papua New Guinea. Geochem. Geophys. Geosystems 15, 10, p. 3945-3964.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2014GC005396)
(Domal structures on D'Entrecasteaux Islands with UHP Pliocene (5.6- 4.6 Ma) eclogites and evidence for partial melting. Zircons from orthogneiss of Normanby Dome record HP metamorphism from 5.66- 5.04 Ma. Melt crystallization began in Goodenough and Normanby Domes within 0.75 Myr of HP metamorphism. Exhumation and cooling of HP rocks in PNG began first in E (Normanby Dome); in W (Goodenough Dome) ~1 Myr later. Mailolo Dome, cooled~2 My after exhumation of Normanby Dome. All domes reveal final extension-driven exhumation by 1.82 Ma)

DesOrmeau, J.W., S.M. Gordon, T.A. Little, S.A. Bowring & N. Chatterjee (2017)- Rapid time scale of Earthȏs youngest known ultrahigh-pressure metamorphic event, Papua New Guinea. Geology 45, 9, p. 795-798.
(Youngest known UHP eclogite from eastern PNG (Mailolo Dome) shows crustal rocks subducted to P 27-31 kbar and T ~715 °C. Zircons suggest ages of 6.0 ± 0.2 Ma to 5.2 ± 0.3 Ma for UHP metamorphism and 3.2-2.3 cm/yr exhumation rate. Subsequent retrogression of terrane near base of crust and final emplacement in upper crust in < ~3 My)

De Vis, C.W. (1905)- Fossil vertebrates from New Guinea. Annals Queensland Museum 6, p. 26-31.

DeVries, M.S., R.D. Parish & J.L. Ryan (1996)- Horizontal well drilling in the Kutubu project, Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea; Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 551-561.

Dickins, J.M. (1958)- Jurassic pelecypods from the Kubor Ranges, New Guinea. Unpublished Report.
(First identification of Late Jurassic Buchia malayomaorica from Kubor Ranges, PNG)

Dixon, J.M. (1996)- Physical model investigation of the influence of early extensional (growth) faults on fold-thrust structures, with application to the Papuan fold and thrust belt. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 147-160.
(Papuan foldbelt result of protracted Mesozoic- E Tertiary continental rifting and passive margin sedimentation and folding-thrusting in Late Tertiary. Plasticine- silicone structure modeling stress hydrocarbon potential of footwall structural traps)

Dobmeier, C.J. & B. Poke (2012)- Geological map publication series of Papua New Guinea, 1:100 000, Sheet 7887 Aiome. Mineral Resources Authority, Port Moresby.

Dobmeier, C.J., B. Poke & B. Wagner (2012)- Geological map publication series of Papua New Guinea, 1:100 000, Sheet 7886 Minj. Mineral Resources Authority, Port Moresby.

Donaldson, J.C. & J.T. Wilson (1990)- Geology and hydrocarbon potential of the Sepik-Ramu area, Ramu Basin. In: G.J. & C.Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 499-512.
(Improved seismic processing over Sepik-Ramu area, N New Guinea, suggests major tectonic event took place in Late Miocene- Early Pliocene, not M Miocene as previously suggested. Thick Miocene section contains 70x12 km area of E-M Miocene carbonates with pinnacle reefs, potentially analogous to Salawati Basin)

Donaldson, J.C. & J.T. Wilson (1996)- Geology and hydrocarbon potential of the Sepik-Ramu area, Ramu Basin, Papua New Guinea. In: G.P. & A.C. Salisbury (eds.) Trans. 5th Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1990, Gulf Publishing, Houston, p. 279-299.
(Same paper as Donaldson & Wilson 1990)

Doust, H. (1990)- Geology of the Sepik Basin, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 461-477.
(Sepik Basin in N part of New Guinea orogen is Neogene successor basin underlain and surrounded by terranes that were accreted in Oligocene-Miocene. Torricelli- Prince Alexander Mts in N are island arc/ oceanic terranes with some E-M Miocene limestones, mountains to S mainly metamorphics. Shell 1986 Nopan well 1, drilled of fault block, penetrated mainly M-L Miocene marine sediments before reaching weathered chlorite-epidote schist at 2312m, without oil shows or anticipated carbonate reservoirs)

Dow, D.B. (1961)- The relationship between the Kaindi metamorphics and Cretaceous rocks at Snake River, Territory of Papua and New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1961/160, p. 1-10.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10885)
(Snake River area at NW end of Owen-Stanley folded zone (SW of Lae and W of Morobe granodiorite) has thick Cretaceous greywackes previously regarded as part of Kaindi Metamorphics, but are less metamorphosed and less complexely folded. Cretaceous molluscs fauna previously described by Glaessner (1949) include Trigonia. Kaindi Metamorphics are greenschist facies metasediments withe marble lenses and possibly correlative of Permian Omung metamorphics of Kubor Block)

Dow, D.B. (1962)- A geological reconnaissance of the Jimi and Simbai Rivers, Territory Papua and New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1962/110, p. 1-31.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10999)

(Area of Jimi Anticline at N side of Jimi River (SW of Upper Ramu River and NW of Mt Herbert/Mt Wilhelm of Bismarck Range. Stratigraphy from old to young: (1) indurated ?Permian greywackes, (2) thick-bedded Jimi Fm greywackes with minor basic volcanics (with U Triassic bivalves Gervillea, Costatoria bivalves); (3) U Jurassic Maril shale with Inoceramus and Buchia malayomaorica (4) Lower Cretaceous basaltic Kondaku Tuff; (5) M Cretacous Genjinji/ Chim Gp marine shales with belemnites (6) thick U Cretaceous submarine basaltic Kumbruff volcanics ('spilites'); (7) thick Eocene Asai Beds (siltstone, shale, limestone with locally common Nummulites/ Discocyclina; metamorphosed to North. Triassic- Jurassic section appears to thicken from W to E (NE? Some of the main faults appear to have transcurrent component)

Dow, D.B. (1977)- A geological synthesis of Papua New Guinea. Bureau Mineral Res. Geol. Geophysics, Bull. 201, p. 1-41.
(online at: www.ga.gov.au/corporate_data/90/Bull_201.pdf)
(Main island of PNG formed by interaction between Australian Plate in SW and Pacific Plate in NE. Between platform and oceanic crust and island arcs, is deformed mobile belt ~150 km wide. Platform stable continental crust of Paleozoic crystalline rocks, overlain by Mesozoic and Tertiary sedimentary rocks, mostly undeformed. Mobile belt deformed since at least Late Mesozoic, with variety of geosynclinal sediments and also site of widespread igneous activity. Oceanic crust and island arcs form NE margin of mobile belt. Oldest rocks in oceanic crust and island arcs are Late Cretaceous ophiolites and island-arc volcanics. Major orogeny in Oligocene, forming belt of metamorphics along length of mobile belt (metamorphics overlain by Upper Te/ E Miocene forams at several localities). E Miocene widespread shelf sediments (mainly limestone). Etc.)

Dow, D.B. & H.L. Davies (1964)- The geology of the Bowutu Mountains, New Guinea. Bureau Mineral Res. Geol. Geophysics, Report 75, p. 1-31.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(Geologic map of Bowutu Mountains, at NW end of Papuan Ultrabasic belt in SE PNG, between Owen Stanley Range and Morobe Coast. Bowutu Mts consist of igneous rocks of Papuan Basic Belt (emplaced in U Cretaceous or Early Tertiary) and Mageri Volcanics (M Miocene); Owen Stanley Range is made up of metasediments of Owen Stanley Metamorphics)

Dow, D.B. & F.E. Dekker (1964)- The geology of the Bismarck Mountains, New Guinea, Bureau Mineral Res. Geol. Geophysics, Report 76, p. 1-45.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(W Bismarck Mts W of Mt Wilhelm are NE of main Central Range of PNG and SW of Ramu Valley. Oldest rocks Upper Triassic Jimi Greywacke and Kana Fm volcanoclastics, unconformably overlain by E Jurassic Balimbu Greywacke, M Jurassic Mongum Volcanics and Late Jurassic Maril Shale. Bismarck granodiorite probably U Triassic- lowermost Jurassic)

Dow, D.B. & M.D. Plane (1965)- The geology of the Kainantu goldfields. Bureau Mineral Res., Geol. Geophysics, Canberra, Report 79, p. 1-28.
(online at: www.ga.gov.au/corporate_data/14993/Rep_079.pdf)
(Area of NE PNG Kainantu goldfields with Paleozoic? Bena Bena Fm metamorphics, intruded by U Triassic or younger Bismarck and Mt Victor granodiorites, overlain by Lower Miocene (Te) Nasananka conglomerate and Omaura greywacke (w. Spiroclypeus, Eulepidina, etc.). Unconformably overlain Lower Tf Lamari Conglomerate (w. Miogypsina, Miogypsinoides dehaartii, Lepidocyclina (N)) and ?Pliocene andesitic Aifunka Volcanics with gold lodes)

Dow, D.B., J.A.J. Smit, J.H.G. Bain & R.J. Ryburn (1972)- Geology of the South Sepik region, New Guinea. Australia Bureau Mineral Res. Geol. Geophysics, Bull. 133, p. 1-88.
(online at: https://d28rz98at9flks.cloudfront.net/128/Bull_133.pdf)
(Geology of N part of Central Range mountains to Sepik River in North. Oldest rocks M Triassic Yuat Fm black shale and U Triassic dacitic Kana Volcanics. Triassic unconformably overlain by M Jurassic- Cretaceous (incl. Maril Shale with M. malayomaorica). Ambunti Metamorphics are post-Eocene and pre-Middle Miocene in age. p. 26: Salumei Fm of S Sepik region Upper Cretaceous- Eocene thick turbiditic greywacke series with volcanic

beds, Cretaceous planktonics and Eocene limestone lenses with Biplanispira, Pellatispira. Time- equivalent of bulk of Lagaip beds, but no volcanics in Lagaip Fm. Widespread M Miocene (Tf1-2) arc volcanics)

Downes, P.M., R.H. Findlay, S. Nekitel, J. Arumba & G. Kopi (1994)- Review of the geology and mineralisation of the Kainantu Area, Papua New Guinea. In: R. Rogerson (ed.) Proc. PNG Geology, Exploration and Mining Conf., Lae, Australasian Inst. of Mining and Metallurgy (AusIMM), p. 1-9.
(Kainantu area in composite Scrapland composed of Mesozoic greenschist - amphibolite facies Bena Bena and Goroka Fm metamorphics and intrusives, overlain by Late Cretaceous-Miocene marine sediments, volcanics and M-L Miocene intrusives. Four deformation events, oldest producing slaty cleavage and isoclinal E-W trending folds. Known mineralization gold-copper skarn, porphyry copper epithermal and gold placer deposits, many associated with 9-13 Ma old porphyry intrusives)

Duck, B.H. (2001)- The Boundary Volcano- its geological associations and implications for exploration. In: G. Hancock (ed.) Geology, Exploration and Mining Conference, Port Moresby 2001, Proc. Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 87-92.

Dugmore, M.A. & P.W. Leaman (1998)- Mount Bini copper-gold deposit. In: D.A. Berkman & D.H. Mackenzie (eds.) Geology of the mineral deposits of Australia and Papua New Guinea, Australasian Inst. of Mining and Metallurgy (AusIMM), Monogr. Series 22, p. 833-848.

Dugmore, M.A., P.W. Leaman & R. Philip (1996)- Discovery of the Mt Bini porphyry copper-gold-molybdenum deposit in the Owen Stanley Ranges, Papua New Guinea- A geochemical case history. J. Geochemical Exploration 57, p. 89-100.
(Bini Cu-Au-Mo deposit with overprinted epithermal Au-Ag in Owen-Stanley Ranges, 50 km NE of Port Moresby, located by stream sediment and rock float sampling. Part of calc-alkaline Bavu Igneous Complex of probable Pliocene age, intruded into Owen Stanley Metamorphics)

Durkee, E.F., W.D. Stewart & G. Francis (1987)- Oil and gas potential of Papua New Guinea. In: M.K. Horn (ed.) Trans. Fourth Circum Pacific Energy and Mineral Resources Conf., Singapore 1986, p. 63-101.
(Review of oil-gas plays and discoveries of PNG Papuan Basin, Bougainville, New Ireland, North New Guinea)

Earnshaw, J.P., A.J.C. Hogg, N.H. Oxtoby & S.J. Crawley (1993)- Petrographic and fluid inclusion evidence for the timing of diagenesis and petroleum entrapment in the Papuan Basin. In: G.C. & Z. Carmen (eds.) Petroleum Exploration and Development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 459-476.
(Fluid inclusion study in Papuan foldbelt discoveries suggests petroleum emplacement occurred after quartz cementation, probably during active thrusting of Late Pliocene- Recent)

Edwards, A.B. (1950)- The petrology of the Miocene sediments of the Aure Trough, Papua. Proc. Royal Soc. Victoria 60, p. 123-148.
(Miocene in Aure Trough ~15,000' thick graywackes, mudstones, conglomerates and limestone. Sediments composed mainly of material derived from andesitic tuffs and lavas, transported over short distance)

Edwards, A.B. (1950)- The petrology of the Cretaceous greywackes of the Purari Valley, Papua. Proc. Royal Soc. Victoria 60, p. 163-171.
(online at: http://takata.slv.vic.gov.au/...)
(Purari valley Cretaceous low-quartz (clear, 5-15%) and high feldspar (30-55%) and chlorite, etc., matrix, and metamorpic and igneous lithics. Derived mainly of granitic material, but also from sedimentary schists and andesitic tuffs)

Edwards, A.B. & M.F. Glaessner (1953)- Mesozoic and Tertiary sediments from the Wahgi Valley, New Guinea. Proc. Royal Soc. Victoria 64, p. 93-112.
(online at: http://takata.slv.vic.gov.au/...)

(In Chimbu area N of Kubor Range, S of Bismarck Range, very thick 'geosynclinal' Upper Jurassic- Eocene section (22,500'!). Upper Jurassic Maril Shale with common Buchia malayomaorica, Belemnopsis gerardi, Inoceramus cf. haasti, Calpionella alpina, etc.. Kondaku Tuff (6100'?) with Aptian- Cenomanian ammonites (Deshayites, etc.). U Cretaceous Maram shales rel. unfossiliferous, but yielded some Cenomanian ammonites, Inoceramus and foraminifera. Chimbu Tuff mainly unfossiliferous, except reportedly with Fasciolites wichmanni (abundant) and Lacazina wichmanni. Not sure if Lacazina, Pellatispira, Biplanispira were actually found here in Chimbu Limestone)

Eisenberg, L.I. (1993)- Hydrodynamic character of the Toro Sandstone, Iagafu/ Hedinia area, Southern Highlands Province, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 447-458.
(Oil distribution in Iagafu/ Hedinia fault-propagation folds in frontal Papuan foldbelt affected by hydrodynamic flow in Toro Sst reservoir, causing tilted oil-water contact)

Eisenberg, L.I. (1996)- Strontium isotope analysis and structural interpretation of Pônyang Anticline, Papuan Fold Belt, Western Highlands Province, Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum Exploration in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 231-244.
(Structure of P'nyang gas-bearing anticline in PPL101 in PNG Southern Highlands constrained by Sr isotope age analyses in Oligo-Miocene Darai Limestone (showing downfaulted nature of NE P'nyang Anticline))

Eisenberg, L.I., J.C. Phelps, T.L. Allen, J.A. Trotter, M.J. Korsch & D.J. Whitford (1996)- Darai Limestone depositional history and Strontium chronostratigraphy, Papuan fold belt, Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 345-356.
(Sr isotope ratios important tool in determination of stratigraphic position within Oligo-Miocene Darai Limestone. In parts of area minimal or non-depostion during E Miocene. At Juha continuous carbonate deposition)

Eisenberg, L.I., M.V. Langston & R.E. Fitzmorris (1994)- Reservoir management in a hydrodynamic environment, Iagifu-Hedinia area, Southern Highlands, Papua New Guinea. In: SPE Asia Pacific Oil and Gas Conference, Melbourne 1994, 18p.
(Agogo and Iagifu/Hedinia fields in S Highlands produced first commercial oil in PNG in 1992. NW to SE regional scale water flow in Toro Sst parallels Papuan Fold Belt for 115km, passing through Iagifu/Hedinia oil field, affecting oil distribution in Toro reservoirs. NW side swept free of moveable oil. Oil/water contacts tilted up to 6 degrees and three members of Toro Sst Fm each have own hydrocarbon-water contacts)

England, R.N. & H.L. Davies (1973)- Mineralogy of ultramafic cumulates and tectonites from Eastern Papua. Earth Planetary Sci. Letters 17, p. 416-425.

Erceg, M.M., G.A. Craighead, R. Halfpenny & P.J. Lewis (1991)- The exploration history, geology and metallurgy of a high sulphidation epithermal gold deposit at Wafi River, Papua New Guinea. In: R. Rogerson (ed.) Proc. Geology, Exploration and Mining Conference, Rabaul 1991, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 58-65.

Erni, A. (1944)- Ein Cenoman Ammonit *Cunningtoniceras holtkeri* nov.spec. aus Neu Guinea, nebst Bemerkungen uber einige ander Fossilien von dieser Insel. Eclogae Geol. Helvetiae 37, p. 468-475.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1944:37::595&subp=hires)
(‘A Cenomanian ammonite Cunningtoniceras hoeltkeri n.sp. from New Guinea, with remarks on some other fossils from the island'. Ammonite collected in Wagi valley, PNG, during 1936/1939 anthropological New Guinea expedition. Ammonite pebbles viewed as 'magic stones' by natives)

Espi, J.O., K.I. Hayashi, K. Komuro, Y. Kajiwara & H. Murakami & (2005)- The Bilimoia gold deposit, Kainantu, Papua New Guinea: a fault-controlled, lode-type, synorogenic tellurium-rich quartz-gold vein system. In: 8th Biennial Meeting, Soc. Geology Applied to Mineral Deposits, Beijing, Springer, 9-19, p. 941-944.

(Bilimoia gold deposit in NE PNG is fault-hosted quartz-gold vein system hosted by 290-221 Ma years old basement that was regionally metamorphosed to greenschist facies at ~45 Ma. Mineralisation related to I-type, intermediate-felsic 9-7 Ma year-old porphyries)

Espi, J.O., K.I. Hayashi, K. Komuro, H. Murakami & Y. Kajiwara (2007)- Geology, wall-rock alteration and vein paragenesis of the Bilimoia gold deposit, Kainantu metallogenic region, Papua New Guinea. Resource Geology 57, 3, p. 249-268.
(Bilimoia gold deposit in eastern Central Mobile Belt of PNG in fault-hosted, NW-NNW-trending Au-quartz veins hosted by M-L Triassic greenschist that metamorphosed between Late Triassic and E-M Jurassic. Bilimoia deposit related to Late Miocene (9-7 Ma) I-type, intermediate to felsic and late mafic intrusions)

Espi, J.O., Y. Kajiwara, M.A. Hawkins & T. Bainbridge (2002)- Hydrothermal alteration and Cu-Au mineralization at Nena high sulfidation-type deposit, Frieda River, Papua New Guinea. Resource Geology 52, p. 301-313.
(Nena Cu-Au deposit in Frieda River mineral district of NW mainland PNG, discovered in 1975. Mineral district represents nearshore isolated island strato-volcano of Miocene age. Basement is U Cretaceous- Eocene Salumei Fm, metamorphosed between 27-25 Ma, Unconformaby overlain by E-M Miocene Wogamush Fm volcanoclastics. April Ultramafics emplaced in Late Eocene-Early Miocene, before M Miocene Frieda River Intrusive Complex, with Nena Diorite age ~17.3-13.1 Ma. High sulfidation system)

Etheridge, R. (1889)- On our present knowledge of the palaeontology of New Guinea. Records Geol. Survey New South Wales 1, 3, p. 172-179.
(Includes first description of Jurassic ammonites from PNG, from river float at the Observatory Bend of the Strickland River, at 6°38'30'S and 142°E; Boehm, 1913)

Findlay, A.L. (1974)- The structure of the foothills South of the Kubor Range, Papua New Guinea. Australian Petrol. Explor. Assoc. (APEA) J. J. 14, 1, p. 14-20.
(Structural styles at S side of NW-SE trending Kubor Range, where Permian granodiorite intruded Paleozoic metamorphics. S side of Kubor Range up to 7km of Mesozoic sediments, including mid-Cretaceous Kondaku Tuffs in N part. E-M Miocene Darai Lst in S replaced by basinal Aure Group closer to Kubor Range. U Miocene- Pliocene Orubadi Fm clastics in S, not deposited towards Kubor Range ?)

Findlay, R.H. (1995)- Stratigraphic constraints on the development and timing of arc-continent collision in Northern Papua New Guinea: discussion. J. Sedimentary Res. 65B. p. 281-282.
(Reply to Abbott et al. 1994 paper)

Findlay, R.H. (1998)- Palaeostress in the Ramu Markham obduction zone. In: Proc. GEOSEA'98, Ninth Reg. Congress Geology, Mineral and Energy Resources of Southeast Asia, Geol. Soc. Malaysia, p. 229-230.
(Abstract only) (Ramu-Markhan obduction zone consists of Southern Microcontinent (Scrapland) which accreted to Australia in Late Eocene- Oligocene (Sepik Event) and which is being overthrust by Finisterre terrane to N, starting in Pliocene and continuing today)

Findlay, R.H. (2003)- Collision tectonics of northern Papua New Guinea: key field relationships in the Finisterre, Sarawaget and Adelbert Mountains and New Britain demand a new model. In: R.R. Hills & R.D. Muller (eds.) Evolution and dynamics of the Australian Plate, Geol. Soc. America (GSA), Spec. Paper 372, p. 291-307.
(Revised lithostratigraphy for Finisterre, Sarawaget and Adelbert Mountains of N PNG. Lithostratigraphic relations demand interpretation of Finisterre Volcanics as allochthonous terrane, which collided with Australian- PNG craton in Pliocene. Finisterre Volcanics formed as autochthonous plateau in backarc basin or intra-arc rift-basin of Sepik Arc to S which collided with Australia in Oligocene)

Findlay, R.H., L. Arumba, J. Kagl, G. Kopi, S. Nekitel et al. (1997)- Papua New Guinea 1:250,000 Geological Atlas, Markham, Sheet SB/55-10 (2nd ed.). Geol. Survey PNG, Port Moresby, p.

Findlay, R.H., L. Arumba, J. Kagl, S. Nekitel, N. Mosusu, C. Rangin & M. Pubellier (1997)- Revision of the Markham 1: 250 000 sheet, Papua New Guinea: what is the Finisterre Terrane? In: G. Hancock (ed.) Proc. PNG Geology, Exploration Mining Conf., Madang 1997, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 87-98.

Finlayson, D.M., B.J. Drummond, C.D.M. Collins & J.B. Connelly (1977)- Crustal structure under the Mount Lamington region of Papua New Guinea. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier, Amsterdam, p. 259-274.
(Mt Lamington stratovolcanoN of Owen Stanley Range in E Papua underlain by Papuan Ultramafic Belt ophiolites. Moho depth shallows from 21km under N Papua coast to 8km under Mt Lamington. Crustal layers velocities compatible with oceanic crust, but crustal thickness along coast twice normal oceanic crust. Prominent negative magnetic anomaly associated with Papuan Ultramafic Belt. Volcanism cannot be associated with well-defined Benioff zone)

Finlayson, D.M., B.J. Drummond, C.D.M. Collins & J.B. Connelly (1977)- Crustal structures in the region of the Papuan ultramafic belt. Physics Earth Planetary Interiors 14, p. 13-29.
(Papuan Ultramafic Belt major dipping layered structure. Thickness of crustal material seaward of belt probably too great to be oceanic. Crustal thickness offshore 33 km in area of Huon Gravity Low in W Solomon Sea, 27 km in area N of Trobriand Platform, 13 km in C Solomon Sea. Crust under Trobriand Gravity High may contain ophiolite rock suite similar to Papuan Ultramafic Belt)

Finlayson, D.M., K.J. Muirhead, J.P. Webb, G. Gibson, A.S. Furumoto, R.J.S. Cooke & A.J. Russell (1976)- Seismic investigation of the Papuan Ultramafic Belt. Geophysical J. Royal Astronomical Soc. 44, p. 45-59.
(online at: http://gji.oxfordjournals.org/content/44/1/45.full.pdf+html)
(Seismic data from profile along NE Papuan peninsula coast indicate velocities which can be correlated with oceanic layers 1, 2 and 3, but with crustal thickness 20-25 km. Crustal thickness >2x thickness of gabbro and basalt components of ophiolite suite exposed inland. Low-velocity zone below Moho. Return to upper mantle velocities at ~50 km)

Finlayson, E.J., N.M.S. Rock & S.D. Golding (1988)- Deformation and regional carbonate metasomatism of turbidite-hosted Cretaceous alkaline lamprophyres (NW Papua New Guinea). Chemical Geology 69, p. 215-233.
(Metasomatised camptonite dykes and stocks, named Fu Intrusives, in thrust plates of Mesozoic slates in New Guinea Thrust Belt. Intrusions emplaced prior to Oligo-Miocene folding deformation and low-grade regional metamorphism of host (K-Ar ages of 75 Ma/ Campanian probable age of intrusion). REE patterns and initial Sr ratios typical of alkaline lamprophyres. Carbonate metasomatism of intrusive suite result of metamorphic dewatering of host rocks during slaty cleavage development)

Fisher, M.S. (1936)- The origin and composition of alluvial gold, with special reference to the Morobe goldfield, New Guinea. Trans. Inst. Mining Metallurgy 44, p. 337-563.

Fischer, M.W. & J. Warburton (1996)- The importance of Pre-Tertiary basin architecture for hydrocarbon accumulation in the Papuan fold and thrust belt: models, analogues and implications. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 111-131.
(Late Miocene Papuan fold-thrust belt commonly interpreted as thin-skinned fold-thrust belt with layer-cake stratigraphy, but many surface anticlines are inverted footwalls of older extensional faults)

Fisher, N.H. (1939)- Metasomatism associated with Tertiary mineralization in New Guinea. Economic Geology 1939, p. 890-905.

Fisher, N.H. (1944)- Outline of the geology of the Morobe Goldfields. Proc. Royal Soc. Queensland 55, 4, p. 51-58.

Fitzgerald, E.M.G., J. Velez-Juarbe & R.T. Wells (2013)- Miocene sea cow (Sirenia) from Papua New Guinea sheds light on Sirenian evolution in the Indo-Pacific. J. Vertebrate Paleontology 33, 4, p. 956-963.
(Vertebrae and ribs of indeterminate sirenian from Burdigalian-Serravallian (Tf1) section, 150m below top of Darai Limestone in Selminum Tem cave, Hindenburg Range, W PNG. Represent earliest mammal recorded from New Guinea)

Fleming, A.W., G.A. Handley, K.L. Williams, A.L. Hills & G.J. Corbett (1986)- The Porgera gold deposit, Papua New Guinea. Economic Geology 81, p. 660-680.
(Porgera gold mine in highlands of PNG. M Miocene intrusive system, derived from melting of thickened crust, emplaced in Late Cretaceous sediments on N margin Papuan platform, ~25 km S of Central orogenic belt. Mineralization associated with porphyritic intrusions of mafic diorite)

Fleming, A.W. & T.I. Neale (1979)- Geochemical exploration at Yandera porphyry copper prospect, Papua New Guinea. J. Geochemical Exploration 11, p. 33-51.
(Case history of geochemical exploration of porphyry Cu-Mo system at Yandera prospect at foot of Mt Wilhelm in Bismark Ranges of PNG. Part of U Miocene batholith of Bismark Intrusive Complex)

Francis, G. (1983)- Tertiary biostratigraphy and lithostratigraphy of Petroleum Prospecting Licence (PPL) 30: a critical review. Geol. Survey Papua New Guinea, Report 83-8, p. 1-24.

Francis, G. (1986)- Some current problems of Mesozoic geology in the Papuan Basin. Geol. Survey Papua New Guinea, Techn. Note 4/86, p. *(Unpublished)*

Francis, G. (1990)- The North New Guinea Basin and associated infra-basins. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby 1990, p. 445-460.
(Good review of North New Guinea Miocene- Pleistocene basins N of Central Range (Aitape, Sepik, Ramu). With results of 7 exploration wells and Miocene- Pliocene paleogeographic maps (cross-sections show dominant fold-thrust style of tectonics; most authors interpret this as left-lateral transpressional system; JTvG))

Francis, G. & D. Deibert (1988)- Petroleum potential of the North New Guinea basin and associated infra-basins. Geol. Survey Papua New Guinea Report 88/37, p. 1-229.

Francis, G., R. Rogerson, D.W. Haig & J. Sari (1986)- Neogene stratigraphy, sedimentation and petroleum potential of the Oiapu-Yule Island- Oroi Region, Papua New Guinea. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 123-152.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986011.pdf)
(Miocene Aure association in SE PNG mainly bathyal shales and turbidite sandstones. Folding phase in latest M Miocene culminating with thrusting in Late Miocene to create SE Papuan foldbelt. Deformation associated with basaltic volcanism (Talama Fm). Local carbonate buildups on cores of anticlines (Ou-Ou Lst). Unconformably overlain by latest Miocene- E Pliocene Orubadi Beds. E Pliocene influx of coarser clastic from rising mountains to NE (Era beds). Second phase of thrusting in Late Pliocene- E Pleistocene. Most thrust faults dip to NE)

Francis, G., R. Rogerson, D.W. Haig & J. Sari (1986)- Neogene stratigraphy, structure and petroleum potential of the Yule Island-Delena region, Papua New Guinea. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Techn. Bull. 17, p. 13-59.
(Same or similar paper as 1986 GEOSEA V paper)

Francis, G., R. Rogerson, D. Hilyard & D.W. Haig (1990)- Excursion guide to the Waghi and Chimbu Georges. In: R. Rogerson (ed.) Excursion Guide Series, Geol. Survey Papua New Guinea, Port Moresby, p. 1-55.

Francis, G., R. Rogerson & L. Queen (1991)- The distribution, petrology and mineralisation of mid-Cretaceous to Palaeogene marine volcanics in Papua New Guinea. In: R. Rogerson (ed.) Proc. PNG Geology, exploration and Mining Conf., Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 17-25.

Francis, G. & G.E.G. Westermann (1993)- The Kimmeridgean problem in Papua-New Guinea and other parts of the Indo-Southwest Pacific. In: G.J. & Z. Carman (eds.) Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 75-93.
(Ammonites rel. rare in PNG Late Jurassic; belemnites and bivalves more common. Diagnostic Kimmeridgean ammonites almost unknown in Indo-SW Pacific from Himalaya-PNG- New Zealand, making biozone-stage calibrations difficult in this region. Also provincialism of PNG belemnites makes direct correlations to Tethyan of Europe impossible. In(Sula Islands more complete Jurassic ammonite sequenc, with 3 Oxfordian zones. (from base: Wanaea spectabilis, upper W. spectabilis and Wanaea clathrata dinozones). Ammonite-rich zone overlain by ammonite-poor zone, then latest Tithonian- earliest Berriasian assemblage with P. iehiense dinos)

Franklin, S.P. & J.E. Livingston (1996)- Development of an infill well program to maximise economic return from the Iagafu- Hedinia Field: Part I. Integrated strauctural, stratigraphic and reservoir attribute modelling as input to reservoir simulation and well targeting. In: P.G. Buchanan (ed.) Petroleum exploration development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 573-589.
(Iagafu- Hedinia oil-gas field in Papuan Fold Belt with 31 MMBO recoverable reserves. Large thrust fault duplex structure, with detachment surfaces in Cretaceous Ieru Shale, causing discordance between structure at surface and basal Cretaceous Toro Sst reservoir level. Toro Sst main reservoir 100m thick, composed of four stacked parasequences of wave-dominated delta complex, separated by marine flooding surfaces)

Gagel, C. (1913)- Beitrage zur Geologie von Kaiser Wilhelms-Land. In: Beitrage zur geologischen Forschung der deutschen Schutzgebiete, 4, Kon. Geolog. Landesanstalt, Berlin, p. 1-55.

Galewsky, J. (1998)- The dynamics of foreland basin carbonate platforms: tectonic and eustatic controls. Basin Research 10, p. 409-416.
(Numerical modeling of coral growth and flexural subsidence in foreland basin setting matches drowning and backstepping of Quaternary carbonate platforms in Huon Gulf, PNG)

Galewsky, J., E.A. Silver, C.D. Gallup, R.L. Edwards & D.C. Potts (1996)- Foredeep tectonics and carbonate platform dynamics in the Huon Gulf, Papua New Guinea. Geology 24, p. 819-822.
(Side-scan sonar and seismic data reveal history of carbonate platform growth, drowning, and back stepping in the Huon Gulf, documenting subsidence of Huon Gulf in response to encroaching Finisterre Mts at ~5.7 mm/yr for past 348 ky (highest subsidence in any any foredeep). Reefs may have formed during sea-level lowstands and drowned during rapid rates of sea-level rise)

Gardner, J.V. (1970)- Submarine geology of the western Coral Sea. Geol. America, Bull. 70, p. 1399-1424.
(Coral Sea Basin probably formed by Late Eocene- E Oligocene rotational spreading, with subsidence of basin margins. Erosional unconformity, previously identified on seismic across marginal Queensland Plateau, dated as E Miocene and represents initial marine transgression onto basin margin. Subsidence continued, accompanied by faulting which subdivided margin into four plateaus. Thick terrigenous turbidites derived from New Guinea deposited during last glacial stage, but predominately calcareous pelagic sediments since then)

George, S.C., F.W. Krieger, P.J. Eadington, R.A. Quezada, P.F. Greenwood et al. (1997)- Geochemical comparison of oil-bearing fluid inclusions and produced oil from the Toro sandstone, Papua New Guinea. Organic Geochem. 26, p. 155-173.
(Oil in Lower Cretaceous Toro Sst in Iagifu-7X different from fluid inclusion oil. DST oils sourced from oxic mixed marine/ terrestrial source, probably M- L Jurassic mudstones. Fluid inclusion oils from less terrestrially-influenced marine source rock deposited under less oxic conditions. Fluid inclusion oils early oil charge from probably Cretaceous source, which started migrating into Toro sst in Miocene. At Iagifu early oil diluted by larger volume of Jurassic oil generated at end-Miocene)

George, S.C., Volk, H., Ahmed, M., Middleton, H., T. Allan & D. Holland (2004)- Novel petroleum systems in Papua New Guinea indicated by terpane and methylhopane distributions. In: P.J. Boult et al. (eds.) Eastern Australasian Basins Symposium II, Adelaide, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 575-588.
(Most PNG oil production from W Papuan fold belt, with oils from Jurassic marine source with terrestrial organic matter. Puri-1 oil and Subu wells (Aure Scarp) bitumens indicate Jurassic source also in E Papuan Basin. Calcareous source rock may be regionally significant in E Papuan Basin. W Papuan Basin oils from Iagifu and P'nyang wells (W Fold belt) and Bujon 1 from foreland indicate Late Cretaceous or younger marine source with minor terrestrial organic matter. Oil from Koko 1 in foreland indicate lacustrine source. Oil stains in Bujon-1 also likely from this source, age unconstrained, but expelled later than Late Cretaceous or younger marine source rock which generated FI oil in Bujon 1. Future PNG petroleum plays not restricted to Jurassic source/- M Cretaceous reservoir paradigm)

George, S.C., H. Volk, M. Ahmed, W. Pickel & T. Allan (2007)- Biomarker evidence for two sources for solid bitumens in the Subu wells: implications for the petroleum prospectivity of the East Papuan Basin. Organic Geochem. 38, p. 609-642.
(Late Cretaceous sst from Subu 1,2 (Aure Scarp) with solid bitumens, reflect biodegradation of two oil families: (A) marine source with significant terrestrial organic matter, believed to be Jurassic; (B) more reducing; so far unidentified. Condensate charge relatively recent. Solid bitumen from Miocene volcanolithic sst from Ouha anticline from early mature Paleogene or late Cretaceous source with predominantly terrestrial organic matter in oxic environment. This sample proves existence of different oil source rocks in E Papuan Basin)

Giddings, J., C.T. Klootwijk, W. Sunata, C. Loxton, C. Pigram & H. Davies (1985)- Palaeomagnetism of Australia's active northern margin in New Guinea. In: E.C. Leitch & E. Scheibner (conv.) Third Circum-Pacific terrane conference, Extended abstracts, Geol. Soc. Australia 14, p. 83-86.

Glaessner, M.F. (1942)- The occurrence of the New Guinea turtle (*Carettochelys*) in the Miocene of Papua. Records Australian Museum 21, 2, p. 106-109.
(online at: http://australianmuseum.net.au/Uploads/Journals/17293/262_complete.pdf)
(Mold of turtle bone in Miocene dark tuffaceous sandstone in quarry near APC 01 well location, on road leading from left bank of Vailala River near mouth of Kariava Creek)

Glaessner, M.F. (1945)- Mesozoic fossils from the Central Highlands of New Guinea. Proc. Royal. Soc. Victoria 56, p. 151-168.
(U Jurassic and M Cretaceous molluscs from Central PNG. Incl. Late Jurassic Buchia malayomaorica, Belemnopis gerardi and Grammatodon virgatus from Kuabgen Range at Upper Fly River area, S Central Highlands. Also Albian Feing Group with belemnite Parahibolites blanfordi. Cretaceous from hills N of Purari River with Exogyra probably Aptian-Albian)

Glaessner, M.F. (1949)- Mesozoic fossils from the Snake River, Central New Guinea. Mem. Queensland Mus. 12, 4, p. 165-180.
(Mollusc faunas from Mesozoic beds of Snake river region, PNG, include Cucullaea (Ashcroftia) distorta, Glycymeris sp., Trigonia (Aganthotrigonia) phyllitica, Cardium sp., Voisella sp. and Tibia? morobica. Age of fauna is Cretaceous)

Glaessner, M.F. (1950)- Geotectonic position of New Guinea. American Assoc. Petrol. Geol. (AAPG) Bull. 34, p. 856-881.
(Division of New Guinea into twelve structural zones. N and E parts of island essentially Melanesian while W New Guinea influenced by Asiatic Banda arcs. S and C New Guinea essentially Australian and appear to continue as submerged median mass SW under Coral Sea)

Glaessner, M.F. (1952)- Geology of Port Moresby, Papua. In: Sir Douglas Mawson Anniversary Volume, University of Adelaide, p. 63-86.

Glaessner, M.F. (1958)- New Cretaceous fossils from New Guinea, Guinea, with a contribution on a new ammonite genus by R. Casey. Records South Australian Mus. 13, 2, p. 199-126.
(Cenomanian- Albian molluscs and ammonites from Central Highlands. Includes new Cenomanian ammonite species from Chim Fm near Chimu airstrip, Chimbuites sinuosocostatus)

Glaessner, M.F. (1960)- Upper Cretaceous larger foraminifera from New Guinea. Science Repts. Tohoku University, 2nd. Ser. (Geol.), Spec. Vol. 4 (Hanzawa Memorial Vol.), p. 37-44.
(Abundant larger forams Pseudorbitoides israelskii and Orbitoides tissoti described from Campanian of Port Moresby area, PNG. First report of this distinctive assemblage outside Caribbean-Gulf of Mexico area)

Glaessner, M.F., K.M. Llewellyn & G.A.V. Stanley (1950)- Fossiliferous rocks of Permian age from the Territory of New Guinea. Australian J. Sci. 13, p. 24-25.
(Short report on first discovery of 200' of 'Permian' limestone at Gum/Kum Creek 4 miles SSE of Hagen airstrip, overlying Mt Kubor granite. Subsequently re-interpreted as Late Triassic in age. Limestone not contact-metamorphic. Coarser parts have grains of quartz, feldspar, mica flakes. Associated with quartzite)

Glen, R.A., E. Belousova & W.L. Griffin (2016)- Different styles of modern and ancient non-collisional orogens and implications for crustal growth: a Gondwanaland perspective. Canadian J. Earth Sci. 53, 11, p. 1372-1415.
(online at: http://www.nrcresearchpress.com/doi/pdf/10.1139/cjes-2015-0229)
(Review of 'accretionary orogens' of N and E Gondwana (convergent margin orogens without continental block collisions), including chapter on Papua New Guinea Orogen)

Goldberg, A. & D. Holland (2008)- Inversion tectonics and the structural development of the Elk/ Antelope gas field, Papua New Guinea. In: J.E. Blevin et al. (eds.) Third Eastern Australasian Basins Symposium, Sydney 2008, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 247-258.
(Elk/Antelope gas field in a complex zone of deformation at front of E-most Papuan Foldbelt, where orientation of foldbelt changes from WNW/ESE strike in W, to NW/SE strike in E. Basement-involved inversion played key role. Elk structure formed from thrust detatchment within Ieru Fm above large inverted fault block. Same level of detatchment interpreted for Puri structure)

Goldberg, A., M. Wilson & S. Sioni (2010)- Quantitative seismic interpretation for characterizing carbonate diagenesis; an Elk/Antelope Gas field study. In: N. Harrison (ed.) 21st Geoph. Conf. Australian Soc. Exploration Geophysicists (ASEG), Sydney 2010, p. 1-4. *(Extended Abstract)*
(Elk/Antelope gas field in PNG is hosted in Miocene reefal and deepwater carbonates. Carbonates exhibit multiple diagenetic overprints and complex internal seismic reflector heterogeneity. Dominant control on seismic reflection events within reservoir are porosity variations)

Gow, P.A., P. Upton, C. Zhao & K.C. Hill (2002)- Copper-gold mineralisation in New Guinea: numerical modelling of collision, fluid flow and intrusion-related hydrothermal systems. Australian J. Earth Sci. 49, 4, p. 753-771.
(Porphyry Cu-Au mineralisation in New Guinea foldbelt tied to local dilation, facilitating magma emplacement by reactivation of arc-normal transfer faults, where they cut weakened fold belt. Rapid uplift and erosion greatest in W of W Papua, where stronger Australian crust acts as buttress. In Papuan Fold Belt uplift greatest near margins, where weaker fold belt abuts stronger crust and/or major faults have been reactivated)

Gow, P.A & J.L. Walshe (2005)- The role of preexisting geologic architecture in the formation of giant porphyry-related Cu ± Au deposits: examples from New Guinea and Chile. Economic Geology 100, 5, p. 819-833.
(Development of porphyry copper-gold deposits in New Guinea during Tertiary magmatic event that overprinted extensional Mesozoic passive margin. During collision deeply detached listric faults were inverted and focused uplift/exhumation. Steep transverse faults formed wrench systems with pathways for magma or fluids. Competent units of flat-lying stratigraphic packages like Darai/Mendi Limestone impeded magma ascent and formed cap on magma and/or fluid system)

Grainge, A. (1993)- Recent developments in prospect mapping in the Hides/Karius area of the Papuan fold belt. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby 1993, p. 527-537.
(Of the 26 structures drilled in Papuan Foldbelt Toro fairway half have been discoveries, all in readily identifiable thrust-related anticlines. Better surface geologic maps being made using Remote sensing, Strontium isotope stratigraphy, magnetotelluric methods, etc.)

Grainge, A.M., A.J.D. Hine & P.J. Brawley (1990)- Discovery and development of the Hides gas field in Licence PPL 27, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 539-550.
(Hides gas field 1987 BP discovery in S Highlands Province. Structure large NW-SE trending anticline. Reservoir Early Cretaceous (Berriasian) Toro Fm quartz sandstone. Reserves estimate 1-3 Tcf gas)

Grainger, D.J. & R.L. Grainger (1974)- Explanatory notes of the 1:2,500,000 Mineral deposits map of Papua New Guinea. Bureau Mineral Res., Canberra, Bull. 148, p. 1-171.
(online at: https://d28rz98at9flks.cloudfront.net/114/Bull_148.pdf)
(Gold widely distributed through PNG, associated with Tertiary acid and intermediate rocks. Major porphyry copper province (Panguna, Ok Tedi deposits). Bauxite on Manus Island. Chromite and nickel mineralization disseminated in ultramafic rocks in SE Papua. Molybdenum in several minor occurrences. Small deposits of manganese, phosphate, asbestos, diatomite, graphite, mercury, pumice and sulphur, but not or marginally economic. Many occurrences of lignite, but mostly low-grade and in remote localities. Many oil and gas seepages (listed and shown on map))

Grant, J.N. & R.L. Nielsen (1975)- Geology and geochronology of the Yandera porphyry copper deposit, Papua New Guinea. Economic Geology 70, 7, p. 1157-1174.
(Porphyry copper- molybdenum- gold mineralization at Yandera, 100 km SW of Madang, in N part of PNG highlands. Associated with M Miocene (12-14 Ma) Bismarck synorogenic batholith complex, emplaced during collision of Australian plate and island-arc zone. Intruded into strongly folded-faulted Goroka Fm metamorphics. Mineralization genetically related to aplitic quartz monzonite porphyry, emplaced at ~6.5 Ma. (see also Titley et al. 1978, Watmuff 1978))

Grant-Mackie, J., G. Francis, G.E. Westermann & A.B. Challinor (2006)- Jurassic molluscan palaeontology of the Telefomin area, Papua New Guinea. Geol. Survey PNG Mem. 19, p. 1-101.

Green, D.H. (1961)- Ultramafic breccias from the Musa Valley, Eastern Papua. Geol. Magazine 98, 1, p. 1-17.
(Musa Valley area rocks of Papuan Ultramafic Belt outcrop over 25x 45 miles, part of folded layered sequence of magnesian dunite and peridotite. Agglomerate-like breccias of fragments of ultramafic rock in variable matrix occur as irregular vent-like bodies in peridotite and as horizontal sheets in Pleistocene-Recent sediments. Breccias interpreted as vent and extrusive breccias resulting from penetration, brecciation and local entrainment (fluidization) of peridotitic country rock by volcanic gases)

Green, R. & R.B. Pitt (1967)- Suggested rotation of New Guinea. J. Geomagn. Geoelectr. 19, p. 317-321.
(online at: www.jstage.jst.go.jp/article/jgg1949/19/4/19_4_317/_pdf)
(Palaeomagnetic sampling at 8 Cretaceous- Recent sites in New Guinea (no locality map; mainly N of Central Range?) suggest increase in westerly declination with age, stretching back as far as Cretaceous (U Cretaceous sample= Chimbu River volcanics). Australia and New Guinea moved N during Tertiary, with New Guinea rotating anticlockwise)

Gregory, J.W. & J.B. Trench (1916)- Eocene corals from the Fly River, Central New Guinea. Geol. Magazine, N.S., 3, 11, p. 481-488.
(Descriptions of fossil corals in river float collected by MacGregor in 1890 in Fly River area S of Macrossan Island. Probably M Eocene age. Descriptions of Feddenia, Circophyllia and new species Stylophora papuensis, Stylina macgregori, Leptoria carnei, Dachiardia macgregori, Plesiastrae horizontalis, Kobya hemicribriformis)

Gregory, J.W. & J.B. Trench (1916)- Eocene corals from the Fly River, Central New Guinea (2). Geol. Magazine, N.S., 3, 12, p. 529-536.
(Continuation of Gregory and Trench (1916). Descriptions of Actinacis maitlandi n.sp., A. sumatraensis (Tornquist) (= Cretaceous species from Sumatra), Porites deshayesana, Montipora antiqua n.sp.)

Griffin, T.J. (1979)- Granitoids of the Tertiary continent- island arc collision zone, Papua New Guinea. Geol. Survey Papua New Guinea, Report 79/22, 28p.
(See also Griffin (1983) GSA publication below)

Griffin, T.J. (1983)- Granitoids of the Tertiary continent- island arc collision zone, Papua New Guinea. In: J.A. Roddick (ed.) Circum-Pacific plutonic terranes, Geol. Soc. America (GSA) Mem. 159, p. 61-76.
(Similar Tertiary I-type calkalkaline granitoids in 3 structural-tectonic zones of PNG: island arc, continental-orogenic and cratonic. Associated with volcanics and porphyry Cu-Au mineralization. Tied to partial melting at base of crust, possibly resulting from subduction, crustal thickening or crustal buckling)

Grund, R.B. (1976)- North New Guinea Basin. In: R.B. Leslie et al. (eds.) Economic geology of Australia and Papua New Guinea, 3, Petroleum, p. 449-506.

Gunson M.J., D.W. Haig, B. Kruman, R.A. Mason, R.C.B. Perembo & R. Stewart (1997)- Stratigraphic reconstruction of the Porgera region, Papua New Guinea. In: Papua New Guinea Geology, Exploration and Mining Conf., Port Moresby 1997, Australasian Inst. of Mining and Metallurgy, Madang, 1, p. 99-108.

Gunson M.J., G. Hall & M. Johnston (2000)- Foraminiferal coloration index as a guide to hydrothermal gradients around the Porgera intrusive complex, Papua New Guinea. Economic Geology 95, p. 271-282.
(Porgera intrusive complex and gold mineralization in Cretaceous black mudstones of Central Range of PNG. Color changes in bathyal agglutinated foraminifera (Cribrostomoides, Dorothia, Marssonella), from white to dark gray, used to map thermal maturation. Foraminiferal coloration showed pairing of hot and cold areas across major structures, associated with upflow (hot) and recharge (cold) of fluids)

Haberle, S.G. (1998)- Late Quaternary vegetation change in the Tari Basin, Papua New Guinea. Palaeogeogr. Palaeoclim. Palaeoecology 137, p. 1-24.

Haddad, D. & A.B. Watts (1999)- Subsidence history, gravity anomalies, and flexure of the Northeast Australian margin in Papua New Guinea. Tectonics 18, 5, p. 827-842.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1999TC900009/pdf)
(PNG folbelt at least 2 major orogenic loading events: (1) start of Miocene and marking initial docking of an exotic terrane with Australian craton; associated with widespread carbonate deposition and (2) earliest Pliocene main phase of fold-thrust belt uplift, representing ongoing history of collision at NE margin of Australian continent)

Haig, D.W. (1979)- Early Jurassic foraminiferids from the western Highlands of Papua New Guinea. Neues Jahrbuch Geol. Palaont., Monatshefte 4, p. 208-215.
(Sinemurian-Pliensbachian shelfal foraminifera from gently folded Balimbu greywacke in upper Jimi River area near Mongum, S foothills of Bismarck Range in western (should be eastern?) PNG Highlands. Assemblage dominated by nodosarians and includes Lingulina, Frondicularia, Involutina liassica. No agglutinants)

Haig, D.W. (1981)- Mid-Cretaceous foraminiferids from the Wahgi Valley, Central Highlands of Papua New Guinea. Micropaleontology 27, p. 337-351.
(Albian-Cenomanian open marine forams from Kondaku Tuff and Chim Fm at N flank Kubor Anticline. Cretaceous overlies Jurassic Maril shale with minor unconformity. Planktonic forams include Favusella washitensis, Hedbergella delrioensis, Hedbergella implicissima, Planomalina buxtorfi, Praeglobotruncana, Rotalipora appenninica, R. greenhornensis, etc. Diverse benthic assemblage, dominated by agglutinants)

Haig, D.W. (1982)- Deep-sea foraminifera from Paleocene sediments, Port Moresby, Papua New Guinea. J. Foraminiferal Research 12, 4, p. 287-279.
(online at: http://jfr.geoscienceworld.org/content/12/4/287.full.pdf)
(Tropical Paleocene (P1-P7) planktonic foram assemblages from lower bathyal calcareous mudstones in highly folded 'Port Moresby Beds'. No stratigraphic sections, limited geologic context)

Haig, D.W. (1985)- *Lepidocyclina* associated with Early Miocene planktic foraminiferids from the Fairfax Formation, Papua New Guinea. In: J.M. Lindsay (ed.) Stratigraphy, palaeontology, malacology; papers in honour of Dr. Neil Ludbrook, South Australia Dept. Mines and Energy Spec. Publ. 5, p. 117-131.
(Friable bathyal marine mudstone in upper Fairfax Fm 25 km NW of Port Moresby with Early Miocene/ Burdigalian zone N7 planktonic foraminifera and displaced shallow marine Lepidocyclina (Nephrolepidina) sumatrensis, L. (N.) ferreroi, L. (N) martini and Miogypsina, characteristic of Lower Tf Letter Stage. Average degree of curvature of Lepidocyclina embryon of 43% agrees with age-equivalent assemblages from Indonesia)

Haig, D.W. (1994)- Zone N18 in foreland basin and oceanic platform sequences, Lower Pliocene, Papua New Guinea. In: Forams '94 International Symposium on Foraminifera, Berkeley, Paleobios 16, 2, Suppl., p. 33.
(Planktonic and benthonic foraminifera from zone N18 in the siliciclastic Orubadi Beds of Papuan Foreland Basin. Type section >2000m thick and includes two mid bathyal- inner neritic shallowing upward sequences, Orubadi Beds and underlying Puri Lst (pelagic middle bathyal base of sequence) belong to N17B and N18. No reworking in foraminiferal assemblages, although reworked nannofossils and dinoflagellates flood mud-fraction of sediment, suggesting extensive sediment plumes clouded surface waters of foreland basin)

Haig, D.W. (1996)- Late Neogene bathyal depocentres in mainland Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 313-327.
(Late Miocene- Pliocene bathyal deposits in Papuan foreland basin, Aure Trough, SW border of Papuan Peninsula and N New Guinea basin. Significant crustal loading in central orogenic belt in PNG at ~8.5 Ma produced bathyal troughs in Purari depocenter (Orubadi Fm) and along SW margin of Papuan Peninsula. Sepik Basin rapid uplift at ~7 Ma and subsidence between 6.5- 2 Ma. Onset of unroofing of Finisterre terrane between 4.1-3.1 Ma. Spine of mainland PNG was barrier to oceanic circulation: Papuan assemblages 'Trans-Equatorial', with Gr. menardii/ Gr. limbata/ Globigerinoides; N New Guinea assemblages dominated by Gr. tumida group)

Haig, D.W., G.S. Humphreys, R. Rogerson & G. Francis (1986)- Field guide to the Kubor Anticline, Central Highlands. 12th Int. Sedimentological Congress, Canberra 1986, Field trip 34B, Geol. Survey of Papua New Guinea, Port Moresby, p.

Haig, D.W. & D.A. Lynch (1993)- A late early Albian marine transgressive pulse over northeastern Australia, precursor to epeiric basin anoxia: foraminiferal evidence. Marine Micropaleontology 22, 4, p. 311-362.
(Major transgressive pulse in late E Albian in W Papuan Basin, changing character of foraminiferal faunas from impoverished agglutinated-dominated Ammobaculites assemblages to diverse calcareous Marssonella/ Hedbergella assemblages. Similar change in coeval deposits of other basins on NE margin of Australian continent (incl. black shales of Toolebuc Fm). Rapid marine regression in W Papuan Basin immediately after latest Albian)

Haig, D.W. & S. Malagun (1980)- Uppermost Cretaceous and lowermost Tertiary sediments around Bogoro Inlet near Port Moresby, Papua New Guinea. Science in New Guinea 7, 1, p. 12-21.
(Maastrichtian-Paleocene deep marine limestones with planktonic foraminifera, unconformably overlain by Eocene calcarenite with larger forams, incl. Pellatispira)

Haig, D.W. & D. Medd (1996)- Latest Miocene to early Pliocene bathymetric cycles related to tectonism, Puri Anticline, Papuan Basin, Papua New Guinea. Australian J. Earth Sci. 43, 3, p. 451-465.
(Four bathyal-to-neritic progradational clastics cycles in 2000m thick Orubadi Fm (Late Miocene- E Pliocene N17B-N18; ~6.2-4.7 Ma) in Puri Anticline, Papuan foreland basin near frontal foldbelt, overlying Late

Miocene pelagic Puri Limestone. Cycles reflect pulses of folding. Development of foredeep either in lower N17 or N16; ~11.5- 7 Ma?)

Haig, D.W. & R.C.B. Perembo (1990)- Foraminifera as Neogene stratigraphic guides for Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 381-395.
(Broad overview of Neogene planktonic and larger foram zonations, and paleobathymetry applicable to PNG. Top larger foram zone Te calibrated to planktonic foram zone ~N6)

Haig, D.W., R.C.B. Perembo, D.A. Lynch, G.J.Milner & M. Zammit (1993)- Marine stratigraphic units in Central Province, Papua New Guinea: age and depositional environments. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 47-60.
(SW part of Papuan Peninsula two main stratigraphic divisions: (1) incoherent Campanian- M Eocene units, ('Port Moresby Association'), with inner neritic Campanian 'Barune quartz sandstone' with Pseudorbitoides and Orbitoides (equivalent of Pale Sst of Aure Scarp), overlain by bathyal Maastrichtian- Paleocene pelagic carbonate mudstones and E-M Miocene bathyal-abyssal deposits (incl. radiolarian cherts), overlain by (2) rel. coherent M Oligocene - Pliocene succession, mainly deep water deposits with 5 possible shallowing-upward sequences. Late Oligocene Boera Beds outcrop 17km NW of Port Moresby with reworked Late Eocene forams, incl. Pellatispira, Asterocyclina, Nummulites)

Haig, D.W. & W. Tamu (1980)- Stratigraphic relationship between Barune Sandstone (Upper Cretaceous) and Baruni Calcarenite (Lower Tertiary) near Port Moresby, Papua New Guinea. Science in New Guinea 7, 3, p. 148-156.
(Baruni Sst with Campanian Pseudorbitoides israelskii and Orbitoides tissoti, originally described by Glaessner 1960. Overlain by deeper water Maastrichtian pelagic Bogoro Lst and Paleocene- E Eocene Port Moresby Beds, unconformably overlain by M-L Eocene 'Baruni calcarenite' with Nummulites and Discocyclina. Description of Barune sst suggests possible turbidites, dominated by calcareous bioclasts, but with some angular quartz. No volcanic/ igneous lithics observed. (Beds of this age generally absent in PNG foreland, but present in terranes of N New Guinea and of Birds Head?; JTvG))

Hall, R.J., R.M. Britten & D.D. Henry (1990)- Frieda River copper-gold deposits. In F.E. Hughes (ed.) Geology of the mineral deposits of Australia and Papua New Guinea, Australasian Institute of Mining and Metallurgy (AusIMM), Melbourne, Monograph 14, p. 1709-1715.

Hamilton, P.J., R.W.Johnson, D.E. Mackenzie & R.K. OôNions (1983)- Pleistocene volcanic rocks from the Fly-Highlands province of western New Guinea: a note on new Sr and Nd isotopic data and their petrogenetic implications. J. Volcanology Geothermal Res. 18, p. 449-459.
(Rb-Sr and Sm-Nd isotopes and trace-elements from 6 Pleistocene volcanoes of Fly-Highlands province suggest contamination of mantle-derived magmas by continental crust. No Benioff zone beneath Fly-Highlands province, suggesting mantle-derived magmas related to Pliocene crustal uplift formed in response to mid-Tertiary continent/island-arc collision)

Hammarstrom, J.M., D. Saroa, B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, B.J. Drenth, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 009pCu7203, Eastern Medial New Guinea magmatic belt- Papua New Guinea and Indonesia. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix O, p. 219-238.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in E part of late Miocene to Pliocene-Pleistocene Medial New Guinea magmatic belt)

Hammarstrom, J.M., D. Saroa, B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 009pCu7205, Maramuni Arc- Papua

New Guinea. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix P, p. 239-250.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in M Miocene (~18-12 Ma) Maramuni magmatic arc in central part of PNG (S of Melanesian Arc terrane and N of Medial New Guinea magmatic belt), resulting from SW-dipping subduction of Solomon Sea Plate beneath E New Guinea. Known porphyry copper deposits include Frieda River (12 Ma). Yandera and Wafi-Golpu nearby but probably part of younger trend)

Hammarstrom, J.M., D. Saroa, B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 009pCu7208, Inner Melanesian Arc Terranes II-Northern New Guinea Island, Papua New Guinea. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix S, p. 268-274.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in Eocene-Oligocene- E Miocene accreted Inner Melanesian magmatic arc terranes along N margin of island of Papua New Guinea, (Bewani-Torricelli Mts, Finisterre-Adelbert Arc). May be related to S-ward subduction of Pacific Plate or Philippine Sea Plate, fragmented by strike-slip faulting since 25 Ma. Rocks age-equivalent to New Britain assemblage. No known deposits)

Hanani, A., P. Lennox & K. Hill (2016)- The geology and structural style of the Juha gas field, Papua New Guinea. In: Proc. 25th ASEG-PESA Int. Geophysical Conf. Exhib., Adelaide, p. 1-7.
(online at: http://www.publish.csiro.au/ex/pdf/ASEG2016ab272)
(Juha gas-condensate field in25 km long/ up to 8 km wide anticlinal structure in SW Papuan foldbelt. Lower Cretaceous quartz sandstone reservoir buried by 1.5 km Cretaceous shale (regional seal), 1.5 km Miocene limestone and >1.6 km Pliocene-Pleistocene 'flysch' and 'molasse', before late Pliocene-Pleistocene uplift-erosion. Seismic indicates inverted basement faults beneath Juha, with detachment in Cretaceous mudstones, so overlying Miocene Limestone deforms partly independently. Deepest burial and gas-generation in Pliocene, before compressional deformation in Pleistocene. Part of ExxonMobil gas development)

Handley, G.A. (1987)- Exploration of the Porgera gold deposit. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 145-149.

Handley, G.A. & D.D. Henry (1987)- Porgera gold deposit. In: F.E. Hughes (ed.) Geology of mineral deposits of Australia and Papua New Guinea, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, 2, p, 1717-1724.

Harnish, S.A. (1990)- Tectonics and mineralization of the western and central New Guinea Mobile Belt. Proc. Pacific Rim 90 Congress, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, 3, p. 141-151.

Harrison, D. (1991)- The gravity field of the Papuan fold belt and its geological implications. Ph.D. Thesis University of London, p. *(Unpublished)*

Harrison, D. & J. Milsom (1996)- Paleo-rift controls on mechanisms of isostatic compensation in the Papuan Fold Belt. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, PNG Chamber of Mines and Petroleum, p. 77-88.
(New Guinea Highlands divided into N zone of accreted allochthonous terranes and S zone (Papuan foldbelt) of deformed Australian continental margin sediments. Change in strength of lithosphere at former rifted margin of Australia. Margin now under foldbelt, but position may be deduced from sediment thickness and gravity data. Lithosphere weakened by loading unable to support topographic loads; strong lithosphere resists significant foreland basin formation)

Harrison, J. (1969)- A review of the sedimentary history of the island of New Guinea. Australian Petrol. Explor. Assoc. (APEA) J. 1969, p. 41-48.

Haupt, O. (1905)- Eine Kreide-ahnlicher, wahrscheinlich Jungtertiarer Mergel aus Kaiser Wilhelmsland (Deutsch Neu-Guinea). Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 57, Monatsberichte 12, p. 565-569.
(online at: https://www.biodiversitylibrary.org/item/186976page/1293/mode/1up)
('A chalk-like, probably Late Tertiary marl from Kaiser Wilhelms Land (German New Guinea'. Brief note on chalky marl collected by Boehm from Huon Peninsula, near Finschafen, NE PNG. With globigerinid forams, radiolaria, diatoms, sponge spicules, calcareous nannofossils)

Hawkins, M.A. (2001)- Controls on high-grade hypogene porphyry Cu-Au mineralisation at Frieda River, PNG. In: G Hancock (ed.) Proc. PNG Geology, Exploration and Mining Conference, Port Moresby 2001, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 135-144.

Hawkins, M.A. & A.K. Akiro (2001)- Geology and exploration of the Irumafimpa gold project. In: G Hancock (ed.) Proc. PNG Geology, Exploration and Mining Conference, Port Moresby 2001, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 145-156.
(Mining project in northern E Highlands of PNG, part of Kainantu Complex)

Hebberger, J.J. (1992)- A synthesis of regional elements of the Papuan fold and thrust belt of Papua New Guinea. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Abstract only)*
(Evolution of PNG fold- thrust belt: (1) development of passive margin during Late Triassic-Early Jurassic rifting, with escape of Kubor Anticline continental fragment to NE, causing development of restricted marine basin with Late Triassic and Jurassic source rocks. Basin affected depositional extent of Cretaceous-Tertiary rocks (e.g. Cretaceous Toro Sst, Miocene Darai Lst). Cretaceous deposition caused maturation of Jurassic source and migration into passive margin traps around basin margins. Pliocene-Pleistocene collision along N margin of New Guinea caused development of Papuan fold-thrust belt, uplift and movement of Kubor Anticline back to SW, partially over basinal area, and remigration of oil into thrust belt structures)

Hebberger, J.J., S.P. Franklin, W.H. Uberawa & A.M. Pytte (2000)- Development of the Iagifu-Hedinia Field, PNG fold belt; a multi-disciplinary reservoir management success story. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 40, 1, p. 546-561.
(Iagifu-Hedinia oil field discovered by Chevron in 1986 in PNG Highlands. Discovered without seismic data due to intense karst development in area. First oil produced in 1992)

Hebberger, J.J. & J.C. Phelps (1992)- Change in structural style from thin-skinned to thick-skinned along the strike of the Papuan fold and thrust Belt, Papua New Guinea. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Abstract only)*
(In Papuan fold-thrust belt gradual (150 km) change along strike from thin-skinned thrust folds with 1-8 km spacing in area of Iagifu/Hedinia oil discoveries to 20-40 km wide basement-involved folds near Irian Jaya border. No dramatic difference in thickness or composition of U Jurassic- Tertiary sediments evident. Gravity data suggest increase in depth to granitic basement along strike, but not in same area as change thin- to thick-skinned thrusting. Change in style may be related to different levels of detachment. In both areas two major detachment levels: one 15-20 km below top of basement, one near base of sedimentary section)

Hegner, E. & I.E. Smith (1992)- Isotopic compositions of Late Cenozoic volcanics from southeast Papua New Guinea; evidence for multi-component sources in arc and rift environments. Chemical Geology 97, p. 233-249.
(Transition from collisional to extensional tectonics in SE Papuan Peninsula reflected in cessation of arc-type volcanism and eruption of rifting-related transitional basalts. Trachytes inherited isotopic signatures either from lower crust recycled into upper mantle, possibly during Mesozoic rifting of Australian craton, or from unknown ancient continental block in Late Cretaceous basement of E PNG)

Helby, R.J. & A.D. Partridge (1976)- Palynological analysis of Aramia-1, Papuan Basin. Esso Australia Ltd., Palaeontological Report 1976/5A, p. 1-14.
(On microfiche appendix 1 in R. Helby et al. (eds.) (1987) A palynological zonation of the Australian Mesozoic, Mem. Assoc. Australasian Palaeontologists 4, p. 85-98)
(Bathonian- Albian palyno-biostratigraphic zonation)

Helby, R.J. & A.D. Partridge (1976)- Palynological analysis of Barikewa-1, Papuan Basin. Esso Australia. Esso Australia Ltd., Palaeontological Report 1976/12, p. 1-13.
(On microfiche appendix 1 in R. Helby et al. (eds.) (1987) A palynological zonation of the Australian Mesozoic, Mem. Assoc. Australasian Palaeontologists 4, p. 100-112)
(Bathonian- Albian palyno-biostratigraphic zonation)

Helby, R.J. & A.D. Partridge (1976)- Palynological analysis of the Mesozoic cores samples from Iehi 1, Papuan Basin. Esso Australia. Esso Australia Ltd., Palaeontological Report 1976/13, p. 1-17.
(On microfiche appendix 1 in R. Helby et al. (eds.) (1987) A palynological zonation of the Australian Mesozoic, Mem. Assoc. Australasian Palaeontologists 4, p. 114-124)
(Callovian- Albian palyno-biostratigraphic zonation)

Helby, R.J. & A.D. Partridge (1977)- Palynological analysis of the Mesozoic sequence in Iamara-1, Esso Australia. Esso Australia Ltd., Palaeontological Report 1977/3, p. 1-11.
(On microfiche appendix 1 in R. Helby et al. (eds.) (1987) A palynological zonation of the Australian Mesozoic, Mem. Assoc. Australasian Palaeontologists 4, p. 126-142; (Bathonian- Aptian palyno-biostratigraphic zonation)

Helby, R.J. & A.D. Partridge (1977)- Palynological analysis of Omati-1 and Omati-2 wells, Papuan Basin. Esso Australia Ltd., Palaeontological Report 1977/10, p. 1-23.
(On microfiche appendix 1 in R. Helby et al. (eds.) (1987) A palynological zonation of the Australian Mesozoic, Mem. Assoc. Australasian Palaeontologists 4, p. 144-166)
(Oxfordian-Albian palyno-biostratigraphic zonation)

Hennig, A., N. Yassir, M.A. Addis & A. Warrington (2002)- Pore-pressure estimation in an active thrust region and its impact on exploration and drilling. In: A. Huffman & G. Bowers (eds.) Pressure regimes in sedimentary basins and their prediction, American Assoc. Petrol. Geol. (AAPG), Mem. 76, 9, p. 89-105.
(Pore pressures in PNG fold belt and foreland basin highly variable and compartmentalized. Conventional pore-pressure detection techniques in shales cannot be used with confidence in tectonically active regions)

Henry, D.D. (1984)- Copper deposits of the Frieda River prospect- Papua New Guinea. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, American Assoc. Petrol. Geol. (AAPG), p. 279-283.
(Frieda River porphyry copper prospect in PNG Mobile Belt, close to W Papua border. Mineralization associated with M Miocene andesitic volcanic complex. Ore grades generally low)

Hill, K.C. (1987)- New tectonic framework for PNG and the Caroline Plate: implications for cessation of spreading in back-arc basins. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 179-182.

Hill, K.C. (1989)- The Muller anticline, Papua New Guinea: basement-cored, inverted extensional fault structures with opposite vergence. Tectonophysics 158, p. 227-245.
(Papuan Foldbelt two dominant structural styles: (1) in NE 1 km thick, thin-skinned thrust-imbricate slices of Miocene limestone, (2) in SW much larger asymmetrical folds, with thicker stratigraphic sections, resulting from Mio-Pliocene inversion of Mesozoic- Paleogene extensional faults. Outcrop of basement in centre of Muller Range 8 km above regional. E Muller anticline basement thrust to SW, W Muller anticline thrust to NE. Faults under Muller anticline active as extensional faults in Mesozoic, soling at mid-crustal detachment. Extensional faults beneath EMA and WMA opposite vergence and separated by transfer zone)

Hill, K.C. (1990)- Structural styles and hydrocarbons in the Papuan Fold Belt, a review. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 301-310.
(Early version of numerous Hill PNG structure papers)

Hill, K.C. (1991)- Structure of the Papuan Fold Belt, Papua New Guinea. American Assoc. Petrol. Geol. (AAPG) Bull. 75, 5, p. 857-872.
(Papuan lithosphere rel. weak, dissected by Mesozoic faults that partly reactivated during Neogene compression, forming basement-involved anticlines)

Hill, K.C. (1991)- Timing of deformation and thermal history in Papua New Guinea: a review. Petroleum Expl. Soc. Australia (PESA) Journal 19, p. 62-67.
(Apatite fission track analysis of Fly Platform and S Papuan Fold Belt suggests widespread M Cretaceous volcanism and Late Cretaceous thermal maximum, probably related to rift-drift in Coral Sea. Most N and W samples reached thermal maximum during Pliocene deformation of Papuan foldbelt. Rapid uplift of basement-cored Muller Anticline in W Papuan Foldbelt and Kubor Anticline in E Papuan Fold Belt at 4.0 ± 0.5 Ma (Kubor thrusting continuing to present day. Cretaceous and Miocene granites NE of Kubor Anticline uplifted at 10- 5 Ma, part of ongoing shortening in C PNG over last 10 Ma, propagating to SW)

Hill, K.C., K. Bradey, J. Iwanec, N. Wilson & K. Lucas (2008)- Structural exploration in the Papua New Guinea fold belt. In: J.E. Blevin et al. (eds.) Third Eastern Australasian Basins Symposium, Sydney 2008, Petroleum Expl. Soc. Australia (PESA) Spec. Publ., p. 225-238.
(In PNG foldbelt large N-S-striking Triassic folds within basement, that influenced subsequent faulting, facies changes and reservoir compartments. Early inversion faults pre-requisite to substantial offset on thin-skinned detachments. Early structures probably trapped migrating hydrocarbons; subsequent thin-skinned deformation decapitated inversion crests, retaining hydrocarbons in newly folded and thrusted hanging wall structures)

Hill, K.C., J. Forwood, C. Rodda, C. Smyth & G. Whitmore (1993)- Structural styles and hydrocarbon prospectivity around the northern Muller anticline, PNG. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 325-324.
(Discussion of surface anticlines N of large Muller Anticline in W PNG foldbelt, with Triassic (222 Ma) granodiorite basement and Mesozoic sandstones exposed in core)

Hill, K.C. & A.J.W. Gleadow (1989)- Uplift and thermal history of the Papuan Fold Belt, Papua New Guinea: apatite fission track analysis. American Assoc. Petrol. Geol. (AAPG) Bull. 75, p. 857-872.

Hill, K.C. & A.J.W. Gleadow (1989)- Uplift and thermal history of the Papuan foldbelt, Papua New Guinea: apatite fission track analysis. Australian J. Earth Sci. 36, p. 515-539.
(Papuan fold belt uplifted and eroded from earliest Pliocene (5 Ma) to present, suggesting Late Miocene collision of New Guinea with island arc to N. Mountain front anticlines like Iehi underwent heating in Late Cretaceous, prior to Paleocene uplift and associated with opening of Coral Sea. Thermal modelling of Iehi 1 indicates ~800m of Late Cretaceous eroded in Paleocene)

Hill, K.C. & A.J.W. Gleadow (1990)- Apatite Fission Track analysis of the Papuan Basin. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 119-136.
(Widespread Albian volcanogenic detritus in Papuan Basin and E Australia probably sourced from N PNG. AFTA of Ieru Fm in S Papuan basin suggest no heating above 60°C, so underlying Jurassic at best marginally mature for hydrocarbons. S Papuan basin probably at max. T in Late Cretaceous, before Paleogene uplift)

Hill, K.C., G. Grey, D. Foster & R. Barrett (1993)- An alternative model for the Oligo-Miocene evolution of the northern PNG and the Sepik-Ramu basins. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. p. 241-259.
(N New Guinea underwent extension in Late Oligocene- E Miocene, probably related to initiation of oblique southern subduction under New Guinea margin (not compression as suggested in other models; there is no obvious body colliding at that time). Mid-crustal rocks with E Miocene cooling ages are local metamorphic core complexes. M Miocene volcanic detritus fill of Sepik- Ramu basins from Maramuni Arc. Late Miocene

collision of Adelbert-Finisterra Arc resulted in compressional deformation through much of New Guinea and transpressional regime in Sepik area)

Hill, K.C. & K.A. Hegarty (1987)- New tectonic framework for PNG and the Caroline Plate: implications for cessation of spreading in back-arc basins. In: Pacific Rim Congress 87, Gold Coast 1987, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 179-182.
(New plate tectonic scenario for N PNG. In N New Guinea Late Oligocene- E Miocene obduction of Mesozoic oceanic crust, followed by S-dipping subduction beneath New Guinea causing extensive M Miocene volcanism. E Pliocene uplift/ folding of main Papuan Foldbelt at ~4 Ma tied to collision of extinct Eocene- Oligocene island arc system with New Guinea margin)

Hill, K., J. Iwanec & D. Lund (2012)- Near-field, subthrust and deep reservoir tests of the Kutubu oil and gas fields, Papua New Guinea. AAPG Int. Conf. Exhib., Singapore 2012, Search and Discovery Art. 20183, p. 1-34. *(Presentation)*
(online at: www.searchanddiscovery.com/documents/2012/20183hill/ndx_hill.pdf)
(Kutubu oil field (= Iagafu- Hedinia) is thrust-faulted anticline in Papuan Fold-Belt, en echelon to smaller Agogo oil field. Structures first drilled in mid-80's and produced over 300 MBO from basal Cretaceous Toro and Digimu sst reservoirs. Reservoirs overlain by ~1 km of Cretaceous shale and ~1 km of Miocene limestone. Kutubu subthrust structure drilled in 2011. Toro-Digimu reservoirs overturned in footwall, with oil-bearing Toro. Koi-Iange test further back on Kutubu field encountered interbedded sands-shales of Koi-Iange Fm)

Hill, K.C., K. Lucas & K. Bradey (2010)- Structural styles in the Papuan Fold Belt, Papua New Guinea: constraints from analogue modelling. In: G.P. Goffey et al. (eds.) Hydrocarbons in contractional belts, Geol. Soc., London, Spec. Publ. 348, p. 33-56.
(Structural styles in oil-producing areas of Papuan Fold Belt include inverted basement faults, detachment faults in Jurassic 1-2 km beneath Neocomian Toro Sst reservoir, and tight, overturned folds in reservoir sequence. Highly variable thicknesses in Cretaceous Ieru Fm, including detachments that isolate Miocene Darai Limestone. Large-offset thrust faults only produced in models with pre-cut faults, generating early inversion then large ramp anticlines, similar to Kutubu oil field. Kutubu oilfield trend probably underlain by large normal fault and oil-rich source rocks may be confined to hanging wall (N side) of this fault)

Hill, K.C. & L. Mahoney (2018)- Compressional evolution of the PNG margin from an orogenic transect from Juha to the Sepik. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, ASEG Extended Abstracts 2018, 1, p. 1-3. *(Extended Abstract)*
(online at: www.publish.csiro.au/ex/pdf/ASEG2018abT5_3A)
(Regional restored cross-section across PNG orogenic belt shows Oligocene- Recent compressional deformation of margin. N end of section with Landslip Metamorphics, an accreted continental terrane, separated from main foldbelt by Jurassic April Ultramafics/ Om Metamorphics/ Eocene volcanics, together constituting accretionary prism. Suture overlain by Miocene sediments indicating Oligocene docking prior to E Miocene subsidence, consistent with E Miocene extension in PNG and emplacement of metamorphic core complexes in Sepik area. Neogene compression started at ~12 Ma with shortening of ~12mm/yr from 12-4 Ma, and 2.5mm/yr from 4-0 Ma, consistent with change in structural style in foldbelt from thrust to more ductile, fold-dominated deformation. Etc.)

Hill, K.C., D. Medd & P. Darvall (1990)- Structure, stratigraphy, geochemistry and hydrocarbons in the Kagua-Kubor area, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby 1990, p. 351-366.
(Structural geology of in Kagua area, 70 km SW of Kubor anticline)

Hill, K.C., M.S. Norvick, J.T. Keetley & A. Adams (2000)- Structural and stratigraphic shelf-edge hydrocarbon plays in the Papuan fold belt. In: P.G. Buchanan et al. (eds.) Papua New Guineaĝs petroleum industry in the 21st Century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 67-85.
(PNG Mesozoic-Tertiary shelf-basin transition 20-50 km NE of main oil-gas fields and penetrated by only one well. Interpreted to be long-lived fault zone, with thick basinal facies to N. In S shallow marine Miocene

limestone unconformable over Lower Cretaceous shelf clastics; in N more complete Upper Cretaceous-Miocene deep water marls. Numerous oil seeps. Main potential reservoir Lower Cretaceous Toro sst, but possibly distal facies. Re-entrants may have focused Toro fans)

Hill, K.C. & A. Raza (1999)- Arc-continent collision in Papua Guinea: constraints from fission track thermochronology. Tectonics 18, p. 950-966.
(Paleogene arc along S margin of Caroline plate juxtaposed against PNG in E Miocene, coeval with locking of W-dipping Solomon subduction zone by Ontong Java Plateau. These events initiated wrenching along N PNG margin. Mobile Belt underwent extension above downgoing slab with rapid cooling of metamorphic rocks at 17 Ma, immediately before emplacement of Maramuni Arc from 17-12 Ma. Change in plate motion at 12-10 Ma terminated arc and caused PNG-Caroline plate convergence, creating New Guinea orogenic belt from 12 -4 Ma. This resulted in ~4.5 km of uplift and ~3 km of denudation and cooling of entire Mobile Belt in Late Miocene, propagating W along Mobile Belt at 8-5 Ma and S-ward into Fold Belt at 5-4 Ma. Change in plate motion at 4-3 Ma returned margin to transpression with local compression along strike-slip faults and ongoing collision of Finisterre Arc terrane)

Hill, K.C., R.J. Simpson, R.D. Kendrick, P.V. Crowhurstt, P.B. O' Sullivan & I. Saefu (1996)- Hydrocarbons in New Guinea, controlled by basement fabric, Mesozoic extension and Tertiary convergent margin tectonics. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 63-76.
(PNG mobile belt formed by Oligocene compression followed by E Miocene extension. Foldbelt hydrocarbons largely controlled by basement architecture and style of folding-thrusting. Bosavi lineament separates oil province to E from gas province in W)

Hill, K.C. & R.H. Wightman (2015)- Inversion, detachment folds, and out-of-sequence thrusts in the Papua New Guinea Fold Belt. 77th EAGE Conf. Exhib., Madrid, WS04-D01, 5p *(Extended Abstract)*
(Profiles through oil- gas-fields of Papuan Fold Belt indicates pre-existing basement configuration played significant role in compressional deformation at Moran-Paua, Agogo and Usano)

Hill, K.C., R.H. Wightman & L. Munro (2015)- Structural style in the Eastern Papuan Fold Belt, from wells, seismic, maps and modelling. AAPG/SEG Int. Conf. Exhibition, Melbourne, Search and Discovery Art. 30433, 10p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2015/30433hill/ndx_hill.pdf)
(Structural deformation in PNG Fold belt involves reactivation of basement, detachment folds and out-of-sequence thin-skinned thrusts. Frontal, SW, portion of fold belt large oil-gas reserves. Large Miocene- Recent inversion structures preserved in foreland ahead of leading edge fold belt (e.g. Darai Plateau), suggesting crustal-scale faulting prior to thin-skinned deformation. Areas with thick syn-rift section developed large detachment folds, probably enhanced by early basement inversion or thrusting)

Hill, K.C., R.H. Wightman & L. Munro (2015)- Structural style in the Eastern Papuan Fold Belt, from wells, seismic, maps and modelling. In: Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 265-271.
(Similar to Hill et al. 2015)

Hilyard, D., R. Rogerson & G. Francis (1988)- Accretionary terranes and evolution of the New Guinea orogen, Papua New Guinea. Geol. Survey Papua New Guinea, Report 88/9, p. 1-88.

Hilyard, D., R. Rogerson, A. Lloyd, H. Hekel & A. Webb (1988)- New micropalaeontological and isotopic age data from the highlands of Papua New Guinea. Geol. Survey Papua New Guinea, Report 88/16.

Hirst, J.P.P. & C.A. Price (1996)- Sequence stratigraphy and sandstone geometry of the Toro and Imburu Formations within the Papuan fold belt and foreland. In: P.G. Buchanan (ed.) Exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 279-299.

(Six sequences in Late Oxfordian- Berriasian of Papuan Fld Belt. Passive margin setting after Triassic- E Jurassic rifting. Steady onlap of granitic basement to SW and W. Lower Toro sandstone K5 (upper P. apiculatum dinozone) is of Berriasian age and widespread lowstand shoreface deposit)

Hobson, D.M. (1986)- A thin-skinned model for the Papuan thrust belt and some implications for hydrocarbon exploration. Australian Petrol. Explor. Assoc. (APEA) J. 26, p. 214-224.

Holm, R.J. (2013)- Magmatic arcs of Papua New Guinea: insights into the late Cenozoic tectonic evolution of the northern Australian plate boundary. Ph.D. Thesis, James Cook University, p. 1-220.
(online at:http://researchonline.jcu.edu.au/32125/)
(Late Cenozoic Maramuni Arc intrudes New Guinea Orogen. Early arc magmatism in U Oligocene, with initiation of subduction beneath New Guinea. Arc magmatism related to N-dipping subduction punctuated by arrival of Australian continent at ~12 Ma, etc. Inherited zircon populations in Quaternary volcanics help identify northern extension of Tasman Line under younger crust)

Holm, R.J. & B. Poke (2018)- Petrology and crustal inheritance of the Cloudy Bay Volcanics as derived from a fluvial conglomerate, Papuan Peninsula (Papua New Guinea): an example of geological inquiry in the absence of in situ outcrop. Cogent Geoscience 4, 1, p. 1-26.
(online at: https://www.tandfonline.com/doi/full/10.1080/23312041.2018.1450198)
(Clasts from isolated conglomerate outcrop in SE Papuan Peninsula with 9 types of volcanic rocks, from basalts to trachyandesites. Zircon U-Pb dating of volcanic clasts indicates activity of Cloudy Bay Volcanics mainly latest Miocene, between (~7- 5 Ma). Hf-isotopes of primary igneous zircons suggests relatively unradiogenic crustal contribution to magma compositions)

Holm, R.J., S. Richards, C. Spandler & G. Rosenbaum (2013)- Tracking the Tasman Line in New Guinea: insights into the role of major structure at accretionary margins. Asia Oceania Geosc. Soc. (AOGS) 10th Ann. Meeting, Brisbane, SE26-A004. *(Abstract and Poster)*
(Tasman Line of E Australia is continental suture, separating E margin of Precambrian basement from W limit of Phanerozoic Tasmanides. Extension into New Guinea in W Papua New Guinea indicated by Quaternary magmatism (more intense volcanism in E, inherited zircons of Paleoproterozoic age (~1850 Ma) in W; Permian-Triassic (~250, 270 Ma) age peaks in E), morphological changes in axial ranges of New Guinea, dramatic displacement of Papuan ophiolite belt, etc. Important implications for understanding the occurrence of mineral deposits in region)

Holm, R.J., G. Rosenbaum & S.W. Richards (2016)- Post 8 Ma reconstruction of Papua New Guinea and Solomon Islands: Microplate tectonics in a convergent plate boundary setting. Earth-Science Reviews 156, p. 66-81.
(Since ~6 Ma crustal elements that comprise PNG and Solomon Islands began interacting with impending collision between Ontong Java Plateau and Australian continent, leading to regional microplate tectonics and escalation in tectonic complexity. Bismarck Sea initially formed as back-arc basin behind New Britain arc, but later modified during arc-continent collision. Ttc.)

Holm, R.J., C. Spandler & S.W. Richards (2015)- Continental collision, orogenesis and arc magmatism of the Miocene Maramuni arc, Papua New Guinea. Gondwana Research 28, 3, p. 1117-1136.
(Late Miocene (~12- 6 Ma and older?) Maramuni arc in E Papuan Highlands with intrusive rocks in Kainantu region. From ~12-9 Ma subduction-zone magmas, with increasing incompatible trace element contents and decreasing εHf with time, reflecting increase in crustal component of magmas. Porphyry suites emplaced at 7.5-6 Ma with HREE-depletion. Geodynamic model involves arrival of Australian continent at N-dipping slab at Pocklington Trough (=W continuation of Aure Trough) from ~12 Ma. Continent collision led to underthrusting of leading continental margin, contributing crustal material to magma at ~9 Ma. From ~7 Ma slab break-off and lithospheric delamination reflected in second phase of orogenesis that produced HREE-depleted geochemical signatures of magmatic rocks. Small proportion of zircons Late Permian-M Cretaceous ages (previous interpretations show S-dipping slab from N New Guinea Trench?; JTvG))

Holm, R.J., S. Tapster, H.A. Jelsma, G. Rosenbaum & D.F. Mark (2019)- Tectonic evolution and copper-gold metallogenesis of the Papua New Guinea and Solomon Islands region. Ore Geology Reviews 104, p. 208-226.
(Review of PNG and Solomon islands mineral deposits. Convergence at Pacific-Australia plate boundary from 45 Ma accommodated by subduction at Melanesian trench, with related arc magmatism. Arrival of Ontong Java Plateau at trench at ~26 Ma resulted in cessation of subduction, immediately followed by formation of Cu-Au porphyry-epithermal deposits at 24-20 Ma throughout Melanesian arc. Late Oligocene- E Miocene tectonic reorganization led to initiation of subduction at Pocklington trough, and onset of magmatism in Maramuni arc. Arrival of Australian continent at Pocklington trough by 12 Ma resulted in continental collision and ore deposit formation from 12-6 Ma (Cu-Au porphyry deposits in New Guinea Orogen, epithermal Au systems in Papuan Peninsula). From 6 Ma crustal delamination in PNG related to prior Pocklington trough subduction resulted in adiabatic mantle melting with emplacement of diverse Cu and Au porphyry and epithermal deposits within Papuan fold-thrust belt and Papuan Peninsula from 6 Ma- today)

Home, P.C., D.G. Dalton & J. Brannan (1990)- Geological evolution of the western Papuan basin. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 107-117.
(BP review of stratigraphy, paleogeography and geologic evolution of PNG W Papuan Basin. Eight megasequences in Triassic- Neogene. Earliest sediments over Paleozoic metamorphics/ Permo-Triassic granites are M Triassic- M Jurassic rift deposits, with two rift events before break-up of Gondwana margin. Seafloor spreading began in M Jurassic, followed by passive margin phase with thermal subsidence. M Cretaceous (Cenomanian) second rift episode, related to rifting before seafloor spreading in Coral Sea. Regional thermal uplift/erosion at end-Cretaceous (major hiatus). Widespread Late Oligocene- M Miocene limestone deposition (Darai Lst). ~Langhian age ophiolite obduction in N PNG. Late Miocene (~10 Ma) inversion event tied to collision of N Papuan margin and Melanesian island arc)

Hopwood, B. (2013)- A regional study of the Toro and Imburu Formation aquifers in the Papuan Basin, Papua New Guinea. B.Sc. Hons. (Geology) Thesis, University of Adelaide, p. 1-119.
(online at: https://digital.library.adelaide.edu.au/dspace/bitstream/2440/105356/1/02whole.pdf)
(presentation at: https://digital.library.adelaide.edu.au/dspace/bitstream/2440/105356/2/03SuppMaterial.pdf)
(In Papuan foldbelt hydrocarbon distribution likely influenced by hydrodynamic bahavior in Toro and Imburu Fm reservoirs. E Cretaceous Toro Sst extensive hydrodynamic aquifer that likely flows NW to SE, from Lavani Valley Toro outcrop (recharge region) in Highlands, through to Kutubu Complex, potentially via Hides, (possibly Angore) and Mananda/SE Mananda Fields)

Hornafius, J.S. & R.E. Denison (1993)- Structural interpretations based on Strontium isotope dating of the Darai Limestone, Papuan fold belt, New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 313-324.
(Darai Limestone in Muller and Kopiago anticlines of PNG foldbelt unconformably overlies U Cretaceous (Coniacian) marine sediments. First paper to use Sr-isotope dating, confirming E Oligocene- M Miocene age of Darai Lst (33-15 Ma). Sedimentation rates much higher between 15-19 Ma than 20-33 Ma (unusual overlap of Te larger forams Spiroclypeus/Eulepidina and Katacycloclypeus (Tf) reported; not repeated in other studies on New Guinea/ Darai limestone like Allan et al. 2000))

Hughes, F.E. (ed.) (1990)- Papua New Guinea- geology and mineral deposits. In: Geology of the mineral deposits of Australia and Papua New Guinea. Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Monograph 14, 2, p. 1681-1830.
(Chapter 9 in major review collection of mineral occurrences in Australia- New Guinea. With general overviews of PNG mineral deposits and sub-chapters on 20 gold and copper-gold deposits)

Hulse, J.C. & G.I. Harris (2000)- The Darai Plateau play: foreland basin potential. In: P.G. Buchanan, A.M. Grainge & R.C.N. Thornton (eds.) Papua New Guineaôs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 169-185.
(Darai Plateau is large Plio-Pleistocene inversion of Mesozoic half-graben. Seismic imaging difficult in karsted terrain. E Cretaceous Toro Fm sandstones primary reservoir targets. With Toro Fm sandstone isopach map)

Hutchison, D.S. (1975)- Basement geology of the North Sepik region, Papua New Guinea. Bureau Mineral Res. Geol. Geophysics, Canberra, Report, 1975/162, p. 1-55.
(online at: www.ga.gov.au/corporate_data/13402/Rec1975_162.pdf)
(N Sepik region mainly Mesozoic- Paleogene basement rocks, overlain by Neogene- Quaternary marine and non-marine sediments. Dominant feature is E-trending basement axis (left-lateral strike-slip fault-zone with horizontal slickensides; continuation of Sorong FZ of W Papua?), which separates metamorphic basement in S from mainly volcanic basement in N (Bliri Volcanics; with Eocene (Tab) Nummulites- Discocyclina and E-M Miocene Te Puwani Lst.). S of Sepik River sporadic exposures of probable U Cretaceous- Eocene greenschist and amphibolite-grade metamorphics correlate with Ambunti metamorphics. In E of area (E Prins Alexander Mts) Mt Turu complex ultramafics in contact with Oligocene metamorphics on S side. Ambunti metamorphics at S side have Eocene limestone lenses (Discocyclina, Nummulites) and are overlain by unmetamorphosed U Oligocene limestone with Lepidocyclina. In stream S of Amanab recrystallized limestone with U Cretaceous Pseudorbitoides. Late Permian- E Triassic intrusive rocks (242-257 Ma) in Border Mts SW of Amanab))

Hutchison, D.S. & M.S. Norvick (1978)- Wewak, Papua New Guinea- 1:250,000 geological series. Bureau Mineral Res. Geol. Geophysics, Canberra, and Geological Survey PNG, Explanatory Notes, SA/54-16, p. 1-34.
(Geologic map sheet along N coast of PNG (N of Sepik River))

Hutchison, D.S. & M. Norvick (1980)- Geology of North Sepik region, Papua New Guinea. Bureau Mineral Res., Canberra, Record 1980/24, p. 1-163.
(online at: www.ga.gov.au/products-services/legacy-publications/records/1980s.html)
(Geology of NW coastal area of PNG, E of West Papua border. Basement in N Sepik region consists of late Mesozoic and early Tertiary volcanic and metamorphic rocks, and is unconformably overlain by thick Neogene-Quaternary non-volcanic clastics. Complex of ultramafic and basic intrusive rocks in E Prince Alexander Mountains (Mt Turu Complex) probably of Jurassic age and possibly small fragment of oceanic crust, emplaced to surface in Oligocene. Mixed high-grade metamorphic and acid intrusive rocks form Late Cretaceous Prince Alexander Complex in W and C Prince Alexander Mts. Basic- intermediate volcanics and related Paleocene- E Miocene sediments (Bliri volcanics) in Bewani and Torricelli Mountains and N coastal ranges, appear to be remnants of early Tertiary island arc. Large, E-trending, dominantly transcurrent fault systems run length of region. Several oil- gas seeps are known, and few unsuccessful wells drilled in 1924-1927)

InterOil Australia (2011)- Formation evaluation, carbonate reservoir characterisation and resource assessment of the Elk and Antelope gas fields in the onshore Eastern Papuan Basin of Papua New Guinea. Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, p. 1-86. *(Abstract + Presentation)*
(2006-2008 discovery of >7 TCF Elk-Antelope gas field in onshore E Papuan Basin in foothills of Central Range. Gas field at crest of fold structure in leading edge of Aure Tectonic Belt. Reservoir fractured Oligocene-Miocene reefal carbonate. Not much on geology)

Jack, R.L. & R. Etheridge (1892)- The geology and palaeontology of Queensland and New Guinea. Geol. Survey of Queensland Publ. 72, p. 1-768. *(3 vols., 68 plates, map)*
(Classic work on Queensland geology, Devonian- Cretaceous stratigraphy and fauna. Thick Devonian with corals Favosites, Heliolites, Pachypora and Stromatopora and brachiopods Spirifera, Atrypa, Rhynchonella, Pentamerus and Stringocephalus. Permo-Carboniferous Bowen series with coal and Glossopteris flora, brachiopods, etc. Also chapter on Papua New Guinea geology)

Jackson, R. (1982)- Ok Tedi: the pot of gold. University of Papua New Guinea, Boroko, p. 1-199.

Jaques, A.L. (1976)- High-K2O island-arc volcanic rocks from the Finisterre and Adelbert Ranges, northern Papua New Guinea. Geol. Soc. America (GSA) Bull. 87, p. 861-867.
(Thick Oligocene- Early Miocene volcanics in Finistere- Adelbert Ranges. Probably formed in volcanic arc N of NE dipping subduction zone)

Jaques, A.L. (1981)- Petrology and petrogenesis of cumulative peridotites and gabbros from the Marum Ophiolite Complex. J. Petrology 22, 1, p. 1-40.
(N PNG Marum ophiolite complex composed of two allochthons thrusted over Cretaceous to Eocene low-grade metasediments in Paleocene- Eocene. 3-4 km thick sequence of ultramafic and mafic cumulates, with mainly dunite at base, through wehrlite, lherzolite, plagioclase lherzolite, pyroxenite, olivine norite-gabbro and norite-gabbro to anorthositic gabbro and ferrogabbro at top. Parent magmas Mg olivine-poor tholeiite. May result from partial melting of depleted mantle lherzolite at shallow depth at mid-ocean ridge or back-arc basin)

Jaques, A.L. (1981)- Ophiolites of Papua New Guinea. In: N. Bogdanov (ed.) IGCP Project 39 Ophiolites, p.

Jaques, A.L. & B.W. Chappell (1980)- Petrology and trace element geochemistry of the Papuan Ultramafic Belt. Contrib. Mineralogy Petrology 75, p. 55-70.
(In Papuan Ultramafic Belt of PNG harzburgites at base of ophiolite are depleted in lithophile elements, consistent with proposed origin as 'depleted' upper mantle, residual after extraction of basaltic melt. Overlying layered ultramafic-mafic cumulates point to magnesian olivine-poor tholeiite parent magma(s) strongly depleted in 'incompatible' elements. LREE-depleted lavas in overlying basalt sequence resemble most depleted mid-ocean ridge basalts. Intruded Eocene tonalites genetically unrelated to ophiolites, and appear related to andesites of Cape Vogel and others at N end of PUB, and represent early stages of island-arc magmatism associated with NE-dipping subduction zone in E Eocene immediately prior to emplacement of PUB)

Jaques, A.L., B.W. Chappell & S.R. Taylor (1978)- Geochemistry of LIL-element enriched tholeiites from the Marum Ophiolite Complex, northern Papua New Guinea. BMR J. Australian Geol. Geophysics 3, p. 297-310.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/80972/)
(Geochemistry of spilitic pillow basalts (Tumu River basalts) associated with peridotites and gabbros of Marum ophiolite complex in N mainland PNG, thrust over low-grade metasediments of mainly Late Cretaceous-Eocene age. Comparable to tholeiites from oceanic islands. Reflect mantle-source composition rather than particular tectonic setting within ocean basin)

Jaques, A.L., B.W. Chappell & S.R. Taylor (1983)- Geochemistry of cumulus peridotites and gabbros from the Marum Ophiolite Complex, Northern Papua New Guinea. Contrib. Mineralogy Petrology 82, p. 154-164.
(Late Mesozoic Marum ophiolite peridotite-gabbro sequence NE of Central Range in N PNG incomplete: upper part extrusives missing. Parent magmas of Marum cumulates strongly depleted in incompatible trace elements, and not of MORB composition)

Jaques, A.L. & G.P. Robinson (1977)- The continent/ island arc collision in northern Papua New Guinea. BMR J. Australian Geol. Geophysics 2, p. 289-303.
(online at: www.ga.gov.au/corporate_data/80936/Jou1977_v2_n4_p289.pdf)
(Adelbert-Finisterre Paleogene oceanic volcanic arc above NE-dipping Indo-Australian Plate subduction zone active in Late Eocene- E Miocene. First collided with Australian continental crust in E Miocene in west, progressing eastward. In collision zone SW of arc with NE-dipping Marum ophiolite complex, with Eocene pelagic sediments interbedded with pillow basalts. SW of ophiolite Bismarck-Schrader Ranges low-grade metamorphics, laterally grading into Late Cretaceous- Eocene clastics and limestones. Metamorphics formed from continental slope flysch with abundant detritus of granitic, metamorphic and volcanic rocks)

Jaques, A. L. & G.P. Robinson (1980)- Bogia, Papua New Guinea, Sheet SB/55-1, 1:250. Geological Series-Explanatory Notes, PNG Dept. Minerals and Energy, p. 1-27.
(Geologic map sheet in NE PNG (Finisterre Range, etc.))

Jakes, P. & I.E.M. Smith (1970)- High potassium calc-alkaline rocks from Cape Nelson, eastern Papua. Contr. Mineralogy Petrology 28, p. 259-271.
(Cape Nelson Quaternary volcanic complex on NE coast of E PNG with two Quaternary stratovolcanoes, Mt Victory (1925m) and Mt Trafalgar (1720m). High-K calc-alkaline rocks dominated by andesites with numerous basic inclusions)

Jenkins, D.A.L. (1974)- Detachment tectonics in western Papua New Guinea. Geol. Soc. America (GSA) Bull. 85, p. 533-548.
(PNG foldbelt deformation in M-L Pliocene. Pattern of detachment related to configuration of two large basement uplifts, aligned WNW en echelon to spine of island. Uplift continued after thrusting ceased)

Jenkins, D.A.L. & A.J. Martin (1972)- Recent investigations into the geology of the southern highlands, Papua. In: Proc. 4th Symp. Development of petroleum resources of Asia and the Far East, UN ECAFE Mineral Resources Development Ser. 41, 1, p. 288-294.

Johnson, R.W. (1979)- Geotectonics and volcanism in Papua New Guinea: a review of the Late Cainozoic. Bureau Mineral Res. (BMR) J. Australian Geol. Geophysics 4, p. 181-207.
(online at: www.ga.gov.au/corporate_data/81001/Jou1979_v4_n3_p181.pdf)
(At least 6-perhaps 10, plate boundaries in PNG. Most are zones of convergence and ridge-transform zones where new sea floor is being created. Australian continent and Ontong Java Plateau reached region in Cenozoic. Late Cenozoic volcanoes of PNG widely distributed and chemically diverse. Andesite is common, but comendites, intra-plate rhyolites, strongly undersaturated rocks, and basalts also present)

Johnson, R.W. (1982)- Papua New Guinea. In: R.S. Thorpe (ed.) Andesites, John Wiley, p. 225-244.

Johnson, R.W. (2013)- Fire mountains of the islands- a history of volcanic eruptions and disaster management in Papua New Guinea and the Solomon Islands. Australian National University (ANU) Press, Canberra, p. 1-391.
(online at: www.oapen.org/download?type=document&docid=462202)
(Popular review of 57 active volcanoes of E PNG mainland and islands to East)

Johnson, R.W. & A.L. Jacques (1980)- Continent-arc collision and reversal of arc polarity: new interpretation from a critical area. Tectonophysics 63, p. 111-124.
(N New Guinea regarded as region where polarity of island arc reversed following collision with Australian continent, but evidence not compelling. Because present-day volcanism off PNG N coast associated with steeply N-dipping Benioff zone and late Cenozoic volcanoes in central highlands cannot be related to Benioff zone, more acceptable interpretation is that, following collision, N-dipping slab beneath arc became suspended nearly vertically. Active marginal basin N of arc is unlikely subducted S beneath mainland, because lithosphere beneath marginal basins appears to be neither thick nor cold enough for initiation of subduction)

Johnson, R.W., D.E. MacKenzie & I.E.M. Smith (1971)- Seismicity and Late Cenozoic volcanism in parts of Papua New Guinea. Tectonophysics 12, p. 15-22.
(Late Cenozoic volcanoes in New Guinea Highlands- E Papua of calc-alkaline and shoshonitic compositions; N coast of New Britain and islands toW tholeiitic basalt, andesite, dacite, and rhyolite. Earthquake foci for 1958-1970, can not be tied to S-dipping Benioff zone. Well-defined Benioff zone dips N beneath New Britain)

Johnson, R.W., D.E. MacKenzie & I.E.M. Smith (1978)- Delayed partial melting of subduction modified mantle in Papua New Guinea. Tectonophysics 46, p. 197-216.
(Late Cenozoic volcanoes in E PNG assigned to nine volcanic provinces, seven of which related to arc-trench systems. Four of these seven associated with present-day subduction of lithosphere. Volcanism in three other provinces not related to subduction (higher 87Sr/86Sr values, etc.) and may have originated in mantle lithosphere chemically modified in Early Cenozoic or Late Mesozoic by slab-derived fluids)

Johnson, R.W., D.E. MacKenzie & I.E.M. Smith (1978)- Volcanic rock associations at convergent plate boundaries: reappraisal of the concept using case histories from Papua New Guinea. Geol. Soc. America (GSA) Bulll. 89, p. 96-106.
(Three volcanic rock associations in seven Late Cenozoic provinces at convergent plate boundaries in PNG)

Johnson, R.W., D.E. Mackenzie, G.A.M. Taylor & I.E.M. Smith (1973)- Distribution and petrology of the late Cainozoic volcanoes in Papua New Guinea. In: P.J. Coleman (ed.) The Western Pacific: island arcs, marginal seas, geochemistry, Western Australia University Press, p. 523-534.

Johnson, T.L. (1979)- Alternative model for the emplacement of the Papuan ophiolite, Papua New Guinea. Geology 7, 10, p. 495-498.
(New model for geologic development of Papuan Peninsula, based on reinterpretation of nature of Owen Stanley metamorphic belt. Owen Stanley rocks interpreted as sediments deposited on oceanic crust and accreted to E- dipping island arc as underlying crust was subducted. Emplacement of ophiolite in two stages: (1) uplift due to buoyancy of lighter material accreted under ophiolite during subduction; (2) further uplift of ophiolite to present position when island arc collided with and partially subducted semicontinental material)

Johnstone, D.C. & J.K. Emmett (2000)- Petroleum geology of the Hides gas field, Southern Highlands, Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaôs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 319-336.
(Hides field in central highlands of PNG, discovered in 1987. SW-verging asymmetrical anticline with >2000m structural relief (and 1300m gas column?). Five gas-bearing reservoirs in clean quartz sandstones of Late Jurassic- Early Cretaceous Imburu and Toro Fms, with 7=10.6% porosity. Rel. dry gas, tied to clastic source with mixed terrestrial and marine kerogens. Estimated reserves 5.3 TCF gas and >100 MB Condensate)

Jongsma, D. (1970)- Marine geology and recent sediments of Milne Bay, New Guinea. Bureau Mineral Res., Geol. Geophysics, Canberra, Record 1970/010, p. 1-24.
(online at: www.ga.gov.au/corporate_data/12423/Rec1970_010.pdf)
(Report version of Jongsma (1972). Milne Bay at SE tip of mainland PNG originated during formation of Owen Stanley fault onshore and Pocklington shear zone. Bay floor sinking in Quaternary, accumulating thick marine sediments)

Jongsma, D. (1972)- Marine geology and Recent sediments of Milne Bay, eastern Papua. Geological Papers 1969, Bureau Mineral Res., Geol. Geophysics, Bull. 125, p. 35-54.
(online at: www.ga.gov.au/corporate_data/125/Bull_125.pdf)
(See also Jongsma (1970))

Kaczmarek, M.A., L. Jonda & H.L. Davies (2015)- Evidence of melting, melt percolation and deformation in a supra-subduction zone (Marum ophiolite complex, Papua New Guinea). Contrib. Mineralogy Petrology 170, 19, p. 1-23.
(Geochemistry of Marum Ophiolite of E PNG, which obducted in Paleocene and Eocene, and is composed of two allochthons thrusted over Cretaceous to Eocene low-grade metasediments. Marum ophiolite is piece of depleted mantle, made of dunite and harzburgite, showing compositions of supra-subduction zone peridotite)

Kamenetsky, V.S., A.V. Sobolev, S.M. Eggins, A.J. Crawford & R.J. Arculus (2002)- Olivine-enriched melt inclusions in chromites from low-Ca boninites, Cape Vogel, Papua New Guinea: evidence for ultramafic primary magma, refractory mantle source and enriched components. Chemical Geology 183, p. 287-303.
(Study of melt inclusions in high-Cr primitive spinel in Paleocene low-Ca boninites from Cape Vogel, PNG. Cape Vogel primary melts could have originated from melting of refractory, hot (>1500°C) harzburgitic mantle fluxed by subduction-related, H2O-bearing enriched components)

Kaufman, R.L., J.C. Phelps & K.J. Kveton (1997)- Petroleum systems of the Papuan Basin, Papua New Guinea. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Petroleum Systems of SE Asia and Australia Conf., Jakarta, Indon. Petroleum Assoc. (IPA), Jakarta, p. 237-246.
(Three petroleum systems in PNG: 1. Jurassic-Imburu (proven play); 2. Cretaceous (tentative; concluded from seeps oil analyses); 3. Tertiary (common oleanane in oil seep near Goroka, N of other seeps/ fields)

Kaufman, R.L. & B. Robertson (1999)- Application of reservoir geochemistry in the Iagifu-Hedinia Field, Papua New Guinea. Australian Petrol. Explor. Assoc. (APEA) J. 39, p. 421-436.

(Combination of oil fingerprint and RFT pressure data in Iagifu-Hedinia Field demonstrated some seals effective over geologic time frames while others effective only on production timeframe. Geochemical data also indicate presence of reservoir compartments where other data were missing or inconclusive)

Kawagle, S.A. (2005)- The mineral resources of Papua New Guinea. Resource Geology 55, 3, p. 285-288.
(Brief review of PNG mining. Three world class, open pit mines at Ok Tedi, Porgera and Lihir; two medium-scale underground operations at Tolukuma and Kainantu. PNG y produced 68 Tonnes of gold in 2003 and 73.6 tonnes in 2004. Copper production averages around 200,000 Tonnes/ year)

Kawagle, S.A. (2007)- Petroleum resources of Papua New Guinea. Resource Geology 57, 3, p. 347-350.
(Brief review of PNG petroleum status. Petroleum sector has substantially grown in last 2 years. Oil- gas fields in Papuan fold belt and foreland and Fly platform. First commercial oil discovery in 1986 with first production in 1992. Oilfields small by world standards. Second major contributor to PNG revenue, after minerals)

Kawagle, S.A. & J.B. Meyers (1996)- Structural and sequence geometry of the Kiunga area, Papuan foreland basin, Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, PNG Chamber of Mines and Petroleum, Port Moresby, p. 175-193.
(PNG foreland basin S of Papuan foldbelt with 4 seismic megasequence boundaries: M Jurassic breakup unconformity, top Mesozoic Megasequence and top of Lower and Upper Darai Megasequence. Late Cretaceous? NW-trending wrench faults)

Keenan, S.E. & K.C. Hill (2015)- The Mananda Anticline, Papua New Guinea: a third oil discovery, appraisal programme and deep potential. AAPG/SEG Int. Conf. Exhibition, Melbourne, Search and Discovery Art. 10803, 13p. *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2015/10803keenan/ndx_keenan.pdf)
(Mananda Anticline one of larger structures in Papuan Fold Belt (40x15 km, up to 2000m high). Stratigraphy 1 km of Miocene limestone over 1 km of Cretaceous shale over earliest Cretaceous Toro and Digimu sandstone reservoirs and inferred Jurassic source. Size of structure suggests basement inversion. Since 1971 nine wells drilled along topographic crest, including SE Mananda-1 oil-gas discovery in 1991. New work indicated structural crest SE of topographic crest. Mananda 5, 6 wells tested oil and gas in Toro Sst reservoirs)

Keenan, S.E. & K.C. Hill (2015)- The Mananda Anticline, Papua New Guinea: a third oil discovery, appraisal programme and deep potential. Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 297-306.
(Same as Keenan and Hill 2015, above)

Keetley, J.T., K.C. Hill & K.J. Kveton (2000)- 3D structural modeling of the Moran Oilfield, Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaӧs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 309-318.
(3D restoration models of Moran anticine in central part of Papuan foldbelt (Late Miocene- Pliocene S-directed folding-thrusting))

Kergaravat, C., W. Vetel, P. Souloumiac, P. Jousselin, W. Gordon-Canning, A. Shakerley et al. (2018)- Forward modeling and mechanical behaviors of a carbonate platform involved in fold-and-thrust belt. The case of Antelope Field and surrounding prospectivity In: PEGSB SEAPEX Asia Pacific E&P Conference, London, 2p. *(Extended Abstract)*
(Elk-Antelope multi-TCF gas field in western PNG represents isolated carbonate buildup involved in thrusting at junction of two major foldbelt systems, Papuan and Aure Foldbelts. Reservoirs E-M Miocene Darai Fm)

Khan, A.M. (1976)- Palynology of Neogene sediments from Papua (New Guinea) stratigraphic boundaries. Pollen et Spores 16, 2, p. 265-284.
(Early, dated paper on Neogene palynology from Iviri 1 well, Fly River Delta)

Kicinski, F.M. (1955)- Micropalaeontological examination of rock samples from Buna-Kokoda area, Eastern Papua. Bureau Mineral Res. (BMR) Geol. Geophysics, Record 1955/009, p.
(Samples from Robinson Bay Limestone (which occur as caps on volcanic Iauga Fm Trobriand arc volcanics), have Lower Tf larger forams (= Burdigalian- Serravallian; Miogypsina kotoi, Austrotrillina, Flosculinella bontangensis, etc.)

King, S.J., D. Haig & A.G. Annette (2000)- The tectonic implications of rapid vertical facies changes in the Yule Island section, Aure Trough, Papua New Guinea. AAPG Int. Conf. Exhib., Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1449.
(Yule Island section ~1.5 km thick marine M. Miocene- E Pliocene. Two separate cycles of tectonic uplift and subsidence in Aure Trough. Tectonic events recorded in succession include: 1) development of proximal foredeep in response to tectonic loading possibly accretion of E Papuan Composite Terrane prior to ~14.8 Ma; 2) 'marginal' uplift associated with development of a fold-and-thrust-belt from ~11.4 Ma; 3) second tectonic loading event, possibly accretion of Adelbert-Finisterre volcanic terrane at ~8.8 Ma; and, 4) pervasive basin-wide uplift associated with development of second and fold-thrust-belt from ~5.2 Ma)

Kivior, I., S. Markham & L. Mellon (2015)- Mapping sub-surface geology from magnetic data in the Hides Area, Western Papuan Fold Belt, Papua New Guinea. Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 307-319.
(Structure interpretation of magnetic data in area of Hides and Karius gas fields, PNG foldbelt, consistent with structures mapped from seismic and well data)

Kivior, I., S. Markham & L. Mellon (2016)- Mapping sub-surface geology from magnetic data in the Hides Area, Western Papuan Fold Belt, Papua New Guinea. AAPG/SEG Int. Conf. Exhib., Melbourne 2015, Search and Discovery Article 30438, 14p.
(online at: www.searchanddiscovery.com/pdfz/documents/2016/30438kivior/ndx_kivior.pdf.html)
(Same as Kivior et al. 2015))

Klimchuk, G.A. (1993)- Provenance and depositional setting of the Pliocene Era Formation, Aure fold and thrust belt, Papua New Guinea. M.A. Thesis, University of Texas at Austin, p. 1-130. *(Unpublished)*

Klootwijk, C., J. Giddings & C. Pigram (1993)- Palaeomagnetic constraints on terrane tectonics: Highlands and Sepik regions, Papua New Guinea. Exploration Geophysics (Bull. Soc. Australian Exploration Geophysicists) 24, 2, p. 291-294.
(New Guinea more than 32 terranes of oceanic, continental or composite affinity. Paleomagnetic control on terrane movement of mainland New Guinea restricted to Birds Head of Indonesian West Papua (Giddings et al., 1993), and North Sepik and Highland regions of Papua New Guinea. Paleocene- E Miocene Bliri Volcanics of Bewani- Torricelli Arc complex in N Sepik region show overprint acquired at latitude of ~150 °S, attributed to latest-Oligocene-E Miocene accretion of arc onto N margin of Australian plate. Declinations from Bliri Volcanics and cover sediments show meridional trend and indicate CCW rotations of Bewani-Torricelli Arc between 30°-110° relative to Australian craton. Also CCW rotations between 30°-100° in Kubor Anticline and Jimi terrane. In Mendi area of S Highlands CW rotations of 30°-50°)

Klootwijk, C., J. Giddings, C. Pigram, C. Loxton, H. Davies, R. Rogerson & D. Falvey (2003)- Papua New Guinea Highlands: palaeomagnetic constraints on terrane tectonics. Tectonophysics 362, p. 239-272.
(Paleomagnetic study of 21 localities in PNG Highlands. Three magnetic components: (1) recent overprint; (2) mainly normal polarity overprint during M-L Miocene intrusive activity in central cordillera; (3) primary component. Interior zone with Triassic- Miocene of Kubor Anticline, Jimi Terrane and Yaveufa Syncline in C and E Highlands 30°- 100°+ CCW rotations. Exterior zone is basement-involved Pliocene foreland fold-and-thrust belt in S Highlands. Exterior zone 30°- 50°+ clockwise rotations in Mendi area. Contrasting rotations across Tahin and Stolle-Lagaip-Kaugel Fault zones indicate decoupling of zones. CCW rotations in Kubor Anticline-Jimi Terrane cratonic spur interpreted as non-rigid rotation of continental terranes as they were transported W across NE Australian craton margin. This margin became reorganised after M Miocene, when N-advancing Australian craton impinged into W-moving Pacific plate/buffer-plate)

Klootwijk, C., J. Giddings, C. Pigram, C. Loxton, H. Davies R. Rogerson & D. Falvey (2003)- North Sepik region of Papua New Guinea: palaeomagnetic constraints on arc accretion and deformation. Tectonophysics 362, p. 273-301.
(Bewani-Torricelli Arc of N Sepik, Paleocene- E Miocene Bliri Volcanics counterclockwise rotations of 30°+-110°+ relative to Australian craton, and clockwise rotations of 100°- 170°+ of detached Tring Block. Latitudinal evolution of Bewani-Torricelli Arc similar to Baining Arc (Finisterre-Huon-New Ireland-New Britain), and indicates N-ward movement from ~30°S in Late Eocene to ~15°S in E-M Miocene, suggesting both arcs may be parts of larger E-W-oriented arc complex, possibly located on Pacific plate prior to accretion)

Klootwijk, C., J. Giddings, W. Sunata, C. Pigram, C. Loxton, H. Davies, R. Rogerson & D. Falvey (1987)- Paleomagnetic constraints on terrane tectonics in New Guinea. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 237-239.
(Paleomagnetic work for New Guinea shows common Late Tertiary overprints. Birds Head probably some N-ward movement relative to Australia between M Eocene and M Miocene and some post E-M Miocene counterclockwise rotation. In N Sepik region Torricelli and Border Mountain blocks 100° or more CCW rotations. In Highlands Kubor Block 50-100°CCW rotation)

Kloppenburg, A. & K.C. Hill (2015)- The Gobe Field, PNG: influence of basement architecture on fold and thrust belt structural style. In: Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 273-279.
(25 km long sinuous Gobe Anticline in SE Papuan Fold Belt three structural compartments, believed to be in part controlled by E Jurassic rift architecture in Permo-Triassic basement. Main oil gas reservoir U Jurassic Iagifu Sst. Overlying 1 km thick Cretaceous mudstone detached reservoir sequence from overlying 1 km thick Miocene limestone that formed Pliocene- Recent thin-skinned structures at the surface. Nearby basement-cored Iehi Anticline. Gobe Anticline resulted from interplay of two conjugate contractional fault sets)

Kloppenburg, A. & K.C. Hill (2016)- The Gobe Field, PNG: influence of basement architecture on fold and thrust belt structural style. AAPG/SEG Int. Conf. Exhib., Melbourne 2015, Search and Discovery Art. 20339, 11p.
(online at: www.searchanddiscovery.com/documents/2016/20339kloppenburg/ndx_kloppenburg.pdf)
(Similar to Kloppenburg & Hill 2015))

Knight, C.L. (ed.) (1976)- Economic geology of Australia and Papua New Guinea. Australasian Inst. of Mining and Metallurgy (AusIMM) Mon., vol. 1. Metals, Parkville, Victoria, p. 1-1126.

Knight, C.L. (ed.) (1976)- Economic geology of Australia and Papua New Guinea. Australasian Inst. of Mining and Metallurgy (AusIMM) Mon., vol. 2. Coal, Parkville, Victoria, p. 1-398.

Knight, C.L. (ed.) (1976)- Economic geology of Australia and Papua New Guinea. Australasian. Inst. Mining and Metallurgy (AusIMM) Mon., vol. 3. Petroleum, Parkville, Victoria, p. 1-541.k

Knight, C.L. (ed.) (1976)- Economic geology of Australia and Papua New Guinea. Australasian Inst. of Mining and Metallurgy (AusIMM) Mon., vol. 4. Industrial minerals and rocks, Parkville, Victoria, p. 1-423.

Kopi, G., I. Abiari, P.G. Quilty, T.W. Kilya, S. Nekitel, R.H. Findlay, C. Mortimer & P. Kia (2002)- Cretaceous macrofossils from the Ramu Valley and the Snake River, Papua New Guinea, place the northern terranes of PNG and the Owen Stanley Metamorphics in Gondwana. In: V.P. Preiss (ed.) Geoscience 2002, 16th Australian Geol. Conv., Geol. Soc. Australia. 67, p. 363. *(Abstract only)*

Koulali, A., P. Tregoning, S. McClusky, R. Stanaway, L. Wallace & G. Lister (2015)- New insights into the present-day kinematics of Papua New Guinea from GPS. Geophysical J. Int. 202, 2, p. 993-1004.
(New GPS derived velocity field based on 1993-2008 observations at 30 GPS sites, combined with published GPS velocities in N and NW PNG. New Guinea Trench is active plate boundary, accommodating most of the

convergence between Pacific and Australian plates in NW PNG with rates >90 mm/ yr. Some convergent deformation partitioned into shear along Bewani-Torricelli fault zone and S Highlands fold-thrust Belt. Fault system N of Highlands fold-thrust belt is major boundary between the rigid Australian Plate and N Highlands block, with convergence between ~6-11.5 mm/yr. N New Guinea Highlands and Papuan Peninsula two blocks separated by boundary through Aure Fold belt Belt. Ramu-Markham fault accommodates deformation associated with Finisterre arc-continent collision)

Krawczynski, L. (2015)- Hydrocarbon generation and distributon in the foreland part of the Papuan Basin. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2015, Singapore, 8.2, 3p. *(Extended Abstract)*
(Papuan Basin of PNG similar petroleum system to Mesozoic of Australia NW Shelf. Commercial discoveries in PNG foldbelt/ foothills and Tertiary carbonates play, but no fields in foreland basin yet. Active source rocks: (1) Triassic lacustrine shales, (2) Jurassic mixed marine-terestrial Imburu Fm and (3) Late Cretaceous and younger terrestrial source rocks. Recent foreland basin wells Manta 1 and NW Koko 1 rely on long-distance (100km) migration from mature Jurassic source)

Krieger, F.W., P.J. Eadington & L.I. Eisenberg (1996)- Rw, reserves and timing of oil charge in the Papuan Fold Belt. In: P.G. Buchanan (ed.) Petroleum exploration and development in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby 1996, p. 407-416.
(Significant decreases in salinity in Cretaceous and Jurassic aquifers through evolution of Papuan basin, suggesting recharge with low salinity meteoric water (after oil charge))

Kristan-Tollman, E. (1986)- Beobachtungen zur Trias am Sudost-Ende der Tethys- Papua/ Neuguinea, Australien, Neuseeland. Neues Jahrbuch Geol. Palaont., Monatshefte 4, p. 201-222.
('Observations on the Triassic of the SE margin of the Tethys- Papua New Guinea, Australia and New Zealand'. Upper Triassic Tethyan faunas remarkably similar all the way E to New Zealand, NW Australia. Includes discussion of Kubor terrane Rhaetian Gurumugl reefal limestones ESE of Mount Hagen, PNG, which contains latest Triassic corals (Montlivaltia norica, Thecosmilia chlathrata) and diverse forams, incl. Tetrataxis, Involutina liassica, Galeanella tollmanni, etc.), suggesting Rhaetian age)

Kristan-Tollman, E. (1986)- Foraminiferen aus dem Rhatischen Kuta-Kalk von Papua- Neuguinea. Mitteilungen Osterreichischen Geol. Gesellschaft 78 (1985), p. 291-317.
(online at: http://geologie.or.at/index.php/downloads2/category/7-archiv-mitteilungen)
(First description of Rhaetian foraminifera from Kuta limestone, Mt. Hagen area, PNG Highlands. Fauna of Tethyan affinity, similar to same age faunas from Mediterranean/ Alps area. Three biofacies types: near-reef (with Trocholina, Coronipora, Semiinvoluta, etc.), fore-reef (crinoid detrital limestones with Variostoma cochlea, etc.) and lagoonal (low diversity with Angulodiscus, Glomospira/ Glomospirella)

Kristan-Tollman, E. (1990)- Rhaet-Foraminiferen aus dem Kuta-Kalk des Gurumugl-Riffes in Zentral-Papua/Neuguinea. Mitteilungen Osterreichischen Geol. Gesellschaft 82 (1989), p. 211-289.
(online at: http://geologie.or.at/index.php/downloads2/category/7-archiv-mitteilungen)
('Rhaetian foraminifera from the Kuta Limestone of the Gurumugl Reef in central PNG'. Detailed account of latest Triassic foram assemblage of 85 species from W part of Gurumugl Reef, W Kundiawa. Incl. Involutina liassica, Tetrataxis, Duotaxis, Triasina oberhauseri, Galeanella, Gaudryina, Agathammina, Endothyra, etc. All species also known from West Tethys, showing uniformity of Late Triassic Tethyan reef faunas. No stratigraphic info)

Kugler, A. (1966)- The stratigraphy, structure and tectonics of the Kukukuku Lobe Permit 22, Papua. Ph.D. Thesis University of Tasmania, Hobart, p. 1-365. *(Unpublished)*
(part online at: http://eprints.utas.edu.au/12292/7/kugler_intro-chp2.4.pdf)

Kugler, A. (1990)- Geology and petroleum plays of the Aitape Basin, New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby 1990, p. 479-490.

(Aitape Basin at NW most corner of PNG near W Papua border. Uup to 6 km thick Miocene-Pleistocene sediments (Boap Creek 1 well has 1500m of Pleistocene N22 section) on Oligocene and older volcanics and intrusives. Three 1980's BHP dry exploration wells. Oil and gas seeps along Torricelli-Bewani fault zone at S side of basin (with up to 10 km of throw). Several seismic anomalies indicative of Early Miocene reefal buildups; similaries with hydrocarbon-bearing Salawati basin in W Papua suggested)

Kugler, K.A. (1993)- Seismic structure and stratigraphy within the Aure fold and thrust belt, Gulf of Papua, Papua New Guinea. M.A. Thesis University of Texas at Austin, p. 1-104. *(Unpublished)*
(With 29 seismic profiles in separate container)

Kugler, K.A. (1993)- Detailed analysis from seismic data of the structure within the Aure fold and thrust belt, Gulf of Papua, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Conference, Port Moresby, p. 399-411.
(Onshore and offshore (N Gulf of Papua) Aure fold-thrust belt folds with amplitudes up to 3500m. Multiple sub-horizontal detachment zones in Paleogene- Pliocene; no evidence that crystalline basement is involved. Minimum shortening 20% for Late Miocene beds. First observable compression by Late Miocene (~5.3- 7.2 Ma), with deformation continuing today at frontal foldbelt)

Kulange, B.J., Y. Kajiwara & K. Komuro (2002)- Cu-Fe Bearing zinc sulfide from Laloki stratabound massive sulfide deposit, Papua New Guinea: chemical characterization. Resource Geology 52, p. 67-72.
(On unidentified, Cu-Fe zinc sulfide in Laloki sulfide deposit, ENE of Port Moresby, PNG. Laloki stratabound massive sulfide deposit part of Astrolabe Mineral Field. Mineralization in latest Paleocene siliceous-calcareous mudstone and rare chert in Cretaceous- Miocene thrust-faulted deep marine clastics and bioclastics with tuff and volcaniclastics. Sadowa Gabbro (~56 Ma) intrusice of tholeiitic affinity)

Kulig, C., R. McCaffrey, G.A. Abers & H. Letz (1993)- Shallow seismicity of arc-continent collision near Lae, Papua New Guinea. Tectonophysics 227, p. 81-93.
(Ramu-Markham Valley separates island arc rocks (Huon Penisula) to N from those of continental origin to S (Kubor Uplift) and appears to be western, onland extension of New Britain trench. E end of RMV narrow, near-vertical belt of seismicity between 10-30 km depth (Lae Seismic Zone), probably within lower plate of gently N-dipping thrust)

Lamerson, P.R. (1990)- Evolution of structural interpretations in Iagifu/Hedinia field, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 283-300.

Large, S.J. E., A. von Quadt, J.F. Wotzlaw, M. Guillong & C.A. Heinrich (2018)- Magma evolution leading to porphyry Au-Cu mineralization at the Ok Tedi deposit, Papua New Guinea: trace element geochemistry and high-precision geochronology of igneous zircon. Economic Geology 113, 1, p. 39-61.
(Ok Tedi is Earth's youngest giant porphyry-skarn deposit. Zircons with inherited older cores in all intrusions. Inherited zircon populations and Hf isotopes of Pleistocene zircons record Proterozoic basement assimilation. Crystallization ages extend over 212 ± 44 k.y.. Youngest zircons in each intrusion reflect emplacement age and suggest three pulses separated by ~160 k.y. Injection of more mafic magma into magma reservoir preceded emplacement of Fubilan porphyry at ~1.19 Ma and may be trigger for Au-Cu mineralization)

Larue, D. & M. Daniels (2000)- Stratigraphic architecture, facies and stratigraphic modeling of the upper and lower Iagifu reservoir intervals, Gobe and Southeast Gobe Fields, Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaős petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 349-367.
(Latest Jurassic Iagafu Fm in Gobe Main and SE Gobe fields in S Highlands of central PNG. Multiple sandstone reservoirs mainly shoreline-associated facies, separated by marine shale flooding surfaces. Lower Iagafu is prograding parasequence set)

LaRue, R.H. (1993)- Leading edge architecture of the Papuan fold belt. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, PNG Chamber of Mines, p. 371-383.
(Structural modeling of leading edge of Papuan Fold Belt (Puri, Gobe anticlines). Many folds may be hybrid fault-propagation folds and fault-bend folds)

Leamon, G.R. & G.L. Parsons (1986)- Tertiary carbonate plays of the Papua Basin. Proc. 6h Offshore SE Asia Conf. 1986, Singapore, Proc. SE Asia Petrol. Expl. Soc. (SEAPEX) 7, p. 213-227.
(Overview of Eocene- Miocene carbonate play fairways in PNG)

Levett, J. & K.J.F. Logan (2012)- Geophysics of the Porgera gold mine, Papua New Guinea. Exploration Geophysics 29, 4, p. 472-476.

Li, W.G, C.Y Fu, Z.Y. Yao, D. Xin, Z.L. Ge, X.X. Song & T.G. Wang (2014)- Tectonic settings, genetic types and main metallogenic features of copper-gold deposits in Papua New Guinea. Regional Geology of China 2014, Z1, p. 270-282.

Lindley, I.D. (2001)- Tertiary echinoids from Papua New Guinea. Proc. Linnean Soc. New South Wales 123, p. 119-139.
(online at: https://www.biodiversitylibrary.org/item/108629page/127/mode/1up)
(Tertiary echinoid faunas from three localities in PNG: (1) M Miocene Langimar Beds at Aseki village, Morobe (dominated by clypeasteroid echinoids), U Oligocene-Lw Miocene Padowa Beds in Sagarai valley, Milne Bay (dominated by spatangoids); (3) rich echinoid fauna from Lower Pliocene Kairuku Fm on Yule Island)

Lindley, I.D. (2014)- Suckling Dome and the Australian-Woodlark plate boundary in eastern Papua: the geology of the Keveri and Ada'u Valleys. Australian J. Earth Sci. 61, 8, p. 1125-1147.
(Owen Stanley Fault Zone is low-angle thrust boundary between Australian and Woodlark plates. W extension of OSFZ links with Woodlark Basin spreading centre. Gravity data show OSFZ and Papuan Ultramafic Belt pass north of Mt Suckling. Mafic and ultramafic rocks of Mt Suckling district reassigned to Awariobo Range Complex. Extensive pillow basalts previously referred to M Eocene reassigned to Late Oligocene-M Miocene Wavera Volcanics. Buoyant uplift of Suckling Dome tied to granite intrusion into thick crust of E Papua region, and coincides with initiation of Woodlark rifting)

Lindley, I.D. (2016)- Epithermal and arc-related layered mafic platinum-group element mineralisation in the mafic-ultramafic rocks of eastern Papua. Australian J. Earth Sci. 63, 4, p. 393-411.
(Platinum-group element mineralisation in mafic-ultramafic rocks of E PNG)

Lingrey, S (2000)- Structural interpretation and modeling of seismic data from the Moran and Paua area, PNG foldbelt. In: P.G. Buchanan et al. (eds.) Papua New Guineaȏs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, Papua New Guinea Chamber of Mines and Petroleum, p. 385-396.

Lisk, M., J. Hamilton, P. Eadington & T. Kotaka (1993)- Hydrocarbon and pore water migration history in relation to diagenesis in the Toro and Iagifu sandstones, SE Gobe-2. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 477-488.
(Fluid inclusion and isotope studies of cement in Iagafu reservoir sandstone in SE Gobe field suggests charge of high-maturity oil largely post-dated quartz overgrowth cements)

Liu, K. & K.A.W. Crook (1992)- Sedimentary basin evolution during propagating arc-continent collision, PNG. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015. *(Abstract only)*
(Oblique collision between Finisterre arc-Australian continent at NE PNG margin created isolated basins along Markham Suture since Late Miocene. Basins initially formed by convergence of irregular plate margins. In SE end of Markham Suture sedimentary basin evolution recorded in Pliocene-Pleistocene Erap Complex and Leron Fm of accretionary prism. Remnant basin with >1000m of deep sea turbidites was enclosed by two plate

promotories on Australian plate around 5 Ma. Around 3 Ma, as arc-continent collision proceeded, turbidites incorporated into approaching forearc, with thick submarine fan/ slope deposits in trench slope basins. As collision progressed, area was uplifted to form intramountane basin with fan delta deposition)

Liu, K. & K.A.W. Crook (1993)- Miocene- Pleistocene deep-sea to alluvial fan delta sedimentation in the Markham Basin, Papua New Guinea: sedimentary response to arc-continent collision. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby 1993, p. 97-109.
(Markham basin in NE PNG started out in ~M Miocene as remnant oceanic basin during collision of Finisterre Terrane and N PNG. Shallowing-upward basin fill sequence. M Miocene- E Pliocene clastic detritus derived from continent in S and deposited as deep sea fans, etc. Late Pliocene deposits dominated by clastics derived from volcanic terrane to N. Became intermontane basin in last 1 Myrs)

Liu, K. & K.A.W. Crook (2001)- Neogene sedimentary basin evolution in northern Papua New Guinea: a model for basin evolution in convergent margins settings. In: K.C. Hill & T. Bernecker (eds.) Eastern Australasian basins symposium, a refocused energy perspective for the future, Melbourne 2001, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 169-177.
(Mainly on M Miocene- Pleistocene predominantly deep-water stratigraphy of Markham basin, E PNG. Change from Australian plate- sourced Sukurum unit to Finisterre Arc terrane- sourced Nariawang unit at 3.7- 3.1 Ma, representing collision of Finisterre arc and Australian Plate. Collision earlier (10 Ma) in Ramu Basin)

Lloyd, A.R. (1978)- An outline of the Tertiary palaeontology and stratigraphy of the Gulf of Papua, Papua New Guinea. In: Wiryosujono & A. Sudradjat (eds.) Proc. Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 43-54.
(8 offshore and 2 onshore wells in N Gulf of Papua penetrated succession of Late Eocene limestones with Pellatispira, Spiroclypeus, Discocyclina Distichoplax, etc., Late Oligocene marls, etc. Oligocene sediments mostly absent. E-M Miocene limestones with Miogypsina, Spiroclypeus, Katacycloclypeus, etc. Late M- Late Miocene absent due to late M Miocene widespread uplift. Rapid subsidence in Pliocene- Recent)

Lloyd, A.R. (1988)- The geology and hydrocarbon potential of Southern Papua New Guinea. Allan R. Lloyd & Associates, p. 1-132. *(Unpublished consultant report)*

Lloyd, A.R. (1993)- The geology, biostratigraphy and hydrocarbon potential of the Papuan Basin, Papua New Guinea. Supplement, Allan R. Lloyd & Associates, p. 1-198. *(Unpublished consultant report)*

Loffler, E. (1972)- Pleistocene glaciation in Papua and New Guinea. Zeitschrift Geomorphologie 13, p. 32-58.

Loffler, E. (1977)- Geomorphology of Papua New Guinea. Australian Nat. University Press, Canberra, p. 1-258.
(Book on landforms and geomorphological processes in Papua New Guinea, linked to geologic history)

Loffler, E. (1978)- Karst features in igneous rocks in Papua New Guinea. In: J.L. Davies & M.A.J. Williams (eds.) Landform evolution in Australasia, Australian Nat. University Press, Canberra, p. 238-249.

Loffler, E., D.E. MacKenzie & A.W. Webb (1980)- Potassium-Argon ages from some of the Papua New Guinea volcanoes and their relevance to Pleistocene geomorphic history. J. Geol. Soc. Australia 25, p. 387-397.
(PNG Highlands volcanics ages suggest start of volcanic activity at 1.6 Ma, major activity ceasing at 0.2 Ma. Glacial activity on Mt Giluwe may date back to 0.7 Ma, and certainly to ~0.3 Ma, indicating altitudes of present magnitudes existed early in Pleistocene, and that most volcanism postdates uplift of central ranges)

Loudon, A.G. (1987)- Gold in Papua New Guinea. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 767-772.
(Brief history of gold discovery and production in PNG)

Lowenstein, P.L. (1982)- Economic geology of the Morobe Goldfield, Papua New Guinea. Geol. Survey of Papua New Guinea, Port Moresby, Memoir 9, 2 vols., p. 1-228.
(Review of discovery, exploitation, geology and economic potential of Morobe Goldfield of E PNG (includes Bulolo, Edie Creek, Wau, etc.))

Lowenstein, P.L. & P.E. Pieters (1974)- Gold and platinum in the East and West Sepik Districts. Dept. of Lands, Surveys and Mines, Geol. Survey of Papua New Guinea, Report 74/25, p. 1-32.

Lucas, K. (2004)- Physical analog modelling of primary stratigraphic and structural controls on the evolution of the Papuan fold belt, Papua New Guinea, with implications for hydrocarbon exploration. M.Sc. Thesis Queen's University, Kingston, ON, Canada, 117p. *(Unpublished)*
(Papuan Foldbelt structures range from thin-skinned deformation of cover to reactivation of extensional basement faults. Scaled physical analog models used to predict structural style. Modelling of reactivation of extensional faults in thin-skinned setting indicates reactivation may occur early in deformation sequence, locally absorbing majority of shortening and controlling location of fold versus thrust-dominated structures)

Lus, W.Y., I. McDougall & H.L. Davies (2004)- Age of the metamorphic sole of the Papuan Ultramafic Belt ophiolite, Papua New Guinea. Tectonophysics 392, p. 85-101.
(Papuan Ultramafic belt >400km long, 12 km thick. Probably Maastrichtian age oceanic crust (Ar-Ar ages 67-59.5 Ma). Emplaced during collision of Cape Vogel island arc and rifted fragment of Australia around K-T boundary. Thick metamorphic sole of 300m amphibolite-granulite, grading into lower-grade Emo metamorphics, cooled at ~58 Ma, Paleocene)

Lynch, D.A. & G.J. Milner (1993)- The Maastrichtian- Danian disconformity in the Mendi-Nipa region, Southern Highlands Province, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby 1993, p. 61-73.
(Stratigraphic gap across K-T boundary of 2 My (66.4-64.5) in Mendi-Nipa Region in PNG Southern Highlands, in more proximal Nipa region 4.5 My (69- 64.5 Ma))

MacKenzie, D.E. (1975)- Plate boundary evolution in the New Guinea region: Volcanic and plate tectonic evolution of central Papua New Guinea. Exploration Geophysics (Bull. Soc. Australian Exploration Geophysicists) 6, 2/3, p. 66-68.
(Volcanic activity in C PNG began in Late Triassic with submarine and terrestrial eruption of andesitic and dacitic lavas on and neaar NE corner of Australian Paleozoic continental crust. Minor basaltic to rhyolitic eruptions in Jurassic in same general area. In Cretaceous, volcanic activity increased in intensity and distribution, spreading to N and W, with mainly andesitic lavas, which may correlate with beginning of spreading in Pacific basin to NE and could be first subduction in area. No evidence to link earlier volcanism with subduction, although it took place near plate boundary).

MacKenzie, D.E. (1976)- Nature and origin of late Cainozoic volcanoes in western Papua New Guinea. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier, Amsterdam, p. 221-238.
(Of Late Cenozoic volcanic centers in W PNG 16 rest on 25-30km thick Paleozoic crust and 10km of post-Paleozoic sediments; one on 35km thick pile of eugeosynclinal sediments. Basaltic rocks dominant in 11 centers, others mainly andesite. Magmas originated in upper mantle low velocity layer)

MacKenzie, D.E. (1978)- Plate-tectonic evolution and delayed partial melting in Western Papua New Guinea. Exploration Geophysics 9, p. 89-90.
(See also Johnson et al. 1978. Late Cenozoic volcanoes in PNG Highlands overlie cratonic crust but produce arc-type volcanics. Mantle magma source chemically modified during subduction and passed through rapid and pronounced changes in tectonic setting may later on be source of magmas produced during favourable but non-arc tectonic regime)

MacKenzie, D.E. & B.W. Chappell (1972)- Shoshonitic and calc-alkaline lavas from the Highlands of Papua New Guinea. Contrib. Mineralogy Petrology 35, p. 50-62.

(Pleistocene- Recent stratovolcanoes in PNG Highlands calc-alkaline to shoshonitic lava, tuff, agglomerate, ash, and lahars. Volcanics originated either in base of thick sialic crust which is undergoing stabilization after major orogeny and uplift, or more probably, in eclogite sinking through underlying mantle)

MacKenzie, D.E. & R.W. Johnson (1984)- Pleistocene volcanoes of the western Papua New Guinea highlands: Morphology, geology, petrography, and modal chemical analyses. Bureau Mineral Res., Geol. Geophysics, Canberra, Report 246, p. 1-271.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=15157)
(15 Pleistocene composite stratovolcanoes in PNG highlands in S part of C and W Ranges and adjacent Fly-Purari plains, rising 1000-2000m above basement and up to 3800m above sea level. Volcanism began in E Pleistocene or Late Pliocene, largely complete by ~200 000 years B.P. Mainly basaltic (70-80%) and andesitic lavas. Basalts generally overlain by andesites. General decrease in silica-saturation from NNE to SSW)

Macnab, R.P. (1969)- Geology of the Area - Upper Dilava- Auga- Middle Angabunga Rivers Area, Papua. Bureau Mineral Res. Geol. Geophysics, Record No. 1969 /126, p. 1-49.
(Area NNW of Port Moresby. N- trending schists/ metasediments of Owen Stanley Metamorphics are flanked to W by similarly trending, steeply E-dipping marine sediments of Upper Cretaceous (Senonian) and Lower Miocene Auga Beds, underlain by U Cretaceous submarine basaltic Aibala Volcanics (overtrusting from E, probably in M Miocene). Auga River section >25,000' of sediments and volcanics. Lower Miocene limestones have common reworked Eocene forams. M Miocene Talama Volcanics unconformable over metamorphics and Auga Gp))

Madu, S. (1996)- Correlation sections of the Late Jurassic to Early Cretaceous succession in the Papuan fold belt, Papuan Basin. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 259-277.
(Twelve eustatic cycles around Toro and pre-Toro reservoir cross-sections along Agogo- Iagafu- Hedinia-Gobe fields trend. Sediment supply in Late Jurassic- E Cretaceous sandstones from SW)

Mahoney, L., K. Hill, S. McLaren, A. Hanani (2017)- Complex fold and thrust belt structural styles: examples from the Greater Juha area of the Papuan Fold and Thrust Belt, Papua New Guinea. J. Structural Geol. 100, p. 98-119.
(Greater Juha area in Eastern Muller Ranges of Papuan Fold Belt in PNG with evidence of major inversion, detachment and triangle zone faults. Exposed Cenozoic Darai Lst shows ~13-21% shortening, yet structures elevated up to 7 km above regional, suggesting inversion of pre-existing rift architecture. Pervasive arc-normal oriented structures related to weakened Paleozoic basement cross-structures that affected E Mesozoic rifting)

Mahoney, L., S. McLaren, K. Hill, B. Kohn, K. Gallagher & M. Norvick (2019)- Late Cretaceous to Oligocene burial and collision in western Papua New Guinea: indications from low-temperature thermochronology and thermal modelling. Tectonophysics752, p. 81-112.
(Late Cretaceous-Oligocene history in much of PNG unknown due to absence of stratigraphic record. New thermochronology data from Muller Range in Papuan fold-thrust belt suggests two major Cenozoic cooling events. Eocene-Oligocene cooling may relate to removal of 1500-3000 m of Late Cretaceous- Eocene before deposition of Darai Lst; may tie to collision of Sepik Terrane at N PNG margin. Muller Range uplift possibly in part facilitated by inversion of extensional faults. Well documented Neogene uplift tied to collision at N margin)

Maillet P., M. Monzier, M. Selo & D. Storzer (1983)- The D'Entrecasteaux Zone (Southwest Pacific); a petrological and geochronological reappraisal. Marine Geol. 53, 3, 179-197.

Maire, R. (1983)- Les karsts de haute montagne et la notion dôetagement des karsts en Nouvelle Guinee. Revue Geomorphologie Dynamique 32, p. 49-68.
('The highland karsts and the concept of layering of New Guinea karsts' Study of karst types in PNG (Huon Peninsula, etc.) from tropical coastal karst to snow karst in highlands)

Maitland, G. (1892)- Geological observations in British New Guinea. Geological Survey Queensland, Report 85, p.
(Includes first description of granite outcrops at Mabaduan, PNG south coast)

Maitland, G. (1905)- The salient features of British New Guinea (Papua). West. Australian Natural History Soc. 2, p. 32-56.
(includes report of supposedly Devonian grey limestone with coral Heliolites porosa on Tauri River (only, but unverified report of Devonian rocks in PNG?; JTvG))

Manser, W. (1976)- Stratigraphy of Papua New Guinea. 25th Int. Geological Congress, Sydney, Excursion Guide 51A, p. 1-41.
(Brief overview of PNG geology and 4-day fieldtrip itinerary)

Marchant, S. (1969)- A photogeological assessment of the petroleum geology of the northern New Guinea basin North of the Sepik River, Territory of New Guinea. Bureau Mineral Res. (BMR), Canberra, Rept. 130 (Report PNG 4), p. 1-78.
(online at: www.ga.gov.au/... (202MB)
(Set of 1: 100,000 photogeological maps of NW part of PNG, N of Sepik River. Area of Bewani Mts, Torricelli Mts, Sepik Plains, etc., structurally complex. Some oil and gas seeps known from region)

Mason, D.R. (1978)- Compositional variations in ferromagnesian minerals from porphyry copper-generating and barren intrusions of the western highlands, Papua New Guinea. Economic Geology 73, 5, p. 878-890.
(On amphiboles and biotites from porphyry copper-generating and barren intrusions in W Highlands, PNG)

Mason, D.R. & J.E. Heaslip (1980)- Tectonic setting and origin of intrusive rocks and related porphyry copper deposits in the western Highlands of Papua New Guinea. Tectonophysics 63, p. 123-137.
(Tertiary and younger calc-alkaline intrusives and related porphyry copper mineralization in two tectonic settings: New Guinea Mobile Belt to N, and Australian Continental Block to S. Ages dominantly M Miocene (15-10 Ma) in Mobile Belt, Late Miocene- Pleistocene (7-1 Ma) in Continental Block. Transcurrent- and block-faulting controlled emplacement of intrusives)

Mason, D.R. & J.A. McDonald (1978)- Intrusive rocks and porphyry copper occurrences in the Papua New Guinea- Solomon island region: a reconnaissance study. Economic Geology 73, p. 857-877.
(Study of 141 Tertiary and younger intrusive igneous rocks from PNG main island to Solomon Islands region, representing barren and porphyry copper-mineralized intrusions from island-arc, continental margin, and continental settings)

Mason, H.D. & B.A. McConachie (2000)- Cross Catalina anticline: an oil accumulation in the New Guinea fold belt in Irian Jaya. In: P.G. Buchanan, A.M. Grainge & R.C.N. Thornton (eds.) Papua New Guineaȏs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 475-485.
(Cross Catalina 1 well 51m net oil-saturation in E Cretaceous Woniwogi Fm sst, but low porosity due to quartz overgrowths (2-12%). Cross Catalina structure ~200 km2 and potential OIP may be >500 MBO)

Mason, R.A. (1994)- Structural evolution of the western Papuan fold belt, Papua New Guinea. Ph.D. Thesis, Royal School of Mines, Imperial College, University of London, p. 1-331.
(online at: https://spiral.imperial.ac.uk/handle/10044/1/37523)
(Papuan Fold Belt in PNG comprises deformed basement, platformal and basinal Mesozoic and Tertiary sediments. Deformation in fold belt started possibly in M-L Late Miocene and is currently continuing. Structure of W part of foldbelt characterised by thin-skinned thrusting and basement involved structures (inversion of Mesozoic-Tertiary extensional faults. Inversion thought to have post-dated initiation of thin skinned thrusting by ~5 Ma)

Mason, R.A. (1996)- Structure of the Western Papuan Fold Belt. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 161-173.
(Western Papuan foldbelt three structural domains: (1) frontal foldbelt with thick-skinned deformation (inversion folds over Mesozoic half-grabens); (2) central domain of thin-skinned imbricate thrust sheets of Darai Lst; (3) northern zone of intensely folded low-metamorphic rocks ('Om Beds' near Sepik River))

Mason, R.A. (1997)- Structure of the Alice anticline, Papua New Guinea: serial balanced cross-sections and their restoration. J. Structural Geol. 19, 5, p. 719-734.
(Structures of W part of Papuan Fold Belt both thin-skinned thrusting and basement involved structures. Alice anticline is frontal foldbelt basement-involved structure, formed due to inversion of older extensional fault system, with varying amounts of shortening along strike. Rotations about vertical axes attributed to pinning of foreland propagating deformation, coincident with relay zones in early extensional fault geometry)

Matsumoto, T. & S.K. Skwarko (1991)- Ammonites of the Cretaceous Ieru Formation, western Papua New Guinea. BMR J. Australian Geol. Geophysics 12, 3, p. 245-262.
(online at: www.ga.gov.au/corporate_data/49552/Jou1991_v12_n3.pdf)
(Eleven ammonite species from five localities in Ieru Fm (above Toro Sst) in W PNG Ok Tedi sheet. Four are typical Cenomanian species, others more likely Turonian- Santonian)

Matsumoto, T. & S.K. Skwarko (1993)- Cretaceous ammonites from South Central Papua New Guinea. AGSO J. Australian Geol. Geophysics 14, 4, p. 411-433.
(online at: www.ga.gov.au/corporate_data/81375/Jou1993_v14_n4_p411.pdf)
(Eleven ammonite species from 11 localities in Central Higlands and foothills to S, collected by APC 1954-1969. Fauriella boissieri from Maril Shale is part of Berriasian Tethyan fauna. Large Puzosia aff. mayoriana and Pachydesmoceras suggest Cenomanian age. Acanthoceras rhotomagense, Cunningtoniceras cunningtoni, etc. definitive Cenomanian age. Romaniceras deverianum indicates Turonian age.

Matzke, R.H., J.G. Smith & W.K. Foo (1992)- Iagafu/Hedinia Field. First oil from the Papuan fold and thrust belt. In: M.T. Halbouty (ed.) Giant oil and gas fields of the decade 1978-1988, American Assoc. Petrol. Geol. (AAPG), Mem. 54, p. 471-482.
(Iagifu-Hedinia first oil development in PNG fold-thrust belt. Discovery well Iagifu-2X drilled in 1986 flowed 45° API oil and gas from thrust-cored anticline. Primary reservoir E Cretaceous (Berriasian) Toro sandstone. Well locations selected on basis of surface geology and well results. Estimated reserves of 146.6 MBO)

McClusky, S., K. Mobbs, A. Stolz, D. Barsby, W. Loratung, K. Lambeck & P. Morgan (1994)- The Papua New Guinea satellite crustal motion surveys. The Australian Surveyor 39, p. 194-214.

McConachie, B. & E. Lanzilli (2000)- Stanley gas condensate field discovery and the oil potential of the Western Papuan Basin. In: P.G. Buchanan et al. (eds.) Papua New Guineaôs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 427-442.
(Stanley 1 well drilled Oligocene inverted foreland structure, close to W Papua border and tested gas in Early Cretaceous Toro sandstone. Cecilia- Tarim foredeep loaded with ~1500m of ?M Miocene- Pliocene clastic foreland sediments. Oligocene Sirga Fm ('Stanley sandstone') ~35m thick and unconformably overlies Cretaceous Ieru Fm. Toro reservoir thickness 28.5 net sand in EK10 E. torynum dinoflagellate zone)

McGee, W.A. (1987)- The chromite resources of Papua New Guinea. In: Pacific Rim Congress 87, Gold Coast 1987, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 317-320.
(Chromite deposits associated with ophiolite complexes across PNG. Not currently exploitable, but potential where contained in laterites or sediments derived from ultramafic members of ophiolites)

McInerney, P., A. Goldberg & D. Holland (2007)- Using airborne gravity data to better define the 3D limestone distribution at the Bwata Gas Field, Papua New Guinea. Proc. 19th Geophysical Conf. Australian Soc. Expl. Geoph. (ASEG 2007), Perth, 6p.

(Bwata gas-condensate field in E Papua Basin is 1960 discovery on structural high of fractured Miocene Puri Limestone, with 157 m of gas pay. Geologic model constrained with new airborne potential field data, new seismic and data from nearby Triceratops-1 well, increasing gas in place resource to 762 BCF)

McMillan, N.J. & E.J. Malone (1960)- The geology of the eastern Central Highlands of New Guinea. Bureau Mineral Res. Geol. Geophysics, Canberra, Rept. 48, p. 1-57.
(online at: https://d28rz98at9flks.cloudfront.net/14963/Rep_048.pdf)
(Area NE of Central Range foldbelt, with Bismarck Range (incl. Mt Wilhelm; 4509m) in center, Goroka Valley in S and Ramu valley in N (part of Bena-Bena Terrane of Davies, etc.). Large anticlinal structure cored by pre-Cretaceous Goroka/ Bena-Bena metamorphics (comparable to Kubor Block Omung Fm?), intruded by Permian? Bismarck granodiorite and overridden by Marum ophiolite in N. Locally overlain by folded Late Cretaceous arenaceous limestone- calcareous shale, with Pseudorbitoides cf. israelskyii and Globotruncana. Towards NE metamorphics overlain directly by shallow marine Eocene (Nummulites, Discocyclina) or latest Oligocene- E Miocene Te (Spiroclypeus, Miogypsinoides, etc.), overlain by M Miocene Tf (Miogypsina, Katacycloclypeus) marine sediments and M Miocene basic Daulo Volcanics, unconformably overlain by intermediate Pliocene Aifunka Volcanics)

McWalter, M. (1996)- Oil exploration in Papua and the Mandated Territory of New Guinea; reprint of an historical paper from 1940 with an introduction. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 17-49.
(Reprint of 1940 article by Australasian Petroleum Company (APC))

McWalter, M. (2017)- Why has Papua New Guinea been successful in producing oil and gas? In: SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, Session 6, 24p. *(Abstract + Presentation)*

Medd, D.M. (1993)- A geological evaluation of the Pangia anticline, Southern Highlands Province, PNG. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, PNG Chamber of Mines, p. 385-397.
(Three structural models of Pangia Antcline in N-Central Papuan Thrust Belt, to explain missing Late Cretaceous- Paleocene section)

Medd, D.M. (1996)- Triangle zone deformation at the leading edge of the Papuan fold belt. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 217-229.
(Puri anticline, near SE part of leading edge of Papuan Fold Belt, is part of structural triangle zone, with backthrusts in roof section)

Medd, M.D. (1996)- Recent triangle zone deformation in Papua New Guinea. Bull. Canadian Petrol. Geol. 44, 2, p. 400-409.
(Description of Puri anticline in PNG; in triangle zone along leading edge PNG foldbelt)

Menzies, D., S. Shakesby, J. Wass, D. Finn, N. Fitzpatrick, G. Morehari et al. (2013)- The Wafi-Golpu porphyry Cu-Au deposit: mineralisation and alteration zonation, surface geochemical expression and paragenesis. In: Proc. Symp. East Asia: geology, exploration technologies and mines, Bali 2013, Australian Inst. Geoscient., Bull. 57, p. 60-63. *(Extended Abstract)*
(Miocene Wafi-Golpu porphyry Cu-Au deposit and epithermal Au mineralisation in Morobe Province of PNG. System bounded by NE- SW trending Wafi Transfer fault zone and intrudes basement of weakly metamorphosed Oligocene Langimar Fm siltstones- conglomerates (previously interpreted as Owen Stanley Metamorphics))

Menzies, J., H.L. Davies, W.J. Dunlap & S.D. Golding (2008)- A possible early age for a diprotodon (Marsupialia: Diprotodontidae) fossil from the Papua New Guinea highlands. Alcheringa 32, p. 129-147.
(Jawbone of fossil diprotodon (large wombat-type marsupial) from Pleistocene lacustrine sediments near Yonki in PNG highlands is coated with cemented fine breccia or tuff, suggesting it was originally buried in volcanic breccia (Ar/Ar age 13.2 Ma, M Miocene) and subsequently reworked by river erosion and redeposited)

Miller, S.R., S.L. Baldwin & P.G. Fitzgerald (2012)-Transient fluvial incision and active surface uplift in the Woodlark Rift of eastern Papua New Guinea. Lithosphere 4, 2, p. 131-149.
(online at: https://gsw.silverchair-cdn.com/gsw/Content_public/Journal/lithosphere/4/2/10.1130_L135.1/2/)
(Rapid extension led to formation of metamorphic core complexes ahead of W-ward-propagating Woodlark basin spreading center. Stream profiles on D'Entrecasteaux Islands and E PNG show prominent knickpoints, likely formed from transient Quaternary stream erosion due to increase in uplift rate)

Milsom, J.S. (1971)- Structure of Eastern Papua: an approach via gravity and other geophysical methods. Ph.D. Thesis, University of London, p. 1-183. *(Unpublished)*

Milsom, J.S. (1973)- Papuan Ultramafic Belt: gravity anomalies and the emplacement of ophiolites. Bull. Geol. America, 84, p. 2243-2258.
(Papuan Ultramafic Belt one of largest ophiolitic complexes in world. Most likely emplacement process is large-scale splitting of oceanic lithosphere as it approaches subduction zone)

Milsom, J.S. (1973)- The gravity field of the Papuan Peninsula. Geologie en Mijnbouw 52, 1, p. 13-19.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0YlR2ckxCR01kckE/view)
(Large gravity anomalies on Papuan Peninsula, PNG, associated with Papuan Ultramafic Belt, an overthrust ophiolitic complex which may once have formed frontal zone of island arc. Very low fields over outcrop of underthrust sialic metamorphics. Extreme E of peninsula built up of basaltic lava over with moderately high gravity fields; structure of this area is most simply explained in terms of Recent extensional movements)

Milsom, J. (1974)- East New Guinea. In: A.M. Spencer (ed.) Mesozoic-Cainozoic orogenic belts, Geol. Soc., London, Spec. Publ. 4, p. 463-474.
(Brief overview of geology of eastern part of Papua New Guinea, from Coral Sea to Papuan Peninsula (with Owen Stanley Range, Papuan Ultramafic Belt), Solomon Sea, New Britain and Bismarck Sea)

Milsom, J.S. (1981)- Neogene thrust emplacement from a frontal arc in New Guinea. In: K. McClay & N.J. Price (eds.) Thrust and nappe tectonics, Geol. Soc. London, Spec. Publ. 9, p. 417-426.
(N New Guinea evidence for Neogene collision of N margin Australian continent with S-facing island arc. Still active volcanism along length of arc and deep oceanic trench opposite segment E of collision zone. Finisterre Range, part of former frontal arc and now part of N New Guinea, up to 50 km S of expected position with respect to segments to E and W. Offset not deep seated feature, but result of movement on shallow thrust. Detachment of thrust sheet along volcanic arc line of weakness. Mobile segment may have been part of frontal arc that first collided with continental margin. Adjacent segments at time of collision opposite oceanic, deeper trenches, have not moved in this way)

Milsom, J.S. (1984)- The gravity field of the Marum ophiolite complex, Papua New Guinea. Geol. Soc., London, Spec. Publ. 13, p. 351-357.
(Marum ophiolite outcrops in NE PNG in fault contact with sialic rocks of continental core of island. To N overlain by thick sediments of Ramu Basin with major gravity low. Gravity anomaly high offset towards N edge of outcrops of basic rock. Anomaly similar in form, but smaller than Papuan Ultramafic Belt anomaly to E)

Milsom, J. (1989)- New Guinea and the western Melanesian arcs. In: A.E.M.Nairn et al. (eds.) The ocean basins and margins 7A, The Pacific Ocean, Plenum Press, New York, p. 551-605.

Milsom, J. (1991)- Oblique collision in New Guinea; implications for hydrocarbon exploration. In: J.W. Cosgrove & M.E. Jones (eds.) Neotectonics and resources, Belhaven Press, London, p. 257-267.

Milsom, J. (1999)- Geophysical contributions to the COASTPLAN project, Lae area, Papua New Guinea, 1998. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA '98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 667-675.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1999065.pdf)

(Gravity survey around Huon Peninsula in Leron-Lae-Finschafen area of NE PNG confirmed presence of major foreland basin gravity low in N Markham Valley and probability of extension of Papuan Ultramafic Belt beneath Huon Peninsula)

Milsom, J. (2003)- Forearc ophiolites: a view from the western Pacific. In: Y. Dilek & P.T. Robinson (eds.) Ophiolites in Earth history. Geol. Soc. London, Spec. Publ. 218, p. 507-515.
(Many of world's largest ophiolite masses now interpreted as remnants of oceanic forearcs, stranded on continental margins in course of arc-continent collision. In C New Guinea, ophiolites emplaced along N flank of main mountain spine, ~100 km S of exposures of arc-volcanic basement in N coast ranges. Papuan Ultramafic Belt of E Peninsula backed to N and E by oceanic Solomon Sea)

Milsom, J. & R.H. Findlay (2000)- Petroleum prospects in the Ramu-Markham foreland basin, northeastern Papua New Guinea. AAPG Int. Conf., Bali 2000, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9 (Abstract only)
(Adelbert and Finisterre ranges (AFR) of N PNG separated from C New Guinea by Ramu- Markham valleyswith >6 km sediments. Gravity data indicate still thicker sediment beneath S-ward thrusting Finisterre Range. Majority of Ramu-Markham and AFR sediments derived from S. Seismic zones dipping both N, beneath AFR, and S beneath New Guinea Highlands testify to former presence of oceanic crust between two. Solomon Sea, believed to be Miocene age, is eastern extension of basin. Miocene back-arc spreading created oceanic crust, followed by arc reversal and basin destruction)

Milsom, J., R. Findlay & G. Kopi (2001)- Early nappe deformation in arc-continent collision: gravity evidence from the Huon Peninsula, Papua New Guinea. In: G. Hancock (ed.) Proc. Geology, Exploration and Mining Conference, Port Moresby 2001, Australasian Inst. of Mining and Metallurgy, Parkville, p. 275-280.

Milsom, J. & I.E. Smith (1975)- Southeastern Papua: generation of thick crust in a tensional environment? Geology 3, 3, p. 117-120.
(Extreme SE part of Papuan Peninsula mainly M Eocene submarine basalt, resembling mid-ocean ridge tholeites. Gravity suggests thick crust)

Mollan, R.G. & G.J. Blackburn (1990)- Petroleum potential of the Fly-Bamu Deltas region. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 215-226.

Munroe, S.M. & I.S.Williams (1996)- The Archaean basement of Papua New Guinea; evidence from the Porgera intrusive complex. In: J.M. Kennard (ed.) Geol. Soc. Australia Abstracts No.41, p. 308.
(Porgera intrusive complex in W PNG contains mixture of Late Miocene and Archean zircons)

Montgomery, J.N. (1930)- A contribution to the Tertiary geology of Papua: The oil exploration work in Papua and New Guinea. Anglo-Persian Oil Company, 4, p. 3-85.

Morgan, G.D. (2005)- Sequence stratigraphy and structure of the Tertiary limestones in the Gulf of Papua, Papua New Guinea. Ph.D. Thesis, University of New South Wales, Kensington, p. 1-315.
(online at: http://unsworks.unsw.edu.au/fapi/datastream/unsworks:798/SOURCE01?view=true)
(Good overview of Eocene- E Oligocene Mendi Lst and Late Oligocene- M Miocene Darai Lst stratigraphy and structure in Gulf of Papua (mainly subsurface seismic/ wells study). During middle E Miocene major global eustatic sea-level fall or flexure of Papuan Basin associated with E Miocene ophiolite obduction subaerially exposed carbonate shelf. During middle M Miocene, subtle inversion associated with ophiolite obduction subaerially exposed carbonate shelf, and resulted in submarine erosion of forereef and basin margin sediments. By Late Miocene, carbonate deposition ceased across most of area)

Morton, A.C., B. Humphreys, G. Manggal & C.M. Fanning (2000)- Provenance and correlation of Upper Jurassic and Lower Cretaceous reservoir sandstones in Papua New Guinea using heavy mineral analysis. In:

P.G. Buchanan et al. (eds.) Papua New Guineaôs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 187-203.
(Variations in heavy mineral assemblages used to correlate reservoir sandstones. Source area for PNG Lower Cretaceous Toro, etc. sandstones comprises metasedimentary basement terrain, including some high-grade rocks (granulite facies), with granite intrusions. Detrital zircon ages from 300- 3304 Ma (major cluster around ~1840-1880 Ma= late Barramundi orogeny felsic volcanism in N Australia; minor Carboniferous ages)

Munro, L., K.C. Hill & R.H. Wightman (2015)- Construction of 2D and 3D models of the Kutubu Oilfield, Papua New Guinea fold belt. In: Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 281-287.
(Kutubu Field in mountains of PNG comprises Hedinia Anticline (mainly gas) and oil-bearing Iagifu Anticline. Produced >300MMBBL oil from basal Cretaceous Toro Sst reservoir, overlain by 1 km of Cretaceous shale and 1 km of karstic Miocene limestone)

Munro, L., K.C. Hill & R.H. Wightman (2016)- Construction of 2D and 3D models of the Kutubu Oilfield, Papua New Guinea Fold Belt. AAPG/SEG Int. Conf. Exhib., Melbourne 2015, Search and Discovery Art. 20340, 11p.
(online at: www.searchanddiscovery.com/documents/2016/20340munro/ndx_munro.pdf)

Murray, A.P., R.E. Summons, J. Bradshaw & B. Pawih (1993)- Cainozoic oil in Papua New Guinea- evidence from geochemical analysis of two newly discovered seeps. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 489-498.
(Two new oil seeps in Lufa District, ~20-30 km S of Goroka, in New Guinea mobile belt, just beyond N border of Papuan Basin foldbelt. Oils not biodegraded, and contain biomarkers indicative of mature Cenozoic source rocks (abundant oleananes, bicadinanes, etc. Little resemblance of biomarkers with Jurassic oils from Papuan foldbelt, but similar to fluvio-deltaic NW Java basin Arjuna field oil)

Nakamori, T., S. Matsuda, A. Omura & Y. Ota (1995)- Depositional environments of the Pleistocene reef limestones at Huon Peninsula, Papua New Guinea, on the basis of hermatypic coral assemblages. J. Geography (Chigaku Zasshi) 104, 5, p. 725-742. *(mainly in Japanese)*
(online at: https://www.jstage.jst.go.jp/article/jgeography1889/104/5/104_5_725/_pdf)

Nelson, A. & B. Turner (2015)- Lateral velocity variations in the Darai Limestone, Papua New Guinea foreland. In: Proc. 24th ASEG-PESA Int. Geophysical Conf. Exhib., Perth, p. 1-4.
(online at: http://www.publish.csiro.au/ex/pdf/ASEG2015ab245)
(Significant lateral velocity variation across >1km thick Late Oligocene-Miocene Darai Limestone, due to alteration, including dolomitisation. Most alteration associated with small-scale faulting)

Newton, R.B. (1918)- Foraminiferal and nullepire structures in some Tertiary limestones from New Guinea. Geol. Magazine 6, 5, 5, p. 203-212.
(Pebbles from Upper Fly River, PNG, collected by MacGregor in 1890 include Eocene limestone with Alveolina wichmanni, Lacazinella wichmanni and Orthophragmina (=Discocyclina) and Miocene limestone with Carpenteria, Alveolina and Lithothamnium)

Noku, S.K., M. Akasaka & H. Matsueda (2011)- The Crater Mountain deposit, Papua New Guinea: porphyry-related Au-Te System. Resource Geology 61, p. 63-75.

Noku, S.K., H. Matsueda, M. Akasaka & J.O. Espi (2009)- The Laloki massive sulfide strata-bound deposit, Papua New Guinea: geology, mineralogy and geochemistry. In Proc. 10th Biennial Mtg. Soc. Geology Applied to Mineral Deposits (SGA), Townsville, p. 731-733.
(Laloki massice Au-Ag sulfide deposit in Astrolabe Field, 20km E of Port Moresby, SE PNG. Stratigraphically hosted by Paleo-Eocene mudstone and grey cherts. Early massive sulfide stage and late stage remobilization and brecciation. Temperatures of early and late stage mineralization range 309-498° C and 266-338° C).

Norvick, M. (2001)- Chronostratigraphic sections of the Northern margins of the Australian Plate. Consultant Report, Melbourne, p. *(Unpublished)*

Norvick, M. & D.S. Hutchison (1980)- Aitape-Vanimo, Papua New Guinea. 1:250,000 Geol. Series. Geol. Survey Papua New Guinea, Explanatory Notes SA/54-11, SA/54-15, p. 1-45.
(Map sheet in NW corner of PNG, immediately E of W Papua border, N of Sepik River. Dominated by E-W Bewani- Torricelli mountain Ranges across central part of map sheet, composed of island arc association of U Cretaceous- E Miocene intrusives (Torricelli Intrusive Complex) and related volcanics and sediments (Bliri Volcanics), Overlain (and onlapped?) by E Miocene and younger sediments of Lumi (to S) and Atape (to N) Troughs. Includes Late Permian (257-242 Ma) granitoid boulders in Border Mountains of PNG- W Papua border area (possibly correlatice to Kubor grandiorite of PNG Highlands). In SW Ambunti metamorphic complex)

Nye, P.B. & N.H. Fisher (1954)- The mineral deposits and mining industry in Papua-New Guinea, Bureau Mineral Res., Geol. Geophysics, Canberra, Report 9, p. 1-35.
(online at: www.ga.gov.au/corporate_data/14926/Rep_009.pdf)
(Brief, old review of history and status of mining activity in PNG in 1954)

Ollier, C.D. & C.F. Pain (1980)- Actively rising surficial gneiss domes in Papua New Guinea. J. Geol. Soc. Australia 27, p. 33-34.
(Surficial gneiss domes 2000-3000m high and 10's of km across in E-most PNG, consisting of gneiss. Dissected domes, unlikely formed by differential erosion. Foliation in gneiss parallel to dome surface, and therefore concentric in plan. Domes formed in area of thick crust in tensional environment. Faults can be traced around gneiss dome on Goodenough Island and around other domes in SE PNG. Each dome probably originated by pushing of granite pluton (see also Daczko et al. 2009, 2010))

Ollier, C.D. & C.F. Pain (1981)- Active gneiss domes in Papua New Guinea- new tectonic landforms. Zeitschrift Geomorphologie, N.F. 25, p. 133-145.

Oppel, T.W. (1970)- Exploration of the southwest flank of the Papuan Basin. Australian Petrol. Explor. Assoc. (APEA) J. 10, 2, p. 62-69.

Osborne, N. (1945)- The Mesozoic stratigraphy of the Fly River headwaters. Proc. Royal Soc. Victoria 56, 2, p. 133-148.
(Thick (~7500') marine Mesozoic in headwaters of Fly River. U Jurassic (?Callovian-Oxfordian Kuabgen Gp) with Malayomaorica- Belemnopsis gerardi, overlain by M Cretaceous (Albian-Cenomanian Feing Gp) with Inoceramus. Cretaceous unconformably overlain by Tertairy limestone, with U Cretaceous-Eocene missing)

Osborne, D.G. (1990)- The hydrocarbon potential of the western Papuan Basin foreland- with reference to worldwide analogues. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 197-213.

Ota, Y. & J. Chappell (1999)- Holocene sea-level rise and coral reef growth on a tectonically rising coast, Huon Peninsula, Papua New Guinea. Quaternary Int. 55, p. 51-59.

Ota, Y., J. Chappell, R. Kelley, N. Yonekura, E. Matsumoto, T. Nishimura & J. Head (1993)- Holocene coral reef terraces and coseismic uplift of Huon Peninsula, Papua New Guinea. Quaternary Research 40, 2, p. 177-188.
(Six levels of emerged Holocene coral terraces along 40 km of Huon Peninsula coastline. Holocene reef crest, ~6000 yr B.P., is tilted down to NW and descends from 23 to 12 m in study area)

Ott, B. & P. Mann (2015)- Late Miocene to Recent formation of the Aure-Moresby fold-thrust belt and foreland basin as a consequence of Woodlark microplate rotation, Papua New Guinea. Woodlark microplate rotation, Papua New Guinea, Geochem. Geophys. Geosystems 16, p. 1988-2004.

(online at: http://onlinelibrary.wiley.com/doi/10.1002/2014GC005668/epdf)
(Aure-Moresby fold-thrust belt of SE PNG not SE extension of Papuan fold-thrust belt. Rel. narrow foldbelt and foreland basin in E Gulf of Papua formed in Late Miocene-Recent as result of CCW rotation of Woodlark microplate. 400 km long, NW trending Aure-Moresby fold-belt exposed onshore PNG plunges to SE, where continuous folds and NE-dipping thrusts can be imaged in subsurface for >250 km. CCW rotation of Woodlark microplate driven by slab pull of subducting N edge)

Owen, A.D. & J.C. Lattimore (1998)- Oil and gas in Papua New Guinea. Energy Policy 26, 9, p. 655-660.
(Late 1990's status of oil and gas reserves and production in Papua New Guinea)

Owen, M. (1973)- Upper Cretaceous planktonic foraminifera from Papua New Guinea. Palaeontological Papers 1970-1971, Bull. Bureau Mineral Res. Geol. Geophysics 140, p. 47-65.
(online at: www.ga.gov.au/corporate_data/107/Bull_140.pdf)
(Diverse Turonian- Maastrichtian planktonic foraminifera assemblage from Lagaip Beds, Wabag area, W Highlands. Descriptions of 38 species (incl. Globotruncana wabagensis n. sp.) from 19 samples)

Page, R.W. (1976)- Geochronology of igneous and metamorphic rocks in the New Guinea Highlands. Bureau Mineral Res. Geoph. Bull. 162, p. 1-117.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=74)
(Mainland PNG Pretertiary igneous intrusive activity only in S part of C Highlands. Kubor Granodiorite Upper Permian (240 Ma;= E-M Triassic?) largest and oldest. Increased mid-Tertiary tectonism suggested by four 27-20 Ma metamorphic ages and granitic intrusive in S Sepik Ambunti Metamorphics. Volcanic and plutonic peak of igneous activity in M Miocene, 15-12 Ma)

Page, R.W. (1976)- Geochronology of Late Tertiary and Quaternary mineralized intrusive porphyries in the Star Mountains of Papua New Guinea. Economic Geology 70, p. 928-936.
(Majority of intrusions associated with porphyry copper mineralization between 7-1 Ma. Ok Tedi intrusion 2.6 Ma, mineralization 1.1 Ma; Star Mts intrusives 4.6- 3.6 Ma; Antares Monzonite 3.1-2.4 Ma)

Page, R.W. & R.W. Johnson (1974)- Strontium isotope ratios of Quaternary volcanic rocks from Papua New Guinea. Lithos 7, 2, p. 91-100.
(also as BMR Record 1973/91, online at: https://d28rz98at9flks.cloudfront.net/12915/Rec1973_091.pdf)
(Sr isotope data for Quaternary volcanic rocks from six areas in PNG suggest two broad groups: (1) island volcanoes with lower Sr37/Sr38 ratios (0.7034–0.7043), probably from relatively homogeneous upper mantle source regions; (2) PNG mainland volcanoes with higher and wider range of Sr37/Sr36 ratios, probably affected by sialic crustal contamination, or derived from heterogeneous sources in upper mantle)

Page, R.W. & I. McDougall (1970)- Potassium-Argon dating of the Tertiary f1-2 stage in New Guinea and its bearing on the geological time-scale. American J. Science 269, p. 321-342.
(In N PNG 13-15 Ma old volcanics between Tf1-2 limestones, suggestive of Middle Miocene age)

Page, R.W. & I. McDougall (1972)- Ages of mineralization of gold and porphyry copper deposits in the New Guinea highlands (Papua New Guinea). Economic Geology 67, p. 1034-1048. *(also BMR Record 1972/113)*
(K-Ar and Rb-Sr ages from five different areas of gold and porphyry copper mineralization in Highlands of PNG. Gold-bearing porphyries in Morabe Goldfield indicate 3.1-3.8 Ma age for mineralization. Gold- copper mineralization in Kainantu Goldfields as young as M-L Miocene. In Yanderra prospect 5 My gap between main M Miocene emplacement of pluton and Late Miocene copper mineralization. Frieda copper prospect intrusion in M Miocene. Mount Fubilan near Ok Tedi River mineralization age Pleistocene, 1.1- 1.2 Ma. All deposits so far dated are M Miocene or younger; magmatic activity and mineralization may have been triggered by interaction and collision between Pacific plate and Australian plate in about M Miocene)

Pain, C.F. (1983)- Volcanic rocks and surfaces as indicators of landform age: the Astrolabe Agglomerate, Papua New Guinea. Australian Geographer 15, 6, p. 376-381.

(Astrolabe Agglomerate pyroclastics with basaltic lavas at top, dated as 5.7 Ma. Since deposition unit slightly warped and deeply dissected. Sogeri Plateau largest remnant of larger erosion surface that may have extended over much of Owen Stanley Ranges)

Pain, C.F. (1983)- Geology and geomorphology of the Purari River catchment. In: T. Petr (ed.) The Purari- tropical environment of a high rainfall river basin, Monographiae Biologicae 51, p. 27-46.

Pain, C.F. & R.J. Blong (1976)- Late Quaternary tephras around Mt. Hagen and Mt. Giluwe, Papua New Guinea. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier, Amsterdam, p. 239-251.

Pain, C.F., C.J. Pigram, R.J. Blong & G.O. Arnold (1987)- Cainozoic geology and geomorphology of the Wahgi Valley, Central Highlands of Papua New Guinea. BMR J. Australian Geol. Geophysics 10, 3, p. 267-276.
(online at: www.ga.gov.au/corporate_data/81224/Jou1987_v10_n3_p267.pdf)
(Wahgi Valley structural depression, between Bismarck Fault Zone to N and Kubor Anticline to S. Kubor Anticline cored with Paleozoic metamorphics and Triassic granodiorite and flanked by U Triassic, U Jurassic and Cretaceous sediments, which also occur on N side of Wahgi Valley, where they are deformed by Bismarck Fault Zone and intruded by Miocene intrusives Area land since ~35 Ma, latest Eocene)

Palmer, S.M., R. Carter & T. Varney (1992)- Sequence stratigraphy and reservoir prediction for the Toro Formation, Papua New Guinea. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015, 1p.
(Abstract only. Toro Fm reservoir sands of PNG foldbelt 6 genetic stratigraphic units, separated by flooding surfaces. Biostratigraphy allows correlation of max. flooding surfaces. Sequence boundaries recognized as sharp-based inner shelf/shoreface sands over mid-outer shelf, bioturbated muds/silts. Primary reservoirs in shelf margin systems tracts. Further reservoirs in highstand and transgressive systems tracts)

Palmieri, V. (1971)- Occurrence of Danian at Port Moresby. Report Geological Survey Queensland, Brisbane, 63, 8p.

Park, S.C. & J. Mori (2007)- Are asperity patterns persistent? Implication from large earthquakes in Papua New Guinea. J. Geophysical Research 112, B3, B03303, p. 1-16.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006JB004481/epdf)
(Asperities not persistent features when portions of New Britainsubduction zone slip in large earthquakes)

Parkin, J.N., S.M.T. Marsh & W.L. Wardlaw (1996)- The integration of exploration techniques in petroleum prospecting licenses PPL123, 156, 176 and 177 within the onshore and offshore Papuan Gulf region of Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd Papua New Guinea Petrol. Conv., Port Moresby, p. 243-256.
(Exploration of Mesozoic in blocks in coastal and shallow marine parts of S PNG, geologically part of foreland of Papuan Fold Belt and extending into Aure Trough and NE part of Fly Platform)

Parsons, G.L. & E.A. Bowen (1986)- The tectonic evolution and petroleum potential of the Papuan Basin, Papua New Guinea. Proc. 6^{h} Offshore SE Asia Conf. 1986, Singapore, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 7, p. 96-110.

Passmore, V.L., P.E. Williamson, A.R.G. Gray & P. Wellman (1993)- The Bamaga basin- a new exploration target. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, PNG Chamber of Mines and Petroleum, p. 233-240.
(Undrilled Bamaga Basin sequence is lowermost basin in E Gulf of Carpenteria stacked basin sequence. Northerly trending sag basin of Paleozoic or Triassic age)

Paterson, S.J. & F.M. Kicinski (1956)- An account of the geology and petroleum prospects of the Cape Vogel Basin, Papua. In: Papers on Tertiary micropalaeontology, Bureau Mineral Res. Geol. Geophysics, Canberra, Report 25, p. 47-70.

(online at: https://d28rz98at9flks.cloudfront.net/14939/Rep_025.pdf)
(Cape Vogel Basin in E PNG between Morobe Arc/ Owen Stanley folded-metamorphic and peridotite Zone and D'Entrecasteau metamorphics-granites Arc. At Cape Vogel Peninsula ~14,000' of M Miocene- Recent mainly arenaceous sediments exposed, with gentle post-Pliocene folding. Common shallow and non-marine sediments, no surface indications of oil, no oil in three test wells, and long history of volcanic activity suggest area has limited petroleum potential. In N part E Miocene Iauga Fm at base Tertiary 2000' thick with Miogypsina in upper part, overlain by Lower Tf (Burdigalian) Robinson Bay limestone)

Paterson, S.J. & W.J. Perry (1964)- The geology of the upper Sepik- August River area, New Guinea. J. Geol. Soc. Australia 11, 2, p. 199-211.
(Petroleum Permit 21 area with mountain ranges of pre-Upper Cretaceous (Paleozoic?)Gwin Metamorphics and igneous rocks. S-trending embayment, blanketed by alluvium and volcanic rocks, with 9320' composite Upper Cretaceous and Mio- Pliocene sediments. Upper Cretaceous greywackes and mudstones rel. deep marine with common planktonic foraminifera, incl. (Maastrichtian?) Globotruncana, etc.. Miocene greywackes and detrital limestones with Upper Te- Tf larger foraminifera. Pleistocene Yapsei Volcanics)

Paul, R.J. & J.E. Bain (1998)- Reducing the risk: integrating gravity, magnetic, and seismic data in Papua New Guinea. The Leading Edge, p. 59-62 + 134.
(PPL 123 on Gulf of Papua Central coast. Gravity-magnetics used to support interpretation of poor seismic)

Pawih, B. (1989)- The stratigraphy of the Maprik district, Papua New Guinea. Petroleum Expl. Soc. Australia (PESA) Journal 14, p. 25-33.
(~4000m thick Pliocene basinal turbidites and ?Pleistocene fluvial deposits in Maprik district of NW PNG (S of Torricell/ Prince Alexander Mts). Well exposed Amogu and Ninab Rivers. Structure dominated by S-dipping homocline, related to loading of overthrust terranes. Metamorphic and deformed plutonic rocks in Prince Alexander Complex forms basement in N. Immature sandstones indicate rapid erosion, transport and burial. Most Neogene detritus from terrane dominated by amphibolites (= not Prince Alexander Mts))

Pawih, B. (1990)- Stratigraphy and tectonics of the Wewak Trough. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby 1990, p. 491-497.
(Wewak Trough in N New Guinea Basin contains <2000m of Pliocene (N18-N20) clastics and minor coral reef limestones, overlying 'Ambunti' metasediments in S and Miocene arc volcanoclastics in N)

Pegler, G., S. Das & J.H. Woodhouse (1995)- A seismological study of the eastern New Guinea and western Solomon Sea regions and its tectonic implications. Geophysical J. Int. 122, p. 961-981.
(online at: http://gji.oxfordjournals.org/content/122/3/961.full.pdf+html)
(Study of earthquake data from E PNG. Solomon Sea plate at depth beneath Finisterre Mts no longer influenced by tectonic forces acting at surface, but breaking up and sinking under own gravitational forces. N-dipping seismic zone with thrust mechanisms imaged above deeper Solomon Sea plate seismic zone and extrapolates to surface to Ramu Markham Fault, which marks suture between Finisterre Terrane and Australia-New Guinea plate and may extend to depth of 90km beneath W limit of Finisterre mountains)

Perembo, R. (1983)- Stratigraphy of Delena Headland, Central Province, Papua New Guinea. Science in New Guinea 10, p. 137-165.

Perembo R.C.B. (2000)- Miocene bathyal deposits of foreland megasequence 1 in the Papuan fold belt, Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaȇs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 123-138.
(Biostratigraphy of E-M Miocene (~20-10 Ma) widespread bathyal siliciclastic facies across PNG Fold Belt. Planktonic foram zones N5/N6- N14 recognized (but mainly N8-N11?; ~17-13 Ma; JTvG). This is part of foreland basin sequence, tied to late Early Miocene subdidence of Darai carbonate platform due to ophiolite obduction in northern PNG. Foreland basin fill terminated with Late Miocene hiatus (uplift around 10 Ma))

Perembo, R.C.B., H.L. Davies, E. Neinen & J. Agua (2000)- Port Moresby basement geology; a mid-Cainozoic accretionary prism. In: C.G. Skilbeck & T.C. Hubble (eds.) Understanding planet Earth; searching for a sustainable future, Abstracts Geol. Soc. Australia 59, p. 386.

Perry, W.J. (1955)- Report on a reconnaissance of Petroleum Permit No. 21, Sepik. District, New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1955/39, p. 1-7.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=9030)
(Preliminary version of Perry 1956)

Perry, W.J. (1956)- A geological reconnaissance of the Upper Sepik-August River area, Sepik district, New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1956/31, p. 1-12.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=10154)
(Geology of area of NW PNG near W Papua border. In N West and Landslip Ranges mainly composed of metamorphic rocks, possibly of Paleozoic age. In S rocks of upper August, upper Sepik and Hoffnungs Rivers are tightly folded, low-grade metasediments (slates, phyllites, quartzites), tentatively correlated with Mesozoic rocks near Telefomin. Isolated Tertiary sediments in W side of area, some with reworked U Cretaceous and Paleocene planktonics, and minor limestone with Lower Tf larger forams (see Crespin & Belford 1956))

Peterson, A., S. Chandra & C. Lundberg (2004)- Landforms from the Quaternary glaciation of Papua New Guinea: an overview of ice extent during the Last Glacial Maximum. Dev. Quaternary Science 2, p. 313-319.

Peterson, E.C. & J.A. Mavrogenes (2014)- Linking high-grade gold mineralization to earthquake-induced fault-valve processes in the Porgera gold deposit, Papua New Guinea. Geology 42, 5, p. 383-386.

Phelps, J.C. & C.N. Denison (1993)- Stratigraphic thickness variations and depositional systems of the Ieru Formation, Southern Highlands and Western Provinces, Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 169-189.
(Abrupt changes in thickness of Cretaceous Ieru Fm in Papuan fold-thrust belt partly overprint of Neogene-Recent thrust faulting. Ieru Fm deposition shelfal marine with deepening to upper bathyal in late Albian (incl. abundant Ticinella planktonic forams), then return to shelfal deposits in Cenomanian- Turonian. TV thickness in wells 760-1900m; much of thickness variation in Late Cenomanian, possibly tied to initiation of Coral sea rifting? (widespread Santonian- Eocene hiatus in PNG foldbelt also tied to Coral Sea opening?; JTvG))

Pieters, P.E. (1978)- Port Moresby-Kalo-Aroa, Papua New Guinea. Bureau Mineral Res. Geol. Geophysics Australia and Geol. Survey Papua New Guinea 1: 250,000 geological map series, Explanatory Notes SC/55-6, 7, 11, p. 1-55.
(Port Moresby geologic map, covering much of Owen Stanley Range of E Papuan Peninsula. Oldest rocks Mesozoic NE-dipping rocks of Papuan Ultramafic Belt, juxtaposed with high P Emo 'metamorphic sole', containingn rare lawsonite and glaucophane, indicating formation under high-P conditions, but with greenschist facies overprint. Metamorphism decreases to SW, grading into Kagi Metamorphics (greenschist facies), then U Cretaceous (Kemp Welch Fm)- Lower Eocene (Port Moresby Fm) clastics. In S Sadowa gabbro/basalt/dolerite batholith, emplaced between Late Eocene- M Oligocene. Area not prospective for oil and gas)

Pieters, P.E. (1980)- Kikori, Papua New Guinea, 1:250,000 geological map sheet SB/55-13. Bureau Mineral Res., Geol. Geophysics, Canberra, Record 1980/79.

Pigott, J.D. (1994)- Irian Jaya- Papua New Guinea hydrocarbon exploration: constraints from regional distribution of geothermal gradients and heat flow. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc., 1, p. 75-100.
(Present thermal state pervasive NW striking trend paralleling central cordillera with basinal and intra-basinal anomalies. Heat flow averages for Salawati 1.98 ± 0.76 HFU, Bintuni 1.49 ± 0.77 HFU, Papua Basins 1.57 ±

0.49 HFU. Av. geothermal gradients for three basins 3.90 ± 1.48 °C/100m, 3.31 ± 1.51 °C/100m, and 2.61 ± 0.81°C/100m, respectively)

Pigott, J.D. & D.G. Neese (1995)- Seismic stratigraphy of the Northern New Guinea Basin: insight into the tectonic evolution of a segmenting basin. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. 1, p. 383-396.
(Piore and Sepik Basins in N New Guinea Basin depositionally contiguous during Miocene. Both floored by Paleogene basement assemblage including fragments of volcanic arc and sporadic Bliri Sequence sediments. Overlying Miocene Sepik Sequence shallow marine to pelagic carbonates and axially transported slope systems which thin northward. Late Miocene basin-wide unconformity. Pliocene uplift of Bewani-Torricelli Mts along active N New Guinea Fault System separated Sepik Basin to S and Piore Basin to N)

Pigott, J.D., N.I. Trumbly & M.V. O'Neal (1984)- Northern New Guinea wrench fault system: a manifestation of late Cenozoic interactions between Australian and Pacific plates. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, p. 613-620.
(Two major products of Australia- Pacific convergence are Sorong Fault Zone of W Papua and Ramu-Markham fault zone of PNG. Two are possibly linked to form major left-lateral strike-slip system)

Pigram, C.J. (1978)- Geology of the Schrader Range. Geol. Survey of Papua New Guinea, Report 76/4, p.

Pigram, C.J., P.J. Davies, D.A. Feary & P.A. Symonds (1989)- Tectonic controls on carbonate platform evolution in southern Papua New Guinea: passive margin to foreland basin. Geology 17, p. 199-202.
(M Oligocene collision of N Australian craton margin with complex subduction system created thrust mass and foreland basin from Coral Sea to Indian Ocean. Carbonate platform facies in SW PNG reflect transition from Eocene passive margin to early foreland basin. Initially, terrigenous sedimentation confined to proximal foredeep, with carbonate deposition adjacent to peripheral forebulge. Subsequent S-ward migration of basin resulted in thick carbonate platform deposition, followed by burial by clastic sediments from emerging orogen after proximal foredeep became filled)

Pigram, C.J., H.L. Davies, D.A. Feary, P.A. Symonds & G.C.H. Chaproniere (1990)- Controls on Tertiary carbonate platform evolution in the Papuan Basin: new play concepts. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, First PNG Petroleum Convention, Port Moresby, p. 185-195.
(Oligo-Miocene Darai Lst carbonate platform deposited in Papuan foreland basin. Oligo-Miocene limestones much larger areal extent and inboard of Late Eocene carbonate platform rim)

Pigram, C.J. & P.A. Symonds (1993)- Eastern Papuan Basin- a new model for the tectonic development, and implications from petroleum prospectivity. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 213-231.
(Study of tectonic evolution of E Papuan basin and W Coral Sea. NE-trending sinistral wrench fault between E Plateau and Gulf of Papua, accomodating Coral Sea opening)

Pinchin, J., K.F. Fowler & C.S. Bembrick (1986)- Fault structures within the Central Papuan Basin- implications for petroleum exploration. Proc. 6h Offshore SE Asia Conf. 1986, Singapore, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 7, p. 111-124.
(Previously unrecognized Late Cretaceous- Paleocene wrench faulting on Fly Platform, primarily in two NW trending parallel systems, Komewu and Fly. Rejuvenation of faults in Miocene)

Plane, M.D. (1967)- Stratigraphy and vertebrate fauna of the Otibanda formation, New Guinea. Bureau Mineral Res., Geol. Geophysics, Bull. 86, p. 1-64.
(online at: www.ga.gov.au/corporate_data/165/Bull_086.pdf)
(Thick Late Tertiary intermontane lacustrine and fluviatile deposits in the Morobe District, NE PNG, with vertebrate fossils. Pyroclastic rocks below mammal horizons K/Ar ages 6.1-7.6 Ma; 5.7 Ma associated with faunal locality. Fauna include incisor of earliest known rodent from Australian region and new representatives marsupials; also gastropods, crocodilians, snakes, birds, and dasyurid)

Plane, M.D. (1967)- Two new diprotodontids from the Pliocene Otibanda Formation, New Guinea. In: R.A. Stirton et al. (eds.) Tertiary Diprotodontidae from Australia and New Guinea, Bull. Bureau Mineral Res., Geol. Geophysics, 85, p. 105-128.
(online at: www.ga.gov.au/corporate_data/164/Bull_085.pdf)
(Mandibles of three diprotodontid marsupial species in Otibanda Fm: Nototherium watutense, Kolopsis rotundus n.sp. and Kolopsoides cullridells n.gen., n.sp.)

Playford, G. (1982)- Neogene palynomorphs from the Huon Peninsula, Papua New Guinea. Palynology 6, p. 29-54.
(Palynology of shales from 3 low-grade coal occurrences in Pindiu area, C Huon Peninsula, NE PNG. 25 types of spores-pollen of Miocene-Pliocene age, representing low diversity tropical freshwater swamp deposits)

Pono, S. (1990)- Seismic images of Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. 1st PNG Petroleum Convention, Port Moresby, p. 33-49.

Powell, T.G. & D.M. McKirdy (1975)- Geologic factors controlling crude oil composition in Australia and Papua, New Guinea. American Assoc. Petrol. Geol. (AAPG) Bull. 59, 7, p. 1176-1197.
(Mainly on Australian oils. Oil from Miocene reef in offshore Papuan basin from marine source)

Pollard, P.J. (2014)- Grade distribution of the giant Ok Tedi Cu-Au deposit, Papua New Guinea- a discussion. Economic Geology 109, 5, p. 1489-1492.
(Critical discussion of Van Dongen et al. (2013) Ok Tedi mine paper. Argues in favor of two separate major mineralization events, first skarn mineralization, second with post-intrusive hydrothermal intrusive breccias)

Powell, T.G. & D.M. McKirdy (1976)- Geochemical character of crude oils from Australia and Papua New Guinea. In: R.B. Leslie et al. (eds.) Economic Geology of Australia and Papua New Guinea 3, Petroleum, Australasian Institute of Mining and Metallurgy, Parkville, p. 18-29.

Power-Fardy, D., R.M.D. Meares, A.R., Collins & P.T. Goldner (1990)- Platinum group element mineralisation in Papua New Guinea. In F. E. Hughes (ed.) Geology of the mineral deposits of Australia and Papua New Guinea, Monograph 14, Australasian Inst. Mining Metallurgy, Melbourne, p. 1703-1705.

Powis, G. (1993)- The sequence stratigraphy of the Mesozoic reservoirs of the Gobe Anticline, Papuan thrust belt. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 155-167.
(Sequence stratigraphy and facies maps of Late Jurassic- E Cretaceous reservoir sandstones along Gobe Anticline, PNG foldbelt. Late Tithonian- Berriasian Upper Imburu Fm with five eustatic cycles; Valanginian Toro Sst controlled by 3 cycles)

Purcell, P.G. (1990)- Marienberg-1 Sepik Basin. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. 1st PNG Petroleum Convention, Port Moresby, p. 429-443.
(History and results of Marienburg 1 well, drilled in 1925-1928 in Ramu-Sepik Basin, on N coast along Sepik River (first 'deep' (825m) exploration well in N PNG). Mainly Late Miocene- Pliocene marine shale, with conglomerate near TD below 2600'. Some gas shows and oil stains encountered).

Queen, L.D. (2015)- The Tifalmin porphyry copper gold district, Star Mountains, Western Papua New Guinea. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 357-360. *(Extended Abstract)*
(Tifalmin porphyry copper district in Star Mountains (~35 km NE of Ok Tedi mine) is cluster of related porphyry copper deposits and associated skarns. Located on N margin of Fly Platform, which is N limit of Australian craton, First discovered in 1960s. Mineralisation associated with 4-2 Ma age porphyritic diorites and tonalites that intrude U Eocene- M Miocene Darai Lst and underlying Cretaceous-Eocene Feing Gp)

Queen, L.D. & S.J. Tear (2015)- The Frieda Kiss- keeping it simple. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 361-369.
(Extended Abstract. Evaluation of Frieda River Prospect in NW PNG)

Rand, A.L. & L.J. Brass (1940)- Results of the Archbold Expeditions No. 29. Summary of the 1936/1937 New Guinea expedition. Bull. American Museum Natural History 77, 7, p. 341-380.
(Report on geographic-biological expedition of Fly River area, PNG. Little or no geology)

Renton, J.F.A., J.H.S. Black & A.M. Grainge (1990)- The development of the Hides Gasfield, Papua New Guinea. Australian Petrol. Explor. Assoc. (APEA) J. 30, p. 223-237.
(Hides 1987 BP/ Oil Search gas discovery in PPL 27 in S Highlands. Hides-1 tested up to 15.9 mmscf/d gas with minor condensate from four intervals in Toro Sst. Gas to be supplied to Porgera goldmine)

Richards, J.P. (1990)- The Porgera gold deposit, Papua New Guinea: geology, geochemistry and geochronology. Ph.D. Thesis Australian National University, Canberra, p. 1-113.
(online at: https://openresearch-repository.anu.edu.au/handle/1885/12535)
(Porgera gold deposit in highlands of PNG associated with Porgera Intrusive Complex, hosted in Jurassic-Cretaceous shelf sediments. K-Ar dating of igneous biotite, and Ar/Ar dating of hornblende suggest age of emplacement of PIC 6.0 ± 0.3 Ma)

Richards, J.P. (1990)- Petrology and geochemistry of alkalic intrusives at the Porgera gold deposit, Papua New Guinea: J. Geochemical Exploration 35, p. 141-199.
(Porgera gold deposit in PNG Highlands close to, but on continental side of major trans-lithospheric fault (Lagaip Fault Zone) which separates Australian craton to S from accreted island-arc terrains to N. Middle-Late Miocene mafic intrusive complex consistent with intra-plate, alkaline parental magma, and derivation from enriched garnet lherzolite source in subcontinental lithosphere. Partial melting probably in response to M Miocene uplift of edge of Australian craton during collision with island-arc)

Richards, J.P. (1992)- Magmatic-epithermal transitions in alkalic systems: Porgera gold deposit, Papua New Guinea. Geology 20, 6, p. 547-550.
(Porgera Au-Ag mineralization in two main stages: (1) disseminated auriferous pyrite in phyllic alteration zones and (2) fault-related, quartz-roscoelite-cemented hydrothermal breccias and veins with locally abundant free gold and Au-Ag-tellurides. Associated with Late Miocene (6 Ma) epizonal intrusive complex, emplaced in continental crust immediately prior to E Pliocene continent- island-arc collision)

Richards, J.P., C.J. Bray, D.M. DeR.Channer & E.T.C. Spooner (1997)- Fluid chemistry and processes at the Porgera gold deposit, Papua New Guinea. Mineralium Deposita 32, p. 119-132.
(Porgera gold deposit in PNG example of alkalic-type epithermal gold system (stage II), which overprints precursor stage of magmatic-hydrothermal gold mineralization (stage I))

Richards, J.P., B.W. Chappell & M.T. McCulloch (1990)- Intraplate-type magmatism in a continent-island arc collision zone: Porgera intrusive complex, Papua New Guinea. Geology 18, p. 958-961.
(Porgera intrusive emplaced in Late Miocene, 6 Ma in Jurassic-Cretaceous shelf-facies sediments near edge of Australasian plate, apparently in backarc environment during subduction of oceanic microplate segment on two sides beneath continental margin and an island arc)

Richards, J.P., B.W. Chappell & M.T. McCulloch (1991)- The Porgera gold deposit, Papua New Guinea, 1: Association with alkalic magmatism in a continent-island-arc collision zone. Brazil Gold '91 Conf., p. 307-312.
(online at: www.iaea.org/inis/collection/NCLCollectionStore/_Public/24/058/24058940.pdf)
(Mesothermal- epithermal Porgera gold deposit associated with shallow level (< 2 km emplacement depth) stocks and dykes of Porgera Intrusive Complex, emplaced at 6.0 ± 0 3 Ma near NE edge of Australian craton, during period of Late Tertiary terrane accretion. Magmatism may have been related to deep subduction beneath continental margin. Gold mineralization immediately followed emplacement of PIC at 5-6Ma. Porgera intrusive suite sodic alkali basalts/gabbros, hawaiites, and mugearites)

Richards, J.P. & R. Kerrich (1993)- The Porgera Gold Mine, Papua New Guinea: magmatic hydrothermal to epithermal evolution of an alkali- type precious metal deposit. Economic Geology 88, 5, p. 1017-1052.
(Porgera Au deposit in PNG highlands associated with Late Miocene (6.0 ±0.3 Ma) epizonal intrusive complex, with close relationship between mafic alkalic magmatism and precious metal mineralizations. Mineralization shortly preceded E Pliocene collision between NE Australasian continental margin and island arc)

Richards, J.P. & I. Ledlie (1993)- Alkalic intrusive rocks associated with the Mount Kare gold deposit, Papua New Guinea; comparison with the Porgera intrusive complex. Economic Geology 88, 4, p. 755-781.
(Mount Kare gold deposit discovered in 1986, 18 km SW of giant Porgera mine in PNG highlands. Both deposits associated with Late Miocene alkalic intrusives emplaced in Mesozoic-Tertiary shelf sediments near edge of Australian plate. K-Ar analysis of illite from altered rock records age of 5.5 Ma, in middle of age ranges of Porgera Au deposit (5.1- 6.1 Ma). Similar alkalic epithermal ore-forming processes at both locations)

Richards, J.P., M.T. McCulloch, B.W. Chappell & R. Kerrich (1991)- Sources of metals in the Porgera gold deposit, Papua New Guinea: evidence from alteration, isotope, and noble metal geochemistry. Geochimica Cosmochimica Acta 55, 2, p. 565-580.
(Porgera gold deposit associated with Late Miocene mafic alkalic Porgera Intrusive Complex, emplaced within continental crust near Lagaip Fault Zone, which represents Oligocene suture between Australian craton and Sepik Terrane volcano-sedimentary rocks. Magmatism at Porgera probably occurred in response to Late Miocene elimination of oceanic microplate and subsequent Early Pliocene collision between craton margin and arc system on Bismarck Sea plate. Gold mineralization occurred within 1 Ma of time of magmatism)

Richards, J.P. & I. McDougall (1990)- Geochronology of the Porgera gold deposit, Papua New Guinea; resolving the effects of excess argon on K Ar and 40Ar/ 39Ar age estimates for magmatism and mineralization. Geochimica Cosmochimica Acta 54, 5, p. 1397-1415.
(Mesothermal/epithermal gold mineralization in Porgera Intrusive Complex and sedimentary host rocks. Conventional K-Ar ages of hornblende from different intrusions between 7-14 Ma, but biotite separates concordant at 6.0 ± 0.3 Ma. Older apparent ages from conventional K-Ar and Ar/Ar analyses explained by excess 40Ar contamination. Late Miocene magmatism and mineralization occurred shortly prior to or during initiation of continent/arc collision and pre-dates Pliocene uplift and foreland deformation)

Richarz, P.S.R. (1910)- Der geologische Bau von Kaiser Wilhelms-Land nach dem heutigen Stand unseres Wissens. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 29, p. 406-536.
('The geological framework of Kaiser Wilhelms Land'. Early geological description paper of the then German colony, now northern PNG. Includes description of 'Upper Cretaceous' shallow marine mollusc fauna from Torricelli Mts (but associated with Oligo-Miocene Lepidocyclina and andesites))

Rickwood, F.K. (1954)- Geology of the Western highlands of New Guinea. J. Geol. Soc. Australia 2, p. 63-82.
(Oldest rocks in W Highlands Omung metamorphics and Kubor-Bismarck granodiorites. Overlain by Permian (= Triassic; JTvG) limestone at Kubor anticline, unconformably overlain by U Jurassic Maril Fm silty shale with Buchia malayomaorica and Inoceramus haasti. ?Oxfordian-Kimmeridgean coral reef limestone lenses at W end of Kubor anticline (incl. Tithonian? cavity fill of coral with Calpionella alpina). Cretaceous marine sediments and mid-Cretaceous Kondaku tuff horizon. Eocene-Miocene Chimbu Lst (with Lacazina in Eocene, Nummulites intermedia in Lower Oligocene and zone Te larger forams in Upper Oligocene- basal Miocene), overlain by Miocene Globigerina marls. Sedimentary succession in E thicker than in W. Jurassic seas transgressed from E. W part of region out of range of Cretaceous vulcanism, so pelagic sedimentation continued into E Miocene. M Miocene volcanic island arc near Lai Syncline. Main folding at end-Pliocene, followed by erosion and extensive Pleistocene volcanism)

Rickwood, F.K. (1968)- The geology of Western Papua. Australian Petrol. Explor. Assoc. (APEA) J. 8, 2, p. 51-61.

Rickwood, F.K. (1990)- Towards development- The long history of petroleum exploration in Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. 1st PNG Petroleum Convention, Port Moresby, p. 1-13.
(First reports of oil in PNG were from 1911, but commercialoil-gas discoveries only since 1980's)

Rickwood, F.K. (1992)- The Kutubu discovery: Papua New Guinea, its people, the country and the exploration and discovery of oil. Author edition, Sydney, 172p.

Ridd, M.F. (1976)- Papuan Basin- inshore. In: C.L. Knight (ed.) Economic geology of Australia and Papua New Guinea, 3, Petroleum, Australian Inst. Mining Metallurgy (AusIMM), Monogr. 7, p.

Riker-Coleman, K.E., C.D. Gallup, L.M. Wallace, J.M. Webster, H. Cheng & R.L. Edwards (2006)- Evidence of Holocene uplift in east New Britain, Papua New Guinea. Geophysical Research Letters 33, 18, 4p.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2006GL026596)
(Along SE coast of New Britain 6 raised reef terraces up to 270m above sea level. Average uplift rate 1.6 ± 0.4 m/ 1000 yrs)

Rinne, M.L. (2015)- Geology, alteration, and mineralisation of the Golpu porphyry and Wafi epithermal deposit, Morobe Province, Papua New Guinea. Ph.D. Thesis University of Tasmania, p. 1-255.
(online at: https://eprints.utas.edu.au/22758/1/whole_Rinne_thesis.pdf)
(Wafi-Golpu gold district in Mesozoic metasediments of Owen Stanley Range of New Guinea Orogen, Morobe Province of PNG, ~65km WSW of Lae, and NW of Morobe Goldfield. Cu-Au mineralization ant ~8.67 Ma tied to Golpu diorite, which post-dates Maramumi Arc magmatism (17-12 Ma; with Frieda, Nena porphyries). Golpu probably part of W-ward younging belt of porphyry generation that also includes Porgera, Star and Ok Tedi. Uplift and exhumation during life of porphyry driven by low-angle subduction of Solomon Sea Plate, resulting in shift from porphyry to epithermal activity over period of 0.25-0.40 Myrs)

Rinne, M.L., D.R. Cooke, A.C. Harris, D.J. Finn, C.M. Allen, M.T. Heizler & R.A. Creaser (2018)- Geology and geochronology of the Golpu porphyry and Wafi epithermal deposit, Morobe Province, Papua New Guinea. Economic Geology 113, 1, p. 271-294.
(Wafi-Golpu district of PNG contains epithermal veins and alteration that overprinted giant, high-grade Golpu porphyry Cu-Au deposit around Golpu diorite. Most porphyry mineralization between ~8.76- 8.73 Ma. Time between main Golpu porphyry mineralization to last stage of Wafi epithermal veins ~120-220 k.y.)

Ripper, I.D. & K.T. McCue (1983)- The seismic zone of the Papua fold Belt. BMR J. Australian Geol. Geophysics 8, p. 147-156.
(online at: https://d28rz98at9flks.cloudfront.net/81143/Jou1983_v8_n2_p147.pdf)
(Seismicity of S highlands of PNG shows two zones: (1) S Highlands Seismic Zone follows Papuan Fold Belt from Kerema on Gulf of Papua through Star Mountains region into Irian Jaya (continuing Pliocene-Quaternary thrust faulting in Indo-Australian Plate); (2) Mount Hagen Seismic Zone, plunging NNE from S Highlands seismic zone S of Mount Hagen to intersect intermediate-depth seismicity beneath Ramu-Markham Valley)

Roberts, M.P. & R.A. Armstrong (2013)- Age and O, Hf isotope systematics of the Yandera porphyry rocks- constraints on magma sources, crystallisation history and crustal evolution. Proc. Symposium East Asia: Geology, exploration technologies and mines, Bali, Australian Inst. Geoscientists, p. 80-82. *(Extended Abstract)*
(Yandera Cu-Mo-(Au) porphyry deposit on N flanks of Mt Wilhelm in PNG highlands. Known since 1965, first production scheduled for 2016. Chalcopyrite and bornite main copper minerals and molybdenite for Mo. Porphyries typical calc-alkaline I-type granitoids. U-Pb zircon ages from Yandera porphyries 3 groups, spanning 7.1-6.3 Ma. No appreciably older inherited zircons, apart from one Mesozoic age (unlike Ok Tedi Cu-Au deposit, with much greater crustal contribution and old inherited zircon ages))

Robinson, G.P. (1970)- The geology of the Huon Peninsula, New Guinea. Geol. Survey Papua New Guinea, Port Moresby, Memoir 3, p. 1-71.

(Huon Peninsula of NE PNG with peaks up to 4121m above sealevel. Oldest rocks Lower Oligocene- Lower Miocene submarine andesitic-basaltic Finisterre Volcanics (locally with U Oligocene Spiroclypeus-Nephrolepidina Lst), Kwama basalt and associated small serpenitinite bodies. E-M Miocene volcanics-derived sandstone and >1000m thick E-M Miocene- Pliocene carbonates. Structure mainly N-tilting fault blocks with many high-angle normal faults, formed during intermittent Pliocene-Pleistocene uplift. Pleistocene reef terraces up to 700m above sea level. Stratigraphy and structural style similar to volcanic arc terranes of Solomon and New Hebrides Islands)

Robinson, G.P. (1974)- Huon-Sag Sag, Papua New Guinea- 1:250,000 geological series. Geol. Survey Papua New Guinea, Explanatory Notes, SB/55-11, 22p.

Robinson, G.P. & A.L. Jaques (1978)- Karkar Island, Papua New Guinea- 1:250,000 geological series. Bureau Mineral Res., Geol. Geophysics, Canberra, and Geol. Survey Papua New Guinea, Explanatory Notes, SB/55-2, p.

Robinson, G.P., A.L. Jaques, & C.M. Brown (1976)- Madang, Papua New Guinea- 1:250,000 geological series. Bureau Mineral Res., Geol. Geophysics, Canberra, and Geol. Survey Papua New Guinea, Explanatory Notes, SB/55-6, p.

Rock, N.M.S. & E.J. Finlayson (1990)- Petrological affinities of intrusive rocks associated with the giant mesothermal gold deposit at Porgera, Papua New Guinea. J. Southeast Asian Earth Sci. 4, 3, p. 247-258.
(Porgera mafic rocks not ordinary tholeiitic or calc-alkaline basalts, andesites, gabbros or diorites, but shoshonitic, more specifically appinitic/ lamprophyric, similar to contemporaneous shoshonitic rocks in PNG)

Rod, E. (1974)- Geology of Eastern Papua: discussion. Geol. Soc. America (GSA) Bull. 85, p. 653-658.
(Discussion of Davies and Smith 1971 paper)

Rod, E. & J.B. Connelly (1980)- Mode of emplacement of the Papuan ultramafic belt; discussion and reply. BMR J. Australian Geol. Geophysics 5, 1, p. 74-76.
(Discussion by Rod and Reply of Connelly (1979) paper on emplacement of Papuan Ultramafic Belt)

Rodgers K.A. (1975)- A comparison of the geology of the Papuan and New Caledonian ultramafic belts. J. Geology 83, p. 47-60.

Rogerson, R. (1993)- Location, age, characteristics and exploitation potential of Papua New Guinea coal occurrences. In: A.J. Hargraves & C.H. Martin (eds.) Australasian coal mining practice, Australasian Inst. of Mining and Metallurgy, Melbourne (AusIMM), Monogr. Ser. 12, p. 56-61.

Rogerson, R. & G. Francis (1983)- Owen Stanley Metamorphic Complex: type of initial prograde metamorphism. Science in New Guinea 10, p. 60-64.

Rogerson, R.J., D.W. Haig & S.T.S. Nion (1981)- Geology of Port Moresby. Geol. Survey Papua New Guinea, Report 1981/16, p. 1-56.

Rogerson, R.J. & D.B. Hilyard (1990)- Scrapland: a suspect composite terrrane in Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 271-282.
(Suspect composite terrane outboard of Australian margin in E PNG, including basement blocks of Bena Bena/ Goroka, Kubor, Amanab, etc. Originated by mainly transform faulting along Australian-Pacific margin prior to and following Coral Sea opening (Late Cretaceous- E Eocene). Late Oligocene- E Miocene Aure/ Omaura Fm is oldest overlap assemblage of Scrapland and main body of PNG. Re-accretion to PNG margin certainly by N17 (Late Miocene), possibly as early as Late Oligocene)

Rogerson, R.J., D.B. Hilyard, E.J. Finlayson, D.J. Holland, S.T. Nion et al. (1987)- The geology and mineral resources of the Sepik headwaters region, Papua New Guinea. Geol. Survey Papua New Guinea, Mem. 12, p. 1-97.

Rogerson, R., D. Hilyard, G. Francis & E. Finlayson (1987)- The foreland thrust belt of Papua New Guinea. In: E. Brennan (ed.) Proc. Pacific Rim Congress 87, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 579-583.
(PNG mainland dominated by foreland thrust belt. 'Body' is floored by Paleozoic granites and metamorphics of 'Fly Platform' and is part of Tasman Orogen. 'Tail' is underlain by Papuan Plateau, which rifted from Tasman Orogen during Coral Sea spreading (near K-T boundary). Thrusting began in E Miocene and continues today)

Rogerson, R. & C. McKee (1990)- Geology, volcanism and mineral deposits of Papua New Guinea. In: F.E. Hughes (ed.) Geology of the mineral deposits of Australia and Papua New Guinea. Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, Monogr. Ser. 14, p. 1689-1701.

Rogerson, R. & A. Williamson (1986)- Age, petrology and mineralization associated with two Neogene intrusive types in the Eastern Highlands of Papua New Guinea. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geol. Min. Energy Res. SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 487-502.
(online at: www.gsm.org.my/products/702001-101415-PDF.pdf)
(Numerous Neogene porphyritic basic-intermediate intrusives outcrop in eastern highlands of PNG between 144°E and 146°E, with radiometric ages from 18-7 Ma. Two distinct phases of plutonism: (1) oldest Akuna-type, large complexes (18-12 Ma; incl. Bismarck Intrusive Complex) with rel. little mineralization; (2) Elandora-type (incl. Yandera), 9-7 Ma, with hydrothermal Cu-Au-Ag mineralization smaller stocks, dykes, etc. (subsequently also called 'Maramuni Arc'?; JTvG))

Rogerson, R., A. Williamson & G. Francis (1986)- Recent advances in the knowledge of geology, energy resources and metallogenesis of Papua New Guinea since 1981. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 2, Bull. Geol. Soc. Malaysia 20, p. 23-37.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986b02.pdf)
(Review of new early 1980's geoscience and mineral exploration work in PNG)

Ronacher, E. (2002)- The Porgera gold deposit: fluid characteristics, ore deposition processes, and duration of the ore forming event. Ph.D. Thesis University of Alberta, Edmonton, p. 1-132.
(Porgera gold deposit in PNG foldbelt 40Ar/39Ar age of igneous biotite (5.99± 0.11 Ma) interpreted age of intrusive event; two hydrothermal roscoelite samples with 5.99± 0.08 Ma age of ore formation)

Ronacher, E., J.P. Richards & M.D. Johnston (1999)- New mineralisation and alteration styles at the Porgera gold deposit, Papua New Guinea. In: G. Weber (ed.) Proc. PACRIM '99 Congress, Bali, Australasian Inst. of Mining and Metallurgy (AusIMM), Publ. 4-99, p. 91-94.
(Porgera gold mine in PNG highlands producing gold since 1990. Deposit associated with 6 Ma-old mafic alkalic intrusions emplaced at shallow levels into unconsolidated Jurassic- Cretaceous sediments, where they caused formation of peperites)

Ronacher, E., J.P. Richards & M.D. Johnston (2000)- Evidence for fluid phase separation in high-grade ore zones at the Porgera gold deposit, Papua New Guinea. Mineralium Deposita 35, 7, p. 683-688.

Ronacher, E., J.P. Richards, M.H. Reed, C.J. Bray, E.T.C. Spooner & P.D. Adams (2004)- Characteristics and evolution of the hydrothermal fluid in the North zone high-grade area, Porgera gold deposit, Papua New Guinea. Economic Geology 99, 5, p. 843-867.

Ronacher, E., J.P. Richards, M.E. Villeneuve & M.D. Johnston (2002)- Short life-span of the ore-forming system at the Porgera gold deposit, Papua New Guinea: laser 40Ar/39Ar dates for roscoelite, biotite, and hornblende. Mineralium Deposita 37, p. 75-86.
(Porgera gold deposit associated with sodic-alkalic intrusions of alkali basaltic- mugearitic composition, emplaced into Cretaceous mudstones- siltstones in latest Miocene. Magmatic biotite date of 5.99± 0.11 Ma, interpreted as onset of mineralizing activity. Age of main ore deposition event ~5.9 Ma. Ages for intrusive and mineralizing events nearly identical, suggesting magmatic and ore-forming system was short-lived)

Ross, L. (1993)- Evolution of structural models of two anticlines in the Papuan Thrust Belt by application of magnetotellurics. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 351-370.
(Structure modeling of deeper structure of Irou (PPL76) and West Anesi (PPL56) anticlines, PNG foldbelt, constrained by magnetotelluric input)

Rush, P.M. & H.J. Seegers (1990)- Ok Tedi copper-gold deposits. In: F.E. Hughes (ed.) Geology of the mineral deposits of Australia and Papua New Guinea, Australasian Inst. of Mining and Metallurgy (AusIMM), Monograph Ser. 14, 2, p. 1747-1754.

Russell, N.J. (1990)- Application of vitrinite reflectivity to paleogeothermometry studies: some examples from Papua New Guinea basins. In: G.J. & Z. Carmen (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 403-420.
(On the use of vitrinite reflectivity for paleogeothermometry in PNG)

Ruxton, B.P. (1966)- Correlation and stratigraphy of dacitic ash-fall layers in northeastern Papua. J. Geol. Soc. Australia 13, 1, p. 41-67.
(Thick weathered dacitic ash for up to 48 km from Mount Lamington strato-volcano and thins with distance from it. Age of Mount Lamington ~90,000 years)

Ryburn, R.J. (1980)- Blueschists and associated rocks in the south Sepik region, Papua New Guinea; field relations, petrology, mineralogy, metamorphism and tectonic setting. Ph.D. Thesis University of Auckland, p. 1-220. *(Unpublished)*
(online at: https://researchspace.auckland.ac.nz/handle/2292/2448)
(Blueschists in S Sepik formed in N-dipping subduction zone, beneath Paleogene arc system accreted along N coast of New Guinea. Blueschists in allochthonous Tau body E-W lens (55 x 8 km) and smaller allochthons E of Tau. Blueschists in late-Mesozoic- Eocene Salumei Fm (mostly pelitic sediments derived from S) and in ophiolite fragments and other volcanogenic rocks, related to arc to N. Salumei Fm near Tau metamorphosed from prehnite-pumpellyite to low-greenschist grade during Oligocene- E Miocene metamorphism. Blueschists mostly mafic schists with blue amphibole. Metamorphic grade increases to N. Isolated mafic tectonic blocks in and N of Tau body include high-grade blueschist, eclogite and amphibolite, all metamorphosed mafic ophiolite. Metamorphic conditions require blueschists and eclogites formed in subduction system. Active and rapid transport is needed to bring these rocks back to shallow levels, and term 'retrojection' is coined)

Sandy, M.J., A.C.M. Laing & C. Warrillow (1986)- Petroleum potential of the northwest Fly Platform, Papua New Guinea. Geol. Survey of Papua New Guinea, Report 86/15, p. 1-19. *(Unpublished)*

Sari, J. (1988)- Aspects of stratigraphy, sedimentology and petroleum geology of the Toro Sandstone Formation. Geol. Survey Papua New Guinea, Report, 88/3, p. *(Unpublished)*

Sari, J. (1990)- Revised stratigraphic definition of the Toro Formation: a proposal. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 159-168.
(Type section of basal Cretaceous Toro Sandstone Fm at Mt. Toro escarpment, Strickland River area, Papuan basin. Upper Toro Sst Mb in outcrop 225m thick. With Berriasian age dinoflagellates (at base Peridictyocysta miriabilis zone to Leptodinium pinnosum zone at top; Davey 1987))

Sari, J., R. Failing & K. Wulff (1996)- The Giero Sandstone: a potentially new play in the Papuan Basin. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention Port Moresby, p. 301-312.
(Cenomanian- Turonian (D. multispinum dinozone) turbiditic deep water sandstone in middle part of Giero Mb in parts of Papuan Basin foldbelt. Up to 70m thick sand-rich submarine fan intervals penetrated in Juha, Egele, Hides and Muller wells)

Schluter, H. (1928)- Jurafossilien vom oberen Sepik auf Neu-Guinea. Nova Guinea 6 (Geology), 3, p. 53-62.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:000122467:pdf)
('Jurassic fossils from the Upper Sepik, New Guinea'. M-U Jurassic macrofossils from geodes in gravel float of Upper Sepik River near 4°15' S- 141° E, collected in 1910 by German 'Border Expedition'. Includes ammonites Macrocephalites keeuwensis, Perisphinctes spp., Idoceras, Phylloceras, Hoplites. Also canaliculate belemnites and Incoceramus galoi. Similarities with fauna from Sula islands, Cenderawasih Bay and Himalaya Spiti Beds)

Schmidt, D. (2000)- Seismic attribute studies of the Flinders amplitude anomaly- Gulf of Papua. In: P.G. Buchanan et al. (eds.) Papua New Guineaȇs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 469-474.

Schmidt, P.W., D.A. Clark & K.J. Logan (1997)- Palaeomagnetism, magnetic petrophysics and magnetic signature of the Porgera intrusive complex, Papua New Guinea. Exploration Geophysics 28, 2, p. 276-280.
(Hornblende diorite and hornblende diorite porphyry most magnetic rock types in Porgera Complex. Both normal and reverse polarity preserved in Complex. Primary magnetisation carried by (titano)magnetite. Primary remanence directions demonstrate tilting of intrusions since emplacement (up to 50°- 60°). Tectonic rotations response to thin-skinned tectonic processes which accompanied rapid uplift of Complex)

Schneider, L., B.V. Alloway, R.J. Blong, G.S. Hope, S.J. Fallon, C.F. Pain, W.A. Maher & S.G. Haberle (2017)- Stratigraphy, age and correlation of two widespread Late Holocene tephras preserved within Lake Kutubu, Southern Highlands Province, Papua New Guinea. J. Quaternary Science 32, 6, p. 782-794.
(Sediment cores from Lake Kutubu, S Highlands, PNG, with two prominent tephra layers, correlated with Tibito and Olgaboli tephras described nearby. Tibito tephra possibly from Long Island; Olgaboli tephra possibly from Karkar Island source)

Schofield, S. (2000)- The Bosavi Arch and the Komewu Fault zone: their control on basin architecture and the prospectivity of the Papuan foreland. In: P.G. Buchanan, A.M. Grainge & R.C.N. Thornton (eds.) Papua New Guineaȇs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 101-122.
(Kimu 1 and Koko 1 wells in PNG foreland, S of Mount Bosavi volcano. Most of Cretaceous section eroded at Base Tertiary unconformity in Koko 1 (uplift and erosion across Fly Platform coincides with Coral Sea rift event). Well TD in E-M Permian granite (269±7 Ma). E-M Jurassic section onlaps onto basement highs; thickening to N and E; facies more marine from SW to NE; Middle- early Late Jurassic extension formed localized depocenters on NW trending faults. Late Jurassic- E Cretaceous passive ramp margin)

Schubert, R.J. (1910)- Uber Foraminiferen und einen Fischotolithen aus dem fossilen Globigerinenschlamm von Neu-Guinea. Verhandlungen Kon. kaiserl. Geol. Reichsanstalt, Vienna, 1910, 14, p. 318-328.
(online at: www.landesmuseum.at/pdf_frei_remote/VerhGeolBundesanstalt_1910_0318-0328.pdf)
('On foraminifera and a fish otolith from a fossil Globigerina marl of New Guinea'. Listing of Pliocene deep marine smaller foraminifera from blueish marls of Torricelli Mountains. Incl. new species Globigerina fistulosa (= Globigerinoides fistulosus))

Schultze-Jena, L. (1914)- Forschungen im Inneren der Insel Neuguinea (Bericht des Fuhrers uber die wissenschaftlichen Ergebnisse der deutschen Grenzexpedition in das westliche Kaiser-Wilhelmsland 1910). Mitteilungen aus den Deutschen Schutzgebieten, Erganzungsheft 11, S. Mittler, Berlin, p. 1-99.

('Investigations in the interior of New Guinea Island'. Results of 1910-1911 German-Dutch expedition along border of Dutch and German sectors of New Guinea. Reached 141° meridian in Central Range from Sepik River. Incl. report of Nummulites Limestone boulder)

Seno, T. (1984)- Was there a North New Guinea Plate? In: Y. Shimazaki (ed.) Proc. Int. Centennial symposium of the Geological Survey of Japan, Chishitsu Chosajo Hokoku (Report Geol. Survey of Japan) 263, p. 29-42.

Shedden, S.H. (1990)- Astrolabe mineral field. In: F.E. Hughes (ed.) Geology of the mineral deposits of Australia and Papua New Guinea, Australasian Inst. of Mining and Metallurgy, Melbourne, 14, 2, p. 1707-1708.
(Au-Cu field E of Port Moresby)

Sheppard, S. & L. Cranfield (2012)- Geological framework and mineralization of Papua New Guinea- an update. Mineral Resources Authority, Papua New Guinea, Port Moresby, p. 1-62.
(online at: www.mra.gov.pg/Portals/2/Publications/..)
(Update of chapters 4-6 on geological framework and mineralization of Williamson and Hancock (2005))

Siedner, G. (1958)- A geological reconnaissance of the Nambayat Creek area, Finisterre Range, New Guinea. Bureau Mineral Res. Geol. Geophysics, Records 1958/037, p. 1-6.
(online at: https://www.ga.gov.au/products/servlet/controller?event=FILE_SELECTION&catno=10345)
(Survey Nambayat Creek area of S slopes of Finisterre Range, N PNG, to verify reported gold find (none found). Sediments thick series of NE dipping, probably Miocene age clastics, intruded by basic igneous rocks)

Silver, E.A., L.D. Abbott, K.S. Kirchoff-Sten, D.L. Reed, B. Bernstein-Taylor & D. Hilyard (1991)- Collision propagation in Papua New Guinea and the Solomon Sea. Tectonics 10, 5, p. 863-874.
(PNG mountain system grow by accretion of Australian margin strata to front of Papuan fold-and-thrust belt in S and by accretion of exotic terranes along NE margin. Finisterre Terrane accreting onto NE margin, with collision point migrating E within Solomon Sea. Rate of progression of collision ~212 km/ My in last My))

Simmons, M.D. & M.J. Johnston (1991)- *Permocalculus iagifuensis* sp.nov.; a new Miocene gymnocodiacean alga from Papua New Guinea. J. Micropalaeontology 9, 2, p. 239-244.
(online at: https://www.j-micropalaeontol.net/9/239/1991/jm-9-239-1991.pdf)
(New species of gymnocodiacean alga from reefal E Miocene Darai Lst Fm of Papuan Fold Belt S of Tari, PNG. Previously only known from Permian and Cretaceous. Associated microfauna Austrotrillina, Flosculinella bontangensis, Miogypsinoides, Miogypsina kotoi, etc.)

Skwarko, S.K. (1963)- Mesozoic fossils from Ramu 1:250,000 Sheet area, Territory of New Guinea. Bureau Mineral Res., Geol. Geophysics, Record 1963/031, p.
(online at: www.ga.gov.au/corporate_data/11113/Rec1963_031.pdf)
(Macrofossils collected by Dow & Dekker from 5 units in U Triassic- U Jurassic S of Ramu River: (1) Jimi greywacke (M-U Triassic molluscs Costatoria, Gervillia, Spiriferina, Myophoria and ammonite Sirenites malayicus Welter, originally described from Timor); (2) Kana Fm detritus from acid volcanics (with Triassic Costatoria, Spiriferina); (3) Balimbu greywacke (Lower Jurassic Tropidoceras?); (4) Jurassic Mangum volcanics; (5) Maril Shale (U Jurassic Buchia malayomaorica, Inoceramus cf. haasti))

Skwarko, S.K. (1967)- Mesozoic Mollusca from Australia and New Guinea, 2, Mesozoic fossils from eastern New Guinea; (a) First Upper Triassic and ?lower Jurassic marine Mollusca from New Guinea. Bureau Mineral Res., Geol. Geophysics, Bull. 75, p. 40-82.
(online at: https://d28rz98at9flks.cloudfront.net/161/Bull_075.pdf)
(Mesozoic of Jimi River, Bismarck Mts and Central Highlands five sedimentary units, 21 genera and species, half of them new. Highly provincial Late Triassic molluscs in thick Jimi Greywacke series. Overlain by Upper Triassic Kana Fm acid volcanoclastics, probably Lower Jurassic Balimbu greywacke, ?M Jurassic Mongum volcanics and Upper Jurassic Maril shale with Malayomaorica and Inoceramus haasti)

Skwarko, S.K. (1967)- Mesozoic Mollusca from Australia and New Guinea, 2, Mesozoic fossils from eastern New Guinea; (b) Lower Cretaceous Mollusca from the Sampa beds near Wau. Bureau Mineral Res., Geol. Geophysics, Australia, Bull. 75, p. 85-98.
(online at: https://d28rz98at9flks.cloudfront.net/161/Bull_075.pdf)
(Eleven mollusc species from Lower Cretaceous Sampa beds of Lake Trist area, PNG)

Skwarko, S.K. (1973)- Middle and Upper Triassic mollusca from Yuat River, Eastern New Guinea. Palaeontological papers 1969, Bureau Mineral Res. Geol. Geophysics Bull. 126, p. 27-50.
(online at: https://d28rz98at9flks.cloudfront.net/101/Bull_126.pdf)
(M and U Triassic molluscs from Yuat River gorge in E PNG Highlands (= part of 'Jimi Terrane', outboard of Kubor Block?; JTvG). Yuat Fm black shale with Late Anisian ammonites, incl. Paraceratites cf. trinodosus, Ptychites, Beyrichites, Parapopanoceras, etc. Nearby Jimi River Ladinian- Carnian sandstones-shales with halobiid bivalves, Myophoria, etc.. Associated with volcanics. U Anisian fauna is Tethyan in character and Circum-Pacific in distribution)

Skwarko, S.K. (1973)- On the discovery of Halobiidae (Bivalvia, Triassic) in New Guinea. Palaeontological papers 1969, Bureau Mineral Res. Geol. Geophysics Bull. 126, p. 51-54.
(online at: https://d28rz98at9flks.cloudfront.net/101/Bull_126.pdf)
(First report of M-U Triassic Halobiidae molluscs from mainland New Guinea: Carnian-Norian (U Triassic) of Yuat River gorge, PNG Highlands, and from Ladino-Carnian in Jimi River area NE of Tabibuga, 80 km to ESE. New species, Daonella novoguineana described Jimi River area is closely related to Daonella indica Bittner 1899, known from Himalayas and Timor. Associated with Costatoria, Spiriferina, etc.)

Skwarko, S.K. (1973)- First report of Domerian (Lower Jurassic) marine mollusca from New Guinea. Palaeontological Papers 1970-1971, Bull. Bureau Mineral Res. Geol. Geophysics 140, p. 105-112.
(online at: www.ga.gov.au/corporate_data/107/Bull_140.pdf)
(S Sepik region Yuat River occurrence of marine Pliensbachian in 'Balimbu Greywacke/ Kana Fm', with Arieticeras ammonite and some bivalves)

Skwarko, S.K. (1978)- Stratigraphic tables, Papua New Guinea. Bureau Mineral Res. Geol. Geophysics, Report 193, p. 1-137.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(Tables of descriptions of stratigraphic units used in PNG)

Skwarko, S.K. (1981)- A new upper Mesozoic trigoniid from western Papua New Guinea. Palaeontological Papers 1981, Bureau Mineral Res. Geol. Geophys. Aust., Bull. 209, p. 53-55.
(online at: www.ga.gov.au/corporate_data/59/Bull_209.pdf)
(First report of U Jurassic or Lower Cretaceous genus Eselaevitrigonia from western Central Range, PNG)

Skwarko, S.K. (1981)- First report of Megatrigoniinae (Bivalvia, Cretaceous) from Papua New Guinea. Palaeontological Papers 1981, Bureau Mineral Res. Geol. Geophys., Bull. 209, p. 57-58.
(online at: www.ga.gov.au/corporate_data/59/Bull_209.pdf)
(First report of Neocomian Iotrigonia (Zaletrigonia?) telefominiana n.sp. from western Central Range, PNG)

Skwarko, S.K. (1981)- *Nototrigonia cinotuta* (Bivalvia, mainly Lower Cretaceous) from northern Queensland and Papua New Guinea. Palaeontological Papers 1981, Bureau Mineral Res. Geol. Geophys., Bull. 209, p. 59-61.
(online at: www.ga.gov.au/corporate_data/59/Bull_209.pdf)

Skwarko, S.K. (1981)- *Spia*, a new Triassic bakevellid bivalve from Papua New Guinea. Palaeontological Papers 1981, Bureau Mineral Res. Geol. Geophys., Bull. 209, p. 63-64.
(online at: www.ga.gov.au/corporate_data/59/Bull_209.pdf)

(Spia janeki new species of bivalve Bakevellia (Spia) from U Triassic Jimi Greywacke, west-C PNG. Only two known species referable to Spia, both from Carnian-Norian of PNG. Spia viewed as subgenus of Bakevellia by Ros-Franch et al. 2014))

Skwarko, S.K. (1983)- *Somareoides hastatus* (Skwarko) a new Late Triassic bivalve from Papua New Guinea. Palaeontological Papers 1983, Bureau Mineral Res., Geol. Geophysics, Bull. 217, p. 67-72.
(On systematic position of new Upper Triassic bivalve from Jimi Greywacke, central PNG, first described by Skwarko 1967. Initially assigned to Permophorus?, this Carnian genus is viewed as endemic of 'Australian fauna' by Damborenea et al. 2002, Southern Tethys by Ros-Franch et al. 2014)

Skwarko, S.K. & B. Kummel (1974)- Marine Triassic molluscs from Australia and Papua New Guinea. Bureau Mineral Res. Geol. Geophysics, Bull. 150, p. 111-127.
(Mainly on Australian material. Skwarko (1973) Jimi River sandstones and shales with Ladinian-Carnian halobiids and Carnian-Norian ammonite Sirenites cf. malayicus. Yuat River gorge in W Highlands with Anisian cephalopods (Beyrichites, Paraponanoceras, Paraceratites, etc.))

Skwarko, S.K., R.S. Nicoll & K.S.W. Campbell (1976)- The Late Triassic molluscs, conodonts and brachiopods of the Kuta Formation, Papua New Guinea. BMR J. Australian Geol. Geophysics 1, p. 219-230.
(online at: www.ga.gov.au/corporate_data/80882/Jou1976_v1_n3_p219.pdf)
(30-250m thick Kuta Limestone with Rhaetian brachiopods (Clavigera, Zugmayerella), cephalopods (Arcestes cf. sundaicus), bivalves and conodonts (Misikella posthernsteini), E of Mt Hagen. Faunas of Tethyan Province aspect. Kuta Fm grades laterally into calcareous breccia with metamorphic rocks. Limestone unconformably overlain by Upper Jurassic or Cretaceous)

Slater, A., H.R. Balkwill & G.U. Fong (1988)- Seismic evidence for structural style in the offshore Kerema area Papua New Guinea: application to petroleum exploration. Proc. Offshore South East Asia Conf. 1988, Singapore, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 8, p. 69-78.
(Marine seismic data off Kerema gives rel. good imaging of PNG foldbelt. Shows common S-dipping backthrusts, frontal folds detached in Mesozoic shales, episodic SW-ward progression of foldbelt compression with younger stratigraphic sequences less tightly folded, etc.)

Slater, A. & F. Dekker (1993)- An overview of the petroleum geology of the Eastern Papuan fold belt, based on recent exploration. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 499-516.
(On- and offshore Aure Trough/ E Papuan foldbelt abundance of oil and gas seeps onshore suggest prolific hydrocarbon system. Cretaceous- Paleogene sediments part of Australian passive continental margin sequence. With map of potential Campanian Pale Sst fairway. Oligo-Miocene Puri Lst also good reservoir potential)

Smillie, R.W., P.J. Pollard, D.R. Hastings, A. Yame, M. Tangwari, J. Garu & E. Atase (2015)- Exploration of the Townsville Cu-Au-Ag skarn, Western Province, Papua New Guinea- preliminary observations of paragenesis and zoning. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 593-600. *(Extended Abstract)*
(On Townsville gold prospect 4 km N of Ok Tedi copper-gold mine in W Province, PNG. Townsville gold deposits in breccia in older Darai Lst)

Smith, I.E.M. (1970)- Late Cainozoic uplift and geomorphology in south-eastern Papua. Search 1, p. 222-225.

Smith, I.E.M. (1972)- High-potassium intrusives from southeastern Papua. Contrib. Mineralogy Petrology 34, p. 167-176.
(Miocene high-K 'shoshonitic' rocks intrude Eocene submarine basalts in SE Papua. Two groups: 'near-saturated' gabbro to syenite, and nepheline normative 'undersaturated' group. Intrusion of shoshonitic rocks at start of period of major tectonic activity in SE Papua and may form part of island arc magmatic association)

Smith, I.E.M. (1976)- Volcanic rocks from southeastern Papua: the evolution of volcanism at a plate boundary. Ph.D. Thesis, Australian National University, Canberra, p.1-290.
(online at: https://openresearch-repository.anu.edu.au/bitstream/1885/138569/2/b10169726_Smith_I_E.pdf)
(Cenozoic volcanism in SE Papuan Peninsula. Oldest volcanics in SE Papua are U Cretaceous and Eocene submarine basalts, forming main ranges at E tip of peninsula; probably mid-ocean ridge basalts associated with sea floor spreading in Coral Sea. Major episode of volcanic activity in SE Papua began in Miocene, with S volcanic belt characterised by high-K basalts and N belt with mainly island arc andesites, basalts and rhyolites)

Smith, I.E.M. (1977)- Peralkaline rhyolites from the D'Entrecasteaux islands, Papua New Guinea. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier, Amsterdam, p. 275-285.
(Mildly peralkaline rhyolites (comendites) most abundant lavas in Quaternary volcanic province centered around Dawson Strait in D'Entrecasteaux islands, E PNG, associated with minor basaltic rocks. Tied to crustal extension and rifting)

Smith, I.E.M. (1982)- Volcanic evolution in Eastern Papua. Tectonophysics 87, p. 315-333.
(Basement formations of U Cretaceous and Eocene submarine basalt comparable to sea floor spreading centers and thought to be associated with Coral Sea basin spreading. Arc-trench type andesitic volcanism prominent during Late Cenozoic but no clear relationship to subduction event. Tectonic environment of E Papua during Late Cenozoic was one of block faulting and uplift associated with crustal tension. Quaternary peralkaline rhyolites suggests this environment now being replaced by active rifting)

Smith, I.E.M. (2013)- The chemical characterization and tectonic significance of ophiolite terrains in southeastern Papua New Guinea. Tectonics 32, 2, p. 159-170.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/tect.20023)
(Papuan Ultramafic Belt marks collision between continental crust and subduction system. However, in SE Milne Terrain extensive problematic sequence of U Cretaceous and Eocene basaltic rocks with MORB affinities. Probably associated with opening of Coral Sea Basin. Milne Terrain rocks represent lower plate in obduction system along which Papuan Ultramafic Belt was emplaced, and thus equivalent of continental crust which was separated from Australian continental block by opening of Coral Sea. Uplift (>4 km) of Milne Terrain may be due presence of underplated material associated with Late Miocene-Pliocene subduction immediately prior to encroachment of Woodlark spreading center into Papuan area)

Smith, I.E.M. (2014)- High-magnesium andesites: the example of the Papuan volcanic arc. In: A. Gomez-Tuena et al. (eds.) Orogenic Andesites and crustal growth, Geol. Soc., London, Spec. Publ. 385, p. 117-135.
(Late Cenozoic volcanic arc in SE PNG developed in environment of complex tectonic processes including obduction, subduction, rifting and sea floor spreading. Volcanic arc extends from Papuan Peninsula SE-ward through D'Entrecasteaux Islands into Louisiade Archipelago. Mainly basaltic andesite and andesite, but also basalt, dacite and rhyolite. Unusual abundance of high-Mg lavas in SE Papua related to extensional tectonics which allowed deep sourced magmas to rise without significant modification)

Smith, I.E.M. & D.S. Clarke (1982)- Intrusive rocks associated with gold mineralisation in southeastern Papua New Guinea. In: R. Rogerson (ed.) Proc. PNG geology, exploration and mining conference, 1991, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 34-39.

Smith, I.E.M. & W. Compston (1982)- Strontium isotopes in Cenozoic volcanic rocks from southeastern Papua New Guinea. Lithos 15, 3, p. 199-206.
(Sr isotope data from 28 samples representing four episodes of Late Cenozoic volcanism in SE PNG)

Smith, I.E. & H.L. Davies (1973)- Abau, Papua New Guinea, Sheet SC/55-12, 1:250,000. Bureau Mineral Res. Geol. Geophys. Australia and Geol. Survey Papua New Guinea, Geol. Serie, Explanatory Notes, p.

Smith, I.E. & H.L. Davies (1973)- Samarai, Papua New Guinea, Sheet SC/56-9, 1:250,000. Bureau Mineral Res. Geol. Geophys. Australia and Geol. Survey Papua New Guinea, Geol. Serie, Explanatory Notes, p.

Smith, I.E. & H.L. Davies (1976)- Geology of the southeast Papuan mainland. Bureau Mineral Res. Geol. Geophys., Canberra, Bull. 165, p. 1-109.
(online at: https://d28rz98at9flks.cloudfront.net/76/Bull_165.pdf)
(Geology of area of Papuan Peninsula/ Owen Stanley Range. E of 148°30'. Mostly U Cretaceous and M Eocene submarine basalts, with minor limestone and chert (incl. Upper Cretaceous and Eocene pelagic rocks with good planktonics and skeletal Eocene carbonates with Discocyclina, Nummulites). Also localized E-M Miocene reefal carbonates on Kutu Volcanics, commonly with reworked Eocene LBF. Some basalt metamorphosed to low greenschist facies. In NW peridotites of Papuan ultramafic belt are faulted against basalt, probably Eocene thrusting. Emergence of SE Papua started in Oligocene. With extensive appendix on foraminifera by Belford)

Smith, I.E.M. & R.W. Johnson (1981)- Contrasting rhyolite suites in the Late Cenozoic of Papua New Guinea. J. Geophysical Research 86, 11, p. 10257-10272.
(Discussion of 4 types rhyolites from New Britain, N Bismarck Sea (alkali rhyolites), Moresby Strait, Dawson Strait (comendites))

Smith, I.E. & J.S. Milsom (1984)- Late Cenozoic volcanism and extension in Eastern Papua. In: B.P. Kokelaar & M.F. Howells (eds.) Marginal basin geology, Geol. Soc., London, Spec. Publ. 16, p. 163-171.
(Sea floor around E PNG deep basins and submarine ridges with islands of metamorphic, volcanic or coralline rock. Extension phases since at least Paleocene, when Coral Sea basin formed. Compressive events include emplacement of Papuan Ultramafic Belt ophiolite in Oligocene. Extension-related volcanic rocks include low-K tholeiites and peralkaline rhyolite. Two Neogene phases of extension (1) M- Late Miocene, with formation of marginal basins related to subduction and (2) M Pliocene- today, response to changes in relative motions of surrounding plates. Active sea-floor spreading in Woodlark Basin today, and post-Miocene calc-alkaline and shoshonitic rocks of Papuan Peninsula and offshore islands reflect reactivation of subduction-modified mantle under this tensional regime, not renewed subduction)

Smith, I.E.M. & C.J. Simpson (1972)- Late Cenozoic uplift in the Milne Bay area, eastern Papua New Guinea. Bureau Mineral Res. Geol. Geophysics, Bull. 125, p. 29-35.
(online at: https://d28rz98at9flks.cloudfront.net/125/Bull_125.pdf)
(Uplifted Late Plio- E Pleistoce erosional surface(s) up to 185m asl on Miocene- Pliocene volcanic rocks along Milne Bay on SE tip of PNG main island. Nearby uplifted coral reefs at >500m above sea level)

Smith, I.E.M., S.R. Taylor & R.W. Johnson (1979)- REE-fractionated trachytes and dacites from Papua New Guinea and their relationship to andesite petrogenesis. Contrib. Mineralogy Petrology 69, p. 227-233.

Smith, J.G. (1965)- Orogenesis in western Papua and New Guinea. Tectonophysics 2, p. 1-27.
(Pre-plate tectonic interpretation of orogenesis of W Papua and New Guinea, which commenced in Upper Miocene and reached culmination in Pliocene and Pleistocene)

Smith, J.W. & D.H. Green (1961)- The geology of the Musa River area, Papua. Bureau Mineral Res. Geol. Geophysics, Report 52, p. 1-41.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(Musa River area in E part of PNG. Occurrence of Papuan Belt ultrabasic rocks and glaucophane bearing metamorphics at Wowo Cap)

Smith, R.I. (1990)- Tertiary plate tectonic setting and evolution of Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 229-244.
(BP review of PNG tectonics. Six tectono-stratigraphic provinces. Four main plate tectonic events: (1) Paleo cene- E Eocene onset of rapid N drift of Australian Plate, short-lived spreading in Coral Sea; (2) M Eocene- E Oligocene Solomon Sea Plate evolved in back-arc of Melanesian Arc; (3) Late Oligocene- M Miocene obduction of S edge Solomon Sea Plate onto N margin of Australian Plate (Sepik and Owen Stanley obduction complexes, Papuan Basin foreland basin evolution); (4) Late Miocene- Recent collision of Melanesian Arc with PNG, resulting in compression of Papuan Thrust belt)

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(Stanley, Elevala, Ketu and Ubuntu gas-condensate fields in foreland of W Papuan Basin. Basement architecture and regional NW-trending 3KB fault system control trap and Late Jurassic- E Cretaceous reservoir development (inversion of pre-existing faults and compactional drape of reservoirs over Basement highs). Map of spatial distribution of reservoir sands and paleogeographic models)

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(Lae is located in Ramu-Markham Fault Zone where New Guinea Highlands and S Bismarck Plate (composed of New Britain, Finisterre Terrane and S Bismarck) are actively converging obliquely at up to 50 mm/yr along Ramu-Markham Fault, causing clockwise rotation of S Bismarck Plate)

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(Regional gravity survey of PNG suggests: mantle-thrust origin for the Papuan Ultrabasic Belt; deep Mesozoic sedimentary basin in S Highlands; upthrusting of very deep sediments in Adelbert, Finisterre and Saruwaged Ranges; and NE-trending transcurrent faulting in Madang and Goropu Mountains areas)

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(PNG is product of plate tectonic processes at N margin of Australian Plate. Two major extensional events in Late Triassic- E Jurassic and Late Cretaceous- Paleocene within passive margin setting. Change in movement direction of Pacific Plate in Eocene and rapid N-ward movement of Australian Plate from Paleocene onwards resulted in oblique convergence of two plates, and formation of island arcs above two major N-ward and S-ward dipping subduction zones to N. From Oligocene onward progressive accretion of allochthonous terranes of mixed and oceanic to island arc affinity to Australian margin caused displacement of parts of former passive margin and deposition of thick syntectonic sequence in foreland and in basins between accreting terranes. Formation of small ocean basins in M-L Pliocene, particularly opening of Manus Basin)

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(online at: www.ga.gov.au/metadata-gateway/metadata/record/14486/)
(Stratigraphic colums and data control maps for E Triassic- Pleistocene time slices of PNG)

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(online at: www.ga.gov.au/image_cache/GA14222.pdf)
(Triassic- Quaternary paleogeographic/ plate reconstructions maps for E New Guinea. Showing Birds Head and E Indonesian terranes like Seram, Misool, Sula, Buton, attached to East New Guinea in Triassic time)

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(SE Gobe oilfield 1991 discovery in Block PPL 56, PNG foldbelt, SE of Iagafu- Hedinia complex. Main reservoir latest Jurassic Iagafu Sst (76-85m thick); Valanginian Toro Sst (52-66m thick) and other potential sandstone reservoirs water-wet or shaled out)

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(Papuan Peninsula formed by collision and convergent tectonism in Late Miocene-Pliocene, but subsequently dominated by extensional tectonics. In SE part of Peninsula compressional structures on S side, extensional tectonics in center and north)

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(Epithermal vein and breccia hosted Au mineralisation at Kerimenge prospect, Wau district, PNG, in Pliocene fractured dacite porphyry at intersecting faults, adjacent to eroded vent of Late Pliocene-Pleistocene volcano)

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(online at: www.ga.gov.au/...)
(Biostrat of samples collected by Smit from limestone outcrops in Aitape, Menyamya, Lake Kopiago and Star Mountains. Mainly Miocene, some Eocene, Oligocene)

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(Kemp Welch River area in Port Moresby region includes M Miocene limestone. Auga River area contains E Miocene with reworked Eocene, etc.)

Thompson, J.E. (1965)- Sedimentary basins of the Territory of Papua and New Guinea and the stratigraphic occurrence of hydrocarbons. Bureau Mineral Res. (BMR) Geol. Geophysics, Record 1965/176, p. 1-17.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=11629)
(Thick sequences of Jurassic-Pliocene marine sediments are prospective for oil and gas. Unmetamorphosed Triassic exposed in Central Highlands, but not seen in outcrop elsewhere or in subsurface. Generalized stratigraphic tables for Papuan Basin, N New Guinea Basin and Cape Vogel Basin)

Thompson, J.E. (1967)- A geological history of eastern New Guinea. Bureau Mineral Res. (BMR) Geol. Geophysics, Record 1967/022, p. 1-24.
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(Manuscript of Thompson 1967 APEA paper. Overview of history of PNG, with 7 generalized paleogeographic maps from Permian- Pliocene. Continental basement underlies SW stable flank of Papuan Basin and central highlands; oceanic basement underlies NE unstable flank of Papuan Basin)

Thompson, J.E. (1967)- A geological history of eastern New Guinea. Australian Petrol. Explor. Assoc. (APEA) J. 7, 2, p. 83-93.
(SE PNG continental area, while NE PNG underlain by oceanic basement with floating islands of detached continental crust. SE emergent between Permian- E Jurassic, inundated in Jurassic-Cretaceous, and exposed again in Late Cretaceous-Oligocene. NE was site of submarine volcanism from Late Triassic onward. In Miocene, seas covered SE, while islands emerged in NE. More land area exposed from Pliocene onward)

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(On hydrocarbon exploration risks in PPL 175 Block, N of Juha gas field in Papuan foldbelt. E Cretaceous Toro and Imburu reservoir sandstones present in block. Trap definition principal risk in this area of S-vergent imbricated thrust faults and folds)

Tingey, R.J. & D.J. Grainger (1976)- Markham, Papua New Guinea-1:250,000 geological series, Sheet SB/55-10. Bureau Mineral Res., Australia, and Geol. Survey of Papua New Guinea, Explanatory Notes, p. 1-49.

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(Copper-molybdenum-gold porphyry system at Yandera, Bismarck Mts, N highlands of PNG, within NW-trending, faulted body of porphyritic rocks intrusive into Miocene (13-15 Ma) Bismarck batholith. Three separate intrusive events)

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(Large (1.0-3.5 TCF) 1990 gas discovery at SW flank of Muller anticline. Reservoirs Late Jurassic (Tithonian P’nyang and Digimu Fms) and basal Cretaceous (Berriasian Toro Fm) sandstones. P'nyang 1X confirmed basement-involvement in structure by granodiorite at TD with latest Triassic K/Ar age of 205±5 Ma))

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(Darai Limestone chronostratigraphy developed based on Sr isotopes, suggesting age range ~30- 8 Ma (but youngest age anomalous relative to biostrat data?). Three distinct sedimentation rate episodes in Juha 1X limestone section. Top larger foram zone Te calibrated to ~22 Ma?, near top planktonic foram zone N4 In Juha 1 (see also Whitford et al. 1996))

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(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.513.3434&rep=rep1&type=pdf)
(Geochemistry of Ok Tedi porphyry copper-gold deposit and nearby Mount Ian Complex in western PNG foldbelt. Original magmatic signatures lost due to intense alteration. Large part of sulphur in system may be provided by mafic magma replenishment)

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(Whole-rock trace-element and REE patterns of samples from Ok Tedi porphyry copper-gold deposit, PNG)

Van Dongen, M., R.F. Weinberg & A.G. Tomkins (2013)- Grade distribution of the giant Ok Tedi Cu-Au deposit, Papua New Guinea. Economic Geology 108, 7, p. 1773-1781.
(Ok Tedi porphyry Cu-Au deposit in PNG world-class mineral deposit in foldbelt near W Papua border. With 5.5 Mt Cu and 18.1 Moz Au. Skarn accounts for ~80% of resources. Two composite felsic intrusions in clastics and carbonates at ~1.16 Ma, in postcollisional tectonic setting, with magmatic-hydrothermal mineralization within ~200 k.y. Contrasting styles of mineralization, conform to classic skarn (where limestone present at depth) and porphyry-type mineralization (where impermeable siltstone present) (see also Pollard 2014))

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(U-Pb dating of zircon at giant Ok Tedi porphyry copper-gold deposit show maximum age of intrusions that host mineralisation is 1.43 ± 0.2 Ma. Previous K-Ar dates constrained last thermal event at 1.11 Ma)

Van Dongen, M., R.F. Weinberg, A.G. Tomkins, R.A. Armstrong & J.D. Woodhead (2010)- Recycling of Proterozoic crust in Pleistocene juvenile magma and rapid formation of the Ok Tedi porphyry Cu-Au deposit, Papua New Guinea. Lithos 114, p. 282-292.
(Zircon from monzonite with U-Pb crystallisation ages of 1.16 Ma, making Ok Tedi youngest known giant porphyry copper-gold deposit. Mineralisation lasted <~0.5 Myr. Pleistocene zircons with inherited Proterozoic component of ~1.8-1.9 Ga. Cores with crustal oxygen isotopic signature, suggesting assimilation of Proterozoic continental crust by mantle-derived magma, similar to Pliocene Porgera Au deposit. Proterozoic ages compare

to felsic magmatic rocks on mainland N Australia, in particular Mount Isa inlier)

Van Oyen, F.H. (1972)- Trough evidence along the southern foothills of the Prince Alexander Mountains (Sepik area of New Guinea). Australian Petrol. Explor. Assoc. (APEA) J. 12, 2, p. 74-78.
(Identification of significant Neogene sediment thickness in North PNG Sepik Basin from magnetic survey)

Van Wyck, N. & I.S. Williams (2002)- Age and provenance of basement metasediments from the Kubor and Bena Bena blocks, central Highlands, Papua New Guinea: constraints on the tectonic evolution of the northern Australian cratonic margin. Australian J. Earth Sci. 49, p. 565-577.
(Metamorphics in Kubor/ Bena Bena blocks in PNG Central Highlands with old detrital zircons, suggesting N Australian provenance. Ages of ~1.8 Ga (10%), ~1.55 Ga (10%), 470-440 Ma (Late Ordovician; 15%), ~340 Ma (E Carboniferous; 10%) and 290-260 Ma (E-M Permian; 40%) match zircons from Coen Inlier, NE Queensland, but contrast with ages from terranes further S, E and W. Omong Metamorphics protolith probably deposited in M-L Permian, deformed in Late Permian- E Triassic, intruded by E Triassic Kubor Intrusive Complex at ~245, 239 Ma)

Varney, T.D. & A.C. Brayshaw (1993)- A revised sequence stratigraphic and depositional model for the Toro and Imburu Formations, with applications for reservoir distribution and prediction. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. 2nd PNG Petroleum Convention, Port Moresby, p. 139-154.
(BP sequence stratigraphic model and facies maps of latest Jurassic sandstones (Late Kimmeridgean-Tithonian Iagafu, Hedinia sst; (Valanginian Digimu, Toro Sst) in Papuan foldbelt. Five genetic sequences)

Vigar, A.J., B. Lueck, I. Taylor, K. Prendergast & P. Dale (2015)- Kainantu gold-copper system, Papua New Guinea. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 601-608. *(Extended Abstract)*
(Kainantu Project in NE part of New Guinea Thrust Belt, PN, in area with long mining history. Discovery of alluvial gold in 1928, followed by vein deposits of gold-copper at Kora in 1950s and current Irumafimpa vein gold mine Mineralisation includes gold, silver and copper, associated with M Miocene intrusions)

Volk, H., S.C. George, H. Middleton & S. Schofield (2005)- Geochemical comparison of fluid inclusion and present-day oil accumulations in the Papuan Foreland- evidence for previously unrecognised petroleum source rocks. Organic Geochem. 36, 1, p. 29-51.
(Suggest Cretaceous- Tertiary source rocks from Bosavi Arch fluid inclusion oils. Not clear how these ended up in Jurassic and E Cretaceous Toro reservoirs)

Wacaster, S. (2015)- The mineral industry of Papua New Guinea. In: 2013 Minerals Yearbook, Indonesia, U.S. Geol. Survey, p. 22.1-22.7.
(online at: https://minerals.usgs.gov/minerals/pubs/country/2013/myb3-2013-pp.pdf)
(Listing of 2013 mineral production in PNG, No geology)

Wade, A. (1914)- Report on petroleum in Papua. Government of the Commonwealth of Australia, Melbourne, p. 1-45.
(Includes evidence of oil along coastal belt 8-12 miles wide between Purari River Delta and Yule Island)

Wade, A. (1927)- The search for oil in New Guinea. American Assoc. Petrol. Geol. (AAPG) Bull. 11, 2, p. 157-176.
(Early overview of geography, geology, oil seeps and oil exploration activity in W and E New Guinea, where at that time no commercial production had yet been established. First gas seeps discovered at Upoia/ Opa, 30 miles from mouth of Vailala River, also site of first hydrocarbon exploration well drilled in PNG side in 1915)

Wai, K.M., M.J. Abbott & A.E. Grady (1994)- The Sadowa Igneous Complex, eastern Papua: ophiolite or not. Mineralogical Magazine 58, p. 949-950.
(online at: http://rruff.info/doclib/MinMag/Volume_58A/58A-2-949.pdf)

(Extended Abstract Goldschmidt Conf. 1994. Late Cretaceous- Eocene Sadowa Igneous Complex, E PNG, obducted onto Owen Stanley metamorphics in Late Eocene- M Oligocene to form E Papuan Composite Terrane. With plagiogranites similar to those from back arc basin rather than oceanic ridge. Sadowa Igneous Complex not complete ideal ophiolite sequence, but still similar to ophiolites elsewhere)

Waples, D.W. & K.J. Wulff (1996)- Genetic classification and exploration significance of oils and seeps of the Papuan Basin. In: P.G. Buchanan (ed.) Petroleum exploration and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 417-430.
(137 oil samples classified into 5 families from different Mesozoic- Tertiary sources. Four of the oil families in linear trends in Papuan Fold Belt. Family 3 oils tied to oil in Oxfordian sands. Family 1 oils with oleanane and bicadanes probably from Oligocene or younger rocks (only in seeps in SE). Family 2 oils with oleanane but no bicadanes probably from U Cretaceous or Paleogene source. Families 3-4 no oleananes, analogous to NW Shelf Mesozoic sources (in Papuan fold belt oil-gas fields))

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(Oil Search 2015 assessment determined ~4.8 GBOE recoverable resources discovered in PNG to date (85% gas). Additional 7 GBOE still to be discovered (40 TCF gas + 550 MMbarrels). In parts of interior PNG petroleum generated in Late Cretaceous, predating foldbelt. In other areas petroleum generated during Mio-Pliocene foldbelt formation near present-day mountain front where it continues to be generated today)

Warren, R.G. (1972)- A commentary on the metallogenic map of Australia and Papua New Guinea. Australian Govt. Publ. Service, Bureau Mineral Res., Canberra, Bull. 145, p. 1-85.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=99)
(Includes 1:1.5M scale map and brief review (p. 69-73) of PNG mineral occurrences)

Waterhouse, H.K. (1996)- Potential of palynostratigraphy for Neogene basin analysis in Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 329-343.
(Palynostratigraphy of U Miocene- Lower Pliocene Orubadi Fm in Puri anticline of Papuan foreland basin. Several episodes of reworking of M Cretaceous- Miocene dinoflagellates from New Guinea Highlands)

Waterhouse, H.K. (1998)- Palynological fluorescence in hinterland reconstruction of a cyclic shallowing-up sequence, Pliocene, Papua New Guinea. Palaeogeogr. Palaeoclim. Palaeoecology 139, 1-2, p. 59-82.
(Variations in fluorescence of contemporaneous Pliocene and lower-fluorescent reworked palynological particles in shallowing-upward sequence of Lower Pliocene Orubadi Fm in Puri Anticline of Papuan Foreland Basin. Episodes of reworking in Puri Creek shown by nannofossils (Late Cretaceous, Late Paleocene, Oligocene-Miocene boundary, M-L Miocene) and palynomorphs (Cenomanian, Senonian), result of episodes of thrusting in New Guinea foldbelt)

Watmuff, G. (1978)- Geology and alteration-mineralization zoning in the central portion of the Yandera porphyry copper prospect, Papua New Guinea. Economic Geology 73, p. 829-856.
(Copper mineralization at Yandera in PNG central highlands associated with low-K tholeiite-calc-alkaline porphyry intrusives into M Miocene (13.5 Ma) Bismark Intrusive Complex. Three episodes of porphyry emplacement. Oldest and largest porphyry emplaced ~1 Myrs after intrusion of host Bismarck batholith)

Webb, P.K. & P. Woyengu (1999)- The internal fold and thrust belt play, Papua New Guinea. In: C.A. Caughey & J.V.C. Howes (eds.) Proc. Conf. Gas habitats of SE Asia and Australasia, Jakarta 1998, Indon. Petroleum Assoc. (IPA), Jakarta, p. 213-224.
(Brief overview of 600 km long x 230 km wide PNG foldbelt. Three segments, two trending NNW, middle one NW. Folding, thrusting, and uplift since Late Miocene)

Weiler, P.D. (1999)- Paleomagnetic study of an active arc-continent collision, Finisterre Arc Terrane, Papua New Guinea. Ph.D. Thesis University of California, Santa Cruz, p. 1-183.
(Larger scale paleomagnetic results from colliding Finisterre Arc: hemipelagic rocks indicate CW rotation of colliding terrane of ~40° in post-Miocene time. Decreasing paleomagnetic declination anomalies along strike in Finisterre Terrane, suggesting rotation results from rigid-body rotation of FT rather than sequential docking of colliding blocks)

Weiler, P.D. & R.S. Coe (1997)- Paleomagnetic evidence for rapid vertical-axis rotations during thrusting in active collision zone, northeastern Papua New Guinea. Tectonics 16, 3, p. 537-550.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/97TC00493)
(Three thrust sheets of foldbelt N of Ramu-Markham fault zone rapid CCW rotations in last 1 My, related to tectonic transport)

Weiler, P.D. & R.S. Coe (2000)- Rotations in the actively colliding Finisterre Arc Terrane: paleomagnetic constraints on Plio-Pleistocene evolution of the South Bismarck microplate, Northeastern Papua New Guinea. Tectonophysics 316, p. 297-325.
(Paleomagnetic results from actively colliding Finisterre Arc Terrane in N PNG indicate ~40° post-Miocene clockwise rotation of colliding terrane. Rotation reflects coherent rigid rotation of Finisterre Terrane rather than sequential docking of independently colliding blocks. S Bismarck/ Australia relative motion highly oblique collision in early stages, with Finisterre Arc Terrane converging along left-lateral Ramu-Markham suture, gradually changing to nearly orthogonal convergence observed today)

Weiser, T.W. & H.G. Bachmann (1999)- Platinum-group minerals from the Aikora River area, Papua New Guinea. The Canadian Mineralogist 37, p. 1131-1145.
(online at: http://rruff.info/doclib/cm/vol37/CM37_1131.pdf)
(Platinum-group minerals discovered in placers in Aikora River, derived from ophiolites of Papuan Ultramafic Belt of E PNG. Mainly Os-Ir-Ru alloys (88%) and minor Pt-Fe alloy)

Wells, M.L., G.K. Vallis & E.A. Silver (1999)- Tectonic processes in Papua New Guinea and past productivity in the eastern equatorial Pacific Ocean. Nature 398, p. 601-604.
(On relation between paleoproductivity and opal accumulation in Equatorial Pacific in last 12 My and tectonics of N New Guinea)

Welsh, A. (1990)- Applied Mesozoic biostratigraphy in the Western Papuan Basin. In: G.J. & Z. Carman (eds.) Petroleum exploration in Papua New Guinea, First PNG Petroleum Convention, Port Moresby, p. 369-380.
(BP Jurassic-Cretaceous palynology zonation of PNG LateJurassic- mid-Cretaceous section. A modified version of Helby et al. 1987 and Davey 1987 zonations. With PNG chronostratigraphic diagram)

Whalen, J.B., R.M. Britten & I. McDougall (1982)- Geochronology and geochemistry of the Frieda River prospect area, Papua New Guinea. Economic Geology 77, 3, p. 592-616.
(Intrusive and volcanic rocks of Frieda River prospect between Frieda and Lagaip fault zones of New Guinea Mobile Belt in W Sepik District all of andesitic composition and belong to normal K calc-alkaline suite. Frieda Complex is remnant edifice of island stratovolcano interstratified in M Miocene Wogamush Fm. with copper-gold and porphyry copper deposits along central axis of complex. Mianmin area is separate, unmineralized volcanic center. Nena Diorite N of Frieda Complex intrudes Upper Cretaceous- Eocene basement rocks, with igneous activity dated between ~17.3- 11.2 Ma)

Whattam, S.A., J. Malpas, J.R. Ali & I.E.M. Smith (2008)- New SW Pacific tectonic model: cyclical intra-oceanic magmatic arc construction and near-coeval emplacement along the Australia-Pacific margin in the Cenozoic. Geochem. Geophys. Geosystems G3 9, 3, p. 1-34.
(NE dipping subduction established off PNG by at least 65-60 Ma which resulted in emplacement of Papuan Ultramafic Belt (PUB) ophiolite at 59-58 Ma. PUB formed above NE dipping Cenozoic intraoceanic arc system which diachronously propagated (N-S) along E margin of Australian Plate. These 'infant arc' ophiolites represent fragments of supra-subduction zone lithosphere generated in earliest stages of magmatic arc

formation, emplaced shortly after (<20 My) as result of forearc-Australian Plate collision. Subduction inception result of subsidence of older MORB-like lithosphere generated in extensive back arc basin. During emplacement of each ophiolite, a crustal fragment of older lithosphere was scraped off NE dipping slab and subsequently back-thrust beneath each ophiolite during emplacement)

Whitford, D.J, T.L. Allan, A.S. Andrew, S.J. Craven, P.J. Hamilton, M.J. Korsch et al. (1996)- Strontium isotope chronostratigraphy and geochemistry of the Darai Limestone: Juha 1X well, Papua New Guinea. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 369-380.
(Sr ages in 1600m thick Darai Lst of Juha 1X well show age range of 7.7- 28.9 Ma (Oslick et al. 1994 calibration), in good agreement with foram ranges. Top Te1-4 (Top Borelis pygmaeus) = 24 Ma, Top Te5 (Top Spiroclypeus) near 21 Ma, Top Tf1= 14 Ma (but picked horizon above observed tops Austrotrillina, Miogypsina; JTvG), Tf2 = ~11-12 Ma. Consistent Sr-isotope ratio trend, but also number of anomalous values)

Whitford, D.J., T.L. Allan, M.J. Korsch, H. Middleton & J.A.Trotter (2003)- Strontium isotope chronostratigraphy and the carbonate sedimentation history of the Papuan Basin, Papua New Guinea In: Proc. 5th Int. Symp. Applied Isotope Geochemistry, AIG-5. Int. Assoc. Geochem. Cosmochem., p. 265-268.

Williams, P.W. (1971)- Illustrating morphometric analysis of karst with examples from New Guinea. Zeitschrift Geomorphologie 15, p. 40-61.

Williams, P.W. (1972)- Morphometric analysis of polygonal karst in New Guinea. Geol. Soc. America (GSA) Bull. 83, p. 761-796.

Williamson, A. (1983)- Geology of Laloki deposit, Central Province. Geol. Survey Papua New Guinea, Report 83/220, p. *(Unpublished)*

Williamson, A. & G. Hancock (eds.) (2005)- The geology and mineral potential of Papua New Guinea. PNG Department of Mining, Port Moresby, p. 1-152.
(online at: www.infomine.com/publications/docs/PapuaNewGuinea2005.pdf)
(Well-illustrated review of geology and mineral deposits of PNG, compiled from initial report by G. Corbett, with contributions from H. Davies, etc.)

Wilson, C., R. Barrett, R. Howe & L.K. Leu (1993)- Occurrences and character of outcropping limestones in the Sepik Basin: implications for hydrocarbon exploration. In: G.J. & Z. Carman (eds.) Petroleum exploration and development in Papua New Guinea, Proc. Second PNG Petroleum Convention, Port Moresby, p. 111-124.
(Carbonates in and around Sepik Basin, mainly at N margin (= 'Idenburg Terrane'?; JTvG): (1) shallow marine, recrystallized Late Cretaceous Orbitoides limestone, overlying metamorphic rocks; (2) M-L Eocene Nummulites limestone, unconformably overlain by (3) >300m thick Late Oligocene- earliest M Miocene Puwani Lst., which form basal transgressive part of Sepik basin fill. With Sepik Basin Miocene paleogeographic maps)

Wilson, M.E.J., D. Lewis, O. Yogi, D. Holland, L. Hombo & A. Goldberg (2013)- Development of a Papua New Guinean onshore carbonate reservoir: a comparative borehole image (FMI) and petrographic evaluation. Marine and Petrol. Geol. 44, p. 164-195.
(Borehole image and petrographic study of Elk- Antelope gas fields in Miocene reefal, platformal and associated deepwater carbonates in present day foothills region of Fold and Thrust Belt in Gulf Province of PNG (~6 TCF recoverable gas in Miocene buildup))

Winn, R.D., R.C.H. Perembo, H.L. Davies & P. Pousai (1997)- Tectonic and stratigraphic evolution of the Tertiary Aure Trough, Papua New Guinea: foreland basin over microplate-craton suture. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 307-318.
(Aure Trough formed over suture between E Papua composite terrane and Australian craton, which represents Oligocene docking event. Started as Oligocene foreland basin. Thick, mostly deep-marine clastics in M

Miocene- Pliocene. Pliocene Aure fold-thrust belt deformation probably far-field response to collision of Bismarck-New Britain volcanic arc with N edge of New Guinea)

Winn, R.D. & P. Pousai (2010)- Synorogenic alluvial-fan- fan-delta deposition in the Papuan foreland basin: Plio-Pleistocene Era formation, Papua New Guinea. Australian J. Earth Sci. 57, 5, p. 507-523.
(Synorogenic Pliocene- ?Pleistocene U Orubadi and Era Fms at SW margin of Papuan Peninsula interpreted as alluvial-fan, fan-delta and shallow-marine sediments, deposited in foreland basin formed from loading of Papuan-Aure fold-thrust Belt, where folding-thrusting related to docking and compression of Finisterre Terrane-Bismarck Arc against New Guinea Orogen. Era Fm siliciclastics sourced from volcanic, metamorphic and sedimentary rocks uplifted in orogen to NE. Volcanic sediment derived mostly from active volcanic arc likely related to SW subduction at Trobriand Trough)

Winn, S., J. Wilmot, J. Noonan, J. Bradshaw, M. Bradshaw, C. Foster, A. Murray, J. Vizy & G. Zuccaro (1994)- Australian Petroleum Systems Papuan basin module, Australian Geol. Survey Org. (AGSO), Canberra, Record 1994/13, vol. 1, p. 1-76.
(online at: www.ga.gov.au/corporate_data/37165/Rec1994_013_vol1.pdf)
(Review of PNG Central Range and foreland geology, with well data, biostrat, paleogeographic maps, etc.)

Winn, S., J. Wilmot, J. Noonan, J. Bradshaw, M. Bradshaw, C. Foster, A. Murray, J. Vizy & G. Zuccaro (1994)- Australian Petroleum Systems Papuan Basin Module, Australian Geol. Survey Org. (AGSO), Canberra, Record 1994/13, vols. 2-3.
(online at: www.ga.gov.au/corporate_data/37165/Rec1994_013_vol2.pdf and: ....vol3.pdf)
(Appendices to Volume 1, with data on (bio-)stratigraphy porosity-permeability, geochemistry, etc.)

Wonders, A.A.H. & C.G. Adams (1991)- The biostratigraphical and evolutionary significance of *Alveolinella praequoyi* sp. nov. from Papua New Guinea. Bull. British Museum (Natural History), Geology, 47, p. 169-175.
(online at: https://ia600206.us.archive.org/2/items/biostor-118556/biostor-118556.pdf)
(Primitive Alveolinella, transitional between Flosculinella bontangensis and Alveolinella praequoyi, from M Miocene Tf1-2 Darai Limestone at Hides Anticline, PNG)

Wood, S. (2010)- Oil potential of the Upper Turama River and Fly River delta areas, Papua New Guinea foreland. M.Sc. Thesis University of Adelaide, p. 1-332. *(Unpublished)*
(online at: http://digital.library.adelaide.edu.au/dspace/bitstream/2440/78636/3/02whole.pdf)
(Petroleum potential study of two areas in Papuan foreland. Geochemical study of 35 oils from 10 wells and 2 seeps suggest five oil families: L (lacustrine; probably from Late Triassic synrift mudstones as drilled in Kanau 1 well), MC (marine carbonate; also Late Triassic?), LJ (Late Jurassic), O (Cretaceous-Tertiary; uncertain origin) and C (coal))

Wood, S., H. Volk, N. Sherwood & C.J. Boreham (2008)- Lacustrine petroleum systems in the Papua New Guinea foreland. In: J.E. Blevin et al. (eds.) Eastern Australasian Basins Symposium III- Energy security for the 21st century, Sydney, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 543. *(Abstract only)*
(Oil shows with lacustrine signature in PNG at Bujon-1 well (Philips Petroleum 1994), and biodegraded oil column at Koko-1 (Oil Search 1999): presence of β carotane, abundant gammacerane, C26/C25 tricyclic terpane ratios > 1, abundant 3β-methyhopanes and tetracyclic polyprenoids. Adiba-1 in S part of foreland, indicates that similar oil geochemistry. Early Jurassic or Triassic source rock?)

Worthing, M.A. (1987)- Deerite from Papua New Guinea. Mineralogical Mag. 51, p. 689-693.
(online at: www.minersoc.org/pages/Archive-MM/Volume_51/51-363-689.pdf)
(Deerite (=hydrous iron silicate) occurrence appears to be limited to glaucophane-lawsonite schist and associated transitional facies. First occurrence in PNG in two meta-ironstones from NE PNG, near Kokoda)

Worthing, M.A. (1988)- Petrology and tectonic setting of blueschist facies metabasites from the Emo Metamorphics of Papua New Guinea. Australian J. Earth Sci. 35, p. 159-168.

(Emo Metamorphics metabasites in Kokoda area, SE PNG, contain quartz-albite-phengite- stilpnomelane-ferroglaucophane- chlorite-almandine-epidote-sphene-apatite. Similar to lawsonite-epidote transition zone on New Caledonia. Suggests P-T conditions of metamorphism of ~7.0 kbar and 320°C. Emo Metamorphics may be sliver of oceanic crust caught up in thrusting that accompanied obduction of Papuan ophiolite)

Worthing, M.A. & M.A. Bennett (1988)- Geochemistry, mineralogy and tectonic setting of deerite-bearing meta-ironstones from the Emo Metamorphics of Papua New Guinea. Australian J. Earth Sci. 35, p. 29-38.
(Deerite-bearing meta-ironstones from Emo Metamorphics of SE PNG suggests deposition as metalliferous cherts enriched in manganese and iron by hydrothermal exhalative activity in ocean ridge system)

Worthing, M.A. & A.J. Crawford (1996)- The igneous geochemistry and tectonic setting of metabasites from the Emo Metamorphics, Papua New Guinea; a record of the evolution and destruction of a backarc basin. Mineralogy and Petrology 58, p. 79-100.
(Papuan ophiolite outcrops in 400km x 40km wide belt on NE side of Owen Stanley Range in Papuan Peninsula. Ophiolite complex, dipping NE at ~20° and is continuous with mantle and crust underlying SW Solomon Sea. Metabasites from Emo Metamorphics in thrust sheets below Papuan ophiolite, and derived mainly from basalt, gabbro, etc. (tholeiitic and back-arc basaltss). Four groups: garnet blueschists with glaucophane, amphibolites, lawsonite blueschists and greenschists. Most samples polymetamorphic history. Two new 39Ar-40Ar isochron ages of amphibolites: ~32-35Ma (= E Oligocene age of obduction of opholite after collision with Owen Stanley microcontinental terrane) and ~14.8 Ma (=M-Miocene arc-continent collision with continental crust of E and Papuan Plateaus of N Australian plate?))

Worthing, M.A., C.K. Midobatu & P.H. Nixon (1992)- Structural setting, petrology and emplacement of serpentinites in the Koki Fault Zone, Port Moresby, Papua New Guinea. J. Southeast Asian Earth Sci. 7, 2-3, p. 147-158.
(Serpentinites from Koki Fault Zone chemically comparable with cumulate members of ultramafic ophiolite sequence. Mapping showed presence of three structural domains: imbricate thrust stack, the KFZ and possible passive roof duplex structure, suggesting deformation occurred close to front of foreland thrust belt)

Yang Lei & Kang An (2011)- Geological characteristics and reef-forming pattern of Antelope Reef gas field in Papua Basin. Xinjiang Petroleum Geol. 2011, 2, p.
(Papua Mesozoic- Cenozoic basin on margin of Australian continental plate with large Antelope gas field. Antelope field is pinnacle reef, developed on carbonate platform, with great thickness of reef)

Yates, K.R. & R.Z. de Ferranti (1967)- Geology and mineral deposits Port Moresby/ Kemp Welch area, Papua. Bureau Mineral Res. Geol. Geophysics, Report 105, p. 1-117.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(Mainly geological-geochemical investigation of Astrolabe copper-gold field, SE PNG. Oldest rocks in area U Cretaceous pink sheared limestone, unconformably overlain by unsheared Eocene (or Paleocene?; with Distichoplax; JTvG) glauconitic limestone, indicating ~Paleocene deformation event. Sadowa Oligocene gabbro, overlain by Dokuna Tuff and 50-100' thick Bootless Inlet Limestone with Te larger foraminifera (called E Miocene, but more likely Late Oligocene with Eulepidina and Heterostegina borneensis; JTvG), including reworked Eocene Nummulites-Pellatispira. E-M Miocene Globada Lst with Miogypsina unconformably over Eocene-Oligocene. Astrolabe agglomerate Pliocene pyroclastics (more likely Late Miocene age; Pain 1983))

Yokoyama, Y., T.M. Esat & K. Lambeck (2001)- Coupled climate and sea-level changes deduced from Huon Peninsula coral terraces of the last ice age. Earth Planetary Sci. Letters 193, p. 579-587.
(Huon Peninsula of NE PNG, is uplifting shoreline ringed by emergent coral terraces, formed during episodes of rapid sea-level rise, and constructing coral platforms that were subsequently uplifted. Last glacial (OIS 3) coral terraces coincide with timing of major N Atlantic climate reversals between 30- 60 ka.Growth of terraces tied to sea-level rises arising from ice-calving episodes from major N Atlantic and Antarctic ice-sheets that precipitated extremes of cold climate called Heinrich events. Sea-levels at this time 60-90m lower than present)

Young, G.A. (1963)- Northern New Guinea Basin reconnaissance aeromagnetic survey 1961. Bureau Mineral Res. Geol. Geophysics, Record 1963/117, p. 1-7.
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=11200)
(Three reconnaissance profiles across N New Guinea Basin indicate pronounced regional geological structures parallel to known structural trends)

Zeng, Y. & B.A. McConachie (2000)- Application of integrated magnetic and seismic interpretation to identify petroleum prospects in Papua New Guinea. In: P.G. Buchanan et al. (eds.) Papua New Guineaǿs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 239-250.

Zhang, J., J.P. Davidson, M.C.S. Humphreys, C.G. Macpherson & I. Neill (2015)- Magmatic enclaves and andesitic lavas from Mt. Lamington, Papua New Guinea: implications for recycling of earlier-fractionated minerals through magma recharge. J. Petrology 56, 11, p. 2223-2256.
(online at: http://petrology.oxfordjournals.org/content/56/11/2223.full.pdf+html)
(Mt. Lamington composite volcano in PNG, on Papuan Ultramafic Belt (PUB) ophiolite. 1951 eruption produced andesitic dome lavas with basaltic–andesitic enclaves and few PUB ultramafic xenoliths. Presence of olivines in enclaves represents recycling of earlier-fractionated components through magma recharge)

Zhu, Z. & Z. Yang (2008)- Cenozoic adakites in Papua New Guinea and metallogetic significance. Jilin Daxue Xuebao (J. Jilin University), Earth Science Edition, 38, 4, p. 618-623.
(Adakites of PNG characterized by high Sr content, positive Sr anomaly peaks (average Sr/Y ratio >41.7) and negative Nb and Th anomalies. Y and Yb contents very low. 87Sr/86Sr values generally <0.704 5. Adakites of PNG located in both oceanic island arc and continental margin orogens in arc-continent collision setting. Some contain both world-class porphyry copper-gold deposits)

Zwingmann, H., T. Allan, K. Liu, D. Holland & D. Leech (2008)- Glauconite ages from Late Cretaceous reservoir sandstones of the Papuan Basin. In: J.E. Blevin et al. (eds.) Eastern Australasian Basins Symposium III, Sydney, Petroleum Expl. Soc. Australia (PESA) Spec. Publ., p. 259-262.
(Coniacian- Campanian glauconite ages of sandstones)

IX.12. Papua New Guinea (Bismarck Sea, Solomon Sea, Woodlark Basin)

Abers, G.A. (1991)- Possible seismogenic shallow-dipping normal faults in the Woodlark-DôEntrecasteaux extensional province, PNG. Geology 19, p. 1205-1208.
(Inversions of large earthquakes in Woodlark-D'Entrecasteaux region of active continental extension show events consistent with normal dip slip on shallow-dipping faults. Largest earthquake near mapped Pliocene-Quaternary metamorphic core complex, with shallow-dipping plane between 10°-25°)

Abers, G.A. (2001)- Evidence for seismogenic normal faults at shallow dips in continental rifts. In: R.C.L. Wilson et al. (eds.) Non-volcanic rifting of continental margins: a comparison of evidence from land and sea, Geol. Soc. London, Spec. Publ. 187, p. 305-318.
(Woodlark Rift system extension rates vary along strike, with shallowest-dipping faults in most rapidly rifting segment. Several earthquakes suggest nodal planes dipping 23-35°, subparallel to shear zones bounding nearby metamorphic core complexes. No documented large earthquake exhibits seismic slip on subhorizontal surfaces)

Abers, G.A., A. Ferris, M. Craig, H. Davies, A.L. Lerner-Lam, J.C. Mutter & B. Taylor (2002)- Mantle compensation of active metamorphic core complexes at Woodlark rift in Papua New Guinea. Nature 418, p. 862-865.
(Seismic observations of metamorphic core complexes of western Woodlark rift show thinned crust beneath regions of greatest surface extension. Core complexes actively exhumed at 5-10 km/Myr, and thinning of underlying crust compensated by mantle rocks of anomalously low density)

Abers, G.A., Z. Eilon, J.B. Gaherty, G. Jin, Y.H. Kim, M. Obrebski & C. Dieck (2016)- Southeast Papuan crustal tectonics: imaging extension and buoyancy of an active rift. J. Geophysical Research, Solid Earth, 121, 2, p. 951-971.
(SE PNG hosts world's youngest ultra-high-pressure metamorphic rocks, in D'Entrecasteaux-Woodlark extensional gneiss domes/ metamorphic core complexes. Seismicity shows active deformation on core complex bounding faults, offset by transfer structures, consistent with N-S extension rather than radial deformation. Crustal thinning under core complexes of 30-50% and very low shear velocities at all depths beneath core complexes. Limited role of diapirism as secondary exhumation mechanism)

Abers, G., C.Z. Mutter & J. Fang (1994)- Shallow dips of normal faults during rapid extension; earthquakes in the Woodlark- D'Entrecasteaux rift system, Papua New Guinea. J. Geophysical Research 102, B7, p. 15301-15317.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/97JB00787/pdf)
(In Woodlark-D'Entrecasteaux rift system low-angle normal faults (dipping 15°-35°) only between 150.5°E - 152.5°E, where transition occurs from seafloor spreading to continental rifting)

Arculus, R.J. & R.W. Johnson (1978)- Criticism of generalised models for the magmatic evolution of arc-trench systems. Earth Planetary Sci. Letters 39, p. 118-126.
(Recent geological and petrological results from PNG and other regions of arc-trench-type volcanism, provide exceptions to spatial, volumetric, and temporal relationships claimed for generalised volcanic arc models. Many alkalic and shoshonitic associations not over deepest parts of downgoing slabs. Several exceptions to K20/SiO2/depth-to-Benioff-zone relationship. Temporal sequence of early tholeiitic- middle calcalkalic- late shoshonitic/alkalic not well substantiated)

Arculus, R.J. & C. Yeats (2007)- Volcanism and tectonism of the South Bismarck microplate, Papua New Guinea. R/V Southern Surveyor Voyage Summary SS06/2007, CSIRO, p.

Ashley, P. M. & R.H. Flood (1981)- Low-K tholeiites and high-K igneous rocks from Woodlark Island, Papua New Guinea. J. Geol. Soc. Australia 28, p. 227-240.
(Woodlark Island, largest above-sea portion of Woodlark Rise, with pre-E Miocene basement of low-K tholeiitic basalt and dolerite, and minor sediments, overlain by E Miocene limestone and volcaniclastics and later Miocene high-K volcanics and intrusives. Basement part of ophiolitic slab en echelon with Papuan Ultramafic

Belt, thrust over equivalents of Cretaceous Owen Stanley Metamorphics. Periodicity in magmatism synchronous with major rifting episodes that formed Woodlark Basin)

Auzende, J.M., J. Ishibashi, Y. Beaudoin, J.L. Charlou, J. Delteil, J.P. Donval et al. (2000)- Les extremites orientale et occidentale du bassin de Manus, Papouasie-Nouvelle-Guinee, explorees par submersible: la campagne Manaute. Comptes Rendus Academie Sciences, Paris, Earth Planetary Science, 331, p. 119-126.
('The E and W ends of the Manus Basin, PNG, explored by submersible'. Submersible dives demonstrate that in E part of Manus basin oceanic accretion is reduced to two axes propagating between Djaul and Weitin FZ. In W part of Manus basin oceanic accretion is along two axes propagating rapidly to SW. Effect of subduction of Australian Plate in New Britain Trench evident throughout basin)

Baldwin, J.T, H.D. Swain & G. H. Clark (1978)- Geology and grade distribution of the Panguna porphyry copper deposit, Bougainville, Papua New Guinea. Economic Geology 73, 5, p. 690-702.
(Panguna mine producing since 1972. Pliocene phase of copper iron sulfide mineralization associated with initial intrusion of Kaverong Diorite into Panguna Andesite. Mineralization successively upgraded by remobilization of copper sulfides with intrusion of Biotite Granodiorite)

Baldwin, S.L., B.D. Monteleone, , L.E. Webb, P.G. Fitzgerald, M. Grove & E.J. Hill (2004)- Pliocene eclogite exhumation at plate tectonic rates in eastern Papua New Guinea. Nature 431, p. 263-267.
(online at: http://instruct.uwo.ca/earth-sci/fieldlog/cal_napp/napp/newfoundland/burlington/nature02846.pdf)
(Exposed metamorphic core complex with Pliocene (4.3 Ma) eclogite facies in D'Entrecasteaux Islands. Extremely rapid exhumation from ~75 km in extending region W of Woodlark basin spreading centre. Such rapid exhumation of high-P rocks facilitated by extension within transient plate boundary zones associated with rapid oblique plate convergence)

Baldwin, S.L. & T.R. Ireland (1995)- A tale of two eras: Pliocene-Pleistocene unroofing of Cenozoic and late Archean zircons from active metamorphic core complexes, Solomon Sea, Papua New Guinea. Geology 23, 11, p. 1023-1026.
(Youngest zircons from felsic gneisses and synkinematically emplaced granodiorites in D'Entrecasteaux Islands Late Pliocene (1.65, 1.98 Ma crystallization ages). Zircon ages from felsic gneisses (2.63, 2.72 Ma) growth subsequent to eclogite facies metamorphism. Felsic gneiss also zircons from Cretaceous-Miocene protoliths. Zircons from igneous and metamorphic clasts from Goodenough No. 1 well single population of 2781 Ma, and derived from basement rocks unroofed from D'Entrecasteaux core complexes. First direct evidence for Archean protoliths in basement rocks of SE PNG).

Baldwin, S.L., G.S. Lister, E.J. Hill, D.A. Foster & I. McDougall (1993)- Thermochronologic constraints on the tectonic evolution of active metamorphic core complexes, DôEntrecasteaux Islands, Papua New Guinea. Tectonics 12, 3, p. 611-628.
(Metamorphic core complexes in D'Entrecasteaux Islands formed by active extension at W end of propagating Woodlark Basin spreading center. Gneisses cooled rapidly at 2.7 to 3.0 Ma and 1.6 to 1.7 Ma., Shear zones active from 4.0-3.5 Ma and 1.9-1.4 Ma. Granodiorites associated with D'Entrecasteaux Islands domes represent syn-kinematically emplaced granitoids intruded into area of continental extension)

Baldwin, S.L., L.E. Webb & B.D. Monteleone (2008)- Late Miocene coesite-eclogite exhumed in the Woodlark Rift. Geology 36, 9, p. 735-738.
(Late Miocene-Pliocene eclogites exhumed in Woodlark Rift. Coesite in Late Miocene (~8 Ma), eclogite from D'Entrecasteaux Islands metamorphic core complexes, exhumed from mantle depths (≥90 km) to surface at plate tectonic rates (cm/ yr). Youngest exhumed ultrahigh-pressure rock on Earth)

Baldwin, S.L., L.E. Webb, B. Monteleone, T.A. Little, P.G. Fitzgerald, K. Peters & J.L. Chappell (2006)- Continental crust subduction and exhumation: insights from eastern Papua New Guinea. Geochimica Cosmochimica Acta 70, 18, Suppl. 1 *(Goldschmidt Conf. Abstract)*
E PNG exhumation of previously subducted continental crust in plate boundary zone characterized by rifting-to- seafloor spreading transition. Australian margin subducted N-ward beneath Late Paleocene- E Eocene

island arc. Eclogite and blueschist relicts in lower plates of metamorphic core complexes (MCCs). Rapid diachronous exhumation from 13 to 0.5 Ma, proceeding from E to W, prior to and synchronous with seafloor spreading in Woodlark Basin (6 Ma). Some rocks subducted to >100 km at ~8 Ma. Exhumation to shallow crustal levels by 1.5 Ma. W of active sea floor spreading rift tip mineral growth and cooling from 8 to 3 Ma; SE of active rift tip ages interpreted to record cooling and exhumation from 13-8 Ma)

Baumer, A. & B. Fraser (1975)- Panguna porphyry copper deposit, Bougainville. In: Economic geology of Australia and Papua New Guinea, 1. Metals, Australasian Inst. of Mining and Metallurgy, Melbourne. p. 855-866.

Beier, C., W. Bach, S. Turner, D. Niedermeier, J. Woodhead, J. Erzinger & S. Krumm (2015)- Origin of silicic magmas at spreading centres- an example from the South East rift, Manus Basin. J. Petrology 56, 2, p. 255-272.
(online at: http://petrology.oxfordjournals.org/content/56/2/255.full.pdf+html)
(Manus Basin is rapidly opening, magmatically active back-arc basin associated with N-ward subduction of Solomon Sea Plate. Samples from 40 km segment of SE Rift span compositional continuum from basalt to rhyolite (50-75 wt % SiO2). Data form a coherent array suggestive of closed-system fractional crystallization, and point to rapid evolution in relatively small magma lenses located near base of thick oceanic crust)

Beier, C., S.P. Turner, J.M. Sinton & J.B. Gill (2010)- Influence of subducted components on back-arc melting dynamics in the Manus Basin. Geochem. Geophys. Geosystems 11, 10.1029/2010GC003037, p. 1-21.
(Manus Basin behind New Britain volcanic arc. Basalts subdivided into those that are like Mid-Ocean Ridge Basalts (Ba/Nb < 16) and Back-Arc Basin Basalts influenced by subduction components (Ba/Nb >16). Rifts closest to arc dominated by BABB. Pb isotope data explained by mixing of subduction component into Indian MORB mantle source)

Belford, D.J. (1981)- Co-occurrence of middle Miocene larger and planktic smaller Foraminifera, New Ireland, Papua New Guinea. Palaeontological Papers 1981, Bureau Mineral Res. (BMR) Geol. Geophysics Bull. 209, p. 1-21.
(online at: www.ga.gov.au/corporate_data/59/Bull_209.pdf)
(Fauna with both larger foraminifera Lepidocyclina (N.) howchini (Lower Tf) and planktonic foraminifera (zones N11-N12) in M Miocene samples from New Ireland, PNG)

Belford, D.J. (1988)- Planktonic foraminifera, age of sediments and polarity reversals, New Britain, Papua New Guinea. Bureau Mineral Res. (BMR) J. Australian Geol. Geophysics 10, p. 329-343.
(online at: www.ga.gov.au/webtemp/1309887/Jou1988_v10_n4.pdf)
(Rudiger Point- Cape Ruge area, New Britain, not conformable Late Miocene-earliest Pliocene sequence, but two age groups (1) general M Miocene age, and (2) late Miocene age. Sample of volcanolithic sandstone of Late Pliocene- M Pleistocene, Zone N21-N22 age, youngest marine sediment recognised in New Britain. Planktonic Zone N18 correlated, at least in part, with normally magnetised interval)

Belford, D.J. (1988)- Late Tertiary and Quaternary foraminifera and paleobathymetry of dredge and core samples from the New Ireland Basin (Cruise L7-84-SP). In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Sci. Ser. 9, p. 65-89.
(Late Miocene (N17)- Recent foraminifera in seafloor samples N of New Ireland, New Hanover, Manus islands)

Benes, V., N. Bocharova, E. Popov, S.D. Scott & L.P. Zonenshain (1997)- Geophysical and morpho-tectonic study of the transition between seafloor spreading and continental rifting, western Woodlark Basin, Papua New Guinea. Marine Geology 142, p. 85-98.
(Two major morpho-tectonic domains, separated by major transfer zone, at transition between seafloor spreading and continental rifting in W Woodlark Basin. Oceanic domain new oceanic crust formed during Bruhnes Epoch, older transitional crust and rifted continental margins. Two rift branches in continental domain. S rift branch failed, N branch maximum extension with initial development of oceanic crust. Seafloor

spreading in W Woodlark Basin started between 3.5- 2.5 Ma. Frequent jumps of seafloor spreading centers indicate instability of Woodlark extensional system)

Benes, V., S.D. Scott & R.A. Binns (1994)- Tectonics of rift propagation into a continental margin: Western Woodlark Basin, Papua New Guinea. J. Geophysical Research 99, p. 4439-4456.

Bernstein-Taylor, B.L., K.M.M. Brown, E.A. Silver & S. Kirchoff-Stein (1992)- Basement slivers within the New Britain accretionary wedge: implications for the emplacement of some ophiolitic slivers. Tectonics 11, 4, p. 753-765.
(Seismic profiles from W Solomon Sea image several 2.5- 3km thick oceanic basement slivers in New Britain accretionary wedge, which may serve as modern analogue for detachment of some ophiolitic slivers. Arcward-dipping normal faults reactivated in response to flexural bending of downgoing oceanic plate are prominent feature of region. Small (13 km thick) basement slivers may be decoupled along favorably oriented zones of weakness formed by normal fault detachments within downgoing oceanic basement)

Bernstein-Taylor, B.L., S. Kimberly, S. Kirchoff-Stein, E.A. Silver, D.L. Reed & M. Mackay (1992)- Large-scale duplexes within the New Britain accretionary wedge: a possible example of accreted ophiolitic slivers. Tectonics 11, 4, p. 732-752.
(Seismic profiles in W Solomon Sea across New Britain accretionary wedge, interpreted as accreted duplexes of downgoing oceanic plate. Seaward edge of largest duplex 6 km from toe of accretionary wedge, suggesting recent incorporation into wedge. Prominent reflector, similar in character to basement reflector, higher in section and probably top of basement duplex)

Binnekamp, J.G. (1973)- Tertiary larger foraminifera from New Britain, Papua New Guinea. Bureau Mineral Res. Geol. Geophysics Bull. 140, p. 1-26.
(online at: www.ga.gov.au/corporate_data/107/Bull_140.pdf)
(Larger forams from 3 formations in New Britain: Eocene Baining volcanoclastics (incl. Pellatispira), Late Oligocene Merai Volcanics (Lower Te with Eulepidina, Nephrolepidina, Cycloclypeus, Halkyardia) and M Miocene (upper Te-Tf) with Nephrolepidina, Cycloclypeus, Katacycloclypeus, Austrotrillina, Flosculinella)

Binns, R.A. & S.D. Scott (1993)- Actively forming polymetallic sulphide deposits associated with felsic volcanic rocks in the eastern Manus back-arc basin, Papua New Guinea. Economic Geology 88, p. 2226-2236.
(E Manus basin back-arc extensional feature N of New Britain trench, ib remnant island-arc crust. E-W belt of en echelon neovolcanic structures composed of picritic basalt and dacite-rhyodacite. Pacmanus hydrothermal site with vent fauna and sulfide minerals, dominated by chalcopyrite)

Blackwell, J.L. (2010)- Characteristics and origins of breccias in a volcanic hosted alkalic epithermal gold deposit, Ladolam, Lihir Island, Papua New Guinea. Ph.D. Thesis, University of Tasmania, Hobart, p. 1-203.
(online at: http://eprints.utas.edu.au/11395/)

Blackwell, J.L., D.R. Cooke, J. McPhie & K.A. Simpson (2014)- Lithofacies associations and evolution of the volcanic host succession to the Minifie Ore Zone: Ladolam gold deposit, Lihir Island, Papua New Guinea. Economic Geology 109, p. 1137-1160.
(Ladolam gold deposit largest alkalic epithermal gold deposit in world. Four ore zones. Minifie ore zone three stages: (1) Plio-Pleistocene volcanosedimentary strata (part of alkalic composite volcanic island), (2) porphyry-style breccia dike, and (3) epithermal-style breccias. Quaternary uplift)

Blake, D.H. & Y. Miezitis (1967)- Geology of Bougainville and Buka Islands, New Guinea. Bureau Mineral Res. Geol. Geophysics, Canberrra, Bull. 93 (PNG 1), p. 1-56.
(online at: www.ga.gov.au/corporate_data/169/Bull_093.pdf)
(Oldest exposed rocks of Bougainville- Buka probably U Oligocene- Lw Miocene Kieta Volcanics/ Buka Fm, consisting of subaerial andesitic and basaltic lavas, agglomerates, tuffs, basic pillow lava and volcanoclastics. Locally overlain by Lower Miocene reefal Keriaka Lst with rich larger foraminifera fauna (Upper Te zone, with Spiroclypeus, Miogypsina, Miogypsinoides; see also Terpstra 1965, 1966))

Bolton, B.R. & N.F. Exon (1988)- Geochemistry of bathyal ferromanganese deposits from the New Ireland region in the Southwest Pacific Ocean. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 131-136.
(Six samples with ferromanganese crusts dredged from seafloor at depths of 800-1500m around New Britain. Rel. low Co values)

Brownlee, S.J., B.R. Hacker, M. Salisbury, G. Seward, T.A. Little, S.L. Baldwin & G.A. Abers (2011)- Predicted velocity and density structure of the exhuming Papua New Guinea ultrahigh-pressure terrane. J. Geophysical Research, Solid Earth, 116, B8, B08206, p. 1-15.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2011JB008195)
(Ultra High Pressure terrane in D'Entrecasteaux Islands of PNG actively exhuming. Seismic velocities based on predicted mineral assemblages indicate exhuming UHP terrane mainly mafic composition below ~20 km depth)

Bruns, T.R., J.G. Vedder & A.K. Cooper (1989)- Geology of the Shortland Basin region, Central Solomons Trough, Solomon Islands- review and new findings. In: J.G. Vedder & T.R. Bruns (eds.) Geology and offshore resources of Pacific island arc- Solomon Islands and Bougainville, Papua New Guinea regions, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Series 12, p. 125-144.
(Basement half graben underlies the center of Shortland basin; developed in Late Oligocene and E Miocene, coincident with arrival of the Ontong Java Plateau at Tertiary subduction zone. Max. sediment thickness 7 km)

Burkett, D., I. Graham, L. Spencer, P. Lennox, D. Cohen, H. Zwingmann et al. (2015)- The Kulumadau epithermal breccia-hosted gold deposit, Woodlark Island, Papua New Guinea. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 205-212.
(Kulumadau intermediate-sufidation epithermal gold deposit, with mineralisation in hydrothermal breccias in pre-existing fault zones in M Miocene (~13 Ma) pyroclastic flow deposits)

Cairns, E.A., T.A. Little, G.M. Turner, L.M. Wallace & S. Ellis (2015)- Paleomagnetic evidence for vertical-axis rotations of crustal blocks in the Woodlark Rift, SE Papua New Guinea: Miocene to present-day kinematics in one of the world's most rapidly extending plate boundary zones. Geochem. Geophys. Geosystems 16, 7, p. 2058-2081.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2015GC005788)
(CW and CCW rotations of blocks at N side of Woodlark rift-spreading sytem. M-L Miocene CCW rotation relative to Australia of SE Papuan Peninsula- Trobriand Platform may be attributed to rotation of incipient Woodlark Microplate, pre-dating onset of Woodlark Rift. Goodenough Bay Block undergoing CW rotation with respect to Australia since 3 Ma. Rapid CW Rotation of NW Normanby Island)

Carman, G.D. (2003)- Geology, mineralization and hydrothermal evolution of the Ladolam gold deposit, Lihir Island, Papua New Guinea. Economic Geology, Spec. Publ. 10, p. 247-284.

Catalano, J.P. (2012)- Geochemical and 40Ar/39Ar contraints on the evolution of volcanism in the Woodlark Rift. M.Sc. Thesis Syracuse University, p. 1-124.
(online at: http://surface.syr.edu/cgi/viewcontent.cgi?article=1000&context=ear_thesis)
(Evolution of Pliocene-Recent volcanism in Woodlark Rift, using 40Ar/39Ar thermochronology and whole rock geochemistry. Volcanism in Woodlark Rise and D'Entrecasteaux Islands results from decompression melting of relict mantle wedge. Subduction zone geochemical signatures in lavas younger than 4 Ma are relict from older subduction beneath E Papua, probably in M Miocene)

Chadwick, J., M. Perfit, B. McInnes, G. Kamenov, T. Plank, I. Jonasson & C. Chadwick (2009)- Arc lavas on both sides of a trench: slab window effects at the Solomon Islands triple junction, SW Pacific. Earth Planetary Sci. Letters 279, 3, p. 293-302.

(Woodlark Spreading Center subducting at San Cristobal trench, forming triple junction at New Georgia Group arc in Solomon Islands. Volcanics chemistry suggests mantle migrates across plate boundary through slab windows created by subduction of spreading center. Presence of slab windows may also be responsible for unusual forearc volcanism and melting of slab window margins high-silica adakite-like lavas)

Chapman, F. (1905)- Notes on the older Tertiary foraminiferal rocks on the west coast of Santo, New Hebrides. Proc. Linnean Soc. New South Wales 30, p. 261-274.
(online at: https://www.biodiversitylibrary.org/item/30106page/297/mode/1up)
(E-M Miocene limestones with Miogysina, Lepidocyclina, etc.)

Chapman, F. (1918)- Report on a collection of Cainozoic fossils from the oil fields of Papua, with geological introduction by Arthur Wade. Bull. Territory of Papua, Melbourne, 5, p. 1-18.
(Listing of Miocene-Recent fossils from oil-bearing strata along coast from Yule Island to Parare delta, PNG)

Clark, G.H. (1987)- Geology and resource estimation at the Panguna porphyry copper/gold mine, Papua New Guinea. Proc. Pacific Rim Congress 87, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 549-556.

Clark, G.H. (1990)- Panguna copper-gold deposit. I: F.E. Hughes (ed.) Geology of the mineral deposits of Australia and Papua New Guinea, vol. 2, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Monogr. 14, p. 1807-1816.

Clarke, D.S., R.W. Lewis & H.M. Waldron (1990)- Geology and trace-element geochemistry of the Umuna gold-silver deposit, Misima Island, Papua New Guinea. J. Geochemical Exploration 35, p. 201-223.
(Umuna epithermal gold-silver deposit on E Misima Island, Solomon Islands, hosted in 100-300m-wide zone of fractures, veins, recognized over 3-km strike length. Host rocks metamorphosed Cretaceous-Paleogene volcano-sedimentary sequence, intruded by Neogene granodioritic bodies)

Connelly, J.B. (1976)- Tectonic development of the Bismarck Sea based on gravity and magnetic modelling. Geophysical J. Royal Astronomical Soc., 46, 1, p. 23-40.
(Bismarck Sea is small marginal sea N of New Britain island and its associated trench, surround on three sides by island arcs. Magnetic map shows E-W general trend of anomalies. Water depth ~2000m and Bouguer gravity values are +150 mGal. In E half of Sea active N-S extension)

Crawford, A.J., L. Briqueu, C. Laporte & T. Hasenaka (1995)- Coexistence of Indian and Pacific Oceanic upper mantle reservoirs beneath the Central New Hebrides Island Arc. In: B. Taylor & N. James (eds.) Active margins and marginal basins of the western Pacific, American Geophys. Union (AGU), Geophys. Monograph 88, p. 199-217.
(Throughout most of its 30 Myr history New Hebrides intra-oceanic island arc produced lavas with Pb-Nd-Sr isotopic signatures defining arrays interpreted to reflect mixing between a Pacific-type MORB mantle source. Collision of Eocene intra-oceanic arc (d'Entrecasteaux zone) with central part of New Hebrides arc at ~2-3 Ma produced shift in isotopic signatures to mix between mantle source like Indian Ocean mid-ocean ridge basalts and a slab-derived component very close to that involved in arc magmatism away from collision zone. Etc.)

Cunningham, H., J. Gill, S. Turner, J. Caulfield, L. Edwards, S. Day (2012)- Rapid magmatic processes accompany arc-continent collision: the Western Bismarck arc, Papua New Guinea. Contrib. Mineralogy Petrology 164, 5, p. 789-804.
(New geochemical and isotope data for young lavas from New Britain and W Bismarck arcs in PNG. New Britain is oceanic arc, W Bismarck is site of arc-continent collision)

Curtis, J.W. (1973)- The spatial seismicity of Papua New Guinea and the Solomon Islands. J. Geol. Soc. Australia 20, 1, p. 1-19.

Curtis, J.W. (1973)- Plate tectonics and the Papua New Guinea-Solomon Islands region. J. Geol. Soc. Australia 20, 1, p. 21-36.
(Earthquake focal mechanism solutions in PNG/ Solomon Islands regions used to delineate tectonic plates. Area of interaction of Australian and S Pacific plates, which here consists of Solomon Sea, New Britain and Manus plates. Subduction is apparent under New Britain and Solomon Islands, sinistral transcurrent movement between New Britain and Manus plates, sea-floor spreading in Woodlark Basin and continent/island arc collision in N New Guinea)

Davies, H.L. (1973)- Fergusson Island, Papua New Guinea. 1:250 000 Geological Series, Sheet SC/56-5, Bureau of Mineral Resources, Geology & Geophysics, Canberra.
(Geologic map of one of D'Entrecastaux island, off SE tip of PNG mainland)

Davies, H.L. (2015)- The geology of Bougainville. In: A.J Regan & H.M Griffin (eds.) Bougainville before the conflict, ANU eView, Australian National University, Canberra, p. 20-30.
(online at: http://eview.anu.edu.au/bougainville/pdf/ch02.pdf)
(Brief review of geology of Bougainville- Buka/ Solomon island Ridges, which started to form at ~45 Ma at Pacific- Australian plates boundary with eruption of submarine volcanic rocks (Late Eocene- E Oligocene Atamo Volcanics). Subduction active along Kilinailau Trenc until ~10 Ma, when collision of Ontong Java Plateau at ~10 Ma initiated reversal of subduction and started subduction of Australian Plate beneath Pacific Plate along New Britain- Bougainville- Makira Trench. Panguna porphyry copper mine active from 1972-1989)

Davies, H.L., E. Honza, D.L. Tiffin, J. Lock, Y. Okuda, J.B.Keene et al. (1987)- Regional setting and structure of the western Solomon Sea. Geo-Marine Letters 7, 3, p. 153-160.
(W Solomon Sea bounded by Paleogene collision complex of Papuan Peninsula to S and land masses formed by Cainozoic volcanism to N and E. Oblique collision of two trenches in W Solomon Sea produced structural complexities that may include doubling of crustal thickness and strong negative gravity anomaly W of 149°E)

Davies, H.L. & D.J. Ives (1965)- The geology of Fergusson and Goodenough Islands, Papua. Bureau Mineral Res., Geol. Geophysics, Canberra, Report 82, p. 1-65.
(online at: www.ga.gov.au/corporate_data/14996/Rep_082.pdf)
(D'Entrecastreaux Islands, N of E end of Papuan mainland, are domes of metamorphic rocks with granodiorite cores. Thick metamorphics of unknown age, possibly related to, but higher grade than Owen Stanley metamorphics of E Papua mainland. Ultramafic rocks (marginal to metamorphic blocks and separated from them by major faults), granodiorites (with xenoliths of ultramafics, therefore younger) and Late Tertiary-Recent volcanics))

Davies, H.L. & R.C. Price (1987)- Basalts from the Solomon and Bismarck Seas. Geo-Marine Letters 6, 4, p. 193-202
(Solomon and Bismarck Seas formed by back-arc spreading in E-M Cenozoic and Pliocene- Quaternary respectively. Volcanic rocks from Solomon Sea Basin mostly ferrobasalt lavas similar to evolved MORB)

Davies, H.L., P.A. Symonds & I.D. Ripper (1984)- Structure and evolution of the southern Solomon Sea region. BMR J. Australian Geol. Geophysics 9, 1, p. 49-68.
(online at: www.ga.gov.au/corporate_data/81171/Jou1984_v9_n1_p049.pdf)
(Review of geology of Solomon Sea region, E of 'mainland' PNG. Solomon Sea bounded to N by New Britain active arc-trench subduction system. Lithosphere of Solomon Sea Basin probably formed by back-arc spreading in E Tertiary. As result of subduction to NE, NW and SW lithosphere anticlinally folded about E-W and N-S axes. Miocene- Holocene volcanics of SE Papua mostly arc-trench suite and probably related to Miocene-Quaternary subduction at Trobriand Trough. Trobriand Basin up to 5000m of Miocene- younger sediments)

Davies, H.L., P.A. Symonds & I.D. Ripper (1985)- Structure and evolution of the southern Solomon Sea region. Proc. 21st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bandung 1984, p. 170-199.

(Reprint of Davies et al. (1984) BMR paper. Good overview of onshore and offshore geology of Solomon Sea area, between E Papuan Peninsula and New Britain. Solomon Sea Basin probably formed by back-arc spreading in E Tertiary)

Davies, H.L. & R.G. Warren (1988)- Origin of eclogite-bearing, domed, layered metamorphic complexes (ócore complexesô) in the D'Entrecasteaux Islands, Papua New Guinea. Tectonics 7, 1, p. 1-21.
(Layered metamorphic rocks of D'Entrecasteaux Islands, PNG, folded into domes and antiforms bounded by faults parallel to metamorphic layering and foliation. Metamorphic grade in N islands amphibolite facies with pockets of eclogite and granulite, and greenschist facies in S island. All three islands sequence from felsic metamorphics at base to ultramafics at top. Association of metamorphic and ultramafic rocks developed in N-dipping Paleogene subduction system and exhumed to upper crustal level in Oligocene- E Miocene, possibly by reversal of faults in former subduction system. Uplift and development of domes and antiforms in Pliocene triggered by W-ward propagation of Woodlark Basin spreading ridge and accompanied by rift-related magmatism, rapid erosion and deposition of coarse sediment in adjacent Trobriand Basin)

Davies, H.L. & R.G. Warren (1992)- Eclogites of the D'Entrecasteaux Islands. Contrib. Mineralogy Petrology 112, 4, p. 463-474.
(Three types of eclogitic rocks on D'Entrecasteaux Islands, SE PNG: (1) true eclogites of omphacite-garnet-rutile; (2) retrogressed eclogites with some omphacite altered to albite and less-jadeitic clinopyroxene, and (3) eclogitic rocks in which clinopyroxene is jadeitic diopside. Eclogitic rocks lenticular boudins and small concordant tabular bodies in 2-3 km thick migmatitic gneisses. Gneiss sequence bounded by detachment faults above and younger granodiorite below. Eclogite equilibrated at T of 530-840°C and P of 12-24 kbar. Metamorphic complex developed during Paleocene N-ward subduction and Paleo-Eocene arc-continent collison, and elevated to crustal levels during Late Oligocene- E Miocene (~30-25 Ma) crustal extension. Plio-Quaternary rapid elevation and doming of metamorphics associated with rifting, magmatism and opening of Woodlark Basin No glaucophane and lawsonite found in D'Entrecasteaux Islands)

De Keyser, F. (1961)- Misima Island- geology and gold mineralization. Bureau Mineral Res., Geol. Geophysics, Report 57, p. 1-36.

Denham, D. (1969)- Distribution of earthquakes in the New Guinea-Solomon Islands Region. J. Geophysical Research 74, 17, p. 4290-4299.

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DePaolo, D. & R. Johnson (1979)- Magma genesis in the New Britain island-arc: constraints from Nd and Sr isotopes and trace-element patterns. Contrib. Mineralogy Petrology 70, 4, p. 367-379.
(Nd-Sr isotopes suggest island arc lavas in general derived from mixture of suboceanic mantle and hydrothermally altered mid-ocean ridge-type basalt, but New Britain magma source homogeneous with little indication of involvement of oceanic crust or mantle inhomogeneity. Mafic lavas from New Britain and other island arcs anomalously high Sr/Nd, possibly due to components from subducted oceanic crust)

Eastoe, C.J. (1978)- A fluid inclusions study at the Panguna porphyry copper deposit, Bougainville, Papua New Guinea. Economic Geology 73, p. 721-748.

Eastoe, C.J. (1979)- The formation of the Panguna porphyry copper deposit, Bougainville, Papua New Guinea: with an appendix on the Frieda porphyry copper prospect, New Guinea. Ph.D. Thesis, University of Tasmania, Hobart, p. 1-255.
(online at: http://eprints.utas.edu.au/11544/)
(Panguna copper-gold deposit of Bougainville, NW of Solomon Islands, formed at S contact between Pliocene Kaverong Quartz Diorite and Panguna Andesite (3-5 Ma). Depth of formation near 3 km)

Eastoe, C.J. (1982)- The physics and chemistry of the hydrothermal systems in the Panguna porphyry copper deposit, Bougainville, Papua New Guinea. Economic Geology 77, p. 127-153.
(Copper in Panguan deposited mainly by salt-rich liquid expelled directly from magma (Kaverong Quartz Diorite)

Eastoe, C.J. & P.J Eadington (1986)- High temperature fluid inclusions and the role of the biotite granodiorite in mineralization at the Panguna porphyry copper deposit, Bougainville, Papua New Guinea. Economic Geology 81, p. 478-483.
(Porphyry copper mineralization at Panguna on Bougainville, PNG, located at S margin of Pliocene Kaverong Quartz Diorite stock, which intrudes andesites of Miocene age)

Eilon, Z.C. (2016)- New constraints on extensional environments through analysis of teleseisms. Ph.D. Thesis, Columbia University, p. 1-215.
(Use of teleseismic methodologies to investigate upper mantle structure in extensional environment of Woodlark Rift, SE PNG)

Eilon, Z., G.A. Abers, J.B. Gaherty & G. Jin (2016)- A joint inversion for shear velocity and anisotropy: the Woodlark Rift, Papua New Guinea. Geophysical J. Int. 206, 2, p. 807-824.

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(Imaging of upper mantle under D'Entrecasteaux Islands, PNG, providing insight into mantle deformation under highly rifted continent adjacent to propagating oceanic spreading center)

Eilon, Z., G.A. Abers, G. Jin & J.B. Gaherty (2014)- Anisotropy beneath a highly extended continental rift. Geochem. Geophys. Geosystems 15, 3, p. 545-564.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2013GC005092/epdf)
(On shear wave splitting in Woodlark-D'Entrecasteaux Rift, an area representing transitional stage between small-extension intracontinental rift and oceanic spreading center)

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(Young ultra-high-pressure rocks in Woodlark Basin, PNG, within active rift. Thermo-mechanical modeling shows UHP exhumation of gneiss domes in Woodlark Basin may result from feedback between rifting and diapiric rise of previously subducted continental fragment through lithosphere)

Exon, N.F. & M.S. Marlow (1988)- The petroleum potential of the New Ireland Basin, Papua New Guinea. In: In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 185-201.
(Undrilled New Ireland basin forearc basin with up to 7km of M Eocene-Recent sediments on E Eocene (and older?) oceanic crust. Most of basin >1000m water depth. Sediments probably include common volcanoclastics. Possible Miocene source rocks. Miocene carbonates potential reservoir rocks. One bright spot on seismic. No anticlinal structures, but common fault blocks. Overall moderate hydrocarbon potential)

Exon, N.F. & M.S. Marlow (1988)- Geology and offshore resource potential of the New Ireland-Manus region- a synthesis. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council for Energy Min. Res., Houston, Earth Science Ser. 9, p. 241-262.

Exon, N.F. & M.S. Marlow (1990)- The New Ireland Basin: a frontier Basin in Papua New Guinea. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby 1990, p. 513-534.

(Onshore geology and seismic survey N of New Ireland Basin. Up to 2000m of M Eocene- earliest Miocene andesitic arc volcanics, built on oceanic crust. Subduction ceased in E Miocene, causing deposition of Miocene limestones. Followed by Late Miocene-Pliocene volcanics)

Exon, N.F., W.D. Stewart, M.J. Sandy & D.L. Tiffin (1986)- Geology and offshore petroleum prospects of the eastern New Ireland Basin, Northeastern Papua New Guinea. BMR J. Australian Geol. Geophysics 10, 1, p. 39-51.
(online at: www.ga.gov.au/corporate_data/81203/Jou1986_v10_n1_p039.pdf)
(New Ireland Basin NE of PNG and NE of New Hanover and New Ireland islands. Basin formed as fore-arc basin between Eocene- E Miocene volcanic arc in SW and outer-arc high in NE. Basin with up to 5 km of fill, interpreted as E Miocene and possibly Oligocene volcaniclastics, Miocene shelf carbonates, Late Miocene-Pliocene bathyal chalks and volcaniclastics, and Pleistocene-Recent sediments. In E Plio-Pleistocene volcanism has formed islands and greatly disturbed the older strata)

Exon, N.F. & D.L. Tiffin (1984)- Geology and petroleum prospects of offshore New Ireland Basin in northern Papua New Guinea. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, p. 623-630.
(NW trending New Ireland Basin 900km long, 160km wide, undrilled. Manus- New Hanover- New Ireland islands part of ?Late Eocene- Oligocene island arc that separated Indo-Australian Plate from Pacific Plate. Overlain by widespread Miocene limestones (see also Exon et al. (1986) paper above))

Falvey, D.A. & T. Pritchard (1984)- Preliminary palaeomagnetic results from Northern Papua New Guinea: evidence for large microplate rotations. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, American Assoc. Petrol. Geol. (AAPG), p. 593-599.
(Paleomagnetic data of Huon Peninsula and islands to N and E (New Britain, Manus, New Ireland, etc.). Huon-New Britain/ Manus/New Ireland rotated 60° CW, and may restore to Eocene NE trending arc, probably adjacent to Papuan Ultramafic belt at 45 Ma. Data from New Ireland- Buka indicate this part of N Solomon Islands part of Pacific Plate since ~10 Ma, Late Miocene)

Ferris, A. (2007)- Seismic imaging of active continental breakup in the Woodlark rift system of Papua New Guinea. Ph.D. Thesis Boston University, p. 1-125.

Ferris, A., G.A. Abers, B. Zelt, B. Taylor & S. Roecker (2006)- Crustal structure across the transition from rifting to spreading: the Woodlark rift system of Papua New Guinea. Geophysical J. Int. 166, p. 622-634.
(online at: http://gji.oxfordjournals.org/content/166/2/622.full.pdf+html)
(Woodlark rift system active ocean basin formation. Continental extension rates some of fastest on planet, with extension progressing E-wards to seafloor spreading. Seismic velocities suggest transition from diffuse continental rifting to localized seafloor spreading likely across narrow zone. Magmatism may not play significant role in altering crust until onset of seafloor spreading, except through underplating at base of crust)

Fitz, G.G. (2011)- Offshore mapping and modeling of Miocene-Recent extensional basins adjacent to metamorphic gneiss domes of the D'Entrecasteaux Islands, eastern Papua New Guinea. M.Sc. Thesis University of Texas at Austin, p. 1-183.
(online at: https://repositories.lib.utexas.edu/handle/2152/14789)
(D'Entrecasteaux Island gneiss domes fault-bounded domes with ~2.5 km of relief, exposing UHP and HP metamorphic gneisses and migmatites, exhumed in Oligocene-Miocene arc-continent collision-subduction zone, subject to Late Miocene- Recent continental extension. Subduction slowed at ~8 Ma as margin transitioned to extensional tectonic environment. Lack of upper crustal extension accompanying subsidence in Trobriand and Goodenough basins suggests lithospheric extension from 8-0 Ma accompanied uplift of DEI gneiss domes. Basin extension of 2.3-13.4 km in upper crust, while subsidence values indicate >21-24 km of lower crust extension since ~8 Ma. DEI domes formation involve vertical exhumation of buoyant lower crust, far-field extension from slab rollback, and inverted two-layer crustal density structure)

Fitz, G. & P. Mann (2013)- Evaluating upper versus lower crustal extension through structural reconstructions and subsidence analysis of basins adjacent to the DôEntrecasteaux Islands, eastern Papua New Guinea. Geochem. Geophys. Geosystems 14, 6, p. 1800-1818.
(D'Entrecasteaux Islands fault-bounded gneiss domes with ~2.5 km of relief, exposing high pressure gneisses and migmatites, exhumed in Oligocene-Miocene arc-continent collision and subject to Late Miocene- Recent continental extension. Trobriand basin formed as fore-arc basin during S-ward Miocene subduction at Trobriand trench. Subduction slowed at ~8 Ma as margin changed to extensional environment. Goodenough rift basin developed after extension began (~8 Ma) as hanging wall of N-dipping Owen-Stanley normal fault. Lack of upper crustal extension accompanying subsidence in Trobriand-Goodenough basins suggests depth-dependent lithospheric extension since 8 Ma accompanied uplift of gneiss domes. Crustal thinning preferentially accommodated in lower crust. Uplift of DEI domes involves vertical exhumation of buoyant, postorogenic lower crust, far-field extension from slab rollback, and inverted 2-layer crustal density structure)

Fitz, G. & P. Mann (2013)- Tectonic uplift mechanism of the Goodenough and Fergusson Island gneiss domes, eastern Papua New Guinea: constraints from seismic reflection and well data. Geochem. Geophys. Geosystems 14, 10, p. 3969-3995.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/ggge.20208)
(HP and UHP fault-bounded gneiss domes of Goodenough and Fergusson Islands result of Late Miocene-Recent continental extension/ exhumation (diapiric uplift of previously subducted continental fragment). Seismic and well data from surrounding offshore areas suggest Trobriand basin formed as forearc basin at Trobriand trench, then at ∼8 Ma margin transitioned to extensional tectonic environment)

Fountain, J.R. (1972)- Geological relationships in the Panguna porphyry copper deposit, Bougainville island, New Guinea. Economic Geology 67, p. 1049-1064.
(Pliocene diorite-granodiorite intrusives in hornfelsed andesite. Four units)

Francis, G. (1988)- Stratigraphy of Manus Island, western New Ireland basin, Papua New Guinea. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 31-40.
(Manus Island underlain by M Eocene- earliest Miocene Tinniwi Fm island arc volcanics, probably on Paleogene oceanic crust. Overlain by Miocene- Pliocene marine sediments, several Miocene- E Pliocene lmestone formations and more E-M Miocene andesitic rocks)

Francis, G., J. Lock & Y. Okuda (1987)- Seismic stratigraphy and structure of the area to the southeast of the Trobriand Platform. Geo-Marine Letters 7, 3, p. 121-128.
(Area SE of Trobriand carbonate platform S of Woodlark Rise, SE PNG, contains E continuation of Oligocene-Quaternary Cape Vogel Basin. Three major seismic sequences recognized. A-B and B-D sequences faulted and gently folded in Late Miocene. To S and SE of this depocenter Cape Vogel Basin truncated by Pliocene opening of Woodlark Basin, an active W-ward-propagating spreading system. Goodenough 1 well Late Oligocene- E Miocene Iauge Volcanics, overlain my marine M Miocene- Pleistocene

Frantz, L., K.P. Becker, W. Kramer & P.M. Herzig (2002)- Metasomatic mantle xenoliths from the Bismarck Microplate (Papua New Guinea)- thermal evolution, geochemistry and extent of slab-induced metasomatism. J. Petrology 43, 2, p. 315-343.
(online at: http://petrology.oxfordjournals.org/content/43/2/315.full.pdf+html)
(On ultramafic mantle xenoliths from Tubaf and Edison seamounts in the Bismarck Archipelago, NE of PNG, transported to sea floor by rift-related Quaternary trachybasalts)

Galewsky, J. & E.A. Silver (1997)- Tectonic controls on facies transitions in an oblique collision: the western Solomon Sea, Papua New Guinea. Geol. Soc. America (GSA) Bull. 109, 10, p. 1266-1278.
(W Solomon Sea is closing ocean basin and incipient arc-continent collision between Bismarck arc and Australian continental margin in PNG. Seismic profiles and sidescan sonar data indicate sedimentation controlled by topographic gradients generated by flexure of Solomon Sea plate)

Gardien, V., C. Lecuyer & J.F. Moyen (2008)- Dolerites of the Woodlark Basin (Papuan Peninsula, New Guinea): a geochemical record of the influence of a neighbouring subduction zone. J. Asian Earth Sci. 33, p. 139-154.
(Moresby Seamount in Woodlark Basin is fragment of oceanic crust (dolerites and gabbros) generated at ~65-68 Ma before being obducted on Australian margin in Eocene. Since 8 Ma, normal faulting related to opening of Woodlark Basin responsible for unroofing of Moresby seamount. Dolerite source was depleted oceanic mantle influenced by arc-related magmas, suggesting seamount created near subduction zone)

Gill, J.B., J.D. Morris & R.W. Johnson (1993)- Time scale for producing the geochemical signature of island arc magmas: U-Th-Po and Be-B systematics in recent Papua New Guinea lavas. Geochimica Cosmochimica Acta 57, 17, p. 4269-4283.
(Geochemistry of Holocene volcanic rocks from Bismarck/ New Britain volcanic arc)

Glikson, M. (1988)- Petroleum source rock study, Miocene rocks of New Ireland, Papua New Guinea. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Sci. Ser. 9, p. 161-183.
(Source rock analyses of Miocene marine and lagoonal sediments and volcanoclastics of New Ireland island)

Goodliffe, A.M., J. Kington & B. Taylor (2008)- Reconciling extension from brittle faulting, subsidence, and kinematic reconstructions: lessons from the Woodlark Basin. AAPG Int. Conf. Exhib., Cape Town 2008, 29p.
(Abstract) (Online at: www.searchanddiscovery.net/documents/2009/30089goodliffe/ndx_goodliffe.pdf)
(Woodlark Basin, PNG, actively rifting since 8.4 Ma. Near rifting-to-seafloor spreading transition asymmetric rift system comprises large tilted fault blocks on S margin and unfaulted N margin that has subsided >3 km. Estimated extension from faulting ~111 km. Extension estimated by fitting Euler poles to fracture zones and magnetic chrons in oceanic lithosphere gives >200 km since 6 Ma. Metamorphic core complexes (MCC), where upper crust has been removed may account for discrepancy)

Goodliffe, A.M. & B. Taylor (2007)- The boundary between continental rifting and sea-floor spreading in the Woodlark Basin, Papua New Guinea. In: G.D. Karner et al. (eds.) Imaging, mapping and modelling continental lithosphere extension and breakup, Geol. Soc., London, Spec. Publ. 282, p. 217-238.
(Progression from rifting of SE Papuan continent to W-ward propagating seafloor spreading in Woodlark Basin characterized by decrease in sedimentation as margins are thinned, subside below sea level and trap sediments in proximal basins. Post-rift sedimentation near continent- ocean boundary hemipelagic and drapes breakup topography without distinct breakup unconformity. Synrift sediments, deposited above 8.4 Ma rift onset unconformity and prior to breakup characterized by rotated sections)

Goodliffe, A M., B. Taylor, F. Martinez, R.N. Hey, K. Maeda & K. Ohno (1997)- Synchronous reorientation of the Woodlark Basin spreading center. Earth Planetary Sci. Letters 146, p. 233-242.
(Seafloor spreading in Woodlark Basin began at ~6 Ma, following period of continental rifting, and propagated W-ward. New multibeam bathymetry and magnetic data shows present spreading axis oblique to older seafloor fabric and Brunhes/Matuyama (0.78 Ma) crustal boundary, indicating 22° CCW re-orientation of 500km long Woodlark Basin spreading system at ~80 ka)

Gordon, S.M., T.A. Little, B.R. Hacker, S.A. Bowring, M. Korchinski, S.L. Baldwin & A.R.C. Kylander-Clark (2012)- Multi-stage exhumation of young UHP-HP rocks: timescales of melt crystallization in the DôEntrecasteaux Islands, southeastern Papua New Guinea. Earth Planetary Sci. Letters 351-352, p. 237-246.
(online at: http://www.geol.ucsb.edu/faculty/hacker/viz/Gordon12_PNG_eclogite_UPb.pdf)
(D'Entrecasteaux Islands outcrops of youngest known ultrahigh-pressure (UHP)- high-P eclogites and gneisses. Zircon ages suggests eclogites may have undergone UHP metamorphism from ~7.2- 4.6 Ma; TIMS dates suggest 5.6-4.6 Ma. Eclogite and gneisses exhumed to lower crustal depths by ~3.5-3.0 Ma)

Gregoire, M., B.I.A. McInnes & S.Z. O'Reilly (2001)- Hydrous metasomatism of oceanic sub-arc mantle, Lihir, Papua New Guinea. Part 2. Trace element characteristics of slab-derived fluids. Lithos 59, p. 91-108.

(See also companion paper by McInnes et al. 2001. On spinel peridotite mantle xenoliths from Tubaf and Edison volcanoes, S of Lihir Island in Tabar-Lihir-Tanga-Feni island arc in PNG)

Haig, D.W. (1985)- Micropalaeontological report on samples from Yule Island. CCOP Techn. Bull. 17, p. 47-59.

Haig, D.W. (1987)- Tertiary foraminiferal rock samples from the western Solomon Sea. Geo-Marine Letters 6, 4, p. 219-228.
(Rock fragments dredged from four stations in W Solomon Sea: (1) E Eocene upper bathyal biomicrite from Trobriand Platform with (Acarinina spp., Pseudohastigerina, Morozovella, etc.); (2) Late Oligocene-E Miocene neritic limestones off Trobriand Platform and inner wall New Britain Trench; (3) Miocene bathyal sediments from Trobriand Platform; (4) similar Pliocene from inner wall New Britain Trench and central part Solomon Sea Basin. No reworked pre-Tertiary foraminifera)

Haig, D.W. & P.J. Coleman (1988)- Neogene foraminifera as time space indicators in New Ireland, Papua New Guinea. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 91-111.
(Oldest known foram assemblage (E Oligocene with abundant Nummulites fichteli) in pebbles from Jaulu Volcanics in New Ireland, PNG. Assemblages from Lelet Lst range from latest Oligocene (Te with Miogypsinoides dehaartii, Miogypsina)- Late Miocene. During M Miocene bathyal sedimentation in N and S New Ireland. Latest Pliocene- E Pleistocene assemblages indicate shallowing from middle bathyal and date final emergence of New Ireland landmass from ~2.0 Ma)

Hammarstrom, J.M., D. Saroa, B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 009pCu7209, Inner Melanesian Arc- New Britain, Papua New Guinea. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix T, p. 275-286.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of porphyry copper deposits in Late Eocene - E Miocene Inner Melanesian Arc on New Britain Island, part of 1000km-long calc-alkaline Inner Melanesian Arc that developed from SW-ward subduction of Pacific Plate along New Britain Trench. Porphyry and high-sulfidation epithermal systems formed during plate reorganization at ~24-25 Ma, when New Britain was at intersection of S Caroline and Melanesian Arcs (Uasilau-Yau Yau intrusive complex, Pleysumi (24.5 Ma), Kulu (22.6 Ma), Esis, Simuku, Sinivit, Andewa, etc))

Hammarstrom, J.M., D. Saroa, B.T. Setiabudi, D.N. Sunuhadi, G.R. Robinson, C.L. Dicken, S. Ludington, A.A. Bookstrom & M.L. Zientek (2013)- Porphyry copper assessment for Tract 009pCu7207, Outer Melanesian Arc I- Papua New Guinea. In: J.M. Hammarstrom et al., Porphyry copper assessment of Southeast Asia and Melanesia, U.S. Geol. Survey, Scient. Invest. Rept. 2010-5090-D, Appendix U, p. 287-302.
(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
(Assessment of Eocene and younger porphyry copper deposits in Outer Melanesian Arc (Manus, New Ireland, Bougainvolle, Bismarck Archipelago ((Tabar, Lihir, Tanga and Feni Islands). Arc is N extension of Solomon Arc, tied to SW subduction of Pacific Plate. Manus (Arie deposit) and New Ireland with E-M Miocene porphyry copper prospects. Bougainville hosts Pliocene porphyry copper deposits (Panguna; 3.4 Ma; closed 1989))

Hanzawa, S. (1947)- Note on an Eocene foraminiferal limestone from New Britain. In: Recent Progress of Natural Sciences in Japan, Nihon Shizen Kagaku Shuho (Japanese J. Geology Geography), 20, 2-4, p. 59-61.
(Foraminiferal assemblage of limestone block in river near Nakanai, New Britain, includes two new species, Pellatispira reticularis and Acervulina linearis and resembles Eocene fauna of Palau island)

Harlow, G.E., G.R. Summerhayes, H.L. Davies & L. Matisoo-Smith (2012)- Jade gouge from Emirau Island, Papua New Guinea (Early Lapita context, 3300 BP): a unique jadeitite. European J. Mineralogy 24, p. 391-399.
(Small stone artifact from Emirau Island, Bismarck Archipelago consists of jadeitite- jadeite jade of unusual composition. Possible source along Torare River in NE W Papua, Indonesia, where 'chloromelanite' (=

jadeitite) was collected by Wichmann in 1903 near Humboldt Bay, with stone adzes made from same material)

Haschke, M. & Z. Ben-Avraham (2005)- Adakites from collision-modified lithosphere. Geophysical Research Letters 32, 15, L15302, p. 1-4.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2005GL023468/pdf)
(Quaternary hornblende-bearing dacites and trachytes from Lusancay Islands and Aird Hills (~150 km N of Woodlark Rift, SE of PNG) show adakitic geochemical signatures. Adakites may be linked to rifting of collision-modified lithosphere)

Hedervadi, P. & Z. Papp (1977)- Seismicity maps of the New Guinea Solomon Islands region. Tectonophysics 42, p, 261-281.

Hill, E.J. (1994)- Geometry and kinematics of shear zones formed during continental extension in eastern Papua New Guinea. J. Structural Geol. 16, 8, p. 1093-1105.
(D'Entrecasteaux Islands (Goodenough, Fergusson islands) of E PNG in area of continental extension, active since M Miocene. During last 4 Ma metamorphic basement domes uplifted and exhumed from depths of ~35 km. Tectonic exhumation by deformation in broad mylonitic shear zones. Progressive evolution in shear zones from dominantly ductile to brittle processes and decreasing metamorphic grade (retrograde metamorphism), result of uplift and cooling)

Hill, E.J. & S.L. Baldwin (1993)- Exhumation of high-pressure metamorphic rocks during crustal extension in the D'Entrecasteaux region, Papua New Guinea. J. Metamorphic Geol. 11, 2, p. 261-277.
(D'Entrecasteaux Islands of E PNG consist of number of active metamorphic core complexes, formed under extensional tectonic setting related to sea-floor spreading in west Woodlark Basin. Complexes are mountainous domes of fault-bounded, high-grade metamorphics (including eclogite facies) intruded by 2-4 Ma granodiorite plutons. Two major episodes of granodiorite intrusion during uplift and exhumation of core complexes. Both closely coincide spatially with high-T metamorphic rocks)

Hill, E.J., S.L. Baldwin & G.S. Lister (1992)- Unroofing of active metamorphic core complexes in the D'Entrecasteaux Islands, Papua New Guinea. Geology 20, 10, p. 907-910.
(Metamorphic core complexes formed as result of active extension at W end of Woodlark Basin. High grade metamorphism followed by rapid cooling between 1-2 Ma)

Hill, E.J., S.L. Baldwin & G.S. Lister (1995)- Magmatism as an essential driving force for formation of active metamorphic core complexes in eastern Papua New Guinea. J. Geophysical Research 100, p. 10441-10451.
(Metamorphic core complexes of D'Entrecasteaux Islands intruded by granodiorite plutons during formation. Granodiorite magmatism and development metamorphic core complexes in linear zone coinciding with zone of thick crust and rugged topography. Plutonism facilitated deformation in ductile extensional shear zones, resulting in tectonic exhumation of deep crustal rocks. Source of plutons may be related to linear zone of mantle upwelling related to propagation of Woodlark seafloor spreading center into continental crust)

Hilyard, D. & R. Rogerson (1989)- Revised stratigraphy of Bougainville and Buka Islands, Papua New Guinea. In: J.G. Vedder & T.R. Bruns (eds.) Geology and offshore resources of Pacific Island arcs; Solomon Islands and Bougainville, Papua New Guinea regions, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Sci. Ser. 12, p. 87-92.
(Oldest exposed rocks on Bougainville Island Late Eocene- E Oligocene Atamo Volcanics. Miocene (Tf) Keriaka limestone, etc.)

Hine, R., S.M. Bye, F.W. Cook, J.F. Leckie & G.L. Torr (1978)- The Esis porphyry copper deposit, East New Britain, Papua New Guinea. Economic Geology 73, p. 761-767.
(Esis porphyry copper deposit in E New Britain typical island-arc setting, at margin of Late Oligocene composite pluton, intruding Eocene basic volcanics)

Hine, R. & D.R. Mason (1978)- Intrusive rocks associated with porphyry copper mineralization, New Britain, Papua New Guinea. Economic Geology 73, p. 749-760.
(U Oligocene- M Miocene I-type granitic-dioritic intrusive complexes of New Britain intrude basic Eocene volcanics that form part of basement of New Britain island arc. With small centers of porphyry copper mineralization)

Hoffmann, G.D. (2010)- Tectonic processes and submarine flows in the Bismarck Volcanic Arc, Papua New Guinea. Ph.D. Thesis, University of California, Santa Cruz, p. 1-264.
(online at: https://media.proquest.com/media/pq/classic/doc/2142289031/)
(Study of four fields of undulating sediments from sidescan and multibeam sonar imagery in Bismarck Sea, N of NewBritain island)

Hoffmann, G., E. Silver, S. Day, N. Driscoll & D. Orange (2011)- Deformation versus deposition of sediment waves in the Bismarck Sea, Papua New Guinea. In: R.C. Shipp et al. (eds.) Mass-transport deposits in deepwater settings, Soc. Sedimentary Geology (SEPM) Spec. Publ. 96, p. 455-474.
(Four fields of undulating sediment in Bismarck volcanic arc N of New Britain island associated with downslope scour features and other evidence of turbidity-current activity, probably formed by combination of extensional deformation and repeated turbidity currents)

Hoffmann, G., E. Silver, S. Day, E. Morgan, N. Driscoll & B. Appelgate (2010)- Drowned carbonate platforms in the Bismarck Sea, Papua New Guinea. J. Marine Geophysical Res. 30, 4, p. 229-236.
(online at: www.springerlink.com/content/1172968x20u86n38/fulltext.pdf)
(Extinct volcanic islands in Bismarck volcanic arc fringed by well-developed coral reefs, with drowned platforms down to 1100m BSL, providing evidence for subsidence in C section of arc, N of Finisterre Terrane-Australia collision. Adjacent mainland coast has raised terraces indicating long-term uplift. Volcanic and sedimentary loading can explain inferred relative subsidence)

Hoffmann, G., E. Silver, S. Day, E. Morgan, N. Driscoll & D. Orange (2008)- Sediment waves in the Bismarck Volcanic Arc, Papua New Guinea. In: A.E. Draut et al. (eds.) Formation and applications of the sedimentary secord in arc collision zones, Geol. Soc. America (GSA), Spec. Paper 436, p. 91-126.
(Six fields of sediment waves imaged in Bismarck Volcanic Arc. Sediment structures not unique and can result from predominantly continuous currents or episodic (turbidity) current, or from deformation of sediment)

Hohnen, P.D. (1978)- Geology of New Ireland, Papua New Guinea. Bull. Bureau Mineral Res., Geol. Geophysics 194 (PNG 12), p. 1-39.
(online at: https://d28rz98at9flks.cloudfront.net/69/Bull_194.pdf)
(New Ireland is E-M Oligocene volcanic island arc deposits. Overlain by Late Oligocene- earliest Miocene erosional surface, ~500m of E Miocene (Te5)- early Late Miocene limestones. Late Miocene faulting, latest Miocene- E Pliocene volcanoclastics in graben, Late Pliocene and younger uplift)

Holm, R.J. & S.W. Richards (2013)- A re-evaluation of arc-continent collision and along-arc variation in the Bismarck Sea region, Papua New Guinea. Australian J. Earth Sci. 60, p. 605-619.
(Bismarck Sea region of NE PNG marked by recent arc-continent collision. Australian continental crust extends as underthrust block beneath accreted Finisterre Terrane. Subducting continental crust and slab stagnation resulted in complex arc-related geochemical signatures along Bismarck arc. In E Solomon Sea plate is subducting beneath New Britain and sedimentary component is low, whereas in W arc volcanics exhibit greater sedimentary component, consistent with subduction of Australian crustal sediments)

Holm, R.J., S.W. Richards, G. Rosenbaum & C. Spandler (2015)- Disparate tectonic settings for mineralisation in an active arc, Eastern Papua New Guinea and the Solomon Islands. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 165-170.
(Majority of mineral systems in active magmatic arcs of E PNG and Solomon Islands (Ladolam, Panguna, Solwara) are younger than 4 Ma. With new plate reconstructions for 3.5Ma- Recent)

Holm, R.J., C. Spandler & S.W. Richards (2013)- Melanesian arc far-field response to collision of the Ontong Java Plateau: geochronology and petrogenesis of the Simuku Igneous Complex, New Britain, Papua New Guinea. Tectonophysics 603, p. 189-212.
(Mid-Cenozoic Melanesian arc studied at Simuku Igneous Complex of W New Britain, PNG. Development of embryonic island arc from at least 40 Ma, progressive arc growth and subduction terminated by distant collision of Ontong Java Plateau at 26 Ma. Simuku Porphyry Complex emplaced between 24-20 Ma)

Holm, R.J., C. Spandler & S.W. Richards (2013)- Adakitic magmatism during subduction cessation: Melanesian arc far-field response to arrival of the Ontong Java Plateau. Proc. SSGMP 2013, Mission Beach, QLD, p. *(Poster presentation)*
(Melanesian Arc Baining Volcanics (43-37 Ma; M-L Eocene) and Kupluk Volcanics (32-27 Ma; E Oligocene) represent 'normal' island arc volcanicsm that forms New Britain Basement. Collision of Ontong Java Plateau with Solomon Islands at 26 Ma ended subduction and led to post-collision adakitic Simuku Porphyry Complex (24-20 Ma; E Miocene). Origin of adakites probably from melting of subducted slab)

Honza, E., H.L. Davies, J.B. Keene & D.L. Tiffin (1987)- Plate boundaries and evolution of the Solomon Sea region. Geo-Marine Letters 7, 3, p. 161-168.
(Solomon Sea Plate widely developed N of PNG in Late Oligocene, separating proto-West Melanesian Arc from proto-Trobriand Arc. Spreading in Bismarck Sea and Woodlark Basin resulted from collision of proto-West Melanesian Arc with N New Guinea, after arc reversal. This model explains extensive Miocene, Pliocene and Quaternary volcanism of PNG mainland as it related to S-ward subduction of Trobriand Trough)

Honza, E., T. Miyazaki & J. Lock (1989)- Subduction erosion and accretion in the Solomon Sea region. Tectonophysics 160, p. 49-62.

Jaques, A.L. & A.W. Webb (1975)-, Geochronology of porphyry copper intrusives from Manus Island, Papua New Guinea. Geol. Survey Papua New Guinea, Report 75/5, 10p.
(Incl. Arie porphyry copper deposit, ~15 Ma, Mount Kren prosect, ~14 Ma)

Johnson, D., P. Maillet & R. Price (1993)- Regional setting of a complex backarc: New Hebrides Arc, northern Vanatu- eastern Solomon Islands. Geo-Marine Letters 13, 2, p. 82-89.
(Complex backarc area of N New Hebrides Arc with deeply faulted Jean Charcot Troughs, 2400-3000m deep and not magmatically active. They appear to be fragmented older crust and not usual backarc basins)

Jakes, P. & A.J.R. White (1969)- Structure of the Melanesian arcs and correlation with distribution of magma types. Tectonophysics 8, 3, p. 223-236.
(Chemical data on Cenozoic lavas from Melanesia indicate zonal arrangement in New Guinea-New Britain arc: (1) tholeiitic on ocean side of New Guinea (Manam, Karkar), and N of New Britain; (2) calc-alkaline on East Papuan coast (Mt. Lamington, Mt. Victory); (3) shoshonitic association of New Guinea highlands (Mt. Hagen, Mt. Giluwe) and East Papua. Zonation not distinct in Solomon Island Arc. Lavas of the New Georgia Group tholeiiticand calc-alkaline affinities; rocks from Bougainville and Guadalcanal calc-alkaline)

Johnson, R.W. (1976)- Late Cainozoic volcanism and plate tectonics at the southern margin of the Bismarck Sea, Papua New Guinea. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier Scient. Publ. Co., Amsterdam, p. 101-116.
(Late Cenozoic South Bismarck volcanic arc at S margin of Bismarck Sea, off NE PNG, 1000km long and two segments: (1) W arc at boundary between S Bismarck and Indo-Australian plates and (2) E arc with zig-zag volcano distribution associated with boundary between S Bismarck plate and Solomon Sea plates at N coast of New Britain. Volcanism tied to steeply N-dipping subduction of Solomon Sea plate)

Johnson, R.W. (1976)- Potassium variation across the New Britain volcanic arc. Earth Planetary Sci. Letters 31, p. 184-191.

(Late Cenozoic volcanoes of NewBritain island arc overlie N-dipping Benioff zone that extends to depth of 580 km. Unlike other island arcs K2O contents in rocks with same SiO2 content do not increase with depth)

Johnson, R.W. (1977)- Distribution and major-element chemistry of late Cainozoic volcanoes at the southern margin of the Bismarck Sea, Papua New Guinea. Bureau Mineral Res., Geol. Geophysics, Canberra, Report 188, p. 1-323.
(online at: www.ga.gov.au/corporate_data/15102/Rep_188.pdf)

Johnson, R.W. & R.J. Arculus (1978)- Volcanic rocks of the Witu Islands, Papua New Guinea: the origin of magmas above the deepest part of the New Britain Benioff zone. Bull. Volcanologique 41, 4, p. 609-655.
(Witu Islands are Quaternary volcanoes overlie deepest (~300-580 km) part of New Britain Benioff zone. Rocks are olivine- and quartz-normative tholeiitic basalts, low- and high-SiO2 andesites, dacites and rhyolites. Alkaline rocks that overlie deep (>300 km) parts of other Benioff zones not found in Witu Islands)

Johnson, R.W., J.C. Mutter & R.J. Arculus (1979)- Origin of the Willaumez-Manus Rise, Papua New Guinea. Earth Planetary Sci. Letters 44, p. 247-260.
(Asymmetrical rise, 450 km long, on Bismarck Sea floor between Manus Island and Willaumez Peninsula on N-C coast of New Britain. Separates Manus Basin from New Guinea Basin. Rise may be result of excess magmatism possibly related to inferred mantle hot spot beneath St. Andrew Strait)

Johnson, R.W., M.R. Perfit, B.W. Chappell, A.L. Jaques, R.D. Shuster & W.I. Ridley (1988)- Volcanism in the New Ireland Basin and Manus Island region: notes on the geochemistry and petrology of some dredged volcanic rocks from a rifted-arc region. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 113-130.
(Volcanic rocks dredged from Manus- New Ireland rifted arc system high compositional diversity)

Johnson, R.W., D.A. Wallace and D.J. Ellis (1976)- Feldspathoid-bearing potassic rocks and associated types from volcanic islands off the coast of New Ireland, Papua New Guinea: a preliminary account of geology and petrology. In: R.W. Johnson (ed.) Volcanism in Australasia, Elsevier Scient. Publ. Co., Amsterdam, p. 297-316.
(M Miocene- Pleistocene volcanic rocks of Tabar, Lihir, Tanga and Feni islands wide range of compositions)

Joseph, L.E. & E.J. Finlayson (1991)- A revised stratigraphy of Muyua (Woodlark Island). Geol. Survey Papua New Guinea, Rept. 91/3, p. 1-56.
(also summary in Proc. Papua New Guinea Geology, Exploration and Mining Conference 1991, p. 26-33)

Joshima, M. & E. Honza (1986)- Age estimation of the Solomon Sea based on heat flow data. Geo-Marine Letters 6, 4, p. 211-217.
(Heatflow average of 87 mW/m2 (2.08 HFU) indicates age of Solomon Sea Basin ranges from 24-44 Ma. Supported by water depth of ~4500m)

Joshima, M., Y. Okuda, F. Murakami, K. Kishimoto & E. Honza (1987)- Age of the Solomon Sea Basin from magnetic lineations. Geo-Marine Letters 6, 4, p. 229-234.
(Magnetic anomalies in central to W half of Solomon Sea best fit age of 34-28 Ma and 5.8 cm/yr half-rate spreading speed. Heat flow and bathymetry data support this model)

Kamenov, G.D. (2004)- Magmatism and ore deposit formation in SW Pacific islands. Ph.D. Thesis University of Florida, Miami, p. 1-138.
(online at: http://ufdc.ufl.edu/UFE0008250/00001/pdf)
(Model of ore formation and magmatism in Tabar-LihirTanga-Feni island arc: injection of volatile-rich magma into evolving magma body near surface is triggering event that results in ore mineralization. Subducted oceanic slabs control composition of island-arc magmas. Once contribution from subducting slab decreases, incorporation of mantle component with Indian affinity in isotopic composition of lavas)

Kamenov, G.D., M.R. Perfit, I.R. Jonasson & P.A. Mueller (2005)- High-precision Pb isotope measurements reveal magma recharge as a mechanism for ore deposit formation: examples from Lihir Island and Conical seamount, Papua New Guinea. Chemical Geology 219, p. 131-148.

Kamenov, G.D., M.R. Perfit, P.A. Mueller & I.R. Jonasson (2008)- Controls on magmatism in an island arc environment: study of lavas and sub-arc xenoliths from the Tabar-Lihir-Tanga-Feni island chain, Papua New Guinea. Contrib. Mineralogy Petrology 155, p. 635-656.
(TLTF islands with mainly high-K alkaline and silica-undersaturated alkaline rocks with geochemical features typical of subduction-related magmatism. Sedimentary, mafic and ultramafic xenoliths from Tubaf seamount show underlying crust composed of sediments and oceanic crust of Pacific affinity)

Katz, H.R. (1984)- Southwest Pacific island arcs: sedimentary basins and petroleum prospects in the New Hebrides and Solomon Islands. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, American Assoc. Petrol. Geol. (AAPG), p. 181-189.
(New Hebrides and Solomon Islands have sedimentary basins with several 1000's m of Miocene- Pliocene sediments, predominantly volcanoclastics deposited in shelf to deep marine environments. Original basins 600-700km wide, but margins strongly deformed, uplifted and eroded. Little is known of source potential)

Kennedy, A.K., S.R. Hart & F.A. Frey (1990)- Composition and isotopic constraints on the petrogenesis of alkaline arc lavas; Lihir Island, Papua New Guinea. J. Geophysical Research 95, B5, p. 6929-6942.
(SiO2-undersaturated lavas from Lihir island, like most arc lavas, enriched in Sr, Ba, K, Rb and Cs and depleted in Hf, Ta, Nb and Ti relative to oceanic basalts, but not product of present-day subduction. Alkaline lavas reflect generation, in tensional tectonic environment, from 'fossil' arc mantle region enriched in alkali and alkaline earth elements during two earlier subduction episodes)

Kicinski, F.M. (1956)- Note on the occurrence of some Tertiary larger foraminifera on Bougainville Island (Solomon Islands). In: Papers on Tertiary micropalaeontology, Bureau Mineral Res. Geol. Geophysics, Canberra, Rept. 25, p. 76-77.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(Brief note on limestone samples from Bougainville: Wakuai River with Te Spiroclypeus, Miogypsinoides; Sisivi area with Tf2 Lepidocyclina verrucosa)

Kicinski, F.M. & D.J. Belford (1956)- Notes on the Tertiary succession and foraminifera of Manus Island. In: Papers on Tertiary micropalaeontology, Bureau Mineral Res. Geol. Geophysics, Canberra, Report 25, p. 71-75.
(online at: https://d28rz98at9flks.cloudfront.net/14939/Rep_025.pdf))
('Hinterland Limestone' of Manus Island NE of PNG with Lower Tf (=Burdigalian) larger foraminifera Miogypsina kotoi and Lepidocyclina, overlain by M-U Miocene? rel. deep marine tuffaceous siltstone and volcanics with rich smaller benthic and pelagic forams)

Kidd, R.P. & J.R. Robinson (2004)- A review of the Kapit Orebody, Lihir Island Group, Papua New Guinea. In: Proc. PACRIM 2004 Conf., Adelaide, Australasian Inst. of Mining and Metallurgy, Melbourne, 9p.

Kington, J.D. & A.M. Goodliffe (2008)- Plate motions and continental extension at the rifting to spreading transition in Woodlark Basin, Papua New Guinea: can oceanic plate kinematics be extended into continental rifts? Tectonophysics 458, p. 82-95.
(online at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.725.6203&rep=rep1&type=pdf)
(Woodlark Basin comparison of brittle extension, subsidence and extension predicted from long-term plate motions at rifting to spreading transition of non-volcanic margin. Seismic data near rifting to spreading transition yields 111 km of brittle extension, subsidence predicts about same. Long term plate motions derived from seafloor spreading predict 220km of extension)

Knight, C.L., R.B. Fraser & A. Baumer (1973)- Geology of the Bougainville copper orebody, New Guinea. In: Metallogenic provinces and mineral deposits in the southwestern Pacific, 12th Pacific Science Congress Symposium, Canberra 1971, Bureau Mineral Res. (BMR) Geol. Geophysics Bull. 141, p. 123-133.

(online at: www.ga.gov.au/corporate_data/108/Bull_141.pdf)
(Bougainville island porphyry copper deposit intrusive into Miocene volcanics and associated sediments)

Korchinski, M., T.A. Little, E. Smith & M.A. Millet (2012)- Variation of Ti-in-quartz in gneiss domes exposing the world's youngest ultrahigh-pressure rocks, D'Entrecasteaux Islands, Papua New Guinea. Geochem. Geophys. Geosystems 13, 10, p. 1-27.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2012GC004230/epdf)
(D'Entrecasteaux Island gneiss domes, PNG, expose world's youngest UHP rocks (5-8 Ma). Ti-in-quartz used as tool to infer domains of differing cooling rates across 4 domes.Fastest cooled rocks exhumed near center of domes Data reinforces structurally based arguments that domes were emplaced vertically into crust as diapirs, not laterally exhumed as result of large-magnitude slip on dome-bounding detachment faults)

Kulig, C., R. McCaffrey, G.A. Abers & H. Letz (1993)- Shallow seismicity of arc-continent collision near Lae, Papua New Guinea. Tectonophysics 27, p. 81-93.
(Ramu-Markham Valley separates island arc rocks to N from continental rocks in S and appears to be W, onland extension of New Britain trench. Narrow, near-vertical belt of seismicity between 10-30 km depth. Huon Peninsula is being emplaced onto Australian plate along gently (~25°) N-dipping thrust fault that is 20 km deep beneath Lae. Ramu-Markhan FZ may be steeply dipping thrust fault that connects with this thrust)

Kvenvolden, K.A. (1988)- Hydrocarbon gas in botton sediment from offshore the northern islands of Papua New Guinea. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 157-160.
(Small concentrations of hydrocarbon gases in 11 samples from 6 gravity cores in New Ireland basin. No evidence for petroleum-related hydrocarbons)

Kvenvolden, K. A. & A. Niem (1989)- Hydrocarbon gases in sediments of the Solomon Islands area. In J.G. Vedder & T.R. Bruns (eds.) Geology and Offshore Resources of Pacific Island arcs-Solomon Islands and Bougainville, Papua New Guinea Regions, Texas, Circum-Pacific Council Energy and Mineral Resources, Earth Science Ser. 12, Houston, p. 283-286.
(Small concentrations of microbial-origin hydrocarbon gases in C Solomons Trough)

Lackschewitz, K.S., D.F. Mertz, , C.W. Devey & C.D. Garbe-Schonberg (2003)- Late Cenozoic volcanism in the western Woodlark Basin area, SW Pacific: the sources of marine volcanic ash layers based on their elemental and Sr-Nd isotope compositions. Bull. Volcanology 65, p. 182-200.
(Tephra fallout layers and volcaniclastics from volcanic sources around/ on Papuan Peninsula form substantial part of Plio-Pleistocene Woodlark Basin marine sediment. Mainly rhyolitic compositions, with subordinate basaltic andesites, etc. Volcanogenic layers indicate much calc-alkaline rhyolitic volcanism in E Papua since 3.8 Ma, but at 135 ka peralkaline tephras appear, reflecting change from crustal subduction to spreading)

Lee, S.M. & E. Ruellan (2006)- Tectonic and magmatic evolution of the Bismarck Sea, Papua New Guinea: review and new synthesis. In: D.M. Christie et al. (eds.) Back-arc spreading systems: geological, biological, chemical and physical interactions, AGU Geophys. Monograph 166, p. 263-286.
(Bismarck Sea N of PNG went through back-arc development beginning in M Pliocene. Around 3.5 Ma N tip of New Guinea came into contact with Finisterre-Huon Range, triggering back-arc opening that eventually divided Bismarck seafloor into N and S Bismarck Plates. Docking of Finisterre- Huon Range with New Guinea Highlands allowed S Bismarck Plate to open faster to E in Manus Basin. Seafloor spreading commenced in Manus Spreading Center <0.78 Ma. Anomalously large distance (>400 km) between arc and spreading axis)

Lewis, R.W. & G.I. Wilson (1990)- Misima gold deposit. In: F.E. Hughes (ed.) Geology of mineral deposits of Australia and Papua New Guinea, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 1741-1745.

(Misima Island in Milne Bay, Solomon Sea with Umuna epithermal gold-silver deposit in host rocks of metamorphosed Cretaceous-Paleogene volcano-sedimentary sequence, intruded by Neogene granodioritic bodies)

Lindley, I.D. (1988)- Early Cainozoic stratigraphy and structure of the Gazelle Peninsula, East New Britain; an example of extensional tectonics in the New Britain arc trench complex. Australian J. Earth Sci. 35, 2, p. 231-244.
(Early Cenozoic sedimentation and volcanism in Gazelle Peninsula three distinct volcanic episodes: Late Eocene, Late Oligocene and Mio-Pliocene. Pre-Miocene andesitic volcanism typical of early island arc. At Oligocene-Miocene boundary major orogeny. Sedimentation resumed in E Miocene with development of extensive carbonate platform. Post-E Miocene history dominated by extensional tectonic regime)

Lindley, I.D. (1994)- A physical volcanology of the mid-Miocene Okiduse Volcanics, Woodlark Island, Papua New Guinea. In: R. Rogerson (ed.) Proc. Papua New Guinea geology, exploration and mining Conf., Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 2-15.

Lindley, I.D. (1998)- Mount Sinivit Gold deposits. In: D.A. Berkman & D.H. Mackenzie (eds.) Geology of Australian and Papua New Guinean mineral deposits, Australasian Inst. Mining Metallurgy (AusIMM), Melbourne, Monogr. 22, p. 821-826.
(Porphyry copper-gold and epithermal gold mineralization on Gazella Peninsula, E New Britain, associated with Late Oligocene- E Miocene igneous activity. Mt Sinivit veins with chalcopyrite, pyrite, bornite, etc.. K-Ar age of sericitic wallrock alteration indicate formation at 22-23 Ma)

Lindley, I.D. (2006)- Extensional and vertical tectonics in the New Guinea islands: implications for island arc evolution. Annals Geophysics 49, Suppl. 1, p. 403-426.
(online at: www.annalsofgeophysics.eu/index.php/annals/article/viewFile/4406/4486)
(Tectonic evolution of islands E of PNG. Disposition of slabs of formerly extensive Miocene platform carbonate suggests New Ireland and New Britain have undergone little more than gentle tilting and uniform uplift, despite location in tectonically dynamic areas)

Lindley, I.D. (2006)- New Britain Trench, Papua New Guinea: an extensional element in a regional sinistral strike-slip system. New concepts in global tectonics Newsletter 41, p. 15-27.
(New Britain Trench SE of New Britain island often viewd as subduction trench, but here reinterpreted as extensional jog-like element of left-stepping sinistral strike-slip zone that extends from Solomon Islands through to W New Guinea)

Lindley, I.D. (2015)- Late Quaternary geology of Ambitle Volcano, Feni Island Group, Papua New Guinea. Australian J. Earth Sci. 62, 5, p. 529-545.
(Ambitle Volcano part of Pliocene-Pleistocene Tabar-Lihir-Tanga-Feni (TLTF) alkalic volcanic province in New Ireland Basin. Volcano rises 2500m above surrounding sea floor, with elevation up to 479 m above sea level. Volcanic deposits rest unconformably on Oligocene basement rocks of New Ireland Basin)

Lindley, I.D. (2016)- Volcanological study of the middle Miocene Okiduse Volcanic Group, Woodlark Island (Muyuw), eastern Papua. Australian J. Earth Sci. 63, 6, p. 731-754.
(Woodlark Island (Muyuw) rifting started in Late Miocene (8.8-6 Ma), associated with W-ward-propagating Woodlark Basin seafloor spreading centre. Island underlain by M Miocene calc-alkaline to shoshonitic Okiduse Volcanic Gp., with two major M Miocene volcanic centres (14-12 Ma))

Lindley, I.D. (2016)- Plate flexure and volcanism: Late Cenozoic tectonics of the Tabar-Lihir-Tanga-Feni alkalic province, New Ireland Basin, Papua New Guinea. Tectonophysics 677, p. 312-323.
(Pliocene-Pleistocene Tabar-Lihir-Tanga-Feni (TLTF) alkaline volcanism, New Ireland Basin, associated with extensional cracks along crests of flexed ridges developed on New Ireland Microplate. The tectonic alignment of the TLTF volcanic arc perpendicular to flexed ridges, suggesting fractures parallel to direction of compression facilitated rapid ascent of alkaline magmas from mantle, perhaps 60-70 km depth)

Little, T.A., S.L. Baldwin, P.G. Fitzgerald & B. Monteleone (2007)- Continental rifting and metamorphic core complex formation ahead of the Woodlark spreading ridge, D'Entrecasteaux Islands, Papua New Guinea, Tectonics, 26, TC1002, doi:10.1029/2005TC001911, 26p.
(Metamorphic core complex (MCC) on Normanby Island in Woodlark rift. Over1 km thick blueschist-derived mylonites formed in mid-crustal shear zone in Pliocene at ~400-500°C. This top-to-N zone reactivated gently dipping base of Papuan ophiolite (PUB). Mylonites in MCC lower plate exhumed along detachment as result of >50km of slip, at >12 mm/yr. Inactive detachment preserves fault surface lineations parallel to Plio-Pleistocene plate motion. Extreme crustal thinning near MCC preconditioned later continental breakup. Lower crust weak, thickening beneath unloaded footwalls to uplift MCCs above sea level, and flowing laterally to even out regional crustal thickness contrasts on 1-6 M.y. timescale)

Little, T.A., B.R. Hacker, S.M. Gordon, S.L. Baldwin, P.G. Fitzgerald, S. Ellis & M. Korchinski (2011)- Diapiric exhumation of Earth's youngest (UHP) eclogites in the gneiss domes of the D'Entrecasteaux Islands, Papua New Guinea. Tectonophysics 510, p. 39-68.
(Woodlark rift, E PNG, hosts world's youngest (2-8 Ma) eclogites. Derived from Australian Plate-derived continental rocks, subducted to UHP depths during Eocene Papuan arc-continent collision. Exhumation processes buoyancy-driven (uplift of previously subducted continental fragment))

Llanes, P., E. Silver, S. Day & G. Hoffman (2009)- Interactions between a transform fault and arc volcanism in the Bismarck Sea, Papua New Guinea Geochem. Geophys. Geosyst., 10, 6, Q06013, 13p.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2009GC002430/epdf)
(Geological evolution ofW branch of Bismarck Sea Seismic Lineationregion, offshore NW PNG. At present, the Schouten Islands now parallel to PNG coast, but originally N-S and underwent left-lateral displacement of Bismarck Sea Seismic Lineation. Wei Island on large submarine volcano, possibly formed as part of leaky transform. Subsequent to formation Wei Island bisected, and pieces displaced 45 km)

Lloyd, A.R. (1963)- Foraminifera and other fossils from the Tertiary of the Gazelle Peninsula, New Britain. Bureau Mineral Res. Geol. Geophysics, Record 1963/91, p. 1-8.
(online at: www.ga.gov.au/corporate_data/11174/Rec1963_091.pdf)
(Foraminifera from outcrop samples, incl. E Miocene limestones with Miogypsina, Miogypsinoides, Austrotrillina)

Lock, J., H.L. Davies, D.L. Tiffin, F. Murakami & K. Kisimoto (1987)- The Trobriand subduction system in the Western Solomon Sea. Geo-Marine Letters 7, 3, p. 129-134.
(S-dipping subduction system under Trobriand Trough and 149° Embayment, on S margin of Solomon Sea, is active or was recently active. Oceanic basement overlain by 2.5 sec TWT of sediment showing two deformation stages: early thrusts (inner wall) and normal faults (outer wall), and later normal faults that elevated outer trench margin. Thrust anticlines and slope basins on inner wall)

Luyendyk, B.P., K.C. MacDonald & W.B. Bryan (1973)- Rifting history of the Woodlark Basin in the Southwest Pacific. Geol. Soc. America (GSA) Bull. 84, 4, p. 1125-1133.
(E part of Woodlark Basin, at SE tip of PNG. presently separating from Australian Plate at >4 cm/yr; W part of basin not presently spreading. Basin began opening as sphenochasm, with pole near tip of E Papua ~20 Ma, caused by left-lateral shear from change in relative motions of Australia - Pacific Plates. Basin opened only few degrees, then stopped. Rifting in entire basin resumed at ~3 Ma, based on magnetic anomaly data)

Ma, Y., Z. Zeng, S. Chen, X. Yin & X. Wang (2017)- Origin of the volcanic rocks erupted in the eastern Manus Basin: basaltic andesite-andesite-dacite associations. J. Ocean University of China 16, 3, p. 389-402.

Macnab, R.P. (1970)- Geology of the Gazelle Peninsula, T.P.N.G.. Bureau Mineral Res. Geol. Geophysics, Record No. 1970 /63, p. 1-127.
(online at: https://d28rz98at9flks.cloudfront.net/12476/Rec1970_063.pdf)

(Gazelle Peninsula in NE part of New Britain composed of volcanic rocks with associated sediments and limestone. Oldest rocks Eocene submarine, andesitic Baining Volcanics, intruded by contemporary and Oligocene hypabyssal and plutonic rocks, and partially overlain by U Oligocene- Lw Miocene Merai Volcanics in SE, M Miocene (lower Tf) Yalam Lst in centre W, and U Miocene- Pliocene volcanics in centre and E)

Macnamara, P.M. (1968)- Rock types and mineralization at Panguna porphyry copper prospect, upper Kaverong valley, Bougainville Island. Proc. Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, 228, p. 71-79.

Macpherson, C.G., D.R. Hilton, D.P. Mattey & J.M. Sinton (2000)- Evidence for an 18O-depleted mantle plume from contrasting 18O/16O ratios of back-arc lavas from the Manus Basin and Mariana Trough. Earth Planetary Sci. Letters 176, p. 171-183.
(Back-arc basin glasses from Mariana Trough and Manus Basin contrasting oxygen isotope characteristics that require differences in their mantle sources)

Macpherson, C.G., D.R. Hilton, J.M. Sinton, R.J. Poreda & H. Craig (1998)- High 3He/4He ratios in the Manus backarc basin: implications for mantle mixing and the origin of plumes in the western Pacific Ocean. Geology 26, 11, p. 1007-1010.
(Glasses from lavas in central Manus backarc basin in W Pacific typical plume (or hotspot) 3He/4He ratios)

Madsen, J.A. & I.D. Lindley (1994)- Large-scale structures on Gazelle Peninsula, New Britain: implications for the evolution of the New Britain arc. Australian J. Earth Sci. 41, 6, p. 561-569.
(Structure on Gazelle Peninsula dominated by Mediva Fault and Wide Bay Fault System, both NNW trending, deep-seated features. Mediva Fault extensional structure which focused M Miocene intrusive activity and displaced Quaternary volcanic deposits. Wide Bay Fault System active since at least Late Oligocene, with likely 100km of sinistral strike-slip motion since at least late M Miocene)

Manwaring, E.A. (1971)- Palaeomagnetism of some Recent basalts from New Guinea. Bureau Mineral Res. Geol. Geophys., Record 1971/45, p. 1-26.
(online at: https://d28rz98at9flks.cloudfront.net/12582/Rec1971_045.pdf)
(Paleomagnetic work on 22 sites of young basalts on Baluan, Karar, Lolobau and Rabaul Islands)

Marlow, M.S., N.F. Exon & S.V. Dadisman (1992)- Hydrocarbon potential and gold mineralization in the New Ireland Basin, Papua New Guinea. In: J.S. Watkins et al. (eds.) Geology and geophysics of continental margins, American Assoc. Petrol. Geol. (AAPG), Mem. 53, p. 119-137.

Marlow, M.S., N.F. Exon, H.F. Ryan & S.V. Dadisman (1988)- Offshore structure and stratigraphy of New Ireland basin in northern Papua New Guinea. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Science Ser. 9, p. 137-155.
(NW trending New Ireland Basin NE of New Hanover- New Ireland islands formed as forearc basin NE of Eocene- E Miocene island arc and adjacent to Manus Trench. Up to 7km of sediment fill)

Martinez, F., A.M. Goodliffe & B. Taylor (2001)- Metamorphic core complex formation by density inversion and lower-crust extrusion. Nature 411, p. 930-934.
(D'Entrecasteaux Islands actively forming metamorphic core complexes in continental rift that laterally evolves to seafloor spreading. Continental rifting since 6 Ma, seismogenic and rapid (~25mm/yr). D'Entrecasteaux core complexes accommodate extension through vertical extrusion of ductile lower crust material, driven by crustal density inversion (thermal expansion lowers crustal density with depth). Buoyant extrusion accentuated in this region by geological structure (dense ophiolite over less-dense continental crust))

Martinez, F. & B. Taylor (1996)- Backarc spreading, rifting, and microplate rotation, between transform faults in the Manus Basin. Marine Geophysical Res. 18, 2, p. 203-224.
(Manus Basin in E Bismarck Sea fast opening backarc basin behind New Britain arc-trench system)

Martinez, F. & B. Taylor (2003)- Controls on back-arc crustal accretion; insights from the Lau, Manus and Mariana Basins. In: R.D. Larter & P.T. Leat (eds.) Intra-oceanic subduction systems: tectonic and magmatic processes, Geol. Soc., London, Spec. Publ. 219, p. 19-54.
(Lau, Manus and Mariana basins broad range of conditions of back-arc basin development. In each basin magmatism enhanced in spreading centres near arc volcanic front, but decreases in axes further from arc. Lau and Manus basin axes far behind arc and typical mid-ocean ridge characteristics. Spreading centres near arc advect hydrated mantle material, enhancing melt production. Spreading centres further from arc advect partly depleted mantle and produce thinner than normal crust. Spreading centres far from arc advect essentially mid-ocean ridge basalt-source mantle)

Martinez, F., B. Taylor & A. Goodliffe (1999)- Contrasting styles of seafloor spreading in the Woodlark Basin: indications of rift-induced secondary mantle convection. J. Geophysical Research, 104, B6, p. 12909-12926.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/1999JB900068/pdf)
(Woodlark Basin in SW Pacific is young ocean basin which began forming by ~6 Ma, following rifting of continental and arc lithosphere. N-S striking Moresby Transform divides oceanic basin. Seafloor spreading W of Moresby Transform began after ~2 Ma. Etc.)

Masato, J., Y. Okuda, F. Murakami, K. Kishimoto & E. Honza (1986)- Age of the Solomon Sea Basin from magnetic lineations. Geo-Marine Letters 6, 4, p. 229-234.

Maung, T.U.& F.I. Coulson (1983)- Assessment of petroleum potential of the Central Solomon Basin. CCOP/SOPAC Techn. Report 26, p. 1-68.
(online at: http://ict.sopac.org/VirLib/TR0026.pdf)

Mawson, D. (1905)- The geology of the New Hebrides. Proc. Linnean Soc. New South Wales 30, p. 400-485.
(online at: http://biostor.org/reference/54467)
(Oldest rocks folded Miocene volcanoclastics with Miocene Lepidocyclina- Lithothamnium limestone (Chapman 1905), active volcanoes, etc.)

McInnes, B.I.A., M. Gregoire, R.A. Binns, P.M. Herzig & M.D. Hannington (2001)- Hydrous metasomatism of oceanic sub-arc mantle, Lihir, Papua New Guinea: petrology and geochemistry of fluid-metasomatised mantle wedge xenoliths. Earth Planetary Sci. Letters 188, p. 169-183.
(Ultramafic, mafic and sedimentary xenoliths from Recent shoshonitic submarine cinder cones (Tubaf and Edison volcanoes) from Tabar-Lihir-Tanga-Feni island arc, New Ireland, PNG. Gabbroic and depleted mantle xenoliths indicate New Ireland fore-arc lithosphere is fragment of ancient Pacific Plate, generated at mid-ocean ridge spreading centre and transported to Pacific-Australian Plate margin)

McKee, C.& R. Duncan (2016)- Early volcanic history of the Rabaul area. Bull. Volcanology 78, 4, p. 1-28.
(Oldest systems in Rabaul area (>1 Ma to~300 ka) are in S)

Milsom, J.S. (1970)- Woodlark Basin, a minor center of sea-floor spreading in Melanesia. J. Geophysical Research 75, p. 7335-7339.
(First author to recognize Woodlark Basin at E tip of PNG is site of active sea floor spreading, based on rugged bathymetry, with most lineations paralleling its long axis, seismicity, upper mantle P-wave velocity, and petrology of rocks exposed on surrounding islands)

Meschede, M. & B. Pelletier (1994)- Structural style of the accretionary wedge in front of the North d'Entrecasteaux Ridge (ODP Leg 134). Proc. Ocean Drilling Program (ODP), Scientific Results 134, p. 417-429.
(online at: www-odp.tamu.edu/publications/134_sr/volume/chapters/sr134_23.pdf)
(ODP Leg 134 drilling and seismic in accretionary wedge at W side of New Hebrides Island Arc, where it collides with aseismic North d'Entrecasteaux Ridge. Imbrication of thrust sheets in accretionary wedge shown

by shear zones with tectono-sedimentary breccia, horizons of scaly fabric, cataclasites and decreasing dip angle and foliation planes from top to bottom. Nine major and four minor thrust zones identified)

Mitchell, A.H.G. & A.J. Warden (1971)- Geological evolution of the New Hebrides island arc. J. Geol. Soc., London, 127, p. 501-529.
(New Hebrides islands segment of Melanesian Ridge, overlie E-ward-dipping Benioff zone, bordered by submarine trench. They consist of volcanic and volcaniclastic rocks, intrusions, mudstones and limestones. Oldest rocks probaly pre-Early Miocene pelagic mudstones in W and pebbles with Late Eocene larger forams in E. E and W Belts of islands contain Neogene rocks, bisected by Central Chain of active and recently extinct volcanoes. W Belt was site of E Miocene volcanic arc)

Monteleone, B.D., S.L. Baldwin, T.R. Ireland & P.G. Fitzgerald (2001)- Thermochronologic constraints for the tectonic evolution of the Woodlark Basin, Papua New Guinea. In: P. Huchon et al. (eds.) Proc. Ocean Dilling Program (ODP), Scient. Results, 180, p. 1-34.
(ODP Leg 180 drilled near Moresby Seamount. Igneous rocks mainly diabase-metadiabase, with minor basalt and gabbro. Zircon age of 66.4 ± 1.5 Ma dates diabase crystallization, plagioclase isochron age of 59 ± 6 Ma, interpreted to represent cooling following intrusion. Diabase not thermally affected by Miocene-Pliocene rift events. Crustal extension in area of Moresby Seamount accommodated by normal faulting in latest Cretaceous-E Paleocene oceanic crust. Felsic clasts additional evidence for M Miocene- Pliocene magmatic events in region. Rhyolitic clasts zircon ages of ~16 Ma evidence for Miocene volcanism in region).

Monteleone, B.D., S.L. Baldwin, L.E. Webb, P.G. Fitzgerald et al. (2007)- Late Miocene-Pliocene eclogite facies metamorphism, D'Entrecasteaux Islands, SE Papua New Guinea. J. Metamorphic Geol. 25, 2, p. 245-265.
(SE PNG active metamorphic core complexes formed in region where tectonic regime transitioned from subduction to rifting. At least one of eclogite bodies formed in Pliocene. Samples from Fergusson and Goodenough Islands document Late Miocene-Pliocene (8-2 Ma) eclogite formation. W-ward younging of eclogite facies metamorphism from Fergusson to Goodenough Island. Present-day exposure of Late Miocene-Pliocene eclogites requires exhumation rates >2.5cm/yr)

Moss, R., S.D. Scott & R. Binns (2001)- Gold content of eastern Manus basin volcanic rocks: implications for enrichment in associated hydrothermal precipitates. Economic Geology 96, 1, p. 91-107.
(Rel. gold-rich hydrothermal precipitates associated with active seafloor vents in E Manus back-arc basin)

Moyle A.J., B.J. Doyle, H. Hoogvliet & A.R. Ware (1990)- Ladolam gold deposit, Lihir Island. In F.E. Hughes (ed.) Geology of the mineral deposits of Australia and Papua New Guinea, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Monogr. 14, 2, p. 1793-1805.

Moyle A.J., B.J. Doyle, H. Hoogvliet & A.R. Ware (1991)- The geology and mineralisation of the Ladolam gold deposit, Lihir Island, Papua New Guinea. In: PNG Geology, exploration and mining Conference, Rabaul 1991, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 101-111.

Muller, D., L. Franz, P.M. Herzig & S. Hunt (2001)- Potassic igneous rocks from the vicinity of epithermal gold mineralization, Lihir Island, Papua New Guinea. Lithos 57, p. 163-186.
(Lihir Island, NE of New Ireland, PNG, consists of five Pliocene-Pleistocene stratovolcanoes, one of which hosts Ladolam largest epithermal gold deposit)

Muller, D., L. Franz, S. Petersen, P.M. Herzig & M.D. Hannington (2003)- Comparison between magmatic activity and gold mineralization at Conical Seamount and Lihir Island, Papua New Guinea. Mineralogy Petrology 79, p. 259-283.
(Grab samples from submarine Conical Seamount, ~10 km S of giant Ladolam gold deposit on Lihir, with highest gold concentrations yet reported from modern seafloor. Lavas from Conical Seamount high-K igneous rocks of oceanic (island) arc-setting)

Muller, D. & D.I. Groves (1993)- Direct and indirect associations between potassic igneous rocks, shoshonites and gold-copper deposits. Ore Geology Reviews 8, p. 383-406.
(Many epithermal -mesothermal and porphyry-style Au- Cu deposits associated with or hosted by potassic igneous rocks and shoshonites. Examples include PNG Pleistocene Ladolam gold deposit on Lihir island (late oceanic arc) and Miocene Porgera gold deposit (postcollisional-arc))

Muller, D., P.M. Herzig, J.C. Scholten & S. Hunt (2002)- Ladolam gold deposit, Lihir Island, Papua New Guinea; gold mineralization hosted by alkaline rocks. In: R.J. Goldfarb & R.L. Nielsen (eds.) Integrated methods for discovery; global exploration in the twenty-first century, Soc. Econ. Geol. (SEG), Spec. Publ. 9, p. 367-382.
(Large gold deposit at Ladolam, Lihir Island, transitional between early-stage, low-grade porphyry gold system to low-sulfidation epithermal gold event)

Muller, D., K. Kaminski, S. Uhlig, T. Graupner, P.M. Herzig & S. Hunt (2002)- The transition from porphyry- to epithermal-style gold mineralization at Ladolam, Lihir Island, Papua New Guinea: a reconnaissance study. Mineralium Deposita 37, 1, p. 61-74.
(Exceptionally large gold resource at Ladolam, E side of Lihir Island, resulted from transition of early-stage, uneconomic low-grade porphyry gold system to low-sulfidation epithermal gold event, probably triggered by rapid decompression during partial slope failure of Luise stratovolcano/caldera at 0.34 Ma)

Nairn, I.A., C.O. Mckee, B. Talai & C.P. Wood (1995)- Geology and eruptive history of the Rabaul Caldera area, Papua New Guinea. J. Volcanology Geothermal Res. 69, 3-4, p. 255-284.
(Rabaul Caldera most active of four N-S aligned volcanic centres in NE New Britain. Oldest exposed basaltic lavas dated at 0.5 Ma. Dacitic lavas in caldera wall 0.19 Ma, overlain by dacitic and andesitic pyroclastic flow and fall deposits. Holocene ignimbrites of latest caldera-forming eruptions ~3500 or 7000 yr B.P.)

Nedachi, M., M. Enjoji, Y. Urashima & W. Manser (1985)- On the paleomagnetism of the intrusives from the Panguna porphyry copper deposit, Bougainville, Papua New Guinea. Kagoshima University Research Center South Pacific, Occasional Papers 5, p. 13-26.
(online at: http://ir.kagoshima-u.ac.jp/bitstream/10232/15869/1/AN10030752_v5_p13-26.pdf)
(Kaverong Quartz Diorite of Panguna, Bougainville Island, intruded at reversed geomagnetic period within 4.0- 5.0 Ma range, into Late Oligocene- E Miocene Panguna Andesite, without significant mineralization. After magnetic polarity change Biotite Granodiorite intruded during normal geomagnetic period, and surrounding rocks were first mineralized (~3.8- 4.3 Ma range). Second mineralization in and around Leucocratic Quartz Diorite at reversed geomagnetic period (3.8-3.4 Ma), when Feldspar Porphyry and Biuro Granodiorite possibly also intruded)

Ollier, C.D. & C.F. Pain (1978)- Geomorphology and tectonics of Woodlark Island, Papua New Guinea. Zeitschrift Geomorphologie 22, 1, p. 1-20.
(Woodlark Island E of PNG mainland, composed of central part of Miocene volcanics, surrounded by Quaternary coral reefs. Deformed by two fault systems)

Page, R.W. & I. McDougall (1972)- Geochronology of the Panguna porphyry copper deposit, Bougainville Island, New Guinea. Economic Geology 67, 8, p. 1065-1074.
(K/Ar ages of major intrusive and subvolcanic bodies associated with Panguna copper deposit on Bougainville. Earliest pre-mineralization intrusive age 4-5 Ma. Mineralized, strongly altered, intrusive bodies 3.4- 0.3 Ma old. The 3.4 Ma age interpreted as age of mineralization of Panguna rocks. Clear time interval of about 0.5- 1.5 Myrs between initial magmatic emplacement and subsequent mineralization)

Page, R.W. & R.J. Ryburn (1977)- K-Ar ages and geological relations of intrusive rocks in New Britain. Pacific Geology 12, p. 99-105.
(also as BMR Record 1973/191; online at: https://d28rz98at9flks.cloudfront.net/13014/Rec1973_191.pdf)

(New Britain volcanic arc system with intermediate- basic intrusives complexes emplaced into Eocene-Oligocene volcanics, overlain by E-M Miocene limestones. K-Ar ages two groups of ages: 27-29 Ma (M Oligocene) and 22 Ma (E Miocene). Gazelle Peninsula tonalite body 14 Ma)

Petersen, K.D. & W.R. Buck (2015)- Eduction, extension, and exhumation of ultrahigh-pressure rocks in metamorphic core complexes due to subduction initiation. Geochem. Geophys. Geosystems 16, p. 2564-2581.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1002/2015GC005847)
(Discussion of exhumation of UHP rocks, whether involving rising of pieces of crust detached from subducted continental lithosphere, or entire subducted plate undergoing 'eduction' (reverse subduction), based on metamorphic core complexes of D'Entrecasteaux Islands, PNG. Eduction followed by seafloor spreading can occur in zone of convergence when subduction of buoyant crust causes subduction zone to 'lock up' and cause formation of new subduction zone. Model implies Goodenough Basin crust exhumed by eduction in last 5 Ma)

Petersen, S., P.M. Herzig, M.D. Hannington, I.R. Jonasson & A. Arribas (2002)- Submarine gold mineralization near Lihir Island, New Ireland fore-arc, Papua New Guinea. Economic Geology 97, 8, p. 1795-1813.
(Gold-rich, siliceous veins with disseminated polymetallic sulfides recovered from top of Conical seamount, a shallow (1050m water depth) submarine volcano, ~10 km S of Lihir island, PNG)

Robertson, A.H.F., S.A.M. Awadallah, S. Gerbaudo, K.S. Lackschewitz, B.D. Monteleone et al. (2001)- Evolution of the Miocene-Recent Woodlark Rift Basin, SW Pacific, inferred from sediments drilled during Ocean Drilling Program Leg 180. In: R.C.L. Wilson et al. (eds.) Non-volcanic rifting of continental margins: a comparison of evidence from land and sea, Geol. Soc., London, Spec. Publ. 187, p. 335-372.
(Woodlark Rift E of papuan Peninsula W-ward propagating spreading centre into continental crust. ODP leg 180 wells document history of Paleogene ophiolite emplacement, Miocene arc-related sedimentation and Late Miocene uplift and emergence of forearc area. Submergence to form Woodlark Rift began in latest Miocene, marked by marine transgression and input of tuffs and volcaniclastic sediments. Pliocene deposition dominated by deep-water turbidites. Pleistocene strong extension along N-dipping, low-angle Moresby Detachment Fault, associated with uplift of Moresby Seamount and shedding of fault-derived talus of meta-ophiolitic origin. Switch to pelagic-hemipelagic deposition in basin in Pleistocene related to W-ward propagation of Woodlark oceanic spreading centre at ~2 Ma)

Rogerson, R., D. Hilyard, E.J. Finlayson, R.W. Johnson & C.O. Mckee (1989)- The geology and mineral resources of Bougainville and Buka Islands, Papua New Guinea. Papua New Guinea Geol. Survey, Port Moresby, Mem. 16, p. 1-217.

Russell, P.J. & E.J. Finlayson (1987)- Volcanic-hosted epithermal mineralisation on Woodlark Island, Papua New Guinea. In: H.K. Herbert (ed.) Proc. Pacific Rim Congress 87, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, p. 381-385.
(Epithermal gold hosted by late M Miocene Okiduse Volcanics on Woodlark Island. Mineralisation contemporaneous with volcanism (12.2 - 12.5 Ma) and tied to subduction of Solomon Sea plate along Trobriand Trench. Pyrite, sphalerite, galena and minor chalcopyrite occur in steeply dipping fracture zones)

Ryburn, R.J. (1973)- Geologic map of Pomio, New Britain, Geol. Ser. SB56-6, 1:250,000. Bureau Mineral Res. Geol. Geophysics, 17p.

Ryburn, R.J. (1975)- Geologic map of Cape Raoult-Arawe, New Britain, Geol. Ser. SB55-8, SB55-12, 1:250,000. Bureau Mineral Res. Geol. Geophysics, 21p.

Ryburn, R.J. (1975)- Geologic map of Talasea-Gasmata, New Britain, Geol.Ser. SB56-5, SB56-9, 1:250,000. Bureau Mineral Res. Geol. Geophysics, 26p.

Rytuba, J.J., E.H. McKee & D. Cox (1993)- Geochronology and geochemistry of the Ladolam gold deposit, Lihir island, and gold deposits and volcanoes of Tabar and Tatau, Papua New Guinea. US Geol. Survey Bull. 2039, p. 119-126.

Schmidt, M., R. Botz, K. Winn, P. Stoffers, O. Thiessen & P. Herzig (2002)- Seeping hydrocarbons and related carbonate mineralisations in sediments south of Lihir Island (New Ireland fore arc basin, Papua New Guinea). Chemical Geology 186, p. 249-264.
(Hydrocarbon gases sampled from cold-seeping and heat-venting areas in New Ireland fore arc basin near Lihir Island. Highest concentrations in deep narrow deep sea basin between Edison Seamount and 'Mussel Cliff' uplift. Seep area covered with chemoautotrophic deep sea fauna (Calyptogena, tube worms). Authigenic calcite concretions in sediments between 50- 200cm sediment depth. Hot hydrothermal vent of Lihir Harbour abiogenic methane formation related to magmatism of Lihir Volcano)

Schubert, R.J. (1910)- Uber das Vorkommen von *Miogypsina* und *Lepidocyclina* in pliocanenen Globigerinengesteinen des Bismarckarchipels. Verhandlungen Kon. kaiserl. Geol. Reichsanstalt, Vienna, 1910, p. 395-398.
(online at: www.landesmuseum.at/pdf_frei_remote/VerhGeolBundesanstalt_1910_0395-0398.pdf)
('On the occurrence of Miogypsina and Lepidocyclina in Pliocene marls from the Bismarck Archipelago'. New species of Miogypsina M. epigona and M. laganiensis (These shallow marine larger forams look like M Miocene age, but are associated with younger deep water fauna; JTvG))

Schubert, R.J. (1911)- Die fossilen Foraminiferen des Bismarckarchipels und einiger angrenzender Inseln. Abhandlungen Verhandlungen Kaiserlich Koniglichen Geol. Reichsanstalt, Vienna, 20, 4, p. 1-130.
(online at: www.landesmuseum.at/pdf_frei_remote/AbhGeolBA_20_0001-0130.pdf)
('Fossil foraminifera from the Bismarck Archipelago and some adjacent islands' Oligocene- M Miocene limestones with larger foraminifera (incl. Flosculinella n.gen. and Lepidocyclina) and Late Miocene- Pliocene Globigerina-rich pelagic sediments)

Simmons, S.F. & K.L. Brown (2006)- Gold in magmatic hydrothermal solutions and the rapid formation of a giant ore deposit. Science 314, 5797, p. 288-291.
(Ladolam on Lihir Island, N of PNG, hosts one of youngest and largest gold deposits in world. Deep brine of magmatic origin contains 15 parts per billion gold. Combination of sustained metal flux and efficient metal precipitation led to formation of a giant hydrothermal gold deposit in short period)

Sinton, J.M., L.L. Ford, B. Chappell & M.T. McCulloch (2003)- Magma genesis and mantle heterogeneity in the Manus back-arc basin, Papua New Guinea. J. Petrology 44, 1, p. 159-195.
(online at: http://petrology.oxfordjournals.org/content/44/1/159.full.pdf+html)
(Manus Basin backarc basin N of New Britain arc. Five magma types in dredge samples from ~1400-2700m water. Closest to New Britain medium-K island arc lavas and back-arc basin basalts. Along Manus Spreading Center and Extensional Transform Zone mid-ocean ridge basalts and extreme back-arc basin basalts (with least contribution from subduction-related components). Compared with normal MORB, Manus MORB more depleted in high field strength elements and enriched in fluid-mobile elements, indicating slight prior enrichment of source with subduction-related components)

Smith, I.E. (1973)- The geology of the Calvados Chain, Southeastern Papua. In: Geological Papers 1970-71, Bureau Mineral Res. Geol. Geophysics Bull. 139, p. 59-65.
(online at: www.ga.gov.au/corporate_data/106/Bull_139.pdf)
(Calvados Island chain in W part of Louisiade Archipelago, SE PNG, composed mainly of low-grade schists, thought to represent Mesozoic sediments metamorphosed in Eocene. Schists intruded by upper Tertiary basic and intermediate dykes. E Miocene reef limestone and volcanics form W-most islands in chain)

Smith, I.E.M. (1976)- Peralkaline rhyolites from the D'Entrecasteaux Islands, Papua New Guinea. In: R.W. Johnson (ed.) Volcanism in Australasia. Elsevier, New York, p. 275-286.

Smith, I.E.M., B.W. Chappell, G.K. Ward & R.S. Freeman (1977)- Peralkaline rhyolites associated with andesitic arcs of the Southwest Pacific. Earth Planetary Sci. Letters 37, p. 230-236.

(Peralkaline rhyolites associated with andesitic volcanic arcs in D'Entrecasteaux Islands (SE PNG), Mayor Island and Kaeo area, Northland, New Zealand. Peralkaline rhyolites related to extensional environments)

Smith, I.E. & W. Compston (1982)- Strontium isotopes in Cenozoic volcanic rocks from southeastern Papua New Guinea. Lithos 15, p. 199-206.
(Volcanic rocks from SE PNG islands suggest four episodes of late Cenozoic volcanism. Eocene tholeiitic basalts have rel. high initial 87Sr/86Sr ratios (0.7037). Late Cenozoic arc trench type volcanoes in Papuan islands initial 87Sr/86Sr ratios with little variation (~0.7041), unlike contiguous PNG mainland (0.7036-0.7054))

Speckbacher, R., J.H. Behrmann, T.J. Nagel, M. Stipp & C.W. Devey (2011)- Splitting a continent: insights from submarine high-resolution mapping of the Moresby Seamount detachment, offshore Papua New Guinea. Geology 39, 7, p. 651-654.
(Top of Moresby Seamount in Woodlark Basin E of PNG exposes submerged extensional fault detachment, with 30° N dip and ~8 km post-Pliocene displacement. Km-scale slickensides indicate downdip direction of movement. Detachment transected by major sinistral strike-slip fault)

Stewart, W.D., G. Francis & D.H. Deibert (1986)- Cape Vogel Basin hydrocarbon potential. Oil and Gas J., Nov. 17, p. 67-71.

Stewart, W.D., G. Francis & S.L. Pederson (1987)- Hydrocarbon potential of Papua New Guinea's Bougainville, Southeastern New Ireland basins. Oil and Gas J. 85, 47, p. 83-87.

Stewart, W.D. & M.J. Sandy (1988)- Geology of New Ireland and Djaul Islands, Northeastern Papua New Guinea. In: M.S. Marlow et al. (eds.) Geology and offshore resources of Pacific island arcs- New Ireland and Manus region, Papua New Guinea, Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Sci. Ser. 9, p. 13-30.
(New Ireland basement formed by ?Eocene- Oligocene Jaulu island arc volcanics and associated Oligocene- M Miocene Lemau Intrusive complex, response to S-ward subduction at Manus- Kilinailau Trench. Unconformably overlain by E Miocene (upper Te and younger) Lelet Lst, with locally common Halimeda and rel. little coral, and lateral equivalents. Followed by M-L Miocene Lumis River volcanics. In C and S New Ireland continued carbonate sedimentation until Late Miocene. Volcanism restarted in E Pliocene , response to N-ward subduction along New Britain Trench)

Stolz, A., G. Davies, A. Crawford & I. Smith (1993)- Sr, Nd and Pb isotopic compositions of calc-alkaline and peralkaline silicic volcanics from the D'Entrecasteaux Islands, Papua New Guinea and their tectonic significance. Mineralogy and Petrology 47, 2, p. 103-126.
(Transitional basalt-peralkaline and associated calc-alkaline rhyolites from D'Entrecasteaux Islands with typical convergent margin geochemical signatures. Calc-alkaline rhyolites produced by partial melting of young arc protocrust; calc-alkaline basic and intermediate magmas derived from depleted mantle source previously modified by subduction along Trobriand Trough. Change from calc-alkaline to alkaline magmatism occured following change from compressional to extensional tectonics)

Stracke, A. & E. Hegner (1998)- Rifting-related volcanism in an oceanic post-collisional setting: the Tabar-Lihir-Tanga-Feni (TLTF) island chain, Papua New Guinea. Lithos 45, p. 545-560.
(Geochemistry of volcanic rocks from Tabar-Lihir-Tanga-Feni volcanic island chain in zone of lithospheric extension superimposed on post-collisonal tectonic setting along Pacific and Indo-Australian plates NE of PNG. Alkalic affinity, with trachybasalts as predominant rock type. Chemical composition of igneous rocks from post-collisional tectonic settings strongly influenced by previous plate tectonics)

Sykora, S., D.R. Cooke, S. Meffre, A.S. Stephanov, K. Gardner, R. Scott, D. Selley & A.C. Harris (2018)- Evolution of pyrite trace element compositions from porphyry-style and epithermal conditions at the Lihir gold deposit: implications for ore genesis and mineral processing. Economic Geology 113, 1, p. 193-208.

(Lihir (also known as Ladolam) Au deposit in PNG telescoped ore deposit, in which volcanic sector collapse led to superimposition of shallow-level Au-rich epithermal mineralization on genetically related, porphyry-style alteration. Au concentrated only along rims of pyrite grains, creating complications for ore processing)

Sykora, S., D. Selley, D.R. Cooke & A.C. Harris (2018)- The structure and significance of anhydrite-bearing vein arrays, Lienetz orebody, Lihir gold deposit, Papua New Guinea. Economic Geology 113, 1, p. 237-270.
(Lihir (Ladolam) is world's largest alkalic Au deposit gold deposit with 56-Moz Au resource and. Deposit in amphitheater, inferred to be remnant of original ~1.1-km-high volcanic cone with NE-directed sector collapse(s) and prolonged weathering. Late-stage Au-rich low-sulfidation epithermal mineralization superimposed on early-stage porphyry-style alteration)

Taylor, B. (1979)- Bismarck Sea: evolution of a back-arc basin. Geology 7, 4, p. 171-174.
(Bismarck Sea backarc basin N of New Britain. Boundary with Pacific plate composed of at least four segments: two transform faults, one spreading segment and one leaky transform. Magnetic anomalies indicate Manus Basin (part of the Bismarck Sea basin) formed during past 3.5 My by asymmetric sea-floor spreading. Spreading direction N60°W, opening rate 13.2 cm/yr)

Taylor, B. (1982)- On the tectonic evolution of marginal basins in Northern Melanesia and the South China Sea. Ph.D. Thesis, Columbia University, New York, p. 1-190.
(Study of two marginal marginal basins of N Melanesia: Manus Basin in Bismarck Sea behind New Britain arc-trench system, and non back-arc Woodlark Basin. S China Basin is 'Atlantic-type' marginal basin.N-S opening of basin moved microcontinental blocks including SW Mindoro, N Palawan, and Reed Bank, from Paleogene position adjacent to China mainland. Majority of opening of W half of basin by crustal stretching of microcontinental blocks. Margins of S China Sea record regional M Oligocene unconformity, interpreted as caused by superposition of breakup and sealevel effects. Seafloor spreading in basin ended slightly before late M Miocene cessation of subduction at Palawan subduction zone to S)

Taylor, B. & N.F. Exon (eds.) (1987)- Marine geology, geophysics and geochemistry of the Woodlark Basin, Solomon Islands. Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Sci. Ser. 7, p. 1-363.
(Collection of papers on Woodlark- Solomon Islands region)

Taylor, B., A.M. Goodliffe & F. Martinez (1999)- How continents break up: insights from Papua New Guinea. J. Geophysical Research 104, B4, p. 7497-7512.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/1998JB900115)
(Woodlark Basin in SW Pacific present-day continuous system of active continental rifting in W, evolving to seafloor spreading in E. Rifting started at ~6 Ma)

Taylor, B., A. Goodliffe, F. Martinez & R. Hey (1995)- Continental rifting and initial seafloor spreading in the Woodlark Basin. Nature 374, p. 534-537.
(Marine geophysical survey of W Woodlark basin/ Papuan peninsula region of PNG. Example of continental rifting and spreading initiation, and spreading centre reorienting by synchronous jumping rather than propagation in last 6 Myr)

Taylor, B. & P. Huchon (2002)- Active continental extension in the Western Woodlark Basin, PNG: a synthesis of leg 180 results. In: P. Huchon et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 180, p. 1-36.
(online at: www-odp.tamu.edu/publications/180_SR/VOLUME/SYNTH/SYNTH.PDF)
(Upper crust of onshore and offshore Papuan region composed of variety of basement types (dominantly mid-ocean-ridge basalts but also island arc rocks) and ages (Late Maastrichtian, Paleocene, M Eocene). E Miocene- Holocene arc magmatism related to S-ward subduction at Trobriand Trough. Regional unconformity at 8.4 Ma marks onset of Woodlark Basin rifting)

Terpstra, G.R.J. (1964)- Age determinations of limestone samples of Woodlark Island, Papua. Bureau Mineral Res. Geol. Geophysics, Record 1964/006, p. 1-6.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=11263)

(Larger forams from two limestone formations of Woodlark Island: Nasai Lst from Nasai Island and Suloga Lst from Suloga Peninsula. Both have same larger foram assemblages with Spiroclypeus, Austrotrillina, Borelis, Eulepidina and Miogypsinoides (interpreted as Te- Lower Miocene, but may be Te4, latest Oligocene; JTvG))

Terpstra, G.R.J. (1965)- Outcrop samples, Bougainville Island, Territory of Papua and New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1965/110, p. 1-2.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=11563)
(Ages of limestones from across Bougainville Island appear to mainly be of Lower Miocene age)

Terpstra, G.R.J. (1966)- Micropalaeontological examination of outcrop samples of Bougainville Island, Territory of Papua and New Guinea. Bureau Mineral Res. Geol. Geophysics, Record 1966/66, p.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=117800
Limestone samples from Bougainville include mainly Keriaka Lst with Te/ Lower Miocene larger foraminifera: Lepidocyclina (Eulepidina), Spiroclypeus, Miogypsinoides and Miogypsina (may include Te4, latest Oligocene; JTvG))

Tiffin, D.L., H.L.Davies, E. Honza, J. Lock & Y. Okuda (1987)- The New Britain Trench and 149° embayment, western Solomon Sea. Geo-Marine Letters 7, 3, p. 135-142.
(W New Britain Trench relatively thin sediments in E, thick turbidites in W. Trench heads toward Huon Gulf, but ends abruptly at 149° Embayment, where it meets Trobriand Trench at acute angle. Collision melange present farther W, where trenches have disappeared under upper plates colliding in N Huon Gulf. Collision suture marked by Markham Canyon, continuous with Ramu-Markham fault zone onshore. Age of collision young in E, but possibly older in W New Guinea)

Titley, S.R. (1975)- Geological characteristics and environments of some porphyry copper occurrences in the southwestern Pacific. Economic Geology 70, p. 499-514.
(Review of discoveries since mid-1960's of Neogene porphyry copper mineralizations from New Guinea to SW Pacific Islands. Close genetic tie with volcanic arc activity and copper-bearing intrusions)

Titley, S.R. (1978)- Geologic history, hypogene features and process of secondary sulphide enrichment at Plesiyumi copper prospect, New Britain, Papua New Guinea. Economic Geology 73, p. 768-784.
(Porphyry copper prospect at Plesyumi, near center of New Britain island in a complex of U Oligocene intrusions and volcanics. Large copper-bearing sulfide system with several styles of mineralization)

Titley, S.R. (1978)- Copper, molybdenum and gold content of some·porphyry copper systems of the southwestern and western Pacific. Economic Geology 73, p. 977-981.
(Brief discussion of metals contents in New Guinea-SW Pacific porphyry copper deposits)

Titley, S.R. & T.L. Heidrick (1978)- Intrusion and fracture styles of some mineralized porphyry systems of the southwestern Pacific and their relationship to plate interactions. Economic Geology 73, p. 891-903.
(Older (Oligo-Miocene) porphyry systems in mobile belt of PNG, Admiralty Islands and New Britain show intrusion and fracture styles indicative of porphyry bodies emplaced into settings dominated by strike-slip stress regimes. Younger (Plio-Pleistocene) porphyry systems on mainland New Guinea and earby islands, with fracture patterns suggestive of forceful emplacement of intrusions into tectonically relaxed crustal blocks)

Tjhin, K.T. (1976)- Trobriand Basin exploration, Papua New Guinea. J. Australian. Petrol. Explor. Assoc. (APEA) 16, p. 81-90.

Trail, D.S. (1967)- Geology of Woodlark Island. Bureau Mineral Res. Geol. Geophysics, Canberra, Report 115, p. 1-33.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(Woodlark island ~170 mi NE of E point of Papua, composed of raised and slightly tilted Quaternary coral platform around eroded and locally mineralized, mainly Lower Micene volcanic pile with some Te limestone)

Tregoning, P., J.J. Jackson, H. McQueen, K. Lambeck, C. Stevens, R.P. Little, R. Curley & R. Rosa (1999)- Motion of the South Bismarck plate, Papua New Guinea. Geophysical Research Letters 26, 23, p. 3517-3520.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/1999GL010840)
(GPS velocities of Madang, Witu, Jacquinot Bay and Finschafen can be modelled to single pole of rotation, with CW rotation rate of 8.11°/My. Tectonic features surrounding S Bismarck Plate also explained by rotation of S Bismarck Plate about this pole)

Tregoning, P., K. Lambeck, A. Stolz, P. Morgan, S.C. McClusky, P. van der Beek, H. McQueen et al. (1998)- Estimation of current plate motions in Papua New Guinea from Global Positioning System observations. J. Geophysical Research 103, B6, p. 12181-12203.
(online at: http://rses.anu.edu.au/geodynamics/gps/papers/png_jgr.pdf)
(On PNG tectonic plates and relative motions from 20 station GPS network)

Tregoning, P. & H. McQueen (2001)- Resolving slip-vector azimuths and plate motion along the southern boundary of the South Bismarck Plate, Papua New Guinea. Australian J. Earth Sci. 48, 5, p. 745-750.

Tregoning, P., H. McQueen, K. Lambeck, R. Jackson, R. Little, S. Saunders & R. Rosa (2000)- Present-day crustal motion in Papua New Guinea. Earth Planets and Space 52, p. 727-730.
(online at: www.terrapub.co.jp/journals/EPS/pdf/5210/52100727.pdf)
(PNG one of most active tectonic regions in world, comprising several microplates and deforming zones in Australian- Pacific Plates collision zone. New data from North New Guinea, and strain accumulation region between S Bismarck and Pacific Plates in New Ireland/ New Britain region)

Vedder, J.G. & T.R. Bruns (eds.) (1989)- Geology and offshore resources of Pacific island arcs; Solomon Islands and Bougainville, Papua New Guinea regions. Circum-Pacific Council Energy and Mineral Resources, Houston, Earth Sci. Ser. 12, p. 1-329.
(Collection of papers on SW Pacific Bougainville- E PNG- Solomon Islands region)

Vedder, J.G. & T.R. Bruns (1989)- Geologic setting and petroleum prospects of basin sequences, offshore Solomon Islands and eastern Papua New Guinea. In: J.G. Vedder & T.R. Bruns (eds.) Circum-Pacific Council for Energy and Mineral Resources, Houston, Earth Science Ser. 12, p. 287-322.
(Multiple undrilled Late Cenozoic intra-arc basins in New Ireland- Guadalcanal segment of Melanesian Arc, Solomon Islands. Seismic profiles suggest up to 5-8km of probably mostly volcanogenic sediment fill. Soure rocks not positively identified and thermal histories of basins uncertain)

Vedder, J.G., T.R. Bruns & A.K. Cooper (1989)- Geologic framework of Queen Emma Basin, eastern Papua New Guinea. In: J.G. Vedder & T.R. Bruns (eds.) Geology and offshore resources of Pacific Island arcs; Solomon Islands and Bougainville, Papua New Guinea regions, Circum-Pacific Council Energy and Mineral Resources, Earth Sci. Ser. 12, p. 59-86.
(Seismic survey across Queen Emma Basin, a NW trending intra-arc basin between New Ireland and Bougainville Islands)

Von der Borch, C.C. (1972)- Marine geology of the Huon Gulf region, Papua New Guinea. Bureau Mineral Res. Geol. Geophysics Bull. 127, p. 1-49.
(online at: www.ga.gov.au/corporate_data/126/Bull_127.pdf)
(Huon Gulf at W side Solomon Sea oceanic basin, which is bordered by tectonically active land masses and contains >8000m deep New Britain Trench on N side. Large scale left-lateral displacement near W end of New Britain Trench appears to be continuation of onshore Markham-Ramu Lineamentand controls position of Markham submarine canyon. N o continental shelf is developed along N margin of Huon Gulf, due to strong and continuing uplift of Huon Peninsula in N New Guinea Arc structural province. Several submarine canyons, each related to large river onshore)

Wallace, D.A., R.W. Johnson, B.W. Chappell, R J. Arculus, M.R. Perfit & I.H. Crick (1983)- Cainozoic Volcanism of the Tabar, Lihir, Tanga, and Feni Islands, Papua New Guinea: geology, whole-rock analyses, and rock-forming mineral compositions. Bureau Mineral Res. Geol. Geophysics, Report 243, p. 1-62.
(online at: https://d28rz98at9flks.cloudfront.net/15154/Rep_243.pdf)
(Tabar, Lihir, Tanga and Feni island groups form alkaline volcanic chain NE of Tertiary New Ireland island arc. Mainly Pliocene-Pleistocene lavas and volcanoclastics. Alkaline rocks mainly phonolitic tephrite and trachybasalt, but also more mafic types. Raised Pleistocene coral reef terraces fringe many islands. E-M Miocene reef limestone on Simberi Island in Tabar Island group)

Wallace, L.M. (2002)- Tectonics and arc-continent collision in Papua New Guinea; insights from geodetic, geophysical, and geologic data. Doct. Thesis University of California Santa Cruz, p. 1-244. *(Unpublished)*

Wallace, L.M., S. Ellis, T. Little, P. Tregoning, N. Palmer, R. Rosa, R. Stanaway, J. Oa, E. Nidkombu & J. Kwazi (2014)- Continental breakup and UHP rock exhumation in action: GPS results from the Woodlark Rift, Papua New Guinea. Geochem. Geophys. Geosystems 15, 11, p. 4267-4290.
(online at: https://agupubs.onlinelibrary.wiley.com/toc/15252027/15/11)
(GPS velocities at Woodlark Rift, SE PNG indicate anticlockwise rotation (at 2-2.7°/Myr relative to Australia) of crustal blocks N of rift, producing 10-15 mm/yr of extension in continental rift, increasing to 20-40 mm/yr of seafloor spreading at Woodlark Spreading Center)

Wallace, L.M., R. McCaffrey, J. Beavan & S. Ellis (2005)- Rapid microplate rotations and backarc rifting at the transition between collision and subduction. Geology 33, 11, p. 857-860.
(GPS velocities from PNG, New Zealand, etc., show correlation between rapid tectonic block rotations and transition from subduction to collision, often leading to backarc rifting)

Wallace, L.M., C. Stevens, E. Silver, R. McCaffrey, R. Stanaway, W. Loratung, S. Hasiata et al. (2004)- GPS and seismological constraints on active tectonics and arc-continent collision in Papua New Guinea: implications for mechanics of microplate rotations in a plate boundary zone. J. Geophysical Research 109, B05404, 16p.
(New Guinea complex array of microplates between Pacific- Australian plates, converging obliquely at ~110 mm/yr. Velocities from 38 GPS sites in PNG explained by six tectonic blocks: Australian, Pacific, S Bismarck, N Bismarck, Woodlark and New Guinea Highlands. Highlands and Woodlark Plates rotate anticlockwise relative to Australia, consistent with left-lateral shear between Australian- Pacific Plates. Birds Head Block in W New Guinea also rotates CCW. Portions of Ramu-Markham Fault appear locked. Clockwise rotation of S Bismarck plate controlled by edge forces initiated by Finisterre arc- New Guinea Highlands collision)

Webb, L.E., S.L. Baldwin, T.A. Little & P.G. Fitzgerald (2008)- Can microplate rotation drive subduction inversion? Geology 36, 10, p. 823-826.
(Model for exhumation of Late Miocene coesite eclogite in Woodlark Rift of E PNG. Reorganization in obliquely convergent Australian-Pacific plate boundary zone led to formation of Woodlark microplate. CCW rotation of microplate relative to Australian plate resulted in extensional reactivation of subduction thrust and exhumation of high- and ultrahigh-pressure (HP-UHP) rocks in Australian-Woodlark plate boundary zone)

Webb, L.E., S.L. Baldwin & P.G. Fitzgerald (2014)- The early-middle Miocene subduction complex of the Louisiade Archipelago, southern margin of the Woodlark Rift. Geochem. Geophys. Geosystems 15, 10, p. 4024-4046.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2014GC005500)
(Louisiade Archipelago at S rifted margin of Woodlark Basin (SE PNG)accretionary wedge formed during E-M Miocene N-dipping subduction of Australian margin and transpression along Australian-Pacific plate boundary. Fold vergence mainly to SW;d top-to- SW thrusting of ultramafic rocks over Calvados Schist on Rossel Island. Followed by ~12 Ma? onset of seafloor spreading in Woodlark Basin)

Webber, S., K.P. Norton, T.A. Little, L.M. Wallace & S. Ellis (2018)- How fast can low-angle normal faults slip? Insights from cosmogenic exposure dating of the active Maiôiu fault, Papua New Guinea. Geology 46, 3, p. 227-230.

(Mai'iu fault in rapidly extending Woodlark Rift is one of few active continental low-angle normal faults globally. Such faults may slip at >10-20 mm/yr faster than high-angle normal faults. Cosmogenic nuclide exposure dating (10Be in quartz) of Mai'iu fault scarp indicates slip at 11.7 ± 3.5 mm/yr over past ~5.5 k.y.)

Weissel, J.K., B. Taylor & G.D. Karner (1982)- The opening of the Woodlark Basin, subduction of the Woodlark spreading system, and the evolution of northern Melanesia since mid-Pliocene time. Tectonophysics 87, p. 253- 277.
(Woodlark Basin spreading rates diminish by >10% from E to W. Start of seafloor spreading in basin prior to 3.5 Ma in E, successively later to W. Land areas bounding W end of Woodlark Basin undergoing tensional deformation, and Woodlark Basin plate boundary will propagate W into Papuan peninsula)

Westaway, R. (2005)- Active low-angle normal faulting in the Woodlark extensional province, Papua New Guinea: a physical model. Tectonics 24, TC6003, p. 1-25.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2004TC001744)
(Correction published 1/2007)

Whalen, J.B. (1985)- Geochemistry of an island-arc plutonic suite: the Uasilau-Yau Yau Intrusive Complex, New Britain, P.N.G.. J. Petrology 26, 3, p. 603-632.
(Late Oligocene Uasilau-Yau Yau intrusive complex of C New Britain compositional continuum from gabbro to granodiorite, dated at ~28-29 Ma. Tonalite porphyry that led to porphyry copper mineralization is younger intrusive event at 24 Ma. Granites probably formed by partial melting of subducted oceanic crust or overlying mantle, and may be termed mantle or M-type granites)

Whalen, J.B. & I. McDougall (1980)- Geochronology of the Uasilau-Yau Yau porphyry copper prospect, New Britain, Papua New Guinea. Economic Geology 75, 4, p. 566-571.
(K-Ar ages for three major intrusive episodes of Uasilau-Yau Yau intrusive complex: Group 1 (gabbro and quartz diorite) >30 Ma; Group 2 (quartz diorite, tonalite, and granodiorite; main volume of complex) ~28.4 Ma; Group 3 tonalite ~23.5 Ma, followed closely by hydrothermal alteration and copper mineralization. All porphyry copper mineralization in New Britain may be result of late Oligocene igneous event)

Whitmore, G.P., K.A.W. Crook & D.P. Johnson (1999)- Sedimentation in a complex convergent margin: the Papua New Guinea collision zone of the western Solomon Sea. Marine Geology 157, p. 19-45.
(Tectono-sedimentary model for sedimentation along W Solomon Sea region of N PNG collision zone. S underthrust plate (Morobe and Trobriand tectono-sedimentary provinces) and N overriding plate (Huon, Finsch, Siassi and New Britain provinces). Most sediment supplied to W end of trench delivered axially down collisional suture, much of it apparently derived from emergent PNG landmasses to W)

Whitmore, G.P., D.P. Johnson, K.A.W. Crook, J. Galewsky & E.A. Silver (1997)- Convergent margin extension associated with arc-continent collision; the Finsch Deep, Papua New Guinea. Tectonics 16, 1, p. 77-87.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/96TC02476)
(Finsch Deep asymmetric rhomboidal basin, up to 5400m deep, N of Solomon Sea Triple Junction, E side of PNG. Developed due to N-S extension in transition zone from continental collision W of Solomon Sea Triple Junction to oceanic subduction to E)

Wiebenga, W.A. (1973)- Crustal structure of the New Britain- New Ireland region. In: P.J. Coleman (ed.) The Western Pacific: island arcs, marginal seas, geochemistry, University of Western Australia Press, p. 163-177.

Willcox, J.B. (1976)- Structure of the Bismarck Sea. Bureau Mineral Res. Geol. Geophysics, Canberra, Record 1976/59, p. 1-46.
(online at: https://d28rz98at9flks.cloudfront.net/13479/Rec1976_059.pdf)
(Geophysical survey of Gulf of Papua and Bismarck Sea by CGG. Bismarck Sea marginal basin partly enclosed by New Guinea and New Britain, and W Melanesian Arc)

Williamson, A. & R. Rogerson (1983)- Geology and mineralization of Misima Island. PNG Geol. Survey Report 83/12, p. 1-136.

Woodhead, J.D., S.M. Eggins & R.W. Johnson (1998)- Magma genesis in the New Britain island arc; further insights into the melting and mass transfer processes. J. Petrology 39, 9, p. 1641-1668.
(online at: http://petrology.oxfordjournals.org/content/39/9/1641.full.pdf+html)
(Quaternary volcanic rocks from New Britain wide range in chemical compositions. Share isotopic characteristics with Indian Ocean type mid-ocean ridge basalt, but high field strength elements extremely depleted compared with MORB. May result from previous melt-extraction event)

Woodhead, J.D., J. Hergt, M. Sandiford & W. Johnson (2010)- The big crunch: physical and chemical expressions of arc/continent collision in the Western Bismarck arc. J. Volcanology Geothermal Res. 190, p. 11-24.
(Earthquake distribution study where W Bismarck arc off NE PNG is undergoing progressive W to E collision with mainland Papua, currently centred around ~148°E (see also Holm & Richards 2013))

Woodhead, J. & R. Johnson (1993)- Isotopic and trace-element profiles across the New Britain island arc, Papua New Guinea. Contrib. Mineralogy Petrology 113, 4, p. 479-491.
(New Pb-, Sr-, and Nd-isotopic data volcanics 100–580 km above Wadati-Benioff Zonein New Britain island arc. Well-defined trends suggest two-component mixing (slab contribution dominated by subducted, altered, oceanic crust and smaller degrees of partial melting of mantle wedge as WBZ depths increase)

Yeats, C.J., J.M. Parr, R.A. Binns, J.B. Gemmell & S.D. Scott (2014)- The SuSu Knolls hydrothermal field, Eastern Manus Basin, Papua New Guinea: an active submarine high-sulfidation copper-gold system. Economic Geology 109, 8, p. 2207-2226.
(SuSu Knolls three steep-sided conical porphyritic andesite-to-dacite domes on N-NW-trending ridge in E Manus basin, with crests 1150-1520 m below sea level. Intense hydrothermal plumes, with Cu-Au sulfide mineralization. Good example of modern, high sulfidation, Cu-Au submarine hydrothermal system)

Yoneshima, S., K. Mochizuki, E. Araki, R. Hino, M. Shinohara & K. Suyehiro (2005)- Subduction of the Woodlark Basin at New Britain Trench, Solomon Islands region. Tectonophysics 397, p. 225-239.
(Woodlark Basin, S of Solomon Islands arc young (~5 Ma) oceanic basin subducting under New Britain Trench. Image of subducting slab at W side of basin from micro-seismicity, which is concentrated at 10-60 km depth along plate boundary. Dip angle of plate 30°)

Zirakparvar, N.A. (2015)- Cathodoluminescence guided zircon Hf isotope depth profiling: mobilization of the Lu-Hf system during (U)HP rock exhumation in the Woodlark Rift, Papua New Guinea. Lithos 220-223, p. 81-96.
(Hf isotope profile within zircons from quartzo-feldspathic host gneisses in Woodlark Rift)

Zirakparvar, N.A., S.L. Baldwin & A.K. Schmitt (2014)- Zircon growth in (U)HP quartzofeldspathic host gneisses exhumed in the Woodlark Rift of Papua New Guinea. Geochem. Geophys. Geosystems 15, 4, p. 1258-1282.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/2013GC004964/epdf)
(Zircons from two gneisses in D'Entrecasteaux Islands contain Cretaceous inherited cores, with metamorphic rims yielding 206Pb/ 238U ages of 2.9 ± 0.3 Ma and 2.8 ± 1.0 Ma. Older age similar to previously reported 206Pb/238U ages on zircons from mafic eclogite within gneiss. At (U)HP locality zircons from gneiss lack inheritance and yield age of 3.7 ± 0.1 Ma. Zircon recrystallization occurred during eclogite metamorphism, zircon rims during subsequent retrogression, but not at (U)HP conditions. PNG (U)HP terrane evolved rapidly)

Zirakparvar, N.A., S.L. Baldwin & J.D. Vervoort (2011)- Lu-Hf garnet geochronology applied to plate boundary zones: insights from the (U)HP terrane exhumed within the Woodlark Rift. Earth Planetary Sci. Letters 309, p. 56-66.

(High-P- UHP metamorphic rocks in many orogenic belts suggest common subduction of continental lithosphere. Late Miocene (U)HP metamorphics in core complexes in Woodlark Rift of SE PNG not tectonically overprinted. Garnet Lu-Hf isotopic ages: 7.1 Ma for garnets in Late Miocene coesite eclogite; ~68 Ma for garnet porphyroblasts (= age of Papuan ophiolite obduction?) from Pleistocene amphibolite facies shear zone in D'Entrecasteaux Island, ~11.2 Ma for recrystallized garnet from SE margin of rift)

Zirakparvar, N.A., S.L. Baldwin & J.D. Vervoort (2013)- The origin and geochemical evolution of the Woodlark Rift of Papua New Guinea. Gondwana Research 23, 3, p. 931-943.
(Protoliths of exhumed metamorphic rocks in Woodlark Rift tied to volcanoclastics of Whitsunday Volcanic Province of NE Australia, produced during M Cretaceous rifting event (similar Nd isotopic compositions, zircons with 90-100 Ma U-Pb ages, no Hf- Nd isotopic compositions expected of ancient continental crust). Some mafic metamorphic rocks in W Woodlark Rift (eclogites and amphibolites) not related to WVP)

IX.13. Papua New Guinea (Gulf of Papua, Coral Sea)

Bailey, B. & G. Salem (2015)- Testing the Tertiary basin floor fan play in the Gulf of Papua, Papua New Guinea. In: Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 237-247.
(see also Bailey et al. 2015)

Bailey, B., G. Salem & P. Haltmeier (2015)- Testing the Tertiary basin floor fan play in the Gulf of Papua, PNG. AAPG/SEG Int. Conf. Exhibition, Melbourne, Search and Discovery Art. 10802, 15p.
(online at: www.searchanddiscovery.com/documents/2015/10802bailey/ndx_bailey.pdf)
(Previous oil-gas exploration in Gulf of Papua in Mesozoic clastic and Miocene carbonate buildup (several small gas discoveries). Extensions of Mesozoic Toro- Digimu Fm reservoirs limited as they sub-crop at base-Tertiary unconformity, caused by uplift/rifting at N end of Coral Sea. Plio-Pleistocene deltas prograde across Gulf from W to E. Three-wells drilled in 2013 to test seismic amplitude anomalies in new Plio-Pleistocene deepwater clastics play found good, quartz-rich, sandstone turbidites, but limited gas)

Botsford, A., L. Endebrock & A. Harrington (2012)- Structural and stratigraphic evolution of the Gulf of Papua, Papua New Guinea: new insights from a modern 3D seismic survey. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 10456, p. 1-12. *(Presentation Abstract)*
(online at: www.searchanddiscovery.com/documents/2012/10456botsford/ndx_botsford.pdf)
(Gulf of Papua complex structural and stratigraphic evolution on NE edge of Australian plate. Current basin setting is NW-SE-trending foreland basin SW of uplifted Papuan fold belt. Over 3.5km of siliciclastic sediments deposited from Pliocene - present. Extensive carbonate system developed throughout Oligocene-Miocene. Well and seismic data show erosion of up to 1.8km of Mesozoic sediment between ~63-38 Ma. Three significant gas discoveries in Lower Miocene Darai Lst: Uramu and Pasca in 1968, Pandora in 1988)

Botsford, A., L. Endebrock & A. Harrington (2012)- Structural and stratigraphic evolution of the Gulf of Papua, Papua New Guinea: new insights from a modern 3D seismic survey. Proc. Eastern Australasian Basins Symposium IV, Brisbane 2012, Petroleum Expl. Soc. Australia (PESA), 6p.
(Same as Botsford et al. 2015)

Bulois, C., M. Pubellier, N. Chamot-Rooke & M. Delescluse (2018)- Successive rifting events in marginal basins: the example of the Coral Sea Region (Papua New Guinea). Tectonics 37, 1, p. 3-29.
(Three successive rifting events in Coral Sea region: (1) poorly documented Triassic event, along N-S Permian structural fabric; (2) Jurassic reactivation forming small basins bounded by N-S, NE-SW, and E-W listric faults. Extension continued in E Cretaceous with seafloor spreading in Owen Stanley oceanic basin, now incorporated in Papuan fold and thrust belts; (3) Late Cretaceous extension, followed by Coral Sea seafloor spreading from Danian-Ypresian. Coral Sea propagator cuts through rifted margin and is controlled by subduction complex tied to Tasman Sea opening)

Carroll, A.R. & E. Webb (1996)- Pandora gas development. In: P.G. Buchanan (ed.) Petroleum exploration, development and production in Papua New Guinea, Proc. 3rd PNG Petroleum Convention, Port Moresby, p. 685-689.

Carson, B.E., J.M. Francis, R.M. Leckie, A.W. Droxler, G.R. Dickens, S.J. Jorry et al. (2008)- Benthic foraminiferal response to sea level change in the mixed siliciclastic-carbonate system of southern Ashmore Trough (Gulf of Papua). J. Geophysical Research 113, F01S20, p. 1-18.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006JF000629/epdf)
(Three foraminifera assemblages in deepwater Gulf of Papua Pleistocene-Holocene: (1) high Uvigerina peregrina- Bolivina robusta (higher organic carbon flux or lower oxygen water at maximum siliciclastic fluxes to slope with falling sea level); (2) high Globocassidulina subglobosa (lowered organic carbon flux or elevated oxygen, corresponding to lowered siliciclastic fluxes to slope due to sediment bypass during sea level lowstand); (3) high % neritic benthic species like Planorbulina mediterranensis (increased off-shelf delivery of neritic carbonates, when carbonate productivity on outer shelf increased significantly when reflooded)

Crockett, J.S. (2006)- Unraveling the 3-D character of clinoforms: Gulf of Papua, Papua New Guinea. Ph.D. Thesis, University of Washington, Seattle, p. 1-162.
(Study of modern clinoform development on Fly River shelf, Gulf of Papua, PNG)

Crockett, J.S., C.A. Nittrouer, A.S. Ogston, D.F. Naar & B.T. Donahue (2008)- Morphology and filling of incised submarine valleys on the continental shelf near the mouth of the Fly River, Gulf of Papua. J. Geophysical Research, Earth Surface, 113, F1S12, p. 1-16.
(Three incised valleys on continental shelf near mouth of Fly River, formed during sea level lowstands, which were not extensively modified or filled during Holocene Transgression. Valley relief 10-50m and most conspicuous at present-day shelf depths of 30-70m. Some filling of valleys during alluvial and transgressive phases in 3 stages: (1) hemipelagic sedimentation at distal sites, (2) gravity-driven flow spreading down valley, and (3) subsequent clinoform progradation that completely fills the valley)

Davies, A., C. Reiser, B. Burmaz & R. Reed (2012)- AVO Screening in frontier basins: an example from the Gulf of Papua, Papua New Guinea. AAPG Ann. Conv. Exhib., Long Beach 2012, Search and Discovery Art. 40910, p. . *(Extended Abstract)*
(online at: www.searchanddiscovery.com/documents/2012/40910davies/ndx_davies.pdf)

Drummond, B.J., C.D.N. Collins & G. Gibson (1979)- The crustal structure of the Gulf of Papua and Northwest Coral Sea. BMR J. Australian Geol. Geophysics 4, 4, p. 341-351.
(online at: www.ga.gov.au/corporate_data/81012/Jou1979_v4_n4_p341.pdf)
(BMR seismic refraction data from SW coast of Papuan Peninsula and NW Coral Sea show sediments thickness of 5km over Papuan Plateau, up to 10 km along axes of Moresby and S Aure Troughs, 1-2 km in Coral Sea, over Eastern Plateau. Crust continental under Papuan Peninsula and E Plateau, oceanic under Moresby Trough. N Australia, E and Papuan Plateaus and Papuan Peninsula once formed continuous continental crust. Opening of Coral Sea Basin extended N-ward along axis of Moresby Trough, into Aure Trough)

Durkee, E.F. (1990)- Pasca-Pandora reef exploration in the Gulf of Papua. In: G.J. & Z. Carman (eds.) Petroleum Exploration in Papua New Guinea, Proc. First PNG Petroleum Convention, Port Moresby, p. 567-579.
(Miocene reef exploration with >3 TCF of probable biogenic dry gas in 1988 Pandora discovery and thermogenic wet gas in Pasca (~0.2- 0.4 TCF ?))

Ewing, M., L.V. Hawkins & W.L. Ludwig (1970)- Crustal structure of the Coral Sea. J. Geophysical Research 75, 1953-1962.

Falvey, D.A. & L.W.H. Taylor (1974)- Queensland plateau and Coral Sea Basin: structural and time-stratigraphic patterns. Bull. Australian Soc. Exploration Geophysicists 5, p. 123-126.
(W Coral Sea region one major and three minor marginal plateaux, partly surrounding deep abyssal plain. Abyssal Plain underlain by ~1km sediment and oceanic crust generated by E Eocene seafloor spreading phase. Queensland Plateau subsided continental crust with Paleozoic basement rocks, originally part of onshore Tasman Geosyncline. Rift features beneath Queensland Trough, and plateau margin, with 1-3 kms of probable U Cretaceous 'rift valley' sediments on basement. Residual plateau highs along old Paleozoic trends subsided in E Miocene and locally capped by coral reefs)

Febo, L.A. (2007)- Paleoceanography of the Gulf of Papua using multiple geophysical and micropaleontological proxies. Ph.D. Thesis Louisiana State University, Baton Rouge, p. 1-155. *(Unpublished)*
(Surface sediments spanning ~15-33 ky- Recent)

Febo, L.A., S.J. Bentley, J.H. Wrenn, A.W. Droxler, G.R. Dickens, L.C. Peterson & B.N. Opdyke (2008)- Late Pleistocene and Holocene sedimentation, organic carbon delivery, and paleoclimatic inferences on the continental slope of the northern Pandora Trough, Gulf of Papua, J. Geophysical Research 113, F01S18, doi:10.1029/2006JF000677, p. 1-21.

(Two periods of Pleistocene rapid sediment accumulation, likely corresponding to early transgression when rivers delivered sediments much closer to shelf edge)

Francis, J.M., J.J. Daniell, A.W. Droxler, G.R. Dickens, S.J. Bentley, L.C. Peterson, B. Opdyke & L. Beaufort (2008)- Deep-water geomorphology and sediment pathways of the mixed siliciclastic-carbonate system, Gulf of Papua. J. Geophysical Research 113, F01S16, p. 1-22.
(Modern deep water sedimentation Gulf of Papua)

Goni, M.A., N. Monacci, R. Gisewhite, J. Crockett, C. Nittrouer, A. Ogston, S.R. Alin & R. Aalto (2008)- Terrigenous organic matter in sediments from the Fly River delta-clinoform system (Papua New Guinea). J. Geophysical Research, Earth Surface, 113, F1S10, p. 1-27.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006JF000653/epdf)
(Organic matter in Fly River prodelta clinoform sediments predominantly of terrigenous origin (modern plant detritus, aged soil organic matter, and very old or fossil organic matter))

Gordon, S.A., B.J. Huizinga & V. Sublette (2000)- Petroleum potential of the Southern Gulf of Papua. In: P.G. Buchanan et al. (eds.) Papua New Guineaõs petroleum industry in the 21st century, Proc. 4th PNG Petroleum Convention, Port Moresby, p. 205-218.
(Thick N-S trending ?Triassic- Jurassic rift basin under W part of Gulf of Papua, with 2-3km of sediment (thicker than NW Shelf). Earliest Tertiary uplift stripped most of Cretaceous sediment)

Harris, P.T. (1994)- Incised valleys and backstepping deltaic deposits in a foreland-basin setting, Torres Strait and Gulf of Papua, Australia. In: R.W. Dalrymple et al. (eds.) Incised-valley systems, Soc. Sedimentary Geology (SEPM) Spec. Publ. 51, p. 97-108
(On incised valleys in front of Fly River delta, cut during Pleistocene lowstands)

Howell, A.L., S.J. Bentley, K. Xu, R.E Ferrell, Z. Muhammad & E. Septama (2014)- Fine sediment mineralogy as a tracer of latest Quaternary sediment delivery to a dynamic continental margin: Pandora Trough, Gulf of Papua, Papua New Guinea. Marine Geology 357, p. 108-122.

Harris, P.T., C.B. Pattiaratchi, J.B. Keene, R.W. Dalrymple, J.V. Gardner, E.K. Baker et al. (1996)- Late Quaternary deltaic and carbonate sedimentation in the Gulf of Papua foreland basin: response to sea level change. J. Sedimentary Res. 66, 4, p. 801-819.

Huuse, J.D., C. Palmer & V. Cole (2014)- Deepwater Papua New Guinea - Evidence for a working petroleum system. 76th EAGE Conf. Exhib., Amsterdam 2014, Th D203 10, 5p.
(Seismic survey in Palmer Petroleum Block offshore Port Moresby, Gulf of Papua With large NW-SE trending Late Miocene- E Pliocene nappes (2 km vertical throw), with hydrocarbon indicators like pockmarks, pipes, gas chimneys and Bottom Simulating Reflectors. Distribution strong correlation with steep limbs of deeper nappes)

Jablonski, D., S. Pono & O.A. Larsen (2006)- Prospectivity of the deepwater Gulf of Papua and surrounds in Papua New Guinea (PNG)- a new look at a frontier region. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 46, 1, p. 179-200.
(Deepwater Gulf of Papua large basement involved, extensional structures, overprinted by compression. New seismic indicates 11 plays: (1) extensional Paleozoic rift fault blocks; (2) U Jurassic- Lw Cretaceous turbidites (Iagifu-Hedina-Toro sst equivalents); (3) Campanian- M Paleocene Coral Sea synrift sst and basin floor fan equivalents (Pale/ Barune Fms); (4) M Paleocene break-up unconformity fault blocks and intra-basinal highs; (5) U Paleocene- Lw Eocene Pima Sst equivalent associated with M Paleocene uplift and erosion; (6) Oligocene- Lw Miocene lowstand deltas and turbidites; (7) Miocene- Recent biohermal build-ups; (8) Karstified Darai Lst equivalent sealed by Aure Beds claystones; (9) Miocene- Recent lowstand deltas and turbidites; (10) Eocene- Pliocene onlaps onto structural highs; and (11) Compressional plays associated with Pliocene- Recent collision of PNG and Pacific plates)

Jorry, S.J., A.W. Droxler & J.M. Francis (2010)- Deepwater carbonate deposition in response to re-flooding of carbonate bank and atoll-tops at glacial terminations. Quaternary Science Rev. 29, 17-18, p. 2010-2026.
(Incl. Gulf of Papua examples, adjacent to carbonate platform)

Jorry, S.J., A.W. Droxler, G. Mallarino, G.R. Dickens, S.J. Bentley, L. Beaufort, L.C. Peterson & B.N. Opdyke (2008)- Bundled turbidite deposition in the central Pandora Trough (Gulf of Papua) since Last Glacial Maximum: Linking sediment nature and accumulation to sea level fluctuations a millennial timescale, J. Geophysical Research 113, doi:10.1029/2006JF000649, p. 1-15.
(Siliciclastic turbidites numerous during Last Glacial Maximum (23-19 ka), and did not occur during warming/ deglaciation times. Timing of calciturbidite coincides with first reflooding of Eastern Fields Reef)

Keen, T.R., D.S. Ko, R.L. Slingerland, S. Reidlinger & P. Flynn (2006)- Potential transport pathways of terrestrial material in the Gulf of Papua. Geophysical Research Letters 33, 4, L04608, doi:10.1029/2005GL025416.

Landmesser, C.W., J.E. Andrews & G.H. Packham (1974)- Aspects of the geology of the eastern Coral sea and the western New Hebrides basin. Initial Reports Deep Sea Drilling Project (DSDP) 30, p. 647-661.
(online at: www.deepseadrilling.org/30/volume/dsdp30_21.pdf)

Mutter, J.C. (1975)- East Australian margin and the western marginal basins: basin evolution and marginal plateau subsidence in the Coral Sea. Exploration Geophysics 6, 2/3, p. 35-37.

Mutter, J.C. (1975)- Structural analysis of the Gulf of Papua and Northwest Coral Sea region. Bureau Mineral Res. Geol. Geophysics, Canberra, Report 179, p. 1-52.
(online at: www.ga.gov.au/products-services/legacy-publications/reports.html)
(New interpretation of structure and tectonic history of Gulf of Papua and NW Coral Sea from 1970 seismic, gravity, and magnetic survey. Opening of Coral Sea formed Aure-Moresby Trough system in M Eocene?. Moresby Trough folding very similar to that in onshore Aure Trough, and probably continuous feature. Crust thins considerably under Moresby Trough, where sediment is thickest)

Sarg J.F., L.J. Weber, J.R. Markello, J.K. Southwell, J.M. Thomson et al. (1996)- Carbonate sequence stratigraphy; a summary and perspective with case history, Neogene, Papua New Guinea. In: C.A. Caughey et al. (eds.) Proc. Int. Symp. Sequence stratigraphy in SE Asia, Jakarta, Indon. Petroleum Assoc. (IPA), Jakarta 1995, p. 137-179.
(Carbonate sequence stratigraphy basics, with data on gas-bearing Gulf of Papua Miocene reefs (Pasca, Pandora). Initial foreland basin subsidence in latest Oligocene- earliest Miocene leads to start of carbonate platform growth. SB at 21 Ma (=Bur1?) extensive subaerial exposure. Sequence 13.8 Ma major platform outbuilding, 10.5 Ma exposure surface. Thrust loading from N initiated peripheral forebulge by middle of M Miocene, with regional uplift and exposure of carbonates area. Platform highs subaerially exposed in Latest Miocene and onlapped by 5.5 Ma first siliciclastics from uplifted Papuan fold and thrust belt to N and NE. Renewed thrust sheet emplacement in latest Miocene-Pliocene drowned remaining platforms. Hydrocarbon columns relatively small, probably due to poor seal)

Septama, E. (2015)- The Late Quaternary deep-sea depositional system in the Gulf of Papua: linking source, dynamic sedimentation processes and depositional architecture. Ph.D. Thesis, Memorial University of Newfoundland, St. Johnôs, p. 1-158.

Septama, E. & S.J. Bentley (2010)- Late Quaternary deepwater fan depositional cycles in the Gulf of Papua: linking sources, dynamic sedimentation processes, and depositional architecture. AAPG Ann. Conv. Exh., New Orleans 2010, Search and Discovery Art. 50283, 31p. *(Abstract+ Presentation)*
(online at: www.searchanddiscovery.com/documents/2010/50283septama/ndx_septama.pdf)
(Seismic and piston core study of Late Quaternary deepwater channel-fan system in Gulf of Papua, focused on Pandora and Moresby Troughs)

Septama, E. & S.J. Bentley (2016)- Late Quaternary geomorphology, seabed evolution, and terrigenous sediment delivery to the Pandora and Moresby Troughs, Gulf of Papua, Papua New Guinea. Marine Geol. 379, p. 208-223.
(Peak depositional period in late Quaternary deepwater Pandora Trough during Marine Isotope Stage 2, when large deep-sea channel network linked Pandora and Moresby Troughs, allowing long-distance sediment transport by large turbidity currents from Papuan mainland to Coral Sea Basin)

Septama, E. & S.J. Bentley (2017)- Source-to-sink sediment delivery in the Gulf of Papua from scanning electron microscopy and mineral liberation analysis-aided provenance analysis of deep-sea turbidite sands. AAPG Bull. 101, 6, p. 907-936.
(Provenance of Pleistocene- Holocene deepwater sediments in Gulf of Papua. Multiple terrestrial sediment sources along~500 km basin margin converged to form continuous deep-sea system in two basins before 30 ka. During sea level fall of Last Glacial Maximum (18-22 ka) distinct depocenters, due to incision of individual rivers across newly exposed coastal plain, followed by compositional similarity near end of LGM. Holocene deepwater sand transport shut down, except one locality with narrow shelf-slope setting and additional volcanic supply)

Septama, E., S.J. Bentley & A.W. Droxler (2016)- Conduits, timing and processes of sediment delivery across a high relief continental margin, continental shelf to basin in the late Quaternary, Gulf of Papua. Marine Petroleum Geol. 72, p. 447-462.

Septama, E., S.J. Bentley & M. Shaffer (2011)- Source-to-sink sediment delivery in the Gulf of Papua from SEM-MLA-aided provenance and textural analysis of turbidite sands. American Assoc. Petrol. Geol. (AAPG) Ann. Conv., Houston 2011, Search and Discovery Art. 30181, 28p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2011/30181septama/ndx_septama.pdf)
(Provenance study of Pleistocene-Holocene deepwater sands in Gulf of Papua shows three major pathways: (1) long-distance NW-SE sediment transport of quartzo-feldspathic sand from the Papuan Mainland; (2) short-distance transport of felsic-mafic volcanic sand from collision margin of Papuan Peninsula; (3) intermediate-distance delivery from Fly-Strickland and Papuan Peninsula along coastal pathways toe Moresby Trough)

Symonds, P.A., P.J. Davies, C.J. Pigram, D.A. Feary & G.C.H. Chaproniere (1991)- Northeast Australia: Torres Shelf- Pandora Trough. Bureau Mineral Res. Geol. Geophysics, Australia, Canberra, Continental margins program Folio 4, p. 1-74.
(With seismic profiles from BMR Survey 50, 1985)

Symonds, P.A., J. Fritsch & H.U. Schluter (1984)- Continental margin around the western Coral Sea Basin: structural elements, seismic sequences and petroleum geological aspects. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, American Assoc. Petrol. Geol. (AAPG), p. 243-252.
(German- Australian surveys across W Coral Sea Basin in 1978/1981 suggest opposing margins of Queensland and Papuan Plateaus underlain by parts of complex rift zone which would have been up to 80 km wide prior to continental break up. "Outer" basement highs" with low angle contacts with oceanic crust in oceanward part of rift zone on both sides of Coral Sea Basin. N Queensland Trough and W margin of Eastern Plateau considered to have best petroleum potential: underlain by grabens with up to 5 km of sediments, part of which may be Mesozoic deltaic sequence similar to that intersected in Anchor Cay 1 well)

Taylor, L.W.H. (1975)- Depositional and tectonic patterns in the western Coral Sea. Bull. Australian Soc. Exploration Geophysicists 6, p. 33-35.
(Preliminary results of DSDP Legs 21 and 30 in Coral Sea. Lower Eocene ocean floor age established at Site 287. Uplift of PNG Owen Stanley Range in latest Oligocene- E Miocene reflected in shedding of detritus into Coral Sea, etc. Fly River of PNG not major sediment source for Coral Sea. U Cretaceous- Paleocene rift valley sequence interpreted for edge of Queensland Plateau, less definitive at SE edge of Papuan Plateau and W part of Louisiade Platform)

Taylor, L. & D.A. Falvey (1977)- Queensland Plateau and Coral Sea basin: stratigraphy, structure and tectonics. Australian Petrol. Explor. Assoc. (APEA) J. 17, 1, p. 13-29.
(Seafloor spreading in Coral Sea dated by DSDP as E Eocene (51 Ma). This requires rifting-breakup of extended NE Australian continent, incl. Queensland, Papuan and Louisiade Plateaus and Cretaceous portions of East Papua. After initial sprading widespread Late Eocene- Mid-Oligocene unconformity on all plateaus. Coral reef development started in Late Oligocene- E Miocene. Up to 3km rift sequences beneath Queensland and Townsville troughs, possibly of U Cretaceous- Paleocene age. With tectonic reconstruction and Paleocene-Eocene paleogeographic maps)

Tcherepanov, E.N., A.W. Droxler, P. Lapointe, G.R. Dickens, S.J. Bentley, L. Beaufort et al. (2008)- Neogene evolution of the mixed carbonate-siliciclastic system in the Gulf of Papua, Papua New Guinea. J. Geophysical Research 113, F01S21, doi:10.1029/2006JF000684, 15p.
(Cenozoic mixed system in Gulf of Papua four phases: (1) Late Cretaceous-Paleocene: rift grabens and uplifted structural blocks which served later as pedestals for carbonate edifices (2) Eocene-M Miocene neritic carbonates, controlled mostly by eustatic fluctuations; (3) Late Miocene- E Pliocene: extensive demise of carbonate platforms in central part of study area; (4) Late Pliocene-Holocene: siliciclastics-dominated, resulting in burial of drowned and active carbonate platforms, although some platforms still alive today)

Tcherepanov, E.N., A.W. Droxler, P. Lapointe & K. Mohn (2008)- Carbonate seismic stratigraphy of the Gulf of Papua mixed depositional system: Neogene stratigraphic signature and eustatic control. Basin Research 20, 2, p. 185-209.
(In Gulf of Papua major carbonate system initiated in Eocene. Subsequent to E Oligocene hiatus, carbonate system expanded and aggraded, then backstepped and partly drowned in Late Oligocene- earliest Miocene. During late E Miocene- early M Miocene carbonate system continued vertical growth in most platform areas. In M Miocene (Langhian-Serravallian boundary) carbonate deposition shifted downward during sea-level regression, exposing most of early M Miocene platform tops. After downward shift, active carbonate production only in NE part of study area. At start of LateMiocene platform tops re-flooded. Overall pattern, often referred to as Oligocene-Neogene stratigraphic signature, similar to patterns such as in Maldives, Bahamas, etc.)

Tcherepanov, E.N., A.W. Droxler, P. Lapointe, K. Mohn & O.A. Larsen (2010)- Siliciclastic influx and burial of the Cenozoic carbonate system in the Gulf of Papua. Marine Petroleum Geol. 27, 2, p. 533-554.
(Extensive Late Oligocene- M Miocene carbonate system in Gulf of Papua buried by huge influx of siliciclastics from PNG. Major episodes of siliciclastic influx in carbonate system related to tectonic activity in fold- thrust belt during Oligocene Peninsular Orogeny, Late Miocene Central Range Orogeny and Late Pliocene renewed uplift and exhumation of peninsular region. Beautiful seismic examples)

Wang, Z. & C.A. Stein (1992)- Subsidence of the Gulf of Papua in the Cenozoic. Tectonophysics 205, p. 409-426.
(Two subsidence episodes in W Gulf of Papua (1) E Cenozoic-Oligocene, minor stretching with opening of Coral Sea; (2) E Miocene- Present higher subsidence rate which cannot be explained by Paleocene rifting. Late Oligocene- Late Miocene episode of rapid subsidence in Aure Trough to E affects subsidence of W Gulf of Papua. Computed expected deflection from flexure due to load of Aure Trough strata similar to that observed. Model used had effective elastic thickness of rifted continental margins, implying relatively weak lithosphere. Predicted position of forebulge in western Gulf where Oligocene strata absent, suggesting post-depositional uplift, facilitating growth of E Miocene reefs)

Weissel, J.K. & A.B. Watts (1979)- Tectonic evolution of the Coral Sea Basin. J. Geophysical Research 84, B9, p. 4572-4582.
(Coral Sea basin magnetic lineations strike N70°W, parallel to N margin Queensland Plateau. Opening began at ~62 Ma, spreading ceased before 50 Ma (~56 Ma?), at same time as Tasman Sea, but finite rotations from two basins different. We infer at least one additional active plate boundary in Paleocene, which met Coral Sea and Tasman Sea plate boundaries at triple junction near E end of Coral Sea basin)

IX.14. NE Indian Ocean

Adisaputra, Mimin K. (1995)- Quaternary plankton foraminifera biozonation in Indian Ocean, South of Jawa. Bull. Marine Geological Inst. 10, 1, p.

Adisaputra, Mimin K. & Hartono (2004)- Late Miocene- Holocene biostratigraphy of single core in Roo Rise, Indian Ocean South of East Jawa. Bull. Marine Geol. Inst. 19, 1, p. 27-48.

Adisaputra, Mimin K. & M. Hendrizan (2008)- Hiatus pada kala Eosen-Miosen Tengah di tinggian Roo, Samudera Hindia, Selatan Jawa Timur, berdasarkan biostratigrafi nannoplankton. J. Geologi Kelautan 6, 3, p. p. 154-166.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/159/149)
'Hiatus between Eocene and Upper Miocene on the Roo Rise, Indian Ocean S of East Java, based on nannoplankton biostratigraphy')

Adisaputra, Mimin K. & H. Yuniarto (2013)- Biostratigrafi foraminifera Kuarter pada Bor inti MD 982152 da 982155 dari Samudra Hindia. Bull. Marine Geol. 11, 2, p. 55-66
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/231/221)
('Biostratigraphy of Quaternary foraminifera in cores MD 982152 and 982155 from the Indian Ocean'. Two 32 and 43m long IMAGES Expedition piston cores from SW and S of Java with Quaternary Globorotalia truncatulinoides Zone, subdivided into three subzones:, Globorotalia crassaformis hessi, Globigerinella calida calida, Beella digitata)

Banerjee, B., S.M. Ahmad, W. Raza & T. Raza (2017)- Paleoceanographic changes in the Northeast Indian Ocean during middle Miocene inferred from carbon and oxygen isotopes of foraminiferal fossil shells. Palaeogeogr. Palaeoclim. Palaeoecology 466, p. 166-173.
(C and O isotope records of foraminifera from ODP site 758 in NE Indian Ocean on Ninetyeast Ridge. Climatic events recorded: 1. M Miocene Climate Optimum (17-15 Ma), (2) Monterey Excursion (17-14 Ma), (3) Et Antarctica Ice sheet formation (13.8 Ma), (4) Initiation of Indian summer monsoon with waning of Antarctica Ice sheet (12.3-10.4 Ma), and (5) cooling event (10.2–9.6 Ma))

Baumgartner, P.O. (1993)- Early Cretaceous radiolarians of the Northern Indian Ocean (Leg 123: sites 765, 766 and DSDP Site 261): the Antarctic Tethys connection. In: D. Lazarus & P. De Wever (eds.) Proc. Interrad VI, Marine Micropaleontology 21, p. 329-352.
(Neocomian radiolarians from Sites 765 (Argo Abyssal Plain) and 766 (lower Exmouth Plateau) dominated by non-Tethyan, Circum-Antarctic forms, with weak Tethyan influence (Holocryptocanium, Cryptamphorella, Archeodictyomitra brouweri, Parvicingula, etc.). Radiolaria at Argo Basin Sites 765 and 261 reflect restricted oceanic conditions in latest Jurassic-Barremian. Argo Basin was paleoceanographically separated from Tethys during Late Jurassic and part of Cretaceous by position at higher paleolatitudes and/or by enclosing land masses. Absence of most Tethyan radiolarian speciesin Valanginian-Hauterivian interpreted as time of strong influx of Circum-Antarctic cold water following spreading between SE India and W Australia. Reappearance and gradual increase of Tethyan taxa, still with dominant Circum-Antarctic species result of more equitable climatic conditions in Barremian- E Aptian and establishment of connection with Tethys Ocean in E Aptian)

Curray, J., F.J. Emmel, D.G. Moore & R.W. Raitt (1982)- Structure, tectonics and geological history of the northeastern Indian Ocean. In: A.E. Nairn & F.G. Stehli (eds.) The ocean basins and margins 6, The Indian Ocean, Plenum Press, New York, p. 399-450.
(Study of areas around Bay of Bengal, Andaman Sea, Sunda Arc off Sumatra and W Java)

Davies, T.A., R.B. Kidd & A.T.S. Ramsay (1995)- A time-slice approach to the history of Cenozoic sedimentation in the Indian Ocean. Sedimentary Geology 96, 1-2, p. 157-179.
(Study of changing patterns of sediment accumulation in Indian Ocean through Cenozoic. Paleogene sedimentation rates generally low, suggesting weak ocean circulation and stable, well-stratified conditions. Vigorous thermohaline circulation of Neogene resulted in substantial widespread sedimentation)

Dehn, J., J.W. Farrell & H.U. Schminke (1991)- Neogene tephrochronology from Site 758 on Ninety East Ridge: Indonesian arc volcanism of the past 5 Ma. In: J. Weissel et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 121, p. 273-295.
(online at: www-odp.tamu.edu/publications/121_SR/VOLUME/CHAPTERS/sr121_14.pdf)
(Pliocene-Recent pelagic sediments in ODP Leg 121- Site 758 on N Ninetyeast Ridge, N Indian Ocean W of N tip of Sumatra, with several 100 rhyolitic tuff layers, ranging in thickness from few mm to 34cm. Ashes believed to be from Sumatra sector of Sunda Arc. Four youngest ash layers correlate to last four eruptions of Toba caldera between 0.075 and 1.2 Ma. Thickest tuffs < 2 My old. Ash Layer D just below paleomagnetic boundary separating Brunhes and Matuyama Chrons and between oxygen isotope stages 19.2 and 20.23 does not correlate to any previously described eruption from Toba caldera. Layer E occurs middle of stage 21, dated at 0.775 Ma, tentatively correlated with 'Old Toba Tuff' although that was dated at 0.84 Ma (Diehl et al. 1987) (NB: O-isotope stratigraphy ages recalibrated since then; Layer D biotite Ar-Ar age of 800 ±20ka by Hall and Farrell 1995; Old Toba Tuff dated as 789 ±12 ka by Izett and Obradovich 1994; see also Mark et al. 2017))

Deplus, C., M. Diament, H. Hebert, G. Bertrand, S. Dominguez, J. Dubois, J. Malod et al. (1998)- Direct evidence of active deformation in the eastern Indian oceanic plate. Geology 26, 2, p. 131-134.
(online at: http://www.ipgp.fr/~sibilla/pdf/Deplus_1998_Geology.pdf)
(Geophysical and bathymetric evidence of active left-lateral strike-slip deformation in NE Indian Ocean plate, east of Ninetyeast Ridge, at long N-S strike faults (transforms of former Wharton Ridge spreading center?))

Fullerton, L.G., W.W. Sager & D.W. Handschumacher (1989)- Late Jurassic- Early Cretaceous evolution of the Eastern Indian Ocean adjacent to Northwest Australia. J. Geophysical Research, Solid Earth, 94, B3, p. 2937-2953.
(New aeromagnetic data off NW Australia constrains tectonic model of seafloor evolution in Argo, Cuvier, and Gascoyne abyssal plains. Complete set of anomalies from M26- M16 in Argo Abyssal Plain shows spreading started at or prior to M26 (E Kimmeridgean) and propagated outward until at least M24 time. Anomalies M10 (late Tithonian)- MO (basal Aptian), record separation of Australia and India in Cuvier and Gascoyne abyssal plains. At M4-M5 time (~Barremian-Hauterivian boundary) 10° clockwise change in spreading direction on Cuvier-Gascoyne spreading system)

Geersen, J., J.M. Bull, L.C. McNeill, T.J. Henstock, C. Gaedicke, N. Chamot-Rooke & M. Delescluse (2015)- Pervasive deformation of an oceanic plate and relationship to large >Mw 8 intraplate earthquakes: the northern Wharton Basin, Indian Ocean. Geology 43, 4, p. 359-362.
(Earthquakes in N Wharton Basin demonstrate pervasive brittle deformation between Ninetyeast Ridge and Sunda subduction zone. Evidence of recent strike-slip deformation along N-S fossil fracture zones and Miocene conjugate Riedel shears in sediment section and oblique to N-S fracture zones)

Glass, B.P., D.R. Chapman & M.S.Prasad (1996)- Ablated tektite from the central Indian Ocean. Meteoritics Planetary Science 31, 3, p. 365-369.
(online at: http://adsabs.harvard.edu/full/1996M%26PS...31..365G)
(Ablated button-shaped tektite, 12mm in diameter from Central Indian Ocean seafloor at 5300m water depth. Compositionally similar to high-Mg australites and microtektites in deep-sea sediment from Indian Ocean, suggesting Australian tektite field also covers most of Indian Ocean)

Gopala Rao, D., K.S. Krishna, A.I. Pillipenko, V. Subrahmanyan, V.I. Dracheva & N.F. Exon (1994)- Tectonic and sedimentary history of the Argo Abyssal Plain, eastern Indian Ocean, AGSO J. Australian Geol. Geophysics 15, p. 165-176.
(online at: https://d28rz98at9flks.cloudfront.net/81389/Jou1994_v15_n1_p165.pdf)
(Argo Abyssal plain early emplacement of oceanic crust and volcanic edifices in Late Jurassic and E Cretaceous, followed by cooling and marked subsidence until Miocene)

Grevemeyer, I., E.R. Flueh, C. Reichert, J. Bialas, D. Klaschen & C. Kopp (2001)- Crustal architecture and deep structure of the Nintyeast Ridge hotspot trail from active-source ocean bottom seismology. Geophysical J. Int. 144, p. 414-431.
(550km long seismic reflection and refraction transect across Ninetyeast Ridge, Indian Ocean, which was created between ~90- 38 Ma above Kerguelen mantle plume. Normal oceanic crust W and E of ridge/ edifice, with crustal thickness average 6.5- 7 km. Crust under ridge bent downward by loading, and hotspot volcanism underplated pre-existing crust, leading to crustal thickness up to ~24km. Underplating continued to E under Wharton Basin)

Hall, C.M. & J.W. Farrell (1995)- Laser 40Ar/39Ar ages of tephra from Indian Ocean deep-sea sediments: Tie points for the astronomical and geomagnetic polarity time scales. Earth Planetary Sci. Letters 133, 3/4, p. 327-338.
(Two Neogene ash layers from ODP Site 758 (Ninetyeast Ridge) dated by laser 40Ar 39Ar. Ash-D (= possible 'Old Toba Tuff') age of 800 ± 20 ka, consistent with 780 ka age of overlying Brunhes-Matuyama transition and age for oxygen isotope stage 19.1. Ash-I, near top of Nunivak subchron possible eruption age of 4.43 ± .03 Ma)

Hoernle, K., F. Hauff, R. Werner, P. van den Bogaard, A.D. Gibbons, S. Conrad & R.D. Muller (2011)- Origin of Indian Ocean Seamount Province by shallow recycling of continental lithosphere. Nature Geoscience 4, p. 883-887.
(Seamounts in Christmas Island Seamount Province in NE Indian Ocean not linear trail of volcanoes and unlikely formed above mantle plume or fracture zone. Ages of seamounts 47-136 Ma, decreasing from E to W and 0-25 Myr younger than underlying oceanic crust, consistent with formation near mid-ocean ridge. Enriched geochemical signal indicates recycled continental lithosphere in source. Seamount province formed where W Burma began separating from Australia-India in Late Jurassic, forming new mid-ocean ridge. Seamounts formed through shallow recycling of delaminated continental lithosphere in mantle that was passively upwelling beneath mid-ocean ridge)

Holbourn, A.E.L. & M.A. Kaminski (1995)- Lower Cretaceous benthic foraminifera from DSDP Site 263: micropalaeontological constraints for the early evolution of the Indian Ocean. Marine Micropaleontology 26, p. 425-460 .
(NW Australian margin DSDP Site 263 E Cretaceous with 66 agglutinated and 31 calcareous taxa: Three assemblages: (1) high-diversity Valanginian-Barremian Bulbobaculites-Recurvoides; (2) moderately diverse Aptian-Albian Rhizammina-Ammodiscus-Glomospira; (3) low diversity Albian-younger of sparse agglutinants, nodosariids and rotaliids. Shelf- lower slope assemblages, deepening after initial breakup of E Gondwana margin in Valanginian. Absence of many cosmopolitan forms suggests faunal differentiation in Austral realm)

Jacob, J., J. Dyment & V. Yatheesh (2014)- Revisiting the structure, age, and evolution of the Wharton Basin to better understand subduction under Indonesia. J. Geophysical Research, Solid Earth, 119, 1, p. 169-190.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/10.1002/2013JB010285)
(Large part of Wharton Basin of N Indian Ocean presently missing, subducted under Indonesia. Gravity and magnetic anomalies show basin characterized by fossil spreading ridge (which became inactive in Late Eocene; ~36.5 Ma), offset by N-S fracture zones. Magnetic anomalies 18-34 (38-84 Ma) identified on both flanks)

Krishna, K.S., D.G. Rao, M.V. Ramana, V. Subrahmanyam, K.V.L.N.S. Sarma, A. I. Pilipenko, V.S. Sheherbakov & I.V.R. Murthy (1995)- Tectonic model for the evolution of oceanic crust in the northeastern Indian Ocean from the Late Cretaceous to the Early Tertiary. J. Geophysical Research, Solid Earth, 100, B10, p. 20011-20024.

Kuznetsova, K.I. (1974)- Distribution of benthonic foraminifera in Upper Jurassic and Lower Cretaceous deposits at Site 261, DSDP Leg 27, in the Eastern Indian Ocean. In: J.J. Veevers et al. (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 27, p. 673-681.
(Latest Jurassic(?)- E Cretaceous foraminifera from Argo abyssal plain DSDP site 261 suggest gradual basin deepening with time and increase in agglutinated forms)

Ludden, J.N. & B. Dionne (1992)- The geochemistry of oceanic crust at the onset of rifting in the Indian Ocean. In: F.M. Gradstein et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Res. 123, p. 791-799.
(online at: www-odp.tamu.edu/Publications/123_SR/VOLUME/CHAPTERS/sr123_42.pdf)
(Basalts of ODP Sites 765 and 766 erupted on NW Australian continental margin at onset of rifting of Indian Ocean at 155Ma. Geochemically distinct from those erupting at present Mid-Indian Ocean Ridge. Isotope characteristics of Site 765 basalts similar to present-day Mid-Indian Ocean Ridge basalts. Indian Ocean mantle domain distinct from Pacific Ocean since Jurassic. (Stagg et al. 1999: K-Ar age of basaltic hyaloclastite directly above basaltic basement at SE Argo Abyssal Plain Site 765 gave 155.3± 3.4 Ma age (~Kimmeridgean), older than Valanginian/E Cretaceous age suggested by oldest overlying sediment))

Mahoney, J.J., R. Frei, M.L.G. Tejada, X.X. Mo, P.T. Leat & T.F. Nagler (1998)- Tracing the Indian Ocean mantle domain through time: isotopic results from old West Indian, East Tethyan, and South Pacific seafloor. J. Petrology 39, p. 1285-1306.
(online at: http://petrology.oxfordjournals.org/content/39/7/1285.full.pdf+html)
(Isotopic difference between modern Indian Ocean and Pacific or N Atlantic Ocean ridge mantle (e.g. lower 206Pb/ 204Pb for a given eNd and 208Pb/204Pb) could reflect processes that occurred before initial breakup of Gondwana. Alternatively, Indian Ocean isotopic signature could be more ancient upper mantle feature inherited from asthenosphere of E Tethyan Ocean, which formerly occupied much of present Indian Ocean region)

Matthews, K.J., R.D. Muller & D.T. Sandwell (2016)- Oceanic microplate formation records the onset of India-Eurasia collision. Earth Planetary Sci. Letters 43, p. 204-214.
(Seafloor tectonic fabric in Indian Ocean from satellite gravity gradient data reveals extinct Pacific-style oceanic microplate ('Mammerickx Microplate') W of 90E Ridge. Formed at Indian- Antarctic ridge, during chron 21n(o) (~47.3Ma; around E-M Eocene boundary). With rotated abyssal hill fabric. Probably plate reorganization linked to India-Eurasia collision (initial 'soft' collision))

Mutterlose, J. (1992)- Early Cretaceous belemnites from the East Indian Ocean and their paleobiogeographic implicatons In: F.M. Gradstein et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 123, p. 443-450.
(online at: www-odp.tamu.edu/publications/123_SR/VOLUME/CHAPTERS/sr123_22.pdf)
(ODP Holes 761B-766A (Legs 122-123) off NW Australia Exmouth Plateau yielded Lower Cretaceous (Berriasian-Hauterivian) belemnites, including Belemnopsis cf. jonkeri, Belemnopsis ex gr. moluccana s.l., Hibolithes and Duvalia. Assemblages close affinities to Belemnopsis moluccana group from Indonesia and included in Neocomian Indo-Pacific Subprovince of Tethyan Realm)

Norton, I.O. & J.G. Sclater (1979)- A model for the evolution of the Indian Ocean and the breakup of Gondwanaland. J. Geophysical Research 84, p. 6803-6830.
(Magnetic anomaly and fracture zone information used to develop tectonic history of Indian and S Atlantic oceans and positions of Gondwana continents back to 115 Ma. Incl. Eocene separation between Australia and Antarctica with Australia joining Indian plate)

Olierook, H.K.H., R.E. Merle, F. Jourdan, K. Sircombe, G. Fraser, N.E. Timms, G. Nelson, K.A. Dadd, L. Kellerson & Borissova (2015)- Age and geochemistry of magmatism on the oceanic Wallaby Plateau and implications for the opening of the Indian Ocean. Geology 43, 11, p. 971-974.
(Plagioclase and zircon dating indicate that portion of theWallaby Plateau off W Australia formed at ~124 Ma (E Aptian), i.e. >6 My younger than oldest oceanic crust in adjacent abyssal plains. Eruption made possible at 124 Ma via opening of Indian Ocean during breakup of Greater India and Australia along Wallaby-Zenith FZ)

Pattan, J.N., N.J.G. Pearce, G. Parthiban, V.C. Smith, A.V. Mudholkar & N.R. Rao (2013)- The origin of ferro-manganese oxide coated pumice from the Central Indian Ocean Basin. Quaternary Int. 313-314, p. 230-239.
(Pumice clasts coated with ferro-manganese oxide from pumice field on C Indian Ocean floor with ~95% glassy matrix, rhyolitic. Glass and mineral (orthopyroxene) chemistry differs from tuffs of Toba Caldera Complex. Fe-Mn oxide coating suggests pumice probably predates activity from Toba caldera. Similarities to rhyolitic eruptives from Sumatra and possibly of Late Miocene- Late Pleistocene age)

Pattan, J.N., M.S. Prasad & E.V.S.S.K. Babu (2010)- Correlation of the oldest Toba Tuff to sediments in the central Indian Ocean Basin. J. Earth System Science 119, 4, p. 531-539.
(online at: www.ias.ac.in/article/fulltext/jess/119/04/0531-0539)
(Ash layer in association with Australasian microtektites of ~0.77 Ma old in two sediment cores ~450 km apart in C Indian Ocean, ~3100 km SW of Toba caldera. Chemically identical to Ash layer-D in ODP site 758 from Ninetyeast Ridge and ash in S China Sea, previously correlated to oldest(?) Toba Tuff eruptions of Toba caldera, Sumatra)

Pattan, J.N., P. Shane & V.K. Banakar (1999)- New occurrence of Youngest Toba Tuff in abyssal sediments of the Central Indian Basin. Marine Geology 155, 243-248.

Pattan, J.N., P. Shane, N.J.G. Pearce, V.K. Banakar & G. Parthiban (2001)- An occurrence of ~74 ka Youngest Toba tephra from the western continental margin of India. Current Science 80, 10, p. 1322-1326.
(online at: http://drs.nio.org/drs/bitstream/2264/267/1/Curr_Sci_80_1322.pdf)
(Dispersed volcanic ash layer in core from 2300m water depth on W continental margin of India. Composition of glass shards indistinguishable from of Youngest Toba ash of ~74 ka, N Sumatra)

Powell, T.S. & B.P. Luyendyk (1982)- The sea-floor spreading history of the eastern Indian Ocean. J. Marine Geophysical Res. 5, 3, p. 225-247.
(E Indian Ocean between NW Australia and Java Trench two rifting/ sea-floor spreading events: Late Jurassic in Argo Abyssal Plain, followed by Early Cretaceous spreading in Cuvier and Perth Abyssal Plains)

Prasad, M.S. (1994)- New occurrences of Australasian microtektites in the Central Indian Basin. Meteoritics Planetary Science 29, 1, p. 66-69.

Prasad, M.S., S.M. Gupta & V.N. Kodagali (2003)- Two layers of Australasian impact ejecta in the Indian Ocean? Meteorics Planetary Science 38, 9, 1373-1381.
(Flanged button tektite on Indian Ocean floor, at shallower level than ~750 ka microtektite horizon at 60-125mm below ocean floor))

Prasad M.S., V.P. Mahale & V.N. Kodagali (2007)- New sites of Australasian microtektites in the Central Indian Ocean: implications for the location and size of source crater. J. Geophysical Research- Planets 102, E6, E06007, p. 1-11.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2006JE002857/epdf)
(Fifteen new Australasian microtektite sites in C Indian Ocean, now to 61 microtektite sites in oceans. Contours joining highest values of square of correlation coefficient of all known data sites define source area in NE Thailand- C Laos (18° N and 104 °E. Calculated crater diameter 33-120 km)

Prasad, M.S. & M. Sudakhar (1999)- Australasian minitektites discovered in the Indian Ocean. Meteorics Planetary Science 34, p. 179-184.
(online at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1945-5100.1999.tb01744.x)
(Box core samples in Indian Ocean South of India yield minitektites between 1- 3.7 mm in diameter, associated with microtektites of 0.77 Ma Pleistocene Australasian tektite strewn field)

Qin, Y. & S.C. Singh (2015)- Seismic evidence of a two-layer lithospheric deformation in the Indian Ocean. Nature Communications 6, 8298, 12p.
(online at: www.nature.com/articles/ncomms9298)
(Wharton Basin in Indian Ocean with active intra-plate deformation, with earthquakes rupturing entire lithosphere. In Wharton Basin direction of maximum stress is NW-SE, and deformation is accommodated along N5°E-trending re-activated fracture zones with left-lateral strike-slip movements. Seismic reflection profiles show faults down to 45 km depth. Lithospheric mantle deformation divided into two layers: upper fractured fluid-filled serpentinized layer and lower pristine brittle lithospheric mantle where great earthquakes initiate)

Robinson, P.T. & D.J. Whitford (1974)- Basalt from the Eastern Indian Ocean, DSDP Leg 27. In: J.J. Veevers et al. (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 27, p. 551-559.
(online at: www.deepseadrilling.org/27/volume/dsdp27_26.pdf)
(Basalt recovered from Perth, Argo, and Gascoyne abyssal plains. Late JurassicE Cretaceous age basalts at Sites 259 and 261 quartz-normative tholeiites and olivine tholeiites, chemically similar to ocean ridge basalts, representing ancient oceanic crust formed during early rifting off W Australia. Basalt sills at Site 260, 261 postdate E-M Albian sediments and represent younger intraplate activity)

Sager, W.W., L.G. Fullerton, R.T. Buffler & D.W. Handschuhmacher (1992)- Argo Abyssal Plain lineations revisited: implications for the onset of seafloor spreading and tectonic evolution of the eastern Indian Ocean. In: F.M. Gradstein et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 123, p. 659-669.
(online at: www-odp.tamu.edu/publications/123_SR/VOLUME/CHAPTERS/sr123_36.pdf)
(Oldest magnetic anomalies of oldest oceanic crust of Argo Abyssal Plain variously interpreted as Late Jurassic or earliest Cretaceous (20 My difference). Preferred model is Late Jurassic age, oldest lineament M26 (163 Ma, ~Callovian))

Sandiford, M., D. Coblentz & W.P. Schellart (2005)- Evaluating slab-plate coupling in the Indo-Australian plate. Geology 33, 2, p. 113-116.
(Seismicity in C Indian Ocean used to evaluate extent of slab-plate coupling in Indo-Australian plate. Effective slab pull < ~10% of total negative buoyancy operating on subducting slab)

Scheibnerova, V. (1974)- Aptian-Albian benthonic foraminifera from DSDP Leg 27, Sites 259, 260 and 263, Eastern Indian Ocean. In: J.J. Veevers & J.R. Heirtzler (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 27, p. 697-741.
(online at: www.deepseadrilling.org/27/volume/dsdp27_36.pdf)
(Lower Cretaceous benthic foraminifera from Leg 27 (Sites 259, 260, 263) off Exmouth Plateau, NW Australia, all in same paleogeographic province as coeval sediments on adjacent continents Australia, India and S Africa, i.e. non-tropical Austral bioprovince)

Scheibnerova, V. (1977)- Synthesis of the Cretaceous benthic foraminifera recovered by the Deep Sea Drilling Project in the Indian Ocean. In: J.R. Heirtzler et al. (eds.) Indian Ocean geology and biostratigraphy; studies following Deep-Sea Drilling legs 22-29, American Geophys. Union (AGU), Spec. Publ. 9, p. 585-597.
(online at: www.agu.org/books/sp/v009/SP009p0585/SP009p0585.pdf)

Scheibnerova, V. (1978)- Some Cretaceous foraminifera from Leg 26 of the DSDP in the Indian Ocean. BMR Bull. Australian Geol. Geophysics 192 (Crespin volume), p. 137-163.
(online at: https://d28rz98at9flks.cloudfront.net/68/Bull_192.pdf)
(64 species of planktonic and benthic foraminifera mainly from Site 258, Naturaliste Plateau. Mostly Albian, with some species of Late Cretaceous (Cenomanian-Campanian) ages. Almost all species also known from other parts of Austral biogeoprovince)

Singh, S.C., H. Carton, A.S. Chauhan, S. Androvandi, A. Davaille, J. Dyment, M. Cannat & N.D. Hananto (2011)- Extremely thin crust in the Indian Ocean possibly resulting from plume-ridge interaction. Geophysical J. Int. 184, 1, 2942, p. 29-42.
(online at: https://academic.oup.com/gji/article/184/1/29/606196)
(Thickness of crust created at ocean spreading centres depends on spreading rate and melt production in mantle. It is ~5-8 km for crust formed at slow and fast spreading centres and 2-4 km at ultra-slow spreading centres away from hotspots and mantle anomalies. Crust is generally thin at fracture zones and thick beneath hotspots and large igneous provinces. Crust generated at fast Wharton spreading centre at 55-58 Ma only 3.5-4.5 km thick over 200km segment of Wharton Basin as suggested by interpreted Moho on seismic reflection and refraction data. This is thinnest crust ever observed in fast spreading environment, and likely formed by interaction between Kerguelen mantle plume and Wharton spreading centre at ~55 Ma)

Stein, C.A., S. Cloetingh & R. Wortel (1989)- Seasat-derived gravity constraints on stress and deformation in the northeastern Indian Ocean. Geophysical Research Letters 16, p. 823-826.

Suo, Y., S. Liab, X. Caoa, H. Dong. X. Li, & X. Wang (2020)- Two-stage eastward diachronous model of India-Eurasia collision: Constraints from the intraplate tectonic records in Northeast Indian Ocean. Gondwana Research *(in press)*
(Magma production rates in two aseismic ridges in NE Indian Ocean (Laccadives-Maldives-Chagos (LMCR) and Ninetyeast Ridge) likely indicators of onset of India-Eurasia collision Increasing magma production along LMCR and SW jump of Central Indian Ridge constrain "soft" (India- island arc; 50–52 Ma) and "hard" (India-Eurasia; ~41 Ma) collisions between W India and Eurasia. Soft collision between E India and Eurasia 47-49 Ma, Extinction of Wharton Ridge constrained hard collision between E India and Eurasia to 38 Ma (M-L Eocene).

Taneja, R. & C. OöNeill (2014)- Constraining the age and origin of the seamount province in the Northeast Indian Ocean using geophysical techniques. Marine Geophysical Res. 35, 4, p. 395-417.
(Christmas Island Seamount Province S of Java-Sunda Trench with numerous submerged volcanic seamounts, and Cocos (Keeling) and Christmas Islands. Regional gravity model of crustal structure under Cocos (Keeling) Island constrain thickness of limestone to 900-2100m. Pliocene episode of volcanism at Christmas Island from flexure-induced cracks in subduction fore-bulge, Eocene phase associated with low velocity seismic zone rising from lower mantle. Modelling also supports existence of older, undated volcanic core to Christmas Island)

Taneja, R., C. OöNeill, M. Lackie, T. Rushmer, P. Schmidt & F. Jourdan (2015)- 40Ar/39Ar geochronology and the paleoposition of Christmas Island (Australia), Northeast Indian Ocean. Gondwana Research 28, 1, p. 391-406.
(Christmas Island episodes of volcanism: (1) Eocene (43-37 Ma), (2) Pliocene (4.3 Ma), (3) possible unexposed Late Cretaceous event. Late Eocene (38-39 Ma) paleomagnetic data suggest paleolatitude of 43.5°± 10° S, further S (~30° S) than existing plate reconstruction models. Pliocene (~4 Ma) paleolatitude of ~13° S. Late Eocene ages at Christmas Island correlate with cessation of spreading of Wharton Ridge (~43 Ma))

Trueman, N.A. (1965)- The phosphate, volcanic and carbonate rocks of Christmas Island (Indian Ocean). J. Geol. Soc. Australia 12, 2, p. 261-283.
(Christmas Island consists of interbedded volcanic and carbonate rocks, mainly of Eocene and Miocene age. Volcanic rocks successively more basic, varying from andesite to limburgite. Phosphate deposits three main mineral groups: apatite, barrandite and crandallite-millisite)

IX.15. NW Australia margin

Abbassi, S., S.C. George, D.S. Edwards, R. di Primio, B. Horsfield & H. Volk (2014)- Generation characteristics of Mesozoic syn- and post-rift source rocks, Bonaparte Basin, Australia: new insights from compositional kinetic modelling. Marine Petroleum Geol. 50, p. 148-165.

Abbassi, S., B. Horsfield, S.C. George, D.S. Edwards, H. Volk & R. di Primio (2014)- Geochemical characterisation and predicted bulk chemical properties of petroleum generated from Jurassic and Cretaceous source rocks in the Vulcan Sub-basin, Bonaparte Basin, North West Shelf of Australia. Organic Geochem. 76, p. 82-103.
(Mesozoic source rocks in Vulcan Sub-basin of Bonaparte Basin contain Types II, II/III and III kerogen. In Vulcan Sub-basin, marine Lw Cretaceous Echuca Shoals Fm and U Jurassic-Lower Cretaceous U Vulcan Fm fair- moderate quality organic matter and marginally mature. Marine M-U Jurassic lower Vulcan and fluvio-deltaic Lw-M Jurassic Plover Fms good quality organic matter and mature for hydrocarbon generation)

Abbassi, S., R. di Primio, B. Horsfield, D.S. Edwards, H. Volk, Z. Anka & S C. George (2015)- On the filling and leakage of petroleum from traps in the Laminaria High region of the northern Bonaparte Basin, Australia. Marine Petroleum Geol. 59, p. 91-113.
(3D petroleum systems model of N Bonaparte Basin indicates potential Nancar Trough source kitchen could be expelling hydrocarbons from numerous Jurassic source rocks into traps on Laminaria High. Lower Cretaceous Echuca Shoals Fm immature for hydrocarbon generation in this region. Hydrocarbon generation in Nancar Trough started in Early Cretaceous, in response to elevated heat flow during syn-rift phase. Second and main phase of generation started in M Eocene and is ongoing)

Abbott, S.T., D. Caust, N. Rollet, M.E. Lech, R. Romeyn, K. Romine, K. Khider & J. Blevin (2016)- Seven Cretaceous low-order depositional sequences from the Browse Basin, North West Shelf, Australia: a framework for CO2 storage studies. In: AAPG Int. Conf. Exhib., Melbourne 2015, Search and Discovery Art. 51224, 26p.
(online at: www.searchanddiscovery.com/documents/2016/51224abbott/ndx_abbott.pdf)
(Seismic stratigraphy of Browse Basin Cretaceous. Seven main depositional sequences, controlled by tectonic events associated with separation of Greater India and Antarctica from Australia. Main direction of progradation from WNW in E Cretaceous and from N in Late Cretaceous. Sequence K10 (late Tithonian- E Valanginian) sand-rich, deltaic package that includes distinctive lowstand wedge)

Abbott, S.T., K. Khider, A. Kelman & K. Romine (2016)- Facies architecture of the K10 supersequence in the Browse Basin: when sequence stratigraphy meets lithostratigraphy. APPEA 56th Conf. Exhib., Brisbane, The APPEA J. 56, 2, p. 568-.
(Sequence stratigraphic mapping of K10 supersequence (Berriasian-Valanginian; Brewster Mb). Deposition of K10 started at onset of rifting between Greater India and N Carnarvon Basin. Sediment sourced from uplifted areas resulted in deposition of Barrow Delta in Exmouth and Barrow sub-basins and smaller K10 sand-rich progradational sequence in Caswell subbasin. Gas reservoir in Ichthys-Prelude and Burnside fields)

Adamson, K.R., S.G. Lang, N.G. Marshall, R.J. Seggie, N.J. Adamson & K.L. Bann (2013)- Understanding the Late Triassic Mungaroo and Brigadier deltas of the Northern Carnarvon Basin, North West Shelf, Australia. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, 29 p

AGSO NW Shelf Study Group (1994)- Deep reflections on the North West Shelf: changing perceptions of basin formation. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1994, p. 63-76.
(Australian NW shelf main basin forming events: (1) Late Devonian- E Carboniferous extension, creating NE trending Fitzroy Trough and Petrel Basin; (2) M-Carboniferous- E Permian major extension, creating Westralian superbasin with thick Permo-Triassic 'sag-phase' deposits; (3) Late Triassic- E Jurassic transpressional reactivation creating M-L Jurassic source rock depocenters and uplifting adjacent blocks)

Al-Hinaai, J. & J. Redfern (2014)- The late Carboniferous basal Grant Group unconformity, Canning Basin, Australia: a complex surface recording glacial tectonic and halotectonic processes. Australian J. Earth Sci. 61, 5, p. 703-717.
(Relief on basal Permian Base Grant Group angular unconformity in Canning Basin, with steep-sided, often U-shaped NE-SW trending paleovalleys, up to 525m deep, 12 km wide. Surface modified during Triassic-Jurassic Fitzroy Movement, resulting in fault reactivation and en-echelon wrench-related anticlines. 'Sombrero structures': Silurian fill of depressions, turned into mounds after withdrawal of Late Ordovician salt)

Al-Hinaai, J. & J. Redfern (2015)- Tectonic and climatic controls on the deposition of the Permo-Carboniferous Grant Group and Reeves Formation in the Fitzroy Trough, Canning Basin, Western Australia. Marine Petroleum Geol. 59, p. 217-231.
(Angular unconformity at base Reeves Fm, recording M Carboniferous Meda Transpressional Movement, separates two extensional phases in Canning Basin. Extensional faulting ceased before deposition of Permian Grant Group. Sakmarian Grant Gp subdivision partly climate-controlled: glacially eroded Base Grant Group unconformity overlain by glacial facies. Deglaciation and relative rise in base level gave rise to middle mudstone unit of Calytrix Fm. Absence of glacial signature in upper Clianthus Fm reflects waning ice sheet)

Ambrose, G.J. (2004)- Jurassic sedimentation in the Bonaparte and northern Browse basins: new models for reservoir- source rock development, hydrocarbon charge and entrapment. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 125-142.

Ambrose, G. (2006)- Untested hydrocarbon column in Thornton-1 in the Timor Sea encourages a Plover ódeepô oil play. PESA News 80, p.
(*Plover Unit C lower delta plain coaly probably good source facies; Possible thin oil-bearing sands in Plover Unit B in Thornton 1 (= below Toarcian mfs)*)

Amir, V., R. Hall & C.F. Elders (2010)- Structural evolution of the Northern Bonaparte Basin, Northwest Shelf Australia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc., IPA10-G-210, 17p.
(Structural interpretation of N Bonaparte Sahul Platform-Laminaria High from 3D seismic. Three main stages: (1) M Triassic? extension (NNE-SSW trending normal faults); (2) Late Jurassic-Early Cretaceous rifting (breakup event; E-W to ENE-WSW trending normal faults; and (3) Neogene Australia-Banda Arc continental collision in Timor (NE-SW trending faults). Late Jurassic extension was about half that of Triassic rift phase)

Anderson, A.D., M.S. Durham & A.J. Sutherland (1993)- The integration of geology and geophysics to post-well evaluations- example from Beluga 1, offshore N Australia. Australian Petrol. Explor. Assoc. (APEA) J. 33, 1, p. 15-21.

Apthorpe, M. (1988)- Cainozoic depositional history of the North West Shelf. In: P.G. & R.R. Purcell (eds.) The Northwest Shelf of Australia, Proc. Petroleum Expl. Soc. Australia (PESA), NW Shelf Symposium, Perth 1988.

Apthorpe, M.C. (1979)- Depositional history of the Upper Cretaceous of the Northwest Shelf based upon foraminifera. Australian Petrol. Explor. Assoc. (APEA) J. 19, 1, p. 74-89.

Apthorpe, M. (1994)- Towards an Early to Middle Jurassic palaeogeography for the North West Shelf: A marine perspective. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 201-210.
(Summary of E-M Jurassic (Hettangian- Bathonian) marine sequences in 19 petroleum exploration wells across NW Shelf. Six marine pulses recognised, and their distribution indicated. Deposited at no greater than shelf water depths, but faunal similarities with Europe, etc., suggest contact with waters of Neo-Tethys Ocean)

Apthorpe, M. (2003)- Early to lowermost Middle Triassic Foraminifera from the Locker Shale of Hampton-1 well, Western Australia. J. Micropalaeontology 22, 1, p. 1-27.
(online at: https://www.j-micropalaeontol.net/22/1/2003/jm-22-1-2003.pdf)

(Marine smaller foraminifera from 350m shale section from upper Lower Triassic to lowermost M Triassic (Spathian-Lower Anisian) in Hampton 1 well, Carnarvon Basin. Differs from coeval fauna from same area (Heath & Apthorpe, 1986). New fauna contains some 'Tethyan' genera, previously recorded from S China and Alps, including Duostomina, Krikoumbilica, Gsollbergella, Trocholina, Endothyra and Endothyranella)

Archbold, N.W. (1983)- Studies on Western Australian Permian brachiopods 3. The Family Linoproductidae Stehli 1954. Proc. Royal Soc. Victoria 95, 4: p. 237-254.
(Incl. Productus spp., Globiella foordi, Globiella flexuosa, etc.)

Archbold, N.W. (1988)- Permian brachiopoda and bivalvia from Sahul Shoals No. 1, Ashmore Block, Northwestern Australia. Proc. Royal Soc. Victoria 100, p. 33-38.
(Brachiopod- bivalve fauna of Late Permian fine, light-grey, biomicrite limestone in Sahul Shoals 1 well, off NW Australia: Streptorhynchid fragments, Waagenoconcha, Neospirifer, Elival sp., Gjelispinifera sp., Etheripecten and Cyrtorostra. Fauna interpreted to indicate paleogeographic proximity of Late Permian Sahul Shoals limestone and Maubisse Fm of Timor (but Permian brachiopod provinciality rel. poorly defined?; JTvG))

Archbold N.W. (1998)- Correlations of the Western Australian Permian and Permian Ocean circulation patterns. Proc. Royal Soc. Victoria. 110, 1-2, p. 85-106.
(18 brachiopod zones in Permian, but only 4 in Bonaparte Basin; speculations on Permian paleo-circulation)

Archbold N.W. (1998)- Marine biostratigraphy and correlation of the West Australian Permian basins. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium 2, p. 141-151.
(Marine Permian strata of onshore Perth, Carnarvon, Canning and Bonaparte basins traditionally correlated by means of marine invertebrate faunas. Brachiopods in particular evolved rapidly and were abundant in W Australian marine Permian. An integrated sequence of 17 brachiopod zones ranging in age from E Permian (Asselian) to Late Permian (Dzhulfian) occurs in W Australia)

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(In Permian present Australian continent was part of E Gondwana which itself was S region of Pangaea. Australia was surrounded by elements of New Zealand to the E and SE, New Caledonia to the SE, Irian Jaya to the N, Timor and the Cimmerian continental fragments to the NW, S Tibet, the Himalaya and Peninsular India to the W and SW and Antarctica to the S.)

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(online at: www.ga.gov.au/corporate_data/14384/Rec1989_036.pdf)
(Australian and Tethyan time scales and biozonations for Permian))

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(online at: http://dmpbookshop.eruditetechnologies.com.au/product/palaeontology-of-the-permian-of-western-australia.do)

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(Early Permian brachiopods from five wells in onshore Carnarvon Basin, tied to spore-pollen zonation. Four earliest Permian brachiopod zones of W Australia (Lyonia lyoni, Trigonotreta occidentalis, Strophalosia irwinensis and Strophalosia jimbaensis zones, in ascending order) correlated with palynological zones (Granulatisporites confluens, Pseudoreticulatispora pseudoreticulata, Striatopodocarpites fusus, Didecitriletes byroensis and Microbaculispora trisina zones, in ascending order))

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(Callovian marine succession (Elang Fm) across area 'A' of Zone of Cooperation (ZOCA) in Timor Sea coastal plain- nearshore marine section withthree 3rd-order sequences: (1) base of oldest sequence in Plover Fm, and corresponds to Wanaea digitata/W. indotata zone boundary. Callovian Unconformity is 3rd-order sequence boundary or disconformity)

Arevalo-Lopez, H.S. & J.P. Dvorkin (2017)- Rock-physics diagnostics of a turbidite oil reservoir offshore northwest Australia. Geophysics 82, 1, p. MR1-MR13.
(Rock physics data from 4 wells in offshore Stybarrow field oil reservoir, Exmouth Basin, 65 km offshore NW Australia. Reservoir composed of turbiditic sandstones interbedded with claystones of E Cretaceous (Valanginian- Berriasian) age)

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(In Collie basin, SW Australia, Stockton Fm tillitic unit, overlain by Collie Coal Measures. Palynoflora at transition Stockton-Collie in Granulatisporites confluens Oppel zone, which also contains Protohaploxypinus limpidus. It is overlain by Pseudoreticulatispora pseudoreticulata zone, etc.. In Perth Basin at least 1620m of Permian coal measures, overlain by 243m of sandstone without coals)

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(Revised Norian-Rhaetian palynological zonation forNW Shelf (spores-pollen and dinocysts). Five significant palynofloral bioevents)

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(Pyrenees-Macedon fields in Exmouth subbasin of N Carnarvon Basine currently underfilled relative to available closure despite being regional focal point for Cretaceous- Recent charge. Vertical leakage may have controlled

column heights, possibly via dynamic failure along pre-existing faults and conductive fractures, and lateral leakage across reservoir against thief zone fault juxtapositions)

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(Barrow subbasin of Carnarvon basin leading producer of oil and gas, due to good Mesozoic source rocks in Barrow Rift and earliest Cretaceous 'Barrow play' reservoir rocks)

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(From end of Mesoproterozoic until ~700 Ma, Wn Australia lay in intracontinental position within the supercontinent Rodinia. At ~700 Ma, Rodinia broke up and Laurentia began to separate from Australia-Antarctica, giving birth to Paleo-Pacific Ocean. Neoproterozoic Marinoan glaciation preceded interval of intracontinental dextral shear. Extension at beginning of Ordovician led to inception of Canning Basin. Late Caboniferous- earliest Permian sheet of glacial continental clastics draining towards shelf edge in N India and NW Australia. Late Permian pre-breakup rifting followed by Late Jurassic Pangea breakup along NW Australian marginand led to formation of Argo Abyssal Plain, the oldest of Australia's current continental margins. Etc.)

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(Source-rock richness, timing of hydrocarbon generation, and thicknesses of potential source shales of Upper Jurassic/Lower Cretaceous section of NW Shelf used for predictions hydrocarbon potential in Browse Basin, Malita Graben/NW Bonaparte Gulf Basin, Rowley Sub-basin, and Vulcan Sub-basin/Sahul Syncline)

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(11 wells on Exmouth Plateau discovered only non-commercial dry gas (incl. Scarborough gas field. Lack of liquid hydrocarbons related to position as platform area adjacent to Barrow-Dampier Jurassic rift system. Jurassic syn- and post-rift sequences extremely condensed, and post-breakup decrease in geothermal gradient has frozen peak hydrocarbon generation window in pre-breakup Triassicn (expulsion before deposition of Late Jurassic- Cretaceous cap rocks. Gas accumulations mostly trapped by fault seal in thin sands, and originated from overmature source sequence, possibly Permian or Lower Triassic shale)

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(Dampier Sub-basin with at least 12 depositional sequences in U Jurassic- Lower Cretaceous succession. At least 8 lowstand events in Oxfordian-Tithonian, associated with syn-rift crustal extension and fluctuations in global-eustatic sea level. During lowstand episodes, huge volumes of coarse clastics transported by mass-flow into Lewis Trough. Oxfordian basin-floor sand cycles with channel-fill and submarine-fan lobe moundforms. Kimmeridgian- Tithonian more widespread, massive, detached, non-channelised basin floor lobes. Lower Cretaceous succession herals change from syn-rift lowstand to post-rift highstand depositional cycles. Sequence boundaries remarkable synchroneity with worldwide global-eustatic curve)

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(Exploration in offshore Browse Basin began in 1963. Basin originated in Late Triassic - E Jurassic in response to rifting of Scott Plateau Arch. Second episode of faulting towads end of M Jurassic ('break-up unconformity'). E-M Jurassic fluvio-deltaic and nearshore marine sandstones main reservoir target in basin. 19 wildcat wells resulted in 4 gas-condensate discoveries: Scott Reef, N Scott Reef, Brewster, Brecknock)

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(Vulcan Sub-basin developed during Late Jurassic extension. S part characterized by large, discrete normal faults and deep sub-basins, more distributed, small-scale faulting further N and development of broader, 'sagged' basin geometry. Upper crustal faulting represents up to 10% extension, not balanced by extension in deeper lithosphere; magnitude of deeper extension evidenced by amount of post-Valanginian thermal subsidence. Lower crustal and lithosphere stretching may reflect long-wavelength strain partitioning associated with continental

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(In Browse Basin oldest carbonate build-ups interpreted as Oligocene giant bryozoan build-up complex (34- 27.8 Ma). In late Burdigalian start of tropical reef growth and reef-rimmed carbonate platforms progressively coalesced into extensive barrier reef. M Langhian- E Tortonian Browse Basin barrier-reef system >500 km long, possibly extending into N Carnarvon Basin. After E Tortonian reefs smaller and less connected, likely resulting from cooling following M Miocene Climate Optimum. Final phase of reef decline at ~6 Ma)

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(Good descriptions/ illustrations of Coniacian planktonic foram assemblage from Korojon calcarenite, Giralia Anticline, NW Australia. With Globotruncana concavata, Gt. coronata, Gt. pseudolinneana, etc.)

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(online at: https://www.iongeo.com/content/documents/Resource%20Center/Articles/GXPRO_The_Australian_North_West_Shelf_141201.pdf)
(New deep regional seismic data (WestraliaSPAN survey) show NW Australian margin with long history of

Phanerozoic extension. North Carnarvon and Bonaparte Basins (Petrel sub-basin) with up to 20-24 km sediment. Models of hyper-extension and/or mantle exhumation required to isostatically provide accommodation space for such deep basins. Progressively higher grade metamorphism at base of sedimentary pile evidenced by reflections that appear sedimentary, but with have seismic velocities of 6 km/s and more)

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(Environmentally controlled spore and pollen associations recognised in Norian Minutosaccus crenulatus Zone and Carnian Samaropollenites speciosus Zone. Fluvial channel- floodplain and marginal marine assemblages dominated by Falcisporites australis. Shallow marine assemblages dominated by dinoflagellates (Heibergella balmei, Suessia listeri)

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(Nine dinoflagellate subzones within Tithonian U Dingodinium jurassicum- Pseudoceratium iehiense zones of Helby et al. (1987), in ~300m thick Angel Fm oil reservoir sandstones section. >150 dinoflagellate species.

Zircons from ash beds in Wanaea 2 well indicate basal Cretaceous age for P. iehiense- K. wisemaniae zone boundary)

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(Geohistory analysis of NW Shelf shows succession of rifting and uplift events, and allows tectonic and thermal subsidence events to be distinguished. Late Devonian extension correlated with rapid S-ward drift of Australian plate. Late Carboniferous-E Permian opening of Neo-Tethys corresponds to shift in drift direction from S to N. Late Triassic Fitzroy compressive event linked to closures of Paleo-Tethys and evolution of Bowen Basin. Jurassic rifting of Argo Abyssal Plain probably consequence of rotation of plate)

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(Permian/Carboniferous- Neocomian rifting along NE Gondwanaland transformed intracratonic basin along E Tethyan continental margin to new passive margin along NW Australia, fronting new Indian Ocean. Subsequent sedimentation thin (starved passive margin). Eight seismic stratigraphic packages of three clastic depositional wedges and carbonate blanket deposit. Evolution: (1) intracratonic sedimentation (Norian-Rhaetian), (2) rift onset and initial breakup (Hettangian-Callovian), (3) second rift to final breakup (Callovian-Hauterivian), (4) postbreakup and rift to drift transition (Hauterivian-Cenomanian), and (5) mature ocean phase to incipient collision (Turonian-Holocene). Hauterivian age of breakup on S Exmouth Plateau corresponds with uplift of Tithonian-Valanginian sediments and progradation of Hauterivian sediment wedge N from Cape Range Fracture Zone. At Cenomanian-Turonian boundary sediment supply on S Exmouth Plateau shifted from N-prograding clastic source to carbonate-dominated blanket. Folding related to collision farther N increased slopes on S Exmouth Plateau starting in Eocene, producing submarine erosion and resedimentation in Cenozoic oozes)

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(3D structural model of Vulcan Sub-basin back-stripped, decompacted/ restored to reveal paleo-architecture in Valanginian, Late Eocene and Late Miocene, corresponding to major periods of hydrocarbon expulsion. Up-dip migration paths over Plover Fm reservoir horizon determined to constrain source risk for prospective traps)

Chen, G., K.C. Hill, N. Hoffman & G.W. OøBrien (2002)- Geodynamic evolution of the Vulcan Sub-basin, Timor Sea, northwest Australia: a pre-compression New Guinea analogue? Australian J. Earth Sci. 49, p. 719-736.
(Late Jurassic Swan Graben significant, but principal phase of crustal extension is Triassic- M Jurassic. Triassic- M Jurassic extension rel. widespread, Late Jurassic faulting more focused. Vulcan Sub-basin four stages of evolution: (1) regional crustal faulting and subsidence in Triassic- M Jurassic; (2) focused faulting in Late Jurassic that created grabens with uplift of shoulders; (3) regional subsidence from M Valanginian; (4) minor extensional and contractional reactivation in Mio-Pliocene)

Chivas, A.R., A. Garcia, S. van der Kaars, M.J.J. Couapel, S. Holt, J.M.Reeves, D.J. Wheeler et al. (2001)- Sea level and environmental changes since the last interglacial in the Gulf of Carpentaria, Australia:an overview. Quaternary Int. 83-85, p. 19-46.

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(Facies architecture and platform evolution E Frasnian reef complex in N Canning Basin of NW Australia strongly controlled by syn-depositional faulting during phase of basin extension)

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(Important features of observed stress field in Australian continent can be explained in terms of balancing ridge push torque with resistance imposed along Himalaya, PNG and New Zealand collisional boundaries segments. These features include N-S-to NE-SW-oriented compression in N Australia and E-W compression in S Australia

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(On relative contributions of topographic (ridge push, continental margins, elevated continental crust) and plate boundary (subduction, collisional) forces to intraplate stress field in Indo-Australian plate)

Cockbain, A.E., R.M.L. Elliott, K. Grey et al. (1990)- Basins. In: Geology and mineral resources of Western Australia, Western Australia Geol. Survey, Mem. 3, Ch. 4, p. 289-563
(Reviews of geology of W Australia basins, incl. Kimberley, Amadeus, Ord, Officer, Bremer, Perth, Carnarvon, Canning, etc.)

Coleman, P.J. (1957)- Permian Productacea of Western Australia. Bureau Mineral Res. Geol. Geophysics, Bull. 40, p. 5-143.
(online at: https://d28rz98at9flks.cloudfront.net/229/Bull_040.pdf)
(NW Australian Permian with 34 species of productid brachiopods from Carnarvon, Canning and Irwin basins, mainly of Artinskian age. Absence of 'bizarre productids', like Lyttonidae and Richthofenidae. Closest affinities to Permian of Timor (Basleo; 4 species), then Indian Salt Range. Dissimilar to brachiopods of Eastern Australia)

Collins, L.B. (2002)- Tertiary foundations and Quaternary evolution of coral reef systems of Australiaȏs North West Shelf. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basins Symposium, Perth 2002, p. 129-152.

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(Exposed, uplifted Oligo- Miocene (N9) carbonate sequences of Cape Range. Late Oligocene-E Miocene Mandu Lst unconformably over Late Eocene Giralia calcarenite, and unconformably overlain by earliest M Miocene Trealla Lst)

Colwell, J.B., T.L. Graham et al. (1990)- Stratigraphy of Australia's NW continental margin (Project 121-26), Post-cruise report for BMR Survey 96. Bureau Mineral Res. (BMR) Record 1990/86, Canberra, p. 1-126.
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(online at: www.ga.gov.au/corporate_data/49408/Jou1994_v15_n1.pdf)
(Dredging on N Exmouth Plateau and Rowley Terrace margin shows Late Triassic (Norian-Rhaetian; with Aulatortus, Triasina, etc.) reef and peri-reefal carbonates and E Jurassic shelfal limestone (with Involutina liassica), with facies and foram- ostracod microfaunas similar to those of other S Tethyan margins, including N Calcareous Alps. Also volcanics emplaced along margin in Late Triassic-M Jurassic, probably start of rifting between Australia- Greater India. (N.B.: Involutina liassica may also be found in Rhaetian-age limestones, so E Jurassic age not proven?; JTvG))

Colwell, J.B. & U. von Stackelberg (1981)- Sedimentological studies of Cainozoic sediments from the Exmouth and Wallaby Plateaus, off Northwest Australia. BMR J. Australian Geol. Geophysics 6, p. 43-50.
(online at: www.ga.gov.au/corporate_data/81059/Jou1981_v6_n1_p043.pdf)
(Cores of Quaternary/Tertiary sediments in Exmouth and Wallaby Plateau areas off NE Australia. Quaternary sediments show variations in composition with water depth, reflecting change in biogenic components and aragonite (~800m) and carbonate (~4100-4800m) compensation depths. Four major facies, from relatively coarse carbonate sands on continental shelf to planktonic foram oozes on slope to siliceous clays on abyssal plains. Tertiary cores mainly consist of Oligocene or Miocene foraminiferal nanno oozes/ chalks. Volcaniclastic sandstone with phosphatic nodules on E margin of the Wallaby Plateau)

Courgeon, S., J. Bourget & S.J. Jorry (2016)- A Pliocene-Quaternary analogue for ancient epeiric carbonate settings: The Malita intrashelf basin (Bonaparte Basin, northwest Australia). American Assoc. Petrol. Geol. (AAPG) Bull. 100, 4, p. 565-595.
(Pliocene-Quaternary of Bonaparte Basin very wide shelf with >600km wide carbonate platform and 200km-wide Malita intrashelf basin. Late Pliocene transgression over irregular topography due to flexural reactivation of Malita graben. Late Quaternary renewed flexural deformation initiated second transgressive cycle, resulting in progressive demise and burial of carbonate platforms in ISB center)

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(online at: www.ga.gov.au/corporate_data/49408/Jou1994_v15_n1.pdf)
(Extensive Callovian-Oxfordian? (~155 Ma) basalts along margin of Scott Plateau and Rowley Terrace, reflecting onset of 'breakup' of 'Argoland' from this segment of NW Australian passive margin))

Crespin, I. (1936)- The larger foraminifera of the Lower Miocene of Victoria. Bureau Mineral Res., Canberra, Palaeontological Bull. 2, p. 3-15.
(occ. Lepidocyclina (incl. stellate forms), Cycloclypeus, Austrotrillina howchini. No Miogypsina; no thin sections)

Crespin, I. (1941)- The genus *Cycloclypeus* in Victoria. Proc. Royal Soc. Victoria 53, 2, p. 301-314.

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(online at: http://biostor.org/cache/pdf/a3/b1/d1/a3b1d10cd1bc317f6d1f51f919509a18.pdf)
(Early review of occurrences of 'Indo-Pacific' larger foraminifera in Tertiary of Australia))

Crespin, I. (1950)- Australian Tertiary microfaunas and their relationships to assemblages elsewhere in the Pacific Region. J. Paleontology 24, p. 421-429.
(Two two major sedimentary provinces in Australia: Austral-Indo-Pacific province and Bass Strait province)

Crespin, I. (1952)- Two species of *Lepidocyclina* from Cape Range, NW Australia. Contr. Cushman Foundation Foraminiferal Research 3, 1, p. 28-32.
(online at: https://cushmanfoundation.allenpress.com/portals/_default/files/pubarchive/CCFFR/03ccffr1.pdf)
(Description of large Early Miocene Lepidocyclina (Eulepidina) badjirraensis and L. (E.) manduensis from Mandu calcarenite, Cape Range, Carnarvon Basin, NW Australia)

Crespin, I. (1956)- Migration of foraminifera in Tertiary times in Australia. In: Papers on Tertiary micropalaeontology, Bureau Mineral Res. (BMR) Geol. Geophysics, Report 25, p. 1-16.
(online at: https://d28rz98at9flks.cloudfront.net/14939/Rep_025.pdf)

(Paleo-Eocene larger forams Discocyclina and Asterocyclina world-wide in distribution, but Pellatispira and Alveolina more closely related to Indo-Pacific. Late Eocene planktonic forams in SW Victoria. Indo-Pacific climate conditions throughout Australia at several times in Mio-Pliocene, etc.)

Crespin, I. (1963)- Lower Cretaceous arenaceous foraminifera of Australia. Bureau Mineral Res. (BMR) Geol. Geophysics, Bull. 66, p. 1-105.
(online at: https://d28rz98at9flks.cloudfront.net/176/Bull_066.pdf)
(Mainly descriptions of small arenaceous benthic foraminifera from Great Artesian Basin, roughly of Aptian-Albian age)

Crostella, A. & C.J. Boreham (2000)- Origin, distribution and migration patterns of gas in the Northern Carnarvon Basin. Petroleum Expl. Soc. Australia (PESA) Journal 28, p. 7-20.
(Widespread gas in Cretaceous in Onslow Terrace, Peedamullah Shelf and inner Exmouth subbasin dry and considered to have biogenic input. Indications of biodegraded residual oil in y area (Roller, Skate oilfields in innermost Barrow subbasin) probably biodegraded by same bacterial processes that produced dry gas. Age of hydrocarbon charge Late Tertiary.)

Crostella, A., R.P. Iasky, K.A. Blundell, A.R. Yasin & K.A.R. Ghori (2000)- Petroleum geology of the Peedamullah Shelf and Onslow Terrace, Northern Carnarvon Basin, Western Australia. Western Australia Geological Survey, Report 73, p. 1-119.
(online at: www.dmp.wa.gov.au/documents/REPORT_73_CDWEB(4).pdf)
(Peedamullah Shelf and Onslow Terrace formed during Carboniferous- Jurassic rifting episodes. Shelf remained elevated area during Jurassic, whereas thick Jurassic succession was deposited in deep-water rift to NW. Oil was sourced from pre-Jurassic section. E Permian Lyons Group marine sedimentation including glacial erratics, until Sakmarian when carbonate and mud (Callytharra Formation) were deposited)

Crowell, J.C. & L.A. Frakes (1971)- Late Paleozoic glaciation, IV. Australia. Geol. Soc. America (GSA) Bull. 82, p. 2515-2540.

Crowell, J.C. & L.A. Frakes (1971)- Late Palaeozoic glaciation of Australia. J. Geol. Soc. Australia 17, p. 115-155.
(Carboniferous- E Permian glaciation covered large part of Australia continent. In W Australia E Permian ice centres located on Yilgarn Block, Pilbara Block (SW of Canning Basin) and on Kimberley Block. Evidence for glaciation mainly ice-rafted debris and fluvial-glacial and glacial-marine strata that reached as far N as Bonaparte Gulf Basin. Rapid growth of continental glaciers near end of Carboniferous corresponds with rapid shift of paleolatitude when Gondwanaland moved to near-polar position and Paleo-Pacific lay nearby to provide source of moisture)

Curry, J.S., J.M. Lorenzo & G.W. O Brien (2000)- Polarity of continent-island arc collision since late Miocene: Timor Sea, N.W. Shelf, Australia. AAPG 2000 Annual Mtg Abstracts, p. 35.
(Late Miocene-to-Recent collision of NW Australian shelf with Outer Banda Island Arc results in downward flexing of Australian lithosphere toward arc. Normal faulting on Australian Shelf occurs as flexural stresses exceed plate strength. Collision began in Late Miocene W of Timor, progressed eastward during the Pliocene, and continues E. Normal faults W of 124.5°E terminate vertically in the Miocene section. Normal faults from 124.5°E to 125.5°E terminate at the Miocene-Pliocene boundary. From 125.5- ~128°E, faults terminate in E Pliocene section. Normal faults from ~128- 131°E terminate at or near sea floor E of 131° E, motion of Australian lithosphere is subparallel to plate boundary and no faulting is evident)

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(Creation of N Carnarvon Basin was by multi-stage ductile movement of lower crust, in general northerly direction, from Exmouth Plateau, towards assumed decompression zones S bounding fault of Canning Basin)

Dawson, G.C., B. Krapez, I.R. Fletcher et al. (2002)- Did Late Palaeoproterozoic assembly of proto-Australia involve collision between the Pilbara, Yilgarn and Gawler Cratons? Geochronological evidence from the Mount Barren Group in the Albany-Fraser Orogen of Western Australia. Precambrian Research 118, p. 195-220.

De Boer, R.A. (2003)- The Puffin sandstone, Timor Sea, Australia: anatomy of a submarine fan. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 373-390.
(Upper Campanian-Maastrichtian submarine fan system in Browse, Vulcan, with minor oil in Puffin 1; up to 900m thick; 6 depositional lobes)

De Carlo, E.H. & N.F. Exon (1992)- Ferromanganese deposits from the Wombat plateau, Northwest Australia. In: U. von Rad et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 122, p. 335-345.
(online at: www-odp.tamu.edu/publications/122_SR/VOLUME/CHAPTERS/sr122_18.pdf)
(Ferromanganese crusts, nodules and Fe-Mn-rich sediments dredged from water depths of 2000-4600m, on Wombat Plateau adjacent to Argo Abyssal Plain. Ferromanganese deposits from ODP sites up to 40 cm thick and formed on long-exposed deep sea floor, probably in Late Cretaceous-Eocene times)

De Deckker, P. & Y. Yokoyama (2009)- Micropalaeontological evidence for Late Quaternary sealevel changes in Bonaparte Gulf, Australia. Global and Planetary Change 66, p. 85-92.
(Micropaleo of 5m core from 116m water depth in Bonaparte basin records sealevel trends from ~40-12 ka. Supports ~120m relative sea level drop at Last Glacial Maximum before ~19 ka, followed by rapid marine transgression)

De Lurio, J.L. & L.A. Frakes (1999)- Glendonites as a palaeoenvironment tool: implications for Early Cretaceous high latitude climate in Australia. Geochimica Cosmochimica Acta 63, 7, p. 1039-1048.
(Glendonites (calcite pseudomorphs after metastable ikaite) in Late Aptian interval of Eromanga Basin, Australia and in other E Cretaceous basins at high paleolatitudes. Ikaite precipitation in marine environment requires cold temperatures (<4°C), high alkalinity, etc.)

De Ruig, M.J., M. Trupp, D.J. Bishop, D. Kuek, D.A. Castillo (2000)- Fault architecture and the mechanics of fault reactivation in the Nancar Trough/Laminaria area of the Timor Sea, northern Australia. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 40, 1, p. 174-193.

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DiCaprio, L., M. Gurnis & D. Muller (2009)- Long-wavelength tilting of the Australian continent since the Late Cretaceous. Earth Planetary Sci. Letters 278, p. 175-185.
(Global sea level and pattern of marine inundation on Australian continent are inconsistent, partly due to anomalous downward tilting of continent to NE by 300m since Eocene. Tilting occurred as Australia approached subduction systems in SE Asia and is recorded by progressive inundation of N margin. Mantle convection induced topography may be of same magnitude as global sea level change)

Dickins, J.M. (1978)- Climate of the Permian in Australia: the invertebrate faunas. Palaeogeogr. Palaeoclim. Palaeoecology 23, p. 33-46.
(Permian climate stages in Australia: A (Sakmarian) cold water from present latitude 20° S-wards. Faunas associated with glacial deposits low diversitywith Deltopecten, Eurydesma, Keeneia and Trigonotreta. Ends with eustatic rise in sea level; B (Sakmarian- E Artinskian) cool, with entry of Tethyan forms (Spiriferella, etc.). Eurydesma and Keeneia persist in E Australia; C- D (Artinskian-Kungurian) slow warming in W Australia; Stage F (latest Permian) Tethyan faunas, incl. Leptodus in N, indicating tropical temperatures)

Dickins, J.M., J. Roberts & J.J. Veevers (1969)- Permian and Mesozoic Geology of the Northeastern Part of the Bonaparte Gulf Basin. Geological Papers 1969, Bureau Mineral Res. Geol. Geophysics Bull. 125, p. 75-93.
(online at: www.ga.gov.au/corporate_data/125/Bull_125.pdf)

Direen, N.G., H.M.J. Stagg, P.A Symonds & J.B. Colwell (2008)- Architecture of volcanic rifted margins: new insights from the Exmouth- Gascoyne margin, Western Australia. Australian J. Earth Sci. 55, p. 341-363.
(Outer continental margin of Exmouth Plateau, adjacent to Gascoyne Abyssal Plain, developed in E Cretaceous as volcanic-rifted margin during breakup between W Australia and India. New broad, dense and magnetised volcanic-margin transitional crust zone with seaward-dipping reflectors developed between outer rifted continental crust of Exmouth Plateau and true oceanic crust (see also Rey et al. (2008))

Di Toro, G.A.E. (1995)- Angel Formation turbidites in the Wanaea field area, Dampier Sub-basin, North-West Shelf, Australia. In: In: K.T. Pickering et al. (eds) Atlas of deep water environments, Springer, Dordrecht, p. 260-266.
(Angel Fm sand-dominated submarine fan sequence deposited through most of Dampier subbasin. U Jurassic (Tithonian) age and in Wanaea area structureless sandstones interbedded with argillaceous siltstones)

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(online at: https://www.duo.uio.no/bitstream/handle/10852/35834/Masterxthesis-TxDixon.pdf?sequence=1)
(Palynology of 2310m -2355m interval, Late Triassic Mungaroo Fm, of Kentish Knock-1 well, distal Australia NW shelf)

Dolby, J.H. & B.E. Balme (1976)- Triassic palynology of the Carnarvon Basin, Western Australia. Review Palaeobotany Palynology 22, p. 105-168.
(Five Triassic palynological assemblage zones in wells from Carnarvon Basin: I. Kraeuselisporites saeptatus (Griesbachian-Smithian, II. Tigrisporites playfordii (Smithian-Anisian), III. Staurosaccites quadrifidus (Anisian-Carnian), IV. Samaropollenites speciosus (Carnian) and V. Minutosaccus crenulatus (Carnian-?Norian). Provincialism in M-L Triassic floras:(1) Onslow microflora on NW Shelf, with mixed Gondwanan-European elements. (2) Ipswich microflora: less diverse Falcisporites-dominated assemblages in E and S Australia; European elements not present)

Dore, A.G. & I.C. Stewart (2002)- Similarities and differences in the tectonics of two passive margins: the Northeast Atlantic Margin and the Australian North West Shelf. In: M. Keep & S. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basin Symposium, Petroleum Expl. Soc. Australia (PESA), Perth, p. 89-117.
(Regional review and plate reconstructions of Australian NW shelf)

Driscoll, N.W. & G.D. Karner (1998)- Lower crustal extension across the Northern Carnarvon Basin, Australia: evidence for an eastward dipping detachment. J. Geophysical Research, Solid Earth 103, B3, p. 4975-4991.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/97JB03295)
(N Carnarvon basin 4 extension events:(1) broadly distributed late Permian event, (2) localized Rhaetian event responsible for inception of Barrow and Dampier subbasins, (3) localized Callovian fault reactivation in Barrow-Dampier subbasins and (4) Tithonian-Valanginian event that generated large post-Valanginian regional subsidence across N Carnarvon basin with only minor brittle deformation and erosional truncation. (4) requires significant lower crustal and mantle extension across N Carnarvon, implying existence of E-dipping, intracrustal detachment with ramp-flat-ramp geometry, effectively thinning lower crust and lithospheric mantle. Detachment breached surface close to continent-ocean boundary W of Exmouth Plateau. Flat component of detachment at mid-crustal depths(~15 km) across plateau and ramped beneath Australian continent. Lower crustal ductile extension viable mechanism to generate large regional subsidence with little upper crustal brittle deformation)

Duddy, I.R., P.F. Green, H.J. Gibson & K.A. Hegarty (2004)- Regional palaeo-thermal episodes in northern Australia. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 125-142.
(Kilometer-scale uplift and erosion in Late Triassic-E Jurassic is major feature of E onshore Canning Basin, corresponding to structuring associated with Fitzroy Movement (White Hills 1 well geohistory curve suggests 2500 m of uplift and erosion between 230 and 180 Ma)

Dumont, T. (1992)- Upper Triassic (Rhaetian) sequences of the Australian Northwest Shelf recovered on Leg 122: sea-level changes, Tethyan rifting, and overprint of Indo-Australian breakup. In: U. Von Rad, B.U. Haq et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 122, p. 197-211.
(U Triassic shallow-marine sediments recovered in N part of Exmouth Plateau (Wombat Plateau), a few km from continent/ocean boundary. Capped by erosional post-rift unconformity with 80 My hiatus. Youngest sediments below post-rift unconformity Rhaetian platform limestones. Rhaetian series two shallowing-upward sequences. Many similarities beteween Wombat U Triassic and European Tethyan Mesozoic)

Durrant, J.M., R.E. France, M.V. Dauzacher & T. Nilsen (1990)- The southern Bonaparte Gulf basin; new plays. The Australian Petrol. Explor. Assoc. (APEA) J. 30, 1, p. 52-67.

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Dyksterhuis, S., R.D. Muller & R.A. Albert (2005)- Paleostress field evolution of the Australian continent since the Eocene. J. Geophysical Research 110, B05102, p. 1-13.
(Reconstructions of plate boundary configuration and age-area distribution of ocean crust around Australia since Eocene to obtain estimates for ridge push, slab pull, and collisional forces acting on Indian-Australian plate. Stress directions over N Australian continent in E Miocene different from present stress directions. Orientations in E Eocene controlled mainly by ridge push from spreading in Wharton Basin in Indian Ocean)

Dyson, I.A. (1998)- Stratigraphy and sedimentology of the *M. australis* sandstone, Barrow and Dampier sub-basins. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, p. 503-512.
(Lower Cretaceous glauconitic sandstone in M. australis palynozone Barrow and Dampier sub-basins of Carnarvon Basin. Shallow marine/ valley fill facies, three depositional sequences, part of retrogradational set)

Edgerley, D.W. (1974)- Fossil reefs of the Sahul Shelf, Timor Sea. In: A.M. Cameron et al. (eds.) Proc. 2nd Int. Coral Reef Symposium, 2, Great Barrier Reef Committee, Brisbane, p. 627-637.
(Sahul Shelf in Timor Sea, NW Australia, with numerous drowned reefs. Area once was region of prolific reef groth comparable to Great Barrier Reef. Incl. chain of reefs at continental shelf edge, rising from <300m, in area from Ashmore Reef to Sahul Shoal to Echo Shoal ('broken barrier' of Fairbridge 1950). Etc.)

Edwards, D.S., C.J. Boreham, J. Chen, E. Grosjean, A.J. Mory, J. Sohn & J.E. Zumberge (2013)- Stable carbon and hydrogen isotopic compositions of Paleozoic marine crude oils from the Canning Basin; comparison with other west Australian crude oils. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p.
(Oils at Cudalgarra 1, Dodonea 1 and Pictor 2 generated by several G. prisca-rich Ordovician source rocks. Oils at Blina and Janpam N 1 derived from Devonian source rock in Fitzroy Trough. Majority of produced oils from Lennard Shelf from E Carboniferous source rocks in Fitzroy Trough)

Edwards, D.S., J.M. Kennard, J.C. Preston, R.E. Summons et al. (2000)- Bonaparte Basin; geochemical characteristics of hydrocarbon families and petroleum systems. AGSO Research Newsl. 33, p. 14-19.
(Bonaparte Basin explored for >20 years, with oil production from several fields (Jabiru, Challis-Cassini, Laminaria-Corallina, Elang and the depleted Skua field) and proposed production from giant gas/condensate fields (Bayu-Undan, Sunrise-Loxton Shoals-Troubadour, Petrel-Tern). Two Paleozoic and seven Mesozoic oil families can be identified)

Edwards, D.S., J.M. Kennard, J.C. Preston, C. Boreham et al. (2001)- Geochemical evidence for numerous Mesozoic petroleum systems in the Bonaparte and Browse basins, northwestern Australia. AAPG 2001 Ann. Mtg., p. 55-56. *(Abstract)*
(Nine distinct oil families. Two Paleozoic in Petrel Sub-basin. U Jurassic in Swan Graben sourced majority of oils produced from Vulcan Sub-basin. In ZOCA three oil families: (1) mixed marine- terrestrial in Jurassic-Cretaceous Plover, Elang, Frigate Fms and Flamingo Group, (2) condensate from Sunrise-1 with marine carbonate biomarker signature, (3) oils in fractured Darwin Fm marine signature; from Cretaceous Echuca Shoals Fm and related to Browse Basin Cornea and Gwydion oils. Three families of oils with dominant terrestrial organic matter over Browse and Bonaparte Basins and in transition zone. One can be mapped to E-M Jurassic Plover Fm. This system is least understood but wide geographic distribution.)

Edwards, D.S., J.C. Preston, J.M. Kennard et al. (2003)- Geochemical characteristics of hydrocarbons from the Vulcan Sub-basin, western Bonaparte Basin, Australia. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 169-200.
(online at: www.ret.gov.au/resources/...)
(Two end-members of oils in Jurassic Vulcan basin, Australia NW Shelf: (1) marine source, tied to Oxfordian Lower Vulcan; (2) terrigenous, tied to fluvio-deltaic shales/ coals, probably E-M Jurassic Middle Plover Fm)

Edwards, D.S., R.E. Summons, J.M. Kennard et al. (1997)- Geochemical characteristics of Palaeozoic petroleum systems in northwestern Australia. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 37, p. 351-379.

Ellis, G. (1993)- Late Aptian-Early Albian radiolarian biostratigraphy and palaeoceanography of the Windalia radiolarite (type section), Camarvon Basin, Western Australia. Eclogae Geol. Helvetiae 86, p. 943-995.
(online at: http://dx.doi.org/10.5169/seals-167268)
(Late Aptian (-E Albian?) widespread marine transgression inundated Australia, with extensive radiolarian-rich facies like Windalia Radiolarite in Carnarvon Basin. Type section ~35m thick, with ammonites and belemnites, and with 59 radiolarian taxa, many recorded previously from Tethyan regions. Assemblages dominated by few non-Tethyan forms (Arachnosphaera exilis, etc.), considered to be endemic elements of 'Austral' faunal realm. (Incl. Tan Sin Hok- Roti species Artocapsa ultima, Hemicryptocapsa capita, Ellipsoxiphus? rugosa, etc.))

Ellis, G.J., A. Pitchford & R.H. Bruce (1999)- Barrow island oil field. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 39, 1, p. 158-175.

Erskine, R. D. & P.R. Vail (1988)- Seismic stratigraphy of the Exmouth Plateau. In: A.W. Bally (ed.) Atlas of seismic stratigraphy, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 2, p. 163-173.
(Exmouth Plateau with >2000m thick nonmarine- marginally marine Triassic section, overlain by thin, marine latest Triassic (Rhaetian)- Jurassic section. Thin Jurassic section overlain by a >1500m thick Berriasian-Valanginian-age clastic wedge that progrades from SE to NW, overlain by thin Hauterivian-Aptian glauconitic sands on shelf. Overlying Aptian-Tertiary section consists of fine-grained deep marine marls)

Etheridge, M.A. & G.W. O'Brien (1994)- Structural and tectonic evolution of the Western Australian margin basin system. Petroleum Expl. Soc. Australia (PESA) Journal 22, p. 45-63.
(Major NW-SE extension in Late Carboniferous- E Permian under much of W Australian margin, thinning crust from ~40 km to 5-20 km (i.e. 100-500% extension) below much of subsequent Mesozoic basins and present shelf. Inversions of Goulburn Graben in Arafura Sea (major angular unconformity between E Permian (Asselian) and Jurassic, and 4-4.5 km of uplift and erosion), most likely during latest Triassic- E Jurassic 'Fitzroy Movement', driven by major Gondwanan plate readjustment. Sense of Fitzroy Movement consistent with N to NNW-directed compression, perhaps with total shortening of 2-5%)

Exon, N.F. & J.B. Colwell (1994)- Geological history of the outer North West Shelf of Australia: a synthesis. AGSO J. Australian Geol. Geophysics 15, p. 177-190.
(online at: www.ga.gov.au/corporate_data/49408/Jou1994_v15_n1.pdf)

(Outer continental margin of NW Australia (N Exmouth Plateau- Rowley Terrace) was stretched in Late Paleozoic, and subsided to form part of Westralian Superbasin on S margin of Tethys. Basin filled with thick Triassic and variable thicknesses of Jurassic sediments, before progressive breakup in Callovian-Valanginian. Late Triassic mainly fluvio-deltaic with outer shelf, carbonates including reefal buildups on what is now N Exmouth Plateau and Rowley Terrace. Rift volcanics in areas of future breakup, in latest Triassic and earliest Jurassic. Late Middle Jurassic thermal uplift and erosion prior to breakup of Gondwana in N, and major period of faulting and rift volcanism. Callovian breakup led to genesis of Argo Abyssal Plain)

Exon, N.F., J.B. Colwell, P.E. Williamson & M.T. Bradshaw (1991)- Reefal complexes in Mesozoic sequences: Australiaȿs North West Shelf region. Proc.20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 51-66.
(Triassic- Early Jurassic carbonate buildups in outer zones of Australia NW Shelf (Wombat Plateau, Rowley margin, etc.) on seismic and in dredge samples. Equivalent rocks possibly in E Indonesia))

Exon, N.F. & D.C. Ramsay (1990)- Distribution of Triassic reefs in the northern Exmouth Plateau and offshore Canning Basin. Bureau Mineral Res. Geol. Geophysics, Record 1990/17, p. 1-50.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=14309)
(ODP Site 764 demontrated Rhaetian (Latest Triassic) reefs in N of Exmouth Plateau area, and indicates suitable conditions for reefal development on NW Shelf)

Exon, N.F., U. Ruhl, J.B. Colwell & B.B. West (1992)- Mesozoic reef complexes in the Carnarvon and Canning Basins, Australia. AAPG Int. Conf., Sydney 1992, Search and Discovery Art. 91015 *(Abstract only)*
(ODP Leg 122 cored 200m of Late Triassic reefal carbonates in Site 764 on N Exmouth Plateau Later dredging by BMR showed common reef buildups and shelf carbonates in Late Triassic of N Carnarvon and W Canning basins. Seismic from N Carnarvon indicate reefs first became established in Rhaetian, when paleolatitude was 25-30° S, and may have persisted until Callovian when area had moved to 35-40° S. Large number of buildups identified in N Carnarvon S of ODP sites, presumed to be Jurassic buildups, sitting on horst blocks of Triassic fluvio-deltaic sediments, commonly several 100m thick, 2 km wide, >10 km long)

Exon, N.F. & U. Von Rad (1994)- The Mesozoic and Cainozoic sequences of the Northwest Australian margin, as revealed by ODP core drilling and related studies. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1994, p. 181-200.
(Results of ODP legs 122 and 123, coring six sites on Exmouth and Wombat plateaus, and two sites on abyssal plains nearby. U Triassic sequence cored on Wombat Plateau consists ~600m of marine Nd-prograding Carnian-Norian fluvio-deltaic sediments (Mungaroo Fm), and 300m of Rhaetian reefal and lagoonal carbonates. Major thermal uplift, faulting and erosion (and volcanism in outer Canning Basin) preceded Callovian-Oxfordian breakup that led to Argo Abyssal Plain formation (155 Ma by K/ Ar age of oldest oceanic crust at Site 765. Etc.)

Exon, N.F., U. Von Rad & U. Von Stackelberg (1982)- The geological development of the passive margins of the Exmouth Plateau off Northwest Australia. Marine Geology 47, p. 131-152.
(Exmouth Plateau large sunken continental block off NW Shelf, formed during Mesozoic breakup of Australia and Greater India. N margin formed in Callovian (155 Ma), when continental fragment moved off to NW. Early rift Late Triassic-E Jurassic volcanics (213-192 Ma) over thick Triassic paralic sequence. N of E-W hinge line several 1000m of E-M Jurassic pre-breakup carbonates and coals. Breakup along series of rifted and sheared segments, with NE-trending Callovian horsts and grabens. Horsts planed off in Late Jurassic- E Cretaceous. Margin was covered by few 100m of Late Cretaceous- Cenozoic pelagic carbonate as it sank to present depth of 2000-2500m. NE-trending West margin formed by Neocomian (120-125 Ma) rifting, as India moved off to NW. Triassic paralic sequence unconformably overlain by thin Late Jurassic and younger marine beds, indicating area was high in E-M Jurassic. NW South margin formed by shearing in Neocomian. Thick Triassic paralics unconformably overlain by thick Late Jurassic-Neocomian delta, suggesting area was high in E-M Jurassic, but depocentre before and after)

Exon, N.F. & J.B. Willcox (1980)- The Exmouth Plateau: stratigraphy, structure and petroleum potential. Bureau Mineral Res. Geol. Geophysics Bull. 199, p. 1-52.
(online at: www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=52)

(Exmouth Plateau and adjacent lower continental slopes in water depthsof 800-5000m, off NW Shelf petroleum province. Crust ~20 km thick, with 5 km of Paleozoic and 5 km of Mesozoic and younger beds over Precambrian basement. Major Late Triassic unconformity separates block-faulted older sediments from gently warped younger ones. In Paleozoic and most of Mesozoic area was embayment of Tethys, with deposition of paralic and shallow marine clastics. In Late Cretaceous-Cenozoic carbonate deposition was dominant)

Exon, N.F., P.E. Williamson, U. von Rad, B.U. Haq & S. O'Connell (1989)- Ocean drilling finds Triassic reef play off N.W. Australia. Oil and Gas J., Oct. 30, p. 46-52.
(Site 764 of Leg 122 of Ocean Drilling Program cored 200m of U Triassic (Rhaetian) reef complex off N margin of Exmouth plateau)

Eyles, C.H. & N. Eyles (2000)- Subaqueous mass flow origin for Lower Permian diamictites and associated facies of the Grant Group, Barbwire Terrace, Canning Basin, Western Australia. Sedimentology, 47, p. 343-356.

Eyles, C.H., A.J. Mory & N. Eyles (2003)- Carboniferous- Permian facies and tectono-stratigraphic successions of the glacially influenced and rifted Carnarvon Basin, Western Australia. Sedimentary Geology 155, p. 63-86.
(Carnarvon Basin of W Australia is rift basin with up to 5 km late Carboniferous-early Permian glacially influenced marine sedimentary strata, accumulated along uplifted and glaciated margin of Pilbara Craton. Three stratigraphic successions: (I) rapidly deposited (30m/Ma) glacially influenced marine strata (Lyons Group, with Westphalian- E Sakmarian palynomorphs); (II) Callythara and Cordalia Fm fossiliferous shales recording reduced sedimentation rates; (III) Moogooloo Sst)

Eyles, N. & P. de Broekert (2001)- Glacial tunnel valleys in the Eastern Goldfields of Western Australia cut below the Late Paleozoic Pilbara ice sheet. Palaeogeog., Palaeoclim., Palaeoecol. 171, p. 29-40.

Eyles, N., C.H. Eyles, S.N. Apak & G.M. Carlsen (2001)- Permian- Carboniferous tectono-stratigraphic evolution and petroleum potential of the northern Canning basin, Western Australia. American Assoc. Petrol. Geol. (AAPG) Bull. 85, 6, p. 989-1006.

Eyles, N., C.H. Eyles & A.D. Miall (1983)- Lithofacies types and vertical profile models; an alternative approach to the description and environmental interpretation of glacial diamict and diamictite sequences. Sedimentology 30, p. 393-410.

Eyles, N., A.J. Mory & J. Backhouse (2002)- Carboniferous- Permian palynostratigraphy of West Australian rift basins: resolving tectonic and eustatic controls during Gondwanan glaciations. Palaeogeogr. Palaeoclim. Palaeoecology 184, p. 305-319.
(Late Carboniferous- E Permian up to 2-3 km thick glacially-influenced siliciclastic successions in 7 NW Australia basins (Bonaparte, Canning, Carnarvon, Collie, N and S Perth). Tripartite successions of glacial-deglaciation cycles (diamictite/ shale/ sandstone) of different ages and marked variations in thickness. Tectonostratigraphic model and palynological zonation chart)

Eyles, N., A. Mory & C.H. Eyles (2006)- A 50-million year-long record of glacial to post-glacial marine environments preserved in a Carboniferous- Lower Permian graben, Northern Perth Basin, Western Australia. J. Sedimentary Res. 76, 3-4, p. 618-632.
(Perth Basin intracratonic rift with 12 km Carboniferous- Cretaceous. M Carboniferous- Lower Permian (Serpukhovian-Kungurian, ~50 My) 2 km glacially influenced marine strata recording transition from glacial to postglacial conditions at high (70°) paleolatitudes. Thickness reflects abundant supply of sediment from adjacent ice-covered Yilgarn Craton and continued subsidence along Darling-Urella fault system. Sedimentology highlights key role of glacial meltwaters rather than direct glacial processes)

Fairbridge, R.W. (1953)- The Sahul Shelf, northern Australia: its structural and geological relationships. J. Royal Soc. Western Australia 37, p. 1-33.

(Discussion of Sahul Shelf between Timor Trough- N Australia. Shelf edge abnormally deep, around 550m, much shallower than Sunda Shelf edge. Shelf terraces at 3-5, 10-15, 25-30 and 55-60 fathoms (1 fathom= 1.83m). Isolated coral reefs at edges of shelf and shelf terraces. Includes brief discussion of geology of Aru Islands)

Falvey, D.A. & J.C. Mutter (1981)- Regional plate tectonics and the evolution of Australia's passive continental margins. BMR J. Australian Geol. Geophysics 6, p. 1-29.
(Passive continental margins around Australia evolved through progressive dissection of E Gondwanaland in five episodes, starting at 155 Ma off NW Australia, 120 Ma in SW, 80 Ma in SE, 65 Ma in NE, and 55 Ma S of Australia. Breakup/ seafloor spreading preceded by sedimentary basin subsidence in fault-bounded rifts, starting 40-50 My before breakup. Such rifting often preceded by broader, intra-cratonic style basin subsidence 50-100 My before breakup. Post breakup subsidence rapid, but sedimentation usually interrupted by submarine erosion in shallow rapidly subsiding ocean basin)

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(online at: https://s3-ap-southeast-2.amazonaws.com/corpdata/60/Bull_210.pdf)

Foster, C.B. & J.B. Waterhouse (1988)- The *Granulatisporites confluens* Oppel-zone and early Permian marine faunas from the Grant Formation of the Barbwire Terrace, Canning Basin, Western Australia. Australian J. Earth Sci. 35, p. 135-157.
(Diverse plant microfossil assemblage in core of marine, glacigene Grant Fm in Canning Basin with 68 palynomorph species (ferns, lycopods, gymnosperms and algae). Assemblage assigned to Granulatisporites confluens Oppel-zone (first described from Argentina, also in India, Africa and Antarctica). Associated marine fauna diverse, with 20 species of molluscs and brachiopods. Presence of Strophalosia cf. subcircularis links to younger Asselian faunas of E and S Australia and India. G. confluens zone assemblages also known from offshore Bonaparte, Collie and Troubridge Basins (Late Asselian- Sakmarian?))

Frankowicz, E. & K.R. McClay (2010)- Extensional fault segmentation and linkages, Bonaparte Basin, outer North West Shelf, Australia. American Assoc. Petrol. Geol. (AAPG) Bull. 94, 7, p. 977-1010.

FROG Tech Pty (2005)- OZ SEEBASE Study 2005. Public Domain report to Shell Development Australia.
(online at: www.frogtech.com.au/ozseebase-details/)
(GIS and PDF versions of extensive study of Australia Basement geology, terranes, tectonic history and basins)

Fuji, T., G.W. OõBrien, P. Tingate & G. Chen (2004)- Using 2D and 3D basin modellling to investigate controls on hydrocarbon accumulation in the Vulcan sub-basin, Timor Sea, Northwestern Australia. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 2004, p. 93-122.

Gaina, C., R.D. Muller, B.J. Brown & T. Ishihara (2003)- Microcontinent formation around Australia. Geol. Soc. Australia Spec. Publ. 22, p. 399-410. *(also in Geol. Soc. America, Spec. Paper 372, p. 405-416)*
Microcontinents of Australian origin in Tasman Sea and Indian Ocean include E Tasman Rise, Gilbert Seamount, Seychelles, Elan Bank (Kerguelen Plateau), possibly fragments of Lord Howe Rise and Norfolk Ridge, Wallaby Plateau. Tasman Sea continental fragments formed by ridge jumps onto adjacent continental margins after sea-floor spreading in S Tasman Sea commenced. E Tasman Plateau separated from Lord Howe Rise at ~83 Ma. Most microcontinents formed by re-rifting of young continental margin in vicinity of mantle plume stem. Weak inner flank of rifted margin weakens further when passing over mantle plume, causing nearby spreading ridge to jump onto this zone of weakness, isolating passive margin segment and leaving narrow passive margin behind)

Gardner, R.L., N.R. Daczko, J.A. Halpin & J.M.Whittaker (2015)- Discovery of a microcontinent (Gulden Draak Knoll) offshore Western Australia: implications for East Gondwana reconstructions. Gondwana Research 28, 3, p. 1019-1031.
(Dredged samples from Gulden Draak Knoll show it is rifted continental fragment at boundary between W Perth Abyssal Plain and Wharton Basin, Indian Ocean. Comprises granulite facies basement with Cambrian granite)

Gartrell, A.P. (2000)- Rheological controls on extensional styles and the structural evolution of the Northern Carnarvon Basin, North West Shelf, Australia. Australian J. Earth Sci. 47, p. 231-244.

Gartrell, A.P. & M. Lisk (2005)- Potential new method for paleostress estimation by combining three-dimensional fault restoration and fault slip inversion techniques: first test on the Skua Field, Timor Sea. Sea. In: P. Boult & J. Kaldi (eds.) Evaluating fault and cap rock seals, AAPG Hedberg Series 2, p. 23-36.
(Fault restorations suggest stress regime responsible for Late Miocene fault activity near Skua oil field in Timor Sea differs from present-day stress regime. Late Miocene extensional regime, present-day transtensional stress regime. Widespread late Tertiary extensional faulting, decreasing fault activity to present day. Most hydrocarbon leakage associated with fault reactivation in present-day stress regime)

Gartrell, A., M. Lisk & J.R. Underschultz (2002)- Controls on the trap integrity of the Skua oil field, Timor Sea. In: M. Keep & S.J. Moss (eds.)- The sedimentary basins of Western Australia 3, Proc. West Australian Basins Symposium, Perth 2002, p. 389-407.
(Fill-spill model for Skua oil field challenges importance of Mio-Pliocene fault reactivation as principal control on trap integrity. Restoration shows important role of pre-existing fault intersections)

Gartrell, A., Y. Zhang, M. Lisk & D. Dewhurst (2004)- Enhanced hydrocarbon leakage at fault intersections: an example from the Timor Sea, Northwest Shelf, Australia. J. Geochemical Exploration 78-79, p. 361-365.

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(Available online; high-level overview of W. Australia activity and discoveries)

George, A.D. & N. Chow (2002)- The depositional record of the Frasnian/Famennian boundary interval in a fore-reef succession, Canning Basin, Western Australia. Palaeogeogr. Palaeoclim. Palaeoecology 181, 1-3, p. 347-374.

George, A.D., K.M. Trinajstic & N. Chow (2009)- Frasnian reef evolution and palaeogeography, SE Lennard Shelf, Canning Basin, Australia. In: P. Koenigshof (ed.) Devonian change: case studies in palaeogeography and palaeoecology, Geol. Soc., London, Spec. Publ. 314, p. 73-107.
(Frasnian (Devonian) reef complexes of SE Lennard Shelf, N Canning Basin, developed on tilt-block highs and evolution was controlled by fault-related subsidence)

George, S.C., M. Ahmed, K. Liu & H. Volk (2004)- The analysis of oil trapped during secondary migration. Organic Geochem. 35, p. 1489-1511.

Geoscience Australia (2010)- Regional geology of the northern Carnarvon Basin, Offshore Petroleum acreage release. p. 1-24.
(online at: www.ret.gov.au/Documents/par/geology/carnarvon/documents/Northen%20Carnarvon%20Basin%20REGIONAL%20geology.pdf)

Ghori, K.A.R., A.J. Mory & R.P. Iasky (2005)- Modeling petroleum generation in the Paleozoic of the Carnarvon Basin, Western Australia: implications for prospectivity. American Assoc. Petrol. Geol. (AAPG) Bull. 89, p. 27-40.
(Modeling of Paleozoic succession in Carnarvon Basin shows potential source rock intervals reached maximum generation- migration in Carboniferous-Permian. Best Paleozoic oil-prone source beds thin beds in carbonate-dominated Silurian- Devonian on Gascoyne Platform, but Devonian source beds restricted to N parts. Maturity

increases from immature in S-SE to mature in N-NW. Best gas-prone source in Lower Permian of Merlinleigh Subbasin. Best U Permian oil-gas source beds in Peedamullah Shelf, where they are mature in NW)

Gibbons, A., J.M. Whittaker & P. Muller (2010)- Revised plate tectonic history of the West Australian margin reveals how the Gascoyne Terrane docked at West Burma. ASEG-PESA 21st Int. Geoph. Conf., Sydney 2010, p. 1-4.

Gibbons, A.D., U. Barckhausen, P. van den Bogaard, K. Hoernle, R. Werner, J.M. Whittaker & R.D. Muller (2012)- Constraining the Jurassic extent of Greater India: tectonic evolution of the West Australian margin. Geochem. Geophys. Geosystems 13, 5, Q05W13, p. 1-25.
(online at: http://onlinelibrary.wiley.com/doi/10.1029/2011GC003919/epdf)
(New model for Jurassic N extent of Greater India constrained by revised seafloor spreading anomalies, fracture zones and crustal ages based on drillsites/dredges from abyssal plains along W Australian margin and Wharton Basin, where unexpected sliver of Jurassic seafloor (153 Ma) was found embedded in Cretaceous (95 Ma) seafloor. NeoTethyan sliver must have originally formed along W extension of spreading centre that formed Argo Abyssal Plain, separating W extension of W Argoland/W Burma from Greater India as ribbon terrane)

Gibson-Poole, C.M., S.C. Lang, J.E. Streit, G.M. Kraishan & R.R. Hillis (2002)- Assessing a basin's potential for geological sequestration of carbon dioxide: an example from the Mesozoic of the Petrel sub-basin, NW Australia. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basins Symposium, Perth 2002, p. 439-462.

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Glenister, B.F., C. Baker, W.M. Furnish & J.M. Dickins (1990)- Late Permian ammonoid cephalopod *Cyclolobus* from Western Australia. J. Paleontology 64, 3, p. 399-402.
(Single specimen of Cyclolobus persulcatus Rothpletz (1892) from Hardman Fm, Canning Basin. Youngest Permian ammonoid known from Australia. Originally described from W TimorBobonaro melange, where commonly associated with type Timorites curvicostatus and other Late Permian 'Amarassi fauna')

Glenister, B.F., C. Baker, W.M. Furnish & G.A. Thomas (1990)- Additional Early Permian ammonoid cephalopods from Western Australia. J. Paleontology 64, 3, p. 392-399.
(Svetlanoceras irwinense (Teichert and Glenister, 1952), etc., from basal Callytharra Fm oldest ammonoids from Permian of Carnarvon Basin (~Sakmarian))

Glenister, B.F. & W.M. Furnish (1961)- The Permian ammonoids of Australia. J. Paleontology 35, 4, p. 673-736.
(19 species of ammonoids known from Early-Late Permian of Australia, mainly from sedimentary basins of W Australia. Agathiceras, Metalegoceras, Propinacoceras, etc.. Pseudoschistoceras gigas (Smith) from Bitauni beds of Timor figured and compared with P. simile Teichert)

Glenister, B.F., F.S. Rogers & S.K. Skwarko (1993)- Ammonoids. In: S.K. Skwarko (ed.) The palaeontology of the Permian of Western Australia, Geol. Survey Western Australia, Perth, Bull. 136, p. 54-63.
(online at: http://dmpbookshop.eruditetechnologies.com.au/product/palaeontology-of-the-permian-of-western-australia.do)
(E Permian ammonoid faunas of W Australia (Perth, Carnarvon basins) strikingly provincial (tied to Boreal Realm with dominance of Metalegoceratidae and Paragastrioceratidae, and lacking Tethyan Perrinitidae). Late Permian ammonoids tend to be cosmopolitan)

Glenn, K.C. & V. Passmore (1998)- Carpenteria, Bamaga and Karumba Basins biozonation and stratigraphy 1998,Chart No.16. Geoscience Australia (AGSO), Canberra, Chart 16.
(online at: https://d28rz98at9flks.cloudfront.net/76687/Chart_16_Carpentaria_Basin.pdf)

Glenton, P.N., J.T. Sutton, J.G. McPherson, M.E. Fittall, M.A. Moore, R.G. Heavysege & D. Box (2013)- Hierarchical approach to facies and property distribution in a basin-floor fan model, Scarborough gas field, North West Shelf, Australia. In: Int. Petroleum Technology Conference (IPTC 2013), Beijing, IPTC 17037, p. 1-15.
(Scarborough gas field discovered in 1979 in Carnarvon Basin, 285 km offshore in water depths of 900-1000m, with ~16 Tcf GIP dry gas in low-relief anticline. Reservoir E Cretaceous basin-floor fan turbidite sands, sourced from N-ward-prograding Barrow Gp fluvio-deltaic system, ~50 km S of Scarborough. Reservoir interval three-tiered fan sequence. Dominant reservoir quartzose m-f-grained sandstones, largely unlithified, with porosities >30% and permeabilities of 100's-1000's mD)

Glikson, A.Y., D. Jablonski & S. Westlake (2010)- Origin of the Mt Ashmore structural dome, West Bonaparte Basin, Timor Sea. Australian J. Earth Sci. 57, 4, p. 411-430.
(Mt Ashmore dome in W Bonaparte Basin structural dome below major pre-Oligocene/post-Late Eocene unconformity and above 6km-deep-seated basement high. Microbrecciation suggest possible impact origin. Age if Mt Ashmore dome contemporaneous with Late Eocene impact cluster)

Goktas, P. (2013)- Morphologies and controls on development of Pliocene-Pleistocene carbonate platforms: Northern Carnarvon Basin, Northwest Shelf of Australia. M.Sc. Thesis, University of Texas at Austin, p. 1-72.
(online at: https://repositories.lib.utexas.edu/handle/2152/22220)
(Interpretation of 3D seismic data over four Plio-Pleistocene flat-topped carbonate platforms on NW Shelf)

Goktas, P., J.A. Austin, C.S. Fulthorpe & S.J. Gallagher (2016)- Morphologies and depositional/erosional controls on evolution of Pliocene-Pleistocene carbonate platforms: Northern Carnarvon Basin, Northwest Shelf of Australia. Continental Shelf Research 124, p. 63-82.

Goncharov, A. (2003)- Basement and crustal structure of the Bonaparte and Browse basins, Australian northwest margin. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 551-566.
(Basement and crustal structure of Bonaparte and Browse basins substantially different to each other. Bonaparte Basin up to 22 km of sediment, Browse Basin up to 12-14 km. Sedimentation in Bonaparte and Browse basins initiated in region with relatively thick crust. Bonaparte Basin deepest Moho directly beneath deepest basement. More typical inverse relationship between Moho topography and depth to basement is observed in Browse Basin)

Gorter, J.D. (1994)- Triassic sequence stratigraphy of the Carnarvon Basin, Western Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 397-413.
(Thirteen depositional sequences in Triassic of offshore Carnarvon Basin. Ages constrained by conodonts)

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(Four regionally extensive Upper Permian limestones in Bonaparte Basin. Regional extent and mappability of these carbonates dictates revision of Upper Permian sequences)

Gorter, J.D. (1999)- Evidence for a widespread Late Eocene (?) meteor bombardment of the northern Bonaparte Basin, offshore northern Australia, and its effect on hydrocarbon prospectivity. Petroleum Expl. Soc. Australia (PESA) Journal 27, p. 25-40.
(Fohn-1 exploration well in offshore N Bonaparte basin with 350 m thick breccia lens interpreted as buried impact crater formed in late Eocene erosion surface. Trace element geochemistry includes anomalous platinum group element values, including iridium. Fohn South with raised outer rim and 30 other smaller circular features at same stratigraphic horizon may all be impact craters)

Gorter, J.D. & S.W. Bayford (2000)- Possible impact origin for the Middle Miocene (Serravallian) Puffin structure, Ashmore Platform, Northwest Australia. Australian J. Earth Sci. 47, 4, p. 707-714.

(Circular structure on seismic possible impact crater (but in Gorter et al. 2002 interpreted as E Miocene patch reef)

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(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1945-5100.2000.tb01784.x/epdf)
(Seismic data and >350 thick, Platinum Group Elements-rich carbonate breccia lens intersected by Fohn-1 well in Timor Sea, interpreted in terms of buried 4.8 km-wide impact crater of late Eocene- Oligocene age. Original crater at least 1400m deep)

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(Revision of latest Tournaisian- Namurian stratigraphy of Petrel sub-basin, NW Shelf)

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(E-M Tournaisian and Late Devonian clastics more likely candidate for Turtle- Barnett oils than Visean Milligans Fm)

Gorter, J.D., P.J. Jones, R.S. Nicoll & C.J. Golding (2005)- A reappraisal of the Carboniferous stratigraphy and the petroleum potential of the southeastern Bonaparte Basin (Petrel sub-basin), Northwestern Australia. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 2005, p. 275-295.

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(Several sedimentary basins in W Australia contain Late Permian or older petroleum reservoir rocks, overlain by thick (400- 2000m) Early Triassic shaly sequences. Age of base Triassic shales re-assessed)

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(Glacial deposits in Lower Kulshill Group (Late Carboniferous-E Permian) in cores from onshore wells in SE Bonaparte Basin and extend at least 100 km to N. Trap oil and gas in Turtle and Barnett wells. Overlying organic-rich Treachery Shale reflects rapid deglaciation in Granulatisporites confluens palynozone in (late Asselian-) E Sakmarian)

Gorter, J.D., J.P. Rexilius, S.L. Powell & S.W. Bayford (2002)- Late Early to Mid-Miocene patch reefs, Ashmore Platform, Timor Sea- evidence from 2D and 3D seismic surveys and petroleum exploration wells. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basins Symposium, Perth 2002, p. 355-375.

(Pascal 1 and Lucas 1 wells on Ashmore Platform penetrated E Miocene patch reefs with Lepidocyclina spp. Nearby seismic structures, including 'impact crater' at Puffin, also likely of reefal origin. In Lucas 1 well Late Eocene argillaceous packstone at 1090-1199 m contains abundant Operculiniids, Amphistegina, Asterigerina and common Lacazinella)

Gorter, J.D., V. Ziolkowski & S.W. Bayford (1998)- Evidence of Lower Triassic reservoirs with possible hydrocarbon charge in the southern Bonaparte Basin. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, p. 229-235.
(Sandstone interval in Lower Triassic Mt Goodwin Fm in wells in S Bonaparte Basin commonly associated with mappable seismic reflector. Seismic profiles show brightening of this event, and direct hydrocarbon indicators strongly imply presence of source rocks in pre-Triassic section).

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(Dredge samples from 3625-4480m of Rowley Terrace contain bivalves of Tethyan affinity in Late Triassic reefal limestone (Paleocardita aff. globiformis) and E Jurassic oolitic calcarenite (Pseudopecten dugong n.sp.)

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(Organic geochemistry and palynology used to establish palaeoenvironmental conditions of Triassic-Jurassic fluvio-deltaic deposits in Delambre-1 well. Changes in higher plant biomarker distributions correlate with (1) brackish water environments; (2) changes in composition of spore and pollen assemblages; (3) sedimentary facies; and (4) stable carbon isotopic composition of higher plant biomarkers. Changes are all consistent with climatic shifts in NW Australia in Late Triassic- M Jurassic. Combustion marker benzopyrene abundant in samples with Falcisporites australis pollen. Decline of F. australis and rapid emergence of Corollina spp.- dominated assemblages marks rapid-pollen extinction event at end of Triassic. Triassic-Jurassic boundary increase in higher plant biomarkers (cadalene and simonellite) in prodeltaic facies)

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(U-Pb and Hf-isotope analyses of zircons from N Yilgarn Craton and adjacent Capricorn Orogen, E of Perth, W Australia. Oldest crustal components 3.7 Ga. Main zircon populatio around ~2700 Ma. 1.8-2.3 Ga magmatism

associated with Capricorn Orogen (between Yilgarn- Pilbara cratons). 540 Ma episode in NE part of craton involved metamorphism or remelting of 2.7-3.0 Ga crust of E Goldfields Province)

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(online at: www.searchanddiscovery.com/pdfz/documents/2016/10827grosjean/ndx_grosjean.pdf.html)
(Browse Basin significant gas province with EUR 36 TCF gas and 1148 MMb condensate in Ichthys, Prelude/ Concerto, Crux, etc. fields. Charged from gas-prone source rocks in E-M Jurassic Plover Fm. Oil-prone source rocks in U Jurassic Lower Vulcan and Lower Cretaceous Echuca Shoals Fms charge limited. Sub-economic oil in Browse Basin only in C Caswell sub-basin (Caswell) and on Yampi Shelf (Cornea, Gwydion), where oil-gas in Cretaceous reservoirs, derived from marine organic matter in E Cretaceous Echuca Shoals Fm)

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(online at: https://dro.deakin.edu.au/eserv/DU:30048942/guzel-palaeobiogeographic-2012.pdf)
(Jurassic- E Cretaceous marine ostracod faunas of W Australia. E Jurassic ostracod faunas of W end of Tethys and NW Australia (E end of S Tethys) little variation in depositional conditions along N Gondwana marine shelf. By Late Jurassic distinctive Indian Ocean ostracod fauna developed. By Barremian- Aptian Austral Province initiated)

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(online at: www-odp.tamu.edu/publications/123_SR/VOLUME/CHAPTERS/sr123_14.pdf)
(79 U Aptian-Albian foram species from ODP Site 766, off W Australia. Uppermost Albian age near top (equivalent of Rotalipora appenninica Zone), but deeper correlation tentative due to absence of index species. Mid-Cretaceous faunas from W Australia represent middle- high paleolatitudes in S Hemisphere. Benthic assemblages belong to Marssonella Association. Australian fauna lacks many families present in Tethyan (low-latitude) faunas. Late Albian planktonic foraminifers from Site 766 similar to those from Papuan Basin)

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(Study of well-preserved late E Permian siliceous agglutinated Foraminifera originally recorded by Parr from Quinnanie Shale and lower Wandagee Fm in Merlinleigh sub-basin of S Carnarvon Basin)

Haig, D.W., M. Smith & M.C. Apthorpe (1997)- Middle Eocene Foraminifera from the type Giralia calcarenite, Gasgoyne Platform, southern Carnarvon Basin, western Australia. Alcheringa 21, p. 229-245.
(M Eocene larger foram assemblage from Giralia calcarenite of Gascoyne Platform, NW Australia. Limestone one sequence with maximum thickness of 40-50m, reflecting maximum flooding event. With larger foraminifera Discocyclina, Asterocyclina and Nummulites (but no Pellatispira as reported by Chapman and Crespin, 1935). Rare Distichoplax algae near base)

Haig, D.W., D.K. Watkins & G. Ellis (1996)- Mid-Cretaceous calcareous and siliceous microfossils from the basal Gearle Siltstone, Giralia Anticline, Southern Carnarvon Basin. Alcheringa 20, 1, p. 41-68.
(Diverse assemblage of E Albian foraminifera (Hedbergella planispira Zone), radiolaria and nannoplankton (CC8a Subzone) in basal beds of Gearle Silstone in Giralia Anticline. Transition from Aptian Windalia Radiolarite to Gearle Siltstone may reflect marine transgressive pulse. Deposition of basal Gearle Siltstone coincident with major increase in bathymetry in Papuan, Laura and other basins in E Australia)

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(Review of E Cretaceous plate tectonic history of SW margin of Australia, including Perth and Mentelle basins, largely following Gibbons et al. (2012) model)

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(Submarine Naturaliste Plateau off SW Australia is block of continental origin exhumed during Cretaceous breakup between Australia and Antarctica. Reworked Mesoproterozoic (ca. 1230-1190 Ma) zircons from granite and orthogneiss samples dredged from S margin of plateau. Igneous rocks metamorphosed during Cambrian Pinjarra Orogeny at ~515 Ma. Protoliths affinities to Mesoproterozoic crust in Albany-Fraser-Wilkes Orogen (Australia-Antarctica))

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(Neogene collision between Australia and Banda Arc modified adjacent Browse and Bonaparte Basins. Two trends: (1) continuous long-wavelength amplification of Permo-Carboniferous basement topography, and (2) flexure and normal faulting of Triassic-Recent sedimentary cover)

Haston, R.B. & J.J. Farrelly (1993)- Regional significance of the Arquebus 1 well, Browse Basin, NW Shelf, Australia. Australian Petrol. Explor. Assoc. (APEA) J. 33, 1, p. 28-38.

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(Anisian foraminifera from Lawley No. 1 well, Dampier sub-basin, NW Shelf. Well-preserved, non-Tethyan assemblage of 34 species, 10 new. Anisian age of material based on palynological evidence (T. playfordi zone))

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(online at: www.earthbyte.org/people/christian/media/Heine_02_MScThesis_e-version.pdf)
(Argo and Gascoyne Abyssal Plains off NW Australia are only preserved patches of Tethyan ocean floor; rest destroyed by subduction. W Burma Block identified as continental fragment breaking up from NW Shelf in Late Jurassic and accreted to SE Asian mainland in Santonian-Coniacian (85-80Ma) near W Thailand)

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(Magnetic anomaly record of Argo and Gascoyne Abyssal Plains re-interpreted, showing continental breakup in Argo and Gascoyne started simultaneously in Oxfordian with M25A (= E Kimmeridgean?; JTvG) as oldest anomaly. Sea-floor spreading continued until M14 (Valanginian), separating W Burma Block and possibly other continental fragments like Sikuleh Terrane of W Sumatra from N Australian margin)

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(Cenozoic progressive flooding of Australia requires downward tilting of Australian Plate towards SE Asian subduction system. Reconstruction of flooding history for last 70 Ma on continental scale. S low caused by sinking slab material from E Gondwana subduction zone in Cretaceous. N low first straddles N Australia in Oligocene, attributable to material subducted N and NE of Australia. Apparent Late Cenozoic N-ward tilt of Australia function of S Australia moving away from Gondwana subduction-related dynamic topography low in Oligocene, followed by drawing down of N Australia as it overrode slab burial ground under much of N Australia since Miocene. Without mantle convection most of Australia's continental shelves would be exposed)

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(Magnetic anomalies in Argo Abyssal Plain identified as M10 to M25, increasing in age from Java Trench to NW Shelf of Australia. Argo Abyssal Plain is bounded by 5600m contour and reaches max. depth of 5730m. Joey Rise limits Argo Abyssal Plain on SW. Numerous diapir-like structures)

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(Late Permian- Cretaceous dinoflagellate zonation, which is now preferred tool for dating Mesozoic sediments of Australian NW Shelf- New Guinea. Falcisporites superzone ranges from Late Permian- latest Triassic or Hettangian. Protohaploxy)

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(Updated Jurassic- Early Cretaceous dinoflagellate zonation chart)

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(On microfiche appendix 1 in R. Helby et al. (eds.) (1987) A palynological zonation of the Australian Mesozoic, Mem. Assoc. Australasian Palaeontologists 4, p. 168-196)
(Bathonian- Aptian palyno-biostratigraphic zonation)

Henderson, R.A. (1998)- Eustatic and palaeoenvironmental assessment of the mid-Cretaceous Bathurst Island Group of the Money Shoals Platform, northern Australia. Palaeogeogr. Palaeoclim. Palaeoecology 138, p. 115-138.

Hengesh, J.V. & B.B. Whitney (2016)- Transcurrent reactivation of Australia's western passive margin: An example of intraplate deformation from the central Indo-Australian plate. Tectonics 35, 5, p. 1066-1089.
(NW Australia passive margin intersects E termination of Java trench of Sunda arc subduction zone and W western termination of Timor Trough at Banda arc collision zone. Differential relative motion between these sectors reactivated former rift margin of NW Australia, evidenced by Pliocene-Quaternary deformation along 1400km long offshore fault system. Earthquake focal mechanisms consistent with dextral motion along NE trending fault planes. Faults crosscut Late Miocene unconformities eroded over M Miocene inversion structures. Onset of deformation consistent with time of collision of Scott Plateau between 3 Ma-present. Example of intraplate deformation resulting from kinematic transitions along distant plate boundary)

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(Boreholes in Vulcan Sub-basin elliptical cross-section, formed in response to in situ stress. Long axes of breakouts 130-170°N trend, implying NE-ENE-oriented maximum horizontal stress. This orientation not controlled by compression from Australia/ Banda Arc collision zone, but consistent with models of stress distribution in Indo-Australian plate based on plate-driving forces at all of its boundaries)

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(Sonic velocity of Miocene Oliver Fm at Ashmore Reef-1 well anomalously fast, probably due to 1.3 km of Pliocene erosion. Erosion was synchronous with subsidence of present-day Timor Trough and uplift of Timor island, so is believed to be linked with collision between Australian Continent and Indonesian Banda Island Arc)

Hillis, R.R. (1998)- The Australian stress map. Petroleum Expl. Soc. Australia (PESA) News 37, p. 40-43.

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(Australian stress map (mainly from borehole breakouts) indicates high level of horizontal compression in Australian Continent. Maximum horizontal stress oriented NE-SW from New Guinea along NW Shelf to Bonaparte and Canning Basins. To W ~50°rotation to 100°N in Carnarvon Basin. Max. horizontal stress oriented 010-020°N in Bowen Basin of Queensland and Amadeus Basin of C Australia)

Hillis, R.R., S.D. Mildren, C.J. Pigram & D.R. Willoughby (1996)- The North West Shelf stress map. PESA News 22, p. 42-47.
(NW Shelf stress map, based on analysis of borehole breakouts, indicates direction of maximum contemporary horizontal compression in upper few km of crust. Regional stress direction is consistently oriented ~050°
060°N (SW-NE) from onshore Canning Basin, Bonaparte basin to New Guinea. Between Canning and Carnarvon Basins max orientation swings ~ 40° to 090°-100°N (WNW-ESE.)

Hillis, R.R., S.D. Mildren, C.J. Pigram & D.R. Willoughby (1997)- Rotation of horizontal stresses in the Australian North West continental shelf due to the collision of the Indo-Australian and Eurasian plates. Tectonics 16, 2, p. 323-335.
(40° rotation of regional maximum horizontal stress orientation between W (Carnarvon Basin) and E (Bonaparte Basin) end of Australian NW Shelf. Borehole breakouts in Carnarvon Basin show σhmax orientation of 90°-

100°N. Regional σhmax orientation from New Guinea through Bonaparte Basin to Canning Basin is 50°-060°N. Between Canning and Carnarvon σhmax rotates to 90°-100°N. Banda Arc collisional zone not generating significant net push; 50°-060°N σhmax orientation of much of N Australian margin probably controlled by New Guinea orogen)

Hillis, R.R., M. Sandiford, S.D. Reynolds & M.C. Quigley (2008)- Present-day stresses, seismicity and Neogene-to-Recent tectonics of Australiaôs ópassiveô margins: intraplate deformation controlled by plate boundary forces. In: H. Johnson et al. (eds.) The nature and origin of compression in passive margins, Geol. Soc., London, Spec. Publ. 306, p. 71-90.
(Widespread Neogene-Recent deformation on and adjacent to Australia's passive margins. Ongoing intraplate deformation of Australian continent tied to plate boundary forces)

Hillis, R.R. & A.F. Williams (1993)- The stress field of the North West Shelf and wellbore stability. The Australian Petrol. Explor. Assoc. (APEA) J. 33, 1, p. 373-385.

Hinz, K., H. Beiersdorf, N.F. Exon, H.A. Roeser, H.M.J. Stagg & U. Von Stackelberg (1978)- Geoscientific investigations from the Scott Plateau off northwest Australia to the Java Trench. BMR J. Australian Geol. Geophysics 3, p. 319-340.
(online at: www.ga.gov.au/corporate_data/80974/Jou1978_v3_n4_p319.pdf)
(Results of 1977 RV Valdivia marine geological survey. Scott Plateau between Argo Abyssal Plain in W and Roti Basin in N is foundered continental block at depth of 2000-3000m. Dominant fault direction is NW to WNW, an ancient strike direction on Australian continent. W margin probably formed as NE-trending rifts and NW-trending transforms during Late Jurassic breakup. Argo Abyssal Plain 5000-5730m deep, overlain by ~400m of Late Jurassic-Cretaceous sediments, unconformably overlain by 200m of Tertiary sediment. Callovian breakup was preceded by period of basic volcanism and shallow marine sedimentation, followed by restricted shallow marine conditions in the Late Jurassic, and bathyal carbonate sedimentation by Late Cretaceous. Manganese crusts up to 1 cm thick at all dredge stations on Scott Plateau)

Hocking, R.M. (1988)- Regional geology of the northern Carnarvon basin. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia, Proc. North West Shelf Symposium, Petroleum Expl. Soc. Australia (PESA), p. 97-114.
(Carnarvon Basin of W Australia two distinct parts: (1) southern, onshore, N-trending sub-basins with up to 7km of mainly Paleozoic sediments, and (2) northern, offshore, NE trending sub-basins, up to 15 km deep, with thick Mesozoic and Cenozoic sequences as well as Paleozoic sediments)

Hocking, R.M. (1990)- Carnarvon Basin. In: Geology and mineral resources of Western Australia, Western Australia Geol. Survey, Mem. 3, p. 457-495

Hocking, R.M. (1992)- Jurassic deposition in the southern and central North West Shelf, western Australia. Geol. Survey Western Australia, Perth, Record 1992/7, p. 1-101.

Hocking, R.M., A.J. Mory & I.R. Williams (1994)- An atlas of Neoproterozoic and Phanerozoic basins of Western Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, p. 21-44.
(W Australia (mainly onshore) basins:(1) Neoproterozoic (Savory, Amadeus, Officer), (2) Paleozoic (Gunbarrel, S Bonaparte, Ord, Canning, S Carnarvon); (3) Mesozoic-Cainozoic (N Bonaparte, Browse, Roebuck, N Carnarvon; grouped into Westralian Superbasin). Perth- Collie basins both Paleozoic and Mesozoic elements)

Hoffman, N. & K.C. Hill (2004)- Structural-stratigraphic evolution and hydrocarbon prospectivity of the deep-water Browse Basin, North West Shelf, Australia. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 393-409.

Holford, S.P., N. Schofield, C.A.L. Jackson, C. Magee, P.F. Green & I.R. Duddy (2013)- Impacts of igneous intrusions on source and reservoir potential in prospective sedimentary basins along the Western Australian

continental margin. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 4, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, 11p.

Hollis, J.A., C.J. Carson & L.M. Glass (2009)- SHRIMP U-Pb zircon geochronological evidence for Neoarchean basement in western Arnhem Land, northern Australia SHRIMP U-Pb zircon geochronological evidence for Neoarchean basement in western Arnhem Land, N Australia. Precambrian Research 174, p. 364-380.
(Pine Creek Orogen, W Arnhem Land, on N periphery of North Australian Craton with metamorphosed Paleoproterozoic sediments with Neoarchean zircon detritus, particularly in 2530-2510 Ma and ca. 2670-2640 Ma age range. Pine Creek orogen itself thermal-compressional event around 1865- 1855 Ma)

Hopper, J.R., J.C. Mutter, R.L. Larson, C.Z. Mutter, P. Buhl et al. (1992)- Magmatism and rift margin evolution; evidence from northwest Australia. Geology 20, 9, p. 853-857.
(Deep seismic observations from NW Australia show Cuvier margin is volcanic passive margin that formed as Greater India rifted away from Australia in E Cretaceous. Formation of Cuvier Basin and rapid initial sea-floor spreading resulted in emplacement of exceptionally thick oceanic crust, while contemporaneous spreading off adjacent Exmouth Plateau formed normal-thickness oceanic crust)

Horstman, E.L (1988)- Source maturity, overpressures and production, North West Shelf, Australia. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia, Proc. North West Shelf Symposium, Petroleum Expl. Soc. Australia (PESA), p. 529-538.

Howarth, V. & T.M. Alves (2016)- Fluid flow through carbonate platforms as evidence for deep-seated reservoirs in Northwest Australia. Marine Geology 380, p. 17-43.

Howe, J.R.W., R.J. Campbell & J.P. Rexilius (2003)- Integrated uppermost Campanian-Maastrichtian calcareous nannofossil and foraminiferal biostratigraphic zonation of the northwestern margin of Australia. J. Micropalaeontology 22, 1, p. 29-62.
(online at: https://www.j-micropalaeontol.net/22/29/2003/jm-22-29-2003.pdf)
(uppermost Campanian-Maastrichtian calcareous microfossil zonation based on ODP holes on Exmouth Plateau and petroleum exploration wells from Vulcan sub-basin. NW Australian margin at this time transitional between cool-water Austral Province to S and warm-water Tethyan Province to N. Many Tethyan marker-species missing or have different ranges. U Campanian- lower U Maastrichtian disconformity on NW margin)

Huber, B.T. (1992)- Paleobiogeography of Campanian-Maastrichtian foraminifera in the southern high latitudes. Palaeogeogr. Palaeoclim. Palaeoecology 92, p. 325-360.
(On Late Cretaceous planktonic forams; mainly near Antarctica)

Hull, J.N.F. & C.M. Griffiths (2002)- Sequence stratigraphic evolution of the Albian to Recent section of the Dampier Sub-basin, North West Shelf Australia. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 617-639.
(In Dampier sub-basin Albian-Santonian sequences progressive increase in water depth and carbonate content, reaching maximum with widespread Santonian calcilutites. Following major relative sea level fall at base Oligocene a strongly prograding carbonate margin established, persisting to present day. Late Miocene- Recent section significant basinward thickening and onlap above N17-1 SB, implying renewed tectonic subsidence associated with collision of Australia and SE Asia in Late Miocene)

Huston, D.L., R.S. Blewett & D.C. Champion (2012)- Australia through time: a summary of its tectonic and metallogenic evolution. Episodes 35, 1, p. 23-43.
(online at: www.episodes.co.in/contents/2012/march/p23-43.pdf)

Iasky, R.P., A.J. Mory, K.A.Blundell & K.A.R. Ghori (2002)- Prospectivity of the Peedamullah Shelf and Onslow Terrace revisited. In: M. Keep & S.J. Moss (eds.) The sedimentary Basins of Western Australia 3, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 741-759.

(Pennsylvanian?- Early Sakmarian glacially influenced marine strata of Lyons Group investigated on Peedamullah Shelf, adjacent to Mermaid Nose)

Imbert, P. & S. Ho (2012)- Seismic-scale funnel-shaped collapse features from the Paleocene- Eocene of the North West Shelf of Australia. Marine Geology 332-334, p. 198-221.
(Cluster of funnel-shaped seismic anomalies offshore Carnarvon basin, Australia NW shelf, in Paleogene deep-water carbonates and marls. Individual depressions typically circular, >1 km wide and few 100m deep. Interpreted as collapse structures caused by thermal gas hydrates moving upsection. Three episodes in study area. May have developed as consequence of global hyperthermal events).

Ingram, B. & R. Morgan (1988)- The development and status of the Mesozoic palynostratigraphy of the North West Shelf, Australia. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia, Proc. North West Shelf Symposium, Petroleum Expl. Soc. Australia (PESA), p. 581-590.
(Palynology has become dominant biostratigraphy tool in Mesozoic section of NW Shelf (Helby, Morgan and Partridge 1987 scheme new industry standard))

Ingram, G.M., S. Eaton & J.M.M. Regtien (2000)- Cornea case study: lessons for the future. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 40, 1, p. 56-65.

Ishiwa, T., Y. Yokoyama, Y. Miyairi, M. Ikehara & S. Obrochta (2016)- Sedimentary environmental change induced from late Quaternary sea-level change in the Bonaparte Gulf, northwestern Australia. Geoscience Letters 3.33, p. 1-11.
(online at: https://geoscienceletters.springeropen.com/articles/10.1186/s40562-016-0065-0
(Bonaparte Gulf of NW Australian continental margin among widest in world (up to 500km), with shallow carbonate terraces and platforms exposed during periods of lower sea level. Switch from siliciclastic to carbonate-dominated sedimentation during last glaciation at ~26 ka, associated with local sea-level fall of -90m)

Ishiwa T., Y. Yokoyama Y. Miyairi, S. Obrochta, T. Sasaki, A. Kitamura, A. Suzuki et al. (2016)- Reappraisal of sea-level lowstand during the Last Glacial Maximum observed in the Bonaparte Gulf sediments, northwestern Australia. Quaternary Int. 397, p. 373-379.
(Sea-level minimum at Last Glacial Maximum occurred at 20.8 ka and LGM durations shorter than reported)

Ito, M., S. O'Connell, A. Stefani & P. Borella (1992)- Fluviodeltaic successions at the Wombat Plateau: Upper Triassic siliciclastic-carbonate cycles. In: U. von Rad, B.U. Haq et al (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 122, p. 109-
(online at: www-odp.tamu.edu/publications/122_SR/VOLUME/CHAPTERS/sr122_06.pdf)
(Carnian-Norian sediments at ODP Sites 759 and 760 on Wombat Plateau ~600m thick transgressive-regressive cycles in deltaic system. Sands dominated by monocrystalline quartz, probably derived from acidic plutonic and volcanic rocks in continental block. Av. ratio of monocrystalline quartz: feldspar: lithic fragments (Qm:F:Lt) is 71:22:7, indicating source from transitional continental and cratonic interior terranes. Mica up to 11%, metasedimentary lithics <0.7%, but generally absent. Upper Carnian sediments more feldspathic and with some volcanic fragments, indicating onset of rifting with volcanism in Gondwana continental block. Around barriers and/or delta lobes, carbonate shoals/banks probably developed)

Jablonski, D.J. (1997)- Recent advances in the sequence stratigraphy of the Triassic to Lower Cretaceous succession in the Northern Carnarvon Basin, Australia. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 36, 1, p. 429-454.

Jablonski, D. & A.J. Saitta (2004)- Permian to Lower Cretaceous plate tectonics and its impact on the tectono-stratigraphic development of the Western Australian margin. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 44, 1, p. 287-327.

Jason, R., G. McMurtrie & J. Keall (2004)- Hydrocarbon potential of the Outer Browse Basin, NW Australia. Proc. Deep water and frontier exploration in Asia & Australasia Symp, Indon. Petroleum Assoc. (IPA), Jakarta, p. 497-507.
(Outer Browse Basin frontier area believed to contain distal extensions of Browse Basin petroleum systems: large gas condensate discoveries in Mesozoic horst blocks, reservoired in Jurassic deltaic sediments, or small oil discoveries in E Cretaceous sandstones in drapes over Mesozoic horsts or basement highs. Maginnis-1 2002 well failed to encounter Jurassic reservoir and penetrated thicker than anticipated M Jurassic volcanic section)

Jenkins, C.C., R.M. Chiquito, P.N. Glenton, A.A. Mills, J. McPherson, M.C. Schapper & M.A. Williams (2008)- Reservoir definition at the Jansz/ Io gas field, NW Shelf, Australia: a case study of an integrated project from exploration to development. In: Proc. Int. Petroleum Techn. Conf. (IPTC) Kuala Lumpur, 32p.
(Extensive description of Jansz field, 2000 discovery 250 km off NW coast of Australia, in 1100-1400m water. Jansz/Io is structural/ stratigraphic trap with gas in U Jurassic (Oxfordian) shallow-marine mud-rich sandstone reservoir, up to 65 m thick)

Jenkins, C.C., A. Duckett, B.A. Boyett, P.N. Glenton, A.A. Mills, M.C. Schapper, M.A. Williams & J.G. McPherson (2017)- The Jansz-Io gas field, Northwest Shelf Australia: a giant stratigraphic trap. In: R.K. Merrill & C.A. Sternbach (eds.) Giant fields of the decade 2000-2010, American Assoc. Petrol. Geol. (AAPG) Mem. 113, Chapter 16, p. 305-322.
(Jansz-Io gas field large stratigraphic trap over 2000 km2, with both structural (faulted anticline) and stratigraphic (reservoir pinch-out) components. Stratigraphic component defined by reservoir extent, (depositional downlap to NW and erosional truncation by U Jurassic and Lw Cretaceous unconformities to SE). Original gas in place for Oxfordian sandstone reservoir 11-33 TCF)

Jenkins, C.C., D.M. Maughan, J.H. Acton, A. Duckett, B.E. Korn & R.P. Teakle (2003)- The Jansz gas field, Carnarvon Basin, Australia. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J., 43, 1, p. 303-324.
(Large gas discovery in stratigraphic/ subunconformity trap in U Jurassic sandstones of Carnarvon Basin)

Jitmahantakul, S. & K. McClay (2013)- Late Triassic-Mid Jurassic to Neogene extensional fault systems in the Exmouth Sub-basin, northern Carnarvon Basin, North West Shelf, Western Australia. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, 22p.
(Exmouth sub-basin major NE- to NNE-trending Mesozoic -Cenozoic depocentre in intra-passive margin N Carnarvon Basin. Late Triassic (Rhaetian)- M Jurassic (Callovian) W-directed extension produced N-S to NE-SW striking domino-style extensional fault systems that formed rift basin, segmented into 4 depocentres by E-W striking accommodation zones. Three systems of extensional faults: 1. Rhaetian-Callovian planar fault systems of major rift phase; 2. Late Berriasian- E Valanginian post-rift planar domino fault arrays; 3. Late Cretaceous-Neogene polygonal fault arrays formed during passive margin subsidence and sedimentation)

Jonasson, K. E. (2001)- Atlas of petroleum fields onshore Canning Basin. Dept. Mineral and Petroleum Res. 2, 1, 72p.

Jones, A.T., G.A. Logan, J.M. Kennard & N. Rollet (2005)- Reassessing potential origins of synthetic aperture radar (SAR) slicks from the Timor Sea region of the Northern West Shelf on the basis of field and ancillary data. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 45, p. 311-331.

Jones, A.T., G.A. Logan, J.M. Kennard, P.E. OōBrien, N. Rollet, M. Sexton & K.C. Glenn (2005)- Testing natural hydrocarbon seepage detection tools on the Yampi Shelf, northwestern Australia. Geoscience Australia Survey S267, Post Survey Report, GA Record 2005/15, p. 1-50.

Jones, H.A. (1973)- Marine geology of the northwest Australian continental shelf. Bureau Mineral Res. Geol. Geophysics, Bull. 136, p. 1-102.
(online at: www.ga.gov.au/corporate_data/104/Bull_136.pdf)

Jones, P.J. & C.B. Foster (1985)- Late Permian (Kazanian) ostracods and associated palynomorphs, from the Petrel Sub-basin, northwestern Australia. Mem. Assoc. Australasian Palaeontologists (AAP) 27, p. 33-51.
(Marine ostracod fauna from limestone cuttings of Pearce Mb (497-502 m) of Hyland Bay Fm in Barnett 1 well in SE Petrel basin. Contains Graphiadactyllis formosa and other species known from Late Permian (Kazanian) of Russian Platform. Associated with APP 43 (=Dulhuntyispora dulhuntyi) spore-pollen zone)

Jones, P.J. & R.S. Nicoll (1985)- Late Triassic conodonts from Sahul Shoals No. 1, Ashmore Block, northwestern Australia. BMR J. Australian Geol. Geophysics 9, p. 361-364.
(online at: www.ga.gov.au/corporate_data/81199/Jou1984_v9_n4_p361.pdf)
(Late Triassic conodont Epigondolella primitia recovered from core at ~1885m in BOCAL 1970 Sahul Shoals 1 well on Ashmore Block, NW Australia. In upper part of 1955m thick Triassic sequence. Dated as latest Carnian-earliest Norian. Sample interval within Samaropollenites speciosus Zone of Onslow Microflora. E. primitia also known from Timor, Sumatra, Malay Peninsula, Austrian Alps, etc.)

Jones, R.W., P.A. Ventris, A.A.H. Wonders, S. Lowe, H.M. Rutherford, M.D. Simmons, T.D. Varney, J. Athersuch, S.J. Sturrock, R. Boyd & W. Brenner (1993)- Sequence stratigraphy of Barrow Group (Berriasian-Valanginian) siliciclastics, North-West Shelf, Australia, with emphasis on the sedimentological and palaeontological characterization of systems tracts. In: D.G. Jenkins (ed.) Applied Micropalaeontology, Kluwer Academic Publ., Dordrecht, p. 193-223.
(Five Barrow Group (Berriasian-Valanginian) siliciclastic sequences described from NW Shelf, Australia, and calibrated against global third-order cycles)

Jones, W., A. Tripathi, R. Rajagopal & A. Williams (2011)- Petroleum prospectivity of the West Timor Trough. (PESA) News 114, p. 61-65.
(Brief seismic-based review of W Timor Trough. Jurassic sediments missing in wells on Ashmore Platform, but new seismic data indicates thicker Jurassic strata in NE, particularly in Timor Graben)

Jules, R., J.R. Ye & Q. Cao (2016)- Geological conditions and hydrocarbon accumulation processes in the Sahul Platform, Northern Bonaparte Basin, Australia. Int. J. Geosciences 7, p. 792-827.
(online at: http://file.scirp.org/pdf/IJG_2016062913404548.pdf)
(Sahul Platform in N Bonaparte Basin between Timor Trough to N and Malita Graben to S. With Sunset-Loxton Shoals and Chuditch gas fields in M Jurassic Plover Fm sandstone. Hydrocarbons migrated mainly from U Jurassic Frigate Shale source rock in Malita Graben to Sunset-Loxton Shoals field in Late Cretaceous (66 Ma). In Chuditch field hydrocarbon migration initiated in Late Miocene (7.5 Ma) from Plover Fm source rock)

Kaiko, A.R. (1998)- Thermal history analysis of the Barrow and Dampier Sub-basins, North West Shelf, Western Australia. B.Sc. (Hons) Thesis University of South Australia, p. 1-681.
(online at: http://search.ror.unisa.edu.au/media/researcharchive/open/9915960302001831/53112361830001831)
(On causes of apparent vitrinite reflectance suppression in Jurassic-Cretaceous of Barrow- Dampier subbasins)

Kaiko, A.R. & A.M. Tait (2001)- Post-rift tectonic subsidence and palaeo-water depths in the northern Carnarvon Basin, western Australia. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 2001, p. 367-379.
(Subsidence history of N Carnarvon Basin dominated by thermal sag following E-M Jurassic rifting. Miocene wrench-related uplift (several 100m) caused local basin inversion)

Kaiko, A.R. & P.R. Tingate (1996)- Suppressed vitrinite reflectance and its effect on thermal history modelling in the Barrow and Dampier sub-basins. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 1996, p. 428-443.
(Jurassic-Cretaceous formations of predominantly marine origin yield vitrinite reflectance values that are often lower than expected. Two possible explanations: (1) recent increase in thermal gradients occurred; or (2) vitrinite reflectance is suppressed, related to the marine environment of deposition)

Kaoru, M., Y. Kurata, D.J. Christiansen & J. Scott (2004)- The Crux gas-condensate discovery, northern Browse Basin, Australia. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 67-79.

Karner, G.D. & N.W. Driscoll (1999)- Style, timing and distribution of tectonic deformation across the Exmouth Plateau, northwest Australia, determined from stratal architecture and quantitative basin modeling. In: C. Mac Niocaill & P.D. Ryan (eds.) Continental Tectonics, Geol. Soc., London, Spec. Publ. 164, p. 271-311.
(Tectonic events responsible for formation of Exmouth Plateau varied in space and time. Deformation broadly distributed in Late Permian event (widespread 'intra-cratonic' Locker Shales and Mungaroo Fm). Late Triassic-E Jurassic extension more localized and formed Exmouth, Barrow and Dampier sub-basins. Callovian and Kimmeridgean extension resulted in seafloor spreading. Regional extension in Tithonian- Valanginian generated widespread regional subsidence. After initiation of seafloor spreading, inversion phase with minor reactivation of fault systems. Post-Valanginian subsidence requires significant lower crustal and mantle extension across Exmouth Plateau in Tithonian-Valanginian, which should be accompanied by large injection of heat)

Keall, J.M. & P.J. Smith (2000)- The impact of late tilting on hydrocarbon migration, eastern Browse Basin, Western Australia. AAPG Int. Conf. Exhibition, Bali 2000, American Assoc. Petrol. Geol. (AAPG) Bull. 84; 9, p. 1445-1446 *(Abstract only)*
(Discoveries of oil in Gwydion-1 (1995) and Cornea-1 (1996) on E margin of Browse Basin confirmed presence of oil source in E Cretaceous- Late Jurassic source rocks, with migration of >50 km from kitchen areas to W. Wells drilled along E side of basin have residual oil columns, suggesting traps had greater structural closure at time of charge. Uplift and erosion in Miocene resulted in tilting of traps, causing reduction in amount of closure and spilling of oil updip)

Keall, J.M. & P.J. Smith (2003)- The Argus-1 gas discovery, northern Browse Basin, Australia. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 37-52.
(N Browse 2000 discovery in tilted Triassic-Jurassic fault block with >240m dry gas column mainly in Oxfordian shallow marine sandstones)

Keep, M. (2000)- Neogene tectonic influences on petroleum systems in the Browse Basin and Timor Sea, North West Shelf, Australia. AAPG Int. Conf. Bali 2000. *(Extended abstract)*

Keep M., A. Bishop & I. Longley (2000)- Neogene wrench reactivation of the Barcoo Sub-basin, northwest Australia: implications for Neogene tectonics of the northern Australian margin. Petroleum Geoscience 6, 3, p. 211-220.
(Barcoo Basin is S part of Browse Basin. Barcoo Fault system is Miocene reactivation of older structures, resulting in right-lateral wrench zone. Exact timing of inversion uncertain, but probably mainly M Miocene)

Keep, M., M. Clough & L. Langhi (2002)- Neogene tectonic and structural evolution of the Timor Sea region. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basins Symposium, Perth 2002, p. 341-353.
(Two major and one minor Neogene structural reactivation events: Earliest Miocene (25-23 Ma; rel. minor; =New Guinea collision?), Late Miocene (11- 5.5 Ma; related to Sumba collision/ uplift or New Guinea collision/ folding; 8 Ma seems widespread Indo-Australian event) and late E Pliocene (~3 Ma- present-day; =Timor collision). Dominantly right-lateral transpression in Browse, left-lateral transtension in Timor Sea)

Keep, M. & M. Harrowfield (2008)- Elastic flexure and distributed deformation along Australia's North West Shelf: Neogene tectonics of the Bonaparte and Browse basins. In: H. Johnson et al. (eds.) The nature and origin of compression in passive margins, Geol. Soc., London, Spec. Publ. 306, p. 185-200.
(Neogene collision between Australia and Banda Arc modified adjacent Bonaparte and Browse basins of NW Australia. Modification both continuous long-wavelength amplification of Permo-Carboniferous basement topography and flexure and normal faulting of Triassic-Recent sedimentary cover)

Keep, M., M. Harrowfield & W. Crowe (2007)- The Neogene tectonic history of the North West Shelf, Australia. Exploration Geophysics 38, p. 151-174.
(Continental collision in vicinity of Timor Island (Banda Orogen) influences Neogene deformation in Timor Sea, but little effect in Carnarvon Basin. Location of deformation changes from outboard in Timor Se, to inboard in

Carnarvon Basin, with neotectonic events controlled by basement boundaries in Carnarvon Basin. Virtually all Neogene faults in Browse and Bonaparte Basins have normal displacement. Minor compressional inversional structures associated with latest Oligocene- E Miocene arc collision at N margin of Australia/ PNG)

Keep, M., J. Hengesh & B. Whitney (2012)- Natural seismicity and tectonic geomorphology reveal regional transpressive strain in northwestern Australia. Australian J. Earth Sci. 59, 3, p. 341-354.
(Temporary seismic network in NW Australia recorded 28 earthquakes, with dominantly strike-slip solutions)

Keep, M., A. Holbourn, W. Kuhnt & S.J. Gallagher (2018)- Progressive Western Australian collision with Asia: implications for regional orography, oceanography, climate and marine biota. J. Royal Soc. Western Australia 101, p. 1-17.
(W Australia margin migrated >30° N-ward in last 50 Myrs, carrying evidence of Paleogene greenhouse to Neogene icehouse climate and ocean transitions in sedimentary sequences. In last 10 Myrs Australia collided with the Asian plate to N, restricting interchange between Indian and Pacific oceans. This created Indonesian Throughflow and ongoing crustal stress along NW Shelf. Recent sediment coring by IODP and RV Sonne yielded superb palaeoclimatic and palaeoceanographic archives)

Keep, M. & S.J. Moss (2000)- Basement reactivation and control of Neogene structures in the Outer Browse Basin, North west Shelf. Exploration Geophysics 31, p. 424-432.
(Late Permian- Early Triassic NE-SW extensional faults with minor reactivation in Cenomanian-Turonian, but more pronounced transpression in M Oligocene and M-L Miocene)

Keep, M., C.M. Powell & P.W. Baillie (1998)- Neogene deformation of the North West Shelf. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1998, p. 81-91.
(Changing angles of collision between the Indo-Australian and Eurasian plates result in a variety of reactivation structures along the NW Shelf. Zones of high strain/ reactivation strongly partitioned into discrete areas. Neogene deformation major impact on petroleum accumulations, both enhancing or breaching earlier traps)

Kennard, J.M. (1996)- Petrel Sub-basin study 1995-1996, Geohistory modelling. Australian Geol. Survey Org. (AGSO) Record 1996/43, p. 1-120.
(online at: https://d28rz98at9flks.cloudfront.net/22673/Rec1996_043.pdf)
(Most wells show uplift and erosion of 400-1000m of Permian- E Triassic sediments during Late Triassic-earliest Jurassic 'Fitzroy Movement'/ basin inversion (peak of Fitzroy Movement probably in late Middle Triassic (Ladinian))

Kennard, J.M., I. Deighton, D.S. Edwards et al. (1999)- Thermal history modelling and transient heat pulses: new insights into hydrocarbon expulsion and 'hot flushes' in the Vulcan Sub-basin, Timor Sea. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 39, 1, p. 177-207.
(Good overview of Vulcan Basin; Late Tithonian submarine fans in Paqualin/Swan graben)

Kennard, J.M., I. Deighton, D.S. Edwards, C.J. Boreham & A.G. Barrett (2002)- Subsidence and thermal history modelling: new insights into hydrocarbon expulsion from multiple petroleum systems in the Petrel Sub-basin, Bonaparte Basin. In: M. Keep & S. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basin Symposium, Petroleum Expl. Soc. Australia (PESA), Perth, p. 409-437.
(Thermal history analysis of E Carboniferous- Permian petroleum systems in Petrel. Modelled oil- gas expulsion from postulated oil-prone source in Lower Carboniferous Milligans Fm in two offshore depocentres N and S of Turtle-Barnett High. Expulsion commenced in Late Carboniferous, peaked in E Permian, prior to onset of Late Triassic 'Fitzroy Movement' uplift. Expulsion from Lower Permian Keyling Fm restricted to central and outer portions of Petrel Deep. Expulsion from outer Petrel Deep in Late Permian-E Triassic. C Petrel Deep peaked in E Triassic, with minor expulsion in Late Triassic-Cretaceous. Gas expulsion from U Permian Hyland Bay Fm limited to outboard limits of Petrel Sub-basin. Timing is Jurassic-Cretaceous, with peak in mid-late Cretaceous)

Kennard, J.M., I. Deighton, D. Ryan, D.S. Edwards& C.J. Boreham (2003)- Subsidence and thermal history modelling: new insights into hydrocarbon expulsion from multiple petroleum systems in the Browse Basin. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 412-435.

Kennard, J.M., D.S. Edwards, T.E. Ruble, C.J. Boreham et al. (2000)- Evidence for a Permian petroleum system in the Timor Sea region, northwestern Australia. AAPG Int. Conf. Exhibition, Bali 2000, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9 *(Abstract only)*

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(online at: https://d28rz98at9flks.cloudfront.net/14787/Rec1994_067.pdf)
(Geohistory analysis of 32 Canning Basin wells. Multiple Ordovician- Triassic tectonic events (Odovician-Silurian Samphire Marsh Extension, E Devonian Prices Creek Uplift, M-L Devonian Pillara Extension, mid-Carboniferous Meda Transpression, E Permian- Triassic Point Moody Extension and Late Triassic- E Jurassic Fitzroy Transpression) resulted in three subsidence phases, each ended by uplift phase. Large anticlines with up to 2600m of erosion of Permian- E Triassic strata formed during Fitzroy Transpression)

Kennard, J.M., P.N. Southgate, M.J. Jackson, P.E. O'Brien, N. Christie-Blick, A.E. Holmes & J.F. Sarg (1992)- New sequence perspective on the Devonian reef complexes and the Frasnian-Fammenian boundary, Canning Basin, Australia. Geology 20, p. 1135-1138.
(Late Devonian barrier reef complex crops out as ~350 km long and 3-50km wide NW-SE linear belt at N margin of Canning Basin, fringing Proterozoic Kimberley block. 15 Frasnian-Tournaisian sequences mapped)

Killick, M.F. & P.H. Robinson (1994)- The good and bad of diagenesis; a review of sandstone reservoirs in the North Bonaparte Basin. In: P. & G. Purcell (eds.) The sedimentary basins of Western Australia. Proc. Petr. Expl. Soc. Austrialia Symposium 1, Perth, p. 275-288.
(U Jurassic- Lower Cretaceous sandstones in N Bonaparte Basin range from fluvial channels to basin floor fans. Gross similarities in diagenetic histories. Reservoir quality primarily controlled by depositional setting. Clean blocky sands of M Jurassic Plover Fm higher porosity-permeability than more argillaceous Sandpiper sands. Major diagenetic events: (1) widespread precipitation of carbonate cements in Cretaceous; and (2) quartz cementation, initiated before carbonate precipitation, but probably peaked in M Tertiary. Some hydrocarbon migration may have occurred before late kaolinite precipitation, preserving reservoir quality)

King, E. (2008)- Seismic stratigraphy of the intra-Barrow Group, Barrow sub-basin, Northwest Shelf, Australia. M.Sc. Thesis University of Adelaide, School of Petroleum, p. 1-126.
(online at: https://digital.library.adelaide.edu.au/dspace/bitstream/2440/59013/2/02whole.pdf)
(Seismic stratigraphy of basal Cretaceous (Berriasian- E Valanginian) Barrow Delta, S of Barrow island. Large shelf-margin fluvial-deltaic system built out to NE. Eleven 2nd-order sequences, with lowstand, transgressive and highstand systems tracts. Within Sequence 1 higher-order sequences with numerous lowstand system wedges and associated channel features)

Kivior, T. (2005)- Characterising top seal in the Vulcan Sub-Basin, North West Shelf, Australia. B.Sc. (Hons) Thesis, University of Adelaide, Australian School of Petroleum, p. 1-390.
(online at: https://digital.library.adelaide.edu.au/dspace/bitstream/2440/59638/2/02whole.pdf)

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(Paleo-oil columns in Vulcan Sub-Basin suggest trap breach, either via top seal or fault leakage. Late Jurassic-Cretaceous with four significant shale-marl seal intervals, capable of supporting 100m hydrocarbon columns)

Kivior, T., J.G. Kaldi & S.C. Lang (2002)- Seal potential in Cretaceous and Late Jurassic rocks of the Vulcan subbasin. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 41, p. 203-224.
(Almost all Late Jurassic and Cretaceous seals in Volcan sub-basin capable of holding back hydrocarbon columns greater than present or paleocolumns encountered. This suggests hydrocarbon leakage unlikely to have occurred as result of top seal capillary failure)

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(online at: www.ga.gov.au/webtemp/1209383/Rec1996_051.pdf)
(Review of SE Asia- NW Australia plate tectonic evolution models. Models show general agreement for original position of Sibumasu block opposite NW Australia, with N China block in near proximity. Positions of S China and Indochina blocks less clear, but possibly located off N Greater India, perhaps near W Australia

Klootwijk, C. (1996)- Phanerozoic configurations of Greater Australia: evolution of the North West Shelf. Part 2: Palaeomagnetic and geologic constraints on reconstructions. Australian Geol. Survey Org., Canberra, Record 1996/52, p. 1-85.
(online at: www.ga.gov.au/corporate_data/23691/Rec1996_052.pdf)
(Paleomagnetic constraints on Paleozoic-Mesozoic stripping of Gondwana's NE margin. This occurred through separation of extensive ribbon-continents rather than individual fragments. Ribbon continents and fragments of Gondwanan origin identified in wide zone of Asia, peripheral to Siberian Platform)

Klootwijk, C. (1996)- Phanerozoic configurations of Greater Australia: evolution of the North West Shelf. Part 3: Palaeomagnetic data base. Australian Geol. Survey Org., Canberra, Record 1996/53, p.

Klootwijk, C. (1998)- Phanerozoic polepath loops and their correlation with basin development and resource accumulation. AGSO Research Newsletter 29, 3p.

Klootwijk, C. (2010)- A heretic view of the Alice Springs Orogeny: Australia-Asia collision and tectonic extrusion. 20th Australian Geological Convention, Canberra 2010, Geol. Soc. Australia, Abstracts 98, p. 94-95.
(Abstract only)
(Paleomagnetic data show N-ward excursion of Australia of >30° of latitude, which may have started in E Devonian and peaked in M-L Visean when promontory of Australian craton in central New Guinea reached latitudes of 30°-40° N, and possibly collided with C Asian Orogenic Belt, closing Paleoasian Ocean)

Klootwijk, C. (2010)- Australia's controversial Middle-Late Palaeozoic pole path and Gondwana-Laurasia interaction. Palaeoworld 19, 1-2, p. 174-185.
(Alternative paleomagnetic pole path indicates substantial N-ward excursion of Australia/ NE Gondwana in E Carboniferous, possibly starting in E Devonian, with New Guinea continental promontory of Australia reaching latitudes of 30°- 40°N by Visean(?))

Klootwijk, C. (2013)- Middle-Late Paleozoic Australia-Asia convergence and tectonic extrusion of Australia. Gondwana Research 24, 1, p. 5-54.
(Paleomagnetic data from Carboniferous of W Tamworth Belt, S New England Orogen, show N-ward excursion over ~30°, that probably started in E Devonian. At M-L Visean peak, C New Guinean promontory of Australian craton reached 30°-40°N, within latitude range of W Central Asian Orogenic Belt. Devonian-Carboniferous convergence with this belt proposed as driver for tectonism throughout Australia and C Asia Orogenic Belt)

Kloss, O., G.R. Wood, J. Benson, S.C. Lang et al. (2003)- A revised depositional model for the Cape Hay Formation, Petrel Field, northern Australia. In: G.K. Ellis, P.W. Baillie & T.J. Munson (eds.) Timor Sea Petroleum Geoscience, Proc. Timor Sea Symp., Darwin 2003, p. 503-519.
(Petrel Field in Bonaparte Basin is large gas resource in Late Permian Cape Hay Formation, interpreted as transgressive, sandy tide-dominated, restricted estuarine fill succession)

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(Change in paleolatitude of areas off NW Australia since E Cretaceous determined from paleomagnetism of cores from ODP Leg 123 and DSDP Leg 27. E Cretaceous paleolatitudes for Sites 766 and 261 around 37°S, lower latitude than expected from Australian apparent polar wander path (APWP). Mid Cretaceous- Paleogene paleolatitudes for Site 765 also lower than predicted by APWP. (NB: results incompatible with present-day relative positions?; Site 261 is 5° N of Site 765 today, but in Cretaceous shown as 5° S of Site Site 765; JTvG))

Korn, B.E., R.P. Teakle, D.M. Maughan & P.B. Siffleet (2003)- The Geryon, Orthrus, Maenad and Urania gas fields, Carnarvon Basin, Western Australia. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 43, 1, p. 285-301.
(Gas fields part of 'Greater Gorgon' group in Barrow sub-basin of Carnarvon basin)

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(online at: www2.uibk.ac.at/downloads/oegg/Band_84_301_308.pdf)
('Alpine Enzesfelder Limestone (Lower Liassic) from the Exmouth plateau, NW of Australia'. Lower Liassic yellow echinoid-mollusc limestone samples dredged from submarine Exmouth Plateau from >2000m water depth. Similar to Enzesfeld Fm in Northern Limestone Alps in Austria and also from Timor. Sample 96 DR 30 with distinct foram fauna with Involutina liassica, I. turgida, Trocholina spp., etc. (although these may be found in latest Triassic; abundant I. liassica usually signifies lowermost Liassic). Part of Alpine Late Triassic- Jurassic facies belt that stretches for >15,000 km from Alps to Australia-PNG)

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(Limestone samples from ODP site 764 and Sonne cruise 1979 dredge samples from N side Wombat Plateau have Norian- Rhaetian fauna, similar to other Tethyan/ 'Alpine' foram faunas, including Timor and PNG, suggesting close similarity of faunal communities throughout Tethys realm)

Labutis, V.R. (1994)- Sequence stratigraphy and the North West shelf of Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 159-180.
(Permian- Paleocene sequence stratigraphic framework for NW Shelf based on biozonation of Helby et al. (1987), Exxon models of sequence stratigraphy and the time scale of Harland (1982). Provides insight into timing, rifting history and type of tectonic deformation affecting NW Shelf)

Labutis, V.R., A.D. Ruddock & A.P. Calcraft (1998)- Stratigraphy of the southern Sahul Platform. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 38, 1, p. 115-136.

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(Sequence stratigraphic framework for Cretaceous- M Miocene of Barcoo sub-basin of Browse Basin, to evaluate stratigraphic trap potential from seismic and 4 wells. Six 2nd-order mega-sequences recognized, each subdivided into 2-7 3rd-order depositional sequences. Base Cretaceous- Top Turonian dominated by major progradational-aggradational siliciclastic margin, with up to 40 km of progradation to NW. Major transgression in Late Cretaceous caused margin backstepping. Cenozoic section also prograded to NW, but thinner than underlying Cretaceous strata, and is less prospective due to shallow burial and lack of traps. To date, no fields discovered)

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Langhi, L. & G.D. Borel (2005)- Influence of the Neotethys rifting on the development of the Dampier Sub-basin (North West Shelf of Australia), highlighted by subsidence modeling. Tectonophysics 397, p. 93-111.
(Tectonic subsidence curves around Roebuck 1 well show striking Permo-Carboniferous rifting phase related to Neotethys (means Mesotethys?; JTvG) rifting and Late Jurassic-Early Cretaceous event coeval with Argo Abyssal Plain spreading. Permo-Carboniferous episode greater effect on proximal Dampier Sub-basin subsidence than Argo rifting. Two modes of extension: Late Paleozoic (widespread) and Mesozoic (localised))

Langhi, L. & G.D. Borel (2008)- Reverse structures in accommodation zone and early compartmentalization of extensional system, Laminaria High (NW shelf, Australia). Marine Petroleum Geol. 25, p. 791-803.
(Late Jurassic rift phase key to accumulation of hydrocarbons in Timor Sea. On Laminaria High Oxfordian-Kimmeridgian E-W faults forms structural traps with discoveries. Secondary reverse structures act as secondary hydrocarbon traps and/or as migration barriers (flower structure in extensional setting))

Langhi, L., N.B. Ciftci & G.D. Borel (2011)- Impact of lithospheric flexure on the evolution of shallow faults in the Timor foreland system. Marine Geology 284, p. 40-54.
(Laminaria High lithosphere flexure associated with collision of Australian NW margin and Banda volcanic arc is mechanism for Neogene fault development and reactivation of Jurassic structures. Initiation of faulting during Late Miocene when Laminaria High entered flexed area (forebulge). Maximum fault growth between Late Pliocene and Early Pleistocene when Laminaria High was located near forebulge hinge)

Langhi, L., N.B. Ciftci & D. Dewhurst (2011)- Structural trap modification associated with foreland lithospheric flexure. AAPG Ann. Conv. Exh., Houston 2011, Poster, Search and Discovery Art. 40780, 5p.
(online at: www.searchanddiscovery.com/documents/2011/40780langhi/ndx_langhi.pdf)
(Bonaparte basin/ Timor Sea Late Jurassic horst block structures modified by Late Miocene and younger flexure of underthrusting Australian continental margin in Timor Trough foreland basin. Creation of 'hour-glass structures' and affecting seal integrity of pre-Miocene hydrocarbon traps)

Langhi, L. & S.B. Reymond (2005)- Seismic attributes mapping of Late Palaeozoic glacial deposits on the Australian North West Shelf. Exploration Geophysics 36, 2, p. 224-233.
(Gondwana supercontinent experienced extensive Permo-Carboniferous glaciation, simultaneous with onset of Neotethys rifting of N margin. Terrestrial ice sheet in W Australia. Describes seismic attributes of Late Paleozoic syn-rift sequences in half-graben (series of basal moraines followed by deglaciation deposits))

Langhi, L. & C. Steiner (2003)- Permian glacial and fluvio-deltaic depositional systems of the Dampier Sub-Basin (North West Shelf of Australia) revealed by 3-D seismic. Abstract AAPG Int. Conf., Barcelona 2003.

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(Analysis of faults and fault seal on Laminaria High, Bonaparte basin, where Neogene extensional-transtensional reactivation affects most trap-bounding faults and may be reason for many breached or underfilled traps)

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(Seismic expression of hydrocarbon leakage across faults from Jurassic reservoirs in Laminaria and Corallina fields)

Larson, R.L. (1977)- Early Cretaceous breakup of Gondwanaland off western Australia. Geology 5, 1, p. 57-60.

(Magnetic lineations between Wallaby and Exmouth plateaus off W Australia identified as Early Cretaceous reversals M-0 to M-4 and some older Early Cretaceous. Formed at same plate boundary as anomalies in Perth abyssal plain and date Early Cretaceous breakup of E Gondwanaland at between 120-135 Ma)

Laurie, J.R., S. Bodorkos, R. Nicoll, J. L. Crowley, D J. Mantle, A.J. Mory, G.R. Wood, J. Backhouse et al. (2016)- Calibrating the middle and late Permian palynostratigraphy of Australia to the geologic time-scale via U-Pb zircon CA-IDTIMS dating. Australian J. Earth Sciences, 63, 6, p. 701-730.
(U-Pb zircon dating allows direct calibration of palynostratigraphy to numerical time-scale highlights significant inaccuracies in the previous indirect correlation. Top Dulhuntyispora granulata Zone (APP4.1) in Wordian, D. dulhuntyi Zone (APP4.3) exceptionally short, within Wuchiapingian, not E Capitanian; top D. parvithola Zone (APP5) near Permo-Triassic boundary, not in latest Wuchiapingian, etc.)

Laurie, J.R., S. Bodorkos, T.E. Smith, J. Crowley & R. Nicoll (2015)- The CA-IDTIMS Method and the Calibration of endemic Australian palynostratigraphy to the geological timescale. In: AAPG /SEG Int. Conf. Exhib., Melbourne 2015, Search and Discovery Art. 51207, 19p.
(online at: www.searchanddiscovery.com/pdfz/documents/2015/51207laurie/ndx_laurie.pdf.html)
(Permian palynozone recalibration via zircon dating of volcanic beds. Similar to Laurie et al. 2016))

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(On adaptation of standard Geological Time Scale, which was largely built around Northern Hemisphere datasets, for Australian region)

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(online at: https://d28rz98at9flks.cloudfront.net/49557/Jou1993_v13_n4.pdf)
(Sediments on Van Diemen Rise, Sahul Shelf, E Timor Sea, mainly skeletal calcareous sand. Several sinuous channels cut through terraces and banks during subaerial exposure of carbonate shelf during Last Glacial Maximum. At ~18 000 BP sea level was -120 m below present shoreline; only narrow marine shelf near edge of present continental shelf. Shoals on narrow shelf focus of coral reef growth. Calcrete concretions formed on exposed land surface. Today entirely clastic sedimentation <50 m, derived from wet-season river input. Large foraminifera and coralline algae dominate shallow banks and rises. Halimeda-dominated assemblages on outermost shelf edge banks)

Lavering, I. & A. Jones (2002)- Carbonate shoals and hydrocarbons in the western Timor Sea. Petroleum Expl. Soc. Australia (PESA) News 55, p. 40-42.
(Major carbonate shoals, particularly along edge of NW Australia continental shelf, some associated with active petroleum seepage systems)

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(33 known petroleum accumulations in Bonaparte Basin in Devonian-Tertiary reservoirs. Largest oilfields Challis, Jabiru, Puffin and Skua, in faulted-anticline traps in Vulcan Sub-basin, Ashmore Platform and Jabiru Terrace. Largest gas accumulations Petrel and Tern in anticlinal traps in Permian of Petrel sub-basin. Palozoic oils lower gravity than Mesozoic oils. Gases in Permian- Carboniferous sequences higher nitrogen and CO2)

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(Detrital zircons dating of samples from Roebuck basin, NW Shelf, shows broad range of old ages. Euhedral Triassic zircons common to all samples suggest proximal volcanic source, possibly Lhasa Terrane or Birds Head/ Sula Spur?)

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(Gas in Lower Permian Keyling Fm, less in E Triassic Mt Goodwin Fm; est. EUR 1.1 TCF; trap Late Triassic compressional anticline)

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(online at: www.asi-pl.com.au/f.ashx/News_Items/WABS2013_Lewis-1.pdf)
(Pilbara, Yilgarn and Kimberley cratons not major protosources during M-U Triassic of NW Shelf. Detrital zircon ages of Berriasian Brewster Mb sandstone from Burnside 1 in Caswell sub-basin main components 1890-1730 Ma (12%; Halls Creek orogen?), 1660-1370 Ma (13%) and 1240-1100/820 Ma (~54%). Subordinate components 2750-2380 Ma (~7%; Yilgarn?) and 730-550 Ma. Triassic euhedral zircon grains of volcanic origin in most Mungaroo Fm samples suggest volcanic event proximal to Exmouth Plateau at this time)

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(Bedout and Rowley Mesozoic sub-basins between Carnarvon and Browse basins with rel. thick Permian-Triassic- E Jurassic. Rel. unexplored)

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(Analyses on 13 fields and 35 abandoned wells suggest oil fields were once more widespread. Jabiru, Skua, Swift and Cassini oil fields had different paleo-OWC to those observed today. Most fields show evidence for paleo-gas cap, indicating early gas charge prior to oil accumulation. Many gas fields had oil columns prior to gas charge. Technical success rate is 1 in 9, about 1 in 24 for commercial fields. Paleo-oil column heights range from few m to >200m, exceeding 30m at Eclipse, East Swan, Octavius and Osprey).

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(Fluid inclusions suggest active petroleum systemin offshore Canning basin, despite absence of Late Jurassic source system)

Liu, C., C.S. Fulthorpe, J.A. Austin & C.M. Sanchez (2011)- Geomorphologic indicators of sea level and lowstand paleo-shelf exposure on Early-Middle Miocene sequence boundaries. Marine Geology 280, p. 182-194.
(3D seismic analysis of two sequence boundaries in E-M Miocene section of N Carnarvon Basin, Australian NW Shelf. Step-like discontinuities on DLS4 and DLS3.1 represent buried wave-cut terraces or sea cliffs, incisions of DLS3.1 are karst, both implying significant lowstand paleo-shelf exposure of E-M Miocene sequence boundaries)

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(Surprisingly few natural hydrocarbon seeps identified in Australia's offshore basins. Low Recent burial and subsidence rates not favourable for seepage. Also difficulties in proving seepage on high energy, shallow carbonate shelves. Active thermogenic methane seepage on Yampi Shelf, only proven occurrence in Australia, driven by deposition of thick Late Tertiary carbonate succession and Late Miocene tectonic reactivation)

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(online at: www.publish.csiro.au/ex/pdf/ASEG2018abT5_2B)
(Ungani field, discovered in Canning Basin in 2011, with 37°API oil from Tournasian Lower Laurel Fm dolomite reservoirs. Sealed by Laurel Shale(?). Heterogeneous reseservoir quality)

Longley, I.M., M.T. Bradshaw & J. Hebberger (2001)- Australian petroleum provinces of the twenty-first century. In: M.W. Downey et al. (eds.) Petroleum provinces of the Twenty-first century, American Assoc. Petrol. Geol. (AAPG), Mem. 74, p. 287-317.

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(also online at: www.searchanddiscovery.com/documents/longley/images/longley_full_big.pdf)
(NW Shelf of Australia major gas province with minor oily sweet spots. Pre-rift Permo-Triassic intracratonic sediments, overlain by Jurassic- Cainozoic syn-post-rift successions, deposited in response to rifting and seafloor spreading of at least three continental blocks in Oxfordian-Valanginian. Rifting initiated in C Argo area in Oxfordian, jumped N of Timor in Tithonian, to S Cuvier area in Valanginian. 754 exploration wells between 1953-2001 discovered 2.6 GBO, 2.6 GBC, 152 Tcf gas in 233 fields. Most traps sands in horsts and tilt blocks, or overlying drape structures. 97% reservoired below Cretaceous regional seal. Dominance of gas (84%) due to

quality and maturity of source. Effective oil source in mainly Jurassic pre- and syn-rift deltaic, or partially restricted syn-rift marine settings. Open marine deposits typically lean and gas-prone. 119 Tcf of gas reserves remain undeveloped, together with ~1400 MB condensate)

Lorenzo, J.M. (2004)- Foreland basins: lithospheric flexure, plate strength and regional stratigraphy. Ph.D. Thesis Louisiana State University, p. 1-168. *(Unpublished)*
(Including chapters on flexural loading control of accommodation in Timor Sea- Australian NW shelf. Model represents geometry of Timor Trough as ~300 km wide, ~2000m deep depression with 300m high forebulge. Inelastic deformation in SW part of Timor Sea reveals tectonic loading since Late Miocene; NE region loading more substantial since Late Pliocene)

Lorenzo, J.M., J.C. Mutter, R.L. Larson and NW Australia Study Group (1991)- Development of the continent-ocean transform boundary of the southern Exmouth Plateau. Geology 19, p. 843-846.
(Two-stage model for development of southern transform margin of Exmouth Plateau: (1) Tithonian-Valanginian? rift stage, with extension at high angle to future transform; (2)E Cretaceous drift stage, with underplating of continental rim resulting in permanent isostatic uplift)

Lorenzo, J.M., G.W. OõBrien, J. Stewart & K. Tandon (1998)- Inelastic yielding and forebulge shape across a modern foreland basin: North West Shelf of Australia, Timor Sea. Geophysical Research Letters 25, p. 1455-1458.
(Timor Trough is 'underfilled' foreland basin created by partial subduction of NW continental shelf of Australia beneath Timor Island. Change of effective elastic thickness of continental lithosphere from ~80 km to ~25 km over 300 km explains high curvature on outer Trough wall and low shelf forebulge (~200m) as measured along base Pliocene unconformity. Jurassic basement normal faults reactivated during bending of foreland)

Lorenzo, J.M. & E.E. Vera (1992)- Thermal uplift and erosion across the continent-ocean transform boundary of the southern Exmouth Plateau. Earth Planetary Science Letters 108, p. 79-92.
(Thermal evolution model of continental lithosphere at paleo-transform margin at SW side of Exmouth Plateau, NW Australia. Up to 3.5 km of sediments eroded from continental rim, decreasing to almost no erosion at 60 km from continent-ocean transform boundary. Surface elevation result of competing (1) thermal uplift, (2) surface erosion and (3) local isostatic rebound in response to erosion. Most erosion ceases by 40 Myrs after ridge emplacement and ~1000 km3 sediments eroded for every 10km of transform length)

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(At least 5 regionally significant petroleum 'supersystems' on NW Shelf of Australia)

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Lowry, D.C. (1995)- Fighting fractured Flamingo; lessons from Rambler-1, Timor Sea. The Australian Petrol. Explor. Assoc. (APEA) J. 35, p. 655-665.

MacNeill, M., N. Marshall & C. McNamara (2018)- New insights into a major Early-Middle Triassic rift episode in the NW Shelf of Australia. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, ASEG Extended Abstracts, 1, p. 1-5. *(Extended Abstract)*
(online at: www.publish.csiro.au/ex/pdf/ASEG2018abM3_3B)
(Prograding 'lava delta' complex interpreted from seismic within Triassic of Roebuck Basin (offshore Canning), under Huntsman 1 well. Steeply dipping clinoforms show NW to SE progradation. Volcanic package up to 10km thick, with pronounced magnetic anomaly. Within bigger scale rift complex, probably E-M Triassic magma

plume that initiated triple junction at NW end of Canning basin/ Argo abyssal plain. Lavas possible source of Triassic zircons in Mungaroo Fm?)

Maftei, A., E.J. King & M.C. Flores (2013)- The Gorgon Field; an overview. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p.

Magee, M., O.B. Duffy, K. Purnell, R.E. Bell, C.A. L. Jackson & M.T. Reeve (2016)- Fault-controlled fluid flow inferred from hydrothermal vents imaged in 3D seismic reflection data, offshore NW Australia. Basin Research 28, p. 299-318.
(online at: https://pdfs.semanticscholar.org/6770/b1642241aa0f93d84e26c32dd863035645cb.pdf)
(121 craters and mounded features on intra-Tithonian horizon interpreted as ancient hydrothermal vents, likely related to magmatic activity. Buried vents consist of craters up to 264m deep, which host mound of disaggregated sedimentary material up to 518m thick. Vent alignment along underlying fault traces)

Mamet, B. & D.J. Belford (1968)- Carboniferous foraminifera, Bonaparte Gulf Basin, Northwestern Australia. Micropaleontology 14, p. 339-347.
(Carboniferous foraminiferal faunas from well and outcrop samples of Bonaparte Gulf Basin, NW Australia. Many genera cosmopolitan (Archaediscus, Propermodiscus, Asteroarchaediscus, Endothyra, Globoendothyra). Australian fauna strong Tethyan influence and resemble those from Tethyan SE Asia, suggesting free migration between Gondwana and Laurasia)

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(2001 oil Vulcan Basin discovery in Plover Fm, directly under intra-Valanginian unconformity)

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(Early Cretaceous age intrusions imaged on 3D seismic in N Carnarvon Basin)

McClure, I.M., D.N. Smith, A.F. Williams, L.J. Clegg & C.C. Ford (1988)- Oil and gas fields in the Barrow sub-basin. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia, Proc. North West Shelf Symposium, Petroleum Expl. Soc. Australia (PESA), p. 371-390.
(Review of Barrow basin oil-gas fields: Barrow Island (1964), Harriet (1986), South Pepper/ North Herald (1987), Saladin, Chervil, Bambra (1982), Harriet and Rosette on E flank. On W side Gorgon (1980), W Tryal Rocks (1972), Spar (1976), etc.)

McConachie, B.A., M.T. Bradshaw & J. Bradshaw (1996)- Petroleum systems of the Petrel sub-basin- an integrated approach to basin analysis and identification of hydrocarbon exploration opportunities. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 1996, p. 248-268.

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(Four major Tertiary sequences. Larger foraminifera in Australia limited to 5 Eocene and 4 Oligo-Miocene excursions of tropical larger foraminifera, reflecting rel. warm climate periods: late M-L Eocene, Late Oligocene N3-N4, late E- early M Miocene N8-N11 and N14 (similar to excursions of warm faunas into Japan; JTvG))

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(online at: http://www.publish.csiro.au/ex/pdf/ASEG2018abM3_1B)
(Paleozoic fault system of N Carnarvon Basin complex interaction of N to NE trending faults This older rift architecture affected geometry of subsequent U Triassic - M Jurassic deformation (initiated in Rhaetian, but most significant in E Jurassic))

McHarg, S., C. Elders & J. Cunneen (2020)- Extensional fault-related folding of the North West shelf, Western Australia. American Assoc. Petrol. Geol. (AAPG) Bull. 104,. 4, p. 913-938.
(Examples of folds associated with extensional faults)

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(Late Cretaceous paleogeography, etc.)

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(Jurassic plant remains in W Australia sparse. Assemblages show links to E Australian, Indian and Antarctic floras of E Jurassic- E Cretaceous age. Bennettitaleans leaves intermediate in size between low and high latitude mid-Mesozoic assemblages, supporting previous paleogeographic placements of W Australia in mesothermal middle-latitude province in Jurassic)

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(Permian- Triassic boundary, using conodonts, carbon-isotopes and new radio-isotopic dating, placed in lower part of Kraeuselisporites saeptatus and Lunatisporites pellucidus Zones of W and E Australia, respectively)

Middleton, M.F. (1988)- Seismic atlas of the North West Shelf. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia, Proc. North West Shelf Symposium, Petroleum Expl. Soc. Australia (PESA), p. 457-478.

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(Revised interpretation shows complete set of NE-SW trending anomalies from M26 (155 Ma) to M21 (150.4 Ma; lineations oblique to N margin Exmouth Plateau, but more closely parallel J-K extension in rest of NW margin?)

Mihut, D. & R.D. Muller (1998)- Volcanic margin formation and Mesozoic rift propagators in the Cuvier Abyssal Plain off Western Australia. J. Geophysical Research 103, B11, p. 27135-27149.
(Breakup between India and W margin of Australia started at ~136 Ma (M14; ~Valanginian- Hauterivian), creating Gascoyne and Cuvier abyssal plains. This was followed by two rift propagation events that transfered parts of Indian Plate to Australian plate)

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(Borehole breakouts, caused by compressional shear failure of wellbore wall, analyzed in 5 Timor Sea wells. Breakouts mainly oriented SE-S-SE, hydraulic fractures mainly NE, consistent with NE-oriented maximum horizontal stress)

Miyazaki, S. (1989)- Characterization of Australiaǿs oil fields by fluid and reservoir properties and conditions: Australian Petrol. Explor. Assoc. (APEA) J. 29, 1, p. 287-298.

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(Ashmore Reef 1 well with complete Tertiary Triassic sequence: Tertiary-U Cretaceous carbonate-clay sequence, thin Lower Cretaceous-Upper Jurassic section with detritus from underlying 1000' thick U Jurassic basic lavas,and thick Triassic sedimentary sequence. NW shelf has block-faulted Precambrian basement)

Molyneux, S., R. McGee, J. Goodall, A. Padman, C. Valenti, B. Hartung-Kagi, J. Winterhalder, B. Zein & T. Jacobson (2015)- The Lower Triassic petroleum prospectivity of the North West Shelf post the Phoenix South-1 discovery. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) Conf. 2015, Singapore, 9.3, 7p. *(Abstract + Presentation)*
(Only commercial hydrocarbon discoveries in Lower Triassic and Permian of NW Shelf in Perth Basin and Petrel sub-basin. Lower Triassic Locker Shale may be source, seal and potential reservoir)

Mory, A.J. (1990)- Bonaparte Basin. Geol. Survey Western Australia. Report 3, p. 380-415.

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(online at: www.dmp.wa.gov.au/documents/10.gsdrpt51.pdf)
(Permian of Carnarvon Basin dominated by marine to nearshore siliciclastics, up to 5000m thick in Merlinleigh sub-basin. Virtually uninterupted sequence. Mid-Permian break in deposition, spanning Microbaculispora trisina to M. villosa Zones evident in wells on Peedamullah Shelf)

Mory, A.J. & G.M. Beere (1988)- Geology of the onshore Bonaparte and Ord basins in Western Australia. Geological Survey of Western Australia, Perth, Bull. 134, p.

Mory, A.J. & P.R. Dunn (1990)- Bonaparte, Canning, Ord and Officer basins; regional geology and mineralisation. Monograph Series, Australasian Inst. of Mining and Metallurgy (AusIMM) 14, p. 1089-1096.

Mory, A.J. & P.W. Haines (2013)- A Paleozoic perspective of Western Australia. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, 25p.

(Review of W Australia Paleozoic stratigraphy, tectonic events and paleogeographic maps)

Mory, A.J. & R.P. Iasky (1996)- Stratigraphy and structure of the onshore northern Perth Basin, Western Australia. Western Australia Geol. Survey Report 46, p. 1-126.

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(Extensive ice sheet covered W Australia from at least latest Carboniferous- earliest Permian (Gzhelian- mid-Sakmarian). Younger glacially influenced successions present in nearly all Phanerozoic basins in W Australia, typically lowermost glacial facies, middle marine mudstone facies, and uppermost fluvial-deltaic strata)

Moss, S., D. Barr, R. Kneale, P. Clews & T. Cruse (2003)- Mid to late Jurassic shallow marine sequences of the eastern Barrow Sub-basin: the role of low-stand deposition in new exploration concepts. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 43, 1, p. 231-255.

Moss, G.D., D.L. Cathro & J.A. Austin (2004)- Sequence biostratigraphy of prograding clinoforms, Northern Carnarvon Basin, Western Australia: a proxy for variations in Oligocene to Pliocene global sea level? Palaios 19, 3, p. 206-226.
(Sequence biostratigraphic analyses from 5 wells in N Carnarvon Basin. Late Oligocene- M Miocene with deeper-water benthic assemblages. Regional flooding event at start of M Miocene (climatic optimum, 16-14.5 Ma), followed by karstification on shelf and incision on clinoform front. Transition to shallow-water, warm facies on shelf in M and Late Miocene, with benthic fauna dominated by larger foraminifera, probably result of progradation. Late M Miocene (12 Ma) intensification of development of gullies and submarine canyons)

Muller, R.D., S. Dyksterhuis & P. Rey (2012)- Australian paleo-stress fields and tectonic reactivation over the past 100 Ma. Australian J. Earth Sci. 59, 1, p. 13-28.
(Changes in stress regime of Australian continent through time can be modelled by changing geometry and forces acting along boundaries of Indo-Australia and Paleo-Australian plate since E Cretaceous. Intraplate structural events may be caused by interaction of far field stress field with heterogeneous geology of Australia. Some intraplate suture zones of Australian continent particularly weak, i.e. faulted portions of NW Shelf and Flinders Ranges, which reactivated when favourable stress regimes existed)

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(E Australian highlands well-documented episodic uplift history spanning 120 Myrs. Initial dynamic uplift of 400-600 m from 120-80 Ma driven by E-ward motion of EAustralia margin away from sinking E Gondwana slab, At ~60 Ma in S (Snowy Mountains) renewed uplift of ~700, propelled by the gradual motion of margin over edge of large Pacific mantle upwelling. N highlands experienced continuous history of dynamic uplift, first due to the end of subduction E of Australia, then due to moving over large passive mantle upwelling. Etc.)

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(Review of Late Jurassic- Recent seafloor spreading around Australia. In NW Late Jurassic breakup of Argoland at ~156 Ma, followed by start of seafloor spreading at Gascoyne and Cuvier abyssal plains in E Cretaceous (~132 Ma), starting separation of Australia and Greater India. Onset of Australia- Antarctica slow separation at ~100 Ma. In E seafloor spreading of Tasman Sea propagated from S, with early rifting at ~70 Ma, continuous spreading at 64 Ma and onset of opening in Coral Sea area at ~58 Ma. At ~52 Ma (Early Eocene) end of seafloor spreading along entire E and NE Australia margin)

Muller, R.D., C. Gaina, A.A. Tikku, D. Mihut, S. Cane & J.M. Stock (2000)- Mesozoic/Cenozoic tectonic events around Australia. In: M.A. Richards et al. (eds.) The history and dynamics of global plate motion, Geol. Soc. America (GSA), Geophys. Monograph 121, p. 161-188.

Muller, R.D., A. Goncharov & A. Kritski (2005)- Geophysical evaluation of the enigmatic Bedout basement high, offshore northwestern Australia. Earth Planetary Sci. Letters 237, p. 264-284.
(Bedout High in Roebuck (offshore Canning) Basin unusual structure, controversially interpreted as end-Permian impact structure. Associated with major crustal thinning and interpreted magmatic underplating. Moho uplift of 7-8 km. Thermal modelling from well La Grange-1 and basalts drilled on top of Bedout High consistent with rifting above anomalously hot mantle. Preferred interpretation is basement high formed by two consecutive Paleozoic and Mesozoic rifting episodes, orthogonal to each other, with basin formation to E and W)

Muller, R.D., D. Mihut & S. Baldwin (1998)- A new kinematic model for the formation and evolution of the West and Northwest Australian margin. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1998, p. 55-72.
(Revised model of Mesozoic continental breakup and sea-floor spreading in Perth, Cuvier, Gascoyne and Argo abyssal plains. Sea-floor spreading in Gascoyne and Cuvier abyssal plains starts in E Valanginian. At Albian-Cenomanian boundary (99 Ma) spreading direction between India- Australia changed from NW-SE to N-S. Event at ~61 Ma in E Paleocene in Tasman Sea and SE Indian- Pacific oceans with change in spreading direction. 99 Ma event resulted in renewed local extension, 61 Ma event may reflect elastic buckling of lithosphere. Both events may have originated from stepwise subduction of Neo-Tethyan Ridge, first N of India at 99 Ma, then N of Australia at 61 Ma. NW Shelf accelerated subsidence, starting at ~20 Ma. Cannot be explained by foreland basin loading, but likely result of complex evolution of compressive intraplate stresses following breakup of Indo-Australian Plate into Indian, Australian and Capricorn plates)

Muller, R.D., D. Mihut, C. Heine, C. OóNeill & I. Russell (2002)- Tectonic and volcanic history of the Carnarvon Terrace: constraints from seismic interpretation and geodynamic modeling. In: M. Keep & S. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. West Australian Basin Symposium, Petroleum Expl. Soc. Australia (PESA), Perth, p. 719-740.
(Carnarvon Terrace multi-phase history of faulting and sedimentation, with major bounding faults active during Late Triassic and E Jurassic. Major phase of uplift and erosion shortly before breakup between Greater India and Australia prior to 130 Ma. Widespread lower Cretaceous intrusions in Exmouth sub-basin and offshore Wallaby and Zenith plateaus, provide evidence for syn- and post-rift volcanism)

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(Ungani and Yulleroo fields oils derived from Carboniferous source. Maximum burial and oil generation/ expulsion in basin immediately prior to Fitzroy Uplift around 200 Ma))

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(Structures in Timor Sea area can be described in terms of compound wrench-duplex structures involving subsequent normal and reverse inversion, resuling from wrench episodes from E Triassic- Present)

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Nicoll, R.S. (2002)- Conodont biostratigraphy and palaeogeography of the Triassic on the western, northwestern and northern margins of the Australian Plate. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia 3, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium 3, p. 167-177.
(In Triassic N margin of Gondwana opened onto Meso-Tethys Ocean. Continental margin was formed by Lhasa and W Burma Blocks and New Guinea part of Australian Plate. Cratonic basins along future margin of Australian Plate: Perth Basin in S, Bonaparte Basin and Triassic basins on Banda Arc islands. Only along N

margin of New Guinea and some islands of N Banda Arc did continental margin shelf areas open directly onto Meso-Tethys Ocean. Triassic sediments deposited in tectonically controlled basins. Conodonts and other fossils allow high-resolution correlation of sequences and events)

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(online at: https://d28rz98at9flks.cloudfront.net/70371/Chart_36_Northern_Carnarvon_Basin.pdf)

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(online at: www.ga.gov.au/corporate_data/49408/Jou1994_v15_n1.pdf)
(Late Triassic (Norian-Rhaetian) conodonts from cores, wells and dredge samples on NW Shelf assigned to Metapolygnathus primitius, Epigondolella triangularis, E. spiculata, E. postera, E. bidentata, Misikella hernsteini, and M. posthernsteini zones. Calibrated with dinocyst and spore-pollen zonations)

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(Studies of relationships between conodont faunas and spore-pollen and dinocyst palynofloras from W Australian margin and Timor have revised calibration of Australian Triassic palynomorph zones and stage terminology. Wombat-Timor Trough (newly defined) is axis of sedimentation on NW Shelf in Triassic)

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(Principal tectonic event shaping architecture of Timor Sea is Late Carboniferous- E Permian crustal extension to 35-40% of former thickness. Vulcan Sub-basin/ Ashmore Platform/Sahul Platform part of single upper plate rift margin, with extension via 'pulling' of lower crust from beneath upper crust. Flexural stress on inboard of upper plate rift margin initiated Vulcan Sub-basin and Malita Graben. Subsequent thermal subsidence created thick sediments until Late Triassic. Jurassic extension associated with rifting and ultimate break-up of Gondwana was minor compared to Permo-Carboniferous event, possibly because crust so heated/ stretched during Permo-Carboniferous that limited Jurassic extension led to crust failure and start of seafloor spreading)

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(Grooved surfaces in Late Paleozoic Grant Group in C Grant Range cut by glacial ice. Orientation of grooves and sedimentary structures indicate ice motion from SSE. Pebbles of banded iron formation in associated marine diamictites suggest that ice originated in Pilbara Block and extended 400 km into Canning Basin)

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(Canning Basin contains hydrocarbon-bearing Permo-Carboniferous glacial successions. Up to 2.5 km of clastic sediment eroded by Permian ice sheets from adjacent Precambrian craton trapped in Fitzroy Trough in NE Canning Basin. Sediments 60-80% f-m sandstone. Later transgressive deposits consist of glaciomarine mudstones and rain-out diamictites, subaqueous outwash fans and deltaic deposits. Grant Group accommodation space created by Permian extension, which began at ~295 Ma)

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(Barramundi event marks metamorphism of earliest Proterozoic basinal successions, linked to and followed by extensive orogenic felsic magmatism. Leichhardt felsic magmatism dated as ~1865 Ma. Time of Yaringa metamorphism established at ~1890 Ma (NB: detrital zircons of ~1880-1840 Ma in Mesozoic sediments of PNG, etc., commonly ascribed to this widespread felsic volcanic event; JTvG))

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(Degree of Curvature in 2 wells between Miocene planktonic foram zones N4- N14 from N Australia. Above Orbulina datum DOC 60-75%))

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(Four Mesozoic petroleum systems identified in Caswell sub-basin. Source rocks in subbasin sufficient maturities to have transformed most of kerogen into hydrocarbons, with most expulsion from Late Cretaceous- Present. In Barcoo Sub-basin only source rocks within the J10–J20 supersequences sufficient maturity for generation. Predominantly gas-prone kerogen in Jurassic-Cretaceous)

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(Barrow and Exmouth subbasins elongate, fault-bounded rift, filled with 7000m of marine Jurassic sediments, thought to be prime source of much of hydrocarbons reservoired in and adjacent to trough)

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(Major Carboniferous-Permian intra-continental rift in approximate locations of Jurassic-Cretaceous rift margin that separated Australia from various Asian terranes and India. Intracontinental rift structurally modified by later M Permian extension. Shallow marine conditions persisted across conjugate margin through Triassic and into Jurassic. With S to N back-stepping Late Permian carbonate ramps. With 300Ma plate restoration)

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(On workflow of interpretation of ultra-high resolution seismic sequences (~40,000 yrs duration) in E Cretaceous prograding shelf-margin (Lower Barrow Gp) on NW Shelf of Australia)

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(online at: www.publish.csiro.au/ex/pdf/ASEG2018abM2_3B)
(Lower Barrow Group in N Carnarvon basin is latest Tithonian- E Valanginian prograding shelf-margin system with ~100-500m high clinoforms. 3D seismic shows high-order clinothems with cyclicity of ~40,000 yrs. Falling to flat shelf-edge trajectories associated with sediment bypass; rising shelf-edge trajectories linked with increasing sediment storage on shelf. Fluvial-dominated coastlines steep slope clinoforms; wave-dominated coastlines low-angle slope clinoforms. Turbidite systems mostly short-lived, fed by multiple small rivers forming linear ramp systems. Due to shallow configuration of margin (<500m), short slopes and high sand ratio, turbidite systems smaller scale (<50 km) and shorter lived than most modern turbidite systems (100-1000 km))

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(Seismic data along Vulcan transect in N Australia show rel. unaltered Precambrian Kimberley Basin rocks near the Australian coast, extending to edge of Yampi shallow-water shelf with crustal thickness of 35 km. Crust thins to 26 km under outer shelf near Timor Trough. Paleozoic/Mesozoic basin sequences thicken to 12-13 km, suggesting attenuation of Precambrian basement rocks from 35 to 13-14 km across margin (β=2.6))

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(Oxygen isotopes of endemic S Hemisphere Dimitobelus spp. belemnites from E-M Albian Gearle Siltstone in Giralia Anticline, Carnarvon Basin, suggest mean paleotemperature of 10.1°C, implying cool paleoclimates at mid-high paleolatitudes (during period of 'Greenhouse' Earth'?). Associated with common radiolaria (incl. Stichomitra communis Tan), possibly suggesting upwelling. Overlies widespread late Aptian- E Albian Windalia radiolarite)

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(M-U Devonian barrier-reef belt exhumed as series of limestone ranges for 350 km along NE margin of Canning basin. Developed as reef-fringed platforms standing 10s- 100s of m above surrounding seafloor. Platforms built by stromatoporoids, algae, and corals in Givetian-Frasnian and by algae in Famennian)

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(Canning Basin Blina 1 well tested paraffinic oil in Famennian reefal platform limestones)

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(NW Shelf of Australia typical `passive' continental margin. Pre-break-up Permian- M Jurassic rift valley and intra-cratonic basins with thick fluvio-deltaic sediments with marine incursions. Break-up near end M Jurassic, accompanied by large-scale block faulting with uplift and erosion. Late Jurassic- E Cretaceous marine sediments transgressed over eroded surfac, with Callovian, late Oxfordian- Kimmeridgian, late Tithonian- early Cretaceous marine incursions. Open marine conditions became widespread in Albian in S part of NW Shelf and Cenomanian

in N part. Thick prograding wedge of mainly carbonates since M Eocene resulted in NW regional tilt of Shelf. Hydrocarbon occurrences related to source rocks in restricted basins)

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(Early review of NW Australian margin- Timor Trough)

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(First spore-pollen zonation of Permian of Australia (relatively low-resolution and based on mainly endemic flora)

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(Samples dredged from Exmouth Plateau by RV Sonne yielded Late Sinemurian forams Ichthyolaria and Geinitzina. First record of marine rocks of this age from Australia)

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(Three localities on N Exmouth Plateau with faunas of Late Aptian- E Cenomanian age in radiolarian-rich mudstones With planktonic forams Ticinella multiloculata, Planomalina buxtorfi, etc. New benthic genus/species Scheibnerova protindica in E Cenomanian of Exmouth Plateau and in previously reported Eltanin samples from Cenomanian of Kerguelen Ridge)

Quilty, P.G. (1990)- Triassic and Jurassic foraminiferid faunas, northern Exmouth Plateau, Eastern Indian Ocean. J. Foraminiferal Research 20, 4, p. 349-367.
(Triassic (Rhaetian) and Jurassic (Callovian) foraminiferid faunas documented for first time in Australia from samples dredged on Exmouth Plateau off NW Australia. Triassic fauna diverse, with distinctly Tethyan characteristics. Callovian fauna diverse and cosmopolitan in character)

Quilty, P.G. (2011)- Late Jurassic foraminifera, Wallaby Plateau, Offshore Western Australia. J. Foraminiferal Research 41, 2, p. 182-195.
(Foraminifera from RV Sonne sample dredged from 4438-4049 m water depth on Wallaby Plateau SW margin. Oxfordian/Kimmeridgean foram fauna, older than previously known ages in region and predates initiation of seafloor spreading along W Australian margin. Low diversity fauna, dominated by Conicospirillina, Conorboides and Lenticulina. Shallow marine deposition. Area subsided ~4000m since deposition)

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(online at: www.ga.gov.au/corporate_data/49408/Jou1994_v15_n1.pdf)

(Seismic lines along margin of Argo Abyssal Plain. N Exmouth Plateau and Rowley Terrace margin underlain by thinned continental crust. At end of M Jurassic period of thermal uplift, faulting, volcanism and erosion over zone within 100-150 km of future abyssal plain, creating widespread angular unconformity, culminating in breakup in Callovian-Oxfordian, and 'Argo Landmass' drifted NW, leaving oceanic crust behind)

Rankey, E.C. (2017)- Seismic architecture and seismic geomorphology of heterozoan carbonates: Eocene-Oligocene, Browse Basin, Northwest Shelf, Australia. Marine Petroleum Geol. 82, p. 424-443.
(Eocene-Oligocene heterozoan carbonate strata from Browse Basin defines progradation of nearly 10 km. Sigmoidal to tangential oblique clinoforms, 350-650m high and max. gradients of 8-18°. Patterns reflect prolific heterozoan production across shelf during periods of rising and high base level when the shelf flooded)

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(Grant Group of Canning Basin deposited during retreat of Gondwanan ice sheet in Late Carboniferous- E Permian. Upper unit of Lower Grant Gp consists of thick mud-rich diamictites)

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(Permo-Carboniferous Grant Gp of Canning Basin, W Australia, predominantly glacial in origin. Basal Hoya Fm diamictites, etc. comparable with similar facies in Permo-Carboniferous glaciogenic sediments from other Gondwanan basins)

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(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2016TC004172)
(E Cretaceous Barrow Group of offshore N Carnarvon Basin was major deltaic system, formed during late stages of continental rifting. Three major depocenters: Exmouth and Barrow subbasins and S Exmouth Plateau. Overcompaction of pre-Cretaceous sediments in S Carnarvon Basin and pervasive reworking of Permian and Triassic palynomorphs in Barrow Group, suggests onshore S Carnarvon Basin originally contained thicker sedimentary succession that was uplifted and eroded prior to breakup. Anomalously rapid tectonic subsidence during Barrow Gp deposition, despite minimal contemporaneous upper crustal extension, suggests period of depth-dependent extension or dynamic topography preceding breakup)

Rek, A., S. Kleffmann & S. Khan (2003)- Petroleum prospectivity of the northern Exmouth Plateau. Petroleum Expl. Soc. Australia (PESA) News 62, p. 48-51.
(Exmouth Plateau commonly perceived to be gas-prone province (giant gas fields at Scarborough, Jansz, Gorgon, etc.). N Exmouth plateau still significant resource potential)

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(Large breakup-related volcanic complex on E Cretaceous Gascoyne Margin, W Australia. Three main volcanic seismic facies units related to volcanism: (1) landward flows, (2) seaward dipping reflections and (3) volcanic protrusions. Also domes, Moho, sill intrusions, etc.. Galah Rise volcanic complex dominated by 100-200 km long, NE-striking volcanic ridges surrounded by sets of deep-marine emplaced SDRs. Magmatism sparse on shear margin, massive near outer corner and decreases NE-wards along rifted margin segment and away from fracture zone)

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Riding, J.B., D.J. Mantle & J. Backhouse (2010)- A review of the chronostratigraphical ages of Middle Triassic to Late Jurassic dinoflagellate cyst biozones of the North West Shelf of Australia. Review Palaeobotany Palynology 162, 4, p. 543-575.
(Reassessment of ages of 20 M Triassic- Jurassic dinoflagellate cyst zones of NW Shelf (relatively minor modifications of Helby, Morgan and Partridge 1987, 2004 zonations))

Riding, J.B., G.E.G. Westermann & D.P.F. Darbyshire (2010)- New evidence for the age of the Athol Formation (Middle Jurassic; Bajocian) in the Tusk-1 and Tusk-2 wells, offshore Carnarvon Basin, Western Australia. Alcheringa 34, 1, p. 21-35.
(Co-occurrence of ammonites (Pseudotoites robiginosus) with palynomorphs in Athol Fm of Tusk-1 and 2 wells, off Carnarvon Basin, confirms E Bajocian age of Dissiliodinium caddaense dinoflagellate zone. Ammonite Pseudotoites prominent in E Bajocian of Indo-Pacific Realm (onshore W Australia, S Andes, W New Guinea (where identified previously as Stephanoceras cf. humphriesianum forma indica). Athol Fm indicates E Bajocian marine transgression onto Australian block)

Rinke-Hardekopf, L., S. Back, L. Reuning & J. Bourget (2016)- Channel-levee systems in a tropical carbonate slope environment and the influence of syn-sedimentary deformation, Browse Basin, Australian North-West Shelf. AAPG 2016 Ann. Con. Exhib., Calgary, Search and Discovery Article 10901, 14p. *(Abstract and Presentation)*
(Miocene of Browse Basin with one of largest Neogene tropical paleo-barrier reef systems. M-L Miocene carbonate slope with multiple channel and channel-levee complexes. Mature stage larger channel-systems 12- >20km long, with 150- >200m incision depth. Some channels with levee complexes up to 850m wide)

Robb, M.S., B. Taylor & A.M. Goodliffe (2005)- Re-examination of the magnetic lineations of the Gascoyne and Cuvier Abyssal Plains, off NW Australia. Geophysical J. Int. 163, p. 42-55.
(Exmouth and Cuvier margins of NW Australia and adjacent Gascoyne and Cuvier Abyssal Plains formed when Greater India rifted and separated from Australia during Late Jurassic and E Cretaceous. Time of final continental breakup similar along middle Exmouth (at M10N or M11; Late Valanginian) and Cuvier (at M10N) margins. Intervening S Exmouth margin spreading at M7- M4 time (Late Hauterivian; with excess magmatism)

Roberts, J. (1971)- Devonian and Carboniferous brachiopods from the Bonaparte Gulf basin, Northwestern Australia. Bureau Mineral Res. Geol. Geophysics Bull. 122, 1, Text, p. 1-319.

(online at: www.ga.gov.au/corporate_data/144/Bull_122Vol1.pdf)
(Monograph on systematics and zonations of Devonian- Carnboniferous brachiopods of the Bonaparte Gulf Basin. Frasnian-Famennian faunas much in common with platform' faunas in Europeand N America. Tournaisian fauna many endemic forms. Visean- E Namurian faunas close to Europe and N Africa)

Roberts, J. (1971)- Devonian and Carboniferous brachiopods from the Bonaparte Gulf basin, Northwestern Australia. Bureau Mineral Res. Geol. Geophysics Bull. 122, 2, p. 1-133.
(online at: www.ga.gov.au/corporate_data/144/Bull_122Vol2.pdf)
(Plates of Roberts 1971)

Robinson, P.H. & K.B. McInerney (2004)- Permo-Triassic reservoir fairways of the Petrel Sub-basin, Timor Sea. In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, p. 295-312.

Robinson, P.H., H.S. Stead, J.B. OôReilly & N.K. Guppy (1994)- Meanders to fans: a sequence stratigraphic approach to Upper Jurassic- Lower Cretaceous sedimentation in the Sahul Syncline, North Bonaparte Basin. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA), Perth 1994, p. 223-242.
(In Sahul Syncline up to 2000m of Late Jurassic- E Cretaceous with 11 depositional sequences. Include Callovian fluvial to shoreface sands and Oxfordian- Berriasian offshore shales, Valanginian massive progradation and aggradation that filled the trough with highstand shales and minor sands. From M Valanginian-earliest Aptian veneer of marine, glauconitic shale marked end of Sahul Syncline as structural entity)

Rohead-OôBrien, H. & C. Elders (2018)- Controls on Mesozoic rift-related uplift and syn-extensional sedimentation in the Exmouth Plateau. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, ASEG Extended Abstracts, 1, p. 1-8. *(Extended Abstract)*
(online at: http://www.publish.csiro.au/EX/ASEG2018abM2_2B)
(Exmouth Plateau of N Carnarvon Basin, NW Australia, multi-phase extensional history. Initially formed as basin during Permo-Carboniferous rifting event that thinned crust and led to large volumes of Triassic sediment accumulatation. Fault activity of second rift phase began in latest Triassic, mainly on NNE-SSW and NE-SW trending faults. Rotation of Triassic fault blocks continued in Jurassic, with erosion of pre-rift sediments. Latest Jurassic infilled of half-grabens and deposition onto highs limited in W as area was starved of sediment. E Cretaceous progradation of Barrow Delta resulted in infilling of previously starved half-grabens)

Rohl, U., T. Dumont, U. Von Rad, R. Martini & L. Zaninetti (1991)- Upper Triassic Tethyan carbonates off Northwest Australia (Wombat Plateau, ODP Leg 122). Facies 25, p. 211-252.
(Wombat Plateau U. Carnian and Norian deltaics, overlain by Rhaetian reefal carbonates. Foraminiferal assemblages closest affinity to Seram, also similarities with other regions like Europe)

Rohl, U., U. Von Rad & G.Wirsing (1992)- Microfacies, paleoenvironment, and facies-dependent carbonate diagenesis in Upper Triassic platform carbonates off Northwest Australia. In: U. Von Rad, B.U. Haq et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 122, p. 129-159.
(online at: www-odp.tamu.edu/publications/122_sr/VOLUME/CHAPTERS/sr122_07.pdf)
(ODP 122 identified 900m U Triassic (Carnian- Rhaetian) early rift sediments on Wombat (N Exmouth) Plateau. Carnian-Norian dominated by fluviodeltaic sediments with many carbonate intercalations. Sequence boundary at base of 'Rhaetian transgression' (215 Ma), overlain by shallowing-upward cycles from bioturbated wackestones to dolomitic algal bindstones, with reef development at platform margin. Open shelf limestone-marl alternations grade into bioclastic and oolitic grainstones, into calcisponge patch reefs and coral reefs. Reef growth ended with sequence boundary, followed by latest Rhaetian sea-level rise. Diagenetic successions of Rhaetian carbonates suggest Wombat Plateau horst was locally subaerially eroded, probably in Callovian-Oxfordian)

Rohrman, M. (2013)- Intrusive large igneous provinces below sedimentary basins: an example from the Exmouth Plateau (NW Australia. J. Geophysical Research, Solid Earth, 118, 8, p. 4477-4487.

(Exmouth Plateau with breakup-related 150 × 400 km sill complex, intruding mainly Triassic sedimentary rocks between Late Jurassic and E Cretaceous. Sill complex likely sourced by mafic or ultramafic magma chamber at base of crust, seismically imaged as high-velocity body and covering ~16x 104 km2)

Rohrman, M. (2015)- Delineating the Exmouth mantle plume (NW Australia) from denudation and magmatic addition estimates. Lithosphere 7, 5, p. 589-600.
(Late Jurassic Exmouth mantle plume upwelling at highly extended and subsided continental fragment bounded by present-day subsea Sonne and Sonja Ridges and includes Cuvier margin and Cape Range fracture zone. Region characterized by ~2.6 km of denudation and ~500m of tectonic uplift, with erosion products acting as source material for E Cretaceous Lower Barrow delta. ~40% of the seismically detected magmatic underplate melt related, with effective underplate ~4 km thick near locus of uplift. Plume-induced domal uplift preceded magmatism and breakup. Plume activity followed by W- propagating hotspot track, possibly terminating in Greater India (Tibet))

Rollet, N., S.T. Abbott, M.E. Lech, D. Caust, R. Romeyn, K. Romine, J. Blevin, K. Khider et al. (2016)- Cretaceous stratigraphic play fairways and risk assessment in the Browse Basin: implications for CO2 Storage. AAPG/SEG Int. Conf. Exhib., Melbourne 2015, Search and Discovery Art. 80513, 29p.
(online at: www.searchanddiscovery.com/documents/2016/80513rollet/ndx_rollet.pdf)
(Browse basin with large undeveloped gas resources (36 Tcf gas, 1148 MMB condensate). Gas rel. high in CO2 (~ 8%). Study of Cretaceous deltaic and submarine fan sandstone reservoirs for CO2 sequestration)

Rollet, N., D. Edwards, E. Grosjean, T. Palu, S. Abbott, M. Lech, J. Totterdell, D. Nguyen et al. (2017)- Reassessment of the petroleum prospectivity of the Browse Basin, offshore North West Australia. In: SE Asia Petroleum Expl. Soc. (SEAPEX) Exploration Conf. 2017, Singapore, Session 3, 35p. *(Abstract + Presentation)*
(Browse Basin with large gas-condensate accumulations and small light oil accumulations mostly in Cretaceous. Large undeveloped gas resources (41 TCF), development of Ichthys and Prelude fields. Seven supersequences from late Tithonian- Maastrichtian (K10-K60))

Rollet, N., D. Edwards, E. Grosjean, T. Palu, L. Hall, J. Totterdell, C. Boreham & A. Murray (2018)- Regional Jurassic sediment depositional architecture, Browse Basin: Implications for petroleum systems. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, ASEG Extended Abstracts, 1, p. 1-8. *(Extended Abstract)*
(online at: www.publish.csiro.au/ex/pdf/ASEG2018abM1_3B)
(Review of sequence stratigraphy of J10-J20 (Plover Fm) and J30-J50+ K10 (Vulcan Fm) supersequences, and paleogeography of Browse Basin. Large gas-condensate fields along Scott Reef Trend (Calliance, Brecknock, Torosa), in C and NW Caswell subbasin (Ichthys, Prelude, Crown, Proteus, Lasseter), and in Crux field in Heywood Graben, sourced from multiple horizons in Jurassic- basal Cretaceous)

Rollet, N., E. Grosjean, D. Edwards, T. Palu, S. Abbott, J., Totterdell, M.E. Lech, K. Khider et al. (2016)- New insights into the petroleum prospectivity of the Browse Basin: results of a multi-disciplinary study. The APPEA J. 56, 1, p. 483-494.
(Browse Basin hosts large gas accumulations. Drilling focused in C Caswell Sub-basin (Ichthys, Prelude), and Brecknock-Scott Reef Trend. New sequence stratigraphy of Cretaceous succession and structural framework. Complex charge history, with fluids from multiple Mesozoic source rocks (Lw- M Jurassic J10-J20, Plover Fm), U Jurassic- lowermost Cretaceous J30-K10, Vulcan Fm) and Lower Cretaceous K20-K30, Echuca Shoals Fm))

Rollet, N., G.A. Logan, J.M. Kennard, P.E. O'Brien, A.T. Jones & M. Sexton (2006)- Characterisation and correlation of active hydrocarbon seepage using geophysical data sets: an example from the tropical, carbonate Yampi Shelf, Northwest Australia. Marine Petroleum Geol. 23, 2, p. 145-164.
(Imaging of active hydrocarbon seepage in Australia, on Yampi carbonate Shelf, in 50 and 90m water. Seepage evidenced by gas plumes in water column, hard-grounds, pockmark fields and mounds)

Romine, K.K., J.M. Durrant, D.L. Cathro & G. Bernardel (1997)- Petroleum play element prediction for the Cretaceous- Tertiary basin phase, Northern Carnarvon Basin. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 37, p. 315-339.

Rosleff-Soerensen, B., L. Reuning, S. Back & P. Kukla (2011)- Seismic geomorphology and growth architecture of a Miocene barrier reef, Browse Basin, NW Australia. Marine Petroleum Geol. 29, 1, p. 233-254.
(Browse Basin non-tropical carbonate ramp in Eocene- E Miocene, changing to tropical rimmed platform in M Miocene. First reef structures in early M Miocene as narrow linear belts oblique to shelf strike direction. Subsequent progradation forms barrier reef of >40 km. Three ridges separated by progradational steps. Second and third step separated by karst horizon, probably global sea-level fall near Serravallian/ Tortonian boundary. E Tortonian sea-level rise drowned barrier-reef system and later also patch reefs in platform interior. First reefs developed simultaneous to maximum transport capacity of Indonesian Throughflow, Late Miocene reef drowning followed restriction of this seaway and Leeuwin current)

Rosleff-Soerensen, B., L. Reuning, S. Back & P. Kukla (2016)- The response of a basin-scale Miocene barrier reef system to long-term, strong subsidence on a passive continental margin, Barcoo Sub-basin, Australian North West Shelf. Basin Research 28, 1, p. 103-123.
(250 km long M-U Miocene barrier reef in S Browse Basin. Main controls for evolution: subsidence, global eustatic variations and antecedent topography. Sr-age of base of reef in Barcoo 1 well 11.8 Ma. High Miocene subsidence rates mainly caused by accelerated tectonic subsidence related to Australian- Eurasian Plates collision 250-500 km N of study area. Local Miocene tectonic reactivation of older structural grain (transpressional anticlines) served as preferential sites for reef growth)

Ross, M.I. & P.R. Vail (1994)- Sequence stratigraphy of the lower Neocomian Barrow Delta, Exmouth Plateau, northwestern Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1994, p. 435-447.
(Berriasian- E Valanginian northward-prograding Barrow Delta system at S Exmouth Plateau, Sequence stratigraphic interpretation based on seismic data and 25 wells shows latest Berriasian switch of depocenter from W Exmouth Plateau to E Barrow Rift. Superimposed on shift are seven eustatic cycles in Berriasian and four in E Valanginian (but only basinally restricted lowstand system tracts))

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(Numerous Miocene reefs and related carbonate buildups in Rowley Shoals region, NW Shelf, forming part of >1600 km Miocene reef tract, which extended N into Browse-Bonaparte basins and S to North West Cape in Carnarvon Basin, comparable in length to modern Great Barrier Reef)

Sanchez, C.M. (2011)- Controls on sedimentary processes and 3D stratigraphic architecture of a Mid-Miocene to Recent, mixed carbonate-siliciclastic continental margin: Northwest shelf of Australia. Ph.D. Thesis University of Texas at Austin, p. 1-140.
(online at: https://repositories.lib.utexas.edu/handle/2152/ETD-UT-2011-05-2678)

Sanchez, C.M., C.S. Fulthorpe & R.J. Steel (2012)- Miocene shelf-edge deltas and their impact on deepwater slope progradation and morphology, Northwest Shelf of Australia. Basin Research 24, 6, p. 683-698.
(Late-Middle Miocene- Pliocene siliciclastics in offshore N Carnarvon Basin, NW Shelf, interpreted as prograding delta deposits)

Sandiford, M. (2007)- The tilting continent: a new constraint on the dynamic topographic field from Australia. Earth Planetary Sci. Letters 261, p. 152-163.
(N Australian margin broad shelf and Neogene record of stratal onlap. Southern shelf typically <100 km wide and record of progressive offlap with Neogene paleo-shorelines hundreds of kilometres inland, at elevations up to ~250m above present-day sea level. This continental-scale 'reciprocal' stratigraphy implies 250-300m N-down vertical motion with respect to sea level since M Miocene)

Sandiford, M., M. Quigley, P. De Broekert & S. Jakica (2009)- Tectonic framework for the Cenozoic cratonic basins of Australia. Australian J. Earth Sci. 56, p. 5-18.
(Variations in Cenozoic marine inundation of Australia point to tectonic regime involving three modes of deformation. At longest wavelength continent has experienced SW-up/NE-down tilting of 300m towards Indonesia-W Pacific subduction realm since Late Eocene. At intermediate wavelengths undulations of ~100m reflecting lithospheric buckling due to intraplate stress from plate-boundary forcing)

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(Latest Triassic/ Rhaetian reefal carbonate buildups penetrated on Wombat Plateau. First colonization by sponge-dominated community, followed by coral-dominated community with associated hydrozoans-tabulozoans constituting main core of pinnacle reef complex, reflecting shallowing of environment of deposition. Rhaetian pinnacle assemblage is low-energy, bank-margin 'reef complex')

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(Brief discussion of five Carboniferous- Permian glacial episodes in Australia. No figures)

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(S Exmouth oil fields in Latest Tithonian- E Berriasian P. iehiense zone lowstand sands in rotated fault blocks, sourced by Late Jurassic Dingo claystone, sealed by intra-Hauterivian unconformity shales)

Scott, J. (1994)- Source rocks of West Australian basins- distribution, character and models. In P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1994, p. 141-158.

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(online at: www.ga.gov.au/corporate_data/15207/Rep_295.pdf)
(Turonian- Maastrichtian nannofossils from onshore Carnarvon and Perth basins and comparison with 10 other localities in Indo-Pacific region, incl. PNG. Three temperature-controlled biogeographic realms in Maastrichtian: (1) Austral (Perth Basin), (2) Extratropical (Carnarvon) and (3) Tropical (PNG) (Maastrichtian with Watznaueria barnesae, Micula murus, etc.))

Shafik, S. (1994)- Significance of calcareous nannofossil-bearing Jurassic and Cretaceous sediments on the Rowley Terrace, offshore northwest Australia. AGSO J. Australian Geol. Geophysics 15, 1, p. 71-88.
(online at: www.ga.gov.au/corporate_data/49408/Jou1994_v15_n1.pdf)
(Nannofossils from dredge samples of Rowley Terrace. Relatively rare in Jurassic paralic pre-breakup sequence. Two nannofloras of E Toarcian and E Bajocian ages, reflecting transgressive events. More open marine conditions in Cretaceous, with oldest nannofloras Valanginian age, with both Austral/Boreal and Tethyan elements, suggesting surface-water connection between E Cretaceous juvenile ocean NW of Australia and S Tethyan ocean. Late Cretaceous nannofloras suggest positions in Extratropical Nannoprovince in Campanian (coeval nannofloras from Carnarvon Basin in S Extratropical Nannoprovince, Papuan Basin in Tropical Nannoprovince)

Shamrock, J.L. & D.K. Watkins (2012)- Eocene calcareous nannofossil biostratigraphy and community structure from Exmouth Plateau, Eastern Indian Ocean (ODP Site 762). Stratigraphy 9, 1, p. 1-54.
(Nannofossils from ODP Leg 122- Hole 762C with ~240m of Eocene pelagic chalk off NW Australia: ~250 Eocene species. Major changes in nannofossil assemblages correspond to paleoenvironmental shifts such as PETM (Paleocene-Eocene thermal maximum) and EECO (Early Eocene climatic optimum). Eight new species: Calcidiscus ellipticus, Cruciplacolithus nebulosus, C. opacus, Cyclicargolithus parvus, Hexadelus archus, Hayella situliformis var. ovata, Markalius latus, Pedinocyclus annulus))

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(New model of shear wave speeds in Australian upper mantle. Slow wave propagation under Paleozoic fold belts in E Australia, increasing W across Proterozoic and reaching maximum in Archean cratons. High wave speeds associated with Precambrian shields extend beyond Tasman Line, which marks E limit of Proterozoic outcrop, suggesting parts of Paleozoic fold belts underlain by Proterozoic lithosphere. N Australia craton extends offshore into PNG and under Indian Ocean. Precambrian cratons without thick high-speed 'keel' near passive margins, suggesting processes associated with continental break-up may have destroyed once present tectosphere)

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(online at: http://jfr.geoscienceworld.org/content/38/3/251.full.pdf)
(Late Miocene-Pleistocene planktonic foram zonation and numerical age calibration of datum levels)

Sircombe, K.N. & M.J. Freeman (1999)- Provenance of detrital zircons on the Western Australia coastline- implications for the geologic history of the Perth basin and denudation of the Yilgarn craton. Geology 27, 10, p. 879-882.
(Detrital zircon samples from W Australia placer deposits dominated by Neoproterozoic and Mesoproterozic ages (little from nearby Archean Yilgarn craton). Dominant ages consistent with derivation from Proterozoic orogens marginal to Yilgarn craton. Peaks around 550 Ma and ~680-700 Ma (Leeuwin Block/Pinjara orogenic belt), ~1200 Ma (Albany-Fraser belt), ~2500-2700 (Yilgarn craton))

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(online at: http://dmpbookshop.eruditetechnologies.com.au/product/palaeontology-of-the-permian-of-western-australia.do)
(Major, well-illustrated inventory of W Australian Permian fossils. Little stratigraphic detail; few comparisons to Timor faunas)

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(Early paper identifying wrench faulting in Fitzroy Trough, the mobile N margin of Canning Basin: superimposed Mesozoic en-echelon compressional anticlines and normal fault structures, indicative of right lateral movements of marginal cratonic blocks)

Smith, P.M. & N.D. Sutherland (1991)- Discovery of salt in the Vulcan Graben: geophysical and geological evaluation. Australian Petrol. Explor. Assoc. (APEA) J. 31, 1, p. 229-249.

(salt/ anhydrite in Paqualin, Swan diapyrs)

Smith, S.A., P.R. Tingate, C.M.Griffiths & J.N.F. Hull (1999)- The structural development and petroleum potential of the Roebuck Basin. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 39, 1, p. 364-385.
(In Roebuck (= offshore Canning) Basin three phases of 'Fitzroy Movement': (1) Ladinian large transpressional 'flower structures' along N Turtle Hinge Zone; (2) Norian major en echelon anticlines in Fitzroy Trough and subtle unconformity in the Phoenix 1, 2 wells; (3) Sinemurian change from predominantly back-stepping to prograding and aggrading sedimentation)

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Spry, T.B. & I. Ward (1997)- The Gwydion discovery: a new play fairway in the Browse Basin. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 37, 1, p. 87-104.
(3 gas, one oil-gas zone in Barremian- Albian sands on Yampi Shelf)

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(online at: www.ga.gov.au/corporate_data/60864/Rec2004_013.pdf)
(Exmouth Plateau is marginal plateau in water depths of 800- >3000m, part of N Carnarvon Basin. Most of plateau underlain by 10-15 km of faulted sediment section, mainly deposited during extension that preceded breakup from Australia of Argo Land in M Jurassic and Greater India in E Cretaceous. Since last breakup Plateau largely sediment-starved, with only few 100m of mid-Cretaceous-Cenozoic marine sediments. Margins of plateau geologically very distinctive)

Stagg, H.M.J. & J.B. Colwell (1994)- the structural foundations of the Northern Carnarvon Basin. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1994, p. 349-364.

Stagg, H.M.J. & N.F. Exon (1981)- Geology of Scott Plateau and Rowley Terrace. Bureau Mineral Res. Geol. Geophysics Bull. 213, p. 1-47.
(online at: www.ga.gov.au/corporate_data/62/Bull_213.pdf)
(Scott Plateau of NW Shelf is subsided W margin to Browse Basin, and was probably paleohigh in Permian-Jurassic, shedding sediments into Browse Basin to E and Rowley Sub-basin to S. Since break-up of continental margin in Callovian, plateau gradually subsided to present depth of 1000-3500m, and now covered by ~1 km U Cretaceous-Cainozoic sediments, mainly carbonates. Basement of possible Kimberley Block equivalents probably no more than 2-4 km below seabed)

Stagg, H.M.J., J.B. Willcox, P.A. Symonds, G.W. OÕBrien, J.B. Colwell, P.J. Hill, C.S. Lee, A.M.G. Moore & H.I.M. Struckmeyer (1999)- Architecture and evolution of the Australian continental margin. AGSO J. Australian Geol. Geophysics 17, 5/6, p. 17-33.
(online at: www.ga.gov.au/corporate_data/81551/Jou2000_v17_n5-6_p017.pdf)
(Review of continental margins of Australia. Normally rifted NW and oblique-slip W margins have polyphase rift/drift history with progressive separation of continental blocks from Permo-Carboniferous- E Cretaceous. Multiple tectonic episodes produced geologically complex margin with strong imprint of volcanism. Continental shelf and marginal plateaux generally underlain by thick Phanerozoic sediments of Westralian Superbasin; areas of shallow crystalline basement are rare. Phanerozoic generally thick and flat-lying. Extension of upper crust

observed only adjacent to inboard confined deep rifts and on outermost margin. Upper crustal extension rarely >20%; basins formed largely as result of lower crustal extension. Goulburn Graben inversion may be related to Late Triassic 'Fitzroy Movement')

Stanley, G.D. (1994)- Upper Triassic spongiomorph and coral association dredged off the northwestern Australian shelf. AGSO J. Australian Geol. Geophysics 15, 1, p. 127-133.
(online at: https://d28rz98at9flks.cloudfront.net/81385/Jou1994_v15_n1_p127.pdf)
(U Triassic corals and spongiomorphs dredged during BMR Cruise 95 from Rowley Terrace, off Canning Basin, NW Australia. Branching spongiomorph (Spongiomorpha sp.) and two corals (Pamiroseris rectilamellosa, Retiophyllia tellae) indicate Late Triassic (Norian-Rhaetian) age. Although different in composition, Rowley Terrace occurrences may be E-ward extension of Wombat Plateau reefs, along rifted margin of Gondwana)

Stein, A., K. Myers, C. Lewis et al. (1998)- Basement control and geoseismic definition of the Cornea discovery, Browse Basin, Western Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 421-431.

Stephenson, A. E. & S.J. Cadman (1994)- Browse Basin, Northwest Australia: the evolution, palaeogeography and petroleum potential of a passive continental margin. Palaeogeogr. Palaeoclim. Palaeoecology 111, p. 337-366.

Stephenson, M.H. (1998)- Preliminary correlation of palynological assemblages from Oman with the *Granulatisporites confluens* Oppel Zone of the Grant formation (lower Permian), Canning Basin, Western Australia. J. African Earth Sci. 26, 4, p. 521-526.
(Presence of Granulatisporites confluens indicates Asselian-Tastubian (lowermost Permian) age for glaciogene sediments in Amal-6 borehole, Oman. In part coeval with glaciogene sediments of Canning Basin, W Australia)

Stilwell, J.D., M. Dixon, B. Lehner & S. Gamarra (2011)- Jurassic- Cretaceous boundary ammonite *Blanfordiceras* (Mollusca, Cephalopoda) from Fortissimo-1 wildcat well, Browse basin, Northwest Shelf, Australia. J. Paleontology 85, 3, p. 551-554.
(First record in Australia of Latest Tithonian (146.5-145.5 Ma) ammonite Blanfordiceras wallichi in core from Upper Swan Fm in well in Browse Basin, NW shelf. Associated microplankton initially identified as 'basal Cretaceous' Pseudoceratium iehiense or overlying Kalyptea wisemaniae Zone)

Stilwell, J.D., P.G. Quilty & D.J. Mantle (2012)- Paleontology of Early Cretaceous deep-water samples dredged from the Wallaby Plateau: new perspectives of Gondwana break-up along the Western Australian margin. Australian J. Earth Sci. 59, 1, p. 29-49.
(Samples from deep-water escarpments of Wallaby marginal plateau (400 km W of Carnarvon). Previously only modern carbonate, tholeiitic basalts and volcaniclastic rocks sampled. Claystones-sandstones from 3015-5159 m water depths are E Cretaceous (latest Berriasian- Barremian-Aptian) paralic- shallow marine deposits, straddling and post-dating breakup and opening of Cuvier Abyssal Plain. This, with recent identification of Oxfordian-Kimmeridgian foraminifera from same location, indicates presence of pre-breakup sedimentary section beneath parts of Wallaby Plateau)

Struckmeyer, H.I.M (ed.) (2006)- Petroleum geology of the Arafura and Money Shoal Basins. Geoscience Australia, Canberra, Report 2006/22, p. 1-65.
(online at: www.ga.gov.au/corporate_data/63995/Rec2006_022.pdf)
(Arafura Basin is Neoproterozoic- Paleozoic intracratonic basin that extends from onshore N Australia across Arafura Sea into Indonesian waters. It is overlain by the M Jurassic-Cenozoic Money Shoal Basin. Oil shows in Arafura 1 and Goulburn 1 wells, but no commercial discoveries)

Struckmeyer, H.I.M., J. E. Blevin, J. Sayers, J.M. Totterdell, K. Baxter & D.L. Cathro (1998)- Structural evolution of the Browse Basin, North West Shelf: new concepts from deep seismic data. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA), p. 345-367.
(Browse Basin developed in Carboniferous- E Permian as response to N-NW extension, accommodated along

NE-striking large normal faults, leading to breakup in E Permian. Rifting created Caswell and Barcoo sub-basins. Contractional reactivation of Paleozoic faults in Late Triassic- E Jurassic, resulting in partial inversion of half-graben. E Jurassic extension accommodated by numerous smaller faults, which caused collapse of many Triassic anticlines. Extension as upper crustal simple shear and lower crustal/upper mantle pure shear during breakup in M Jurassic. Widespread Callovian erosion, associated with continental breakup and initiation of seafloor spreading in Argo Abyssal Plain. Tertiary collision of Australian- Eurasian Plates produced inversion structures in M-L Miocene, along Paleozoic fault trends in Barcoo subbasin, and extensive normal faulting in N Caswell subbasin)

Struckmeyer, H.I.M. & J.M. Totterdell (co-ord.) (1990)- Australia: evolution of a continent. BMR Palaeogeographic Group, Bureau Mineral Res. (BMR), Geol. Geophysics, Canberra, p. 1-97.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/22137/)
(Schematic paleogeographic maps of Australia since Cambrian)

Swart, R.H. (1998)- Revision of Permian pleurotomarian gastropods from the Carnarvon and Bonaparte basins. In: G.R. Shi, N.W. Archbold & M. Grover (eds.) Strzelecki international symposium on Permian of eastern Tethys; biostratigraphy, palaeogeography and resources. Proc. Royal Soc. Victoria 110, 1-2, p. 163-172.

Swift, M.G. & D.A. Falvey (1990)- Heat flow and heat flow models in evaluating the oil prospectivity of the Exmouth Plateau, Northwest Australia. In: B. Elishewitz (ed.) Proc. CCOP Heat Flow Workshop III, Bangkok 1988, CCOP Techn. Publ. 21, p. 65-78.

Swift, M.G., H.M J. Stagg & D.A. Falvey (1988)- Heat flow regime and implications for oil maturation and migration in the offshore northern Carnarvon Basin. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia. Proc. North West Shelf Symposium, Petroleum Expl. Soc. Australia (PESA), p. 539-551.
(Present day heat-flow distribution in Exmouth Plateau region compiled from seabed measurements and oil wells. Area of high heat-flow (~90 mW/m2) near Barrow Island, decreasing W-ward to moderate-low (as low as 17 mW/ 1m2) over center of Exmouth Plateau. Some process diverting heat away from Exmouth Plateau Arch)

Symonds, P.A., C.D.N. Collins & J. Bradshaw (1994)- Deep structure of the Browse Basin: implications for basin development and petroleum exploration. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 315-331.
(Primary architecture of Browse Basin of Australian NW Shelf largely result of NE-SW ?Late Devonian- E Carboniferous intra-cratonic upper crustal extension, and NW-N-oriented M Carboniferous- E Permian full-lithosphere extension. Up to 11 km of sediment fill. During extension, crust beneath Browse thinned from 35 km to 10km by removal and stretching of upper and lower crust, leaving mid-crust largely intact. Later deformation events: Late Permian- E Triassic (Bedout Movement), M-L Triassic, and Late Triassic- E Jurassic (Fitzroy Movement) inversion events, post-breakup (Callovian-Oxfordian) margin sag, and ?Late Miocene transpressional anticlines in some areas)

Symonds, P.A., S. Planke, O. Frey & J. Skogseid (1998)- Volcanic evolution of the Western Australian continental margin and its implications for basin development. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symp., p. 33-54.
(2000km long- 500km wide volcanic province along NW Australian margin around times of continental breakup. Oxfordian (150 Ma) in age in Argo abyssal plain in N, Valanginian (136 Ma) in age in Gascoyne, etc. in S)

Tagliaro, G., C.S. Fulthorpe, S.J. Gallagher, C.M. McHugh, M. Kominz & L. Lavier (2018)- Neogene siliciclastic deposition and climate variability on a carbonate margin: Australian Northwest Shelf. Marine Geol. 403, p. 285-300.
(Bare Fm episode of Late Miocene- Pliocene siliciclastic deposition on carbonate-dominated Australian NW Shelf. Bare Formation preceded by M-L Miocene shelf exposure and karstification (~12 Ma). Small lobate deltas in Late Miocene, fluvial and wave dominated delta in Zanclean. Siliciclastic input decreased in Piacenzian and ended in E Pleistocene (~2.4 Ma). Correlate with regional climate trends: arid M-L Miocene, humid Zanclean

and return to arid in Piacenzian. Linked to reorganization of Indian Ocean paleoceanography, accompanying N-ward migration of Australian continent and progressive restriction of Indonesian Throughflow)

Tandon, K., J.M. Lorenzo & G.W. O'Brien (2000)- Effective elastic thickness of the northern Australian continental lithosphere subducting beneath the Banda orogen (Indonesia): inelastic failure at the start of continental subduction. Tectonophysics 329, p. 39-60.
(Pliocene-Recent continent-island arc collision of N Australian continental lithosphere across Banda orogen from Roti to Kai Plateau formed underfilled foreland basin within Timor-Tanimbar-Aru Trough. Australian continental lithosphere N of Timor believed to be detached from oceanic lithosphere. Effective Elastic Thickness of N Australian continental lithosphere derived using elastic half-beam model. EET varies from 27-75 km, highest near C Timor. Almost cessation of normal faulting in Late Miocene- E Pliocene)

Tao, C., G. Bai, J. Liu, C. Deng, X. Lu, H. Liu & D. Wang (2013)- Mesozoic lithofacies palaeogeography and petroleum prospectivity in North Carnarvon Basin, Australia. J. Palaeogeography 2, 1, p. 81-92.
(online at: www.journalofpalaeogeography.org/fileup/PDF/2013-1-81.pdf)
(Six Late Triassic- Cretaceous paleogeographic maps of N Carnarvon Basin)

Teichert, C. (1940)- Marine Jurassic of East Indian affinities at Broome, north-western Australia. J. Royal Soc. Western Australia 26, p. 103-119.
(Oxfordian-Kimmeridgean faunal assemblages from artesian wells at Broome, W Australia, characterized by pelecypod Buchia (= Malayomaorica; JTvG) and belemnites of Belemnopsis gerardi group, demonstrating presence of marine Late Jurassic between 950- 1550'. Notable similarities to Jurassic faunas of E Indonesia)

Teichert, C. (1941)- Upper Paleozoic of Western Australia: correlation and paleogeography. American Assoc. Petrol. Geol. (AAPG) Bull. 25, 3, p. 371-415.
(Late Paleozoic in W Australia starts with glacial deposits, probably of Sakmarian- early Kungurian age (E Permian). Permian glaciation of Australia was single major event with strongest refrigeration in Sakmarian. Rich marine faunas arrived in Australia after climax of glaciation. Upper Paleozoic deposited in geosynclinal trough, marginal to Precambrian shield and continuous with Timor geosyncline of East Indies. p. 405: Great differences exist in composition of Late Paleozoic faunas of Timor (echinoderm-cephalopod facies) and W Australia (brachiopod- bryozoan facies),…no identical coral species, etc.)

Teichert, C. (1947)- Stratigraphy of Western Australia. American Assoc. Petrol. Geol. (AAPG) Bull. 31, 1, p. 1-70.

Teichert, C. (1951)- The marine Permian faunas of Western Australia (an interim review). Palaeont. Zeitschrift 24, p. 76-90.
(Marine Permian faunas (~350 species) compared with Tethyan, E Australian and Gondwana faunas. W Australian faunal province affinities with E Tethys (Salt Range, Timor) but dissimilar to E Australian province, although some W Australian elements migrated into N (Queensland) and S (Tasmania) parts of E province)

Teichert, C. (1959)- Australia and Gondwanaland. Geol. Rundschau 47, 2, p. 562-590.
(Marine nature of W Australia sediments and the compositions of fossil faunas indicate existence of open ocean W of Australia since E Paleozoic time. Fossil land vertebrate faunas suggests isolation of Australian continent since at least Permian time)

Tesch, P., R.S. Reece, M.C. Pope & J.R. Markello (2018)- Quantification of architectural variability and controls in an Upper Oligocene to Lower Miocene carbonate ramp, Browse Basin, Australia. Marine Petroleum Geol. 91, p. 432-454.

Then, J., M. Wilson, I. Copp, M. Buschkuehle & R. Carey (2018)- Depositional, diagenetic and mineralogical controls on porosity development in the Ungani Field, Canning Basin. In: Proc. Australian Exploration Geoscience Conf. (AEGC 2018), Sydney, ASEG Extended Abstracts 2018, 1, p. 1-8. *(Extended Abstract)*
(online at: www.publish.csiro.au/ex/pdf/ASEG2018abT5_3B)

(E Carboniferous Tournaisian Dolomite reservoir in Ungani field on S flank of Fitzroy Trough. Fractured and bioclastic-rich with 'reefal' organisms, but with pervasive dolomitisation. Shallow-moderate burial and marine or evaporative reflux fluids likely responsible for pervasive dolomitisation. Subsequent leaching of calcite)

Thomas, B.M., P. Hanson, J.G. Stainforth, P. Stamford & L. Taylor (1991)- Petroleum geology and exploration history of the Carpentaria Basin, Australia, and associated infrabasins. In: M.W. Leighton et al. (eds.) Interior cratonic basins, American Assoc. Petrol. Geol. (AAPG) Mem. 51, p. 709-725.

Thompson, M.J. (2013)- Offshore West Australian basins, fuelling a decade of conventional prosperity for industry and Woodside. Sedimentary Basins of Western Australia. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p.

Thompson, N.B., C. Buessenschuett, L. Clydsdale, C.J. Cubitt, R.C. Davis, M.K. Johnson et al. (2003)- The North West Shelf of Australia- a Woodside perspective. Proc. 2003 SE Asia Petrol. Expl. Soc. (SEAPEX) Exploration Conf., Singapore, p. 1-43.
(Major review of evolution of NW Shelf of Australia, a major Mesozoic gas province with minor oily sweet spots. Since exploration drilling started in 1953, 754 exploration wells drilled (Dec 2001), discovering 2.6 billion bbls of oil, 2.6 billion bbls of condensate and 152 TCF gas in 233 fields. Most traps sands in rift-related horsts and tilted blocks, or sands in overlying drape structures. 97% of resources reservoired under dominantly Cretaceous regional seal. Same as Longley et al. 2002)

Thompson, N.B., M.L. Taylor & N.C. Taylor (1998)- Reservoir geology of the Perseus Field, North West Shelf, Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 527-534.
(Perseus Field giant gas accumulation, in structural/stratigraphic trap on Rankin Trend. Gas reservoired in Bathonian- Callovian deltaic sandstones of Legendre Formation, which subcrop U Jurassic-Lower Cretaceous Main Unconformity in graben between Goodwyn and North Rankin horsts. Six third-order sequences within W. digitata, W. indotata and C. halosa dinoflagellate zones)

Thurow, J. (1988)- Sedimentology of the Argo and Gascoyne abyssal plains, NW Australia: Report on Ocean Drilling Program Leg 123. Carbonates and Evaporites 3, 2, p. 201-212.

Thurow, J. & U. von Rad (1992)- Bentonites as tracers of earliest Cretaceous post-breakup volcanism off Northwestern Australia. In: F.M. Gradstein et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 123, p. 89-106.
(online at: www-odp.tamu.edu/publications/123_SR/VOLUME/CHAPTERS/sr123_04.pdf
(Bentonites in Berriasian- Valanginian pelagic sediments on and around Wombat- Exmouth Plateau are altered volcanic ash layers, and tied to continental breakup and rapid subsidence during 'juvenile ocean phase')

Tilbury, L., C.J. Clayton, T.J. Conroy, G. Philip, G.A. Boyd, G.A. Johnson et al. (2009)- Pluto- a major gas field hidden beneath the continental slope. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 2009, p. 243-268.
(Pluto 2005 gas discovery in Carnarvon Basin in tilted fault block. Gross gas column 209m in Triassic Mungaroo Fm sands and Tithonian sands, sealed by Cretaceous Forestier and Muderong Fm shales)

Tindale, K., N. Newell, J. Keall & N. Smith (1998)- Structural evolution and charge history of the Exmouth Sub-basin, Northern Carnarvon Basin, Western Australia. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 447-472.
(Exmouth sub-basin forms part of Exmouth Barrow-Dampier intra-cratonic rift system of N Carnarvon Basin.With significant thicknesses of U Jurassic Dingo Claystone, principal hydrocarbon source facies in region. Exmouth Sub-basin complex tectonic history, with at least two phases of uplift and erosion in Cretaceous (Valanginian, E Santonian), and Tertiary inversion/ tilting. Also multiphase hydrocarbon charge history)

Tortopoglu, B. (2015)- The structural evolution of the northern Carnarvon Basin, northwest Australia. M.Sc. Thesis, Colorado School of Mines, Golden, p. 1-170. *(online at:*

https://dspace.library.colostate.edu/bitstream/handle/11124/20135/Tortopoglu_mines_0052N_10771.pdf?sequence=1)
(N Carnarvon Basin rift-dominated basin, with five phases of extension (Pre-Top Permian, Top Permian, Base Jurassic, Middle Jurassic, and Late Jurassic) and the Base Cretaceous inversion. Magnitude of rift phases increased during M and Late Jurassic extension)

Tovaglieri, F. (2013)- Depositional history and paleogeography of the Jurassic Plover Formation in Calliance and Brecknock fields, Browse Basin, North West Shelf, Australia: Ph.D. Thesis, University of Western Australia, p. 1-361 + Enclosures.
(online at: research-repository.uwa.edu.au/files/3245318/Tovaglieri_Federico_2013_Part_1.pdf)
(Sequence stratigraphc framework of E-M Jurassic Plover reservoirs in Calliance and Brecknock fields)

Tovaglieri, F. & A.D. George (2012)- Sedimentology and image-log analysis of the Jurassic deltaic Plover Formation, Browse Basin, Australian North West Shelf. AAPG Ann. Conv. Exhib., Long Beach, Search and Discovery Art. 50714, 19p. *(Abstract + Presentation)*
(online at: http://www.searchanddiscovery.com/documents/2012/50714tovaglieri/ndx_tovaglieri.pdf)
(Plover Fm E-M Jurassic syn-rift deltaic system, with 5 second-order sequences of ~5-9 Ma duration)

Tovaglieri, F. & A.D. George (2014)- Stratigraphic architecture of an Early-Middle Jurassic tidally influenced deltaic system (Plover Formation), Browse Basin, Australian North West Shelf. Marine Petroleum Geol. 49, p. 59-83.
(Stratigraphic architecture and evolution of major E-M Jurassic fluvio-deltaic system (Plover Fm). Five 3rd-order sequences record progradational (S1, S2 and S4) and retrogradational (S3 and S5) phases of delta evolution. Common S-directed sediment dispersal in S2 and S3 and increasingly complex with W-directions in S4 and S5. Two rift-related depositional phases separated by phase of uplift between S3- S4. See also corrigendum in Vol. 54, p. 139-140)

Tovaglieri, F., A.D. George, T. Jones & H. Zwingmann (2013)- Depositional and volcanic history of the Early to Middle Jurassic deltaic reservoirs in Calliance and Brecknock Fields (Plover Formation), Browse Basin, North West Shelf, Australia. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 1-20.

Towner, R.R. & D.L. Gibson (1983)- Geology of the onshore Canning Basin, Western Australia. Bureau of Mineral Resources, Geology and Geophysics Bulletin 215, p. 1-51.
(online at: https://s3-ap-southeast-2.amazonaws.com/corpdata/11/Bull_215.pdf)
(Canning Basin of NW Australia large, intracratonic basin between Halls Creek Province and Pilbara Block, with up to 18 km thick faulted and folded Phanerozoic sediments. Five major periods of sedimentation; each with marine and continental phases, separated by intervals of erosion: (1) E Ordovician mainly marine sediments; (2) Silurian- E Carboniferous: initially evaporitic marine with thick Devonian reef-carbonates; (3) Late Carboniferous marine and continental sedimentation, initially under glacial conditions, warming into E Triassic, followed by major compressional tectonism, probably in E Jurassic; (4) late E Jurassic- E Cretaceous with regional transgression; (5) Cenozoic. Text followed by extensive report by Yeates et al. 1975)

Tucker, S.P. (2009)- Post-rift marine transgression of the southern Browse Basin margin: controls on hydrocarbon reservoir development and exploration potential. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 2009, p.

Turner, S., L.B. Bean, M. Dettmann, J.L. McKellar, S. McLoughlin & T. Thulborn (2009)- Australian Jurassic sedimentary and fossil successions: current work and future prospects for marine and non-marine correlation. Geologiska Foren. Forhandlingar (GFF), Stockholm, 131, 1, p. 49-70.
(online at: http://pdfserve.informaworld.com/38517_914071552.pdf)
(Review of Jurassic stratigraphies and fossils across Australia)

Tyler, I.M. & R.M. Hocking (2001)- A revised geological framework for Western Australia. West Australian Geol. Survey Record 2002/5, p. 1-7.
(online at: www.doir.wa.gov.au/documents/ gswa/gsdPap_Tyler_and_Hocking.pdf)

Tyler, I.M., R.M. Hocking & P.W. Haines (2012)- Geological evolution of the Kimberley region of Western Australia. Episodes 35, 1, p. 298-306.
(online at: www.episodes.org/index.php/epi/article/viewFile/59916/46873)
(History of Kimberley cratonic region in NW Australia began in Paleoproterozoic with rifting along N Australian Craton margin at 1910-1880 Ma, followed by plate collision as part of 1870-1790 Ma events that formed Diamantina Craton within supercontinent Nuna (Hooper Orogeny, Halls Creek Orogeny, etc.))

Vachard, D., D.W. Haig & A.J. Mory (2014)- Lower Carboniferous (middle Visean) foraminifers and algae from an interior sea, Southern Carnarvon Basin, Australia. Geobios 47, p. 57-74.
(Moderately diverse foraminifera fauna in Yindagindy Fm. Cosmopolitan genus Koninckopora and Plectinopsis suggest M Visean age)

Van Aarssen, B.G.K., R. Alexander & R.I. Kagie (1996)- The origin of Barrow Sub-basin crude oils: a geochemical correlation using land-plant biomarkers. The Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 36, 1, p. 465-476.
(New biomarker technology used in sediments and oils-condensates from Barrow Sub-basin. Plant fingerprint established in M-U Jurassic rock samples from Koolinda-1 well. Crude oils from area match closely with Oxfordian (W. spectabilis dinozone) of Koolinda-1 sediments. Four oils correlated with slightly older sediments. Five condensates did not fit higher plant fingerprint of Jurassic in Koolinda-1; possibly from older source rocks)

Van Aarssen, B.G.K., R. Alexander & R.I. Kagie (1998)- Higher plant biomarkers on the North West Shelf: application in stratigraphic correlation and palaeoclimate reconstruction. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, p. 123-128.
(Biomarkers(retene, cadene, etc.) tied to higher land plants in Middle-Late Jurassic sequences on NW Shelf. Results show significant climate change in Oxfordian, probably led to dominance of conifer type trees. Palaeoclimate in Carnarvon Basin changed in cyclic fashion during Jurassic, coinciding with second-order sea level changes)

Van Aarssen, B.G.K., R. Alexander & R.I. Kagie (1998)- Molecular indicators for palaeoenvironmental changes. Petroleum Expl. Soc. Australia (PESA) Journal 26, p. 98-105.
(Similar to Van Aarssen et al. 1998, above)

Van Tuyl, J., T.M. Alves & L. Cherns (2018)- Pinnacle features at the base of isolated carbonate buildups marking point sources of fluid offshore Northwest Australia. Geol. Soc. America (GSA) Bull. 130, 9-10, p. 1596-1614.
(online at: https://pubs.geoscienceworld.org/gsa/gsabulletin/article/130/9-10/1596/530065/Pinnacle-features-at-the-base-of-isolated)
(Seismic data show most Late Oligocene-Miocene isolated carbonate buildups in Browse Basin underlain by bright spots, dim spots and other evidence of fluid accumulation, suggesting buildups formed preferentially on pinnacles formed by mud volcanoes or methanogenic carbonates)

Van Tuyl, J., T.M. Alves & L. Cherns (2018)- Geometric and depositional responses of carbonate build-ups to Miocene sea level and regional tectonics offshore Northwest Australia. Marine Petroleum Geol. 94, p. 144-165.
(online at: https://www.sciencedirect.com/science/article/pii/S0264817218300801)
(Geometric/depositional responses of carbonate build-ups to Miocene sea-level change and regional tectonics from seismic data in Browse Basin and outcrops of Cariatiz Reef, SE Spain. Five Miocene sequence boundaries. Growth patterns suggest Messinian structural partitioning across Browse Basin, with local deformation associated with plate collision focused on preferentially oriented faults)

Veevers, J.J. (1969)- Sedimentology of the Upper Devonian and Carboniferous platform sequence of the Bonaparte Gulf basin. Bureau Mineral Res. Geol. Geophysics, Bull. 109, p. 1-86.

Veevers, J.J. (1969)- Palaeogeography of the Timor Sea region. Palaeogeogr. Palaeoclim. Palaeoecology 6, p. 125-140.
(Deep offshore Ashmore Reef 1 well and seismic in Timor Sea show of ~15,000m thick Phanerozoic sediments in Bonaparte Gulf Basin. Stratigraphic similarity between Permian- early M Miocene of Carnarvon Basin, Ashmore Reef area, and E Timor seems to indicate these areas consistently lay at edge of Australian continent)

Veevers, J.J. (ed.) (1984)- Phanerozoic earth history of Australia. Oxford Monographs Geol. Geophysics 2, Oxford University Press, Oxford, p. 1-418.

Veevers, J.J. (ed.) (2000)- Billion-year earth history of Australia and neighbours in Gondwanaland. GEMOC Press, Sydney, p. 1-388.
(Major review of tectonic history of Australia and surrounding areas)

Veevers, J.J. (2001)- Atlas of Billion-year earth history of Australia and neighbours in Gondwanaland. GEMOC Press, Sydney, p. 1-76.

Veevers, J.J. (2004)- Gondwanaland from 650-500 Ma assembly through 320 Ma merger in Pangea to 185- 100 Ma breakup: supercontinental tectonics via stratigraphy and radiometric dating. Earth-Science Reviews 68, p. 1-132.

Veevers, J.J. (2006)- Updated Gondwana (Permian-Cretaceous) earth history of Australia. Gondwana Research 9, 3, p. 231-260.
(Permo-Carboniferous glaciation followed by Permian coals and E Triassic barren beds and redbeds, in E deformed in M-Triassic. Coal deposition resumed in Late Triassic and tholeiite erupted in SE. After rifting, W margin formed by the opening of Indian Ocean at 156 and 132 Ma. By 99 Ma mid-Cretaceous, S margin was shaped by opening of SE Indian Ocean, and E highlands uplifted to produce present morphology of Australia)

Veevers, J.J. (2007)- Pan-Gondwanaland post-collisional extension marked by 650-500 Ma alkaline rocks and carbonatites and related detrital zircons: a review. Earth-Science Reviews 83, 1-2, p. 1-47.
(A-type granites of 650–500 Ma age common in Africa, South America, India, Antarctica, and Australia, and are indicated by related detrital zircons in Permian-Triassic and younger sediments from Australia, etc.)

Veevers, J.J. & C.M. Powell (eds.) (1994)- Permian-Triassic Pangean Basins and foldbelts along the Panthalassan margin of Gondwanaland. Geol. Soc. America (GSA) Mem. 184, p. 1-368.

Veevers, J.J., C.M. Powell & S.R. Roots (1991)- Review of seafloor spreading around Australia. I. Synthesis of the pattern of spreading. Australian J. Earth Sci. 38, 4, p. 373-389.
(Twelve reconstructions of seafloor around Australia that spread during dispersal of Argoland (Late Jurassic), India (Early Cretaceous), Antarctica (Late Cretaceous) and Papuan Peninsula (Paleo-Eocene))

Veevers, J.J. & Z.X. Li (1991)- Review of seafloor spreading around Australia. II. Marine magnetic anomaly modeling. Australian J. Earth Sci. 38, 4, p. 391-408.
(Inception of seafloor spreading around Australai youngs in counter-clockwise sense from Late Jurassic (160 Ma) in NW through Early Cretaceous (132.5 Ma) in W and SW, Late Cretaceous (96 Ma) in SE Indian Ocean and Tasman Basin, Paleocene (63.5 Ma) in Coral Sea and Pliocene (3.5 Ma) in Woodlark Basin)

Veevers, J.J. & J. Roberts (1968)- Upper Palaeozoic rocks, Bonaparte Gulf Basin of northwestern Australia Bureau Mineral Res. Geol. Geophysics Bull. 97, p. 1-155.
(online at: www.ga.gov.au/corporate_data/149/Bull_097.pdf)

(Bonaparte Gulf Basin of NW Australia extends beneath Timor Sea. Rel. complete Paleozoic section of shelfal marine sediments. U Devonian- Lower Carboniferous sediments known only in S, where unconformably overlies Precambrian, Cambrian and Lower Ordovician rocks, and unconformably overlain by U Carboniferous-Permian sediments. Faulting along E margin in Frasnian. Frasnian- E Tournaisian carbonate reef complexes on NW part of platform. Shale covered platform in E Visean. In Permian, step faults along E margin reactivated)

Veevers, J.J., J.W. Tayton & B.D. Johnson (1985)- Prominent magnetic anomaly along the continent ocean boundary between the northwestern margin of Australia (Exmouth and Scott Plateaus and the Argo Abyssal Plain). Earth Planetary Sci. Letters 72, p. 415-426.
(Prominent positive magnetic anomaly along lower slope between N Exmouth Plateau and Argo Abyssal Plain. It lies along Continent-Ocean boundary and is interpreted as complex of rift-related dykes in continental crust and adjacent oceanic crust)

Veevers, J.J. & T.H. Van Andel (1967)- Morphology and basement of the Sahul Shelf. Marine Geology 5, 4, p. 293-298.
(Aeromagnetic survey suggests correspondence of submarine shelf morphology with top surface of magnetic basement)

Volkman, J.K., R. Alexander, R.I. Kagi, R.A. Noble & G.W. Woodhouse (1983)- A geochemical reconstruction of oil generation in the Barrow sub-basin of Western Australia. Geochimica Cosmochimica Acta 47, 12, p. 2091-2105.
(Biomarkers from crude oils from Barrow sub-basin, NW Australian shelf sourced from Upper Jurassic Dingo Claystone Fm)

Von Rad, U. & T.J. Bralower (1992)- Unique record of an incipient ocean basin: Lower Cretaceous sediments from the southern margin of Tethys. Geology 20, p. 551-555.
(Wombat Plateau Site 761 three Berriasian-Valanginian fining-upward units above breakup unconformity: (1) barren fine sand, (2) fining-upward very fine sand with belemnites (incl. Belemnopsis cf jonkeri and ?Hibolithes), and (3) calcisphere-nannofossil chalk with volcanic ash layers)

Von Rad, U. & N.F. Exon (1982)- Mesozoic-Cenozoic sedimentary and volcanic evolution of the starved passive continental margin off Northwest Australia. In: J.S. Watkins & C.L. Drake (eds.) Studies in continental margin geology, American Assoc. Petrol. Geol. (AAPG), Mem. 34, p. 253-281.

Von Rad, U., N.F. Exon, R. Boyd & B.U. Haq (1992)- Mesozoic paleoenvironments of the rifted margin off NW Australia (ODP legs 122/123). In: R.A. Duncan et al. (eds.) Synthesis of results from Scientific Drilling in the Indian Ocean. American Geophys. Union (AGU), Geophys. Monograph 70, p. 157-184.
(NW Australia in early Mesozoic time was passive margin of E Gondwana, facing S Tethys Sea. Wombat Plateau: U Triassic synrift fluviodeltaic to carbonate platform deposits; earliest Jurassic platform drowning and early-rift volcanism; Callovian-Oxfordian block faulting and formation of 'post-rift unconformity' and ocean formation at Argo Abyssal Plain; Berriasian rapid subsidence and condensed section of terrigenous littoral sands, belemnite-rich sandy muds and calcisphere-nannofossil chalks; Albian-Cenomanian gradual transition from hemipelagic to pelagic conditions. C Exmouth Plateau failed Late Jurassic breakup, followed by uplift of southern hinterland, erosion and N-ward progradation of Berriasian shelf-margin clastic wedge, overlain by condensed Valanginian section, followed by late Valanginian-early Hauterivian final breakup between Australia and Greater India)

Von Rad, U., N.F. Exon & B.U. Haq (1992)- Rift-to-drift history of the Wombat Plateau, northwest Australia: Triassic to Tertiary Leg 122 results. Proc. Ocean Drilling Program (ODP), Scient. Results 122, College Station, TX, p. 765-800.

Von Rad, U., B.U. Haq et al. (1992)- Proceedings of the Ocean Drilling Program (ODP), Scientific Results 122. Ocean Drilling Program, College Station, TX, p. 1-904.
(Scientific results of ODP work on Exmouth and Wombat Plateaus)

Von Rad, U., M. Schott, N.F. Exon, J. Mutterlose, P.G. Quilty & J.Thurow (1990)- Mesozoic sedimentary and volcanic rocks dredged from the northern Exmouth Plateau: petrography and microfacies. BMR J. Australian Geol. Geophysics 11, p. 449-472.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/81271/)
(Deeply incised N margin of Exmouth Plateau dredged along seismic reflection profiles in 2000-5600m water. With: (1) Late Triassic- E Liassic mixed early rift volcanics (K-Ar ages 213, 192 Ma), (2) Late Triassic- M Jurassic shallow water carbonate (with microfacies similar to coeval platform carbonates in Alps and Mediterranean area of Tethys Ocean), (3) ?Late Triassic- M Jurassic uplifted and weathered coals and very mature quartz sandstones, (4) latest Triassic- earliest Jurassic red biomicrites shoals and basinal hemipelagic micrites with redeposited calciturbidites. Uplifted horst blocks like Wombat Plateau subaerially eroded in Jurassic or earliest Cretaceous. Following breakup to form Argo Abyssal Plain in earliest Cretaceous deposition of (5) Lower Cretaceous marginal marine claystones, followed by (6) hemipelagic late Lower Cretaceous radiolarian clays. From Turonian increasingly pelagic deposition)

Von Rad U., J. Thurow, B.U. Haq, F. Gradstein et al. (1989)- Triassic to Cenozoic evolution of the NW Australian continental margin and the birth of the Indian Ocean (preliminary results of ODP Legs 122 and 123). Geol. Rundschau 78, 3, p. 1189-1210.

Von Stackelberg, U., N.F. Exon, U. von Rad, P. Quilty, S. Shafik, H. Beiersdorf, E. Seibertz & J.J. Veevers (1981)- Geology of the Exmouth and Wallaby Plateaus off northwest Australia: sampling of seismic sequences. BMR J. Australian Geol. Geophysics 5, 2, p. 113-140.
(online at: https://d28rz98at9flks.cloudfront.net/81034/Jou1980_v5_n2_p113.pdf)

Walker, T. (2007)- Deepwater and frontier exploration in Australia- historical perspectives, present environment and likely future trends. APPEA J. 47, p. 15-38.

Walker, T.R. & A.J. Kantsler (2004)- Deepwater and frontier exploration in Australia- a historical perspective and a view to the future. In: R.A. Noble et al. (eds.) Proc. Deepwater and frontier exploration in Asia and Australasia Symposium, Jakarta, Indon. Petroleum Assoc. (IPA), p. 471-480.

Warris, B.J. (1993)- The hydrocarbon potential of the Paleozoic basins of Western Australia. Australian Petrol. Explor. Assoc. (APEA) J. 33, l, p. 123-137.

Waterhouse, J.B. (1987)- Late Palaeozoic brachiopoda (Athyrida, Spiriferida and Terebratulida) from the Southeast Bowen Basin, East Australia. Palaeontographica, A, 196, p. 1-56.

Waterhouse, J.B. (2011)- Origin and evolution of Permian brachiopods of Australia. Mem. Assoc. Australasian Palaeontologists (AAP) 41, p. 205-228.
(Permian brachiopods of Australia two main associations: (1) E Australia, few families, affected by cool-glacial conditions, interspersed with few warmer-water faunas; (2) W Australia more like faunas of SE Asia and Himalayan region. Played major role in stocking Lopingian faunas of S Asia, especially Himalayas. No mention of any Indonesian faunas)

Webster, G.D. (1987)- Permian crinoids from the type-section of the Callytharra Formation, Callytharra Springs, Western Australia. Alcheringa 11, 2, p. 95-135.
(E Permian Callythara Fm in Carnarvon Basin, W Australia, with limestone beds with diverse crinoid assemblage of 40 species. Most likely age ~Sakmarian. Eleven species also known from Timor (150 crinoid species, generally believed be of Late Permian age, but may be incorrect), but Australian faunas less diverse and many endemics)

Webster, G.D. (1990)- New Permian crinoids from Australia. Palaeontology 33, p. 49-74.
(online at: http://cdn.palass.org/publications/palaeontology/volume_33/pdf/vol33_part1_pp49-74.pdf)

(13 new species of E Permian crinoids mainly from Teichert collections in W Australia. Australian crinoids cooler water assemblages. 114 species identified, 53 from W Australia, 51 from East Australia, with no species common to both regions)

Webster, G.D. & P.A. Jell (1992)- Permian echinoderms from Western Australia. Mem. Queensland Museum 32, 1, p. 311-373.

West, B.G. & V.L. Passmore (1994)- Hydrocarbon potential of the Bathurst Island Group, northeast Bonaparte Basin, implications for future exploration. Australian Petrol. Explor. Assoc. (APEA) J. 34, p. 626-643.

Westphal, H. & T. Aigner (1997)- Seismic stratigraphy and subsidence analysis in the Barrow-Dampier Subbasin, Northwest Australia. American Assoc. Petrol. Geol. (AAPG) Bull. 81, 10, p. 1721-1749.

Whibley, M. & E. Jacobson (1990)- Exploration in the northern Bonaparte Basin, Timor Sea, WA-199-P. The Australian Petrol. Explor. Assoc. (APEA) J. 30, 1, p. 7-25.

Whitney, B.B. & J.V. Hengesh (2015)- Geomorphological evidence of neotectonic deformation in the Carnarvon Basin, Western Australia. Geomorphology 228, p. 579-596.

Whittaker, J.M., J.A. Halpin, S.E. Williams, L.S. Hall, N.R. Daczko, R. Gardner, M.E. Kobler & R.D. Muller (2013)- Tectonic evolution and continental fragmentation of the southern West Australian margin. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, 16p.
(Companion paper to Williams et al. 2013. Metamorphic and granitic rocks and sandstones dredged from Batavia and Gulden Draak knolls show these are micro-continents. Geochronology of Gulden Draak Knoll felsic orthogneiss indicate original granites ages Archean (~2850 Ma) and Mesoproterozoic (~1230-1200 Ma). Zircon data from metapelite suggests deposition of protolith sediments between 2800-1200 Ma. All rocks affected by high-grade metamorphism at ~500 Ma. Late Neoproterozoic- Cambrian (540-530 Ma) granite gneisses and granites from Batavia Knoll emplaced during and soon after collisional tectonism along Kuunga Orogen)

Whittam, D.B., M.S. Norvick & C.L. McIntyre (1996)- Mesozoic and Cainozoic tectonostratigraphy of western ZOCA and adjacent areas. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 36, 1, p. 209-231.

Williams, S.E., J.M. Whittaker, R. Granot & R.D. Muller (2013)- Early India-Australia spreading history revealed by newly detected Mesozoic magnetic anomalies in the Perth Abyssal Plain. J. Geophysical Research, Solid Earth, 118, 7, p. 3275-3284.
(Seafloor of Perth Abyssal Plain off W Australia records early spreading history between India and Australia in E Cretaceous breakup. New magnetic anomaly shows crust in W part of basin was part of Indian Plate (conjugate flank to oceanic crust offshore Perth margin). Gulden Draak and Batavia Knolls are microcontinental fragments that rifted away from Australia with Greater India during initial breakup at ~130Ma (~Hauterivian-Barremian), then rifted from India after cessation of spreading in Perth Abyssal Plain in Albian (~101-103Ma))

Williams, S.E., J.M. Whittaker & R.D. Muller (2013)- Newly-recognised continental fragments rifted from the West Australian Margin. In: M. Keep & S.J. Moss (eds.) The sedimentary basins of Western Australia IV, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth, 9p.
(Batavia Knoll and Gulden Draak Knoll prominent bathymetric features located >1600 km offshoreW Australia recently recovered continental basement rocks, revealing that both knolls are extended microcontinents. These initially rifted with Greater India during breakup with Australia at ~130 Ma, then rifted off India after W-ward ridge jump at ~105-100Ma)

Williamson, P.E., N.F. Exon, B.U. Haq, U. von Rad, S. O'Connell and Leg 122 Shipboard Scientific Party (1989)- A Northwest Shelf Triassic reef play: results from ODP Leg 122. Australian Petrol. Explor. Assoc. (APEA) J. 29, p. 328-344.

Williamson, T. (2006)- Systematics and biostratigraphy of Australian Early Cretaceous belemnites with contributions to the timescale and palaeoenvironmental assessment of the early Australian Early Cretaceous system derived from stable isotope proxies. Ph.D. Thesis, James Cook University, p. 1-106. *(Unpublished)*
(online at: http://eprints.jcu.edu.au/4906/)
(Aptian- Cenomanian belemnites from NW Australia. Oxygen-isotope values from Carnarvon Basin continental margin system indicate S Hemisphere mid-latitude Late Aptian sea surface temperatures, similar to today's. Warming trend in Albian-Cenomanian, representing greenhouse climatic conditions)

Willis, I. (1988)- Results of exploration, Browse Basin. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, p. 259-272.
(Exploration of Browse Basin since first discovery in 1963. Four gas discoveries, in M Jurassic sandstones: Scott Reef (1971), Brecknock (1979), North Scott Reef (1982) and Echuca Shoals (1983))

Willmott, W.F., W.G. Whitaker, W.D. Palfreyman & D.S. Trail (1973)- Igneous and metamorphic rocks of Cape York Peninsula and Torres Strait. Bureau Mineral Res. Geol. Geophysics Bull. 135, p. 1-144.
(online at: www.ga.gov.au/)
(Broad ridge of Precambrian- Paleozoic igneous and metamorphic rocks extends for 450 km along E side of Cape York Peninsula, from where submerged ridge of Paleozoic igneous rocks extends across Torres Strait to PNG. Metamorphic grade increases E-wards from phyllite to gneiss. Cape York Peninsula Batholith probably M Paleozoic age. Lower Carboniferous coal-bearing sediments in small basins. Thick sheets of acid welded tuff in Torres Strait probably Carboniferous age; associated high-level granites S of Temple Bay are Late Carboniferous or E Permian (Badu granite K/Ar 294± 5 Ma). Mesozoic, coarse sandstone followed by finer sediments in trough between two basement ridges)

Wingate, M.T.D. & D.A.D. Evans (2003)- Paleomagnetic constraints on the Proterozoic tectonic evolution of Australia. In: M. Yoshida et al. (eds.) Proterozoic East Gondwana: supercontinent assembly and breakup, Geol. Soc. London, Spec. Publ. 206, p. 77-91.
(Discusssion of Proterozoic assembly of tectonic blocks of Australia. N and W Australian cratonic assemblages in present relative positions since 1.7 Ga and joined to S Australian cratonic assemblage since at least 1.5 Ga)

Woods, E.P. (1994)- A salt-related detachment model for the development of the Vulcan Sub-basin. In: P.G. & R.R.Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, p. 259-274.
(Late Jurassic extensional structuring in Vulcan sub-basin (between Browse and Bonaparte) at or immediately after time of continental breakup to W. Deep salt layer (Silurian- Devonian?) may act as detachment surface. Salt-related detachment explains nature of deep grabens at Swan and Paqualin and occurrence of salt diapirs in these grabens (627m in Paqualin 1 well, Swan diapir). Renewed normal faulting, tied to Timor collision, began in Late Miocene, peaking in Pliocene, not active today)

Woods, E.P. (1998)- Extensional structures of the Jabiru Terrace, Vulcan sub-basin. In: P.G. & R.R. Purcell (eds.) The North West Shelf, Australia. Proc. North West Shelf Symposium, Petroleum Expl. Soc. Australia (PESA), p. 311-330.
(Sandbox models to recreate Miocene 'hourglass structures' at Jabiru Terrace area. Localised graben in shallow section is good indicator of an underlying Jurassic horst structure)

Woods, E.P. (2004)- A salt-related detachment model for the development of the Vulcan sub-basin. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia, Proc. Petroleum Expl. Soc. Australia (PESA) Symposium, Perth 1994, p. 259-273.

Woods, E.P. (2004)- Twenty years of Vulcan Sub-basin exploration since Jabiru- what lessons have been learnt? In: G.K. Ellis et al. (eds.) Timor Sea Symposium Darwin 2003, Northern Territory Geol. Survey, Darwin, p. 83-97.

Wopfner, H. (1988)- Oil and gas in Australia. GeoJournal 16, 4, p. 371-386.

Wormald, G.B. (1988)- The geology of the Challis oilfield- Timor Sea, Australia. In: Petroleum in Australia: the First Century. APEA/MacArthur Press, p. 425-437.

Wright, C.A. (1977)- Distribution of Cainozoic foraminiferida in the Scott Reef No. 1 well, Western Australia. J. Geol. Soc. Australia 24, 5, p. 269-277.
(Maastrichtian- Recent larger and planktonic foram zonation in well in Browse Basin, Australia NW Shelf. Rich planktonic faunas of Lower Paleocene- Lower Eocene (P1c-P6) and Oligocene- Lower Miocene to (P19-N6). In-between barren or shallow water larger foraminifera like Nephrolepidina, Discocyclina, etc.)

Wright, C.A. & M. Apthorpe (1976)- Planktonic foraminiferids from the Maastrichtian of the Northwest Shelf, Western Australia. J. Foraminiferal Research 6, p. 228-240.
Online at: http://jfr.geoscienceworld.org/content/6/3/228.full.pdf)
(Twenty-five planktonic foram species recorded in wells on NW Shelf and used to erect three biostratigraphic zones. Overall tropical and subtropical character of fauna appears inconsistent with palaeomagnetic studies which place NW Australia at cool temperate latitude of perhaps as much as 40° S. during. Late Cretaceous)

Wright, C.W. (1963)- Cretaceous ammonites from Bathurst Island, Australia. Palaeontology 6, 4, p. 597-614.
(online at: http://palaeontology.palass-pubs.org/pdf/Vol%206/Pages%20597-614.pdf)
(16 species of Albian- Turonian ammonites off N Australia. Mainly new species, mostly endemics?)

Wulff, K.J. (1992)- Depositional history and facies analysis of the Upper Jurassic sediments in the eastern Barrow Subbasin. The APEA Journal 32, 1, p. l04-122.

Wulff, K. & P. Barber (1995)- Tectonic controls on the sequence stratigraphy of Late Jurassic fan systems in the Barrow-Dampier Basin, North West Shelf. Australia. Petroleum Expl. Soc. Australia (PESA) Journal 23, p. 77-89.
(U Jurassic syn-rift sediments in Barrow-Dampier Basin subdivided into nine depositional sequences. Sequence boundary development related to tectonically-induced changes in basin architecture, associated with continental break-up of E Gondwanaland. Callovian-Oxfordian deposition whilst Barrow and Dampier were two separate sub-basins separated by intra-basinal arch; Kimmeridgian-Tithonian deposits more widespread)

Yeates, A.N., M.T. Bradshaw, J.M. Dickins, A.T. Brakel, N.F. Exon et al. (1987)- The Westralian Superbasin: an Australian link with Tethys. In: K.G. McKenzie (ed.) Shallow Tethys 2, A.A. Balkema, Rotterdam, p. 199-213.

Yeates, A.N., D.L. Gibson, R.R. Towner and R.W.A. Crowe (1984)- Regional geology of the onshore Canning Basin, W.A.. In: The Canning Basin, Western Australia, Petroleum Expl. Soc. Australia (PESA), p. 23-55.
(Onshore Canning Basin (W Australia) history began in E Ordovician ands largely completed by E Cretaceous. Up to M Triassic sedimentation in NW-trending depocenters; Jurassic-Cretaceous sequence relates to break-up of Gondwanaland, and global E Cretaceous rise in sea level)

Yang, X.M. & C. Elders (2016)- The Mesozoic structural evolution of the Gorgon Platform, North Carnarvon Basin, Australia. Australian J. Earth Sci. 63, 6, p. 755-770.
(Gorgon Platform on SE edge of Exmouth Plateau in N Carnarvon Basin. Four major sets of extensional faults, controlled by three different extensional events in E-M Jurassic, Late Jurassic and E Cretaceous, all creating unconformities)

Young, L.F., T.M. Schmedje & W.F. Muir (1995)- The Elang oil discovery bridges the gap in the Eastern Timor Sea (Timor Gap zone of cooperation). Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 47-69.
(Elang-1 1994 oil discovery in Timor Gap Zone of Cooperation established new oil province in E Timor Sea. Tested 5800 BOPD from marine Late Jurassic Montara sandstones. Oil light (56° API). On Elang Trend, a prominent structural high established during continental breakup in Late Jurassic)

Young, L.F., T.M. Schmedje & W.F. Muir (1995)- The Elang oil discovery establishes a new oil province in Eastern Timor Sea (Timor Gap ZOCA). Australian Petrol. Explor. Assoc. (APEA) J. 35, 1, p. 44-64.

Zachariasse, W.J. (1992)- Neogene planktonic foraminifera from Sites 761 and 762 off northwest Australia. In: U. von Rad, B.U. Haq et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 122, College Station, p. 665-675.
(online at: www-odp.tamu.edu/publications/122_SR/VOLUME/CHAPTERS/sr122_39.pdf)
(Diverse, warm-water Late Oligocene-Recent planktonic foram faunas on Wombat and Exmouth plateaus, despite N-ward drift of Australia across 10°-15° latitude since E Miocene. Invasions of cool-water species during periods of global cooling in late M Miocene (replacement of warm water Paragloborotalia mayeri by Globorotalia partimlabiata), Late Miocene (common cool-water Globorotalia conoidea just after coiling change in Neogloboquadrina humerosa) and Pleistocene (common cool-water Globorotalia inflata))

Zaninetti, L., R. Martini & T. Dumont (1992)- Triassic foraminifers from sites 761 and 764, Wombat Plateau, Northwest Australia. In: U. von Rad, B.U. Haq et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 122, p. 427-436.
(online at: www-odp.tamu.edu/publications/122_SR/VOLUME/CHAPTERS/sr122_24.pdf)
(Late Norian (Triasina oberhauseri) and Rhaetian (Triasina hantkeni) forams from ~250m thick Late Triassic reefal-platform carbonate section in ODP cores from Wombat Plateau at edge of Argo Abussal Plain, NW Australia. Reefal carbonate platform with inner shelf (intertidal to lagoon), patch reef, and outer shelf facies. Close affinity to microfauna of Seram. First record of Galeanella? laticarinata outside Seram)

Zhan, Y. & A.J. Mory (2013)- Structural interpretation of the Northern Canning Basin, Western Australia. West Australian Basins Symposium, Perth 2013, Session 9, p. 1-17.
(Seismic profiles in N Canning Basin reveal major WNW-oriented strike-slip fault zone in Fitzroy Trough, generated during Late Triassic-E Jurassic 'Fitzroy Transpression'. With NW-oriented fault splays indicative of right-lateral slip. Deformation at this time also produced N-S compression and E-W extension)

Zhen, Y.Y. & R.S. Nicoll (2009)- Biogeographic and biostratigraphic implications of the *Serratognathus bilobatus* Fauna (Conodonta) from the Emanuel Formation (Early Ordovician) of the Canning Basin, Western Australia. Records Australian Museum, Sydney 61, p. 1-30.
(Discovery of Serratognathus bilobatus in E Ordovician Emanuel Fm of Canning Basin indicates biogeographic link between Australia and E Gondwanan plates in E Ordovician and formation of 'Australasian Province'. S. bilobatus fauna from Canning Basin is more diverse than coeval Chinese Lower Ordovician successions and probably represents assemblage inhabiting relatively deeper water (mid-outer shelf) facies. Also present in Setul Lst, Malaysia. E Ordovician paleobiogeographic reconstruction shows E Gondwana shows Australia- New Guinea in equatorial position)

IX.16. NE Australia margin ('Tasmanides')

Adams, C. & R. Korsch (2010)- Crossing the Tasman: tracking Torlesse Terrane rocks from New Zealand into the New England Orogen. 20th Australian Geological Convention, Canberra 2010, Geol. Soc. Australia, Abstracts 98, p. 71-72. *(Abstract only)*
(New Zealand Torlesse Supergroup extensive Permian-Cretaceous accretionary wedge of quartzose greywacke turbidites. Provenances continent-derived, plutonic rock, best match with Carboniferous, Permian and Triassic sources in New England Orogen, with some Cambrian and Ordovician. Jurassic-Cretaceous ages dominant in North Island, Late Permian-Triassic in South Island. Oldest horizons close to S-most edge of terrane, with slivers with Late Carboniferous limestone, probably oceanic seamount and pelagic seafloor assemblages upon which Torlesse was later deposited. Oldest Torlesse records M Permian initiation (~270 Ma) of major Late Permian-Triassic accretionary phase, supplied by erosion of contemporaneous magmatic arcs in E Australia)

Aitchison, J. (1990)- Significance of Devonian-Carboniferous radiolarians from accretionary terranes of the New England orogen, eastern Australia. Marine Micropaleontology 15, p. 365-378.
(Radiolarians provide age constraints for terranes in New England tectonic collage along E margin of Australia. Djungati terrane two siliceous sediment lithofacies: M Silurian- Late Devonian ocean-floor red, ribbon-bedded cherts and latest Devonian green tuffaceous cherts. Anaiwan terrane with latest Devonian and E Carboniferous radiolarians in cherts and tuffaceous siltstones. Yarrimie Fm of Gamilaroi terrane with Late Devonian (Frasnian) radiolarians and allochthonous blocks of limestone with Givetian conodonts and corals)

Aitchison, J., M.C. Blake, P.G. Flood & A.S. Jayko (1994)- Paleozoic ophiolite assemblages within the southern New England Orogen of eastern Australia: implications for the growth of the Gondwana margin. Tectonics, 13, 1135-1149.
(Narrow belt of E Cambrian ophiolite crops out near Peel- Manning Fault System, juxtaposed against younger arc and subduction complex terranes. May represent portions of Lachlan Fold Belt basement. M-L Devonian ophiolitic rocks in Yarras Complex comprise basement to Birpai subterrane and represent crustal cross section through rifted island arc. Periodic accretion of island arc systems to E margin of Gondwana suggests multiple phases of subduction with possibility of polarity reversals throughout the history of accretion)

Aitchison, J. C. & S. Buckman (2012)- Accordion vs. quantum tectonics: insights into continental growth processes from the Paleozoic of eastern Gondwanan. Gondwana Research 22, p. 674-680.
(E Paleozoic Lachlan Fold Belt of E Australia widely regarded as convergent plate margin beneath which Paleo-Pacific (Panthalassic) oceanic lithosphere was continuously subducted, in retreating accretionary orogeny. However, sandstone compositions, chert accumulation and stratigraphic architecture not consistent with this model. Alternative explanation for growth of continental margin includes subduction of oceanic lithosphere outboard of passive Gondwana continental margin under extensive intra-oceanic island arc that now crops out as allochthonous Macquarie arc in foldbelt. Once intervening oceanic lithosphere was eliminated, the arc was emplaced oh Gondwana margin. Four such events recognized in Phanerozoic)

Aitchison, J.C., A.M. Davis, J.M.C. Stratford & F.C.P. Spiller (1999)- Lower and Middle Devonian radiolarian biozonation of the Gamilaroi Terrane New England Orogen, Eastern Australia. Micropaleontology 45, 2, p. 138-162.
(Seven uppermost Lower to M Devonian radiolarian assemblages in Gamilaroi terrane of E Australia. Gamilaroi terrane sedimentation occurred during Early (Pragian) to Late (Frasnian) Devonian in volcanic island arc environment with abundant radiolarians. Assemblages are dominated by spumellarians)

Aitchison, J.C. & P.G. Flood (1992)- Early Permian transform margin development of the southern New England Orogen, eastern Australia (eastern Gondwana). Tectonics 11, 6, p. 1385-1391.
(S New England orogen evolved from zone of high-angle plate convergence during Carboniferous, into either transform margin or highly oblique-convergent margin by E Permian)

Aitchison, J.C. & P.G. Flood (1992)- Implications of radiolarian research for analysis of subduction complex terranes in the New England Orogen, NSW, Australia. Palaeogeogr. Palaeoclim. Palaeoecology 96, p. 89-102.

Aitchison, J.C. & P.G. Flood (1994)- Gamilaroi Terrane: a Devonian rifted intra-oceanic island-arc assemblage, NSW, Australia. In: J.L. Smellie (ed.) Volcanism associated with extension at consuming plate margins, Geol. Soc., London, Spec. Publ. 81, p. 155-168.
(Devonian Gamilaroi terrane of New England orogen is intra-oceanic island arc, with local rifting. Oceanic crust between Gamilaroi terrane and Gondwana subducted E-wards under W margin of Gamilaroi terrane arc. Gamilaroi terrane obducted onto Gondwana margin in latest Devonian, resulting in subduction flip and subsequent development of E-facing continental margin arc system on top of Gamilaroi terrane)

Aitchison, J.C., P.G. Flood & F.C.P. Spiller (1992)- Tectonic setting and paleoenvironment of terranes in the southern New England orogen, eastern Australia as constrained by radiolarian biostratigraphy. Palaeogeogr. Palaeoclim. Palaeoecology 94, p. 31-54.
(Radiolarians abundant in Gamilaroi, Djungati and Anaiwan terranes of New England orogen in E Australia. Oldest rocks of Gamilaroi terrane probably Devonian, part of intra-oceanic island arc succession which accreted to E margin of Australia at end of Devonian. Overlain by Carboniferous, continental arc sequence of successor basin. Djungati terrane was part of oceanic basin in M Silurian- Late Devonian, influenced by volcanic island arc activity and tectonically disrupted in latest Devonian- E Carboniferous)

Aitchison J.C. & T.R. Ireland (1995)- Age profile of ophiolitic rocks across the Late Palaeozoic New England Orogen, New South Wales: implications for tectonic models. Australian J. Earth Sci. 42, p. 11-23.
(Zircon U-Pb ages from ophiolitic and associated rocks across S part of New England Orogen suggest earliest Cambrian- Triassic ages)

Aitchison J.C., T.R. Ireland, M.C. Blake & P.G. Flood (1992)- 530 Ma zircon age for ophiolite from the New England Orogen: oldest rocks known from eastern Australia. Geology 20, p. 125-128.
(Magmatic zircons from plagiogranite in Weraerai ophiolite terrane, juxtaposed between Devonian terranes in New England tectonic collage. Dated as 530 ± 6 Ma (E Cambrian))

Allen, C.M., I.S. Williams, C.J. Stephens, & C.R. Fielding (1998)- Granite genesis and basin formation in an extensional setting: the magmatic history of the northernmost New England Orogen. Australian J. Earth Sci. 45, p. 875-888

Armit, R., P. Betts, J. Stewart, I. Whitnall, P. Donchak & L. Hutton (2015)- Ordovician-Late Silurian geodynamics of north Queensland. Conf. Spec. Group Tect. Struct. Geol., Geol. Soc. Australia, 2015, 2p. *(Extended Abstract)*
(Following Delamerian Orogeny, roll-back of W-dipping subduction system in E Ordovician lead to extension of continental crust in overriding plate along E margin of Gondwana. In N Queensland separation of two micro-continental ribbons from Australian continent (now basement rocks in Hodgkinson Province and Barnard Province). Ordovician back arc inversion)

Arnold, G.O. & J.F. Faulkner (1980)- The Broken River and Hodgkinson Provinces. In: R.A. Henderson & P.J. Stephenson (eds.) The geology and geophysics of Northeastern Australia, Geol. Soc. Australia, Queensland Division, Brisbane, p. 175-189.

Babaahmadi, A., R. Sliwa, J. Esterle & G. Rosenbaum (2017)- The development of a Triassic fold-thrust belt in a synclinal depositional system, Bowen Basin (eastern Australia). Tectonics 36, p. 51-77.
(Decollements and resultant structures likely developed in response to mild contraction of E- C Bowen Basin synclinal depositional system during last phase of Permian-Triassic Hunter-Bowen orogeny)

Babaahmadi, A., R. Sliwa, J. Esterle & G. Rosenbaum (2018)- The evolution of a Late Cretaceous- Cenozoic intraplate basin (Duaringa Basin), eastern Australia: evidence for the negative inversion of a pre-existing fold-thrust belt. Int. J. Earth Sciences 107, 5, p. 1895-1910.

(Duaringa Basin in E Central Queensland is Late Cretaceous?- Paleogene basin (with M-L Eocene oil shales) that developed simultaneously with opening of Tasman and Coral Seas. Basin overlies Permian-Triassic fold-thrust belt. NNW-striking, NE-dipping Duaringa main boundary fault probably inversion of Triassic thrust)

Bain, J.H.C. & J.J. Draper (1997)- North Queensland Geology. Australian Geol. Survey Org. Bull. 240 and Queensland Dept. Mines and Energy Queensland Geology 9, p. .

Baker, J.C., C.R. Fielding, P. de Caritat & M.M. Wilkinson (1993)- Permian evolution of sandstone composition in a complex back-arc extensional to foreland basin: the Bowen Basin, eastern Australia. J. Sedimentary Petrology 63, p. 881-893.
(Bowen Basin Permo-Triassic back-arc extensional to foreland basin landward of continental volcanic arc. Started with limited back-arc crustal extension in E Permian, with N-S trending grabens with in W quartz-rich sediment from surrounding continental basement; in E calc-alkaline volcanolithic-rich and volcaniclastic sediment from active volcanic arc. Early extension followed by thermal subsidence accompanied by episodic compression in late E Permian- early Late Permian. In W quartzose sediment from W and S, in E volcanolithic-rich sediment from inactive volcanic arc. Latest Permian flexural loading and increased compression and renewed volcanism in E led to volcanics-rich sediment over entire basin)

Bammel, B. (2014)- A tectonic reconstruction of accreted terranes along the Paleo-Pacific margin of Gondwana. M.Sc. Thesis, University of Texas, Arlington, p. 1-92.
(online at: https://uta-ir.tdl.org/uta-ir/handle/10106/24444)
(Paleo-Pacific margin of S Gondwana consisted of segments of Australian-Antarctic craton, Argentina -Chile, S Africa, etc. Terra Australis orogen is one of largest and longest lived orogens in Earth history. Tasman foldbelt convergent margin from M Cambrian- Late Triassic, associated with generally W dipping subduction)

Belousova, E.A., W.L. Griffin, S.R. Shee, S.E. Jackson & S.Y. O'Reilly (2001)- Two age populations of zircons from the Timber Creek kimberlites, Northern Territory, as determined by laser-ablation ICP-MS analysis. Australian J. Earth Sci. 48, p. 757-765.
(Two populations of kimberlitic zircon in Timber Creek kimberlites, N Territory: 1483 ± 15 Ma for main group (inherited) and 179± 2 Ma (E Jurassic emplacement age))

Black, L.P., R.J. Bultitude, S.S. Sun, J. Knutson & R.S. Blewett (1992)- Emplacement ages of granitic rocks in the Coen Inlier (Cape York): implications for local geological and regional correlation: BMR J. Australian Geol. Geophysics 13, p. 191-200.
(online at: https://d28rz98at9flks.cloudfront.net/81317/Jou1992_v13_n3_p191.pdf)
(New zircon U-Pb ages define two major short-lived episodes of Paleozoic magmatism in Coen Inlier, N Queensland: (1) E Permian (284 Ma; Weymouth Granite, Twin Humps Adamellite); (2) most granites Late Silurian- E Devonian (~402-408 Ma). Similarities in ages of granites in Coen and Georgetown Inliers)

Blake, P.R. (2010)- Devonian corals of the Yarrol Province, eastern-central Queensland. Mem. Assoc. Australasian Palaeontologists (AAP) 38, p. 1-191.
(Yarrol Province in E-C Queensland contains latest Silurian to Permian rocks. Devonian corals locally abundant. Fairly diverse Late Devonian coral fauna present, with 45 genera and 77 species (incl. Heliolites, etc.). Six coral faunas, three in E Devonian, two in M Devonian, and one in Late Devonian)

Blewett, R.S. & L.P. Black (1998)- Structural and temporal framework of the Coen Region, north Queensland: implications for major tectonothermal events in east and north Australia. Australian J. Earth Sci. 45, p. 597-609.
(Coen Region Proterozoic (Yambo, Savannah) and Paleozoic (Pama, Kennedy) Provinces. N Queensland two major crust-forming periods: Proterozoic (1800-1550 Ma) and Paleozoic (430-280 Ma), with intervening 1000 million years of quiescence interrupted by minor Grenville-age modification (1300-1000 Ma). Coen Region intraplate, with plate-margin processes further E)

Boger, S.D. & D. Hansen (2004)- Metamorphic evolution of the Georgetown Inlier, northeast Queensland, Australia; evidence for an accreted Palaeoproterozoic terrane? J. Metamorphic Geol. 22, p. 511-527.

(Georgetown Inlier, NE Australia, two separate metamorphic events: (1) contemporaneously with Paleo- to Mesoproterozoic orogenesis; (2) thermal overprint with emplacement of Forsayth Batholith (~1550 Ma))

Brakel, A.T., J.M. Totterdell, A.T. Wells & M.G. Nicoll (2009)- Sequence stratigraphy and fill history of the Bowen Basin, Queensland. Australian J. Earth Sci. 56, 3, p. 401-432.
(Regional seismic synthesis of 10 km-thick continental-shallow marine succession of Bowen Basin revealed 3 basin-fill episodes and 9 depositional supersequences: (A) E Permian volcanics and half-graben development in separate troughs with fluvio-lacustrine sediments including coal. In subsequent thermal subsidence phase, four marine supersequences (B-E) were generated. Foreland loading in Late Permian-Triassic, with pulses of thrust loading and 4 supersequences (F-I). Later part of F mainly non-marine coal measures. Foreland-loading phase greatest rate of subsidence since initial rift, but little evidence of widespread marine flooding)

Briggs, D.J.C. (1998)- Permian Productidina and Strophalosiidina from the Sydney-Bowen Basin and New England Orogen: systematics and biostratigraphic significance. Mem. Assoc. Australasian Palaeontologists (AAP) 19, p. 1-258.

Bruce, M.C. & Y.L. Niu (2000)- Early Permian supra-subduction assemblage of the South Island terrane, Percy Isles, New England Fold Belt, Queensland. Australian J. Earth Sci. 47, p. 1077-1086.
(South Island of Percy Isles off Queensland dominated by serpentinised ultramafic rocks. E Permian age (~277 Ma) of calc-alkaline, intermediate volcanics and granitoids from South Island terrane similar to that of Gympie terrane (270-280 Ma) and Berserker terrane of C-E Queensland and may represent different sections of same oceanic arc)

Bruce, M.C, Y. Niu, T.A. Harbort & R.J. Holcombe (2000)- Petrological, geochemical and geochronological evidence for a Neoproterozoic ocean basin recorded in the Marlborough terrane of the northern New England Fold Belt. Australian J. Earth Sci. 47, p. 1053-1064.
(Marlborough Terrane largest (~700km2) ultramafic-mafic complex in E Australia. Terrane is near-horizontal, out-of-sequence thin-skinned nappe sheet and has sea-floor spreading centre origin. Crystallisation age of ~562 Ma suggests Late Neoproterozoic ocean basin. New England Fold Belt may have developed on oceanic crust, following oceanward migration of subduction zone at ~540 Ma)

Bruhl, D. & S. Pohler (1999)- Tabulate corals from the Moore Creek Limestone (Middle Devonian: Late Eifelian- Early Givetian) in the Tamworth Belt (New South Wales, Australia). In: R. Feist et al. (eds.) North Gondwana: Mid-Paleozoic terranes, stratigraphy and biota. Abhand. Geol. Bundesanstalt, Vienna, 54, p. 275-293.
(M Devonian (Eifelian-early Givetian) Moore Creek Limestone of Tamworth foldbelt in NSW, E Australia, thought to be deposited in intra-oceanic island arc setting. With tabulate corals, incl. Heliolites porosus. Assemblage and depositional setting may be comparable to NE Kalimantan, described by Rutten 1940, 1943)

Bryan, S.E. (2007)- Silicic large igneous provinces. Episodes 30, 1, p. 20-31.
(online at: www.episodes.co.in/www/backissues/301/20-31%20Bryan.pdf)
(Review of Large Igneous Provinces, including Cretaceous (~132-95 Ma; Aptian-Albian) Whitsunday and Late Carboniferous- E Permian (~320-280 Ma) Kennedy-Connors-Auburn Group from NE margin of Australia)

Bryan, S.E., A.G. Cook, C.M. Allen, C. Siegel, D. J. Purdy, J.S. Greentree & I. Tonguc Uysal (2012)- Early-mid Cretaceous tectonic evolution of eastern Gondwana: from silicic LIP magmatism to continental rupture. Episodes 35, 1, p. 142-152.
(Early-mid Cretaceous three major continental-scale events in E Gondwana: (1) emplacement of Silicic Large Igneous Province near continental margin; (2) volcaniclastic fill, transgression and regression of major epicontinental seaway developed over Australian continent; (3) uplift, exhumation and continental rupturing culminating in opening of Tasman Basin at ~84 Ma)

Bryan, S.E., A.E. Constantine, C.J. Stephens, A. Ewart, R.W. Schon & J. Parianos (1997)- Early Cretaceous volcano-sedimentary successions along the eastern Australian continental margin: implications for the break-up of eastern Gondwana. Earth Planetary Sci. Letters 153, p. 85-102.
(Two large E Cretaceous volcanic-sedimentary provinces in NE Australia (Whitsunday and Great Artesian Basin), and one in SE (Otway/Gippsland). Large E Cretaceous Whitsunday Aptian-Albian volcanic province (125-105 Ma) along E margin of Australia, part of high-K calc-alkaline pyroclastic volcanic belt that extends for >900 km along C-S Queensland coast. Ages 132-95 Ma, mainly ~120-105 Ma (Albian). Represents volcanism related to rifting/ break-up of E Gondwana margin)

Bryan, S E., A. Ewart, C.J. Stephens, J. Parianos & P.J. Downes (2000)- The Whitsunday Volcanic Province, central Queensland, Australia: Lithological and stratigraphic investigations of a silicic-dominated large igneous province. J. Volcanology Geothermal Res. 99, p. 55-78.
(Silicic Large Igneous Provinces volumetrically dominated by ignimbrite and spatially and temporally associated with plate break-up. E Cretaceous (~132/125-100/95 Ma) Whitsunday Volcanic Province dominated by dacitic-rhyolitic lithic ignimbrites, each 10-100 m thick. Total ignimbrite-dominated sequence >1 km thick. Early explosive dacitic pyroclastic phase succeeded by mixed pyroclastic-effusive phase. Volcanic sequences intruded by gabbro/dolerite to rhyolite dykes, sills and comagmatic granite, and record evolution of multiple vent, low-relief volcanic region, dominated by several large caldera centres)

Bryan, S.E., R.J. Holcombe, & C.R. Fielding (2001)- The Yarrol terrane of the northern New England Fold Belt: fore-arc or back-arc? Australian J. Earth Sci. 48, p. 293-316.
(Question 'classical' forearc model for Yarrol Basin of N New England Fold Belt)

Bryan, S.E., R.J. Holcombe, & C.R. Fielding (2003)- Reply- The Yarrol terrane of the northern New England Fold Belt: fore-arc or back-arc? Discussion and Reply. Australian J. Earth Sci. 50, p. 278-293.
(Reply to critical discussion by Murray, Blake et al. (2003) of Bryan et al. (2001) paper)

Bultitude, R.J. & D.C. Champion (1992)- Granites of the eastern Hodgkinson Province: their field and petrographic characteristics. Dept. of Resource Industries, Queensland, p. 1-202.

Bultitude, R.J., P.J. Donchak, J. Domagala & B.G. Fordham (1993)- The Pre-Mesozoic stratigraphy and structure of the western Hodgkinson Province and environs. Geological Survey of Queensland, Record 1993/29, p. 1-259.
(Detailed report on Ordovician- Carboniferous stratigraphy of Hodgkinson Province. Ordovician-Silurian limestone-dominated. Devoniian turbidite-dominated Chilligoe and Hodgkinson Fms until Late Devonian (Famennian) when E-directed thrusting halted deep-water sedimentation. Area effectively cratonised by numerous Late Carboniferous- E Permian(~320- 275 Ma) granite plutons and subaerial volcanic sequences (part of N Queensland Volcanic-Plutonic Province). M Jurassic-E Cretaceous fluvial- shallow-marine quartzose sands and gravels deposited in W part of region)

Bultitude, R.J., P.J. Donchak, J. Domagala, B.G. Fordham & D.C. Champion (1990)- Geology and tectonics of the Hodgkinson Province, North Queensland. In: Proc. 1990 Pacific Rim Congress (PACRIM), Gold Coast 1990, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, 3, p. 75-81.
(Hodgkinson Province is N part of Tasman Orogen, with extensive outcrops of Silurian-Devonian in Queensland. Siliciclastic turbidites dominant, with common mafic volcanics and fossiliferous limestones near W margin. Complex deformational history, numerous thrust faults. Up to five major deformational events, mostly in E-M Carboniferous, pre-dating Late Carboniferous- Late Permian granites. Dominant NNW-NW oriented cleavage pre-dates deposition of M Jurassic- E Cretaceous sediments of Laura Basin. Late Permian- E Triassic deformational event?)

Bultitude, R.J., P.D.Garrad, P.J.T.Donchak, J. Domagala, D.C. Champion, I.D. Rees et al. (1997)- Cairns Region. In: J.H.C. Bain & J.J. Draper (eds.) North Queensland Geology, Chapter 7, AGSO Bull. 240, p. 225-325.

Burger, D., C.B. Foster & J.L. McKellar (1992)- A review of Permian to Cretaceous palynostratigraphy in Eastern Australia. Bureau Min Res. Geol. Geophys., Canberra, Record 1992/5, p. 1-26.
(online at: https://d28rz98at9flks.cloudfront.net/14516/Rec1992_005.pdf)

Burrow, C.J., S. Turner & G.C. Young (2010)- Middle Palaeozoic microvertebrate assemblages and biogeography of East Gondwana (Australasia, Antarctica). Palaeoworld 19, p. 37-54.
(On Silurian- Carboniferous fish remains from Australia and links to other regions)

Campbell, L.M., R.J. Holcombe & C.R. Fielding (1999)- The Esk Basin- a Triassic foreland basin within the northern New England Orogen. In: P.G. Flood (ed.) Regional geology, tectonics and metallogenesis, New England Orogen, NEO '99, University of New England, Armidale 1999, p. 275-284.
(Evolutionary history of Esk Basin redefined as consisting of E Permian phase of extension, M-Permian passive thermal subsidence and latest Permian–E Triassic foreland loading, paralleling tectonic evolution of Bowen Basin. Esk Basin developed in depocentre on SE margin of larger Bowen Basin and likely contiguous with it. Continental volcanic-arc active in E-M Triassic in SE Queensland, during hiatus in deformation. Hunter-Bowen Orogeny produced exposed fold-thrust highland by E Triassic arc magmatism migrated W onto continent, and that terminal thrusting of orogenic event occurred prior to end of M Triassic)

Caprarelli, G. & E.C. Leitch (1998)- Magmatic changes during the stabilisation of a cordilleran fold belt: the Late Carboniferous-Triassic igneous history of eastern New South Wales, Australia. Lithos 45, p. 413-430.
(Between Late Carboniferous and Late Permian, magmatic arc in New England Fold Belt in NE NSW shifted E-ward and changed in trend from NNW to N. Devonian-Late Carboniferous arc located in W of Fold Belt, Late Permian-Triassic mainly in earlier forearc. Growth of younger arc accompanied by compressional deformation that stabilised New England Fold Belt. During transition two suites of S-type granitoids: Hillgrove at ~305 Ma during compressional and regional metamorphism episode and Bundarra at ~280 Ma during late extensional episode. Termination of earlier arc resulted from shallow breakoff of downgoing plate)

Cawood, P.A. (1982)- Structural relations in the subduction complex of the Paleozoic New England fold belt, Eastern Australia. The J. Geology 90, p. 381-392.

Cawood, P.A. (1984)- The development of the SW Pacific margin of Gondwana: correlations between the Rangitata and New England orogens. Tectonics 3, 5, p. 539-553.
(Before formation of Tasman Sea, Late Paleozoic-Mesozoic Rangitata Orogen of New Zealand and New Caledonia abutted New England Orogen of E Australia. Similar Permian-Cretaceous igneous and deformational events in two orogens: (1) end of arc volcanism and widespread sedimentation in New England, together with onset of regional deformation and crustal anatexis synchronous with start of volcanism and sedimentation in Rangitata Orogen; (2) E Permian andesitic volcanism in E New England is along-strike extension of Brook Street terrane of New Zealand; (3) Late Permian regional deformation in New England coincides with break in subduction- related igneous activity in New England and Rangitata Orogens and shift in locus of activity; (4) Late Permian-Triassic calc-alkaline igneous activity in New England correlates with pyroclastic material in forearc basin of Rangitata Orogen; (5) cessation of plutonism in New England corresponds with start of Esk Head Melange in New Zealand; (6) Late Cretaceous plutons in New England Orogen similar to final Rangitata orogenesis, both marking initial rifting associated with formation of Tasman Sea)

Cawood, P.A. (2005)- Terra Australis orogen: Rodinia breakup and development of the Pacific and Iapetus margins of Gondwana during the Neoproterozoic and Paleozoic. Earth-Science Reviews 69, p. 249-279.
(Pacific Ocean formed through Neoproterozoic rifting of Rodinia and never subsequently closed. Record of ocean opening and inception of ocean convergence/subduction preserved in Neoproterozoic- late Paleozoic Terra Australis Orogen. Orogen pre-dispersal length along E Gondwana margin ~18000 km long, up to 1600 km wide. Subduction of Pacific Ocean established at Gondwana margin by ~570 Ma. Termination of Terra Australis Orogen at ~300-230 Ma associated with assembly of Pangea (Pan-Pacific Gondwanide Orogeny)

Cawood, P.A. & G. Buchan (2007)- Linking accretionary orogenesis with supercontinent assembly. Earth-Science Reviews 82, p. 217-256.

(Assembly of Gondwana and Pangea indicate timing of collisional orogenesis between amalgamating continental bodies synchronous with subduction initiation and contractional orogenesis in accretionary orogens along margins of supercontinents. Final assembly of Gondwana between ~570-510 Ma, amalgamating East and West Gondwana, coeval with switch from passive margin sedimentation to convergent margin activity along Pacific margin of supercontinent. Subduction initiation along Pacific margin 580-550 Ma. Final stages of assembly of Pangean supercontinent between ~320-250 Ma, with major plate boundary reorganization and regional orogenesis alonge Pacific margin. E Gondwana margin segment transpressional and transtensional activity from ~305-270 Ma, after which convergence along margin was re-established. In E Australia this involved E-ward migration of arc magmatism into old subduction complex)

Cawood, P.A. & R.J. Korsch (2008)- Assembling Australia: Proterozoic building of a continent. Precambrian Research 166, p. 1-35.

Cawood, P.A. & E.C. Leitch (1984)- Accretion and dispersal tectonics of the southern New England foldbelt, Eastern Australia. In: D.G. Howell (ed.) Tectonostratigraphic terranes of the Circum-Pacific region, Circum-Pacific Council Energy and Mineral Resources, Earth Sci. Ser. 1, p. 481-492.

Cawood, P.A., E.C. Leitch, R.E. Merle & A.A. Nemchin (2010)- Earliest Permian non-collisional orogeny and basin formation in the southern New England fold belt sector of the Terra Australis Orogen. 20th Australian Geological Convention, Canberra 2010, Geol. Soc. Australia, Abstracts 98, p. 70 *(Abstract only)*
(Tablelands Orogeny major tectonothermal event around Carboniferous-Permian boundary, between 305-295 Ma, with HT/LP metamorphism, ending long-lived subduction-related magmatic arc activity in W New England. Followed by development of new E Permian arc (S-type granites) and contemporaneous extensional basins on accretionary complex of older arc system. Major stratigraphic break in Tamworth Belt in latest Carboniferous, with removal of several 1000m of M Devonian- Carboniferous strata before E Permian)

Cawood, P.A., E.C. Leitch, R.E. Merle & A.A. Nemchin (2011)- Orogenesis without collision: stabilizing the Terra Australis accretionary orogen, eastern Australia. Geol. Soc. America (GSA) Bull. 123, 11-12, p. 2240-2255.
(Convergent margin magmatism along W margin of New England foldbelt ended latest Carboniferous (~305 Ma), followed by short pulse of compressional deformation/ metamorphism. Followed by onset of clastic sedimentation and local calc-alkaline volcanism, dated at 293 Ma in extensional Barnard Basin. Emplacement of S-type granites with high-T metamorphism at 296-288 Ma. Hunter-Bowen orogenic phase regional deformation/ metamorphism at ~265-260 Ma, associated with I-type plutonism and volcanic activity in New England orogen that ceased around 230 Ma, marking end of Gondwanide orogenesis. No evidence that deformation was related to collision with major lithospheric mass. Widespread development of extensional basins in E third of Australia in E Permian indicates controls acting on continental scale, probably changing plate kinematics)

Cawood, P.A., S.A. Pisarevsky & E.C. Leitch (2011)- Unraveling the New England orocline, east Gondwana accretionary margin. Tectonics 30, TC5002, p. 1-15.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2011TC002864)
(New England orocline developed during Late Carboniferous- E Triassic Gondwanide Orogeny (310-230 Ma), which deformed pre-Permian arc assemblage (W magmatic arc, adjoining forearc basin and E subduction complex). Buckling of arc system about vertical axis during N-ward translation of S segment of arc system against N segment, which is pinned relative to cratonic Gondwana. Final stage of orocline formation (~270-265 Ma; ~M Permian) overlaps with major gap in magmatic activity)

Champion, D.C. & R.J. Bultitude (1994)- Granites of the eastern Hodgkinson Province. II. their geochemical and Nd-Sr isotopic characteristics and implications for petrogenesis and crustal structure in north Queensland. Queensland Geological record, Dept. of Minerals and Energy, Queensland, p. 1-113.

Champion, D.C. & R.J. Bultitude (2003)- Granites of North Queensland. In: P. Blevin et al (eds.) The Ishihara Symposium: Granites and associated metallogenesis, Macquarie University, Geoscience Australia Record 2003/14, p. 19-23.
(online at: www.ga.gov.au/image_cache/GA3675.pdf)
(N Queensland major episodes of granite formation in: Mesoproterozoic (~1550 Ma), Cambrian-Ordovician (~480-460 Ma; Macrossan Igneous Province), Silurian Devonian (~430-380 Ma; Pama Igneous Province), and Carboniferous- Late Permian (~330-260 Ma; Kennedy Igneous Province; most voluminous, 3 subgroups))

Chappell, B.W. (1994)- Lachlan and New England: fold belts of contrasting magmatic and tectonic development. J. and Proc. Royal Soc. New South Wales 127, p. 47-59.

Chaproniere, G.C.H., C.J. Pigram, P.A. Symonds & P.J. Davies (1990)- The Northeast Australian margin and adjacent areas- a biostratigraphic review and geohistory analysis. Bureau Mineral Res. Geol. Geophysics, Record 1990/7, p. 1-30.
(online (without plates) at: www.ga.gov.au/image_cache/GA13885.pdf)
(Review of M Eocene- Recent biostratigraphy of NE Australian offshore wells in SE Papuan and Capricorn/ S Great Barrier Reef Basins, DSDP Sites in Coral Sea Basin and Lord Howe Rise and dredge samples. Anchor Cay 1 well with Late Eocene Pellatispira. Early Oligocene unconformity in most S Papuan/ Capricorn wells)

Cohen, B.E. (2012)- The scenic rim of southeastern Queensland, Australia: a history of mid Cenozoic intraplate volcanism. Episodes 35, 1, p. 103-109.
(online at: www.episodes.co.in/contents/2012/march/p103-109.pdf)
(SE Queensland intraplate plume-derived mafic volcanism provide record of N-ward Australian plate movement over mantle plume. Major slowdown between 26 -23 Ma is correlated with initial collision of Ontong Java plateau with N subduction margin of Australian plate, which also caused brief changes in direction of Tasmantid and Lord Howe seamount chains and also changed motion of Pacific plate. Little contamination of upper mantle-drived magmas by 36 km thick continental crust, except rhyolites formed during last 1 Myr of slow plate velocity)

Collins, W.J. (1991)- A reassessment of the 'Hunter-Bowen orogeny': tectonic implications for the southern New England fold belt. Australian J. Earth Sci. 38, p. 409-423.
(All Late Permian deformation in S New England Fold Belt ascribed to single compressive tectonic event: Hunter-Bowen Orogeny (265-250 Ma). E Permian rifting of Carboniferous arc and fore-arc of Tamworth Belt and region W of it produced Sydney Basin and subsidiary meridional troughs in backarc environment. Initial E-W compression in Late Permian produced meridional folds and above W-propagating decollement. Final deformation reactivated ancestral Peel Fault, rotated fault blocks in Tamworth Belt and caused sinistral displacement of tectonostratigraphic units in Tablelands Complex, culminating in Permian dispersal event. Orogenic cycle recorded as massive flooding of Sydney Basin with continental detritus from S New England Fold Belt, in response to uplift of belt, and change from backarc to foreland basin in Late Permian)

Collins, W.J. & S.W. Richards (2008)- Geodynamic significance of ópost-collisionalô S-type granites in circum-Pacific orogens. Geology 36, p. 559-562.
(Delamerian, Lachlan and New England orogens characterized by 'tripartite associations' of (1) belts of S-type granite and associated high T-low P metamorphic complexes, (2) outboard oceanic arc sequences, remnants of which are preserved as greenstones, and (3) intervening, slightly younger back-arc basins into which I-type plutons are emplaced. Four tripartite associations: M Cambrian, Cambrian-Ordovician, Silurian and Carboniferous, each representing distinct phase of arc retreat, magmatism, and back-arc rifting that followed major compressive event associated with closure of precursor back-arc basin)

Coney, P.J. (1992)- The Lachlan belt of eastern Australia and Circum-Pacific tectonic evolution. Tectonophysics 214, p. 1-25.
(Pacific Ocean basin remarkable permanency through Phanerozoic, with accretionary continental margin orogens showing little evidence of continental collisions (unlike Circum-Atlantic and Tethyan realms). Through Paleozoic- E Mesozoic South America, Antarctica, and Australia were joined along SE, S and SW margins of Pacific Ocean, with Pacific margin orogenic system extending for 20,000 km from NW South America to NE

Australia. Lachlan Fold Belt E Paleozoic deep-marine turbiditic facies common along margin, often directly juxtaposed against cratonic interior. Prolonged histories of Late Precambrian- Late Cambrian, then E Silurian-E Mesozoic convergent to transpressive and accretionary tectonics, often accompanied by magmatism)

Coney, P.J., A. Edwards, R. Hine, F. Morrison & D. Windrum (1990)- The regional tectonics of the Tasman orogenic system, Eastern Australia. J. Structural Geol. 12, p. 519-543.
(Tectonic evolution of Tasman orogen four main phases: (1) late Proterozoic- E Paleozoic, generally deep-marine turbiditic sedimentation submarine volcanism, and shifting deformation, metamorphism and plutonism; (2) major mid-Paleozoic deformation, volcanism and plutonism; (3) major accretionary phase in outer New England belt of terranes that culminated in Late Paleozoic and continuing into E Mesozoic; (4) extensional break-up of Gondwanaland in Cretaceous, continuing to present)

Craven, S.J., N.R. Daczko & J.A. Halpin (2012)- Thermal gradient and timing of high-T-low-P metamorphism in the Wongwibinda Metamorphic Complex, southern New England Orogen, Australia. J. Metamorphic Geol. 30, p. 3-20.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1525-1314.2011.00949.x/pdf)
(Wongwibinda high T- low P Metamorphic Complex in S New England Orogen (variably metamorphosed Devonian-Carboniferous turbidites, intruded by granodiorite/granitoids). Overall increase in metamorphic grade from W to E. Age peak metamorphism ~297 Ma. Zircon U-Pb crystallization age in granodiorite 290.5 Ma, suggesting confirming pluton emplacement post-dates peak HTLP metamorphism (both earliest Permian))

Crawford, A.J., S. Meffre & P.A. Symonds (2003)- 120 to 0 Ma tectonic evolution of the southwest Pacific and analogous geological evolution of the 600 to 220 Ma Tasman Fold Belt System. Geol. Soc. Australia Spec. Publ. 22, p. 377-397. (or Geol. Soc. America (GSA), Spec. Paper 372, p. 383-403).
(Elongate microcontinental ribbons (Lord Howe Rise, Norfolk-New Caledonia Ridge) calved off E Australia during ~120-52 Ma extension, with oceanic crust formation from 85-52 Ma, producing Tasman Sea and S Loyalty Basin. Change in Pacific plate motion at ~55 Ma initiated E-directed subduction along recently extinct spreading centre in S Loyalty Basin. Subduction of S Loyalty Basin crust led to arrival at ~38 Ma of 70-60 My old Norfolk Ridge volcanic passive margin at trench, and W-directed emplacement of New Caledonia ophiolite. After locking of subduction zone at 38-34 Ma, subduction jumped E to form new W-dipping subduction zone and Vitiaz arc. Arc splitting episodes fragmented Vitiaz arc to form S Fiji (31-25 Ma) and N Fiji Basins (10 Ma- present). Collision of Ontong Java Plateau with Solomons section of Vitiaz arc resulted in reversal of subduction polarity, and growth of Vanuatu arc. Continued rollback of trench fronting Tonga arc since 6 Ma split this arc to form Lau Basin-Havre Trough. SW Pacific style of crustal growth above rolling-back slab applied to Tasman Fold Belt)

Crespin, I. (1947)- Foraminifera in the Permian rocks of Australia. Bureau Mineral Res. Geol. Geophysics, Bull. 15, p. 1-31.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/206/)
(On smaller benthic forams from Queensland, New South Wales, Tasmania, W Australia, etc. The only record of two genera of Fusulinid forams is Neoschwagerina and Verbeekina from W Kimberley area in W Australia by Chapman and Parr (1937) (but fusulinid identifications now believed to be erroneous; JTvG))

Crespin, I. (1958)- Permian foraminifera of Australia. Bureau Mineral Res. Geol. Geophysics, Bull. 48, p. 1-207.
(online at: www.ga.gov.au/metadata-gateway/metadata/record/239/)
(106 species/46 genera of Permian foraminifera, all small benthics, mainly arenaceous. Beds in W Australia from which Chapman and Parr (1937) described fusulinids not Permian but Triassic, and supposed fusulinids are probably fish remains (Brunnschweiler, 1954))

Crook, K.A.W. & E.A. Felton (1975)- Tasman Geosyncline greenstones and ophiolites: J. Geol. Soc. Australia 22, p. 117-131.

(Alpine-type serpentinites rather common in Tasman Geosyncline. Metallogeny affinities with ophiolites, suggesting a common origin as oceanic crust. W Pacific-type geosynclines, such as Tasman Geosyncline, may have developed on oceanic crust of unusual composition)

Crouch, S.B.S. (1999)- Geology, tectonic setting and metallogenesis of the Berserker subprovince, northern New England Orogen. Queensland Govt. Mining J. 100, p. 6-14.
(Glen 2005: Early Permian volcanics, erupted in back-arc or intra-arc setting)

Davies, P.J., J.A. McKenzie, A. Palmer-Julson et al. (1991)- Introduction. Proc. Ocean Drilling Program (ODP), Initial Reports 133, College Station, p. 5-30.
(online at: www-odp.tamu.edu/publications/133_IR/VOLUME/CHAPTERS/ir133_01.pdf)
(With cross-sections of Queensland and Townsville Troughs)

Davis, B.K., C.C. Bell & M. Lindsay (2002)- A single late orogenic Permian episode of gold mineralization in the Hodgkinson Province, North Queensland, Australia. Economic Geology 97, 2, p. 311-323.
(Quartz-hosted gold deposits in Hodgkinson province widely distributed, emplaced during waning stages of D4, main contractional phase of Permian-Triassic Hunter-Bowen orogeny, associated syn-D4 Whypalla supersuite, indicating mineralization in E Permian or later)

Davis, B.K., R.A. Henderson & R.J. Bultitude (1998)- Evidence for a major crustal dislocation in the Hodgkinson Province, North Queensland. Australian J. Earth Sci. 45, 6, p. 937-942.
(Late Paleozoic granites intruding multiply deformed Silurian-Devonian strata of Hodgkinson Province, N Queensland, display pronounced WNW-ESE orientations, reflecting zone of structuring during post-D2 regional deformation and reactivated in Hunter-Bowen Orogeny (D4), with overall sinistral displacement)

Davis, B.K., R.A. Henderson & R.Wysoczanski (1998)- Timing of granite emplacement under conditions of low strain in the northern Tasman Orogenic Zone, Australia. Tectonophysics 284, 3, p. 179-202.
(Granite plutons of Mount Alto and Whypalla supersuites intruded in S of multiply deformed Silurian-Devonian Hodgkinson Province during E Permian. Wall rocks contain evidence for four deformation events. Main stage of granite emplacement during weak contractional D3 deformation)

Day, R.W., L.C. Cranfield & H. Schwarzbock (1974)- Stratigraphy and structural setting of Mesozoic basins in southeastern Queensland and northeastern New SouthWales. In: A.K. Denmead et al. (eds.) The Tasman Geosyncline, a Symposium. Geol. Soc. Australia, Queensland Div., p. 319-363.

Day, R.W., C.G. Murray & W.G. Whitaker (1978)- The eastern part of the Tasman Orogenic Zone. Tectonophysics 48, p. 327-364.
(E part of Tasman Orogenic Zone (or Fold Belt System) comprises Hodgkinson-Broken River Orogen in N (Ordovician- E Carboniferous volcaniclastic flysch with shelf carbonate facies sediments) and New England Orogen in centre and S (Silurian-Triassic). Two zones, now separated by Alpine-type ultramafic belts: W: partly on E Paleozoic continental crust with Late Silurian- E Permian volcanic-arc deposits, in E: probably on oceanic crust, with pelagic sediments, flysch and ophiolites of Silurian- E Permian age. New England Orogen viewed as Pacific-type continental margin with calc-alkaline volcanic arc in W, volcaniclastic continental shelf in centre and in E continental slope and oceanic basin)

De Keyser, F. & K.G. Lucas (1968)- Geology of the Hodgkinson and Laura Basins, North Queeensland. Bureau Mineral Res. Geol. Geophysics Bull. 84, p. 1-245.
(online at: www-a.ga.gov.au/web_temp/1187541/Bull_084.pdf)
(Hodgkinson Basin of N Queensland thick folded Paleozoic sediments (incl. limestones with corals Halysites, Favosites, Heliolites, etc.), unconformably overlain by Jurassic- Cretaceous sand-dominated sediments of Laura Basin)

Denaro, T., C. Ramsden & D. Brown (2007)- Queensland minerals, a summary of major mineral resources, mines and projects. Queensland Department of Mines and Energy, Indooroopilly, p. 1-1005.

(partly online at: www.lgdi.net/resources/i/docs/11_qld_mineral_4th.pdf)
(Overview of Queensland geology, igneous provinces and mineral occurrences)

DiCaprio, L., R.D. Muller & M. Gurnis (2010)- A dynamic process for drowning carbonate reefs on the northeastern Australian margin. Geology 38, 1, p. 11-14.
(Australian NE marginal plateaus underwent accelerated tectonic subsidence in Late Miocene- Pliocene that, with second-order global sea-level rises, drowned Miocene carbonate platforms. Mechanism for anomalous subsidence of mature passive margin uncertain. Plate model shows Late Miocene NE Australia overrode subducted slabs from Eocene Melanesian subduction N of PNG. Surface subsidence induced by sinking slabs may have caused relative sea-level rises outpaced Late Miocene reef growth)

Dickins, J.M. & E.J. Malone (1973)- Geology of the Bowen Basin, Queensland. Bureau Mineral Res. Geol. Geophysics, Bull. 130, p. 1-154.
(online at: www.ga.gov.au/corporate_data/102/Bull_130.pdf)
(Bowen Basin of NE Australia is Permian- Triassic basin, overlapped by Mesozoic Surat Basin. Complex tectonic history with pre-Lower Devonian movement and discordances between M-U Devonian and between Carboniferous- Permian on margins, particularly in W, where strongly folded and faulted Carboniferous beds are overlain by relatively flat Permian. In U Permian Bowen Basin cut off from sea by uplift along E margin, and Blackwater Gp (= U Bowen Coal Measures, with rich Glossopteris flora with Taeniopteris) was deposited. Granites on En margin with isotopic age of ~240 Ma emplaced during uplift and are of same age as volcanics in Blackwater Gp. Uplift and folding in Late Triassic. Onset of sedimentation in Great Artesian Basin in Jurassic)

Direen, N.G. & A.J. Crawford (2003)- The Tasman Line: where is it, what is it, and is it Australiaó's Rodinian breakup boundary? Australian J. Earth Sci. 50, p. 491-501.
(Several different interpretations of position of Tasman Line, the boundary between Australian Precambrian craton in W and Early Paleozoic foldbelts in E)

Dixon, D.A. & G.J. Pope (1987)- Oil shale of the Duaringa Basin, Central Queensland. Fuel 66, 3, p. 305-308.
(Extensive oil shale deposits in Cenozoic Duaringa Basin of C Queensland. NNW-trending, 180 x 20km half-graben, superimposed on deformed E margin of Permo-Triassic Bowen Basin. Up to 1300m of flat-lying fluvio-lacustrine sediments, with oil shale of M-L Eocene age in two near-surface seams (Rundle and Stuart oil shale deposits) (see also Pope 2000))

Draper, J.J. (1988)- Permian limestone in the southeastern Bowen Basin, Queensland: an example of temperate carbonate deposition. Sedimentary Geology 60, 1, p. 155-162.
(Two limestone-bearing sequences in Permian Bowen foreland basin. Mainly skeletal grainstones and packstones with crinoids, bryozoans, brachiopods, molluscs, ahermatypic corals, foraminifera and sponge spicules influenced by cold to cool-temperate climatic conditions at paleolatitude of 60°S)

Elliott, L. (1989)- The Surat and Bowen Basins. Australian Petroleum Explorers J. 29, p. 398-416.

Elliott, L.G. (1993)- Post-Carboniferous tectonic evolution of eastern Australia. Australian Petrol. Expl. Assoc. (APEA) J. 33, p. 215-236.

Ewart, A., R.W. Schon & B.W. Chappell (1992)- The Cretaceous volcanic-plutonic province of the Central Queensland (Australia) coast- a rift related calc-alkaline province. Trans. Royal Soc. Edinburgh, Earth Sci. 83, p. 327-345.

Ewing, M., L.V. Hawkins & W.J. Ludwig (1970)- Crustal structure of the Coral Sea. J. Geophysical Research 75, p. 1953-1962.
(Seismic refraction data suggest M-U Paleozoic Tasmanide Belt continues offshore under Queensland Plateau. Coral Sea underlain by normal oceanic crust, with ~2.5 km of sediment cover)

Exon, N.F. (1976)- Geology of the Surat Basin in Queensland. Bureau Mineral Res. Geol. Geophysics, Bull. 166, p. 1-235.
(online at: www.ga.gov.au/corporate_data/77/Bull_166.pdf)
(Surat Basin of E Australia S of Bowen Basin and W of New England foldbelt. Contains 2500m of Jurassic and Cretaceous sediments, terrestrial Jurassic, but with two marine incursions in Early Cretaceous. Sequence is almost flat-lying, with few drape or compaction folds and faults. Volcanic debris suggests contemporaneous volcanism in Jurassic and E Cretaceous. Erosion during Late Cretaceous and Early Tertiary. Oligocene and Miocene volcanism around margins of basin)

Exon, N.F., P.J. Hill, Y. Lafoy, C. Heine & G. Bernardel (2006)- Kenn Plateau off northeast Australia: a continental fragment in the Southwest Pacific jigsaw. Australian J. Earth Sci. 53, 4, p. 541-564.
(Kenn Plateau was part of E Australia, S of present Marion Plateau. Presumably underlain by Paleozoic-Triassic basement of New England Fold Belt. Overlying sediments probably Late Triassic- Jurassic non-marine sediments, Early Cretaceous rift-volcanics, Late Cretaceous- Eocene synrift and sag marine sediments, etc.. Kenn Plateau started to separate from Queensland at ~63 Ma (Cretaceous- Tertiary boundary)

Exon, N.F., P.J. Hill, Y. Lafoy, G. Burch, A. Post, C. Heine, P. Quilty, R. Howe & L. Taylor (2005)- The geology of the Kenn Plateau off northeast Australia: results of the Southern Surveyor Cruise SS5/2004 (Geoscience Australia Cruise 270). Geoscience Australia, Canberra, Record 2005/4, p. 1-172.
(online at: https://d28rz98at9flks.cloudfront.net/61747/Rec2005_004.pdf)
(In Late Cretaceous Kenn Plateau was part of Maryborough Basin to W and Capricorn Basin to N. It separated from Australia in earliest Paleocene- M Eocene by moving NE along Cato Fault Zone and rotating 45° CCW).

Falvey D.A. & L.W.H. Taylor (1974)- Queensland plateau and Coral Sea Basin: structural and time-stratigraphic patterns. Bull. Australian Soc. Exploration Geophysicists 5, 4, p. 123-126.
(W Coral Sea region contains one major and three minor marginal plateaux, partly surrounding deep abyssal plain. Coral Sea underlain by ~1km sediment and E Eocene oceanic crust. Queensland Plateau continental crust with Paleozoic basement rocks, tectonically part of onshore Tasman Geosyncline. Continental rifts beneath Queensland Trough and plateau/basin margin, with 1-3 km of U Cretaceous sediments on basement. Subsidence followed seafloor spreading in basin. Early Oligocene depositional break. Residual highs along old Paleozoic trends subsided in E Miocene and locally capped by modern coral reefs)

Feary, C.M., D.C. Champion, R.J. Bultitude & P.J. Davies (1993)- Igneous and metasedimentary basement lithofacies of the Queensland Plateau. Proc. Ocean Drilling Program (ODP), Scient. Results, 133, p. 535-540.
(online at: www-odp.tamu.edu/publications/133_SR/VOLUME/CHAPTERS/sr133_37.pdf)
(Queensland Plateau basement penetrated at Sites 824 and 825 on W Queensland Plateau. Altered and deformed metasedimentary rocks, cut by relatively undeformed intermediate dikes. Similar to latest Silurian-Devonian Hodgkinson Fm of N Queensland, a greywacke-shale-slate succession with turbiditic structures, cut by Late Paleozoic- E Mesozoic dike swarms, deposited in deep marine, extensional back-arc basin environment in Devonian, with deformation in E-M Carboniferous. Uplift and erosion produced peneplaned surface on which extensive M and Late Cenozoic carbonate reefs developed. Tasman Fold Belt much wider than outcrop width on Australian mainland)

Fergusson, C.L. (1991)- Thin-skinned thrusting in the northern New England Orogen, central Queensland, Australia. Tectonics 10, 4, p. 797-806.
(N New England Orogen and E Bowen Basin Late Permian- Middle Triassic deformation event ('Hunter-Bowen Orogeny'). W-directed, thin-skinned tectonics, NNW trending folds in Late Permian sediments)

Fergusson, C.L. (2010)- Plate driven extension and convergence along the East Gondwana active margin: Late Silurian-Middle Devonian tectonics of the Lachlan Fold Belt, southeastern Australia. Australian J. Earth Sci. 57, 5, p. 627-649.

Fergusson, C.L. (2019)- Subduction accretion and orocline development in modern and ancient settings: implications of Japanese examples for development of the New England Orogen of eastern Australia. J. Geodynamics 129, p. 117-130.
(Texas Orocline in S New England Orogen of E Australia nucleated during subduction of seamount chain, resulting in orogenic curvature of Carboniferous subduction complex. Subduction of seamount chain shown by abundant limestone associated with ocean island basalts amongst accreted turbidites in core of orocline)

Fergusson, C.L. & R.A. Henderson (2015)- Early Palaeozoic continental growth in the Tasmanides of northeast Gondwana and its implications for Rodinia assembly and rifting. Gondwana Research 28, 3, p. 933-953

Fergusson, C.L., R.A. Henderson, C.M. Fanning & I.W. Withnall (2007)- Detrital zircon ages in Neoproterozoic to Ordovician siliciclastic rocks, northeastern Australia: implications for the tectonic history of the East Gondwana continental margin. J. Geol. Soc., London, 164, p. 215-225.
(U-Pb detrital zircon ages in Neoproterozoic- E Paleozoic metamorphosed clastics of NE Australia show two major successions along E Gondwana margin (1) Late Neoproterozoic passive margin, with rifting at ~600 Ma. Most zircon ages 1000-1300 Ma; (2) E Paleozoic active margin of Gondwana that developed on former passive margin, with distinctive 510-600 Ma detrital zircon signature that is widespread in E Gondwana. Also 460-510 Ma zircon ages from local igneous sources)

Fielding, C.R., T.D. Frank, L.P. Birgenheier, M.C. Rygel, A.T. Jones & J. Roberts (2008)- Stratigraphic imprint of the Late Paleozoic Ice Age in eastern Australia: a record of alternating glacial and nonglacial climate regime. J. Geol. Soc., London, 165, p. 129-140.
(online at: https://web.viu.ca/earle/geol305/labs/fielding-et-al.pdf)
NSW and Queensland Carboniferous- Permian at least eight glacial intervals in mid-Carboniferous (~327 Ma) to early Late Permian (~260 Ma). Glaciations P1 (299–291 Ma: Asselian- E Sakmarian) and P2 (287–280 Ma: late Sakmarian- M Artinskian; appear most widespread glaciations in E Australia, but may reflect greater area covered by subsiding sedimentary basins in E Permian? Gradual demise of glaciation in Late Permian)

Fielding, C.R., T.D. Frank, L.P. Birgenheier, M.C. Rygel, A.T. Jones & J. Roberts (2008)- Stratigraphic record and facies associations of the Late Paleozoic ice age in eastern Australia (New South Wales and Queensland). Geol. Soc. America (GSA), Spec. Paper 441, p. 41-57.

Fielding, C.R., M.A. Martin & K.L. Bann (2015)- Stratigraphy and sedimentology of the Permian succession in the Southwest Bowen Basin, Queensland. In: Proc. Eastern Australian Basins Symposium (EABS), Petroleum Expl. Soc. Australia (PESA), p. 13-27.

Fielding, C.R., R. Sliwa, R.J. Holcombe & A.T. Jones (2001)- A new palaeogeographic synthesis for the Bowen, Gunnedah and Sydney Basins of eastern Australia. In: K.C. Hill & T. Bernecker (eds.) Eastern Australasian Basins Symposium. Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 269-278.

Fielding, C.R., R. Sliwa, R. Holcombe & J. Kassan (2000)- A new palaeographic synthesis of the Bowen Basin of central Queensland. In: J.W. Beeston (ed.) Proc. Bowen Basin Symposium 2000, Geol. Soc. Australia, p. 287-302.

Fielding, C.R., C.J. Stephens & R.J. Holcombe (1997)- Permian stratigraphy and palaeogeography of the eastern Bowen Basin, Gogango overfolded zone and Strathmuir synclinorium in the Rockhampton-Mackay region of Central Queensland. Geol. Soc. Australia, Spec. Publ. 19, p. 80-95.
(Connors-Auburn Arch E Permian continental volcanic arc at E side of Bowen basin. Did not form basin-marginal physiographic feature: Permian strata in Bowen Basin and New England Fold Belt correlative formations and facies assemblages on both sides of Arch)

Fishwick, S., M. Heintz, B.LN. Kennett, A.M. Reading & K. Yoshizawa (2008)- Steps in lithospheric thickness within eastern Australia, evidence from surface wave tomography. Tectonics 27, TC4009, p. 1-17.
(Lithospheric thickness of E Australia reconstructed from seismic surface wave tomographic model)

Fordham, B.G. (1990)- Microfossils and gross structure and stratigraphy of the Silurian-Devonian Chillagoe Formation, western Hodgkinson Province, northeast Australia. Abstracts, Geol. Soc. Australia 25, p. 48-49.
(Abstract only) (E Silurian- E Devonian radiolarian/ conodonts in flysch and limestone of Chillagoe Fm in imbricated thrust slices of Hodgkinson Province. Conodonts have CAl value of 5, consistent with prehnite-pumpellyite to lower greenschist grade)

Fordham, B. G. (1994)- Complex structure in the Mungana region of the Hodgkinson Province, and significance for exploration programs. In: Queensland Department of Minerals and Energy Symposium, Queensland Exploration Potential 1994, Handbook 32, Queensland Dept. Minerals and Energy, Brisbane, p.

Foster, D.A. & D.R. Gray (2000)- Evolution and structure of the Lachlan fold belt (orogen) of Eastern Australia. Annual Review Earth Sci. 2000, p. 47-80.
(Stepwise shortening and accretion of Lachlan foldbelt, with deformation and metamorphism from Late Ordovician (450 Ma)- E Carboniferous. Dominant events at ~440-430 Ma and 400-380 Ma. Accretion of Lachlan and related Tasmanides belts added ~2.5 Mkm2 to surface area of Gondwana. Sedimentary, magmatic, and deformational processes converted oceanic turbidite fan system into continental crust of normal thickness)

Foster, D.A. & D.R. Gray (2008)- Paleozoic crustal growth, structure, strain rate, and metallogeny in the Lachlan Orogen, eastern Australia. In: J.E. Spencer & S.R. Titley (eds.) Ores and orogenesis: Circum-Pacific tectonics, geologic evolution and ore deposits, Arizona Geol. Soc. Digest 22, p. 213-226.

Foster, D.A., D.R. Gray & C. Spaggiari (2005)- Timing of subduction and exhumation along the Cambrian East Gondwana margin and the formation of Paleozoic backarc basins. Geol. Soc. America (GSA) Bull. 117, 1-2, p. 105-116.

Foster, D.A., D.R. Gray, C. Spaggiari G. Kamenov & F.P. Bierlein (2009)- Palaeozoic Lachlan orogen, Australia; accretion and construction of continental crust in a marginal ocean setting: isotopic evidence from Cambrian metavolcanic rocks. In: Geol. Soc., London, Spec. Publ. 318, p. 329-349.
(Lachlan orogen classic accretionary orogen between Paleo-Pacific subduction zone and Australian craton, probably on basement of mafic oceanic crust along with possible small fragments of older continental crust)

Fukui, S., T. Tsujimori, T. Watanabe & T. Itaya (2012)- Tectono-metamorphic evolution of high P/T and low-P/T metamorphic rocks in the Tia complex, southern New England Fold Belt, eastern Australia: insights from K-Ar chronology. J. Asian Earth Sci., p. 59, p. 62-69.
(Tia Complex in S New England Fold Belt is poly-metamorphosed Late Paleozoic accretionary complex. New K-Ar ages and geological data postulate model of E-ward rollback of a subduction zone in E Permian)

Fukui, S., T. Watanabe, T. Itaya & C. Leitch (1995)- Middle Ordovician high PT metamorphic rocks in eastern Australia: evidence from K-Ar ages. Tectonics 14, 4, p. 1014-1020.
(K-Ar dating of metamorphic rocks from S part of New England fold Belt indicated 3 metamorphic episodes, at ~260 Ma, between ~340-310 Ma, and ~470 Ma. The 470 Ma event, is High P and identified from blocks in serpentinite melange in lenses close to faulted boundary between Devonian-Carboniferous arc flank/ forearc basin rocks and oceanic rocks of similar age which make up an accretionary subduction complex)

Gaina, C., R.D. Muller, J.Y. Royer, J. Stock, J. Hardebeck & P. Symonds (1998)- The tectonic evolution of the Tasman Sea: A tectonic puzzle with thirteen pieces. J. Geophysical Research, 103, B6, p. 12,413-12,433.
(Model for tectonic evolution of Tasman between Australian and Lord Howe Rise plates from 73.6- 52 Ma when spreading ceased. Major tectonic event at 61 Ma), when counterclockwise change in spreading direction occurred, contemporaneous with similar event in SW Pacific Ocean. Tasman Sea rifting propagated from S to N in several stages and several rifts failed. 13 continental blocks acting as microplates between 90- 64 Ma)

Gaina, C., R.D. Muller, J.Y. Royer & P. Symonds (1999)- Evolution of the Louisiade triple junction. J. Geophysical Research, 104, B6, p. 12,927-12,939.

(Finite rotations for opening of Coral Sea differ from rotations of Tasman Sea opening, confirming triple junction between Australian Plate, Mellish Rise and Louisiade Plateau during opening of Coral Sea (62-52 Ma). Extension between Mellish Rise and Louisiade Plateau, and extensional and transform motion occurred between Australia and Mellish Rise. Extension in Osprey Embayment may explain small areas of oceanic crust W of Coral Sea Basin. W boundary of Coral Sea was NE-SW strike-slip fault, active between 58 and 52 Ma)

Gaina, C., W.R. Roest, R.D. Muller & P. Symonds (1998)- The opening of the Tasman Sea: a gravity anomaly animation. Earth Interactions, 2-002, 4, 23p.
(online at: www.earthbyte.org/Resources/Movies/ei021.pdf)

Gallagher, K., T.A. Dumitru & A.J.W. Gleadow (1994)- Constraints on the vertical motion of eastern Australia during the Mesozoic. Basin Research 6, 2/3, p. 77-94.
(Backstripping and AFT analysis of Eromanga, Surat and Clarence-Moreton basins show linear subsidence in Jurassic, with increasing subsidence towards E. Cretaceous preserved only in Eromanga Basin. Cretaceous probably deposited, then eroded over Surat and Clarence-Moreton Basins. Exhumation started in E in Late Cretaceous-Early Tertiary. Removed section greater in E (~2.5 km) than in W (<1 km). Results suggest platform tilting, related to Jurassic- E Cretaceous subduction along E Australia. Cessation of subduction, and subsequent opening of Tasman Sea in Late Cretaceous accompanied by uplift on E margin and termination of widespread deposition on platform)

Gibson, P.J. (1989)- Petrology of two Tertiary oil shale deposits from Queensland, Australia. J. Geol. Soc., London, 146, 2, p. 319-331.
(In E Central Queensland series of small E Paleogene rift basins with M-L Eocene lacustrine oil shale deposits. Petrography of oil shales in Lowmead and Duaringa Basins)

Glen, R.A. (1992)- Thrust, extensional and strike-slip tectonics in an evolving Palaeozoic orogen- a structural synthesis of the Lachlan Orogen of southeastern Australia. Tectonophysics 214, p. 341-380.

Glen, R.A. (2005)- The Tasmanides of Eastern Australia. In: A.P.M. Vaughan et al. (eds.) Terrane processes at the margins of Gondwana. Geol. Soc., London, Spec. Publ. 246, p. 23-96.
(Major review of Tasmanines foldbelt of E Australia. Five Neoproterozoic- Triassic orogenic belts along E margin of Gondwana, with internal Permian-Triassic rift- foreland basin system. Complex deformation ended with E Triassic accretion of intra-oceanic arc)

Glen, R.A. (2013)- Refining accretionary orogen models for the Tasmanides of eastern Australia. Australian J. Earth Sci. 60, 3, p. 315-370.
(SW to NE younging of stratigraphy in S Tasmanides of E Australia has been used to infer continually E-wards-rolling paleo-Pacific plate, but not simple, continuous rollback. E-wards rollback of paleo-Pacific plate from 520-502 Ma (Cambrian) opened vast backarc basin that never closed. Ordovician- Carboniferous, almost vertical stacking of continental margin arcs in New England Orogen indicates constant W-dipping plate boundary. Rollback in E Permian never completely reversed, so Late Permian-Triassic to Cretaceous arcs lie farther E, with rifted fragments in Lord Howe Rise and in New Zealand. N Tasmanides missed out M Cambrian plate boundary. Tasmanides characterised by general absence of material accreted from paleo-Pacific plate and dominance of craton-derived, recycled sedimentary rocks)

Glen, R.A., E. Belousova & W.L. Griffin (2016)- Different styles of modern and ancient non-collisional orogens and implications for crustal growth: a Gondwanaland perspective. Canadian J. Earth Sci. 53, 11, p. 1372-1415.
(online at: http://www.nrcresearchpress.com/doi/pdf/10.1139/cjes-2015-0229)
(Review of non-collisional, convergent margin orogens, commonly called accretionary orogens. Along margin of Australian Plate, New Guinea accretionary orogen, SW Pacific Orogen, Tasmanides (Lachlan Orogen, outboard New England Orogen), etc. All non-collisional orogens involve continental growth, but only New England Orogen and to lesser extent New Guinea Orogen involve significant crustal growth)

Glen, R.A. & S. Meffre (2009)- Styles of Cenozoic collisions in the western and southwestern Pacific and their applications to Palaeozoic collisions in the Tasmanides of eastern Australia. Tectonophysics 479, p. 130-149.
(Several styles of collisions in W and SW Pacific, mainly oblique and strike-slip collisions between island arcs and rifted continental fragments and collisions between forearc lithosphere and continental fragments. The 58 Ma collision along N Australian plate margin in New Guinea, 44-34 Ma collision in New Caledonia and 26-25 Ma collision in N Island New Zealand may be parts of single, S-migrating plate boundary collision. Collision between forearc crust and continental fragment produces subduction flip or rollback, thus avoiding classic arc-continent collision. Pacific style collisions applied to interpretation of Delamerian Orogen and Lachlan Orogen in S Tasmanides with varying degrees of success)

Goscombe, P.W. & B.A. Coxhead (1995)- Clarence-Moreton, Surat, Eromanga, Nambour, and Mulgildie Basins. In: C.R. Ward et al. (eds.) Geology of Australian coal basins, Geol. Soc. Australia, Coal Geol. Grp., Spec. Publ. 1, p. 489-511.

Gray, D.R., D.A. Foster & F.P. Bierlein (2002)- Geodynamics and metallogeny of the Lachlan Orogen. Australian J. Earth Sci. 49, p. 1041-1056.
(Paleozoic Lachlan Orogen of E Australia is accretionary orogen made up of structurally thickened oceanic successions, including turbidites from deep-sea fans, andesitic volcanics from remnant island arcs, forearc sediments and slices of oceanic crust. Accretion by collapse of marginal basin during double divergent subduction. Stepwise deformation and metamorphism from Late Ordovician- E Carboniferous times formed three subprovinces. In W Subprovince, Ordovician turbidites host major lode Au deposits (C Victoria). In E Subprovince, porphyry Cu-Au deposits formed in Ordovician oceanic island arc)

Gray, D.R., D.A. Foster & M. Bucher (1997)- Recognition and definition of orogenic events in the Lachlan Fold Belt. Australian J. Earth Sci. 44, 4, p. 489-501.
(Unconformities used to establish orogenic framework for Lachlan Fold Belt. Four orogenic pulses between 440-340 Ma (Latest Ordovician- Late Devonian; Lachlan Orogeny) not regional events. M Devonian 'Tabberabberan' event (~380-370 Ma) represents limited deformation during amalgamation of W and C/E subprovinces. Orogeny over much of Lachlan Fold Belt progressive, ongoing and subduction-controlled in complex oceanic, SW Pacific-style setting, analogous to migrating deformation and sedimentation in accretionary wedges above subduction zones)

Gray, D.R., D.A.Foster, R.J.Korsch & C.V. Spaggiari (2006)- Structural style and crustal architecture of the Tasmanides of eastern Australia, example of a composite accretionary orogen. In: S. Mazzoli et al. (eds.) Styles of continental contraction, Geol. Soc. America (GSA), Spec. Paper 414, p. 119-132.
(E Australian Tasmanides both thin-skinned thrusting and thick-skinned faulting. Composite orogenic system made up of three orogenic belts: (1) former rifted passive margin to make Delamerian Orogen, (2) turbidite fan system(s) in back-arc setting to make Lachlan Orogen, (3) arc-subduction complex with older accreted components to make New England Orogen. New England Orogen constructed from craton-vergent, fore-arc and magmatic arc sequences, subduction complexes, and ophiolite fragments)

Gray, D.R., D.A. Foster, R. Maas, C.V. Spaggiari, R.T. Gregory, B.D. Goscombe & K.H. Hoffmann (2007)- Continental growth and recycling by accretion of deformed turbidite fans and remnant ocean basins: examples from Neoproterozoic and Phanerozoic orogens. In: R.D. Hatcher et al. (eds.) The 4D Framework of continental crust. Geol. Soc. America (GSA), Mem. 200, p. 63-92.

Gust, D.A., C.J. Stephens & A.T. Grenfell (1993)- Granitoids of the northern NEO: their distribution in time and space and their tectonic implications. In: J.C. Aitchison & P.G. Flood (eds.) New England Orogen, Eastern Australia, Proc. NEO '93 Conference, University of New England, p. 565-572.
(Half of exposed granites in N New England foldbelt have E-M Triassic ages, between 230-250 Ma, coeval with overwhelmingly andesitic terrestrial volcanism)

Haig, D.W. (2008)- Cretaceous foraminiferal biostratigraphy of Queensland. Alcheringa 3, 3, p. 171-187.

(On distribution of foraminiferids in Aptian-Albian marine deposits of Laura, Carpentaria, Eromanga and Surat Basins. Two main associations: Ammobaculites (hyposaline, cool, shallow water) and Marssonella (normal marine, open shelf). Cool, hyposaline, shallow water conditions prevailed over much of Queensland. Open marine shelf conditions in Albian in Laura and NE Carpentaria Basins. Albian northern seaway to open ocean)

Haig, D.W. & D. Barnbaum (1978)- Early Cretaceous microfossils from the type Wallumbilla Formation, Surat Basin, Queensland. Alcheringa 2, 2, p. 159-178.
(Shallow marine fauna of probable Aptian age)

Hallock, P., K. Sheps, G. Chaproniere & M. Howell (2006)- Larger benthic foraminifers of the Marion Plateau, northeastern Australia (ODP Leg 194): comparison of faunas from bryozoan (Sites 1193 and 1194) and red algal (Sites 1196-1198) dominated carbonate platforms. In: F.S. Anselmetti et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results 194, p. 1-31.
(online at: www-odp.tamu.edu/publications/194_SR/VOLUME/CHAPTERS/009.PDF)
(Two Neogene carbonate platforms on Marion Plateau, both with common latest Oligocene-Late Miocene larger foraminifera, incl. Amphistegina, Cycloclypeus (incl. Katacycloclypeus annulatus), Lepidocyclina, Miogypsina and Operculina. Five LBF facies assemblages. Operculina complanata common in terrigenous mud-rich facies, Lepidocyclina spp. dominated in more carbonate-rich facies)

Harrington, H.J. (1983)- Correlation of the Permian and Triassic Gympie terrane of Queensland with the Brook Street and Maitai terranes of New Zealand. In: Permian Geology of Queensland, Geol. Soc. Australia, Queensland Division, Brisbane, p. 431-436.

Harrington, H.J. (1987)- Tectonic setting of Permian coal basins of Eastern Australia. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 792-796.
(Coal basins near E margin of Australia formed in foreland basin setting in front of growing orogen. Terminated and compressed when Gympie volcanic arc accreted to orogen)

Harrington, H.J. (1987)- Geological units common to eastern Australia and New Zealand. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 801-804.
(New Zealand is exposed part of subcontinent that separated from Australia when Tasman Sea opened in Late Cretaceous. Three main belts: (1) West: was part of Antarctica, (2) Central: Hokonui and Caples terranes, broadly correlate with Gympie Terrane of E Queensland, which is island arc/ forearc/ accretionary wedge terrane that accreted to Australasia in Mid-Triassic; (3) Torlesse rocks, emplaced over Caples in Triassic, Jurassic and Cretaceous strike-slip episodes)

Harrington. H.J., A.T. Brakel, J.W. Hunt, A.T. Wells, M.F Middleton, P.E. O'Brien, D.S. Hamilton et al. (1989)- Permian coals of eastern Australia. Bureau Mineral Res., Canberra, Bull. 231, p. 1-407 + Appendices, figures
(online at: https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=28)
(Extensive report on Permian coals in large areas of E Australia, in 3 basin types: (1) small rifts and valleys with seams up to 30m thick; (2) large interior intracratonic basins (Cooper, Galilee), which formed on E Paleozoic orogen and filled by mainly non-marine sediments;(3) marginal foredeep basins, formed near Permian coast of Australia (Sydney-Bowen Basin, with almost all major black coal mines, 1700 km long, separated from Paleo-Pacific Ocean only by ridge in developing New England-Yarrol Orogen). Interior basins coals separated by lacustrine sediments; marginal basins coals separated by marine sediments. As ice waned in Late Permian, cold-temperate conditions resulted in widespread upper coal measures)

Harrington, H.J. & R.J. Korsch (1985)- Tectonic model for the Devonian to Middle Permian of the New England Orogen. Australian J. Earth Sci. 32, p. 163-179.

Harrington, H.J. & R.J. Korsch (1987)- Oroclinal bending in the evolution of the New England- Yarrol Orogen and the Moreton Basin. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 797-800.

Hashimoto, T., N. Rollet, V. Stagpoole, K. Higgins, P. Petkovic et al. (2010)- Geology and evolution of the Capel and Faust basins: petroleum prospectivity of the deepwater Tasman Sea frontier. New Zealand Petroleum Conf. 2010, p. 1-15.
(online at: www.nzpam.govt.nz/cms/pdf-library/petroleum-conferences-1/2010-nzpc-technical-posters-papers/P24_Hashimoto_abstract.pdf)

Hashimoto, T., N. Rollet, K. Higgins, G. Bernandel & R. Hackney (2008)- Capel and Faust Basins: preliminary assessment of an offshore deepwater frontier region. In: J.E. Blevin et al. (eds.) Eastern Australasian Basins Symposium III- Energy security for the 21st century, Sydney, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 311-315.
(Capel and Faust basins at NE margin of Tasman oceanic basin, between E Australia and New Caledonia at water depths of 1300-2500m. New data acquired by Geoscience Australia)

Hashimoto, T., N. Rollet, K. Higgins, V. Stagpoole, P. Petkovic, R. Hackney et al. (2011)- Petroleum prospectivity of the Eastern Australian deepwater frontier basins: insights from the Capel and Faust Basins. Poster AAPG Ann. Conv. Exh., Houston 2011, Search and Discovery Art. 10358, 15p.
(Large basin depocentres with up to 6 km of sediment in Tasman Sea region between Australia, New Zealand and New Caledonia. Formed during two Cretaceous extensional events preceding final breakup of E Gondwana margin. Syn-rift deposition initially dominated by volcanoclastics, then non-marine to shallow marine clastics)

Hawkins, P.J. & L.J. Williams (1990)- Review of the geology and economic potential of the Laura Basin. Queensland Resource Industries, Record 1990/2, p. 1-36.
(online at: https://qdexguest.deedi.qld.gov.au/…)
(Laura Basin is N-S trending intra-cratonic Jurassic-Cretaceous basin on E of Coen inlier of York Peninsula, with geological history similar to Carpenteria Basin. Onshore part at least 1100m thick)

Henderson, R.A. (1980)- Structural outline and summary geological history for north-eastern Australia. In: R.A. Henderson, & P.J. Stephenson (eds.) The geology and geophysics of North-eastern Australia, Geol. Soc. Australia, Queensland Division, Brisbane, p. 1-26.
(Hodgkinson Province of NE Queensland with folded-thrusted Silurian- Devonian turbidites interpreted as M Paleozoic accretionary prism)

Henderson, R.A. (1987)- An oblique subduction and transform faulting model for the evolution of the Broken River Province, northern Tasman Orogenic Zone. Australian J. Earth Sci. 34, p. 237-249.
(Suggests Marion and Queensland Plateux underlain by accretionary complex rocks of New England orogen?)

Henderson, R.A., C.L. Fergusson, E.C. Leitch, V.J. Morand, J.J. Reinhardt & P.F. Carr (1993)- Tectonics of the northern New England Fold Belt. In: P.G. Flood & J.C. Aitchison (eds.) Proc. New England Orogen, eastern Australia (NEO'93) Conf., University of New England, Armidale, p. 505-515.
(N New England foldbelt classic active margin tectonostratigraphic assemblage of Late Silurian- Permian age, with subduction complex, forearc basin, magmatic arc and backarc extensional elements. Two episodes of contraction: (1) Late Carboniferous (rel, minor) and (2) Late Permian- M Triassic Hunter-Bowen orogeny, transforming assemblage into fold-thrust belt (W-directed thrusting). Discrete belts of ultramafic and metasedimentary assemblages. Magmatic arc granitoids poorly developed here?)

Higgins, K., T. Hashimoto, N. Rollet, J. Colwell, R. Hackney & P. Milligan (2015)- Structural analysis of extended Australian continental crust: Capel and Faust basins, Lord Howe Rise. In: G.M. Gibson et al. (eds.) Sedimentary basins and crustal processes at continental margins: from modern hyper-extended margins to deformed ancient analogues, Geol. Soc., London, Spec. Publ. 413, p. 9-33.

(Capel and Faust basins (N Lord Howe Rise) in SW Pacific with multiple large depocentres up to 150 km long and 40 km wide, containing over 6 km of sediment. Basins probably evolved in two E Cretaceous rift episodes leading to final break-up of E Gondwanan margin: oblique rifting along E-W vector in ?Early Cretaceous-Cenomanian and NE–SW orthogonal rifting in ?Cenomanian- Campanian. Pre-rift basement is a collage of several terranes, including Paleozoic orogen with NW-trending basement fabric (New England Orogen))

Hill, P.J. (1992)- Capricorn and northern Tasman Basins: structure and depositional systems. Exploration Geophysics 23, 2, p. 153-162.
(Capricorn Basin Late Cretaceous failed rift arm at N end of Tasman rift system. Late Cretaceous- E Paleogene syn-rift continental/restricted marine deposits overlain by Eocene-Recent mainly marine post-rift sediments. Basement structures generally N-NW trend. Discontinuous series of rift basins of various geometries. Mid-Eocene compressional or transpressional event produced minor faulting/ folding and uplift/ erosion, attributed to plate reorganization at ~43 Ma. Late Oligocene volcanism in S Capricorn Basin, with volcanic edifices exposed on seafloor. In Tasman Basin, 3 km Cenozoic post-breakup sediments over oceanic basement and extended continental crust at base of continental slope)

Hoffmann, K.L., N. F. Exon, P. G. Quilty & C. S. Findlay (2008)- Mellish Rise and adjacent deep water plateaus off northeast Australia: new evidence for continental basement from Cenozoic micropalaeontology and sedimentary geology. Proc. Eastern Australian Basins Symposium III Sydney, Petroleum Expl. Soc. Australia (PESA), p. 317-323.
(Mellish Rise, E of Queensland Plateau, buoyant block of continental crust in SW Pacific, in water depths ~1500- 2900m. Paleocene- Quaternary sediments in dredge samples. Common manganese crusts and nodules. Late Eocene tropical larger foram Biplanispira in dredge sample first in Australasian waters (but not figured))

Hoffmann, K.L., J.M. Totterdell, O. Dixon, G.A. Simpson, A.T. Brakel, A.T. Wells & J.L. Mckellar (2009)- Sequence stratigraphy of Jurassic strata in the lower Surat Basin succession, Queensland. Australian J. Earth Sci. 56, 3, p. 461-476.
(Non-marine sequence stratigraphy of Early- early Late Jurassic strata in lower part of Surat Basin)

Holcombe, R.J. & T.A. Little (1994)- Blueschists of the New England Orogen: structural development of the Rocksberg Greenstone and associated units near Mt Mee, southeast Queensland. Australian J. Earth Sci. 41, p. 115-130.
(Blueschist facies rocks in Late Paleozoic New England Orogen in SE Queensland contains metamorphic structures and fabrics related to both subduction and uplift. Protoliths of Rocksberg Greenstone mafic volcaniclastics and interpreted as remnants of volcaniclastic apron of seamount constructed on oceanic lithosphere. Seamount was dismembered in M Carboniferous. Overprinted by greenschist facies conditions during exhumation from depths of >18 km, which began in Late Carboniferous)

Holcombe, R.J., C.J. Stephens, C.R. Fielding, D. Gust, T.A. Little et al. (1997)- Tectonic evolution of the northern New England Fold Belt: The Permian-Triassic Hunter-Bowen event. In: P.M. Ashley & P.G. Flood (eds.) Tectonics and metallogenesis of the New England Orogen, Geol. Soc. Australia, Spec. Publ. 19, p. 52-65.
(New England Fold Belt complex arrangement of terranes, dominated by contractional structures formed during Late Permian- late M Triassic Hunter-Bowen Orogeny (~265-230 Ma). ~35 My period records W-ward (East?; JTvG) migration of continental magmatic arc during period of contraction, and subsequent transition to extensional (and ultimately intra-plate) setting. Half of exposed granitoids intermediate, E-M Triassic (250-230 Ma). Late Triassic (~230-220 Ma) change to extensional regime, with predominantly silicic granites and volcanics, and creation of small N-NW elongate basins (Ipswich, Tarong, etc.) unconformably over folded E-M Triassic rocks)

Holcombe, R.J., C.J. Stephens, C.R. Fielding, D. Gust, T.A. Little et al. (1997)- Tectonic evolution of the northern New England Fold Belt: Carboniferous to Early Permian transition from active accretion to extension. In: P.M. Ashley & P.G. Flood (eds.) Tectonics and metallogenesis of the New England Orogen, Geol. Soc. Australia, Spec. Publ. 19, p. 66-79.

(Discussion of transition from active accretion in mid-Carboniferous to widespread extension through Late Carboniferous- E Permian. Transition interpreted in terms of E-ward retreat of convergent slab, and migration of volcanic arc offshore)

Hoy, D. & G. Rosenbaum (2017)- Episodic behavior of Gondwanide deformation in eastern Australia: insights from the Gympie Terrane: episodic Gondwanide orogeny in Australia. Tectonics 36, 8, p. 1497-1520.
(Earliest deformation of Gympie Terrane of E Australia during final pulse of Permian- Triassic Hunter-Bowen orogenesis (235-230 Ma; ~ Carnian). No evidence for crustal suture, suggesting terrane accretion not main mechanism behind deformation. Gondwanide Orogeny more likely linked to plate-reorganization)

Hunt, J.W. (1989)- Permian coals of eastern Australia: geological control of petrographic variation. Int. J. Coal Geology 12, p. 589-634.
(Coal types and geological controls in E Australia Permian basins (Sydney- Bowen foreland Basins in E, large cratonic Galilee- Cooper basins in W, and small cratonic Blair Athol, Wolfgang and Oaklands Basins))

Hutton, A.C. (2009)- Geological setting of Australasian coal deposits. In: R. Kininmonth & E. Baafi (eds.) Australasian Coal Mining Practice, Australasian Inst. of Mining and Metallurgy, p. 40-84.

James, N.J., T.D. Frank & C.R. Fielding (2009)- Carbonate sedimentation in a Permian high-latitude, subpolar depositional realm: Queensland, Australia. J. Sedimentary Res. 79, 3, p. 125-143.
(Lower-Middle Permian limestones from NE Australia New England Foldbelt and Bowen basin typical cold water limestones without corals, fusulinids, etc.)

Jansson, I.M., S. McLoughlin, V. Vajda & M. Pole (2008)- An Early Jurassic flora from the Clarence-Moreton Basin, Australia. Review Palaeobotany Palynology 150, p. 5-21
(Low-diversity E Jurassic flora in floodbasin siltstones of Clarence-Moreton Basin. Basin has Late Triassic-Late Jurassic sedimentary section over moderately deformed M-L Paleozoic accretionary prism and intrusive igneous rocks. Palynoflora dominated by Classopollis pollen and attributable to Late Pliensbachian- E Toarcian age (180-185 Ma) upper Corollina (=Classopollis) torosa Zone. Relatively humid paleoclimate)

Jeon, H., I.S. Williams, B.W. Chappell & V.C. Bennett (2010)- Implications of contrasting patterns of inherited zircon in the Late Palaeozoic granites of the Lachlan and New England fold belts. 20th Australian Geological Convention, Canberra 2010, Geol. Soc. Australia, Abstracts 98, p. 249. *(Abstract only)*
(Lachlan Foldbelt granites mostly Silurian-Devonian, some in NE Carboniferous age. Inherited zircons same as detrital zircons in intruded Ordovician sediments. Two inheritance age patterns in Carboniferous (~340-325 Ma) I-type granites. New England fold belt granites Permian-Triassic in age, mainly E Permian (~290 Ma) S-type and Late Permian (~250 Ma) I-types. S-type inherited zircon, mostly Carboniferous age (peaks at 310 and 330 Ma; same age as Carboniferous granites in LFB)

John, C.M., G.D. Karner, E. Browning, R.M. Leckie, Z. Mateo, B. Carson & C. Lowery (2011)- Timing and magnitude of Miocene eustasy derived from the mixed siliciclastic-carbonate stratigraphic record of the northeastern Australian margin. Earth Planetary Sci. Letters 304, p. 455-467.
(online at: https://www.geo.umass.edu/faculty/leckie/John%202011%20EPSL%20Marion%20SL.pdf)
(Marion Plateau carbonate platform 8 sequences (18.0, 17.2, 16.5, 15.4, 14.7, 13.9, 13.0, 11.9 Ma), controlled by glacio-eustasy as demonstrated by increases in δ18O (= deep-sea Miocene isotope events Mi1b, Mbi-3, Mi2, Mi2a, Mi3a, Mi3, Mi4, and Mi5), reflecting increased ice volumes primarily on Antarctica. Backstripping estimates combined with δ18O estimates yields sea-level fall amplitudes of 27m at 16.5 and at 15.4 Ma, 33m at 14.7 Ma, 59± 6 m at 13.9 Ma. Sea-level fell by 53-69 m between 16.5-13.9 Ma. Implies >90% of E Antarctic Ice sheet formed during M Miocene)

Jones, A.T. & C.R. Fielding (2004)- Sedimentological record of the late Paleozoic glaciation in Queensland, Australia. Geology, 32, p. 153-156.
(Glaciation in Queensland, NE Australia, restricted to discrete periods, in Namurian (315 Ma), Westphalian (311 Ma) and Sakmarian (289-293 Ma). Glaciations confined to local (valley or mountain) glaciers)

Keep, M. (2003)- Physical modelling of deformation in the Tasman Orogenic Zone. Tectonophysics 375, p. 37-47.

Kemp, A.I.S., C.J. Hawkesworth, W.J. Collins, C.M. Gray, P.L. Blevin & EIMF (2009)- Isotopic evidence for rapid continental growth in an extensional accretionary orogen: The Tasmanides, eastern Australia. Earth Planetary Sci. Letters 284, p. 455-466.
(Nd and zircon Hf–O isotope data used to study continental crust formation in Tasmanides (515-230 Ma), which formed by repeated opening and closure of sediment-filled back-arc basins behind long-lived subduction zone. Juvenile magmatic input enhanced during extensional, back-arc rifting episodes that followed crustal thickening, suggesting relationship between slab rollback and continental growth. Juvenile component in Tasmanide igneous rocks increased from Cambrian to Triassic, as subduction zone migrated outboard. Subduction zone retreat formed large tracts of new crust in E Australia at comparable rates to crust generation at modern island arcs)

Kidane, T.B., M. Fuller & Y.I. Otofuji (2010)- Shipboard paleomagnetic age estimates for an acoustic basement emplacement in Marion Plateau, off northeast Australia. Australian J. Earth Sci. 57, 2, p. 231-241.
(Shipboard paleomagnetic work on olivine basalt cores from bottom of ODP Leg 194 holes 1193C and 1198B give paleolatitude of Marion Plateau at 33.3°S, indicating possible emplacement time for basalt of either 130-110 Ma or 190-165 Ma. Latter result better fit with 40Ar/39Ar age of 162 ±1 Ma for basalt)

Klootwijk C. (1985)- Paleomagnetism of the Tasman fold belt: indicaton for mid-Carboniferous large-scale southward displacement of the New England region. In: Third Circum Pacific Terrane Conf., Extended Abstracts 14, p. 124-127.

Klootwijk C. (2009)- Sedimentary basins of eastern Australia: paleomagnetic constraints on geodynamic evolution in a global context. Australian J. Earth Sci. 56, 3, p. 273-308.
(L2 loop indicates Late Devonian- M Carboniferous N-ward excursion of NE Gondwanaland. Succeeding early-Late Carboniferous S-ward movement of NE Gondwanaland was extremely fast and created extensional environment, initiating Westralian Superbasin. L3 loop reflects change in rotation of Gondwanaland from CCW (Late Carboniferous) to CW (E Permian), leading to Stephanian initiation of Bowen-Gunnedah-Sydney basins)

Korsch, R.J. (1984)- Sandstone compositions from the New England Orogen, Eastern Australia- implications for tectonic setting. J. Sedimentary Petrology 54, 1, p. 192-211.
(Late Paleozoic sandstones from New England Orogen mainly quartz-poor, lithic to feldspathic types derived from volcanic arc terrane, evolving from mafic to more felsic in composition through time. Volcanic source existed for >100 Million years. Possibly deposited in backarc basin)

Korsch, R.J. (2004)- A Permian-Triassic retro-foreland thrust system- The New England Orogen, and adjacent sedimentary basins, Eastern Australia. In: K.R. McClay (ed.) Thrust tectonics and hydrocarbon systems, American Assoc. Petrol. Geol. (AAPG), Mem. 82, p. 515-537.
(From Late Devonian to Triassic, E Australia was active, convergent plate margin with W-dipping subduction system. Permian-Triassic development, of major W-directed retroforeland thrust belt in N New England, with formation of thick foreland-basin phase in adjacent Bowen Basin to W)

Korsch, R.J., C.J. Adams, L.P. Black, D.A. Foster, G.L. Fraser, C.G. Murray, C. Foudoulis & W.L. Griffin (2009)- Geochronology and provenance of the Late Paleozoic accretionary wedge and Gympie Terrane, New England Orogen, eastern Australia. Australian J. Earth Sci. 56, 5, p. 655-685.
(New England Orogen result of Late Devonian- Triassic W-dipping subduction system at boundary of E Gondwanaland and Panthalassan Ocean. Late Paleozoic accretionary wedge contains deep-marine trench fill turbidites with in-faulted slices of oceanic crust. Turbidites first-cycle, immature, quartz-poor, volcanic-derived. Dating of detrital zircons and hornblendes show maximum depositional ages of 355-316 Ma for sediments in accretionary wedge, indicating accretionary wedge evolved over 40 Ma, with principal sources from active

continental margin volcanic arc. Quartz-rich sandstones from E part of accretionary wedge with Late Paleozoic-Archean zircon ages, indicating quartz-rich detritus from continental interior dominated depocentres)

Korsch, R.J., C.J. Boreham, J.M. Totterdell, R.D. Shaw & M.G. Nicoll (1998)- Development and petroleum resource evaluation of the Bowen, Gunnedah and Surat Basins, Eastern Australia. Australian Petrol. Prod. Explor. Assoc. (APPEA) J. 38, p. 199-237.

Korsch, R.J. & H.J. Harrington (1981)- Stratigraphic and structural synthesis of the New England Orogen. Australian J. Earth Sci. 28, p. 205-226.
(Four principal sets of regional deformations: D1- pre-Late Carboniferous (could extend back into Devonian); D2-Late Carboniferous- E Permian (~295 Ma); D3-E Permian (~ 273 Ma); D4-Late Permian (~250 Ma).

Korsch, R.J. & H.J. Harrington (1987)- Oroclinal bending, fragmentation and deformation of terranes in the New England Orogen, Eastern Australia. In: E.C. Leith & E. Scheibner (eds.) Terrane accretion and orogenic belts, American Geophys. Union (AGU), Geodyn. Ser. 19, p. 119-127.
(New England Orogen two pre-Permian terranes which form forearc basin-accretionary wedge couple. Orogen disrupted by major oroclinal bending in late E Permian)

Korsch, R.J., P.E. O'Brien, M.J. Sexton, K.D. Wake-Dyster & A.T. Wells (1989)- Development of Mesozoic transtensional basins in easternmost Australia. Australian J. Earth Sci. 36, p. 13-28.
(E Australia basins Esk Trough, Ipswich Basin and Clarence-Moreton Basin initiated by transtensional events in Late Permian or Early Triassic)

Korsch, R.J. & J.M. Totterdell (2009)- Subsidence history and basin phases of the Bowen, Gunnedah and Surat Basins, eastern Australia. Australian J. Earth Sci. 56, 3, p. 335-353.
(E Permian- M Triassic Bowen and Gunnedah Basins and E Jurassic- E Cretaceous Surat Basin complex subsidence history over 200 My: (1) E Permian, rapid subsidence in half-grabens along W margin of Bowen-Gunnedah Basins; extension ceased at ~280 Ma, followed by thermal subsidence with widespread, uniform sedimentation; (2) Late Permian foreland basin phase, driven by thrust loading to E in New England Orogen. very high rates of tectonic subsidence (3) peneplanation in Late Triassic; (4) sedimentation at start of Jurassic, forming Surat Basin, with tectonic subsidence driven by dynamically induced platform tilting; (5) subduction ceased at ~95 Ma, resulting in rapid uplift, due to rebound of lithosphere)

Korsch, R.J., J.M. Totterdell, D.L. Cathro & M.G. Nicoll (2009)- Early Permian East Australian rift system. Australian J. Earth Sci. 56, 3, p. 381-400.
(E Permian- M Triassic Bowen and Gunnedah back-arc basins developed in response to tectonic events to E (W-dipping subduction system at E Gondwana margin). Initial extension part of major E Permian N-S trending E Australian Rift System from N Queensland to S New South Wales. Denison Trough with producing gasfields. E part of rift system commenced at ~305 Ma and volcanic-dominated. Half-grabens in and W of Bowen Basin non-volcanic, with mechanical extension from~285-280 Ma (~Artinskian), followed by thermal subsidence)

Korsch, R.J., J.M. Totterdell, T. Fomin & M.G. Nicoll (2009)- Contractional structures and deformational events in the Bowen, Gunnedah and Surat Basins, eastern Australia. Australian J. Earth Sci. 56, 3, p. 477-499.
(Permian- Triassic Bowen and Gunnedah Basins formed in backarc setting, initially extensional, but switched to contractional in mid-Permian, with major W-directed thrust belt in New England Orogen and foreland basin phase to W in Bowen-Gunnedah. Inversion of E Permian extensional faults as thrusts. During Late Permian-Late Triassic period of rapid subsidence driven by thrust loading several short periods of non-deposition and contraction. Final contractional event in early Late Cretaceous corresponds with cessation of sedimentation in Surat Basin, uplift and reactivation of earlier structures)

Korsch, R.J., K.D. Wake-Dyster & D.W. Johnstone (1991)- Structure of the Permian-Mesozoic eastern Australian Basins complex, with emphasis on the BMR Bowen Basin deep seismic profiles. Exploration Geophysics 22, 1, p. 223-226.

(Permian Taroom Trough (S extension of Bowen Basin) interpreted as transtensional basin. Small flower structures in overlying Jurassic sediments are transpressional features due to reactivation of faults. Bowen Basin Late Permian- E Triassic sedimentary wedge thickening to E, initiated during period of extension oriented ENE-WSW in latest Carboniferous or earliest Permian)

Korth, J. (1987)- Analytical studies on Australian oil shales. Ph.D. Thesis, University of Wollongong, p. 1-328.
(online at: http://ro.uow.edu.au/theses/1110)
(Analyses of M-L Eocene lacustrine oil shales of upper and lower seams of Duaringa deposit, Queensland. Telalginite (torbanite) with common green algae Botryococcus, Tasmanites and Gloeocapsomorpha; lamalginite (lamosite) mainly with planktonic Pediastrum)

Kositcin, N., D.C. Champion & D.L. Huston (2009)- Geodynamic synthesis of the North Queensland region and implications for metallogeny. Geoscience Australia Record 2009/30, p. 1-196.
(online at: www.ga.gov.au/corporate_data/69159/Rec2009_030.pdf)
(Useful overview of N Queensland geology and geodynamic history)

Leitch, E.C. (1975)- Plate tectonic interpretation of the Palaeozoic history of the New England Fold Belt. Geol. Soc. America (GSA) Bull. 86, p. 141-144.
(M-U Paleozoic paleogeographic elements in New England Fold Belt comprise W volcanic chain, a fore-chain basin, and E non-volcanic arc-platform-trench complex, developed above W-dipping subduction zone. Temporary halts in subduction led to minor deformational episodes. Subduction ceased in E Permian, followed by major orogenesis. Late stage right-lateral movement on Demon Fault displaced paleogeographic elements)

Leitch, E.C., C.L. Fergusson & R.A. Henderson (2003)- Arc to craton provenance switching in a Late Palaeozoic subduction complex, Wandilla and Shoalwater terranes, New England Fold Belt, eastern Australia. Australian J. Earth Sci. 50, p. 919-929.
(Wandilla and Shoalwater terranes of N New England Fold Belt are Carboniferous accretionary subduction complexes formed at convergent plate boundary along E edge of Gondwana. Sandstones from Wandilla terrane quartz-poor and derived from magmatic arc; Shoalwater terrane quartz-rich and from cratonic region)

Leitch, E.C., J.V. Morand, C.L. Fergusson, R.A. Henderson & P.F. Carr (2007)- Accretion and post-accretion metamorphism in subduction complex terranes of the New England Fold Belt, eastern Australia. J. Metamorphic Geol. 11, 3, p. 309-318.
(Two regional metamorphic episodes in Late Paleozoic subduction complexes of Queensland: (1) Synaccretion prehnite-pumpellyite and greenschist facies, (2) upper greenschist- upper amphibolite facies episode at ~250 Ma in arc or back-arc setting. Similar pattern for 1000 km along New England Fold Belt)

Leitch, E.C. & E. Scheibner (1987)- Stratotectonic terranes of the Eastern Australian Tasmanides. In: E.C. Leitch & E. Scheibner (eds.) Terrane accretion and orogenic belts, Amer. Geophys. Union (AGU), Geodyn. Ser. 19, p. 1-19.
(Some 36 tectonostratigraphic terranes accreted along E Australia Tasmanides convergent margin of E cratonic edge of Gondwanaland. Major episodes of amalgamation coincided with widespread deformational episodes. Despite >200 Myr of subduction in Paleozoic- Mesozoic no evidence for major continental collision or large exotic terranes, but mainly magmatic arcs and microcontinental blocks)

Li, P.F., G. Rosenbaum & D. Rubatto (2012)- Triassic asymmetric subduction rollback in the southern New England Orogen (eastern Australia): the end of the Hunter-Bowen Orogeny. Australian J. Earth Sci. 59, 6, p. 965-981.
(New England Orogen youngest subduction in Australian continent, with history of W-dipping Devonian-Triassic subduction. From M-L Permian- U Triassic (~265-235 Ma) subjected to contractional deformation (Hunter-Bowen Orogeny) and widespread I-type calc-alkaline magmatism. Zircon ages from granites 255-215 Ma. Magmatism during Hunter-Bowen Orogeny along NNE–SSW belt; younger magmatism (235-215 Ma) aligned along N-S belt farther E, suggesting E-ward arc migration, possibly in response to slab rollback.

Proposed model involves asymmetric slab rollback, possibly in response to pinning of N part of subduction zone by Gympie Terrane accretion, marking earliest phase of Mesozoic rifting of E Australia)

Lindner, A.W. (1983)- Geology and geochemistry of some Queensland Tertiary oil shales. In: Symposium on Geochemistry and chemistry of oil shale, Seattle, p. 10-19.
(online at: https://web.anl.gov/PCS/acsfuel/preprint%20archive/Files/28_3_SEATTLE_03-83_0010.pdf)
(Duaringa Tertiary basin in NE Queensland E Tertiary rift basin, related to Tasman Sea- Coral Sea rifting. With algal-rich lacustrine oil shales (lamosites). Highest grade in Rundle deposits; 25-161m thick (see also Dixon 1987)

Lipski, P. (2001)- Geology and hydrocarbon potential of the Jurassic- Cretaceous Maryborough Basin. In: K.C. Hill & T. Bernecker (eds.) Eastern Australasian Basins Symposium, a refocused energy perspective for the future, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 263-268.
(Maryborough Basin Late Triassic- E Tertiary basin that straddles coastline of SE Queensland, with up to >6000m of Jurassic- Cretaceous sediments. Late Cretaceous transpressional deformation formed NW-trending anticlines. Source rocks marine and lacustrine shales of Early Cretaceous Maryborough Fm and also coals and shales of E-M Jurassic Tiaro and E Cretaceous Burrum Coal Measures)

Little, T.A., R.J. Holcombe, G.M. Gibson, R. Offler, P.B. Gans & M.O. McWilliams (1992)- Exhumation of Late Paleozoic blueschists in Queensland, Australia, by extensional faulting. Geology 20, p. 231-234.
(Blueschists in SE Queensland record Carboniferous history of subduction and metamorphism and later thermal overprint from intrusion of Late Carboniferous S-type granitoids at ~306 Ma. By E Permian most of New England orogeny uplifted and eroded and now site of back-arc extensional basins)

Little, T.A., R.J. Holcombe & R. Sliwa (1993)- Structural evidence for extensional exhumation of blueschist-bearing serpentinite matrix melange, New England Orogen, southeast Queensland, Australia. Tectonics 12, p. 536-549.
(N D'Aguilar block with blueschist blocks in serpentinite matrix melange. Mid-Carboniferous epidote-blueschist metamorphism, intruded by ~306 Ma (latest Carboniferous) granitoids)

Little, T.A., M.O. McWilliams & R.J. Holcombe (1995)- 40Ar/39Ar thermochronology of epidote blueschists from the North D'Aguilar block, Queensland Australia: timing and kinematics of subduction complex unroofing. Geol. Soc. America (GSA) Bull. 107, p. 520-535.
(Epidote blueschists as coherent schists and blocks in serpentinite matrix melange. Formed below 18 km depth in lower plate of metamorphic core complex. Slate from upper plate dated as 315 Ma (Late Carboniferous), interpreted as minimum age for subduction. Exhumation of lower plate schists coeval with overprinting by greenschist facies fabric by ductile stretching and normal faulting. Phengites from lower plate schists 40Ar/39Ar plateau ages of ~299-296 Ma (earliest Permian; = time of cooling below ~350°C). Similar cooling ages for different blueschist blocks support view that Australian melange uplifted by extensional tectonic processes unrelated to serpentinite diapirism)

Lloyd, A.R. (1967)- Neogene foraminifera from H.B.R. Wreck Island No. 1 bore and Heron Island bore, Queensland; their taxonomy and stratigraphic significance. Part 1. Lituolacea and Miliolacea. Bull. Bureau Mineral Res. Geol. Geophys. 92, p.

Lloyd, A.R. (1970)- Neogene foraminifera from HBR Wreck Island No. 1 bore and Heron Island bore, Queensland; their taxonomy and stratigraphic significance. Part 2. Nodosariacea and Buliminacea. Bull. Bureau Mineral Res. Geol. Geophys. 108, p. 145-225.
(online at: www.ga.gov.au/corporate_data/160/Bull_108.pdf)
(Mainly Miocene open marine foraminifera from below Great Barrier Reef)

MacKenzie, D.E. (1987)- Geology, petrology and mineralization of the Permo-Carboniferous Featherbed Volcanics Complex, Northeastern Queensland. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 297-301.

(Late Carboniferous- E Permian Featherbed Volcanics at W margin of Hodgkinson Basin. Late Carboniferous I-type andesitic-rhyolitic ignimbrites and minor andesite lava, with dioritic-granitic intrusives and Sn, W and base metal mineralization. Main part of complex E Permian, mainly A-type rhyolitic ignimbrite)

Marsden, M.A.H. (1972)- The Devonian history of northeastern Australia. Geol. Soc. Australia J. 19, 1, p. 125-162.
(Devonian rocks in 'Tasman Geosyncline' 3 tectonic divisions (1) broad mobile platform (2) volcanic-rich New England Geosyncline, and (3) N Queensland complex marine-continental sedimentation on cratonic blocks, with non-volcanic flysch-like sedimentation in marginal Hodgkinson Basin. Devonian rocks affected by intense Late Paleozoic tectonic and igneous activity in E marginal regions, but only minor effects to West)

Marshallsea, S.J., P.F. Green & J. Webb (2000)- Thermal history of the Hodgkinson Province and Laura Basin, Queensland: multiple cooling episodes identified from apatite fission track analysis and vitrinite reflectance data. Australian J. Earth Sci. 47, 4, p. 779-797.
(Hodgkinson Province and Laura Basin underwent regional Cretaceous cooling, possibly two episodes: mid-Cretaceous (110-100 Ma) and Late Cretaceous (80-70 Ma). Rocks now at outcrop cooled from Cretaceous paleotemperatures between 50-130°C in S and from >100°C in N. In Hodgkinson Province also evidence for E Jurassic cooling episode, with cooling starting at ~200 Ma. Regional extent of Cretaceous cooling episode suggest uplift/ denudation, with removal of 0.8- >3.0 km of Triassic and younger section, starting between ~110 and 80 Ma))

Matthews, K.J., A.J. Hale, M. Gurnis, R.D. Muller & L. DiCaprio (2011)- Dynamic subsidence of Eastern Australia during the Cretaceous. Gondwana Research 19, 2, p. 372-383.
(Australia's E Cretaceous eastward passage over sinking subducted slabs induced widespread dynamic subsidence and formation of large epeiric sea in E interior)

McConachie, B.A., J.N. Dunster, P. Wellman, T.J. Denaro, C.F. Pain, M.A. Habermehl & J.J. Draper (1997)- Carpentaria Lowlands and Gulf of Carpentaria regions. In: J.H.C. Bain & J.J. Draper (eds.) North Queensland Geology, Australian Geol. Survey Org. (AGSO) Bull. 240, 365-397.
(Laura Basin, etc.)

McKellar, J.L. (2002)- Geophysical controls on late Palaeozoic- early Mesozoic geological history and floral succession: eastern Australia in perspective. In: G.A. Brock & J.A. Talent (eds.) First Int. Palaeontological Congress, Sydney, Australia, Geol. Soc. Australia, p. 47-84.

Michaelsen, P. & R.A Henderson (2000)- Sandstone petrofacies expressions of multiphase basinal tectonics and arc magmatism: Permian-Triassic north Bowen Basin, Australia. Sedimentary Geology 136, p. 113-136.
(Permian- Triassic sandstones of N Bowen Basin two petrofacies: (A) Lower- mid U Permian quartz-rich, sourced primarily from cratonic basement; (B) U Permian- Lw Triassic volcanolithic, sourced from magmatic arc provenance in New England Orogen. Evidence of contemporaneous volcanism shown by tuffs- tonsteins in Late Permian succession)

Mortimer, N., F. Hauff & T. Calvert (2008)- Continuation of the New England Orogen, Australia, beneath the Queensland Plateau and Lord Howe Rise. Australian J. Earth Sci. 55, 2, p. 195-209.
(Greywacke, argillite, greyschist and hypabyssal igneous rocks from ODP core on Queensland Plateau and xenoliths in volcanic breccia with 260-240 Ma K-Ar ages dredged from Lord Howe Rise. Low-intermediate detrital quartz contents and age suggest correlation with New England Orogen of E Australia. New England Orogen terranes continue towards New Zealand at least as far as S Lord Howe Rise)

Muller, R. D., V. S. L. Lim & A. R. Isern (2000)- Late Tertiary tectonic subsidence on the northeast Australian passive margin: response to dynamic topography? Marine Geology 162, 2-4, p. 337-352.
(Accelerated subsidence in Late Miocene-Pliocene off NE Australia difficult to account for by thrust loading in PNG or collision along Australian-Pacific plate boundary. Shear wave tomography displays NNW-SSE trending band of high velocities in upper mantle from Queensland Plateau to Indonesia, probably subducted slab material

from Late Eocene- Oligocene subduction N of PNG. Observed post- 9 Ma tectonic subsidence of Queensland and Marion plateaus probably caused by dynamic surface topography due to Australia's NE margin overriding slab burial ground, modulated by flexural deformation resulting from collision tectonics N of Australia)

Murgulov, V., E. Beyer, W.L. Griffin, S.Y. OøReilly, S.G. Walters & D. Stephens (2007)- Crustal evolution in the Georgetown Inlier, North Queensland, Australia: a detrital zircon grain study. Chemical Geology 245, p. 198-218.
(Detrital zircon ages of Precambrian Georgetown Inlier. Archean zircons evidence for existence of Archean crustal components in Georgetown Inlier. At least three stages of heating and granitoid magmatism: 1545-1585 Ma, 420 Ma and 340 Ma. Similarities/ differences in crustal evolution of Mt Isa, Broken Hill and Georgetown blocks suggest Proterozoic history of Australian continental margin involved accretion and subsequent dispersal of individual, originally Archean, microcomments)

Murgulov, V., W. Griffin & S. O'Reilly (2013)- Carboniferous and Permian granites of the northern Tasman orogenic belt, Queensland, Australia: insights into petrogenesis and crustal evolution from an in situ zircon study. Int. J. Earth Sciences (Geol. Rundschau) 102, 3, p. 647-669.
(U-Pb dating and Lu-Hf systematics of zircon in Carboniferous I-type and Permian S- and I-type granites of Hodgkinson Province in N Tasman orogenic belt, Queensland)

Murray, C.G. (1974)- Alpine-type ultramafics in the northern part of the Tasman Geosyncline- possible remnants of Palaeozoic ocean floor. In: A.K. Denmead et al. (eds.) The Tasman Geosyncline- a symposium, Geol. Soc. Australia, Queensland Division, Brisbane, p. 161-181.

Murray, C.G. (1985)- Tectonic setting of the Bowen Basin. In: Bowen Basin Coal Symposium, Geol. Soc. Australia Abstracts 17, p. 5-16.

Murray, C.G. (1986)- Metallogeny and tectonic development of the Tasman Fold Belt System in Queensland. Ore Geology Reviews 1, p. 315-400.

Murray, C.G. (1987)- Tectonic evolution and metallogenesis of the New England fold belt, Eastern Australia. In: Pacific Rim Congress 87, Gold Coast 1987, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 353-358.
(New England foldbelt is E part of Tasman foldbelt system. Late Devonian- Early Cretaceous active magmatic margin. Metallogenic deposits mainly associated with extensive Late Permian- Late Triassic granites and silicic volcanics)

Murray, C.G. (1990)- Tectonic evolution and metallogenesis of the Bowen Basin. In J. W. Beeston (ed.) Bowen Basin Symposium 1990, Proc. Geol. Soc. Australia, p. 201-212.

Murray, C.G. (1997)- From geosyncline to fold belt: a personal perspective on the development of ideas regarding the tectonic evolution of the New England Orogen. Geol. Soc. Australia, Spec. Publ. 19, p. 1-28.

Murray, C.G. (2003)- Granites of the northern New England Orogen. In: P. Blevin et al (eds.) The Ishihara Symposium: Granites and associated metallogenesis, Macquarie University, Geoscience Australia Record 2003/14, p. 101-108.
(online at: www.ga.gov.au/image_cache/GA3700.pdf)
(N New England Orogen granites of 4 main age groups: M- Late Devonian (380 Ma; Mt Morgan trondjhemite oceanic island arc); M Carboniferous- E Permian (330-280 Ma; Connors and Auburn Arches; subduction followed by extension), Late Permian- Late Triassic (275-205 Ma; Yarrol; subduction changing to extensional in Late Triassic due to slab rollback) and Early Cretaceous (145-90 Ma; Whitsunday Volcanics; extensional)

Murray C.G. (2007)- Devonian supra-subduction zone setting for the Princhester and Northumberland serpentinites: implications for the tectonic evolution of the northern New England Orogen. Australian J. Earth Sci. 54, p. 899-925.

Murray, C.G., P.R. Blake, L.J. Hutton, I.W. Whitnall, M.A. Hayword, G.A. Simpson & B.G. Fordham (2003)- Discussion and Reply- Yarrol terrane of the northern New England Fold Belt: forearc or backarc? Australian J. Earth Sci. 50, p. 271-278.
(Critical discussion of Bryan et al. (2001) paper, which questioned standard tectonic model of New England Orogen as Late Devonian- E Carboniferous classic convergent continental margin with parallel volcanic arc, forearc basin and accretionary wedge assemblages. Bryan et al. model not considered to be viable alternative)

Murray, C.G., C.L. Fergusson, P.G. Flood, W.G. Whitaker & R.J. Korsch (1987)- Plate tectonic model for the Carboniferous evolution of the New England Fold Belt. Australian J. Earth Sci. 34, p. 213-236.

Mutter, J.C. (1977)- The Queensland Plateau. Bureau Mineral Res. Geol. Geophysics, Bull. 179, p. 1-55.
(online at: www.ga.gov.au/corporate_data/87/Bull_179.pdf)
(Queensland Plateau of NE Australia large submarine plateau (237,000 km2) in 200- 3000m water depth, facing Coral Sea. Basement structure continuarion of structural onshore Tasman Geosyncline in SW). Widespread uplift and erosion in Late Cretaceous- M Eocene, forming planar basement surface. Subsidence began in M Eocene, with faulting and differential subsidence of basement surface. Rifting and formation of Queensland and Townsville basins ended by M Oligocene, followed by period of thermal subsidence. Sediment thickness from 300m on basement highs to >1000m in graben structures)

Mutter, J.C. & D. Jongsma (1978)- The pattern of the Pre-Tasman Sea rift system and the geometry of breakup. Bull. Australian Soc. Exploration Geophysicists 9, 3, p. 70-75.

Mutter, J.C. & G. Karner (1978)- Cretaceous taphrogeny in the Coral Sea. Bull. Australian Soc. Exploration Geophysicists 9, 3, p. 82-87.
(Little evidence to support Cretaceous taphrogenesis preceding separation of continental blocks in Coral Sea)

Mutter, J.C. & G. Karner (1978)- The evolution of the continental margin off Northeast Australia- a review. In: R.A. Henderson (ed.) Geophysics of Northeastern Australia, Geol. Soc. Australia, Brisbane, p. 47-69.

Mutter, J.C. & G. Karner (1980)- The continental margin off northeast Australia. In: R.A. Henderson & P.J. Stephenson (eds.) The Geology and Geophysics of Northeast Australia. Geol. Soc. Australia, Queensland Div., Brisbane, p. 47-69.

Neumann, N.L. (2007)- Time-space evolution of the Georgetown and Coen regions. In: N.L. Neumann & L. Geoffrey (eds.) (2007)- Geochronological synthesis and time-space plots for Proterozoic Australia, Geoscience Australia, Canberra, Record 2007/06, p. 74-87.
(online at: www.ga.gov.au/image_cache/GA10759.pdf)
(Proterozoic igneous- metamorphic events of Georgetown and Coen inliers of N Queensland mainly 1540-1590 Ma and ~1680-1720 Ma. Georgetown Region also magmatism in Silurian- E Devonian and Carboniferous-Permian. Coen Region also Silurian-Devonian, Late Devonian- E Carboniferous and Carboniferous-Permian magmatism)

Neumann, N.L. & L. Geoffrey (eds.) (2007)- Geochronological synthesis and time-space plots for Proterozoic Australia. Geoscience Australia, Canberra, Record 2007/06, p. 1-216.
(online at: www.ga.gov.au/image_cache/GA10759.pdf)
(Extensive overview of ages of igneous rocks and episodes of metamorphism in Proterozoic across Australia. Very useful for provenance analysis of detrital zircons)

Norvick, M.S. & M.A. Smith (2001)- Mapping the plate tectonic reconstruction of southern and southeastern Australia and Implications for petroleum systems. Australian Petrol. Prod. Explor. Assoc. (APPEA) J., p. 15-35.

Norvick, M.S., M.A. Smith & M.R. Power (2001)- The plate tectonic evolution of Eastern Australia guided by the stratigraphy of the Gippsland Basin. Petroleum Expl. Soc. Australia (PESA) Eastern Australian Basins Symposium, Melbourne, p. 15-23.
(Common themes in E Australasia include Triassic-Jurassic subduction, from Papuan Fold Belt to New Zealand, and Late Barremian-Albian volcanogenic sedimentation (back-arc volcanism). Local developments include Lower Cretaceous rift basins in Bass Strait area (N-S extension between Australia- Antarctica), Turonian-Santonian rift basins (E-W Tasman Sea opening). Tasman Sea seafloor spreading started in S in M Santonian (~85 Ma)and stopped in Ey Eocene (~54 Ma). Later spreading event opened Coral Sea, starting in Paleocene (~62 Ma). Subduction prisms began approaching NE Australasia in E Eocene. Etc.)

Nott, J. & S. Horton (2000)- 180 Ma continental drainage divide in northeastern Australia: role of passive margin tectonics. Geology 28, 8, p. 763-766.
(Stratigraphy and sedimentology of Jurassic-Tertiary sediments in Laura and Carpentaria basins in NE Australia show continental drainage divide here remained stationary since M Jurassic. Maximum of only 50m of denudation could have occurred on continental drainage divide here since Cretaceous)

Nutman, A.P., S. Buckman, H. Hidaka, T. Kamiichi, E. Belousova & J. Aitchison (2013)- Middle Carboniferous- Early Triassic eclogite-blueschist blocks within a serpentinite melange at Port Macquarie, eastern Australia: implications for the evolution of Gondwana's eastern margin. Gondwana Research 24, p. 1038-1050.
(New England Orogen with suites of Paleozoic- earliest Mesozoic rocks, formed in supra-subduction zone settings at Gondwana E margin. In Port Macquarie serpentinite with blocks of low-T, high-P metamorphic rocks with glaucophane blueschists and lawsonite-bearing eclogites. High-P metasediments contain Archean to 251±6 Ma (Permo-Triassic) detrital zircons, with most grains of M Devonian- Carboniferous age (380-340 Ma). In Lorne Basin to S ≥220 Ma Triassic sedimentary and volcanic rocks unconformably overlie serpentinite melange and provide minimum age of high-P metamorphism. Emplacement of melange with high-P rocks may have been due to docking of Permian oceanic island arc (Gympie terrane in S Queensland?) and Andean-style arc at E Australian margin (New England Orogen 260-230 Ma N-S oriented magmatic belts)

O'Brien, P.E., R.J. Korsch, A.T. Wells, M.J. Sexton & K. Wake-Dyster (1994)- Structure and tectonics of the Clarence-Moreton Basin. In: A.T. Wells & P.E. O'Brien (eds.) Geology and petroleum potential of the Clarence-Moreton Basin, New South Wales and Queensland, AGSO, Bull. 241, p. 195-216.

Offler, R. & D.A. Foster (2008)- Timing and development of oroclines in the southern New England Orogen, New South Wales. Australian J. Earth Sci. 55, p. 331-340.

Offler, R. & J. Gamble (2002)- Evolution of an intra-oceanic island arc during the Late Silurian to Late Devonian, New England Fold Belt. Australian J. Earth Sci. 49, p. 349-366.

Offler, R. & C. Murray (2011)- Devonian volcanics in the New England Orogen: tectonic setting and polarity. Gondwana Research 19, 3, p. 706-715.
(Devonian volcanics in New England Orogen formed in intra-oceanic island arc and back arc basin settings. Many samples that formed in BAB have mixed MORB and arc characteristics, believed to be due to subduction component in basaltic magma. Samples with MORB-like compositions originated at spreading centres. Late Devonian basalts more arc-like to W, suggesting W-facing polarity. Two subduction zones in Late Devonian: (1) dipping W beneath Lachlan Orogen, (2) dipping E beneath rifted intra oceanic arc. Obduction of this intra oceanic arc over continental margin of Lachlan Orogen in latest Devonian at ~375 Ma led to development of new W dipping subduction zone oceanward and start of continental, arc magmatism)

O'Sullivan, P.B., D.A. Foster, B.P. Kohn & A.J.W. Gleadow (1996)- Multiple postorogenic denudation events: an example from the eastern Lachlan fold belt, Australia. Geology 24, 6, p. 563-566.
(Fission-track results from E part of Lachlan fold belt suggest two distinct episodes of rapid km-scale denudation since M Carboniferous when deformation in fold belt ceased: (1) E Triassic, possibly response to Hunter-Bowen orogeny, affected New England fold belt, Sydney-Bowen basin, and now Lachlan fold belt (2) M

Cretaceous, possibly in response to onset of continental extension in Tasman Sea at ~96 Ma, resulting in km-scale denudation over much of SE highlands of Australia)

Partridge, A.D. (2006)- Australian Mesozoic and Cenozoic palynology zonations (Charts 1-4). In: E. Monteil (coord.) Australian Mesozoic palynology zonations- updated to the 2004 Geologic Time Scale, Geoscience Australia Record 2006/23.
(online: /www.ga.gov.au/image_cache/GA14151.pdf, www.ga.gov.au/image_cache/GA14153.pdf)
(Spore-pollen and dinocyst zonations charts: Jurassic- Early Cretaceous for Australia, Late Cretaceous-Cenozoic Gippsland Basin)

Petrizzo, M.R. (2000)- Upper Turonian-lower Campanian planktonic foraminifera from southern mid-high latitudes (Exmouth Plateau, NW Australia): biostratigraphy and taxonomic notes. Cretaceous Research 21, 4, p. 479-505.
(Planktonic foraminifera from ODP Holes 762C and 763B Some low latitude (Globotruncana ventricosa, Hedbergella flandrini, Marginotruncana marianosi) and high latitude (Globigerinelloides impensus, Hedbergella sliteri) markers different vertical distribution at mid-high latitudes from low latitudes)

Passmore, V.L. (1980)- Laura Basin. In: Stratigraphic correlation between sedimentary basins of the ESCAP region, VII, ESCAP Atlas of stratigraphy II, Australia, Japan, Mineral Res. Dev. Ser. 46, p. 23-27.
(Well cross-section of N-S trending Laura Basin shows ~500-700m sandy Middle- Late Jurassic section (Dalrymple Sst, Gilbert River Fm), unconformably over Hodgkinson Basin Permian. Basin trends offshore under Great Barrier Reef)

Peters, S.G. (1993)- Polygenetic melange in the Hodgkinson goldfield, Northern Tasman Orogenic Zone. Australian J. Earth Sci. 40, 2, p. 115-129.
(Melange intercalated with multiply deformed Siluro-Devonian shale, greywacke, clast-in-matrix rock, spilite and chert in Hodgkinson goldfield of NE Australia)

Phillips, G. & R. Offler (2011)- Contrasting modes of eclogite and blueschist exhumation in a retreating subduction system: The Tasmanides, Australia. Gondwana Research 19, 3, p. 800-811.
(Three groups of HP metamorphic blueschists and eclogites in Tasmanides: (1) eclogite-blueschists in thick sedimentary sequences (exhumation by buoyancy of continental slabs); (2) moderate-pressure (< 9 kbar) blueschist of arc to MORB-type composition in sedimentary or serpentinite melange zones (accretionary HP rocks; exhumation by corner flow and/or extensional collapse in accretionary wedge) and (3) eclogites of MORB-type composition within serpentinite (exotic HP rocks; exhumation by slab rollback and trench retreat)
(Three groups pf blueschists and eclogites in Tasmanides of E Australia: (1) eclogite-blueschists with calc-alkaline/ tholeiitic affinities in thick sedimentary sequences (continental HP rocks; exhumation by buoyancy of continental slabs); (2) moderate-P blueschist of arc to MORB-type composition in sedimentary or serpentinite melange zones (accretionary HP rocks; exhumation by corner flow /or extensional collapse in accretionary wedge) and (3) eclogites of MORB-type composition within serpentinite (exotic HP rocks; discontinuous exhumation triggered by slab rollback and trench retreat) Dominant W-dipping, E-ward migrating subduction zone can explain HP metamorphic rocks in Tasmanides.)

Pohler, S. (1998)- Devonian carbonate buildup facies in an intra-oceanic island arc (Tamworth Belt, New South-Wales, Australia). Facies 39, p. 1-34.
(E- M Devonian biohermal buildups in Tamworth Belt, possibly comparable to NE Kalimantan Devonian coral)

Pope, G.J. (2000)- An application of sequence stratigraphy in modelling oil yield distribution, the Stuart oil shale deposit, Queensland, Australia. M.Sc. Thesis Queensland University of Technology, p. 1-121.
(online at: https://eprints.qut.edu.au/16145/1/Graham_Pope_Thesis.pdf)
(M-L Eocene lacustrine oil shales of Stuart deposit in Rundle Fm of Duaringa half-graben, C Queensland coast)

Powell, C.M. (1984)- Late Devonian and early Carboniferous: continental magmatic arc along the eastern edge of the Lachlan Fold belt. In: J.J. Veevers (ed.) Phanerozoic Earth history of Australia, Oxford Science Publ., p. 329-240.

Powell, C.M., Z.X. Li & G.A. Thrupp (1990)- Australian Palaeozoic palaeomagnetism and tectonics- I. Tectonostratigraphic terrane constraints from the Tasman Fold Belt. J. Structural Geol. 12, p. 553-565.
(Tasman Fold Belt three N-S orogenic realms: Kanmantoo, Lachlan-Thomson and New England. Kanmantoo Orogen accreted to Australia by Late Cambrian. Lachlan Fold Belt two major amalgamated terranes by M Silurian, progressively covered, from W in Late Silurian-Late Devonian by quartzose overlap assemblage. New England Orogen fragmentary E Paleozoic history, but from Devonian onwards related to series of volcanic island and continental margin magmatic arcs. Docking not demonstrated until mid-Carboniferous)

Power, P.E. & S.B. Devine (1970)- Surat Basin, Australia- subsurface stratigraphy, history and petroleum. American Assoc. Petrol. Geol. (AAPG) Bull. 54, 12, p. 2410-2437.
(Jurassic- Lower Cretaceous Surat basin is segment of Great Artesian basin. Deposition of fluvial quartzose sands began in Late Triassic E of Surat basin and transgressed W-ward to C and N parts of basin, covering folded and block-faulted Triassic and older rocks. Mainly non-marine deposits, up to 7500' thick. Uplift-erosion event in M Jurassic time. Cretaceous sediments becoming marine. Basin contracted in M Cretaceous due to deformation N and E of basin. Small Jurassic oil-gas fields. Source probably in nonmarine Jurassic rocks, but marine Permian may have contributed)

Przeslawski, R., A. Williams, S.L. Nichol, M.G. Hughes, T.J. Anderson & F. Althaus (2011)- Biogeography of the Lord Howe Rise region, Tasman Sea. Deep Sea Research II, 58, 7-8, p. 959-969.
(Lord Howe Rise is ribbon fragment of continental crust, separated from E Gondwana as Tasman Sea opened in Late Cretaceous. It attained present position once seafloor spreading ended, at ~52Ma, then subsided to present depth by ~23 Ma. LHR supports mixture of endemic species together with species associated with Australian and NewZealand continental margins)

Quinn, C.D., I.G. Percival, R.A. Glen & W.J. Xiao (2014)- Ordovician marginal basin evolution near the palaeo-Pacific east Gondwana margin, Australia. J. Geol. Soc. 171, 5, p. 723-736.
(Ordovician Macquarie Arc in E Lachlan Orogen of SE Australia long considered to be intra-oceanic arc within an accretionary orogen. More likely extensional tectonics at palaeo-Pacific E Gondwana margin in Ordovician with alkalic and calc-alkalic Cu-Au porphyry deposits away from active arc system)

Raza, A., K.C. Hill & R.J. Korsch (2009)- Mid-Cretaceous uplift and denudation of the Bowen and Surat Basins, eastern Australia: relationship to Tasman Sea rifting from apatite fission-track and vitrinite-reflectance data. Australian J. Earth Sci. 56, p. 501-531.
(Peak paleotemperatures/ depth of burial in Bowen and Gunnedah Basins, E Australia, in Early Cretaceous. Late Cretaceous (100-80 Ma) cooling, with erosion of up to 1.9 km of Jurassic- E Cretaceous rock. Uplift widespread along E margin of Gondwanaland, including all of E Australia, New Zealand, Antarctica. Onset of mid-Cretaceous denudation coincided with continental extension after cessation of volcanism and subduction at ~95 Ma, and prior to initiation of seafloor spreading at ~84 Ma and formation of current passive margin)

Rey, P.F. & R.D. Muller (2008)- Late Cretaceous-Paleocene evolution of the East Gondwana margin, a new dynamic model for the formation of marginal basins. In: J.E. Blevin et al. (eds.) Eastern Australasian Basins Symposium III- Energy security for the 21st century, Sydney, Petroleum Expl. Soc. Australia (PESA), Spec. Publ., p. 267-269.
(At ~100 Ma E Gondwana cordillera started oceanward gravitational collapse, until opening of Tasman Sea from ~90 to 52 Ma. Collapse of cordilleran orogens, marginal basin opening and detachment of micro-continents often considered consequence of slab rollback, but along E Gondwana margin Late Cretaceous change in plate motion probably caused switch from contractional to extensional tectonics)

Rey, P.F. & R.D. Muller (2010)- Fragmentation of active continental plate margins owing to the buoyancy of the mantle wedge. Nature Geoscience 3, p. 257-261.

(Mantle-wedge buoyancy may explain collapse of E Gondwana Cordillera along edge of E Australia/ E Antarctic. At 105-90 Ma, change in absolute plate motion reduced subduction velocity, triggering gravitational collapse of orogen and fragmentation of active margin)

Roberts, J. (1987)- Carboniferous faunas: their role in the recognition of tectonostratigraphic terranes in the Tasman Belt, eastern Australia. In: E.C. Leitch & E. Scheibner (eds.) Terrane accretion and orogenic belts, American Geophys. Union (AGU), Geodyn. Ser. 19, p. 93-102.
(Two marine invertebrate assemblages in Carboniferous shelfal successions of Australia: (1) high diversity, warm water, E Carboniferous Cosmopolitan; (2) low diversity, cold water, M-L Carboniferous Gondwanan. In E Carboniferous Yarrol-New England portion of Tasman Tasman Belt may be separate terrane, in near-equatorial position N of Australia, as indicated by paleomagnetic data, and docked later in Carboniferous)

Roberts, J., J.C. Claoue-Long & C.B. Foster (1996)- SHRIMP zircon dating of the Permian system of eastern Australia. Australian J. Earth Sci. 43, 4, p. 401-421.
(SHRIMP zircon dates from Permian ignimbrites and tuffs associated with fossiliferous strata within the Sydney-Bowen Basin and New England Orogen)

Roberts, J. & B.A. Engel (1980)- Carboniferous palaeogeography of the Yarrol and New England orogens, eastern Australia. J. Geol. Soc. Australia 27, p. 167-186.
(During Carboniferous Yarrol and New England Orogens comprised active depositional margin E of cratonised parts of Australia)

Roberts, J., P.J. Jones & T.B.H. Jenkins (1993)- Revised correlations for Carboniferous marine invertebrate zones of eastern Australia. Alcheringa 17, 4, p. 353-376.
(Update of E Australian faunal zonations and chronostratigraphy of Carboniferous. Gondwanan assemblages succeeding E Carboniferous cosmopolitan faunas cannot be readily correlated with N Hemisphere biozones)

Rosenbaum, G., P. Li & D. Rubatto (2012)- The contorted New England Orogen (eastern Australia): new evidence from U-Pb geochronology of early Permian granitoids. Tectonics 31, TC1006, p. 1-14.
(online at: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2011TC002960)
(Sharp bends (oroclines) in Paleozoic- E Mesozoic New England Orogen of E Australia, obscured by voluminous magmatism (E Permian granitoids zircon U-Pb ages 296-288 Ma). Phase of younger magmatism (<260 Ma) postdates orocline development. Tectonic model involves early stage of subduction curvature during slab rollback at 300-285 Ma, followed by bending associated with dextral transpression and final tightening possibly by E-W shortening during Late Permian- Triassic (265-230 Ma) Hunter-Bowen orogeny)

Schellart, W.P., B.L.N. Kennett, W. Spakman & M. Amaru (2009)- Plate reconstructions and tomography reveal a fossil lower mantle slab below the Tasman Sea. Earth Planetary Sci. Letters 278, p. 143-151.
(New P-wave and S-wave mantle tomography models from SW Pacific identify flat-lying high-velocity anomaly below Tasman Sea at ~1100 km depth that cannot be linked to Pacific subduction. Strike NW-SE and ~2200 x 600-900 km in lateral extent. Can be interpreted as middle Cenozoic single NE-dipping New Caledonia fossil subduction zone)

Seton, M., N. Flament & R.D. Muller (2012)- Subduction history in the Melanesian Borderlands region, SW Pacific. In: Eastern Australian Basins Symposium IV (EABS IV), Brisbane 2012, p. 1-12.
(online at: www.earthbyte.org/Resources/Pdf/Seton_Melanesian_borderlands_subduction_history_EABS4_2012.pdf
(Plate kinematic model of E Coral Sea area developed from comparison with seismic tomography. Subduction history in E Coral Sea works well for latest Cenozoic but fails to predict seismically fast material (indicative of cold, subducted material) in lower mantle imaged in seismic tomography models)

Seton, M., N. Mortimer, S. Williams, P. Quilty, P. Gans, S. Meffre, S. Micklethwaite, S. Zahirovic, J. Moore & K.J. Matthews (2016)- Melanesian back-arc basin and arc development: constraints from the eastern Coral Sea. Gondwana Research 39, p. 77-95.

(E Coral Sea in NE corner of Australian Plate, where interaction between Pacific and Australian plate boundaries, and accretion of Ontong Java Plateau resulted in complex assemblage of back-arc basins, island arcs, continental plateaus and volcanic products. Start of opening of Santa Cruz Basin and S Rennell Trough at ~48 Ma and termination at 25-28 Ma. Simultaneous opening of Melanesian Basin/ Solomon Sea further N suggests single >2000 km long back-arc basin, with triple junction landward of Melanesian subduction zone from Eocene-Oligocene. Cessation of spreading corresponds with reorganization of plate boundaries and initial soft collision of Ontong Java Plateau)

Shaanan, U. & G. Rosenbaum (2018)- Detrital zircons as palaeodrainage indicators: insights into southeastern Gondwana from Permian basins in eastern Australia. Basin Research 30, Suppl. 1, p. 36-47.
(U-Pb ages from detrital zircon grains from E Permian sediments (~290-297 Ma) in southern New England Orogen. Over 80% of ages Late Carboniferous, from adjacent forearc sediments. Pre-Devonian detritus from SE Gondwanan craton, with peaks of 2000-1500 Ma, 1200-900 Ma (Grenvillian) and 620-480 Ma)

Shaanan, U., G. Rosenbaum, D. Hoy & N. Mortimer (2018)- Late Paleozoic geology of the Queensland Plateau (offshore northeastern Australia. Australian J. Earth Sciences 65, 3, p. 357-366.
(Queensland Plateau (off NE Australia) submerged continental block. Detrital zircons from two drill cores that penetrated Paleozoic metasedimentary strata (ODP Leg 133) provide maximum depositional ages of ~319 and 299 Ma. Queensland Plateau probably formed in backarc basin, NE continuation of New England Orogen and/or E Australian Rift System)

Shaw, S.E. & R.H. Flood (1981)- The New England Batholith, Eastern Australia: geochemical variations in time and space. J. Geophysical Research 86, p. 10530-10544.

Sheps, K. (2004)- Quantitative paleoenvironmental analysis of carbonate platform sediments on the Marion Plateau (NE Australia, ODP Leg 194). M.Sc. Thesis, College of Marine Science, University Southern Florida, p. 1-105.
(online at: www.etd.fcla.edu/SF/SFE0000546/kshepsthesis.pdf)
(Paleoenvironmental distribution of Large Benthic Foraminifera, etc.)

Sircombe, K.N. (1999)- Tracing provenance through the isotope ages of littoral and sedimentary detrital zircon, eastern Australia. Sedimentary Geology 124, p. 47-67.
(Provenance of detrital zircons in 19 littoral and sedimentary deposits in E Australia four age groups: (1) 100-175 Ma= Jurassic-Cretaceous volcanism along E Australian margin; (2) 225-350 Ma = New England Orogen; (3) 350-500 Ma correlated with magmatism in Lachlan Orogen. Ultimate source of Pacific-Gondwana 500-700 Ma ages tentatively identified as Neoproterozoic orogeny along E Antarctic margin. Lachlan Orogen age grouping stronger in S, New England Orogen age grouping stronger in N)

Sivell, W.J. & J.B. Waterhouse (1988)- Petrogenesis of Gympie Group volcanics: evidence for remnants of an Early Permian volcanic arc in eastern Australia. Lithos 21, 2, p. 81-95.
(Gympie Group, SE Queensland, tectonomorphically anomalous Lower Permian submarine volcanic sequence composed of mafic basalt- basaltic andesites, breccias and subordinate lavas, with dacitic tuffs and glassy flows. Gympie suite represents immature submarine tholeiitic stage of portion of major intra-oceanic arc that bordered Gondwana, but was fragmented by opening of Tasman Sea)

Smart, J., K.G. Grimes, H.F. Doutch & J. Pinchin (1980)- The Mesozoic Carpentaria and Cainozoic Karumba Basins, North Queensland. Bureau Mineral Res. Geol. Geophysics, Bull. 202, p. 1-73.
(online at: /www.ga.gov.au/corporate_data/53/Bull_202.pdf)
(Mesozoic Carpentaria Basin shallow, saucer-shaped, intra-cratonic downwarp of ~560 000 km2 with up to ~1200 m of M Jurassic -Albian sediments, underlying most of Gulf of Carpentaria, Cape York Peninsula, and area south of Gulf. E Cretaceous transgression from N caused change to shallow marine conditions, with widespread 5-20m thick low-grade oil shale of mid-Albian Toolebuc Fm)

Smart, J. & B.R. Senior (1980)- Jurassic-Cretaceous basins of northeastern Australia. In: R.A. Henderson& J.P. Stephenson. (eds.) The geology and geophysics of Northeastern Australia, Third Australian Geol. Conv., Townsville, Geol. Soc. Australia, p. 315-328.
(On Carpenteria, Laura basins in N Queensland)

Sommacal, S., L. Pryer, J. Blevin et al. (2008)- Clarence-Moreton SEEBASE TM and Structural GIS Project. FrOG Tech Pty Ltd. Report to NSW DPI, p. 1-37.
(online at: www.dpi.nsw.gov.au/__data/assets/pdf_file/0007/244339/MR707-Clarence-Moreton-SEEBASE-structural-GIS-project.pdf)
(Clarence-Moreton Basin, with non-marine Late Triassic- E Cretaceous section, formed on basement of probable tightly folded pre-Permian forearc and accretionary wedge material with granitoid intrusions. M-L Triassic early basin deposits include Nymboida and Ipswich coals. Also M Jurassic coal in sag phase across much of basin)

Spampinato, G.P.T., P.G. Betts, L. Ailleres & R.J. Armit (2015)- Early tectonic evolution of the Thomson Orogen in Queensland inferred from constrained magnetic and gravity data. Tectonophysics 651-652, p. 99-120.

SRK Consulting (2010)- Gunnedah Bowen Study. Report to NSW DPI, p. 1-97.
(Online at: www.dpi.nsw.gov.au/minerals/resources/petroleum/reports)
(Major study on coal-bearing Permian-Triassic Gunnedah, Sydney and Bowen Basins, which developed mostly W of the N-trending suture between the Lachlan Foldbelt and New England foldbelts)

Stratford, J.M.C. & J. C. Aitchison (1996)- Devonian intra-oceanic arc rift sedimentation- facies development in the Gamilaroi terrane, New England orogen, eastern Australia. Sedimentary Geology 101, p. 173-192.
(Silurian-Devonian rocks in Gamilaroi terrane of New England orogen example of intra-oceanic arc rift, with volcaniclastics deposited by debris flows and turbidity currents. Subordinate facies include limestones, crystal-rich volcaniclastic sandstones, volcanic breccias and olistostromes. Felsic volcanics at base of section represent part of original arc and are overlain by volcaniclastic sandstones and mudstones deposited within an arc basin. Lower Devonian (Emsian) limestones. Thick pillow basalts at top of succession)

Struckmeyer, H.I.M. & P.A. Symonds (1997)- Tectonostratigraphic evolution of the Townsville Basin, Townsville Trough, offshore northeast Australia. Australian J. Earth Sci. 44, p. 799-817.
(Townsville Basin is E-W extensional half-graben, separating Marion and Queensland Plateaus, off NE Australia. No direct control on stratigraphy; timing interpreted from regional context. Up to ~6.5 km sediment in two megasequences: (1) probably Cretaceous synrift in fault-controlled depocentres up to 4 km thick; (2) Tertiary sag-phase up to 3.8 km thick. Half-grabens contain several rotational blocks. Compartmentalised into sub-basins by NNW-NW trending transverse zones, which may represent pre-existing basement structures. Two extensional events. Structuring event during early sag-phase followed by multiple reactivation in ?Late Miocene- E Pliocene. Townsville Basin part of complex rift system of probable Late Jurassic-E Cretaceous age, formed as result of oblique extension that utilised pre-existing Paleozoic structural trends. Comparison with trends of adjacent Queensland Trough suggests formation of both basins independent of (Late Cretaceous-Paleocene) sea-floor spreading in Tasman and Coral Sea Basins)

Symonds, P.A., J. Fritsch & H. Schluter (1984)- Continental margin around the western Coral Sea Basin: structural elements, seismic sequences and petroleum geological aspects. In: S.T. Watson (ed.) Trans. Third Circum-Pacific Energy and Mineral Resources Conference, Honolulu 1982, AAPG, p. 243-252.
(Coral Sea oppposing margins of Queensland and Papuan Plateaus underlain by (Late Cretaceous-Paleocene) rift zone which would have been up to 80 km wide before continental break up. Outer basement highs, with low angle contacts with oceanic crust, in oceanward part of rift zone on both sides of Coral Sea Basin and under lower slope of Eastern Plateau, N Queensland Trough and Osprey Embayment. N Queensland Trough and W margin of Eastern Plateau underlain by grabens with up to 5 km of sediments, part of which may be Mesozoic deltaic sequence similar to that intersected in Anchor Cay 1 well, or deeper water equivalent)

Symonds, P.A., J.B. Colwell, H.I. Struckmeyer, J.B. Willcox & P.J. Hill (1996)- Mesozoic rift basin development off eastern Australia, Geol. Soc. Australia Bull. 43, p. 528-542.

Taylor, L. & D. Falvey (1977)- Queensland Plateau and Coral Sea Basin: stratigraphy, structure and tectonics. The Australian Petrol. Explor. Assoc. (APEA) J. 17, 1, p. 13-29.
(Seismic and gravity show up to 3km thick U Cretaceous-Paleogene rift-valley sequences under offshore NE Australia Queensland and Townsville Troughs)

Totterdell, J.M., J. Moloney, R.J. Korsch & A.A. Krassay (2009)- Sequence stratigraphy of the Bowen-Gunnedah and Surat Basins in New South Wales. Australian J. Earth Sci. 56, 3, p. 433-459.

Tulloch, A., J. Ramezani, K. Faure & A. Allibone (2010)- Early Cretaceous magmatism in New Zealand and Queensland: intra-plate or intra-arc origin?. In: S. Buckman & P.L. Blevin (eds.) Proc. Conf. New England Orogen 2010 (NEO 2010), Armidale, p. 332-335.
(Mesozoic magmatism in New Zealand dominated by 800+km-long subduction-related Median Batholith. Main phase of magmatism 170-105 Ma, broadly subdivided into 130-105 Ma inboard belt (adakitic) and 170-130 Ma outboard belt. E Cretaceous magmatism in E Australia dominated by Whitsunday Volcanic Province with high-silica rhyolite and bimodal basalt and coeval isolated granitic plutons (mainly 134-120, some 100 Ma), comparable to that of Median Batholith. Apparent absence of Cretaceous subduction zone suggests formation in extensional intra-plate environment (but too old for 84-55 Ma Tasman Sea spreading?))

Uysal, I.T., M. Glikson, S.D. Golding & F. Audsley (2000)- The thermal history of the Bowen Basin, Queensland, Australia: vitrinite reflectance and clay mineralogy of Late Permian coal measures. Tectonophysics 323, 1, p. 105-129.
(Vitinite Reflectance values from 0.45% Ro in S Bowen Basin to >3.5% Ro in N Bowen Basin. Maximum temperatures of organic maturation of Bowen Basin coals not related to deep burial metamorphism during latest M Triassic- earliest Late Triassic, but to zone of high heat flow in latest Late Triassic)

Vaughan, A.P.M & R.A. Livermore (2005)- Episodicity of Mesozoic terrane accretion along the Pacific margin of Gondwana: implications for superplume-plate interactions. In: A.P.M. Vaughan et al. (eds.) Terrane processes at the margins of Gondwana. Geol. Soc., London, Spec. Publ. 246, p. 143-178.
(Discussion of Late Triassic- E Jurassic (202-197 Ma) and Mid-Cretaceous(~116-110 Ma) periods of coincident continental rifting and marginal collision around Paleo-Pacific. Both are times of elevated mantle heat flow and magmatism, followed by periods of high rates of continental extension (Pangea/Gondwana break-up in Late Triassic-E Jurassic; extensional core-complex formation in M Cretaceous), and times of oceanic plate reorganization and major changes in plate velocity. Possibly related to 'superplume events')

Veevers, J.J., P.J. Conaghan & C.M. Powell (1994)- Eastern Australia. In: J.J. Veevers & C.M. Powell (eds.) Permian-Triassic Pangean basins and foldbelts along the Panthalassan margin of Gondwanaland, Geol. Soc. America (GSA) Mem. 184, p. 11-172.
(Extensive overview of Tasmanides geology)

Verard, C. & G.M. Stampfli (2013)- Geodynamic reconstructions of the Australides-1: Palaeozoic. Geosciences 3, 2, p. 311-330.
(online at: www.mdpi.com/2076-3263/3/2/311)
(Plate reconstruction of Australides (Australia-Antarctica-proto-Pacific) system from 600-200 Ma. Most geodynamic units of Australides exotic in origin, and many tectonic events of Delamerian Cycle, Lachlan SuperCycle, and New England SuperCycle regarded as occurring offshore Gondwana)

Verard, C. & G.M. Stampfli (2013)- Geodynamic reconstructions of the Australides-2: Mesozoicï Cainozoic. Geosciences 3, 2, p. 331-353.
(online at: www.mdpi.com/2076-3263/3/2/331)
(Plate reconstruction model of area between Pacific, Australian and Antarctic plates since 200 Ma)

Vos, I.M.A., F.P. Bierlein & D. Phillips (2007)- The Palaeozoic tectono-metallogenic evolution of the northern Tasman Fold Belt system, Australia: interplay of subduction rollback and accretion. Ore Geology Reviews 30, p. 277-296.

Vos, I.M.A., F.P. Bierlein & J. Webb (2006)- Geochemistry of Early- Middle Palaeozoic basalts in the Hodgkinson Province: a key to tectono-magmatic evolution of the Tasman Fold Belt System in northeastern Queensland, Australia. Int. J. Earth Sciences (Geol. Rundschau) 95, 4, p. 569-585.
(Hodgkinson Province Late Ordovician- Devonian tholeiitic- calc-alkaline basalts interspersed with marine sedimentary rocks and limestones, metamorphosed to lower greenschist facies. Decreasing volcanic arc affinity of Silurian-Devonian MORB-type basalts. Interpreted to reflect deposition in back-arc basin setting. Onset of basin extension in Silurian, accelerated subsidence through Devonian and halted by basin inversion in Late Devonian. Basin evolution controlled by E-ward stepping subduction zone outboard of Australian Craton)

Wartenberg, W. (2005)- The concealed Tamworth Belt (New England Orogen)- stratigraphic and geophysical observations depicting a thrust-related geometry in southern Queensland, Australia. Doct. Diss. Rheinischen Friedrich-Wilhelms University, Bonn, 106p.
(extended abstract online at: http://hss.ulb.uni-bonn.de/2005/0534/0534-1.pdf)
(Tamworth and Yarrol Belts part of Devonian-Carboniferous fore-arc basin, partly concealed in W by Permian-Triassic Bowen and Gumnnedal rift basins. Age equivalent accretionary wedge assemblages in outcrop across E part of orogeny, e.g. Tablelands Complex in NSW and Beenleigh, D'Aguilar, Wandilla and Shoalwater terranes in Queensland. Magmatic arc exposed only in N NEO (Conners and Auburn arcs))

Waschbusch, P., R.J. Korsch & C. Beaumont (2009)- Geodynamic modelling in aspects of the Bowen, Gunnedah, Surat and Eromanga basins from the perspective of convergent margin processes: Australian J. Earth Sci. 56, p. 309-334.
(Geodynamic modelling of Bowen, Gunnedah, Surat and Eromanga Basins. Bowen and Gunnedah Basins subsidence in early Late Permian initial foreland phase platform tilting associated with W-directed subduction. Late Permian-E Triassic platform tilting due to foreland loading, as thrust front in New England Orogen migrated W-ward. Surat and Eromanga subsidence also dynamic platform tilting. Uplift of Eastern Highlands in mid-Cretaceous due to rebound of lithosphere after cessation of W-directed subduction)

Waterhouse, J.B. & W.J. Sivell (1987)- Permian evidence for Trans-Tasman relationships between East Australia, New Caledonia and New Zealand. Tectonophysics 142, p. 227-240.
(E Permian submarine volcanic sequence of Gympie Group, SE Queensland suggestive of immature submarine, tholeiitic stage of arc development on thin (oceanic) crust. M Carboniferous-Permian calc-alkaline Camboon arc to W developed on continental crust. Volcanics and overlying sediments of Gympie Group similar to volcanic arc and adjoining formations of Nelson-Eglinton-Takitimu areas of New Zealand. Dacitic volcanics in New Caledonia may form young part of same volcanic arc. Overlying Permian sediments further similarities between three regions. New Zealand was locus for actively spreading mid-ocean ridge (Dun Mt Ultramafics/ Patuki ophiolite complex), Gympie lay towards end of mid-ocean ridge, New Caledonia close to terminus of volcanic arc and received more terrestrial sediment)

Webb, G.E. (1990)- Lower Carboniferous coral fauna of the Rockhampton Group, east-central Queensland. In: P.A. Jell (ed.) Devonian and Carboniferous coral studies, Assoc. Australasian Pal. Mem. 10, p. 1-167.

Webb, A.W. & I. McDougall (1968)- The geochronology of the igneous rocks of Eastern Queensland. J. Geol. Soc. Australia 15, p. 313-346.
(E Queensland phases of granite emplacement in Devonian (360 Ma), Carboniferous (310, 285Ma), Permian (265, 245, 235 Ma), Triassic (220 Ma.) and Cretaceous (125, 110 Ma). Activity moved generally E-wards with time. Igneous intrusion in Late Permian can be correlated with phases of the Hunter-Bowen Orogeny)

Webby, B.D. (1987)- Biogeographic significance of some Ordovician faunas in relation to east Australian Tasmanide suspect terranes. In: E.C. Leitch & E. Scheibner (eds.) Terrane accretion and orogenic belts, AGU Geodynamics Ser. 19, p. 103-117.

Weissel, J.K. & D.E. Hayes (1978)- Evolution of the Tasman Sea reappraised. Earth Planetary Sci. Letters 36, p. 77-84.
(Revised interpretations of S Tasman Sea magnetic lineations and fracture zones. Simple two-plate spreading system, active between about 82-60 Ma)

Wellman, P. (1995)- Interpretation of regional magnetic and gravity data in Cape York Peninsula, Queensland. Australian Geol. Survey Org. Record 1995/45, 53p.

Wellman, P. (1995)- The Lakefield Basin: a new Permian basin in far North Queensland. Queensland Government Mining Journal 95, 19-23.

Wellman, P., H.I.M. Struckmeyer, P.A. Symonds, M.E. Fellows, D.L. Scott & J.J. Draper (1997)- Coral Sea region. In: J.H.C. Bain & J.J. Draper (eds.) North Queensland geology, AGSO Bull. 240, p. 409-418.

Wells, A.T. & P.E. O'Brien (1994)- Lithostratigraphic framework of the Clarence-Moreton Basin. In: A.T. Wells & P.E. O'Brien (eds.) Geology and petroleum potential of the Clarence-Moreton Basin, New South Wales and Queensland, AGSO, Bull. 241, p. 4-47.

Withnall, I.W., R. Bultitude, S.C. Lang, P.J. Donchak & R.L. Hammond (1987)- Geology and tectonic history of the Palaeozoic Hodgkinson and Broken River provinces, North Queensland. In: E. Brennan (ed.) Proc. Pacific Rim Congress 1987, Gold Coast, Australasian Inst. of Mining and Metallurgy (AusIMM), Parkville, p. 495-498.
(Hodgkinson and Broken River provinces of N part of Tasman Orogen separated by Late Paleozoic igneous rocks, but probably originally continuous. Hodgkinson Province multiply deformed and composed mainly of Silurian-Devonian turbidites, mainly quartz-rich and continent-derived. With probably allochthonous limestone lenses (with E Silurian- E Devonian conodonts))

Withnall, I.W. & R.A. Henderson (2012)- Accretion on the long-lived continental margin of northeastern Australia. Episodes 35, 1, p. 166-176.
(online at: www.episodes.co.in/contents/2012/march/p166-176.pdf)
(S part of Tasman Orogenic Zone broad tract of crust, ~1000 km across, added to cratonic core of Australia. In N Queensland much smaller volume of new crust generated, expressing slow accretion. As a consequence, three large-scale, successive Paleozoic active margin igneous assemblages form largely co-located and overprinting belts with plutonic suites stitching Tasman Line and extending into craton)

Withnall, I.W., D.E. Mackenzie, T.J. Denaro, J.H.C. Bain et al. (1997)- Georgetown Region. In: J.H.C. Bain & J.J. Draper (eds.) North Queensland Geology, Australian Geol. Survey Org. Bull. 240/ Queensland Geology 9, p. 19-116.

Zuchetto, R.G., R.A. Henderson, B.K. Davis & R. Wysoczansky (1999)- Age constraints on deformation of the eastern Hodgkinson Province, North Queensland: new perspectives on the evolution of the northern Tasman Orogenic Zone. Australian J. Earth Sci. 46, p. 105-114.
(Granitic plutons intrude Hodgkinson Fm of E Hodgkinson Province, N Queensland. Fabrics show four deformational events. Plutons two supersuites: (1) latest Devonian- earliest Carboniferous, with emplacement age of ~357 Ma (Mt Formartine Suite); (2) Early Permian Wangetti suite (majority of granites). Devonian-Carboniferous granites emplacement associated with first episode of regional orogenesis and development of penetrative fabrics in Hodgkinson-Broken River Fold Belt)

X. PALEONTOLOGY, BIOSTRATIGRAPHY

(Numerous additional biostratigraphy papers are listed under specific areas, and are not all repeated here)

X.1. Quaternary-Recent faunas-microfloras and distribution

Adisaputra, Mimin K. (1985)- Paleontological analyses of the Savu and Lombok basins and Argo abyssal plain. Proc. 14th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 205-221.

Adisaputra, Mimin K. (1988)- Late Quaternary calcareous nannoplankton in the surface sediment of Makasar and Flores basin, Indonesia. Bull. Marine Geol. Inst. Indonesia 3, 1, p. 25-36.

Adisaputra, Mimin K. (1989)- Planktonic foraminifera in recent bottom sediments of the Flores, Lombok and Savu Basins, eastern Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 465-475.
(Planktonic foraminiferal assemblages differ between Flores, Lombok and Savu Basins. In Flores Basin Ng. dutertrei dominant, followed by Gr. menardii, Pulleniatina obliquiloculata, Hastigerina siphonifera and Globigerina bulloides. Lombok and Savu Basins dominated by Gr. menardii, with Pulleniatina obliquiloculata, Gs. ruber and Gr. tumida)

Adisaputra, Mimin K. (1991)- Mikrofauna dan potensi wisata perairan Benoa, Bali. J. Geologi Sumberdaya Mineral 1, 2, p. 2-6.
('Microfauna and recreational potential of the water of Benoa, Bali'. Beach sand at Benoa, S of Denpasar, SE Bali, contains abundant foraminifera of genus Schlumbergerella, also Amphistegina lessoni, Calcarina calcar, Tinoporus spengleri, Baculogypsisna sphaerulata, Operculina, etc.)

Adisaputra, Mimin K. (1992)- Mikrofauna perairan Muria. J. Geologi Sumberdaya Mineral 2, 5, p. 11-16.
('Microfauna in the waters of Muria'. Shallow marine small benthic forams of Java Sea N of Muriah volcano. At less than 20m common Ammonia beccarii, Eponides praecinctus and Asterorotalia trispinosa. In deeper parts more Ammonia annectens, Pseudorotalia schroeteriana and Quinqueloculina. Not much detail)

Adisaputra, Mimin K. (1992)- Late Neogene planktonic foraminifera of the Makasar Basin. Bull. Marine Geol. Inst. 7, 1, p. 15-21.
(Abundant planktonic foraminifera in Makassar Straits bottom samples between 42-2300m, collected during Snellius II expedition. Globigerinoides ruber dominant in North, Neogloboquadrina dutertrei in S part)

Adisaputra, Mimin K. (1996)- Planktonic foraminifera and oxygen isotope records in two cores from the Banda Sea and Indian Ocean. J. Geologi Sumberdaya Mineral 6, 57, p. 10-17.
(Study of Quaternary planktonic foraminifera from two ~7-8m long French- Indonesian cores collected in 1990, one SW of Timor (2313m), one in Banda Sea depth (3163m). Neogloboqudrina dutertrei is indicator of rel. low salinity, Globorotalia menardii for rel. high salinity)

Adisaputra, Mimin K. (1996)- Biostratigrafi kuarter sedimen dasar laut perairan Indonesia bagian Timur dan Samudera Hindia. J. Geologi Sumberdaya Mineral 6, 59, p. 2-6.
('Stratigraphy of Quaternary seafloor sediments in waters of eastern Indonesia and the Indian Ocean'. Study of Quaternary planktonic foraminifera from 46 seven meter long seafloor cores in deep waters of E Indonesia and adjacent Indonesian Ocean. Four subzones in Quaternary Globorotalia truncatulinoides zone (N22-N23), from top: (1) Globorotalia fimbriata-Bolliella adamsi, (2) Globigerina calida, (3) Globorotalia crassaformis hessi and (4) Globigerinoides cyclostomus))

Adisaputra, Mimin K. (1997)- Foraminifera sedimen permukaa perairan Selat Bangka-Belitung. J. Geologi Sumberdaya Mineral 7, 70, p. 2-10.
('Foraminifera from seafloor sediments of Bangka-Belitung Straits'. 38 seafloor samples from straits S of Bangka and Belitung in water depths 10-50m. Dominant foraminifera Operculina ammonoides and other spp., followed by Quinqueloculina, Amphistegina lessonii, Elphidium, Cellanthus, Pseudorotalia schroeteriana, etc.)

Adisaputra, Mimin K. (1998)- *Schlumbergerella floresiana* accumulation in coastal zone of Bali and Nusatenggara, Indonesia: implementation for tourism. Proc. 33rd Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Shanghai 1996, p. 310-316.
('White sands' along coasts of E Bali, W Lombok, N Sumbawa and S Flores composed mainly of rounded foraminifera Schlumbergerella floresiana (formerly also called Tinoporus, Baculogypsina, Baculogypsinoides; JTvG). Forams derived from adjacent coral reefs)

Adisaputra, Mimin K. (1998)- Foraminifera bentos pantai Senggigi, Lombok Barat dan asosiasinya; faktor penunjang pariwisata. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 53-65.
('Benthic foraminifera of Senggigi Beach, W Lombok, and its associations; factors supporting tourism'. Senggigi beach with abundant foraminifera derived from adjacent reef flat, dominated by Schlumbergerella floresiana. Also Baculogypsina, Baculogysinoides spinosus, Amphistegina lessonii, Calcarina calcar))

Adisaputra, Mimin K. (2000)- Recent foraminifera on the coast and offshore of East Lombok, Eastern Indonesia. Proc. 36th Sess. Coord. Comm. Coastal and Offshore Programmes E and SE Asia (CCOP), Hanoi 1999, p. 181-200.
(Benthic foraminifera from East Lombok coast and Alas Strait shallow waters down to 90m. In N and central parts Amphistegina lessonii dominant and associated with Calcarina. In S Asterorotalia ('Rotalinoides') gaimardii dominant, still with Amphistegina. Beach samples in N with common Schlumbergerella and Baculogypsinoides, derived from coral reef. Planktonic foraminifera rare)

Adisaputra, Mimin K. (2000)- Late Neogene planktonic foraminiferal biostratigraphy of two cores in Timor waters, Indonesia. Majalah Geologi Indonesia (IAGI) 24, 1, p. 39-50.

Adisaputra, Mimin K. & M. Hendrizan (2011)- Foraminifera perairan Balikpapan, Kalimantan Timur: lingkungan pengendapan dan pengaruhnya. J. Geologi Kelautan 9, 2, p. 119-133.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/205/195)
('Foraminifera from waters off Balikpapan, East Kalimantan: depositional environment and its effects'. 195 benthic and 34 planktonic foraminifera species in Makassar Straits seafloor samples off Balikpapan, between 18-562m depth. Asterorotalia trispinosa dominant around 20m, Heterolepa praecincta most abundant from ~50-300m, Karreriella brady and Uvigerina spp. common only >300m, etc. Cycloclypeus only at 71 and 83m. Abundant planktonic foraminifera Neogloboquadrina dutertrei below 100m, indicating rel. low salinity.)

Adisaputra, Mimin K., M. Hendrizan & A. Kholiq (2010)- Katalog foraminifera perairan Indonesia. Pusat Puslitbang Geologi Kelautan, Bandung, p. 1-198.
('Catalog of Foraminifera collected from Indonesian seas')

Adisaputra, Mimin K. & D. Rostyati (2000)- Recorded Recent foraminifera in the surface sediment of Sunda Strait water. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 117-132.
(Foraminifera from 12 seafloor samples in Sunda Straits and adjacent Indian Ocean between 52- 2180m. Rel. common planktonic foram Neogloboquadrina dutertrei, possibly related to rel. low salinity. Most common benthics Bulimina and Bolivina (mostly 490-1580m). Hyalinea balthica between 489-1078m)

Adisaputra, Mimin K. & D. Rostyati (2003)- Foraminifera sedimen dasar Laut Delta Mahakam, Kalimantan Timur. J. Geol. Kelautan 1, 3, p. 1-10.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/98/88)
('Foraminifera in sediments offshore Mahakam Delta, E Kalimantan'. Foram distribution in samples mainly from 10-100m water depth. 39 species of planktonic, 149 benthic foraminifera. Common benthics Amphistegina lessonii, Heterolepa, Operculina and Pseudorotalia schroeteriana. Max. diversity at depth of 63,5 m)

Amijaya, H., Ngisomuddin & Akmaluddin (2010)- Characterization of July 17, 2006 tsunamiite at South coast of West Java. J. Southeast Asian Applied Geol. (UGM) 2, 1, p. 35-39.

(online at: https://journal.ugm.ac.id/index.php/jag/article/viewFile/7232/5672)
(Deposits of July 26 tsunami at Pangandaran Beach, W Java. Mainly f-m sand, ~10-12cm thick, separated from older beach sediment by erosional surface. Sedimentary structures parallel lamination and current ripples. No vertical fining trends. With transported shallow and deeper marine benthic foraminifera, incl. Ammonia, Elphidium, Amphistegina, Cibicides., Biginerina, Bolivina, Bathysiphon, Nodosaria and Quinqueloculina)

Anderson, J.A.R. (1963)- The flora of the peat swamp forests of Sarawak and Brunei, including a catalogue of all recorded species of flowering plants, ferns and fern allies. Singapore Gardens Bull. 20, p. 131-228.
(All modern coastal and deltaic peat swamps of N Borneo raised bog type. 243 plant/tree species, in 6 communities: 1) Mixed swamp forest, 2) Alan forest, 3) Alan bunga forest, 4) High pole forest, 5) Low pole forest, 6) Padang keruntum)

Aswan, Y. Zaim & Y. Rizal (2006)- Distribution of Quarternary freshwater molluscs fossils in Jawa. In: Y. Zaim et al. (eds.) S. Sartono: dari hominid ke delapsi dengan kontroversi, Penerbit ITB, Bandung, Chapter 9, p. 109-120.

Auliaherliaty, L., K.T. Dewi & Y.A. Priohandono (2004)- Foraminifera di Teluk Sepi- Blongas, Lombok selatan, Nusa Tenggara Barat dan kaitannya dengan faktor lingkungan. J. Geologi Kelautan 2, 3, p. 1-8.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/115/105)
(Seafloor sediment samples of 1-78m in Sepi-Blongas Bay, S Lombok, with 133 foraminiferal species, mainly Ammonia beccarii, Elphidium crispum, Pattelina, Amphistegina lessonii, Calcarina, Pyrgo, Quinqueloculina, etc.. Genus Calcarina with 15 species (?))

Baccaert, J. (1976)- Soritidae of the Lizard Island reef complex: a preliminary report. Annales Soc. Geologique Belgique 99, p. 237-262.
(Eight species of soritids, incl. Marginopora vertebralis)
(online at: http://popups.ulg.ac.be/0037-9395/index.php?id=5368&file=1&pid=5366)

Baccaert, J. (1986)- Foraminiferal bio- and thanatocoenoses of reef flats, Lizard Island, Great Barrier Reef, Australia: nature of substrate. Annales Soc. Royale Zoologique Belgique 116, 1, p. 3-14.

Baccaert, J. (1987)- Distribution patterns and taxonomy of benthic foraminifera in the Lizard Island reef complex, northern Great Barrier Reef, Australia. Ph.D. Thesis, Universite de Liege, 3 vols., 146p, 290p.

Barbin, V., J.C. Cailliez & D. Decrouez (1987)- Sable a *Schlumbergerella floresiana* (foraminifere) et *Conus mobilis skinneri* (gasteropode) de Kesuma Sari (SSE Bali, Indonesie). Revue Paleobiologie, Geneve, 6, 1, p. 159-164.
(Sands composed of large globular foram Schlumbergerella floresiana and Conus gastropods in SE Bali)

Barker, R.W. (1960)- Taxonomic notes on the species figured by H.B Brady in his report on the foraminifera dredged by the H.M.S. óChallengerô during the years 1873-1876. Spec. Publ. SEPM 9, p. 1-238.
(Useful taxonomic revision of beautifully illustrated modern deep water foraminifera book of Brady (1884) (see also Jones (1994, 2014))

Barmawidjaja, D.M. (1991)- Studies in living and fossil foraminifers from seasonally productive regions. Ph.D. Thesis University of Utrecht, Geologica Ultraiectiana 82, p. 1-221.
(online at: http://dspace.library.uu.nl/handle/1874/238680)
(Collection of papers on subrecent foraminifera in Adriatic Sea, semi-enclosed Kau Basin (Halmahera; sill depth 40m) and Molucca Sea. Three categories of species: epifaunal, predominantly infaunal and infaunal. Kau Basin, Halmahera was freshwater lake during Last Glacial Maximum, became reconnected with open ocean about 10 ka due to sea level rise at Pleistocene- Holocene transition. Dysoxic bottom conditions prevailed throughout Holocene. Piston core off Halmahera in N Molucca Sea suggest Pleistocene glacial climate was drier than today and surface water T 2.5° C lower than today)

Barmawidjaja, D.M. (1993)- Sebaran mikrohabitat Holosen bentos foraminifera di Teluk Kau. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1114-1129.
('Distribution of Holocene benthic foraminifera microhabitats in Kau Bay'. In English. Three piston cores of 8.5m long in Late Quaternary sediments from 20, 260 and 460m water depth in Kau Bay, NE Halmahera. Kau Bay was freshwater lake in Weichselian (Late Pleistocene Last Glacial Maximum. Foram assemblages dominated by opportunistic infauna (Bolivina spp., Bulimina marginata, Hopkinsina) and opportunistic epifauna, mainly responding to relatively low oxygen levels in basin after marine flooding. Rel. common Cassidulina crassa and Cancris auriculus)

Barmawidjaja, D.M. (1994)- Pengaruh lingkungan terhadap sebaran foraminifera plangton di Teluk Kau, Halmahera. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 173-183.
('Influence of environment on planktonic foraminifera distribution in Kau Bay, Halmahera')

Barmawidjaja, D.M., R. Kapid & B. Dwiyanto (1996)- Environmental factors controlling the distribution of benthonic foraminifera of Jakarta Bay. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1-15.

Barton, E. S. (1901)- The genus *Halimeda*. In: M. Weber (ed.) Siboga Expeditie, Uitkomsten op zoologisch, botanisch, oceanographisch en geologisch gebied verzameld in Nederlandsch Oost-Indie 1899-1900, Monographie LX, Brill, Leiden, p. 1-32.
(online at: http://images.algaebase.org/pdf/5964B9370f1d92EC18jmK2CED443/16210.pdf)
(Recent calcareous algae Halimeda rel. widespread in coastal reefs around of E Indonesia: LesserSunda Islands, Sulawesi, Aru and Kai islands and in Banda-Archipelago. Seven species distinguished)

Belasky, P. (1996)- Biogeography of Indo-Pacific larger foraminifera and scleractinian corals: a probabilistic approach to estimating taxonomic diversity, faunal similarity, and sampling bias. Palaeogeogr. Palaeoclim. Palaeoecology 122, p. 119-141.
(On modern corals and larger foraminifera distribution in Indo-Pacific. Eastward decline in diversity due primarily to shallowing of thermocline and significant cooling of Equatorial Undercurrent in E Pacific)

Biekart, J.W. (1989)- The distribution of calcareous nannoplankton in Late Quaternary sediments collected by the Snellius II Expedition in some southeast Indonesian basins. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B92, 2, p. 77-141.
(Descriptions of Late Quaternary calcareous nannofossils in three Snellius II Expedition (1984-1985) cores from Savu Sea, Timor Trough and Lombok Ridge. Dominant species Florisphaera profunda)

Biekart, J.W. (1989)- Coccolithophores in the Upper Quaternary of some Indonesian basins. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 523-530.
(Quaternary calcareous nannofossils from E Indonesia piston cores dominated by Florisphaera profunda)

Biswas, B. (1976)- Bathymetry of Holocene foraminifera and Quarternary sea-level changes on the Sunda shelf. J. Foraminiferal Research 6, 2, p. 107-133.
(Benthic foraminifera distribution on Sunda Shelf. Only 3 species in littoral zone of S China Sea, 107 species at shelf edge. Planktonic species 4% of total fauna at 20-30m, increasing to 65-80% at shelf edge)

Boichard, R., P.F. Burollet, B. Lambert & J.M. Villain (1985)- La plate-forme carbonate du Pater Noster, Est de Kalimantan (Indonesie), etude sedimentologique et ecologique. TOTAL Comp. Francaise Petrole, Notes et Mem. 20, p. 3-101.
('The carbonate platform of Paternoster, East of Kalimantan'. Well-documented sedimentological- ecological study by TOTAL personnel of Recent sediments on marine platform bordering SW Makassar Straits deepwater and its coral reef islands. All bottom samples are m-c grained carbonate sands. On reef islands mainly fragments of corals, algae and foraminifera, between reef complexes mainly benthic foraminifera. In some sheltered lows abundant Halimeda algae. On E slope of platform common planktonic foraminifera, coccoliths and glauconite)

Brady, H.B. (1884)- Report on the foraminifera dredged by H.M.S. Challenger during the years 1873-1876. Scientific results of the voyage of H.M.S. Challenger during the years 1873-76, Sect. V, Zoology 9, XXII, London, p. 1-814.
(Classic description of Recent and subfossil benthic foraminifera from deep waters of SE Asia. For revisions of taxonomy see also Barker 1960 and Jones 1994)

Brady, G.S. (1880)- Report on the Ostracoda dredged by H.M.S. Challenger during 1873-1876. Scientific results of the voyage of H.M.S. Challenger during the years 1873-76, Reports 1, Zoology III, p. 1-184.
(Early descriptions of modern ostracods from Challenger seafloor samples, mainly from deep water SE Asia)

Broecker, W.S., E. Clark, J. Lynch-Stieglitz, W. Beck, L.D. Stott, I. Hajdas & G. Bonani (2000)- Late Glacial diatom accumulation at 9°S in the Indian Ocean. Paleoceanography 15, 3, p. 348-352.
(10m-long section in core from 3800m depth at 9°S on Ninety-East Ridge, Indian Ocean, consists of 2/3 of diatom Ethmodiscus rex and 1/3 planktonic foraminifera. Age ~30 ka- 11 ka. During glacial time, Pacific Ocean thermocline waters may have moved above site, providing silica and nutrients required by diatoms)

Bronnimann, P. & A.J. Keij (1986)- Agglutinated foraminifera (Lituolacea and Trochamminacea) from brackish waters of the state of Brunei and of Sabah, Malaysia, Northwest Borneo. Revue Paleobiologie, Geneve, 5, 1, p. 11-31.

Bronnimann, P., A.J. Keij & L. Zaninetti (1983)- *Bruneica clypea* n.gen. n.sp., a Recent remaneicid (Foraminiferida; Trochamminacea) from brackish waters of Brunei, Northwest Borneo. Revue Paleobiologie, Geneve, 2, 1, p. 35-41.

Bronnimann, P., J.E. Whittaker & L. Zaninetti (1992)- Brackish water foraminifera from mangrove sediments of southwestern Viti Levu, Fiji Islands, Southwest Pacific. Revue Paleobiologie, Geneve, 11, p. 13-65.

Bronnimann, P. & J.E. Whittaker (1993)- Taxonomic revision of some Recent agglutinated foraminifera from the Malay Archipelago, in the Millett Collection, the Natural Museum of History, London. Bull. British Museum (Natural History), Zoology, London 59, 2, p. 107-124.

Burke, S.C. (1981)- Recent benthonic foraminifera of the Ontong Java Plateau. J. Foraminiferal Research 11, p. 1-19.

Burke, S.C., W.H. Berger, W.T. Coulbourn & E. Vincent (1993)- Benthic foraminifera in box core ERDC 112, Ontong Java Plateau. J. Foraminiferal Research 23, p. 19-39.

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(Mangrove swamp samples from Setiu wetlands of NE Peninsular Malaysia with 13 infauna taxa. Six taxa live in all cores: Ammobaculites exiguus, Bruneica clypea, Caronia exilis, Haplophragmoides, Siphotrochammina and Trochammina inflata. Upper mangrove swamp populations with Arenoparella mexicana (=Trochammina inflata mexicana), Haplophragmoides wilberti, Miliammina fusca, Miliammina obliqua, Trochammina inflata and calcareous Helenina anderseni. Low-mangrove-swamp and adjacent mudflat populations dominated by calcareous species such as Ammonia aoteana, Rosalina sp., Elphidium oceanicum, and Triloculina oblonga)

Culver, S.J., D.J. Mallinson, D.R. Corbett, E. Leorri, A.A. Rouf, N.A.M. Shazili, R. Yaacob, J.E. Whittaker, M.A. Buzas & P.R. Parham (2012)- Distribution of foraminifera in the Setiu estuary and lagoon, Terengganu, Malaysia. J. Foraminiferal Research 42, p. 109-133.
(Four benthic foram thanatofacies in Setiu wetlands of NE Peninsular Malaysia, related to variations in salinity and hydrodynamics: (1) low salinity estuarine: low diversity assemblage dominated by Ammotium directum, Trochammina amnicola, Miliammina fusca and Ammobaculites exiguus; (2) medium salinity lagoon: dominated by Ammobaculites exiguus; (3) high salinity estuary and lagoon: high diversity, dominated by A. exiguus and Ammonia aff. A. aoteana; (4) normal marine salinity inlet and adjacent lagoon: high diversity dominated by Amphistegina lessonii, Ammonia aff. A. aoteana)

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(online at: https://repository.si.edu/handle/10088/10057)
(Descriptions of smaller bulimimid benthic foraminifera from tropical Pacific Ocean. For Part 4 of series see Todd 1965)

Cushman, J.A., R. Todd & R.J. Post (1954)- Recent foraminifera of the Marshall Islands: Bikini and nearby atolls, part 2, oceanography (biologic). U.S. Geol. Survey (USGS) Prof Paper 260-H, p. 319-384.
(online at: http://pubs.usgs.gov/pp/0260h/report.pdf)
(331 species from 195 samples from lagoons and outer slopes of Marshall Islands: Rongerik, Rongelap, Bikini and Eniwetok, range in depth from beach to 835 fathoms. Reef flat fauna characterized by common Calcarina spengleri, Marginopora vertebralis, Homotrema rubrum, Miniacina miniacea, Carpenteria proteiformis and Amphistegina madagascariensis. Lagoon fauna dominated by A. madagascariensis and Heterostegina suborbicularis)

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(Variable and often chaotic diatom assemblages can be attributed to tsunami waves incorporating and depositing diatoms from intertidal and offshore habitats during runup and subsequent backwash. Tsunami sand deposits have high % of broken diatom valves and dominance of centric (circular) species)

De, S. & A.K. Gupta (2010)- Deep-sea faunal provinces and their inferred environments in the Indian Ocean based on distribution of Recent benthic foraminifera. Palaeogeogr. Palaeoclim. Palaeoecology 291, p. 429-442.
(Distributions of 46 species of deep-sea benthic foraminifera from 131 core-top samples (322-5013 m) from across Indian Ocean. Two faunal provinces: (1) NW (Arabian Sea): with high organic flux and pronounced oxygen minimum zone (dominated by Uvigerina peregrina, Robulus nicobarensis, Bolivinita spp., Bulimina aculeata, Bulimina alazanensis, Ehrenbergina carinata and Cassidulina carinata); (2) S, SE and E Indian Ocean (dominated by Nuttallides umbonifera, Epistominella exigua, Globocassidulina subglobosa, Uvigerina proboscidea, Cibicides wuellerstorfi, Cassidulina laevigata, Pullenia bulloides, Oridorsalis umbonatus, Gyroidinoides soldanii), suggesting well-oxygenated, cold deep water)

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(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/divers14-01/010058351.pdf)
(Descriptions and environmental conditions of 1000 species of Recent foraminifera found around New Caledonia)

Debenay, J.P. & G. Cabioch (2007)- Recent and Quaternary foraminifera collected around New Caledonia. In: Compendium of marine species of New Caledonia, Doc. Sci. Techn II-7, Inst. Rech. Dev., Noumea, p. 69-94.
(Online: www.ird.nc/biodec/downloads/Compendium/Version%20v%E9rrouill%E9e/Debenay-Cabioch-v.pdf)
(Listing and some illustrations of modern forams around New Caledonia)

Debenay, J.P. & C.E. Payri (2007)- Epiphytic foraminiferal assemblages on macroalgae in reefal environments of New Caledonia. J. Foraminiferal Research 40, 1, p. 36-60.
(online at: http://jfr.geoscienceworld.org/content/40/1/36.full.pdf)
(152 species of epiphytic foraminifera identified from New Caledonia)

De Deckker, P. & F.X. Gingele (2002)- On the occurrence of the giant diatom *Ethmodiscus rex* in an 80-ka record from a deep-sea core, southeast of Sumatra, Indonesia: implications for tropical palaeoceanography. Marine Geology 183, p. 31-43.
(Deep-sea core from water depth 2542 m off SE Sumatra shows 'blooms' of giant diatom Ethmodiscus rex in Indian Ocean during last glacial period, particularly in Last Glacial Maximum. Blooms caused by increases in salinity and nitrate levels near surface. No major upwelling recorded during glacial times. During glacial period Indonesian Archipelago was much drier, preventing low-salinity 'cap' at surface of oceans)

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(online at: http://colonial.library.leiden.edu/….)

(Recent benthic foraminifera in shoreline sands of islands between Sulawesi and Philippines. Mainly miliolids, Robulus, Elphidium, Heterostegina, Amphistegina, Calcarina spp., Baculogypsina sphaerulata)

De Neve, G.A. (1949)- Opmerkingen over een foraminifenhoudende kalksteen van Baranti op het schiereiland Sanggar (Soembawa) en de strandzanden van Poeloe Ngali (Salehbaai) en Poeloe Madang. Chronica Naturae 105, 4, p. 116-118.
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('Remarks on a foraminifera-bearing limestone of Baranti on the Sanggar Peninsula (Sumbawa) and the beach sands of Pulau Ngali (Saleh Bay) and Pulau Madang'. Late Neogene limestone similar to described by Tobler (1918), with Schlumbergerina, Alveolinella quoyi, Calcarina spp., Baculogypsina sphaerulata, etc. Baculogypsina tetraedra n.sp. described by Tobler (1918) from this area is probably synonym of Tinoporus baculatus and T. floresianus (Schlumberger))

De Neve, G.A. (1949)- Foraminifera from the shore zone of the islands of Morotai and Ternate. Chronica Naturae 105, 7, p. 196-198.
(online at: http://colonial.library.leiden.edu/….)
(Recent foraminifera from beach sand samples of SW Molotai and Ternate: Quinqueloculina, Robulus, Elphidium, Heterostegina, Orbitolites, Rotalia gaimardii, Amphistegina radiata, Calcarina spp., Baculogypsina sphaerulata. With summary of foraminifera from deep water samples off W Halmahera from 'Albatross-Expedition', as reported by Cushman (1921))

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(Recent foraminifera from beach sand samples near Parigi and Poso, C Sulawesi. Up to 13 species, incl. miliolids, Elphidium, Operculina, Verbeekia, Orbitolites, Siderolites tetraeda and Calcarina. With summary of Gulf of Tomini deep water samples (1240-1966m) from 'Albatross-Expedition', as reported by Cushman (1921))

De Neve, G.A. (1949)- Een notitie over de foraminiferen van de oudste diepzee-lodingen in Indonesia. Chronica Naturae 105, 11, p. 291-292.
(online at: http://colonial.library.leiden.edu/….)
('Note on the foraminifera from the oldest deep sea soundings in Indonesia'. Brief note on earliest descriptions of deep sea foraminifera from Indonesia by Ehrenberg (1854) and Harting (1861, 1864))

De Silva, L.P. & P.J. Militante-Matias (1998)- Foraminiferal assemblages of Pagbilao Bay, Philippines. J. Geol. Soc. Philippines 53, 1-2, p.
(134 foram species identified, representing 7 foraminiferal assemblages: river mouth, intertidal zone- Patayan Island, intertidal zone- Bocboc point, beach, reef/carbonate platform, inner bay, and inner bay channel. Nature of substrate strongly influences distribution of shallow water benthic foraminifera)

Dewi, K.T. (1993)- Ostracoda from the Java Sea, West of Bawean Island, Indonesia. Masters Thesis, University of Wollongong, Australia, p. 1-165.
(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=3832&context=theses)
(Seafloor samples from Sunda Shelf W of Bawean island contain 113 species of ostracodes, including 7 new)

Dewi, K.T. (1997)- Ostracoda from the Java Sea, West of Bawean Island, Indonesia. Marine Geol. Inst., Bandung, Spec. Publ. 4, p. 1-86.
(same as Dewi (1993) above; Masters Thesis, University of Wollongong, Australia)

Dewi, K.T. (2000)- Distribution of ostracoda from South of Tanjung Selatan, South Kalimantan. Bull. Marine Geol. 15, 1, p. 1-14.

Dewi, K.T. (2014)- Ostracoda from subsurface sediments of Karimata Strait as indicator of environmental changes. Bull. Marine Geol. 29, 1, p. 1-10.

(online at: ejournal.mgi.esdm.go.id/index.php/bomg/article/download/60/61)
(43 species of ostracods from 3 short seafloor cores of Sunda Shelf, in water depth 11-27m. Highest abundance/ diversity in upper 70cm of cores. Main genera Actinocythereis, Hemicytheridea, Loxoconcha, Neocytheretta, Stigmatocythere, Neomonoceratina, Phlyctenophora, Argillloecia, etc. (see also Mostafawi 1992))

Dewi, K.T., I. Adhirana, Y.A. Priohandono & L. Gustiantini (2016)- Ostracoda sebagai indikator perubahan lingkungan perairan sekitar PLTU Tarahan, Teluk Lampung, Sumatera. J. Geologi Kelautan 14, 1, p. 1-12.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/335/263)
('Ostracoda as indicators of marine environmental changes off the Tarahan power plant, Lampung Bay, Sumatera'. Ostracods from surface sediments in Lampung Bay quite diverse and abundant, with 27 genera, dominated by Keijella, Hemicytheridea and Cytherella. Also locally abundant Bairdopillata)

Dewi, K.T., L. Arifin, A. Yuningsih & Y. Permanawati (2012)- Meiofauna (Foraminifera) dalam sedimen dan keterkaitannya dengan pantai pasir putih Senggigi serta kondisi perairan Lombok Barat. Jurnal Ilmu Tekn. Kelautan Tropis 4, 1, p. 47-54.
(online at: www.itk.fpik.ipb.ac.id/ej_itkt41/jurnal/…)
('Meiofauna (Foraminifera) in sediments and its association with the white sand beaches and water conditions of Senggigi, West Lombok'. Schlumbergerella floresiana abundant in white sands of Senggigi beach, but not common in offshore samples)

Dewi, K.T., N.C.D. Aryanto & Y. Noviadi (2007)- Land-sea interactions in coastal waters off NE Kalimantan: evidence from microfaunal communities. Bull. Marine Geol. 22, 1, p. 1-15.
(online at: ejournal.mgi.esdm.go.id/index.php/bomg/article/download/1/1)
(Microfauna in seafloor samples in 14-43m deep water off Nunukan and Sebatik islands in NE Kalimantan with typical microfauna of shallow marine ostracoda (Hemicytheridea spp., Keijella spp., Cytherella) and foraminifera (Asterorotalia trispinosa, Operculina))

Dewi, K.T., P. Frenzel & A. Muller (2008)- Mikrofauna (ostracoda) di sekitar paparan Sahul dan Laut Banda dalam kaitannya dengan batimetri. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 127-138.
(Study of recent ostracods distribution in Snellius II samples along transects from Timor, Tanimbar, Seram into Banda Sea down to 3070m. Highest number of ostracods between 100-210m water depth, with Bairdopillata, Neonesidea, Paranesidea, Paracytheridea, Hemiparacytheridea, Foveoleberis, Polycope and Loxoconcha)

Dewi, K.T., P. Frenzel, A. Muller & D. van Harten (2004)- Recent ostracoda (microcrustacea) from a Banda-to-Timor Sea traverse: implications for paleobathymetric studies. Proc. 33rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 42-51.
(146 species of ostracods in surface sediments between 100-3070m along Banda Sea- Leti Strait-Timor Sea transect, E of Timor island. Richest assemblages in <100m water; abundance and diversity decreases with depth. Bathyal zone characterized by Cytheropteron, Saida, Bradleya, Paleocythere, Henryhowella, Krithe and Parakrithe; lower bathyal by Acantocythereis, Agrenocythereis and Krithe- Parakrithe spp.; abyssal by Argilloecia, Xestoleberis, Cytheropteron)

Dewi, K.T. & M. Hanafi (2013)- Karakteristik komunitas foraminifera laut dalam di Teluk Tomini, Sulawesi. J. Ilmu dan Teknologi Kelautan Tropis (Bogor), 5, 1, p. 17-25.
(online at: http://journal.ipb.ac.id/index.php/jurnalikt/article/view/7742)
('The characteristics of the deep sea foraminiferal community in Tomini Bay, Sulawesi'. Foraminifera from 14 seafloor sediment samples from 600-1400m in Tomini Bay. Samples dominated by planktonic foraminifera (>90%). Benthic foraminifera represented by Cibicidoides wuellerstorfi, Ceratobulimina pacifica, Pyrgo sp., Bolivinita quadrilatera, Uvigerina peregrina, Planulina, etc., also very rare Laticarinina below 1000m)

Dewi, K.T. & D. Illahude (2005)- Ostracoda from off Derawan island, East Kalimantan (LP-1815) in relation to bathymetric zonation. Bull. Marine Geol. 20, 1, p. 1-14.
(Depth distribution of Recent ostracoda from 25 seafloor samples at depths 7-628m off Berau/ Tarakan Rivers, NE Kalimantan. 142 species identified. Common ostracods in area around reef complex, with Bairdopillata

paracratericola, B. paraalcyanicola and Macrocypris decora. Also high diversity at water depths >200m, with displaced shallow water ostracods and deep water fauna. Bradleya common deepwater ostracod, found from <50m to >500m)

Dewi, K.T., A. Muller, P. Frenzel, L. Auliaherliaty & L. Gustiantini (2003)- Do Quaternary ostracods reflect sea level changes in the Timor Sea? Proc. 32nd Ann. Conv. Indon. Assoc. Geologists (IAGI) and 28th Ann. Conv. HAGI, Jakarta, 11p.
(Samples from E of Timor in water depth 1768m show several small ostracod diversity peaks. Peaks of deep-sea taxa like Krithe, Bradleya, Cytheropteron, Acantocythereis and Ambocythere related to changes in paleoproductivity. Other peak with mixed shallow-water (Paracytheridea, Quadracythere, Loxocorniculum, Neonesidea) and deep-sea taxa suggest downslope transport of sediments, possibly regressive events)

Dewi, K.T., N. Nurdin, Y.A. Priohandono & A. Sinaga (2015)- Benthic foraminifera in marine sediment related to environmental changes off Bangka Island, Indonesia. Berita Sedimentologi 33, p. 47-57.
(online at: www.iagi.or.id/fosi/files/2015/09/BS33-Marine-Geology-of-Indonesia-II-R1.pdf)
(60 species of foraminifera in samples from 6-24m water depth offshore E Bangka island. Dominated by Amphistegina, Elphidium, Quinqueloculina, Operculina)

Dewi, K.T., Y.A. Prihandono & H.H. Prabowo (2000)- Ostracoda perairan Utara P. Kangean: kaitannya dengan transpor sedimen. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 109-116.
('Ostracodes from waters North of Kangean Island; relations to sediment transport'. 30 sediment samples with 30 species, dominated by Bairdopillata, Cytherella, Foveoleberis. Not much detail)

Dewi, K.T. & E. Saputro (2013)- Sebaran spasial foraminifera dalam kaitannya dengan kedalaman laut dan jenis sedimen di Teluk Bone, Sulawesi Selatan. J. Geologi Kelautan 11, 3, p. 165-173.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/240/230)
('Spatial distribution of foraminifera in relation to water depth and sediment types in Bone Bay, S Sulawesi'. Foraminifera from 23-85m water depth in N Bone Bay mainly Operculina spp., Heterolepa, Pseudorotalia. Absence of 'Sunda species' Asterorotalia trispinosa)

Dharma, B. (2005)- Recent & fossil Indonesian shells. Conch Books, Hackenheim, p. 1-424.

Dhillon, D.S. (1968)- Notes on the foraminiferal sediments from the Lupar and Labuk estuaries, East Malaysia. Geol. Survey of Malaysia, Borneo Region, Bull. 9, p. 56-73.

Ding, X., F. Bassinot, F. Guichard, Q.Y. Li, N.Q. Fang, L. Labeyrie, R.C. Xin, M.K. Adisaputra & K. Hardjawidjaksana (2006)- Distribution and ecology of planktonic foraminifera from the seas around the Indonesian Archipelago. Marine Micropaleontology 58, p. 114-134.
(Planktonic foraminiferal assemblages five provinces: (1) Banda/Java region; (2) Timor region; (3) Java upwelling region; (4) Indian monsoon Sumatra region, and (5) NW Australia margin region. Assemblages reflect sea-surface temperature, salinity, thermocline depth, and nutrient supply, related to circulation patterns. Strongest dissolution in Java upwelling region, with lysocline rising above 2800m. Increase in Globigerina bulloides at 10-8 ka BP in Java upwelling region corresponds to decrease in Banda/ Java region, indicating intensification of upwelling in relation to strengthened SE monsoon)

Faiz, N.N., R. Omar & Basir Jasin (2007)- Taburan ostrakod di dalam sedimen luar pantai di sekitar Pulau Tinggi, Johor. Sains Malaysiana 36, 2, p. 139-148.
(online at: http://journalarticle.ukm.my/112/1/1.pdf)
(Distribution of ostracoda in offshore sediment around Pulau Tinggi, Johor. 11 shallow(?) marine samples off SE Malay Peninsula with 36 genera/ 51 species of ostracods. Dominant species is Loxoconcha malayensis. Sediment mainly m-grained sand)

Faiz, N.N., R. Omar, M.N. Abd Malek, C. Li & Y. Liu (2016)- Taburan dan kepelbagaian Foraminifera bentik di dalam sedimen permukaan sekitar delta Sungai Pahang, Pahang, Malaysia. Sains Malaysiana 45, 5, p. 669-676.
(online at: www.ukm.my/jsm/pdf_files/SM-PDF-45-5-2016/02%20Noraswana%20.pdf)
('The distribution and diversity of benthic Foraminifera in surface sediment of Pahang River Delta, Pahang, Malaysia'. 82 species of Recent benthic foraminifera offshore Pahang River delta. Amphistegina lessonii and A. gibbosa most abundant, followed by Elphidium advenum, Operculina ammonoides and Asterorotalia pulchella. No specifics on water depth of samples or detailed distribution)

Fajemila, O.T., M.R. Langer & J.H. Lipps (2015)- Spatial patterns in the distribution, diversity and abundance of benthic foraminifera around Moorea (Society Archipelago, French Polynesia). PLoS ONE 10, 12, e0145752, p. 1-25.
(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0145752)
(380 species of shallow benthic foraminifera from around Moorea)

Fauzielly, L. (2013)- Distribusi vertikal Ostracoda dan hubungannya dengan perubahan lingkungan di perairan Teluk Jakarta. Bull. Scientific Contr. (UNPAD) 11, 2, p. 108-117.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8292/3839)
('Vertical distribution of ostracods and relationship with environmental changes in Jakarta Bay waters'. Similar to Fauzielly et al. (2012), below)

Fauzielly, L., T. Irizuki & Y. Sampei (2012)- Vertical changes of Recent ostrocode asemblages and environment in the inner part of Jakarta Bay, Indonesia. J. Coastal Development 16, p. 11-24.
(Ostracodes from sediment core from the inner part of Jakarta Bay. 53 species, dominated by Keijella carriei and Loxoconcha wrighti, which are common in areas with high organic carbon and nitrogen contents)

Fauzielly, L., T. Irizuki & Y. Sampei (2013)- Spatial distribution of Recent ostracode assemblages and depositional environments in Jakarta Bay, Indonesia, with relation to environmental factors. Paleont. Research 16, 4, p. 267-281.
(Recent ostracodes of Jakarta Bay 94 species, dominated by Keijella carriei, Hemicytheridea reticulata, Loxoconcha wrighti and Hemicytheridea ornata. Cytherella, Cytherelloidea, Neomonoceratina, and Pistocythereis also abundant. Three biofacies: (I) muddy bottom inner-middle bay with K. carriei, L. wrighti, and H. reticulata. Biofacies; (II) muddy bottom outer bay with H. reticulata, H. ornata and Cytherella spp. (III) sandy mud bottom outer bay high-diversity assemblages with Atjehella kingmai, Foveoleberis cypraeoides, Neomonoceratina bataviana and Pistocythereis cribriformis)

Fauzielly, L., L. Jurnaliah & A.H. Hamdani (2014)- Distribusi foraminifera bentonik sedimen paleo-tsunami letusan Gunung Krakatau berdasarkan data inti bor U-6 Di daerah Ujungkulon, Banten. Bull. Scientific Contr. (UNPAD) 12, 2, p. 84-91.
(online at: http://repository.unpad.ac.id/21772/1/Distribusi-foraminifera-bentonik-sedimen...)
('The distribution of benthic foraminifera in sedimentary paleo-tsunami eruption of Krakatoa based on data from core U-6 in the Ujungkulon area, Banten'. Marine microfossils in onland sediments may indicate paleo-tsunami deposits. Sand with coral debris at 90-120cm in core from Ujung Kulon recognized as tsunami deposit. With 55 species of benthic foraminifera, dominated by Streblus beccarii, Planulina wuellerstorfi, Hyalinea balthica, Bulimina marginata, Bolivina spathulata, Elphidium, Uvigerina peregrina Cushman. Origin of tsunami sediments is (outer) shelf-bathyal and inner shelf lagoon)

Fernando, A.G.S., A.M. Peleo-Alampay & M.G. Wiesner (2007)- Calcareous nannofossils in surface sediments of the eastern and western South China Sea. Marine Micropaleontology 66, p. 1-26.
(Calcareous nannofossils in surface sediments of S China Sea in water depths of 35–4345 m. In shallow/ nearshore waters dominant taxa are Emiliania huxleyi and Gephyrocapsa oceanica. In deeper portion of SCS, Florisphaera profunda dominates. Three assemblages recognized:(a) upwelling, (b) oceanic and (c) deep basin assemblages. F. profunda is relatively resistant to dissolution)

Flenley, J.R. (1979)- The Equatorial rain forest: a geological history. Butterworths London, p. 1-162.
(Includes review of SE Asia Cretaceous- Neogene evolution of pollen assemblages and chapter on Quaternary palynology and vegetation changes of SE Asia. In PNG vegetation zones moved downward ~1600m during Pleistocene glacial episodes, suggesting 10°C decline in temperatures (later book with similar title by R.J. Morley (2000) Origin and evolution of tropical rain forests))

Flenley, J.R. (1998)- Tropical forests under the climates of the last 30,000 years. In: A. Markham (ed.) Potential impacts of climate change on tropical forest ecosystems, Climatic Change 39, Kluwer, p. 177-197.
(Incl. review of pollen diagrams from lowlands of SE Asia. Depression of altitudinal vegetation zones during Late Pleistocene Last Glacial Maximum suggests temperatures 5-10°C cooler than now)

Flenley, J.R. (1999)- Problems of the Quaternary on mountains of the Sunda-Sahul region. Quaternary Science Reviews 15, p. 549-555.
(In montane areas in Sunda-Sahul region Upper Montane rainforest appears to be absent in Late Pleistocene. Estimates of temperature lowering in Late Pleistocene strikingly greater in mountains than in lowlands)

Forderer, M. & M.R. Langer (2016)- Five new species and one new genus of recent miliolid foraminifera from Raja Ampat (West Papua, Indonesia). PeerJ 4:e2157; DOI 10.7717/peerj.2157, 20p.
(online at: www.ncbi.nlm.nih.gov/pmc/articles/PMC4924127/pdf/peerj-04-2157.pdf)
(Shallow waters W of Waigeo Island with highly diverse assemblages of 455 species of benthic foraminifera (249 miliolid species). With new genus (Dentoplanispirinella) and 5 new species of miliolids (D. occulta, Miliolinella moia, M. undina, Triloculina kawea, Siphonaperta hallocki). New species relatively rare)

Forderer, M. & M.R. Langer (2018)- Atlas of benthic foraminifera from coral reefs of the Raja Ampat Archipelago (Irian Jaya, Indonesia). Micropaleontology 64, 1-2, p. 1-170.

Forderer, M. & M.R. Langer (2019)- Exceptionally species-rich assemblages of modern larger benthic foraminifera from nearshore reefs in northern Palawan (Philippines). Revue Micropaleontologie 65, 9, 100387, p.
(44 larger foraminifera morphospecies from shallow nearshore habitats in N Palawan, among the highest reported anuwhere. Heterostegina depressa and Calcarina mayori most widely distributed taxa)

Forderer, M., D. Rodder & M.R. Langer (2018)- Patterns of species richness and the center of diversity in modern IndoPacifc larger foraminifera. Nature Scientific Reports 8, 8189, p. 1-9.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5974165/pdf/41598_2018_Article_26598.pdf)
(Species richness maps for Indo-Pacific larger foraminifera)

Frerichs, W.E. (1967)- Distribution and ecology of benthonic foraminifera in the sediments of the Andaman Sea. Ph.D. Thesis University Southern California, Los Angeles, p. 1-269.
(Recent foraminifera from seafloor samples across Andaman Sea, between 13-3778m depth. Number of forams increases with depth to 1800m; below this affected by dissolution of calcareous foraminifera. Planktonic number increases with depth and distance from shore. Planktonic assemblages from shelf sediments have globose chambers (Globigerina, Globigerinoides, Globigerinita); in bathyal deposits also common Globorotalia and Sphaeroidinella. Radiolarian number increases with depth; not significant above middle bathyal depths. Benthic foraminifera five faunal provinces. Etc.)

Frerichs, W.E. (1970)- Distribution and ecology of benthonic foraminifera in the sediments of the Andaman Sea. Contr. Cushman Foundation Foraminiferal Research 21, 4, p. 123-147.
(online at: https://cushmanfoundation.allenpress.com/portals/_default/files/pubarchive/CCFFR/21ccffr4.pdf)
(In Andaman Sea shelf faunas characterized by species of Ammonia, Asterorotalia and Pseudorotalia. Upper bathyal faunas characterized by first appearance of Bolivina robusta. Change in ornamentation of Uvigerina at upper-middle bathyal boundary: costate species in outer shelf-upper bathyal; hispid species (U. auberiana) below 600m. Lower bathyal microfaunas calcareous forams dissolved, characterized by arenaceous Glomospira charoides and Karreriella apicularis. Etc.)

Frerichs, W.E. (1971)- Planktonic foraminifera in the sediments of the Andaman Sea. J. Foraminiferal Research 1, p. 1-14.
(Distribution of Recent planktonic foraminifera in sediments of Andaman Sea controlled by surface salinity, water depth, diagenesis and topography. Large volumes of fresh water in N Andaman Sea result in lowering of surface salinity and exclusion of planktonic forams. Depth zonation: Sphaeroidinella and some Globorotalia species indicative of bathyal depths)

Fujita, K. (2006)- Identification of coral reef environments based on foraminiferal death assemblages from Ishigaki Island, Okinawa, Japan. In: Proc. 10th Int. Coral Reef Symposium, Okinawa 2004, p. 528-535.
(Reef-flat foraminiferal assemblages characterized by dominant Calcarinidae, whereas fore-reef foraminiferal assemblages are characterized by various dominant species)

Fujita, K. & S. Kato (2011)- Distribution of gravel-sized empty tests of large benthic foraminifers as practical depositional indicators in tropical reef and shelf carbonate environments. Facies 57, 4, p. 525-541.
(Depth and spatial distributions of Large Benthic Forams in 39 surface sediment samples from W coast of Miyako Island (Ryukyu Islands, NW Pacific))

Fujita, K., Y. Osawa, H. Kayanne, Y. Ide & H. Yamano (2009)- Distribution and sediment production of large benthic foraminifers on reef flats of the Majuro Atoll, Marshall Islands. Coral Reefs 28, p. 29-45.
(Estimates of sediment production by Large Benthic Forams, mainly Calcarina and Amphistegina, on reef flats of Pacific atolls. Both live attached to seagrass/algae and most abundant on ocean reef flat (ORF) and in inter-island channel near windward, sparsely populated islands. Calcarina density higher on windward sides)

Fujita, K., M. Otomaru, P. Lopati, T. Hosono & H. Kayanne (2016)- Shell productivity of the large benthic foraminifer *Baculogypsina sphaerulata*, based on the population dynamics in a tropical reef environment. Coral Reefs 35, p. 317ï 326

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(Diatoms, pollen, geomagnetic and geochemical analyses on 3.6 m long core from Lake Buyan, Bali, representing ~8000 yrs sedimentation. Laminated sediments at 6.5-5.0 and 3.6-3.1 ka reflect drier climate)

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(online at: http://repository.dl.itc.u-tokyo.ac.jp/dspace/bitstream/2261/51680/1/CMS350104.pdf)
(Dinoflagellates play role in harmful agal blooms. Review of distribution in marine sediments shows generally 13-50 cyst types, Pyridinium bahamense var. compressum most common species in SE Asia waters)

Furio, E.F., K. Matsuoka, K. Mizushima, I. Baula, K.W. Chan, A. Puyong, D. Srivilai, B.R. Sidharta & Y. Fukuyo (2006)- Assemblages and geographical distribution of dinoflagellate cysts in surface sediments of coastal waters of Sabah, Malaysia. Coastal Marine Science 30, 1, p. 62-73.
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(Dinoflagellate cysts relatively rare in sediments from Kota Kinabalu Bay and Tuaran Estuary. >25 species identified, mainly Spiniferites, Alexandrium, Lingulodinium, Polysphaeridium, etc.))

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(Includes discussion of Recent palynomorph distribution in meso- to macrotidal Rajang River Delta, Sarawak. Mangrove pollen found throughout delta and alluvial plain sediments, as far as 75 km inland from mouth of rivers in frequencies of 5% of pollen spectra)

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(Three organic matter facies assemblages in Rajang River delta sediments)

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(Apo reef W of Mindoro in S China Sea with 10 physiographic zones. Sediment pockets in reef wall with Amphistegina lessonii, Marginopora vertebralis. Deep lagoon with Elphidium, Sorites marginalis, Peneroplis. Reef flat with Calcarina spp., etc.)

Glenn-Sullivan, E.C. & I. Evans (2001)- The effects of time-averaging and taphonomy on the identification of reefal sub-environments using larger foraminifera: Apo Reef, Mindoro, Philippines. Palaios 16, 4, p. 399-408.
(Foraminifera ~40% of sediment at small, isolated Apo Reef. Comparisons of live and dead assemblages show time-averaged assemblages, the product of taphonomic processes, more effective in delineating reefal sub-environments than do live assemblages. Robust calcarinids are in shallow seaward zones; free-living miliolids and small rotaliines in leeward zones. Planktonics and large thin rotaliines in fore reef)

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(Recent larger foram distribution at 6 sites in 8-35m water off Brunei Darussalam (mainly sandy patches near shipwrecks, in area of mud-dominated seafloor without larger forams). High diversity assemblages, 16 species. Shallowest samples dominated by Calcarina defrancii and Neorotalia calcar, deepest samples by Amphistegina radiata, Operculina ammonoides and Calcarina mayori. Alveolinella quoii around 30m)

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(DNA tests of three rain-forest-restricted murine rodents of Borneo, Sumatra, Java, Malay Peninsula and Indochina do not support hypothesis of migrations enabled by Late Pleistocene land bridges/ rainforest corridors, but suggest older history of divergent evolution since Pliocene fragmentation of Sunda block)

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(Study of Early Holocene coseismic subsidence in Aceh. Buried mangrove soil horizons overlain with sharp contact by 5-20 cm thick sand that tapered landward, with intertidal and shallow marine foraminifera (Ammonia, Asterorotalia, Pararotalia, Quinqueloculina, etc.) and probably tsunami deposit. Sands overlain by 1-3m of silty clay with at base common Cerithidea cingulata, an opportunistic intertidal gastropod)

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(online at: http://www.oxis.org/articles-c-j/gremmen-1990.pdf)
(Tempe Lake Depression in SW Sulawesi with three lakes and swamp areas probably remnant shallow marine seaway between Makassar Straits and Bone Bay until recently. In tidal mangrove zone between 7000- 2600 BP)

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(online at: http://nopr.niscair.res.in/bitstream/123456789/39098/1/IJMS%2010(3)%20293-295.pdf)
(16 deep marine seafloor samples around Little Andaman, with 14 modern and 24 reworked Eocene-Pliocene nannofossil species. Modern species dominated by Gephyrocapsa oceanica)

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('Comparison of benthic and planktonic foraminifera (P/B ratio) in the waters around Derawan Island, East Kalimantan')

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(Fossil estuarine deposits often with common Ammonia beccarii, abundance is low in modern Segara Anakan lagoon N of Nusakambangan, S Java)

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('Foraminifera in the waters around Bakauheni, Lampung (northern Sunda Strait)' Abundant foraminifera along Lampung coast in N Sunda Strait, dominated by Asterorotalia trispinosa, Operculina, Pseudorotalia and Elphidium)

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(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/213/203)
('Benthic foraminifera in sediment as indicators of coral reef environments in the waters of Pulau Cemara Besar and Cemara Kecil, Karimunjawa Islands, Central Java'. Benthic forams dominated by Calcarina, Amphistegina, Streblus and Reusella)

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('The distribution of foraminifera in the Halmahera Sea from the last Glacial to Recent'. Deep marine Late Pleistocene- Holocene planktonic and benthic foraminifera from core MD10-3339, SE of Halmahera)

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(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/149/139)
('Distribution of benthic foraminifera as indicators of environmental conditions in the waters around Batam Island, Riau archipelago'. High abundance of benthic foraminifera in Batam- Bintan waters, dominated by

dominated by Asterorotalia trispinosa, Pseudorotalia annectens, Amphistegina radiata, Quinqueloculina cf. philippinensis, and Operculina ammonoides)

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(Bottom samples from 31 stations in shallow areas of Java Sea rich in foraminifera. Some genera more abundant in sandy deposits (incl. Textularia, Operculina, Amphistegina, Siderolites (=Baculogypsina?; JTvG), Planorbulinella, Alveolinella), some more abundant in muddy deposits (Eponides praecinctus, Rotalia schroeteriana, Quinqueloculina))

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('Ostracodes from the Cimanuk Delta'. 35 Recent genera of ostracods in shallow waters around Cimanuk 'birdfoot delta', Java. Delta fauna dominated by Hemicytheridea, Loxoconcha, Hemikrithe, Cythereis, etc. Open marine genera Cytherella, Cytherelloidea, Bradleya, etc.)

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(online at: http://jfr.geoscienceworld.org/content/18/3/203.full.pdf)
(101 species of miliolids from five settings in Papuan Lagoon, SE coast of PNG. Miliolids generally 10-40% of total foram assemblage, which is dominated by rotaliids)

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(60 small buliminid-bolivinid-uvigerinid species from in 0-50m water depth in lagoon behind Papuan barrier reef, SE coast of PNG)

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(Carbonate production rates by foram families Asterigerinidae, Calcarinidae, and Nummulitidae in Palau, W Caroline Islands: seaward reef flats up to 2.8 kg CaCO3/m2/yr, equivalent to deposition of almost 1 mm/yr. Productivity on lagoonal reef slopes about one-fifth. In Hawaii production rates much lower because of slower growth rates and absence of family Calcarinidae)

Hallock, P. (1984)- Distribution of selected species of living algal symbiont-bearing foraminifera on two Pacific coral reefs. J. Foraminiferal Research 14, p. 250-261.
(Distribution of 15 larger foram species on reefs of Palau (W Caroline Islands) and Oahu (Hawaii). Four clusters (1) Calcarinidae-dominated on seaward reef flats; (2) Marginopora vertebralis, Amphistegina lobifera and Peneroplis planatus in protected shoals in <5m water, (3) Amphistegina lessonii on reef slopes of 5-20m, (4) Amphistegina radiata and Operculina ammonoides deeper dwelling taxa)

Hallock, P. (1999)- Symbiont-bearing foraminifera. In: B.K. Sen Gupta (ed.) Modern Foraminifera, Kluwer, Amsterdam, p. 123-149.

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(late Early Miocene larger foram facies assemblages in wells Matinloc 2 and Libro 1, off NW Palawan, Philippines. Assigned to zone Te5, but more likely Lower Tf?; associated with N8 planktonic forams)

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(14 samples with Recent Cycloclypeus from off Ryukyu Islands from 87-133m water depth, one from 235m)

Hardy, M.J. (2000)- Origin, distribution, and degradation of sedimentary organic matter in a modern tropical deltaic system (Mahakam Delta, Borneo, Indonesia). Ph.D. Thesis Louisiana State University, Baton Rouge, p. 1-368. *(Unpublished)*

Hardy, M.J. & J.H. Wrenn (2009)- Palynomorph distribution in modern tropical deltaic and shelf sediments- Mahakam Delta, Borneo, Indonesia. Palynology 34, p. 19-42.
(Distribution of terrestrial palynomorphs in Mahakam Delta surface sediments from 12 depositional environments from head of delta to shelf edge can be explained by transport and depositional processes. Amounts of marine palynomorphs (foram linings, copepod eggs, dinocysts) increases gradually offshore)

Harting, P. (1863)- Bijdrage tot de kennis der mikroskopische fauna en flora van de Banda-Zee. Verhandelingen Kon. Akademie Wetenschappen, Amsterdam, 10, p. 1-34.
('Contribution to the knowledge of the microscopic fauna and flora from the Banda Sea' Early report on foraminifera, radiolaria, etc. from Recent deep Banda Sea sediment samples between 1200-4000 fathoms)

Hasan, S.S., M. Mohamed, N. Muhsin & S. Jirin (2013)- The distribution of *Miliammina fusca* in three different environmental setting of Peninsular Malaysia, Malaysia. In: Petroleum Geoscience Conf. Exhib. (PGCE 2013), Kuala Lumpur, P14, 4p. *(Extended Abstract)*
(Study on distribution of small agglutinated benthic foram Miliammina fusca in three modern depositional settings, Klang Delta, Pahang Delta and Sedili Besar River. Invariably associated with brackish conditions. In Malay Basin M. fusca used as indicator of marine incursions into basin, particularly in Lower Oligocene (upper Group L and Group K))

Haseldonckx, P. (1974)- A palynological interpretation of palaeo-environments in S.E. Asia. Sains Malaysiana 3, 2, p. 119-127.

Haseldonckx, P. (1977)- The palynology of a Holocene marginal peat swamp environment in Johore, Malaysia. Review Palaeobotany Palynology 24, 5, p. 227-238.

(Shallow Holocene peat near Pekan Nanas, Johore, with 47 pollen and spore types. Pollen profile shows succession from open swamp vegetation with mangrove influence to marginal peat swamp facies with river bank vegetation. Radiocarbon dating on deepest peat yielded ~4.9 ka)

Haseldonckx, P. (1977)- Palynology and its application to Quaternary geology in the Sunda shelf region. Proc. Symposium on Quaternary Geology of the Malay-Indonesian coastal and offshore areas, Kuala Lumpur, 1976, United Nations ESCAP CCOP Techn. Publ. 5, p. 33-53.
(Brief, general overview of pollen and spores, processing and application in determination of paleoenvironments. 'Palynology in SE Asia still at early stage of development')

Haslett, S.K. (2001)- The palaeoenvironmental implications of the distribution of intertidal foraminifera in a tropical Australian estuary: a reconnaissance study. Australian Geogr. Studies 39, p. 67-74.
(Modern intertidal foraminifera in mangrove-lined microtidal distributary of Barron River Delta (Queensland): (1) saltmarsh: Trochammina inflata assemblage; (2) regularly inundated tidal flat: dominated by Ammonia beccarii; (3a) high tidal flat: >70% Ammonia beccarii and low diversity, and (3b) low tidal flat: 55-65% Ammonia beccarii and diverse small allochthonous species transported into estuary from shelf)

Hayward, B.W. & S. Kawagata (2005)- Extinct foraminifera figured in Bradyφs Challenger Report. J. Micropalaeontology 24, 2, p. 171-175.
(online at: https://www.j-micropalaeontol.net/24/171/2005/jm-24-171-2005.pdf)
(Brady's (1884) monograph on living foraminifera from Challenger Expedition samples contains 18 species known to become extinct in M Pleistocene between 1.2- 0.6 Ma (mainly elongate, benthic foraminifera like Pleurostomella, Stilostomella, Orthomorphina, etc.). Majority (14 species) from two stations off Kei Islands, Banda Sea (191A, 192). Station 192 (~250m depth) is considerably shallower than established fossil bathymetric ranges of extinct species, suggesting tectonic uplift)

Hayward, B.W., S. Kawagata, H.R. Grenfell, A.T. Sabaa & T. O'Neill (2007)- Last global extinction in the deep sea during the mid-Pleistocene climate transition. Paleoceanography 22, PA3103, p. 1-14.
(20% of cosmopolitan deep-sea benthic foraminifera extinct during late Pliocene-M Pleistocene, with peak of extinctions during M Pleistocene Climate Transition (1.2-0.55 Ma). Family Stilostomellidae (30 species) wiped out, Pleurostomellidae (9 species) decimated. Pulsed declines in abundance, earlier in deepst water sites. Tied to demise of microbial food source due to increased cold and oxygenation of S-sourced deep water masses during major late Pliocene and E Pleistocene glacials)

Hendrizan, M., R.A. Troa, R. Zuraida & E. Triarso (2016)- Calcareous nannoplankton (marine algae) analysis in subsurface sediments of Andaman Sea. Bull. Marine Geol. 31, 2, p. 91-98.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/313/277)
(4m thick Quaternary clay sediment core BS36 in S Andaman Sea (Mergui-N Sumatra Basin). With 11 genera of calcareous nannofossils, dominated by Gephyrocapsa, Emiliania, and Helicosphaera)

Hessler, I., M. Young, U. Holzwarth, M. Mohtadi, A. Luckge & H. Behling (2013)- Imprint of eastern Indian Ocean surface oceanography on modern organic-walled dinoflagellate cyst assemblages. Marine Micropaleontology 101, p. 89-105.
(Recent distribution of dinoflagellate cysts in 116 marine surface samples of E Indian Ocean. Three distinct regions (1) W and E Indonesia, with high T and low nutrient content of surface water; dominated by Spiniferites spp. and S. ramosus; (2) Indonesian Throughflow(ITF) region, dominated by heterotrophic dinocyst species (Brigantedinium spp.), reflecting high productivity; (3) offshore NW Australia, characterized by water masses of saline and nutrient depleted Leeuwin Current, with rel. high O. centrocarpum)

Hillen, R. (1986)- Palynology as a tool in delineating tropical lowland depositional environments of Late Quaternary age. In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 495-504.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986037.pdf)

(Samples from Lower Perak and Kelantan lowlands (Malay Peninsula) allowed palynological characterizaton of environments:shallow offshore, deltaic/ esturine, mangrove, fresh water swamp, peat swamp)

Hofker, J. (1927)- The foraminifera from the Siboga expedition, I. Families Tinoporidae, Rotaliidae, Nummulitidae, Amphisteginidae. Siboga Expedition 1899-1900, Monogr. 4a, 1, E.J. Brill, Leiden, p. 1-78.
(Modern foraminifera in seafloor samples collected by Siboga Expedition in Indonesia, part 1 of 3)

Hofker, J. (1930)- Foraminifera of the Siboga Expedition, Part II, Families Astrorhizidae, Rhizamminidae, Reophacidae, Anomalinidae, Peneroplidae. Siboga-Expeditie, Monogr. 4a, 2, E.J. Brill, Leiden, p. 79-170.
(Modern foraminifera in seafloor samples collected by Siboga Expedition in Indonesia, part 2 of 3)

Hofker, J. (1951)- The Foraminifera of the Siboga Expedition. Part III. Ordo Dentata, Sub-Ordines Protoforaminata, Biforaminata, Deuteroforaminata. Siboga Expeditie Monograph 4a, 3, Brill, Leiden, p. 1-513.
(Modern foraminifera in seafloor samples collected by Siboga Expedition in Indonesia, part 3 of 3)

Hofker, J. (1968)- Foraminifera from the Bay of Jakarta, Java. Bijdragen tot de Dierkunde 37, p. 11-59.
(online at: www.repository.naturalis.nl/document/548150)
(Rel. low diversity recent foraminifera assemblages in shallow marine Jakarta Bay, dominated by Pseudoratalia schroeteriana, Asterorotalia pulchella, Elphidium batavum, Operculina complanata, Quinqueloculina. Highest diversity in NW part of bay. Pseudorotia most common in muddy substrates in SE, Baculogypsinoides and miliolids mainly in NW, away from delta muds)

Hofker, J. (1978)- Biological results of the Snellius Expedition XXX. The foraminifera collected in 1929 and 1930 in the eastern part of the Indonesian Archipelago. Zool. Verhandelingen, Rijksmuseum Natuurlijke Historie Leiden 161, p. 1-69.
(online at: www.repository.naturalis.nl/document/155300)
(462 species of foraminifera from 78 sea bottom samples at depths 85- 5138m, collected by 1929-1930 Snellius Expedition to East Indonesia, and a few other shallow marine samples)

Hohenegger, J. (1994)- Distribution of living larger foraminifera NW of Sesoko-Jima, Okinawa, Japan. Marine Ecology 15, p. 291-334.
(Living larger foraminifer restricted to photic zone. Peneroplids in shallow-water from intertidal (common Peneroplis) to 40m (Dendritina, sandy substrates). Soritids subtidal, from reef moat down to 60m. Amphisorus and Marginopora common down to 3 m, Parasorites in deeper parts of reef slope. Alveolinella in upper 40m of reef slope. Amphisteginids in entire photic zone, with test flattening with increasing depth. Calcarinids cling to firm substrates. Baculogypsina restricted to high energy reef flat regions. Calcarina similar facies, extending to fore reefs down to 8m. Baculogypsinoides dominant calcarinid genus from 30-70m depth. Heterostegina prefers hard substrates on reef slope. Operculina frequent in deeper part, independent of substrates. Sandy bottoms from 30-60m inhabited by Nummulites (Operculina) venosus. Cycloclypeus restricted to fore reef areas below 50m down to base of photic zone)

Hohenegger, J. (1995)- Depth estimation by proportions of living larger foraminifera. Marine Micropaleontology 26, p. 31-47.

Hohenegger, J. (1996)- Remarks on the distribution of larger foraminifera (Protozoa) from Belau (Western Carolines). Kagoshima University Research Center Pacific Islands, Occasional Papers 30, p. 85-90.
(online at: http://hdl.handle.net/10232/16891)

Hohenegger, J. (1999)- Larger foraminifera-microscopical greenhouses indicating shallow-water tropical and subtropical environments in the present and past. Kagoshima University Research Center Pacific Islands, Occasional Papers 32, p. 19-45.
(online at: http://hdl.handle.net/10232/16923)
(Larger foraminifera (2mm-15cm) characteristic of shallow marine (sub-)tropical environments, in clear, nutrition-depleted water like for coral reefs. All larger foraminifera house symbiotic microalgae and are thus

restricted to photic zone (<150m). In intertidal-shallow subtidal environments high irradiatiois blocked by thicker tests or porcelaneous structures; species living near base of photic zone facilitate light penetration by thin transparent test walls and by light-collecting mechanisms such as nodes and pillars)

Hohenegger, J. (2000)- Coenoclines of larger foraminifera. Micropaleontology 46, Suppl. 1, Advances in the biology of foraminifera, p. 127-151.
(Good review of depth distribution of modern larger foraminifera, mainly in W Pacific)

Hohenegger, J. (2004)- Depth coenoclines and environmental considerations of Western Pacific larger foraminifera. J. Foraminiferal Research 34, p. 9-33.
(Good overview of depth distribution modern larger foraminifera in W Pacific)

Hohenegger, J. (2005)- Estimation of environmental paleogradient values based on presence/absence data: a case study using benthic foraminifera for paleodepth estimation. Palaeogeogr. Palaeoclim. Palaeoecology 17, p. 115-130.

Hohenegger, J. (2006)- The importance of symbiont-bearing benthic foraminifera for West Pacific carbonate beach environments. Marine Micropaleontology 61, p. 4-39.

Hohenegger, J. & E. Yordanova (2001)- Depth-transport functions and erosion-deposition diagrams as indicators of slope inclination and time-averaged traction forces: applications in tropical reef environments. Sedimentology 48, p. 1025-1046.
(Comparisons of distributions of living versus dead tests of larger foraminifera indicate common downslope transport in two NW Pacific off-reef transects)

Hohenegger, J. & E. Yordanova (2001)- Displacement of larger foraminifera at the western slope of Motobu Peninsula (Okinawa, Japan). Palaios 16, p. 53-72.

Hohenegger, J., E. Yordanova & A. Hatta (2000)- Remarks on West Pacific Nummulitidae (Foraminifera). J. Foraminiferal Research 30, p. 3-28.
(Operculina, Planostegina, Cycloclypeus and Heterostegina from W Pacific. Heterostegina depressa broad range in light intensities and is protected against irradiation by thick tests and cryptic life mode near surface. Test construction enables life under strong hydrodynamic regimes. Lives firmly attached to hard substrates, thus counteracting transportation by water movement. Nummulites venosus lives exclusively on coarse sand and avoids high sediment movement, starting distribution beneath fair weather wave base. Cycloclypeus carpenteri easily transported due to thin, plate-like form. Upper distribution limit correlates with storm wave base, below 50m. Lower distribution limit depends on light intensity and is near base photic zone)

Hohenegger, J., E.K. Yordanova, Y. Nakano & F.Tatzreiter (1999)- Habitats of larger foraminifera on the upper reef slope of Sesoko Island, Okinawa, Japan. Mar. Micropal. 36, p. 109-168.
(Peneroplis common on reef flat, hardgrounds down to 30m. Dendritina on sandy bottoms avoids uppermost slope, found down to 50m. Alveolinella similar distribution, common on hard bottom. Parasorites restricted to sandy substrates, 20-80m. Sorites and Amphisorus firm substrates between reef edge and 50m. Amphistegina species prefer hardgrounds, A. radiata also common on sand. Calcarinids withstand high energy, abundant on firm substrates close to reef edge. Baculogypsinoides deeper slope, sandy bottom, avoids shallowest parts. Hard substrates settled by Heterostegina down to 80m, occasionally on sandy bottoms. Nummulites on sands between 20- 70m. Operculina, starting at 20m, sandy substrates, rare individuals on rubble)

Hoibian, T. (1984)- La microfaune benthique traceur de lôevolution dôun systeme deltaique sous climat equatorial: le delta de la Mahakam (Kalimantan). Doct. Thesis Universite Bordeaux, p. 1-169. *(Unpublished)*
('Benthic microfauna tracing evolution of a delta system under equatorial climate: the Mahakam Delta (Kalimantan)')

Ho Kiam Fui (1971)- Distribution of recent benthonic foraminifera in the ñinnerò Brunei Bay. The Brunei Mus. J. 2, 3, p. 124-137.
(Three foraminifera assemblage in nearly landlocked Brunei Bay: (1) Trochammina cf. lobata and other small arenacous species (tidal inlets); (2) Ammobaculites (large part of inner bay); (3) Asterorotalia trispinosa with Ammonia, Elphidium, Florilus (seaward part of inner bay))

Holbourn, A., A.S. Henderson & N. Macleod (2013)- Atlas of benthic foraminifera. Wiley-Blackwell, p. 1-654.
(Atlas describing and illustrating 300 common Jurassic- Recent deep-sea benthic foraminifera species)

Honjo, S. & N. Minoura (1968)- *Discoaster barbadiensis* Tan Sin Hok and the geologic age of the Setogawa Group. Proc. Japan Academy 44, 3, p. 165-169.
(online at: https://www.jstage.jst.go.jp/article/pjab1945/44/3/44_3_165/_pdf)
(Nannofossil assemblage with Discoaster barbadiensis (originally described by Tan Sin Hok from Roti) signifies E-M Eocene age))

Hope, G.S. (1973)- The vegetation history of Mt Wilhelm. Ph.D. Thesis Australian National University, Canberra, p. 1-461.
(online at: https://digitalcollections.anu.edu.au/handle/1885/11103)
(Palynology study of sites on Mt Wilhelm PNG. Before 10,000 BP cooler and drier conditions prevailed in mountains and most mountains over 3800m in New Guinea were glaciated. Glaciers started retreating after 14,000 BP. By 8300 BP subalpine forests colonised Mt Whilhelm up to 4000m. Forests extensively cleared after 800 BP when planting of gardens took place below 2500m)

Hope, G.S. (1976)- The vegetational history of Mt Wilhelm, Papua New Guinea. J. of Ecology 64, p. 627-663.
(Pollen diagrams and 14 C dating from sites between 4420- 2740m on Mt Wilhelm, PNG Highlands allow determination of position of vegetation zones. From >22 000 years ago until 10 200 yrs B.P. tree-line stood well below 2700m and glaciers were present on mountain)

Horton, B.P., S.J. Culver, M.I.J. Hardbattle, P. Larcombe, G.A. Milne et al. (2007)- Reconstructing Holocene sea-level change for the central Great Barrier reef (Australia) using subtidal foraminifera. J. Foraminiferal Research 37, 4, p. 47-63.
(Samples behind barrier reef in water depths from 4.2- 48m. Two foraminiferal zones: inner shelf with Elphidium hispidulum, Pararotalia venusta, Planispirinella exigua, Quinqueloculina venusta and Triloculina oblonga; and middle shelf dominated by Amphistegina lessonii, Dendritina striata and Operculina complanata)

Horton, B.P., P. Larcombe, S.A. Woodroffe, J.E. Whittaker, M.R. Wright & C. Wynn (2003)- Contemporary foraminiferal distributions of a mangrove environment, Great Barrier Reef coastline, Australia: implications for sea-level reconstructions. Marine Geology 198, p. 225-243.
(Modern foraminifera and associated environmental information from Cocoa Creek, a mesotidal fringing mangrove environment on Great Barrier Reef. Three elevational zones. Zones I (highest) and II dominated by agglutinated species Trochammina inflata and Miliammina fusca, respectively; and Zone III (lowest) dominated by calcareous species, notably Ammonia tepida and Elphidium discoidale multiloculum. These assemblage zones similar to those found in both tropical and temperate intertidal environments)

Horton, B.P., J.E. Whittaker, K.H. Thomson, M.I.J. Hardbattle, S.A. Woodroffe & M.R. Wright (2005)- The development of a modern foraminiferal data set for sea-level recontructions, Wakatobi Marine National Park, Southeast Sulawesi, Indonesia. J. Foraminiferal Research 35, 1, p. 1-14.
(Intertidal foraminifera from Tukang-Besi islands off SE Sulawesi. Agglutinated species like Arenoparella mexicana, Miliammina fusca and Trochammina inflata most common at landward margin, and small calcareous species Ammonia tepida, Elphidium advanum and Quinqueloculina dominant at seaward margin of mangrove belt)

Horton, B.P., Y. Zong, C. Hillier & S. Engelhart (2007)- Diatoms from Indonesian mangroves and their suitability as sea-level indicators for tropical environments. Marine Micropaleontology 63, p. 155-168.

(Modern diatoms from mangrove swamps of Kaledupa (Tukang Besi island). 95 species, dominated by mesohalobous species (Amphora coffeaeformis, Amphora turgida, Achnanthes delicatula, Nitzschia sigma, Tryblionella balatonis) and oligohalobous (Amphora veneta, Diploneis ovalis, Progonoia didiomatia) taxa)

Howe, H.V. & K.G. McKenzie (1989)- Recent marine ostracoda (Crustacea) from Darwin and North Western Australia. Northern Territory Museum Arts Sciences, Monogr. Ser. 3, p. 1-50.

Hughes, G.W. (1977)- Recent foraminifera from the Honiara Bay area, Solomon Islands. J. Foraminiferal Research 7, 1, p. 45-57.

Hughes, G.W. (1984)- Recent foraminifera and selected biometrics of *Heterostegina* from Ontong Java Atoll, Solomon Islands, Southwest Pacific. J. Foraminiferal Research 15, p. 13-17.
(online at: http://jfr.geoscienceworld.org/content/15/1/13.full.pdf)
(56 species of foraminifera in Halimeda gravels from Ontong Java Atoll lagoon between 31-38 m water depth. Amphistegina lessoni and Heterostegina depressa two most common species in all samples)

Hughes, G.W. (1988)- Modern bathyal agglutinating foraminifera from the Vella Gulf and Blanche Channel, New Georgia, Solomon Islands, Southwest Pacific. J. Foraminiferal Research 18, p. 304-310.
(online at: http://jfr.geoscienceworld.org/content/18/4/304.full.pdf)
(Diverse agglutinated foraminiferal assemblages of 39 species between 510- 1225m water depth off Solomon Islands. Below ~600m Bathysiphon, Ammodiscus, Martinottiella, Karreriella appear. Increase in abundance and diversity between 865-1070m associated with regional oxygen-maximum zone between 450m and 750m and a salinity-minimum zone below 800m)

Hughes, G.W. (1995)- Recent foraminifera from inter-reef channels, nearshore North Rarotonga, Cook Islands, South Pacific. J. Micropalaeontology 14, 1, p. 29-36.
(online at: https://www.j-micropalaeontol.net/14/29/1995/jm-14-29-1995.pdf)
(Samples from 8-65 water depth in Avatiu and Avarua channels of Rarotonga Island, S Pacific. Foraminifera mainly Cymbaloporetta bradyi, Borelis schlumbergeri, Heterostegina depressa, Peneroplis pertusus, Planorbulinella larvata, Siphogenerina raphanus, Sorites marginalis, Reussella simplex, Spirillina vivipara, Rosalina globularis, Amphistegina radiata, Planispirinella exigua and small miliolids)

Hughes, G.W. (2008)- Recent brackish Foraminifera and Thecamoebae from Sedili River, West Malaysia. Malaysia. In: M.A. Kaminski & R. Coccioni (eds.) Proc. 7th Int. Workshop on agglutinated foraminifera, Grzybowski Foundation Spec. Publ. 13, p. 41-45.
(Sedili River of S Malay Peninsula enters S China Sea through wide estuary. Lower estuarine, mangrove-fringed regime with normal marine salinity (34 ppt) has mixed calcareous-agglutinated autochthonous foraminiferal assemblage with Trochammina, Tiphotrocha comprimata, Haplophragmoides and Ammobaculites and surge-transported inner neritic calcareous benthic forams (Asterorotalia, Cellanthus, Triloculina, Ammonia, Elphidium, etc.) and rare planktonics. Estuarine, mangrove-fringed regime upstream of lower estuarine contains diverse agglutinated foraminiferal assemblages dominated by Trochammina spp., Tiphotrocha, Cribrostomoides and Ammobaculites. Upper estuarine, freshwater-slightly brackish Pandanu-grass-fringed tidal regime with low diversity agglutinated foram assemblages dominated by Miliammina fusca and Spirolocammina sp. Upstream freshwater areas of Nipa palm and grass-fringed river banks barren of foraminifera. Thecamoebae include Difflugia oblonga, Cucurbitella tricuspis and Nebela colaris)

Hunt, C.O., D.D. Gilbertson & G. Rushworth (2012)- A 50,000-year record of Late Pleistocene tropical vegetation and human impact in lowland Borneo. Quaternary Science Reviews 37, p. 61-80.
(Palynology from sections in Great Cave of Niah, Sarawak, spanning period from ~52,000-5000 BP. Vegetation of interstadials marked by lowland forest, sometimes rather dry and at times by mangroves. Stadials are indicated by taxa characteristic of open environments, with taxa now restricted to 1000-1600m above sea level, suggesting temperature declines of ca 7–9 °C relative to present)

Hunt, C.O. & R. Premathilake (2012)- Early Holocene vegetation, human activity and climate from Sarawak, Malaysian Borneo. Quaternary Int. 249, p. 105-119.
(40 m core from Loagan Bunut yielded high-resolution E Holocene (11.3- 6.75 ka) sequence of marginal-marine deposits)

Hussain, S.M. (2017)- An overview of ostracoda studies from the freshwater, marginal marine and marine ecosystems of Andaman and Nicobar Islands and the coasts of India. In: P K Kathal et al. (eds.) Micropaleontology and its applications, Scientific Publishers, India, p.

Hussain, S.M., P. Ganesan, G. Ravi, S.P. Mohan & S.G.D. Sridhar (2007)- Distribution of ostracoda in marine and marginal marine habitats off Tamil Nadu and adjoining areas, SE coast of India and Andaman Islands: environmental implications. Indian J. Marine Sciences 36, 4, p. 369-377.
(online at: http://nopr.niscair.res.in/bitstream/123456789/68/1/IJMS%2036(4)%20(2007)%20369-377.pdf)

Hussain, S.M., R. Krishnamurthy, M.S. Gandhi, K. Ilayaraja, P. Ganesan & S.P. Mohan (2006)- Micropaleontological investigations of tsunamigenic sediments of Andaman Islands. Current Science 91, p. 1655-1667.
(online at: www.iisc.ernet.in/currsci/dec252006/1655.pdf)
(Diverse marine foraminifera and ostracods from likely tsunami deposits on Andaman Islands. Common Amphistegina., Operculina ammonoides, Calcarina, Textularia, Ammonia, etc. Also deeper marine elements)

Hussain, S.M., S.P. Mohan & M.P. Jonathan (2010)- Ostracoda as an aid in identifying 2004 tsunami sediments: a report from SE coast of India. Natural Hazards 55, p. 513-522.
(Presence of marine ostracods in 2004 coastal tsunami deposits)

Hustedt, F. (1938)- Systematische und okologische Untersuchungen uber die Diatomeen-Flora von Java, Bali und Sumatra nach dem Material der Deutschen Limnologischen Sunda-Expedition. 1: Systematischer Archiv. Hydrobiologie, Suppl. Band 15, p. 1-790. *(Reprinted 1980 by Otto Koeltz Science Publishers, Konigstein)*
('Systematic and ecological investigations of the diatom floras of Java, Bali and Sumatra…')

Isnaniawardhani, V. (2006)- Biostratigrafi dan paleoekologi berdasarkan nannoplankton dan foraminifera daerah Perairan Madura sejak Pliosen hingga Resen. Ph.D. Thesis Inst. Teknologi Bandung (ITB), p. 1- . *(Unpublished)*
('Biostratigraphy and paleoecology based on nannoplankton and foraminifera in the Madura waters from Pliocene to Recent'. 10 biozones in waters S of Madura. Climate trends: warm conditions characterized by nannoplankton Discoaster quinqueramus and foram Globorotalia tumida)

Isnaniawardhani, V. (2009)- Environmental control of nannoplankton and foraminifera assemblages in Madura waters. Bull. Marine Geol. 24, 1, p. 1-12.
(online at: http://isjd.pdii.lipi.go.id/admin/jurnal/24109112.pdf)
(Distribution of nannoplankton and foraminifera in 26 shallow marine surface sediment samples from Madura Strait and 24 samples from open marine water N of Madura)

Isnaniawardhani, V. (2012)- Karakteristik sedimen dan mikroorganisma permukaan dasar laut perairan Madura bagian utara. Bull. Scientific Contr. (UNPAD) 10, 1, p. 18-30.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8275/3822)
('Characteristics and microorganisms of seafloor sediments north of Madura'. Clay and silt seafloor samples in water depths 5-77m with 20 nannoplankton species (mainly Emiliania huxleyi, Gephyrocapsa oceanica), 30 planktonic forams species (mainly Globigerinoides ruber) and 16 benthic foraminifera species (common Ammonia, Quinqueloculina, Eponides, Triloculina, Asterorotalia, Cibicides, Cancris, Elphidium, Textularia). Pseudorotalia, Cibicides and Anomalinella more abundant in N, away from coast. Abundance and diversity increase with depth. Gephyrocapsa mainly in samples closest to shoreline)

Isnaniawardhani, V. & F. Muhammadsyah (2015)- Kelimpahan, keanekaragaman dan spesies khas dari kumpulan foraminifera bentik pada sedimen permukaan dasar laut di perairan Tambelan. Bull. Scientific Contr. (UNPAD) 13, 3, p. 259-269.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8413/3920)
('Abundance, diversity and species of benthic foraminifera in sea floor sediments in waters of Tambelan'. Benthic foraminifera from shallow waters around Tambelan Islands, Natuna Sea)

Isnaniawardhani, V., E. Suparka, R. Kapid & H. Latief (2002)- Calcareous nannoplankton and foraminifera in the surficial sediment of Madura Strait. Proc. 31st Ann. Conv. Indon. Assoc. Geol. (IAGI), Surabaya, 1, p. 380-386.
(Recent calcareous nannoplankton assemblages N of Madura island dominated by Gephyrocapsa oceanica, Emiliana huxleyi and Florisphaera. Not much detail)

Isnaniawardhani, V., E. Suparka, R. Kapid & H. Latief (2003)- Nannoplankton and foraminifera assemblages and their relations to bathymetry in Madura waters. In: Proc. 8th Int. Congress Pacific Neogene Stratigraphy, Chiang Mai 2003, p.

Jell, J.S., W.H.G. Maxwell & R.G. McKellar (1965)- The significance of the larger foraminifera in the Heron Island reef sediments. J. Paleontology 39, 2, p. 273-279.
(Distribution of foraminiferal detritus in sediments of Heron Island Reef, Great Barrier Reef Province. Dominant genus Calcarina spp., Baculogypsina sphaerulata and Marginopora vertebralis mainly in outer parts of reef flats. Amphistegina, Elphidium, Operculina, Peneroplis and Alveolinella quoii relatively rare)

Jian, Z. & L. Wang (1997)- Late Quaternary benthic foraminifera and deepwater paleoceanography in the South China Sea. Marine Micropaleontology 32, p. 127-154.
(In deepwater S China Sea different foram assemblages associated with Intermediate Water Mass (Globocassidulina subglobosa), Deep Water Mass (Astrononion novozealandicum and Bulimina aculeata) and Deep water below CCD (Eggerella bradyi))

Jian, Z., L. Wang, M. Kienast, M. Sarnthein, W. Kuhnt, H. Lin & P. Wang (1999)- Benthic foraminiferal paleoceanography of the South China Sea over the last 40,000 years. Marine Geology 156, 1, p. 159-186.
(During periods of high organic carbon flux during last glacial maximum (~10 ka; possibly due to increased surface productivity, induced by increased input of nutrients from nearby river runoff) detritus feeders like Bulimina aculeata and Uvigerina peregrina dominated benthic foraminiferal assemblages. Suspension feeders like Cibicidoides wuellerstorfi and 'opportunistic' species like Oridorsalis umbonatus, Melonis barleeanum and Chilostomella ovoidea gradually became more abundant as soon as organic carbon flux decreased)

Jones, R.W. (1994)- The Challenger Foraminifera. Oxford University Press, p. 1-149.
(Updated taxonomy and reproductions of foraminifera from classic H.B. Brady (1884) Challenger report)

Jones, R.W. (2014)- Supplemental notes on Challenger Foraminifera. In: A.J. Bowden et al. (eds.) Landmarks in foraminiferal micropalaeontology: history and development, The Micropalaeontological Society, Spec. Publ. 6, Geol. Soc. London, p. 31-45.
(Updates to Jones (1994) updates to names of foraminifera in Brady Challenger Report)

Jouse, A., P. & G.H. Kazarina (1974)- Pleistocene diatoms from site 262 leg 27, DSDP. Initial Reports Deep Sea Drilling Project (DSDP) 27, U.S. Government Printing Office, Washington, p. 925-946.
(online at: www.deepseadrilling.org/27/volume/dsdp27_42.pdf)
(Site 262 near axis of the Timor Trough, 75 km S of W tip of Timor in 2315m water depth. Mainly nannofossil oozes with some terrigenous material. Diatoms only in upper 250m (M-U Pleistocene; 5 zones), not numerous, well preserved, 97 species, dominantly oceanic (38). All samples with of Thalassionema and Thalassiotrix)

Jumnongthai, J. (1983)- Recent smaller foraminifera from the Gulf of Thailand. J. Geol. Soc. Thailand 6, 1 p. 39-53.

(online at: http://library.dmr.go.th/Document/J-Index/1983/88.pdf)
(Foram distribution in 18 samples from water depth 29-74m in N Gulf of Thailand >99% benthics (83% calcareous). Common Asterorotalia pulchella, Cellanthus craticulatus, Elphidium, Pseudorotalia spp., Quinqueloculina, Textularia, etc.))

Jumnongthai, J. (2001)- Brackish foraminifera from southern provinces along the Gulf of Thailand. Dept. Mineral Resources, Bangkok, Techn. Report No. GSD 254/2001, p.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/2001/1746.pdf)
(Brackish water foraminifera from five provinces along Gulf of Thailand 53 benthic species. Low salinity facies with Ammobaculites, Ammotium cassis, Arenoparella, Miliammina fusca and Trochammina. Higher salinity assemblages with more calcareous forms Elphidium, Pararotalia nipponica))

Jumnongthai, J. (2002)- Recent brackish foraminifera from southern peninsular Thailand. J. Geol. Soc. Thailand 1, p. 35-46.
(online at: http://library.dmr.go.th/Document/J-Index/2002/136.pdf)
(92 species of brackish foraminifera in estuaries and coastal zones along Andaman Sea. Arenacous taxa Arenoparella mexicana, Haplophragmoids, Miliammini fusca and Trochammina dominant in mangrove forests; calcareous taxa Ammonia beccarii, Elphidium and Pararotalia nipponica dominant in coastal areas)

Jurnaliah L. & Winantris (2015)- Distribusi submikrofosil (polen dan foraminifera) pada delta front di delta Mahakam, Kalimantan Timur. Bull. Scientific Contr. (UNPAD) 13, 3, p. 169-181.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8404/3911)
('Distribution of microfossils (pollen and foraminifera) in the Mahakam delta, East Kalimantan'. 29 samples from delta front. Pollen 24 species of palmae, 21 mangrove and 117 species of non-mangrove and 7 biofacies. Foraminifera 82 species of small benthics, also 7 biofacies, from inner shelf to mangrove swamp)

Kamaludin b. Hassan (1989)- Significance of palynology in Late Quaternary sediments in Peninsular Malaysia. Bull. Geol. Soc. Malaysia 24, p. 57-66.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1989b05.pdf)

Karmini AS, Mimin (1996)- Foraminifera sedimen permukaan perairan Teluk Semangko & Lepas pantai sebelah Barat Sumatra Selatan. Proc. 25th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 71-87.
('Foraminifera in seafloor sediments of Semangko Bay and Lepas beach, S Sumatra')

Kathal, P.K. (2002)- Taxonomy, distribution patterns and ecology of Recent littoral foraminifera of the East coast of India. Neues Jahrbuch Geol. Palaont. Abhandl. 224, 1, p. 115-160.
(Foram distributions in 96 samples of coastal sediments down to 3m depth along E coast India. Faunas dominated by Miliolidae, followed by Rotaliidae, Elphididae, Nonionidae, Cassidulinidae, etc.))

Kawagata, S., B.W. Hayward & A.K. Gupta (2006)- Benthic foraminiferal extinctions linked to late Pliocene-Pleistocene deep-sea circulation changes in the northern Indian Ocean (ODP sites 722 and 758). Marine Micropaleontology 58, p. 219-242.
(Late Pliocene- M Pleistocene decline and extinction of 63 species of elongate, bathyal-upper abyssal benthic foraminifera (Stilostomellidae, Pleurostomellidae, some Nodosariidae. Two Indian Ocean ODP sites show pulsed declines in Extinction Group abundance and richness, especially in glacial periods, with partial recoveries in interglacials. Glacial declines result of increased production of colder, well-ventilated Antarctic Bottom Water and Glacial North Atlantic Intermediate Water)

Kawamura, H. (2002)- Marine palynological records in the southern South China Sea over the last 44 kyr. Doctor Dissertation Christian-Albrechts-University, Kiel, p. 1-145.
(online at: at http://deposit.ddb.de/cgi-bin/...)
(Mainly on Recent and Quaternary dinoflagellates in Molengraaff paleo-river area at N margin of Sunda Shelf)

Kawamura, H. (2004)- Dinoflagellate distribution along a shelf to slope transect of an oligotrophic tropical sea (Sunda Shelf, South China sea). Phycological Research 52, 4, p. 355-375.
(51 surface samples along Sunda shelf to S China Sea slope with36 taxa of dinoflagellate cysts. Oligotrophic tropical shelf assemblages dominated by gonyaulacoids (Spiniferites, Operculodinium spp.). Slope assemblages dominated by protoperidinioids, possibly reflecting higher nutrient availability)

Keij, A.J. (1953)- Preliminary note on the Recent Ostracoda of the Snellius Expedition. Proc. Kon. Nederl. Akademie Wetenschappen, B 56, 2, p. 155-168.
(13 species of podocopid and one platycopid ostracode species from 28 stations of 1929-1930 Snellius Expedition in E Indonesian Seas. Ostracoda still found in samples from 4000-5000m)

Keij, A.J. (1964)- The relative abundance of recent planktonic foraminifera in seabed samples collected offshore Brunei and Sabah. Annual Report Geological Survey Borneo Region Malaysia 1963, p. 146-153.
(Percentages of planktonic foraminifera increase with depth in 561 seafloor samples from narrow Brunei and Sabah shelf between 4-113m: rare between 0-20m, <5% between 20-40m, 5-40% between 40-100m, up to 80% between 100-200m. Distinct increases in relative abundance of Orbulina, Pulleniatina, Globorotalia menardii below 40-50m. Globorotalia truncatulinoides, Gr. crassaformis and Sphaeroidinella dehiscens only below 100m)

Keij, A.J. (1966)- Southeast Asian Neogene and Recent species of *Paijenborchella*. Micropaleontology 12, 3, p. 324-354.
(Discussion of distribution of 4 species of Miocene- Recent ostracode genus Paijenborchella in Brunei, Cebu-Philippines, etc. to Victoria, Australia. P. malaiensis is deep-water species living in depths of >100m)

Keij, A.J. (1975)- Some recent Ostracoda of Manila (Philippines). Proc. Kon. Nederl. Akademie Wetenschappen B 78, p. 351-363.

Keij, A.J. (1979)- Review of the Indo-West Pacific Neogene to Holocene ostracode genus *Atjehella*. Proc. Kon. Nederl. Akademie Wetenschappen B 82, p. 449-464.

Keijzer, C.J. (1935)- On variability in East Indian foraminifera. Doct. Thesis University of Leiden, Brill, p. 1-79. *(Unpublished)*
(Biometric study of selected modern foraminifera species from coasts of Java, Bali, Madura)

Khare, N., S.K. Chaturvedi & A. Mazumder (2007)- An overview of foraminiferal studies in nearshore regions off eastern coast of India, and Andaman and Nicobar Islands. Indian J. Marine Sci. 36, 4, p. 288-300.
(online at: http://nopr.niscair.res.in/bitstream/123456789/52/1/IJMS%2036(4)%20(2007)%20288-300.pdf)
(Review and bibliography of over 100 papers dealing with shallow marine and coastal Recent foraminifera)

Kleijne, A. (1990)- Distribution and malformation of extant calcareous nannoplankton in the Indonesian Seas. Marine Micropaleontology 16, p. 293-316.
(Calcareous nannoplankton distribution in 202 samples from Snellius-II Expedition in Banda Sea and adjacent seas. 36 living species recorded; most common Gephyrocapsa oceanica, Umbellosphaera irregularis, Emiliania huxleyi and U. sibogae. Coccolithophorids present, but devoid of coccoliths during NW monsoon, suggesting low salinity and nutrient depletion of surface waters restrict coccolith formation, since normal coccoliths do develop during SE monsoon when upwelling causes nutrient enrichment and normal salinity)

Kob, M.R.C. (1993)- Late Quaternary nannofossils from offshore Sabah, northwest Borneo. In: T. Thanasuthipitak (ed.) Proc. Int. Symposium Biostratigraphy of mainland Southeast Asia: facies & paleontology (BIOSEA), Chiang Mai 1993, Chiang Mai University, 2, p. 261-281.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/2298_2 ...)
(late Pleistocene- Recent calcareous nannofossils from 13m thick core KL139 in ~2700m water depth of Sabah Trough. Emiliana huxleyi, Gephyrocapsa oceanica and 'small Gephyrocapsa' >50% of total assemblages. Four

zones: deeper zone C (Late Pleistocene Last Glacial Maximum?) with peak 'small Gephyrocapsa' represents rel. cool period, youngest zone A with peak G. oceanica rel. warm)

Koba, M. (1978)- Distribution and environment of Recent *Cycloclypeus*. Science Repts. Tohuku University, ser. 7, 28, p. 283-311.
(online at: http://ir.library.tohoku.ac.jp/re/bitstream/10097/45065/1/AA0045945078466.pdf)
(Tropical larger foram Cycloclypeus widely distributed in Recent of Indo-Pacific oceanic region. Common on outer reef slopes, and confined by 200m isobath. Not present in pelagic environments, reef banks, lagoons or bays. In Recent samples found between 32-1419m depth, but clear abundance peak around 90m)

Langer, M.R. (1992)- New Recent foraminiferal genera and species from the lagoon at Madang, Papua New Guinea. J. Micropalaeontology 11, 1, p. 85-93.
(online at: https://www.j-micropalaeontol.net/11/85/1992/jm-11-85-1992.pdf)
(Samples from shallow water (0-55m) fore- and back-reef environments at Madang lagoon with larger foraminifera (Assilina spp., Heterostegina depressa, Alveolinella quoyi, Sorites spp., Amphisorus hemprichii, Marginopora vertebralis). Two new genera (Pseudolachlanella) and eight new species of benthic foraminifera)

Langer, M.R. (1995)- Oxygen and carbon isotopic composition of Recent larger and smaller foraminifera from the Madang Lagoon (Papua New Guinea). Marine Micropaleontology 26, p. 215-221.
(General trend in Recent large benthic foraminifera (Operculina, Heterostegina, Sorites, Marginopora, Alveolinella) from Madang Lagoon of depletion in heavier C and O isotopes with depth appears to be depth- and light-dependant)

Langer, M.R. & L. Hottinger (2000)- Biogeography of selected 'larger' foraminifera. Micropaleontology 46, Suppl. 1, Advances in the biology of foraminifera, p. 105-126.
(Global distributions of Recent larger foraminifera species. Main provinces: (1) Central Pacific with Baculogypsinoides spinosus, Schlumbergerella floresiana, Operculina heterosteginoides, Pseudorotalia indopacifica; (2) Indo-Pacific with Marginopora vertebralis, Alveolinella quoyii, Amphistegina radiata, Calcarina spp., Nummulites venosus and Cycloclypeus carpenteri; (3) W Indian Ocean and (4) Caribbean)

Langer, M.R. & J.H. Lipps (2003)- Foraminiferal distribution and diversity, Madang reef and lagoon, Papua New Guinea. Coral Reefs 22, p. 143-154.
(Benthic foram distribution shows four clusters in in Madang lagoon at NE coast of PNG)

Lei, Y. & T. Li (2016)- Atlas of benthic foraminifera from China Seas, the Bohai Sea and the Yellow Sea. IUP Science Press, Beijing, Springer, p. 1-399.
(Descriptions of 183 species of mainly shallow marine foraminifera from northeen South China Sea)

Lelono, E.B. (2007)- Pleistocene palynology of East Java. Lemigas Scientific Contr. 29, 3, p. 3-14.

Lelono, E.B. (2018)- Dry climate expasion on the Pleistocene of Indonesia as recorded in its pollen assemblage. Lemigas Scientific Contributions Oil and Gas 41, 1, p. 17-27.
(online at: http://journal.lemigas.esdm.go.id/ojs/index.php/SCOG/article/download/69/pdf)
(Pleistocene characterised by glacial and interglacial periods, in Indonesia is reflected in dry/cool (abundant Gramineae grass pollen) and wet/warm climates (increases of coastal and mangrove palynomorphs). Quantitative palynology shows Pleistocene in E Java wells characterised by abundant Monoporites annulatus grass pollen, corresponding to glacial-period expansion of savanna vegetation. Abundant charred Gramineae cuticles reflect burning grass. In N Papua wells repetition of dry/ wet conditions or low/ high sea levels)

LeRoy, L.W. (1938)- A preliminary study of the microfaunal facies along a traverse across Peper Bay, West coast of Java. De Ingenieur in Nederlandsch-Indie (IV) 5, 8, p. 130-133.
(Recent foraminifera off W Java SW of Labuan three assemblages (1) Haplophragmoides- Haplophragmium, (2) Operculina ozawaia and (3) Dendritina-Aveolinella)

Lessard, R.H. (1964)- Intertidal and shallow water foraminifera of the tropical Pacific Ocean. M.Sc. Thesis, University of Southern California, p. 1-112.
(online at: http://digitallibrary.usc.edu/cdm/ref/collection/p15799coll30/id/107855)
(Mainly on distribution of Baculogypsina and Tinoporus in western tropical Pacific)

Lessard, R.H. (1980)- Distribution patterns of intertidal and shallow water foraminifera of the tropical Pacific Ocean. Cushman Foundation Foraminiferal Research, Spec. Publ. 19, p. 40-58.

Li, Z., Y. Saito, L. Mao, T. Tamura, Z. Li, B. Song, Y. Zhang, A. Lu, S. Sieng & J. Li (2012)- Mid-Holocene mangrove succession and its response to sea-level change in the upper Mekong River delta, Cambodia. Quaternary Research 78, 2, p. 386-399.
(Cores from upper Mekong River delta in Cambodia record transgressive sequence from floodplain freshwater marsh to tidal flat (~9.4- 6.3 ka), overlain by mangrove. At decelerated sea-level rise at ~8.3 ka pioneer (high-salinity tolerant) mangrove species Sonneratia alba and Sonneratia caseolaris appeared, then was replaced by regressive mangrove succession of increasing Rhizophora apiculata and Bruguiera spp.)

Ling, H.Y. & W.A. Anikouchine (1967)- Some spumellarian radiolaria from the Java, Philippines and Mariana trenches. J. Paleontology 41, 6, p. 1481-1491.
(Eight species of five genera of patagium-bearing and morphologically closely related spumellarian Radiolaria in three sediment cores from Java, Philippine, and Mariana Trenches. Java Trench samples from pelagic ooze in core from 3380m water depth off S Sumatra, with Euchitonia spp., Hymeniastrum, Dictyocorine and Rhopalodictyum. Also locally common diatiom Ethmodiscus rex)

Lipps, J.A. & K.P. Severin (1985)- *Alveolinella quoyi*, a living fusiform foraminifera, at Motupore Island, Papua New Guinea. Science in New Guinea 11, p. 126-137.
(Living species of Alveolinella quoyi in water depths of 3-12m, mainly on algae-covered coral rubble and around bases of living coral heads in rel. sheltered areas. Dead tests scattered over wider bathymetric range. Virtually absent on back-reef flats)

Lobegeier, M.K. (2002)- Benthic foraminifera of the family Calcarinidae from Green Island Reef, Great Barrier Reef Province. J. Foraminiferal Research 32, 3, p. 201-216.
(Three epiphytic calcarinid species on Great Barrier Reef and limited to W Indo-Pacific (absent from Indian Ocean and E of 170°W). Calcarina spengleri (=hispida) dominant and common in shallow water on reef flat. Calcarina mayori smaller and dominates in deeper water off reef flat. Baculogypsina sphaerulata is shallow water high-energy species. Best preserved Calcarina at Green Island Reef in windward shoals)

Li, B.H., X.Y. Wang, Z.M. Jian, P.X. Wang (2009)- Sea surface environment inferred from planktonic foraminifera in the southern South China Sea since the last glacial period. Palaeoworld 18, p. 23-33.
(Planktonic foraminifera from Site 17964 in southern S China Sea (SCS) show higher % warm-water species in Holocene, while temperate-water species increase during last glacial period. Pulleniatina obliquiloculata more common during glacial period. Orbulina universa test size larger than those in Indian and Atlantic Oceans, indicating warmer and less saline surface water in Equatorial- tropical W Pacific. Diameter and shell porosity of O. universa increased from last glacial to Holocene)

Lirdwitayaprasit, T. (1997)- Distribution of dinoflagellate cysts in the surface sediment of the South China Sea, Area I: Gulf of Thailand and East Coast of Peninsular Malaysia. In: Proc. 1st Techn. Seminar Marine fishery resource survey in the South China Sea, SE Asia Fisheries Dev. Centre (SEAFDEC), Training Dept., Thailand, S4/SB7, p. 294-309.
(online at: http://map.seafdec.org/downloads/pdf/collaborative%20research/AreaI_GOT/SCS_FRS1_18.pdf)
(Dinoflagellate cysts in Gulf of Thailand and off E coast of Peninsular Malaysia 20 goniolacoid, tuberculodinioid and peridinioid species. Spiniferites spp. (=Gonyaulax spp.) dominant cyst species)

Lirdwitayaprasit, T. (1997)- Distribution of dinoflagellate cysts in the surface sediment of the South China Sea, Area II: Sabah, Sarawak and Brunei Darussalam waters. In: Proc. 1st Techn. Seminar Marine fishery resource

survey in the South China Sea, SE Asia Fisheries Dev. Centre (SEAFDEC), Training Dept., Thailand, S2/FB4, p. 310-322. *(online at: http://map.seafdec.org/downloads/pdf/collaborative%20research/AreaII_West%20Borneo/SCS_FRS2_16.pdf)*
(Dinoflagellate cysts off N Borneo with Spiniferites bulloideus as dominant species)

Lloyd, A.R. (1973)- Foraminifera of the Great Barrier Reef bores. In: O.A. Jones & R. Endean (eds.) Biology and geology of coral reefs, 1, Academic Press, New York, p. 347-366.

Loeblich, A.R. & H. Tappan (1994)- Foraminifera of the Sahul Shelf and Timor Sea. Cushman Foundation Foraminiferal Research, Spec. Publ. 31, p. 1-661.
(online at: https://cushmanfoundation.allenpress.com/Portals/_default/SpecialPublications/sp31.pdf)
(Comprehensive study of Recent foraminifera from Timor Trough and Sahul Shelf, collected in 1961. Mainly species descriptions (946 species of 428 genera; 101 new species)

Luan, B.T. & J.P. Debenay (2005)- Foraminifera, environmental indicators in the highly impacted environments of the Mekong Delta. Hydrobiologia 548, p. 75-83.

Lucero, E.S. & L.P. de Silva (2006)- The occurrence and distribution of Recent benthic foraminifera in Subic Bay, Zambales, Philippines. J. Geol. Soc. Philippines 61, p.

Lunt, P. (2014)- Stacked digital imaging of foraminifera. Berita Sedimentologi 29, p. 123-132.
(online at: www.iagi.or.id/fosi)
(Description of technique of imaging foraminifera by combining series of digital photographs in automated software to produce single optical image with high resolution and superior depth of focus. With examples of Indonesian Tertiary- Recent foram material)

Maloney, B.K. (1992)- Late Holocene climatic change in Southeast Asia: the palynological evidence and its implications for archaeology. World Archaeology 24, 1, p. 25-34.
(Palynological information on SE Asia Holocene from deep sea cores, archeological sites and land cores)

Maloney, B.K. (1998)- That elm again! Ulmus at Pea Bullok, North Sumatra, and regional comparisons. Blumea 43, p. 121-127.
(online at: http://repository.naturalis.nl/document/565696)
(Quaternay Ulmus pollen present in Pua Bulok swamp in N Sumatra. Ulmus not necessarily ndicator for seasonal dryness)

Maloney, B.K. & F.G. McCormac (1996)- Thirty thousand years of radiocarbon dated vegetation and climatic change in highland Sumatra. Radiocarbon 37, p. 181-190.
(Pollen analysis and 14C sequences from two Sumatra highland sites, Pea Bullok (Toba Plateau) and Danau di-Atas, spanning last glacial period. Strong indications of extensive forest clearance after ~2 ka)

Mamo, B.L. (2016)- Benthic foraminifera from the Capricorn Group, Great Barrier Reef, Australia. Zootaxa 4215, 1, p. 1-123.
(Taxonomy of 133 benthic foram species from Heron Island, One Tree Island, Wistari and Sykes Reefs)

Mantle, D.J., A.P. Kelman, R.S. Nicoll & J.R. Laurie (2010)- Australian biozonation chart 2010, Part 1: Australian and selected international biozonation schemes tied to the GTS2004 geological timescale. Geoscience Australia, Canberra.
(online at: https://d28rz98at9flks.cloudfront.net/70371/Australian_Biozonation_Chart_2010_Part1.pdf)
(Large chart with Ediacaran- Recent time scale and biozonations of Australia)

Marquez, E.J. (1999)- Deep sea foraminiferal distribution of eastern South China Sea. J. Geol. Soc. Philippines 54, 1-2, p.

Marquez, E.J. (2000)- The 1991 Mount Pinatubo eruption and Eastern South China Sea foraminifera: occurrence, composition and recovery. Island Arc 9, 4, p. 527-541.
(Pyroclastic materials from 1991 eruption of Mt Pinatubo resulted in decimation of most benthic foraminifera in E South China Sea. Samples above eruption layers in deep water cores much lower abundances, lower diversity and relative common of Quinqueloculina spp., probably form part of recolonization fauna)

Marquez, E.J., P.J. Militante-Matias, G.P. Yumul, M.M. De Leon, D.V. Faustino et al. (1999)- Deep-sea foraminiferal distribution of the central and eastern portions of the South China Sea. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ô98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 529-536.
(online at: www.gsm.org.my/products/702001-100787-PDF.pdf)
(1991 eruption of Mount Pinatubo covered S China Sea with W-trending ash fan. Eruption affected foraminifera only in cores taken near Luzon. Not much detail (not one species name!))

Martin, S.Q. (2016)- Distribution and taxonomy of modern benthic foraminifera of the western Sunda Shelf (South China Sea) off Peninsular Malaysia. Masters Thesis, East Carolina University, p. 1-262. *(Unpublished)*
(also as Cushman Foundation Spec. Publ. 47, 2018, with S.J. Culver, E. Lorri et al., p.)
(Distribution and taxonomy of 125 modern benthic foraminifera species from 54 seafloor samples in southern S China Sea, between 8-60m. Main assemblages across Sunda Shelf : (1) nearshore areas (<40m) dominated by symbiont-bearing Amphistegina lessonii, A. radiata; (2) inner shelf (40-100m), sandy mud substrates and abundant Heterolepa. dutemplei; (3) outer shelf (100-200m), muddy substrates and Uvigerina schwageri)

Maryunani, Khoiril Anwar (2003)- Calibration of tropical Pacific marine sediment indices (d18O) to sea surface temperature. Buletin Geologi (ITB) 35, 1, p.

Matsumaru, K. & Y. Matsuo (1976)- Short note on the Recent benthic foraminiferids from the beach sediments of the subtropical and tropical islands in the Western Pacific region. J. Saitama University Fac. Education (Math. Nat. Science) 25, p. 15-26.

Matsuoka, K., Y. Fukoyo, D.P. Praseno, Q. Adnan & M. Kodama (1999)- Dinoflagellate cysts in surface sediments of Jakarta Bay, off Ujung Pandang and Larantuka of Flores island, Indonesia with special reference of *Pyrodinium bahamense*. Bull. Fac. Fisheries, Nagasaki University, 80, p. 49-54.
(online at: http://naosite.lb.nagasaki-u.ac.jp/dspace/bitstream/10069/9236/1/80-049.PDF)

McCloskey, B.J. (2009)- Foraminiferal responses to arsenic in shallow-water hydrothermal system in Papua New Guinea and in the laboratory. Ph.D. Thesis University of South Florida, p. 1-425. *(Unpublished)*
(On shallow marine, reef flat foram assemblages around hydrothermal vents in ~8m of water at Ambitle Island, Tutum Bay, E of New Ireland, PNG)

McKenzie, K.G. & A.J. Keij (1977)- *Pterobairdia* (Ostracoda, Bairdiidae), a new genus from the Indo-West Pacific. Proc. Kon. Nederl. Akademie Wetenschappen, B, 80, 5, p. 367-374.
(Recent ostracodes from East Indonesia Snellius Expedition, incl. Pterobairdia maddocksae n. sp.)

Melis, R. & D. Violanti (2006)- Foraminiferal biodiversity and Holocene evolution of the Phetchaburi coastal area (Thailand Gulf). Marine Micropaleontology 61, p. 94-115.
(Study of foraminifera from surface sediments from Phetchaburi coastal area, Thailand Gulf, from margin of vegetated zone, to depth of ~20m, and core in Mae Khlong delta plain. Area characterized by inflow of Mae Khlong river. Four assemblages of low diversity brackish-water faunas, with salinity controlling factor)

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(Dinoflagellate 'refugium species' Dapsilidinium pastielsii thought to range from Eocene- E Pleistocene, but still living in SE Asia (Okinawa; Koror, Palau, Ambon, E Vietnam Sea and Philippines)

Miao, Q. & R.C. Thunell (1993)- Recent deep-sea benthic foraminiferal distributions in the South China and Sulu Seas. Marine Micropaleontology 22, p. 1-32.
(Benthic foraminifera in surface sediment samples from S China and Sulu Seas. Low abondances but high diversity. Four faunal assemblages: (1) Globocassidulina subglobosa/ Uvigerina <1500m; within oxygen minimum zone); (2) Bulimina aculeata between 1700-2000m in SE S China Sea, also associated with high organic carbon content; (3) Astrononion pusillum in S China Sea between 1500-3200 m; (4) below lysocline (~3200m) in S China Sea agglutinated Rhabdammina abyssorum assemblage, in water mass that is highly undersaturated with respect to calcite. In Sulu Sea Pyrgo murrhina assemblage 1400-2200m; below 2200m assemblages dominated by Oridorsalis umbonatus)

Miao, Q. & R.C. Thunell (1996)- Late Pleistocene-Holocene distribution of deep-sea benthic foraminifera in the South China Sea and Sulu Sea- palaeoceanographic implications. J. Foraminiferal Research 26, p. 9-23.

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Minhat, F.I., P.R. Parham, M.L. Husain & B. Satyanarayana (2014)- Review of foraminiferal studies in nearshore Areas, Peninsular Malaysia. Geol. Soc. Malaysia, Nat. Geoscience Conf. (NGC) 2014, Trengganu, P063, p. 122-124. *(Extended Abstract)*
(Brief review of current status of intertidal- shallow marine foraminiferal distribution work in Malaysia)

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(Modern subtidal benthic foraminifera on E coast of Johor 279 species, dominated by Asterorotalia pulchella (= A. tripinosa), Discorbinella bertheloti, Pseudorotalia indopacifica, Ammonia and Cavarotalia annectens. Agglutinated species Textularia pseudosolita, T. agglutinans, Bigenerina nodosaria and T. foliacea in middle-shelf (>20m), calcareous genera Elphidium, Pararotalia and Ammonia in inner-shelf (<20m))

Minhat, F.I., K. Yahya, A. Talib & O. Ahmad (2013)- A survey of benthic foraminiferal assemblages in tropical coastal waters of Pulau Pinang, Malaysia. Tropical Life Sciences Research 24, 1, p. 35-43.
(Samples from subtidal zone to 1200m offshore Pinang Island, Malacca Straits, in water depths 1.5-10m with 9 nine genera of foraminifera, dominated Ammonia, Bigenerina, Ammobaculites and Elphidium)

Minhat, F.I., K. Yahya, A. Talib & O. Ahmad (2014)- Benthic foraminiferal distributions as bioindicators in coastal waters of Penang National Park, Malaysia. J. Foraminiferal Res. 44, 2, p. 143-150.
(Distribution of benthic foraminifera off NW corner of Penang Island. Water depths 1.5-10 m, with predominantly muddy substrate. All assemblages dominated by Ammonia; also Elphidium, Ammobculites, etc.)

Mohamed, Mahani, S. Jirin, S.S. Hasan & N. Mohsin (2010)- Biofacies characterisation in the marginal marine environments of the Malay Basin using agglutinated foraminifera. Petrol. Geosc. Conf. Exhib. (PGCE), Kuala Lumpur 2010, p. *(Extended Abstract)*
(Malay Basin dominated by paralic facies, where agglutinated foraminifera are useful in characterising biofacies. Three modern localities studied for biofacies analogs: Sedili Besar Estuary, Klang-Langat Delta and Pahang River Delta. Occurrences of species such as Ammobaculites exiguus, Textularia sp and Arenoparrella mexicana used to differentiate nearshore, shallow marine and brackish intertidal depositional settings)

Mohamed, Mahani, S.S. Hasan & S. Jirin (2014)- Recent agglutinated foraminiferal trends and assemblages of the Sedili Besar River and its adjacent offshore area, southeastern Peninsular Malaysia. Berita Sedimentologi 29, p. 73-79.
(online at: www.iagi.or.id/fosi)

(Distribution of Recent foraminifera from Sedili river estuary to shallow marine offshore S China Sea along SE coast of Malay Peninsula. Calcareous forms increase with water depth, agglutinated foraminifera show reverse trend. Five biofacies zones differentiated, coinciinge with the upper brackish intertidal, lower brackish intertidal, estuary mouth, beach/nearshore and inner shelf depositional settings)

Mohamed, Mahani, S.S. Hasan, A.M. Yakzan & S. Jirin (2011)- Agglutinated foraminiferal trends and assemblages of the Sedili Besar River and its offshore area, southeastern Peninsular Malaysia. In: M.A. Kaminski & S. Filipescu (eds.) Proc. 8th Int. Workshop on agglutinated foraminifera, Romania, Grzybowski Found. Spec. Publ. 16, p. 131-136.
(Similar to paper above)

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(Foraminifera in Sedili Besar River Estuary dominated by Ammonia cf. takanabensis (also identified as Ammonia beccarii) in stratified water column of marine base and freshwater top. In Klang-Langat and Pahang Deltas, where minimal salinity stratification, Ammonia assemblages are quite scattered. Agglutinated forms (mainly Arenoparrella group) dominate less stratified water column)

Mohan, P.M., P. Dhivya & K. Narayanamurthy (2013)- Distribution of live planktonic and benthic foraminifera in the shelf off Port Blair and Hut Bay, Andaman Group of Islands, India. In: K. Venkataraman et al. (eds.) Ecology and conservation of tropical marine faunal communities, Springer-Verlag, Berlin, p. 19-42.
(189 shelfal marine foram species off Andaman Islands (no water depths of sample locations given))

Montaggioni, L.F. & M.T. Venec-Peyre (1993)- Shallow-water foraminiferal taphocoenoses at Site 821: implications for the Pleistocene evolution of the central Great Barrier Reef shelf, Northeastern Australia. In: J.A. McKenzie et al. (eds.) Proc. Ocean Drilling Program (ODP), Scient. Results, 133, p. 365-378.
(online at: www-odp.tamu.edu/publications/133_SR/VOLUME/CHAPTERS/sr133_26.pdf)
(Useful overview of foram distribution on and around Great Barrier reef)

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(Palynology and foraminifera from two shallow Late Pleistocene- Holocene cores from Makassar Straits and offshore SW Sulawesi)

Mostafawi, N. (1992)- Rezente Ostracoden aus dem mittleren Sunda-Schelf, zwischen der Malaiischen Halbinsel und Borneo. Senckenbergiana Lethaea 72, p. 129-168.
('Recent ostracods from the central part of the Sunda Shelf, between the Malay Peninsula and Borneo'. 116 species of Recent ostracodes in 44 seafloor samplesalong W-E transect , all <100m depth. Four new genera.Major control on abundance / diversity appears to be substrate. Many species range across all water depths, some more diagnostic for water depth: (1) < ~50m with Atjehella kingmai, Keijia spp., Hemicytheridea cf. oculosa, etc.; (2) >50m with Abracythereis malaysiana, Bythocytheridea carinatum, etc.)

Mostafawi, N., J.P. Colin & J.F. Babinot (2005)- An account on the taxonomy of ostracodes from recent reefal flat deposits in Bali, Indonesia. Revue Micropaleontologie 48, p. 123-140.
(Ostracods from recent reefal flat sample off Sanur, SE Bali, at depth of ~1.5m. Assemblage of 34 species, dominated by Loxoconcha peterseni, Auradilus convolutus, A. australiensis, Paranesidea conulifera, etc. Fauna belongs to East Indian biogeographical province of Titterton and Whatley (1988) in tropical littoral zone of Indo-W Pacific. Associated with foraminifera Schlumbergella floresiana, Calcarina hispida, etc.)

Muller, G.W. (1906)- Die Ostracoden der Siboga-Expedition. In: M. Weber (ed.) Siboga Expeditie, Uitkomsten op zoologisch, botanisch, oceanographisch en geologisch gebied, Monograph 30, Brill, Leiden, 40, p. 1-40 + Plates.

(online at: http://ia800807.us.archive.org/26/items/dieostracodender00mlle/dieostracodender00mlle.pdf)
('The ostracodes of the Siboga Expedition'. 56 Recent species from shallow to deep water seafloor samples of 1899-1900 Siboga Expedition. Material unusually rich in Cypridinids (25 species, 15 new). Halocypriden mainly at depths>750m. Cypridiniden generally <70m)

Muller, J. (1965)- Palynological study of Holocene peat in Sarawak. In: Symposium on ecological research in humid tropics vegetations, Kuching, Sarawak. UNESCO, p. 147-156.

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Murray, J.W. (1994)- Larger foraminifera from the Chagos Archipelago: their significance for Indian Ocean biogeography. Marine Micropaleontology 24, p. 43-55.
(Chagos Archipelago is thin limestone cap on Eocene volcanic basement in central Indian Ocean. Principal larger foraminifera in surface samples from 0-43m. Amphisorus hemprichii and Sorites orbiculus widespread in shallow lagoon Heterostegina depressa patchy distribution, most common between 18-25m. Operculina ammonoides generally in deeper lagoon, below 12m)

Murray, J.W. (2006)- Ecology and applications of benthic foraminifera. Cambridge University Press, New York, p. 1-426.

Murray, J.W. & C.W. Smart (1994)- Distribution of smaller benthic foraminifera in the Chagos Archipelago, Indian Ocean. J. Micropalaeontology 13, 1, p. 47-53.
(online at: https://www.j-micropalaeontol.net/13/47/1994/jm-13-47-1994.pdf)
(Chagos Archipelago in C Indian Ocean close to the equator. Relatively high energy conditions in shallow waters around reefs. On oceanic side of atoll reefs Amphistegina lessonii dominant, with minor miliolidsand up to 20% planktonics. Lagoon assemblages dominated by Calcarina calcar, with minor miliolids)

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(online at: www.biodiversityjournal.com/pdf/6(4)_789-794.pdf)
(Living benthic foraminifera Nevillina coronata, Sigmoihauerina involuta and Loxostomina limbata reported from inner shelf regions of Andaman Islands. Nevillina coronata very common in NE, flourishing in low T of rainy season, while two other species abundant in non rainy months)

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(online at: http://asapb.org/15%20-%20The%20Assemblages%20of%20Benthic.pdf)
(28 species of tropical marginal- shallow marine benthic foraminifera around South Andaman Island)

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(Larger foraminifera at six reef sites (4-30 m) around South Andaman Islands 16 species, incl. Amphistegina lessonii, A. radiata and Calcarina spengleri)

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(Late Quaternary pollen from two swamps at ~1500 m asl in Sumatran Highlands (Danau di Atas, Telago). In Late Pleistocene vegetation zones depressed by ~800m and mean T 1.6- 5.2 °C cooler than now)

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(Recent tsunami deposit from Pangandaran with Ammonia, Elphidium, Amphistegina, Cibicide., Biginerina. Bolivina, Bathysiphon, Nodosaria and Quinqueloculina, suggesting source from shallow to deep marine environents. Recent tsunami sediments at Parangendog Beach with Ammonia beccarii and Elphidium advenum, suggesting sediments came from lagoonal to shallow marine environment)

Nor Faiz, N. & R. Omar (2009)- Ostrakod baharu di dalam sedimen luar pantai di Sekitar Pulau Tioman, Pahang. Sains Malaysiana 38, 1, p. 9-20.
('Recent Ostracoda in offshore sediment around Pulau Tioman, Pahang'. 34 species of ostracodes in shallow waters around Tioman Island. Most common species Loxoconcha paiki, Pistocythereis bradyi, Venericythere papuensis)

Nugroho, S.H. (2018)- State of knowledge on marine palynology in Indonesia. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012012, p. 1-7.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012012/pdf)
(Brief review of Quaternary (displaced) spores-pollen studies in marine environments in Indonesia)

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(online at: http://jurnal.unpad.ac.id/bsc/article/view/8364/3885)
('Determination of small benthic foraminifera species dominant in the waters of Semarang, C Java Province'. Foraminifera in 20 samples from 38-54m in Java Sea N of Semarang dominated by Heterolepa (36%), Anomalina, Ammonia spp. (12%), Pseudorotalia, Quinqueloculina spp. (9%) and Asterorotalia trispinosa(6%))

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(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/62/63)
(Kepulauan Seribu (Thousand Islands) samples from coral reefs with ~20 genera of benthic foraminifera, dominated by Amphistegina and Calcarina, also Operculina, Quinqueloculina, Peneroplis, and Discorbis)

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(On distribution of modern calcareous nannofossils off Japan, Taiwan, Gulf of Thailand (mainly Emiliania huxleyi, Gephyrocapsa oceanica, Florisphaera profunda; G. oceanica most abundant in coastal stations) and Arafura Sea- Gulf of Carpenteria (mainly G. oceanica and E. huxleyi; F. profunda rel. rare). F. profunda dominates associations in deep basins)

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(Description of Recent marine and freshwater gastropods from across Java, mainly collected by J. van Baren and J.M. Geerts)

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('The use of microfauna for the knowledge of stratigraphy of the Late Tertiary, as needed for oil exploration'. Brief pamphlet promoting use of foraminifera for oilfield stratigraphic subdivision))

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(Recent benthic foraminiferal distribution on Ayeyarwaddy Delta Shelf, off Myanmar shows Asterorotalia trispinosa has preference for low salinity. Variations in abundance used as proxy for delineation of past wet and dry periods: dry climate prior to 1650 AD and warm and wet climate since 1650 to present)

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Parker, J.H. & E. Gischler (2011)- Modern foraminiferal distribution and diversity in two atolls from the Maldives, Indian Ocean. Marine Micropaleontology 78, p. 30-49.
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(Spores-pollen in 10 samples from Pleistocene- Holocene cave deposits on Nias)

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(A 134-cm-long sediment core from ~50 km off Pembuang River mouth, S Kalimantan. Mixed terrestrial and marine organic matter, with low pollen-spore concentrations. Dinoflagellate cysts mainly Operculodinium and Spiniferites with minor Impagidinium (mainly I. strialatum). After ca. 2480 cal yr BP, bottom waters became increasingly ventilated. After 1530 cal yr BP, more pronounced influence of Pembuang River indicated by nutrient-sensitive Lingulodinium machaerophorum and Nematosphaeropsis labyrinthus)

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(Study of benthic forams along transect from Fly River Delta to shelf edge (~140m depth), near N end of Great Barrier Reef. Three areas different benthic foram assemblages. High relict content in surface samples)

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(Pliocene-Pleistocene deep sea benthic foraminifera from ODP Site 762B off Exmouth Plateau in E Indian Ocean. Diverse fauna in E Pliocene (>3.5 Ma) relatively oligotrophic and warm bottom water conditions. At beginning of Late Pliocene (i.e. ~ 3 ± 0.5 Ma) increase in Uvigerina proboscidea, infaunal taxa and high productivity taxa and decline in faunal diversity suggest development of pronounced upwelling. Reduced inflow of warm and oligotrophic water masses from SW Pacific to E Indian Ocean due to effective closure of Indonesian seaway increased surface water productivity. Closing of Indonesian seaway in Late Pliocene also responsible for cessation of warm, S-flowing Leeuwin Current)

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(S Andaman Island three distinct environments: rocky shore with Elpidium, Amphistegina; (2) sandy shore with common Calcarina and (3) intertidal muddy region with Trochammina inflata is common in intertidal clays)

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(Asterorotalia trispinosa dominates sparse foraminiferal assemblage of shallow, mud-dominated Muthupet Lagoon on SE coast of India, where salinities are slightly lower than normal marine)

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(Deep-sea benthic foraminifera distibution in 8 box cores from 510-4515 m in thermospheric (>10°C) Sulu Sea. Site 510m dominated by Cibicidoides, Uvigerina, and Bolivina. 1005m core: mainly Siphonina Cibicidoides, Uvigerina. 2000m cores: Cibicidoides, Gyroidinoides, and Oridorsalis. 3000 and 4000m cores: Cibicidoides bradyi and Oridorsalis umbonatus dominant. Infaunal Valvulineria mexicana in sediments of 4515m core. Low bottom water oxygen values do not necessarily yield 'low-oxygen taxa' like Bolivina, Uvigerina, Chilostomella, Bulimina and Globobulimina)

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(Significant differences between living deep-sea benthic foraminifera in thermospheric (>10°C) environments of Sulu Sea and psychrospheric (<10°C) conditions in S China Sea. Gavelinopsis, Bolivinopsis, Astrononion, Osangularia and Ceratobulimina common taxa in S China Sea, but rare in Sulu Sea. Siphonina and Valvulineria dominant genera at certain depths in Sulu Sea, but rare in S China Sea. Differences result from large differences of bottom-water temperatures)

Rathburn, A.E. & Q. Miao (1995)- The taphonomy of deep-sea benthic foraminifera: comparisons of living and dead assemblages from box and gravity cores taken in the Sulu Sea. Marine Micropaleontology 25, p. 127-149.
(Benthic foraminifera from 500- 4000m water in Sulu Sea. Bolivina, Bulimina, Globobulimina, Chilostomella and Uvigerina most abundant <1500m, but rel. rare in deeper water. Dominant taxa below 2000m Cibicidoides bradyi and Oridorsalis umbonatus)

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(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?filename=0&article=1211&context=theses&type=additional)

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(Throughout last glacial cycle, region between Australia and New Guinea (now Gulf of Carpentaria) oscillated from open shallow marine conditions to freshwater lake behind Arafura sill. Six ostracod biofacies in last 130 ka: (1) open shallow marine with bairdiids, pectocytherinids, cytherettids; (2) shallow marine dominated by Cytherella and Hemikrithe; (3) marginal marine with Xestoleberis and Praemunita; (4) tidal channel dominated by Loxoconcha; (5) estuarine with Venericythere and Leptocythere; (6) non-marine facies: brackish lagoon/lake dominated by Cyprideis and Leptocythere and freshwater with Ilyocypris, Cyprinotus and Cypretta. Also morphological variations within species tied to paleoenvironments)

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(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_7/b_fdi_53-54/010021194.pdf)
(General review of spores-pollen studies and applications in chronostratigraphy, paleoclimate and paleoenvironments. With examples from SE Asia, including work on Java Pleistocene hominid sites and Pleistocene climate changes on New Guinea, Sumatra, etc.)

Renema, W. (2003)- Larger foraminifera on reefs around Bali. Zool. Verhandelingen, Leiden, 345, p. 337-366.
(online at: www.repository.naturalis.nl/document/46850)
(Recent larger foraminifera from Bali total 19 species. Species richness similar to SW Sulawesi and Cebu, but different composition. Schlumbergerella locally abundant and geographically restricted to Lesser Sunda Islands and Java. Very low abundance of imperforate species probably due to climatic or oceanographic parameters, most likely periodic upwelling, which causes seasonal seawater temperature drops)

Renema, W. (2005)- Depth estimation using diameter-thickness ratios in larger benthic foraminifera. Lethaia 38, p. 137-141.
(Diameter-thickness ratio (D/T) of Amphistegina and Operculina varies with depth. Increased turbulence thickens test, whilst decreased light intensity causes flatter tests)

Renema, W. (2006)- Large benthic foraminifera from the deep photic zone of a mixed siliciclastic-carbonate shelf off East Kalimantan, Indonesia. Marine Micropaleontology 58, p. 73-82.

(Modern large benthic forams on Berau shelf 2 to 3 depth-controlled assemblages: shallow (20-50m; dominated by Operculina ammonoides) and deeper (50-85m; dominated by Operculina complanata and Planostegina operculinoides). Deepest living LBF at 115m. Cycloclypeus carpenteri between 55-95m)

Renema, W. (2006)- Habitat variables determining the occurrence of large benthic foraminifera in the Berau area (East Kalimantan, Indonesia). Coral Reefs 25, 3, p. 351-359.
(Composition of larger foram assemblages (35 species) on Berau carbonate shelf with barrier reef system and some reefs outside barrier. Four clusters corresponding to substrate type)

Renema, W. (2008)- Habitat selective factors influencing the distribution of larger benthic foraminiferal assemblages over the Kepulauan Seribu. Marine Micropaleontology 68, p. 286-298.
(On distribution of symbiont-bearing larger foraminifera on 'Thousand Islands' off Jakarta. Diversity and habitat fractionation increases as terrestrial and nutrient influence decline. Assemblages in nearshore reefs dominated by generalist species, while, additionally, more specialistic species occur at more offshore reefs)

Renema, W. (2010)- Is increased calcarinid (foraminifera) abundance indicating a larger role for macro-algae in Indonesian Plio-Pleistocene coral reefs? Coral Reefs 29, p. 165-173.
(Reefal habitats dominated by algae are inhabited by Calcarinidae larger foraminifera)

Renema, W. (2018)- Terrestrial influence as a key driver of spatial variability in large benthic foraminiferal assemblage composition in the Central Indo-Pacific. Earth-Science Reviews 177, p. 514-544.
(Nutrient availability, hydrodynamic energy, light intensity, substrate type and temperature important environmental parameters controlling occurrence of larger foraminifera species. Terrestrial run-off also important environmental parameter. Calcarinids more abundant with increased algal cover)

Renema, W., R.J. Beaman & J.M. Webster (2013)- Mixing of relict and modern tests of larger benthic foraminifera on the Great Barrier Reef shelf margin. Marine Micropaleontology 101, p. 68-75.

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(Fossil and molecular evidence reveals at least three hotspots of high marine biodiversity in past 50 million years. They moved across globe, with timing and locations coinciding with major tectonic events. Birth and death of successive hotspots highlights link between environmental change and biodiversity patterns. Antiquity of taxa in modern Indo-Australian Archipelago hotspot emphasizes role of pre-Pleistocene events)

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(online at: www.repository.naturalis.nl/document/46294)
(Distribution patterns of 20 species of larger benthic foraminifera in Spermonde Archipelago, off SW Sulawesi. 13 transects sampled, down to 33m water depth. Substrate type, hydrodynamic energy, light intensity, nutrient availability and environmental stabiltity determine distribution)

Renema, W. & J. Hohenegger (2005)- On the identity of *Calcarina spengleri* (Gmelin 1791). J. Foraminiferal Research 35, p. 15-21.
(online at: http://jfr.geoscienceworld.org/content/35/1/15.full.pdf)
(On identity of Recent reef dwelling larger foram Calcarina spengleri (Gmelin 1791). Commonly confused with Calcarina mayori Cushman 1924, C. gaudichaudii d'Orbigny 1840 and C. hispida Brady 1876)

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(online at: http://hopsea.mnhn.fr/pc/thesis/Emil_Robes_2007.pdf)
(Palynology of Quaternary lake deposits on karst surface of Gunung Sewu (Southern Mountains), C Java)

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(Late Pleistocene diatoms in core GeoB10038-4 off S Sumatra show highest paleoproductivity during interglacials, due to nutrient input after rise in sea level. In Marine Isotope Stage 5 response of diatom productivity and upwelling intensity to boreal summer insolation. Resting spores of Chaetoceros, typical of nutrient-rich waters, dominant during periods of highest diatom paleoproductivity)

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(online at: http://jfr.geoscienceworld.org/content/20/2/170.full.pdf)
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(Globigerina ooze forms major fraction of bottom sediment in Makassar Strait. Diversity and richness of benthic foraminifera decrease with water depth. High abundance of Uvigerina asperula may be proxy of oxygen minimum zone)

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(online: http://repository.ipb.ac.id/bitstream/handle/123456789/53434/08%20Karakteristik%20Komunitas.pdf)
(The characteristics of the foraminiferal community in Jakarta Bay'. Benthic foraminifera in Jakarta Bay: (1) coastal water and estuary dominated by Ammonia beccarii; (2) Calcarina and other larger foraminifera common in coral reef area; (3) Elphidium and Nonion depressulum common in open waters area. Higher diversity than coastal water of Semarang and Cirebon. Reef area has highest diversity)

Rositasari, R. & L. Effendi (1994)- Foraminifera aglutinin dan kemungkinan pengaplikasiannya sebagai indikator lingkungan yang mengalami tekanan. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 155-161.
('Agglutinated foraminifera and possible application as indicators of environments under stress'. Discussion of agglutinated foraminifera and presence in shallow, brackish waters of coastal creeks around Jakarta Bay. Main taxa Eggerella, Ammobaculites agglutinans, Trochammina, Haplophragmoides, Textularia conica, Cyclammina pusilla, etc.)

Rositasari, R., Suhartati M.N., T. Susana & Helfinalis (1994)- Tipe estuari sebagai faktor pembatas pada komunitas foraminifera; hasil penelitian di Muara Sungai Ciawi dan Muara Sungai Bekasi. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 162-172.
('Type of estuary as factor on foraminifera communities; results of study at mouths of Ciawi and Bekasi Rivers'. Ciawi river mouth (Ujung Kolon) with abundant Operculina ammonoides, Amphistegina lessonii, Calcarina calcar, Elphidium, Quinqueloculina, etc.. Bekasi river mouth dominated by Ammonia beccarii, Trochammina

hadai and Ammobaculites agglutinans)

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(Distributions of Recent aragonitic pelagic pteropod species on Sunda Shelf and in Java Sea very similar, but some exceptions)

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(online at: http://scienceasia.org/2008.34.n2/scias34_137.pdf)

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(On many 'varieties' of Lagena vulgaris (incl. Oolina) from seafloor samples at 1080 fathoms, 10 miles S of 'Sandalwood Island' (= probably Sumba, but lat-longs closer to South Bali; unlikely from Java Sea). Many now viewed as species. Associated with common Rotalia, Uvigerina, Bulimina, Globigerina, diatoms, ostracods, sponge needles, etc.)

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('On the mollusc fauna of the large freshwater lakes of Central Sulawesi')

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(In samples from continental shelf and slope of W Bay of Bengal Asterorotalia trispinosa abundance ranges from 0- 31%, with highest abundance near outfall region of Ganges-Brahmaputra Rivers and decreases away from river mouths. Abundance of A. trispinosa indicates warmer and marginally hyposaline environment)

Sathyanarayana, B., M.L. Husain, R. Ibrahim, S. Ibrahim & F.D. Guebas (2014)- Foraminiferal distribution and association patterns in the mangrove sediments of Kapar and Matang, West Peninsular Malaysia. J. Sustainability Science Management 9, p. 32-48.
(online at: www.ulb.ac.be/sciences/biocomplexity/pub/Satyanarayanaetal_2014_JSustainSciManage.pdf)
(28 foram species in mangrove surface sediment on W coast of Malay Peninsula. Calcareous forms mainly Ammonia beccarii and Buccella frigida. Agglutinated species mainly Arenoparrella and Haplophragmoides)

Sawai, Y., K. Jankaew,M.E. Martin, A. Prendergast, M. Choowong &, T. Charoentitirat (2009)- Diatom assemblages in tsunami deposits associated with the 2004 Indian Ocean tsunami at Phra Thong Island, Thailand. Marine Micropaleontology 73, 1, p. 70-79.
(Diatom assemblages in fining-upward m-f sandy deposits of 2004 tsunami at Phra Thong Island, Thailand: (1) lowermost sand mainly unbroken beach and subtidal species that live attached to sand grains; (2) shift to

marine planktonic species in middle of the bed and (3) mix of freshwater, brackish, and marine species near top. Trends are consistent with expected changes in current velocities of tsunami through time)

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(Distribution of oceanic diatoms in W Philippine Basin. Ethmodiscus rex dominant species. 68 species in 4 assemblages, related with North Equatorial Current and Kuroshio Current patterns)

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('The Prosobranchs of the Siboga Expedition, Part IV, Rachiglossa'. Part 4 of series of six monographs on Recent marine gastropods from Indonesia, collected during Siboga Expediton 1899-1900)

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('The Prosobranchs of the Siboga Expedition, Part VI, Pulmonata and Opisthobranchia, Tectibranchiata, tribe Bullomorpha'. Part 6 of series of six monographs on Recent gastropods from Indonesia, collected during Siboga Expediton. 19 species of land- and freshwater molluscs (2 new), 41 species of Opisthobranchia Tectibranchiata Bullomorpha with 15 new sp.)

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(online at: www.aslo.org/lo/toc/vol_56/issue_5/1587.pdf)

(Aquarium experiments on living larger forams Amphistegina radiata and Heterostegina depressa, collected from Great Barrier Reef. Normally at temperatures of 23-28°C, show bleaching and lack of growth at temperatures of 31°C and higher)

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(online at: https://www.j-micropalaeontol.net/14/165/1995/jm-14-165-1995.pdf)
(Deep water late Pliocene- Pleistocene benthic foraminifera from Sonne cruise SO67 core on Manihiki Plateau in SW Tropical Pacific (2612m water depth). Dominated by Nodogenerina, Cibicidoides wuellerstorfi, Oridorsalis umbonatus, Pleurostomella, Dentalina, etc. Remarkable absence of 'high-productivity taxa' Bolivina, Bulimina, Chilostomella and Uvigerina, suggesting low flux of organic matter to sea floor)

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('On the Recent foraminifera fauna of Singapore'. Foram faunas in shallow marine calcareous sand off Singapore dominated by miliolids)

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(Holocene Ostracoda from 80cm deep digs on beach of Satonda Crater Lake off Sumbawa: (1) lowermost samples monospecific associations of fresh-brackish Aglaiocypris; (2) middle part higher diversity including marine Tenedocythere, etc.; (3) in upper parts of digs and in alkaline waters of today's crater lake, same cypridid species as in lowermost horizons, reflecting re-establishment of more stressful environment)

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(online at: www.ga.gov.au/corporate_data/80975/Jou1978_v3_n4_p341.pdf)
(Quaternary sediments in N Scott Plateau and Java Trench. Quaternary calcareous nannofossils associated with reworked U Cretaceous and Tertiary forms, possibly caused by bottom currents eroding parts of C Scott Plateau. Late Pleistocene-Holocene calcareous nannofossils in upper ~1 m thick of N Scott Plateau, but absent from Java Trench suggesting that present Nanno Solution Depth is between 3290-4950m water depth)

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Sidiq, A., S. Hadisusanto & K.T. Dewi (2016)- Foraminifera bentonik kaitannya dengan kualitas perairan de wilayah barat daya Pulau Morotai, Maluku Utara. J. Geologi Kelautan 14, 1, p. 13-22.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/336/264)
('Benthic foraminifera and relation to water quality off southwest part of Morotai Island, North Moluccas'. Seafloor samples from 16-36m off Morotai, N Moluccas, with 28 species of benthic foraminifera, dominated by abundant Amphistegina spp. and Operculina spp. Also Alveolinella, Calcarina, Heterolepa, Baculogypsinoides, Elphidium, Peneroplis, Schlumbergerella and Sorites)

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(Late Quaternary record of Pulleniatina obliquiloculata in cores from Andaman Sea. As in Pacific Ocean, Pulleniatina obliquiloculata Minimum Event exists in Indian Ocean between 4.5- 3.0 ka. Two additional minimum events in Younger Dryas and late Last Glacial Maximum (20-18 ka). PMEs of Andaman Sea characterized by fewer thermocline species, indicating increased depth of thermocline during minimum events)

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('Album of foraminifera and nannoplankton microfossils from Indonesian waters')

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('The influence of the seasons on the distribution of foraminifera in Jakarta Bay'. Seasonal influence shown by modern foraminifera Rotalia and Quinqueloculina)

Smith, B.J. & M. Djajasasmita (1988)- The land molluscs of the Krakatau Islands, Indonesia. Philos. Trans. Royal Soc. London. Ser. B, 322, 1211, p. 379-400.
(Land molluscs fauna from 1984-85 Zoological Expeditions to Krakatau Islands 19 species: 16 from Rakata, 12 from Sertung, 7 from Panjang and 1 from Anak Krakatau (first record of land snail from that island))

Soemodihardjo, S. & A. Matsukuma (1989)- Ecology of sandy beach bivalves of Pari Island off the coast of Jakarta Bay. Indonesia. Bull. Nat. Science Museum, Tokyo, Ser. A, 15, p. 197-212.
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(Example of occurrences of tube worms at cold gas seeps and hot hydrothermal vent sites in SW Pacific and S Java deepwater seafloor settings (also known from Sumatra forearc, etc.))

Staub, W. (1915)- Uber die Verbreitung einiger lebender und versteinter Lamellibranchier und Gastropodenarten am Ausgange der Sangkulirangbai (Ost Borneo), einem Aestuarium der tropischen Zone. Vierteljahrschrift Naturforschenden Gesellschaft Zurich 61. p. 120-135.
('On the distribution of some living and fossilized bivalve and gastropod species at the mouth of Sangkulirang Bay (East Borneo), an estuary of the tropical sea'. Early paper on distribution of land, brackish and marine molluscs in estuary of NE Kalimantan)

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(online at: http://edoc.hu-berlin.de/dissertationen/stelbrink-bjoern-2014-12-19/PDF/stelbrink.pdf)
(On significance of modern fauna and floral distribution for evolution of SE Asia, with focus on Sulawesi)

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(Spectacular photographs of modern coastal marine diatoms, including Indonesian material on Plates 30-33 (Semarang, Sumatra))

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(Palynology of 8m sediment core from Bayombong swamp at ~1200m above s.l. in SW Java, showing Late Pleistocene- Holocene (~17 ky- today) vegetational shift from upper montane forest to lower montane forest around ~10,000 yrs B.P.)

Stuijts, I. (1993)- Late Pleistocene and Holocene vegetation of West Java, Indonesia. Modern Quaternary Research in Southeast Asia 12, Balkema, Rotterdam, p. 1-173. *(also Thesis Rijksuniversiteit Groningen)*
(Late Pleistocene- Holocene palynology of shallow core holes from montane localities above 1000m in West Java (Gede-Panggrango, Gunung Patuha, Danau Ciharus))

Stuijts, J.C., J.C. Newsome & J.R. Flendley (1988)- Evidence for Late Quaternary vegetational change in the Sumatran and Javan highlands. Review Palaeobotany Palynology 55, p. 207-216.
(Late Pleistocene pollen records from above 2000m on tropical mountains indicate cooler climates and more arid climates below 1200m. Sumatran and Javan sites at intermediate altitudes show higher altitude vegetation from ~18,200 yr B.P. to ca. 12,400 yr B.P., suggesting much lower forest altitudinal boundaries than today's)

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(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1440-1738.2009.00677.x/epdf)
(Nearshore to offshore sediments from SW coast of Thailand clarify submarine sediment transport during 2004 Indian Ocean tsunami. Benthic foraminifera showed seaward migration after tsunami event (brackish agglutinated foraminifera in post-tsunami foreshore to offshore, transported offshore with tsunami backwash). Offshore planktonic and benthic species slight evidence of landward migration by tsunami)

Suhartati, M.N. (1992)- Preliminary study on the benthic foraminifera and its association with ostracoda in Porong Delta, East Java. Toyama University, 10p.
(15 sediment samples from 0.6- 21.5m along Porong delta front, Madura Straits. Most abundant species Ammonia beccarii, Calcarina calcar and Elphidium advenum. Also common Elphidium crispum, Asterorotalia trispinosa, Pseudorotalia schroeteriana and Quinqueloculina)

Suhartati, M.N. (1994)- Foraminifera bentonik dan kaitannya dengan kandungan zat hara di perairan Padang Lamun, Goba Besar, Pulau Pari, Kepulauan Seribu. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 582-590.
('Foraminifera bentonic and their relation to nutrient content in the waters of Padang Lamun, Goba Besar, Pulau Pari, Thousand Islands'. Diverse benthic foram assemblage on seagrass beds of Pari Island, dominated by Quinqueloculina spp., Spiroloculina spp., Ammonia, Peneroplis, Rosalina, Elphidium, Calcarina, etc.)

Suhartati, M.N. (1994)- Benthic foraminifera in the seagrass beds of Pari island- Seribu islands, Jakarta. In: S. Sudara et al. (eds.) Proc. Third ASEAN-Australia Symp. Living Coastal Resources, Bangkok, 2, p. 323-329.
(Dominant species in reef-flat seagrass areas are miliolids Quinqueloculina spp., and Spiroloculina spp. Also common Ammonia beccarii, Calcarina calcar, Elphidium spp.)

Suhartati, M. Natsir (1998)- First record of brackish water agglutinated foraminifera from Java. Reopical Biodiversity 5, 1, p. 57-63.
(Ammobaculites agglutinans and Textularia pseudogramen common in Recent sediments near Solo and Poreng River mouths, E Java)

Suhartati, M. Natsir (2005)- Distribusi foraminifera bentik (*Textularia*) di Delta Porong, Jawa Timur. Agritek 4, 2, p. 1-7.

('Distribution of benthic foraminifera (Textularia) in the Porong Delta, East Java')

Suhartati, M. Natsir (2009)- Distribusi dan kelimpahan foraminifera bentik Resen di Pulau Opak Besar, Kepulauan Seribu. Lingkungan Tropis 3, 2, p. 95-103.
(Online at: www.lingkungan-tropis.org/distribusi-dan-kelimpahan-foraminifera-suhartati-m-natsir)
('Distribution and abundance of Recent benthic foraminifera in Opak Besar, Seribu islands'. Off NW Java. Samples from water depths 27-36m around Opak Island dominated by Calcarina calcar, followed by miliolids)

Suhartati, M.N. (2010)- First record of agglutinated foraminifera from Lombok. J. Coastal Development 13, 1, p. 48-55.
(online at: www.omicsonline.com/open-access/first-record-of-agglutinated-foraminifera-from-lombok-1410-5217-13-276.pdf)
(Benthic foram assemblages around Gili islands, NW Lombok, have more agglutinated individuals in stations close to bay, mainly Ammobaculites agglutitans and Haplophragmoides canariensis)

Suhartati M. Natsir (2010)- The distribution of benthic foraminifera in Damar and Jukung Island, Seribu Islands. Marine Research in Indonesia (LIPI) 35, 2, p. 9-14.
(Benthic foraminifers on Jakarta Bay islands. Jukung Island higher diversity than Damar Besar Island. Larger foraminifera of both islands Amphistegina, Calcarina, Heterostegina, Marginophora, and Operculina)

Suhartati M. Natsir (2010)- Foraminifera bentik sebagai indikator kondisi lingkungan terumbu karang perairan Pulau Kotok Besar dan Pulau Nirwana, Kepulauan Seribu. Oseanol. Limnol. Indonesia 36, 2, p. 181-192.
('Benthic foraminifera as indicator of environmental conditions of coral reefs in Kotok Besar and Nirwana islands of Seribu islands'. Kotok Besar Island healthy reef growth due to FORAM Index of ~7.6. Dominant symbiont bearing foraminifera are Amphistegina, Calcarina and Tinoporus. Nirwana Island was dominated by opportunistic foraminifera Ammonia, Elphidium, Quinqueloculina and Spiroloculina, showing stressed conditions unsuitable for reef growth as shown by FORAM Index of 1.6-1.9)

Suhartati M. Natsir (2010)- Kelimpahan foraminifera Resen pada sedimen permukaan di Teluk Ambon. E-Jurnal Ilmu Tekn. Kelautan Tropis 2, 1, p. 9-18.
(online at: http://repository.ipb.ac.id/jspui/bitstream/123456789/53406/1/2_foraminifera.pdf)
('The abundance of recent foraminifera in surface sediment of Ambon Bay'. Bottom samples from Ambon Bay with 61 species of benthic and 25 species of planktonic foraminifera. Dominant benthics Amphistegina lessonii, Ammonia beccarii, Elphidium craticulatum, Operculina ammonoides and Quinqueloculina. Forams generally abundant on sand substrate sand, but no foraminifera on mud substrate)

Suhartati M. Natsir (2012)- The benthic foraminiferal assemblages on Handeuleum Islands, Ujung Kulon National Park of Banten, Indonesia. J. Shipping and Ocean Engineering 2, p. 86-91.
(online at: www.davidpublishing.com/...)
(Nine sediment samples from around Handeuleum Islands off Ujung Kulon Peninsula contain 14 genera of benthic foraminifera and some Ostracoda and Bryozoa. Most specimens from sand sediments of coral reefs community. Most common foraminifera are opportunistic taxa such as Ammonia beccari and Elphidium craticulatum and E. crispum. Also present are symbiont bearing foraminifera Amphistegina, Calcarina, Sorites also Cymbaloporetta, Oolina, Quinqueloculina and Spiroloculina)

Suhartati M. Natsir (2014)- The distribution of benthic foraminifera in Indonesian shallow waters. Berita Sedimentologi 29, p. 66-72.
(online at: www.iagi.or.id/fosi/berita-sedimentologi-no-29-biostratigraphy-of-southeast-asia-part-1.html)
(Summary of studies on Recent benthic foraminifera in Indonesia shallow waters by Research Center for Oceanography- LIPI)

Suhartati M. Natsir & K.T. Dewi (2015)- Foraminifera bentik terkait dengan kondisi lingkungan perairan sekitar Pulau Damar, Kepulauan Seribu. J. Geologi Kelautan 13, 3, p. 165-171.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/271/261)

('Benthic foraminifera related to marine environments around Damar Island, Pulau Seribu'. 64 species of benthic foraminifera from 11-37m depth around Damar Island reef, S part of Thousand Islands. Common forms associated with coral reef incl. Amphistegina lessonii, A. radiata, Sorites marginalis, Heterostegina and Calcarina calcar)

Suhartati M. Natsir, K.T. Dewi & S. Ardhyastuti (2017)- Keterkaitan foraminifera dan kedalaman perairan sebelah tenggara Pulau Seram, Maluku. J. Geologi Kelautan 15, 2, p. 73-80.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/389/424)
('The relation between foraminifera and water depth of waters SE of Seram Island, Moluccas'. Nine samples between 512-1177m water depth, with 95-100% planktonic foraminifera. Rare benthic foraminifera incl. Bulimina, Buliminella, Bolivinella)

Suhartati M. Natsir, A. Firman, I. Riyantini & I. Nurruhwati (2015)- Struktur komunitas foraminifera pada sedimen permukaan dan korelasinya terhadap kondisi lingkungan lepas pantai Balikpapan, Selat Makassar. J. Ilmu dan Teknologi Kelautan Tropis 7, 2, p. 671-680.
(online at: http://journal.ipb.ac.id/index.php/jurnalikt/article/view/11059/8774)
('Community structure of foraminifera in surface sediments and correlation with environmental conditions in offshore waters of Balikpapan, Makassar Strait'. Foraminifera from 6 seafloor samples off Balikpapan (no water depths for samples (54-73m?), no species identifications))

Suhartati M. Natsir & Z.A. Muchlisin (2012)- Benthic foraminiferal assemblages in Tambelan Archipelago, Indonesia. AACL Bioflux 5, 4, p. 259-264.
(online at: www.bioflux.com.ro/docs/2012.259-264.pdf)
(Recent foraminifera in shallow waters around Tambelan islands, S China Sea. Dominated by Amphistegina and Assilina ammonoides; also common Quinqueloculina, Pseudorotalia, Amphistegina, Elphidium)

Suhartati, M.N., Ricky R. & Helfinalis (1994)- Foraminifera bentonik dan spesifikasinya pada beberapa lingkungan perairan Dangkal di Indonesia. Proc. 23rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 1, p. 603-604.

Suhartati M. Natsir & Rubiman (2010)- Distribusi foraminifera Resen di Laut Arafura. J. Ilmu Tekn. Kelautan Tropis 2, 2, p. 74-82.
(online at: www.itk.fpik.ipb.ac.id/ej_itkt22/jurnal/ML_185_final%20(74-82).pdf)
('The distribution of Recent benthic foraminifera in the Arafura Sea'. Arafura Sea shallow waters S of Papua. Shallow-water ecosytems such as mangrove, seagrass beds and coral reefs. Samples mainly between 30-90m, deepest station 13 at 341m. 37 species, most common Ammonia beccarii and Pseudorotalia schroeteriana, except station 13 which has abundant Bolivina spp. and Anomalina rostrata)

Suhartati & Subadri (1993)- Foraminifera bentonik di perairan menpawah dan Sungai Duri- Pontianak Kalimantan Barat. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 1181-1188.
('Benthic foraminifera in the waters offhore Sungai Duri, Pontianak, W Kalimantan'. Shallow marine (0.5-5m) seafloor samples off Mempawah and Sunai Duri with 24 species of benthic foraminifera. Dominated by Quinquelocuina spp., Asterorotalia trispinosa, Ammonia beccarii, Pseudorotalia schroeteriana, etc.))

Suhartati M. Natsir & M. Subkhan (2012)- The distribution of agglutinated foraminifera in Porong and Solo deltas, East Java. J. Environmental Sci. Engineering A 1, p. 918-923.
(Recent foraminiferal assemblages around Porong and Solo River Deltas dominated by small agglutinated forams, mainly Textularia pseudogramen, Ammobaculites agglutinans, Haplophragmoides, Ammotium, etc.)

Suhartati M. Natsir & M. Subkhan (2012)- The distribution of benthic foraminifera in coral reefs community and seagrass bed of Belitung Islands based on foram index. J. Coastal Development 15, 1, p. 51-58.
(online at: http://ejournal.undip.ac.id/index.php/coastdev/article/view/1997/1775)
(Benthic foraminiferal from six sampling sites around Belitung Islands 29 species of 18 genera. Most abundant benthic foraminifera in Nasik Strait on coarse sand substrate with coral reef (Peneroplis, Calcarina,

Operculina, etc.). Seagrass beds of Nasik Strait dominated by opportunistic foraminifera Heterostegina, Calcarina, Elphidium, Ammonia, Acervulina, Spirolina, Quinqueloculina and Lenticulina. Most abundant species of all sites is Peneroplis pertusus)

Suhartati M. Natsir & M. Subkhan (2012)- Foraminifera bentik sebagai indikator kualitas perairan ekosistem terumbu karang di Pulau Bidadari dan Ringit, Kepulauan Seribu.
('Benthic foraminifera as indicators for water quality of coral reefs ecosystem in Bidadari and Ringit Islands, Thousand Islands', off NW Java.)

Suhartati M. Natsir, M. Subkhan, Rubiman &, S.P.A. Wibowo (2011)- Komunitas foraminifera bentik di perairan kepulauan Natuna. J. Ilmu dan Kelautan Tropis 3, 2, p. 21-31.
('Benthic foraminifera community in the Natuna islands group'. Over 50 species, dominated by Amphstegina lessonii, Ammonia beccarii, Operculina ammonoides, Quinqueloculina, etc. Water depths??)

Suhartati M. Natsir, M. Subkhan, M.S. Tarigan, S.P.A. Wibowo & K.T. Dewi (2012)- Benthic foraminifera in South Waigeo waters, Raja Ampat, West Papua. Bull. Marine Geol. 27, 1, p. 1-6.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/40/41)
(Foraminifera from 12 sites in S part off Waigeo Island, Raja Ampat group, W Papua. Faunas dominated by symbiotic bearing benthic foraminifera, mainly Amphistegina lessonii, also Baculogypsina, Calcarina, Tinoporus, Heterostegina, etc.)

Suhartati M. Natsir, M. Subkhan & V.I. Wardhani (2012)- The distribution of benthic foraminiferal assemblages in Tambelan Islands of Riau Islands. In: Proc. Soc. Indon. Biodiversity Int. Conf., 1, p. 107-112.
(online at: http://biosains.mipa.uns.ac.id/P/P0101/P010119.pdf)
(Foraminifera from 5 shallow shelf stations around Tambelan Archipelago in South China Sea, off NW Kalimantan (34-50m water depth). Sediments mainly clay and mud. Assemblages 64 species, dominated by Operculina ammonoides ('Assilina depressa'), Amphistegina lessonii and miliolids)

Sukandarrumidi (1990)- The new species of *"Quinqueloculina"* and "*Triloculina*" from the bottom sea sediment of the Java Sea, Bali Strait and Karimata Strait, Indonesia. Media Teknik (UGM) 13, 2, p. 132-143.
(Sea floor samples from Java Sea, Bali Strait and Karimata Strait with 3 new species of miliolid benthonic foraminifera, Quinqueloculina aberensis, Triloculina malayensis and Triloculina siuriensis)

Suleiman, A, C.C.S. Wahyu & A. Bachtiar (2011)- Quaternary benthic foraminifera from bathyal zone seabed of Mamuju offshore, North Makassar Basin, West Sulawesi. Proc. Joint 36th HAGI and 40th IAGI Ann. Conv., Makassar, JCM2011-424, 5p.
(Summary of benthic foraminifera from 1700-1800m depth, sampled during geohazard survey, offshore, Lariang Basin. Mainly calcareous benthics usually found in outer shelf- upper bathyal instead of arenaceous tests that are common in bathyal zone. This suggests deposition is allochthonous sediment debris from upslope)

Sumawinata, B. (1998)- Sediments of the lower Barito basin in South Kalimantan: fossil pollen composition. Southeast Asian Studies, Kyoto 36, 3, p. 293-316.
(Palynology/ environments of Holocene sediments from Lower Barito and Martapura Rivers shallow cores)

Sun, H.J., T.G. Li, R.T. Sun, X.K. Yu, & F.M Chang & Z. Tang (2011)- Calcareous nannofossil bioevents and microtektite stratigraphy in the Western Philippine Sea during the Quaternary. Chinese Sci. Bull. 56, 25, p. 2732-2738.
(Seven calcareous nannofossil bioevents identified over past 2.36 Ma in two sediment cores from Benham Rise, W Philippine Sea, E of Luzon. Bioevents and Australasian microtektite impact event calibrated to oxygen isotope stratigraphy. Age of highest concentration of microtektites 792 ± 2 ka, near boundary of isotope stages MIS20/19)

Sun, X., Y. Luo, F. Huang, J. Tian & P. Wang (2003)- Deep-sea pollen from the South China Sea: Pleistocene indicators of East Asian monsoon. Marine Geology 201, p. 97-118.

(High-resolution pollen record for last 820 ka of ODP Site 1144, northern S China Sea. 29 pollen zones, mainly defined by alternations of Pinus-dominant (interglacial) vs. herb-dominant (glacial) zones correspond to Marine Oxygen Isotope Stages 1-29. Clear 100 ka Milankovich cyclicity)

Suriadi, R., H. Shaari, S.J. Culver, M.L. Husain, V.R. Vijayan, P.R. Parham, A. Sulaiman & N. Sapon (2019)- Inner shelf benthic foraminifera of the South China Sea, East Coast Peninsular Malaysia. J. Foraminiferal Research 49, 1, p. 11-28.
(Distribution of modern benthic foraminifera on inner shelf of southern S China Sea, off E coast of Malaysia, between Johor and Terengganu. Samples from <50 m water depth with 266 species. Two biofacies: (A) high abundance of Amphistegina papillosa in sandier sediments, (B) characterized by Pseudorotalia schroeteriana and other small rotaliids in muddy sediments. Assemblages reflect strong fluvial/terrestrial influence on tropical shelf environment)

Szarek, R. (2001)- Biodiversity and biogeography of Recent benthic foraminiferal assemblages in the south-western South China Sea (Sunda Shelf). Ph.D. Thesis, Christian Albrechts Universitat, Kiel, p. 1-273. *(Unpublished)*
(Benthic foraminifera distribution patterns on Vietnam Shelf and Sunda Shelf of SW S China Sea, based on 75 sites along two transects in 50-2000m water depth. Shallow water (<200m) assemblages from Vietnam and Sunda Shelves significantly different species composition and distinct distribution patterns. Bathyal faunas exhibit more uniform species composition)

Szarek, R., W. Kuhnt, H. Kawamura & H. Kitazato (2006)- Distribution of Recent benthic foraminifera on the Sunda Shelf (South China Sea). Marine Micropaleontology 61, p. 171-195.
(Recent benthic foraminifera distribution on Sunda Shelf around Natuna Island between 60-226m depth. Four biofacies: (A) inner shelf (Ammomassilina alveoliniformis- Asterorotalia pulchella), in fine grained sediments; (B) high-energy inner shelf (Heterolepa dutemplei- Textularia lythostrota, Asterorotalia gaimardii) in sand and silt dominated sediments NE of Natuna; (C) high-energy outer shelf biofacies (Cibicidoides pachyderma- Textularia bocki, Operculina ammonoides) in neritic relict sand; (4) outer shelf (Facetocochlea pulchra- Bulimina marginata, Bolivina) in area covered with modern silt and mud)

Szarek, R., W. Kuhnt, H. Kawamura & H. Nishi (2009)- Distribution of Recent benthic foraminifera along continental slope of the Sunda Shelf (South China Sea). Marine Micropaleontology 71, p. 41-59.
(Benthic foraminiferal distribution from the winter upwelling region off Borneo on continental slope of Sunda Shelf and from continental slope of S Vietnam Shelf. Faunas highly diverse. Four biofacies: (1) Upper bathyal (Siphotextularia foliosa- Cibicidoides robertsonianus); (2) Middle bathyal (Uvigerina auberiana- Nuttallides rugosus; within oxygen minimum zone); (3) uppermost Lower bathyal (Lagenammina difflugiformis- Uvigerina peregrina) and (4) Lower bathyal (Paratrochammina challengeri- Parrelloides bradyi))

Tanaka, G., T. Komatsu & N.D. Phong (2009)- Recent ostracod assemblages from the northeastern coast of Vietnam and biogeographical significance of euryhaline species. Micropaleontology 55, p. 365-382.
(75 species, 3 biofacies controlled by salinity)

Taylor, A.M. (1988)- The taxonomy, ecology and zoogeographical significance of Recent reef Ostracoda from Singapore. Magister Dissertation, University of Wales, Aberystwyth, p. 1-203. *(Unpublished)*

Thanikaimoni, G. (1983)- Palynological investigation on the Borobudur monument. Bull. Ecole française d'Extreme-Orient 72, p. 237-250.
(online at: www.persee.fr/docAsPDF/befeo_0336-1519_1983_num_72_1_1458.pdf)
(Palynomorphs from soil material used for construction of base of Borobudur monument. Collected from alluvial deposits in open area, not covered by dense vegetation. Absence of marsh and aquatic elements like Typha and Nymphaea in samples suggests not derived from lake or marsh)

Thomas, M.L. (2015)- Holocene palynology of the Gulf of Papua, Papua New Guinea: using modern palynomorph distribution to better constrain paleoenvironmental changes. Ph.D. Thesis, Louisiana State University, p.1-207.
(online at: http://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=1786&context=gradschool_dissertations)

Thomas, M.L., D.T. Pocknall, S. Warny, S.J. Bentley, A.W. Droxler & C.A Nittrouer (2015)- Assessing palaeobathymetry and sedimentation rates using palynomaceral analysis: a study of modern sediments from the Gulf of Papua, offshore Papua New Guinea. Palynology 39, 3, p. 410-433.
(Palynofacies analyses of organic matter of 64 seafloor samples in Gulf of Papua, PNG, from river mouth to shelf to slope. Five categories of palynomacerals distinguished: (1, 2) brown wood, (3) leaf cuticle, (4) black debris, (5) structureless organic matter. Palynomacerals 1-3 more common in nearshore facies, 4 more common in deeper offshore sites)

Thomas, M.L., S. Warny, D.M. Jarzen, S.J. Bentley, A.W. Droxler, B.B. Harper, C.A. Nittrouer & X. Xu (2018)- Palynomorph evidence for tropical climate stability in the Gulf of Papua, Papua New Guinea, over the latest marine transgression and highstand (14,500 years BP to today). Quaternary Int. 467, B22, p. 277-291.
(online at: https://sites01.lsu.edu/faculty/swarny/wp-content/uploads/sites/30/2018/02/Thomas-et-al.-2018-QI.pdf)
(Palynological data indicate climatic conditions at sea level around Gulf of Papua remained warm, wet and stable for past 14.5 kyr, with sea surface T >14 °C)

Titterton, R. & R.C. Whatley (1988)- The provincial distribution of shallow water Indo-Pacific and marine ostracoda: origins, antiquity, dispersal routes and mechanisms. In: T. Hanai et al. (eds.) Evolutionary biology of ostracoda: its fundamentals and applications, Proc. 9th Int. Symposium on Ostracoda, Shizuoka, Elsevier, Amsterdam, p. 759-786.
(Tertiary to Recent ostracods from Indo-Pacific and Southern Ocean fall into 13 zoogeographical provinces. East Indian and SW Pacific regions were locus from which ostracods migrated out since Miocene)

Titterton, R. & R.C. Whatley (1988)- Recent Bairdiinae (Crustacea, Ostracoda) from the Solomon Islands. J. Micropalaeontology 7, 2, p. 111-142.
(online at: https://www.j-micropalaeontol.net/7/111/1988/jm-7-111-1988.pdf)
(21 species of Bairdiinae ostracods (13 new) from littoral and inner shelf of Solomon Islands)

Titterton, R. & R.C. Whatley (2005)- Recent marine Ostracoda from the Solomon Islands. Part 2. Cytheracea (Xestoleberidae). Revista Espanola Micropal. 37, 2, 291-313.
(online at: http://revistas.igme.es/index.php/revista_micro/article/viewFile/314/312)

Titterton, R. & R.C. Whatley (2006)- Recent marine Ostracoda from the Solomon Islands. Part 1: Cypridoidea, Platycopina and Cladocopina. J. Micropalaeontology 25, p. 73-94.
(online at: https://www.j-micropalaeontol.net/25/73/2006/jm-25-73-2006.pdf)
(16 species of Cypridoidea described, comprising 15% of the ostracode fauna of 160 species from Solomon Islands. Platycopids/ Cladocopids 13% of total fauna)

Titterton, R. & R.C. Whatley (2006)- Recent marine Ostracoda from the Solomon Islands. Part 3: Cytheroidea, Bythcytheroidea, Cytherideidae, Krithidae, Neoytherideidae, Cytheruridae. Revista Espanola Micropal. 38, p. 169-189.
(online at: http://revistas.igme.es/index.php/revista_micro/article/view/325/322)

Titterton, R. & R.C. Whatley (2008)- Recent marine Ostracoda from the Solomon Islands. Part 4: Cytheroidea; Hemicytheridae, Thaerocytheridae. J. Micropalaeontology 27, p. 13-33.
(online at: https://www.j-micropalaeontol.net/27/13/2008/jm-27-13-2008.pdf)
(11 species of family Hemicytheridae and 7 of family Thaerocytheridae described, together comprising 14% of Recent ostracod fauna from Solomon Islands. Hemicytherids more endemic than thaerocytherids)

Titterton, R., R.C. Whatley & J.E. Whittaker (2001)- A review of some key species of mainly Indo-Pacific ostracoda from the collections of G.S. Brady. J. Micropalaeontology 20, 1, p. 31-44.
(online at: https://www.j-micropalaeontol.net/20/31/2001/jm-20-31-2001.pdf)
(Review of 15 modern (mainly deep water?) ostracode species from G.S. Brady's Challenger collection)

Todd, R. (1960)- Some observations on the distribution of *Calcarina* and *Baculogypsina* in the Pacific. Sci. Repts. Tohoku University, Sendai, ser. 2 (Geol.), Spec. Vol. 4, p. 100-107.
(Calcarina spengleri and Baculogypsina sphaerulata common reef-dwelling foram species of tropical W Pacific between ~170°W and 120°E. Both first appeared late in Tertiary. Common from Australia Great Barrier Reef to Philippines and Ryukyus in W and from Marianas to Marshalls, Gilberts, Phoenix Islands, Samoa, and Niue in E (not known from C-E Pacific))

Todd, R. (1965)- The foraminifera of the tropical Pacific Collections of the òAlbatrossò, 1894-1900, Part IV, Rotaliform families and planktonic families. Bull. U.S. National Museum, 161, p. 1-139.
(online at: https://repository.si.edu/handle/10088/10220)
(Descriptions of smaller rotaliform benthic and planktonic foraminifera from tropical Pacific Ocean (Part 4 of of Cushman 1932-1942 monographs))

Toruan, L.N.L., D. Soedharma & K.T. Dewi (2013)- Komposisi dan distribusi foraminifera bentik di ekosistem terumbu karang pada Kepulauan Seribu. J. Ilmu dan Teknologi Kelautan Tropis 5, 1, p. 1-16.
(online at: http://journal.ipb.ac.id/index.php/jurnalikt/article/view/7741)
('The composition and distribution of benthic foraminifera at coral reef ecosystem in the Thousand Islands'. Benthic foraminifera from 11 stations at Karang Bongkok, Pramuka, and Onrust Island. Highest composition of symbiont-bearing foraminiferal assemblages associated with reef ecosystem was in East Pramuka (78%) and lowest was in South Onrust (22%). Opportunistic types highest in S Onrust, indicating high nutrients)

Troelstra, S.R. (1989)- Actuomicropalaeontology and sediment distribution of three transects across the Banda Arc, Indonesia (Snellius-II expedition, cruise G5). In: Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 477-489.

Troelstra, S.R. & D. Kroon (1989)- Note on extant planktonic foraminifera from the Banda Sea, Indonesia (Snellius-II Expedition, Cruise G-5). In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, p. 459-463.

Troelstra, S.R., H.M. Jonkers & S. de Rijk (1996)- Larger Foraminifera from the Spermonde Archipelago (Sulawesi, Indonesia). Scripta Geologica 113, p. 93-120.
(Online at: www.repository.naturalis.nl/document/148804)
Modern larger foram distribution in Spermonde reefal province off SW tip of Sulawesi. Near-reef facies dominated by few species (Calcarina, Elphidium). Mid-shelf reefs mainly with Heterostegina depressa and Amphistegina radiata. Outer platform reefs more open ocean influence with Amphisorus hemprichii and Amphistegina lessonii)

Benthem Jutting, T. van (1933)- Non marine mollusca from Dutch North New Guinea including an annotated list of the species of Papuina. Nova Guinea (Zoology) 17, p.71-150.

Benthem Jutting, T. van (1941)- On a collection of non-marine mollusca from the Talaud Islands and from Morotai (Moluccas). Treuia 18, 1, p. 1-27.
(online at: http://e-journal.biologi.lipi.go.id/index.php/treubia/article/view/2593/2231)
(Freshwater molluscs from northern Moluccas islands collected by H.J. Lam in 1926)

Van Benthem Jutting, W.S.S. (1953)- Systematic studies on the non-marine mollusca of the Indo-Australian Archipelago. IV. Critical revision of the freshwater bivalves of Java. Treubia 22, 1, p. 19-73.
(online at: http://e-journal.biologi.lipi.go.id/index.php/treubia/article/view/1562/1453)

(Review of 16 species of modern freshwater bivalves from lakes/ rivers of Java. Three families: Unionidae, Corbiculidae, Sphaeriidae (Pisidium spp.))

Van Benthem Jutting, W.S.S. (1956)- Systematic studies on the non-marine mollusca of the Indo-Australian Archipelago. V. Critical revision of the Javanese gastropods. Treubia 23, 2, p. 259-477.
(online at: http://e-journal.biologi.lipi.go.id/index.php/treubia/article/view/2713/2325)
(Review of modern freshwater gastropods (89 species) and land gastropods(171 species) of Java)

Van Benthem Jutting, W.S.S. (1959)- Catalogue of the non-marine mollusca of Sumatra and of its satellite islands. Beaufortia, Zoological Museum Amsterdam, 7, 83, p. 41-191.
(online at: www.repository.naturalis.nl/document/548339)

Van Benthem Jutting, W.S.S. (1959)- Non-marine mollusca of the North Moluccan islands Halmahera, Ternate, Batjan and Obi. Treubia 25, p. 25-87.
(online at: http://e-journal.biologi.lipi.go.id/index.php/treubia/article/view/2731/2341)

Van Benthem Jutting, W.S.S. (1963-1965)- Non-marine mollusca of West New Guinea. Nova Guinea (Zoology), vols. 20, 23, 26, 32.
(Part 1, Mollusca from fresh and brackish waters, vol. 20, p. 409-521. Part 2, Operculate land shells, vol. 23, p. 653-726. Part 3, Pulmonata, 1, vol. 26, p. 1-74. Part 4, Pulmonata, 2, vol. 32, p. 205-304)

Van Benthem Jutting, W.S.S. (1973)- Systematic studies on the non-marine mollusca of the Indo-Australian Archipelago. Linnaeus Press, Amsterdam, p. 1-477.
(Reprint of 5 papers on Recent fresh and brackish water molluscs from Indonesia, originally published in 'Treubia' (vol.19 (1948) p. 539-604; 20 (1950) p. 381-505; 21 (1952) p. 291-435; 22 (1953) p. 19-73 and 23 (1956) p. 259-477)

Van den Bold, W.A. (1950)- *Hemikrithe*, a new genus of ostracoda from the Indopacific. Ann. Mag. Natural History 12, 3, p. 900-904.
(Short note listing 44 species of ostracods from two samples, one off Sarawak, one from Batu Island, W coast of Sumatra. Incl. new genus Hemikrithe orientalis)

Van de Paverd, P.J. & K.R. Bjorklund (1989)- Frequency distribution of polycystine radiolarians in surface sediments of the Banda Sea, Eastern Indonesia. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2, p. 511-521.
(Numbers of radiolarians in sea-floor sediments of Banda Sea vary widely: low from 0-950m, high between 950-4800m, and low again below 4800m water depth. Distribution reflect sediment influx and occurrence of highly productive areas in surface water)

Van de Paverd, P.J. & K.R. Bjorklund (1996)- Preservation and density of Late Quaternary radiolaria in piston cores from the Banda Sea, eastern Indonesia. Revista Espanola Micropal. 28, 3, p. 139-152.

Van der Kaars, W.A. (1991)- Palynology of eastern Indonesian marine piston-cores: a Late Quaternary vegetational and climatic record for Australasia. Palaeogeogr. Palaeoclim. Palaeoecology 85, p. 239-302.
(Pollen analyses on Late Quaternary sediments from E Indonesia marine piston cores show vegetation and environmental record for E Indonesia and N Australia. On Halmahera and N Australia montane oak forest largely replaced tropical lowland vegetation during last glacial period, while climate was cooler and drier than today, with maximum grassland cover at ~18 ka. One piston-core (G6-4) extends to 300 ka. and also shows glacial periods characterised by expanding grassland vegetation (Graminae pollen peaks), and during interglacials increases in woodland and fern cover. Mangrove vegetation expansions suggest rises in sea-level at ~244, 220 and 130 ka)

Van der Kaars, S. (1998)- Marine and terrestrial pollen records of the last glacial cycle from the Indonesian region: Bandung Basin and Banda Sea. Palaeoclimates 3, p. 209-219.

Van der Kaars, S.F. Bassinot, P. de Deckker & F. Guichard (2010)- Changes in monsoon and ocean circulation and the vegetation cover of southwest Sumatra throughout the last 83,000 years: the record from marine core BAR94-42. Palaeogeogr. Palaeoclim. Palaeoecology 296, p. 52-78.
(Palynological record from deep-sea core off SW Sumatra used to reconstruct monsoon circulation and vegetation of SW Sumatra over the last 83 ky. During marine isotope stage (MIS) 5a, SW Sumatra was covered by rainforest. During MIS 4 conditions became drier, cooler and weaker monsoon. Vegetation most open during MIS 3, between ~52- 43 ky, driest of last glacial, also increase in montane pollen. After ~43 ky everwet climate gradually developed as monsoonal circulation intensified)

Van der Kaars, S. & R. Dam (1997)- Vegetation and climate change in West-Java, Indonesia during the last 135,000 years. Quaternary Int. 37, p. 67-71.
(Sediment cores from intramontane Bandung basin (W Java) provide paleoclimatic record for last 135,000 years. Anomalously dry conditions for penultimate glacial last glacial periods, very warm and humid conditions during last interglacial. For Last Glacial Maximum temperatures 4-7°C lower than present)

Van der Kaars, S., D. Penny, J. Tibby, J. Fluin, R.A.C. Dam & P. Suparan (2001)- Late Quaternary palaeoecology, palynology and palaeolimnology of a tropical lowland swamp: Rawa Danau, West-Java, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 171, 3-4, p. 185-212.
(Open vegetation and drier climate suggested for Late Glacial, but no evidence for cooler conditions. Onset of Holocene coincides with change to more humid conditions. Changes in diatom composition reflect shallowing of lake)

Van Iperen, J.M., A.J van Bennekom & T.C.E. van Weering (1993)- Diatoms in surface sediments of the Indonesian Archipelago and their relation to hydrography. In: H. van Dam (ed.) Twelfth Int. Diatom Symposium, Hydrobiologia 269-270, 1, p. 113-128.
(Recent marine diatoms from 53 seafloor samples between 350-7200m water depth in Indonesian Archipelago, collected during Snellius II Expedition. Three assemblages, related to overlying water mass: (1) warm saline surface waters of Pacific and Indian Ocean origin (Thalassiosira oestrupii, Rhizosolenia bergonii); (2) low-salinity lobe in Makassar Strait ((Thalassionema frauenfeldii, Cyclotella striata); (3) seasonal upwelling areas in Arafura Sea and S of Java (Thalassionema nitzschioides, Chaetoceros resting spores). Also three groups of allochthonous species, indicators of productivity in littoral environment, bottom currents and river outflow)

Van Marle, L.J. (1988)- Bathymetric distribution of benthic foraminifera on the Australian- Irian Jaya continental margin, Eastern Indonesia. Marine Micropaleontology 13, 2, p. 97-152.
(Study of distribution of 164 species of benthic foraminifera in 35 seafloor samples from Australia- Irian Jaya continental margin between 60-2119 m water depth, along three transects across Banda Arc. Four fauna1 depth-zones and four subzones distinguished)

Van Marle, L.J. (1989)- Benthic foraminifera from the Banda Arc region, Indonesia, and their paleobathymetric significance for geologic interpretations of the Late Cenozoic sedimentary record. Ph.D. Thesis Vrije Universiteit, Free University Press, Amsterdam, p. 1-271.
(Collection of 11 papers, also published elsewhere, on modern foraminifera distribution and Neogene stratigraphy of E Indonesian islands)

Van Marle, L.J. (1991)- Eastern Indonesian, Late Cenozoic smaller benthic foraminifera. Verhandelingen Kon. Nederl. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde 1, 34, p. 1-328.
(online at: www.dwc.knaw.nl/DL/publications/PU00011017.pdf)
(Taxonomy and distribution of Miocene- Recent deep water benthic foraminifera in E Indonesia)

Van Marle, L.J., J.E.van Hinte & A.J. Nederbragt (1987)- Plankton percentage of the foraminiferal fauna in seafloor samples from the Australian-Irian Jaya continental margin, Eastern Indonesia. Marine Geol. 77, p. 151-156.

(Plankton percentage of foram fauna in 36 seafloor samples between 40-2119m depth from Australian-Irian Jaya continental margin increases with water depth. Percentage- Depth Transform derived from data set. Examples: around 100m water depth plankton% ~50%, below 500m >90%)

Van Steenis, C.G.G.J. (1934)- On the origin of the Malaysian mountain flora, part 1, Facts and statements of the problem. Bull. Jardin Botanique Buitenzorg, ser. 3, 13, p. 135-262.
(On distribution and origin of recent SE Asian mountain plants)

Van Steenis, C.G.G.J. (1935)- On the origin of the Malaysian mountain flora, part 2, Altitudinal zones, general consideration and renewed statement of the problem. Bull. Jardin Botanique Buitenzorg, ser. 3, 13, p. 289-290.

Van Steenis, C.G.G.J. (1936)- On the origin of the Malaysian mountain flora, part 3, Analysis of floristical relationships. Bull. Jardin Botanique Buitenzorg, ser. 3, 14, p. 56-72.
(Malesian (= Indonesian) mountain flora reached Indnesian archipelago along three migration routes, called Sumatra, Luzon and Papuan tracks)

Van Steenis, C.G.G.J. (1979)- Plant-geography of East Malesia. Botanical J. Linnean Soc. 79, p. 97-178.
(Modern plant distribution in E Indonesian archipelago (Lesser Sunda Islands; not Malaysia). Two main contacts between Malesian (Indonesian) and Australian floras must have occurred, (1) in Upper Cretaceous-Paleocene or earlier, and (2) before end Miocene (abundant influx of Asian elements into Australian flora))

Van Waveren, I. (1989)- Pattern analysis of organic component abundances from deltaic and open marine deposits: palynofacies distribution (East Java, Indonesia). In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 23, 4, p. 441-447.
(Eleven types of organic debris types in sea floor samples from Java Sea, off Solo River Delta, Porong Delta, etc.. Mix of open marine (foraminifera, dinoflagellates) and land-derived material (spores-pollen, etc.))

Van Waveren, I. (1989)- Palynofacies analysis of surface sediments from the Northeastern Banda Sea (Indonesia). In: Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 4, p. 501-509.
(Analysis of organic matter types in 31 deep water sea floor samples E of Seram)

Van Waveren, I. (1993)- Planktonic organic matter in surficial sediments of the Banda Sea (Indonesia); a palynological approach. Ph.D. Thesis University of Utrecht, Geologica Ultraiectina 104, p. 1-237.
(online at: dspace.library.uu.nl/bitstream/..)
(Collection of seven publications, six of which deal with Recent Banda Sea palynomorphs, organic matter, tintinnomorphs and dinoflgellate cysts)

Van Waveren, I. (1994)- Tintinnomorphs from deep-sea sediments of the Banda Sea (Indonesia). Scripta Geologica 105, p. 27-51.
(online at: www.repository.naturalis.nl/document/148769)
(64 types of chitinous remains of tintinnomorph protozoans in (sub-)Recent sediments of Banda Sea. Presence and preservation may be related to effects of high productivity and high sedimentation rates in Banda Sea)

Van Waveren, I. & H. Visscher (1994)- Analysis of the composition and selective preservation of organic matter in surficial deep-sea sediments from a high-productivity area (Banda Sea, Indonesia). Palaeogeogr. Palaeoclim. Palaeoecology 112, 1-2, p. 85-111.
(Palynological analysis of box-core samples from deep-sea sediments along three transects in Banda Sea)

Van Zeist, W. (1984)- The prospect of palynology for the study of prehistoric man in Southeast Asia. Modern Quaternary Research in Southeast Asia 8, Balkema, Rotterdam, p. 1-15.
(Early review of use of palynology to identify paleo-vegetational changes in Quaternary sediments of Indonesia, with examples from Java, Sumatra, PNG)

Van Zeist, W., N.A. Polhaupessy & I.M. Stuijts (1979)- Two pollen diagrams from West Java, a preliminary report. Modern Quaternary Research in Southeast Asia 5, Balkema, Rotterdam, p. 43-56.
(Palynology of two shallow core holes in Holocene lake deposits at Situ Gunung and Telaga Patengan, SW Java)

Varol, O. (1985)- Distribution of calcareous nannoplankton in surface sediments from intertidal and shallow marine regimes of a marginal sea: Jason Bay, South China Sea. Marine Micropaleontology 9, p. 369-374.
(Sediments collected from intertidal and shallow marine (0-20m) parts of Jason Bay, S China Sea contain calcareous nannoplankton assemblages with 99% Gephyrocapsa oceanica and rare Helicosphaera carteri, Umbilicosphaera sibogae, Scapholithus fossilis, Cyclococcolithus leptoporus, Syracosphaera pulchrae. Nannoplankton species abundance increases with depth, becoming abundant below ~20m)

Vavra, V. (1906)- Ostracoden von Sumatra, Java, Siam, den Sandwich-lnseln und Japan (Reise von Dr. Walter Voltz). Zool. Jahrbuch, Syst. Okol. Geogr. Tiere 23, p. 413-436.
(On Recent fresh-water ostracodes from swamps, lakes, etc. of Sumatra, Java, Thailand, etc.)

Verheij, E. & P.L.A. Erftemeijer (1993)- Distribution of seagrasses and associated macroalgae in South Sulawesi, Indonesia. Blumea 38, p. 45-64.

Veron, J.E.N. & R. Kelley (1988)- Species stability in reef corals of Papua New Guinea and the Indo Pacific. Mem. Assoc. Australasian Palaeontologists (AAP) 6, p. 1-69.
(Pliocene coral fauna from PNG with 85 species, of which 87% still extant)

Victor, R. & C.H. Fernando (1979)- On some freshwater ostracod type specimens from Indonesia. Canadian J. Zoology 57, 1, p. 6-12.
(Re-description of some modern freshwater ostracod species from Sulawesi and Sumatra, originally described by Moniez (1892) (Strandesia, Hemicyprus, Cypretta))

Victor, R. & C.H. Fernando (1981)- Freshwater ostracods (Crustacea: Ostracoda) of the subfamily Cyprinotinae Bronstein, 1947 from Malaysia, Indonesia and the Philippines. Hydrobiologia 83, 1, p. 11-27.
(Recent Cyprinotus, Hemicypris and Heterocypris from ponds in W Indonesia, etc.)

Villain, J.M. (1995)- Modeles micropaleontologiques recents et stratigraphie sequentielle en Indonesie. In: M. Gayet et al. (eds.) First European Palaeontological Congress, Geobios, Mem. Spec. 18, p. 409-423.
('Recent micropaleontological models and sequence stratigraphy in Indonesia'. Foraminifera distribution on E Kalimantan shelf between Mahakam delta and Makassar Strait. Deltaic assemblages arranged according to salinity. Inner shelf with larger Rotaliidae towards euryhaline conditions. Operculina typical of shallow marine low-oxygen organic-rich clays; coarser seafloor rich in oxygen with Amphisteginids. Nodosariidae and planktonics bathymetric markers on slope. In bathyal areas mostly agglutinants. Model above valid only for highstand situations, comparable to present day. Sediments deposited during last lowstand period cored and correlated. Shelf microfaunas thin-walled, due to low oxygen and low carbonate concentrations; Rotaliidae indicate low salinities at shelf edge, where they coexist with Operculina and Amphistegina, close to deeper facies with planktonics, Buliminidae and Nodosariidae)

Vozenin-Serra, C. & C. Prive-Gill (1991)- Les terrasses alluviales pleistocenes du Mekong (Cambodge). I. Bois silicifies homoxyles recoltes entre Stung-Treng et Snoul. Review Palaeobotany Palynology 67, 1/2, p.
('The Pleistocene alluvial terraces of the Mekong (Cambodia), I. Homoxyxl silified woods collected between Stung-Treng et Snoul')

Vozenin-Serra, C. & C. Prive-Gill (1991)- Les terrasses alluviales pleistocenes du Mekong (Cambodge). II. Bois silicifies heteroxyles recoltes entre Stung-Treng et Snoul. Review Palaeobotany Palynology 68, 1/2, p.
('The Pleistocene alluvial terraces of the Mekong (Cambodia), II. Heteroxyxl silified woods collected between Stung-Treng et Snoul')

Vyverman, W. (1991)- Diatoms from Papua New Guinea. Bibliotheca Diatomologica 22, p. 1-224.
(Recent diatoms from lakes, etc., in PNG)

Vyverman W. & K. Sabbe (1995)- Diatom-temperature transfer functions based on the altitudinal zonation of diatom assemblages in Papua New Guinea: a possible tool in the reconstruction of regional palaeoclimatic changes. J. Paleolimnology 13, p. 65-77.

Wagey, G.A. (2002)- Ecology and physiology of phytoplankton in Ambon Bay, Indonesia. Ph.D. Thesis University of British Columbia, p. 1-185.
(105 phytoplankton species identified from Ambon Bay, including several dinoflagellates new to Indonesia)

Waller, H.O. (1960)- Foraminiferal biofacies off the South China Coast. J. Paleontology 34, 6, p. 1164-1182.
(Benthic foraminifera from shelf S of Taiwan and in Gulf of Tonkin. Four depth-related faunas: (1) Inner Shelf (65-150') Elphidium advenum, E. sagrum, Nonion japonius, Quinqueloculina; (2) C Shelf (151-275') Amphistegina lessonii, Hanzawaia nipponica, Streblus tepidus, Operculina bartschi; (3) Outer Shelf (276-400') Biloculinella labiata, Cassidulina neocarinata, Spiroloculina communis; (4) U Bathyal (401-656') Bolivina spathylata, Uvigerina auberiana, U. schwageri)

Wang, P. & J. Chappell (2001)- Foraminifera as Holocene environmental indicators in the South Alligator River, Northern Australia. Quaternary Int. 83-85, p. 47-62.
(Trends in foraminifera assemblages along 80 km length of macrotidal river E of Darwin, N coast of Australia. Due to tidal transport and resuspension, most foraminiferal thanatocoenoses in river contain many small marine forms, while % of large and heavy marine forams, like Quinqueloculina, decreases upstream)

Wang, P. & C. Samtleben (1983)- Calcareous nannoplankton in surface sediments of the East China Sea. Marine Micropaleontology 8, p. 249-259.
(28 species of coccoliths in surface sediments of East China Sea. Emiliania huxleyi and Gephyrocapsa oceanica together >90% of assemblages. Coccoliths very rare in water depths <50m). Coccolith species composition different between continental shelf and Okinawa Trough, reflecting different water masses)

Wang, R., A. Abelmann, B. Li & Q. Zhao (2000)- Abrupt variations of the radiolarian fauna at Mid-Pleistocene climate transition in the South China Sea. Chinese Science Bull. 45, 10, p. 952-955.
(Core 17957-2 from S China Sea shows distinct changes in radiolarian/foraminfera ratio and radiolarian assemblages that can be related to global climate cooling observed at M Pleistocene revolution at ~900 ka)

Wang, X., S. van der Kaars, P.P. Kershaw, M.I. Bird & F.A. Jansen (1999)- A record of fire, vegetation and climate through the last three glacial cycles from Lombok Ridge Core G6-4, Eastern Indian Ocean, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 147, 3-4, p. 241-256.
(Deepsea core SW of Sumba with ~300,000 yr sediment record)

Watson, K.A. (1988)- The taxonomy and distribution of Recent reef Ostracoda from the Pulau Seribu, Java Sea. Doct. Diss., University of Wales, Aberystwyth, p. 1-434. *(Unpublished)*

Weber- van Bosse, A. & M. Foslie (1904)- The Corallinaceae of the Siboga Expedition. In: M. Weber (ed.) Siboga Expeditie, Uitkomsten op zoologisch, botanisch, oceanographisch en geologisch gebied verzameld in Nederlandsch Oost-Indie 1899-1900, Monographie 61, Brill, Leiden, p. 1-110.
(Monograph on Recent marine coralline red algae collected by Siboga Expedition in 1899-1900. Lithothamnium group present at 55 stations, invariably in areas of strong tidal or other currents, thriving best from 10-30m, but also present on reef flats and deeper water down to ~120m)

Weinmann, A.E., D. Rodder, S. Lotters & M.R. Langer (2013)- Heading for new shores: projecting marine distribution ranges of selected larger foraminifera. a. PLoS ONE 8, 4, e62182, p. 1-14.
(online at: https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0062182&type=printable)

(Modern symbiont-bearing larger foraminifera confined to tropical and subtropical shallow marine habitats, mainly between 30°N and 30°S) and minimum T limits e governed by 14-20°C isotherms. During times of extensive global warming (Eocene, Miocene), larger foraminifera found as far N as 50°N and 47°S (New Zealand). Species Distribution Models for Archaias angulatus, Calcarina spp., and Amphistegina spp.. Amphistegina spp. largest potential distribution (T tolerance). Calcarina most tolerant to high T)

Wells, P., G. Wells, J. Calli & A. Chivas (1994)- Response of deep sea benthonic foraminifera to Late Quaternary climate changes, SE Indian Ocean, offshore Western Australia. Marine Micropaleontology 23, p. 185-229.
(Late Quaternary benthic foraminifera of four ODP 122 deep-sea cores off W Australia with two main assemblages (1) dominated by Uvigerina peregrina, (2) dominated by U. proboscidea. Episodes of high influx of particulate organic matter during glacial episodes, tied to upwelling episodes and to unusually low sea-surface paleotemperature indicated by planktic foraminifera)

Whatley, R.C. & R. Titterton (1981)- Some new Recent podocopid Ostracoda from the Solomon Islands, South-West Pacific. Revista Espanola Micropal. 13, p. 157-170.

Whatley, R.C. & K. Watson (1988)- A preliminary account of the distribution of ostracoda in Recent reef and reef associated environments in the Pulau Seribu or Thousand Island Group, Java Sea. In: T. Hanai et al. (eds.) Evolutionary biology of ostracoda: its fundamentals and applications, Proc. 9th Int. Symposium on Ostracoda, Shizuoka, Elsevier, Developments in Palaeontology and Stratigraphy 11, p. 399-411.
(Samples on and around reef complex of Pulau Pari, Pulau Seribu, Java Sea, yielded 141 species of podocopid and platycopid Ostra coda. Bairdiidae maximum diversity on reef, Renaudcypris and Hansacypris mainly in intertidal zone. Loxoconcha, Xestoleberis and Ornatoleberis wider environmental tolerance)

Whatley, R.C. & Q. Zhao (1987)- Recent ostracoda of Malacca Straits (Part I). Revista Espanola Micropal. 19, 3, p. 327-366.
(18 bottom samples of modern sediments from Malacca Straits over depth range of 10-100m contain 129 species of ostracodes (22 new). Faunas close affinity to South China Sea and Indonesia)

Whatley, R.C. & Q. Zhao (1988)- Recent ostracoda of Malacca Straits (Part II). Revista Espanola Micropal. 20, 1, p. 5-37.

Whittaker, J.E. & R.L. Hodgkinson (1995)- The foraminifera of the Pitcairn Islands. In: T.G. Benton & T. Spencer (eds.) Pitcairn Islands: biogeography, ecology and prehistory, Biol. J. Linnean Soc. 56, p. 365-371.
(Recent foraminifera from Pitcairn Islands, Pacific Ocean. Living forams almost exclusively from phytal (attached or clinging) habitats. Foraminifera in sediment samples mainly thanatocoenoses. Fauna all calcareous, low diversity, dominated by large soritids (Marginopora, Amphisorus, Sorites) and Amphistegina, with small miliolids and small attached genera (discorbids, etc.). Apparent absence of Calcarina, small rotaliids, elphidiids and agglutinating species, common in W Pacific islands)

Wicaksono, S.A., J.M. Russell & S. Bijaksana (2015)- Compound-specific carbon isotope records of vegetation and hydrologic change in central Sulawesi, Indonesia, since 53,000 yr BP. Palaeogeogr. Palaeoclim. Palaeoecology 430, p. 47-56.
(Carbon isotopic composition (δ13C) of terrestrial leaf waxes in sediment cores from LakeMatano spanning 53 kyr. During Marine Isotope Stages 1 and 3, more negative δ13Cwax values indicate closed-canopy rainforests dominated in Sulawesi, in wetter, less seasonal climate. More abundant open canopy vegetation and possible expansion of C4 grasses between 29-14 ka BP, indicating more arid climate in Marine Isotope Stage 2 (incl. Last Glacial Maximum). Higher elevations maintain rainforest refugia during regionally arid time intervals when C4 savannas and grasslands expanded at lower elevations)

Wijono, S. (1991)- Distribusi foraminifera bentonik di daerah peraian P. Papateo, Kepulauan Seribu, Laut Jawa. Media Teknik (UGM) 13, 2, p. 119-131.

'Distribution of benthic foraminifera off Papateo Island, Pulau Seribu, Java Sea'. Forams from 18 samples from 21-30m depth)

Winantris (2011)- Fungal spore sedimen Resen delta front delta Mahakam Kalimantan Timur. Bull. Scientific Contr. (UNPAD) 9, 2, p. 107-120.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8267/3814)
('Fungal spores in Recent sediments of the Mahakam delta from, East Kalimantan'. Terrestrial and marine fungal spores present in delta front sediments, incl. Monoporisporites, Inapertisporites, Biporipsilonites)

Winantris (2012)- Kelimpahan polen dan spora endapan channel Delta Mahakam. Bull. Scientific Contr. (UNPAD) 10, 2, p. 89-95.
(online at: http://jurnal.unpad.ac.id/bsc/article/view/8280/3827)
('Abundance of pollen and spores in channels deposits of the Mahakam Delta'. Abundance of pollen higher in tidal channel deposits than in distributary channels. Oncosperma tigillarium and Nypa fruticans palmae pollen dominate in distributary channels, Rhizophora and Avicennia mangrove pollen dominant in tidal channels)

Winantris & L. Jurnaliah (2018)- Pollen and foraminifera approaches to identify sediment sources in the river mouth Mahakam, East Kalimantan. J. Geoscience Engineering Environm. Technol. (JGEET) 2, 4, p. 242-248.
(online at: http://journal.uir.ac.id/index.php/JGEET/article/view/689/627)
(Shallow core from Mahakam River before delta plain. Common pollen (incl. mangrove), rel. rare, simple foraminifera (Oolina, Ramulina, Stictogongylus vandiemenensis, etc.))

Winantris, A. Sudradjat, I. Syafri & A.T.Rahardjo (2014)- Diversitas polen Palmae pada endapan delta Mahakam Resen. Proc. 43rd Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, PIT IAGI 2014-195, 5p.
('Diversity of Palmae pollen in Recent deposits of the Mahakam Delta'. Sediments of Mahakam Delta contain 28 palm pollen species in delta plain, 23 in delta front. Palm pollen can help differentiate between delta plain and delta front facies: (1) delta plain dominated by Oncosperma tiggilarium, Nypa fruticans, Eugessona insignis, Pinanga parvula and Cocos nucifera; (2) delta front dominated by Oncosperma tiggilarium, Nypa fruticans, Eugessona insignis, Phoenix paludosa and Licuala sp. Palm pollen abundance nearly 4x greater in delta plain than in delta front, also higher diversity)

Winantris, I. Syafri & A.T. Rahardjo (2012)- *Oncosperma tigillarium* merupakan bagian palino karakter delta plain di Delta Mahakam, Kalimantan. Bionatura-Jurnal Ilmu-ilmu Hayati dan Fisik 14, 3, p. 228-236.
(online at: http://jurnal.unpad.ac.id/bionatura/article/viewFile/7465/3426)
('Oncosperma tigillarium is part of the palino character of delta plain in Mahakam Delta, Kalimantan'. O. tigillarium pollen of coastal palm tree widespread in Recent delta plain samples, but absent in delta front, therefore good indicator of (upper) delta plain environment)

Woodroffe, S.A., B.P. Horton, P. Larcombe & J.E. Whittaker (2005)- Intertidal mangrove foraminifera from the central Great Barrier Reef shelf, Australia: implications for sea-level reconstruction. J. Foraminiferal Research 35, 3, p. 259-270.
(Foraminifera distribution in intertidal zone tied to elevation. Agglutinated foram assemblage of Miliammina fusca, Trochammina inflata, Ammotium and Haplophragmoides between just above Mean Low Water of Neap Tides to Highest Astronomical Tide level (vertical range 1.8 m). Ammonia aoteana- dominated assemblage between just below Mean Low Water of Neap Tides and Mean High Water of Neap Tides (vertical range 0.8 m)

Wu, R., Y. Gao, Q. Fang, C. Chen, B. Lan, L. Sun & D. Lan (2013)- Diatom assemblages in surface sediments from the South China Sea as environmental indicators. Chinese J. Oceanology Limnology 31, 1, p. 31-45.
(online at: http://dspace.xmu.edu.cn/bitstream/handle/2288/53977/Diatom_assemblages_in_surface_sediments_from_the_South_China_Sea_as_environmental_indicators.pdf?sequence=1&isAllowed=y)
(Diatoms in 62 surface sediment samples from depths from 101-4185m. 256 species, dominated by Coscinodiscus africanus, Coscinodiscus nodulifer, Cyclotella stylorum, Hemidiscus cuneiformis, Melosira sulcata, Nitzschia marina, Roperia tesselata, Thalassionema nitzschioides, etc.. Seven zones)

Yahya, K., S. Shuib, F.I. Minhat, O. Ahmad & A. Talib (2014)- The distribution of benthic foraminiferal assemblages in the north-west coastal region of Malacca Straits, Malaysia. J. Coastal Life Medicine 2, 10, p. 784-790.
(online at: www.jclmm.com/qk/201410/5.pdf)
(Benthic foram assemblages from shallow marine environments around NW Penang island dominated by Ammonia (~80% of fauna), followed by Elphidium (~3%). Rare agglutinated taxa and Bolivina)

Yakzan, A.M., S. Jirin, S.S.M. Shah & R.J. Morley (2010)- The major trends of palynomorphs distribution in three fluvial systems, Peninsular Malaysia. Petrol. Geosc. Conf. Exhib. (PGCE), Kuala Lumpur 2010, p. *(Extended Abstract)*
(Palynomorph distribution patterns in three fluvial systems on W (Klang-Langat River) and E (Pahang and Sedili Besar Rivers) coasts of Peninsular Malaysia. Ecological groups. mangrove (Rhizophora), back mangrove (Acrostichum, Nypa) and hinterland pollen. Pollen and spores redistributed by currents and less by wind. Sediments in offshore area contain pollen signals which approximately mirror vegetation character onshore)

Yakzan, A.M. & H. Kamaludin (2010)- Palynology of late Quaternary coastal sediments. Catena 30, 4, p. 391-406.
(Palynology of Late Pleistocene sediments from Pantai tin mine, W coast of Malay Peninsula, with freshwater Pandanus peat overlain by mangrove peat)

Yanagisawa, Y. (1987)- Age assignments of dredge and piston core samples based on diatom biostratigraphy. Coord. Comm. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Techn. Bull. 19, p. 73-87.
(Latest Pliocene- Recent ages for sediments in piston cores in forearc offshore E Java)

Yassini, I., B.G. Jones & M.R. Jones (1993)- Ostracods from the Gulf of Carpentaria, northeastern Australia. Senckenbergiana Lethaea 73, p. 375-406.

Yin, J., C. Liu, J. Zhang, X. Yang, J. Wu, W. Oschmann, F.T. Fursich, B. Zhu & H. Zhang (2018)- Distribution and constraining factors of planktonic and benthic foraminifers in bottom sediments of the southern South China Sea. Palaeogeogr. Palaeoclim. Palaeoecology 502, p. 130-146.
(Water depth dominant factor controling foram assemblage composition and δ18O. Differences in proportion of agglutinated and porcelaneous tests in shallow-water zone controlled by terrestrial runoff from nearby river systems (Mekong and N Borneo rivers) and seasonal currents. Dominance of Melonis barleeanus at sites of active cold methane seepage in southern SCS)

Yordanova, E.K. & J. Hohenegger (2004)- Morphocoenoclines of living operculinid foraminifera. Micropaleontology 50, p. 149-177.
(Relations between water depth and shape in Operculina, Planoperculina and Planostegina in Ryuku islands. Thick Operculina with intensively coiled spirals predominate in shallow water (20 -40m); in deep euphotic zone (−120m) thin forms with weakly coiled spiral. Thin Planoperculina heterosteginoides restricted to deep euphotic zone (>80m) can extend distribution to just below euphotic zone, where it develops very thin tests)

Yulianto, E., A.T. Rahardjo, Dardji Noeradi, D.A. Siregar & K. Hirakawa (2005)- A Holocene pollen record of vegetation and coastal environmental changes in the coastal swamp forest at Batulicin, South Kalimantan, Indonesia. J. Asian Earth Sci. 25, 1, p. 1-8.
(Pollen analysis of coastal peat swamp core at Batulicin, SE Kalimantan, representing 9100 BP, showing Rhizophora mangrove forest since early Holocene. From ~6000 BP gradual change from mangrove forest to peat swamp forest due to higher precipitation and progradation. Human influence recognized from ~1600 BP)

Yulianto, E. & W.S. Sukapti (1998)- Perubahan iklim selama rentang Plistosen atas hingga Holosen di Indonesia berdasarkan rekaman data palinologi. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 66-71.

('Late Pleistocene-Holocene climate change in Indonesia based on palynological data records')

Yulianto, E., W.S. Sukapti & K.T. Dewi (2019)- Late Holocene pollen record of environmental changes in Karimata Strait, Sunda Shelf Rregion. Indonesian J. Geoscience 6, 1, p. 41-55.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/291/277)
(Pollen analysis on 90 cm gravity core taken from Karimata Strait reveals Late Holocene environmental changes in central Sunda Shelf region)

Yulianto, E., W.S. Sukapti, A.T. Rahardjo, Dardji Noeradi, D.A. Siregar, P. Suparan & K. Hirakawa (2004)- Mangrove shoreline responses to Holocene environmental change, Makassar Strait, Indonesia. Review Palaeobotany Palynology 131, p. 251-268.
(Pollen analyses of two near-coastal sites at Batulicin, S Kalimantan and Pare-Pare, S Sulawesi. Mangroves developed at Batulicin in mid-Holocene, persisting to present at Batulicin. Mangrove development commenced at Pare-Pare in early Holocene, but since mid Holocene fluvial/floodplain deposition)

Zallesa, S., K.T. Dewi, N.C.D. Aryanto & R. Rahardiawan (2014)- The correlation between benthic foraminifera and sediment types of South Makassar Strait. Bull. Marine Geol. 29, 2, p. 53-59.
(online at: http://ejournal.mgi.esdm.go.id/index.php/bomg/article/view/65/66)
(Core top samples from water depths 200-1500m in S Makassar Straits with 38 species of benthic foraminifera. Most common species Anomalinoides colligerus, Lenticulina suborbicularis, Planulina wuellerstorfi, Pseudonodosaria discrete, Bolivina spathulata. Highest abundance of benthic foraminifera in silty sand and sandy silt)

Zamoras, L.R. & P.J. Militante-Matias (1997)- Recent Foraminifera of Matabungkay and Talim Bays, Batangas. J. Geol. Soc. Philippines 52, 2, p.

Zhang, P., R. Zuraida, Y. Rosenthal, A. Holbourn, W. Kuhnt & J. Xu (2019)- Geochemical characteristics from tests of four modern planktonic foraminiferal species in the Indonesian Throughflow region and their implications. Geoscience Frontiers 10, 2, p. 505-516.
(online at: https://www.sciencedirect.com/science/article/pii/S1674987118300471)
(d18O and Mg/Ca of Globigerinoides ruber, Gs sacculifer, Pulleniatina obliquiloculata and Neogloboquadrina dutertrei from 60 coretop sediment samples from Indonesian Throughflow region suggest calcification within mixed layer for G. ruber (0-50m) and G. sacculifer (20-75 m), and within thermocline (~75-125m) for P. obliquiloculata and N. dutertrei)

Zhao, Q. & P. Wang (1988)- Distribution of modern ostracoda in the shelf seas off China. In: T. Hanai et al. (eds.) Evolutionary biology of ostracoda: its fundamentals and applications, Proc. 9th Int. Symposium on Ostracoda, Shizuoka, Elsevier, Developments in Palaeontology and Stratigraphy 11, p. 805-821.

Zhao, Q. & R.C. Whatley (1989)- Recent podocopid Ostracoda of the Sedili River and Jason Bay, southeastern Malay Peninsula. Micropaleontology 35, p. 168-187.
(Distribution of ostracodes in Jason Bay, off SE coast of Malay Peninsula. 101 species recorded. Dead assemblages higher diversity than live assemblages, due to postmortem transportation. One new genus and 13 new species. Freshwater Sedili River only two species (Darwinula stephensoni, ?Cytherissa.), in brackish estuary 4 species (Sinocythere superba, Hemicytheridea reticulata, Keijella multisulcus, Neocytherideis sp.) Forty-eight species live in open sea, most common: Atjehella semiplicata, Cushmanidea subjaponica, Hemicytheridea spp., Javanella kendengensis, Neomonoceratina delicata, Parakrithella pseudadonta, etc.)

Zhao, Q. & R.C. Whatley (1997)- Distribution of the ostracod genera *Krithe* and *Parakrithe* in bottom sediments of the East China and Yellow Seas. Marine Micropaleontology 32, 1, p. 195-207.
(Distribution closely linked to water masses)

Zheng, S.Y. (1979)- The Recent foraminifera of the Xisha Islands, Guangdong Province, China, Part II. Studia Marina Sinica 15, p. 101-232. *(In Chinese with English summary)*

Zheng, S.Y. (1980)- The Recent foraminifera of the Zhongsha Islands, Guangdong Province, China, Part I. Studia Marina Sinica 16, p. 143-182. *(In Chinese with English summary)*

Zhou, B. (1995)- Recent ostracode fauna in the Pacific off Southwest Japan. Mem. Faculty Science, Kyoto University, Ser. Geology Mineralogy, 57, 2, p. 21-98.
(online at: http://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/186675/1/mfskugm%20057002_021.pdf)

Zhou, B. & Q. Zhao (1999)- Allochthonous ostracods in the South China Sea and their significance in indicating downslope sediment contamination. Marine Geol. 156, p. 187-195.
(Modern distribution pattern of allochthonous ostracods in South China Sea: limited to continental shelf and slope, and around reef islands, suggesting ostracods have not travelled far from source areas. Turbidites probably principal agent responsible for downslope transport of ostracods)

Zobel, B. (1978)- Deep-water Quaternary Foraminifera from short cores taken between Australia and southeast Indonesia. BMR J. Australian Geol. Geophysics 3, p. 345-349.
(online at: www.ga.gov.au/corporate_data/80976/Jou1978_v3_n4_p345.pdf)
(Twenty short cores from N Scott Plateau (water depths ~3200 m) and S slope of the Java Trench (4950-5790m) taken by R.V. Valdivia. 55 species of benthic foraminifera identified on plateau, less in trench (incl. Eggerela bradyi, Kareriella bradyi, Bulimina spp, Sphaeroidina bulloides, Cibicides wuellerstorfi, Globocassidulina, Gyroidinoides, Melonis pompilioides, Oridorsalis tener, etc.. Only deep-water forms. Planktonic foraminifera belong to tropical associations. Holocene-Pleistocene boundary at ~60 cm in cores, and carbonate solution more marked above than below boundary)

Zong, Y. & B.H. Kamaludin (2004)- Diatom assemblages from two mangrove tidal flats in Peninsular Malaysia. Diatom Research 19, p. 329-344.

X.2. Tertiary

Adams, C.G. (1967)- Tertiary Foraminifera in the Tethyan, American and Indo Pacific Provinces. In: C.G. Adams & D.V. Ager (eds.) Aspects of Tethyan biogeography, Systematics Association, London, Spec. Publ. 7, p. 195-217.
(Tertiary larger foraminifera three major bioprovinces: Americas, Tethys, Indo-Pacific)

Adams, C.G. (1968)- A revision of the foraminiferal genus *Austrotrillina* Parr. Bull. British Museum (Natural History), Geology, 16, p. 71-97.
(Evolutionary changes in Late Oligocene- E Miocene Austrotrillina are of value in stratigraphy)

Adams, C.G. (1970)- A reconsideration of the East Indian Letter classification of the Tertiary. Bull. British Museum (Natural History), Geology, 19, 3, p. 87-137.
(online at: https://ia800700.us.archive.org/0/items/bulletinofbritis19geol/bulletinofbritis19geol.pdf)
(Classic review of Late Paleocene- Recent larger foram zonation, known as East Indian Letter Classification)

Adams, C.G. (1973)- Some Tertiary foraminifera. In: A. Hallam (ed.) Atlas of Palaeobiogeography. Elsevier, Amsterdam, p. 453-468.
(Notes on biogeography of Eocene- M Miocene larger foram genera)

Adams, C.G. (1976)- Larger foraminifera and the Late Cenozoic history of the Mediterranean region. Palaeogeogr. Palaeoclim. Palaeoecology 20, p. 47-66.
(Larger foram faunas similar between Mediterranean and Indo-West Pacific, but different from Americas. From M Miocene onward diverged rapidly)

Adams, C.G. (1981)- Larger foraminifera and the Paleogene/ Neogene boundary. In: Proc. 7th Int.Congress Mediterranean Neogene, Athens 1979, Ann. Geol. Pays Hellen., hors serie, IV, p. 145-151.
(No major changes in larger foram faunas distribution at Oligo-Miocene boundary. In Indonesia- W Pacific first appearance of Miogypsina best marker event)

Adams, C.G. (1983)- Speciation, phylogenesis, tectonism, climate and eustasy: factors in the evolution of Cenozoic larger foraminiferal bioprovinces. In: R.W. Sims et al. (eds.) The emergence of the biosphere, Syst. Assoc. Spec. Vol. 23, Academic Press, London, p. 255-287.
(Review of evolutionary patterns of Cenozoic larger foraminifera (Miogypsina, Cycloclypeus, Lepidocyclina, etc.), related to climate changes and tectonism (Early Miocene disconnection of Mediterranean and Indian Ocean, etc.))

Adams, C.G. (1984)- Neogene larger foraminifera, evolutionary and geological events in the context of datum planes. In: N. Ikebe & R. Tsuchi (eds.) Pacific Neogene datum planes, Contributions to biostratigraphy and chronology, University of Tokyo Press, p. 47-67.
(Thorough discussion of Oligocene- Recent larger foraminifera 'datum planes', with updated range chart)

Adams, C.G. (1987)- On the classification of the Lepidocyclinidae (Foraminiferida) with redescriptions of the unrelated Palaeocene genera *Actinosiphon* and *Orbitosiphon*. Micropaleontology 33, p. 289-317.
(Three subgenera, Lepidocyclina (Lepidocyclina), L. (Eulepidina), and L. (Nephrolepidina), discriminated on nature and arrangement of peri-embryonic chambers. Two groups of species recognized within L. (Lepidocyclina) on basis of equatorial chamber shape)

Adams, C.G. (1989)- Foraminifera as indicators of geological events. Proc. Geologists Assoc. 100, 3, p. 297-311.

Adams C.G. (1992)- Larger foraminifera and the dating of Neogene events. In: R. Tsuchi & J.C. Ingle (eds.) Pacific Neogene, University of Tokyo Press, p. 221-235.

Adams, C.G. & D.J. Belford (1974)- Foraminiferal biostratigraphy of the Oligo-Miocene limestones of Christmas Island (Indian Ocean). Palaeontology 17, p. 475-506.
(Late Oligocene- M Miocene (lower Te- Lower Tf zones) LBF assemblages in ~190m thick limestones capping a truncated basaltic volcanic cone in the Indian Ocean off SW Java. Mention of Eocene limestone, but no details)

Adams, C.G., J. Butterlin & B.K. Samanta (1986)- Larger foraminifera and events at the Eocene-Oligocene boundary in the Indo West Pacific region. In: C. Pomerol & I. Premoli Silva (eds.) Terminal Eocene events, Elsevier, Amsterdam, p. 237-252.
(In most Indo-Pacific localities Eocene terminated by disconformities, with extinction of Discocyclina, Pellatispira, Spiroclypeus vermicularis, etc., as in localities worldwide. Possibly triggered by global sea level fall with climatic deterioration.

Adams, C.G. & P. Frame (1979)- Observations on *Cycloclypeus (Cycloclypeus)* Carpenter and *Cycloclypeus (Katacycloclypeus)* Tan (Foraminifera). Bull. British Museum (Natural History), Geology, 32, 1, p. 3-17.
(Online at: www.archive.org/details/bulletinofbritis32geollond)
(Katacycloclypeus limited to Middle Miocene Lower Tf letter stage. Microspheric forms from Fiji up to 90 mm)

Adams, C.G., A.W. Gentry & P.J. Whybrow (1979)- Dating the terminal Tethyan event. Utrecht Micropal. Bull. 30, p. 273-298.
(Geographic distribution of larger foraminifera shows continuous connection between Mediterranean and Indian Ocean closed by mid-Burdigalian)

Adams, C.G., D.E. Lee & B.R. Rosen (1990)- Conflicting isotopic and biotic evidence for tropical sea-surface temperatures during the Tertiary. Palaeogeogr. Palaeoclim. Palaeoecology 77, p. 289-313.
(Paleotemperatures derived from some isotope studies are too low to account for distribution and diversity of many Tertiary tropical- subtropical taxa)

Adams, C.G., P. Rodda & R.J. Kiteley (1979)- The extinction of the foraminiferal genus *Lepidocyclina* and the Miocene-Pliocene boundary problem in Fiji. Marine Micropaleontology 4, 4, p. 319-339.
(Last surviving species of Lepidocyclina, L. radiata, becomes extinct at N18/N19 boundary, near top Miocene)

Adisaputra, Mimin K. (1987)- Notes on *Cycloclypeus (Katacycloclypeus)* Tan and *Cycloclypeus (Radiocloclypeus)* Tan. J. Riset Geologi Pertambangan (LIPI) 8, 1, p. 25-33.
(Discussion of larger foram Cycloclypeus subgenera and species. Age of Katacycloclypeus is M Miocene (planktonic foram zone N8-N12). Stellate Radiocycloclypeus may be N12 and younger)

Adisaputra, Mimin K. & Hartono (2007)- Phillipsite mineral in deep sea sediment from single core in Roo Rise, Indian Ocean. Indonesian Mining J. 10, 3, p. 39-43.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/612/474)
(Core MD982156 in Roo Rise, Indian Ocean/ Java Trench, S of East Jawa, 30m long in water depth 3884m. Upper part of core abundant planktonic foraminifera, lower part mainly phillipsite-rich sediment (± 40%). Late Miocene or older (Paleocene according to Adisaputra & Kusnida (2010))

Adisaputra, Mimin K., N. Hasjim & A. Djojosumarto (1995)- Sundaland Neogene biostratigraphic events. In: S. Nishimura & R. Tsuchi (eds.) Proc. Oji Seminar on Neogene evolution of Pacific Ocean Gateways, Kyoto, IGCP-355, p. 62-71.

Adisaputra, Mimin K. & M. Hendrizan (2008)- Hiatus pada kala Eosen-Miosen Tengah di Tinggian Roo, Samudra Hindia, berdasarkan biostratigrafi nannoplankton. J. Geologi Kelautan 6, 3, p. 154-166.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/159/149)
('Eocene- Middle Miocene hiatus at the Roo Rise, Indian Ocean S of East Java, based on nannoplankton biostratigraphy'. Late Miocene and Paleocene calcareous nannoplankton from Roo Rise piston core MD982156 from MD III-IMAGES IV Expedition)

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Victoria; Wreck Island 1 well in Queensland; and various localities in New Zealand. Two new subspecies of Lepidocyclina (N): Lepidocyclina (N) howchini praehowchini and Lepidocyclina (N) orakeiensis waikukuensis)

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(62 species of Late Eocene (Asterocyclina, Nummulites, Biplanispira, Pellatispira), Late Oligocene (Eulepidina, Heterostegina borneensis, Borelis, Miogypsinoides, Spiroclypeus), Miocene (Miogypsina, Flosculinella) and Pliocene- Recent (Calcarina, Marginopora, Sorites) larger foraminifera from three Eniwetok Atoll drill holes. Deeper water genus Cycloclypeus rare, suggesting continuous shallow marine facies)

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(Commonly used calcareous nannofossil genus name Discoaster, as first described by Tan Sin Hok (1927), was an informal genus name that lacked a generic description and designation of type species. It combines 3 groups of species of formally described genera Eu-discoaster Tan (star-shaped discosterids; type species Discoaster brouweri Tan), Helio-discoaster Tan (rosette-shaped discoasterids; type species Discoaster barbadiensis Tan and Hemi-discoaster Tan (star-shaped discoasterids with arms welded together; type species Discoaster molengraaffii Tan). This is a proposal to legitimize the common use of Discoaster)

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Jacques, F.M.B., G. Shi, T. Su & Z. Zhou (2015)-A tropical forest of the middle Miocene of Fujian (SE China) reveals Sino-Indian biogeographic affinities. Review Palaeobotany Palynology 216, p. 76-91.
(M Miocene Fotan flora of S Fujian, just above basalt with 14.8 ± 0.6 Ma radiometric age, considered to represent tropical rainforest based on occurrence of Dipterocarpaceae and other tropical-subtropical elements, Closer affinities to Indian Neogene than other Chinese paleofloras. During M Miocene Climatic Optimum tropical and subtropical vegetation moved N to S Fujian)

Jeannet, A. & R. Martin (1937)- Ueber Neozoische Echinoidea aus dem Niederlandisch-Indischen Archipel. Leidsche Geol. Mededelingen 8, 2, p. 215-308.
(online at: www.repository.naturalis.nl/document/549527)
('On Neozoic echinoids from the Netherlands Indies Archipelago'. Mainly paleontological descriptions of Neogene echinoid fossils from Java, Madura, Kalimantan, Timor, Ceram, N Sumatra, etc., from various European University collections)

Johnson, J.H. & B.J. Ferris (1949)- Tertiary coralline algae from the Dutch East Indies. J. Paleontology 23, 2, p. 193-198.
(Tertiary coralline algae, including five new species (Lithothamnium borneoense. L. nanosporum, Mesophyllum javaense, Lithophyllum parricellum, Corallina delicatula) from Eocene and Miocene of E Kalimantan and W Java, collected by LeRoy. Most common species is Lithoporella melobesioides)

Johnson, K., B.W. Hayward & A. Holbourn (2011)- Impact of the Middle Miocene climate transition on elongate, cylindrical foraminifera in the subtropical Pacific. Marine Micropaleontology 78, p. 50-64.
(58 species of elongate, cylindrical benthic foraminifera of 'Extinction Group' (Nodosariidae, Stilostomellidae, Pleurostomella; extinct during M Pleistocene Climate Transition) in ODP Sites 1146, (S China Sea) and 1237 (SE Pacific) show no major changes during major cooling in M Miocene (14.0-13.7 Ma))

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(online at: https://www.j-micropalaeontol.net/25/175/2006/jm-25-175-2006.pdf)
(Borelis melo melo ranges throughout Miocene, B. melo curdica restricted to late E- M Miocene. Both sub-species occur only in Indo-Pacific Province in late E Miocene (Burdigalian), but also present in Mediterranean province in latest Early- early M Miocene (M Burdigalian- Langhian))

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(Descriptions of foram content of Tertiary limestones, mainly from Flying Fish Cove. Larger foraminifera include Lepidocyclina spp. and Discocyclina)

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(Review of Neogene stratigraphy and foram datum levels of NW Java, South Central Java (Progo Mts.). NE Java (Cepu area) and East Kalimantan (Kutai Basin; zonation based on rotalid benthic foraminifera))

Kanno, S. (1986)- Revision of the genus *Vicarya* (Gastropoda) from the Indo-Pacific region. Bull. Joetsu University of Education, Niigata, 5, 3, p. 31-57.
(online at: https://core.ac.uk/download/pdf/159479401.pdf)
(Revision of marine gastropod Vicarya from Indo-Pacific region. Six species in Miocene (incl. Vicarya formosa Oostingh 1935 from Bojongmanik Fm of W Java), three in Eocene. Specimens described from Eocene of Nanggulan, C Java, as Vicarya jogjacartensis by Martin 1914 too poorly preserved for identification)

Kase, T., Y. Kurihara, Y.M. Aguilar, H. Pandita, A.G.S. Fernando & H. Hayashi (2015)- A new cerithioidean genus *Megistocerithium* (Gastropoda; Mollusca) from the Miocene of Southeast Asia: a possible relict of Mesozoic ñEustomatidaeò. Paleontological Research 19, 4, p. 299-311.
(New, large cerithiform gastropod genus/ species Megistocerithium magoi described, based on specimens from M Miocene Nyalindung Fm of W Java and Philippines. Intertidal sandy mudflat dweller (mangove grazer?). M. magoi possibly relict of Mesozoic Eustomatidae)

Kase, T., Y. Kurihara, H. Hayashi, H. Pandita & Y.M. Aguilar (2008)- Age refinement of the Sonde molluscan fauna, East Java, Indonesia. Mem. National Museum Natural Sci., Tokyo 45, p. 127-138.
(Klitik Mb of U Kalibeng Fm along Solo River in Sonde area, E Java, Indonesia contains diverse shallow marine molluscs that have been standard of Neogene mollusc sequences in Indonesia, and were vaguely dated as Late Pliocene. Planktonic foraminifera in Klitik Mb along Solo River at Bangun, 2 km W of Sonde, suggest age between 3.95 Ma- 3.58 Ma, ~mid Pliocene (NB: unusual mix of shallow marine molluscs and siltstones with abundant deeper planktonic forams, which may be reworked from older Kalibeng Fm. Klitik Beds younger than concluded here?; JTvG))

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(Includes material of Vicarya verneuili, from M Miocene Nyalindung Fm, Ciangsana, SW Java)

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(Suggest closure of Indonesian Seaway around 13-12 Ma)

Kennett, J.P. & M.S. Srinivasan (1983)- Neogene planktonic foraminifera, a phylogenetic atlas. Hutchinson Ross Publ. Co., Stroudsburg, p. 1-265.

Kiel, S. (2013)- Lucinid bivalves from ancient methane seeps. J. Molluscan Studies 79, 4, p. 346-363.
(online at: https://academic.oup.com/mollus/article/79/4/346/1014058/Lucinid-bivalves-from-ancient-methane-seeps)
(Lucina-type bivalves reported from late Jurassic- late Miocene methane-seep deposits worldwide. Elliptiolucina hetzeli (Martin 1933), associated with asphalt seeps in Late Miocene sediments of Buton, Indonesia (Martin, 1933, Beets 1942) and E Pliocene seep deposits of Leyte, Philippines (Kase et al. 2007, Majima et al. 2007))

Kingma, J.T. (1948)- Contributions to the knowledge of the Young-Caenozoic Ostracoda from the Malayan region. Doct. Thesis University Utrecht, Kemink, p. 1-119.
(online at: http://dspace.library.uu.nl/handle/1874/236218)
(Late Neogene ostracods from (1) outcrop samples in Aceh (N Sumatra), (2) S Kendeng zone (E Java; 31 species), (3) Miocene-Pliocene of Bojonegoro 1 well (E Java; 41 species), and (4) Recent forms from Snellius Expedition samples in E Java Sea (19 species). Six new genera (Hemicytheridea, Atjehella, Paijenborchella, Tanella, Javanella), 94 species of which 40 new. Includes description of Caudites javana Kingma, a widespread species in Indo Pacific. Limited stratigraphy/ stratigraphic results)

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('Name changes of some Tertiary foraminifera from Netherlands East Indies'. Brief note about name changes for species described by Koch (1926): Globigerina aspera= G. binaiensis, Globigerina bulloides var. tripartita= G. tripartita, etc.)

Kooyman, R.M., R.J. Morley, D.M. Crayn, E.M. Joyce, M. Rossetto, J.W.F. Slik, J.S. Strijk, Tao Su et al. (2019)- Origins and assembly of Malesian rainforests. Ann. Rev. Ecology Evolution Systematics 50, 119-143.
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('The Tertiary woods of SE Asia (with exclusion of Dipterocarpaceae', Part 1. Includes wood from Sumatra collected by Posthumus, incl. Dammaroxylon kaurioides n.sp., possibly of E Permian age (Booi et al. 2014))

Kramer, K. (1974)- Die tertiaeren Holzer Sudost-Asiens (unter Ausschluss der Dipterocarpaceae), 2 Teil. Palaeontographica. Abt. B, Palaeophytologie, 145, p. 1-150.
('The Tertiary woods of Southeast Asia (with exclusion of Dipterocarpaceae', Part 2)

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('The state of knowledge of the Tertiary flora of the Netherlands Indies'. Review of known fossil plant occurrences on Java, Borneo, Sumatra)

Krijnen, W.F. (1931)- Het genus *Spiroclypeus* in het Indo-Pacifische gebied. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 9, 2, p. 77-112.
('The genus Spiroclypeus in the Indo-Pacific region')

Krijnen, W.F. (1931)- Annotations to the map of the more important fossil localities in the Netherlands East Indies. Leidsche Geol. Mededelingen 5 (K. Martin Memorial Volume), p. 509-551.
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(Map and chronological listing of 330 significant Paleozoic- Recent fossil localities in Indonesia)

Kumar, P. & K.S. Soodan (1976)- Early Palaeocene planktonic foraminifera from Baratang Formation, Middle Andaman Island. Proc. 6th Indian Colloq. Micropal. Stratigraphy, Hyderabad, p. 145-150.
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Kupper, H. (1942)- Note on a new *Cycloclypeus* from Australia. De Ingenieur in Nederlandsch-Indie (IV), 9, 1, p. 1-4.
(Commentary on Crespin (1940) paper on a Cycloclypeus population in Victoria, SE Australia. New species C. victoriensis is probably same as C. indopacificus Tan))

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(online at: http://pubs.usgs.gov/pp/0531/report.pdf)

Ladd, H. (1970)- Eocene molluscs from Eua, Tonga. U.S. Geol. Survey (USGS) Prof. Paper 640-C, p. 1-12.
(online at: http://pubs.usgs.gov/pp/0640c/report.pdf)
(Many of the W Pacific islands have Late Eocene shallow marine limestones. On Eua in Tonga Group Late Eocene limestone overlies plutonic- volcanic rocks. Mainly small gastropods, probably slightly deeper marine fauna (see also Storrs Cole (1970) for larger and Todd (1970) for smaller associated foraminifera))

Ladd, H. (1972)- Cenozoic fossil molluscs from Western Pacific islands; gastropods (Turritellidae through Strombidae). U.S. Geol. Survey (USGS) Prof. Paper 532, p. 1-79 + 20 plates.
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(170 species of Eocene- Pliocene gastropods from W Pacific islands. Most molluscs appear reef-associated; many are from lagoonal beds. Molluscs are of Indo-Pacific aspect, with closer ties to Indonesia and N Australia than to Ryukyus and Japan)

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(Indo-Pacific gastropods, mainly from Late Miocene-Pliocene of Fiji, Eniwetok, Guam, Palau, etc.)

Ladd, H. (1982)- Cenozoic fossil molluscs from Western Pacific islands; gastropods (Eulimidae and Volutidae through Terebridae). U.S. Geol. Survey (USGS) Prof. Paper 1171, p. 1-100 + 41 plates.
(online at: http://pubs.usgs.gov/pp/1171/report.pdf)

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('Contribution to the knowledge of the Tertiary echinoids of the Sonde Islands (=Indonesia)'. On of very few publications on Miocene- Recent regular echinoderms from Indonesia (Java, Borneo, Sumbawa, Timor), based on material collected by Tobler, Leupold, Gerth, Weber, etc. Many new species (manuscript initially submitted in 1934 for publication in 'Wetenschappelijke Mededeelingen' Bandung, was refused due to lack of finances))

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(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/1997/7641.pdf)
(Tertiary palynology zonation of Pearl River Mouth basin, northern South China Sea. Warmest paleoclimate in M Miocene (common tropical mangroves of Florschuetzia cf. levipoli- Dacrydiumites florinii assemblage), coldest in Late Oligocene (Alnipollenites- Pinuspoleenites assemblage). Tertiary biozonation similarities with SE Asia, but calibration of Oligo-Miocene Florschuetzia zones younger than Morley 1977)

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('Revision of Eocene pollen zonation'. Palynology study of Nanggulan Fm in C Java shows seven Eocene biozones within former Proxapertites operculatus zone)

Lelono, E.B. (2001)- Climatic effect to the distribution of the Late Paleogene indicator of pollen *Meyeripollis naharkotensis* in Western Indonesia. Lemigas Scientific Contr. 24, 2, p. 12-16.

Lelono, E.B. (2005)- Penelitian palinologi pada sedimen Paleogen di kawasan Indonesia bagian Barat. Lembaran Publikasi Minyak Gas Bumi, Lemigas 39, 2, p. 15-23.
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Lelono, E.B. (2007)- Zonasi polen Tersier Indonesia Timur. Lembaran Publikasi Lemigas 41, 1, p. 1-8.
('Tertiary pollen zonation of East Indonesia'. Differences of pollen assemblages between Papua (Australian plate) and Sulawesi- Java (Sundaland/Asian plate) necessitate separate palynozonation for E Indonesia: (1) 1. Spinizonocolpites baculatus (Paleo-Eocene). (2) Metroxyllon salamonense (M Miocene), (3) Foveosporites spp; (4) Nothofagidites emarcida (Late Miocene; 3 sub-zones), (5) (6) Malvacipollis diversus (Pliocene), (7) 'Garcinia cuspidata type' (Late Pliocene) (8) Proteacidites spp. (Pleistocene))

Lelono, E.B. (2009)- The dispersal route of the Australian elements of *Dacrydium* and *Casuarina* from its origin to SE Asia. Lemigas Scientific Contr. 32, 3, p. 157-161.
(Australian pollen Dacrydium may have dispersed into SE Asia prior to E Oligocene via Ninety East Ridge and Indian plate, and subsequent distribution across Sunda region and Indochina was limited by paleoclimate, explaining why it is present in some areas of Sunda region, but not others. Dispersal of Casuarina remains unresolved; migration via India unlikely as it is not known from Indian subcontinent)

Lelono, E.B. (2012)- The migration pathway of some selected Australian palynomorphs from their origin to SE Asia. Lemigas Scientific Contr. Oil Gas 35, 2, p. 49-56.
(online at: www.lemigas.esdm.go.id/)
(Proposes alternative dispersal route of Australian taxa Dacrydium and Casuarina to SE Asia. Previously thought to have migrated to Sunda region after collision of Australian and Asian plates, or arrival with Gondwanan fragment in Early Oligocene. Records of Dacrydium in Eocene of Ninety East Ridge and Indian subcontinent may support alternative dispersal route into SE Asia via Indian plate)

Lelono, E.B. (2017)- Pollen records from the Oligocene of Western Indonesia as the evidences of climate changes. Lemigas Scientific Contributions Oil and Gas 40, 3, p. 107-115.

(online at: http://journal.lemigas.esdm.go.id/ojs/index.php/SCOG/article/view/46/pdf)
(Oligocene of SE Asia characterized by dry/ seasonal climate. Samples from offshore wells in Java, W Natuna and C Sumatera. Abundant fresh water algae of Pediastrum and Bosedinia in E Oligocene indicates presence of lacustrine sediments; dry/ seasonal climate marked by rich grass pollen Monoporites annulatus and absent or rare rain forest elements. Late Oligocene with common brackish elements indicate shifting paleoenvironment into transition-shallow marine. More humid climate evidenced by high Dacrydium and Casuarinaand other rain forest palynomorphs. Wettest climate in Java region)

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(online at: www.naturalis.nl/sites/naturalis.en/contents/i000884/the%20gerth%20catalogue.pdf)
(Listings and illustrations of type material of 229 taxa of Tertiary and Permian corals in Leiden Natural History Museum, mainly from Martin, Gerth and Umbgrove collections)

Leloux, J. & F.P. Wesselingh (2009)- Types of Cenozoic Mollusca from Java in the Martin collection of Naturalis. Nat. Natuurhist. Museum Techn. Bull. 11, p. 1-765.
(online at: www.repository.naturalis.nl/document/143887)
(Updated, expanded and illustrated version of Van den Hoek Ostende et al. (2002) of type specimens of Tertiary bivalves, gastropods and scaphopods from Java in K. Martin collection at Naturalis Museum, Leiden. With listing of fossil localities and 289 color plates)

Leriche, M.(1954)- Les faunes ichthyologiques marines du Neogene des Indes Orientales. Mem. Soc. Paleontologique Suisse 70, p. 1-21.

LeRoy, L.W. (1940)- The ostracode genus *Cytherelloidea* from the Late Tertiary of the Netherlands East Indies. Natuurkundig Tijdschrift Nederlandsch-Indie 100, p. 179-196.
(Fourteen new species of ostracode Cytherelloidea from Indonesia, incl. 3 from Late Miocene of NE Kalimantan, 4 from Mio-Pliocene from Bantam, W Java and 7 species from Miocene of C Sumatra)

LeRoy, L.W. (1941)- The ostracode genus *Cytherelloidea* from the Tertiary of the Netherlands East Indies. J. Paleontology 15, 6, p. 612-621.
(Same paper as above: 14 new species of ostracode Cytherelloidea from Indonesia, incl. 3 from Late Miocene of NE Kalimantan, 4 from Mio-Pliocene from Bantam, W Java and 7 species from Miocene of C Sumatra)

LeRoy, L.W. (1945)- A contribution to ostracodal ontogeny. J. Paleontology 19, p. 81-86.
(Includes discussion and illustrations of growth stages of Cythereis holmani from Telisa Fm of C Sumatra)

LeRoy, L.W. (1948)- The foraminifer *Orbulina universa* d'Orbigny, a suggested middle Tertiary time indicator. J. Paleontology 22, 4, p. 500-508.
(Lowest stratigraphic occurrence of pelagic foraminifer Orbulina universa proposed to bea good mid-Miocene markerhorizon. With discussion of stratigraphy and faunas of Kassikan section near Aliantan, Sultanate of Siak, C Sumatra, where this event occurs near top of Telisa Fm)

LeRoy, L.W. (1964)- Smaller foraminifera from the Late Tertiary of Southern Okinawa. U.S. Geol. Survey (USGS) Prof. Paper 454-F, p. 1-58.
(online at: http://pubs.usgs.gov/pp/0454f/report.pdf)
(Good descriptions of typical Indo-Pacific shallow and shelfal marine smaller benthic foraminifera))

Less, G. & E. Ozcan (2008)- The Late Eocene evolution of nummulitid foraminifer *Spiroclypeus* in the Western Tethys. Acta Palaeontologica Polonica 53, p. 303-316.

Leupold, W. & I.M. van der Vlerk (1931)- The Tertiary. In: B.G. Escher et al. (eds.) Stratigraphie van Nederlandsch Oost-Indie, Feestbundel K. Martin, Leidsche Geol. Mededelingen 5, p. 611-648.

(Overview of Tertiary stratigraphy across 'Netherlands East Indies' in K. Martin memorial volume. With distribution chart of larger foraminifera and 'Letter Classification' zonation)

Lignac-Grutterink, L.H. (1943)- Some Tertiary Corallinaceae of the Malaysian Archipelago. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 13, p. 283-297.
(Brief descriptions of Tertiary calcareous algae from Borneo, Java, etc., in Leiden collection. No location/ stratigraphy info)

Lindley, I.D. (2004)- Some living and fossil echinoderms from the Bismarck Archipelago, Papua New Guinea, and two new echinoid species. Proc. Linnean Soc. New South Wales 125, p. 115-139.
(online at: https://www.biodiversitylibrary.org/item/132499page/120/mode/1up)

Lloyd, A.R. (1974)- Time measurement of geological time and precision in correlation. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 1, Singapore, p. 31-43.
(On stratigraphic correlations, with examples from SE Asia)

Lloyd, A.R. (1975)- Paleontology and its role on oil exploration. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 2, Singapore, p. 152-159.
(Brief summary of importance of paleontology in oil exploration)

Ludbrook, N.H. (1965)- Tertiary fossils from Christmas Island (Indian Ocean). J. Geol. Soc. Australia, 12, p. 285-294.
(Christmas Island in Indian Ocean S of W Java is Tertiary atoll formed on volcanic cone rising more >13,000' from ocean floor. Algal limestones in outcrop of Late Eocene (Tb) and Early Miocene (Te-Tf) age. Upper Eocene limestone with Discocyclina, Nummulites, Heterostegina. Lower Miocene limestone lower part with Lepidocyclina (Eulepidina), followed by Miogypsinoides dehaarti, then Flosculinella bontangensis. No rocks younger than Burdigalian identified other than young fringing reef)

Lunt, P. (2003)- Biogeography of some Eocene larger foraminifera, and their application in distinguishing geological plates. Palaeontologia Electronica 6, 1, p. 1-22.
(online at: http://palaeoelectronica.org/paleo/2003_2/geo/issue2_03.htm)
(Eocene larger foram assemblages can distinguish between carbonates from Asian-Pacific-Mediterranean (Pellatispira-Assilina) or Australian- New Guinea (Lacazinella) realms)

Lunt, P. (2013)- Foraminiferal micropalaeontology in SE Asia In: A.J. Bowden et al. (eds.) Landmarks in foraminiferal micropalaeontology: history and development, The Micropalaeontological Society, Spec. Publ. 6, Geol. Soc. London, p. 193-206.
(History of foraminiferal micropaleontology in SE Asia (mainly Indonesia) since late 1800's)

Lunt, P. & T. Allan (2004)- A history and application of larger foraminifera in Indonesian biostratigraphy, calibrated to isotopic dating. Geol. Res. Dev. Centre Museum, Bandung, 2004 Workshop on Micropaleontology, p. 1-109.
(online at: http://w.nummulites.net/PC_carbonates/Books/Lunt_Allan_2004.pdf)
(Modern overview of Indonesian Tertiary larger foraminifera and zonations)

Lunt, P. & W. Renema (2014)- On the *Heterostegina- Tansinhokella- Spiroclypeus* lineage(s) in SE Asia. Berita Sedimentologi 30, p. 6-31.
(online at: www.iagi.or.id/fosi)
(Detailed discussion of larger foraminifera evolutionary series from Heterostegina (Vlerkina) through Tansinhokella to Spiroclypeus, which can be observed twice in fossil record: (1) in Late Eocene and in mid-Oligocene- E Miocene. Morphologically no reliable way to distinguish Late Eocene and later Oligocene tests. Second evolutionary development of Tansinhokella and Spiroclypeus was at same time in three geographically separate areas. Tansinhokella important for biostratigraphic subdivision of Letter Stage Te)

MacGillavry, H.J. (1962)- Lineages in the genus *Cycloclypeus* Carpenter. Proc. Kon. Nederl. Akademie Wetenschappen B65, 5, p. 429-458.
(Eight Eocene- Recent Cycloclypeus lineages distinguished)

MacGillavry, H.J. (1978)- Foraminifera and parallel evolution- how or why? Geologie en Mijnbouw 57, 3, p. 385-394.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0UE1PRmVLSE1GdHM/view)
(On evolutionary trends in larger foraminifera, by former Stanvac micropaleontologist. With appendix B and C summarizing larger foraminifera (Cycloclypeus, miogypsinids) from Indonesia and stratigraphy near Baturaja, S Sumatra)

Madon, M.B., R.B.A. Karim & R.W.H. Fatt (1999)- Tertiary stratigraphy and correlation schemes. In: Petronas (ed.) The Petroleum Geology and Resources of Malaysia. Petronas, Kuala Lumpur, p. 113-137.
(Review of biozonations and stratigraphic nomenclature of Malay Basin, Penyu Basin, NW Borneo, Sabah)

Malz, H. (1981)- *Atjehella jacobi* n.sp., eine pliozane Ostracoden-Art von Java. Senckenbergiana Lethaea 62, p. 167-171.
(Atjehella jacobi n.sp., a Pliocene ostracod species from Java')

Mao, Limi & Swee Yeok Foong (2013)- Tracing ancestral biogeography of *Sonneratia* based on fossil pollen and their probable modern analogues. Palaeoworld 22, p. 133-143.
(Review of biogeography of tropical mangrove pollen Florschuetzia, which is ancestral to modern Sonneratia. Florschuetzia documented from Late Eocene- M Miocene in paleotropics around Tethyan region. Migrated from center of origin in SE Asia probably during E Eocene, and radiated and expanded to China, Japan, Australia and E Africa. Until warm early M Miocene (Langhian) Sonneratia had largest geographical range)

Martin, K. (1924)- Eenige opmerkingen over ouderdomsbepalingen van het Indische Tertiair. De Mijningenieur 5, 2, p. 15-19.
('Some remarks on the age determinations of the Indies Tertiary'. In past ages of rocks often assumed from lithologic similarities to other known formations, but paleontologic studies often proved them to be different (quotes examples from Timor, Nanggulan, etc.). Current problem with interpretation of Tertiary faunas of Indonesia is lack of similarities with European faunas and no clear index fossils identified yet)

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(Calcification of originally aragonitic skeletons of cheilostome bryozoans Reussirella and Reptadeonella in muddy reefs from Miocene of E Kalimantan)

Matsumaru, K. (1974)- The transition of the larger foraminiferal assemblages in the Western Pacific Ocean- especially from the Tertiary period. J. of Geography (Chigaku Zasshi), Tokyo, 83, 5, p. 281-301.
(In Japanese. Review of stratigraphic distribution of larger foraminifera in localities across SE Asia- W Pacific, the Letter zonation and its calibration to planktonic foram zones)

Matsumaru, K. (1980)- Cenozoic larger foraminiferal assemblages of Japan, Part 1. A comparison with Southeast Asia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 21, p. 211-224.
(Review of Eocene- Recent larger foram occurrences and zonation in Japan and correlation with Indonesian letter zonation. Three abundance peaks: (1) M-L Eocene, (2) Late Oligocene; (3) latest E Miocene-M Miocene)

Matsumaru, K. (2011)- A new definition of the Letter Stages in the Philippine Archipelago. Stratigraphy 8, 4, p. 237-252.

(M Paleocene- Recent Letter Stages for Philippines re-defined in terms of 17 larger foram assemblage zones)

Matsumaru, K. (2012)- Miogypsinid foraminiferal biostratigraphy from the Oligocene to Miocene sedimentary rocks in the Tethys Region. In: I.A. Dar (ed.) Earth Sciences, InTech Open Science, 25, p. 619-648.
(online at: http://cdn.intechopen.com/pdfs/27609/..)
(Good review of late Oligocene- M Miocene miogypsinid larger foram evolution and biostratigraphy

Matsumaru, K. & K. Kimura (2012)- Larger foraminifera from the Eocene Shimizu and Miocene Misaki Formations in Tosa Shimizu City, Kochi Prefecture, Japan. Trans. Proc. Palaeontological Soc. Japan 156, p. 255-269.
(online at: www.palaeo-soc-japan.jp/download/TPPSJ/TPPSJ_NS156.pdf)
(Larger foraminifers from Eocene Shimizu Fm (Asterocyclina, Orbitoclypeus. Discocyclina) and Miocene Misaki Fm (Nephrolepidina) in Tosa Shimizu City, Kochi Prefecture, Shikoku, Japan)

McGowran, B. (1986)- Cainozoic oceanic and climatic events: the Indo-Pacific foraminiferal biostratigraphic record. Palaeogeogr. Palaeoclim. Palaeoecology 55, p. 247-265.
(Overall Cenozoic climatic deterioration reversed in Eocene and in Miocene by short-lived, far-reaching, extratropical excursions by tropical-type foraminifera. Widespread oceanic hiatuses appear to correlate with episodes of global warming and transgression)

McGowran, B. (2005)- Biostratigraphy: microfossils and geological time. Cambridge University Press, 459p.

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(Review of M. Glaessner contributions to foraminiferal micropaleontology, including Cenozoic larger foraminifera of Papua New Guinea and biostratigraphic correlations in the Indo-Pacific region)

McGowran, B. & Q. Li (2000)- Evolutionary palaeoecology of Cainozoic Foraminifera: Tethys, Indo-Pacific, Southern Australia. Historical Biol. 15, p. 3-27.
(Tertiary larger foram extinctions and migrations into higher latitudes tied to major cooling/warming events)

Mohler, W.A. (1946)- Handleiding voor het determineeren van de groot foraminiferen-genera van Nederlandsch Oost Indie. Unknown publisher, p. 1-46.
('Manual for the identification of larger foram genera of Indonesia'. Small atlas of Eocene- Recent key larger foraminifera genera of Indonesia)

Morgenroth, P., A.T. Rahardjo & K.A. Maryunani (2000)- Dinoflagellate cysts- an alternative stratigraphic tool in marine Tertiary strata in Indonesia. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 99-108.
(Initial studies of dinoflagellates from Eocene- Miocene outcrops across Java)

Morley, R.J. (1977)- Palynology of Tertiary and Quaternary sediments in Southeast Asia. Proc. 6th Ann. Conv. Indon. Petroleum Assoc. 1, p. 255-276.
(Up to eight palynozones in Oligocene- Quaternary, mainly based on evolution of Florschuetzia species of mangrove pollen, building on Germeraad et al. 1968 work)

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(On four pollen-morphological evolutionary trends and Eocene-Pliocene fossil record of genus Alangium a flowering plant, in SE Asia)

Morley, R.J. (1991)- Tertiary stratigraphic palynology in Southeast Asia: current status and new directions. Bull. Geol. Soc. Malaysia 28, p. 1-36.

(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1991001.pdf)
(Palynology is only biostratigraphic tool for correlation of non-marine sediments and correlation across facies. Age-restricted palynomorphs are relatively few, so in Tertiary palynology mainly useful in correlation rather than dating. Higher resolution requires quantitative palynological zonation schemes)

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(On palynomorph distribution patterns in sequences/ systems tracts)

Morley, R.J. (1998)- Palynological evidence for Tertiary plant dispersals in the SE Asian region in relation to plate tectonics and climate. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 211-234.
(online at; http://searg.rhul.ac.uk/publications/books/biogeography/biogeog_pdfs/Morley.pdf)
(Tertiary plant dispersals reflect tectonic and climatic evolution of SE Asia. Sunda Eocene flora stretched as far East as S arm of Sulawesi, and after Makassar Straits opening, part of this flora became stranded E of Wallace Line. Small number of plant taxa dispersed W across Wallace line since Miocene, at 17 Ma, 14, 9.5, 3.5 and ~1 Ma. Much of Sunda region moisture deficient in Oligocene- earliest Miocene, ever-wet rainforest becoming widespread at ~20 Ma, after which they repeatedly expanded and contracted. Greatest extent of rainforest at beginning of M Miocene. Quaternary 'glacial' periods with low sea levels and more seasonal climates, leading to more pine forests and savannah. New Guinea mountains formed in M Miocene allowing dispersal of Gondwana taxa from S. Some, like Podocarpus imbricatus, Phyllocladus subsequently dispersed into SE Asia)

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(Incl. SE Asia chapter describing Cenozoic vegetation response to plate tectonic evolution, as reflected in Indonesia palynology records. In M Eocene SW Sulawesi has Laurasian flora, and was attached to E Kalimantan. Makassar Straits became floral-faunal migration barrier in Late Eocene. First Australian- New Guinea floral elements (Casuarina, etc.) start appearing in W Java Sea around 22-21 Ma)

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Morley, R.J. (2003)- Interplate dispersal paths for megathermal angiosperms. In: Perspectives in plant ecology, evolution and systematics 6, 1-2, Urban & Fischer Verlag, p. 5-20.
(Review of dispersal of megathermal angiosperms between tectonic plates in Cretaceous and Tertiary. Early Cretaceous radiation of angiosperms unrelated to formation of Tethys. Nine dispersal routes, some tied to Late Cretaceous- E Tertiary Gondwana break-up and routes formed since M Eocene phases of plate collision)

Morley, R.J. (2007)- Cretaceous and Tertiary climate change and the past distribution of megathermal rainforests. In: M.B. Bush & J. R. Flenley (eds.) Tropical rainforest responses to climatic change, Chapter 1, Springer-Praxis, p. 1-31.
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Morley, R.J. (2011)- Dispersal and paleoecology of tropical Podocarps. Smithsonian Contr. Botany 95, p. 21-41.
(online at: http://smithsonianrex.si.edu/index.php/scb/article/download/175/131)
(Tropical Podocarpaceae family appeared in Triassic of Gondwana and essentially remained southern family. Podocarpus s.l. dispersed into SE Asia in Late Eocene, explained by dispersal from India and possibly multiple dispersal events from Australia. Dacrydium reached SE Asia in E Oligocene and expanded range to Japan during M Miocene climatic optimum. Dacrycarpus and Phyllocladus dispersed into New Guinea as island

emerged in Late Miocene, then island hopped to Borneo in M Pliocene. Dacrycarpus reached Sumatra and Malay Peninsula in Pleistocene)

Morley, R.J. (2012)- A review of the Cenozoic palaeoclimate history of Southeast Asia. In: D. J. Gower et al. (eds.) Biotic evolution and environmental change in Southeast Asia, The Systematics Association, Cambridge University Press, p. 79-114.
(Summary of Cenozoic climatic and environmental history of Sunda region, from Sulawesi to S Vietnam, based on palynological record, occurrence of coals (formed during periods of everwet climate) and paleosols)

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(Summary of palynology work in Java (Eocene of Nanggulan and Bayah), Sumatra (E Oligocene Pematang Fm, Late Oligocene Talang Akar Fm, E Miocene Gumai Fm, M Miocene Air Benakat Fm)

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(online at: www.jlimnol.it/index.php/jlimnol/article/view/704)
(On development of widespread rift lake systems in Oligocene of SE Asia and their eventual demise following marine transgression. Pollen and spores content illustrate variety of fresh and brackish water swamp communities around margins)

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Muller, J. (1978)- New observations on pollen morphology and fossil distribution of the genus *Sonneratia* (Sonneratiaceae). Review Palaeobotany Palynology 26, p. 277-300.
(Study of mangrove pollen Sonneratia, and fossil representatives Florschuetzia. May have originated in Eocene in Tethys area, but earliest reliable occurrence (Florschuetzia trilobata) from E Miocene in Sunda area)

Murgese, D.S. & P. De Deckker (2005)- The distribution of deep-sea benthic foraminifera in core tops from the eastern Indian Ocean. Marine Micropaleontology 56, p. 25-49.
(57 core tops between 700- 4335m from E Indian Ocean between Australia and Indonesia. Seven key-species useful for environments. Two species groups: (1) Oridorsalis tener umbonatus, Epistominella exigua and Pyrgo murrhina (cold, well-oxygenated, low carbon flux to sea floor) and (2) Nummoloculina irregularis and Cibicidoides pseudoungerianus (upper-bathyal). Uvigerina proboscidea mainly at low latitudes, with high carbon flux due to higher primary productivity at sea surface, and low oxygen levels due to organic matter oxidation and presence of oxygen-depleted Indonesian Intermediate Water and N Indian Intermediate Water)

Nishida, S. (1987)- Calcareous nannoplankton biostratigraphy in the Sunda Arc. Comm. Co-Ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Techn. Bull. 19, p. 69-72.

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(Collection of papers on Miocene larger benthic foraminifera from Kutai Basin and Taballar Lst from Mangkalihat Peninsula (E Kalimantan), Bulu Fm (C Java))

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(Paleoenvironmental models for distribution of Miocene larger foraminifera, based on cluster analysis of assemblages from E-M Miocene mixed carbonate-clastic series in Kutai Basin, E Kalimantan, and Serravallian Bulu Fm of C Java)

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(Eocene limestones with Discocyclina, Miocene limestones with Lepidocyclina, Miogypsina, Spiroclypeus)

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(Biometrical study of Miocene Cycloclypeus from Van der Vlerk collection from NE Java, Madura and Larat)

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(Comparison of two stellate Lepidocyclina species from E-M Miocene of Java, Madura and Borneo)

O'Herne, L. & I.M. van der Vlerk (1971)- Geological age determinations on a biometrical basis (comparison of eight parameters). Boll. Soc. Palaeont. Italiana 10, 1, p. 3-18.

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(Very general paper on use of micropaleontology since 1930 by BPM/ Shell in S Sumatra. Discussion of biofacies versus lithostratigraphy and time. No details on faunas, stratigraphy, etc.)

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(Discussion of molluscs as index fossils for Neogene. Gastropod Vicarya callosa is M Miocene (Tf2-3) index species. No illustrations, range charts, etc. Very few of Neogene Java species known from elsewhere (unlike Eocene species; JTvG))

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('The use of corals in Tertiary and Quaternary stratigraphy of Indonesia'. Elegant review with listings of all Eocene- Pliocene fossil coral faunas described from Indonesia. Percentage of living coral species increases from 0% in Eocene-Oligocene, 6-9% in Early Miocene, 15-30% in M Miocene, 30-60% in Late Miocene-Pliocene and ~80% in Pleistocene. With range charts)

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(New high resolution Neogene-Quaternary nannoplankton zonation for Indonesia, mostly based on material from NE Java, NW Java, Sumatra, Kutei, S Sulawesi, Salawati, Bintuni and Waipoga-Waropen Basins. The 21 standard zones of Martini (1971) can be subdivided into 58 subzones)

Parker, F.L. (1967)- Late Tertiary biostratigraphy (planktonic foraminifera) of tropical Indo-Pacific deep-sea cores. Bull. American Paleontology. 52, 235, p. 115-208.
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(Brief review of use of nannofossils in Cenozoic of SE Asia)

Prins B. (1971)- Speculations on relations, evolution, and stratigraphic distribution of discoasters. In: A. Farinacci (ed.) Proc. 2nd Planktonic Conference, Roma 1970, Ediz. Tecnoscienza, 2, p. 1017-1031.
(Discussion of legitimacy of calcareous nannofossil genus Discoaster Tan Sin Hok 1927)

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(Study of Miogypsinoides- Miogypsina evolution in India, highly applicable to Indonesian faunas)

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(Aragonitic shells of Burdigalian and Tortonian molluscs from C Java and E Kalimantan analyzed for δ18O and δ13C ratios. Depleted δ18O and δ13C ratios in brackish water samples. Also chemosymbiotic species show depleted δ13C ratios. Seagrass communities yield comparatively enriched δ13C ratios. Stable isotope ratios may provide additional evidence for distinguishing paleoenvironments)

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Renema. W. (2005)- The genus *Planorbulinella* (Foraminiferida) in Indonesia. Scripta Geologica 129, p. 137-146.
(Late Oligocene- Miocene Planorbulinella from Java, SE Borneo, W Sulawesi. Two new species)

Renema, W. (2006)- Comment on ñSignificant Miocene larger foraminifera from South Central Javaò by M.K. BouDagher-Fadel and S.W. Lokier. Revue Paleobiologie, Geneve, 25, 1, p. 405-406.
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(online at: www.sciencedirect.com/science/article/pii/S2214242814000217)
(Genus Cycloclypeus ranges from Oligocene- Recent, first appearing in E Rupelian of Java and Kalimantan (C. koolhoveni). Late Oligocene- Recent C. eidae to C. carpenteri lineage in Mediterranean and Indo- West Pacific provinces. C. annulatus derived from C. eidae as separate lineage in late Early-M Miocene)

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(60 species of Nummulites reported from Indonesia, only 7 believed to be valid. Sangiran mud volcano boulders of Nummulites-Pellatispira limestone with N. gerthi/ N. pengaronensis and planktonic foraminifera (P15; around M-L Eocene boundary. Timor Miomaffo samples with Nummulites and Pellatispira)

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(online at: http://retro.seals.ch/digbib/view?pid=egh-001:1946:39::344)
('On morphogenetic investigations of larger foraminifera')

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(Correlation between paleomagnetic reversal scale and calcareous nannofossil zonation in Indian Ocean for last 7 Myrs)

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(online at: www.deepseadrilling.org/26/volume/dsdp26_33.pdf)
(Radiolaria from Leg 26 Sites 250-258 in Indian Ocean W of Australia. Dictyomitra lilyae Tan Sin Hok, 1927= Early Cretaceous (Albian?) age range. Pages 773-774: unpublished nannofossil work on Tan Sin Hok's Bebalain 150 sample from Roti island by Bukry: presence of Cretarhabdus crenulatus, Eiffellithus turriseiffeli, Manivitella pemmatoidea, Parhabdolithus embergeri, Vagalapilla matalosa, Watznaueria barnesae and W. biporta, indicating Aptian-Turonian age. Other samples of Tan Sin Hok from Roti (no. 149, 154, and 384) contain similar radiolarian assemblages and probably of same age)

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(Review of zonation and datum levels of low-latitude Cenozoic radiolarians)

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(online at: www.deepseadrilling.org/27/volume/dsdp27_37.pdf)
(DSDP Site 262 in Timor Trough SW of Timor Island with rel. thick U Pliocene-Pleistocene. Good record of evolutionary trends in Globorotalia crassaformis- G. tosaensis- G. truncatulinoides groups)

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('Late Tertiary mollusc fauna from the Netherlands East Indies'. Mio-Pliocene? bivalves and gastropods from S West Papua (Noordwest, Bibis and Noord Rivers S of Central Range; collected by 1907 and 1909/1910 New Guinea expeditions) and W Java (Cirebon area). Also shark tooth Carcharias gangeticus. With one small plate)

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('Statistical biometry of the length ratio in the genus Asterorotalia in wellbore Cengkareng'. Length-width ratios of 3 Asterorotalia species (A. inspinosa, A.multispinosa, A. trispinosa) in 200m deep Cengkareng well, NW Java)

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Thalmann, H.E. (1942)- Occurrence of the genus *Lacazina* Munier-Chalmas in the East Indies. Geol. Soc. America (GSA) Bull. 53, 12, p. 1838-1839. *(Abstract only)*
(Eocene limestones with larger foram Lacazina (= Lacazinella) often associated with Nummulites, Discocyclina and Alveolina. Known only from E half of East Indies Archipelago: E Sulawesi (Boealemo peninsula), W Papua (Pisang Island E of Misool; Onin Island, Dramai Island; S and E of Triton Bay; Setawka River in SW New Guinea; Birds Head between Rumberpon and Horna, and Sungei Ingsiim; on Wilhelmina Peak of Central Range; S and E of Paniai Lake), PNG (Chimu aerodrome), Kai Besar Island (between Riamroe and Yamtimur))

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(Miocene nannofossil zonation, partly based on Miocene material of Solo River section, Kendeng zone, E Java. Returns to emended definitions of Helio-discoaster Tan and Eu-discoaster Tan for Discoaster species)

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(online at: https://www.e-periodica.ch/digbib/view?pid=egh-001:1925-1926:19284)
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('Calcification of the lateral chambers in Miogypsina'. Incl. new species Miogypsina tuberosa, M. abunensis)

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('The genus Pellatispira in the Indo-Pacific area'. Review of Late Eocene (Ta-Tb) larger foram genus Pellatispira in Indonesian region. Seven species, five of which new)

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('The nature of the Tertiary fauna of the Netherlands Indies'. Early interpretation of nature of Indonesian Tertiary faunas by student of K. Martin, with comparisons of Recent and Tertiary fossil faunas)

Van der Vlerk, I.M. (1923)- Een overgangsvorm tusschen *Orthophragmina* en *Lepidocyclina* uit het Tertair van Java. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 7, 2, p. 91-98.

('A transitional form between Orthophragmina and Lepidocyclina from the Tertiary of Java'. Description of new genus and species Orthocyclina soeroeanensis from Kali Soeroean, Bagelen area, C Java. Looks like an advanced M-L Miocene radiate Lepidocyclina (Trybliolepidina). Names never used by later workers; JTvG)

Van der Vlerk, I.M. (1924)- *Miogypsina Dehaartii* nov. spec. de Larat (Moluques). Eclogae Geol. Helvetiae 18, p. 429-431.
(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1923-1924:18::764&subp=hires)
(New miogypsinid larger foram species from Larat, an island off SW coast of New Guinea, collected by BPM geologist De Haart. No locality info. No lateral chambers, so should be assigned to genus Miogypsinoides. See also Van der Vlerk 1966)

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(online at: http://retro.seals.ch/cntmng?type=pdf&rid=egh-001:1928:21::604&subp=hires)
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(Listing of all Cenozoic mollusc species described from Indonesia before 1931)

Van der Vlerk, I.M. (1950)- Stratigraphy of the Caenozoic of the East Indies based on foraminifera. Rept. 18th Int. Geological Congress, Great Britain 1948, 15, p. 61-63.
(Summary of Tertiary larger foram Ta-Tg 'Letter zonation' used in shallow marine carbonates of Indonesia)

Van der Vlerk, I.M. (1951)- Tabulation of determinations of larger foraminifera. In: M. Reinhard & E. Wenk (eds.) Geology of the Colony of North Borneo, Bull. Geological Survey Dept., British Territories in Borneo 1, p. 137-145.
(Incl. samples from Banggi and Kudat areas of E Miocene limestones with reworked Eocene Pellatispira, Discocyclina, etc.)

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Van der Vlerk, I. M. (1963)- Biometric research on *Lepidocyclina*. Micropaleontology 9, p. 425-426.
(On evolutionary tendency in iso-, nephro- and trybliolepidine embryons in Lepidocyclina embryon of deuteroconch to enclose protoconch to an increasing degree. Measured as 'grade of enclosure, maximum values increase from 25-30% in Late Eocene, 40-45% in Late Oligocene, 45-50% at Te-Tf boundary and 50-55% in E Miocene/ Burdigalian)

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('Evolution of an embryon'. Evolution of Late Oligocene- Miocene Lepidocyclina embryon can be measured as 'degree of curvature', which can then be used for age determination and correlations. With example of values in East Java- Madura stratigraphy)

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(Measurements on embryonic shambers of Lepidocyclina from Java and Madura. Extent to which deuteroconch encloses protoconch or extent to which dividing-wall between them is curved ("degree of curvature") increases from 10% in M Oligocene to 67% in M Miocene. Rate of evolution changes from very slow to very fast to slow again and to fast again. First rapid change in M Oligocene when genus migrated from America to Europe and to Far East- Australia. Second phase of rapid evolution from earliest Miocene up to extinction of genus)

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(Small guidebook describing principal larger foram genera from the Tertiary of Indonesia. One of earliest papers to define the Eocene-Recent larger foram zonation known as 'East Indies Letter Classification')

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(online at: www-odp.tamu.edu/publications/121_SR/VOLUME/CHAPTERS/sr121_03.pdf)
(Upper Cretaceous- Oligocene planktonic foram biostratigraphy of Indian Ocean ODP sites along Ninety-East Ridge, W and SW of Sumatra. Most intervals reflect temperate- subtropical climate)

Van Eijden, A.J.M. & G.M. Ganssen (1995)- An Oligocene multi-species foraminiferal oxygen and carbon isotope record from ODP Hole 758A (Indian Ocean): paleoceanographic and paleo-ecologic implications. Marine Micropaleontology 25, p. 47-65.
(Oligocene- basal Miocene (Zones P19-P22/N4) O and C isotope stratigraphy of benthic and plankonic forams from E Indian Ocean ODP Hole 758A. Lack of covariance in planktic and benthic δ18O ratios indicates that many Oligocene sea level fluctuations, including major fall at 30 Ma, not of glacio-eustatic origin)

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(Overview of methods, zonations, facies interpretations, etc., in Indonesian Tertiary biostratigraphy)

Van Gorsel, J.T. (2014)- An introduction to Cenozoic macrofossils of Indonesia. Berita Sedimentologi 30, p. 63-76.
(online at: www.iagi.or.id/fosi/files/2014/08/BS30-Biostratigraphy_SEAsia_Part2_FINAL.pdf)
(Brief overview of principal groups and literature of Cenozoic macrofossils known from outcrops in Indonesia. Prior to 1930's macrofossils (mainly molluscs), were principal objects of paleontological and biostratigraphic studies in Indonesia. Since then focus shifted to microfossils. Cenozoic marine macrofossil assemblages from Indonesia all represent tropical faunas of Indo-Pacific province affinity)

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(Overview of Cenozoic biostratigraphy and biofacies interpretation of SE Asia. Principal microfossil groups used in region are foraminifera, calcareous nannofossils and palynology. Also brief reviews of work on ostracodes, diatoms and radiolaria)

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(online at: www.repository.naturalis.nl/document/43244)
(Inventory of holotypes of fossil plants in Leiden Naturalis museum collections, mainly from Tertiary in Java, in 'Martin Collection'. Incl. Jurassic Novoguineoxylon lacunosum from Kamundan (W Papua), species from Java Mio-Pliocene described by Goeppert (1854), Crie (1888), Krausel) (1926, etc.)

Van Morkhoven, F.P.C.M., W.A. Berggren & A.S. Edwards (1986)- Cenozoic cosmopolitan deep-water benthic foraminifera. Bull. Centre Rech. Exploration-Production Elf-Aquitaine, Mem. 11, p. 1-421.

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(Listing of proposed nomenclatural changes for mollusc names described from Indonesia by K. Martin)

Van Straelen, V. (1931)- Arthropoda. In: B.G. Escher et al. (eds.) Onze palaeontologische kennis van Nederlandsch Oost Indie, Leidsche Geol. Mededelingen 5 (Feestbundel K. Martin), p. 156-163.
(online at: www.repository.naturalis.nl/document/549583)
(Listings of arthropod fossils from Indonesia, as known in 1931: (1) Permian trilobites (Phillipsia, Neoproetus indicus, Griffithides sumatrensis) from Timor, Leti, Sumatra, W Papua; (2) Neogene ostracodes, (3) Cenozoic crab fossils from Java, Kalimantan, Sulawesi, W Papua and M Jurassic Eryma boehmi n.sp. from of Jefbie, Misool)

Van Straelen, V. (1938)- Crustaces decapodes Cenozoiques des Indes Orientales neerlandaises. Leidsche Geol. Mededelingen 10, p. 90-103.
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Van Vessem, E.J. (1978)- Study of Lepidocyclinidae from Southeast Asia, particularly from Java and Borneo. Utrecht Micropal. Bull. 19, p. 1-163.
(online at: https://dspace.library.uu.nl/handle/1874/205830)
(Quantitative study of lepidocyclinids of Nephrolepidina group from 42 samples from N Borneo (Klias Peninsula, Kinabatangan River), E Kalimantan (Kutei, Sangkulirang), C and E Java (Lodan, Tremboel, Boegoel wells) and Madura. Assemblages subdivided into five successive biometric units, called species: L. isolepidinoides, L. sumatrensis, L. angulosa, L. martini and L. rutteni)

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(Well-illustrated book. Unpublished, but distributed among various academic institutions)

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(3 larger foram horizons on Fiji, all Te, Early Miocene)

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(Indian Ocean planktonic foraminiferal biogeography examined in DSDP sites for 5 Neogene time-slices and used to reconstruct surface circulation patterns. Closure of Indo-Pacific passage at end of E Miocene strengthened low-latitude circulation in Indian Ocean and led to development of distinct tropical and subtropical faunal provinces. Global cooling during M-L Miocene resulted in steeper latitudinal temperature gradients and enhanced faunal provincialization)

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(online at: https://pdfs.semanticscholar.org/fc9d/05e55c75424d1fd9590ca8ec7cbfe39d4a51.pdf?_ga=2.250484229.209811469.1529357724-1507267566.1529357724)
(Holotype of Globorotalia barisanensis Le Roy 1939 from M Miocene Lower Palembang Fm in upper Kassikan section, Tapung Kiri River, C Sumatra, is non-keeled species, transitional between Gr. peripheroacuta and Gr praefohsi (zones N10-N11). Holotype should be viewed as senior synonym of Gr. peripheroacuta, but more practical to conserve latter name)

Zachariasse, W.J. & Sudijono (2012)- New data on the morphology and classification of the Oligocene-Miocene planktonic foraminifer *Paragloborotalia siakensis* (LeRoy, 1939). J. Foraminiferal Research 42, 2, p. 156-168.
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X.3. Jurassic- Cretaceous

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(Study of diversity, distribution patterns, and endemism of Late Tithonian ammonites. Himalayan Kutch ammonites part of Indo-Madagascan Province)

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(Key publication on M Jurassic- E Cretaceous radiolaria from Tethys region, mainly western Tethys and Japan)

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(Presence of E-M Turonian planktonic foraminifera Praeglobotruncan stephani, P. hagni, P. imbricata, P. helvetica and Hedbergella spp from wells in Carnarvon Basin show Tethyan character)

Bolli, H.M. (1974)- Jurassic and Cretaceous calcisphaerulidae from DSDP Leg 27, Eastern Indian Ocean. In: J.J. Veevers et al. (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 27, p. 843-907.
(online at: www.deepseadrilling.org/27/volume/dsdp27_39.pdf)
(19 new species of Pithonella, family Calcisphaerulidae, from U Jurassic and Cretaceous sediments from Sites 259, 260, 261, and 263 of Leg 27 in E Indian Ocean. Previously, calcisphaerulidae (av. size 40-120μ) described only from thin sections, like Stomiosphaeridae and Cadosinidae from Late Jurassic- earliest Cretaceous pelagic limestones of Seram, Timor, Roti, Buton and Misool by Wanner 1940 and Vogler 1941)

BouDagher-Fadel, M.K. (2008)- The Mesozoic larger benthic foraminifera: the Jurassic. In: Evolution and geological significance of larger benthic foraminifera, Chapter 4, Developments in Palaeontology and Stratigraphy, Elsevier, 21, p. 157-213.
(General review of Jurassic larger foraminifera)

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(Review of Aptian- Cenomanian larger foraminifera Orbitolina. Includes new material from W flank of Meratus Mountains, S Kalimantan, identified as Late Aptian- E Albian Mesorbitolina texana, Palorbitolinoides orbiculata, Mesorbitolina subconcava and Conicorbitolina sp.)

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(On ranges of Buchia (= Aucella) bivalve mollusc species in Oxfordian-Tithonian. Now assigned to genus Malayomaorica)

Challinor, A.B. (1989)- The succession of *Belemnopsis* in the Late Jurassic of Eastern Indonesia. Palaeontology 32, 3, p. 571-596.
(Belemnopsis from Misool and Sula all part of B. moluccana lineage. Misool Late Jurassic stratigraphy condensed rel. to Sula. Misool: 85m of Oxfordian Demu Fm carbonate/ shale overlain by ~100m of Kimmeridgean-Tithonian Lelinta shale with minor sandstone)

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(M Jurassic- E Cretaceous belemnites from SW Pacific, New Guinea, Misool, Sula, tied to dinoflagellate zonations. Two belemnite provinces in SW Pacific region from M Jurassic- E Cretaceous: (1) Tethyan: E Indonesia, W Papua, PNG, parts of N and W Australia; (2) S Pacific: New Zealand, most of Australia)

Challinor, A.B. (1992)- Belemnites of the Southwest Pacific. In: G.E.G. Westermann (ed.) The Jurassic of the Circum-Pacific, World and Regional Geology 3, Cambridge University Press, p. 308-309.
(Brief summary of Jurassic belemnites in E Indonesia, PNG, New Zealand. Three main assemblages Dicoelites-Conodicoelites (Late Bajocian- E Oxfordian), Hibolithes (late Callovian- Oxfordian) and Belemnopsis (basal Oxfordian- latest Tithonian))

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('Dogger (= M Jurassic) ammonites from the Moluccas'. On Hammoceratids from Misool and Mangoli, Stephanoceratids from Mangoli and Taliabu. Text volume only; part 2 never published due to WWI)

Colom, G. (1965)- Essais sur la biologie, la distribution geographique et stratigraphique des Tintinnoidens fossiles. Eclogae Geol. Helvetiae 58, 1, p. 319-334.
(online at: http://dx.doi.org/10.5169/seals-163267)
('Review of the biology, geographic and stratigraphic distribution of the fossil Tintinnids'. Classic paper on Jurassic-Cretaceous tintinnid nannofossils, incl. records of Late Jurassic Calpionella alpina group in PNG (Maril Shale; Rickwood 1955) N Australia (Brunnschweiler 1960))

Cookson, I.C. & A. Eisenack (1958)- Microplankton from Australia and New Guinea Upper Mesozoic sediments. Proc. Royal Soc. Victoria 70, p. 19-79.
(online at: http://takata.slv.vic.gov.au/...)
(Early paper of Late Jurassic- Early Cretaceous dinoflagellates. Mainly taxonomic descriptions of 75 species from Australian NW shelf, some from PNG (Omati River, Era River))

Cookson, I.C. & A. Eisenack (1960)- Upper Mesozoic microplankton from Australia and New Guinea. Palaeontology 2, 2, p. 243-261.
(online at: http://cdn.palass.org/publications/palaeontology/volume_2/pdf/vol2_part2_pp243-261.pdf)
(Upper Jurassic- basal Cretaceous dinoflagellates and hystrichospheres from Canning basin, W Australia and other localities in Australia and New Guinea)

Cookson, I.C. & A. Eisenack (1974)- Mikroplankton aus Australischen Mesozoischen und Tertiaeren Sedimenten. Palaeontographica, B, Palaeophytologie, 148, p. 44-93.
('Microplankton from Australian Mesozoic and Tertiary sediments')

Crame, J.A. (1983)- The occurrence of the Upper Jurassic bivalve *Malayomaorica malayomaorica* (Krumbeck) on the Orville Coast, Antarctica. J. Mollusc. Stud. 49, p. 61-76.

(online at: http://mollus.oxfordjournals.org/content/49/1/61.full.pdf
(First record of Malayomaorica malayomaorica in Antarctica. Late Jurassic bivalve species (originally assigned to Aucella, then Buchia) mainly limited to Kimmeridgean. Appears to be typical of margins of S Hemisphere Late Jurassic Gondwanaland, including NW Australia, New Zealand, New Caledonia and E Indonesia (Misool, Timor, New Guinea, Sula, E Sulawesi, Ceram, Buru; JTvG)

Dhondt, A.V. (1992)- Cretaceous inoceramid biogeography: a review. Palaeogeogr. Palaeoclim. Palaeoecology 92, p. 217-232.
(Cretaceous inoceramid bivalves did not thrive in shallow or warm seas, and therefore rare in Tethyan shallow deposits. Occur mainly in temperate seas, and distribution often bipolar. Not much on SE Asia)

Fontaine, H. & L. Beauvais (1986)- Distribution of the Jurassic corals in Southeast Asia. In: P.Q. Tuong (ed.) Proc. First Conf. Geology of Indochina, Ho Chi Minh City 1986, Gen. Dept. of Geology Vietnam, 1, p. 137-145.
(On Jurassic corals from S Vietnam, Cambodia, S Laos, Philippines (Mindoro, Calamian Islands, NE Palawan), Borneo (W Sarawak, W Kalimantan), Sumatra, Thailand (Mae Sot))

Hallam, A. (1977)- Jurassic bivalve biogeography. Paleobiology 3, p. 58-73.
(No maps. Incl. Late Jurassic SW Pacific Province: with Malayaomaorica as only endemic bivalve genus. Same or closely re lated species in Spiti Shales of Himalayas. Buchia and Retroceramus abundant in the Arctic/ Antarctic, but also common in lower latitudes)

Hayami, I. (1984)- Jurassic marine bivalve faunas and biogeography in Southeast Asia. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia 25, University of Tokyo Press, p. 229-237.
(Unique E Jurassic (Pliensbachian?) heavy bivalve assemblage from Timor with Lithiotis, Pachymegalodon, Gervilleioperna, etc. described from Fatu Lst of Timor by Krumbeck (1923). Upper Jurassic bivalves in W Borneo part of East Asian Province with Philippines and Japan. Timor-Roti, Seram, Misool, etc., are part of Maorian Province with Malayomaorica and Retroceramus haasti)

Hofker, J., Jr. (1963)- Studies on the genus *Orbitolina* (Foraminiferida). Leidsche Geol. Mededelingen 29, p. 181-253.
(online at: www.repository.naturalis.nl/document/549624)
(Study of mid-Cretaceous (Barremian-Cenomanian) 'Tethyan' larger foram genus Orbitolina. Includes material from W Kalimantan Seberuang area collected by Van Schelle and Wing Easton collections, and classified as relatively primitive 'Group I- Lower Aptian' species)

Iba, Y. & S. Sano (2006)- *Mesorbitolina* (Cretaceous larger foraminifera) from the Yezo Group in Hokkaido, Japan and its stratigraphic and paleobiogeographic significance. Proc. Japan Academy, B, 82, 7, p. 216-223.
(Aptian Orbitolina (Mesorbitolina) parva from limestone olistoliths in lower Yezo Group, Hokkaido, represent first report of this species from Circum-North Pacific)

Iba, Y., S. Sano & T. Miura (2011)- Orbitolinid foraminifers in the Northwest Pacific: their taxonomy and stratigraphy. Micropaleontology 57, 2, p. 163-171.
(Four orbitolinid species ('Palorbitolina lenticularis', Praeorbitolina cf. wienandsi, Mesorbitolina parva, M. texana) recognized in Late Hauterivian- Early Albian of Japan- S Sakhalin)

Jaworski, E. (1931)- Ueber *Arnioceras geometricum* Oppel 1856 und verwandte Spezies; nebst einem Anhang uber *Arnioceras natrix* v. Schlotheim 1820. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 65, B, p. 83-140.
('Arnioceras geometricum Oppel (1856) and related species; with appendix on Arnioceras natrix v. Schloth. 1820'. Preliminary results of study on Early Jurassic ammonites from Netherlands Indies (Babar, etc.))

Jaworski, E. (1933)- Revision der Arieten, Echioceraten und Dactylioceraten des Lias von Niederlandisch-Indien. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 70, B, p. 251-333.

('Revision of the arietes, echiocerates and dactyliocerates from the Liassic of Netherlands Indies'. Mainly taxonomic descriptions of Early Jurassic ammonites from Roti, Babar, Timor and Sula Islands from collections in Amsterdam, Leiden, Utrecht, Delft, Bonn, Berlin and Basel: Arnioceras spp., Arietites, Dactylioceras spp., Coeloceras moermanni, etc.. Little on stratigraphy, no maps)

Jeletzky, J.A. (1963)- *Malayomaorica* gen. nov. (Family Aviculopectinidae) from the Indo-Pacific Upper Jurassic, with comments on related forms. Palaeontology 6, p. 148-160.
(online at: http://palaeontology.palass-pubs.org/pdf/Vol%206/Pages%20148-160.pdf)
(S Hemisphere Late Jurassic bivalves described as Buchia and Aucella differ from N Hemisphere-Boreal Buchia, therefore assigned to new genus Malayomaorica. Typical of Kimmeridgean of Gondwana margin, including NW Australia, New Zealand New Guinea, Misool, Sula, E Sulawesi, Timor, Ceram, Buru; JTvG)

Kruizinga, P. (1931)- Cephalopoda. In: B.G. Escher et al. (eds.) De palaeontologie en stratigraphie van Nederlandsch Oost-Indie, Leidsche Geol. Mededelingen 5 (K. Martin memorial volume), p. 297-389.
(online at: www.repository.naturalis.nl/document/549628)
(Summary of state of knowledge of ammonites and belemnites in Indonesia in 1931. Highest number of species known is from Timor. Other significant cephalopd faunas on Roti, Sula Islands, Buru and Misool. Most known species of Triassic age, other rich faunas of Jurassic and Permian, but relatively few species from Cretaceous)

Leupold, W. & W. Maync (1935)- Das Auftreten von *Choffatella*, *Pseudocyclammina*, *Lovcenipora* (*Cladocoropsis*) und *Clypeina* im alpinen Faziesgebiet. Eclogae Geol. Helvetiae 28, p. 129-139.
(online at: http://retro.seals.ch/digbib/view?pid=egh-001:1935:28::191)
('The occurrences of Choffatella, Pseudocyclammina, Lovcenipora (Cladocoropsis) and Clypeina in the Alpine facies region'. First record of Late Jurassic Pseudocyclammina associated with Cladocoropsis mirabilis Felix from Switzerland. Assemblage formerly known from Japan and Barisan Mts of Sumatra (see also Maync 1952)

Liard, T. & R. Liard (2016)- Mesozoic vertebrate footprints discoveries from ASEAN. In: Proc. 52nd Annual Session Coord. Comm. Geoscience Programmes E and SE Asia (CCOP), Bangkok, p. 40-51.
(online at: www.ccop.or.th/download/as/52as2.pdf)
(Mesozoic vertebrate footprints found in several SE Asia countries with Indochinese redbeds, incl. in six Late Triassic- E Cretaceous formations in NE Thailand. Also in Laos, Malay Peninsula Singapore (Sentosa), Cambodia)

Lucas, S.G. (2006)- The *Psittacosaurus* biochron, Early Cretaceous of Asia. Cretaceous Research 27, p. 189-198.
(E Cretaceous primitive ceratopsian dinosaur Psittacosaurus widespread in Asia, from W Siberia, Mongolia, China to Thailand, and possibly Japan. Psittacosaurus signifies Barremian-Albian time, ~105-125 Ma)

Mamgain, V.D. & B.R.J. Rao (1965)- Orbitolines from the limestone intercalations of Dras Volcanics, Jammu and Kashmir State. J. Geol. Soc. India 6, p. 122-129.
(Barremian- Aptian Orbitolina (incl. Orbiqia drasensis n.sp.) in limestone intercalations in volcanic rocks of Dras, in Jammu and Kashmir state. Also Orbitolina trochus)

Matsumaru, K., M. Aizawa, K. Mukai & A. Furusawa (2007)- Note of orbitolinid foraminifera from the Lower Aptian (Cretaceous) Shimanoshita Mudstone, Lower Yezo Group, Hokkaido, Japan. J. Saitama University Fac. Educ. 56, l, p. 367-372.
(Mid-Cretaceous Orbitolina at several localities across accretionary prism of Japan and also Taiwan Shimanoshita location E Aptian with Palorbitolina lenticularis, Mesorbitolina parva, Praeorbitolina)

Matsumaru, K., M. Ehiro & S. Kojima (2006)- On *Orbitolina* (Foraminiferida) from the Shyok suture zone, Ladakh, NW India. J. Palaeontol. Soc. India 51, 2, p. 43-49.
(online at: http://palaeontologicalsociety.in/vol51_2/v4.pdf)
(E-M Albian Orbitolina from Lower Shyok Fm in Shyok suture zone, Ladakh, NW India, in sediments overlying ultramafic unit. Incl. Mesorbitolina texana, M. minuta, Simplorbitolina cf. conulus)

Matsumaru, K. & A. Furusawa (2007)- On orbitolinid foraminifera from the lower Aptian (Cretaceous) of Hokkaido, Japan. J. Palaeontological Soc. India 52, 1, p. 39-44.
(online at: http://palaeontologicalsociety.in/vol52_1/v4.pdf)
(Five E Aptian orbitolinid species in Takisato Orbitolina Lst of Hokkaido: Palorbitolina lenticularis, Mesorbitolina parva, M. minuta, M. libanica, Paleodictyoconus conica)

Matsuoka, A. (1995)- Jurassic and Lower Cretaceous radiolarian zonation in Japan and in the western Pacific. The Island Arc 4, p. 140-153.
(Radiolarian zonation for Jurassic- Lower Cretaceous from Japan outcrop sections and W Pacific seafloor; applicable to low and middle paleolatitude portions of Paleo-Pacific ocean. 11 zones proposed)

Matsuoka, A., Y. Aita, K. Wakita, Munasri, G. Shen, H. Ujiie, K. Sashida, V.S. Vishnevskaya, N.Y. Bragin & F. Cordey (1996)- Mesozoic radiolarians and radiolarian-bearing sequences in the circum-Pacific regions: a report of the Symposium 'Radiolarians and orogenic belts'. The Island Arc 5, 2, p. 203-213.
(Collection of 7 extended abstracts)

Maync, W. (1952)- Critical taxonomic study and nomenclatural revision of the Lituolidae based upon the prototype of the Family, *Lituola nautiloidea* Lamarck, 1804. Contr. Cushman Found. Foraminiferal Research 3, 2, p. 35-56.
(online at: https://cushmanfoundation.allenpress.com/portals/_default/files/pubarchive/CCFFR/03ccffr2.pdf)
(Includes discussion of Lacazina lamellifera Silvestri 1925 and Loftusia bemmeleni Silvestri 1932 from Saling Lst of S Sumatra (not species of Pseudocyclammina). Confirms presence of true Late Jurassic- E Cretaceous Loftusia and Pseudocyclammina in samples from Gumai Mts of S Sumatra)

Munasri (2000)- Microfossils radiolaria in Indonesia: introducing the technique of preparation. Proc. 29th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 4, p. 259-264.

Munasri (2001)- Radiolarian research in some Mesozoic provinces in Indonesia. Berita Sedimentologi 16, p. 26-30.
(Brief review of radiolaria studies from Cretaceous of C Java (Karangsambung), M Cretaceous from S Sulawesi (Bantimala), Jurassic-Cretaceous from SE Kalimantan (Meratus Range), M-L Triassic and E Cretaceous from W Timor (Nefokoko, Kefamenanu, Kolbano) and M Jurassic from Roti island)

Munasri (2012)- Penggunaan fosil radiolaria dalam sintesis geologi. Pros. Pemaparan Hasil Penelitian Pusat Penelitian Geoteknologi LIPI, Bandung 2012, p. 337-350.
('The use of fossil radiolaria in geological synthesis'. Review of Mesozoic radiolarian research in Indonesia. Radiolarian fossils found in deep-sea environments and are used for biostratigraphy, tectonic reconstructions, paleo-oceanography and paleogeography. With summary of 15 areas in Indonesia with radiolarian sediments)

Munasri, K. Wakita & K. Sashida (1999)- Fosil radiolaria sebagai alat biostratigrafi yang baru di Indonesia. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), 2 (Sed. Pal. Strat.), Yogyakarta, p. 48-52.
('Fossil radiolaria as a new biostratigraphic tool in Indonesia'. Review of radiolaria studies on Java, Sulawesi, SE Kalimantan, Timor)

O'Dogherty, L. (2009)- Inventory of Mesozoic radiolarian species (1867-2008). Geodiversitas 31, 2, p. 371-481.
(Useful listing of 6296 Mesozoic radiolarian species names, in combinations as originally described, with approximate ages. E.g. helpful in confirming correctness of Hojnos (1934) Late Jurassic- E Cretaceous age assignments of E Sulawesi radiolarian rocks)

O'Dogherty L., E.S. Carter, P. Dumitrica, S. Gorican, P. De Wever, A.N. Bandini, P.O. Baumgartner & A. Matsuoka (2009)- Catalogue of Mesozoic radiolarian genera. Part 2: Jurassic-Cretaceous. Geodiversitas 31, 2, 271-356.
(Illustrated catalogue of type species of 581 genera of Jurassic- Cretaceous radiolaria. No range charts)

O'Dogherty. L. & J. Guex (2002)- Rates and pattern of evolution among Cretaceous radiolarians: relations with global paleoceanographic events. In: Proc. INTERRAD 9, Micropaleontology of Radiolarians, Micropaleontology 48, Suppl. 1, p. 1-22.

Oloriz, F. & G.E.G. Westermann (1998)- The perisphinctid ammonite *Sulaites* n. gen. from the Upper Jurassic of the Indo-Southwest Pacific. Alcheringa 22, 3-4, p. 231-240.
(New genus Sulaites comprises Oxfordian group of 'Perisphinctes' sularus and moluccanus, described from Sula Islands, and Late Oxfordian-?E Kimmeridgian 'Pseudoparaboliceras aramaraii' group described from W Papua. Genus Sulaites also known from W Papua, PNG and probably New Zealand and Nepal)

Oosting, A.M. (2004)- Palaeoenvironmental and climatic changes in Australia during the Early Cretaceous. Thesis University Utrecht, p. 1-203.
(online at: http://dspace.library.uu.nl/handle/1874/1578)
(Biochronostratigraphy for Tethyan and Boreal M Cretaceous traditionally based on ammonites, but because of lack of useful ammonites in Australian M Cretaceous, and faunal and floral latitudinal contrasts, correlations between different realms is not straightforward. Dinoflagellate cyst events combined with changes in carbon-isotope stratigraphy used here to assess Barremian- Albian stage boundaries in Australia)

Pannekoek, A.J. (1931)- Brachiopoda. In: B.G. Escher et al. (eds.) De palaeontologie en stratigraphie van Nederlandsch Oost-Indie, Leidsche Geol. Mededelingen 5 (K. Martin memorial volume), p. 396-435.
(Summary of state of knowledge of fossil brachiopods in Indonesia in 1931)

Philippe, M., A. Boura, C. Oh & D. Pons (2014)- *Shimakuroxylon* a new homoxylous Mesozoic wood genus from Asia, with palaeogeographical and palaeoecological implications. Review Palaeobotany Palynology 204, p. 18-26.
(New type of (Late?) Jurassic-E Cretaceous fossil wood with radial pitting of 'japonicum type', named here Shimakuroxylon. Geographic distribution limited to terranes which lined S-most E Asia during Jurassic (Lhasa, Indochina, Semitau, etc.). W Kalimantan specimen in British Museum collected from Buduk (Boedak) 100km N of Pontianak, associated with bivalves identified as M Jurassic by Newton (1903) (probably Late Jurassic?). Also present in Outer Zone of SW Japan. Probably indicator for warm and wet climates)

Philippe, M., H.E. Jiang, K. Kim, C. Oh, D. Gromyko, M. Harland, I.S. Paik & F. Thevenard (2009)- Structure and diversity of the Mesozoic wood genus *Xenoxylon* in Far East Asia: implications for terrestrial palaeoclimates. Lethaia 42, p. 393-406.
(Mesozoic fossil wood Xenoxylon is indicator of wet temperate biotopes and is common in Far East Asia in Carnian-Maastrichtian. It is part of 'Northern-type' leaf-flora (also call Tetori-type or Siberian-Canadian), although still present in Vietnam. Diversity peak of Xenoxylon spp. centred on NE China, where wet-temperate climate probably prevailed through Late Triassic- Cretacous (genus not known from Indonesia or Gondwana))

Remane, J. (1985)- Calpionellids. In: H.M. Bolli, J.B. Saunders & K. Perch-Nielsen (eds.) Plankton Stratigraphy, Cambridge University Press, p. 555-572.
(Review of Late Tithonian- E Valanginian planktonic protozoans of unknown affinities. Includes reported, but not illustrated, presence of calpionellids in PNG by Rickwood (1955))

Renz, G.W. (1974)- Radiolaria from Leg 27 of the Deep Sea Drilling Project. In: J.J. Veevers et al. (eds.) Initial Reports Deep Sea Drilling Project (DSDP) 27, p. 769-841.
(online at: www.deepseadrilling.org/27/volume/dsdp27_38.pdf)
(Study of Cretaceous radiolarians from Leg 17 sites, mainly Site 261 in eastern Indian Ocean and Site 262 in Timor Trough of SW Timor. Succession of three assemblages, from young to old: (1) Bathropyramis timorensis, (2) Eucyrtis columbarius and (3) Spongocyclia lanigera Assemblage, of uncertain ages (but placed in ~Berriasian-Aptian range by Sanfilippo and Riedel 1985, Fig. 2; JTvG). Includes brief discussion of Tan Sin Hok (1927) Roti sample 149 assemblage, which is believed to be younger than this DSDP material)

Riding, J.B. (2012)- A compilation and review of the literature on Triassic, Jurassic, and earliest Cretaceous dinoflagellate cysts. American Assoc. Stratigr. Palynologists (AASP), Contr. Ser. 46, Dallas, p. 1-119.
(online at: http://nora.nerc.ac.uk/19423/1/Jurassic_dinocyst_reference_list_-_revised_manuscript_March_2012_word_2003.pdf)

Riding, J.B. (2013)- The literature on Triassic, Jurassic and earliest Cretaceous dinoflagellate cysts: supplement 1. Palynology 37, 2, p. 345-354.

Sahni, M. R. (1937)- Discovery of *Orbitolina*-bearing rocks in Burma, with a description of *Orbitolina birmanica* sp. nov. Records Geological Survey India 71, p. 360-375.

Sahni, M.R. & V.V. Sastri (1957)- A monograph of the orbitolines found in the Indian continent (Chitral, Gilgit, Kashmir), Tibet and Burma, with observations on the age of the associated volcanic series. Mem. Geol. Survey India, Palaeontologia Indica 33, 3, p. 1-50.

Samathi, A., P. Chanthasit & P.M. Sander (2019)- A review of theropod dinosaurs from the Late Jurassic to mid-Cretaceous of Southeast Asia. In: Palaeobiodiversity of Southeast Asia, Annales de Paleontologie 105, 3, p. 201-215.
(Several non-avian theropod dinosaurs reported from SE Asia, mainly in NE Thailand)

Sano, S.I. & P.W. Skelton (2010)- *Epidiceras* (Bivalvia, Hippuritoidea) from the Tithonian-Berriasian Torinosu-type Limestones of the Sakawa Area, Southwest Japan. Turkish J. Earth Sciences 19, p. 733-743.
(online at: http://journals.tubitak.gov.tr/earth/issues/yer-10-19-6/yer-19-6-5-0905-2.pdf)
(Primitive rudists Epidiceras speciosum and E. guirandi from Tithonian-Berriasian Torinosu limestones in SW Japan. Epidiceras speciosum also present in Kimmeridgean-Tithonian Bau Limestone of SW Sarawak. Tethyan rudists extend into W Pacific province)

Sarjeant, W.A.S., W. Volkheimer & W.P. Zhang (1992)- Jurassic palynomorphs of the Circum-Pacific region. In: G.E.G. Westermann (ed.) The Jurassic of the Circum-Pacific, World and Regional Geology 3, p. 273-292.
(Includes discussion of Jurassic palynomorphs/ dinoflagellates of Papua New Guinea, Australia. The only Jurassic palynoflora from SE Asia is partly published work from Misool by Helby and Hasibuan: Yefbie Shale has characteristic Toarcian Susadinium assemblage and Bajocian- E Bathonian Dissioliodinium association;base Demu Fm has Late Callovian- E Oxfordian Rigaudella aemula zone, Late Oxfordian- E Kimmeridgean Wanaea spectabilis zone in rest of Demu Fm and basal Lelinta shale; later assemblages suggest age as young as Kalyptea wisemaniae zone, E Berriasian)

Sato, T. (1956)- Correlation du Jurassique inferieur japonais en basant sur les ammonites fossiles. J. Geol. Soc. Japan 62, 732, p. 490-503. *(Japanese with French abstract)*
(online at: www.jstage.jst.go.jp/article/geosoc1893/62/732/62_732_490/_pdf)
(Incl. circum-Pacific 'Aalenian' (Late Toarcian?) ammonite distribution map, showing distribution of Hammatoceras in E Indonesia)

Sato, T. (1975)- Marine Jurassic formations and faunas in Southeast Asia and New Guinea. In: T. Kobayashi & R. Toriyama (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 151-189.

Sato, T. & T. Ishibashi (1984)- Ammonoids of Southeast Asia. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 267-272.

Sato, T. & G.E.G. Westermann (1991)- 4. Japan and Southeast Asia. In: G.E.G. Westermann & A.C. Ricardi (eds.) Jurassic taxa ranges and correlation charts fror the Circum-Pacific. Newsletters Stratigraphy 24, 1-2, p. 81-108.
(Useful compilation of distribution and ranges of Jurassic macrofossils in Indonesia)

Scheibnerova, V. (1971)- Foraminifera and the Mesozoic biogeoprovinces. Records Geol. Survey New South Wales 13, p. 135-174.

Scrivenor, J.B. (1912)- Radiolaria-bearing rocks in the East Indies. Geol. Magazine (V), 9, 6, p. 241-248.
(Review of mainly Mesozoic radiolarian-bearing rocks on the Malay Peninsula and Indonesia. Radiolarites of Danau Fm of C Borneo (probable Jurassic age) do look like oceanic deposits, but other radiolaria-bearing rocks often associated with clastic material and may be of shallower marine origin)

Sha, J. (2007)- Cretaceous trigonioidid (non-marine Bivalvia) assemblages and biostratigraphy in Asia with special remarks on the classification of Trigonioidacea. J. Asian Earth Sci. 29, 1, p. 62-83.
(Seven zones distinguished in distribution of Cretaceous Trigonioides-group fresh water molluscs. Mainly on mainland Asia (China, Korea, some Thailand) and Japan; nothing on Indonesia)

Sha, J. (2010)- Historical distribution patterns of trigonioidids (non-marine Cretaceous bivalves) in Asia and their palaeogeographic signiýcance. Proc. Royal Society (London), B (Biol. Sci.), 277, p. 277-283.
(online at: http://rspb.royalsocietypublishing.org/content/early/2009/07/15/rspb.2009.0936.full.pdf)
(Non-marine trigonioidid bivalves five phases of radiation in Cretaceous of Pal-Asia: pre-Aptian (?Valanginian/ Hauterivian- Barremian), Aptian, Albian, Cenomanian and Turonian-Maastrichtian. Distribution patterns show two distinct paleo-river systems feeding trigonioidids. Trigonioidid distribution pattern suggests Japan was attached to part of E China and/or Korea in Valanginian-Cenomanian (no discussion of records from Indonesia))

Sha, J., A. Meesook & X.K. Nguyen (2012)- Non-marine Cretaceous bivalve biostratigraphy of Thailand, Southern Lao PDR and Central Vietnam. J. Stratigraphy 36, 2. p. 382-399.
(Cretaceous of Thailand, Lao and Vietnam entirely in non-marine facies (Khorat Group). Two trigoniodid bivalve assemblages: Aptian Trigonioides kobayashii- Plicatounio assemblages and mainly Albian Trigonioides diversicostatus- Pseudohyria assemblage)

Skelton, P.W. (1985)- Preadaptation and evolutionary innovation in rudist bivalves. Special Papers in Palaeontology 33, p. 159-173.
(Includes mention of early rudists Epidiceras speciosum (Goldfuss) and Valletia sp. from Bau Limestone, SW Sarawak, in collections of British Museum of Natural History, London)

Skelton, P.W., S.I. Sano & J.P. Masse (2013)- Rudist bivalves and the Pacific in the Late Jurassic and Early Cretaceous. J. Geol. Soc., London, 170, p. 513-526.
(Rudist distribution in Pacific region. Very little on SE Asia region rudists)

Skwarko, S.K. & F. Hasibuan (1989)- A brief review of literature on the larger marine invertebrates in the Cretaceous of Indonesia with list of fossils hitherto identified. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 6, p. 44-52.
(Listing of 32 papers with descriptions of Cretaceous marine macrofossils from Indonesia since 1883. 22 faunas documented, 8 from Kalimantan, 3 each from Sumatra, Sula Islands, Misool and W Papua, one from Sulawesi. Bivalve molluscs (80 species) and cephalopods (70 species) are most diverse groups. Most determinations in need of revision)

Stevens, G.R. (1964)- The belemnite genera *Dicoelites* Boehm and *Prodicoelites* Stolley. Paleontology 7, 4, 9, 606-620.
(online at: http://palaeontology.palass-pubs.org/pdf/Vol%207/Pages%20606-620.pdf)
(Belemnite genus name Dicoelites first used by Boehm (1906) for D. dicoelus Rothpletz from Callovian-Lower Oxfordian of Roti Island, then in 1912 for material from Callovian-Kimmeridgean? of Wai Miha, Taliabu, Sula islands (D. keeuwensis). Both have two grooves, but latter re-assigned to new genus Conodicoelites)

Stevens, G.R. (1965)- The Jurassic and Cretaceous belemnites of New Zealand and review of the Jurassic and Cretaceous belemnites of the Indo-Pacific region. Paleont. Bull., Geol. Survey New Zealand 36, p. 1-283.

(Major review of J-K belemnites. In Oxfordian development of Indo-Pacific province. Kimmeridgean abundant Belemnopsis developed in Indo-Pacific, incl. Belemnopsis uhligi complex (Belemnopsis spp., incl. uhligi, indica, moluccana, etc.). Usually associated with Buchia and Inoceramus. In Tithonian uhligi complex persists, but progressively replaced by Hibolithes and Duvalia assemblage. Etc.)

Stolley, E. (1929)- Uber Ostindische Jura-Belemniten. Palaontologie von Timor, Schweizerbart, Stuttgart, 16, 29, p. 91-213.
('On East Indies Jurassic belemnites'. Belemnites from Molengraaff, Jonker and Weber collections from Timor, Roti, Misool, Sula islands, Seram, E Sulawesi and Yamdena/Tanimbar. Includes reports of Belemnopsis aucklandica from Timor (Ofu) and Roti, re-assigned to Belemnopsis uhligi-jonkeri group by Stevens 1964. B. aucklandica from Yamdena, re-described as Belemnopsis stolleyi by Stevens 1964)

Street, C. & P.R. Bown (2000)- Palaeobiogeography of Early Cretaceous (Berriasian-Barremian) calcareous nannoplankton. Marine Micropaleontology 39, p. 265-291.
(Early Cretaceous nannoplankton biogeographyWatznaueria spp. dominant in all settings. Assemblage composition relatively uniform between ~50° N and S. High-paleolatitude assemblages less rich, lower diversity and with more Crucibiscutum salebrosum, Stradnerlithus silveradius, Broinsonia matalosa, etc.. Argo Abyssal Plain, NW of Australia, southern high-latitude assemblage)

Taylor, B.A. & D.W. Haig (2001)- Barremian Foraminifera from the Muderong Shale, oldest marine sequence in the Cretaceous of the southern Carnarvon Basin, Western Australia. Micropaleontology 47, p. 125-143.
(E Cretaceous Muderong Shale from S Carnarvon Basin outcrop and wells with restricted marine Ammobaculites spp.- Haplophragmoides- Miliammina- Verneuilinoides association)

Thierry, J. (1976)- Paleobiogeographie de quelques Stephanocerataceae (Ammonitina) du Jurassique moyen et superieur; une confrontation avec la theorie mobiliste. Geobios 9, 3, p. 291-331.
(Paleogeography of Middle-Late Jurassic ammonites, showing 'Tethyan' Macrocephalites- Mayaites group distribution)

Van Gorsel, J.T. (1978)- Late Cretaceous orbitoidal foraminifera. In: R.H. Hedley and C.G. Adams (eds.) Foraminifera 3, Academic Press, London, p. 1-120.
(General review of Campanian- Maastrichtian orbitoidal larger foraminifera. In SE Asia members of 'Caribbean-Tropical Pacific' assemblage with Pseudorbitoides, Orbitoides, Asterorbis, etc. present in PNG, W Papua and E Philippines. Occurrence of Omphalocyclus in Kalimantan, never described elsewhere)

Van Gorsel, J.T. (2014)- An introduction to Mesozoic faunas and floras of Indonesia. Berita Sedimentologi 31, p. 27-56.
(online at: www.iagi.or.id/fosi/files/2014/12/BS31-Biostratigraphy_SEAsia_Part3.pdf)
(Review of Mesozoic fossils of Indonesia. Mesozoic-age faunas relatively widespread in Indonesia, from Sumatra, Java and Kalimantan in W to Sulawesi, Outer Banda Arc (Sumba, Timor, Tanimbar, Seram), Sula Islands and New Guinea in East. Triassic low-latitude Tethyan faunas present in both W and E Indonesia. Late Jurassic ammonites and bivalves from E Indonesia- New Guinea of more temperature character)

Von Hillebrandt, A., P. Smith, G.E.G. Westermann & J.H. Callomon (1992)- Ammonite zones of the Circum-Pacific region. In: G.E.G. Westermann (ed.) The Jurassic of the Circum-Pacific, Cambridge University Press, p. 247-272.
(Jurassic ammonite zonations of Circum-Pacific region. Lower Jurassic (Toarcian) ammonites known from Kalimantan, Sula Islands, Misool and Timor and Roti. M Jurassic ammonites mainly on Sula Islands and New Guinea (Bajocian-Bathonian Sulaites, Lower Callovian Macrocephalites keeuwensis assemblage. U Jurassic (Oxfordian Mayaites) also rich on Sula Islands; Kimmeridgean ammonites virtually unknown)

Von Hillebrandt, A., G.E.G. Westermann, J.H. Callomon & R.L. Detterman (1992)- Ammonites of the Circum-Pacific region. In: G.E.G. Westermann (ed.) The Jurassic of the Circum-Pacific, Cambridge University Press, New York, p. 342-359.

(Review of Jurassic ammonite stratigraphic and geographic distributions in Pacific region. Sula- New Guinea sub-province of Indo-Pacific Province in Bajocian- Bathonian, characterized by endemic Irianites, Satoceras and Praetulites. In Oxfordian more extended Indo-SE Pacific realm, with mayaitids also in New Zealand)

Wan, X., Y. Wu & G. Li (2003)- Distribution of Mid-Cretaceous Orbitolinids in Xizang (Tibet) and its paleobiogeographic implications. Acta Geologica Sinica 77, 1, p. 1-8. *(Chinese with English Abstract)*
(online at: www.jourlib.org/paper/4876549.V9XKwvkrKUk)
(Mid-Cretaceous Orbitolinid larger foraminifera common in Barremian- Cenomanian of shallow marine Neotethys margins. In Tibet limited to Lhasa Block (= SE Eurasia margin in M Cretaceous) and parts of Qiantang, extending E to Myanmar and W to Ladakh. Not present on India Plate)

Wandel, G. (1936)- Beitrage zur Kenntnis der Jurassischen Molluskenfauna von Misol, Ost Celebes, Buton, Seran und Jamdena. In: J. Wanner (ed.) Beitrage zur Palaeontologie des Ostindischen Archipels 13, Neues Jahrbuch Mineral. Geol. Palaeont., Beilage Band 75B, p. 447-526.
('Contributions to the knowledge of Jurassic molluscs from Misool, East Sulawesi, Buton, Seram and Yamdena'. Description of Mollusca, mainly collected by F. Weber. Misool faunas include upper Liassic Harpoceraten beds, lower Dogger Hammoceraten beds, Oxfordian Aucella malayomaorica marls (also in E Sulawesi), etc.)

Williams, G.L. & J.P. Bujak (1985)- Mesozoic and Cenozoic dinoflagellates. In: H. M. Bolli, J. B. Saunder & Katharina Perch-Nielsen (eds.) Plankton Stratigraphy, vol. 2, Radiolaria, diatoms, silicoflagellates, Cambridge University Press, p. 847-965.

Yabe, H. & S. Hanzawa (1926)- *Choffatella* Schlumberger and *Pseudocyclammina*- a new genus of arenaceous foraminifera. Science Reports Tohoku Imperial University, 2nd series, Geology, 9, p. 9-13.
(online at: http://ir.library.tohoku.ac.jp/re/bitstream/10097/30196/1/KJ00004178170.pdf)
(New genus name Pseudocyclammina for Late Jurassic foram 'Cyclammina' lituus from Torinosu Limestone of Japan, which species is very similar to Choffatella cyclamminoides n. sp. described by Silvestri (1925) from Sungi Tuni, Korinci, Jambi Province, Sumatra)

Yabe. H. & S. Toyama (1927)- *Cladocoropsis mirabilis* Felix from the Torinosu Limestone of Japan. Japan. J. Geol. Geogr. 5, p. 107-110.
(On (Late) Jurassic Cladocoropsis, a reefal sponge or branching stromatoporoid, in Pacific accreted terrane of Japan. (Frequently erroneously assigned to (Triassic) genus Lovcenipora. Widespread in Tethyan lagoonal-reefal limestone facies (Leinfelder et al. 2005), also known from Sumatra and Borneo))

Yin, J. & R. Enay (2004)- Tithonian ammonoid biostratigraphy in eastern Himalayan Tibet. Geobios 37, 5, p. 667-686.
(Rich ammonoid faunas in Tithonian- Lw Berriasian in E Himalayas of Tibet, with Tithonian Virgatosphinctes-Aulacosphinctoides and Uhligites-Aulacosphinctes; U Tithonian dominated by Blanfordiceras wallichi, etc. Strong affinities with E Indonesia- New Guinea and SW Pacific ammonoid faunas. Also presence of Kimmeridgean Sulaites Belemnopsis galoi)

Zhang, Q., A.P. Rasnitsyn, B. Wang & H. Zhang (2018)- Myanmarinidae, a new family of basal Apocrita (Hymenoptera: Stephanoidea) from mid-Cretaceous Burmese amber. Cretaceous Research 81, p. 86-92.
(online at: https://www.sciencedirect.com/science/article/pii/S019566711730366X)
(New family of wasps Myanmarinidae established from species discovered in M Cretaceous (E Cenomanian, ~99 Ma) Burmese amber from amber mines in Hukawng Valley of Kachin State, Myanmar)

X.4. Triassic

Ager, D.V. (1968)- The supposedly ubiquitous Tethyan brachiopod *Halorella*. J. Paleontol. Soc. India 5-9, p. 54-70.
(online at: http://palaeontologicalsociety.in/vol5/v11.pdf)
(Late Triassic rhynchonellid brachiopod Halorella common in Europe. Halorella nimassica described from Timor by Krumbeck (1921-1924) not true Halorella, but assigned to Timorhynchia n. gen.. Halorella spp. described from Seram by Wanner (1907) look more like true Halorella, but here placed in Halorelloidea)

Al-Shaibani, S., D. Altiner, P. Bronnimann, D.J. Carter & L. Zaninetti (1982)- *Triasina hantkeni* Majzon, 1954 (Foraminifere), dans le Trias superieur de la Tethys (Europe et Asie). Archives Sciences Geneve 35, 2, p. 137-142.
('Triasina hantkeni Majzon 1954 (foraminifer), in the Upper Triassic of the Tethys (Europe and Asia)'. Norian-Rhaetian small benthic foram Triasina, known in Tethys from Europe to E Indonesia)

Ando, H. (1987)- Paleobiological study of the Late Triassic bivalve *Monotis* from Japan. The University of Tokyo Museum Bull. 30, p. 1-110.
(online at: http://umdb.um.u-tokyo.ac.jp/DKankoub/Bulletin/no30/no30000.html)
(Monograph of Late Triassic 'flat clam' Monotis in Japan, with discusssion of global distribution)

BouDagher-Fadel, M.K. (2008)- The Mesozoic larger benthic foraminifera: the Triassic. In: Evolution and geological significance of larger benthic foraminifera, Chapter 3, Developments in Palaeontology and Stratigraphy, Elsevier, 21, p. 119-156.
(General review of Triassic foraminifera)

Brayard, A. & H. Bucher (2008)- Smithian (Early Triassic) ammonoid faunas from northwestern Guangxi (South China): taxonomy and biochronology. Fossils and Strata 55, p. 1-179.

Carter, E.S. (2007)- Global distribution of Rhaetian radiolarian faunas and their contribution to the definition of the Triassic-Jurassic boundary. In: S.G. Lucas & J.A. Spielmann (eds.) The global Triassic, New Mexico Museum of Natural History and Science Bull. 41, p. 27-31.
(online at: http://paleo.cortland.edu/globaltriassic/Bull41/09-Carter%20(radiolarians).pdf)
(Includes comparison with Rhaetian radiolarian faunas from Meto River, W Timor as described by Rose (1994). Assemblages not ypically Tethyan but mix of cosmopolitan taxa and species with stronger affinities to Japan and Philippines)

Chablais, J. (2010)- Sedimentology and biostratigraphy of the Upper Triassic atoll-type carbonates of the Sambosan Accretionary Complex (Panthalassan domain; Japan). Doct. Thesis Universite Geneve, Sc.4212, p. 1-204.
(online at: https://archive-ouverte.unige.ch/unige:8438)

Chablais, J., R. Martini, F. Kobayashi, G.M. Stampfli & T. Onoue (2011)- Upper Triassic foraminifers from Panthalassan carbonate buildups of Southwestern Japan and their paleobiogeographic implications. Micropaleontology 57, 2, p. 93-124.
(60 species of foraminifera in U Triassic atoll-type carbonates of Sambosan Accretionary Complex, SW Japan. With paleobiogeographic distribution analysis between Neo-Tethys and Panthalassa: six faunal provinces defined on foram assemblages)

Chablais, J., R. Martini & T. Onoue (2010)- *Aulotortus friedli* from the Upper Triassic gravitational flow deposits of the Kumagawa River (Kyushu, southwest Japan). Paleontological Research 14, 2, p. 151-160.
(Involutinid benthic foram Aulotortus friedli reported from U Triassic (Norian-Rhaetian) carbonates from capped seamount in Sambosan Accretionary Complex. From shallow-water limestone clasts in debris flow along Kumagawa River)

Chablais, J., R. Martini, S. Rigaud, E. Samankassou, T. Onoue & H. Sano (2008)- New Upper Triassic foraminifers of Sambosan accretionary complex (Japan); a tool for sedimentological and paleobiogeographic understanding of the Panthalassan Ocean. Abstracts 33rd Int. Geological Congress, Oslo *(Abstract only)*
(Late Jurassic- E Cretaceous Sambosan accretionary complex in SW Japan with U Triassic reefal limestones typical of seamount atoll in Panthalassan Ocean. Four foram associations: (1) lagoonal: common Aulotortidae, Nodosariidae and Endotebidae; (2) Back- and fore-reef: mainly Duostomina and Variostoma; (3) reefal: Galeanella, Hoyenella, Ophthalmidium and Cucurbita; (4) Shoal facies rich in ooids and near-monospecific Pilammina sulawesiana association (as known from Sulawesi). Carnian-Norian age matches Tethyan carbonate platform/ reefs in Alps and Asinepe Limestone in Seram. Foraminifera Tethyan tropical affinity, suggesting paleoposition at low-middle latitude in S Hemisphere, in agreement with presence of endemic foraminifers and corals of Timor and Sulawesi. Sambosan AC seamounts moved >15000 km to be accreted against Asian blocks. Distance in accordance with velocity and direction of plates related to Neo-Tethyan ridge opening)

Chablais, J., R. Martini, E. Samankassou, T. Onoue & H. Sano (2010)- Microfacies and depositional setting of the Upper Triassic mid-oceanic atoll-type carbonates of the Sambosan Accretionary Complex (southern Kyushu, Japan). Facies 56, p. 249-278

Chonglakmani, C. & J.A. Grant-Mackie (1984)- Handbook of Triassic index fossils (preliminary). Dept. Mineral Resources, Bangkok, 21p.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1984/24271.pdf)
(Selection of age-significant Triassic microfossils from Thailand and adjacent regions. Ammonites and thin-shelled molluscs (Daonella, Halobia, Monotis) most important. With 5 plates and range chart)

Cirilli, S. (2010)- Upper Triassic- lowermost Jurassic palynology and palynostratigraphy: a review. In: S.G. Lucas (ed.) The Triassic timescale, Geol. Soc., London, Spec. Publ. 334, p. 285-314.
(Late Triassic- E Jurassic palynostratigraphy and latitudinal control on distribution of 'Onslow' (rel. warm, southern Tethys margin) vs. 'Ipswich' (rel. cool, Gondwanan) microfloral provinces in S Hemisphere)

De Franceschi, D. & C. Vozenin-Serra (1997)- The Upper Vietnamese Triassic flora: palaeogeographical significance. Comptes Rendus Academie Sciences, Paris, ser. 2, 324, 4, p. 333-340.
(Vietnamese Triassic flora belongs to coastal floristic assemblage of SW Pacific. Affinities of plant-fossil assemblage with Krusin flora of NW Borneo)

Diener, C. (1918)- Nachtrage zur Dibranchiatenfauna der Halstatter Kalke. Jahrbuch Geol. Reichsanstalt, 1918, 68, 3, p. 475-492
(online at: http://opac.geologie.ac.at/wwwopacx/...)
('Additions to the Dibranchiate fauna of the Halstatter Limestone'. Mainly comparison of Late Triassic belemnoid faunas from Timor and North Calcareous Alps, Austria. In both areas very similar thin-ribbed Aulacoceras sulcatum group. Prefers to maintain Aulacoceras timorense Wanner as separate species)

Dobruskina, I.A. (1994)- Triassic floras of Eurasia. Osterrreich. Akademie Wissenschaften, Erdwissensch. Komm., Band 10, Springer Verlag, Vienna, p. 1-422.
(Review of Triassic floras, incl. from Thailand (Norian- Rhaetian near base of Khorat Group), Vietnam (Tonkin flora) and Sarawak (Krusin flora, near basal conglomerates of Halobia clastics series))

Dolby, J.H. & B.E. Balme (1976)- Triassic palynology of the Carnarvon Basin, Western Australia. Review Palaeobotany Palynology 22, p. 105-168.
(Five Triassic palynological assemblage zones in wells from Carnarvon Basin: I. Kraeuselisporites saeptatus (Griesbachian-Smithian, II. Tigrisporites playfordii (Smithian-Anisian), III. Staurosaccites quadrifidus (Anisian-Carnian), IV. Samaropollenites speciosus (Carnian) and V. Minutosaccus crenulatus (Carnian-?Norian). Provincialism in M-L Triassic floras:(1) Onslow microflora on NW Shelf, with mixed Gondwanan-European elements; (2) Ipswich microflora: less diverse Falcisporites-dominated assemblages in E and S Australia; European elements not present)

Foster, C.B., B.E. Balme & R. Helby (1994)- First record of Tethyan palynomorphs from the Late Triassic of East Antarctica. J. Australian Geol. Geophysics 15, p. 239-246.
(online at: www.ga.gov.au/corporate_data/49409/Jou1994_v15_n2.pdf)
('Onslow-type'/ 'Tethyan' Norian microflora from Prince Charles Mts, E Antarctica, with Minutosaccus crenulatus, Ovalipollis ovalis, Samaropollenites speciosus, Falcisporites australis, etc.)

Gardin, S., L. Krystyn, S. Richoz, A. Bartolini & B. Galbrun (2012)- Where and when the earliest coccolithophores? Lethaia, 10.1111, 17p.
(First coccoliths appear in Late Triassic, with oldest species Crucirhabdus minutus and Prinsiosphaera triassica appearing in latest Norian. Across Norian-Rhaetian boundary increase in abundance of Prinsiosphaera triassica and appearance of Euconusphaera zlambachensis (two most important Rhaetian pelagic carbonate producers). Both present on Timor, Wombat Plateau (NW Australia) (also on Seram?; JTvG))

Grant-Mackie, G.A. (1975)- The stratigraphy and taxonomy of the Upper Triassic bivalve *Monotis* in New Zealand. Ph.D. Thesis University of Auckland, p. 1-380.
(online at: https://researchspace.auckland.ac.nz/handle/2292/2580)
(20 taxa recognized in New Zealand Late Triassic bivalve genus Monotis)

Grant-Mackie, G.A. (1978)- Subgenera of the Upper Triassic bivalve *Monotis*. New Zealand J. Geol. Geophysics 21, 1, p. 97-111.
(online at: www.tandfonline.com/doi/abs/10.1080/00288306.1978.10420726)
(Proposal of five subgenera of Monotis. Monotis s.s. resembles salinaria group, M. (Entomonotis) includes M. ochotica, subcircularis, and zabaikalica groups; M. (Eomonotis) typha group and M. (Maorimonotis))

Grant-Mackie, G.A. (1978)- Systematics of New Zealand *Monotis* (Upper Triassic Bivalvia)- subgenus *Entomonotis*. New Zealand J. Geol. Geophysics 21, 4, p. 483-500.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1978.10424073)

Hallam, A. (1981)- The end-Triassic bivalve extinction event. Palaeogeogr. Palaeoclim. Palaeoecology 35, p. 1-44.
(Important mass extinction episode in latter part of Triassic, affecting primarily deeper marine taxa like bivalves Halobia and Monotis. Major extinction of other bivalves, corals, ammonites, etc. at end of Triassic, possibly related to major eustatic sea level drop?)

Hasibuan, F. (2010)- The Triassic marine biota of Eastern Indonesia and its interregional and global correlation: a review. J. Geologi Indonesia 5, 1, p. 31-47.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/263)
(Marine macrofossil biostratigraphy of Triassic in Indonesia. Mainly on ammonoids from Timor and Misool, and correlations with regions outside Indonesia)

Hasibuan, F. & Purnamaningsih (1998)- Pre-Tertiary biostratigraphy of Indonesia. In: J.L. Rau (ed.) Proc. 34th Sess. Coord. Comm. Coastal Offshore Geoscience Programmes E and SE Asia (CCOP), Taejon, Korea 1997, 2, Techn. Repts., p. 40-54.
(Review of Paleozoic- Mesozoic marine macrofossil biostratigraphy of Indonesia, particularly in Misool island)

Hautmann, M. (2001)- Die Muschelfauna der Nayband-Formation (Obertrias, Nor- Rhat) des ostlichen Zentraliran. Beringeria 29, p. 1-181.
(online at: http://opus.bibliothek.uni-wuerzburg.de/frontdoor/index/index/docId/1817)
('The bivalve fauna of the Nayband-Formation (U Triassic, Norian-Rhaetian) of east-central Iran'. Well-preserved bivalve fauna with >100 species. Paleogeographic analysis of Tethyan bivalve faunas suggests E Tethys province, with N (Iran, Yunnan, Vietnam, Burma, W Sumatra) and S subprovince (Lhasa-block, E Indonesia terranes; attached to Gondwana until end Triassic and separated later by opening of 'Ceno-Tethys' Ocean (= Mesotethys?; JTvG))

Hautmann, M., M.J. Benton & A. Tomasovych (2008)- Catastrophic ocean acidification at the Triassic-Jurassic boundary. Neues Jahrbuch Geol. Palaont., Abhandl. 249, p. 119-127.
(On end-Triassic extinction of reefal organisms and end of carbonate deposition at Triassic- Jurassic boundary in many parts of world, caused by ocean acidification, tied to volcanic degassing)

Hautmann, M. (2012)- Extinction: end-Triassic mass extinction. In: eLS online, John Wiley & Sons, p. 1-10.
(On mass extinction at end of Triassic, at ~200 Ma. This event eliminated conodonts and nearly annihilated corals, sphinctozoan sponges and ammonoids. Probably caused by volcanic activity of Central Atlantic Magmatic Province. Lead to virtual absence of reef systems for nearly 10 Myrs in E Jurassic).

Helby, R., V.D. Wiggins & G.J. Wilson (1987)- The circum-Pacific occurrence of the Late Triassic dinoflagellate *Sverdrupiella*. Australian J. Earth Sci. 34, p. 151-152.
(Late Triassic dinoflagellate genus Sverdrupiella Bujak and Fisher widespread, abundant and relatively diverse in Norian strata. Reported from Seram, E Indonesia, in Norian Kanikeh Fm, associated with undescribed dinoflagellate suite including suessioids and Heibergella (=Hebecysta balmei zone?; JTvG). Circum-Pacific distribution of Sverdrupiella in Late Triassic similar to distribution of Late Triassic bivalve Monotis)

Hinde, G.J. (1908)- Radiolaria from Triassic and other rocks of the Dutch East Indian Archipelago. In: R.D.M. Verbeek, Molukkenverslag. Geologische verkenningstochten in het oostelijke gedeelte van den Nederlandsch Oostindische Archipel. Jaarboek Mijnwezen Nederlandsch Oost-Indie 37 (1908), Wetenschappelijk Gedeelte, p. 694-736.
(Radiolaria from Timor, Savu, Ceram, Sulawesi, Buru and Mangoli collected by Verbeek, probably mainly of Late Triassic-Jurassic age. 83 species identified, 74 new. Richest assemblages from Halobia-Daonella-bearing cherty limestones from Rote and Savu and Halobia limestone from Timor. Fewer, but similar species in loose chert pebbles collected at Seram and E Sulawesi)

Ichikawa, K. (1958)- Zur Taxonomie und Phylogenie der triadischen ĂPteriidae" (Lamellibranchiata) mit besonder Berucksichtigung der Gattungen *Claraia, Eumorphotis, Oxytoma* und *Monotis*. Palaeontographica, A111, 5-6, p. 131-212.
('On the taxonomy and phylogeny of the Triassic 'Pteridae' (Lamellibranchiata), with particular emphasis on the genera Claraia, Eumorphotis, Oxytoma und Monotis'. Includes description of new species Monotis (Entomonotis) timorica from Timor (which is same as Monotis subcircularis Gabb; Westermann 1962))

Ishibashi, T. (1975)- Some Triassic ammonites from Indonesia and Malaysia. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 16, p. 45-56

Jasin, Basir (2018)- Radiolarian biostratigraphy of Malaysia. Bull. Geol. Soc. Malaysia 65, p. 45-58.
(online at: https://gsmpubl.files.wordpress.com/2018/08/bgsm201805.pdf)
(Two types of radiolarian cherts in Malaysia:bedded chert and chert blocks. Bedded cherts in Peninsular Malaysia mainly in Western Belt (Kubang Pasu, Kenny Hill and Semanggol Fms). In Sabah in Sabah Ophiolite Complex. In Sarawak bedded cherts in Serian Volcanic Fm and basal part of Pedawan Fm. Chert blocks mainly in Bentong Raub Suture Zone of Peninsular Malaysia and melanges of Sabah and Sarawak. Radiolarians from Peninsular Malaysia Late Devonian-Triassic, with 16 biozones identified. Radiolarians from Sabah and Sarawak E Jurassic- Cretaceous ages. Five hypersiliceous periods, related to volcanism: Late Devonian-E Carboniferous, Permian, Triassic, E Jurassic and Late Jurassic-Cretaceous)

Kanmera, K. (1964)- Triassic coral faunas from the Konose Group in Kyushu. Mem. Fac. Science, Kyushu Unversity, Ser. D Geology, 15, p. 117-147.
(Corals from U Triassic Pacific seamount limestones in Japan. Includes mention of species previously known only from Timor)

Kobayashi, F., R. Martini & L. Zaninetti (2005)- Anisian foraminifers from allochthonous limestones of the Tanoura formation (Kurosegawa Terrane, West Kyushu, Japan). Geobios.38, 6, p. 751-763.

(35 species of M Triassic foraminifera in allochthonous oolitic limestone blocks in Carnian Tanoura Fm in Kurosegawa Terrane of W Kyushu. Blocks of Anisian in age, based on Pilammina densa and Meandrospira dinarica, associated with Triadodiscus, Aulotortus, etc.. Terrane was part of N Gondwana margin, then isolated eastwards before E Cretaceous amalgamation with S China in E Cretaceous)

Kobayashi, T. & T. Kimura (1944)- A study on the radiolarian rocks. J. Fac. Science, Imperial University Tokyo, sec. 2, 7, 2, p. 75-187.
(Includes review of Paleozoic- Mesozoic radiolaria data from Sumatra, Kalimantan, etc. Kalimantan Danau Fm radiolaria transitional between Jurassic and Carboniferous faunas, therefore possibly more likely of Triassic age. Cherts in Tuhul Fm of S Sumatra are M-L Triassic or Permo-Triassic in age)

Kobayashi, T. & M. Tamura (1983)- The Arcto-Pacific Realm and the Trigoniidae in the Triassic Period. Proc. Japan Academy 59, B, p. 207-210.
(Family Trigoniidae evolved from Myophoriidae polyphyletically in M and Late Triassic. Triassic bivalves of New Zealand, New Caledonia and New Guinea constitute distinct fauna. U Triassic cosmopolitan genus Monotis with paleogeographically restricted species; Borneo is junction of three Monotis seas: (1) salinaria group, distributed from Europe-Himalaya to Borneo; (2) ochotica group from Siberia to Borneo through Japan and (3) subcircularis group from Canada to New Zealand and Borneo through E Pacific coast)

Kobayashi, T. & M. Tamura (1984)- The Triassic Bivalvia of Malaysia, Thailand and adjacent areas. In: T. Kobayashi et al. (eds.) Geology and Palaeontology of Southeast Asia 25, University of Tokyo Press, p. 201-227.
(Review of Triassic bivalves Claraia, Daonella-Halobia, Monotis, Trigoniaceae (incl. Myophoria, Costatoria), megalodontids in Malay Peninsula, Thailand and Sumatra)

Koike, T. (1984)- Summary of Triassic conodonts of Southeast Asia. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 295-302.
(Brief review of Triassic conodont faunas in Malay Peninsula, Thailand and Indonesia (Carnian of Lake Toba, Sumatra; Anisian-Ladinian and Carnian and W Timor; Norian of Timor Leste))

Kristan-Tollmann, E. (1988)- A comparison of Late Triassic agglutinated foraminifera of Western and Eastern Tethys. Abhand. Geol. Bundesanstalt, Vienna, 41, p. 245-253.
(online at: www.landesmuseum.at/pdf_frei_remote/AbhGeolBA_41_0245-0253.pdf)
(Examples of common species of Triassic arenaceous and calcareous agglutinated foraminifera across Tethys realm (mainly from Austrian Calcareous Alps, PNG Kuta Limestone and Timor). Timor fauna includes Verneulinoides mauritii and Variostoma helictum)

Kristan-Tollmann, E. (1991)- Triassic Tethyan microfauna in Dachstein limestone blocks in Japan. In: T. Kotaka, J.M. Dickins et al. (eds.) Proc.Int. Symp. Shallow Tethys 3, Sendai 1990, Saito Hoon Kai Spec. Publ. 3, p. 35-49.
(First description of U Triassic foraminifera from Panthalassan seamount reefal limestone in Sambosan accretionary complex in Japan; see also Chablais et al. 2008)

Kristan-Tollmann, E. (1995)- Weitere Beobachtungen an Rhatischen nannofossilien der Tethys. Geol. Palaont. Mitteilungen Innsbruck 20, p. 1-11.
(online at: www2.uibk.ac.at/downloads/c715/gpm_20/20_001-011.pdf)
('Additional observations on Rhaetian nannofossils of the Tethys'. Eoconusphaera zlambachensis and Prinsiosphaera triassica are most common species in uppermost Triassic of calcareous Alps; also present off Wombat Plateau, NW Australia, confirming Tethys-wide distribution)

Kummel, B. (1969)- Ammonoids of the Late Scythian (Lower Triassic). Bull. Museum Comparative Zoology, Harvard University, 137, p. 311-701.
(online at: www.archive.org/details/bulletinofmuseum13719681969harv)
(Treatise on Early Triassic/ Scythian ammonoids, including material from Timor (p. 349-351), mainly from 'Block E near Nifoekoko', described previously by Welter (1922). Contains Hungarites, Pronorites spp, etc.)

McRoberts, C.A. (2008)- Rhaetian (Late Triassic) *Monotis* (Bivalvia: Pectinoida) from the eastern Northern Calcareous Alps (Austria) and the end-Norian crisis in pelagic faunas. Palaeontology 51, 3, p. 721-735.
(Species of marine bivalves of pectinoid genus Monotis provide useful biochronologic indices for Late Triassic (M Norian-earliest Rhaetian). Profound extinction event in pelagic realm at Norian-Rhaetian boundary where ~15 monotids became extinct. Surviving Monotis dwarfed compared to Norian predecessors)

McRoberts, C.A. (2010)- Biochronology of Triassic bivalves. In: S.G. Lucas (ed.) The Triassic Timescale, Geol. Soc., London, Spec. Publ. 334, p. 201-219.
(General zonation scheme for Triassic based on bivalves Claraia, Peribositria, Enteropleura, Daonella (M Triassic), Halobia (Carnian-M Norian), Eomonotis and Monotis (Late Norian). Widely distributed across Tethys, Panthalassa and Boreal regions)

Metcalfe, I. & R.S. Nicol (2007)- Conodont biostratigraphic control on transitional marine to non-marine Permian-Triassic boundary sequences in Yunnan-Guizhou, China. Palaeogeogr. Palaeoclim. Palaeoecology 252 p. 56-65.
(Permian- Triassic boundary defined by first appearance of conodont species Hindeodus parvus, also bivalve Claraia. In S Chian Permo-Triassic boundary marked by two volcanic ash beds)

Metcalfe, I., R.S. Nicoll & B.R. Wardlaw (2007)- Conodont index fossil *Hindeodus changxingensis* Wang fingers greatest mass extinction event. Palaeoworld 16, p. 202-207.
(Marine conodont fossil species, Hindeodus changxingensis restricted to very narrow stratigraphic interval from Permian-Triassic extinction event into very earliest Triassic ('disaster species'?). Geographically widespread in Tethyan Region)

Nicoll, R.S. & C.B. Foster (1998)- Triassic biozonation and stratigraphy, 1998 Chart 20. Australian Geol. Survey Org. (AGSO), 1p. *(chart)*
(online at: www.ga.gov.au/corporate_data/76687/Chart_20_NWS_Triassic.pdf)

Nicoll, R.S., I. Metcalfe & C.Y. Wang (2002)- New species of the conodont genus *Hindeodus* and the conodont biostratigraphy of the Permian-Triassic boundary interval. J. Asian Earth Sci. 20, 6, p. 609-631.
(Four new species of conodont genus Hindeodus just above Permian- Triassic boundary in S. China; boundary based on first appearance of Hindeodus parvus. Change in conodont biofacies at P-T boundary from Neogondolella (Clarkina)-dominated faunas to Hindeodus-dominated faunas, associated with increase in silt)

OčDogherty L., E.S. Carter, P. Dumitrica, S. Gorican, P. De Wever, A. Hungerbuhler, A.N. Bandini & A. Takemura (2009)- Catalogue of Mesozoic radiolarian genera. Part 1: Triassic. Geodiversitas 31, 2, p. 213-270.

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(General discussion of Triassic radiolarian biostratigraphy. Work on Triassic in Indonesia limited to Sashida et al. 1999 on Timor. Many studies on Thailand Triassic)

Payne, J.L., M. Summers, B.L. Rego, D. Altiner, J. Wei, M. Yu & D.J. Lehrmann (2011)- Early and Middle Triassic trends in diversity, evenness, and size of foraminifers on a carbonate platform in south China: implications for tempo and mode of biotic recovery from the end-Permian mass extinction. Paleobiology 37, 3, p. 409-425.
(Gradual increase in diversity of foraminifera through E- M Triassic. Model of E-M Triassic carbonate platform of 'Great Bank of Guizhou', S China: E Triassic with widespread thrombolite limestone, M Triassic (Anisian) platform margin Tubiphytes reef, etc.)

Payne, J.L. & B. van de Schootbrugge (2007)- Life in Triassic oceans: links between planktonic and benthic recovery and radiation. In: P. Falkowski & A.H. Knoll (eds.) Evolution of primary producers in the sea, Academic Press, Amsterdam, p. 165-189.

(Review of faunal trends through Triassic. E Triassic global reef gap after end-Permian extinctions, commonly associated with black shale. Increase in coral and algal diversity through M Triassic, but reefs dominated by Tubiphytes. E-M Carnian reefs dominated by Porifera, Norian-Rhaetian reefs dominated by corals. E Jurassic is another reef gap, again with common black shale)

Peybernes, C. (2016)- Upper Triassic mid-oceanic shallow water ecosystems of the Panthalassa Ocean: insights from the Sambosan Accretionary Complex, Southwest Japan. Doct. Thesis Universite de Geneve, Sc 4914, p. 1-229.
(online at: https://archive-ouverte.unige.ch/unige:84250)
(U Triassic carbonates of Sambosan Accretionary Complex in SW Japan: (1) limestone clasts embedded in volcaniclastic matrix with microbialite-rich Ladinian?- Lower Carnian reef biota; (2) sponge-dominated Late Carnian- Norian (Rhaetian?) reefs (built on top of basalts of low-latitude Panthalassic seamount). Paleogeographic affinities with S. Tethys. Limestone commonly as clasts in volcanoclastic breccias, probably mass-movement deposits from seamount collapse in mid-oceanic realm (very few ooids?))

Peybernes, C., J. Chablais & R. Martini (2015)- Upper Triassic (Ladinian?-Carnian) reef biota from the Sambosan Accretionary Complex, Shikoku, Japan. Facies 61, 4, p. 1-27.
(M-L Triassic (Ladinian?-Carnian) reef limestone from Sambosan Accretionary Complex, Shikoku Island, SW Japan, with scleractinian corals, calcified sponges, calcareous algae, foraminifera and microproblematica (older than previously identified reef limestones in Sambosan Complex))

Peybernes, C., J. Chablais, T. Onoue, G. Escarguel & R. Martini (2016)- Paleoecology, biogeography, and evolution of reef ecosystems in the Panthalassa Ocean during the Late Triassic: Insights from reef limestone of the Sambosan Accretionary Complex, Shikoku, Japan. Palaeogeogr. Palaeoclim. Palaeoecology 457, p. 31-51.
(Ur Triassic sponge-coral- Tubiphytes reef limestone from Sambosan Accretionary Complex at Shikoku Island, Japan, with two types of reefs, Ladinian?- E Carnian and Late Carnian-Rhaetian? Strong paleobiogeographic affinity of Late Triassic W Panthalassa reef biota with those of S Tethys Ocean)

Peybernes, C., J. Chablais, T. Onoue & R. Martini (2016)- Mid-oceanic shallow-water carbonates of the Panthalassa domain: new microfacies data from the Sambosan Accretionary Complex, Shikoku Island, Japan. Facies 62, 4, p. 1-27.
(During Late Triassic carbonate platforms expanded on continental shelves and island arcs in Tethys realm and coeval mid-oceanic shallow-water environments of Panthalassa domain. U Triassic limestone of Sambosan Accretionary Complex, SW Japan, suggests typical Sambosan platform probably carbonate bank with submerged margins and mosaic of microfacies in platform interior instead of atoll-type platform)

Retallack, G.J. (1977)- Reconstructing Triassic vegetation of eastern Australasia; a new approach for the biostratigraphy of Gondwanaland. Alcheringa 1, 3-4, p. 247-278.

Rettori, R. (1995)- Foraminiferi del Trias inferiore e medio della Tetide: revisione tassonomica, stratigrafica ed interpretazione filogenetica. Doct. Thesis, Dept. Geologie et Paleontologie, Universite de Geneve, p. 1-147. *(In Italian; Unpublished)*
('Foraminifera of the lower and middle Trias of the Tethys: taxonomic review, stratigraphic and phylogenetic interpretation'. Revised taxonomy of E and M Triassic foramifera from Tethys region)

Rigaud, S., R. Martini, R. Rettori & G.D. Stanley (2010)- Stratigraphic potential of the Upper Triassic benthic foraminifers. Albertiana 38, p. 34-39.
(online at: http://archive-ouverte.unige.ch/unige:6737)
(Summary of rich Carnian-Norian benthic foraminiferal assemblages in isolated limestone remnant of Panthalassa Ocean in N Wallowa Mts, Oregon. Foraminifera ~75% well-known Tethyan species, with comparable stratigraphic distribution, incl. Triasina oberhauseri, Aulotortus tumidus, A. communis, A. tenuis, etc. Also with Norian Heterastridium conglobatum)

Rigaud, S., R. Martini & R. Rettori (2013)- A new genus of Norian involutinid foraminifers: its morphological, biostratigraphic, and evolutionary significance. Acta Palaeontologica Polonica 58, 2, p. 391-405.
(online at: www.app.pan.pl/archive/published/app58/app20110072.pdf)
(New genus name Aulosina for Late Triassic (Norian- E Rhaetian) involutinid foram Triasina oberhauseri, morphologically transitional between Aulatortus and (Rhaetian) Triasina hantkeni)

Schafer, P. & J.A. Grant Mackie (1998)- Revised systematics and palaeobiogeography of some Late Triassic colonial invertebrates from the Pacific region. Alcheringa 22, 1-2, p. 87-122.
(Revision of U Triassic colonial organisms from New Zealand, New Caledonia, Timor, etc. Heterastridium conglobatum, a hydrozoan of uncertain affinity and possible pelagic lifestyle, is known from Norian of Tethys (Hallstatt Lst in Alps, Middle East, etc.), Timor, New Caledonia, New Zealand and W North America. 'Monotrypella timorica' is calcareous demosponge)

Stanley G.D. & T. Onoue (2015)- Upper Triassic reef corals from the Sambosan Accretionary Complex, Kyushu, Japan. Facies 61, 1, p. 1-27.
(Ten U Triassic coral taxa, incl. Retiophyllia, from limestones of Sambosan accretionary complex of Japan, with remains of reefs and carbonate sediment deposited on Pacific volcanic atolls. High degree of endemism; some paleogeographic connection with W Tethys, Pamir Mts and Timor (Craspedophyllia ramosa Roniewicz))

Thenius, E. (1980)- Zum Problem der Ăzirkumpazifischen" und der Tethys-Verbreitung mariner Evertebraten in der Trias. Annalen Naturhistorischen Museum Wien 83, p. 285-301
(online at: www.landesmuseum.at/pdf_frei_remote/ANNA_83_0285-0301.pdf)
('On the problem of 'Circum-Pacific' and the Tethys distribution of marine invertebrates in the Triassic'. Figure 2 shows distribution of Norian bivalve Monotis, modified from Westermann (1973): in Indonesia with 'Arctic-W Pacific' M. ochotica and M. subcircularis in NW Kalimantan, with 'Tethyan' M. salinaria and M. subcircularis on Timor)

Vachard, D. & H. Fontaine (1988)- Biostratigraphic importance of Triassic foraminifera and algae from South-East Asia. Revue Paleobiologie, Geneve, 7, 1, p. 87-98.
(Triassic forams from Thailand, NW Malay Peninsula, Indonesia (Sibaganding limestone of Sumatra, Seram), Philippines (Malajon Island), Myanmar, Vietnam)

Van Voorthuysen, J.H. (1940)- Beitrag zur Kenntnis des inneren Baus von Schale und Sipho bei triadischen Ammoniten. Doct. Thesis, University of Amsterdam, p. 1-143.
(Study of internal structure of U Triassic ammonites from Timor (Tropitida, Placites spp., Cladiscitidae, Phylloceratidae and Arcestidae))

Vozenin-Serra, C. (1971)- Notes sur des bois Mesozoiques et Cenozoique du Viet-nam et du Cambodge. Archives Geol. Vietnam 14, p. 1-47.
('Notes on the Mesozoic and Cenozoic woods from Vietnam and Cambodia')

Vozenin-Serra, C. (1977)- Contribution a lœtude de la paleoflore du Sud-est Asiatique (Cambodge, Laos, Vietnam). These Doct. Etat., Universite de Paris, p. 1-310. *(Unpublished)*
('Contribution to the study of the paleoflora of SE Asia (Cambodia, Laos, Vietnam)')

Vozenin-Serra, C. (1983)- Etat de nos connaissances sur les flores mesozoiques du Sud-Est Asiatique. Comptes Rendus 108e Congres Nat. Soc. Savantes, Grenoble 1983, 1, Sciences de la Terre, 2, p. 101-116.
('Status of our knowledge of the Mesozoic floras of SE Asia'. Review of Triassic-Cretaceous floras, mainly from Vietnam, Thailand, etc.. For Indonesian region only mentions W Sarawak Krusin flora of Kon'no 1972, which is part of Late Triassic 'Dictyophyllum- Clathropteris floral province' of SW Pacific at end-Triassic (also known from Vietnam, Thailand, W Japan))

Vozenin-Serra, C. (1984)- Etat de nos connaissances sur les flores du Paleozoique superieur et du Mesozoique du Sud-Est Asiatique. Interpretations paleogeographiques. Mem. Soc. Geologique France 147, p. 169-181.

('Status of our knowledge of the Upper Paleozoic and Mesozoic floras of SE Asia and paleogeographic interpretations')

Westermann, G.E.G. (1973)- The Late Triassic bivalve Monotis.

Westermann, G.E.G. (1973)- Species distribution of the world-wide Triassic pelecypod *Monotis* Bronn. Proc. 22nd Int. Geological Congress, India 1964, Sect. 8, p. 374-389.

Zammit, M. (2010)- A review of Australasian ichthyosaurs. Alcheringa 34, 3, p. 281-292.
(Ichthyosaur fossils recorded from M Triassic of Timor (Mixosaurus sp.), from U Triassic of New Caledonia (Shonisauru) and Lower Cretaceous of Australia and New Zealand (Platypterygius))

Zaninetti, L. (1976)- Les foraminiferes du Trias, essai de synthese et correlation entre les domaines mesogeens europeen et asiatique. Rivista Italiana Paleontol. Strat. 82, p. 1-258.
(Synthesis of Triassic foraminifera and correlation between European and Asian domains)

X.5. Paleozoic

Archbold, N.W. (1983)- West Australian Permian brachiopoda: their taxonomy, biostratigraphy and provincialism; with an appendix of published articles including a description of Permian brachiopoda from Irian Jaya, Indonesia. Ph.D. Dissertation, University of Melbourne, 2 vols.

Archbold, N.W. (2001)- Permian Productida of Australasia: palaeobiogeographical and palaeoclimatological implications. In: S.L. Long et al. (eds.) Brachiopods, chapter 37, CRC Press, p. 363-371.
(Permian Productid brachiopods few genera in common between Westralian (rel. warm, S Tethys margin) and Austrazean (colder water, mainly endemics, strong links with New Zealand) provinces)

Archbold, N.W. & T. Hogeboom (2000)- Subsurface brachiopoda from borehole cores through the Early Permian sequence of the Carnarvon Basin, Western Australia: correlations with palynological biostratigraphy. Proc. Royal Soc. Victoria 112, 1, p. 93-109.
(Early Permian brachiopods from five wells in onshore Carnarvon Basin, tied to spore-pollen zonation. Four earliest Permian brachiopod zones of W Australia (Lyonia lyoni, Trigonotreta occidentalis, Strophalosia irwinensis and Strophalosia jimbaensis zones, in ascending order) correlated with palynological zones (Granulatisporites confluens, Pseudoreticulatispora pseudoreticulata, Striatopodocarpites fusus, Didecitriletes byroensis and Microbaculispora trisina zones, in ascending order))

Asama, K., A. Hongnusonthi, J. Iwai, E. Konôno, S.S. Rajah & M. Veeraburas (1975)- Summary of the Carboniferous and Permian plants from Thailand, Malaysia and adjacent areas. In: T. Kobayashi & R. Toriyama (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 15, p. 77-101.
(online at: http://library.dmr.go.th/library/DMR_Technical_Reports/1975/324.pdf)
(Oldest plants in SE Asia from Lower Carboniferous: known from Malaysia only (Kuantan flora, with Lepidodendron, on E Malaya Block). Five known Permian floras. Permian Jambi flora of Sumatra greatest similarities with Artinskian-Kungarian Shansi Fm of N China. Four other U Permian Cathaysian floras with Gigantopteris: Linggiu and Jengka floras from E Malay Peninsula; Phetchabun and Loei floras of N Thailand. Permian plants from W New Guinea are Gondwana-type flora, but some apparent Cathaysian elements)

Belasky, P. (1994)- Biogeography of Permian corals and the determination of longitude in tectonic reconstructions of the Paleopacific region. Canadian Soc. Petrol. Geol. Spec. Publ., p. 621-646.
(Mainly focused on American terranes. South China was center of diversity of Permian Tethyan coral province and was located near Permian equator and W margin of Paleopacific Ocean)

BouDagher-Fadel, M.K. (2008)- The Palaeozoic larger benthic foraminifera: the Carboniferous and Permian. In: Evolution and geological significance of larger benthic foraminifera, Chapter 2, Developments in Palaeontology and Stratigraphy, Elsevier, 21, p. 39-118.
(General review of Paleozoic larger foraminifera, mainly Carboniferous-Permian fusulinids. End of Permian is major extinction event)

Bronnimann, P., J.E. Whittaker & L. Zaninetti (1978)- *Shanita*, a new pillared Miliocean foraminifera from the Late Permian of Burma and Thailand. Rivista Italiana Paleont. 84, p. 63-92.
(New late M- Late Permian pillared miliolid Shanita amosi from W margin of Shan Plateau, E Myanmar. Species mainly characteristic of M Permian of Sibumasu terranes?)

Broutin, J., J. Yu, X. Shi, W. Shu & X. Qing (2020)- Terrestrial palaeofloral succession across the Permian-Triassic Boundary in the North and South China blocks: a brief review. Palaontologische Zeitschrift, p. *(in press)*
(From Late Cisuralian (E Permian)- M Lopingian, N and S China blocks located in the equatorial domain. Both with homogeneous 'Cathaysian Palaeoflora', resulting from Cisuralian southern extension and diversification from northern cradle of Cathaysian plants to South. Progressive change in floral successions due to N-ward drift of N China block, while S China block remained in sub-equatorial domain)

Cantrill, R.C. (2003)- Aspects of Ordovician conodonts and the stratigraphy of Thailand, Malaysia, and Tasmania. Ph.D. Thesis, University of Tasmania, p. 1-158
(online at: http://eprints.utas.edu.au/19158/1/whole_CantrillRobinCrawford2003_thesis.pdf)
(Incl. Ordovician conodonts from shallow tropical Lower Setul Lst from Langkawi Island (Tremadoc- Ashgill), Thung Song Lst of mainland Thailand and Ko Tarutao, Karmberg Lst of central S Tasmania)

Cantrill, R.C. & C. Burrett (2003)- The Greater Gondwana distribution of the Ordovician conodont *Panderodus nogamii* (Lee) 1975. Courier Forschungsinstitut Senckenberg 245, 1, p. 407-421.
(Panderodus nogamii (formerly Scolopodus nogamii), first described from N Korea, also in Lw Ordovician of Thailand, Malaysia, N and S China, Australia and Argentina. It ranged through M- early U Ordovician and was restricted to shallow water carbonates in tropical- subtropical paleolatitudes of Greater Gondwana)

Chapman, F. & W.J. Parr (1937)- On the discovery of fusulinid foraminifera in the Upper Palaeozoic of Northwest Australia. Victorian Naturalist 53, p. 175-179.
(Describe presence of fusulinid genera Verbeekina and Neoschwagerina in NW Australia. These were later shown to be fish remains (Crespin 1958, Quilty 1975). (No fusulinid forams recorded yet from Australia, but present on Timor and possibly also in Birds Head of New Guinea; JTvG)

Cleal, C.J. (2017)- A global review of Permian macrofloral biostratigraphical schemes. In: S.G. Lucas & S.Z. Shen (eds.) The Permian Timescale, Geol. Soc., London, Spec. Publ. 450, p.
(Incl. mention of Djambi flora of Sumatra, which may be regarded as transitional flora with taxa characteristic of both Euramerica (e.g. medullosaleans and marattialean ferns) and Cathaysia (e.g. Tingia, Cathaysiodendron) realms)

De D. Hornibrook, N. (1951)- Permian fusulinid foraminifera from the North Auckland Peninsula, New Zealand. Trans. Royal. Soc. New Zealand 79, 2, p. 319-321.
(online at: http://rsnz.natlib.govt.nz/volume/rsnz_79/rsnz_79_02_004230.pdf)
(Permian fusulinid foraminifera from limestone blocks associated with spilitic pillow lavas from Whangaroa Harbour, North Island, are first record of fusulines New Zealand. Verbeekina, Neoschwagerina margaritae, Yabeina multiseptata probably of M Permian (Wordian- Capitanian) age)

De Neve, G.A. (1961)- Correlation of fusulinid rocks from southern Sumatra, Bangka, and Borneo, with similar rocks from Malaya, Thailand and Burma. Proc. 9th Pacific Science Congress, Bangkok 1957, Geology and Geophysics 12, p. 249. *(Abstract only)*
(Four occurrences of U. Paleozoic rocks with fusulinids in Indonesia, incl. Sumatra localities of limestone with Neoschwagerina and Fusulina spp. in Palembang area, S Sumatra, (3a) E of Bukit Pendopo, discovered by Keil and (3b) 18 km W of Palembang, in Sekaju area pebbles with fusulinids in Old Neogene conglomerate by Van Tuijn (1931))

Dickins, J.M. (1956)- Permian pelecypods from the Carnarvon Basin, Western Australia. Bureau Mineral Res. Geol. Geophysics, Bull. 29, p. 1-42.
(online at: https://s3-ap-southeast-2.amazonaws.com/corpdata/224/Bull_029.pdf)

Dickins, J.M. (1957)- Permian pelecypods and gastropods from the Carnarvon Basin, Western Australia. Bureau Mineral Res. Geol. Geophysics, Bull. 41, p. 1-75.

Dickins, J.M. (1963)- Permian pelecypods and gastropods from Western Australia. Bureau Mineral Res. Geol. Geophysics, Bull. 63, p. 1-203.
(online at: https://d28rz98at9flks.cloudfront.net/173/Bull_063.pdf)
(>150 species of pelecypods and 60 gastropods from Permian of Carnarvon Basin, and Canning/ Fitzroy Basins. Lower Permian four stages, lower stage characterized by 'Eurydesma fauna')

Dzulkafli, M.A., Basir Jasin & M.S. Leman (2016)- Taksonomi radiolaria dari genus *Pseudoalbeillella* berusia Perm dari Pos Blau, barat daya Kelantan, Semenanjung Malaysia. Bull. Geol. Soc. Malaysia 62, p. 13-21.

(online at: https://gsmpubl.files.wordpress.com/2017/04/bgsm2016003.pdf)
('Taxonomy of the Permian radiolarian genus Pseudoalbeilella from Pos Blau, SW Kelantan, Peninsular Malaysia. Seven species of Permian Pseudoalbaillella radiolarian genus in chert between Gua Musang and Cameron Highlands, SW of Kelantan. Association of Pseudoalbaillella with Hegleria mammilla indicates Pseudoalbaillella globosa Assemblage Zone (early M Permian; Roadian))

Dzulkafli, M.A., Basir Jasin, M.S. Leman & K.W. Chung (2017)- Penemuan Zon Himpunan Pseudoalbaillella globosa (Radiolaria) di Pos Blau, Baratdaya Kelantan, Semenanjung Malaysia dan implikasinya terhadap biostratigrafi radiolaria. Sains Malaysiana 46, 12, p. 2349-2357.
(online at: http://www.ukm.my/jsm/pdf_files/SM-PDF-46-12-2017/11%20Dzulkafli%20Muhammad.pdf)
('Discovery of Pseudoalbaillella globosa Assemblage Zone (Radiolaria) from Pos Blau, SW Kelantan, Peninsular Malaysia and its implication for radiolarian biostratigraphy'. Well preserved radiolaria from bedded chert outcropping at km 38,of Gua Musang- Cameron Highland highway, near Pos Blau. 20 species representing Pseudoalbaillella globosa Assemblage Zone of (Roadian) E-M Permian age)

Dzulkafli, M.A., Basir Jasin, M.S. Leman & N. Sulaiman (2018)- Fosil radiolaria daripada batuan bersilika-rijang di Pos Blau (Singkapan Pb-1), Baratdaya Kelantan, Semenanjung Malaysia. Sains Malaysiana 47, 10, p. 2259-2268.
(E Permian (Sakamarian) radiolarian assemblages from siliceous-cherty rocks from Pos Blau, SW Kelantan, in Bentong-Raub Suture Zone)

Edgell, H.S. (2004)- Upper Devonian and Lower Carboniferous Foraminifera from the Canning Basin, Western Australia. Micropaleontology 50, p. 1-26.
(Foraminifera from U Devonian reef complex and overlying Lower Carboniferous in N Canning Basin of NW Australia 20 species of tournayellids and endothyrids. Striking resemblance to microfaunas of Russia, Kazakhstan and South China)

Fortey, R.A. & L.R.M. Cocks (1986)- Marginal faunal belts and their structural implications, with examples from the Lower Palaeozoic. J. Geol. Soc., London, 143, p. 151-160.
(Record of Ordovician (Llanvirn) graptolites in Heluk River, E Irian Jaya (4°25'S, 139°17'E). Assigned to isograptid biofacies and taken as evidence of Ordovician ocean margin here. Oldest fossils in Indonesia ?)

Foster, C.B. (1979)- Permian plant microfossils of the Blair Athol coal measures, Baralaba coal measures, and basal Rewan formation of Queensland. Geol. Survey Queensland, Publ. 372, p. 1-244.
(Permian palynology of Bowen Basin, NE Australia)

Foster, C.B. (1982)- Spore-pollen assemblages of the Bowen Basin, Queensland (Australia): their relationship to the Permian/Triassic boundary. Review Palaeobotany Palynology 36, p. 165-183.
(Five palynofloral zones in M Permian- E Triassic of Bowen Basin, from old to young: 'Upper Stage 5' (= Dulhuntyipora zone of authors; commonly associated with Glossopteris); Playfordiaspora crenulata Zone (M Permian; = youngest coal seams and with last known Glossopteris), Protohaploxypinus microcorpus Zone (also with P. samoilovichii), Lunatisporites pellucidus Zone (also contains Falcisporites= Alisporites?; latest Permian or E Triassic?) and Protohaploxypinus samoilovichii Zone (= E Triassic). No range charts (Morante 1996 suggests Base P. microcorpus is ~Base E Triassic = base of Mt Goodwin shale in Bonaparte basin)

Foster, C.B., G.A. Logan, R.E. Summons, J.D. Gorter & D.S. Edwards (1997)- Carbon isotopes, kerogen types and the Permian-Triassic boundary in Australia: implications for exploration. The APPEA J. 37, p. 472-489.
(Permian- Triassic boundary characterized by massive extinction of marine fauna. In non-marine sections in E Australia, top of coal measures used as top Permian. Carbon isotopic (δ13C) shift of either organic matter or carbonates may be used to delimit P-T boundary)

Furnish, W.M. & B.F. Glenister (1970)- Permian ammonoid *Cyclolobus* from the Salt Range, West Pakistan. In: Stratigraphic boundary problems: Permian and Triassic of West Pakistan, p. 153-175.
(On M Permian ammonite Cyclolobus, incl. occurrences from Basleo and Ruasnain, W Timor)

Gerth, H. (1931)- Porifera. In:B.G. Escher et al. (eds.) Onze palaeontologische kennis van Nederlandsch Oost Indie, Leidsche Geol. Mededelingen 5 (Feestbundel K. Martin), p. 115-119.
(online at: www.repository.naturalis.nl/document/549435)
(Porifera (sponges) chapter in 'Our paleontological knowledge of the Netherlands East Indies'. Isolated sponge needles known from various formations in Indonesia, but whole sponges mainly known from Permian and Triassic of Timor. Permian of Timor 25 species, mainly siliceous sponges. Triassic of Timor mainly calcareous sponges. No figures)

Gould, R.E. (1975)- The succession of Australian Pre-Tertiary megafossil floras. The Botanical Review 41, 4, p. 453-483.
(Review of Devonian- Cretaceous floras of Australia, incl. Devonian Baragwanathia flora, Permian Glossopteris flora, Triassic Dicroidium flora, etc.)

Hashemi, H. & G. Playford (2005)- Devonian spore assemblages of the Adavale Basin, Queensland (Australia): descriptive systematics and stratigraphic significance. Revista Espanola Micropal. 37, 3, p. 317-417.

Hayasaka, I. (1917)- On the brachiopod genus *Lyttonia* with several Japanese and Chinese examples. J. Geol. Soc. Tokyo 24, p. 43-53.
Heritsch, F. (1937)- Die rugosen Korallen und die Stratigraphie der Permformation. In: F. E. Suess Festschrift, Mitteilungen Geol. Gesellschaft Wien, 29, p. 307-328.
(online at: www2.uibk.ac.at/downloads/oegg/Band_29_307_328.pdf)
('The rugose corals and the stratigraphy of the Permian'. Review of Permian coral zonation, including discussion of M Permian Basleo coral fauna of Timor, as first described by Gerth (1921))

Heritsch, F. (1937)- Rugose Korallen aus dem Salt Range, aus Timor und aus Djoulfa, mit Bemerkungen uber die Stratigraphie des Perms. Sitzungsberichte Akademie Wissenschaften, Wien, Math.-Naturw. Kl. Abt. 1, 146, p. 1-16.
('Rugose corals from the Salt Range (Himalaya), from Timor and from Djoulfa, with remarks on the stratigraphy of the Permian'. Brief descriptions of some Permian rugose corals)

Hess, H. (1999)- Permian. In: H. Hess et al. (eds.) Fossil crinoids, Cambridge University Press, p. 160-165.
(Timor Permian crinoid faunas most diverse and abundant in world, with 320 species described by Wanner, most new and unique to Timor. Permian crinoids from Australia cooler water faunas, with much lower diversity than Timor faunas)

Hill, D. (1939)- The Permian corals of Western Australia. J. Royal Soc. Western Australia 23, p. 43-64.
(13 species, most new, including one Verbeekia, genus first described from Timor)

Hill, D. (1939)- Further Permian corals from Western Australia. J. Royal Soc. Western Australia 27, p. 57-72.
(Description of 16 species from Perth, Canning and Carnarvon basins, including one Verbeekiellia, genus first described from W Timor by Penecke 1908)

Hill, D. (1957)- The sequence and distribution of Upper Palaeozoic coral faunas. Australian J. Science 19, p. 42-61.
(Review of Permian corals, including Timor material)

Igo, H. (1984)- Summary of the Palaeozoic conodonts from Malaysia and Thailand. In: T. Kobayashi, R. Toriyama & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 25, p. 289-293.
(Brief review of Paleozoic conodonts in SE Asia. Oldest conodonts are of Ordovician age, from S Thailand)

Ishii, K.I. (1975)- On the genus *Colaniella* and its biostratigraphic significance. J. Geosciences Osaka City University 19, 6, p. 107-138.

(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DBe0190006.pdf)
Small latest Permian benthic foram genus Colaniella, generally associated with fusulinids (Palaeofusulina, Reichelina, Staffella) and small foraminifera (Pachyphloia, Globivalvulina, Agathammina, Endothyra, etc.). Common in Japan, S China, Himalayas, Mediterranean, also in Thailand, Malay Peninsula (Kelantan))

Ishii, K., Y. Okimura & K. Ichikawa (1985)- Notes on Tethys biogeography with reference to Middle Permian fusulinaceans. In: K. Nakazawa & J.M. Dickins (eds.) The Tethys: her paleogeography and paleobiogeography from Paleozoic to Mesozoic, Tokai University Press, Tokyo, p. 139-155.

Isozaki, Y. (2006)- Guadalupian (Middle Permian) giant bivalve Alatoconchidae from a mid-Panthalssan paleo-atoll complex in Kyushu, Japan: a unique community associated with Tethyan fusulines and corals. Proc. Japan. Acad., B82, 1, p. 25-32.
(online at: http://ea.c.u-tokyo.ac.jp/earth/Members/Isozaki/06Alatoconchidae.pdf)
(Large Alatoconchidae bivalves in M Permian, with typical Tethyan fusulinids of Neoschwagerina and Lepidolina zones. Range up to end-Guadalupian extinction level)

Isozaki, Y. & D. Aljinovic (2009)- End-Guadalupian extinction of the Permian gigantic bivalve Alatoconchidae: end of gigantism in tropical seas by cooling. Palaeogeogr. Palaeoclim. Palaeoecology 284, p. 11-21.
(Large, thick Permian Alatoconchidae bivalves from E-M Permian shallow-marine carbonates in 9 areas in low-latitudes of Tethyan and Panthalassan domains, incl. Thailand, Malaysia, Philippines, and Japan. Always in association with large fusulines (Verbeekinidae) and/or rugose corals (Waagenophyllidae). This 'tropical trio' became extinct near Guadalupian-Lopingian boundary, probably due to temperature drop (Kamura cooling))

Jones, P.J. (2011)- Latest Devonian (Strunian) Ostracoda from the Buttons Formation, Bonaparte Basin, Northwestern Australia: Biostratigraphy, Palaeoecology and Palaeozoogeography. Mem. Assoc. Australasian Palaeontologists (AAP) 39, p. 261-322.

Kanmera, K., K. Ishii & R. Toriyama (1976)- The evolution and extinction patterns of Permian Fusulinaceans. In: T. Kobayashi & W. Hashimoto (eds.) Geology and Palaeontology of Southeast Asia, University of Tokyo Press, 17, p. 129-154.
(Review of parallel evolution of several lineages of fusulinid foraminifera, each with short periods of rapid diversification, interspersed with longer periods of relative stability. No sudden and catastrophic extinctions of fusulinaceans, but gradual waning of group through later Permian)

Kawamura, T. & H. Machiyama (1995)- A Late Permian coral reef complex, South Kitakami Terrane, Japan. Sedimentary Geology 99, p. 135-150.
(M Permian Iwaizaki Lst of S Kitakami Terrane in NE Japan, represents coral reef complex. With rugose and tabulate corals, solenoporacean algae, calcisponges, Tubiphytes, Archaeolithoporella, etc. High diversity unique among Permian reefs, most of which are mainly formed by calcisponges and calcareous algae. Coral reefs developed mainly around S China and Indochina continents, in tropics. Calcisponge reefs and Tubiphytes-algal crust reefs common in tropical- subtropical regions; stromatolite-bryozoan reefs in arid areas)

Kemp, E.M., B.E. Balme, R.J. Helby, R.A. Kyle, G. Playford & P.L. Price (1977)- Carboniferous and Permian palynostratigraphy in Australia and Antarctica: a review. BMR J. Australian Geol. Geophysics 2, p. 177-208.
(online at: www.ga.gov.au/corporate_data/80927/Jou1977_v2_n3_p177.pdf)

Kobayashi, F. (2005)- Permian foraminifers from the Itsukaichi-Ome area, West Tokyo, Japan. J. Paleontology 79, 3, p. 413-432.
(Continuous carbonate deposition of >70 My on Panthalassan buildup in Carboniferous-Permian limestone blocks in Itsukaichi- Ome area. Blocks and breccias resulted from collapse of seamount and tectonic mixing with trench-fill deposits in Jurassic accretionary complexes of Chichibu Terrane. 105 species of Permian and 65 species of Carboniferous forms in 24 fusulinacean zones)

Kobayashi, F. (2011)- Permian fusuline faunas and biostratigraphy of the Akasaka Limestone (Japan). Revue Paleobiologie, Geneve, 30, 2, p. 431-574.
(online at: www.ville-ge.ch/mhng/paleo/paleo-pdf/30-2/pal_30_2_01a.pdf)
(Mainly M Permian Akasaka Lst in C Japan with 63 species of fusulinids, divided into 7 zones: Parafusulina nakamigawai (U Kungurian), Cancellina nipponica (Lw Roadian), Neoschwagerina simplex (U Roadian), N. craticulifera (Lw Wordian), N. colaniae (U Wordian) Yabeina globosa (Capitanian) and Nanlingella suzukii Zone (Wuchiapingian))

Kobayashi, F. (2012)- Permian non-fusuline foraminifers of the Akasaka Limestone (Japan). Revue Paleobiologie, Geneve, 31, 2, p. 313-335.
(online at: www.ville-ge.ch/mhng/paleo/paleo-pdf/31-2/pal_31_2_03.pdf)
(Description of diverse Permian smaller foram assemblages with Tethyan affinities, from 250m thick Akasaka Lst, deposited on Permian Panthalassan seamount and emplaced as exotic block in Jurassic-E Cretaceous accretionary complexes of Mino Terrane in C Japan. Associated with rich fusulinid assemblages, with 7 zones.)

Kobayashi, F. (2012)- Middle and Late Permian foraminifers from the Chichibu Belt, Takachiho Area, Kyushu, Japan: implications for faunal events. J. Paleontology 86, p. 669-687.
(M-L Permian- Triassic carbonates (<100m thick?) with fusulinids in S Chichibu Belt of C Kyushu, originated as Panthalassan seamount, now in ?Jurassic accretionary complex. Permian (Guadalupian-Lopingian) and Triassic ages)

Kobayashi, F., C.A. Ross & J.R.P. Ross (2010)- *Thailandina* and *Neothailandina*, and their subfamily Thailandininae: an example of an invalid taxonomic group of Permian fusuline foraminifera. J. Paleontology 84, 2, p. 360-361.
(Thailandina and Neothailandina new genera of Permian fusulinids from Rat Buri Limestone proposed by Toriyama and Kanmera (1968), based on unique wall structure. However, thailandinid wall is secondary mineralization of calcite as seen in specimens of Staffellidae, Misellina, etc.)

Kobayashi, T. & T. Hamada (1978)- Three suites of Carboniferous trilobites in Southeast Asia. Proc. Japan Academy, B, 54, 3, p. 92-95.
(online at: https://www.jstage.jst.go.jp/article/pjab1977/54/3/54_3_92/_pdf)
(18 species of trilobites known from Carboniferous of SE Asia. Oldest assemblage in Langgon Red Beds in NW Malay Peninsula (Langgonbole, Waribole, Macrobole, etc.). Younger assemblage (Dinantian) with Linguphillipsia (= Phillipsia of older authors?))

Krassilov, V.A. (2000)- Permian phytogeographic zonality and its implications for continental position and climates. Paleontological Journal (Moscow) 34, Suppl. 1, p. 587-598.
(online at: http://paleobotany.ru/pdf/Krassilov%202000%20-%20Permian%20Phytogeographic%20Zonality%20and%20Its.pdf)
(Revised scheme of Permian plant geography. Contrary to prevalent opinion views Sumatra (Jambi) and West Irian Jaya floras as 'mixed Eurogondwana' floras, and mapped in 'subtropical humothermic belt' with 'Gondwanan' India- Australia floras)

Krijnen, W.F. (1931)- Palaeozoic and Mesozoic Gastropoda, Lamellibranchiata and Scaphopoda. In: B.G. Escher et al. (eds.) De palaeontologie en stratigraphie van Nederlandsch Oost-Indie, Leidsche Geol. Mededelingen 5 (K. Martin Memorial Volume), p. 164-205.
(online at: www.repository.naturalis.nl/document/549430)
(Extensive listings of Paleozoic- Mesozoic molluscs (gastropods, bivalves) known from Indonesia in 1931. No figures)

Laveine, J.P., S. Zhang & Y. Lemoigne (2003)- Additional documentation to the knowledge of the Late Palaeozoic floras of east and southeast Asia: general conclusions and references. Revue Paleobiologie, Geneve, 22, p. 831-849.
(Floras suggest that Indochina, E Malaysia, and S and N China were closely connected during Carboniferous)

Lee, J.S. (1931)- Distribution of the dominant types of the fusulinoid foraminifera in the Chinese Seas. Acta Geologica Sinica (Bull. Geol. Soc. China) 10, p. 273-290.

Leven, E.Y. (1993)- Main events in Permian history of the Tethys and fusulinids. Stratigraphy Geol. Correlation 1, 1, p. 59-75.

Leven, E.Y. (1997)- Permian stratigraphy and fusulinida of Afghanistan with their paleotectonic implications. Geol. Soc. America (GSA), Spec. Paper 316, p. 1-134.
(Complete Permian section in Afghanistan, with rich fusulinid faunas: 58 genera, 282 species, incl. 41 new. Asselian- Sakmarian in N Afghanistan and N Pamir tropical shelf carbonates and fusulinid assemblages. Age-equivalent rocks of S Afghanistan- S Pamir all siliciclastic, lacking fusulinids, with cold-water macrofaunas typical of Peri-Gondwanan seas. In S Afghanistan first fusulinids in Sakmarian, low diversity, mainly species of Pseudofusulina. By late Yahtashian- Bolorian (late E Permian= ~late Artinskian-Kungurian; JTvG), due to milder climate and widespread transgression, distinction between S and N fusulinid assemblages starts to disappear. In C-S Afghanistan occurrences of Monodiexodina in Bolorian (= Kungurian; late E Permian), Neoschwagerina- Verbeekina- Sumatrina in Murgabian-Midian (M Permian) and miliolid Shanita amosi-Hemigordiopsis renz in Midian-Dzhulfian (M-L Permian))

Leven, E.J. & H.J. Campbell (1998)- Middle Permian (Murgabian) fusuline faunas, Torlesse Terrane, New Zealand. New Zealand J. Geol. Geophysics 41, p. 149-156.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1998.9514799)
(Two fusuline foram limestone localities in Torlesse Gp of Canterbury, S Island, New Zealand. Limestones associated with volcanics and hemipelagic sediments which appear 'allochthonous' (fortuitous accumulations associated with oceanic seamounts). Low diversity fauna dominated by Parafusulina (Skinnerella) japonica, also Parafusulina (S.) cuniculata. Fauna correlates best with late M Permian (E Murgabian) sequences of Tethyan affinity in Eurasia)

Leven, E.J. & J.A. Grant-Mackie (1997)- Permian fusulinid foraminifera from Wherowhero Point, Orua Bay, Northland, New Zealand. New Zealand J. Geol. Geophysics 40, p. 473-486.
(online at: www.tandfonline.com/doi/pdf/10.1080/00288306.1997.9514777)
(Abundant, diverse E-M Midian fusulinids (24 species) from Waipapa Terrane, N Island. Probably East Paleotethys-Panthalassa seamount fauna. Key species Neoschwagerina margaritae, Yabeina spp, Reichelina sp, Lepidolina shiraiwensis, etc. Much more diverse than Murgabian faunas from Torlesse, S Island)

Long, J.A. (1990)- Late Devonian Chondrichthyans and other microvertebrate remains from Northern Thailand. J. Vertebrate Paleontology 10, 1, p. 59-71.
(Microvertebrates from limestones near Burmese border town of Mae Sam Lap, N Thailand, dated as Late Famennian by conodonts. Fauna contains chondrichthyans, several types of chondrichthyan scales, actinopterygian scales and teeth, and rare acanthodian scales. Taxa suggest close affinity between Shan-Thai, East Gondwana, and S China Terranes at end of Devonian)

Macurda, D.B. (1983)- Systematics of the fissiculate Blastoidea. University of Michigan Papers on Paleontology, Ann Arbor, 22, p. 1-291.
(Strictly taxonomic review of Permian blastoids, much of which based on Timor material. No location info, biostratigraphic succession, etc.)

Mamet, B. (1974)- Une zonation par foraminiferes du Carbonifere inferieur de la Tethys Occidentale. Compte Rendus 7th Int. Congres Stratigraphie et de Geologie du Carbonifere, Krefeld, 1971, 3, p. 391-408.
('A foraminifera zonation of the Lower Carboniferous of the Western Tethys')

Mamet, B.L. & E. Saurin (1970)- Sur la microfaune des foraminiferes carboniferes du Sud-est asiatique. Bull. Soc. Geologique France (7) 12, 2, p. 356-363.

('On the Carboniferous foraminiferal microfauna of Southeast Asia'. Eight Carboniferous foram assemblages, similar to Europe/ Asia, described from Laos, Vietnam, Malaysia)

Martodjojo, Sujono (1964)- A study of the superfamily Adrianitaceae. Contr. Dept. Geology, Institute Technology Bandung 58, p. 75-81.
(Two groups recognized in ?Permian ammonoid family, from Timor?)

McLoughlin, S. (1990)- Some Permian glossopterid fructifications and leaves from the Bowen Basin, Queensland, Australia. Rev. Palaeobotany Playnology 62, p. 11-140.

McLoughlin, S. (1993)- Glossopterid megafossils in Permian Gondwanic non-marine biostratigraphy. In: R.H. Findlay et al. (eds.) Proc. Gondwana Eight- Assembly, evolution and dispersal, Balkema, Rotterdam, p. 253-264.
(Review of Permian Glossopteris floras, characteristic of Gondwana. NE Australian Strong provincialism: Bowen Basin no Glossopteris species in common with Indian or South African successions))

McLoughlin, S. (1995)- New records of *Bergiopteris* and glossopterid fructifications from the Permian of Western Australia and Queensland. Alcheringa 19, 3, p. 175-192.

Metcalfe, I. & Y. Isozaki (2009)- Current perspectives on the Permian-Triassic boundary and end-Permian mass extinction: Preface. J. Asian Earth Sci. 36, p. 407-412.
(End-Permian mass extinction nowwell dated at 252.6 ± 0.2 Ma (U-Pb) and Permian-Triassic GSSP level is dated by interpolation at 252.5 Ma. Conodonts evolved rapidly in first 1 million years following mass extinction leading to high-resolution conodont zones. Nature of double-phased Late Permian extinction (at Guadalupian-Lopingian boundary and P-T boundary, linked to large igneous provinces, suggests superplume activity that involved geomagnetic polarity change and massive volcanism)

Morante, R. (1996)- Permian and early Triassic isotopic records of carbon and strontium in Australia and a scenario of events about the Permian-Triassic boundary. Historical Biology 11, p. 289-310.
(Organic carbon in wells in Australian basins showed negative d13C excursions of 6-10%, believed to correlate with negative d13C excursion in marine carbonates at Permian-Triassic boundary around world. Shift consistently near base of miospore Protohaploxypinus microcorpus Zone of Helby et al. (1987))

Nestell, M.K. & G.P. Pronina (1997)- The distribution and age of the genus *Hemigordiopsis*. In: C.A. Ross et al. (eds.) Late Paleozoic foraminifera; their biostratigraphy, evolution, and paleoecology; and the mid-Carboniferous boundary, Cushman Foundation Foraminiferal Research, Spec. Publ. 36, 3, p. 105-110.
(M-L Permian foraminifer Hemigordiopsis appears to be characteristic of 'Cimmerian' (includes Sibumasu) terranes that rifted off N Gondwana margin in Permian, now in belt from Mediterranean to Peninsular Thailand and W Malay Peninsula))

Newell Arber, E.A. (2005)- Catalogue of the fossil plants of the *Glossopteris* flora in the Department of Geology, British Museum (Natural History); being a monograph of the Permo-Carboniferous flora of India and the Southern Hemisphere. British Museum (Natural History). Dept. of Geology, London, p. 1-255.
(online at: www.books.google.com/...)
(Old monograph on Carboniferous-Permian plant fossils of Gondwanaland (mainy India))

Nicoll, R.S. & I. Metcalfe (2011)- The Permian conodont biostratigraphy of Australia and New Zealand. In. XVII Int. Congress Carboniferous and Permian, Perth 2011, Geol. Survey W Australia, Record 2011/20, p. 96.
(Abstract only)
(Summary of Permian conodont studies. High paleolatitude Permian conodont faunas of W Australia dominated by Vjalovognathus with occasional Hindeodus, Mesogondella and Sweetognathodus. Lower latitude faunas from Timor, Pakistan, Nepal/Tibet higher diversity, attributed to warmer temperatures)

Okimura, Y., K. Ishii & C. A. Ross (1985)- Biostratigraphical significance and faunal provinces of Tethyan Late Permian smaller foraminifera. In: K. Nakazawa & J.M. Dickins (eds.) The Tethys: her paleogeography and paleobiogeography from Paleozoic to Mesozoic, Tokai University Press, Tokyo, p. 115-138.

Ota, A. & Y. Isozaki (2006)- Fusuline biotic turnover across the Guadalupian-Lopingian (Middle-Upper Permian) boundary in mid-oceanic carbonate buildups: biostratigraphy of accreted limestone in Japan. J. Asian Earth Sci. 26, p. 353-368.
(Fusulinid biostratigraphy of upper M- lower U Permian shallow-water limestones at Kamura and Akasaka in SW Japan. Both sections represent seamount carbonate buildups developed on basaltic basement in mid-oceanic environment. Sections contain abundant Tethyan fusulines and record extinction of M Permian large-sized fusuline family Verbeekinidae at Guadalupian- Lopingian boundary in mid-Panthalassa, similar to shallow-water Tethyan shelf areas)

Palmieri, V. (1994)- Permian Foraminifera in the Bowen Basin, Queensland. Queensland Geology 6, p. 1-125.

Palmieri, V., C.B. Foster & E.V. Bondareva (1994)- First record of shared species of Late Permian small foraminiferids in Australia and Russia: time correlations and plate reconstructions. AGSO J. Australian Geol. Geophysics 15, p. 359-365.
(online at: https://d28rz98at9flks.cloudfront.net/81403/Jou1994_v15_n3_p359.pdf)
(At least 12 species of small calcareous foraminiferids from early Late Permian assemblages from Arctic Russia also occur in assemblages from E Australian Ingelara Fm of Bowen Basin)

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('The most important calcareous algae from the Late Paleozoic and their stratigraphic significance'. Incl. description of M Permian algae assemblages with Vermiporella sumatrana n.sp. from Sumatra (Fontaine 1989))

Pickett, J.W. (2011)- Fossil corals of Australia, New Zealand, New Guinea and Antarctica: bibliography and index. Mem. Assoc. Australasian Palaeontologists (AAP) 40, p. 1-189.
(Bibliography and index of published fossil coral research from Antarctica, Australia, New Guinea and New Zealand, covering 1343 species names, 607 genus names and 639 references)

Posthumus, O. (1931)- Plantae. In: B.G. Escher et al. (eds.) Onze palaeontologische kennis van Nederlandsch Oost Indie, Leidsche Geol. Mededelingen 5 (Feestbundel K. Martin), p. 485-508.
(online at: www.repository.naturalis.nl/document/549382)
(Listings of Permian- Pleistocene fossil plant and calcareous algae species from Indonesia, as known in 1931: mainly from Permian of Sumatra and Tertiary of Java, Sumatra, Kalimantan)

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(online at: http://palaeontology.palass-pubs.org/pdf/Vol%2021/Pages%20341-356.pdf)
(Overview of Permian bryozoa distribution, incl. comments on Timor assemblages)

Segroves, K.L. (1969)- Saccate plant microfossils from the Permian of Western Australia. Grana Palynologica 9, p. 174-227.
(online at: www.tandfonline.com/doi/pdf/10.1080/00173136909436435)
(29 species of saccate spores from Permian of N Perth Basin)

Shen, S.Z. (2018)- Global Permian brachiopod biostratigraphy: an overview. In: S.G. Lucas & S.Z. Shen (eds.) The Permian timescale, Geol. Soc., London, Special Publ. 450, p. 289-320.
(Permian brachiopod successions in five major paleobiogeographical realms. For Gondwanaland and peri-Gondwanan regions including Cimmerian blocks, Bandoproductus, Cimmeriella characteristic of Cisuralian (E Permian). Lower Permian brachiopods from Mengkareng Fm in Sumatra (Crippa et al. 2014) viewed as Sakmarian in age and grouped with S Thailand- Malaysia Cimmerian/ Sibumasu faunas))

Shen, S.Z. & G.R. Shi (1996)- Diversity and extinction patterns of Permian Brachiopoda of South China. Historical Biology 12, p. 93-110.

Shen, S.Z. & G.R. Shi (2002)- Paleobiogeographical extinction patterns of Permian brachiopods in the Asian-western Pacific region. Paleobiology 28, p. 449-463.
(End-Permian extinction eliminated ~90% of genera and 95% of species of Brachiopoda. End-Guadalupian extinction less profound)

Shen, S.Z., H. Zhang, W.Z. Li, L. Mu & J.F. Xie (2006)- Brachiopod diversity patterns from Carboniferous to Triassic in South China. Geological Journal 41, p. 345-361.
(Carboniferous to Triassic includes (1) 100 My-long stable biodiversity stage from Late Carboniferous- late Middle Permian, with highly diverse brachiopod faunas;(2) end-Permian most severe mass extinction in Phanerozoic; (3) bleak stage in E Triassic and (4) rapid recovery stage in M Triassic)

Smith, T.E., T. Bernecker, S. Bodorkos, J. Gorter, L. Hall, T. Hill, E. Holmes, A. Kelman, K. Khider, J. Laurie et al. (2017)- The impact of recalibrating palynological zones to the chronometric timescale: revised stratigraphic relationships in Australian Permian and Triassic hydrocarbon-bearing basins. AAPG/SEG 2017 Int. Conf. Exhibition, London, Search and Discovery Art. 51443, 9p. *(Poster Presentation)*
(online at: http://www.searchanddiscovery.com/documents/2017/51443smith/ndx_smith.pdf)
(Recalibration of Permian and Triassic spore-pollen palynozones and numerical ages from high-precision radiometric dating of tuffs)

Smith, T.E. & D. Mantle (2013)- Late Permian palynozones and associated CA-IDTIMS dated tuffs from the Bowen Basin, Australia. Geoscience Australia Record 2013/46, p. 1-39.
(onine at: https://d28rz98at9flks.cloudfront.net/72990/Rec2013_046.pdf)
(Calibration of Late Permian palynozones with radiometric ages of associated tuffs. Dulhuntyispora parvithola zone APP5 spans >5 Myrs (~254.4- 263 Ma). Latest Permian Playfordiaspora crenulata and Protohaploxypinus microcorpus palynozones APP6 between ~252-254.4 Ma) (see also Laurie et al. 2016))

Stehli, F.G. (1961)- New genera of Upper Paleozoic Terebratuloids. J. Paleontology 35, 3, p. 457-466.
(New genus and species name Timorina broili for small terebratulid brachiopod, originally described as Notothyris minuta by Broili (1916) from M Permian of Basleo, Timor)

Stephenson, M.H. (2008)- A review of the palynostratigraphy of Gondwanan Late Carboniferous to Early Permian glacigene successions. In: C.R. Fielding et al. (eds.) Resolving the Late Paleozoic Ice Age in time and space, Geol. Soc. America (GSA), Spec. Paper 441, p. 317-330.
(E Permian W Australian, Arabian and S African sequences can be correlated using taxa like Converrucosisporites confluens and Pseudoreticulatispora pseudoreticulata. C. confluens and P. pseudoreticulata zones considered to be Sakmarian, and Striatopodocarpites fusus zone is Artinskian. Difficult to correlate Gondwana palynological assemblages precisely to Russian type areas because of scarcity of marine fauna in Gondwana and different paleolatitudes, so Carboniferous-Permian boundary cannot be precisely correlated in Gondwana by palynology)

Sun, K. (1999)- Origin, evolution and extinction of Cathaysia flora. Chinese Science Bull. 44, 2, p. 100-108.
(Carboniferous- Permian Cathaysia flora mainly distributed in China, Korea, Japan, Laos, Thailand, Sumatra and Malaysia. Mixed Cathaysian and Gondwanan flora known in S Tibet, Kashmir, Turkey and New Guinea. Cathaysian flora developed from global uniform E Carboniferous Lepidodendropsis flora)

Taboada, A.C., A.J. Mory, G.R. Shi, D.W. Haig & M.K. Pinilla (2015)- An Early Permian brachiopod-gastropod fauna from the Calytrix Formation, Barbwire Terrace, Canning Basin, Western Australia. Alcheringa 39, 2, p. 207-223.
(Small brachiopod-gastropod fauna from core near base of Calytrix Fm in glacially-influenced Grant Group on Barbwire Terrace, Canning Basin. Age probably Sakmarian, but possibly as old as Asselian. With palynomorphs of Pseudoreticulatispora confluens Zone)

Teichert, C. & B.F. Glenister (1952)- Fossil Nautiloid faunas from Australia. J. Paleontology 26, p. 730-752

Tien, Nguyen D. (1989)- *Sphairionia sikuoides* gen. et sp. nov., a Permian incertae sedis organism: *Sphairionia*. In: Comptes Rendus 11th Congress Carboniferous Stratigraphy and Geology, Beijing 1987, 3, p. 73-78.
(Description of 'small bubble', either lagenid foraminifer or charophyte algae from M Permian of W Thailand and Cambodia. Also already described in 1988 'Note on two 'Incertae Sedis' from the Permian of West Thailand', CCOP Tech. Bull. 20. (also reported from Thailand and other areas of Tethys; Pronina 1996))

Tong, J. & G.R. Shi (2000)- Evolution of Permian and Triassic foraminifera in South China. In: H. Yin, J.M. Dickins et al. (eds.) Permian-Triassic evolution of Tethys and Western Circum-Pacific, Developments in palaeontology and stratigraphy 18, Elsevier, p. 291-307.
(Paper mainly on stratigraphic distribution of foram genera. No paleobiogeography, no fossil illustrations)

Tripathi, C. & G. Singh (1985)- Carboniferous flora of India and its contemporaneity in the world. Comptes Rendus Dixieme Congres Int. Stratigraphie et de Geologie du Carbonifere, Madrid 1983, p. 295-306.

Tripathi, C. & G. Singh (1987)- Gondwana and associated rocks of the Himalaya and their significance. In: G.D. McKenzie (ed.) Gondwana Six: Stratigraphy, Sedimentology, and Paleontology, 6th Int. Gondwana Symposium, Columbus, Ohio, 1985, Amer. Geophys. Union (AGU), Geophys. Monograph 41, p. 195-205.
(Along N margin of India Plate (Permian rift margin) two Permian Gondwanan domains, both with widespread diamictite, Glossopteris flora and Eurydesma fauna: (1) (S) Lesser Himalaya belt with Permian Volcanics directly on Precambrian/ Cambrian basement and with Glossopteris flora; (2) (N) Tethyan Himalaya belt (Salt Range-Ladakh- Thakkola- Lingshi) with more complete Cambrian- Permian section, more marine influence (limestones) and mixed Gondwana-Cathaysia flora. In Kashmir Basin Artinskian? Mamal Fm above Panjal Volcanics with rich E Permian flora, incl. Gondwanan Glossopteris, endemic Gangamopteris kashmirensis, also common 'Cathaysian' elements like Taeniopteris, Rajahia, Lobatanularia, Gingkophyllum and Parasphenophyllum. Also endemic vertebrate fauna. In Karakorum Basin (= Lhasa or Qiantang Block?) Fenestella Shale, overlain by diamictite, Gangamopteris plant bed and fusulinid lst)

Vachard, D. (2016)- Macroevolution and biostratigraphy of Paleozoic foraminifers. In: Stratigraphy and Timescales, 1, Chapter 4, Elsevier, p. 257-323.

Vachard, D. (2017)- Permian smaller foraminifers: taxonomy, biostratigraphy and biogeography. In: S.G. Lucas & S.Z. Shen, The Permian Timescale, Geol. Soc., London, Spec. Publ. 450, p.

Vachard, D. & J. Ferriere (1991)- Une association a *Yabeina* (foraminifere fusulinoide) dans le Midien (Permien superieur) de la region de Whangaroa (Baie d'Orua Nouvelle-Zelande). Revue Micropaleontologie 34, p. 201-230.
('A Yabeina association (fusulinid foraminifera) in the Midian (U Permian) of the Whangaroa region (Orua Bay, New Zealand'. Microfauna/ microflora from exotic limestone blocks embedded in volcanic and volcano-sedimentary units in Whangaroa area, New Zealand. Algae dominated by Tubiphytes. Smaller foraminifera common Tethyan species. Fusulinids mainly Reichelina, Codonofusiella, Chusenella, also Yabeina parvula. Outcrop is terrane that belonged to Cathaysia and which had migrated 3000 km S across Paleopacific)

Vachard, D., L. Pille & J. Gaillot (2010)- Palaeozoic foraminifera: systematics, palaeoecology and responses to global changes. Revue Micropaleontologie 53, p. 209-254.
(Review of biostratigraphy and facies models of Paleozoic forams)

Van Gorsel, J.T. (2014)- An introduction to Paleozoic faunas and floras of Indonesia. Berita Sedimentologi 31, p. 6-26.
(online at: www.iagi.or.id/fosi/files/2014/12/BS31-Biostratigraphy_SEAsia_Part3.pdf)
(Review of Ordovician-Permian fossils of Indonesia. E Paleozoic faunas mainly in W Papua. Late Paleozoic (mainly Permian) faunas and floras more widespread, mainly on Sumatra, Timor and W Borneo. Paleozoic

fossils from Indonesia are mainly marine organisms, but non-marine Permian plant fossils are also known from Sumatra and West Papua. Some assemblages or species signify 'low-latitude Tethyan' settings; others have 'anti-tropical/subtropical Tethyan' or 'Gondwanan' affinities)

Von Staff, H. (1909)- Beitrage zur Kenntnis der Fusuliniden. Neues Jahrbuch Mineral. Geol. Palaontologie, Beilage Band 27, p. 461-508.
('Contribution to the knowledge of the fusulinids'. Permian larger foram Schwagerina verbeeki Geinitz from Padang Highlands, W Sumatra should be classified in new genus Verbeekina (see also Thompson 1936; Genus name still used today, and is 'Tethyan' species, also common in S China, Thailand, Tibet, Crimea, etc.; JTvG))

Wang, Y., K. Ueno, Y.C. Zhang & C.Q. Cao (2010)- The Changhsingian foraminiferal fauna of a Neotethyan seamount: the Gyanyima Limestone along the Yarlung-Zangbo Suture in southern Tibet, China. Geological Journal 45, p. 308-318.
(Late Guadalupian- Triassic limestone blocks along Yarlung-Zangbo Suture (between Lhasa Block to N and Himalaya Plate in S), probably remnants of Neotethyan seamounts. Gyanyima Lst with diverse latest Permian foraminiferal fauna dominated by Reichelina pulchra, Colaniella parva and Dilatofusulina. Can be correlated with Palaeofusulina sinensis Zone in E Tethys. With common corals, mainly Waagenophyllum, Ipciphyllum, etc. Composition of fauna suggests paleogeographic position at lower latitudes in Neotethys (NB: = Mesotethys of other authors?; JTvG))

Waterhouse, J.B. (1973)- Permian brachiopod correlations for South-East Asia. In: B.K. Tan (ed.) Proc. Reg. Conference on the Geology of SE Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 187-210.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973014.pdf)
(Correlations of Permian brachiopod assemblages in Indonesia (Timor), Malaysia, Thailand, Vietnam, Burma, etc., using fusulinids and ammonoids)

Xu, G. & R.E. Grant (1994)- Brachiopods near the Permian-Triassic Boundary in South China. Smithsonian Contr. Paleobiology 76, p. 1-68.
(online at: www.sil.si.edu/smithsoniancontributions/paleobiology/pdf_hi/SCtP-0076.pdf)
(Latest Permian(Changxingian) in S China with Cathaysian Tethyan brachiopod assemblage of 164 species, incl. Leptodus spp.. After major extinction event 20 species in E Triassic (lower Griesbachian))

Yabe, H. & S. Hanzawa (1931)- Palaeozoic and Mesozoic foraminifera. In: B.G. Escher et al. (eds.) De palaeontologie en stratigraphie van Nederlandsch Oost-Indie (Feestbundel K. Martin), Leidsche Geol. Mededelingen 5, p. 23-34.
(online at: www.repository.naturalis.nl/document/549381)
(Listings of Paleozoic- Mesozoic foraminifera reported from Indonesia: Carboniferous- Permian (Sumatra, Timor, Leti, Luang), Triassic- Jurassic (Sumatra) and Cretaceous (Sumatra, Java, Borneo, Timor, Roti, Ceram, etc.))

Yancey, T.E. & D.W. Boyd (1983)- Revision of the Alatoconchidae: a remarkable family of Permian bivalves. Palaeontology 26, p. 497-520.
(online at: http://cdn.palass.org/publications/palaeontology/volume_26/pdf/vol26_part3_pp497-520.pdf)
(Review of M Permian large, thick-walled bivalves, including material from Kinta Valley, Malay Peninsula (H.S. Lee mine, etc.). Oldest known alatoconchids Shikamaia (Tanchintongia) perakensis and Saikraconcha (Dereconcha) kaparensis, of probable E Artinskian age. Typical Tethyan fauna, adapted to warm-water, carbonate bank environments)

Zaninetti, L., J. Whittaker & D. Altiner (1979)- The occurrence of *Shanita amosi* Bronnimann, Whittaker and Zaninetti (Foraminifera) in the Late Permian of the Tethyan region. Notes Laboratoire Paleontologie Universite de Geneve 5, 1, p. 1-7.
(Late Permian small miliolid foraminifer Shanita appears to be marker for M-L Permian of N Gondwana margin; see also Jin & Yang, 2005)

Zhou, W., M. Wan, R.A. Koll & J. Wang (2018)- Occurrence of the earliest gigantopterid from the basal Permian of the North China Block and its bearing on evolution. Geological J. 53, 2, p. 500-509.
(Gigantopterid plants characteristic floral element in Permian Cathaysian floras. However, in China oldest known occurrences later than in N America (Artinskian) and Sumatra/Indonesia (Asselian-Sakmarian). New gigantopterid Gigantonoclea cf. mira from basal Permian (Asselian) strata in N China Block represents oldest unequivocal evidence for gigantopterids)

X.6. Quaternary Hominids, Mammals and associated stratigraphy

Aimi, M. (1989)- A mandible of *Sus stremmi* Koenigswald 1933 from Cisaat, Central Java, Indonesia. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 6, p. 4-10.
(New mandible (jaw) of pig species from coarse sands of Kali Glagah Fm at Cisaat, Bumiayu region, C Java)

Aimi, M. & F. Aziz (1985)- Vertebrate fossils from the Sangiran dome, Mojokerto, Trinil and Sambungmacan, Indonesia. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 155-198.

Aimi, M. & Sudijono (1979)- On the problematical species *Aceratherium boschi* von Koenigswald 1933. Bull. Geol. Res. Dev. Center 1, p. 37-45.
(online at: http://www.rhinoresourcecenter.com/pdf_files/149/1498297867.pdf)
(On latest Miocene?-Pliocene? rhinoceros molar from calcarenite in upper Halang Beds in Cisande River, W Java. First described by Von Koenigswald in 1933. Here believed to be referable to Rhinoceros sondaicus and foram age control deemed non-diagnostic)

Alink, G., S. Adithayama & T. Simanjuntak (2017)- Descriptive analysis of Palaeolithic stone tools from Sulawesi, collected by the Indonesian-Dutch expedition in 1970. AMERTA (J. Penelitian dan Pengembangan Arkeologi) 35, 2, p. 75-148.
(1970 Indonesian-Dutch expedition, headed by Soejono, Van Heekeren and Hooyer collected 1100 lithic objects from sites Beru and Marale in Walanae Depression in S Sulawesi. Vertebrate fossils (mainly pigs, turtle) from Walanae valley from upper Late Pliocene and possible Lower Pleistocene Walanae Fm. 'Cabenge Industry' lithic artefacts in terrace deposits, may be of Late Pleistocene age)

Alink, G., W. Roebroeks & T. Simanjuntak (2016)- The *Homo erectus* site of Trinil: past, present and future of a historic place. AMERTA (J. Penelitian dan Pengembangan Arkeologi) 34, 2, p. 99-114.

Allen, H. (1991)- Stegodonts and the dating of stone tool assemblages in island S.E. Asia. Asian Perspectives 30, p. 243-266.
(online at: http://hl-128-171-57-22.library.manoa.hawaii.edu/bitstream/10125/16998/1/AP-v30n2-243-265.pdf)
(Stone tools found associated with U Pleistocene-Holocene Homo fossils on Java (Ngandong, Wajak, etc.), but no tools with any certainty associated with M Pleistocene Homo erectus)

Amano, N., A.M. Moigne, T. Ingicco, F. Semah, R. DueAwe & T. Simanjuntak (2016)- Subsistence strategies and environment in Late Pleistocene- Early Holocene Eastern Java: evidence from Braholo Cave. Quaternary Int. 416, p. 46-63.
(Climatic shifts during Pleistocene- Holocene transition in Island SE Asia resulted in changes in landscapes, impacting vertebrate community composition and human subsistence economies. Braholo Cave in E Java with mainly arboreal fauna in Late Pleistocene - E-M Holocene, but older cave deposits dominated by animal taxa associated with open environments (bovids, cervids). Reflects forest expansion at onset of Holocene)

Ambrose, S.H. (1998)- Late Pleistocene human bottlenecks, volcanic winter, and differentiation of modern humans. J. Human Evolution 34, p. 623-651.
(Toba eruption on Sumatra may have caused human population bottleneck and modern human races may have differentiated abruptly only 70,000 years ago (see also commentary by Gathorne-Hardy 2003))

Ambrose, S.H. (2003)- Did the super-eruption of Toba cause a human population bottleneck? Reply to Gathorne-Hardy and Harcourt-Smith. J. Human Evolution 45, p. 231-237.
(~73 ka Toba eruption larger than previously estimated, and caused millennium of coldest temperatures of U Pleistocene. Genetic studies suggest real population bottleneck during first half of last glacial period, but no mass extinctions. We are descendants of few small groups of tropical Africans who united in face of adversity)

Anderson, C. (1937)- Palaeontological notes no. 4; fossil marsupials from New Guinea. Records Australian Museum 20, p. 73-76.

Ansyori, M.M. (2010)- Fauna from the oldest occupation layer in Song Terus cave, Eastern Java, Indonesia- biochronological significance of the Terus layer. Masters Thesis, Mus. Natl. Histoire Naturelle, Paris, p. 1-71.
(online at: http://hopsea.mnhn.fr/pc/thesis/M2_Ansyori_MIRZA.pdf)
(Oldest archeological assemblage in Song Terus cave in Weru, Pacitan, S Mountains of S Java ranges in age from ~300-80 ka (M-L Pleistocene). Late Pleistocene faunas of upper Terus Layer (80-120 ka) resemble Punung fauna of Badoux. Big fauna dominated by Cervidae, Bovidae and Suidae. Tropical forest environment)

Anton, S.C. (1997)- Developmental age and taxonomic affinity of the Mojokerto child, Java, Indonesia. American J. Physical Anthropology 102, 4, p. 497-514.
(Mojokerto child (Perning I), Java, discovered in 1936, has been assigned to Australopithecus and multiple species of Homo modjokertensis, etc. Developmental age range probably 4-6 years)

Anton, S.C. (1999)- Cranial growth in *Homo erectus*: how credible are the Ngandong juveniles? American J. Physical Anthropology 108, 2, p. 223-236.
(Ngandong 5 and 9 skulls are adults, 8 an older juvenile and 2 is a juvenile. Adult cranial contours and pattern of contour development similar between Ngandong adults and other H. erectus adults. Nothing to suggest that Ngandong transitional in vault shape between H. erectus and H. sapiens, despite relatively large brain)

Anton, S.C. (2001)- Cranial evolution in Asian *Homo erectus*. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 27, p. 39-46.

Anton, S.C. (2002)- Evolutionary significance of cranial variation in Asian *Homo erectus*. J. Physical Anthropology 118, 4, p. 301-323.
(Principal components analysis of calvarial shape suggest regional differentiation between N Asian and SE Asian H. erectus. Most recent SE Asian fossils (e.g. Ngandong) conform to SE Asian pattern)

Anton, S.C. (2003)- Natural history of *Homo erectus*. Yearbook Physical Anthropology, Wiley, 46, p. 126-170.
(online at: http://studylib.net/download/8851017)
(In Indonesia earliest hominid crania (Sangiran) few in number, often badly deformed and ~1.6- 1.8 Ma old. More common hominids between 0.9- 1.5 Ma, with cranial capacity of ~800-1000cc. Later Indonesian hominids (Ngandong, Sambungmacan) <100ka in age, and lack upper facial, mandibular or dental remains. Cranial size 900- >1200cc, average >1000cc. Main differences between earlier and later Indonesian H. erectus: brain size increase, increases in vault height, and decreases in postorbital constriction. H. erectus, notable for increased body size, originated around Plio-Pleistocene boundary in Africa and quickly dispersed into W and E Asia.)

Anton, S.C., F. Spoor, C.D. Fellmann & C.C. Swisher (2007)- Defining *Homo erectus*: size considered. In: W. Henke et al. (eds.) Handbook of Paleoanthropology, Springer Verlag, 3, 11, p. 1655-1693.

Anton, S.C. & C.C. Swisher (2003)- Early dispersals of *Homo* from Africa. Annual Rev. Anthropology 33, p. 271-296.
(Hominin presence outside Africa started at ~1.6-1.8 Ma (Homo erectus). Includes discussion on reliability of ages of Sangiran hominid ('poo-poo everything'; JTvG). Earliest hominins at Sangiran older than 1.0 Ma and probably 1.3 Ma or older)

Aplin, K. & K.M. Helgen (2010)- Quaternary murid rodents of Timor Part I: New material of *Coryphomys buehleri* Schaub, 1937, and description of a second species of the genus. Bull. American Museum Natural History 341, p. 1-80.
(online at: http://digitallibrary.amnh.org/handle/2246/6077)
(Archeological excavations in E Timor in 1968- 2002 provided new material of Late Pleistocene and recently extinct gigantic murine (rat) Coryphomys (originally described by Hooijer 1965))

Argue, D., C.P. Groves, M.S.Y. Lee & W.L. Jungers (2017)- The affinities of *Homo floresiensis* based on phylogenetic analyses of cranial, dental, and postcranial characters. J. Human Evolution 107, p. 107-133.
(online at: www.sciencedirect.com/science/article/pii/S0047248417300866)
(Analyses of multiple morphological characteristics suggest H. floresiensis (~65-90ka) is closest to early hominins (>1.75 Ma; Homo habilis?), suggesting probably long-surviving relict of early hominin lineage, with hitherto unknown migration out of Africa. Not recent descendants of either H. erectus or H. sapiens)

Ariens-Kappers, C.U. & K.H. Bouman (1939)- Comparison of the endocranial casts of the *Pithecanthropus erectus* skull found by Dubois and von Koenigswaldős *Pithecanthropus* skull. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 45, p. 30-40.

Arif, J., Y. Kaifu, H. Baba, M.E. Suparka, Y. Zaim & T. Setoguchi (2002)- Preliminary observation of a new cranium of *Homo erectus* (Tjg-1993.05) from Sangiran, Central Jawa. Anthropological Science 110, 2, p. 165-177.
(New well-preserved hominid skull found in 1993 from Bapang (Kabuh) Fm at Tanjung village, Sangiran region, C Java. Relocated to basal or middle part of Bapang Fm)

Audley-Charles, M.G. & D.A. Hooijer (1973)- Relation of Pleistocene migrations of pygmy stegodonts to island arc tectonics in Eastern Indonesia. Nature 241, p. 197-198.
(Pleistocene pygmy stegodonts in Sulawesi, Flores and Timor, areas now separated by deep seas. Dwarf Stegodon populations coexisted in Flores and Timor, and apparently wandered back and forth in Pleistocene)

Aziz, F. (1983)- Notes on a new *Meganthropus* S.33 from the Sangiran Dome, Central Java. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 4, p. 56-60.

Aziz, F. (1989)- *Macaca fascicularis* (Raffles) from Ngandong, East Java. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 5, p. 50-56.
(Macaque fossil tooth from Pleistocene of Ngandong along Solo River, site of Homo soloensis. Supports earlier interpretations of open-country habitat)

Aziz, F. (1990)- Pleistocene mammal faunas of Sulawesi and their bearings to paleozoogeography. Ph.D. Thesis, Kyoto University, p. 1-106.

Aziz, F. (2000)- A new insight on the Pleistocene fauna of Sangiran and other hominid sites in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 10, p. 49-57.
(Discussion of the De Vos 1982 and Sondaar 1982 Java mammalian biostratigraphy scheme)

Aziz, F. (2001)- New insight on the Pleistocene fauna of Sangiran and other hominid sites in Java. In: T. Simanjuntak et al. (eds.) Sangiran: man, culture and environment in Pleistocene times, Yayasan Obor Indonesia, Jakarta, p. 260-271.
(Same paper as Aziz (2000))

Aziz, F. (2002)- New discovery of a hominid skull from Cemeg, Sambungmacan, Central Java: an announcement. J. Sumber Daya Geologi 7, 125, p. 2-7.
(Displaced hominid skull from Solo River sediments near Cemeng, W of Trinil, C Java, here called Sambungmacan 4. Probably Homo erectus of Pleistocene age)

Aziz, F. (2013)-Peran Badan Geologi dalam penelitian manusia purba. Geomagz 3, 2, p. 23-25.
('The role of the Geological Agency in ancient human research')

Aziz, F. & H. Baba (eds.) (2013)- *Homo erectus* in Indonesia. Recent progress of the study and current understanding, Centre for Geological Survey, Bandung. p. 1- .

Aziz, F., H. Baba & S. Narasaki (1994)- Preliminary report on recent discoveries of fossil hominids from the Sangiran area, Java. J. Geologi Sumberdaya Mineral 4, 29, p. 11-16.
(New hominid skull and mandible fragments, found by local collectors in E part of Sangiran Dome, C Java)

Aziz, F., H. Baba & N. Watanabe (1996)- Morphological study on the *Homo erectus* Sangiran 17 skull based on the new reconstruction. Geol. Res. Dev. Centre, Bandung, Seri Paleontologi 8, p. 11-25.

Aziz, F. & J. de Vos (1989)- Rediscovery of the Wadjak Site (Java, Indonesia). J. Anthropological Soc. Nippon 97, 1, p. 133-144.
(online at: www.jstage.jst.go.jp/article/ase1911/97/1/97_1_133/_pdf)
(Site of Wajak cave at Gunung Lawa near Tjermee/ Campur Darat villages in C Java, with 'Wajak man' hominid remains and originally excavated by Dubois in 1890, still exists (latest Pleistocene or Holocene; see Storm et al., 2013)

Aziz, F. & J. de Vos (1999)- The fossil faunas from the Citarum area, West Java, Indonesia. In: J.W.F. Reumer and J. de Vos (eds.) Elephants have a snorkel!, Papers in honor of Paul Y. Sondaar, DEINSEA 7, p. 21-32.
(online at: www.hetnatuurhistorisch.nl/..)
(Four fossil mammal faunas from Citarum area, Bandung Basin, W Java: (1) Banuraja, with Sus, Panthera, Manis palaeojavanicus, etc., with age of ~0.8 Ma; (2) Cipatik/Cililin lake deposits with fossil fish of possibly Pleistocene age. (3) Ciharuman with fossils dated as ~29.6-42.3 k; (4) Cipeundeuy with Elephas maximus, Rhinoceros sondaicus, Rusa, Elephas maximus with age of ~0.42- 0.36 Ma)

Aziz, F. & I. Saefudin (1996)- An isolated tooth of orang-utan (*Pongo pygmaeus*) from the Sangiran area, Central Java, Indonesia. Publ. Geol. Research Dev. Centre (GRDC), Bandung, Seri Paleontologi 8, p. 47-50.

Aziz, F., P.Y. Sondaar, J. de Vos, G.D. van den Bergh & Sudijono (1995)- Early dispersal of man on islands of the Indonesian Archipelago: facts and controls. Anthropological Science 103, 4, p. 349-368.
(online at: https://www.jstage.jst.go.jp/article/ase1993/103/4/103_4_349/_pdf)
(Migration of hominids across sea barriers much earlier than Neolithic. Distance of island to mainland and food supply limiting factors on human colonization of islands. On islands of SE Asia giant rats may have served as food supply for Paleolithic Man. M Pleistocene faunal turnover on Flores. Java Homo erectus s.s. associated with 3 mammalian assemblages Ci Saat (~1.2 Ma), Trinil HK (Grenzbank- lower Bapang/ Kabuh Fm of Sangiran; ~1.0 Ma) and Kedung Brubus (U Bapang/ Kabuh Fm between middle and lower tuff of Sangiran; ~0.8 Ma). Ngandong fauna with Homo erectus soloensis <0.8 Ma. Punung and Wajak faunas with H. sapiens. On Flores two endemic island faunas: (1) dwarf Stegodon and giant tortoise Geochelone, and (2) younger fauna with Stegodon trigonocephalus, giant rats and hominid lithic industry)

Aziz, F., P.Y. Sondaar, J.J.M. Leinders & J. de Vos (1989)- Fossil faunas and early man of Java. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 6, p. 1-3.
(Brief summary of succession of seven Pleistocene mammal/ hominid assemblages of Java)

Aziz, F., P.Y. Sondaar, G.D. van den Bergh & J. de Vos (1995)- *Homo erectus* in S.E. Asia: time space and migration routes, II. The Java case. In: J. Gibert et al. (eds.) Proc. Int. Conf. The hominids and their environment during the Lower and Middle Pleistocene of Eurasia, Orce 1995, p. 363-368.

Aziz, F. & G.D. van den Bergh (1995)- A dwarf *Stegodon* from Sambungmacan (Central Java, Indonesia). Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 98, 3, p. 229-241.
(New dwarf Stegodon jaw fragment found in 1992 in shallow marine Kalibeng Limestone at Sambungmacan. Age may be latest Pliocene or earliest Pleistocene. Site may have been margin of a paleo-island in Kendeng zone. Overlying clastics at this site yielded 1973 'Solo Man' Homo erectus skull cap discovery and stone tools)

Baab, K.L. (2010)- Cranial shape in Asian *Homo erectus*: geographic, anagenetic, and size-related variation. In: C.J. Norton & D.R. Braun (eds.) Asian Paleoanthropology: from Africa to China and beyond, Springer, Chapter 6, p. 57-79.

(No strong support for linear progression in neurocranial skull shape from Sangiran to Ngandong via Sambungmacan/Ngawi)

Baab, K.L. (2016)- The place of *Homo floresiensis* in human evolution. J. Anthropological Sci. 94, p. 5-18.
(online at: www.isita-org.com/jass/Contents/2016vol94/Baab/26829572.pdf)
(Two evolutionary scenarios for small-bodied Homo floresiensis on Flores in Late Pleistocene: (1) H. floresiensis was dwarfed descendent of H. erectus, or (2) remnant of older lineage, perhaps descended from H. habilis. Could be either)

Baab, K.L., K.P. McNulty & K. Harvati (2013)- *Homo floresiensis* contextualized: a geometric morphometric comparative analysis of fossil and pathological human samples. PlosOne 8, 7, e69119, p. 1-11.
(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0069119)
(Geometric morphometric analyses of LB1 cranium shows Homo floresiensis is distinct from healthy modern humans and from those with pathological conditions (hypothyroidism, Laron syndrome, microcephism), and is most similar to Homo erectus (but smaller))

Baab, K.L. & Y. Zaim (2017)- Global and local perspectives on cranial shape variation in Indonesian *Homo erectus*. Anthropological Science 125, 2, p. 67-83.
(online at: https://www.jstage.jst.go.jp/article/ase/125/2/125_170413/_pdf/-char/en)
(Skull shapes of Homo erectus from Sangiran, Ngandong, Sambungmacan and Ngawi compared to H. erectus from outside of Java. Asian H. erectus fossils can be distinguished from African/Georgian ones. Late Indonesian H. erectus from sites like Ngandong, distinct from all other H. erectus groups, including older C Java fossils. Younger Sangiran fossils more closely approach Ngandong/Sambungmacan/Ngawi pattern)

Baba, H. & F. Aziz (1992)- Human tibial fragment from Sambungmachan, Java. In: T. Akazawa et al. (eds.) The evolution and dispersal of modern humans in Asia, Tokyo, p. 349-361.

Baba, H., F. Aziz, Y. Kaifu, G. Suwa, R.T. Kono & T. Jacob (2003)- *Homo erectus* calvarium from the Pleistocene of Java. Science 299, p. 1384-1388.
(Homo erectus calvarium from Sambungmacan, C Java. Overall morphology intermediate between earlier and later Javanese Homo erectus)

Baba, H., F. Aziz & S. Narasaki (2000)- Restoration of the face of Javanese *Homo erectus* Sangiran 17 and re-evaluation of regional continuity in Australasia. In: W. Dong (ed.) Proc. 1999 Beijing Int. Symposium on paleoanthropology, Acta Anthropologica Sinica 19 (Suppl.), p. 34-40.
(Facial characteristic of restored Sangiran 17 skull do not support hypothesis of Thorne and Wolpoff of regional continuity between H. erectus and Late Pleistocene Australians)

Baba, H., F. Aziz, S. Narasaki, Sudijono, Y. Kaifu, A. Supriojo, M. Hyodo, E.E. Susanto & T. Jacob (2000)- A new hominid incisor from Sangiran, Central Java. J. Human Evolution 38, 6, p. 855-862.
(New hominid lower left central tooth found in 1997, in level between lower and upper tuffs in Bapang Fm, near village of Bukuran, ESE Sangiran dome area (latest E Pleistocene))

Baba, H., F. Aziz, S. Narasaki, Sudijono, Y. Kaifu, I. Saefudin & E.E. Susanto (2004)- Frontal bone fragment of *Homo erectus* from Sangiran, Java. Human Evolution 19, 3, p. 197-201.
(Homo erectus frontal bone fragment found in 1994 in Brangkal River river floor, Sangiran area. Original stratigraphic level not known, possibly from 'Grenzbank')

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(online at: http://ci.nii.ac.jp/naid/110000008554/en)
(Hominid tibial fragment Sm 2 collected in 1977 with other vertebrate bones from Sambungmacan, presumably from Kabuh equivalent beds. Rel. advanced character)

Bacon, A.M., K. Westaway, P.O. Antoine, P. Duringer, A. Blin, F. Demeter, J.L. Ponche, J.X. Zhao, L.M. Barnes et al. (2015)- Late Pleistocene mammalian assemblages of Southeast Asia; new dating, mortality profiles and evolution of the predator-prey relationships in an environmental context. Palaeogeogr. Palaeoclim. Palaeoecology, 422, p. 101-127.
(On mammal remains in Late Pleistocene karst deposits in N Laos, N Vietnam, Punung (C Java) and Sibrambang (W Sumatra))

Badoux, D.M. (1959)- Fossil mammals from two fissure deposits at Punung (Java) with some remarks on migrations and evolution of mammals during the Quaternary in South East Asia. Doct. Thesis University of Utrecht, p. 1-151.
(Description of 'Punung' mammal fauna' from karst hills of S Mountains, E Java, collected by Von Koenigswald in 1930's. (see also Storm et al (2005) for details of locality, paleoenvironment (rainforest) and age (~0.1 Ma))

Bae, C.J. (2010)- The late Middle Pleistocene hominin fossil record of eastern Asia: synthesis and review. American J. Physical Anthropology 143, Suppl. 51, p.75-93.
(Traditionally, M Pleistocene hominin fossils that cannot be allocated to Homo erectus s.l. or modern H. sapiens in E Asia, classified as archaic, early, or premodern H. sapiens. Increasing number of M Pleistocene hominin fossils currently being assigned to H. heidelbergensis, but little evidence in E Asia to support assignment to H. heidelbergensis. Best to continue to use term archaic H. sapiens)

Bae, C.J., FengLi, L. Cheng, W. Wang & H. Hong (2018)- Hominin distribution and density patterns in Pleistocene China: climatic influences. Palaeogeogr. Palaeoclim. Palaeoecology 512, p. 118-131.
(Hominins during E- M Pleistocene appear restricted to C and S China. By advent of late M Pleistocene hominins found regularly in N China. Hominins restricted range due to climatic variation during E- early M Pleistocene, but more successful to adapt to changing climates in late M Pleistocene)

Balzeau, A. (2005)- Specificites des caracteres morphologiques internes du squelette cephalique chez *Homo erectus*. Doct. Thesis Museum Natl. Histoire Naturelle, Paris, p. 1-394.
(online at: http://hopsea.mnhn.fr/pc/thesis/PhD_Balzeau2005.pdf)
('Internal morphologic characteristics of Homo erectus skull')

Balzeau, A., D. Grimaud-Herve & T. Jacob (2005)- Internal cranial features of the Mojokerto child fossil (East Java, Indonesia). J. Human Evolution 48, p. 535-553.

Balzeau, A. (2013)- Thickened cranial vault and parasagittal keeling: correlated traits and autapomorphies of *Homo erectus*? J. Human Evolution 64, 6, p. 631-644.

Balzeau, A. & P. Charlier (2016)- What do cranial bones of LB1 tell us about *Homo floresiensis*? J. Human Evolution 93, p. 12-24.
(No support for attribution of holotype of Homo floresiensis (LB1) from Liang Bua, Flores, to H. sapiens)

Bandet, Y., F. Semah, S. Sartono & T. Djubiantono (1989)- Premier peuplement par les mammiferes dûne region de Java Est, a la fin du Pliocene: age de la faune du Gunung Butak, pres de Kendungbrubus (Indonesie). Comptes Rendus Academie Sciences, Paris 308, p. 867-870.
(online at: https://core.ac.uk/download/pdf/39865312.pdf)
('First population by mammals of a region of E Java at the end of the Pliocene: age of the Gunung Butak fauna near Kedungbrubus'. Along flanks of Gunung Butak marine sediments abruptly overlain by coarse and slightly transported volcanic breccia. Fossil mammals appear just above, in fluviatile and lahar beds. Top of basal breccia dated 1.87 Ma. Emerged tongues of land due to volcanoes colonized by mammals by latest Pliocene)

Barker, G., H. Barton, M. Bird, P. Daly, I. Datan, A. Dykes, L. Farr et al. (2007)- The `human revolution' in lowland tropical Southeast Asia: the antiquity and behavior of anatomically modern humans at Niah Cave (Sarawak, Borneo). J. Human Evolution 52, 3, p. 243-261.

(Anatomically modern humans in Niah cave, Sarawak, N Borneo. New dates and lithostratigraphy relate Deep Skull to evidence of human activity between ~46,000- 34,000 years ago)

Barry, J.C., N.M. Johnson, S.M. Raz & L.L. Jacobs (1985)- Neogene mammalian faunal change in southern Asia: correlations with climatic, tectonic, and eustatic events. Geology 13, p. 637-640.

Bartstra, G.J. (1974)- Notes about Sangiran (Java, Indonesia). Quartar 25, p. 1-11.
(online at: www.quartaer.eu/pdfs/1974/1974_01_bartstra.pdf)
(Brief review of Sangiran dome Pleistocene stratigraphy, ~10km N of Solo, and localities of hominid fossils)

Bartstra, G.J. (1976)- Contributions to the study of the Palaeolithic Patjitan culture, Java, Indonesia. Thesis University of Groningen, Brill, Leiden, p. 1-121.
(Study of Pacitanian Paleolithic artifacts, first discovered by Von Koenigswald in 1935 in Baksoko River terrace gravels in Southern Mountains of C Java. Mammals in nearby Punung fissure deposit of M Pleistocene age (Djetis and Trinil associations; Hooijer appendix). Includes good overview of geology of Southern Mountains (Gunung Sewu) of C Java, incl. Wonosari limestone karst terranes, Pleistocene river terraces, etc..)

Bartstra, G.J. (1977)- The height of the river terraces in the transverse Solo valley in Java. Modern Quaternary Research in Southeast Asia 3, Balkema, Rotterdam, p. 143-155.
(Quaternary terraces in transverse valley of Solo River N of Ngawi, previously studied by De Terra (1943), Sartono (1976), etc.. Highest terrace up to 40-50m above present Solo river level (T1; poorly preserved), second terrace at ~20m above rive (T2), third ~5m above river (T3; best preserved; location of villages). Ngandong Solo Man fossils in T2/20m terrace)

Bartstra, G.J. (1977)- Walanae Formation and Walanae terraces in the stratigraphy of South Sulawesi (Celebes, Indonesia). Quartar 27/28, p. 21-30.
(Geologic setting of terraces of Walanae River, which contain Pleistocene vertebrate fossils (Archidiskodon-Celebochoerus fauna of Hooijer, 1948), and stone artefacts (Tjabenge industry). Author believes stone artifacts to be younger than S Sulawesi fossils)

Bartstra, G.J. (1978)- The age of the Djetis Beds in East and Central Java. Antiquity 52, 204, p. 56-58.
(On age of Jetis Fauna (incl. Homo erectus) from Mojokerto area)

Bartstra, G.J. (1978)- The Patjitan culture: a preliminary report on new research. In: F. Ikawa-Smith (ed.) Early Palaeolithic in South and East Asia, Mouton Publishers, The Hague, p. 29-36.
(Paleolithic 'Pacitanian' relatively advanced stone tools from along Baksoko River near Punung, S coast of E Java, first described by Von Koenigswald (1936). 1500 additional artifacts collected in 1972 excavations. Three fluvial terraces, all with stone artifacts but unfossiliferous. Pacitan culture may be work of Homo soloensis)

Bartstra, G.J. (1982)- The river-laid strata near Trinil, site of *Homo erectus*, Java, Indonesia. Modern Quaternary Research in Southeast Asia 7, Balkema, Rotterdam, p. 97-130.
(Historic review of stratigraphic interpretations of Pleistocene Trinil Beds of C Java, the site of first Pithecanthropus and of abundant vertebrate fossils collected by Dubois, Selenka, etc. Two fluvial sand horizons along Solo River at Trinil: (1) Lower horizon (Kabuh Beds) of M and Late Pleistocene age; (2) upper horizon of Late Pleistocene Solo River terrace deposits. Sands composed of andesitic material and unconformably overlie Late Neogene marine marls)

Bartstra, G.J. (1982)- *Homo erectus erectus*: the search for his artifacts. Current Anthropology 23, 3, p. 318-320.
(online at: https://www.rug.nl/research/portal/files/66717894/2742319.pdf)
(Years of fieldwork in C Java between 1977-1981 failed to find conclusive evidence for E-M Pleistocene tools used by Homo erectus. Many stone artifacts found across E Java, but all younger than Homo erectus and may be from modern Homo Older small crude flakes interpreted to be hominid implements 'may just be stones')

Bartstra, G.J. (1983)- The fauna from Trinil, type locality of *Homo erectus*: a reinterpretation, Comment I: The vertebrate bearing deposits of Kedungbrubus and Trinil, Java, Indonesia. Geologie en Mijnbouw 62, 2, p. 329-336.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0TXdLZ3dtNVloTHc/view)
(De Vos et al. (1982) suggested classic Pleistocene vertebrate stratigraphy of Java as established by Von Koenigswald is incorrect, calling Jetis·fauna younger than Trinil fauna. On stratigraphic grounds this view is untenable and Van Koenigswald's stratigraphy is essentially correct. See also Hooijer 1983))

Bartstra, G.J. (1983)- Some remarks upon fossil man from Java, his age, and his tools. Bijdragen Taal, Land Volkenkunde 139, 4, Leiden, p. 421-434.
(online at: www.kitlv-journals.nl/index.php/btlv/article/view/2001/2762)
(Review of stratigraphy and hominid fossils of C Java. Solo River deposits near Trinil two units: (1) upper unit typical modern Solo river terrace deposits with Homo soloensis, (2) lower unit Pleistocene clays, silts, sands and gravels, with Homo erectus)

Bartstra, G.J. (1984)- Dating the Pacitanian: some thoughts. In: P. Andrews & J.L. Franzen (eds.) The early evolution of Man with special emphasis on South East Asia and Africa, Courier Forschungsinstitut Senckenberg 69, p. 253-258.

Bartstra, G.J. (1985)- Sangiran, the stone implements of Ngebung and the Paleolithic of Java. Modern Quaternary Research in Southeast Asia 9, Balkema, Rotterdam, p. 99-113.

Bartstra, G.J. (1987)- Late *Homo erectus* or Ngandong man of Java. Palaeohistoria 29, p. 1-7.
(online at: https://ugp.rug.nl/Palaeohistoria/article/download/24867/22315)
(Review of Ngandong man ('Homo soloensis') from 'High Terrace' deposits of Solo river in Kendeng zone of Java, Generally regarded as last representative of Homo erectus in SE Asia. Associated with rich mammal fauna, mainly bovids, indicative of open forest environment. Oldest Solo terrace sediments in C Java must date from beginning of N-ward directed drainage pattern and probably Late Pleistocene in age. U-series ages from Ngandong bone samples mainly between ~40-80 ka. No in-situ stone implements, but nearby surface finds of small chalcedony artefacts ('Ngandong Industry'))

Bartstra, G.J. (1994)- Indonesia in the period of *Homo habilis* and *Homo erectus*. In: S.J. de Laet et al. (eds.) History of humanity: prehistory and the beginnings of civilization, 1, UNESCO, Paris, p. 89-99.

Bartstra, G.J. (1994)- Indonesia in the period of *Homo sapiens neanderthalensis.* In: S.J. de Laet et al. (eds.) History of humanity: prehistory and the beginnings of civilization, 1, Chapter 17, UNESCO, Paris, p. 167-175.

Bartstra, G.J. (1997)- A fifty years commemoration: fossil vertebrates and stone tools in the Walanae valley, South Sulawesi, Indonesia. Quartaer 47/48, p. 29-50.
(online at: www.quartaer.eu/pdfs/1997/1997_02_bartstra.pdf)
(History of discovery of Pleistocene mammals and hominid artifacts along the Walanae River in S Sulawesi in 1947 by archeologist H.R. van Heekeren and vertebrate paleontologist D.A. Hooijer)

Bartstra, G.J. & Basoeki (1989)- Recent work on the Pleistocene and the Palaeolithic of Java. Current Anthropology 30, 2, p. 241-244.

Bartstra, G.J., M. Basoeki & B. Santosa Azis (1976)- Solo Valley research 1975 Java, Indonesia. Modern Quaternary Research in Southeast Asia 2, Balkema, Rotterdam, p. 23-36.
(Brief review of Pleistocene geology along Solo River in Trinil and Ngawi areas. Discovery of stone implements in high terrace gravels)

Bartstra, G.J. & D.A. Hooijer (1992)- New finds of fossil vertebrates from Sulawesi, Indonesia. Lutra 35, p. 113-122.

Bartstra, G.J., D.A. Hooijer, B. Kallupa & M.A. Akib (1992)- Notes on fossil vertebrates and stone tools from Sulawesi, Indonesia, and the stratigraphy of the northern Walanae depression. Palaeohistoria 33/34, p. 1-18.
(online at: http://rjh.ub.rug.nl/Palaeohistoria/article/view/25054/22512)
(Pleistocene Archidiskodon-Celebochoerus vertebrate fauna and artifacts of the Cabenge Industry. Fossils and artifacts may not be contemporaneous. Singkang embayment/ Tempe depression separates SW peninsula of Sulawesi from rest of island and was covered by sea until recently)

Bartstra, G.J., S.G. Keates, Basoeki & B. Kallupa (1991)- On the dispersion of *Homo sapiens* in Eastern Indonesia: the Palaeolithic of South Sulawesi. Current Anthropology 32, 3, p. 317-321.
(Homo sapiens reached Sulawesi around 50,000 B.P. (Walanae Fm); Homo erectus never reached Sulawesi)

Bartstra, G.J., S. Soeghondo & A. van der Wijk (1988)- Ngandong man: age and artifacts. J. Human Evolution 17, 3, p. 325-337.
(Homo soloensis found in 1930's in High Terrace of Solo River near Ngandong, with associated small stone implements. Th/U ages for Ngandong vertebrate remains suggest Upper Pleistocene age (~30-100 ka?))

Bednarik, R.G. (1997)- The initial peopling of Wallacea and Sahul. Anthropos 92, p. 355-367.
(online at: www.ifrao.com/wp-content/uploads/2015/02/97Wallacea.pdf)
(Review of Pleistocene migrations of hominids into Indonesia and Australia)

Bednarik, R.G. (2000)- Pleistocene Timor: some corrections. Australian Archaeology 5, p. 16-20.
(Review of Pleistocene mammal fossils (Stegodon, giant tortoise) and some questionable relicts of Pleistocene hominids on Timor)

Bednarik, R.G. (2002)- The maritime dispersal of Pleistocene humans. Migration and Diffusion 3, 10, p. 6-33.
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(Sundaland region in W of SE Asia archipelago and isolated islands of Wallacea in E witnessed complex trajectories of human movement and evolution during Pleistocene)

Bellwood, P. (1997)- *Homo erectus* in Sundaland. In: Prehistory of the Indo-Malaysian Archipelago, Chapter 2, ANU Press, p. 39-68.
(online at: http://press-files.anu.edu.au/downloads/press/p80041/pdf/ch0273.pdf)

Bellwood, P.S. (2007)- Prehistory of the Indo-Malaysian Archipelago. Australia National University (ANU) Press, Canberra, p. 1-384.
(*online at: http://epress.anu.edu.au/pima/pdf/pima-whole.pdf*
(3rd edition of 1985 textbook)

Bellwood, P.S. (2017)- First Islanders: prehistory and human migration in island Southeast Asia, Wiley-Blackwell, p. 1-384.
(Recent review of history of hominids in SE Asia)

Bellwood, P.S. (2017)- *Homo erectus* and *Homo floresiensis-* Archaic hominins in island Southeast Asia. In: First Islanders: prehistory and human migration in island Southeast Asia, Wiley, Chapter 3, p. 34-85.
(Discussion of lithic stone tool industries reportedly associated with Homo erectus in various regions of island SE Asia. Two categories: (1) 'chopper/chopping-tool industries' characterized by Java Pacitanian industry and supposedly work of Homo erectus; (2) 'pebble and flake industries' more characteristic of early Homo sapiens)

Berry, E.W. (1916)- The environment of the ape man. The Scientific Monthly 3, 2, p. 161-169.
(Early discussion of environmental setting of Pleistocene Pithecanthropus erectus (Java man). Recognized that during Pleistocene glacial lowstands Sumatra and Java were connected with Borneo and Malay Peninsula,

forming landmass. Java Pleistocene mammal faunas of Siamese and Indian affinity and believed to have migrated from SE Asia mainland in NW)

Bettis, E.A., A.K. Milius, S.J. Carpenter, R. Larick, Y. Zaim, Y. Rizal, R.L. Ciochon, S.A. Tassier-Surine, D. Murray, Suminto & S. Bronto (2009)- Way out of Africa: Early Pleistocene paleoenvironments inhabited by *Homo erectus* in Sangiran, Java. J. Human Evolution 56, 1, p. 11-24.
(Stratigraphy and paleosols at Sangiran, C Java, document environments of Homo erectus in E Pleistocene. Earliest human immigrants encountered low-relief lake-margin landscape dominated by moist grasslands with open woodlands in driest positions. By 1.5 Ma, large streams filled lake and landscape became more riverine. Long-term shift toward regional drying or longer dry seasons through E Pleistocene)

Bettis, E.A., Y. Zaim, R.R. Larick, R.L. Ciochon, Suminto, Y. Rizal, M. Reagan & M. Heizler (2004)- Landscape development preceding *Homo erectus* immigration into Central Java, Indonesia: the Sangiran Formation Lower Lahar. Palaeogeogr. Palaeoclim. Palaeoecology 206, p. 115-131.
(Sangiran Lower Lahar Unit debris flow age 1.90 Ma, terminates Late Pliocene shallow marine sedimentation)

Bettis, E.A., Y. Zaim & Y. Rizal (2009)- Plio-Pleistocene climatic and volcanic controls on high to moderate accommodation space systems in the Solo Basin, Central Java, Indonesia. AAPG Hedberg Conf. Variations in fluvial-deltaic and coastal reservoirs deposited in tropical environments, Jakarta 2009, 3p.
(online at: www.searchanddiscovery.com/abstracts/pdf/2010/hedberg_indonesia/abstracts/ndx_bettis.pdf)
(Extended abstract. Late Pliocene- Pleistocene marginal marine, lacustrine and fluvial sediments exposed in Sangiran Dome interpreted in terms of interactions between tectonics and climate change over past 2 My)

Beyer, H.O. & D.J. Steinberg (1957)- New finds of fossil mammals from the Pleistocene strata of the Philippines. National Research Council of the Philippines, Quezon City, Bull. 41, p. 220-238.

Bibi, F. & G. Metais (2016)- Evolutionary history of large herbivores of South and Southeast Asia (Indomalayan Realm). In: F.S. Ahrestani & M. Sankaran (eds.) The ecology of large herbivores in South and Southeast Asia, Springer Verlag, p. 15-88.

Bilsborough, A. (2005)- *Homo erectus* revisited: aspects of affinity and diversity in a Pleistocene hominin species. Anthropologie 43, 2-3, p. 129-158.
(No convincing morphological case for differentiating early African specimens (H. ergaster) or 'Meganthropus' material from Homo erectus. Long interval between early (Sangiran- Trinil- Kedung Brubus) and latest H. erectus (Ngandong- Sambungmacan). Regional trends include increase in brain size and cranial robusticity, dental reduction, etc.. Homo floresiensis probably derived from SE Asian Homo erectus via transilience event and selection for endemic dwarfing)

Bird, M.I., D. Taylor & C. Hunt (2005)- Palaeoenvironments of insular Southeast Asia during the last glacial period; a savanna corridor in Sundaland? Quaternary Science Reviews 24, 20-21, p. 2228-2242.
(Geomorphology, palynology, biogeography and vegetation/climate modelling suggests N-S 'savanna corridor' through Sundaland continent through Last Glacial Period at time of lowered sea-level. Minimal interpretation of 50-150 km wide zone of open savanna vegetation along divide between S China and Java Seas, forming land bridge between Malay Peninsula, Sumatra, Java and Borneo and served as barrier to dispersal of rainforest-dependent species between Sumatra and Borneo. Savanna corridor may have provided convenient route for rapid early dispersal of modern humans through region and on into Australasia)

Blain, H. (2012)- An environmental tale from Pleistocene Java. Reconstructing dietary niche and palaeoenvironment by applying stable isotope analysis to selected fossil fauna From Trinil (Java, Indonesia). Master of Arts Thesis, University of Leiden, Faculty of Archaeology, p. 1-61.
(online at: https://openaccess.leidenuniv.nl/handle/1887/19730)
(Dietary and water resource niches for selected fossil bovids from Trinil HK, Java determined from stable isotopes of carbonate fraction of teeth and bones of fossil aquatic fauna (Trinil and Sangiran) suggests Pleistocene environment of site more diverse environment than just grassland)

Bocherens, H., F. Schrenk, Y. Chaimanee, O. Kullmer, D. Morike, D. Pushkina & J.J. Jaeger (2017)- Flexibility of diet and habitat in Pleistocene South Asian mammals:Implications for the fate of the giant fossil ape *Gigantopithecus*. Quaternary Int. 434, p. 148-155.
(Giant fossil ape Gigantopithecus blacki from SE Asia survived until ~100,000 years ago. Known only from isolated teeth and lower jaw fossils. Carbon isotopes of tooth enamel from N Thailand suggest Gigantopithecus was forest-dweller with vegetarian diet. Demise possibly due to forest reduction during glacial periods)

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(New, more complex out-of-Africa scenario involving multiple exits, varying terrestrial routes, a sub-divided African source population, slower progress to Australia, and interbreeding with archaic varieties of Homo)

Bonde N. & B. Westergaard (2004)- Progress in hominid classification: cladistic approaches. In: Miscelanea en homenaje a Emiliano Aguirre, Paleoantropologia, p. 37-57.
(Elegant general review of hominid evolution)

Borel, A., R. Cornette & M. Baylac (2017)- Stone tool forms and functions: a morphometric analysis of modern humans' stone tools from Song Terus Cave (Java, Indonesia). Archaeometry 59, 3, p. 455-471.
(Stone industries from beginning of Holocene of SE Asia difficult to characterize typo-technologically)

Borel, A., C. Gaillard, M.H. Moncel, R. Sala, E. Pouydebat, T. Simanjuntak & F. Semah (2013)- How to interpret informal flakes assemblages? Integrating morphological description, usewear and morphometric analysis gave better understanding of the behaviors of anatomically modern human from Song Terus (Indonesia). J. Anthropological Archaeology 32, 4, p. 630-646.
(Analysis of thousands of Holocene (~11-5 ka) hominid stone tools from upper ('Keplek') levels of Song Terus cave in Southern Mountains of Central Java)

Bouteaux, A. (2005)- Paleontologie, paleoecologie et taphonomie des mammiferes du Pleistocene moyen ancien du site a hominides de Sangiran (Java central, Indonesie). Doct. Thesis Museum Nat. Histoire Naturelle, Paris, p. 1-368.
(online at: http://hopsea.mnhn.fr/pc/thesis/PhD_Bouteaux2005.pdf)
('Paleontology, paleoecology and taphonomy of the E-M Pleistocene mammals from the Sangiran hominid site, Central Java')

Bouteaux, A. (2008)- Etude taphonomique dôassemblages fauniques de sites a *Homo erectus* du dome de Sangiran (Pleistocene moyen, Java central, Indonesie). Annal. Paleont. 94, 4, p. 229-243.
('Taphonomic study of faunal assemblages of Homo erectus sites at Sangiran Dome (M Pleistocene, Central Java, Indonesia'. Most bone assemblages from H. erectus sites come from fluvial volcanic-sedimentary Kabuh layers (E-M Pleistocene). Herbivores dominate assemblages (large bovids like Bubalus palaeokerabau or Bibos palaesondaicus and smaller cervids like Axis lydekkeri). Carnivores are rare. High degree of fragmentation of fossils related to fissuration and fluviatile transport)

Bouteaux, A. & A.M. Moigne (2010)- New taphonomical approaches: the Javanese Pleistocene open-air sites (Sangiran, Central Java). Quaternary Int. 223-224, p. 220-225.
(Excavations in Sangiran Dome produced numerous mammal fossils, including Homo erectus. Bones most common in M Pleistocene fluvial Kabuh Fm volcanoclastics, dominated by teeth and extremities of large bovids and smaller cervids, mostly in fragments. Modification of assemblages by water action. Carnivores and traces of their actions rare. Anthropic influence at Ngebung 2 site, with occurrence of lithic artifacts)

Bouteaux, A., A.M. Moigne & T. Jacob (2008)- Palaeontology, palaeoecology and taphonomy of Middle Pleistocene: mammals in the hominid site of Sangiran dome. In: E. Indriati (ed.) Recent Advances on Southeast Asian palaeoanthropology and archaeology, Int. Seminar on Southeast Asian Paleoanthropology, Yogyakarta, p. 160-168.

Bouteaux, A., A.M. Moigne, F. Semah & T. Jacob (2007)- Les assemblages fauniques associes aux sites a *Homo erectus* du dome de Sangiran (Pleistocene moyen, Java, Indonesie). Compt. Rendus Palevol 6, 3, p. 169-179.
('The faunal assemblages associated with Homo erectus sites at Sangiran (M Pleistocene, Java)'. Homo erectus in fluvial deposits outcropping in several localities. Thirteen taxa of M Pleistocene mammals determined. Lithic tools rare at these sites. Mechanical action of water responsible for accumulations)

Bouteaux, A., A.M. Moigne & K. Setiagama (2008)- Etudes archeozoologiques de sites javanais du Pleistocene: les sites de plein air du dome de Sangiran (Java central) et le site en grotte de Song Terus (Java est). In: Archaeozoology of the Near East VIII, Travaux Maison de l'Orient et de la Mediterranee, 49, p. 79-97.
(online at: www.persee.fr/doc/mom_1955-4982_2008_act_49_1_2702)
('Archeozoologic studies at Pleistocene sites of Java: Sangiran Dome (C Java) and Song Terus cava (E Java)')

Braches, F. & R. Shutler (1984)- The Philippines and Pleistocene dispersal of mammals in island Southeast Asia. Philippine Quart. Culture and Society 12, 2, p. 106-115.
(Presence of Pleistocene mammalian faunas on Luzon and Mindanao had lead Von Koenigswald (1935) to propose Pleistocene migration route from mainland SE Asia to Borneo/ Java through Philippines. However, Luzon probably island fauna and Philippines probably played no major role in Pleistocene dispersal of 'Sino-Malayan faunas' to Java)

Brandon-Jones, D. (1998)- Pre-glacial Bornean primate impoverishment and Wallace's Line. In: R. Hall & J.D. Holloway (eds.) Biogeography and geological evolution of SE Asia, Backhuys Publ., Leiden, p. 393-403.
(online at: http://searg.rhul.ac.uk/searg_uploads/2016/01/Brandon-Jones.pdf)

Brandt, R.W. (1976)- The Hoabinhian of Sumatra: some remarks. Modern Quaternary Research in Southeast Asia 2, p. 49-52.
('Hoabinhian' stone tools from Medan area, N Sumatra. Called 'sumatraliths', made of andesite. Named after E Holocene stone artifact assemblages from N Vietnam)

Brasseur, B., M.A. Courty, B. Deniaux, N. Fedoroff, B. Poreda & F. Semah (2007)- The geodynamic context of the ca. 0.8 Ma layers in the Sangiran Dome (Central Java. Indonesia): traces of the fall-event linked to the Australasian tektites strewn field? In: N.R. Catto (ed.) 17th INQUA Congress, The tropics: heat engine of the Quaternary, Cairns, Quaternary Int. 167-168, Supplement, p. *(Abstract only)*

Brasseur, B. (2009)- Dynamique et histoire des depots du Pleistocene inferieur et moyen ancien du dome de Sangiran (Java central, Indonesie): caracterisation des surfaces d'occupation a *Homo erectus*. Ph.D. Thesis, Museum Nat. Histoire Naturelle, Paris, p. 1-360. *(Unpublished)*
('Dynamics and history of lower and early M Pleistocene deposits of Sangiran dome (central Java, Indonesia): characterization of Homo erectus occupation layers'. Thick Quaternary sediments of Sangiran dome with oldest human fossils dated to 1.5 Ma, but mainly in Bapang/Kabuh Fm fluvio-volcanic layers dated 1- 0.7 Ma (also with tektite horizon). Ngebung 2 hill with only preserved human occupation surface dating to 0.8 Ma. Propose reconstruction of rivers pathways and development at ~1.0 Ma of alluvial fan coming from N and linked to active tectonic phase. Frequent weathering and reworking of volcanic tuffaceous material may explain wide range of radiometric dates in hominid bearing series. Several mudflows rapidly covered Ngebung 2 H. erectus occupation surface)

Brasseur, B., F. Semah, A.M. Semah & T. Djubiantono (2011)- Approche paleopedologique de lênvironnement des hominides fossiles du dome de Sangiran (Java central, Indonesie). Quaternaire (Paris) 22, 1, p. 13-34.

(online at: http://quaternaire.revues.org/pdf/5815)
(Study of paleo-soils in Pleistocene of Sangiran Dome area, C Java. Six paleosoil types. First fully terrestrial level identified at base of U Pucangan Fm, corresponding to development of open landscape on earlier sites of wide coastal swamps. Higher up, environments indicative of seasonal climate with long dry season, alternating with periods of more humid palustrine conditions. Recurrent aridity proxies in Grenzbank and Kabuh series (with most commont hominid fossils). Soils reflect long dry season and open vegetation landscape, in agreement with stratigraphical and palynological observations)

Brasseur, B., F. Semah, A.M. Semah & T. Djubiantono (2015)- Pedo-sedimentary dynamics of the Sangiran dome hominid bearing layers (Early to Middle Pleistocene, Central Java, Indonesia): a palaeopedological approach for reconstructing ó*Pithecanthropus*ô (Javanese *Homo erectus*) palaeoenvironment. Quaternary Int. 376, p. 84-100.
(Paleosols in Pleistocene of Sangiran dome, C Java. Base of Upper Sangiran (= Pucangan) Mb earliest continental deposits with fresh-water molluscs, corresponding to development of open landscape with wide coastal marshes and mangroves, with rain forest cover on hinterland. Higher in stratigraphic succession, seasonal climate with long dry season alternating with periods of more humid palustrine conditions. From U Sangiran Mb to lower Bapang (= Kabuh Fm) Mb, erosion of soil cover caused accumulation of pedosediments in topographic depressions. Recurrent aridity proxies in paleosols of Bapang (= Kabuh) Fm, reflecting long dry season and open vegetation landscape)

Broadfield, D., R.L. Holloway K. Mowbray, A. Silver & S. Marquez (2001)- The endocast of Sambungmacan 3 (Sm3): a new *Homo erectus* from Java. Anatomical Record 262, 4, p. 369-379.

Brongersma, L.D. (1935)- Notes on some recent and fossil cats, chiefly from the Malay archipelago. Zoologische Mededelingen 18, p. 1-90.
(online at: www.repository.naturalis.nl/document/149407)

Brongersma, L.D. (1937)- On fossil remains of a Hyaenid from Java. Zoologische Mededelingen 20, p. 186-202.
(online at: www.repository.naturalis.nl/document/150150)
(On hyaenid fossils from Kedung Brubus, C Java, in Dubois collection)
(Study of Recent cats in Indonesian region and on Pleistocene fossils in Dubois collection from Trinil, C Java)

Brongersma, L.D. (1937)- Notes on fossil and prehistoric remains of Felidae from Java and Sumatra. Comptes Rendus XIIe Congres Int. Zoologie, Lisbon 1935, p. 1855-1865.

Brongersma, L.D. (1941)- On the remains of carnivora from cave deposits in Java and Sumatra, with notes on recent specimens, I. Zoologische Mededelingen, 23, p. 114-148.
(online at: www.repository.naturalis.nl/document/149372)
(Descriptions of Late Pleistocene carnivore fossils from C Java caves: dog from Gua Lawa (=Wajak man locality) and a marten/weasel (Martes) from Gua Jimbe)

Brongersma, L.D. (1941)- De verzameling van Indische fossielen (Collctie Dubois). De Indische Gids 63, Maart 1941, p. 97-116.
('The Indies fossils collection (Collection Dubois)')

Brongersma, L.D. (1958)- On an extinct species of the genus *Varanus* (Reptilia, Sauria) from the island of Flores. Zoologische Mededelingen 36, 7, p. 113-125.
(online at: www.repository.naturalis.nl/document/149846)
(Late Pleistocene(?) lizard Varanus hooijeri n.sp. from cave deposits on Flores, collected by T.L. Verhoeven. Associated with Mesolithic flake and blade industry)

Bronson, B. & T. Asmar (1975)- Prehistoric investigations at Tianko Panjang Cave, Sumatra: an interim report. Asian Perspectives 18, 2, p. 128-145.

(Excavation in 1974 of obsidian artifacts in cave in W Jambi, which was first tested by Zwierzycki in early 1920s)

Brothwell, D.R. (1960)- Upper Pleistocene human skull from Niah caves, Sarawak. Sarawak Museum J. 9, p. 323-349.

Brown, P. (1992)- Recent human evolution in East Asia and Australasia. Philosophical Trans. Royal Soc. London, B, 337, p. 235-242.
(online at: www.peterbrown-palaeoanthropology.net/Brown%201992%20235-242.pdf)

Brown, P. (1994)- Cranial vault thickness in Asian *Homo erectus* and modern *Homo sapiens*. In: J.L. Lorenz (ed.) 4th Int. Conf. 100 years of *Pithecanthropus*: the *Homo erectus* problem, Frankfurt 1991, Courier Forschungsinstitut Senckenberg 171, p. 33-46.
(Thickened cranial vault bone argued to distinguished Homo erectus from H. sapiens, but considerable overlap with modern Australian aboriginal populations and (Chinese) archaic Homo sapiens)

Brown, P. (2012)- LB1 and LB6 *Homo floresiensis* are not modern human (*Homo sapiens*) cretins. J. Human Evolution 62, p. 201-224.
(Late Pleistocene Homo floresiensis from Liang Bua cave, Flores, associated with stone artefacts and bones of Stegodon. Recent arguments that characteristics of H. floresiensis consistent with dwarfism and delayed development in modern human (Homo sapiens) cretins deemed invalid: no modern human skeleton known with attributes of H. floresiensis)

Brown, P. & T. Maeda (2009)- Liang Bua *Homo floresiensis* mandibles and mandibular teeth: a contribution to the comparative morphology of a new hominin species. J. Human Evolution 57, 5, p. 571-596.
(Morphological and metrical comparisons of mandibles of Homo floresiensis from Liang Bua place them outside H. sapiens and H. erectus ranges of variation. Mandibles, cranial and postcranial anatomy, limb proportions and functional anatomy of wrist and shoulder in many respects closer to African early Homo or Australopithecus than to later Homo)

Brown, P., T. Sutikna, M. Morwood, R.P. Soejono, Jatmiko, E.W. Saptomo et al. (2004)- A new small-bodied hominin from the Late Pleistocene of Flores, Indonesia. Nature 431, p. 1055-1061.
(Tiny hominid Homo floresiensis from Liang Bua cave on Flores)

Brumm, A., F. Aziz, G.D. van den Bergh, M.J. Morwood, M.W. Moore, I. Kurniawan, D.R. Hobbs & R. Fullagar (2006)- Early stone technology on Flores and its implications for *Homo floresiensis*. Nature 441, 7093, p. 624-628.
(C Flores Soa Basin sites contain stone artefacts associated with Stegodon florensis, Komodo dragon, rat, etc., dated as 840-700 ka. Apparent technological continuity with those excavated from Late Pleistocene at Liang Bua cave, 50 km to W, dated as 95-74 and 12 ka, and associated with small-bodied Homo floresiensis)

Brumm, A., G.M. Jensen, G.D. van den Bergh, M.J. Morwood, I. Kurniawan, F. Aziz & M. Storey (2010)- Hominins on Flores, Indonesia, by one million years ago. Nature 464, 7289, p. 748-752.
(Wolo Sege, a new site in Soa Basin with i- situ stone artefacts stratigraphically below previously discovered Mata Menge site. Ignimbrite overlying artefact layers erupted 1.02 Ma, providing new minimum age for hominins on Flores and predates disappearance from Soa Basin of 'pygmy' Stegodon and giant Geochelone)

Brumm A., I. Kurniawan, M.W. Moore, Suyono, R. Setiawan, Jatmiko, M.J. Morwood & F. Aziz (2009)- Early Pleistocene stone technology at Mata Menge, Central Flores, Indonesia. In: F. Aziz et al. (eds.) Geology, palaeontology and archaeology of the Pleistocene Soa Basin, Central Flores, Indonesia, Chapter 4, Pusat Survei Geologi, Bandung, Spec. Publ. 36, p. 119-137.
(E Pleistocene stone tool assemblage from Mata Menge in Soa Basin, Flores, is oldest Palaeolithic stone assemblage in well-dated stratigraphic context in SE Asia. 91% of 459 artefacts made from volcanic rocks)

Brumm, A., M.C. Langley, M.W. Moore, B. Hakim, M. Ramli, I. Sumantri, B. Burhan, A.M. Saiful, L. Siagian, Suryatman, R. Sardi, A. Jusdi, Abdullah, A.P. Mubarak et al. (2017)- Early human symbolic behavior in the Late Pleistocene of Wallacea. Proc. National Academy Sciences USA 114, 16, p. 4105-4110.
(Leang Bulu Bettue cave and rock-shelter in SW Sulawesi with relicts of Late Pleistocene (~30-22ka) Homo sapiens. Include previously unknown items of personal ornamentation, portable art, etc., fashioned from body parts of endemic animals)

Brumm, A. & M.W. Moore (2012)- Biface distributions and the Movius Line: a Southeast Asian perspective. Australian Archaeology 74, p. 32-46.
(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=7783&context=scipapers)
(Movius Line suggests that 'true' Acheulean biface stone tools, especially handaxes, are common only in Africa and W Eurasia, but bifaces relatively common in SE Asia (e.g. Pacitan/Java, Walanae River/Sulawesi, etc.))

Brumm, A., G.D. van den Bergh, M. Storey, I. Kurniawan, B.V. Alloway, R. Setiawan, E. Setiyabudi, R. Grun et al. (2016)- Age and context of the oldest known hominin fossils from Flores. Nature 534, 7606, p. 249-253.
(Excavations in fluvial valley-fill sandstone at M Pleistocene (0.7 Ma) Mata Menge site, Soa Basin, C Flores, yielded hominin fossils ancestral to Late Pleistocene Homo floresiensis. Hominins inhabited savannah-like open grassland habitat with wetland component, in relatively dry climate, Hominin fossils occur alongside remains of insular fauna (Stegodon florensis, giant rat Hooijeromys nusatenggara, Varanus komodoensis, etc.) and simple stone technology)

Buffetaut, E. (1989)- The contribution of vertebrate paleontology to the geodynamic history of SE Asia. In: A.M.C. Sengor et al. (eds.) Tectonic evolution of the Tethyan Region, NATO Advanced Study Inst., Ser. C, 259, p. 645-653.
(Continental fossil vertebrates good indicators of former land connections between continental blocks. Vertebrate fauna from Norian Huai Hin Lat Fm of NE Thailand close affinities with faunas from Laurasia, and indicates continental link between Indochina microcontinent and Laurasia in Late Triassic)

Bulbeck, D. (2004)- South Sulawesi in the corridor of island populations along East Asia's Pacific Rim. In: S.G. Keates & J. Pasveer (eds.) Quaternary Research in Indonesia, Chapter 12, Modern Quaternary Research in Southeast Asia 18, Balkema, Leiden, p. 221-258.

Bulbeck, D., I. Sumantri & P. Hiscock (2004)- Leang Sakapao 1, a second dated Pleistocene site from South Sulawesi, Indonesia. In: S.G. Keates & J. Pasveer (eds.) Quaternary Research in Indonesia, Chapter 8, Modern Quaternary Research in Southeast Asia 18, p. 111-128.
(Rock shelter at base of limestone cliff in SW Sulawesi with evidence of Late Pleistocene (~31-20 ka) human habitation (stone artefacts, pottery, etc.)))

Busk, G.(1869)-.Notice of the discovery at Sarawak in Borneo of the fossilized teeth of *Rhinoceros* and of a Cervine ruminant. Proc. Zoological Soc. London 37, 1, p. 409-416.

Chaimanee, Y. (1997)-Les rongeurs du Plio- Pleistocene de Thailand. Doct. Thesis University Montpellier II, p. 1-215.
(online at: http://library.dmr.go.th/Document/DMR_Technical_Reports/1997/546.pdf)
('The rodents of the Plio-Pleistocene of Thailand'. 20 Late Pliocene- Pleistocene rodent localities in Thailand, with 41 species, most of them extant species in Thailand or in Sundaland)

Chaimanee, Y. (1998)- Plio-Pleistocene rodents of Thailand. Thai Studies in Biodiversity 3, Bangkok, p. 1-303.
(Study of rodent fossils from 20 fissure fill and cave deposits. English version of 1997 French thesis)

Chaimanee, Y. (2004)- *Siamopithecus eocaenus*, anthropoid primate from the Late Eocene of Krabi, Thailand. In: C.F. Ross & R.F. Kay (eds.) Anthropoid origins: new visions, Kluwer/Springer, New York, Chapter 14, p. 329-356.

(Late Eocene primate Siamopithecus eocaenus from Krabi coal mine in Peninsular Thailand is anthropoid. Large primate, of body size estimated between 8-9 kg, with many shared dental characters with other Asian taxa such as Fondaungia, Amphipithecus, and Myanmarpithecus (amphipithecids))

Chaimanee, Y. (2009)- Diversity of Cenozoic mammals in Thailand; contribution to palaeoenvironments. J. Geol. Soc. Thailand 1, p. 11-16.
(online at: http://library.dmr.go.th/Document/J-Index/2009/2973.pdf)
(Oldest mammalian fossils of Thailand in late Eocene Krabi basin, Peninsular Thailand (27 taxa). Species association indicates humid tropical forest. Nong Ya Plong Late Oligocene locality with many groups of mammals, all new. Several M-L Miocene mammalian localities in N Thailand, incl. first hominoid fossils (orang-utan-like, 12, 8 Ma) in SE Asia. Pliocene and Pleistocene fossils were recovered from caves and fissure fills, with micromammals indicating cooler climate than today from Pliocene- M Pleistocene, with mixture of grasslands with forests. More humid climate with tropical rain forests appears after E Pleistocene, in relation with monsoon development and led to explosion of Rattus group in region)

Chaimanee, Y., O. Chavasseau, V. Lazzari, A, Euriat & J.J. Jaeger (2013)- A new Late Eocene primate from the Krabi Basin (Thailand) and the diversity of Palaeogene anthropoids in southeast Asia. Proc. Royal Society (London), Biological Sci., 280, 1771, 20132268, 9p.
(online at: http://rspb.royalsocietypublishing.org/content/royprsb/280/1771/20132268.full.pdf)
(Recent discoveries from M Eocene of Myanmar and China suggest anthropoid primates originated in Asia rather than Africa. Asian Eocene anthropoids two distinct groups, eosimiiforms and amphipithecids. Description of new small anthropoid primate from Late Eocene of Krabi, Krabia minuta, which shares several derived characters with amphipithecid)

Chaimanee, Y. & J.J. Jaeger (1993)- Pleistocene mammals of Thailand and their use in the reconstruction of the paleoenvironments of Southeast Asia. Spafa J. 3, p. 4-10.

Chaimanee, Y., J.J. Jaeger & V. Suteethorn (1993)- Pleistocene micromammals of Thailand: contribution to paleoenvironmental changes, biochronology and biodiversity. In: T. Thanasuthipitak (ed.) Int. Symposium Biostratigraphy of mainland Southeast Asia: facies and paleontology (BIOSEA), Chiang Mai University, 1, p. 125-136.
(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1993/6786.pdf)
(11 M-L Pleistocene localities in Thailand with 19 genera of rodents (squirrels, rats, mice))

Chaimanee, Y., D. Jolly, M. Benammi, P. Tafforeau, D. Duzer, I. Moussa & J.J. Jaeger (2003)- A Middle Miocene hominoid from Thailand and orangutan origins. Nature 422, p. 61-65.

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Chaimanee, Y., R. Lebrun, C. Yamee & J.J. Jaeger (2011)- A new Middle Miocene tarsier from Thailand and the reconstruction of its orbital morphology using a geometric-morphometric method. Proc. Royal Society (London), B 278, p. 1956-1963.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3107645/pdf/rspb20102062.pdf)
(New species of nocturnal primate Tarsius from M Miocene of Mae Moh coal mine, N Thailand (today Tarsius endemic to islands of SE Asia))

Chaimanee, Y., V. Suteethorn, J.J. Jaeger & S. Ducrocq (1997)- A new late Eocene anthropoid primate from Thailand. Nature 385, p. 429-431.
(New anthropoid from Late Eocene lignite seam near Krabi, S Thailand. Species about size of Aegyptopithecus, can be related to Burmese forms, and provides evidence for SE Asian evolutionary centre for anthropoids)

Chaimanee, Y., V. Suteethorn, P. Jintasakul, C. Vidthayanon, B. Marandat & J.J. Jaeger (2004)- A new orang-utan relative from the Late Miocene of Thailand. Nature 427, p. 439-441.

(online at: https://www.khoratgeopark.com/kgp/researchs/2004_Chaimanee%20et%20al.pdf)
(Lower jaw of new species of Khoratpithecus piriyai from sandpit in Late Miocene of Khorat Plateau, NE Thailand. Associated with tropical floras)

Chaimanee, Y., T. Thein, S. Ducrocq, A.N. Soe, M. Benammi, T. Tun, T. Lwin, S. Wai & J.J. Jaeger (2000)- A lower jaw of *Pondaungia cotteri* from the Late Middle Eocene Pondaung Formation (Myanmar) confirms its anthropoid status. Proc. National Academy Sciences 97, 8, p. 4102-4105.
(online at: www.pnas.org/content/97/8/4102.full.pdf)

Chaimanee, Y., C. Yamee, B. Marandat & J.J. Jaeger (2007)- First Middle Miocene rodents from the Mae Moh Basin (Thailand): biochronological and paleoenvironmental implications. In: Mammalian paleontology on a globall stage: papers in honor of Mary R. Dawson, Bull. Carnegie Museum Natural History, Pittsburgh, 39, p. 157-163.
(First report of M Miocene microvertebrates from Mae Moh coal mine, Lamphang Province, N Thailand, incl. Tarsius sp., insectivores and rodents (Prokanisamys, Neocometes). From Q and K coal seams, previously dated between 13.1-13.3 Ma, but very similar to Mae Long fauna from Li Basin, dated between 16-18 Ma. Associated with fragments of primitive deer Stephanocemas cf. rucha and pig Conohyus thailandicus)

Chaimanee, Y., C. Yamee, P. Tian, K. Khaowiset, B. Marandat, P. Tafforeau, C. Nemoz & J.J. Jaeger (2006)- *Khoratpithecus piriyai*, a late Miocene hominoid of Thailand. American J. Physical Anthropology 131, p. 311-323.
(Lower jaw of Khoratpithecus piriyai, a Late Miocene orangutan-like hominoid from NE Thailand. Originated from fluvial sand-gravel deposits of large river, associated with fossil tree trunk and large vertebrate remains. Associated mammal fauna gives geological age between 9-6 Ma)

Chaimanee, Y., C. Yamee, P. Tian & J.J. Jaeger (2007)- Diversity of Cenozoic mammals in Thailand: paleoenvironment and age updated. In: W. Tantiwanit (ed.) Int. Conf. Geology of Thailand: Towards sustainable development and sufficiency economy (GEOTHAIǒ07), Bangkok, Dept. Mineral Resources, p. 73-79.
(online at: http://library.dmr.go.th/library/Proceedings-Yearbooks/M_1/2007/12704.pdf)
(Brief review of mammal occurrences in Tertiary basins of Thailand: Krabi Basin (Late Eocene, tropical swamp), Nong Ya Plong (Late Oligocene, tropical), Mae Moh basin (M Miocene, tropical with temperate elements), Chiang Muan (M Miocene), Khorat (Late Miocene))

Choi, K. & D. Driwantoro (2007)- Shell tool use by early members of *Homo erectus* in Sangiran, central Java, Indonesia: cut mark evidence. J. Archaeological Science 34, 1, p. 48-58.
(1.6- 1.5 Ma old cut marks on Pleistocene bovid bones from Pucangan Fm in Sangiran, inflicted by thick clamshell flakes, document use of first tools in Sangiran and oldest evidence of shell tool use in world)

Ciochon, R.L. (2009)- The mystery ape of Pleistocene Asia. Nature 459, 7249, p. 910-911.
(Reports of fossil teeth, etc., of E Pleistocene humans in SE China (Longgupo, etc.) and interpreted as related to Homo erectus probably erroneous; instead belong to an unknown ape species, living in forested region)

Ciochon, R.L. (2010)- Divorcing hominins from the *Stegodon-Ailuropoda* fauna: new views on the antiquity of hominins in Asia. In: J.G. Fleagle et al. (eds.) Out of Africa I: The first hominin colonization of Eurasia, Chapter 8, Springer, p. 111-126.
(Pleistocene Stegodon-Ailuropoda (= Panda) fauna of S China and peninsular SE Asia contains ape species previously attributed to early hominins, but no clear evidence. Early hominins may have inhabited parts of S China without forest, but not with heavily forested, humid-climate adapted Stegodon-Ailuropoda mammalian fauna. Homo erectus likely arrived in Java between 1.8-1.6 Ma, but at ~900 ka hominins and most other contemporary large mammals seem to have left area)

Ciochon, R.L. & G.F. Gunnell (2002)- Eocene primates from Myanmar: historical perspectives on the origin of Anthropoidea. Evolutionary Anthropology 11, p. 156-168.

Ciochon, R.L. & G.F. Gunnell (2004)- Eocene large-bodied primates of Myanmar and Thailand: morphological considerations and phylogenetic affinities. In: C.F. Ross & R.F. Kaya (eds.) Anthropoid origins: new visions, Chapter 11, Springer, New York, p. 249-282.
(Eocene large-bodied primates known from SE Asia: Pondaungia and Amphipithecus from Myanmar and Siamopithecus from Thailand, traditionally viewed as anthropoids)

Ciochon, R.L. & O.F. Huffman (2018)- Java Man. In: Encyclopedia of Global Archaeology, Springer, p.
(Review of 'Java Man', the popular name for Pleistocene Homo erectus of Java. H. erectus widely distributed in Old World, but in SE Asia limited to 100 skeletal specimens from C and E Java. Discussions of Trinil, Sangiran and Ngandong and Mojokerto sites)

Ciochon, R.L., F. Huffman, E.A. Bettis, Y. Zaim, Y. Rizal & Aswan (2009)- Rediscovery of the *Homo erectus* bed at Ngandong: Site formation of a late Pleistocene hominin site in Asia. American J. Physical Anthropology, Suppl. 48, p. 110. *(Abstract only?)*

Ciochon, R.L., V.T. Long, R. Larick, L. Gonzales, R. Grun, J. de Vos et al. (1996)- Dated co-occurrence of *Homo erectus* and *Gigantopithecus* from Tham Khuyen Cave, Vietnam. Proc. National Academy Sciences USA 93, p. 3016-3020.
(online at: www.pnas.org/content/93/7/3016.full.pdf)
(Tham Khuyen Cave deposits in N Vietnam with hominoid teeth dated as 475 ± 125 ka (electron spin resonance). Teeth represent Homo erectus and Gigantopithecus blacki. Co-occurrence demonstrates >1 million years of co-existence of these two species throughout E Asia in E-M Pleistocene)

Corlett, R.T. (2010)- Megafaunal extinctions and their consequences in the tropical Indo-Pacific. In: S.G. Haberle et al. (eds.) Altered ecologies: fire, climate and human influence on terrestrial landscapes, Terra Australis 32, ANU Press, Chapter 8, p. 117-131.
(online at: www.jstor.org/stable/pdf/j.ctt24h8rj.10.pdf)
(Global Quaternary Megafauna Extinction (QME) event eliminated 2/3 of all mammal genera, with most well-dated extinctions occurring between ~50-30 ka. Java probably had fully modern fauna by 120 ka. In Indo-Pacific hominin impacts probably major factor behind most large vertebrate extinctions and range restrictions in the past 130 kyrs and probably earlier ones)

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('Preliminary communication on the occurrence of fossil bones in the hill country N of Jetis and Perning, C Java'. Localities N of Mojokerto. Bone-bearing layers similar to those from Trinil, and considered to be Pliocene in age (now viewed as Pleistocene; JTvG))

Cosijn, J. (1932)- Tweede mededeeling over het voorkomen van fossiele beenderen in het heuvelland ten Noorden van Djetis en Perning (Java). Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie 9, 3, p. 135-148.
('Second communication on the occurrence of fossil bones in the hill country N of Jetis and Perning, C Java')

Corvinus, G. (2003)- *Homo erectus* in East and Southeast Asia, and the questions of the age of the species and its association with stone artifacts, with special attention to handaxe-like tools. Quaternary Int. 117, p. 141-151.
(Many fossil remains of H. erectus found In C Java, but not sure which tools belonged to H. erectus. Sangiran and Ngandong industries of small flakes provisionally connected with H. erectus soloensis. Handaxe-like tools from Pacitan, Java and Cabenge, Sulawesi are of uppermost Pleistocene age and work of modern humans)

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(Small Pleistocene- Holocene Bubalus likely attributable to island dwarfing. First fossil mammal reported from Cebu Island and only non-proboscidean from Negros-Panay Philippine Faunal Region)

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(online at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0196633)
(Uranium-series dating and descriptions of three partial human mandibles from Niah Caves recovered during excavations by Harrisson in 1957: ~30-28 ka, ~11.0-10.5 ka and ~10.0-9.0 ka (= minimum ages))

Curnoe, D., I. Datan, P.S.C. Tacon, C.L.M. Ung & M.S. Sauffi (2016)- Deep skull from Niah Cave and the Pleistocene peopling of Southeast Asia. Frontiers Ecology Evolution 4, 75, p. 1-17.
(online at: http://journal.frontiersin.org/article/10.3389/fevo.2016.00075/full)
(Late Pleistocene Deep Skull from Niah Cave in Sarawak the oldest (>50 ka) anatomically modern human from island SE Asia)

Danisworo, C. (1987)- Lithostratigraphy and magnetostratigraphy of the Quaternary deposits in the Sangiran area, Central Java, Indonesia. Doct. Thesis, Vrije Universiteit, Brussel, p. *(Unpublished)*

Danisworo, C. (1992)- Magnetostratigraphy of Plio-Pleistocene deposits in the Sangiran area, Central Java. Proc. 21st Ann. Mtg. Indon. Assoc. Geol. (IAGI), Yogyakarta, 2, p. 477-485.
(Normal and reversed magnetic polarities identified in Late Pliocene- Pleistocene in Sangiran Dome. Gauss-Matuyama boundary (2.48 Ma) just above Balanus Limestone of Puren Fm (U Kalibeng Fm). Normal polarity in Cemoro (Pucangan) Fm claystone probaly Olduvai event (~1.87-1.67 Ma). Base Jaramillo event (0.97 Ma) below 'Grenzbank' at base Bapang (Kabuh) Fm. Brunhes- Matuyama reverse to normal transition (0.73 Ma) between TB3 and TB4 tuff horizons in Bapang (Kabuh) Fm (see also Hyodo et al. 1988, 2011, Sunardi 2010))

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(Pithecanthropus erectus VIII skull considered to be from within Jagan Tuff Member, lower Bapang Fm., between 0.97- 0.90 Ma old, or in Pleistocene Jaramillo magnetic event)

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(On fossil rabbits/ hares from Pleistocene of Sangiran, C. Java)

Delfino, M. & J. De Vos (2010)- A revision of the Dubois crocodylians, *Gavialis bengawanicus* and *Crocodylus ossifragus*, from the Pleistocene *Homo erectus* beds of Java. J. Vertebrate Paleontology 30, p. 427-441.
(Revision of two extinct Javanese crocodylian species Gavialis bengawanicus Dubois 1908 and Crocodylus ossifragus Dubois 1908 (= C. siamensis Schneider 1801). Both found with Stegodon- Homo erectus fauna, which is considered to be largely result of E Pleistocene dispersal from Siwaliks Hills via Siva-Malayan route)

Delfino, M. & J. De Vos (2014)- A giant crocodile in the Dubois Collection from the Pleistocene of Kali Gedeh (Java). Integrative Zoology 9, 2, p. 141-147.
(Unpublished crocodylian specimen collected by Dubois in latest E Pleistocene of Kali Gedeh tentatively referred to genus Crocodylus. ~1m long lower jaw indicate total length of ~6-7m)

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(Sambungmacan (Sm) 3 calvaria, discovered on Java in 1977, was illegally removed from Indonesia in 1998. Sm 3 probably Homo erectus, with greatest similarity to specimens from Ngandong)

De Lumley, H., F. Semah & T. Simanjuntak (1993)- Les outils du Pithecanthrope. Les dossiers d'Archeologie 184, p.62-68.
('The tools of Pithecanthropus')

Demeter, F., A.M. Bacon, Nguyen Kim Thuy, Vu The Long, H. Matsumura, Ha Huu Nga, M. Schuster, Nguyen Mai Huong & Y. Coppens (2004)- An archaic *Homo* molar from Northern Vietnam. Current Anthropology 45, 4, p. 535-541.
(Human tooth from Ma U'Oi Cave, N Vietnam, interpreted as archaic Homo, with characteristics transitional between H. erectus and H. sapiens. Associated fauna characteristic of Stegodon-Ailuropoda (Panda) complex, of estimated late M Pleistocene- Late Pleistocene age)

Demeter, F., L.L. Shackelford, A.M. Bacon, P. Duringer, K. Westaway, T. Sayavongkhamdy et al. (2012)- Anatomically modern human in Southeast Asia (Laos) by 46 ka. Proc. Nat. Academy Sciences U.S.A. 109, 36, p. 14375ï 14380.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3437904/pdf/pnas.201208104.pdf)
(Modern human cranium from Tam Pa Ling (Cave of Monkeys), ~260 km NNE of Vientiane, Laos. Sediments minimum age of 51-46 ka. Maximum age of ~63 ka from U-dating of bone. Establishes evidence for fully modern humans in mainland SE Asia by ~50 ka)

De Neve, G.A. (1949)- Note on the occurrence of the remains of a Cetacean in the alluvial tin deposits of the island of Billiton. Chronica Naturae 105, 4, p. 118-120.
(online at: http://colonial.library.leiden.edu/....)
(Vertebra of whale in Quaternary tin ore-bearing deposits near Manggar, Belitung. Related to fin whale Balaenoptera)

De Neve, G.A. (1949)- Opmerking over de fossiele wervel gevonden in Billiton. Chronica Naturae 105, 11, p. 293-294.
('Remark on the fossil vertebra found on Billiton'. Second whale vertebra fossil from Manggar, Belitung, probably from (Quaternary) marine shell layer first identified by Verbeek at ~2m(?) below sea level)

De Neve, G.A. (1950)- Notitie over vertebraat-fragmenten uit de proefboring Kebajoran. De Ingenieur in Indonesia 1950, 5, p. IV.23-IV.25.
('Note on vertebrate fragments from the test well Kebajoran'. Vertebrate remains from 51,50 m. depth in water well drilled by the Geological Survey Water Supply department) near Kampong Kebajoran, SW of Jakarta, include jaw fragment of Sus brachygnatus with two molars, and indicate M-Pleistocene age of river deposit)

Deninger, K. (1910)- Uber einen Affenkiefer aus den Kendeng-Schichten von Java. Centralblatt Mineralogie Geologie Palaont. 1910, p. 1-3.
(online at: www.biodiversitylibrary.org/item/192869page/25/mode/1up)
('On a monkey jaw from the Kendeng beds of Java'. Pleistocene fossil jaw with molars collected by Elbert near Saradan, Madiun District (younger than Trinil bone bed). Assigned to Inuus nemestrinus (macaque family))

Dennell, R.W. (2004)- Hominid dispersals and Asian biogeography during the Lower and early Middle Pleistocene, c. 2.0- 0.5 Mya. Asian Perspectives 43, 2, p. 205-226.

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(Homo erectus site near base of Solo River terrace deposits at Ngandong, excavated by Oppenoorth of Geological Survey in 1931-1933, differs from other sites with hominin remains in fluvial deposits, because 12 crania are present, but few other skeletal elements (fluvial disarticulation, large carnivores or headhunters?). Most of >25,000 mammalian fossils excavated from Ngandong now lost)

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Dennell, R. (2015)- Life without the Movius Line: the structure of the East and Southeast Asian Early Palaeolithic. Quaternary International 400, p. 14-22.
(Movius Line is no longer appropriate view of Early Paleolithic of E and SE Asia, and should be disregarded. E Asia not isolated throughout E-M Pleistocene, but open to immigration during interglacials. M Pleistocene 'Acheulean' stone tool assemblages possibly present in Ngebung (Sangiran) C Java)

Dennell, R.W., J. Louys, H.J. O'Regan & D.M. Wilkinson (2014)- The origins and persistence of *Homo floresiensis* on Flores: biogeographical and ecological perspectives. Quaternary Science Reviews 96, p. 98-107.
(Stone artifacts suggest hominids arrived on Flores before 1 Ma and small hominin species (Homo floresiensis) lived on on Flores in Late Pleistocene. Flores was always island, at least 19 km from other islands on Sunda Shelf, suggesting early hominids reaching Flores were capable of using watercraft)

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(Timing and the paths of colonization of S Asia by Homo sapiens poorly known. Dispersal from E Africa between 60- 40 ka, but U Pleistocene population history of S Asia likely complex)

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(Review of work by Dubois, Von Koenigswald, etc. on Pleistocene stratigraphy and hominid sites of Java, incl. Mojokerto, Sangiran, Trinil, Ngandong, Pacitan. Includes study of Solo River Quaternary terraces from observations during 1938 fieldtrip with Teilhard de Chardin, Movius and Von Koenigswald)

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(Results of American SE Asian Expedition for early Man)

Detroit, F. (2000)- The period of transition between *Homo erectus* and *Homo sapiens* in East and Southeast Asia: new perspectives by the way of geometric morphometrics. In: W. Dong (ed.) Proc. 1999 Beijing Int. Symposium on paleoanthropology, Acta Anthropologica Sinica 19 (Suppl.), p. 75-81.
(Comparison of morphometric components of human skulls from ~2.5 Ma- present. Always clear distinction between H. erectus and H. sapiens cranial architecture. Ngandong specimens (= 'H. soloensis') sometimes considered archaic Homo sapiens, but typical Homo erectus architecture)

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(online at: http://hopsea.mnhn.fr/pc/thesis/Detroit_2002_PhD_thesis.pdf)
(' Origin and evolution of Homo sapiens in SE Asia: overview and morphometric analyses of new fossils'. Study of U Pleistocene- Holocene Homo sapiens populations from Malaysia, Java (Wajak, Tulungagung, Gua Lawa, Gunung Sewu, etc.), Flores, Thailand (Moh Khiew), Palawan (Tabon). Two periods in Pleistocene evolution of

Homo: (1) time of Homo erectus, marked by some endemism in SE Asia archipelago, (2) intensified migrations with first arrival of H. sapiens in M Pleistocene)

Detroit, F. (2006)- *Homo sapiens* in Southeast Asian archipelagos: the Holocene fossil evidence with special reference to funerary practices in East Java. In: H.T. Simanjuntak et al. (eds.) Proc. Symp. Austronesian diaspora and the ethnogeneses of people in Indonesian archipelago, Solo, Indonesian Inst. Science (LIPI), Jakarta, p. 186-204.
(On Homo sapiens fossils from Gunung Sewu area, Southern Mountains of Java (Song Terus, Song Keplek, Goa Braholo), and their funeral practices)

Detroit, F., A.S. Mijares, J. Corny, G. Daver, C. Zanolli, E. Dizon, E. Robles, R. Grun & P.J. Piper (2019)- A new species of *Homo* from the Late Pleistocene of the Philippines. Nature 568, p. 181-186.
(Hominin foot bone from Callao Cave (N Luzon) dated to 67 ka, providing earliest evidence of human presence in Philippines. Twelve additional hominin elements in same layer combination of primitive and derived morphological features, different from other species and warrants attribution to new species Homo luzonensis)

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(Fossil faunas from Punung, Java, and Sumatran caves. Biostratigraphically intermediate between Ngandong and Wadjak faunas, and both indicative of humid forest climate)

De Vos, J. (1985)- De Collectie Dubois. Cranium 1985, p. 26-32.
(online at: http://natuurtijdschriften.nl/download?type=document&docid=523096)
(Brief review of life of E. Dubois and his Pithecanthropus discoveries on Java. Very little on other fossils in Dubois collection)

De Vos, J. (1985)- Faunal stratigraphy and correlation of the Indonesian hominid sites. In: E. Delson (ed.) Ancestors, the hard evidence, A.R. Liss, New York, p. 215-220.
(Review of succession of Pleistocene mammalian faunas from E Java, as also described by Sondaar (1984). From old to young: Satir, Ci Saat, Trinil HK, Kedung Brubus, Ngandong, Punung and Wajak. Oldest faunas rel. poor island faunas. Kedung Brubus fauna reflects greatest interchange with Asian mainland. Oldest hominids in Sangiran of Trinil HK or Ci Saat age)

De Vos, J. (1994)- *Homo modjokertensis*; vindplaats, ouderdom en fauna. Cranium 11, 2, p. 103-107.
(online at: http://natuurtijdschriften.nl/download?type=document&docid=523348)
('Homo modjokertensis; locality, age and fauna'. Discussion of Swisher et al. (1994), who suggest new 1.81 Ma radiometric age of Homo modjokertensis beds, indicating Homo erectus-like fossils may have originated in Asia, not in Africa as generally assumed. Magnetostratigraphic work, associated mammals and uncertainty about exact level of H. modjokertensis skull suggest Swisher's Ar/Ar age and conclusions may be wrong)

De Vos, J. (1995)- The migration of *Homo erectus* and *Homo sapiens* in SE Asia and the Indonesian Archipelago. In: J.R.F. Bower & S. Sartono (eds.) Human evolution in its ecological context, Proc. Pithecanthropus Centennial Congress, Leiden, vol. 1, Evolution and ecology of *Homo erectus*, DSWO Press, p. 239-260.

De Vos, J. (1996)- Faunal turnovers in Java in relation to faunas of the continent. Odontologie 1, p. 32-36.

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(Online at: www.repository.naturalis.nl/document/148593)
(Description of large Dubois collection in Leiden Naturalis museum and its role in studies of Java Pleistocene stratigraphy, mammal faunas, faunal migrations, hominid evolution, etc.)

De Vos, J. (2014)- The history of palaeoanthropological research in Asia: reasons and priorities for future cooperation in research and preservation of sites and collections. In: N. Sanz (ed.) Human origin sites and the World Heritage Convention in Asia, UNESCO World Heritage Papers 39, p. 68-82.
(online at: http://unesdoc.unesco.org/images/0022/002291/229174e.pdf)
(Review of history of paleoanthropology in SE Asia and principal localities in Indonesia)

De Vos, J. & F. Aziz (1987)- Note on two upper canines of *Megantereon* sp. (Mammalia, Felidae) from the Pleistocene of Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B90, p. 57-63.
(Teeth of sabre-tooth cat, found by Indonesian-Japanese team in 'Grenzbank' Bed in Sangiran Dome, C Java, and reported as Homotherium zwierzyckii. These canines belong to Megantereon sp.)

De Vos, J. & F. Aziz (1989)- The excavations by Dubois (1891-1900), Selenka (1906-1908) and the Geological Survey by the Indonesian-Japanese Team (1976-1977) at Trinil (Java, Indonesia). J. Anthropological Soc. Nippon 97, 3, p. 407-420.
(online at: https://www.jstage.jst.go.jp/article/ase1911/97/3/97_3_407/_pdf)

De Vos, J., F. Aziz & P.Y. Sondaar (1993)- Les faunes quaternaires de Java. In: F. Semah & D. Grimaud-Herve (eds.) Le Pithecanthrope de Java, a la decouverte du chainon manquant, Les dossiers d'Archeologie 184, p. 56-61.
('The Quaternary faunas of Java'. Age of Ngandong hominids (H. soloensis or 'advanced H. erectus) ~80,000 to 250,000 years)

De Vos, J., F. Aziz, P.Y. Sondaar & G.D. van den Bergh (1995)- *Homo erectus* in S.E. Asia: time space and migration routes, III. Migration routes and evolution. In: J. Gibert et al. (eds.) Proc. Int. Conf. The hominids and their environment during the Lower and Middle Pleistocene of Eurasia, Orce 1995, p. 369-381.
(Brief review of Pleistocene mammal fossil occurrences in SE Asia. E-M Pleistocene migration via Siva-Malayan route from Siwaliks via Birma to Java brought in Homo erectus in M Pleistocene. During Late Pleistocene Sunda Shelf became connected with continent, causing migration from China, Vietnam, Cambodia via 'Sino-Malayan' corridor, bringing in Homo sapiens and leading to extinction of Homo erectus)

De Vos, J., F. Aziz, E. Setiabudi, G.D. van den Bergh & E.Y. Patriani (2007)- A new vertebrate fossil locality near Sumberdadi, Mojokerto (East Java, Indonesia). In: Int. Senckenberg conference, Late Neogene and Quarternary biodiversity and evolution: regional developments and interregional correlations, Weimar 2006, 2, CFS Courier Forschungergebnisse Senckenberg 259, p. 175-180.
(36 vertebrate fossils from new locality in sand quarry near Sumberdadi, ~30 km N of Mojokerto, E Java, incl. Stegodon trigonocephalus cf. ngandongensis, Bibos palaeosondaicus, Axis lydekkeri, Rusa sp. and crocodile remains. Advanced stage of Stegodon suggests late M- Late Pleistocene, comparable with Ngandong fauna)

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(online at: http://hopsea.mnhn.fr/pc/brochures/2007HOPseaFI.pdf)
(Brief review of Pleistocene mammal fauna evolution of SE Asia. Parts of Java first emerged above sea level at ~1.8 Ma. First mammals to reach Java unbalanced island fauna (Satir Fauna of Bumiayu and Sangiran, with hippos (Hexaptotodon), cervids and mastodon (Sinomastodon bumiajuensis)). At 1.2 Ma better connection with Java, with arrival of more balanced Ci Saat fauna, including tigers, and more diverse Trinil Fauna with Homo erectus no later than 1.0 Ma. Around 0.8 Ma new migration to Java (Kedung Brubus Fauna, with first Elephas). Next fauna is Ngandong Fauna that includes Solo Man, a Homo erectus with larger brain size than

older forms, that lived until ~0.2 Ma. Final faunas Punung Fauna (~120ka) and Wajak Fauna, both tropical rainforest assemblages, with Homo sapiens)

De Vos, J., S. Sartono, S. Hardja-Sasmita & P.Y. Sondaar (1982)- The fauna from Trinil, type locality of *Homo erectus*: a reinterpretation. Geologie en Mijnbouw 61, 2, p. 207-211.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0ZlN5anhJdHF5YWs/view)
(Fauna at Trinil type locality is older than 'Jetis-fauna' of Von Koenigswald 1934 and also older than Kedung Brubus fauna. Many endemic species, suggesting island setting (see also comments of Bartstra 1983))

De Vos, J. & P.Y. Sondaar (1982)- The importance of the 'Dubois collection' reconsidered. Modern Quaternary Research in Southeast Asia 7, Balkema, Rotterdam, p. 35-63.
(Review of Dubois collection of Pleistocene mammals from C Java, mainly from excavations at Trinil along Solo River and Kedung Brubus near Madiun in 1890's. Material in Naturalis Museum, Leiden, since. Much of material not collected in stratigraphic context. With locality maps and listings of species)

De Vos, J. & P.Y. Sondaar (1994)- Dating hominid sites in Indonesia. Science 266, p. 1726-1727.
(Question correctness of Swisher et al. (1994) older-than-generally-accepted new radiometric ages of pumice associated with Java hominids at Mojokerto and Sangiran sites of C Java (1.8-1.66 Ma instead of 'conventional' 0.97-0.73 Ma))

De Vos, J., P.Y. Sondaar, G.D. van den Bergh & F. Aziz (1994)- The *Homo* bearing deposits of Java and its ecological context. In: J.L. Lorenz (ed.) 4th Int. Conf. 100 years of *Pithecanthropus*: the *Homo erectus* problem, Frankfurt 1991, Courier Forschungsinstitut Senckenberg 171, p. 129-140.
(Discussion of Quaternary faunal succession of Java: (1) Satir (lower Kali Klaga series in Bumiayu; island fauna), (2) Ci Saat (upper Kali Glagah series, Sangiran upper Black Clay; 1.2 Ma), (3) Trinil H.K. (1 Ma; with first Homo erectus; large amounts of bovids suggest rel. dry, glacial period), (4) Kedung Brubus Fauna (= upper Bapang Fm at Sangiran, ~0.8 Ma; also rel. dry climate), (5)Ngandong (with Homo erectus soloensis), (6) Punung (Late Pleistocene; common primates indicates humid tropical forest environment; last interglacial?), (7) Wajak (Wajak cave; Holocene with Homo sapiens). All Pleistocene Java hominids are Homo erectus, but with several subspecies)

De Vos, J., L.W. van den Hoek Ostende & G.D. van den Bergh (2007)- Patterns in insular evolution of mammals: a key to island palaeogeography. In: W. Renema (ed.) Biogeography, time, and place: distributions, barriers, and islands, Springer, p. 315-345.
(Dwarfism and gigantism in unbalanced faunas on islands attest that only a few non-flying mammals were able to reach island. Pygmy elephants and giant rats evolved in isolation of these insular environments. Includes review of Pleistocene mammal island faunas of SE Asia)

De Vos, J. & T.L. Vu (2001)- First settlements: relations between continental and insular Southeast Asia. In: F. Semah et al. (eds.) Proc. Int. Symp. Origine des peuplements et chronologie des cultures paleolithiques dans le sud-est asiatique, Paris 1998, 24, p. 225-249.

Di Geronimo, I. & S. Sartono (1990)- Sangiran (Java, Indonesia): Upper Pliocene- Pleistocene molluscan environments. Buletin Jurusan Geologi (ITB) 20, p. 33-35.

DIRSP (Dutch-Indonesian Joint-Research Group on Sedimentology and Paleontology of South Sulawesi) (1995)- The geology and stratigraphy of the vertebrate-bearing deposits in the Sengkang Basin: The terrestrial faunal evolution of South Sulawesi during the Plio-Pleistocene. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 18, p. 1-112.

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(Kaliuter River section 10 km N of Sangiran shows transition from Pliocene folded marine Lower KalibengFm marls and Late Pliocene- E Pleistocene Upper Kalibeng Fm regressive series, unconformably overlain by unfolded M-U Pleistocene non-marine series with hominids. 'Grenzbank' is unconformity surface)

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(also in Jaarboek Mijnwezen Nederlandsch Oost-Indie 1895, Wetenschappelijk Gedeelte, p. 5-77)
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('The geologic age of the Kendeng or Trinil fauna'. Suggests most likely age of hominid bearing beds is Late Pliocene (Subsequent workers all assume Pleistocene age))

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(online at: https://trace.tennessee.edu/utk_graddiss/2155)
(Features on cranial base in Ngandong hominids unique to that group. Autapomorphic characters in Ngandong population, in conjunction with previous work on Pleistocene paleoecology of Java, suggests multiple hominid species inhabited Java in Pleistocene. Also provides strong evidence of discontinuity between Indonesian Homo erectus and earliest Homo sapiens in Australasian fossil record)

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('The latest investigations on the Pithecanthropus question'. October 1907 presentation of member of Selenka expedition. Pithecanthropus is intermediate between humans and apes as suggested by Dubois. With discussion of Trinil stratigraphy. Age of Pithecanthropus Pleistocene. Plant fossils and common unweathered feldspars in Trinil Beds suggest 3- 6°C cooler climate)

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(Good review of 300-350m thick Late Pliocene- Pleistocene stratigraphy and hominid, mammal and mollusc distributions in Sangiran dome, C Java. From old to young: Shallow marine Late Pliocene Upper Kalibeng Fm, E Pleistocene Pucangan Fm Lower lahar and lacustrine black clay with diatomite beds and rich in Corbicula (first hominids possibly from top of formation), and M Pleistocene fluvial Kabuh Fm (with bulk of Homo erectus finds; tektite layer near top; common reworked marine microfauna). Capped by Notopuro Fm lahars with erosional base. Four mud volcanoes in center of dome, with rock fragments including Eocene limestone. Reliable stratigraphic information lacking for most hominid fossils)

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('Lithic technology characteristic of progressive Homo erectus based on artifact assemblage from Matar Site, Bojonegoro'. New Matar site on E banks of Solo River (equivalent of 20m terrace of Ngandong?) with stone tool assemblage of 'progressive Homo erectus'. Flakes and massive tools such as bola, spheroidal, polyhedrons, and chopper-chopping tools)

Fauzi, M.R., M.M. Ansyori, D. Prastiningtyas, M.F.S. Intan, U.P. Wibowo, Wulandari, H. Rahmanendra, H. Widianto & T. Simanjuntak (2016)- Matar: a forgotten but promising Pleistocene locality in East Java. Quaternary Int. 416, p. 183-192.
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('The industrial assemblage of Song Keplek, East Java; a new view on stone tools of modern man at the beginning of the Holocene in Indonesia'. Song Keplek stone tool assemblage from Punung area ~6000-4000 years old)

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(online at: www.persee.fr/docAsPDF/arch_0044-8613_2007_num_74_1_3914.pdf)
(Long history of prehistoric stone tool making in Sumatra, incl. Acheuleen tools from Ogan River tributaries in S Sumatra, possibly from Homo erectus, 'Hoabinhian' shell middens 30m wide x 5m high in NE Aceh, etc.)

Forestier, H., D. Driwantoro, D. Guillaud, Budiman & D. Siregar (2006)- New data for the prehistoric chronology of South Sumatra. In: T. Simanjuntak et al. (eds.) Archaeology: Indonesian perspective, R.P. Soejono's Festschrift, LIPI Press, Jakarta, p. 177-192.
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(The Togi Ndrawa site, Nias Island, Noth Sumatra: the first record of a Hoabinhian cave settlement in Indonesia'. Late Pleistocene- E Holocene classic Hoabinhian pebble artefacts, forest and coastal fauna and human bones in Togi Ndrawa cave, NE Nias)

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(M Pleistocene terrace of the Mekong River S of SW Laos with stone tools. Terrace T.II contains coarse pebble formations, yielding most abundant lithic industry and also yielded abundant 0.77 Ma age tektites)

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(preprint online at: https://www.biorxiv.org/content/biorxiv/early/2018/01/04/241448.full.pd)
(Paleogeographical reconstructions with genetic and morphometric data from Sulawesi mammals Babirusa, Anoa and Sulawesi warty pig indicate almost synchronous expansion from central part of island after recent emergence of land on Sulawesi (~1-2 Ma))

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(Late Pleistocene (~30ka) flaked stone tools from shelter at base of limestone cliff E of Tompokbalang in Maros District, S Sulawesi)

Grenet, M., J. Sarel, R. Fauzy, A.A. Oktaviana, B. Sugiyanto, J.M. Chazine & F.X. Ricaut (2016)- New insights on the late Pleistocene- Holocene lithic industry in East Kalimantan (Borneo): the contribution of three rock shelter sites in the karstic area of the Mangkalihat peninsula. Quaternary Int. 416, p. 126-150.

Grimaud-Herve, D. (1986)- The parietal bone of Indonesian *Homo erectus*. Human Evolution 2, p. 167-181.

(Comparative study of parietal (skull) bones from Sangiran, Sambungmacan 1 and Ngandong. Some morphological metrical features allow separation of Sangiran and Ngandong samples. Sambungmacan 1, whose chronological age is not well established, appears closer to Ngandong men)

Grimaud-Herve, D., A. Balzeau, H. Widianto, T. Djubiantono, F. Detroit, A.M. Moigne, A.M. Semah, A. Purnomo, M. Ansyori, B. Brasseur, T. Ingicco & F. Semah (2016)- Position of the posterior skullcap fragment from Sendang Klampok (Sangiran Dome, Java, Indonesia) among the Javanese *Homo erectus* record. Quaternary Int. 416, p. 193-209.
(New part of Homo erectus skullcap fossil from 'Grenzbank' at Sendang Klampok in NNW Sangiran Dome, associated with rel. rich 'Trinil-type' mammal assemblage. Among more ancient hominids from Sangiran dome. Many characters closer to Ngandong hominins, different from those of Kabuh (Bapang) and Zhoukoudian Lower Cave specimens (?))

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1994.
('The human femur Kresna 11 compared to those from Trinil'. Thigh bone named Kresna 11 discovered in 1992 from the 'Grenzbank' horizon in Sangiran Dome shows several Homo erectus features, similar to Trinil)

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('The fossil humans discovered in Java since the 1980's')

Grimaud-Herve, D., H. Widianto, F. Detroit & F. Semah (2012)- Comparative morphological and morphometric description of the hominin calvaria from Bukuran (Sangiran, Central Java, Indonesia). J. Human Evolution 63, p. 637-652.
(Description of heavily mineralized Homo erectus skull discovered in 1977 near Sendangbusik, Bukuran area, E side of Sangiran dome, C Java. In cross-bedded fluvio-volcanic sands of lower Kabuh (Bapang) Fm, ~14m above 'Grenzbank')

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(Fragmented Homo erectus skull from Kabuh Beds at Grogol Wetan site. Ar-dating indicates 0.78 ± 0.29 Ma. Second hominid skull in 1996 from Kabuh Beds at Bukuran site)

Grine, F. & J.L. Franzen (1994)- Fossil hominid teeth from the Sangiran Dome (Java, Indonesia). In: 4th Int. Conf. 100 years of *Pithecanthropus: Homo erectus* problem, Frankfurt 1991, Courier Forschungsinstitut Senckenberg 171, p. 75-103.

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(online at: www.landesmuseum.at/pdf_frei_remote/Zeitschrift-Saeugetierkunde_41_0201-0216.pdf)
(Discussion of present-day mammal faunas of Sulawesi and relation to classic faunal province boundaries suggested for Indonesia ((Wallace, Weber, Lydekker Lines))

Groves, C.P. (1984)- Mammal faunas and the palaeogeography of the Indo-Australian Region. In: P. Andrews & J.L. Franzen (eds.) The early evolution of man with special emphasis on Southeast Asia and Africa. Courier Forschungsinstitut Senckenberg 69, p. 267-273.

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Groves, C.P. (2001)- Mammals in Sulawesi: where did they come from and when, and what happened to them when they got there? In: I. Metcalfe, J.M.B. Smith et al. (eds.) Faunal and floral migrations and evolution in SE Asia- Australia, A.A. Balkema, Lisse, p. 333-342.
(Present day faunal endemism suggests Sulawesi was cluster of islands until quite late in geologic time)

Grun, R. & A. Thorne (1997)- Dating the Ngandong humans. Science 276, p. 1575-1576.
(Critique of Swisher et al. 1994, 1996 dating results of Ngandong hominids. Consider the Solo high terrace to represent a mix of materials reworked from different levels, sites, and ages)

Gruwier, B.J. (2017)- The large vertebrate remains from Bindjai Tamieng (Sumatra, Indonesia). J. Indo-Pacific Archaeology 41, p. 22-29.
(online at: https://journals.lib.washington.edu/index.php/JIPA/article/download/15027/12536)
(Study of animal- and human remains excavated in 1928 by Schurmann at Early Holocene Binjai Tamieng shell midden in NE Sumatra. Associated vertebrate remains mainly marine turtles, fish and artiodactyls (deer, pig), while crocodiles and a small whale were probably opportunistically hunted or scavenged. Also rhinoceros and human remains showing traces of disarticulation, possibly indicative of funerary rituals or cannibalism)

Hameau, S., C. Falgueres, J.J. Bahain, F. Semah, A.M. Semah & J.M. Dolo (2007)- ESR dating in Song Terus cave (East Java, Indonesia). Quaternary Geochron. 2, p. 398-402.
(Dating on animal teeth from Song Terus cave, Gunung Sewu, E Java shows cave belongs to karstic system which has been in place since M Pleistocene (216, 392 ka))

Hardjasasmita, H.S. (1983)- Evolution of the genus *Sus* (Suidae, Mammalia) in Indonesia. Taxonomy, phylogeny and paleogeography. Ph.D. Thesis Inst. Teknologi Bandung (ITB), p. 1-177. *(Unpublished)*
(In Indonesia fossil suids (pig family) known from Pliocene- Holocene, mainly represented by genus Sus. On Sulawesi also Babyrousa and Celebochoerus. Two fossil species (Sus brachygnathus, S. macrognathus), one subspecies (Sus macrognathus terhaari) and two questionable species (Sus stremmi, S. sangiranensis), nine Recent species and subspecies are recognized)

Hardjasasmita, H.S. (1987)- Taxonomy and phylogeny of the Suidae (Mammalia) in Indonesia. Scripta Geologica 85, p. 1-68.
(online at: www.repository.naturalis.nl/document/148680)
(Overview of ?Pliocene- Recent wild pigs in Indonesia, mainly of genus Sus, mainly from Java)

Harrison, T. (1978)- Present status and problems for Paleolithic studies in Borneo and adjacent islands. In: F. Ikawa-Smith (ed.) Early Palaeolithic in South and East Asia, Mouton Publishers, The Hague, p. 38-57.
(Few or no Paleolithic fossils found on Borneo (unlike Sulawesi, Java, etc.) and some may be Chinese drugstore imports. Niah cave in Sarawak rel. rich record of human and associated fossils dating to ~35 ka. M Pleistocene tektites of coastal NW Brunei cannot be used for dating of 'Jerudong Terrace', as most or all are reworked into younger gravel terraces)

Harrison, T., J. Krigbaum & J. Manser (2006)- Primate biogeography and ecology on the Sunda Shelf islands: a paleontological and zooarchaeological perspective. In: S.M. Lehman & J.G. Fleagle (eds.) Primate biogeography, Springer, New York, p. 331-372.
(Non-human primates on Sundaland taxonomically diverse (27 species), and relatively high provinciality and endemism. By Late Pliocene main islands of Sunda Shelf had primate fauna that included Pongo pygmaeus,

Hylobates spp., Macaca nemestrina etc. on Sumatra, Java, Borneo and Mentawai Islands. Most probably arrived during Pretiglian cold phase, starting at ~2.8 Ma, when sea levels fell by >100m)

Hawkins, S., S. O'Connor, T.R. Maloney, M. Litster, S. Kealy, J.N. Fenner, K. Aplin et al. (2017)- Oldest human occupation of Wallacea at Laili Cave, Timor-Leste, shows broad-spectrum foraging responses to late Pleistocene environments. Quaternary Science Reviews 171, p. 58-72.
(online at: http://www.sciencedirect.com/science/article/pii/S0277379117302470)
(Laili Cave in Laleia, Timor-Leste, preserves oldest human occupation in Wallacea (~43-45 ka), earlier than other Pleistocene sites known in Wallacea. Pleistocene humans used abundant local chert and engaged in mobile broad-spectrum foraging)

Heaney, L.R. (1985)- Zoogeographic evidence for Middle and Late Pleistocene land bridges to the Philippine islands. Modern Quaternary Research in Southeast Asia 9, p. 127-143.
(In Sunda shelf region rel. widespread faunal distribution, corresponding stronlgy with M and Late Pleistocene land bridge formation. Number of species corresponds with size of island area. Elephant species rel. widespread in SE Asia Pleistocene, probably because they are strong swimmers and do not necessary need land bridges. Unlikely there was land bridge between Asia and The Philippines, except M Pleistocene connection from NE Borneo to Palawan. Therefore unlikely that Homo erectus reached Philippines)

Heaney, L.R. (1986)- Biogeography of mammals in SE Asia: estimates of rates of colonization, extinction and speciation. Biological J. Linnean Soc. 28, 1-2, p. 127-165.

Hemmer, H. (1971)- Fossil mammals of Java II. Zur Fossilgeschichte des Tigers (*Panthera tigris* L.) in Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 74, 1, p. 35-52.
('Fossil mammals of Java 2: the fossil record of the tiger Panthera tigris in Java'. On presence of extinct tiger 'Trinil Tiger' (Panthera tigris trinilensis) in beds of 1.2 Ma old at Trinil)

Hemmer, H. (1971)- Fossil mammals of Java III. Zur Kenntnis der Evolution javanischer Kleinkatzen: *Prionailurus bengalensis koenigswaldi* ssp. n. und *Felis chaus* ssp. aus dem Neolithikum von Sampung, Mittel-Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 74, p. 365-367.
('On the knowledge of the evolution of javanese small cats Prionailurus, etc. Two new subspecies from Neolithic of Sampung, C Java')

Hemmer, H. & G. Schutt (1972)- Pleistozane Leoparden (*Panthera pardus*) aus Java und Sudchina. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B76, p. 37-49.
('Pleistocene leopards from Java and S China')

Hemmer, H. & G.H.R. von Koenigswald (1964)- Fossile Nebelparder (*Neofelis*) aus dem Pleistozan Sudchinas und Javas. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 67, p. 1-16.
('Fossil leopards (Neofelis) from the Pleistocene of South China and Java')

Henneberg, M., R.B. Eckhardt, S. Chavanaves & K.J. Hsu (2014)- Evolved developmental homeostasis disturbed in LB1 from Flores, Indonesia, denotes Down syndrome and not diagnostic traits of the invalid species *Homo floresiensis*. Proc. National Academy Sciences USA 111, 33, p. 11967-11972.
(online at: www.pnas.org/content/111/33/11967.full.pdf)
(LB1 type specimen of Homo floresiensis ('hobbit') viewed as anomalous specimen in small-bodied Australomelanesian Homo sapiens population, possibly afflicted by Down syndrome. Conclusion disputed by Westaway et al. 2015)

Henneberg, M. & J. Schofield (2008)- The Hobbit trap. Money, fame, science, and the discovery of a ñnew species. Wakefield Press, Kent Town, S.A., p. 1-159.
(Book critical of Homo floresiensis ('hobbit') interpretations, claiming it to be much younger than reported and be 'normal' dwarfed Homo sapiens island population. Also 2011 2nd Edition)

Hennig, E. (1911)- Die Fischreste. In: E. Selenka & M. Blanckenhorn (eds.) Die Pithecanthropus Schichten auf Java, Engelmann, Leipzig, p. 54-60.
(Description of Pleistocene fish remains from Trinil, excavated by Selenka expedition)

Herman, D.Z. (2011)- Fossilization type of *Elephas hysudrindicus* from Blora on the basis of petrographic and Scanning Electron Microscopic analyses. J. Geologi Indonesia 6, 2, p. 75-84.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/304)
(2009 discovery of nearly complete skeleton of Pleistocene elephant Elephas hysudrindicus in Solo River terrace in Sunggun area near Medalem Village (not clear from what part of Pleistocene/ terrace level?; JTvG). Some precipitation of calcite and other authigenic minerals)

Hertler, C. & Y. Rizal (2005)- Excursion guide to the Pleistocene hominid sites in Central and East Java. JW Goethe University, Frankfurt, and ITB Bandung, 35p.
(at www.palaeo.net/biologie/material/Excursion%20guide.pdf)
(Overview of Pleistocene mammal fauna biostratigraphy, paleoanthropology and fossil hominid sites)

Hertler, C., Y. Rizal & Y. Zaim (2007)- Habitat differentiation in the Pleistocene of Jawa- Introduction of the new Pleistocene fossil locality Majalengka. Courier Forschungsinstitut Senckenberg 259, p. 165-175.
(Pleistocene mammal faunas from Java three successive faunas based proboscidean genera: (1) E Pleistocene Mastodon- Geochelone fauna, (2) early M Pleistocene Stegodon- Homo erectus fauna and (3) late M Pleistocene Elephas- Homo sapiens fauna. Stegodon- Homo erectus fauna contains elements from successive migration waves and different ecological settings. Introduce model for endemic evolution in Java and newly discovered Pleistocene mammal locality in W Java)

Hertler, C. & R. Volmer (2005)- Assessing prey competition in fossil carnivore communities- a scenario for prey competition and its evolutionary consequences for tigers in Pleistocene Java. Palaeogeogr. Palaeoclim. Palaeoecology 257, p. 67-80
(online at: http://www.roceeh.net/fileadmin/download/Publications/Hertler-volmer-2008.pdf)
(Five carnivore species overlapped in time in Java Pleistocene: two pantherines, a hyaenid and two canid species, each in one or more faunal levels. Significant increase in body mass of tigers in Ngandong faunal level reflects intense competition among carnivores in preceding Kedung Brubus level)

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(online at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0007241)
(Phyletic giantism and westward dispersal from mainland Australia best explanation for palaeodistribution of V. komodoensis and newly identified species of giant varanid from Timor. Pliocene giant varanid fossils from Australia suggest origin for V. komodoensis on mainland Australia (>3.8 Ma))

Holloway, R.L. (1981)- The Indonesian *Homo erectus* brain endocasts revisited. American J. Physical Anthropology 55, p. 503-521.
(online at: http://www.columbia.edu/~rlh2/IndonHerectAJPA1981.pdf)
(New brain endocasts of Homo erectus discoveries from Java. Mean brain volume 930 ml (Homo soloensis 1000-1250 cm3, modern humans ~1250 cm3; JTvG))

Hooijer, D.A. (1946)- Prehistoric and fossil rhinoceroses from the Malay Archipelago and India. Zoologische Mededelingen 26, 1, p. 1-138.
(online at: www.repository.naturalis.nl/document/150703)
(Description of rhinoceros fossils collected by Dubois in caves of C Sumatra in 1888-1890, Trinil, etc.. Reprint of doctoral thesis)

Hooijer, D.A. (1947)- On fossil and prehistoric remains of *Tapirus* from Java, Sumatra and China. Zoologische Mededelingen 27, p. 253-299.

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Hooijer, D.A. (1947)- *Pithecanthropus, Meganthropus* en *Gigantopithecus*. Geologie en Mijnbouw 9, 12, p. 230-239.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0VWdxUXpJQl9fYlU/view)
(Review of Von Koenigswald (1940) and Weidenreich (1945) monographs on Java hominids)

Hooijer, D.A. (1948)- *Rhinoceros sondaicus* Desmarest from kitchen-middens of Bindjai Tamiang, North Sumatra. Geologie en Mijnbouw 10, 5, p. 115-116.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0alp1ZkJOMzhwQkU/view)
(Rhinoceros tooth from Paleolithic (Late Pleistocene?) refuse-heap at Binjai Tamiang, 15km from mouth of Tamiang River in N Sumatra. Mound composed of layers of Meretrix mollusc shells alternating with ashy layers with stone tools and remains of land mammals, fish and crabs. Evidence of cannibalism. Rhinoceros tooth comparable to material from Sibrambang cave (Padang Highlands))

Hooijer, D.A. (1948)- Prehistoric teeth of man and of the orang-utan from Central Sumatra, with notes on the fossil orang-utan from Java and Southern China. Zoologische Mededelingen, Leiden, 29, p. 175-301.
(online at: http://repository.naturalis.nl/document/150691)
(Study of collection of teeth excavated by Dubois in late 1880's from Lida Ajer and other caves in Padang Highlands, C Sumatra. Includes orang-utan skulls and some hominid teeth indistinguishable from modern humans (may be oldest known Homo sapiens in Indonesian region (~70 ka; Westaway et al. 2017). Also extensive study of Pleistocene orang-utan teeth from Java and S China))

Hooijer, D.A. (1948)- Pleistocene vertebrates from Celebes. I. *Celobochoecerus heekereni* nov.gen.nov. spec. Proc. Kon. Nederl Akademie Wetenschappen 6, 8, p. 1024-1032.
(First of series of descriptions of Pleistocene mammal fossils from around Tjabenge, S Sulawesi, ~100 km NE of Makassar, collected by Van Heekeren)

Hooijer, D.A. (1948)- Pleistocene vertebrates from Celebes. II. *Testudo margae* nov. spec. Proc. Kon. Nederl Akademie Wetenschappen 6, 9, p. 1169-1182.
(Pleistocene giant land tortoise fossils from S Sulawesi)

Hooijer, D.A. (1948)- Pleistocene vertebrates from Celebes. III. *Anoa depressicornis* (Smith) subsp. and *Babyrousa babyrussa beruensis* nov. subsp. Proc. Kon. Nederl Akademie Wetenschappen 6, 10, p. 1322-1330.

Hooijer, D.A. (1949)- Pleistocene vertebrates from Celebes. IV. *Archidiskodon celebensis* nov. spec.. Zoologische Mededelingen, Leiden, 30, 14, p. 205-226.
(online at: www.repository.naturalis.nl/document/150021)
(Pleistocene dwarf elephant fossils from S Sulawesi)

Hooijer, D.A. (1949)- The Pleistocene vertebrates of southern Celebes. Chronica Naturae 105, 5, p. 148-150.

Hooijer, D.A. (1950)- The fossil hippopotamidae of Asia, with notes on the Recent species. Zoologische Verhandelingen, Leiden, 8, p. 3-124.
(online at: http://repository.naturalis.nl/document/148880)
(Review of fossil Hippopotamus from Asia. Three species in Pleistocene of Java, formerly recored as Hippopotamus antiquus, H. simplex and H. namadicus by Von Koenigswald here renamed Hippopotamus sivalensis koenigswaldi (E Pleistocene Djetis fauna, rel. small, Trinil, Mojokerto, Kedung Brubus), H. sivalensis sivajavanicus and H. sivalensis soloensis n.ssp (M-U Pleistocene, descended from H. koenigswaldi)

Hooijer, D.A. (1950)- Man and other mammals from Toalian sites in south-western Celebes. Verhandelingen Kon. Nederl. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde, 2, 46, p. 1-164.
(online at: www.dwc.knaw.nl/DL/publications/PU00011890.pdf)

(Descriptions of Holocene ('Toalian'; Neolithic) subfossil human and mammal bones from of Bola Batoe cave near Badjo Barebo district, 20 km SW of Watampone in Central Bone and ~100 km NE of Makassar in and other SW Sulawesi sites)

Hooijer, D.A. (1950)- Fossil evidence of Australomelanesian migrations in Malaysia? Southwestern J. of Anthropology 6, 4, p. 416-422.
(Presence of big-teeth humans resembling Australian aboriginals and Melanesians may once lived in Malaya-Indonesian region, as evidenced by Wajak man of Java (Dubois 1920) and subfossil man from Gua Lawa Sampung and Bojonegoro as described by Mijsberg (1932). View disputed by Von Koenigswald 1952)

Hooijer, D.A. (1951)- The geological age of *Pithecanthropus, Meganthropus and Gigantopithecus*. American J. Physical Anthropology 9, 3, p. 265-282.
(Questions some of the ages assigned to Von Koenigswald (1934) Pleistocene vertebrate zonation of Cisande, Cijulang, Kali Glagah, Jetis, Trinil and Ngandong faunas, and places most of them in Pleistocene. Distinctions between zones may also not be as clear-cut as assumed)

Hooijer, D.A. (1951)- Pygmy elephant and giant tortoise. The Scientific Monthly 72, 1, p. 3-8.
(On migration of earliest, Pleistocene mammal 'island fauna' from S Sulawesi, probably from Java)

Hooijer, D.A. (1952)- *Palaeoloxodon* cf. *namadicus* (Falconer et Cautley) from Borneo. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B55; 4, p. 395-398.
(Molar from Samarinda region, E Kalimantan, is first record of M Pleistocene Stegodon fauna on Borneo. Resembles M Pleistocene elephant Palaeoloxodon namadicus of S and E Asia. Represents link between Stegodon- Ailuropoda fauna of Java and Indochina)

Hooijer, D.A. (1952)- Fossil mammals faunas and the Plio-Pleistocene boundary in Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B55, p. 436-443.
(Tjidjulang and Kali Glagah mammal assemblages of Java, originally considered to be of Middle-Late Pliocene age by Von Koenigswald, etc., should be assigned to Lower Pleistocene)

Hooijer, D.A. (1953)- Pleistocene vertebrates from Celebes. V. Lower molars of *Archidiskodon celebensis* Hooijer. Zoologische Mededelingen, Leiden, 31, 28, p. 311-318.
(On teeth of Pleistocene dwarf elephant from S Sulawesi)

Hooijer, D.A. (1953)- Pleistocene vertebrates from Celebes. VI. *Stegodon* spec. Zoologische Mededelingen, Leiden, 32, 11, p. 107-112.
(online at: www.repository.naturalis.nl/document/149397)
(On Pleistocene small Stegodon sp. elephantoid from Cabenge area, Sopeng District, S Sulawesi, collected by Van Heekeren)

Hooijer, D.A. (1953)- Pleistocene vertebrates from Celebes. VII. Milk molars and premolars of *Archidiskodon celebensis* Hooijer. Zoologische Mededelingen, Leiden, 32, 20, p. 221-232.
(online at: https://www.repository.naturalis.nl/document/150455)

Hooijer, D.A. (1954)- Pleistocene vertebrates from Celebes. VIII. Dentition and skeleton of *Celebochoerus heekereni* Hooijer. Zoologische Verhandelingen, Leiden, 24, p. 1-46.
(online at: www.repository.naturalis.nl/document/149035)
(More on Pleistocene pig-like suid from Cabenge area, S Sulawesi)

Hooijer, D.A. (1954)- Pleistocene vertebrates from Celebes. IX. Elasmobranchii. Proc. Kon. Nederl Akademie Wetenschappen, Amsterdam, B57, 4, p. 475-485.
(On Pleistocene shark teeth from Tjabenge area, S Sulawesi)

Hooijer, D.A. (1954)- Pleistocene vertebrates from Celebes. X. Testudinata. Proc. Kon. Nederl Akademie Wetenschappen, Amsterdam, B57, 4, p. 486-489.
(On Pleistocene large tortoise fossils from S Sulawesi)

Hooijer, D.A. (1954)- A pygmy *Stegodon* from the Middle Pleistocene of Eastern Java. Zoologische Mededelingen 33, 14, p. 91-102.
(online at: www.repository.naturalis.nl/document/149695)
(Dwarf elephantoid from area N of Djetis and Perning in E Java, collected by Cosijn)

Hooijer, D.A. (1954)- Pleistocene vertebrates from Celebes. XI. Molars and a tusked mandible of *Archidiskodon celebensis* Hooijer. Zoologische Mededelingen, Leiden, 33, 15, p. 104-120.
(online at: www.repository.naturalis.nl/document/149831)
(?E Pleistocene elephantoids from near Cabenge, 100km NE of Makassar, SW Sulawesi))

Hooijer, D.A. (1954)- Crocodilian remains from the Pleistocene of Celebes. Copeia 1954, p. 263-266.

Hooijer, D.A. (1955)- Fossil Proboscidea from the Malay Archipelago and the Punjab. Zoologische Verhandelingen 28, p. 1-146.
(online at: www.repository.naturalis.nl/document/149023)
(On Pleistocene elephant fossils from Java, Sumatra, Sulawesi, India, etc.: Stegodon, Stegolophodon, Archidiskodon, Elephas, etc.))

Hooijer, D.A. (1956)- The lower boundary of the Pleistocene in Java and the age of *Pithecanthropus*. Quaternaria 3, p. 5-10.
(Mammal fossils suggest Tjidjoelang and Kali Glagah faunas of Java are of basal Pleistocene age)

Hooijer, D.A. (1957)- The correlations of fossil mammalian faunas and the Plio-Pleistocene boundary in Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 60, 1, p. 125-128.
(Reiteration of 1952 position that Tjidjulang and Kali Glagah mammal faunas of Java should be assigned to Villafranchian, Early Pleistocene)

Hooijer, D.A. (1957)- Report upon a collection of fossil vertebrates from Ola Bula, Central Ngada, Flores. Berita Madjelis Ilmu Pengetahuan Indonesia, Jakarta, November 1957, p. 6-9.
(Vertebrate remains discovered in 1956 at Ola Bula on Soa Plateau of Flores belong to extinct primitive Asian elephantids Stegodon, similar to S. trigonocephalus Martin from Pleistocene of Java)

Hooijer, D.A. (1957)- A *Stegodon* from Flores. Treubia 24, p. 119-129.
(online at: e-journal.biologi.lipi.go.id/index.php/treubia/article/download/2721/2332)
(Stegodon remains discovered by Verhoeven in 1956 at Ola Bula on Soa Plateau of Flores described as Stegodon trigonocephalus floresiensis. Rel. common Stegodon fossils, but remarkable lack of associated fauna)

Hooijer, D.A. (1957)- Three new giant prehistoric rats from Flores, Lesser Sunda Islands. Zoologische Medelingen 35, p. 229-314.
(online at: www.repository.naturalis.nl/document/150080)
(Three new forms of large Pleistocene rat fossils collected by Verhoeven in cave deposits at Liang Toge near Warukia, Manggarai, W Flores: Papagomys armandvillei besar, P. verhoeveni and Spelaeomys florensis. Associated with Mesolithic flake and blade industry)

Hooijer, D.A. (1958)- Fossil Bovidae from the Malay Archipelago and the Punjab. Zoologische Mededelingen 38, p. 1-110.
(online at: www.repository.naturalis.nl/document/148928)
(Bovidae (buffaloes, cows, bison, etc.) rel. common in Pleistocene of Java, mainly of genera Bibos, Bubalus, Leptobos, Duboisia, etc.)

Hooijer, D.A. (1958)- The Pleistocene vertebrate fauna of Celebes. Archives Neerlandaises Zoologie 13, Suppl. 1, p. 89-96. (also in Asian Perspectives 2, 2, p. 71-76)
(Pleistocene mammal faunas discovered in fluvial deposits of Tjabenge area SW Sulawesi by Van Heekeren in 1948 different from any Pleistocene fauna in Indo-Australian region: island fauna with dwarf elephant and buffalo, giant tortoise, freshwater sharks and rays, etc.)

Hooijer, D.A. (1960)- Quaternary gibbons from the Malay Archipelago. Zoologische Verhandelingen 46, 1, p. 1-42.
(online at: http://repository.naturalis.nl/document/148964)
(Apes (Pongidae) from Indonesian region include Late Pleistocene gibbons (Symphalangus and Hylobates) from limestone caves in Padang Highlands, C Sumatra, collected by Dubois. Possibly also incave material from C Java (Pacitan) and Sarawak)

Hooijer, D.A. (1962)- Quaternary langurs and macaques from the Malay archipelago. Zoologische Verhandelingen 55, 1, p. 1-64.
(online at: www.repository.naturalis.nl/document/148851)
(Pleistocene monkeys (Presbytis, Trachypithecus, Macaca) from limestone caves in Padang Highlands , C Sumatra, and cave deposits on Java)

Hooijer, D.A. (1962)- Paleontology of hominid deposits in Asia. Advancement Sci. 1962, p. 485-489.

Hooijer, D.A. (1962)- Report upon a Collection of Pleistocene mammals from tin-bearing deposits in a limestone Cave near Ipoh, Kinta Valley, Perak. Federation Museums Journal 7 (new series), p. 1-5.
(Study of mammal fossils from depth of ~9 m in tin bearing deposits inside imestone cave near Ipoh, sent to Museum of Natural History (Leiden) by B.A.V. Peacock in 1957. 51 specimens from 7 species of mammals, interpreted to be of e age. Inclide antelope, Duboisia santeng and hippopotamus, known from M Pleistocene of Java, but not previously recorded from mainland SE Asia. Also Java rhinoceros and possible buffalo)

Hooijer, D.A. (1964)- Pleistocene vertebrates from Celebes. XII. Notes on pygmy Stegodonts. Zoologische Mededelingen 40, 7, p. 37-44.
(online at: www.repository.naturalis.nl/document/149873)
(Sulawesi Stegodon decidedly smaller than Stegodon trigonocephalus Martin from Java, but probably similar to newly discovered pygmy stegodonts from Flores. Renamed Stegodon sompoensis n. sp.)

Hooijer, D.A. (1964)- Pleistocene vertebrates from Celebes. XIII. *Sus celebensis* Muller & Schlegel, 1845. Beaufortia 222, 16, p. 215-218.
(online at: www.repository.naturalis.nl/document/548530)

Hooijer, D.A. (1964)- On two milk molars of a pigmy stegodont from Ola Bula, Flores. Bull. Geol. Survey Indonesia l, 2, p. 49-52.

Hooijer, D.A. (1964)- New records of mammals from the Middle Pleistocene of Sangiran, Central Java. Zoologische Mededelingen 40, 10, p. 73-87.
(online at: www.repository.naturalis.nl/document/149780)
(On mammal fossils from Sangiran donated to Leiden museum by Van Heekeren and Houboldt. Not much new. Questions Von Koenigswald's perfectly valid suggested use of tektites as dating tool in Sangiran)

Hooijer, D.A. (1965)- Note on *Coryphomis buhleri* Schaub, a gigantic murine rodent from Timor. Israel J. Zoology 14, p. 128-133.
(Large Pleistocene rat fossils from Liang Leluat cave, SW Timor, collected by Verhoeven at Maubesi River)

Hooijer, D.A. (1967)- Indo-Australian insular elephants. Genetica 38, 1, p. 143-162.

(Pleistocene dwarfed elephants known from Celebes, Flores and Timor described and relationships considered. Pygmy forms arose independently on each island as result of isolation and genetic drift favouring small size. Wherever we find pygmy elephants we have also giant rodents)

Hooijer, D.A. (1969)- The *Stegodon* from Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B72, 3, p. 201-210.
(Additional description of Pleistocene dwarf elephant mandible and molars collected by Verhoeven E of Atambua, W Timor N coast, first described as Stegodon timorensis by Sartono 1969)

Hooijer, D.A. (1970)- Pleistocene South-East Asiatic pygmy stegodonts. Nature 225, 5231, p. 474-475.

Hooijer, D.A. (1971)- A giant land tortoise, *Geochelone atlas* (Faulconer & Cautley) from the Pleistocene of Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B74, 5, p. 504-525.
(Common material of giant land tortoise from Pleistocene gravel deposits at Raebia in Atambua area, W Timor. Originally described as Testudo margae Hooijer (1948), but indistinguishable from Geochelone atlas from E Pleistocene of Java)

Hooijer, D.A. (1972)- *Stegodon trigonocephalus florensis* Hooijer and *Stegodon timorensis* Sartono from the Pleistocene of Flores and Timor. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B75, p. 12-33.
(Flores and Timor Middle-Late Pleistocene Stegodon elephants much smaller than Java Stegodon, from which they probably evolved)

Hooijer, D.A. (1972)- *Varanus* (Reptilia, Sauria) from the Pleistocene of Timor. Zoologische Mededelingen, Museum Leiden 47, p. 445-448.
(online at: www.repository.naturalis.nl/document/149563)
(On Pleistocene 'komodo dragon'-like lizard fossils from gravel deposits, collected by Verhoeven at Raebia in Atambua area, W Timor)

Hooijer, D.A. (1972)- Pleistocene vertebrates from Celebes. XIV. Additions to the *Archidiskodon-Celebochoerus* fauna. Zoologische Mededelingen 46, 1, p. 1-15.
(online at: www.repository.naturalis.nl/document/150627)
(Descriptions of new mammal material collected by 1970 Dutch-Indonesian expedition to Beru area, Sulawesi. Additional material of Archidiskodon celebensis, Stegodon sompoensis, S. cf. trigonocephalus, Celebochoerus heekerei and Anoa depressicorni)

Hooijer, D.A. (1974)- *Elephas celebensis* (Hooijer) from the Pleistocene of Java. Zoologische Mededelingen 48, 11, p. 85-93.
(online at: www.repository.naturalis.nl/document/150495)

Hooijer, D.A. (1975)- Quaternary mammals west and east of Wallaceȏs line. In: G.J. Bartstra & W.A. Casparie (eds.) Modern Quaternary Research in Southeast Asia, A.A. Balkema, Rotterdam, 1, p. 37-51.
(Introduces concept of hypothetical M Pleistocene 'Stegoland' landmass, comprising Flores, Timor and Sulawesi, characterized by pygmy stegodonts S. sompoensis (based on erroneous assumption that elephants are not good swimmers and therefore unlikely to migrate between islands; JTvG))

Hooijer, D.A. (1975)- Quaternary mammals west and east of Wallaceȏs line. Netherlands J. Zoology. 25, p. 46-56.
(Same paper as above)

Hooijer, D.A. (1981)- What, if anything new, is *Stegodon sumbaensis* Sartono? Modern Quaternary Research in Southeast Asia 6, Balkema, Rotterdam, p. 89-90.
(Nature of Sumba Stegodon described by Sartono (1979) still uncertain. Not necessarily pygmy Stegodon)

Hooijer, D.A. (1982)- The extinct giant land tortoise and the pygmy stegodont of Indonesia. Modern Quaternary Research in Southeast Asia 7, Balkema, Rotterdam, p. 171-176.
(Mainly critical discussion of Sondaar (1981) paper on Geochelone faunas. All known Geochelone tortoises in Indonesia can be grouped in G. atlas and made their way to Indonesian islands by overseas dispersal (not land bridges). All pygmy stegodonts are conspecific, Stegodon sompoensis)

Hooijer, D.A. (1982)- Premolars of *Elephas planifrons* Falconer & Cautley from the Pleistocene of Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B85, 3, p. 265-272.

Hooijer, D.A. (1983)- Comment II: Remarks upon the Dubois collection of fossil mammals from Trinil and Kedungbrubus in Java. Geologie en Mijnbouw 62, p. 337-338.
(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0TXdLZ3dtNVloTHc/view)
(Comments on De Vos and Sondaar (1982) and De Vos et al. (1982) papers on Dubois collection. Part of problem is that the Dubois collections from Trinil may come from two different deposits: M Pleistocene Kabuh Fm and Late Pleistocene terrace sediments. Also Dubois collection from Kedungbrubus- Gunung Butak is mixture of Late Pliocene- E Pleistocene Jetis and M Pleistocene Trinil fauna)

Hooijer, D.A. (1984)- The mammalian faunas of Trinil and Kedungbrubus in Java once more. Modern Quaternary Research in Southeast Asia 8, Balkema, Rotterdam, p. 95-102.
(Comments on De Vos et al. (1982) and Sondaar et al. (1983) papers. Hooijer does not accept that the more diverse Kedungbrubus fauna is younger than Trinil fauna, but are roughly equivalent)

Hooijer, D.A. & B. Kurten (1984)- Trinil and Kedungbrubus: the *Pithecanthropus*-bearing fossil faunas of Java and their relative age. Annales Zoologici Fennici 21, p. 135-141.
(online at: www.sekj.org/PDF/anzf21/anzf21-135-141.pdf)
(Dispute De Vos (1982) interpretation that Trinil mammal fauna is older than Kedungbrubus fauna)

Hope, G.S. & S.G.Haberle (2005)- The history of the human landscapes of New Guinea. In: A. Pawley et al. (eds.) Papuan pasts: cultural, linguistic and biological histories of Papuan-speaking peoples, Australian National University, Canberra, p. 541-554.
(online at: http://palaeoworks.anu.edu.au/pubs/Hope&Haberle05.pdf)
(Humans have been in highland valleys of New Guinea for at least 30,000 years and presumably occupied savannah plains that then connected New Guinea to Australia for 50,000 years or more)

Hou, Yamei, R. Potts, B. Yuan, Z. Guo, A. Deino, W. Wang, J. Clark, G. Xie & W.W. Huang (2000)- Mid-Pleistocene Acheulean-like stone technology of the Bose Basin, South China. Science 287, 5458, p. 1622-1626.
(Stone artifacts from T4 terrace deposits in Bose basin, S China, associated with tektites dated to 803 ± 3 ka and represent oldest known cutting tools in E Asia, compatible with Acheulean technologies in Africa. Stone tool- tektite horizon also contains abundant charcoal and silicified wood fragments, suggesting episode of forest burning initiated by tektite event)

Htike, Thaung & N.N. San (2014)- New discovery of anthracotheres (Mammalia, Artiodactyla) from the Middle Miocene of Sagaing Region, Upper Myanmar. Shwebo University Research J. 5, 1, p. 89-96.
(online at: https://umoar.mu.edu.mm/handle/123456789/155)
(Re-investigation of anthracotheres from M Miocene Male and Thanbinkan localities of Sagaing Region, Upper Myanmar. Four species recognized. Most are forest- dwelling brachyodont and bunodont species)

Huffman, O.F. (1998)- An Early Pleistocene way of life- *Homo erectus* of Sangiran Dome, Central Java. In: P. Lunt, R. Netherwood & O F. Huffman (eds.) Guidebook for field trip to Central Java, Oct 1998, Indonesian Petroleum Assoc. (IPA), Jakarta, 15p.
(online at: www.utexas.edu/cola/files/776909)

Huffman, O.F. (1999)- Pleistocene environmental variety in eastern Java and early *Homo erectus* paleoecology- a geological perspective. Buletin Geologi (ITB) 31, 2, p. 93-107

(Late Pliocene-Pleistocene paleogeography of E Java. Homo erectus homeland was volcanic archipelago)

Huffman, O.F. (2001)- Plio-Pleistocene environmental variety in eastern Java and early *Homo erectus* paleoecology- a geological perspective. In: T. Simanjuntak et al. (eds.) Sangiran: man, culture, and environment in Pleistocene times, Proc. Int. Colloq. Sangiran Solo- Indonesia, Solo 1998, Jakarta. Nat. Res. Centre Archaeology, p. 231-256.
(online at: www.utexas.edu/cola/depts/anthropology/projects/huffman/6-SoloProc2001.pdf)
(Same paper as above. Homo erectus' homeland was volcanic archipelago with variety of paleoenvironments like Java today. With Late Pliocene-Pleistocene paleogeography; similar to Huffman (1999))

Huffman, O.F. (2001)- Geologic context and age of the Perning/Mojokerto *Homo erectus*, East Java. J. Human Evolution 40, 4, p. 353-362.
(Perning/Mojokerto Homo erectus from Upper Pucangan Fm in E Kendeng hills of E Java likely to be of latest Pliocene age (1.81 Ma radiometric age of hornblende in associated tuff; Swisher et al.) and reflect early H. erectus occupation of Java (but relation of tuff and Mojokerto skull debated in later literature, e.g. Huffman et al. 2006; JTvG)

Huffman, O.F., J. de Vos, A.W. Berkhout & F. Aziz (2010)- Provenience reassessment of the 1931-1933 Ngandong *Homo erectus* (Java), confirmation of the Bone-bed origin reported by the discoverers. PaleoAnthropology 2010, p. 1-60.
(online at: www.paleoanthro.org/journal/content/PA20100001.pdf)
(Geologists of Geological Survey of Netherlands Indies unearthed 14 Homo erectus fossils in 1931-1933 from Excavation site I Ngandong. Hominin discoveries and other vertebrate remains from thin, gravelly volcaniclastic stratum near base of fluvial terrace remnant ~20m above Solo River)

Huffman, O.F., P. Shipman, C. Hertler, J. de Vos & F. Aziz (2005)- Historical evidence of the 1936 Mojokerto skull discovery, East Java. J. Human Evolution 48, p. 321-363.
(Extensive review of history of discovery of Mojokerto child skull (Perning 1) in E Java in 1936, from hill-slope outcrop of folded conglomeratic sandstone in Duyfjes' Pucangan Fm on Kedungwaru anticline. Now accepted as Homo erectus (long believed one of oldest hominids from Java. Radiometric age of 1.81 ± 0.04 Ma from pumice near discovery section by Swisher et al., 1994, but may be from deeper beds; Huffman et al. 2006)

Huffman, O.F. & Y. Zaim (2003)- Mojokerto Delta, East Jawa: paleoenvironment of *Homo modjokertensis*- first results. J. Teknologi Mineral (ITB), 10, 2, p.
(manuscript online at: www.utexas.edu/cola/files/793055)
(Homo modjokertensis remains found in 1936 found in situ in Plio-Pleistocene bedrock at Perning site, SW of Surabaya. With Plio-Pleistocene paleogeographic map. Discovery site formed as fluvial channel on delta plain of ancient Mojokerto Delta)

Huffman, O.F., Y. Zaim, J. Kappelman, D.R. Ruez, J. de Vos, Y. Rizal, F. Aziz & C. Hertler (2006)- Relocation of the 1936 Mojokerto skull discovery site near Perning, East Java. J. Human Evolution 50, p. 431-451.
(Mojokerto skull discovery site was probably in beds 20m higher than ash layer dated as 1.81 Ma by Swisher et al. 1994, 2000)

Husain, M., S. Eko, H.A. Mahfi, W. Sunata & P. Sanyoto (1997)- Magnetostratigrafi daerah Patiayam, Kudus, Jawa Tengah. Proc. 22nd Ann. Conv. Indon. Assoc. Geophys. (HAGI), Bandung, p.
('Magnetostratigraphy of the Patiayam area, Kudus, C Java'. Hominid fossils in Patiayam area near Top Brunhes normal polarity subchron)

Hutterer, K.L. (1983)- Absolute dates for the hominid-bearing deposits in Java: an overview. Asian Perspectives 25, 2, p. 53-65.
(online at: https://scholarspace.manoa.hawaii.edu/bitstream/10125/19247/1/AP-v25n2-53-65.pdf)

(Literature review of published radiometric dates of Upper Pucangan Beds (~0.85-1.2 Ma; with 'Djetis Fauna near top at ~0.8 Ma) and Lower Kabuh Beds (~0.5-0.7 Ma; with Trinil Fauna, ~0.5 Ma) and Notopuro Beds (<0.1 Ma; with Ngandong Fauna). Tektite from Sangiran 730,000 ± 50,000 yrs)

Hyodo, M. (2001)- The Sangiran geomagnetic excursion and its chronological contribution to the Quaternary geology of Java. In: T. Simanjuntak et al. (eds.) Sangiran: man, culture, and environment in Pleistocene times, Proc. Int. Colloq. Sangiran Solo- Indonesia, Solo 1998, Jakarta, Nat. Res. Centre Archaeology, p. 320-335.
(Sangiran geomagnetic excursion, characterized by westerly declinations, ranges from below T1 Tuff up to just above diatomite layer in Pucangan Fm. Age estimated 1.56-1.48 Ma. Good time marker for tectonic event in M Matuyama chron in C and E Java)

Hyodo, M., S. Matsuûura, Y. Kamishima, M. Kondo, Y. Takeshita, I. Kitaba, T. Danhara, F. Aziz, I. Kurniawan & H. Kumai (2011)- High-resolution record of the Matuyama-Brunhes transition constrains the age of Javanese *Homo erectus* in the Sangiran dome, Indonesia. Proc. National Academy Sciences USA, 198, 49, p. 19563-19568.
(online at: www.ncbi.nlm.nih.gov/pmc/articles/PMC3241771/pdf/pnas.201113106.pdf)
(Paleomagnetic study in Sangiran area. A reverse-to-normal polarity transition in 7m thick section across Upper Tuff in Bapang (= Kabuh) Fm, with 3 short reversal episodes overlain by thick normal polarity magnetozone. Pattern closely resembles Matuyama-Brunhes transition (~0.78 Ma). Hominid last occurrence and tektite level in Sangiran nearly coincident, just below Upper Middle Tuff, which underlies MB transition. Meteorite impact preceded M-B reversal by ~12 ka)

Hyodo, M., H. Nakaya, A. Urabe, H. Saegusa, S. Xue, J. Yin & X. Ji (2002)- Paleomagnetic dates of hominid remains from Yuanmou, China, and other Asian sites. J. Human Evolution 43, 1, p. 27-41.
(Geomagnetic data suggest Homo erectus-affinity Yuanmou, SW China, hominid remains from early Brunhes chron ~0·7 Ma). Hominid fossils from Sangiran and Mojokerto, Java, do not exceed 1·1 Ma in age)

Hyodo, M., W. Sunata & E.E. Susanto (1990)- A long-term geomagnetic excursion from Plio-Pleistocene sediments in Java. In: M. Kono (ed.) Rock magnetism and paleogeophysics 17, Tokyo, p. 31-37.
(online at: http://peach.center.ous.ac.jp/rprep/Rock%20Magnetism%20and%20Paleogeophysics%20vol17%201990.pdf)
(Similar to Hyodo et al. 1992))

Hyodo, M., W. Sunata & E.E. Susanto (1992)- A long-term geomagnetic excursion from Plio-Pleistocene sediments in Java. J. Geophysical Research 97, B6, p. 9323-9335.
(Paleomagnetic records from Sangiran and Mojokerto suggest large-scale declination swing between Olduvai and Jamarillo events, lasting ~130,000 years)

Hyodo, M., W. Sunata, E.E. Susanto & H. Wahyono (1988)- Paleomagnetism of Plio-Pleistocene sediments in Sangiran, Central Java. In: M. Kono (ed.) Rock magnetism and paleogeophysics 15, DELP Publ. 23, Tokyo, p. 31-34.
(online at: http://peach.center.ous.ac.jp/rprep/Rock%20magnetism%20and%20Paleogeophysics%20vol15%201988.pdf)
Nine polarity boundaries were located in outcrops of Sangiran area. The stratigraphic levels with Pithecantropus fossils (uppermost Pucangan- Kabuh Fms) range from lower boundary of Jaramillo event at 0.97 Ma to Brunhes-Matuyama boundary at 0.73 Ma)

Hyodo, M., N. Watanabe, W. Sunata & E.E. Susanto (1993)- Magnetostratigraphy of hominid fossil bearing formations in Sangiran and Mojokerto, Java. Anthropological Science 101, 2, p. 157-186.
(online at: https://www.jstage.jst.go.jp/article/ase1993/101/2/101_2_157/_pdf)
(Also in Rock magnetism and paleogeophysics 19 (1992). Paleomagnetic study of Plio-Pleistocene formation at Sangiran and Mojokerto. Levels of hominid fossils in Sangiran range from lower Jamarilo event at 0.97 Ma to Brunhes-Matayama boundary at 0.73 Ma. Homo modjokertensis in Mojokerto lies at lower border of Jamarillo event at 0.97 Ma)

Ibrahim, Y.K., L.T. Tshen, K.E. Westaway, E.O. Cranbrook, L. Humphrey, R.F. Muhammad, J.X. Zhao & L.C. Peng (2013)- First discovery of Pleistocene orangutan (*Pongo* sp.) fossils in Peninsular Malaysia: biogeographic and paleoenvironmental implications. J. Human Evolution 65, 6, p. 770-797.
(Nine isolated fossil Pongo teeth from Batu caves in Peninsular Malaysia are first fossil Pongo in Peninsular Malaysia, showing ancestral Pongo successfully passed biogeographic divide between mainland SE Asia and Sunda subregion before 500 ka. Pongo remains indicate forest habitat, implying that during Last Glacial Phase sufficient forest cover persisted in W coast plain of Peninsular Malaysia)

Indonesia-Japan Research Cooperation Programme (CTA-41) (1979)- Progress report of the Indonesia-Japan joint research project on geology of human fossil bearing formations in Java. Geol. Research Dev. Centre, Bandung, Bull. 1, p. 47-60.

Indonesia-Japan Joint Research Team (1979)- Stratigraphy and geological structure in the Central Part of the Sangiran Dome. Geol. Research Dev. Centre, Bandung, Bull. 2, p. 55-61.
(Brief description of Late Pliocene- Pleistocene stratigraphy exposed in Sangiran Dome, C Java. Structure is dome, with radial and concentric faults. With four mud volcanoes with exotic blocks and some natural gas seepage. Described in more detail in Watanabe & Kadar, 1985)

Indonesia-Japan Joint Study Team (1991)- Quaternary geology of the northern foot area of Mount Lawu and along the middle course of the Solo river, Central and East Java. Geol. Res. Dev. Centre (GRDC), Bandung, p. 1-84.

Indonesia-Japan Joint Study Team (1990)- Stratigraphical correlation of the Quaternary system in the Sangiran area and its surroundings, Central Java. United Nations CCOP Techn. Bull. 21, p. 117-134.

Indriati, E. (2004)- Indonesian fossil hominid discoveries from 1889 to 2003: catalogue and problems. In: S. Akiyama et al. (eds.) Proc. Fifth and Sixth Symposia on collection building and natural history studies in Asia and the Pacific Rim, National Science Museum Mon., Tokyo, 24, p. 163-177.
(Indonesian hominid fossil discoveries catalogue in 1975 listed 57 hominids, in 2003 list more than doubled, albeit lacking provenance for some discoveries)

Indriati, E. & S.C. Anton (2008)- Earliest Indonesian facial and dental remains from Sangiran, Java: a description of Sangiran 27. Anthropological Science 116, 3, p. 219-229.
(online at: https://www.jstage.jst.go.jp/article/ase/116/3/116_070814/_pdf)
(Sangiran 27 only known facial skeleton of Homo erectus. Probably from earliest Pleistocene Sangiran (Pucangan) Fm. Highly mineralized. Ar/Ar dates on bracketing tuffs suggest age of 1.58-1.66 Ma. Sangiran 27 best considered member of H. erectus, but more robust morphology than contemporaneous fossils from Georgia and Kenya)

Indriati, E., C.C. Swisher, C. Lepre, R.L. Quinn, R.A. Suriyanto, A.T. Hascaryo, R. Grun, C.S. Feibel et al. (2011)- The age of the 20 meter Solo River terrace, Java, Indonesia and the survival of *Homo erectus* in Asia. Plos One 6, 6, e21562, p. 1-10.
(online at: www.plosone.org/article/info:doi%2F10.1371%2Fjournal.pone.0021562)
(Wide range and conflicting results of radiometric ages for hominid-bearing beds of Solo River 20m terrace deposits in E Java. New radiometric ages suggest older age than currently accepted. Ar/Ar ages from '20m terrace' at Ngandong and Jigar 546 ± 12 ka, but ESR/U-series results 143 ka± 20 ka, possibly indicating leaching of uranium (NB: Rizal et al. (2019) most likely age of bone bed ~117-108 ka))

Ingicco, T. (2010)- Les primates quaternaires de Song Terus (Java Est, Indonesie): implications paleobiogeographiques et archeozoologiques pour l'Asie du Sud-Est. Doct. Thesis Museum Nat. Histoire Naturelle, Paris, p. 1-281.
('The Quaternary primates of Song Terus (East Java, Indonesia): paleobigeographic and archeozoological implications for SE Asia'. Bones of non-human primates 70% of E Holocene mammal remains in caves in

Punung region of SE Java. Facial parts of monkeys found with pre-Neolithic human burials, as noted by Van Heekeren. Primate speciation patterns in islands of SE Asia suggest continuous connections between Sunda Islands through forested terrain during Pleistocene. Tooth micro-wear suggests commensalism between monkeys (especially Trachypithecus auratus) and humans at SongTerus from 9000-5000 years ago)

Ingicco, T. (2012)- Les primates quaternaires de Song Terus (Java Est, Indonesie): implications paleobiogeographiques et archeozoologiques pour l'Asie du Sud-Est. Bull. Mem. Soc. Anthropologie Paris 24, p. 199-203.
(Summary of thesis above)

Ingicco, T., J. de Vos & O.F. Huffman (2014)- The oldest gibbon fossil (Hylobatidae) from insular Southeast Asia; evidence from Trinil (East Java, Indonesia), lower/middle Pleistocene. PloS One 9, 6, E99531, p. 1-15.
(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0099531)
(Fossil femur excavated by Dubois in 1891-1900 in E-M Pleistocene bone bed of Trinil and now in Dubois collection at Naturalis museum, Leiden, recognized here as that of Hylobatidae (gibbon), making it oldest insular record in SE Asia. Living Hylobatidae inhabit evergreen rain forests, so paleoenvironment in greater Trinil area included forests of this kind in E-M Pleistocene)

Ingicco, T., A.M. Moigne, K.F. Setiagama, N. Amano, A. Kusno, A. Mirza, F.S. Detroit, A.M. Semah & F. Semah (2014)- The fauna of Song Terus cave (East Java, Indonesia) and LGM impact on the Sunda shelf: is the Keplek fauna an impoverished Wajak fauna? In: N. Amano et al. (eds.) Southeast Asia: human evolution, dispersals and adaptations, 17th Congress UISPP, Burgos, p. 110-115.

Ingicco, T., G. van den Bergh, J. de Vos, A. Castro, N. Amano & A. Bautista (2016)- A new species of *Celebochoerus* (Suidae, Mammalia) from the Philippines and the paleobiogeography of the genus *Celebochoerus* Hooijer, 1948. Geobios 49, 4, p. 285-291.
(online at: https://ro.uow.edu.au/cgi/viewcontent.cgi?article=5182&context=smhpapers)
(Celebochoerus is suid (pig familiy) with large upper tusks, previously only known from Plio-Pleistocene of Sulawesi. Canine fragment of Celebochoerus from Cagayan Valley, Luzon, named Celebochoerus cagayanensis n. sp.. Probable migration route from Philippines to Sulawesi, possibly out of Taiwan)

Insani, H., U.P. Wibowo, E. Setiyabudi & I. Kurniawan (2015)- On variation of extinct Java Hippopotamuses: a note from a new finding of Hippopotamidae fossil from Subang, West Java, Indonesia. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-277, 4p.
(New maxilla fossil of small hippopotamus from conglomeratic sandy layer of E Pleistocene Citalang Fm in Pasir Cabe, Wanareja Village, Subang District. Assigned to Hippopotamus sivalensis sivajavanicus)

Itihara, M., Sudijono, D. Kadar, T. Shibasaki, H. Kumai, S. Yoshikawa, F. Aziz et al. (1985)- Geology and stratigraphy of the Sangiran area. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid fossil bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 11-43.

Itihara, M., Sudijono, Wikarno & D. Kadar (1985)- Mud volcanoes in the Sangiran Dome. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid fossil bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 117-124.

Itihara, M., N. Watanabe, D. Kadar & H. Kumai (1994)- Quaternary stratigraphy of the hominid fossil bearing formations in the Sangiran area, Central Java. In: J.L. Lorenz (ed.) 4th Int. Conf. 100 years of *Pithecanthropus*: the *Homo erectus* problem, Frankfurt 1991, Courier Forschungsinstitut Senckenberg 171, p. 123-128.

Itihara, M., Wikarno & Y. Kagemori (1985)- Tektites from the Sangiran area. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid fossil bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 125-128.
(Horizon with tektites, glassy material from widespread M Pleistocene Australasian meteorite strewnfield, present between 2nd and 3rd Tuff Horizon in Bapang/ Kabuh Fm of Sangiran Dome)

Jablonski, N. G. & Tyler, D.E. (1999)- *Trachypithecus auratus sangiranensis*, a new fossil monkey from Sangiran, Central Java, Indonesia. Int. J. Primatology 20, 3, p. 319-326.
(Description of new subspecies of Javan lutung, based on tooth-bearing upper jaw fragment from volcanic breccia between U Kalibeng Fm and Lower Pucangan Fm, 500m S of Sangiran. Geochronological age 1.9 Ma, making it oldest monkey in SE Asia. Morphologic similarities to living leaf monkeys of Java, but larger (age disputed by Larick et al. 2000; probably younger))

Jacob, T. (1964)- A new hominid skull cap from Pleistocene Sangiran. Anthropologica, n.s. 6, p. 97-104.

Jacob, T. (1966)- The sixth skull cap of *Pithecanthropus erectus*. American J. Physical Anthropology 25, 3, p. 243-259.
(Sixth Pithecanthropus skull (named skull V) from cross-bedded sandstone of upper Trinil beds in Tanjung village, Sangiran, C Java. Pithecanthropine characteristics, with cranial capacity ~975 cm3. Absence of cranial base does not necessarily indicate that specimen was victim of cannibalism)

Jacob, T. (1967)- Some problems pertaining to the racial history of the Indonesian Region. Doct. Thesis, Rijksuniversiteit Utrecht, p. 1-156. *(Unpublished)*

Jacob, T. (1967)- Recent *Pithecanthropus* finds in Indonesia. Current Anthropology 8, 5, p. 501-504.
(New mandible and skull caps ('Skull VI' and 'Skull VII') of Pithecanthropus from Sangiran, C Java)

Jacob, T. (1972)- The absolute date of the Djetis beds at Modjokerto. Antiquity 46, p. 148-155.

Jacob, T. (1973)- Palaeoanthropological discoveries in Indonesia with special reference to the finds of the last two decades. J. Human Evolution 2, 6, p. 473-485.
(Reviews of paleoanthropological research in Indonesia since 1889. Three periods, with most finds in second one (1931-1941). Most finds are skull fragments of Pithecanthropus erectus, from M Pleistocene Kabuh Fm in Sangiran. K/Ar dating gives age of 1.9 ± 0·4 million years for Jetis beds at Perning (site of Mojokerto juvenile calvaria) and 0.83 Ma for (upper?) tuff from Trinil beds (Kabuh Fm) at Sangiran)

Jacob, T. (1974)- Studies on human variation In Indonesia. J. Natl. Medical Assoc. 66, 5, p. 389-399.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2609252/pdf/jnma00489-0061.pdf)

Jacob, T. (1975)- Morphology and paleoecology of early man in Java. In: R.H. Tuttle (ed.) Paleoanthropology morphology and paleoecology, Mouton, The Hague, p. 311-325.
(Between 1889-1941 at least 31 hominid fossils discovered in Indonesia, mainly pithecanthropines. Since 1952 >17 additional individuals found)

Jacob, T. (1975)- The pithecanthropines of Indonesia. Bull. Mem. Soc. Anthropologie, Paris 13, 2, p. 243-256.
(online at: www.persee.fr/web/revues/home/prescript/article/bmsap_0037-8984_1975_num_2_3_1816)
(Bodily remains of Pithecanthropus of Java consist of cranial and lower limb bones of ~50 individuals, from Lower and Middle Pleistocene beds (~1.9 to 0.2 Ma). Hiatus of at least 150,000 years existed between last Pithecanthropus and first Homo remains in Asia)

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(Brief review of hominids in Indonesian region in last 2 Myrs)

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(online at: https://journal.ugm.ac.id/bik/article/download/4724/3981)

Jacob, T. (1978)- The puzzle of Solo Man. Modern Quaternary Research in Southeast Asia 4, p. 31-40.

(Solo man from Ngandong first discovered in 1931 is M Pleistocene pithecanthropine (advanced Homo erectus). Solo man made stone tools. May have been cannibalistic, but not necessarily so)

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(Brief review of occurrences of Pleistocene hominid fossils of Java. Most new finds of M Pleistocene H. erectus fragments from Kabuh Fm of Sangiran area. K/Ar ages of Kabuh Fm hominid-bearing beds average 830,000 years; associated tektites 710,000 years)

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(online at: https://tspace.library.utoronto.ca/bitstream/1807/4410/1/CJA%20Vol%203%20%232%201983.pdf)
(Brief review of three genera of fossil hominids from 7 sites on Java)

Jacob, T. (1984)- The fossil skull cap from Sambungmachan and its implication to human evolution. Berkala Bioanthropologi Indonesia 1, p. 19-27.

Jacob, T., E. Indriati, R.P. Soejono, K. Hsu, D.W. Frayer, R.B. Eckhardt, A. J. Kuperavage, A. Thorne & M. Henneberg (2006)- Pygmoid Australomelanesian *Homo sapiens* skeletal remains from Liang Bua, Flores: population affinities and pathological abnormalities. Proc. National Academy Sciences USA 103, 36, p. 13421-13426.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1552106/pdf/zpq13421.pdf)
(Liang Bua 1 skull descrined as new species Homo floresiensis by Brown et al. (2004) and Morwood et al. (2005) not new species, but places within modern human ranges of variation, resembling Australomelanesian populations. LB1 probably drawn from earlier pygmy H. sapiens population)

Jacob, T. & D. Kadar (1978)- A new pithecanthropine cranial endocast S34 from the Sangiran Dome area, Central Java. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 1, p. 1-7.

Jacob, T., R.P. Soejono, L.G. Freeman & F.H. Brown (1978)- Stone tools from Mid-Pleistocene sediments in Java. Science 202, 4370, p. 885-887.
(Stone chopper and retouched flake from mid-Pleistocene channel fills at Sambungmacan, C Java)

Jaeger, J.J., A.N. Soe, O. Chavasseau, P. Coster, E.G. Emonet, F. Guy, R. Lebrun, A. Maung, A.A. Khyaw et al. (2011)- First hominoid from the Late Miocene of the Irrawaddy Formation (Myanmar). PLoS One 6, 4, e17065, p. 1-14.
(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0017065)
(Neogene fossil mammal fauna known in Irrawaddy Fm in C Myanmar for over a century. First hominoid fossil in Myanmar found together with Hipparion mammal fauna from Late Miocene Irrawaddy Fm (10.4- 8.8 Ma). New species of Khoratpithecus)

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('The fossil turtle remains from Trinil'. Description of Pleistocene turtle fossils from Trinil, collected by Selenka expedition)

Janensch, W. (1911)- Die Reptilienreste (exkl. Schildkroten). In: M. Selenka & M. Blanckenhorn (eds.) Die Pithecanthropus-Schichten auf Java, Geologische und Palaontologische Ergebnisse der Trinil Expedition (1907 und 1908), Wilhelm Engelmann, Leipzig, p. 61-74.
('The reptilian remains (excluding turtles) of Trinil, C Java. Descriptions of Gavialis bengawanicus Dubois, Crocodilus ossifragus and varanus vertebrae)

Janssen, R. (2017)- Isotope records in vertebrate fossils: from the Cretaceous seas to Quaternary Sundaland. Ph.D. Thesis Vrije Universiteit, Amsterdam, p. 1-142.
(online at: https://research.vu.nl/en/publications/isotope-records-in-vertebrate-fossils-from-cretaceous-seas-to-qua)
(Includes chapter on carbon and Sr isotopes of teeth enamel of Pleistocene mammals from Trinil-Sangiran, C Java, and Padang Highlands))

Janssen, R., J.C.A. Joordens, D.S. Koutamanis, M.R. Puspaningrum, J. de Vos, J.H.J.L. van der Lubbe & H.B. Vonhof (2016)- Tooth enamel stable isotopes of Holocene and Pleistocene fossil fauna reveal glacial and interglacial paleoenvironments of hominins in Indonesia. Quaternary Science Reviews 144, p. 145-154.
(online at: https://research.vu.nl/ws/portalfiles/portal/41930773)
(Carbon and oxygen O- isotope composition of tooth enamel used to investigate diet and habitat of bovids, cervids and suids from Holocene and Pleistocene sites on Java and Sumatra. Data from Homo erectus bone samples possibly contaminated by diagenetic overprint. C4-dominated isotope signal suggests Trinil specimens in Dubois and Selenka collections were excavated from narrow stratigraphical interval representing dry, glacial climate state (similar in Sangiran))

Joordens, J.C.A., F. d'Errico, F. Wesselingh, S. Munro, J. de Vos, J. Wallinga, C. Ankjaergaard et al. (2015)- *Homo erectus* at Trinil on Java used shells for tool production and engraving. Nature 518, 7538, p. 228-231.
(Fossil freshwater mussel shells from 'Hauptknochenschicht' of Trinil, C Java (= main bone layer; type locality of Homo erectus) with evidence for freshwater shellfish consumption by hominins, one shell tool and shell with geometric engraving. Sediment in shells dated with 40Ar/39Ar and luminescence dating methods as between ~0.54 and 0.43 Ma, i.e. younger than previously estimated from correlation of mammal assemblages to nearby Sangiran section. Engraving probably made by Homo erectus)

Joordens, J.C.A., F.P. Wesselingh, J. de Vos, H.B. Vonhof & D. Kroon (2009)- Relevance of aquatic environments for hominins: a case study from Trinil (Java, Indonesia). J. Human Evolution 57, p. 656-671.
(Study of ecological context of Java hominids. Homo erectus site of Trinil contained near-coastal rivers, lakes, swamp forests, lagoons, and marshes with minor marine influence, laterally grading into grasslands. Trinil HK environments yielded edible molluscs and fish. Midden-like characteristics of large bivalve shell assemblages from Trinil HK indicate deliberate collection, possibly by hominins)

Jungers, W., S.G. Larson, W. Harcourt-Smith, M.J. Morwood, T. Sutikna, Rokhus Due Awe & T. Djubiantono (2009)- Descriptions of the lower limb skeleton of *Homo floresiensis*. J. Human Evolution 57, 5, p. 538-554.

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('On the fossil mammal bones at Pati Ayam in the Jepara Residency, Java'. Short note on June 1856 visit to reported 'battlefield of giants' at Pati Ayam hills S of Muiah volcano. Area with black clays rich in mammal bones, including Bos sp., Elephas primigenius and Mastodon elephantoides. Latter species also known from Irrawaddy, India. No figures)

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(Discussion of paleoenvironments and fossils of Late Pliocene- Pleistocene formations of Sangiran Dome)

Kahlke, H.D. (1972)- A review of the Pleistocene history of the Orang-Utan (*Pongo* Lacepede 1799). Asian Perspectives 15, p. 5-14.
(Review of Pleistocene orang-utan localities in SE Asia (Java, Sumatra, Kalimantan, China, Laos, Vietnam))

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(online at: https://www.jstage.jst.go.jp/article/ase/114/1/114_1_35/_pdf/-char/ja)
(Postcanine tooth crowns of late E Pleistocene Homo erectus from Sangiran smaller than those of older H. erectus remains of same region. Javanese H. erectus still robust root systems, presumably primitive retention)

Kaifu, Y. (2017)- Archaic hominin populations in Asia before the arrival of modern humans, their phylogeny and implications for the ñSouthern Denisovansò. Current Anthropology 58, Suppl. 17, p. S418-S433.
(online at: http://www.journals.uchicago.edu/doi/pdfplus/10.1086/694318)
(Asian hominid fossil record scant, but suggests presence of regionally different evolutionary lineages of archaic Homo in Pleistocene Asia. Javanese Homo erectus may be 'southern Denisovans')

Kaifu, Y., J. Arif, K. Yokoyama, H. Baba, E. Suparka & H. Gunawan (2007)- A new *Homo erectus* molar from Sangiran. J. Human Evolution 52, 2, p. 222-226.
(Njg 2005.05 molar originally from Bapang-AG levels of Sangiran region)

Kaifu, Y., F. Aziz & H. Baba (2001)- New evidence of the existence of *Pongo* in the Early/Middle Pleistocene of Java. In: Geol. Res. Dev. Centre, Bandung, Spec. Publ. 27, p. 55-60.

Kaifu, Y., F. Aziz & H. Baba (2005)- Hominid mandibular remains from Sangiran: 1952-1986 collection. American J. Physical Anthropology 128, 3, p. 497-519.
(Descriptions of 8 hominid mandibular and associated dental remains found between 1952-1986 from E Pleistocene deposits of Sangiran, C Java. All specimens are surface finds)

Kaifu, Y., F. Aziz & H. Baba (2013)- The origins and early evolution of Indonesian *Homo erectus*: evidence from Sangiran. In: F. Aziz & H. Baba (eds.) *Homo erectus* in Indonesia. Recent progress of the study and current understanding, Centre for Geological Survey, Bandung, p. 43-64.

Kaifu, Y., F. Aziz, E. Indriati, T. Jacob, I. Kurniawan & H. Baba (2008)- Cranial morphology of Javanese *Homo erectus*: new evidence for continuous evolution, specialization, and terminal extinction. J. Human Evolution 55, p. 551-580.
(Morphological changes in H. erectus skulls from Java: brain size expansion, anteroposterior lengthening of midcranial base and an anterior shift of posterior temporal muscle, etc. Crania from Sambungmacan transitional between earlier (Bapang Fm above Grenzbank in Sangiran) and later (Ngandong) morphotypes of Java. Development of unique features in later Javanese H. erectus supports hypothesis that this Javanese lineage went extinct without making significant contributions to ancestry of modern humans)

Kaifu, Y., H. Baba & F. Aziz (2006)- Indonesian *Homo erectus* and modern human origins in Australasia; new evidence from the Sambungmacan region, central Java. In: Y. Tomida et al. (eds.) Proc. 7th and 8th Symp. Collection building and natural history studies in Asia and the Pacific Rim, Natl. Science Museum Monograph 34, p. 289-294.
(online at: https://www.kahaku.go.jp/research/researcher/papers/28135.pdf)
(Fossil and genetic studies generally support African origins of modern humans. Current fossil evidence still insufficient to reject competing claim of continuity between Javanese Homo erectus and modern aboriginal Australians. New H. erectus fossils from Sambungmacan, C Java, intermediate between earlier and later groups of Javanese H. erectus and support discontinuity between H. erectus and H. sapiens in Australasia)

Kaifu, Y., H. Baba, F. Aziz, E. Indriati, F. Schrenk & T. Jacob (2003)- Taxonomic affinities and evolutionary history of the early Pleistocene hominids of Java: dentognathic evidence. American J. Physical Anthropology 128, 4, p. 709-726.
(Study of teeth of E Pleistocene Javanese hominids from Sangiran show morphological differences between younger and older groups. Primitive aspects of oldest Javanese hominids suggest hominids dispersed into E Eurasia in earlier Early Pleistocene)

Kaifu, Y., H. Baba, T. Sutikna, M.J. Morwood, D. Kubo, E.W. Saptomo, Jatmiko, R. Due Awe & T. Djubiantono (2011)- Craniofacial morphology of *Homo floresiensis*: description, taxonomic affinities, and evolutionary implication. J. Human Evolution 61, p. 644-682.
(Description of LB1/1 Homo floresiensis cranium. Reductive trend in facial skeleton comparable to H. sapiens, but craniometrically different. LB1 most similar to older Homo erectus from Sangiran and Trinil, consistent with hypothesis that H. floresiensis evolved from early Javanese H. erectus with dramatic island dwarfism)

Kaifu, Y., E. Indriati, F. Aziz, I. Kurniawan & H. Baba (2010)- Cranial morphology and variation of the earliest Indonesian hominids. In: C.J. Norton & D.R. Braun (eds.) Asian Paleoanthropology: from Africa to China and beyond, Springer Science, Chapter 11, p. 143-157.
(Previous arguments suggest oldest Indonesian/ Sangiran hominids characterized by cranial robusticity, but hominids highly variable, with both robust and gracile morphotypes. Cranial size, shape and dentognathic morphology of earliest Indonesian hominids comparable to ~1.7 Ma early Homo erectus from E Africa)

Kaifu, Y., M. Izuho & T. Goebel (2015)- Modern human dispersal and behavior in Palaeolithic Asia: summary and discussion. In: Y. Kaifu et al. (eds.) Emergence and diversity of modern human behavior in Paleolithic Asia, Texas A&M University Press, College Station, p. 535-566.

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(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0141614)
(Dental remains of Homo floresiensis both primitive and advanced molar morphologies, a combination unknown in other hominin species. Consistent with alternative hypothesis that H. floresiensis derived from earlier Asian Homo erectus population and experienced size dwarfism in isolated insular setting)

Kaifu, Y., I. Kurniawan, D. Kubo, E. Sudiyabudi, G.P. Putro, E. Prasanti, F. Aziz & H. Baba (2015)- *Homo erectus* calvaria from Ngawi (Java) and its evolutionary implications. Anthropological Science 123, 3, p. 161-176.
(online at: https://www.jstage.jst.go.jp/article/ase/123/3/123_150702/_pdf)
(Endocranial volume of Ngawi 1 959 cm3. H. erectus crania from Ngawi and Sambungmacan generally similar to those of U Pleistocene Ngandong H. erectus, but also features close to terminal Pleistocene Bapang AG Homo erectus from Sangiran)

Kaifu, Y., E. Setiyabudi, I. Kurniawan, H. Baba & F. Aziz (2013)- Evolution of Indonesian *Homo erectus* in the Early Pleistocene: significance of Sangiran 17. In: F. Aziz & H. Baba (eds.) *Homo erectus* in Indonesia. Recent progress of the study and current understanding, Centre for Geological Survey, Bandung, p. 65-91.

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(New reconstruction of remarkably complete skull of E Pleistocene Homo erectus skull IX (Tjg-1993.05) from Bapang Fm-AG levels in Sangiran)

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(Sangiran, Ngawi and Mojokerto site in C and E Java. Vertebrate remains and hominid fossils mainly accumulated in continental sediments associated with lacustrine and fluvial systems)

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(Review of possible Late Pleistocene human migration routes across Wallacea, the transitional island biogeographic zone between Sundaland (SE Asia) and Sahul (Australia-New Guinea))

Keates, S.G. (1998)- A discussion of the evidence for early hominids on Java and Flores. In: G.J. Bartstra (ed.) Bird's Head approaches; Irian Jaya studies; a programme for interdisciplinary research, Modern Quaternary Research in Southeast Asia 15, p. 179-191.

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(Stone artefacts from Walanae valley, SW Sulawesi, may represent earliest human (Homo sapiens) activity in early part of Late Pleistocene (first identified as Cabenge flake industry by Van Heekeren in late 1940's). With review of Late Pleistoce stone tool industries in other parts of Indonesia)

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(Lithic artifacts from Late Pleistocene river terraces in N Walanae depression, S Sulawesi)

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(online at: http://quartaer.eu/pdfs/2001/2001_01_keates.pdf)
(Paleolithic stone artefact collections from Walanae valley near Cabenge in Sulawesi and from Baksoka valley near Pacitan, S Java, date largely to Late Pleistocene)

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Kloosterman, F.H. (1989)- Groundwater flow systems in the northern coastal lowlands of West- and Central Java, Indonesia. Ph.D. Thesis, Free University, Amsterdam, p. 1-298.
(online at: dare.ubvu.vu.nl/bitstream/1871/12723/1/tekst.pdf)
(Mainly on groundwater systems on N Java coastal areas, with chapters on regional geologic setting, stratigraphy, Pleistocene tectonics and climate, etc.. Emergence of Java as island in Pleistocene resulted not only from huge volumes of Pleistocene volcanic rocks but also major uplifts along axis of island)

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(online at: http://ci.nii.ac.jp/naid/110002703460/en)
(Plio-Pleistocene mollusc assemblages from Sangiran Dome area, C Java: 25 species of marine bivalvia, 25 marine gastropoda, 3 non-marine bivalvia and 9 non-marine gastropoda identified from U Kalibeng Formation and Pucangan Fms. Paleoenvironmental conditions changed gradually from warm, shallow marine during U

Kalibeng into tidal zone, then to fresh water facies during lower Pucangan. Return of shallow marine environment during lower U Pucangan. Fresh water conditions returned to area during upper U Pucangan)

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(online at: www.repository.naturalis.nl/document/150405)
(Description of rel. large Pleistocene fresh water fish remains from C Java, mainly Trinil, collected by Dubois)

Kramer, A., T. Djubiantono, F. Aziz, J.S. Bogard, R.A. Weeks, D.C. Weinand, W.C. Hames, J.M. Elam, A.C. Duband & Agus (2005)- The first hominid fossil recovered from West Java, Indonesia. J. Human Evolution 48, 6, p. 661-667.
(M Pleistocene hominid teeth found during 1999 excavation in Cisanca River, Rancah, W Java, SE of Bandung. EPR dating and Ar-Ar dating of associated tuffs suggest age between 516-606 ka.)

Kubo, D., R.T. Kono & Y. Kaifu (2013)- Brain size of *Homo floresiensis* and its evolutionary implications. Proc. Royal Society (London), B 280, 20130338, p.
(online at: http://royalsocietypublishing.org/content/royprsb/280/1760/20130338.full.pdf)
(Homo floresiensis from Late Pleistocene of Flores has extremely small endocranial volume (LB1 type specimen ~400cc). Hypotheses discussed: (1) H. floresiensis experienced dramatic brain size reduction from the Homo erectus (~1000 cc) in isolated insular setting; (2) species derived directly from more primitive and smaller-brained form such as Homo habilis (~600 cc) or Australopithecus (~400 cc))

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(online at: http://dlisv03.media.osaka-cu.ac.jp/infolib/user_contents/kiyo/DB00000180.pdf)
(Madiun basin in E Java with >250m of Quaternary sediments deposited above thick argillaceous sediments of Lower Pleistocene Pucangan stage. M-U Pleistocene Kabuh, Notopuro and Setri Fms consist of thick fluvial sediments and form good aquifers)

Kunimatsu, Y., B. Ratanasthien, H. Nakaya, H. Saegusa & S. Nagaoka (2004)- Earliest Miocene hominoid from Southeast Asia. American J. Physical Anthropology 124, p. 99-108.
(First find of large-bodied Miocene hominoid in SE Asia, in Lower Lignite Member at Chiang Muan in N Thailand. Upper molar similar in size to modern orangutans (Pongo pygmaeus). Age estimated as latest M Miocene (~11-12 Ma), based on earlier mammalians and paleomagnetic studies)

Kunimatsu, Y., B. Ratanasthien, H. Nakaya, H. Saegusa & S. Nagaoka (2005)- Hominoid fossils discovered from Chiang Muan, northern Thailand: the first step towards understanding hominoid evolution in Neogene Southeast Asia. Anthropological Science 113, 1, p. 85-93.
(online at: https://www.jstage.jst.go.jp/article/ase/113/1/113_1_85/_pdf)
(Upper molar of large-bodied Miocene hominoid found in 2000 in lignite mine in Chiang Muan basin, N Thailand, first record of Miocene hominoid from SE Asia. Age estimated to be M-L Miocene boundary (~10-12 Ma). In 2003 more hominoids found at same site, and named Lufengpithecus chiangmuanensis)

Kupper, H. (1930)- Paleolitische werktuigen uit Atjeh, Nord Sumatra. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 47, p. 985-989.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001673001:pdf)
('Paleolithic tools from Aceh, North Sumatra'. Paleolithic stone tools near Lho Seumaweh at N and E coasts of Aceh found during geologic survey work. Mainly made from pebbles of dark quartzite)

Kupper, H. (1948)- Zur Kenntnis des prahistorischen Menschen auf West Java. Annalen Naturhistorischen Museums Wien 56, p. 434-439.
('On the knowledge of prehistoric people on West Java'. Report of artifacts found in several areas north of Bandung: obsidian tools, ceramic shards, etc. (also investigated by Von Koenigswald, Rothpletz, Mohler, etc.))

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(online at: www.repository.naturalis.nl/document/149473)
(Description of tooth of sabre-toothed cat from unspecified Java location in Dubois collection, Leiden)

Kusumayuda, S.B., M.T. Zen, S. Notosiswoyo & R.S. Gautama (1999)- Distribution of the Gunung Sewu karstic aquifers based on fractal analysis- case study: Semanu and surrounding area, Yogyakarta, Indonesia. In: G.H. Teh (ed.) Proc. 9th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA ‗98), Kuala Lumpur 1998, Bull. Geol. Soc. Malaysia 43, p. 345-350.
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(Not much geology; wrong age model)

Laitman, J.T. & I. Tattersall (2001)- *Homo erectus newyorkensis*: an Indonesian fossil rediscovered in Manhattan sheds light on the middle phase of human evolution. Anatomical Record 262, 4, p. 341-343.

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(Review of uncertainties of numerical ages assigned to Java Homo erectus fossils. Presence of tektites in middle Bapang deposits can be tied to large Australasian strewnfield from asteroid impact near Laos or Cambodia around 700,000-800,000 years BP. This would make age of most Java hominids 1 Ma or younger)

Larick, R. & R.L. Ciochon (2015)- Early hominin biogeography in island Southeast Asia. Evolutionary Anthropology 24, p. 185-213.
(Modern review of hominid distribution in Indonesian region)

Larick, R., R.L. Ciochon, Y. Zaim, Sudijono, Suminto, Y. Rizal et al. (2001)- Early Pleistocene 40Ar/39Ar ages for Bapang Formation hominins, Central Jawa, Indonesia. Proc. National Academy Sciences USA 98, 9, p. 4866-4871.
(online at: https://www.pnas.org/content/pnas/98/9/4866.full.pdf)
(Sangiran dome Plio-Pleistocene ~80 Homo erectus fossils. At 5 locations in Bapang (Kabuh) Fm H. erectus fossils associated with epiclastic pumice. 40Ar/39Ar ages from 1.51 Ma at Bapang/ Sangiran Fm contact, to 1.02 Ma above hominid-bearing sequence. Intermediate level with four crania has ~1.25 Ma age)

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(New subspecies of colobine monkey described by Jablonski and Tyler (1999) from near Krikilan, Sangiran dome, C Java, unlikely to be from Late Pliocene Lower Lahar volcanic breccia. Not found in situ, and probably from Upper Sangiran (Pucangan) or lower Bapang (Kabuh) Fms)

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(Review of migration of hominids in Asia. Earliest hominins in Asia almost as old as first appearance of genus Homo in Africa. Most fossil materials from Asia are without reliable dates)

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(online at: https://drive.google.com/file/d/0B7j8bPm9Cse0ZXh0eVY0UGFkOWc/view)
(New standard biozonation for Plio-Pleistocene continental deposits of Java. Ages of our oldest faunal zones/ mammal assemblages: Satir fauna ~1.5 Ma, Ci Saat/ Satir fauna~1.2 Ma, Trinil HK ~1.0 Ma and Kedung Brubus ~0.8 Ma)

Lenoble, A., V. Zeitoun, F. Laudet, A. Seveau & T. Doyasa (2008)- Natural processes involved in the formation of Pleistocene bone assemblages in continental South-East Asian caves : the case of the Cave of the monk (Chiang Dao Wildlife Sanctuary, Thailand). In: J.P. Pautreau et al. (eds.) 11th Int. Conf. Eurasea (EurASEAA 2006), Bougon 2006, Chiang Mai, p. 41-50.
(online at: https://hal.inria.fr/halshs-00423519/document)
(Large mammal assemblage typical of Ailuropoda-Stegodon fauna in Cave of the Monk, N Thailand. Fossiliferous layer with gnawed bones resulted from mid-size burrowing animals, probably porcupine)

Lim Tze Tshen (2013)- Quaternary *Elephas* fossils from Peninsular Malaysia: historical overview and new material. Raffles Bull. Zoology 2013, Suppl. 29, p. 139-153.
(online at: https://lkcnhm.nus.edu.sg/nus/pdf/PUBLICATION/..)
(Elephant fossils rare in Peninsular Malaysia. 19 specimens recorded, all isolated dental materials of presumed Late Pleistocene and Holocene age)

Lipson, M., P.R. Loh, N. Patterson, P. Moorjani, Y.C. Ko, M. Stoneking, B. Berger & D. Reich (2014)- Reconstructing Austronesian population history in Island Southeast Asia. Nature Communications 5, 4689, 7p.
(online at: www.nature.com/ncomms/2014/140819/ncomms5689/pdf/ncomms5689.pdf)
(Gentic studies of 31 Austronesian-speaking peoples in SE Asia suggest 'Austronesian expansion,' which began 4000-5000 years ago, likely had roots in Taiwan)

Locatelli, E., R. Awe Due, G.D. van den Bergh & L.W. van den Hoek Ostende (2012)- Pleistocene survivors and Holocene extinctions: the giant rats from Liang Bua (Flores, Indonesia). Quaternary Int. 281, p. 47-57.
(online at: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1054&context=smhpapers)
(Liang Bua Cave with common micromammal remains, mainly murids, incl. 3 species of giant rats. Papagomys armandvillei still living on Flores, other (Papagomys theodorverhoeveni, Spelaeomys florensis) went extinct during Holocene. Giant murids examples of insular gigantism. Peak in number of giant rats in cave in Holocene may result from Paleolithic hunting activity

Louys, J. (2007)- Limited effect of the Quaternary's largest super-eruption (Toba) on land mammals from Southeast Asia. Quaternary Science Reviews 26, p. 3108-3117.
(Relatively few species became extinct in SE Asia following the Toba super-eruption at 74 ka)

Louys, J. (2007)- Ecology and extinction of Southeast Asia's megafauna. Ph.D. Thesis University of New South Wales, Sydney, p. 1-290.
(online at: http://unsworks.unsw.edu.au/fapi/datastream/unsworks:1693/SOURCE02)
(On extinction of large Pleistocene mammal species in SE Asia)

Louys J. (2008)- Quaternary extinctions in Southeast Asia. In: A.M.T. Elewa (ed.) Mass extinction, Springer-Verlag, Heidelberg, p. 159-189.

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Louys, J. (2012)- Mammal community structure of Sundanese fossil assemblages from the Late Pleistocene, and a discussion on the ecological effects of the Toba eruption. Quaternary Int.258, p. 80-87.
(Mammal community structure of Late Pleistocene W Indonesia fossil sites Punung, Sibrambang and Lida Ajer show community structure more similar to each other than to modern Sundanese communities. Niah Caves exhibits structure consistent with modern communities. Modern community structure in Sundaland may have formed between 128-118 ka and 45-39 ka, possibly result of Toba eruption, although more likely stem from environmental fluctuations accompanying glacial/interglacial cycles)

Louys, J. (2014)- The large terrestrial carnivore guild in Quaternary Southeast Asia. Quaternary Science Reviews 96, p. 86-97.
(SE Asia's Pleistocene large terrestrial carnivores appearances and disappearances from region poorly understood. Two significant extinctions represented by Pachycrocuta and Pliocrocuta. Disappearance of hyenids probably related to climate change. Several large carnivores from Java unique genetic and morphological variations, possibly related to connection between Java and Indochinese mainland in M Pleistocene. At least one endemic large carnivore evolved in Sundaland (Sunda clouded leopard))

Louys, J. (2016)- The giant rats of Timor. Australasian Science 37, 3, p. 24-26.
(Dog-sized giant rats coexisted with humans for 40,000 years on Timor)

Louys, J., D. Curnoe & H. Tong (2007)- Characteristics of Pleistocene megafauna extinctions in Southeast Asia. Palaeogeogr. Palaeoclim. Palaeoecology 243, p. 152-173.
(online at: http://www.rhinoresourcecenter.com/pdf_files/132/1328059508.pdf)
(Extinction of large-bodied taxa from Pleistocene in mainland SE Asia and Indonesia (incl. proboscideans Stegodon and Palaeloxodon, pygmy hippopotamus Hexaprotodon, hyenas Crocuta and Hyaena, giant panda Ailuropoda, tapirs Tapirus and Megatapirus and giant Asian ape Gigantopithecus, cannot be assigned to single cause. Disappearance likely tied to both climatic and human agents)

Louys, J. & E. Meijaard (2010)- Palaeoecology of Southeast Asian megafauna-bearing sites from the Pleistocene and a review of environmental changes in the region. J. Biogeography 37, 8, p. 1432-1449.
(Reconstructions of habitat of 25 Pleistocene sites in SE Asia with medium- and large-bodied mammals. Sites classified as closed (continuous tree cover), mixed (heterogeneous tree cover) and open (limited or no tree cover; incl. Trinil)

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(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4793331/pdf/peerj-04-1788.pdf)
(U-series dating of stegodon tusk from Pleistocene Ainaro gravels near Atambua, Timor, indicate presence of stegodons in Timor at or before 130 ka, pre-dating earliest evidence of humans on island)

Louys, J. & A. Turner (2012)- Environment, preferred habitats and potential refugia for Pleistocene *Homo* in Southeast Asia. Comptes Rendus Palevol 11, 2-3, p. 203-211.
(SE Asia dominated by mix of savannah, open woodlands and evergreen forests in much of Pleistocene, conditions ideal for early hominin subsistence. These conditions would have been rare for much of rest of Asia during glacial periods. SE Asia was possible refugium for savannah-adapted species like hominins during these periods)

Lovejoy, C.O. (1970)- The taxonomic status of the '*Meganthropus*' mandibular fragments from the Djetis beds of Java. Man 5, 2, p. 228-236.
(Material described as Meganthropus palaeojavanicus by Von Koenigswald in 1941 from Djetis beds of Java, lies within expected range of variation of Homo erectus)

Lydekker, R. (1885)- Description of a tooth of *Mastodon latidens*, Clift, from Borneo. Proc. Zoological Soc. London 53, 4, p. 777-779.
(online at: https://www.biodiversitylibrary.org/page/31015890page/905/mode/1up)
(Molar of Pleistocene(?) Mastodon from Brunei. Very similar to M. latidens from Siwalik fauna of India and from Burma, possibly also Java as described by Martin)

Lyras, G.A., M.D. Dermitzakis, A.A.E. van der Geer, S.B. van der Geer & J. de Vos (2009)- The origin of *Homo floresiensis* and its relation to evolutionary processes under isolation. Anthropological Science 117, 1, p. 33-43.
(online at: https://www.jstage.jst.go.jp/article/ase/117/1/117_080411/_pdf)
(Morphometric analysis of skulls separates H. floresiensis (LB1) from all H. sapiens, while not possible to separate H. floresiensis from H. erectus. Neolithic skulls from Flores within range of modern humans and not related to LB1)

Mahirta (2005)- Stone technology and the chronology of human occupation on Rote, Sawu and Timor, Nusa Tenggara Timur, Indonesia. Indo-Pacific Prehistory Assoc. Bull. 29, p. 101-108.
(online at: https://journals.lib.washington.edu/index.php/BIPPA/article/view/9483/8470)
(Human occupation in Nusa Tenggara started from at least 30,000-35,000 years ago)

Mano, K., Sudijono & U.L. Batu (1991)- Stratigraphy along the middle course area of Solo River and its tributaries between Teluk and Ngawi. In: Quaternary geology of the northern foot area of Mount Lawu and along the middle course of the Solo River, central and East Java, Indonesia-Japan Joint Study Team, Geol. Res. Dev. Centre Bandung, p. 14-36.

Maringer, J. & T. Verhoeven (1970)- Die Steinartefakte aus der *Stegodon*-Fossilschicht von Mengeruda auf Flores, Indonesien. Anthropos 65, 1-2, p. 229-247.
('The stone artifacts from the Stegodon fossil beds of Mengeruda on Flores, Indonesia'. Pleistocene volcanoclastic fossiliferous beds on Soa Plateau, W Central Flores, contains Stegodon (Hooijer 1957), also Pleistocene tektites and variety of stone tools, similar to 'Sangiran industry' of C Java and 'Cabenge industry' of Sulawesi (now dated at Mata Menge site as ~880 ka: JTvG))

Maringer, J. & T. Verhoeven (1970)- Die Oberflachenfunde aus dem Fossilgebiet von Mengeruda und Olabula auf Flores, Indonesien. Anthropos 65, p. 530-565.

Maringer, J. & T. Verhoeven (1979)- Recent discovery of a Palaeolithic past in Flores, Indonesia, and its contribution to the research of most ancient Southeast Asia. East and West 29, p. 247-263.
(Discovery of Pleistocene mammalian fauna with Stegodon trigonocephalus and human stone tools at Olabula, Flores, by Verhoeven in 1957 were first East of Wallace Line)

Maringer, J. & J. Verschuuren (1981)- Zum Palaolithikum der Insel Timor, Indonesien. Anthropos 76, 3-4, p. 584-588.
('On the Paleolithic of Timor Island'. Stone tools (mainly chert, some obsidian) from Talau River area S of Atambua, E part of W Timor)

Marks, P. (1953)- Preliminary note on the discovery of a new jaw of *Meganthropus* Von Koenigswald in the lower Middle Pleistocene of Sangiran, Central Java. Indonesian J. Natural Science (Majalah Ilmu Alam untuk Indonesia) 109, p. 26-33.
(On large fragment of hominid mandible collected by villagers N of Glagahombo village in conglomerate layer probably equivalentto 'Grenzbank'. Attributed to Meganthropus palaeojavanicus)

Marquez, S., K. Mowbray, G.J. Sawyer, T. Jacob & A. Silvers (2001)- New fossil hominid calvaria from Indonesia- Sambungmacan 3. The Anatomical Record 262, p. 344-368.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/ar.1046/pdf)

(On skull cap of M Pleistocene Homo cf. erectus from banks of Solo River near Poloyo village, Sambungmacan district, C Java. Absence of some classic characters attributed to Homo erectus can be interpreted as: (1) known cranial variation of H. erectus from Indonesia and China is extended; (2) calvaria shows evidence of evolutionary change within H. erectus; or (3) more than one species of Homo in M Pleistocene of Java)

Martin, J.E., E. Buffetaut, W. Naksri, K. Lauprasert & J. Claude (2012)- *Gavialis* from the Pleistocene of Thailand and its relevance for drainage connections from India to Java. PLoS ONE 7, 9, e44541, 14p.
(online at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0044541)
(Occurrence of crocodilian Gavialis cf. bengawanicus in E Pleistocene of Tha Chang sandpit, Nakhon Ratchasima Province NE Thailand. Associated with Stegodon and other E Pleistocene mammal fauna. Scenario for dispersal of Gavialis from Indo-Pakistan to Indonesia. Dispersal by sea less likely than dispersal through fluvial drainages. (not much on geological setting and age control; G. bengawanicus Dubois also known from Trinil, C Java, associated with Stegodon- Homo erectus fauna; Dubois 1908, Delfino & De Vos, 2010; HvG)

Martin, K. (1884)- Ueberreste vorweltlicher Proboscidier von Java und Banka. Sammlungen Geol. Reichs-Museums, Leiden, Ser. 1, 4, p. 1-24.
(online at: www.repository.naturalis.nl/document/552394)
('Remnants of prehistoric elephants from Java and Bangka'. Early paper on molars of Pleistocene elephantoids: Stegodon sp. from Pati Ajam (S of Muriah volcano, C Java), Elephas sumatranus from Bangka)

Martin, K. (1884)- Ueberreste vorweltlicher Proboscidier von Java und Bangka. Jaarboek Mijnwezen Nederlandsch-Indie, 1884, p. 285-308.
('Remnants of prehistoric elephants from Java and Bangka'. Reprint of Martin (1884))

Martin, K. (1886)- Fossile Saugethierreste von Java und Japan. Sammlungen Geol. Reichs-Museums, Leiden, Ser. 1, 4, p. 25-69.
(online at: www.repository.naturalis.nl/document/552399)
('Fossil mammal remains from Java and Japan'. Early description of Pleistocene mammal remains collected by Raden Saleh in 1865-1866, mainly from C Java Solo area. Mainly Stegodon (skull and molars), Elephas, whale bones and deer (also in Jaarboek Mijnwezen Nederlandsch Oost-Indie 16, p. 1-45))

Martin, K. (1887)- Fossile Saugethierreste von Java und Japan. Jaarboek Mijnwezen Nederlandsch Oost-Indie 16, Wetenschappelijk Gedeelte, Palaeontologie Nederlandsch-Indie Verh. 21, p. 1-45.
('Fossil mammal remains from Java and Japan'. Same as Martin (1886))

Martin, K. (1888)- Neue Wirbelthierreste vom Pati-Ajam auf Java. Sammlungen Geol. Reichs-Museums, Leiden, Ser. 1, 4, p. 87-116.
(online at: www.repository.naturalis.nl/document/552407)
('New vertebrate remains from Pati-Ajam on Java'. Early paper on Pleistocene mammals from Pati-Ajam mountains S of Muriah volcano, near Klaling, Jepara Residency, C Java. Mainly molars of Mastodon, Stegodon, Euelephas, Bos sp. and Cervus sp., Material collected by Koorders, but locality first described by Junghuhn 1857. Similar mammal fauna known from Solo region)

Martin, K. (1888)- Neue Wirbeltierreste vom Pati-Ajam auf Java. Jaarboek Mijnwezen Nederlandsch Oost-Indie 17 (1888), Wetenschappelijk Gedeelte, p. 20-48.
('New vertebrate remains from Pati-Ajam on Java'. Reprint of Martin (1888)

Martin, R.D., A.M. MacLarnon, J.L. Phillips & W.B. Dobyns (2006)- Flores hominid: new species or microcephalic dwarf ? The Anatomical Record, A, 288A, 11, p. 1123-1145.
(online at: http://onlinelibrary.wiley.com/doi/10.1002/ar.a.20389/pdf)
(New hominids 'Homo floresiensis' from Flore, dated at ~18,000 yrs, very small but dentally adult. Commonly interpreted as insular dwarf derived from Homo erectus, but far too small to derive from Homo erectus by normal dwarfing. H. floresiensis most likely microcephalic Homo sapiens with advanced stone tools)

Marwick, B. (2009)- Biogeography of Middle Pleistocene hominins in mainland Southeast Asia: a review of current evidence. Quaternary Int. 202, p. 51-58.
(online at: http://faculty.washington.edu/bmarwick/PDFs/Marwick_2009_QI.pdf)
(Mainland SE Asia surrounded by M Pleistocene hominid remains in India, S China and Indonesia, but little evidence from mainland. Region fits into great arc of human dispersal from Africa to Australia, but not robust support for any migration model)

Marwick, B., C. Clarkson, S. O'Connor & S. Collins (2016)- Early modern human lithic technology from Jerimalai, East Timor. J. Human Evolution 101, p. 45-64.
(Jerimalai rock shelter in E Timor with large assemblage of Pleistocene stone artefacts and shell fish hooks dated to 42,000 yrs BP, one of oldest known sites of modern human activity in island SE Asia. Little change in lithic technology over 42,000 year sequence until addition of new types and raw materials in M Holocene. Assemblage dominated by small chert cores and implements rather than pebble tools and choppers (common in island SE Asia as opposed to mainland SE Asia). Jerimalai assemblage resembles Liang Bua assemblage of Flores, associated with Homo floresiensis; both possibly created by modern humans)

Matsumura, H., M.F. Oxenham, Nguyen K.T., Nguyen L.C. & Nguyen K.D. (2011)- Population history of mainland Southeast Asia: the Two Layer model in the context of Northern Vietnam. In: N. J. Enfield (ed.) Dynamics of human diversity, Pacific Linguistics, Canberra, p. 153-178.

Matsumura, H., K. Shinoda, T. Simanjuntak, A.A. Oktaviana, S. Noerwidi, H.O. Sofian et al. (2018)- Cranio-morphometric and aDNA corroboration of the Austronesian dispersal model in ancient Island Southeast Asia: support from Gua Harimau, Indonesia. PLoS ONE 13, 6, e0198689, p. 1-25.
(online at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0198689)
(Gua Harimau cave in Padang Bindu, Sn Sumatra, with 84 human skeletons dating from pre-Neolithic through to Neolithic, Bronze and Iron Ages (~5600- 1800 BP). Cranial and dna evidence for at least 2-3 distinct populations from two separate time periods)

Matsuûra, S. (1982)- A chronological framing for the Sangiran hominids. Bull. National Science Museum, Tokyo, D8, p. 1-53.
(online at: http://ci.nii.ac.jp/els/...)
(Fluorine dating of ~250 E Pleistocene vertebrate fossils from Grenzbank and Kabuh Fms of Sangiran area, C Java, suggesting age range of ~0.8-1.1 Ma for Pithecanthropus Beds)

Matsu'ura, S. (1985)- A consideration of the stratigraphic horizons of hominid finds from Sangiran by the fluorine method. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid fossil bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 359-366.

Matsu'ura, S. (1986)- Fluorine and phosphate analysis of fossil bones from the Kabuh formation of Trinil. Bull. National Science Museum, Tokyo, D12, p. 1-9.
(online at: http://ci.nii.ac.jp/naid/110000008540/en)
(Bone samples from lower Kabuh Fm in Trinil area analysed for fluorine and phosphate for comparison with Sangiran other areas. No obvious conclusions?)

Matsu'ura, S., M. Kondo, F. Aziz, Sudijono, S. Narasaki & N. Watanabe (2000)- First known tibia of an early Javanese hominid. Current Anthropology 41, 2, p. 297-300.
(On modern-shaped hominid tibia recovered in 1977 from Sambungmacan, C Java)

McKenzie, K.G. & Sudijono (1981)- Plio-Pleistocene ostracoda from Sangiran, Jawa. Publ. Geol. Res. Dev. Centre, Seri Paleontologi 1, p. 29-51.
(Descriptions of 25 ostracode species in Late Pliocene Upper Kalibeng Fm and Pleistocene Pucangan Fm at Sangiran Dome, C Java. Shallow marine Kalibeng Fm fauna with Neonesidea, Cytherelloidea, Thalmannia, Hemicytherideа, etc. Lower Pucangan Fm with brackish water assemblage of Ishizakiella, Hemicytheridea, Ilyocypris, Stenocypris and Cyprinotus. Lacustrine Upper Pucangan Fm with Physocypria and Indocythere)

Medway, Lord (1972)- The Quaternary mammals of Malesia: a review. In: P. & M. Ashton (eds.) The Quaternary era in Malesia, Trans. 2nd Aberdeen-Hull Symposium Malesian Ecology, University of Hull Dept. Geogr. Misc. Ser. 13, p. 63-98.

Meijaard, E. (2003)- Mammals of South-East Asian islands and their Late Pleistocene environments. J. Biogeography 30, 8, p. 1245-1257.
(During Last Glacial Maximum several areas in Sunda region remained forest covered: W Sumatra, NW Borneo, Malacca Straits and around Palawan. Other areaspossibly more open vegetation types like tree savanna, or open deciduous forest: Malay/Thai Peninsula, Java Sea, including Sunda Strait, and E Borneo)

Meijaard, E. (2004)- Solving mammalian riddles: a reconstruction of the Tertiary and Quaternary distribution of mammals and their palaeoenvironments in island South-East Asia. Ph.D. Thesis Australian National University, Canberra, p. 1-347.
(online at: https://digitalcollections.anu.edu.au/handle/1885/47989)
(New Miocene-Quaternary biogeographic models for SE Asia that help explain present-day distribution patterns and evolutionary relationships between mammal species)

Meijaard, E. & C.P. Groves (2006)- The geography of mammals and rivers in mainland Southeast Asia. In: M. Lehman & J.G. Fleagle (eds.) Primate biogeography- progress and prospects, Springer, New York, p. 305-330.
(Late Pliocene- E Pleistocene environmental changes in mainland SE Asia split up many tropical species leading to diversification, maintained during Pleistocene by further glacial periods. During last glacial maximum this may have led to isolation of rainforest-dependent species in several refugia. M Pleistocene catastrophic comet collision around 0.77 Ma, with centre of impact in E Thailand or E Cambodia/S Laos, may have caused widespread extinction in mainland SE Asia in area possibly >1 million km2)

Meijer, H.J.M. (2014)- The avian fossil record in Insular Southeast Asia and its implications for avian biogeography and palaeoecology. PeerJ 2:e295; DOI 10.7717/peerj.295, p. 1-13.
(online at: https://peerj.com/articles/295.pdf)
(Review of bird fossils from Indonesia/ SE Asia islands. At least 63 species in 54 genera and 27 families recorded. Except for Eocene of Sumatra, all bird fossils are Pleistocene in age)

Meijer, H.J.M., T. Sutikna, E.W. Saptomo, R. Due Awe, Jatmiko, S. Wasisto, H.F. James, M.J. Morwood & M.W. Tocheri (2013)- Late Pleistocene-Holocene non-passerine avifauna of Liang Bua (Flores, Indonesia). J. Vertebrate Paleontology 33, 4, p. 877-894.
(Liang Bua cave deposits, Flores, span last 95,000 years, with bird fossils throughout. Late Pleistocene assemblage with 23 taxa. Giant marabou Leptoptilos robustus and vulture Trigonoceps sp. now extinct)

Meijer, H.J.M., L.W. van den Hoek Ostende, G.D. van den Bergh & J. de Vos (2010)- The fellowship of the hobbit: the fauna surrounding *Homo floresiensis*. J. Biogeography 37, 6, p. 995-1006.
(Flores vertebrate fauna low species richness and disharmonic fauna, resulting from isolated position of island. H. floresiensis associated with common pygmy proboscidean Stegodon florensis insularis, giant rats (Papagomys armandvillei, P. theodorverhoeveni, Spelaeomys florensis) and other murids, bats, Komodo dragon (Varanus komodoensis, V. hooijeri), and large number of birds (incl. giant marabou Leptoptilos). Between fossil-bearing localities Ola Bula Fm (~900-800 ka) and Liang Bua (~95-0 ka) gap of ~700 kyr)

Menzies, J.I. & C. Ballard (1994)- Some new records of Pleistocene megafauna from New Guinea. Science in New Guinea 20, p. 113-139.
(Four new sites with Plio-Pleistocene megafauna in PNG, incl. zygomaturine diprodontid Hulitherium tomasetti (marsupial equivalent of giant panda) and Protemnodon)

Mijares, A.S., F. Detroit, P. Piper, R. Grun, P. Bellwood, M. Aubert, G. Champion, N. Cuevas, A. De Leon & E. Dizon (2010)- New evidence for a 67,000-year-old human presence at Callao Cave, Luzon, Philippines. J. Human Evolution 59, 1, p. 123-132.

(Human third metatarsal from Callao Cave in N Luzon dated by U-series ablation as ~67 ka, making it oldest known modern human fossil in Philippines (and SE Asia?). Morphometric analysis indicates gracile structure, close to small-bodied Homo sapiens, but also within ranges of Homo habilis and H. floresiensis)

Mijsberg, W.A. (1932)- Recherches sur les restes humains trouves dans les fouilles de l'abris-sous-roche de Goewa-Lawa a Sampoeng et des sites prehistoriques a Bodjonegoro (Java). In: Hommage du Service Archeologie des Indes Neerlandaises au Premier Congres des Prehistoriens d'Extreme-Orient a Hanoi, Batavia, p. 39-54.
('Investigations on the human remains found in the excavations of the Gua Lawa rock shelter in Sampung and prehistoric sites in Bojonegoro (Java)'. Report on skeletal remains of 'big-teeth' prehistoric people from East Java, reminescent of Papua-Melanesian racial group)

Mishra, S., C. Gaillard, C. Hertler, A.M. Moigne & T. Simanjuntak (2010)- India and Java: contrasting records, intimate connections. Quaternary Int. 223-224, p. 265-270.
(Comparison of similarities of archeological, paleontological and hominin records of India and Java)

Mohler, W.A. (1946)- Zur Stratigraphie der Saugetierfuhrenden Schichten von Java. Experientia, Basel, 2, 8, p. 287-292.
('On the stratigraphy of mammal-bearing beds of Java'. Mammalian faunas recognized: Tji Djolang (M Pliocene), Kali Glagah (U Pliocene), Djetis with Pithecanthropus (Lower Pleistocene), Trinil with Pithecanthropus (M Pleistocene), Ngandong with Homo neanderthalensis soloensis (U Pleistocene), Sampoeng (Subrecent). Post-M Pleistocene folding (U Pleistocene Ngandong-terraces not folded))

Moigne, A.M., R. Due Awe, F. Semah & A.M. Semah (2004)- The cervids from Ngebung site ('Kabuh series', Sangiran dome, Central Java) and their biostratigraphical significance. In: S.G. Keates & J. Pasveer (eds.) Quaternary Research in Indonesia, Chapter 3, Modern Quaternary Research in Southeast Asia 18, Balkema, p. 31-44.
(Excavations in Lower Kabuh Fm at Ngebung site with fossil riverbank horizon formerly occupied by Homo erectus, with numerous stone artifiacts and broken bones, dated at ~0.8 Ma (Ar-dating of overlying tuff by Salei 1997). Dominant animal fossils large bovids, smaller cervids and Stegodon, an association probably linked to human activity. Two cervids, Cervus (Rusa) and Axis lydekkeri ngebungensis)

Moigne, A.M., F. Semah & A.M. Semah, A. Bouteaux & R. Due Awe (2004)- Mammalian fossils from two sites of the Sangiran Dome (Central Jawa, Indonesia), in the biostratigraphical framework of the Jawanese Pleistocene. In: L.C. Maul & R.D. Kahlke (eds.) Late Neogene and Quaternary biodiversity and evolution: Regional developments and interregional correlations, Proc. 18th Int. Senckenberg Conf., Weimar, Terran Nostra, Stuttgart, p. 176-178. *(Extended Abstract)*
(online at: www.senckenberg.de/fis/doc/abstracts/68_Moigne_etal_2.pdf)
(Brief review of Bukuran and Ngebung 2 sites, Sangiran. Ngebung 2 with 'late Trinil HK' mammalian assemblage and dated as beginning of M Pleistocene (~0.9 Ma?))

Moncel, M.H., M. Arzarello, E. Boeda, T. Bonilauri, B. Chevrier, C. Gaillard, H. Forestier, Y. Li, F. Semah & V. Zeitoun (2018)- Assemblages with bifacial tools in Eurasia (second part). What is going on in the East? Data from India, Eastern Asia and Southeast Asia. Comptes Rendus Palevol 17, 1-2, p. 61-76.
(online at: www.sciencedirect.com/science/article/pii/S1631068315002122)
(Review of Pleistocene stone tools in Asia, incl. Indonesia: Baturaja-S Sumatra, Pacitan-Java, Ngebung/ Sangiran-Java (part 1 of series was on stone tools in Europe))

Moncel, M.H., M. Arzarello, E. Boeda, T. Bonilauri, B. Chevrier, C. Gaillard, H. Forestier, Y. Li, F. Semah & V. Zeitoun (2018)- Assemblages with bifacial tools in Eurasia (third part). Considerations on the bifacial phenomenon throughout Eurasia. Comptes Rendus Palevol 17, 1-2, p. 77-97.
(online at: www.sciencedirect.com/science/article/pii/S163106831630032X)
(Bifacial stone tool technology believed to become widespread from 800-700 ka onwards, probably reaching Levant from Africa before moving toward Asia, then Europe. However, reality may be more complex. In

Indonesia lithic pieces compatible with Acheulean traditions found without stratigraphic context in S Sumatra and associated with Homo erectus fossils at base of Kabuh Fm in Sangiran)

Moore, M.W. T. Sutikna, Jatmiko, M.J. Morwood & A. Brumm (2009)- Continuities in stone flaking technology at Liang Bua, Flores, Indonesia. J. Human Evolution 57, 5, p. 503-526.
(At Liang Bua, Flores, stratified unchanging artifact sequence spanning 95 kyr, with minor shift to unifacial flaking after 11 ka. Pleistocene pattern associated with Homo floresiensis skeletal remains. Holocene changes correlate with appearance of Homo sapiens)

Moore, M.W. & A. Brumm (2007)- Stone artifacts and hominins in island Southeast Asia: new insights from Flores, eastern Indonesia. J. Human Evolution 52, p. 85-102.
(Review of stone tool types in Indonesia. Large-sized 'core tools' commonly believed to be work Homo erectus and assemblages of small-sized 'flake tools' attributed to Homo sapiens, but both probably part of same sequences)

Morley, M.W. (2017)- The geoarchaeology of hominin dispersals to and from tropical Southeast Asia: a review and prognosis. J. Archaeological Science 77, p. 78-93.
(Review of geoarchaeology of Late Pleistocene modern human dispersals into and out of SE Asia, incl. Indonesian localities Punung/ Wajak (Java) and Liang Bua (Flores))

Morwood, M.J., F. Aziz, G.D. van den Bergh, P.Y. Sondaar & J. De Vos (1997)- Stone artefacts from the 1994 excavation at Mata Menge, West Central Flores, Indonesia. Australian Archaeology 44, p. 26-34.
(online at: https://www.library.uq.edu.au/ojs/index.php/aa/article/download/996/994)
(1994 excavation in fluvial Ola Bula Fm at Mata Menge near Bajawa, C Flores, yielded M Pleistocene stone tool pieces (basalt and chert flakes) and faunal remains (large Stegodon, crocodile, giant rat). Likely Matuyama- Brunhes boundary (and tektites from same site reported by Maringer and Verhoeven 1970 (but below main fossil layers?))

Morwood, M.J., P. Brown, Jatmiko, T. Sutikna, E. Wahyu Saptomo, K.E. Westaway, R. Awe Due et al. (2005)- Further evidence for small-bodied hominins from the late Pleistocene of Flores, Indonesia. Nature 437, 7061, p. 1012-1017.
(Homo floresiensis from Late Pleistocene of Flores has stature, limb proportions and endocranial volume of African Pliocene Australopithecus. Age of population from 95-74 to 12 thousand years ago. Excavation yielded more evidence for behavioural capabilities, including butchery of Stegodon and use of fire)

Morley, R.J., H.P. Morley, Y. Zaim & O.F. Huffman (2020)- Palaeoenvironmental setting of Mojokerto *Homo erectus*, the palynological expressions of Pleistocene marine deltas, open grasslands and volcanic mountains in East Java. J. Biogeography, 2020,p. 1-18.

Morwood, M.J. & W.L. Jungers (eds.) (2009)- Paleoanthropological research at Liang Bua, Flores, Indonesia. J. Human Evolution 57, 5, p. 437-648.
(Collection of papers)

Morwood, M.J. & W.L. Jungers (2009)- Conclusions: implications of the Liang Bua excavations for hominin evolution and biogeography. J. Human Evolution 57, 5, p. 640-648.
(Liang Bua excavations on Flores stratified sequence of stone artifacts and faunal remains spanning ~95- 17 ka, and includes skeletal remains of Homo sapiens in Holocene and Homo floresiensis in Pleistocene. Small H. floresiensis not australopithecine and not dwarfing of ancestral H. erectus population, but probably late representative of small-bodied hominid lineage that exited Africa before emergence of Homo erectus)

Morwood, M.J., P.B. OöSullivan, F. Aziz & A. Raza (1998)- Fission-track ages of stone tools and fossils on the East Indonesian island of Flores. Nature 392, p. 173-176.

(Zircon fission-track dates from two fossil sites on Flores. Tangi Talo, with endemic fauna, dates to 0.90 ± 0.07 Ma, Mata Menge (with stone tools and elements of continental SE Asian fauna) 0.88- 0.80 Ma. Also older, reworked zircons with ages between 7- 14 Ma (also with Australasian tektites; Von Koenigswald 1957))

Morwood, M.J., P. OõSullivan, E.E. Susanto & F. Aziz (2003)- Revised age for Mojokerto 1, an early *Homo erectus* cranium from East Java, Indonesia. Australian Archaeology 57, p. 1-4.
(online at: www.library.uq.edu.au/ojs/index.php/aa/article/viewFile/526/1690)
(Field study and redating of two pumice horizons at site of Homo erectus skull found by Duyfjes (1936) at Mojokerto, E Java, indicates age is <1.49 Ma, not much-hyped 1.8 Ma age of Swisher et al. (1984))

Morwood, M.J., R.P. Soejono, R.G. Roberts, T. Sutikna, C.S.M. Turney, K.E. Westaway et al. (2004)- Archaeology and age of a new hominin from Flores in eastern Indonesia. Nature 431, p. 1087-1091.
(Excavations at Liang Bua cave on Flores yielded tiny hominins, assigned to Homo floresiensis n.sp.. It existed from before 38 ka until at least 18 ka. Associated deposits contain stone artefacts and animal remains, including Komodo dragon and endemic, dwarfed species of Stegodon. H. floresiensis originated from early dispersal of Homo erectus and overlapped in time with Homo sapiens in region)

Morwood, M.J., T. Sutikna, E.W. Saptomo, K.E. Westaway, Jatmiko et al. (2008)- Climate, people and faunal succession on Java, Indonesia: evidence from Song Gupuh. J. Archaeological Science 35, 7, p. 1776-1789.
(Song Gupuh cave in Gunung Sewu Limestones, E Java, over 16m of deposits with faunal sequence spanning 70 ka. Terminal Pleistocene- Early Holocene period of maximum biodiversity. Human activity, especially after onset of Neolithic around 2.6 ka, contributed to progressive loss of species from area)

Morwood, M.J. & P. van Oosterzee (2007)- A new human- The startling discovery and strange story of the ñhobbitsò of Flores, Indonesia. Harper Collins, p. 1-222.
(Popular book on 2004 discovery of Homo floresiensis and its interpretation as a new species. N.B.: There is a school of paleoanthropologists that still dispute this 'startlingdiscovery; see e.g. Jacob et al. (2006), Martin et al. (2006), Bednarik (2008), Obendorf et al. (2008), Oxnard et al. 2010, Henneberg et al. (2011), Eckhardt et al. (2014) and others, who argue Morwood et al. misrepresented facts and misinterpreted significance of H. floresiensis, which they believe represents aberrant specimens of Homo sapiens)

Movius, H.L. (1943)- The stone age of Burma. In: Research on early man in Burma, Trans. American Philosphical Soc., N.S., 32, 3, p. 341-393.
(Paleolithic stone tools from 'Anyathian' M-U Pleistocene terraces of Irrawaddy River in Upper Myanmar (hand adzes, choppers, scrapers). Early Anyathian similarities with Pacitanian of S Java)

Movius, H.L. (1944)- Early man and Pleistocene stratigraphy in southern and eastern Asia. Papers Peabody Museum Archaeology Ethnology, Harvard University, 19, 3, p. 1-125.

Movius, H.L. (1948)- The Lower Palaeolithic cultures of southern and eastern Asia. Trans. American Philosophical Soc., new ser. 38, 4, p. 329-420.
(Review of Pleistocene stratigraphy and hominids and stone tools in Java, NW India, Burma and N China)

Movius, H.L. (1949)- Lower Palaeolithic archaeology in southern Asia and the Far East. In: W.W. Howell (ed.) Early man in the Far East, Symposium, American Assoc. Phys. Anthropologists, Chicago 1946, p. 17-77.
(Review of Pleistocene stratigraphy and hominids and stone tools in NW India, Burma, N China and Java)

Mubroto, B., Suminto & J. Kimura (1995)- Paleomagnetic analysis of sediments of the Kedungbrubus area. In: Sudijono et al. (eds.) Geology of Quaternary environment of the Solo- Madiun area, Central-East Java, Geol. Res. Dev. Centre, Spec. Publ. 17, p. 100-104.

Mulyaningsih, S., Sampurno, Y. Zaim. D.J. Puradimaja, S. Bronto & D.A. Siregar (2006)- Perkembangan geologi pada Kuarter Awal sampai masa sejarah di dataran Yogyakarta. J. Geologi Indonesia 1, 2, p. 103-113.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/170)

('Developments in Quaternary geology until the beginning of history in the Yogyakarta plain'. Uplift of Southern Mts in E Pleistocene formed Yogyakarta Basin. Merapi volcanic activity took place since ±42 ka or 0.67 Ma)

Mulvaney, D.J. (1970)- The Patjitanian industry: some observations. Mankind (Australian J. Anthropology) 7, 3, p. 184-187.
(Pacitanian stone tools from Java S Mountains contain both hand-axes and flake tools and may not be as old as previously suggested)

Musser, G.G. (1981)- The giant rat of Flores and its relatives east of Borneo and Bali. Bull. American Museum Natural History 169, 2, p. 67-176.
(online at: http://digitallibrary.amnh.org/handle/2246/568)
(Five Pleistocene- Recent murids (rats) known only from Flores: Papagomys armandvillei and new species P. theodorverhoeveni, Hooijeromys nusatenggara, Floresomys naso and Spelaeomys florensis. Komodomys rintjanus occurs on Flores and Komodo Islands of Rintja and Padar)

Musser, G.G. (1982)- The Trinil rats. Modern Quaternary Research in Southeast Asia 7, Balkema, Rotterdam, p. 65-85.
(Review of extant and fossil murid rodents of Java. Rare murid rodents in Pleistocene Trinil fauna represent two species incl. small Rattus trinilensis n.sp.)

Musser, G.G. & C. Newcomb (1983)- Malaysian murids and the giant rat of Sumatra. Bull. American Museum Natural History 174, p. 327-598.

Musser, G.G., A. van de Weerd & E. Strasser (1986)- *Paulamys*, a replacement name for *Floresomys* Musser, 1981 (Muridae), and new material of that taxon from Flores, Indonesia. American Museum Novitates 2850, p. 1-10.

Naumann, E. (1887)- Fossile Elephantenreste von Mindanao, Sumatra und Malakka. Abhandl. Zool. Museum Dresden 1, 6, p. 1-11.
('Fossil elephant remains from Mindanao, Sumatra and Malacca')

Naumann, E. (1890)- *Stegodon mindanensis*, eine neue Art von Uebergangs-Mastodonten. Zeitschrift Deutschen Geol. Gesellschaft, Berlin, 42, 1, p. 166-169.
(online at: https://www.biodiversitylibrary.org/item/37733page/176/mode/1up)
('Stegodon mindanensis, a new species of transitional mastodonts'. Brief note on elephantoid tooth from Mindanao in Dresden Museum, initially identified as same as Stegodon trigonocephalus from Java, but is different. No figures)

Ninkovich, D. & L.H. Burckle (1978)- Absolute age of the base of the hominid-bearing beds in Eastern Java. Nature 275, p. 306-308.
(Analysis of planktonic marine diatoms from marine intercalations in lowermost hominid-bearing beds and from underlying U Kalibeng Fm marine sediments in E Java (~2.1-1.9 Ma age for U Kalibeng assemblage))

Ninkovich, D., L.H. Burckle & N.D. Opdyke (1982)- Palaeogeographic and geologic setting for early man in Java. In: R.A. Scrutton & M. Talwani (eds.) The ocean floor, Wiley, New York, p. 211-227.

Nishioka, Y. & C. Vidthayanon (2018)- First occurrence of *Duboisia* (Bovidae, Artiodactyla, Mammalia) from Thailand. Fossil Record (Berlin) 21, p. 291-299.
(online at: https://www.foss-rec.net/21/291/2018/fr-21-291-2018.pdf)
(First fossil record of ?M Pleistocene antelope-like bovid Duboisia skull with horns from sandpit at Tha Chang, E of Nakhon Ratchasima (Khorat), NE Thailand. Confirms genus no longer endemic to Java. Assigned to Duboisia aff. D. santeng. From just below tektite-bearing horizon)

Noerwidi, S., Siswanto & H. Widianto (2016)- Primata besar di Jawa: spesimen baru *Gigantopithecus* dari Semedo. Berkala Arkeologi 36, 2. p. 141-160.
(online at: http://berkalaarkeologi.kemdikbud.go.id/index.php/berkalaarkeologi/article/view/96/142)
('Giant primate of Java: a new Gigantopithecus specimen from Semedo'.Two enigmatic mandible specimens found in 2014 at Semedo, SE of Tegal, C Java. Morphologically similar to common primate jaw, but twice size. Semedo specimens close to Gigantopithecus blacki)

Obendorf, P.J., C.E. Oxnard & B.J. Kefford (2008)- Are the small human-like fossils found on Flores human endemic cretins? Proc. Royal Society (London), B, 275, p. 1287-1296.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2602669/pdf/rspb20071488.pdf)
(Hominid fossils from Liang Bua, Flores, Indonesia, including nearly complete skeleton dated to 18 ka and assigned to new species are probably ME endemic cretins, part of an inland population of Homo sapiens)

Obradovich, J.D. & C.W. Naeser (1981)- Indonesia, age of *Homo erectus* from Java. U.S. Geol. Survey (USGS) Prof. Paper 1275, p. 285-286.

OćConnell, C.A. & J.M. DeSilva (2013)- Mojokerto revisited: evidence for an intermediate pattern of brain growth in *Homo erectus*. J. Human Evolution 65, p. 156-161.
(online at: https://www.bu.edu/anthrop/files/2013/08/OConnellDeSilvaJHE2013.pdf)

OćConnell, J.F. & J. Allen (2004)- Dating the colonization of Sahul (Pleistocene Australia- New Guinea): a review of recent research. J. Archaeological Science 31, p. 835-853.
(Date for arrival of human colonization of Sahul area (Australia- New Guinea) generally assumed to be at ~40,000 BP or 60,000 BP. Postulated arrival dates before~42-45 ka not well-supported by data)

OćConnor, S. (2007)- Pleistocene Timor: further corrections, a reply to Bednarik. Australian Archaeology 54, p. 46-51.

OćConnor, S. (2007)- New evidence from East Timor contributes to our understanding of earliest modern human colonisation east of the Sunda Shelf. Antiquity 81, p. 523-535.
(New age date of ~38,000-42,000 yrs BP from rock shelter of Jerimalai, E Timor is earliest evidence for migration by modern humans E of Sunda Shelf into Island SE Asia)

OćConnor, S. (2010)- Pleistocene migration and colonization in the Indo-Pacific Region. In: A. Anderson et al. (eds.), The global origins and development of seafaring, McDonald Inst. Archaeological Research, Cambridge, p. 41-55.
(Maritime spread was most likely mode of expansion for early modern humans moving out of Africa and along Indian Ocean Rim and reaching Sahul (Pleistocene Australia-New Guinea) at least 60,000 years ago)

OćConnor, S. & K. Aplin (2007)- A matter of balance: an overview of Pleistocene occupation history and the impact of the Last Glacial Phase in East Timor and the Aru Islands, eastern Indonesia. Archaeology in Oceania 42, 3, p. 82-90.
(Late Pleistocene Last Glacial Maximum (~30- 15 ka) increased aridity and lowered sea level had significant impact on human hunter-gatherers in E Timor and Aru Islands)

OćConnor, S., D. Bulbeck & J. Meyer (eds.) (2018)- The archaeology of Sulawesi- Current research on the Pleistocene to the Historic period. Terra Australis 48, Australian National University Press, p. 1-357.
(online at: https://press-files.anu.edu.au/downloads/press/n4569/pdf/book.pdf)

OćConnor, S., J. Louys, S. Kealy & S.C. Samper Carro (2017)- Hominin dispersal and settlement East of Huxleyĉs Line; the role of sea level changes, island size, and subsistence behavior. Current Anthropology 58, Suppl. 17, p. S567-S582.
(online at: https://www.journals.uchicago.edu/doi/pdfplus/10.1086/694252)

(Pleistocene pre-sapiens hominins opportunistic omnivores, probably constrained to environments with plentiful fresh water animals and plants; therefore rel. difficult to migrate across island archipelago. Homo sapiens probably able to subsist on marine resources and more easily moved through islands E of Huxley Line)

OôConnor, S., M. Spriggs & P. Veth (2002)- Excavation at Lene Hara Cave establishes occupation in East Timor at least 30,000-35,000 years ago. Antiquity 76, p. 45-50.
(First discovery of Late Pleistocene flake-based stone tools from Timor, in Lene Hara cave, Timor Leste (one of rel. many Late Pleistocene occurrences of small 'flake tool industries' in caves and rock shelters across E Indonesia region)

Olsen, J.W. & R.L. Ciochon (1990)- A review of evidence for postulated Middle Pleistocene occupations in Viet Nam. J. Human Evolution 19, 8, p. 761-788.
(Several archeological localities across Vietnam originally interpreted as of M Pleistocene age, but age control of many localities unreliable)

Oppenheimer, S. (2009)- The great arc of dispersal of modern humans: Africa to Australia. Quaternary Int. 202, p. 2-13.
(Late Pleistocene dispersal of anatomically modern humans out of Africa. Routes obeyed limitations placed by drinking water and climate-permissive corridors. First spread N in Eemian interglacial (~125 ka). Reached Indonesian region by 75-81 ka. Crossed Wallace Line to reach Australia at least by 48 ka (possibly 60 ka)

Oppenoorth, W.F.F. (1932)- De vondst van Palaeolithische menschelijke schedels op Java. De Mijningenieur 13, 6, p. 106-110.
('The discovery of Paleolithic human skulls on Java'. On new hominid skull discoveries in lower part of 20m river terrace, left bank of Solo River at Ngandong, C. Java)

Oppenoorth, W.F.F. (1932)- *Homo (Javanthropus) soloensis*, een Plistoceene mensch van Java. Voorloopige mededeeling. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 20, p. 49-75.
('Homo (Javanthropus) soloensis, a new Pleistocene hominid from Solo River terrace at Ngandong, E Java'. First description of Ngandong hominid fossils (skull caps, etc.). Associated with rich mammal assemblage (H. soloensis now variously viewed as 'advanced Homo erectus' or as separate species; JTvG))

Oppenoorth, W.F.F. (1932)- Een nieuwe fossiele mensch van Java. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 49, p. 704-707.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001678001:pdf)
('A new fossil man from Java'. New hominid skull from Solo River terrace deposits near Ngandong, N of Ngawi, C Java. Named Homo (Javanthropus) soloensis)

Oppenoorth, W.F.F. (1932)- Ein neuer diluvialer Urmensch von Java. Natur und Museum, Senckenberg, Frankfurt, 62, 9, p. 269-279.
('A new Pleistocene hominid from Java. Similar to above papers on Ngandong 'Solo Man' discovery. In German)

Oppenoorth, W.F.F. (1936)- Een prehistorisch cultuurcentrum langs de Solo Rivier. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 53, p. 399-411.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001680001:pdf)
('A prehistoric culture center along the Solo River'. On mammal and hominid remains in Pleistocene fluvial terraces near Ngandung, Solo River downstream of Ngawi, E Java. In addition to bones, also various man-made tools made from bones)

Oppenoorth, W.F.F. (1937)- The place of *Homo soloensis* among fossil men. In: G.G. Mac-Curdy (ed): Early Man, Lippincott Co., New York., p. 348-360.

(Homo soloensis from Ngandong, Java, viewed as oldest known representatives of 'Homo sapiens fossillis'. (Weidenreich 1943 viewed it as transition between Pithecanthropus and modern man; Koenigswald (1956) suggested Ngandong specimens too recent and advanced to be Pithecanthropus, but closer to Neandertals))

Orchiston, D.W. & W.G. Siesser (1982)- Chronostratigraphy of the Plio-Pleistocene fossil hominids of Java. Modern Quaternary Research in Southeast Asia 7, Balkema, Rotterdam, p, 131-149.
(Review of chronostratigraphy of hominid-bearing formations of C and E Java. Most radiometric dates without well documented stratigraphic position or analytical uncertainty, and of dubious value. Most reliable date is 0.83 Ma for pumice in Lower Kabuh Fm. Underlying marine U Kalibeng Fm Late Pliocene microfaunas)

OóSullivan, P.B., M. Morwood, D. Hobbs, F. Aziz, Suminto, M. Situmorang, A. Raza & R. Maas (2001)- Archaeological implications of the geology and chronology of the Soa Basin, Flores, Indonesia. Geology 29, 7, p. 607-610.
(Zircon fission-track dates of tuffaceous deposits associated with stone artifacts attributed to Homo erectus in Soa lacustrine basin on Flores indicate early hominids must have begun colonizing E Indonesia by ~840 ka)

Oxnard C., P.J. Obendorf, B.J. Kefford & J. Dennison (2010)- Post-cranial skeletons of hypothyroid cretins show a similar anatomical mosaic as *Homo floresiensis*. PlosOne 5, 9, e13018, p. 1-11.
(online at: http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0013018&type=printable)
(LB1and LB6 skulls of 'Homo floriensis' most likely, endemic cretins from population of unaffected Homo sapiens. Consistent with recent hypothyroid endemic cretinism throughout Indonesia, including nearby Bali)

Oxnard C., P.J. Obendorf, B.J. Kefford & J. Dennison (2012)- More on the Liang Bua finds and modern human cretins. Homo 63, 6, p. 407-412.

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(Fifteen Late Pleistocene small mammal species from cave in Ordovician limestone hill in S Thailand)

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(Middle Paleolithic hominins in India appear to have survived negative effects of Toba volcanic eruption and climatic fluctuations in Late Pleistocene)

Pickford, M., H. Nakaya, Y. Kunimatsu, H. Saegusa, A. Fukuchi & B. Ratanasthien (2004)- Age and taxonomic status of the Chiang Muan (Thailand) hominoids. Comptes Rendus Palevol 3, 1, p. 65-75.
(Age of Lufengpithecus chiangmuanensis Chaimanee 2003 originally estimated as ~13-13.5 Ma, but previous studies suggest age closer to ~12-11 Ma. L. chiangmuanensis synonym of L. keiyuanensis Wu)

Polanski, J.M., H.E. Marsh & S.D. Maddux (2016)- Dental size reduction in Indonesian *Homo erectus*: implications for the PU-198 premolar and the appearance of *Homo sapiens* on Java. J. Human Evolution 90, p. 49-54.
(Recent recovery of hominin maxillary third premolar, PU-198 in collections from Punung Cave (E Java) was used to suggest Homo sapiens appeared on Java between 143-115, ka. However, PU-198 overlaps in premolar sizes between H. erectus and H. sapiens, and indicate reduction in premolar size between early and late Javan H. erectus. Question appearance of H. sapiens on Java between 143-115 ka)

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(Two pollen zones distinguished in Pleistocene of Trinil (site of first Homo erectus in C Java) Pucangan Fm rel. low diversity grass-dominated terrestrial vegetation and lacustrine fresh water plants; Lower Kabuh Fm higher

diversity mixed freshwater swamp and terrestrial vegetation, perhaps suggesting slightly drier climate than today)

Polhaupessy, A.A. (1999)- Quaternary palynological study of the Trinil area, East Jawa. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 9, p. 1-7.

Polhaupessy, A.A. (2006)- Environment of early man in Java. In: T. Simanjuntak et al. (eds.) Archaeology: Indonesian perspective, R.P. Soejono's Festschrift, LIPI Press, Jakarta, p. 83-101.
(Review of palynological analyses at Quaternay deposits of Java, particularly sites with hominids or other vertebrate fossils: Bumiayu (Cisaat), Sangiran, Trinil, Solo and Madiun areas, etc. Many Pleistocene sites with abundant Graminae (grass) pollen, suggesting more seasonal climate with savannah grasslands. Pollen during Last Glacial Maximum with common Dacrycarpus, etc., suggest temperatures several degrees cooler than today)

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(All known Asian hominids <1 Million years old, and all early Asian hominids can be accommodated in Homo erectus. Entire record of Homo erectus in Asia may only span period of ~0.9-0.3 Ma. Maximal exposure of continental shelves such as Sunda occurred at ~3 Ma, 1.25 Ma and 0.65-0.45 Ma. Exposures at 1.25 Ma and 0.65-0.45 Ma most likely provided opportunities for migration of hominids and Pleistocene mammals to Java)

Pope, G.G. (1995)- The influence of climate and geography on the biocultural evolution of the Far Eastern hominids. In: E.S. Vrba et al. (eds.) Paleoclimate and evolution, with emphasis on human origins, Yale University Press, New Haven, p. 493-506.

Pope, G.G. & J.E. Cronin (1984)- The Asian hominidae. J. Human Evolution 13, 5, p. 377-396.
(Majority of known Asian hominids less than 1.0 Ma old, with maximum age 1.3 Ma. All can be incorporated in Homo erectus or Homo sapiens. Asian fossil record suggests gradual change over ~1 million years)

Pope, K.O. & J.E. Terrell (2008)- Environmental setting of human migrations in the circum-Pacific region. J. Biogeography 35, p. 1-21.
(Rapid expansion of modern humans from Africa into SE Asia along coastal routes facilitated by period of stable climate and sea level from ~45,000- 40,000 yr BP, enabling them to reach coasts of NE Russia and Japan by 38,000- 37,000 yr BP)

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(online at: http://jurnalarkeologi.kemdikbud.go.id/index.php/kalpataru/article/view/47)
(The cultural development during Late Pleistocene-Early Holocene in the Indonesian Archipelago'. Review of Late Pleistocene- Early Holocene human culture in various parts of Indonesia)

Purnomo, A. (2007)- La sedimentation du lac de Guyang Warak (Punung-Java Est, Indonesie). Master Thesis, Museum Nat. Histoire Naturelle, C.E.R.P. de Tautavel, p. 1-83.
(online at: http://hopsea.mnhn.fr/pc/thesis/Purnomo_Andri_2007.pdf)
('Sedimentation of Guyang Warak lake (Punung, East Java, Indonesia'. South Central Java'. Study of 'Grenzbank' and Kabuh Formation)

Purnomo, A. (2008)- Stratigraphie et sedimentation au Sud Est de Dome de Sangiran: lôenvironnement des *Homo erectus* au debut de Pleistocene Moyen. Thesis Universita degli Studi di Ferrara, Italy, p. 1-252 + 34
(online at: http://eprints.unife.it/831/1/Purnomo_tesi.pdf)

('Statigraphy and sedimentation in the SE of Sangiran Dome: the environment of Homo erectus at the start of the Middle Pleistocene'))

Purnomo, A. (2008)- The sedimentation of Lake Guyang Warak (Punung-East Java, Indonesia). Annali dellôUniversita degli Studi di Ferrara Museologia Scient. Naturalistica. Spec. Vol. 2008, p. 151-154.
(Lake Guyang Warak, Punung, NW of Pacitan in S Mountains of C Java, close to famous Paleolithic Site Song Terus Cave. 6m long core shows almost same environment from at least 2000 BP)

Purnomo, A. (2013)- Stratigraphie et sedimentation au Sud Est de Dome de Sangiran: lôenvironnement des *Homo erectus* au debut de Pleistocene moyen. Ph.D. Thesis Universita degli Studi di Ferrare, Italy, p. 1-251.
(online at: http://eprints.unife.it/831/1/Purnomo_tesi.pdf)
(Stratigraphy and sedimentation at the SE Sangiran Dome: the environment of Homo erectus at the start of the Middle Pleistocene'. Depositional environments of Upper Pucangan- Grenzbank- Kabuh Formations, identification of soil horizons with human occupation, frequent volcanic eruptions, etc.))

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(Six Proboscidean taxa found in Java extending back to Early Pleistocene, successively Stegoloxodon indonesicus, Sinomastodon bumiajuensis, pygmy Stegodon, Stegodon trigonocephalus, Elephas hysudrindicus and Elephas maximus. C and O isotope analyses suggest earliest fauna (S. indonesicus) feeding in closed canopy rainforest during earliest Pleistocene,. Towards late E Pleistocene (S. bumiajuensis) adapted to increasingly drier grassy habitats. Proboscidea in Ngandong Fauna suggests fragmented dense evergreen forests or woodland vegetation reappeared towards end M Pleistocene)

Raden Saleh (1867)- Over fossiele beenderen van den Pandan. Natuurkundig Tijdschrift Nederlandsch-Indie 29, p. 423, 428, 434-435, 449-451 and p. 457-458.
('On fossil bones from the Pandan', C Java. Brief reports of telegrams from Raden Saleh about occurrences of large mammal bones in C Java region, but with little detail. Crates with fossil bones sent to 'Bataviaasch Genootschap van Kunsten en Wetenschappen '. (Pleistocene mammals re-described by K. Martin (1886, 1888); localities SW of Mt. Pandan now commonly known as Kedung Brubus; HvG)

Rahardjo, A.T. (1999)- Perubahan iklim dan batas umur Pliosen-Plistosen berdasarkan analisis foraminifera dan palinologi di daerah Mojoroto, Mojokerto- Jawa Timur. Buletin Geologi (ITB) 3, 1, p. 1-13.
('Climate change and Pliocene-Pleistocene age boundary based on foraminifera and palynology analysis in the Mojoroto area, Mojokerto, East Java')

Rahardjo, A.T. & A.M. Semah (1989)- Penelitian palynology daerah Sangiran. Bull Dept. Geol. Inst Technologi Bandung (ITB) 1983, 9, p. 23-31.
('Palynology research in the Sangiran area')

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(DNA genomic sequence of Aboriginal Australians shows they are descendants of early human dispersal into E Asia, ~62,000- 75,000 yrs ago, separate from dispersal of ancestors of modern Asians 25,000- 38,000 yrs ago)

Reich, D., N. Patterson, M. Kircher, F. Delfin, M.R. Nandineni, I. Pugach, A.M. Ko, Y.C. Ko et al. (2011)- Denisova admixture and the first modern human dispersals into Southeast Asia and Oceania. American J. Human Genetics 89, 4, p. 516-528.

(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3188841/pdf/main.pdf)
(Ancestors of New Guineans, Aboriginal Australians, Near Oceanians, Polynesians, Fijians, E Indonesians, and Mamanwa ('negrito' group from Philippines) inherited part of ancestry from Denisovans, an archaic hominin group from Siberia. However, mainland E Asians, W Indonesians, Jehai (negrito group from Malaysia), and Onge (negrito group from Andaman Islands) have not)

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(online at: http://users.clas.ufl.edu/krigbaum/6930/Reis&Garong_p3_2001.pdf)
(Humans first colonized Palawan at ~40,000 yr BP. Absence of large carnivores and primates suggests more insular affinity than Borneo, but higher diversity than truly oceanic islands in Late Quaternary)

Reynolds, T. & G. Barker (2014)- Reconstructing Late Pleistocene climates and human activities in northern Borneo from excavations in the Niah caves. In: Y. Kaifu et al. (eds.) Emergence and diversity of modern human behavior in Paleolithic Asia, Peopling of the Americas Publications, Texas A&M University Press, p. 140-157.
(Niah Caves in Sarawak home to oldest anatomically modern 'Deep Skull', now confidently dated as ~37.5 ka. First evidence for associated human activity at caves site goes back to ~50 ka)

Rightmire G.P. (1984)- Comparisons of *Homo erectus* from Africa and Southeast Asia. Courier Forschungsinstitut Senckenberg 69, p. 83-98.

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Rightmire, G.P. (1990)- The evolution of *Homo erectus*: comparative anatomical studies of an extinct species. Cambridge University Press, Cambridge, p. 1-276.
(Incl. reviews of Homo erectus in Indonesia (Sangiran, Ngandong))

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Rightmire G.P. (2001)- Patterns of hominid evolution and dispersal in the Middle Pleistocene. Quaternary Int. 75, p. 77-84.
(At onset of Quaternary Homo erectus spread across Old World from Africa. Populations persisted in Far East until late in M Pleistocene, while H. erectus disappeared relatively early in West. Episode of hominid speciation in mid-Quaternary gave rise to anatomically more modern hominids called Homo heidelbergensis. Relationships of H. heidelbergensis to Neanderthals and recent humans still need clarification)

Rizal, Y. (1998)- Die Terrassen entlang des Solo-Flusses in Mittel- und Ost-Java. Thesis Universitat Koln, Cologne, p. 1-189. *(Unpublished)*
('The terraces along the Solo River in Central and East Java')

Rizal, Y. (2005)- The ages of the Solo Terraces at the Ngancar and Ngandong Region, Middle Jawa, Indonesia. *(Abstract only)*
(online at: http://hopsea.mnhn.fr/doc/2005QP11abstracts.pdf)
(Best estimates of ages of Pleistocene terraces along Solo River: High-terraces ~47 ka, Middle-terraces ~20 ka and Lower-terraces 1.65 + 1.5 ka)

Rizal, Y., W.D. Santoso, A. Rudyawan, R.A. Tampubolon & A.A. Nurfahan (2018)- Sedimentary facies and hydrocarbon reservoir potential of sand flat in the upper part of Tapak Formation in Banyumas area, Central Java. J. Riset Geologi Pertambangan (LIPI) 28, 2, p. 251-263.
(online at: http://jrisetgeotam.com/index.php/jrisgeotam/article/view/835/pdf)
(Sedimentology and trace fossils of upper Tapak Fm in Kali Cimande in Banyumas Basin, C Java, suggest tidal flat environments)

Rizal, Y., K.E. Westaway, Y. Zaim, G.D. van den Bergh, E.A. Bettis, M.J. Morwood, O.F. Huffman, R. Grun, R. Joannes-Boyau, R.M. Bailey, Sidarto, M.C. Westaway, I. Kurniawan et al. (2020)- Last appearance of *Homo erectus* at Ngandong, Java, 117,000-108,000 years ago. Nature 577, p. 381-385.
(Twelve H. erectus calvaria (skull caps) and two tibiae (lower leg bones) excavated between 1931-1933 from bone bed in terrace 20m above Solo River at Ngandong, and are youngest form of H. erectus. Bayesian modelling of 52 radiometric ages (U-series dating of speleothems to constrain regional landscape evolution; 40Ar/39Ar and U dating to constrain sequence of terrace evolution, etc.) At least by 0.5 Ma Solo River diverted into Kendeng Hills, and formed Solo terrace sequence between 316 and 31 ka, and Ngandong terrace between ~140- 92 ka. Modelled ages of H. erectus bone bed 117-108 ka)

Rizal, Y., Y. Zaim & Y. Iriani (2005)- Late Tertiary fossil whale from Surade, South Sukabumi, West Java. Buletin Geologi (ITB) 37, 1, p. 29-34.

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(online at: https://journals.lib.washington.edu/index.php/BIPPA/article/viewFile/11800/10428)

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(online at: https://pdfs.semanticscholar.org/3357/23a5ad5a4c439bd39897170ce3d7a26cdbfd.pdf)
(Morphology of long bones of antelope-like insular fossil bovid Duboisia santeng (Dubois, 1891) from E-M Pleistocene Java suggests it was forest dweller)

Rozzi, R., D.E. Winkler, J. De Vos, E. Schulz & M.R. Palombo (2013)- The enigmatic bovid *Duboisia santeng* (Dubois, 1891) from the Early-Middle Pleistocene of Java: a multiproxy approach to its palaeoecology. Palaeogeogr. Palaeoclim. Palaeoecology, 377, p. 73-85.
(Faunal elements of Indo-Chinese origin entered Java during Pleistocene. Most Javanese mammalian taxa close or identical to mainland relatives, like fossil bovids, common in E-M Pleistocene 'Stegodon-Homo erectus fauna' (Bubalus palaeokerabau, Bibos palaesondaicus, Epileptobos groeneveldtii). Javanese bovid Duboisia santeng from Sangiran regarded as insular endemic species due to small size, but present in late M Pleistocene of what is now Peninsular Malaysia (also in Thailand; Nishioka et al. 2018; JTvG))

Saegusa, H., Y. Thasod & B. Ratanasthien (2005)- Notes on Asian stegodontids. Quaternary Int. 126-128, p. 31-48.
(Stegodontids (elephant-like proboscideans), flourished in Neogene and Quaternary of Asia. Significant recent finding of new stegodontid fossils at Nakhon Ratchasima, Thailand and Yuanmou Basin, Yunnan, show Late Miocene transition from stegolophodons to stegodons, suggesting stegodons originated in Asia)

Saleki, H. (1997)- Apport dûune intercomparaison de methodes nucleaires (230Th/234U, ESR et 40Ar/39Ar) a la datation de couches fossiliferes pleistocenes dans le dome de Sangiran (Java, Indonesie). Ph.D. Thesis, Museum National Hist. Naturelle, Paris, p. 1-238. *(Unpublished)*

('Contribution to comparison of nuclear methods (230Th/234U, ESR and 40Ar/39Ar) to the dating of Pleistocene fossiliferous beds in the Sangiran dome, Java'. Proposed chronology for Sangiran dome: (1) volcanic breccia deposited between 2.05 ± 0.08 and 1.56 ± 0.05 Ma, followed by Pucangan Fm; (2) Grenzbank in upper limit of Jaramillo period at 0.9 Ma; (3) rapid sedimentation with archeological layer with some bones which supposedly burnt at ~0.8-0.9 Ma, before Brunhes/Matuyama magnetic reversal; (4) Notopuro mud-flow unit deposited at 150 ± 10 ka (incl. 0.8 Ma of tuff overlying Ngebung H. erectus occupation site))

Santa Luca, A.P. (1980)- The Ngandong fossil hominids: a comparative study of a Far eastern *Homo erectus* group. Yale University Publ. in Anthropology 78, New Haven, p. 1-175.
(Morphological study of Ngandong hominid skulls from Solo River 20m terrace at Ngandong, originally described as Homo soloensis Oppenoorth 1932. Here interpreted as advanced forms of Homo erectus ('Homo erectus s.l.', not H. erectus s.s.') (conclusion followed by many subsequent researchers, but validity questioned in older (Dubois 1937, Von Koenigswald 1956) and more recent studies, e.g., Zaitoun et al. 2010?, M. Westaway et al. 2015)

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(online at: https://archive.org/details/cbarchive_109549_neuelithochronefundeiminnernvo1857/page/n1)

Sartono, S. (1961)- Notes on a new find of a *Pithecanthropus* mandible. Geol. Survey Indonesia, Publ. Teknik, Seri Paleontologi 2, p. 1-51.
(Obsidian and chert stone implements from Ngalau Ulu Tjangko (Tiangko) cave between the Merangin and Batang Tabir tributaries of the Jambi River, collectd by A. Tobler, and donated to Basel Museum. Some conclusions disputed by Zwierzycki 1926)

Sartono, S. (1968)- Early man in Java: *Pithecanthropus* skull VII, a male specimen of *Pithecanthropus erectus*. Proc. Kon. Nederl. Akademie Wetenschappen B 71, 5, p. 396-422.

Sartono, S. (1969)- On the Plio-Pleistocene boundary of Java. Bull. Nat. Inst. Geology and Mining (NIGM), Bandung 2, 2, p. 1-19.
(In Sangiran area of C Java Plio-Pleistocene boundary should be placed between Corbicula beds and Lower Volcanic Breccia bed. Based on mammalian fauna it should be placed between 'Unterer Wirbeltierhorizont' and 'Oberer Wirbeltierhorizont' of Von Koeningswald)

Sartono, S. (1969)- *Stegodon timorensis*: a pygmy species from Timor (Indonesia). Proc. Kon. Nederl. Akademie Wetenschappen, B72, p. 192-202.
(First description of Pleistocene dwarf elephant from Timor, collected by Verhoeven in 1964, 5 km E of Atambua)

Sartono, S. (1970)- On the stratigraphic position of *Pithecanthropus* mandible-C. Proc. Inst. Teknol. Bandung (ITB) 4, 4, p. 91-102.
(online at: http://journal.itb.ac.id/download.php?file=A70002.pdf&id=887&up=13)
(Pithecantropus C mandible is from surface of Lower Pleistocene Putjangan beds from Sangiran area, C Java. Encrusting matrix of mandible with planktonic (incl. Globorotalia tumida, Gr. crassa, Globigerinoides obliquus, Pulleniatina) and deeper marine smaller benthic foraminifera, presumably suggesting Lower Pleistocene age (NB: most forams in Sangiran fluvial Pleistocene deposits are reworked from underlying Kalibeng Fm marine beds; JTvG) (see also Siesser & Orchiston 1978))

Sartono, S. (1971)- Observations on a new skull of *Pithecanthropus erectus* (*Pithecanthropus* VIII) from Sangiran, Central Java. Proc. Kon. Nederl. Akademie Wetenschappen B 74, 2, p. 185-194.

Sartono, S. (1972)- Discovery of another hominid skull at Sangiran, Central Java. Current Anthropology 13, 1, p. 124-126.

(New fossil Homo erectus skull discovered in 1969 at S flank Sangiran dome, at base of low bluff on S side of Putjung creek)

Sartono, S. (1973)- On an additional *Stegodon timorensis* Sartono. Publ. Teknik Direkt. Geol., Ser. Paleontol. 3, p. 1-13.
(Description of additional Stegodon tooth, collected by Verhoeven from sandy conglomerate overlying marine claystones near Umaklaren (Atambua), W Timor)

Sartono, S. (1973)- On Pleistocene migration routes of vertebrate fauna in Southeast Asia. In: B.K. Tan (ed.) Proc. Reg. Conf. Geology of Southeast Asia, Kuala Lumpur 1972, Bull. Geol. Soc. Malaysia 6, p. 273-286.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1973018.pdf)
(Pleistocene vertebrates in SE Asia originated on Asian continent and migrated during Pleistocene into the island archipelago of Indonesia. Migration followed two routes, a western route across Sundaland area, and an eastern route via Taiwan and Philippines towards Sundaland area and Sulawesi)

Sartono, S. (1974)- Observations on a newly discovered jaw of *Pithecanthropus modjokertensis* from the lower Pleistocene of Sangiran, central Java. Proc. Kon. Nederl. Akademie Wetenschappen, B 77, 1, p. 26-31.

Sartono, S. (1975)- Implications arising from *Pithecanthropus* VIII. In: R.H. Tuttle (ed.) Palaeoanthropology, Mouton Publ., The Hague, p. 327-360.
(Three Pithecanthropus types in C Java: P. erectus (M Pleistocene, Trinil beds), P. modjokertensis (E Pleistocene Djetis Beds) and P. dubius (lowest Pleistocene of Sangiran). New Pithecanthropus fossil (P VIII) near-complete and rel. large cranium discovered in Kabuh Fm of Sangiran in 1969 different from typical Pithecanthropus morphology)

Sartono, S. (1976)- Genesis of the Solo terraces. Modern Quaternary Research in Southeast Asia 2, Balkema, Rotterdam, p. 1-21.
(Three well-known river terrace levels along transverse valley of Solo River, N of Ngawi, C-E Java: Upper Pleistocene High terrace (Ngandong; possibly coinciding with Riss glaciation), Low Terrace and Flood Terrace. Also three older, less well-known terraces identified, mainly from aerial photos. Highest terraces oldest (Early Pleistocene?) and 97m above Solo River. (see also Bartstra 1977))

Sartono, S. (1978)- The site of *Homo erectus* mandible F. Modern Quaternary Research in Southeast Asia 4, Balkema, Rotterdam, p. 19-24.
(Rel. complete Homo erectus trinilensis lower jaw from black claystones of Pucangan Fm in central part of Sangiran dome)

Sartono, S. (1979)- The discovery of a pygmy *Stegodon* from Sumba, East Indonesia: an announcement. Modern Quaternary Research in Southeast Asia 5, Balkema, Rotterdam, p. 57-63.
(First report of Pleistocene Stegodon mandible from Sumba (Watu Mbaka). Described as Stegodon sumbaensis)

Sartono, S. (1979)- The stratigraphy of the Sambungmacan site in Central Java. Modern Quaternary Research in Southeast Asia 5, Balkema, Rotterdam, p. 83-88.
(Gravels, sands and silts at small Sambungmacan site, off Solo River, C Java, in which Homo erectus cranium was found in 1973, now regarded as of part of Ngandong Fm of Late Pleistocene age. not E-M Pleistocene 'Grenzbank'/ Kabuh Fm- equivalent)

Sartono, S. (1979)- The age of the vertebrate fossils and artifacts from Cabenge in South Sulawesi. Modern Quaternary Research in Southeast Asia 5, Balkema, Rotterdam, p. 65-82.
(Fossiliferous terrace deposits of Walanae River most likely Pleistocene, possibly Holocene)

Sartono, S. (1980)- *Homo erectus ngandongensis*: the possible maker of the 'Sangiran flakes'. Anthropologie 18, p. 121-131.

(Primitive stone artefacts named 'Sangiran flakes' limited to Top Kabuh/ Base Notopuro Formations at Sangiran, none found in lower levels with hominid remains. Appear to be associated with more advanced Homo erectus ngandongensis)

Sartono, S. (1982)- Characteristics and chronology of early man in Java. In: H. and M. De Lumley (eds.) Congres Int. de Paleontologie Humaine, Nice (France), CNRS, 2, p. 495-541.

Sartono, S. (1984)- Notes on the Pleistocene stratigraphy of Java, Indonesia. Modern Quaternary Research in Southeast Asia 8, Balkema, Rotterdam, p. 129-135.

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(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1986/5083...)
(Review of hominid material from Pleistocene of Java and latest Pliocene- Pleistocene migration routes of hominids into Indonesian region from Asia. Migrations into Java probably aided by Pleistocene sealevel lowstands and exposed Sunda Shelf. Migrations into East Indonesia and Philippines probably not until Late Pleistocene)

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palaeojavanicus). Pleistocene hominids from SE Asia probably subjected to evolution while they migrated from Asia toward Australia. Two migration routes: (1) western (Sunda Shelf) and (2) northern (Philippines), both arriving in Wallacea, possibly also in Sahul (Australia-New Guinea)

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(On age of fossil child skull cap originally described by Von Koenigswald in 1936, from locality near Perning, 14 km ENE of Mojokerto. Supposedly from Lower Pleistocene U Pucangan Fm/ volcanic facies, but rocks more likely equivalent of M Pleistocene Kabuh Fm of Sangiran. Underlying clay facies of Lower Pucangan/ Lidah Fm with zone N21 planktonic foraminifera (Globorotalia tosaensis, Globigerinoides obliquus extremus; also Asterorotalia trispinosa). New finds of associated Hippopotamus, Sus, Buffelus bubalus, etc., suggest M-U Pleistocene Trinil or Ngandong fauna)

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(Jenggala and Majapahit are two empires of 11th to early 16th centuries at Brantas delta, E Java. Rise and fall related to geological processes in Brantas delta. Large mud volcano eruptions may have caused or contributed to demise)

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(Homo erectus widespread and highly variable species from which later hominids emerged. Review of relevant specimens from Sangiran, other Javanese sites and Zhoukoudian Lower Cave (China) shows concept 'erectus' masks evidence of taxic diversity in Asian hominid fossil record and raises questions about non-Asian specimens belonging to single species)

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(online at: https://ia800303.us.archive.org/23/items/diepithecanthrop00sele/diepithecanthrop00sele.pdf)
(Extensive report of 1907-1908 excavations of Pleistocene beds near Trinil, C Java, by Selenka Trinil Expedition No new hominid fossils found, but extensive documention of localities and good descriptions of Pleistocene vertebrate and invertebrate faunas and flora)

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Semah, A.M. (1984)- Remarks on the pollen analysis of the Sambungmacan section (Central Java). Modern Quaternary Research in Southeast Asia 8, Balkema, Rotterdam, p. 29-34.
(Pollen diagram of Pleistocene deposits of Sambungmacan, E of Solo (site of 1973 discovery of Homo erectus skull). <10m thick poorly-dated fluvial, sandy-tuffaceous section, unconformable over Pliocene limestone)

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(Brief review of Pleistocene climate trends on Java. Between ~1 and 0.2 Ma climate rel. cooler and drier and yielding majority of hominid fossils)

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(Change in paleoenvironments in Lower and early M Pleistocene, based on sediment and pollen records in C Java. Late Lower Pleistocene 'Grenzbank' layer at ~0.9 Ma at Sangiran marks tectonic event (folding of Kendeng zone). Second event is major climate change at E-M Pleistocene boundary, with severe fragmentation of rainforest cover during glacials (~0.8 Ma; close to in-situ 0.793 Ma Australasian tektites and Brunhes-Matuyama boundary in lowermost Kabuh Fm). Faunal turnover in Lower Kabuh Fm tied O-isotope zones MIS19-MIS22 interval. Little detail)

Semah, A.M., F. Semah, A.M. Moigne, T. Ingicco, A. Purnomo, T. Simanjuntak & H. Widianto (2016)- The palaeoenvironmental context of the Palaeolithic of Java: a brief review. Quaternary Int. 416, p. 38-45.

(Earliest Paleolithic implements in Java Island >1 Ma old, postdating oldest Homo erectus fossils. Acheulean-like tools in early M Pleistocene ('Sangiran flakes'; 1.0-0.8 Ma), flake tools assemblages in late M/early U Pleistocene sites and development of cave occupations at end Pleistocene and E Holocene. Environment, mostly forested in E Pleistocene, changing climate during M Pleistocene, then at start of Late Pleistocene. Tectonic and volcanic activities affected local climate, paleogeography and floras. Associated vertebrate faunas reflect periods of contact with mainland (increased biodiversity) and periods of isolation (endemism))

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(40m long cores from Ambarawa Basin (Solo Depression), C Java, provides sedimentary/ palynological record of last 21,000 years, from Last Glacial Maximum to present. Pollen from ~21-15 ka reflect cooler conditions and severe dryness, with grassland and lowland forest. From ~15-10.5 ka increased precipitation with swamp conditions. From 10.5 ka onward more forest vegetation. First evidence of human activity at ~1500 yrs BP)

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(Notopuro and Kabuh Fms of Sangiran and Gemolong all with normal geomagnetic polarity and tied to Brunhes Epoch. Reversal events in underlying Pucangan Fm, tied to Matuyama Event. Top of U Kalibeng Fm normal polarity, probably Olduvai Event (1.67-1.87Ma))

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(Review of Plio-Pleistocene stratigraphy in W and E Central Java areas known for vertebrate fossils (Bumiayu, Sangiran dome. Homo erectus mainly in lower and middle Kabuh Fm of Sangiran Dome. Australasian tektite event, radiometrically dated as 0.7- 0.8 Ma, in middle Kabuh Fm, close to Matuyama-Brunhes paleomagnetic boundary)

Semah, F. (2001)- La position stratigraphique du site de Ngebung 2 (dome de Sangiran, Java Central, Indonesie). In: F. Semah et al. (eds.) Origine des peuplements et chronologie des cultures paleolithiques dans le sud-est asiatique, Paris, p. 299-329.
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(Review of 'journey' of Homo erectus and Homo sapiens across Indonesian archipelago since 1.5 Ma)

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Semah, F., H. Saleki, C. Falgueres, G. Feraud & T. Djubiantono (2000)- Did early man reach Java during the Late Pliocene? J. Archaeological Science 27, 9, p. 763-769.
(Homo erectus (Pithecanthropus) reached Java from Asian continent and became one of oldest islanders in world. Combined 40Ar/39Ar and paleomagnetic data of 'Lower lahar' at base of fossil-bearing series of Sangiran dome show that emergence of first dry land at Sangiran, took place at end and just after Olduvai subchron. Therefore ~1.7 Ma is max. age for arrival of first hominids at Sangiran)

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(Well-preserved ~1.75m long extinct testidinid tortoise from E Pleistocene lower Kali Glagah Fm, N of Bumiayu, originally studied by Van der Maarel 1932 and part of Java Satir Fauna of ~1.5Ma. Here identified as Megalochelys cf. sivalensis. Giant tortoise also known from Myanmar, Flores, etc.)

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(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/download/23/23)

(Presence of fossil reptiles from mainland Asia in Pleistocene of Soa Basin, Flores: giant tortoise (Megalochelys sp.), fresh water turtle (Geoemydidae), crocodiles and komodo dragon (Varanus komodoensis). After crossing 'Wallace Line' at ~1 Ma lived in isolated conditions and adapted to savannah environment. Vertebrate faunas of Soe basin dominated by extinct proboscideans (Stegodon))

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(Recent field survey in Sumba relocated original locality of Stegodon sumbaensis mandible described by Sartono (1979). At Lewapaku dwarf Stegodon found with tooth of Varanus komodoensis and giant murine rodent. Lewapaku fauna similar to 900 ka old Tangi Talo fauna from Flores)

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(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/404/253)
(Open woodland mammal fauna from Seropan Cave in Gunung Sewu karst area, Wonosari, with Cervus, Sus verrucosus, Bubalus, Panthera cf. pardus, etc.. C14 radiocarbon age dating gave date of 9,450 ± 400 yrs. BP)

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('Determination of the ages of the ancient hominid fossils in Java based on magnetostratigraphy'. Review of magnetostratigraphic studies of hominid sites of C Java: Sangiran (hominids between base Jamarillo subchron and Brunhes-Matuyama chron boundary in Upper Kabuh Fm (0.78- 1.07 Ma), Trinil (near top Jaramillo (0.99 Ma), Kedungbrubus, Mojokerto (near lower limit Jaramillo (1.07 Ma) and Patiayam (hominids in Brunhes or younger (<0.78 Ma))

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(online at: http://library.dmr.go.th/Document/Proceedings-Yearbooks/M_1/1986/5083...)
(Brief review of Pleistocene Java mammal assemblages and issues regarding dating and interpretation)

Shutler, R., J.M. Head, D.J. Donahue, A.J.T. Jull, M.F. Barbetti, S. Matsuǒura, J. de Vos & P.Storm (2004)- AMS radiocarbon dates on bone from cave sites in Southeast Java, Indonesia, including Wajak. Modern Quaternary Research in SE Asia 18, p. 89-93.
(14C apatite dates for bones from Wajak Cave, SE Java. Wajak fauna calibrated age ~12.1- 12.9 ka, Wajak femur ~7.5 ka (older ages obtained by Storm et al. 2013))

Siesser, W.G. & D.W. Orchiston (1978)- Micropalaeontological re-assessment of the age of *Pithecanthropus* mandible C from Sangiran, Indonesia. Modern Quaternary Research in Southeast Asia 4, p. 25-30.
(Pithecanthropus mandible C discovered in 1960 in Pucangan Fm near Mandingan, Sangiran Dome. Sartono (1970) reported 11 planktonic and 15 benthic species of foraminifera in claystone adhered to mandible. Co-occurrence of Globorotalia crassaformis and Globigerinoides obliquus suggests Late Pliocene age, between 4.2-1.6Ma (N.B.: Sangiran Pleistocene fluvial-lacustrine Pucangan Fm contains locally abundant Pliocene planktonic foraminifera, all reworked from underlying Kalibeng Fm; Van Gorsel and Troelstra 1981))

Sighinolfi, G.P., S. Sartono & G. Artioli (1993)- Chemical and mineralogical studies on hominid remains from Sangiran, Central Java (Indonesia). J. Human Evolution 24, p. 57-68.

Simanjuntak, T. (1995)- Mesolithique de lôIndonesie : une heterogeneite culturelle. LôAnthropologie 99, 4, p. 626-636.
('The Mesolithic of Indonesia: a cultural heterogeneity')

Simanjuntak, T. (2001)- New light on the prehistory of the Southern Mountains of Java. Bull. Indo-Pacific Prehistory Assoc. (IPPA) 21, p. 152-156.
(online at: http://ejournal.anu.edu.au/index.php/bippa/article/view/272/262)
(Many limestone caves in Gunung Sewu, S Java inhabited in Prehistoric times. Excavations revealed chronology from Early Holocene (possibly Late Pleistocene) to 4500 BP. by 'Australomelanesian' people)

Simanjuntak T. (2001)- New insights on the tools of *Pithecanthropus*. In: T. Simanjuntak et al. (eds.) Sangiran: man, culture and environment in Pleistocene times, Yayasan Obor Indonesia, Jakarta, p. 154-170.

Simanjuntak, T. (2002)- Gunung Sewu in prehistoric times. Gadjah Mada University Press, Yogyakarta p.

Simanjuntak, T. (2004)- New insight on the prehistoric chronology of Gunung Sewu, Java, Indonesia. In: S.G. Keates & J. Pasveer (eds.) Quaternary Research in Indonesia, Chapter 2, Modern Quaternary Research in Southeast Asia 18, Balkema, Leiden, p. 9-30.
(C Java Southern Mountains numerous Late Pleistocene- Holocene, Paleolithic- Neolithic prehistoric sites)

Simanjuntak, T. (2006)- Indonesia-Southeast Asia: climates, settlements, and cultures in Late Pleistocene. Comptes Rendus Palevol 5, p. 371-379.
(Late Pleistocene period between Paleolithic culture and E Holocene Preneolithic culture, marked by climate and sea level fluctuations and appearance of modern human (oldest Homo sapiens), replacing H. erectus)

Simanjuntak, T. (2017)- The western route migration: a second probable Neolithic diffusion to Indonesia. In: P.J. Piper et al. (eds.) New perspectives in Southeast Asian and Pacific prehistory, Terra Australis 45, ANU Press, p. 201-211.
(online at: https://www.jstor.org/stable/j.ctt1pwtd26)
(Neolithic in Indonesia generally traced to culture of Austronesian-speaking people who migrated from Taiwan at ~4000 BP. Another earlier probable Neolithic diffusion from mainland SE Asia, probably by Austroasiatic-speaking people. Subsequent dispersal of Austronesian-speaking people into W parts of Indonesia influenced Neolithic cultures there and resulted in replacement of local Austroasiatic languages)

Simanjuntak, T., B. Prasetyo & R. Handini (eds.) (2001)- Sangiran: man, culture and environment in prehistoric times, Yayasan Obor Indonesia, Jakarta, p. 1-443.
(Collection of papers on Sangiran hominid site, C Java, presented at 1st Int. Colloquium on Sangiran, Solo 1998)

Simanjuntak, T. & F. Semah (1996)- A new insight into the Sangiran flake industry. In: The Chiang Mai papers, 1, Indo-Pacific Prehistory Assoc. Bull. 14, p. 22-26.
(online at: http://journals.lib.washington.edu/index.php/BIPPA/article/view/11584/10215)
(Flake tools made of chalcedony, jasper, etc., and supposedly made by Homo erectus, first discovered by Von Koenigswald in 1936. Flakes can be found throughout Kabuh Fm at Negung, NW Sangiran Dome, C. Java)

Simanjuntak, T., F. Semah & C. Gaillard (2010)- The Palaeolithic in Indonesia: nature and chronology. Quaternary Int. 223-224, p. 418-421.
(Brief review of Indonesian 'older' Paleolithic stone tool assemblages. Human presence on Java dates back to ~1.5 Ma, but no stone tools known older than ~1.0 Ma)

Simanjuntak, T., F. Semah & A.M. Semah (2014)- Tracking evidence for modern human behavior in Paleolithic Indonesia. In: Y. Kaifu et al. (eds.) Emergence and diversity of modern human behavior in Paleolithic Asia, Peopling of the Americas Publications, Texas A&M University Press, p. 158-170.
(Homo sapiens may have colonized Indonesian Archipelago in early U Pleistocene. Most reliable evidence only since ~45 ka (Paleolithic sites with artifacts in Gunung Sewu, S Java))

Sipola, M.E. (2018)- Formation of the Ngandong paleoanthropological site and Solo River terrace sequence, Central Java, Indonesia. Ph.D. Thesis University of Iowa, p. 1-246.
(online at: https://ir.uiowa.edu/etd/6286)
Paleoanthropological excavations in Late Pleistocene fluvial terrace along Solo River at Ngandong uncovered 14 Homo erectus fossils. Position at low terrace level and U-series dating suggest possibly most recent known H. erectus in world)

Siswanto & S. Noerwidi (2014)- Fosil Proboscidea fossils dai situs Semedo: hubungannya dengan biostratigrafi dan kehadiran manusia di Jawa. Jurnal Berkala Arkeologi 34, 2, p. 115-130.
(online at: http://balaiarkeologiyogya.com/berkalaarkeologi/article/view/20/37)
('Proboscidea fossils from Semedo site: its correlation with biostratigraphy and human arrival in Java'. Semedo site in Tegal district of C Java rich in vertebrate fossils, with high percentage and several species of Proboscidea (elephantoids): Sinomastodon bumiayuensis, Stegodon trigonocephalus, Stegodon 'pygmy' semedoensis, Stegodon hypsilophus, Elephas (Archidiskodon) planifrons and Elephas hysudrindicus)

Soares, P., J.A. Trejaut, J.H. Loo, C. Hill, M. Mormina et al. (2008)- Climate change and postglacial human dispersals in Southeast Asia. Molecular Biol. Evol. 25, 6, p. 1209-1218.
(online at: https://academic.oup.com/mbe/article/25/6/1209/1134230)
(Modern humans in Island SE Asia since at least 50,000 years, commonly thought to be from Neolithic dispersal from China. Genome sequencing of modern humans suggest migration of humans from Sundaland across region since start of Holocene, at time of Sundaland breaking up into archipelago by rising sea levels)

Soejono, R.P. (1961)- Preliminary notes on new finds of Lower-Palaeolithic implements from Indonesia. Asian Perspectives 5, 2, p. 217-232.
(Review of Lower Paleolithic stone tools from Java, Sumatra, Kalimantan)

Soejono, R.P. (1969)- The history of prehistoric research in Indonesia to 1950. Asian Perspectives 12, p. 69-91.
(online at: http://hl-128-171-57-22.library.manoa.hawaii.edu/bitstream/10125/16796/1/AP-v12n1-69-91.pdf)
(Review of archeological work in the Indonesian region before 1950, incl. Paleolithic-Neolithic stone tools, bronze drums and other object, megalithic remains, fossilized human remains)

Soejono, R.P. (1982)- New data on the Palaeolithic industry in Indonesia. In: M.A. de Lumley (ed.) Colloque Int. CNRS Lô*Homo erectus* et la place de lôHomme de Tautavel parmi les hominides fossiles, Nice p. 578-592.

Soerastopo Hadisoemarno (1972)- Geomorphology of the Sangiran dome, Java, Indonesia. Ilmu Alam, 1, p. 57-65. *(in Indonesian)*

Soergel, W. (1914)- Stegodonten aus den Kendengschichten auf Java. Palaeontographica, Suppl. 4, 3, 1, p. 1-24.
(online at: http://sammlungen.ub.uni-frankfurt.de/botanik/periodical/pageview/4499569)
('Stegodont elephants from the Kendeng beds on Java'. On Pleistocene Stegodont elephant teeth collected by Elbert)

Sondaar, P.Y. (1981)- The *Geochelone* faunas of the Indonesian Archipelago and their paleogeographical and biostratigraphical significance. Modern Quaternary Research in Southeast Asia 6, Balkema, Rotterdam, p. 111-120.

(E Pleistocene giant tortoise Geochelone atlas known from Java (Sangiran, Kali Klagah), Sulawesi and Timor. Probably part of island faunas, which became extinct with arrival of Asiatic mammals via land bridge in E Pleistocene. (see also critical discussion by Hooijer 1982))

Sondaar, P.Y. (1984)- Faunal evolution and the mammalian biostratigraphy of Java. In: P. Andrews & J.L. Franzen (eds.) The early evolution of man with special emphasis on Southeast Asia and Africa. Courier Forschungsinstitut Senckenberg 69, p. 219-235.
(Re-interpretation of Java fossil mammal successions, linked to changes in paleobiogeography. Seven Late Pliocene- Pleistocene vertebrate faunas, from old to young: Satir (early island fauna), Ci Saat, Trinil HK (with arrival of Homo erectus), Kedung Brubus, Ngandong, Punung and Wajak faunas)

Sondaar, P.Y. (1987)- Pleistocene man and extinctions of islands endemics. Mem. Soc. Geologique France, N.S., 150, p. 159-165.

Sondaar, P.Y. (1989)- Did man reach Australia via the giant rat and Dingo route? Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 5, p. 76-83.
(Discussion of possible routes followed by Pleistocene man from China to Australia)

Sondaar, P. (1993)- De *Stegodon* van Flores. Cranium 10, 1, p. 47-48.
(online at: http://natuurtijdschriften.nl/download?type=document&docid=523307)
(Elephantoid Stegodon rel. common in Plio-Pleistocene of SE Asia. Dwarf species known from Sulawesi, Flores, Sumba and Timor (many of these first found by missionary Verhoeven))

Sondaar, P. (1994)- De *Homo erectus* faunaôs van Java. Cranium 11, 2, p. 92-96.
(online at: http://natuurtijdschriften.nl/download?type=document&docid=523346)
('The Homo erectus faunas of Java'. Changes in faunal succession in Pleistocene of Java explained by: (1) geographical position of Java at periphery of SE Asia; 2) succession of glacials, causing sealevel lowering, connecting Java, Borneo and Sumatra with continent; 3) reduction of tropical rainforest during glacials (dry periods, favoring migration of mammals living in open habitats). Two major turnovers in faunal succession of Java: (1) ~1.2 Ma change from unbalanced island fauna (Satir fauna) to continental fauna (Ci-Saat fauna; with Homo erectus and disappearance of endemic island forms); (2) Late Pleistocene (~80.000 yrs ago) extinction of M Pleistocene forms (Stegodon, Hexaprotodon, Homo erectus), replaced with new fauna, with extant Elephas maximus and probably Homo sapiens)

Sondaar, P.Y., F. Aziz, G.D. van den Bergh & J. de Vos (1996)- Faunal change and hominid evolution during Quaternary of Jawa. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 8, p. 1-10.
(Quaternary vertebrate assemblages, from old to young: Satir (unbalanced island fauna), Cisaat, Trinil, Kedung Brubus, Ngandong, Punung and Wajak. Homo erectus in several different stratigraphic levels)

Sondaar, P.Y., J. de Vos & J.J.M. Leinders (1983)- Reply. Facts and fiction around the fossil mammals of Java. Geologie en Mijnbouw 62, p. 339-343.
(Discussion of Bartstra (1983) critique of De Vos, Sartono et al. (1982) reinterpretation of relative ages of mammalian faunas of Trinil and Kedungbrubus of Java. See also Hooijer 1983, Hooijer and Kurten 1984)

Sondaar, P.Y., G.D. van den Bergh, J. de Vos & F. Aziz (1995)- *Homo erectus* in S.E. Asia: time space and migration routes, IV. Overseas traveling of *Homo erectu*s and faunal turnovers. In: J. Gibert et al. (eds.) Proc. Int. Conf. The hominids and their environment during the Lower and Middle Pleistocene of Eurasia, Orce 1995, p. 383-388.
(Homo sapiens generally believed to be first to cross water barriers. Stone tools of 0.7 Ma age on Flores suggest Homo erectus probably also had this capability)

Sondaar, P.Y., G.D. van den Bergh, J. de Vos & F. Aziz (2001)- The Flores case: the earliest island colonizers. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 27, p. 15-19.

Sondaar, P.Y., G.D. van den Bergh, B. Mubroto, F. Aziz, J. de Vos & U.L. Batu (1994)- Middle Pleistocene faunal turnover and colonization of Flores (Indonesia) by *Homo erectus*. Comptes Rendus Academie Sciences, Paris, II, 319, p. 1255-1262.
(Stone artifacts made of basalt, associated with fossil Stegodon trigonocephalus florensis Hooijer and fresh water molluscs in fluvial sands and tuffs of Ola Bula Fm near Mata Menge, W Central Flores. Tools probably made by Homo erectus and dated as slightly older than 0.73 Ma (based on possibly erroneous Matuyama-Brunhes paleomag interpretation and actually closer to 0.8-0.9 Ma: Morwood et al. 1998). Older endemic island fauna at base Ola Bula Fm at Tangi Talo, with pygmy Stegodon, Geochelone (large tortoise) and Varanus komodoensis)

Sorensen, P. (2001)- A reconsideration of the chronology of the Early Palaeolithic Lannathaian culture of North Thailand. Bull. Indo-Pacific Prehistory Assoc. (IPPA) 21, p. 138-141.
(online at: https://journals.lib.washington.edu/index.php/BIPPA/article/view/11773/10402)
(E Paleolithic sites with Lannathaian flaked pebble tools of Lampang Basin, N Thailand, probably 1.2- 0.8 Ma: in highest (oldest) Terrace 1 deposits, overlain by basalts older than Matuyama- Brunhes magnetic boundary (K-Ar dating of basalts unsuccessful))

Spriggs, M., C. Reepmeyer, Anggraeni, P. Lape, L. Neri, W.P. Ronquillo, T. Simanjuntak et al. (2011)- Obsidian sources and distribution systems in Island Southeast Asia: a review of previous research. J. Archaeological Science 38, p. 2873-2881.
(online at: https://faculty.washington.edu/plape/pubs/JAS%202011.pdf)
(Review of distribution and origin of stone age obsidian artifacts in Philippines, Sulawesi, Flores, W and E Java, S Sumatra, Borneo and E Timor. Many probably sourced from islands on which they were found)

Stehlin, H.G (1925)- Fossile Saugetiere aus der Gegend von Limbangan (Java). Dienst Mijnbouw Nederlandsch-Indie, Wetenschappelijke Mededeelingen 3, p. 1-12.
('Fossil mammals from the Limbangan area, Java'. Diverse Pleistocene mammal assemblage in conglomeratic sandstone near Limbangan on Pamali River, Brebes District, C Java (16 km W of Tegal). Incl. Stegodon, Elephas, cervids)

Storm, P. (1992)- Two microliths from Javanese Wadjak Man. J. Anthropological Soc. Nippon 100, 2, p. 191-203.
(online at: https://www.jstage.jst.go.jp/article/ase1911/100/2/100_2_191/_pdf)
(Two hominid stone tools made from limestone, from rock shelter known as Wajak site on mountain slope in S Java, S of Mt Willis near village of Wajak, site of human skull first found by Van Rietschoten in 1888)

Storm, P. (1994)- De morfologie van *Homo modjokertensis*. Cranium 11, 2, p. 97-102.
(online at: http://natuurtijdschriften.nl/download?type=document&docid=523347)
(Mojokerto skull from E Java, described by Von Koenigswald (1936) as Pithecanthropus modjokertensis, is juvenile skull, but not possible to determine if early (Homo erectus erectus) or late (Homo erectus soloensis) Javanese form (Dubois 1940 considered this to be rel. young Homo wadjakensis= H. soloensis))

Storm, P. (1995)- The evolutionary significance of the Wajak skulls. Scripta Geologica 110, p. 1-247.
(online at: www.repository.naturalis.nl/document/148692)
(Two Late Pleistocene- Holocene robust hominid skulls from fissure fill breccia in limestone of the Southern Mountains, Gua Wajak, SE Java, first described by Dubois (1922). Most likely interpretation as Mesolithic robust representatives of present Homo sapiens of Java)

Storm, P. (2000)- The evolutionary history of humans in Australasia from an environmental perspective. Anthropological Science 108, 3, p. 225-260.
(online at: https://www.jstage.jst.go.jp/article/ase1993/108/3/108_3_225/_pdf)

Storm, P. (2001)- The evolution of humans in Australasia from an environmental perspective. In: R.A.C. Dam & S. van der Kaars (eds.) Quaternary environmental change in the Indonesian region, Palaeogeogr. Palaeoclim. Palaeoecology 171, p. 363-383.
(Incl. climatic sequence for Java: before and around 135 ka climate considerably drier and hot; between 126-81 ka mainly humid-warm (with Punung fauna), becoming drier and cooler (with Wajak fauna) before returning to more interglacial conditions in Holocene)

Storm, P. (2006)- De ñHobbitò van Flores: een mensachtige eilandvorm. Cranium 23, 2, p. 3-14.
(online at: http://natuurtijdschriften.nl/download?type=document&docid=523527)
(Prehistoric "hobbit" of Flores with small size (1m tall) and endocranial volume, cannot be compared with anything else in human family tree. Most likely new species, Homo floresiensis, that fits with island evolution)

Storm, P. (2012)- A carnivorous niche for Java Man? A preliminary consideration of the abundance of fossils in Middle Pleistocene Java. Comptes Rendus Palevol 11, p. 191-202.
(Anatomical and archeological aspects of Homo erectus sites Kedung Brubus and Trinil suggest vertebrates meat was important part of diet)

Storm, P., F. Aziz, J. de Vos, D. Kosasih, S. Baskoro, Ngaliman & L.W. van den Hoek Ostende (2005)- Late Pleistocene *Homo sapiens* in a tropical rainforest fauna in East Java. J. Human Evolution 49, 4, p. 536-545.
(Redescription of two original sites of 'Punung fauna', as first described by Von Koenigswald (1939) and Badoux (1959) from karst hills of S Mountains, E Java. Punung and new nearby mammal site Gunung Dawung reflect tropical rainforest environment with common Pongo (orangutan) fossils. Punung fauna younger than Ngandong, possibly around 100 ka)

Storm, P. & J. de Vos (2006)- Rediscovery of the Late Pleistocene Punung hominin sites and the rediscovery of a new site Gunung Dawung in East Java. Senckenbergiana Lethaea 86, 2, p. 121-131.
(On re-location of Von Koenigswalds's Punung sites where in 1930s he collected hominin remains and mammals indicative of tropical rainforest like orang-utans (Pongo) and gibbons (Hylobates))

Storm, P. & A.J. Nelson (1992)- The many faces of Wajak Man. Archaeology in Oceania 27, p. 37-46.
(online at: www.oermens.nl/many_faces_wadjak.pdf)
('Wadjak Man' first fossil hominid found in SE Asia (S Java in 1888 by Dubois). Initially believed to be ancestral to Australian Aborigines, but material sub-recent and first occupation of Australia well into Pleistocene (50ka?))

Storm, P., R. Wood, C. Stringer, A. Bartsiokas, J. de Vos, M. Aubert, L. Kinsley & R. Grun (2013)- U-series and radiocarbon analyses of human and faunal remains from Wajak, Indonesia. J. Human Evolution 64, p. 356-365.
(Radiometric dating of human and faunal bone fragments from Wajak, Java, indicate minimum age of 37.4-28.5 ka, older than previously published radiocarbon estimates, probably due to secondary carbonatisation. Requires reassessment of evolutionary relationships of human remains in SE Asia- Oceania)

Stremme, H. (1911)- Die Saugetiere mit Ausnahme der Proboscidier. In: M.L. Selenka & M. Blanckenhorn (eds.) Die Pithecanthropus-Schichten auf Java, geologische und palontologische Ergebnisse der Trinil Expedition (1907 und 1908), W. Engelmann, Leipzig, p. 82-150.
('The mammals, not including elephants', from Pleistocene of Trinil, from material collected by Selenka expedition, 1907-1908. Descriptions of rodents, Rhinoceros, Sus brachygnathus, Hippopotamus, Cervus (Axis) lydekkeri, Duboisia, Buffelus, Bibos spp., etc.))

Sudijono, K. Mano & R. Wikarno (eds.) (1995)- Geology of the Quaternary environment of the Solo-Madiun area, Central-East Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 17, p. 1-128.

Suharyogi, I.Y.P., U.P. Wibowo, H. Insani & E. Setiyabudi (2019)- *Duboisia santeng* (Bovidae, Artiodactyla) dari Bumiayu. Bull. Scientific Contr. (UNPAD): Geology 17, 1, p. 1-7.

(online at: http://jurnal.unpad.ac.id/bsc/article/view/20639/pdf)
('Duboisia santeng from Bumiayu', Java. Left bovidae horncore found in 2016 at Santanaya River, Cisaat (Bumiayu). Assigned to Duboisia santeng (Dubois, 1891). Probably from M Pleistocene Gintung Fm, possibly Kedung Brubus Fauna. Environment open woodland)

Suminto, J. Kimura & T. Hirayama (1995)- Subsurface geology in Sangiran, Kedungbrubus and Ponorogo area. In: Sudijono et al. (eds.) Geology of Quaternary environment of the Solo-Madiun area, Central-East Java, Geol. Res. Dev. Centre, Spec. Publ. 17, p. 81-86.

Suminto, M.J. Morwood, I. Kurniawan, F. Aziz, G.D. van den Bergh & D.R. Hobbs (2009)- Geology and fossil sites of the Soa Basin, Flores, Indonesia. In: F. Aziz et al. (eds.) Geology, palaeontology and archaeology of the Pleistocene Soa Basin, Central Flores, Indonesia, Chapter 2, Pusat Survei Geologi, Bandung, Spec. Publ. 36, p. 19-40.
(Flores classic Mata Menge site age: tuff sealing top of fossil layer (with Stegodon florensis and in-situ stone artefacts) with fission track age of 800 ± 70 Ma, while pink tuffaceous silt immediately below main fossil deposit dated as 880 + 70 ka. Tangi Talo site with pygmy Stegodon sondaari and giant tortoise and FT age 900 ± 70 ka. Around 680 ka lake increased in size one leading to deposition of thin-bedded freshwater limestones of Upper limestone. Tektite at surface of Dozu Dhalu site with in-situ artefact and Stegodon florensis)

Suminto, G.D. van den Bergh, I. Saefudin & K. Mano (1996)- The stratigraphy and sedimentology of the hominid skull find site, Grogolan Wetan, Sangiran area, Central Jawa. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 8, p. 51-57.
(New H. erectus skull from upper Bapang Fm, between Upper Tuff and Uppermost Lahar. This is youngest level of hominid fossil occurrence in Sangiran)

Sunardi, E. (2010)- Penelitian magnetostratigrafi dan penerapan satuan stratigrafi polaritas magnet sebagai satuan kronostratigrafi: studi kasus di cekungan Bandung serta daerah Mojokerto dan Sangiran, Jawa. J. Geologi Indonesia 5, 2, p. 137-150.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/99/99)
('Magnetostratigraphy study and application of magnetic polarity stratigraphy units as chronostratigraphy units: a case study in the Bandung Basin and the Mojokerto and Sangiran regions, Java'. Magnetic polarity reversals of rocks in Sangiran Area (C Java), Mojokerto (E Java; 3 Ma) and Bandung Basin (W Java; 4 Ma) correlated to magnetostratigraphy of Pleistocene formations at Mojokerto)

Suraprasit, K., Y. Chaimanee, H. Bocherens, O. Chavasseau & J.J. Jaeger (2013)- Systematics and phylogeny of middle Miocene Cervidae (Mammalia) from Mae Moh Basin (Thailand) and a paleoenvironmental estimate using enamel isotopy of sympatric herbivore species. J. Vertebrate Paleontology 34, 1, p. 179-194.
(New species of primitive deer Lagomeryx and Stephanocemas from late M Miocene (13.4-13.2 Ma) coal layers of Mae Moh Basin, N Thailand. Paleoenvironmental studies of Mae Moh mammalian taxa (cervid, bovid, suid, rhinoceros and proboscidean indicate range of habitats from woodlands to grasslands in a C3-plant-dominated environment. Isotopic samples support herbivores lived in low-seasonal climate)

Suraprasit, K., Y. Chaimanee, T. Martin & J.J. Jaeger (2011)- First castorid (Mammalia, Rodentia) from the Middle Miocene of Southeast Asia. Naturwissenschaften 98, 4, p. 315-328
(late M Miocene age Steneofiber fossils from coal mines in Mae Moh and Chiang Muan, N Thailand)

Suraprasit, K., Y. Chaimanee, O. Chavasseau & J.J. Jaeger (2015)-Middle Miocene bovids from Mae Moh Basin, Northern Thailand: The first record of the genus *Eotragus* from Southeast Asia. Acta Palaeontologica Polonica 60, 1, p. 67-78.
(online at: https://www.app.pan.pl/archive/published/app60/app20120061.pdf)
(Bovid fossils from late M Miocene (~13.3 Ma) of Mae Moh Basin of NW Thailand, assigned to new species Eotragus lampangensis n.sp.. First report of Eotragus from SE Asia. Foraged mainly between grassland and forest)

Suraprasit, K., J.J. Jaeger, Y. Chaimanee, O. Chavasseau, C. Yamee, P. Tian & S. Panha (2016)- The Middle Pleistocene vertebrate fauna from Khok Sung (Nakhon Ratchasima, Thailand): biochronological and paleobiogeographical implications. ZooKeys 613, p. 1-157.
(online at: http://zookeys.pensoft.net/articles.php?id=8309)
(Rich late M Pleistocene vertebrate fauna with 15 mammal and 10 reptile species in fluvial terrace deposits of Khok Sung, NE Thailand. No Ailuropoda, but with Gavialis bengawanicus. Fauna comparable to three other late M Pleistocene faunas, one with age >169 ka. In M Pleistocene of SE Asia two faunal associations: Java and mainland SE Asia. Thailand pathway for Sino-Malayan migration event from S China to Java)

Sutikna, T., M.W. Tocheri, M.J. Morwood, E.W. Saptomo, Jatmiko, R.D. Awe, Sri Wasisto, K.E. Westaway, M. Aubert et al. (2016)- Revised stratigraphy and chronology for *Homo floresiensis* at Liang Bua in Indonesia. Nature 532, 7599, p. 366-369.
(Skeletal remains and deposits with H. floresiensis dated as 100- 60 ka. Stone artefacts range from ~190-50 ka. Not clear if H. floresiensis survived after 50 ka and potentially encountered modern humans on Flores or other hominins dispersing through SE Asia)

Suyanto A. & C.H.S. Watts (2002)- Verhoevenôs giant rat of Flores, Indonesia (*Papagomys theodorverhoeveni* Musser, 1981; Muridae) is a modern species. Treubia 32, 1, p. 87-93.
(online at: https://pdfs.semanticscholar.org/fee8/f23bfe0979528dbe13e57c4a222a8afbf16c.pdf)
(Report of recent specimen in collections of Museum Zoologicum Bogoriense of P. theodorverhoevei, generally believed to be extinct. See also Zijlstra et al. 2008)

Suyono (2009)- The study of fossil faunas in the Walanae Basin, Indonesia. Ph.D. Thesis University of Wollongong, p. 1-115.
(online at: http://ro.uow.edu.au/theses/3058/)
(Mainly on morphology and phylogenetic history of Celebochoerus heekereni, an endemic pig species from Pliocene in Walanae Basin, SW Sulawesi)

Suzuki, M., Wikarno, Budisantoso, I. Saefudin & M. Itihara (1985)- Fission track ages of pumice tuff, tuff layers, and javites of fossil hominid fossil-bearing formations in Java. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid fossil bearing formations in Java, Geol. Res. Dev. Centre, Spec. Publ. 4, p. 309-357.
(Eight radiometric ages from 21 pumice tuff layers and 2 javites of Pleistocene of Sangiran. Tuffs from Pucangan Fm 1.16 Ma and Kabuh Fm 0.71- 0.78 Ma). Javites(tektites) 0.71 Ma)

Swisher, C.C., G.H. Curtis, T. Jacob, A.G. Getty, A. Suprijo & Widiasmoro (1994)- Age of the earliest known hominids in Java, Indonesia. Science 263, p. 1118-1121.
(40Ar/39Ar ages from pumice from Mojokerto hominid sites 1.81 and 1.66 Ma, 0.6 million years older than Homo erectus fossils from Olduvai Gorge, and comparable to age of H cf. erectus (H. ergaster) in Kenya. Ages would suggest Homo erectus may have evolved in Asia instead of Africa (NB: these Java age dating results widely disputed in subsequent literature due to erroneous locality information (Huffman et al. 2006, etc.))

Swisher, C.C., G.H. Curtis & R. Lewin (2000)- Java Man- how two geologistsô dramatic discoveries changed our understanding of the evolutionary path to modern humans. Scribner, New York, p. 1-244.
(Popular account of events leading to new conclusions on human evolution. (This 'dramatic discovery' is highly controversial; the unusually old age date of Mojokerto hominids probably based on erroneous location information; JTvG)

Swisher, C.C., W.J. Rink, S.C. Anton, H.P. Schwartz, G.H. Curtis & A. Suprijo (1996)- Latest *Homo erectus* of Java; potential contemporaneity with *Homo sapiens* in Southeast Asia. Science 274, p. 1870-1874.
(Hominid fossils from Ngandong and Sambungmacan considered the most morphologically advanced Homo erectus. Dating of fossil bovid teeth collected from hominid-bearing levels gave mean ages of 27 to 53 ka, much younger than previous age estimates for these hominids (results unrealistically young?; see also Grun and Thorne 1997, Indriati et al. 2011))

Tassy, P., P. Anupandhanant, L. Ginsburg, P. Mein, B. Ratanasthien & V. Suteethorn (1992)- A new *Stegolophodon* (Proboscidea, Mammalia) from the Early Miocene of northern Thailand. Geobios 25, 4, p. 511-523.

Tattersall, I. & J.H. Schwartz (2009)- Evolution of the genus *Homo*. Annual Review Earth Planetary Sci. 37, p. 67-92.
(General review of hominid evolution in last ~2 Myrs. Heterogeneity among 'early African Homo erectus' and no clear link to Asian Homo erectus group. Pithecanthropus (now Homo) erectus now reckoned to be ~0.7- 1.5 Myr old. First truly cosmopolitan Homo is H. heidelbergensis, known from Africa, Europe and China 600 kyr ago. Homo sapiens originated in Africa)

Ter Haar, C. (1934)- *Homo-soloensis*. De Ingenieur in Nederlandsch-Indie,1, 4, p. 52-60.
(Discussion of geological setting of Homo soloensis discovery in Solo River terrace deposits at Ngandong, Kendeng Hills, C Java)

Thein, Z.M.M., T. Htike, A.N. Soe, C. Sein, M. Maung & M. Takai (2017)- A review of the investigation of primate fossils in Myanmar. In: A.J. Barber et al. (eds.) Myanmar: geology, resources and tectonics, Geol. Soc., London, Memoir 48, Chapter 9, p. 185-206.
(Fossil primates in latest M Eocene Pondaung Fm in C Myanmar. Two large-bodied primates, Pondaungia cotteri and Amphipithecus mogaungensis. Some authorities believed they are primitive anthropoids, others regarded them as adapiforms or non-primate. Also rare primate fossils from Late Neogene Upper Irrawaddy Beds, dominated by proboscideans and bovids)

Theunissen, B. (1989)- Eugene Dubois and the ape-man from Java; The history of the first ñmissing linkò and its discoverer. Kluwer Acad. Publ., Dordrecht, p. 1-293.
(Study of the life and scientific contributions of Eugene Dubois, discoverer of 'Java Man' in 1891)

Theunissen, B., J. de Vos, P.Y. Sondaar & F. Aziz (1990)- The establishment of a chronological framework for the hominid-bearing deposits of Java: a historical survey. In: L.F. La Porte (ed.) Establishment of a geologic framework for paleoanthropology, Geol. Soc. America (GSA), Spec. Paper 242, p. 39-53.
(Brief historical survey of discovery of Pleistocene mammals and hominid-bearing deposits in Java since mid-1850's, and of attempts to establish chronological framework for Javanese hominids)

Thorne, A. & M.H. Wolpoff (1981)- Regional continuity in Australasian Pleistocene hominid evolution. American J. Physical Anthropology 55, 3, p. 337-349.
(Study of Sangiran 17 Homo erectus skull, interpreted to show similarities with Late Pleistocene Australian hominid)

Tiauzon, A. (2011)- Lithic technology in Song Terus during the late Middle Pleistocene and the early Upper Pleistocene. M.Sc. Thesis, Museum Nat. Histoire Naturelle, Paris, p. 1-96.
(online at: http://hopsea.mnhn.fr/pc/thesis/M2%20Archie_TIAUZON.pdf)

Tjia, H.D. (2006)- Geological evidence for Quaternary land bridges in insular Southeast Asia. In: T. Simanjuntak et al. (eds.) Archaeology: Indonesian perspective, R.P. Soejono's Festschrift, LIPI Press, Jakarta, p. 71-78.
(During most of Quaternary (<1.8 Ma) four major land bridges provided access from SE Asia into Wallacea (= mobile region between Sundaland and Sahul-land): (1) Sabah/ Borneo via Palawan-Mindoro (Philippines), (2) Sabah/ Borneo via Sulu Archipelago to Mindanao (Philippines), (3) Kangean Gp via Paternoster platform to S Sulawesi, (4) Java/S Kalimantan via Banda Arc to Alor- Timor or via Sumba- Savu-Rote to Timor. Today these land bridges contain passages >200m deep, but probably result of recent tectonic subsidence, not older than 100 ka when modern humans began to populate region)

Tobias, P. (1966)- A re-examination of the Kedung Brubus mandible. Zoologische Mededelingen, Leiden, 41, p. 307-320.
(online at: http://dare.uva.nl/cgi/arno/show.cgi?fid=150000)
(Description of fragment of Pithecanthropus erectus jawbone collected by Dubois at Kedung Brubus in 1890 and described in 1924. Probably from juvenile individual)

Tobias, P.V. (1971)- The brain in hominid evolution. Columbia University Press, New York, p. 1-170.
(online at: https://ia800208.us.archive.org/21/items/braininhominidev38tobi/braininhominidev38tobi.pdf)
(With chapter 5 on Java Homo erectus. Brain capacity of 6 Sangiran and Trinil Homo erectus average 860 cc))

Tobias, P.V. & G.H.R. von Koenigswald (1964)- A comparison between the Olduvai hominines and those of Java and some implications for hominid phylogeny. Nature 204, 4958, p. 515-518.

Tokunaga, S., H. Oshima, A.A. Polhaupessy & Y. Ito (1985)- A palynological study of the Pucangan and Kabuh Formations in the Sangiran area. In: N. Watanabe & D. Kadar (eds.) Quaternary geology of the hominid fossil bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 199-217.
(Preliminary palynological study of Pleistocene of Sangiran, C Java. Rel. common grass pollen from M-U Pucangan and Lower Kabuh Fms)

Tougard, C. (1998)- Les faunes de grands mammiferes du Pleistocene moyen terminal de Thailande dans leur cadre phylogenetique, paleoecologique et biochronologique. Doct. Thesis Montpellier, p. 1-170. *(Unpublished)*
(The large mammal faunas of late Middle Pleistocene from Thailand in a phylogenetic, paleocological and biochronological framework'. Late M Pleistocene (~170 ka) large mammal fauna with giant panda, Ailuropoda Hyena, Crocuta, Orang-utang, Pongo pygmaeus Sus barbatus, etc.)

Tougard, C. (2001)- Biogeography and migration routes of large mammal faunas in South-East Asia during the Late Middle Pleistocene: focus on fossil and extant faunas from Thailand. Palaeogeogr. Palaeoclim. Palaeoecology 168, p. 337-358.
(Thailand at boundary of Indochinese and Sundaic faunal provinces and in continental migration route of mammals migrating to SE Asia in M Pleistocene. Emergence of Sundaland during glacial periods allowed faunal exchanges from continental SE Asia to Indonesian islands in late M Pleistocene and Late Pleistocene)

Tougard, C., Y. Chaimanee, V. Suteethorn, S. Triamwichanon & J.J. Jaeger (1996)- Extension of the geographic distribution of the giant panda (Ailuropoda) and search for the resons for its progressive disappearance in Southeast Asia during the latest Middle Pleistocene. Comptes Rendus Academie Sciences, Paris, Ser. IIA, 323, p. 973-979.
(Giant panda in latest M Pleistocene of N Thailand. Progressively disappears in SE Asia related to increase in temperature and rainfall)

Tougard, C. & S. Montuire (2006)- Pleistocene paleoenvironmental reconstructions and mammalian evolution in South-East Asia: focus on fossil faunas from Thailand. Quaternary Science Reviews 25, p. 126-141.
(Until 1980's no Pleistocene large mammal faunas known from Thailand. During M-L Pleistocene faunal exchanges between Thailand (Indochinese Province) and W Indonesia (Sundaic Province) via Sundaland continental shelf during glacial periods of low sea level)

Turvey, S.T., J.J. Crees, J. Hansford, T.E. Jeffree, N. Crumpton, I. Kurniawan, E. Setiyabudi et al. (2017)- Quaternary vertebrate faunas from Sumba, Indonesia: implications for Wallacean biogeography and evolution. Proc. Royal Society (London), B, 284, 20171278, p. 1-10.
(online at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5577490/pdf/rspb20171278.pdf)
(New vertebrate fossil deposits on Sumba. Pleistocene deposit at Lewapaku in interior highlands may be close to 1 Ma old, with small Stegodon sumbaensis, tooth of Varanus komodoensis and fragments of giant murids. Holocene cave deposits at Mahaniwa (~2000-3500 BP) with large rats and extinct frugivorous Varanus hooijeri. Sumba Quaternary vertebrate fauna comparable fauna of Flores)

Tyler, D.E. (1991)- A taxonomy of Javan hominid mandibles. J. Human Evolution 6, p. 401-420.
(Seven human mandibular remains from Java (Kedung Brubus, Sangiran 1, 5, 6, 8, 9, and 22) are single species, Homo erectus)

Tyler, D.E. (1995)- The current picture of hominid evolution in Java. Acta Anthropol. Sinica 14, p. 285-299.

Tyler, D.E. (1997)- New and significant fossil finds from Sangiran, Central Java. In: N.G. Jablonski. (ed.) The changing face of East Asia during the Tertiary and Quaternary, University of Hong Kong Press, p. 498-517.

Tyler, D.E. (2001)- ñ*Meganthropus*ò cranial fossils from Java. J. Human Evolution 16, 2, p. 81-101.
(3 of 12 Homo erectus skulls from E-M Pleistocene of Sangiran may represent 'Meganthropus'. Meganthropus I, II, and III more massive than any known H. erectus specimens, also higher vaulted, smaller brained, and have thick lower occipital planes. May represent species that separated from H. erectus upon its arrival to Java)

Tyler, D.E. (2001)- Three new *Homo erectus* mandibles from Java. J. Human Evolution 16, 2, p. 103-115.
(Eleven known Homo erectus manidublar pieces from E-M Pleistocene of Java, all from Sangiran, one from Kedung Brubus. Sangiran 21 (E), Sangiran 22 (F), and Sangiran 37 (G) first described here. Sangiran 21, 22, and 27 from U Pucangan Fm and dated as ~1.2 Ma)

Tyler, D.E. (2001)- Two new ñ*Meganthropus*ò mandibles from Java. J. Human. Evolution 16, p. 151-158.
(Two new mandibles from U Pucangan Fm of Sangiran, C Java. Dated as ~1.2- 1.4 Ma. Morphologically compatible with other"Meganthropus" mandibles described from Java)

Tyler, D.E. (2003)- Sangiran 5 (ñ*Pithecanthropus dubius*ò), *Homo erectus*, ñ*Meganthropus*ò or *Pongo*? J. Human Evolution 18, 3-4, p. 229-241.
(Eleven E-M Pleistocene jaw fragments now known from Java, all but one from Sangiran. Morphologically, they are a mixture of undoubted H. erectus, 'H. meganthropus' and possibly a pongid. 'Pithecanthropus dubius' (Sangiran 5) may not be hominid, but if it is, must be placed with 'H. meganthropus', not H. erectus)

Tyler, D.E. (2004)- An examination of the taxonomic status of the fragmentary mandible Sangiran 5, *(Pithecanthropus dubius), Homo erectus, "Meganthropus"*, or *Pongo*? Quaternary Int. 117, p. 125-130.
(Morphology of Sangiran 5 mandible fossil, initially named Sangiran 1939 and recovered by Von Koenigswald, beyond known range of any H. erectus and must be pongid ape)

Tyler, D.E., N. Jablonski & S. Sartono (1995)- Earliest known monkey fossil from the Indonesian Archipelago: an announcement. In: J.R.F. Bower & S. Sartono (eds.) Palaeo-anthropology: evolution and ecology of *Homo erectus*, Pithecanthropus Centennial Foundation, Leiden University, p. 213-216.
(Monkey fossil from Sangiran. See also Jablonski & Tyler1999 and Larick et al. 2000: not as old as assumed?)

Tyler, D.E., G.S. Krantz & S. Sartono (1995)- The taxonomic status of the '*Meganthropus*' cranial (Sangiran 31) and the '*Meganthropus*' occipital fragment III. In: In: J.R.F. Bower & S. Sartono (eds.) Palaeo-anthropology: evolution and ecology of *Homo erectus*, Pithecanthropus Centennial Foundation, Leiden, 1, p. 189-202.

Tyler, D.E. & S. Sartono (2001)- A new *Homo erectus* cranium from Sangiran, Java. Human Evolution 16, 1, p. 13-25.
(New H. erectus cranium found by local farmer in 1993 at Sangiran M Pucangan Fm, ~1.6-1.8 Ma in age. Braincase and most of face. Skull longer and narrower than Trinil, possibly female counterpart to Sangiran 17)

Van den Bergh, G.D. (1988)- *Duboisia santeng*, the endemic Pleistocene bovid from Java (Indonesia). Master Dissertation, University of Utrecht, p. 1-72.
(Duboisia santeng (Dubois' antelope) extinct antelope-like bovid that was endemic to Indonesia in Pleistocene)

Van den Bergh, G.D. (1990)- Sulawesi (Celebes): faunistisch en geologisch ontmoetingspunt der aardschollen. Cranium 7, 2, p. 68-76.

(online at: http://natuurtijdschriften.nl/download?type=document;docid=523240)
('Sulawesi: faunistic and geologic junction of earth plates'. Discussion of present-day endemic fauna of Sulawesi and low diversity Pleistocene 'island fauna' in SW Sulawesi with endemic pig (Celebochoerus heekereni) and dwarfed proboscideans (Elephas celebensis, Stegodon sompoensis, S. cf. trigonocephalus))

Van den Bergh, G.D. (1999)- The Late Neogene elephantoid-bearing faunas of Indonesia and their paleozoogeographic implications. A study of the terrestrial faunal succession of Sulawesi, Flores and Java, including evidence for early hominid dispersal east of Wallace's Line. Scripta Geologica 117, Leiden, p. 1-419.
(online at: www.repository.naturalis.nl/document/45937)

Van den Bergh, G.D. & F. Aziz (1991)- Fossil vertebrates from the Walanae Formation and younger Pleistocene deposits, South Sulawesi. J. Geologi Sumberdaya Mineral 1, 3, p. 8-11.
(>1500 Late Pleistocene vertebrate fossils recovered from Walanae Fm grey clay layer, deposited on floodplain of N-flowing Walanae River, S Sulawesi. Most abundant is large pig Celebochoerus heekereni, also dwarf Stegodon, giant tortoise Geochelone atlas and large crocodile. Endemic species show S Sulawesi was isolated from SE Asian mainland)

Van den Bergh, G.D., F. Aziz, P.Y. Sondaar & S.T. Hussain (1992)- Taxonomy, stratigraphy, and paleozoogeography of Plio-Pleistocene Proboscideans from the Indonesian islands. Bull. Geol. Res. Dev. Centre (GRDC), Bandung, Seri Paleontologi 7, p. 28-58.
(Taxonomic revision of Plio-Pleistocene proboscideans (elephants) from Indonesian region (Java, Sulawesi, Flores, Timor, Sumba, Sangihe, Sumatra))

Van den Bergh, G.D., F. Aziz, P.Y. Sondaar & J. de Vos (1994)- The first *Stegodon* fossils from Central Sulawesi and a new advanced *Elephas* species from South Sulawesi. Geol. Res. Dev. Centre (GRDC), Bandung, Bull. 17, p. 22-39.
(First Stegodon from M-L Pleistocene Napu Fm near Betue, Poso District, C Sulawesi Very similar toS. trigonocephalus from Java. Also new Elephas species from M-L Pleistocene Tanrung Fm of S Sulawesi)

Van den Bergh, G.D., J. de Vos, F. Aziz & M.J. Morwood (2001)- Elephantoidea in the Indonesian region: new *Stegodon* findings from Flores. In: Proc. Conf. The world of elephants, CNRS Rome, p. 623-627.
(Recent discoveries of fossil Stegodon remains from Flores confirm earlier discoveries. E Pleistocene island assemblage, dated at 0.9 Ma, with dwarf Stegodon sondaari, Varanus komodoensis and giant tortoise remains. M Pleistocene assemblages from numerous localities dated as 0.85- 0.7 Ma, contain intermediate- large Stegodon florensis, giant Hooijeromys nusatenggara and V. komodoensis, associated with human stone tools)

Van den Bergh, G.D., J. de Vos & P.Y. Sondaar (2001)- The Late Quaternary palaeogeography of mammal evolution in the Indonesian Archipelago. Palaeogeogr. Palaeoclim. Palaeoecology 171, p. 385-408.
(online at: http://users.clas.ufl.edu/krigbaum/6930/vandenbergh_etal_p3_2001.pdf)
(Recent sub-faunas from Sundaland preserved broad connections with SE Asia mainland during the last glacial: all balanced and mainly mainland elements. In Wallacea (Sulawesi, Lesser Sunda islands) always geographically isolated from mainland, with unbalanced faunas with endemic elements. Significant faunal turnover throughout region around 0.8 Ma (also in Japan, Taiwan). On Java Late Pliocene- E Pleistocene Satir Fauna indicates island conditions)

Van den Bergh, G.D., J. de Vos, P.Y. Sondaar & F. Aziz (1995)- *Homo erectus* in S.E. Asia: time space and migration routes, I. The Flores case. In: J. Gibert et al. (eds.) Proc. Int. Conf. The hominids and their environment during the Lower and Middle Pleistocene of Eurasia, Orce 1995, p. 353-362.

Van den Bergh, G.D., J. de Vos, P.Y. Sondaar & F. Aziz (1996)- Pleistocene zoogeographic evolution of Java (Indonesia) and glacio-eustatic sea-level fluctuations: a background for the presence of *Homo*. Indo-Pacific Prehistory Assoc. Bull. 14 (Chiang Mai Papers, 1), p. 7-21.
(online at: http://ejournal.anu.edu.au/index.php/bippa/article/view/425/414)

(Relation of Java mammal faunal changes in last 2.5 My to global sea level changes not clear. No proof for presence of mammals on Java during first marked glacio-eustatic sea level lowering at 2.4 Ma. Oldest recognizable fauna is Satir fauna, age between 2- 1.5 Ma and indicates island conditions. Isolated conditions continue until ~0.8 Ma, suggested by unbalanced Ci Saat (1.2 Ma) and Trinil faunas (0.9 Ma), when Homo erectus arrived. Major faunal immigration at 0.8 Ma with Kedung Brubus fauna, corresponding with marked lowering of glacio-eustatic sea level)

Van Den Bergh, G.D., R. Due Awe, M.J. Morwood, T. Sutikna, Jatmiko & E.W.Saptomo (2008)- The youngest *Stegodon* remains in Southeast Asia from the Late Pleistocene archaeological site Liang Bua, Flores, Indonesia. Quaternary Int. 182, p. 16-48.
(Stegodon remains from Late Pleistocene of Liang Bua cave described as new endemic dwarf subspecies: Stegodon florensis insularis. Hominin activities likely played role in Stegodon bone accumulation at cave)

Van Den Bergh, G.D., Y. Kaifu, I. Kurniawan, R.T. Kono, A. Brumm, E. Setiyabudi, F. Aziz & M.J. Morwood (2016)- *Homo floresiensis*-like fossils from the early Middle Pleistocene of Flores. Nature 534, 7606, p. 245-248.
(online at: http://udel.edu/~mcdonald/vandenbergh2016.pdf)
(Hominin fossils excavated in 2014 from early M Pleistocene Mata Menge site, Soa Basin, C Flores, include mandible fragment and isolated teeth, similar to Late Pleistocene H. floresiensis of Liang Bua. Dated as ~0.7Ma, oldest known hominin remains from Flores. Mata Menge fossils tend to support view that H. floresiensis is dwarfed descendent of early Asian Homo erectus)

Van Den Bergh, G.D., I. Kurniawan, M.J. Morwood, C.J. Lentfer, Suyono, R. Setiawan & F. Aziz (2009)- Environmental reconstruction of the Middle Pleistocene archaeological/ palaeontological site Mata Menge, Central Flores, Indonesia. In: F. Aziz et al. (eds.) Geology, palaeontology and archaeology of the Pleistocene Soa Basin, Central Flores, Indonesia, Chapter 4, Pusat Survei Geologi, Bandung, Spec. Publ. 36, p. 59-94.
(M Pleistocene paleontological- archeological Mata Menge site in Soa basin represents lake shore deposits, aged ~0.80- 0.88 Ma. Common Stegodon florensis bones from aged animals that probably died natural death. Despite abundance of stone artefacts in same layers no evidence for butchering. FT age of overlying white tuff 0.75 ± 0.07 Ma (Morwood et al. 1998). Fossils all in 0.5- 1.3m thick 'Unit B'; overlying Unit C tuffaceous siltstone and sand unfossiliferous)

Van den Bergh, G.D., Bo Li, A. Brumm, R. Grun, D. Yurnaldi, M.W. Moore, I. Kurniawan, R. Setiawan, F. Aziz, R.G. Roberts, Suyono, M. Storey, E. Setiabudi & M.J. Morwood (2016)- Earliest hominin occupation of Sulawesi, Indonesia. Nature 529, 7585, p. 208-211.
(New excavations at Talepu in Walanae Basin NE of Maros with stone artefacts and fossil megafauna (Bubalus, Stegodon, Celebochoerus) from stratified deposits that accumulated from before 200 ka until ~100ka)

Van den Bergh, G.D., H.J.M. Meijer, R.A. Due, M.J. Morwood, K. Szabo, L.W. van den Hoek Ostende, T. Sutikna, E.W. Saptomo, P.J. Piper & K.M. Dobney (2009)- The Liang Bua faunal remains: a 95 k.yr. sequence from Flores, East Indonesia. J. Human Evolution 57, 5, p. 527-537.
(Excavations at Liang Bua limestone cave on Flores faunal sequence spanning the last 95 ky. Major climatic fluctuations, and two human species: H. floresiensis from 95- 17 ka, and modern humans from 11 ka- Present. Faunal assemblage comprises island gigantism in small mammals and dwarfing of large taxa. Confirms long-term isolation, impoverishment, and phylogenetic continuity of Flores faunal community)

Van den Bergh, G.D., B. Mubroto, F. Aziz, P.Y. Sondaar & J. de Vos (1996)- Did *Homo erectus* reach the island of Flores? In: P. Belwood (ed.) Indo-Pacific Prehistory Assoc. Bull. 14 (Chiang Mai Papers, 1), p. 27-34.
(Flores E- M Pleistocene stone artifacts too old for Homo sapiens, probably made by Homo erectus)

Van den Bergh, G.D., P.Y. Sondaar, J. de Vos & F. Aziz (1996)- The Proboscideans of the South-East Asian islands. In: J. Shoshani & P. Tassy (eds.) The Proboscidea; evolution and palaeoecology of elephants and their relatives, Oxford University Press, p. 240-248.

Van den Brink, L.M. (1982)- On the mammal fauna of the Wajak Cave, Java (Indonesia). Modern Quaternary Research in Southeast Asia 7, Balkema, Rotterdam, p. 177-193.
(On Late Pleistocene mammal and hominid fossils from Wajak cave, Lawah Hill, S of Kediri, Java. Rel. modern fauna with Rusa timorensis, Muntiacus muntjac, Sus scrofa, Tapirus indicus, Rhinoceros sondaicus, Hystrix javanica, Panthera tigris, Homo sapiens and Presbytis cristatus)

Van den Hoek Ostende, L., G. van den Bergh & R. Awe Due (2006)- First fossil insectivores from Flores. Hellenic J. Geosciences 41, p. 67-72.
(online at: https://www.repository.naturalis.nl/document/160872)
(Hominid bearing strata from Liang Bua cave on Flores yielded common microvertebrate remains, incl. mandibles of shrews)

Van der Geer, A., G. Lyras, J. de Vos & M. Dermitzakis (2010)- Evolution of island mammals: adaptation and extinction of placental mammals on islands. Wiley and Sons, p. 1-461.
(With reviews of Pleistocene mammal localities and biozones of Java (Ch. 12, p. 172-189), Flores (Ch. 13, p. 190-205), Sulawesi (Ch. 14, p. 206-215), The Philippines (Ch. 15, p. 216-227))

Van der Geer, A., G.A. Lyras & R. Volmer (2018)- Insular dwarfism in canids on Java (Indonesia) and its implication for the environment of *Homo erectus* during the Early and earliest Middle Pleistocene. Palaeogeogr. Palaeoclim., Palaeoecology 507, p. 168-179.
(On 'Trinil Dog' from E- earliest M Pleistocene of Java. Large Xenocyon (previously Megacyon) present in E Pleistocene and replaced by small Xenocyon (previously Mececyon) during earliest M Pleistocene. Change in body size likely effect of increased competition among carnivores on island. Endemism of terrestrial mammals of earliest M Pleistocene horizon of site Trinil indicates Java marginally isolated)

Van der Geer, A.A.E., G.D. van den Bergh, G.A. Lyras, U.W. Prasetyo, R. Awe Due, E. Setiyabudi & H. Drinia (2016)- The effect of area and isolation on insular dwarf proboscideans. J. Biogeography 43, 8, p. 1656-1666.

Van der Kaars, W.A. & M.A.C. Dam (1995)- A 135,000-year record of vegetational and climatic change from the Bandung area, West-Java, Indonesia. Palaeogeogr. Palaeoclim., Palaeoecology 117, p. 55-72.
(Sediment cores from Bandung intramontane basin provide paleoclimatic record for Java for last 135,000 years. Anomalously dry conditions in penultimate glacial period, around 135 ka, and very warm and humid interglacial conditions from 126- 81 ka. Reduction in Asplenium ferns from 81- 74 ka suggests drier conditions, while increased numbers indicate slightly wetter climate from 74- 47 ka. Distinctly cooler and possibly drier climate from 47- 20 ka. For Last Glacial Maximum 4-7 °C lower temperatures recorded)

Van der Maarel, F.H. (1931)- Mammalia. In: B.G. Escher et al. (eds.) De palaeontologie en stratigraphie van Nederlandsch Oost-Indie ('Feestbundel K. Martin'), Leidsche Geol. Mededelingen 5, p. 471-484.
(online at: www.repository.naturalis.nl/document/549246)
(Listings of Pleistocene mammal species as known from Indonesia in 1931 and bibliography)

Van der Maarel, F.H. (1932)- Contributions to the knowledge of the fossil mammalian fauna of Java. Wetenschappelijke Mededeelingen Dienst Mijnbouw Nederlandsch-Indie 15, p. 1-208.
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(*Stone implements found on Flores similar to those found in Sangiran, C Java, by Von Koenisgswald and Ghosh (1973), confirming crossing to Flores by Homo erectus. Primitive stone artefacts at Mata Menge and Boa Leza associated with Stegodon florensis)*

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(Cheek teeth and mandibular fragment of porcupines from Late Pleistocene fissure deposits near Punung considered new subspecies, Hystrix brachyura punungensis subsp. nov. M Pleistocene specimens allocated to Hystrix brachyura subsp.; those from the Holocene to Hystrix javanica)

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(M Pleistocene site of Sangiran where tigers co-occurred with machairodonts (Hemimachairodus zwierzyckii and Homotherium ultimum) and large Merriam's Dog (Megacyon merriami). Tigers did not increase body mass before Ngandong faunal level)

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(Revision of fossil canid (dog) material from Sangiran Dome. Previously described species Cuon sangiranensis, C. crassidens, C. alpinus, C. javanicus, and C. trinilensis. Cuon already present in Java during E-M Pleistocene and probably arrived as part of immigration events during Kedung Brubus faunal stage)

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('The fossil mammal faunas of Java'. Pliocene-Pleistocene mammals grouped into 7 faunas, from young to old: 1. Sampoeng, 2. Ngandong, 3. Trinil, 4. Djetis/ Jetis, 5. Kali Glagah (Late Pliocene), 6. Tji Djoelang (S of Cirebon; M Pliocene; with anthracotheriid Merycopotamus) and 7. Tji Sande (3 km NW of Loerahgoeng; S of Cirebon; with Aceratherium boschi rhinoceros molar= latest Miocene- earliest Pliocene and oldest mammal fossil from Java). No figures)

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('A fossil mammal fauna with Simia from South China'. On Pleistocene fossils from Chinese pharmacies in SE Asia. With teeth of various ape species, including giant ape Gigantopithecus blacki n.gen., n.sp.)

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('An elephant of the planifrons group from the Pliocene of W Java'. Late Pliocene elephant teeth Kali Glagah Fm beds in 'Tji Djulang' (Tji Djoelang, Cijulang) river, collected in 1935, in Bumiayu area, S of Tegal. Rel. small and more primitive representative of 'A. planifrons' group from Siwaliks, India, described as Archidiskodon praeplanifrons n. sp. Associated with Pliocene 'Cheribonian' mollusc assemblage)

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(Gigantopithecus blacki von Koenigswald known from four molars bought in Chinese drugstores in Hong Kong and Canton. Molars are largest known of any higher primate. Cannot be regarded as ancestral to man. Part of the (early) M Pleistocene Ailuropoda-orang fauna of S China)

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(Mainly description of material collected by O. Beyer. With first descriptions of Rhinoceros philippinensis, Stegodon luzonensis, Elephas beyeri. Also present Stegodon cf. trigonocephalus, S. mindanensis, etc.. Incl. probable M Pleistocene association of Stegodon, pre-Neolithic stone implements and tektites on Luzon, off Manila- Ipo road)

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(Ngandong fauna with Homo soloensis ('Solo Man') is Java representative of Neanderthal Man. Associated with bird fossils suggesting colder climate than today, and water buffaloes with horn spreads >2m, indicating more open country, not typical rainforest conditions. Advanced bone culture and completely rounded stone balls also point to younger hominid population than Sangiran/ Trinil Homo erectus. Etc.)

Von Koenigswald, G.H.R. (1976)- Climatic changes in Java and Sumatra during the Upper Pleistocene. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 79, p. 232-234.
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(online at: https://jurnal.ugm.ac.id/bik/article/view/4757/4009)
(Brief review of five different types of early hominids known from Java. Summary of lecture given after receiving Dr. h.c. degree from Gadjah Mada University, Yogyakarta. Oldest mammalian fossils on Java in West Java (Cijulang, Kali Glagah). Two main episodes of mammalian migration: (1) Sivamalayan migration, from India region; (2) Sinomalayan migration, from China region via Philippines, Kalimantan)

Von Koenigswald, G.H.R. (1978)- Selachia (Pisces) from the black clay of Sangiran, Central Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B 81, 3, p. 364-369.
(Lower Pleistocene 'black clay' of Sangiran deposited in fresh water lake according to mollusc fauna. Presence of marine fish Pristiopsis cf P. microdon and Eulamia gangetica that can enter and live in fresh water indicates outlet of lake into open sea)

Von Koenigswald, G.H.R. (1978)- Lithic industries of *Pithecanthropus erectus* of Java. In: F. Ikawa-Smith (ed.) Early Palaeolithic in South and East Asia, Mouton Publ., The Hague, p. 23-27.
(Sangiran area of C Java yielded five skulls of Pithecanthropus erectus since 1937, with average K-Ar ages of 830,000 years. Stone implements known from M Pleistocene fluviatile part of Sangiran section (most not found in-situ). Flakes rarely larger than 5-6 cm)

Von Koenigswald, G.H.R. & A.K. Ghosh (1973)- Stone implements from the Trinil Beds of Sangiran, Central Java. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, B76, 1, p. 1-34.
(Crude stone tools from Trinil Beds at Sangiran believed to be of human origin (Pithecanthropus erectus; first discovered by vK in 1936, but these finds were initiallly dismissed until similar tools of similar age found in Flores in 1970 and 1990's; JTvG))

Von Koenigswald, G.H.R. & F. Weidenreich (1938)- Discovery of an additional *Pithecanthropus* skull. Nature 142, 3598, p. 715.
(Discovery of almost complete brain case of Pithecanthropus in 1937, in Trinil Fm of Sangiran, C Java)

Vu The Long, J. de Vos & R.L. Ciochon (1996)- The fossil mammal fauna of the Lang Trang Caves, Vietnam, compared with Southeast Asian fossil and recent mammal faunas: the geographical implications. Indo-Pacific Prehistory Assoc. Bull. 14, p. 101-109.
(Pleistocene Stegodon fauna from Lang Trang caves, 120 km SW of Hanoi, Vietnam, and comparison to similar faunas in S China, Indonesia and Malaysia. Similar to Late Pleistocene cave faunas from Padang (Sumatra), Punung (Java) and Niah (Sarawak))

Walters, I.. (2002)- Early hominids in SE Asia: older, younger, smarter and more. In: P. Kershaw et al. (eds.) Bridging Wallace's Line: the environmental and cultural history and dynamics of the SE Asian- Australian region, Advances in Geology 34, Catena Verlag, p. 255-263

Wang, W., C.J. Bae, S. Huang, X. Huang, F. Tian, J. Mo, Z. Huang, C. Huang, S. Xief & D. Li (2014)- Middle Pleistocene bifaces from Fengshudao (Bose Basin, Guangxi, China). J. Human Evolution 69, p. 110-122.
(Paleolithic handaxes dated at 803 ka based on association of Australasian tektites. Tektites all from between mottled sandy red clay in upper Terrace 4 at 185.95-187.06m asl. Tektites fresh, with sharp edges do not look redeposited (but in-situ nature of tektites questioned by Langbroek 2015))

Wang, W. & C.J. Bae (2015)- How old are the Bose (Baise) Basin (Guangxi, southern China) bifaces? The Australasian tektites question revisited. J. Human Evolution 80, p. 171-174.
(Disagree with Langbroek (2015) comments on Wang et al. (2014). The 275 tektites from stone artifact-bearing laterite of upper Terrace 4 show no signs of abrasion and are in-situ, while tektites from younger gravel bed in T3 do show rounding)

Wang, W., S.J. Lycett, N. von Cramon-Taubadel, J.J.H. Jin & C.J. Bae (2012)- Comparison of handaxes from Bose Basin (China) and the Western Acheulean indicates convergence of form, not cognitive differences. PlosOne 7, 4, e35804, p. 1-7.
(In Bose Basin stone artefacts, including handaxes, limited to middle and upper units of 4th terrace, associated with tektites dated by 40AR/39AR to 803 ± 3 ka old and also limited to 4th terrace. Rel. relatively high levels of shape variability in Bose handaxes)

Wang, W., J.Y. Mo & Z.T. Huang (2008)- Recent discovery of handaxes associated with tektites in the Nanbanshan locality of the Damei site, Bose basin, Guangxi, South China. Chinese Science Bull. 53, 6, p. 878-883.
(176 stone artifacts in laterized sediments of top of Terrace 4 of Youjiang River at Nanbanshan, Bose basin, S China. Two handaxes associated with 155 fresh, unabraded and sharp-edged tektite pieces (average length 29 mm) in 60cm thick horizon, suggesting tektites buried immediately after airfall event, and artifacts and tektites deposited simultaneously 803 ka. More stone artifacts unearthed above tektite layer, indicating early humans survived event)

Wang, W., R. Potts, B.Y. Yuan, W.W. Huang, C. Hai, R.L. Edwards & P. Ditchfield (2007)- Sequence of mammalian fossils, including hominid teeth, from the Bubing Basin caves, south China. J. Human Evolution 52, 4, p. 370-379.

Watanabe, N. & D. Kadar (eds.) (1985)- Quaternary geology of the hominid fossil bearing formations in Java. Geol. Res. Dev. Centre (GRDC), Bandung, Spec. Publ. 4, p. 1-378.
(Extensive report of multi-year Indonesian- Japanese Research Project 1976-1979, mainly on Pleistocene of Sangiran area, C Java. Project did not find new hominid fossils, but good documentation of Sangiran stratigraphy, faunas, radiometric and paleomagnetic studies, etc.)

Weesie, P.D.M. (1982)- The fossil bird remains in the Dubois collection. Modern Quaternary Research in Southeast Asia 7, Balkema, Rotterdam, p. 87-90.
(Pleistocene bird fossils from Trinil, C Java, incl. Branta, Ephippiorhynchus, Leptoptilos, Pavo, Tadorna. Assemblage include species now restricted to more northern regions, suggests cooler climate than present-day during deposition of Trinil beds)

Weidenreich, F. (1942)- Early man in Indonesia. The Far Eastern Quarterly 2, 1, p. 58-65.
(Early review of Pleistocene hominids in Indonesia)

Weidenreich, F. (1945)- The puzzle of *Pithecanthropus*. In: P. Honig & F. Verdoorn (eds.) Science and scientists in the Netherlands Indies, Board for the Netherlands Indies, Surinam and Curacao, New York, p. 380-390.

Weidenreich, F. (1945)- Giant early man from Java and South China. American Museum Natural History Anthropological Papers 40, 1, p. 5-134.
(online at: digitallibrary.amnh.org/handle/2246/263)
(Discussion of unusually large hominids (Pithecanthropus robustus Weidenreich from China, Meganthropus palaeojavanicus from Sangiran, Java). Partly based on unpublished material from Von Koenigswald)

Weidenreich, F. (1951)- Morphology of Solo man. Anthropological Papers American Museum Natural History 43, 3, p. 203-288.
(online at: http://digitallibrary.amnh.org/handle/2246/297)
(Description of 11 skulls of Homo soloensis, collected between 1931 and 1941 from Late Pleistocene Solo river 20m terrace at Ngandong, left bank of Solo River, 6 miles N of Ngawi, C Java. Associated with rich mammalian fauna (Sus terhaari, Cervus javanicus) and possible bone tools and stone balls. Hominins believed to be younger than those from other parts of Java (Sangiran, Mojokerto, Trinil). Remarkable absence of other hominin body parts. With introduction by Von Koenigswald on geology and associated fauna (NB: unfinished study due to Weidenreich's death in 1948; see also Santa Luca 1980))

Weinand, D.C. (2005)- A reeevaluation of the paleoenvironmental reconstructions associated with Homo erectus from Java, Indonesia, based on the functional morphology of fossil bovid Astragali. Ph.D. Thesis University of Tennessee, p. 1-173.
(online at: https://trace.tennessee.edu/utk_graddiss/2315)
(Study of bovid astragali ('cow knuckle bones') from hominid-bearing sites in Java indicate paleoenvironment at Trinil site (~ 1 Ma) dominated by vegetated river valleys and upland forests, broken by grasslands. Grasslands probably expanded at time of Kedung Brubus locality (~0.8 Ma). Environmental change and immigration of new species important to evolutionary success of Homo erectus in M Pleistocene)

Westaway, K.E. (2006)- Reconstructing the Quatermary landscape evolution of Western Flores: an environmental and chronological context for an archaeological site. Ph.D. Thesis University of Wollongong, p. 1-411.
(online at: http://ro.uow.edu.au/theses/562/)
(Age range for occupation of Liang Bua cave by Homo floresiensis 95-11 ka, most intensive phases of occupation 74-61 and 17-11 ka, depositional age of holotype skeleton 36-14 ka, and age of oldest human skeletal remains found on Flores 95-74 ka)

Westaway, K.E. & C.P. Groves (2009)- The mark of ancient Java is on none of them. Archaeology in Oceania 44, 2, p. 84-95.
(Suggested links between Javanese E Pleistocene Homo erectus and Australian Late Pleistocene Homo sapiens crania (Thorne, etc.) questionable. Hybridization of two species unlikely: no chronological overlap and phylogenetic analysis indicate no close genetic relationship between Ngandong-like population from Java and late Pleistocene Australian fossils from Willandra Lakes)

Westaway, K.E., J.M. Morwood, R.G. Roberts, A.D. Rokus, J.X. Zhao, P. Storm, F. Aziz, G. van den Bergh, P. Hadi, Jatmiko & J. de Vos (2007)- Age and biostratigraphic significance of the Punung rainforest fauna, East Java, Indonesia, and implications for *Pongo* and *Homo*. J. Human Evolution 53, p. 709-717.
(Punung Fauna of Java represents faunal turnover when Stegodon and other archaic mammal species were replaced by modern fauna, including rainforest-dependent species such as Pongo pygmaeus (orangutan). Dated as early Last Interglacial age (between 128±15 and 118±3 ka))

Westaway, K.E., M.J. Morwood, R.G. Roberts, J.X. Zhao, T. Sutikna et al. (2007)- Establishing the time of initial human occupation of Liang Bua, western Flores, Indonesia. In: R. Grun & R.G. Roberts (eds.) LED 2005, 11th Int. Conf. Luminescence and electron spin resonance dating, Quaternary Geochron. 2, p. 337-343.

Westaway, K.E., M.J. Morwood, T. Sutikna, M.W. Moore, A.D. Rokus, G.D. van den Bergh, R.G. Roberts & E.W. Saptomo (2009)- *Homo floresiensis* and the late Pleistocene environments of eastern Indonesia: defining the nature of the relationship. Quaternary Science Reviews 28, p. 2897-2912.
(Occupation deposits in Liang Bua limestone cave on Flores span ~95 kyrs and contain abundant stone artefacts, well preserved faunal remains and evidence for endemic hominin Homo floresiensis. H. floresiensis endured rapidly fluctuating environmental conditions over last ~100 ka. Peaks in occupation at 100-95, 74-61 and 18-17 ka correlate with episodes of channel formation and erosion in cave, which in turn correspond with high rainfall, thick soils and high bio-productivity outside)

Westaway, K.E., J.X. Zhao, R.G. Roberts, A.R. Chivas, M.J. Morwood & T. Sutikna (2007)- Initial speleothem results from western Flores and eastern Java, Indonesia: were climate changes from 47 to 5 ka responsible for the extinction of *Homo floresiensis*? J. Quaternary Science 22, 5, p. 429-438.
(O and C isotopic shifts in stalagmites from W Flores and E Java suggest rapid increase in rainfall around 13 ka or 17–16.5 ka, and may be related to abrupt disappearance of Stegodon and Homo floresiensis in W Flores)

Westaway, K.E., J. Louys, R. Due Awe, M.J. Morwood, G J. Price, J.X. Zhao, M. Aubert, R. Joannes-Boyau, T.M. Smith et al. (2017)- An early modern human presence in Sumatra 73,000-63,000 years ago. Nature 548, 7667, p. 322-325.
(Reinvestgation of Lida Ajer cave in Padang Highlands, W Sumatra, which yielded Late Pleistocene human teeth (Dubois 1890), associated with rich rainforest fauna. Enamel-dentine junction morphology, enamel thickness and comparative morphology show that teeth belong to anatomically modern humans (Homo sapiens). Dating of bone-bearing sediments and U-series/ electron spin resonance dating of Pongo mammalian teeth place modern humans in Sumatra between 73-63 ka. Evidence of rainforest occupation by H. sapiens at ~70 ka is ~20 ka earlier than assumed timing of dispersal of modern humans across SE Asia)

Westaway, M.C. (2002)- Preliminary observations on the taphonomic processes at Ngandong and some implications for a late *Homo erectus* survivor model. Tempus 7, p. 189-193.
(At Late Pleistocene Ngandong site different taphonomic alterations between human and non-human skeletal elements. Homo erectus remains may be older than many non-hominin fossils)

Westaway, M.C., A.C. Durband, C.P. Groves & M. Collard (2015)- Mandibular evidence supports *Homo floresiensis* as a distinct species. Proc. National Academy Sciences USA 112, 7, p. E604-E605.
(online at: www.pnas.org/content/112/7/E604.full.pdf)
(Mandibular characteristics of Homo floresiensis from Liang Bua, Flores, close to early hominins, and not pathological H. sapiens as suggested in Henneberg et al. and Eckhardt et al. 2014 papers)

Westaway, M.C., A. Durband & D. Lambert (2015)- Human evolution in Sunda and Sahul and the continuing contributions of Professor Colin Groves. In: A.M. Berle & M.F. Oxenham (eds.) Taxonomic tapestries: the threads of evolutionary, behavioural and conservation research, ANU Press, p. 249-276.
(online at: www.jstor.org/stable/pdf/j.ctt169wd9c.16.pdf)
('Late' Homo erectus from sites like Ngandong/ Sambungmacan/ Ngawi, Java, often viewed as advanced H. erectus or sometimes as 'archaic' H. sapiens, but may be separate species Homo soloensis. Etc.)

Westaway, M., T. Jacob, F. Aziz, H. Otsuka & H. Baba (2003)- Faunal taphonomy and biostratigraphy at Ngandong, Java, Indonesia and its implications for the late survival of *Homo erectus*. American J. Physical Anthropology 120, Abstract, p. 222ï 223.

Weston, E.M. & A.M. Lister (2009)- Insular dwarfism in hippos and a model for brain size reduction in *Homo floresiensis*. Nature 459, 7243, p. 85-88.

Wetmore, A. (1940)- Avian remains from the Pleistocene of Central Java. J. Paleontology 14, p. 447-450.
(Pleistocene bird remains from Ngandong Terrace of Solo River at Watoealang, 5km W of Ngawi, incl. Leptoptilos titan (marabou stork) and humerus of crane (Grus grus), indicating rel. cool temperatures in U Pleistocene (cranes today not found S of China))

Wibowo, U.P., E. Setiyabudi & I. Kurniawan (2018)- A *Stegodon* mandible from Cipanaruban, Subang, West Java; description and its position in the Java vertebrate biostratigraphy. J. Geologi Sumberdaya Mineral 19, 1, p. 9-14.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/126/333)
(Mandible of Stegodon trigonocephalus at Cipanaruban River near Pasir Cabe paleontological site (Von Koenigswald 1935), ~6 km E of Subang. Presumably part of Cisaat Fauna, E Pleistocene)

Wibowo, U.P., E. Setiyabudi, I. Kurniawan & H. Insani (2015)- Indonesian Archipelago paleogeography as the natural laboratory of the Proboscidean migration and adaptation pattern. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-355, 4p.
(History of migration elephantoids (Sinomastodon, Stegoloxodon, Stegodon, Elephas) in Pleistocene- Holocene in Indonesian Archipelago)

Wibowo, U.P., I.Y.P. Suharyogi & E. Setiyabudi (2017)- The enigma of the existence of vertebrate fossils in the Flores Island. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI (JCM 2017), Malang, 3p. *(Extended Abstract)*
(Fossil analyses indicate Pleistocene vertebrate faunas on Flores fauna most likely from Java, not Sulawesi (characteristics of Stegodon, giant tortoise and hominids that look like descendants of Homo erectus)

Widianto, H. (1993)- Unite et diversite des hominides fossils de Java: presentation de restes humains fossils inedits. Doct. Thesis, Museum Nat. Histoire Naturelle, Inst. Paleontologie Humaine, Paris, p. 1-277. *(Unpublished)*
('Unity and diversity of Java fossil hominids: presentation of unpublished human fossil remains'. Cranial remains show three Homo erectus groups: robust group, Trinil-Sangiran and Ngandong. Mandibular remains show only one genus, Homo, and one species, erectus, with two subspecies defined here: Homo erectus paleojavanicus and Homo erectus javanicus)

Widianto H. (2001)- Searching for *Homo erectus* artifacts. In: E. Indriati (ed.) A scientific life: papers in honor of Prof. Dr. T. Jacob, Bigraf Publishing, Yogyakarta, p. 75-89.

Widianto, H. (2001)- The perspective on the evolution of Javanese *Homo erectus* based on morphological and stratigraphic characteristics. In: H.T. Simanjuntak et al. (eds.) Proc. Int. Colloquium on Sangiran: man, culture and environment in Pleistocene times, Solo 1998, p. 24-45.

Widianto, H. & D. Grimaud-Herve (2000)- Un nouveau crane humain fossile dans le dome de Sangiran (Java, Indonesie). Comptes Rendus Academie Sciences, Paris, Ser. IIA, 330, 12, p. 883-888.
('A recently discovered fossil human skull near Grogol Wetan village in Kabuh Fm of in Sangiran dome, Java'. New human remains from Kabuh Fm at Grogol Wetan, Sangiran dome, with morphological characters very similar to other hominids of same horizon. Part of homogeneous population of asiatic Homo erectus)

Widianto, H., D. Grimaud & S. Sartono (2001)- The evolutionary position of the Ngawi calvaria. Bull. Indo-Pacific Prehistory Assoc. 21, p. 162-169.
(online at: https://journals.lib.washington.edu/index.php/BIPPA/article/view/11778/10407)

(Ngawi 1 hominid skull originally described by Sartono 1991 from left bank Solo River near Selopuro, possibly derived from fluvial Pitu terraces, 5 km W of Ngawi. Probably member of Ngandong and Sambungmacan group of M-U Pleistocene Homo erectus)

Widianto, H., B. Toha & T. Simanjuntak (2001)- The discovery of stone implements in the Grenzbank: new insights into the chronology of the Sangiran flake industry. Bull. Indo-Pacific Prehistory Assoc. 21, p. 157-169.
(online at: http://ejournal.anu.edu.au/index.php/bippa/article/view/273/263)
(Sangiran flake industry stone tools made from chalcedony and silicified tuff found in situ in 'Grenzbank' layer between Kabuh and Pucangan Fms. Age at least 800,000 years ago)

Widianto, H. & V. Zeitoun (2003)- Morphological description, biometry and phylogenetic position of the skull of Ngawi 1 (East Java, Indonesia). Int. J. Osteoarchaeology 13, 6, p. 339-351.
(Rel. complete and well-preserved human skull of Ngawi 1, Solo River near Selopuro village (Sartono 1991) Morphologically closer to Ngandong-Sambungmacan (40,000 yrs) than to Trinil-Sangiran series. Question is whether skull belongs to subspecies of H. sapiens, or to H. soloensis. After local volcano-tectonic events at 71 ka and catastrophic events at 780 ka, first inhabitants of Java may have disappeared and Ngawi 1 may be new invader from Asia. Indonesian human group may have evolved at same time as Neandertals in Europe)

Widiasmoro (1998)- Late Tertiary- Early Quaternary magmatic arc and its relationship to the sedimentation processes in Sangiran, Central Java. In: H.T. Simanjuntak (ed.) Proc. Int. Colloquium on Sangiran: man, culture and environment in Pleistocene times, Solo 1998, Japan Found. and Nat. Res. Center Archaeology, Jakarta, p. 45-46.

Witkamp, H. (1920)- Kjökkenmöddinger ter Oostkust van Sumatra. Tijdschrift Koninklijk Nederlandsch Aardrijkskundig Genootschap 37, p. 572ï 574.
('Shell middens at the East coast of Sumatra'. First report of presence of several large mounds of sea shells, typically 20m wide and 3-5m high, NW of Bindjai in NE Sumatra. These represent 'kitchen waste' of Mesolithic hunter-gatherer peoples. Many of these prehistoric shell mounds have been destroyed for use as road cover and in local lime kilns. See also Schurmann, 1931)

Willemsen, G.F. (1986)- *Lutrogale palaeoleptonyx* (Dubois, 1908), a fossil otter from Java in the Dubois collection. Proc. Kon. Nederl. Akademie Wetenschappen B 89, 2, p. 195-200.
(M Pleistocene otter fossil from fluvial deposits Kedung Brubus, C Java)

Wolpoff, M.H. (1984)- Evolution in *Homo erectus*: the question of stasis. Paleobiology 10, 4, p. 389-406.
(Analyses of Homo erectus fossils, incl. Indonesian material. Shows evolutionary changes in increased cranial capacity and mandibular and dental features. Late end of H. erectus range difficult to define, as evidenced by difficulty in agreeing on whether Ngandong (C Java) samples are H. erectus or H. soloensis or H. sapiens)

Wolpoff, M.H., A.G. Thome, J. Jelinek & Y. Zhang (1984)- The case for sinking *Homo erectus*. 100 years of *Pithecanthropus* is enough! In: J.L. Franzen (ed) 100 years of *Pithecanthrops*, the *Homo erectus* problem. Courier Forschungsinstitut Senckenberg, Frankfurt, 171, p. 341-361.
(Homo erectus and Homo sapiens part of single evolving lineage in past two million years)

Wurster, C.M. & M.I. Bird (2015)- Barriers and bridges: early human dispersals in equatorial SE Asia. In: J. Harff et al. (eds.) Geology and archaeology: submerged landscapes of the continental shelf, Geol. Soc., London, Spec. Publ. 411, p. 235-250.
(Review of paleogeography of W Indonesian region during Last Glacial Period. Hominin fossil sites generally associated with areas of open vegetation. N-S savannah corridor probably existed on Sunda Shelf, facilitating rapid dispersal of early humans in SE Asia)

Yabuki, H. & M. Shima (1981)- Fission track age and chemical composition of tektite from the remain of *Pithecanthropus erectus*. Scientific Papers Inst. Physical Chemical Research 75, 2, p. 102-104.
(M Pleistocene age determination of tektite from Sangiran, C. Java)

Yokoyama, Y., C. Falgueres, F. Semah, T. Jacob & R. Grun (2008)- Gamma-ray spectrometric dating of late *Homo erectus* skulls from Ngandong and Sambungmacan, Central Java, Indonesia. J. Human Evolution 55, p. 274-277.
(Hominid fossils from Ngandong and Sambungmacan, C Java, Indonesia considered youngest representatives of Homo erectus (but much younger than and different from typical Sangiran H. erectus; JTvG). Dating of three skulls established minimum age of ~40 ka, with upper age limit ~60-70 ka. Homo erectus of Java possibly contemporaneous with earliest Homo sapiens in SE Asia)

Yokoyama, T., S. Hadiwisastra, W. Hantoro, T. Matsuda & S. Nishimura (1980)- K-Ar age of the 'Lahar Tuff' lowest part of the Pucangan formation, Pleistocene of Sangiran, Central Java, Indonesia. J. Riset Geologi Pertambangan (LIPI) 3, 1, p. 1-7.
(K-Ar age of 2.06 ± 0.6 Ma from andesite from 'Lahar Tuff' of base of Pucangan Fm in W Sangiran Dome. Layer has normal magnetic polarity, maybe correlated with Olduvai Event (1.67-1.87 Ma))

Yokoyama, T. & I. Koizumi (1989)- Marine transgressions on the Pleistocene Pecangan Formation in the Sangiran area, central Java, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 72, p. 177-193.
(Diatoms and electric conductivity suggest four marine transgressions in Pleistocene Pucangan Fm between 1.8- 0.73 Ma, reflecting glacial eustasy. First transgression at ~1.5 Ma)

Yudha, D.S. (2008)- Reevaluation du crane Ngawi 1 (*Homo erectus*, Java, Indonesie), apports de lôimagerie 3D et des analyses multivariees. Master Thesis Quaternaire et Prehistoire, Museum Nat. Histoire Naturelle, Paris, p. 1-55.
(online at: http://hopsea.mnhn.fr/pc/thesis/M2_DONAN_S_Y.pdf)
('Reevaluation of the Ngawi 1 skull (Homo erectus, Java, Indonesia); 3D imaging and multivariate analyses'. M-L Pleistocene Ngawi 1 skull found in 1987 morphologically close to 'late Homo erectus' Ngandong and Sambungmacan hominids. Morphological characteristics of Ngawi skull not directly comparable to Chinese (Sinanthropus) and African Homo erectus (H. ergaster), but one African individual (Olduvai 9) fits well in Ngangong-Ngawi group)

Yurnaldi, D., R. Setiawan & E.Y. Patriani (2018)- The magnetostratigraphy and the age of Soôa Basin fossil-bearing sequence, Flores, Indonesia. Indonesian J. Geoscience 5, 3, p. 221-234.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/433/269)
(Three fossil-bearing intervals recognized in Pleistocene Soa Basin of Flores, with upper one holding important hominin fossils. Paleomagnetic sampling of four sections shows two reverse and two normal polarity zones. Reverse magnetozones part of Matuyama Chron, normal magnetozones are Jaramillo and Brunhes chrons. Tangi Talo fossil layer below base Jamarillo, older than previously thought (>1.07 Ma). Mata Menge fossil intervals above Matuyama-Brunhes boundary (<0.78 Ma))

Yuwono, J.S.E. (2009)- Late Pleistocene to Mid-Holocene coastal and inland interaction in the Gunung Sewu karst area, Yogyakarta. Bull. Indo-Pacific Prehistory Assoc. (IPPA) 29, p. 33-44.
(On Java Southern Mountains karst and prehistoric settlement)

Zaim, Y. (1981)- Revisi umur dan stratigrafi Formasi Pucangan di daerah Perning, Mojokerto, Jawa Timur. Proc. 10th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, p. 230-237.
('Revision of age and stratigraphy of the Pucangan Fm in the Perning area, Mojokerto, E Java'. Top Pucangen Fm below mammal-bearing Kabuh Fm with Late Pliocene Globorotalia tosaensis (N21))

Zaim, Y. (1989)- Les formations ôvolcano-sedimentairesö quaternaires de la region de Patiayam (Central Java, Indonesie). Milieu de sedimentation et mineralogie. Doct. Thesis Museum Nat. Histoire Naturelle, Universite de Paris, p. 1-260. *(Unpublished)*
('The Quaternary 'volcano-sedimentary' formations of the Patiayam region (C Java, Indonesia); depositional environment and mineralogy')

Zaim, Y. (1996)- The age of Pitu Terrace of Watualang region, Ngawi (East Java), Indonesia. Buletin Geologi (ITB) 26, p. 31-36.
(Six Solo River terraces in area of Watualang (Ngawi). New vertebrate fossils in Pitu Terrace include Buffalus bubalus var sondaicus fosilis, suggesting age not older than Late Pleistocene, equivalent of Ngandong fauna).

Zaim, Y. (2004)- A new discovery of *Stegodon* in Early Pleistocene sediments from the Sumedang area (West Jwawa, Indonesia). 18th. Int. Senckenberg Conf., Weimar 2004, 1p. *(Abstract only)*
(online at: www.senckenberg.de/fis/sngconf18/doc/abstracts/115_Zaim.pdf)
(Summary of Zaim 2002 paper. Dwarf Stegodon tooth from E Pleistocene of W Java, probaby of Satir or Ci Saat fauna indicates E Pleistocene island in this part of W Java)

Zaim, Y. (2010)- Geological evidence for the earliest appearance of hominins in Indonesia. In: J.G. Fleagle et al. (eds.) Out of Africa 1, The first hominin colonization of Eurasia, Vertebrate Paleobiology and Paleoanthropology 2, Springer Science, p. 97-110.
(Until end Tertiary most Indonesian regions still in marine environment. Tectonics and glacioeustatic changes during Pleistocene formed Indonesian Archipelago. Sunda Land acted as land bridge and migration route for Homo erectus and vertebrate faunas from Asia mainland to Java. First arrival of vertebrate faunas from Asia to Indonesia through Sunda Land at end of Late Pliocene, followed by arrival of early hominin (Homo erectus paleojavanicus (= Meganthropus paleojavanicus)) to Java in Early Pleistocene (1.6-1.0 Ma))

Zaim, Y. & R. Ardan (1998)- A premolar of *Homo erectus* from Patiayam region, Central Java. Buletin Geologi (ITB) 28, p. 31-36.
(First lower permanent premolar of Homo erectus, in fluvial sandstones of E-M Pleistocene Slumprit Fm)

Zaim, Y., R.L. Ciochon, J. Polanski, F.E. Grine, E.A. Bettis, Y. Rizal, R. Larick, M. Heizler, Aswan et al. (2011)- New 1.5 million-year-old *Homo erectus* maxilla from Sangiran (Central Java, Indonesia). J. Human Evolution 61, 4, p. 363-376.
(online at: https://pdfs.semanticscholar.org/50d0/b3d0046bb13698fa66f430d7e9799274640e.pdf)
(New H. erectus left maxilla fragment from cemented gravelly sands at base Grenzbank Zone at Bapang, Sangiran. Pumice hornblende 2m above locality with 40Ar/39Ar age of 1.51 Ma (ages interpreted here for Sangiran section older than most other workers and not in agreement with paleomag, tektites, etc.?; JTvG)

Zaim, Y. & M. Delaune (1990)- Nouvelles donnees sur la stratigraphie et le milieu de sedimentation des formations volcano-sedimentaires quaternaires de la region de Patiayam (Java- Indonesie). Geodynamique 5, 2, p. 135-150.
('New data on the stratigraphy and depositional environment of the volcano-sedimentary formations of the Patiayam region (Java, Indonesia)'. Shoshonitic volcanic activity of Patiayam Dome, S of Muria Volcano in N Java, initiated ~2 Ma ago. During Lower Pleistocene (0.9 Ma) still active and contemporaneous with beginning of activity at Muria 1)

Zaim, Y., J. de Vos, O.F. Huffman, F. Aziz, J. Kappelman & Y. Rizal (2003)- A new antler specimen from the 1936 Perning hominid site, East Jawa, Indonesia, attributable to *Axis lydekkeri* (Martin, 1886). Jurnal Teknologi Mineral, Bandung, 10, 2, p. 45-52.
(Nearly complete left antler, attributed to Axis lydekkeri, found in 2001 in excavation E of relocated site that produced Homo modjokertensis in 1936. Not reported previously from hominid-bearing bed)

Zaim, Y., R. Larick, R.L. Ciochon, Suminto, Y. Rizal & Sujatmiko (1999)- Karakteristik satuan Lahar Bawah dari formasi Pucangan di Sangiran, Jawa Tengah. Buletin Geologi. (ITB) 31, p. 67-84.
('Characteristics of the lower lahar unit in the Pucangan Fm in Sangiran'. See also Bettis et al. 2004)

Zaim, Y. & R. Marino (2002)- Pygmy *Stegodon* dari Desa Cariang, Kecamatan Tomo, Kab. Sumedang, Jawa Barat. Buletin Geologi (ITB) 34, 1, p. 45-52.

('Pygmy Stegodon from Cariang Village, Tomo District, Sumedang, West Java'. New species of small elephantoid Stegodon cariangensis in E Pleistocene lacustrine black clay in Majalengka, W Java (deposits unconformable above Late Pliocene marine clays of Kaliwangu Fm))

Zaim, Y., Y. Rizal & Aswan (2007)- The geological background of hominid colonization of Java. In: A.M. Semah & K. Setiagama (eds.) Proc. Int. Conf. First islanders- human origins patrimony in Southeast Asia, AsiaLink-HOPSea Programme, Paris, p. 92-98.
(online at: http://hopsea.mnhn.fr/pc/brochures/2007HOPseaFI.pdf)

Zaim, Y., Y. Rizal, Aswan & B.S. Fitriyana (2006)- S. Sartono: dari hominid ke delapsi dengan kontroversi. Penerbit Institut Teknologi Bandung, Bandung, p. 1-183.
('S. Sartono: from hominids to 'delapsi' with controversy'. Collection of papers)

?Zaim, Y., Y. Rizal, Suminto, A. Bettis, R.L. Ciochon & R. Larick (2002)- Vertebrate fossils from the Lower Lahar, Sangiran Formation, Central Java, Indonesia. Buletin Geologi ?

Zanolli, A. (2013)- Additional evidence for morpho-dimensional tooth crown variation in a new Indonesian *H. erectus* sample from the Sangiran Dome (Central Java). PlosOne 8, 7, e67233, p. 1-15.
(online at: http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0067233&type=printable)
(Fifteen new Homo erectus fossil dental remains found in last two decades in Kabuh Fm of Sangiran Dome area, some from excavation of human occupation floors in basal Kabuh Fm)

Zanolli, A. (2014)- Molar crown inner structural organization in Javanese *Homo erectus*. American J. Physical Anthropology 156, 1, p. 148-157.
(Study of 7 Homo erectus permanent molar crowns from late E- early M Pleistocene Kabuh Fm of Sangiran, C Java. Features differ from penecontemporaneous African H. erectus/ergaster and H. heidelbergensis, as well as in Neanderthals, but occur in recent human populations)

Zanolli, A., L. Bondioli, L. Mancini, A. Mazurier, H. Widianto, R. Macchiarelli (2012)- Brief communication: Two human fossil deciduous molars from the Sangiran dome (Java, Indonesia): outer and inner morphology. American J. Physical Anthropology 147, 3, p. 472-481.
(Two deciduous crowns collected near Pucung, probably from E-M Pleistocene Kabuh Fm, or from E Pleistocene 'Grenzbank'. Probably from Homo erectus)

Zeitoun, V. (2000)- Revision de lôespece *Homo erectus* (Dubois, 1893). Bull Memoires Soc. Anthropologie de Paris, N.S., 12, 1-2, p. 1-200.
('Reappraisal of the species Homo erectus'. Mainly on details of skull morphology)

Zeitoun, V., V. Barriel & H. Widianto (2016)- Phylogenetic analysis of the calvaria of *Homo floresiensis*. Comptes Rendus Palevol 15, 5, p. 555-568.
(online at: www.sciencedirect.com/science/article/pii/S1631068316000130)
(Metrics of calvariae of human fossils from Liang Bua, Flores, indicate LB1 is included in Homo erectus clade, and less similar to Sambungmacan-Ngandong-Ngawi group. H. floresiensis not pathological modern human)

Zeitoun, V., W. Chinnawut, R. Debruyne & P. Auetrakulvit (2015)- Assessing the occurrence of *Stegodon* and *Elephas* in China and Southeast Asia during the Early Pleistocene. Bull. Soc. Geologique France 186, 6, p. 413-427.
(Critical review of validity of associations of Stegodon and Elephas in E Pleistocene of China and SE Asia)

Zeitoun, V., W. Chinnawut, R. Debruyne, S. Frere & P. Auetrakulvit (2016)- A sustainable review of the Middle Pleistocene benchmark sites including the *Ailuropoda-Stegodon* faunal complex: The Proboscidean point of view. Quaternary Int. 416, p. 12-26.
(Age and ecological significance of M Pleistocene Ailuropoda-Stegodon mammal assemblages still debated)

Zeitoun, V., F. Detroit, D. Grimaud-Herve & H. Widianto (2010)- Solo man in question: convergent views to split Indonesian *Homo erectus* in two categories. Quaternary Int. 223-224, p. 281-292.
(Homo (Javanthropus) soloensis Oppenoorth 1932 from Solo River bank terraces thought to belong to either archaic Homo sapiens, or (most paleoanthropologists:) evolved Homo erectus. Chronological gap splits two categories, posing question of possibly two separate species. Catastrophic event around Brunhes/Matuyama geomagnetic reversal (Australasian tektite strewn field 770,000 or 803 ka) must have triggered shifting among Asian populations and environments. Toba eruption of 17 ka probably also had drastic global consequences on human ecology and evolution)

Zeitoun, V., H. Forestier & S. Nakbunlung (2008)- Prehistoires au sud du Triangle d'Or. IRD Editions, Paris, p. 1-252.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/divers16-07/010045202.pdf)
('Prehistory in the south of the Golden Triangle'. Prehistory/ archeology of N Thailand, with reviews of hominid and mammal occurrences in SE Asia)

Zeitoun, V., A. Lenoble, F. Laudet, J. Thompson, W.J. Rink & T.D. Asa (2008)- Taphonomy and paleoecological significance of the *Ailuropoda-Stegodon* complex of Ban Fa Suai (Northern Thailand). In: J.P. Pautreau et al. (eds.) 11th Int. Conf. Eurasea (EurASEAA 2006), Bougon 2006, Chiang Mai, p. 51-57.
(online at: https://halshs.archives-ouvertes.fr/halshs-00423522/document)
(Sino-malayan fauna of Von Koenigswald (1938), more commonly termed Ailuropoda (giant panda) - Stegodon fauna complex viewed as indicator of tropical upper M Pleistocene in SE Asia. Also contains primates Gigantopithecus and Pongo, Sus, Bos, Cervus, Hylobates, Tapirus, etc.. Cave of the Monk mixed assemblage?)

Zeitoun, V., H. Widianto & T. Djubiantono (2007)- The phylogeny of the Flores Man: the cladistic answer. In E. Indriati (ed.) Proc. Int. Seminar Southeast Asian paleoanthropology: Recent advances on Southeast Asian paleoanthropology and archaeology, Gadjah Mada University, Yogyakarta, p. 54-60.

Zhang, P., W. Huang & W. Wang (2010)- Acheulean handaxes from Fengshudao, Bose sites of South China. Quaternary Int. 223-224, p. 440-443.
(Acheulian lithic assemblage rich in handaxes from Fengshudao (Guangxi province, S China), adjacent to N Bose basin. Age from tektite dating ~800 ka. Artifacts manufactured from quartzite, sandstone, volcanic rocks, chert and quartz)

Zijlstra, J.S., L.W. van den Hoek Ostende & R. Awe Due (2008)- Verhoevenȏs giant rat of Flores (*Papagomys theodorverhoeveni*, Muridae) extinct after all? Contrib. Zoology, 77, 1, p. 25-31.
(online at: https://www.repository.naturalis.nl/document/98741)
(Giant rat species from Flores Papagomys theodorverhoeveni believed to be extinct, but reported by Suyanto and Watts (2002) as still extant, on basis of single museum specimen. However, identification of this specimen refuted here)

Zin-Maung-Maung-Thein, Thaung-Htike, T. Tsubamoto, M. Takai, N. Egi & Maung-Maung (2006)- Early Pleistocene Javan rhinoceros from the Irrawaddy Formation, Myanmar. Asian Paleoprimatology 4, p. 197-204.
(online at: http://repository.kulib.kyoto-u.ac.jp/dspace/handle/2433/199762)
(Rhinoceros sondaicus (Java rhino) in upper part of E Pleistocene Irrawaddy Fm. Species widespread in upper M Pleistocene- U Pleistocene of Laos, Vietnam, Cambodia, Thailand, Java, Sumatra and Borneo, and probably originated in E Pleistocene in continental Asia)

Zin-Maung-Maung-Thein, M. Takai, T. Tsubamoto, Thaung-Htike, N. Egi & Maung-Maung (2008)- A new species of *Dicerorhinus* (Rhinocerotidae) from the Plio-Pleistocene of Myanmar. Palaeontology 51, 6, p. 1419-1433.
(online at: http://onlinelibrary.wiley.com/doi/10.1111/j.1475-4983.2008.00813.x/epdf)
(Skull and mandible of Dicerorhinus gwebinensis n.sp. from upper Irrawaddy sediments (Plio-Pleistocene) in C Myanmar. More similar to extant species D. sumatrensis (Sumatran rhinoceros) than to other species of genus)

Zin-Maung-Maung-Thein, M. Takai, T. Tsubamoto, N. Egi, Thaung-Htike, T. Nishimura, Maung-Maung & Zaw-Win (2010)- A review of fossil rhinoceroses from the Neogene of Myanmar with description of new specimens from the Irrawaddy sediments. J. Asian Earth Sci. 37, p. 154-165.
(8 species of fossil rhinoceros in Neogene of C Myanmar: M-L Miocene 'Diceratherium' naricum, Brachypotherium spp., etc. Latest Miocene -Pleistocene onset of extant genera Rhinoceros and Dicerorhinus. Dispersed to island SE Asia from continental Asia during E-M Pleistocene periods of low eustatic sea level)

Zwierzycki, J. (1926)- Een vondst uit de Palaeolithische cultuurperiode in een grot in Boven-Djambi. De Mijningenieur 7, 4, p. 64-67.
('A discovery from the Paleolithic culture period in a cave in Upper Jambi'. Tianko Panjang cave excavation in early 1920's yielded some animal bones (deer, pangolin) and obidian artifacts (see also Sarasin 1914, Bronson & Asmar 1975))

Zwierzycki, J. (1926)- De beteekenis van nieuwe fossile werveldiervondsten bij Boemiajoe. De Mijningenieur 7, 12, p. 229-234.
('The significance of new fossil mammal discoveries near Bumiayu'. Localities in river valleys of Kali Glagah and Ci Saat, 'West Kendeng Zone', C Java. Ongoing excavations of mammal bones in several horizons in ~1200m thick series of coarse sandstones, conglomerates and clays with fresh-water molluscs. Fossil elephants (incl. Stegodon, Elephas), hippopotamus, etc., described by Stehlin (1925). Age believed to be Late Pliocene, possibly E Pleistocene like Trinil (lecture summary; no figures) (more Bumiayu locality info see Semah 1997))

Zwierzycki, J. (1948)- Przedhistoruczne typy ludzkie na Jawie. Widomosci Museum Ziemi, Warsaw, p. 137-172.
('Prehistoric types of Man on Java'. In Polish with English summary. Five vertebrate horizons in C and E Java: (1) Tjisande, (2) Tjidjoelang, (3) Lower Boemiajoe, (4) Upper Boemiajoe and (5) Trinil)

XI. HYDROCARBONS, COAL, MINING

XI.1. Hydrocarbon Occurrences/ Assessment

(Additional references on hydrocarbons/ fields that are specific to one region are listed under these regions)

Akil, I., H.M.S. Hartono, J. Widartoyo, K. Roeslan et al. (1980)- Note on the hydrocarbon potential of eastern Indonesia. Proc. 17th Sess. CCOP, Bangkok, p. 334-356.
(Only 5% of Indonesia current oil production from E Indonesia, but higher potential)

Atkinson, C., M. Renolds & O. Hutapea (2006)- Stratigraphic traps in the Tertiary rift basins of Indonesia: case studies and future potential. In: M.R. Allen et al. (eds.) The deliberate search for the stratigraphic trap. Geol. Soc., London, Spec. Publ. 254, p. 105-126.
(Stratigraphic traps require charged petroleum system, favourable basin and reservoir architectures, low dips and good seal integrity. Paleogene rift basins: syn-rift source and reservoir sands; 'early post-rift' phase with better quality reservoir sandstones and reef carbonates; 'late post rift' transgression with marine shale regional seal. Late Tertiary 'orogenic' phases trigger migration up flanks and create structures at shallower levels. Potential for large reserves in stratigraphic traps. Unexplored basins in Asahan Offshore PSC, N Sumatra and Biliton PSC, W Java discussed)

Barber, C.T. (1935)- The natural gas resources of Burma. Mem. Geol. Survey of India 66, 1, p. 1-172.
(Review of oil and gas fields and seeps in Tertiary of Myanmar. Descriptions of gas fields Yenangyaung, Singu, Lanywa, Yenangyat-Yethaya, Minbu-Palanyon, Indaw, etc.)

Bataafsche Petroleum Maatschappij (BPM) (1957)- Oil in Netherlands New Guinea. Bataafsche Petroleum Maatschappij, Public Relations Department, Mouton, The Hague, p. 1-32.

Beddoes, L.R. (ed.) (1973)- Oil and gas fields of Australia, Papua New Guinea and New Zealand. Tracer Petroleum and Mining Publ., p. 1-391.
(78 oil-gas fields in 12 basins with reserves and production data to end 1972)

Beddoes, L.R. (1980)- Hydrocarbon plays in Tertiary basins of Southeast Asia. SEAPEX Offshore SE Asia Conf., Singapore 1980, 18p.

Beddoes, L.R. (1981)- Hydrocarbon plays in Tertiary basins of Southeast Asia. In: M.J. Valencia (ed.) Proc. EAPI/CCOP Workshop, Honolulu 1980, Energy 6, 11, p. 1141-1163.
(Eight basin areas, peripheral to Sunda Shield exhibit general continuity of Tertiary sedimentary cycles, but each basin unique structural, stratigraphic and temperature gradient character, reflecting its individual plate tectonic setting. With examples of Tertiary depositional cycles and hydrocarbon occurrences from E Java Sea and NW Palawan)

Beers, H.W. (ed.) (1970)- Indonesia: resources and their technological development. University Press of Kentucky, Lexington, p. 1-282.
(Papers and papers and discussions from seminar held in Lexington, May 1967)

Brouwer, H.A. (1926)- Oil provinces in the Netherlands East Indies. Proc. 2nd Pan-Pacific Science Congress, Melbourne and Sydney, Australia 1923, 2, p. 1280-1284.
(Oil producing areas in Netherlands Indies in 'geosynclinal areas' of Tertiary sediments, that were subsequently folded)

Brown, J.L. & J. E. McCallum (1997)- An atlas of sealing faults in SE Asia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum systems of SE Asia and Australasia, Jakarta, Indon. Petroleum Assoc., p. 837-841.

Carlson, R.M.K., S.C. Teerman, J.M. Moldowan, S.R. Jacobson, E.I. Chan et al. (1993)- High temperature gas chromatography of high-wax oils. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 483-507.

Caughey, C., T.C. Cavanagh, J.N.J. Dyer, A. Kohar, H. Lestarini, R.A. Lorentz et al. (eds.) (1994)- Seismic atlas of Indonesian oil & gas fields, vol. 1 (Sumatra). Indon. Petroleum Assoc. (IPA), Jakarta.

Caughey, C., J.N.J. Dyer, A. Kohar, H. Lestarini, W.R. Lodwick et al. (eds.) (1995)- Seismic atlas of Indonesian oil & gas fields, vol. 2 (Java, Kalimantan, Natuna and Irian Jaya). Indonesian Petroleum Assoc. (IPA), Jakarta, , p.

CCOP (1974)- The offshore hydrocarbon potential of East Asia: a review of investigations 1966- 1973. Techn. Rept., p. 1-67.

CCOP (2002)- Energy overview in East and Southeast Asia. Petromin, August 2002, p. 8-36.

Champeny, J.D. (1981)- Petroleum potential in the Far East. In: M.T. Halbouty (ed.) Energy resources of the Pacific region, American Assoc. Petrol. Geol. (AAPG), Studies in Geology 12, p. 189-194.

Chung, S.K., A.S. Gan, K.M. Leong & C.H. Kho (1977)- Ten years of petroleum exploration in Malaysia. United Nations ESCAP, CCOP Techn. Bull. 11, p. 111-142.

Clement, M. (1910)- Le petrole aux Indes neerlandaises. Annales des Mines 10, 17, p. 386-433.
('Petroleum in the Netherlands Indies')

Cockcroft, P., J. Anli & J. Duignan (1988)- EOR potential of Indonesian reservoirs. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 73-108.

Cockroft, P.J., G.A. Edwards, R.S.K. Phoa & H.W. Reid (1987)- Applications of pressure analysis and hydrodynamics to petroleum exploration in Indonesia. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-40.
(General paper on pressure, hydrodynamics, etc.)

Cockroft, P.J. & K. Robinson (1988)- Chemistry of oilfield waters in South East Asia and their application to petroleum exploration. Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 8, p. 221-238.
(Most subsurface formation waters in SE Asia fresh-brackish and range from meteoric bicarbonate to connate chloride-calcium waters. Predominance of fresh waters may be related to depositional environment and relatively young age of sediments which are typically undergoing compaction and dewatering)

Courteney, S. (1996)- The future hydrocarbon potential of Western Indonesia. In: C.A. Caughey, D. Carter et al. (eds.) Proc. Int. Symp. Sequence Stratigraphy in SE Asia, Jakarta 1995, Indon. Petroleum Assoc., p. 397-415.
(Correlative framework based on sequence stratigraphy established for productive basins in Sumatra, Java and Kalimantan. Examples of 'hydrocarbon system' from perspective of source, reservoir, seal and timing)

Courteney, S., P. Cockroft, R.S.K. Phoa & A.W.R. Wight (eds.) (1989)- Indonesia Oil and Gas Fields Atlas. Indon. Petroleum Assoc. (IPA), 6 volumes.

Courteney, S., P. Cockroft, R. Lorentz, R. Miller et al. (eds.) (1990)- Indonesian Oil and Gas Fields Atlas, VI Eastern Indonesia. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-119.

Darissalam, M.M. (1992)- Peluang dan tantangan lapangan-lapangan minyak tua di Indonesia. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta,1, p. 35-44.

('Chance and challenge of old oil fields in Indonesia'. Listing of early 1900's oil fields in N, C and S Sumatra (12+6+35), Java- Madura (33), Kalimantan (11) and West Papua (8) with potential for redevelopment. With cumulative production, number of wells and year of abandonment)

De Greve, W.H. (1865)- Petroleum en aardolie en haar voorkomen in Nederlandsch Indie. Tijdschrift Nijverheid en Landbouw in Nederlandsch Indie 11, p. 281-356.
('Petroleum and its occurrence in Netherlands Indies'. Very early paper on petroleum occurrences and surface seeps in Netherlands Indies, and description of oil samples in now defunct 'Colonial Museum' in Haarlem. All seeps on Java N of volcanic arc (except one in Banyumas), and not related to volcanism. Most seeps in sandstone beds of Lower Tertiary and commonly associated with gas seeps, mud volcanoes and salt water wells. Listing of seeps in West Java (Priangan, Cirebon), C Java (Semarang, Rembang, Banyumas, Madiun, Solo), East Java (Surabaya, Madura, Pasaruan, Kediri). Also in Sumatra (Palembang), Kalimantan (SE), Sulawesi (Manado) and East Seram. No maps, figures)

De Jongh, C.A. (1922)- Geschiedenis van de petroleumindustrie op Java. De Mijningenieur 3, 5, p. 63-66.
(online at: https://babel.hathitrust.org/cgi/pt?id=coo.31924081565537;view=1up;seq=279)
('History of the petroleum industry on Java'. Brief history of petroleum exploration on Java-Madura since. With total production figures from 300 to 33,625 tons in 1890-1918)

De Loos, D. (1899)- Gesteenten en mineralen van Nederlandsch Oost-Indie, 4: Petroleum. Koloniaal Museum Haarlem, Erven Loosjes, p. 1-59.
('Rocks and minerals from Netherlands East Indies- 4: petroleum'. Early, popular review of occurrence and properties of petroleum in Indonesia)

De Stoppelaar, L.P. (1897)- De petroleum industrie, in het bijzonder die van Nederlandsch Oost-Indie: overzicht bewerkt ten behoeve van houders van petroleumwaarden. J.H. de Bussy, Amsterdam, p. 1-225.
(online at: https://ia801408.us.archive.org/12/items/depetroleumindu00stopgoog/depetroleumindu00stopgoog.pdf)
('The petroleum industry, in particular that of Netherlands East Indies: overview modified for holders of petroleum shares'. Not much technical detail. No figures)

Du Bois, E.P. (1980)- Major gas reserves of Southeast Asia and Australasia: an overview. Proc. 17th Sess. CCOP, Bangkok 1980, p. 286-303.

ECAFE (1967)- Case histories of oil and gas fields in Asia and the Far East (Second Series). United Nations ECAFE Mineral Resources Development Ser. 29, p. 1-96.

Energy Information Administration (1984)- The petroleum resources of Indonesia, Malaysia, Brunei, and Thailand. U.S. Department of Enegy, Washington, p. 1-183.
(Brief review and tables of fields disvered, wells drilled, production histories etc. from 1880s- early 1980s)

Fletcher, G.L. & R.A. Soeparjadi (1976)- Indonesia's Tertiary basins- the land of plenty. In: Proc. Offshore South East Asia Conf. 1976, Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), Paper 8, p. 1-54.

Fletcher, G.L. & R.A. Soeparjadi (1977)- The land of plenty: Indonesia's 28 Tertiary basins hold 99 percent of production. Oil and Gas J. 75, 1, p. 150-156.
(Abbreviated version of Fletcher and Soeparjadi (1976) paper in SEAPEX Conference)

Gunawan, B.K., S.E. Saputra, M.K. Utama, C. Armandita & J.A. Paju (2008)- Play system from the last decade discoveries in Indonesia basins. Presentation AAPG Ann. Convention, San Antonio, April 2008, 24p.
(online at: http://www.searchanddiscovery.com/documents/2008/08119gunawan/images/gunawan)
(Overview of old and new plays in Indonesian basins)

Hatley, A.G. (1976)- Offshore petroleum exploration in East Asia, an overview. In: Offshore SE Asia Congress 1976, Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), Paper 1, p. 1-22.

Hatley, A.G. (1978)- Asia's oil prospects and problems: an overview of petroleum exploration activity in East Asia. Offshore SE Asia Congress 1978, Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p.

Heriyanto, N. & S. Aloy (1995)- Mesozoic petroleum exploration in the eastern part of Indonesia: status, concept and future activity. In: IPA Symposium on Mesozoic stratigraphy of eastern Indonesia, 8p.

Hiller, K. (1994)- Thailand/ Thailand. In: H. Kulke (ed.) Regional petroleum geology of the world, I, Borntraeger, Berlin, p. 709-722.
(Brief review of oil-gas basins and fields of Thailand, Sarawak, Sabah; in German)

Hiller, K. (1994)- Malaysia/ Malaysia. In: H. Kulke (ed.) Regional petroleum geology of the world, I, Borntraeger, Berlin, p. 723-738.
(Brief review of oil-gas basins and fields of Malay Basin, Sarawak and Sabah; in German)

Hiller, K. (1988)- On the petroleum geology of Bangladesh. Geol. Jahrbuch, D 90, p. 3-32.
(Five petroleum-geological provinces distinguished in Bangladesh. Gas fields in Miocene sandstones of foldbelt province)

Holloway, N. (2011)- SE Asia exploration, still going strong or heading for eclipse? Proc. 2011 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 18, p. 1-38. *(Abstract + Presentation)*
(IHS review. SE Asia still attrctive for independents)

Howes, J.V.C. (1997)- Petroleum resources and petroleum systems of SE Asia, Australia, Papua New Guinea and New Zealand. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 81-100.

Howes, J.V.C. (2001)- Future petroleum production from Indonesia and Papua New Guinea. In: M.W. Downey et al. (eds.) Petroleum provinces of the Twenty-first century. American Assoc. Petrol. Geol. (AAPG) Mem. 74, p. 281-286.

Howes, J.V.C. & R.A. Noble (eds.) (1997)- Proceedings International Conference Petroleum Systems of SE Asia and Australasia, Jakarta 1997, Indonesian Petroleum Assoc. (IPA), p. 1-1025.

Howes, J.V.C. & S. Tisnawijaya (1995)- Indonesian petroleum systems, reserve additions and exploration efficiency. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-18.
(Indonesia EUR ~50 BBOE, roughly even oil- gas)

Hundling, I.E. (1942)- Oil-possibilities in Ceram, New Guinea, Celebes, and Boeton. Geological Survey Report 1942, Archives Bureau of Mines 37/dy, Bandung, p. . *(Unpublished)*

Ibrahim, A., N. Pudyo, A. Satyana & S. Saputra (2006)- Exploration hot zones in Kalimantan and Eastern Indonesia: a two decade review. Proc. SEG Ann. Meeting, New Orleans 2006, p. 1-5. *(Extended Abstract)*
(>160 exploration wells drilled in last two decades with success ratio of 41% and discovered in place reserves of 6 BBOE. Most attractive plays are Jurassic Roabiba-Plover Play system (Tangguh, Abadi gas fields), Jurassic carbonates (Oseil), and Miocene carbonate in collision zone (Tomori))

Jardine, J. (1997)- Dual petroleum systems governing the prolific Pattani Basin, offshore Thailand. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Symp. Petroleum Systems of SE Asia and Australia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 351-363.
(Pattani Basin largest of series of N-S trending Tertiary rifts in Gulf of Thailand. Gas and less oil trapped in Miocene fluvial sandstones in faulted graben systems. Two petroleum systems in basin: (1) dominant Miocene

gas-generating coals and shales, currently mature in deeper portions of basin; (2) Oligocene oil-prone lacustrine shales, mature in basin flank areas but overmature in central trough)

Junghuhn, F. (1865)- Brief gerigt aan Zijne Excellentie den Gouverneur-Generaal van Ned. Indie omtrent de exploitatie van aardolie op Java. Tijdschrift Nijverheid Landbouw in Nederlandsch-Indie 11, p. 357-361.
(online at: https://babel.hathitrust.org/cgi/pt?id=coo.31924096303676;view=1up;seq=375)
('Letter to His Excellency the Governor-General of Netherlands Indies regarding the exploitation of petroleum on Java'. Oil seeps present at several localities in Cirebon Residency, but bitumen is tar-like. Also, none of thousands of hot springs contain oil, chance of successful exploitation of petroleum from wells on Java is deemed to be low. Recommends to drill saltwater well in Grobogan Plain instead)

Kingston, J. (1988)- Undiscovered petroleum resources of Indonesia. U.S. Geol. Survey (USGS), Open File Report 88-379, p. 1-217.
(online at: http://pubs.usgs.gov/of/1988/0379/report.pdf)
(Nearly all of Indonesia's petroleum resources in 13 of 44 sedimentary basins. W Indonesia, underlain by Sunda continental block, contains >% of present petroleum reserves and exploration reached early-middle maturity. Undiscovered recoverable petroleum resources of Indonesia are 10 BBO and condensate, and 95 Tcf gas (not including 60 Tcf of discovered, but undeveloped gas))

Koesoemadinata, R.P. (1969)- Outline of the geologic occurrence of oil in Tertiary basins of West Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 53, 11, p. 2368-2376.
(Many W Indonesian Tertiary basins similar geologic history, beginning with transgression, followed by bathyal conditions, and terminating with regression ate end of basin evolution. Transgressive facies with excellent petroleum potential in all basins, and greater reserves than regressive facies. Heavy paraffinic oil expected in transgressive strata, light paraffinic or asphaltic oil in regressive facies)

Koesoemadinata, R.P. (1980)- Geologi minyak dan gas bumi, 2^{nd} Ed. Institut Teknologi Bandung (ITB), vol. 1, p. 1-259, vol. 2, p. 1-295.
(Geology of oil and gas textbook, with examples from Indonesian basins)

Koning, T. (2003)- Oil and gas production from basement reservoirs: examples from Indonesia, USA and Venezuela. In: N. Petford & K.J.W. McCaffrey (eds.) Hydrocarbons in crystalline rocks. Geol. Soc., London, Spec. Publ. 214, p. 83-92.
(Basement reservoirs main contributor of oil production in Vietnam. In Indonesia production from basement rocks has been minimal, but recent large gas discovery in pre-Tertiary fractured granites in S Sumatra)

Kusumastuti, A., A. Mortimer, C. Todd, E. Guritno, G. Goffey, M. Bennet & S. Algar (2001)- Deep-water petroleum provinces of SE Asia: a high level overview. In: A. Setiawan et al. (eds.) Proc. Deep-water sedimentation of Southeast Asia, FOSI 2nd Regional Seminar, Jakarta 2001, p. 10-15. *(Extended Abstract)*

Longley, I. (2015)- Counter-cyclic strategic thinking and symbiotic serendipity- will they work in Australasia? Or are we all doomed to work for myopic engineers in the onshore USA? A personal view of the future. Proc. 2015 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 5.3, p. 1-3. *(Extended Abstract + Presentation)*
(Australasia (SE Asia, Australia, PNG and NZ) viewed by many as mature exploration province since glory days of 1960's-1970's, but at least seven lightly drilled provinces with significant remaining potential)

Masters, C.D. & J.P. Riva (1981)- Assessment of conventionally recoverable petroleum resources of Indonesia. U.S. Geol. Survey (USGS), Open File Rept. 81-1142, 7p.
(1981 USGS oil-gas resource estimate of Indonesia. See also later version by Riva (1983))

Molengraaff, G.A.F. (1920)- De geologische ligging der petroleumterreinen van Nederlandsch Oost Indie. Verslagen Kon. Nederl. Akademie Wetenschappen, Amsterdam, 29, p. 141-149.
('The geological setting of petroleum terrains of the Dutch East Indies'. Dutch version of Molengraaff 1921)

Molengraaff, G.A.F. (1921)- On the geological position of the oil-fields of the Dutch East-Indies. Proc. Kon. Nederl. Akademie Wetenschappen, Amsterdam, 23, 2-3, p. 440-447.
(online at: www.dwc.knaw.nl/DL/publications/PU00014628.pdf)
(Majority of large oil-fields in world in long enduring geosynclines, where these are marginal areas of sedimentation along coasts of continents. In Indonesia main proven oil basins all along edge of Sundaland. Accurately predicted NW Java and C Sumatra as settings to look for new oil-gas fields)

Murphy, R.W. & I. Longley (2005)- Main producing systems in Southeast Asia. Proc. 2005 SE Asia Petroleum Expl. Soc. (SEAPEX) Conf., Singapore, 64p.
(Three main petroleum systems in SE Asia: (1) rift-sag basins on continental crust (Sumatra- W Java, Malay basin, etc.), (2) Miocene platform carbonates (Sumatra, Luconia shoals, Salawati, Malampaya) and (3) shallow to deep water deltas, largely M- Late Miocene in age (E Bengal, Kutei, NW Borneo))

Nayoan, G.A.S. (1981)- Offshore hydrocarbon potential of Indonesia. In: M.J. Valencia (ed.) Proc. EAPI/CCOP Workshop, Honolulu 1980, Energy 6, 11, p. 1225-1246.
(Offshore producing Tertiary sedimentary basins in Indonesia account for 34% of total daily oil production and 12% of cumulative production. Most ofoffshore production from basins that are geological continuation of onshore basins (NW Java, Sunda, Kutai))

Nayoan, G.A.S., L. Samuel, M.G. Rukmiati & D.N. Imanhardjo (1991)- Regional aspect of Pre Tertiary hydrocarbon potential in Eastern Indonesia. Proc. 20th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, p. 11-25.

Ooi Jin Bee (1980)- Offshore oil in Indonesia. Ocean Management 6, 1, p. 51-73.
(Review of history and status of Indonesia offshore oil in 1980. Started with first offshore Production Sharing Contracts in 1966, which triggered series of significant discoveries between 1969-1974, mainly off NW Java and E Kalimantan. First offshore production in 1971, from NW Java basin)

Ooi Jin Bee (1982)- The petroleum resources of Indonesia. Oxford University Press, p. 1-256.
(Somewhat dated, mostly non-technical book on Indonesian oil industry and history)

Owen, N.A. & C.H. Schofield (2012)- Disputed South China Sea hydrocarbons in perspective. Marine Policy 36, 3, p. 809-822.
(Geological evidence does not indicate vast hydrocarbon reserves in S China Sea)

Patmosukismo, Suyitno, A. Pulunggono, Mulhadiono & L.Samuel (1989)- Hydrocarbon potential of Eastern Indonesia and required research direction. In: J.E. van Hinte et al. (eds.) Proc. Snellius II Symposium, Jakarta 1987, Netherlands J. Sea Research 24, 2-3, p. 153-164.
(E Indonesia underexplored. Structural and stratigraphic trapping models and geochemical data on E Sulawesi, Seram and Irian Jaya indicate possibilities for exploration plays in Tertiary and Mesozoic)

Pattinama, S. & L. Samuel (1992)- Petroleum exploration in deep water and frontier areas of Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 479-497.
(86% of E Indonesia basins are deep sea basins and rel. little explored frontier areas; little or no G&G)

Poley, J.P. (2000)- Eroica- the quest for oil in Indonesia (1850-1898). Kluwer Academic Publ., Dordrecht, p. 1-175.
(History of 19th century oil exploration in Sumatra, E Java, E Kalimantan)

Prijono, R., J. Widjonarko, E. Sunardi & B. Adhiperdana (2007)- Petroleum potential of the East Java - Lombok Basin, North and South Makassar Strait and offshore Kutei Basin. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-068, 12p.
(Review of six Oligocene- Miocene hydrocarbon plays along E and SE Sundaland margin)

Pulunggono, A. (1976)- Recent knowledge of hydrocarbon potentials in sedimentary basins of Indonesia. In: M. Halbouty et al. (eds.) Proc. Circum-Pacific Energy and mineral resources Conference, Honolulu 1974, American Assoc. Petrol. Geol. (AAPG), Mem. 25, p. 239-249.
(Early, general paper on Indonesian basins. S part of Sunda Shelf many Tertiary sedimentary basins and intervening uplifts. Main oil production in W Indonesia is from Oligocene-Miocene regressive and deeper transgressive sandstone series, except in E Kalimantan, where producing zones range from Eocene- Pliocene. Carbonate rocks becoming prime objective, especially in E Java-Madura basinal area)

Rachmat, J.B. & T. Wibowo (1992)- Peringkat potensi hidrokarbon cekungan-cekungan Tersier Indonesia. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 19-34.
('Hydrocarbon potential ranking of Indonesian Tertiary basins'. 23 of 60 Tertiary basins of Indonesia tested hydrocarbons; 14 are producing by 1991. Ranking for oil: 1. C Sumatra, 2. Kutei, 3. NW Java, 4. S Sumatra, 5. W Natuna and 6. E Natuna)

Ramdhan, A.M., L.M. Hutasoit & A. Bachtiar (2012)- Some Indonesiaǿs giants: óunconventionalô hydrodynamic trap? Proc. 36th Ann. Conv. Indon. Petroleum Assoc. (IPA) Jakarta, 12-G-004, p. 1-15.
(Peciko and Tunu gas fields and some reservoirs in Nilam Field, Kutai Basin proven unconventional hydrodynamic traps. Arun (N Sumatra) and Tangguh (W Papua) possibly also hydrodynamic traps)

Ramdhan, A.M., L.M. Hutasoit & E. Slameto (2018)- Lateral reservoir drainage in some Indonesiaǿs sedimentary basins and its implication to hydrodynamic trapping. Indonesian J. Geoscience 5, 1, p. 65-80.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/394/255)
(Lateral reservoir drainage is hydrodynamic flow type driven by differences in overpressure and can lead to hydrodynamically tilted hydrocarbon-water contacts. Tilted contacts present in fields in Lower Kutai Basin, Arun Field in N Sumatra, Vorwata Field in Bintuni and BD Field of East Java)

Ramli, N. (1985)- The history of hydrocarbon exploration in Malaysia. Energy 10. 3-4, p. 457-473.
(First offshore petroleum exploration in Malaysia in 1950's offshore Sarawak, with first commercial discovery Temana in 1962. Malay Basin exploration, E of Malay Peninsula, began in 1968. First well Tapis 1 by EPMI, with first production in 1978 from Pulai and Tapis fields)

Redfield, A.H. (1922)- Petroleum in Borneo. Economic Geology 17, 5, p. 313-349.
(Early review of petroleum discoveries on Borneo, including Tarakan, Sanga Sanga in E Kalimantan and Miri district of Brunei)

Reminton, C.H., N. Mujahidin & T. Yunus (2000)- Opportunity and challenge beyond the year 2000: the role of exploration in maintaining the oil and gas business in Indonesia. Proc. 27th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-12.

Renolds, M. & C. Atkinson (2013)- Stratigraphic traps in the Tertiary rift basins of Indonesia: case studies and future potential. SEAPEX Press 73, 16, 3, p. 54-78.
(Reprint of Atkinson et al. (2006))

Riva, J.P. (1983)- Assessment of undiscovered conventionally recoverable petroleum resources of Indonesia. U.S. Geol. Survey (USGS) Circular 899, p. 1-17.
(online at: http://pubs.usgs.gov/circ/1983/0899/report.pdf)
(Estimates of undiscovered conventionally recoverable petroleum in Indonesia (means 16 BB Oil, 42 TCF gas) in five types of basins. See also more elaborate version of USGS assessment by Kingston 1988)

Robinson, K. (1984)- Assessment of undiscovered recoverable petroleum resources in Tertiary sedimentary basins of Malaysia and Brunei. U.S. Geol. Survey (USGS), Open File Rept. 84-328, p. 1-19.
(online at: http://pubs.usgs.gov/of/1984/0328/report.pdf)

Robinson, K. (1984)- Assessment of undiscovered conventionally recoverable petroleum resources in Tertiary sedimentary basins of Thailand. U.S. Geol. Survey (USGS) Open-File Report OF, 84-0330, p. 1-14.
(online at: http://pubs.usgs.gov/of/1984/0330/report.pdf)

Robinson, K. (1985)- Assessment of undiscovered conventionally recoverable petroleum resources in Tertiary sedimentary basins of Malaysia and Brunei. Bull. Geol. Soc. Malaysia 18, p. 119-132.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1985005.pdf)
(Undiscovered petroleum resources assessment suggests mean 8 billion B Oil and 80 TCF gas remaining to be discovered in Malaysia and Brunei)

Said, M. (1982)- Overview of exploration for petroleum in Malaysia under the Production Sharing Contracts. In: Offshore Southeast Asia 82 Conf., Singapore, SE Asia Petroleum Expl. Soc. (SEAPEX), p. 1-14.

Satyana, A.H. (2014)- Successful and prospective exploration play concepts of Indonesia: lessons from history and recent progress - anticipating future challenges. Proc. 38th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA14-G-276, 19p.
(10 proven economic hydrocarbon play types in Indonesia: (1) Paleogene regressive clastics of Java- Sumatra- Kalimantan (Talang Akar, Tanjung); (2) Neogene regressive clastics of Java- Sumatra- Kalimantan (Wonocolo, Warukin); 3. Neogene deltaic complex of Kutai- Tarakan (Handil, Tarakan); (4) Neogene deep water clastics of Kutai- Tarakan (W Seno); (5) Oligo-Miocene carbonate platforms of Sumatra- Java (Kaji Semoga); (6) Neogene pinnacle reefs (Arun, Banyu Urip, Kasim); (7) Fractured volcanics of Sumatra- Java (Suban, Jatibarang); (8) Australian Mesozoic marginal rift grabens (Vorwata- Tangguh); (9) Neogene microcontinental collisions (Tiaka, Donggi- Senoro); (10) Neogene island arc- Australian passive margins (Oseil- Bula). Five additional play types with indications of hydrocarbons: (11) Subvolcanic North Serayu, C Java (Karangkobar- Cipluk); (12) Paleogene rifted structures of Makassar Straits (Kaluku type); (13) Neogene reefs of Sumatra- Java forearcs (Singkel Ibu Suma); (14) Papuan fold- thrust belt (Cross Catalina) and (15) N Papua Neogene volcanoclastic sediments (Niengo))

Satyana, A.H. (2016)- Review of Indonesia's petroleum exploration 2000-2015: where from. Proc. IPA 2016 Technical Symposium, Indonesia exploration: where from- where to, Indon. Petroleum Assoc. (IPA), Jakarta, 28-TS-16, p. 1-26.
(In Indonesia 974 exploration and appraisal wells drilled from 2002-2015, 617 onshore and 357 offshore. Of 676 new field wildcats 310 encountered hydrocarbons, adding in-place resources of 18,500 MMBOE. Discoveries in W Indonesia in 5 plays: (1) Paleogene rift sections of Sumatra, W Java, W Natuna; (2) pre-Cenozoic fractured basement in S Sumatra, W Java, E Java; (3) Oligo-Miocene carbonate build ups of E Java and U Kutai; (4) Mio-Pliocene deep-water turbidites of N Makassar and Tarakan; (5) Mio-Pliocene growth-faults of delta progradation of Tarakan Basin. In E Indonesia in 2 plays (Jurassic and Miocene). With details on significant discoveries and dry wells)

Satyana, A.H., C. Armandita & J.A. Paju (2012)- Acceleration in regional exploration of Indonesia: requirement for survival. Proc. 36th Ann. Conv. Indon. Petroleum Assoc., Jakarta, IPA12-G-158, p. 1-14.

Schenk, C.J. (2012)- Assessment of undiscovered conventional oil and gas resources of Thailand. In: Int. Petroleum Techn. Conference (IPTC), Bangkok, IPTC, p. 38-42.
(US Geological Survey estimated mean 1.6 billion barrels of undiscovered conventional oil and 17 trillion cubic feet of undiscovered conventional natural gas in three geologic provinces of Thailand. Most of undiscovered conventional oil and gas in offshore Thai Basin Province)

Schenk, C.J. (2012)- Potential unconventional oil and gas resource accumulations, Onshore Thailand. In: Int. Petroleum Techn. Conference (IPTC), Bangkok 2012, 3p. *(Extended Abstract)*
(Tight gas and shale gas accumulations may exist in Triassic clastics of Khorat Plateau Province. Shale oil and shale gas may be present in extensional structures in Thai Cenozoic Basins Province. Coalbed gas does not appear to be viable resource in N Thailand)

Schenk, C.J., M.E. Brownfield, R.R. Charpentier, T.A. Cook, T.R. Klett et al. (2010)- Assessment of undiscovered oil and gas resources of Southeast Asia, 2010. U.S. Geol. Survey (USGS) Fact Sheet 2010-3015, p. 1-4.
(online at: http://pubs.usgs.gov/fs/2010/3015/pdf/FS10-3015.pdf)
(SE Asia undiscovered conventional oil and gas resources in 23 geologic provinces. Oil mean total is 21.6 Billion BO (range 8.9- 41.6); gas mean total 299 TCFG (range 129- 557) and mean natural gas liquids 9.1 Billion barrels. About 70% of oil in 6 provinces: Baram Delta/Brunei-Sabah, Kutei, S China Sea Platform, E Java, Cuu Long and Thai Basins. About 60% of gas in 6 provinces: Kutei, Greater Sarawak Basin, East Java, Baram Delta/Brunei-Sabah, S China Sea and Nam Con Son Basin)

Schenk, C.J., M.E. Brownfield, R.R. Charpentier, T.A. Cook, T.R. Klett, J.K. Pitman & R.M. Pollastro (2012)- Assessment of undiscovered oil and gas resources of Papua New Guinea, eastern Indonesia, and East Timor, 2011. U.S. Geol. Survey (USGS) Fact Sheet 2012-3029, 2p.
(online at: http://pubs.usgs.gov/fs/2012/3029/FS2012-3029.pdf)
(USGS assessed undiscovered conventional oil and gas in five geologic provinces of the PNG, E Indonesia, and E Timor: (1) oil mean total 5.78 MMBO (2) gas mean total is 115.2 BCFG. Of undiscovered oil 36% in Timor Thrust and Seram Thrust provinces, 37% in fold- thrust belts of PNG and Irian Jaya. Undiscovered Gas mean estimates for PNG Fold Belt 18.1 BCFG, Arafura Platform 15.9 BCFG and Bintuni Basin 20.8 BCFG)

Schuppli, H.M. (1946)- Oil basins of the East Indian Archipelago. American Assoc. Petrol. Geol. (AAPG) Bull. 30, p. 1-22.
(Oil fields of Tertiary basins of Sumatra, Java, and Borneo produced >1 billion barrels of oil to end of 1940. Oil produced almost exclusively from sands of Miocene and Pliocene age. Shortly before the Japanese invasion commercial accumulations discovered in Eocene beds. Bula field in Seram, probably produces Triassic oil, accumulated in overlapping Plio-Pleistocene sands)

Siddayao, C.M. (1980)- The off-shore petroleum resources of South-East Asia- potential conflict situations and related economic considerations. Oxford University Press, Kuala Lumpur, p. 1-205.

Siddiq, F., Z.M. Rubianto, J. Prasetyo & S. Damayanti (2018)- Evaluation and assessment of all play and resources of petroleum system Indonesia to optimize big resources exploration for big oil and gas discoveries in Indonesia. Proc. 42nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA18-267-G, 13p.
(Play assessment: 563 plays in 1954 prospects and 2173 leads in 43 sedimentary basins in Indonesia. Total in-place resources at P90 is 45.5 BBO and 155 TCF (cut-off of big resources is 500 MMBO for oil, 1 TCF for gas). Current oil production in Indonesia ~810,000 BOPD, against demand of >1.5 MMBOD)

Singh, H. (2005)- The occurrence and exploitation of Malaysian oil and gas resources. Oil Industry History (Petroleum History Institute), 6, 1, p. 129-152.

Situmorang, B. (1986)- Offshore exploration for hydrocarbons in Indonesia. Lemigas Scientific Contr. 9, 2, p. 3-8.
(Brief review of hydrocarbon exploration in Indonesia until 1985)

Soeparjadi, R.A., G.A.S. Nayoan, L.R. Beddoes & W.V. James (1975)- Exploration play concepts in Indonesia. Proc. 9th World Petroleum Congress, London, 3, p. 51-64.

Suardy, A., B. Simbolon & P.J. Taruno (1987)- Two decades of hydrocarbon exploration activities in Indonesia. In: M.K. Horn (ed.) Trans. 4th Circum Pacific Energy Mineral Resources Conf., Singapore 1986, p. 243-261.
(Statistics on hydrocarbon acreage and drilling in Indonesia 1966-1985. Sixty sedimentary basins identified)

Sujanto, F.X. (1986)- Hydrocarbon geology of producing basins in Indonesia and future exploration for stratigraphic traps. Proc. Joint ASCOPE ECOP Workshop I, Jakarta, p.

Sujanto, F.X. (1997)- Substantial contribution of petroleum systems to increase exploration success in Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 1-14.
(Broad overview Indonesia basins exploration and hydrocarbons)

Sujanto, F.X., L. Kartanegara, Y.R. Sumantri & L. Gultom (1993)- An assessment of Indonesian natural gas reserves and resources. Proc. 22nd Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 2, p. 638-652.
(June 1993 Pertamina gas assessment in 60 basins of Indonesia: remaining 'proven' recoverable gas reserves ~105 TCF and expected additional reserves 54.5 TCF. Most basins in E Indonesia small speculative resources)

Sujanto, F.X. & Pramu Hartoyo (1984)- Observasi atas status eksplorasi Migas di Indonesia Awal Pelita IV. Proc. 13th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 423-438.

Sumantri, Y.R. & E. Sjahbuddin (1994)- Exploration success in the Eastern part of Indonesia and its challenges in the future. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-20.
(General overview E Indonesia discoveries, plays)

Supraptono (1973)- The status of petroleum exploration in the offshore areas of Indonesia. United Nations ECAFE, CCOP Techn. Bull. 7, p. 75-79.
(Offshore oil exploration in Indonesia started in 1967. In 1973 exploration by 21 companies in 27 (some very large) contract areas. 91 offshore exploration wells drilled in 1971)

Suryana, A. & Fatimah (2008)- Tinjauan terhadap bitumen padat dan gas metan batubara di Indonesia. Colloquium Fossil Energy, p. 1-13.
(online at:http://psdg.bgl.esdm.go.id/kolokium%202008/ENERGI%20FOSIL/ etc.)
('Review of heavy oil and coalbed methane gas in Indonesia'. With maps of occurrences and assessed volumes)

Tiratsoo, E.N. (1973)- Oilfields of the world (Indonesia). Scientific Press, Beaconsfield, United Kingdom, p. 171-189.

Tjia, H.D. (2006)- Potential of impact-structure hydrocarbon plays in continental Southeast Asia. In: Petroleum Geol. Conf. & Exh. 2003, Kuala Lumpur, Bull. Geol. Soc. Malaysia 49, p. 111-117.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm2004018.pdf)

Todd, D.F. & A. Pulunggono (1971)- The Sunda basinal area, an important new oil province. Oil and Gas J., June 14, p. 104-110.

US Energy Information Administration (EIA) (2015)- Technically recoverable shale oil and shale gas resources: Indonesia. EIA/ARI World Shale Gas and Shale Oil Resource Assessment Report XXIII, p. 1-25.
(online at: https://www.eia.gov/analysis/studies/worldshalegas/pdf/Indonesia_2013.pdf)
(Highest shale gas and shale oil potential in Indonesia in oil-prone, lacustrine shales in C and S Sumatra basins. Kutei and Tarakan basins of Kalimantan also thick lacustrine source rock shales with oil- gas potential. Indonesia has estimated 46 TCF gas and 7.9 BBO of risked, technically recoverable shale gas and shale oil resources out of 303 TCF and 234 BBO of risked shale gas and shale oil in-place)

US Energy Information Administration (EIA) (2015)- Technically recoverable shale oil and shale gas resources: Thailand. EIA/ARI World Shale Gas and Shale Oil Resource Assessment Report XXII, p. 1-18.
(online at: www.eia.gov/analysis/studies/worldshalegas/pdf/Thailand_2013.pdf)

US Embassy, Jakarta (2006)- Petroleum report Indonesia 2005-2006. p. 1-121.
(One of annual overview reports on Indonesia petroleum industry. Available from www.usembassyjakarta.org)

Von Baumhauer, E.H. (1869)- Over de aardolien der Nederlandsch Oost Indische bezittingen. Verslagen Mededelingen Kon. Akademie Wetenschappen, Amsterdam, Afd. Natuurkunde (2), 3, p. 340-383.

(online at: https://books.google.com/....)
('On crude oils in the Netherlands Indies'. Review of 44 oil seeps in Java, with some physical (density, etc.) and chemical (C, H, O percentages) properties. Also oil seepage occurrences on Borneo, Sumatra, Ceram, E Sulawesi. Oils commonly biodegraded. Oil from Rembang and Cirebon of high quality)

Von Baumhauer, E.H. (1869)- Over de aardolien der Nederlandsch Oost Indische bezittingen. Tijdschrift Nederlandsche Maatschappij ter bevordering van Nijverheid, 310, Haarlem, p. 190-246.
('On crude oils in the Netherlands Indies'. Same paper as above)

Warga Dalem, M.A. & S. Padmosubroto (1988)- The occurrence of heavy crude and tar sands in Indonesia. In: R.F. Meyer (ed.) Proc. Third UNITAR/UNDP Int. Conference on Heavy crude and tar sands, Long Beach 1985, Alberta Oil Sands Technology and Research Authority, Edmonton, p. 171-183.

Warga Dalem, M. A., S. Padmosubroto & A. Khazoom (1985)- The occurrences of heavy crude and tar sands in Indonesia. In: Proc. Third Int. Conf. Heavy crude and tar sands, UNITAR/UNDP, New York, p. 205-216.

Widarsono, B. (2014)- Porosity versus depth characteristics of some reservoir sandstones in Western Indonesia. Scientific Contr. Oil and Gas, Lemigas, Jakarta, 37, 2, p. 87-104.
(online at: www.lemigas.esdm.go.id/publikasi/read/scientific/1/)
(Porosity depth models derived from core samples from 549 wells in 8 producing sedimentary basins in W Indonesia)

Widarsono, B. (2016)- Petrophysical characteristics of some Indonesian reservoir rocks. Lemigas, LIPI Press, Jakarta, p. 1-257.

Widarsono, B., A. Muladi & I. Jaya (2007)- Vertical-horizontal permeability ratio in Indonesian sandstone and carbonate reservoirs. Proc. Simp. Nasional IATMI, July 2007, UPN Yogyakarta, IATMI 2007-TS-09, 20p.
(Permeablity anisotropy in both sandstones and carbonate rocks inwells in Indonesia (KV/KH) generally below 1.2. Carbonate rocks greater portion of data above 1.2)
(online at: www.iatmi.or.id/assets/bulletin/pdf/2007/2007-09.pdf)

Witkamp, H. (1917)- Onze koloniale Mijnbouw, II. De Petroleum. Tjeenk Willink, Haarlem, p. 1-96.
(online at: www.delpher.nl/nl/boeken/view?coll=boeken&identifier=MMKB02%3A100003992%3A00007)
('Our colonial mining industry, II, Petroleum'. Early popular overview of oil industry in Indonesia)

Witoelar Kartaadipura, L. & L. Samuel (1988)- Oil exploration in Eastern Indonesia, facts and prospective. Proc. 17th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 1-8.

Yazid, A., Sunoto & D. Djatmiko (1992)- Development of oil and gas exploration activities In Indonesia. Proc. 21st Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta,1, p. 1-18.
(Brief review of hydrocarbon exploration activities in Indonesia. Of 60 sedimentary basins in Indonesia only 38 explored. 14 basins produce oil and gas)

XI.2. Hydrocarbon Source Rocks, Oils and Gases

(Additional references on hydrocarbon source that are specific to one region are listed under these regions)

Amijaya, H. (2010)- Indonesian low rank coal as petroleum source rock: high petroleum potentional but no expulsion? Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-071, 6p.
(Petrographic and geochemichal study on low rank coals from Muara Enim Fm, S Sumatra. Coals can generate gas and oil, but with huminite reflectance 0.35-0.52% threshold to generate and expel oil not yet reached)

Astawa, I.N., D. Setiady, P.H. Wijaya, G.M. Hermansyah & M.D. Saputra (2016)- Indikasi gas biogenik di perairan Delta Mahakam, Provinsi Kalimantan Timur. J. Geologi Kelautan 14, 2, p. 103-114.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/354/282)
('Indications of biogenic 'swamp gas' in waters of the Mahakam Delta. Numerous indications of biogenic methane in shallow seismic profiles and cores in shallow sediments of Mahakam Delta distributary channels)

Astawa, I.N., P.H. Widjaja & W. Lugra (2011)- Pola sebaran gas charged sediment dasar laut di perairan Sidoarjo, Jawa Timur. J. Geologi Kelautan 9, 2, p. 66-77.
(online at: http://ejournal.mgi.esdm.go.id/index.php/jgk/article/view/201/191
('The distribution pattern of gas charged sediment in seabed of waters of Sidoarjo, East Java'. Belt of biogenic shallow gas-charged sediments on shallow seismic profiles off Porong Delta, Madura Straits)

Atkinson, C.D. & A. Livsey (2000)- Role of resinite in hydrocarbon generation from Indonesian coals. AAPG Int. Conf. Exhib. Abstracts, American Assoc. Petrol. Geol. (AAPG) Bull. 84, 9, p. 1400. *(Abstract only)*
(Liptinite maceral 'resinite' important constituent of Tertiary coals in W Indonesia, probably from resins of Dipterocarp family tropical lowland trees. Samples from Miocene of Kutei Basin and Oligocene of Arjuna Basin (off NW Java) have abundant resinite, particularly in vitrinite-rich delta plain coals. Resinites hydrogen-rich, but not paraffinic, suggesting resinite not significant contributor to terrestrially-derived oils in these basins, but contribute cyclic hydrocarbons and biomarkers to these oils)

Barber, P.M. & J. Winterhalder (2013)- The Northern Australia- Eastern Indonesia- PNG Super Gas Province: why so much gas and so little oil? AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 10475, 32p. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2013/10475barber/ndx_barber.pdf)
(N Australia-E Indonesia-PNG Gas Province of Late Paleozoic-Mesozoic age overwhelmingly gas-prone (80% of all hydrocarbons discovered to date). Distribution of oil- vs. gas-prone source rocks controlled by successive Permian-Mesozoic passive margin extension, rifting and breakup, overprinted by global eustatic cycles and tectonic interaction with W Papua-PNG foldbelt. Two major source rock types: (1) oil-prone Organofacies B (only in local Oxfordian-Kimmeridgian syn-rifts and PNG foreland basins); (2) Organofacies D/E much more widespread, in U Permian-Jurassic lower delta-plain coals)

Bernard, B.B., J.M. Brooks, P. Baillie, J. Decker, P.A. Teas & D.L. Orange (2008)- Surface geochemical exploration and heat flow surveys in fifteen (15) frontier Indonesian basins. Proc. 32nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 45-58.
(Piston core survey in E Indonesia with many samples with migrated hydrocarbon. Not much detail)

Bernard, B.B., D.L. Orange, J.M. Brooks & J. Decker (2013)- Interstitial light hydrocarbon gases in jumbo piston cores offshore Indonesia: thermogenic or biogenic? In: Offshore Technology Conf. (OTC), Houston 2013, OTC 24228, p. 1-12.
(Interstitial light hydrocarbons in 12m long piston cores from deepwater offshore NW Papua (no locality details; all deemed to be of biogenic origin)

Bertrand, P. (1984)- Geochemical and petrographic characterization of humic coal considered as possible oil source rocks. Organic Geochem. 6, p. 481-488.

Bradshaw, M., D. Edwards, J. Bradshaw, C. Foster, T. Loutit et al. (1997)- Australian and Eastern Indonesian petroleum systems. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 141-153.
(Six Phanerozoic petroleum supersystems in Australia, three of these also in E Indonesia. Source rock intervals in Cambrian, Ordovician, Late Devonian, E Carboniferous, Permian, Triassic, Late Jurassic and Cretaceous. Petrel gas field in Bonaparte Basin example of Gondwanan Supersystem accumulation in Late Permian sandstones with earliest Triassic marine shale seal. Similar system may be operating in Bintuni Basin)

Brown, S. (1989)- The "mangrove model", can it be applied to hydrocarbon exploration in Indonesia? Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 385-401.
(On mangrove-derived organic matter as likely hydrocarbon source, and mangrove forests as a highly productive ecosystem and ideal place for accumulation and preservation of organic matter)

Carlson, R.M.K., S.C. Teerman, J.M. Moldowan, S.R. Jacobson, E.I. Chan, K.S. Dorrough, W.C. Seetoo & B. Mertani (1993)- High temperature gas chromatography of high-wax oils. Proc. 22nd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 483-507.
(High Temp Gas Chromatography can provide paleoenvironmental information on geologic source of oils and bitumens. Oil from Salawati Basin in Irian Jaya and Telisa Shale extracts from C Sumatra show profiles consistent with marine sources. C Sumatran high-wax oils consistent with fresher water lacustrine source)

Carr, A.D. (2008)- Suppression and retardation of vitrinite reflectance, part 2. Derivation and testing of a kinetic model for suppression. J. Petroleum Geol. 23, 4, p. 475-496.
(Vitrinite reflectance may be suppressed and lead to erroneous predictions of hydrocarbon generation in sedimentary basins. Case studies include Bunga Orkid-1 (Malay Basin))

Caughey, C.A. & J.V.C. Howes (eds.) (1999)- Gas habitats of SE Asia and Australasia. Proc. Int. Conf., Indon. Petroleum Assoc. (IPA), Jakarta, October 1998, p. 1-237.

Cole, J.M. & S. Crittenden (1997)- Early Tertiary basin formation and the development of lacustrine and quasi-lacustrine/ marine source rocks on the Sunda Shelf of SE Asia. In: S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 147-183.

Cook, A.C. (1989)- Source potential and maturation of hydrocarbon source rocks in Indonesian sedimentary basins. In: B. Situmorang (ed.) Proc. 6th Regional Conf. Geology, Mineral Hydrocarbon Resources of Southeast Asia (GEOSEA VI), Jakarta 1987, IAGI, p. 319-342.
(General overview of petroleum source rocks)

Cooper, B.A., M.J. Raven, L. Samuel & S.W. Hardjono (1997)- Origin and geological controls on subsurface CO2 distribution with examples from Western Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems SE Asia and Australasia, Jakarta 1997, Indonesian Petroleum Assoc. (IPA), p. 877-892.
(Potential sources of CO2 include mantle degassing, reaction (metamorphic and diagenetic) of carbonates and catagenesis of coals)

Core Laboratories Indonesia (1993)- A non-exclusive study of the hydrocarbon potential and stratigraphic occurrence of coals in Indonesia. Unpublished report BS-01, 5 vols.

Courteney, S. (1996)- Middle Eocene, older sequences in rifts key to potential in western Indonesia. Oil and Gas J., May 27, p. 71-74.
(Part 2 of Western Indonesia paper. M Eocene most effective source interval in W Indonesia rift basins)

Curiale, J.A. (2006)- The occurrence of norlupanes and bisnorlupanes in oils of Tertiary deltaic basins. Organic Geochem. 37, p. 1846-1856.
(On the occurrence of the C28 and C29 lupanoid hydrocarbons in crude oils and their use in oil-source correlations. With examples from Kutai Basin, E Kalimantan)

Curiale, J. & J. Decker (2007)- Eocene oil-prone source rock potential of Central Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 91, Program Abstracts 2007 AAPG Ann. Mtg. Long Beach.
(Occurrence of oil-prone, terrigenous Eocene source potential in extensive areas of E Borneo and W Sulawesi, and oil-prone, lacustrine Eocene potential in S part Makassar Strait. Eocene-sourced oil accumulations known in Barito Basin (Tanjung Field). Extent of other Eocene-sourced accumulations (e.g., Tengkawang oil of E Kalimantan, surface seeps in SW Sulawesi, Pangkat oil tests in S Makassar Strait) not determined)

Curiale, J.A., J. Decker, C.A. Caughey & H.F. Schwing (2003)- Oil-prone lacustrine source rock potential in Central Indonesia. 2003 AAPG/ SEPM Conv., p. 35-36. *(Abstract only)*
(E Borneo and W Sulawesi oils show partial or total lacustrine signature. C Indonesian oils with partial or complete lacustrine signature include Pantai-1 (off E coast Borneo) and Pangkat-1 (S Makassar Strait). Both oils elevated 4-methylsteranes. Pangkat-1 oil with beta-carotane, elevated sulfur (S = 2.1%) and very light carbon isotope ratios (d13C = -30.3 ppm). Very low maturity levels, possibly early generation from Type I-S kerogen deposited in hypersaline setting. Other C Indonesian oils reveal lacustrine source signature indicating freshwater depositional setting. Paleogene rifting between Borneo and Sulawesi provided potential development of oil-prone lacustrine source rocks)

Curiale, J.A., E. Lumadyo & R. Lin (2002)- Petroleum and source rock geochemistry of the Salayar Basin (offshore Sulawesi), Indonesia. AAPG-SEPM Ann. Conv., Houston 2002, p. *(Abstract only).*
(Salayar Basin off SW Sulawesi, at S-most extent of Makassar Strait in Indonesia. Cretaceous- M Eocene rifting created Dewakang graben, followed by inversion through M Miocene. Depositional models and regional data suggest lacustrine, oil-prone sources in Paleocene, and oil-prone coaly sequences in M Eocene. Both source facies proven to E and NE at basin margins. Eocene 'Kelara Limestone' source for low-wax, low-asphaltene oil in basin center. Underlying Eocene coals- coaly shales analogous to oil-prone Barito Basin sapropelic coals, and responsible for oil seeps in SW Sulawesi. Possible occurrence of older, lacustrine oil-prone sources in Salayar Basin significant upside to exploration. Oil-prone sources mature in deepest parts of basin)

Curiale, J.A., P. Kyi, I.D. Collins, D. Aung, N. Kyaw, N.M. Nyunt & C.J. Stuart (1994)- The Central Myanmar (Burma) oil family-composition and implications for source. Organic Geochem. 22, 2, p. 237-255.
(Geochemical characteristics of 31 Eocene-Miocene oils/seeps, Eocene coal and Eocene resin from C Myanmar suggest Eocene resinous shale/coal is source for oils)

Daulay, B. & H. Panggabean (2001)- Batubara sebagai sumber hidrokarbon: studi kasus cekungan Kutai dan Barito. J. Geologi Sumberdaya Mineral 11, 118, p. 26-34.
('Coal as a source of hydrocarbons: a case study in the Kutai and Barito Basins'. Coals good potential petroleum source rocks)

Davis, R.C., S.W. Noon & J. Harrington (2004)- Influence of depositional environment on the petroleum potential of Tertiary Indonesian coals. Abstracts 21th Ann. Mtg. Soc. Organic Petrology, Sydney, 21, 3p.

Davis, R.C., S.W. Noon & J. Harrington (2007)- The petroleum potential of Tertiary coals from Western Indonesia: relationship to mire type and sequence stratigraphic setting. Int. J. Coal Geology 70, p. 35-52.
(500 deltaic sediments analysed from 14 basins in W Indonesia. Main peat-forming episodes: (1) Paleogene syn-rift transgressive, (2) Paleogene-Neogene post-rift transgressive, (3) Neogene regressive. Paleogene syn-rift coals more hydrogen-rich than Neogene coals and more oil-prone. Pliocene coals from regressive sequence in Sumatran fore-arc very hydrogen-poor. Systematic increase in HI with increasing rank suggests pyrolysis underestimates petroleum potential in low rank coals. Vitrinite type more important for petroleum potential than liptinite content. Four coal sub-types: I, II and III low ash coals and likely deposited in raised mires. Sub-type IV hydrogen-rich, high-ash Eocene coals, deposited in submerged mire. Highly degraded peats result in hydrogen-rich coals with higher proportion of detrital vitrinite. Degree of degradation related to time peat spends in zone of influence of water table; unlikely related to tectonostratigraphic setting)

Doust, H. & G. Lijmbach (1997)- Charge constraints on the hydrocarbon habitat and development of hydrocarbon systems in Southeast Asia Tertiary Basin. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of South East Asia and Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 115-125.
(Most SE Asia basins similar geological history of Early Tertiary graben formation, fill and transgression, followed by E-M Miocene marine transgression and Late Tertiary regressive deltaic progradation. Main source rocks: (1) Early synrift lacustrine (Oligocene- E Miocene), oil prone; (2) Late synrift transgressive deltaic (Oligocene- E Miocene), oil and gas prone; (3) Early postrift marine (E-M Miocene transgression), mainly gas prone; and (4) Late postrift regressive deltaic (M Miocene-Pliocene), oil and gas prone. Lacustrine shales, fluvio-deltaic coals/coaly shales and organic-rich marine shales generated light waxy oils and abundant gas of region. Proximal basins and environments more oil prone, more distal basins and environments more gas potential; intermediate basins and environments both oil and gas prone)

Doust, H. & R.A. Noble (2008)- Petroleum systems of Indonesia. Marine Petroleum Geol. 25, 2, p. 103-129.
(Four Petroleum System Types (PSTs) corresponding to main stages of geodynamic basin development (1) oil-prone Early Synrift Lacustrine in Eocene-Oligocene deeper parts of synrift grabens, (2) oil and gas-prone Late Synrift Transgressive Deltaic in shallower Oligocene- E Miocene portions of synrift grabens, (3) gas-prone Early Postrift Marine of E Miocene transgressive period, and (4) oil and gas-prone Late Postrift Regressive Deltaic of shallowest late Tertiary basin fills. Mixing of predominantly lacustrine to terrestrial charge has taken place. Grouped basins according to dominant PSTs and identified 'basin families', termed proximal, intermediate, distal, Borneo and E Indonesian, according to paleogeographic relationship to Sunda craton)

Doust, H. & H.S. Sumner (2007)- Petroleum systems in rift basins- a collective approach in Southeast Asian basins. Petroleum Geoscience 13, p. 127-144.
(Shell view of SE Asia Tertiary basins. Four types of petroleum systems, correlating with basin evolution stages (early and late synrift, early and late postrift). Petroleum system types characteristic environmentally-controlled source, reservoir and seal lithofacies which, in combination with structural trap style, determine hydrocarbon habitat. Variations in tectonostratigraphic evolution due to differences in paleogeographical position and proximity to late Tertiary collisions. This is reflected in volumes, field sizes and oil- gas ratios)

Dowling, L.M., C.J. Boreham, J.M. Hope, A.P. Murray & R.E. Summons (1995)- Carbon isotopic composition of hydrocarbons in ocean-transported bitumens from the coastline of Australia. Organic Geochem. 23, 8, p. 729-737.
(Bitumens stranding along coastlines of Northern Territory, W Australia, S Australia, Victoria and Tasmania with biomarker signatures similar to SE Asian oils. Comparison with C Sumatra Minas and Duri lacustrine oils shows very similar isotopic patterns to waxy bitumens from Australian coastline. Asphaltic bitumens from S Australian coastline lighter carbon isotopes)

Edwards D. & J. Zumberge (2005)- The oils of Western Australia II: Regional petroleum geochemistry and correlation of crude oils and condensates from Western Australia and Papua and New Guinea. GeoMark Research Ltd. *(Unpublished multi-client study)*

Escher, B.G. (1920)- The composition of the crude-oils of the Netherlands East Indian Archipelago in connection with the oil bearing strata. In: Algemeen Ingenieurs Congres (General Engineering Congress), Batavia 1920, sect. 5, Mijnbouw en Geologie, Intr. Paper 1, p. 1-33.
(On composition of crude oils from BPM fields in N and S Sumatra (oils with asphalt base, rich in benzine), E Kalimantan (medium oils with paraffin or with asphalt base with common aromatic and unsaturated hydrocarbons), Tarakan (heavy oils with asphalt base) and Java (oils with paraffin and asphalt base))

Geneau, M.E. (1990)- A discussion of 'sniffer' geochemical surveying offshore Malaysia. Bull. Geol. Soc. Malaysia 25, p. 57-73.

GEOMARK (1993)- Far East oil study. 15 volumes. *(Unpublished multi-client report on oils chemistry)*

George, S.C., H. Volk & M. Ahmed (2004)- Oil-bearing fluid inclusions: geochemical analysis and geological applications. Acta Petrologica Sinica 20, 6, p. 1319-1332.
(On fluid inclusion geochemistry, with examples from Timor Sea, etc., NW Australia)

Gibling, M.R. (1988)- Cenozoic lacustrine basins of Southeast Asia, their tectonic setting, depositional environment and hydrocarbon potential. In: A.G. Fleet, K. Kelts & M.R. Talbot (eds.) Lacustrine petroleum source rocks, Geol. Soc., London, Spec. Publ. 40, p. 341-351.
(Cenozoic strike-slip tectonism in SE Asia generated many short-lived, but deep basins. Formed ideal sites for lakes during Oligocene- Miocene early basinal history. Examples from N Thailand basins with lacustrine mudstone and coal with Type I, hydrogen-rich kerogen, with good hydrocarbon generation potential)

Gordon, T.L. (1985)- Talang Akar coals; Ardjuna subbasin oil source. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 91-120.

Grantham, P.J., J. Posthuma & A. Baak (1983)- Triterpanes in a number of Far-Eastern crude oils. In: M. Bjoroy et al. (eds.) Proc. Int. Meeting on Organic Geochemistry 1981, Wiley & Sons, New York, Advances in Organic Geochemistry 10, p. 675-683.
(First authors to suggest relation between uncommon triterpanes in crude oils from SE Asia and dammar (resinous material from Dipterocarpaceae angiosperm hardwood trees common in SE Asia))

Grunau, H.R. & U. Gruner (1978)- Source rocks and the origin of natural gas in the Far East. J. Petroleum Geol. 2, p. 3-56.
(Most source rocks of SE Asia, Australia have strong humic component and therefore large gas-generating capacity, so Far East largely a gas province. Most source rocks Paleocene- Miocene age. Source rock maturity and post-maturity in many cases reached in Neogene to Recent times. Retention of gas may have been inadequate in areas of strong Neogene folding (e.g. Sumatra, E Kalimantan, Burma Tertiary basins)

Hoffmann, C.F., A.S. MacKenzie, C.A. Lewis, J.R. Maxwell, J.L. Oudin, B. Durand & M. Vandenbroucke (1984)- A biological marker study of coals, shales and oils from the Mahakam Delta, Kalimantan, Indonesia. Chemical Geology 42, p. 1-23.
(Distributions of steroidal and triterpenoidal alkanes and aromatic hydrocarbons in oils, coals and shales from Mahakam Delta suggest high relative abundances of components of higher-plant origin, agreeing with Type III organic matter interpretation. Source for Handil oils must have present depth of at least 3000m)

Horsfield, B., K.L. Yordy & J.C. Crelling (1988)- Determining the petroleum-generating potential of coal using organic geochemistry and organic petrology. In: Proc. 13th Int. Meeting on Organic Geochemistry, Organic Geochem. 13, p. 121-129.
(Arjuna Basin of NW Java contains high-wax crude oil. Pyrolysis-gas chromatography shows potential precursors of long chain (waxy) paraffins in coals of Talang Akar formation, and are most abundant in those that are rich in 'matrix liptinite' (better expulsion potential than vitrinite-rich coals))

Howes, J.V.C. & S. Tisnawijaya (1995)- Indonesian petroleum systems, reserve additions and exploration efficiency. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 1-17.

Imbus, S.W., B.J. Katz & T. Urwongse (1998)- Predicting CO2 occurrence on a regional scale: Southeast Asia example. Organic Geochem. 29, p. 325-345.
(In SE Asia gas fields CO2 may vary from <10% to 90% in same basin. Multiple possible origins for CO2, incl. from mantle, carbonate metamorphism, maturation of organic material, etc.). Tectonic setting, basement fault density, reservoir temperature and reservoir pressure are key elements controlling CO2 abundance)

Kang An & Yang Lei (2010)- Lacustrine source rock occurrence and its petroleum reservoir distribution of Paleogene fault basins in offshore China and Southeast Asia. Xinjiang Petroleum Geol. 2010, 4, p.
(Hydrocarbons generated from lacustrine source rocks in Paleogene rift basins of offshore China and SE Asia account for 95% and 48% of total petroleum resources in these areas. Two models of source rock distribution

(1) Bohai Bay basin model with widely distributed, thick, deep lacustrine shale; (2) Asri- C Sumatra basin model with rel. thin, shallow lacustrine shale of limited distribution)

Katz, B.J. (1991)- Controls on lacustrine source rock development for Indonesia. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 587-619.
(Lacustrine source rocks >80% of Indonesia's known petroleum reserves. Nonmarine source systems not universally distributed. Factors favoring lacustrine source development: tectonic development of narrow basins, subsidence rates in excess of sedimentation rates, rainfall rates in excess of evaporation but insufficient to support growth of rain forests, lack of winter storms, and limited seasonality of surface temperatures)

Katz, B.J. (1995)- Biogenic gas- its formation and economic significance. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 461-474.
(Significant proportion of global gas reserve-base not thermogenic but of bacterial origin. Several Indonesian basins, with high sedimentation rates, locally high TOC and rel. low T gradients, may be suitable for biogenic gas generation)

Katz, B.J. (1995)- A survey of rift basin source rocks. In: J.J. Lambiase (ed.) Hydrocarbon habitat of rift basins, Geol. Soc., London, Spec. Publ. 80, p. 213-240.
(Rift basins contain disproportionate amount of petroleum relative to their area and sediment volume, but not all rifts contain organic-rich deposits, nor are all organic-rich deposits volumetrically significant. Includes examples from C Sumatra, etc.)

Katz, B.J. (2001)- Gas geochemistry- a key to understanding formation and alteration processes. Proc. 28th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 789-802.
(Multiple gas formation mechanisms, reflected in bulk and isotope geochemistry; can be used to decipher gas accumulation history)

Katz, B.J. & B. Mertani (1989)- Central Sumatra- a geochemical paradox. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 403-425.
(Crude oil data suggest four crude oil families in C Sumatra. Source rock data indicated only one effective oil source, Pematang Brown Shale. Facies variations in Brown Shale may explain differences in crude oils)

Katz, B.J., R.A. Royle & B. Mertani (1990)- Southeast Asian and Southwest Pacific coals contribution to the petroleum resource base. Proc. 19th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 299-329.
(Considerable variation in ability of coals to generate hydrocarbons. With exception may be of algal-dominated coals, coals generally do not contribute to petroleum resource base. Lacustrine source rocks account for 90% of petroleum resource base of Indonesia, 95% of China's)

Kelley, P.A., K.K. Bissada, B.H. Burda, L.W. Elrod & R.N. Pheifer (1985)- Petroleum generation potential of coals and organic rich deposits: significance in Tertiary coal rich basins. Proc. 14th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 2, p. 3-21.
(Contribution of coal to accumulated hydrocarbons controversial. Only alginite produces molecular fingerprint that resembles crude oil, hydrocarbons generated by vitrinite do not. Vitrinite generates minor quantities of hydrocarbons and is not viable oil source. Algae and bacteria probably represent basis for all crude oils)

Kewley, J. (1921)- The crude oils of Borneo. Petroleum Times, London, 5, p. 337-339.
(also in J. Inst. Petrol. Technologists 7, 37, p. 209-233)
((Plummer 1921 AAPG review): In Kutei region in E Borneo Miocene Pliocene deltaic deposits overlie glauconitic marls, limestones and marls of E Miocene and Eocene age. Oil originated in lower Miocene and Eocene marls and limestones and migrated upward, saturating delta deposits. Oil accumulated along Sanga Sanga fold (Sanga Sanga and Sambodja oil fields). Deeper oil rich in paraffin wax; oils from higher levels in or above coal beds poorer in paraffin and richer in aromatic and asphaltic constituents. In Miri field where coal is absent, oil also low in aromatic and asphaltic content. At Perlak in Sumatra where coal is also absent oils lower in aromatic and asphaltic constituents than oils of Moera Enim, Sumatra, where coal seams present)

Kjellgren, G.M. & H. Suguharto (1989)- Oil geochemistry: a clue to the hydrocarbon history and prospectivity of the Southeastern North Sumatra Basin, Indonesia. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 363-385.
(Oils from Pertamina wells in N Sumatra basin suggest two oil sources: (1) E Oligocene synrift Bampo Fm (early generation, now overmature; oils mostly biodegraded) and (2) post-rift Late Oligocene- M Miocene Baong-Belumai Fms)

Kristadi, H.J. & D.W. Dati (2012)- Gas metana batu bara: energi baru untuk rakyat. Pusat Penelitian dan Pengembangan Teknologi Minyak dan Gas Bumi (LEMIGAS), Jakarta, p. 1-129.
(online at: www.lemigas.esdm.go.id/id/pdf/buku_populer/Buku%20Gas%20Metana%20Batubara.pdf)
('Coal methane gas: new energy for the people'. Review of coalbed methane principles, occurrences in Indonesia (Sumatra, Kalimantan), extraction, economics, etc.)

Lawrence, G., A. Fleming, M. Broadley & N.A. Press (1997)- Offshore seepage mapped from space high-grades unexplored parts of Southeast Asia basins. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 995-999.
(General discussion of offshore satellite slicks in SE Asia)

Leckie, A.J. & H.R. Woltjer (1935)- Het Helium-gehalte van aardgassen der petroleumbronnen. Handelingen 7e Nederl. Natuurwetenschappelijk Congres, Batavia 1935, p. 170-181.
('The Helium content of natural gases from the oil wells'. Analyses of 15 gases from Java, Sumatra, Borneo and sera. Highest He content in Bula field, Seram)

Liaw, K.K. (2019)- Coaly petroleum source rocks In Malaysia - is thepresent the key to the past? Berita Sedimentologi 42, p. 22-32.
(online at: www.iagi.or.id/fosi/files/2019/01/FOSI_BeritaSedimentologi_BS42_January2019.pdf)
(Except for Central Luconia, Malaysia's oil-producing regions (Malay, Sarawak and Sabah Basins) broadly similar petroleum systems with Neogene clastic reservoirs, hydrocarbons sourced mainly from Type III coaly source rocks. Low-lying forest peats often inundated by floods, and oil-prone (Type III/II) coals;raised peat domes, forming above seasonal flood levels result in gas-prone (Type III) coals)

Link, W. (1952)- Significance of oil and gas seeps in world exploration. American Assoc. Petrol. Geol. (AAPG) Bull. 36, 8, p. 1505-1549.
(General discussion of oil-gas seepage. Most common in young sediments that were folded, faulted and eroded and on basin margins. With 3 maps showing oil seep distribution on Sumatra (fig. 38), Borneo (fig. 39) and Java (fig. 40), based on information from Standard-Vacuum Oil Company)

Livsey, A.R., N. Duxbury & F. Richards (1992)- The geochemistry of Tertiary and Pre-Tertiary source rocks and associated oils in eastern Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 707-761.
(Overview of E Indonesia source rocks. Main source rock ages Late Permian, Late Triassic (restricted marine oil-source in Buton, Seram, Timor, Buru), E-M Jurassic (coaly and marine facies in New Guinea), Miocene (Salawati, Sengkang basins))

Longley, I. (2005)- Topical tropical non-marine deep water deltaic charge systems in SE Asia. a model to explain why some are oily and some are not. Proc. 30th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 625-646.
(General Asia hydrocarbon source discussion, mainly dealing with Borneo Baram and Mahakam deltas)

MacGregor, D.S. (1994)- Coal-bearing strata as source rocks- a global overview. In: A.C.Scott & A.J. Fleet (eds.) Coal and coal-bearing strata as oil-prone source rocks? Geol. Soc. London Special Publ. 77, p. 107-116.
(Coal-bearing sequences are significant oil generators only in very specific and relatively uncommon settings. Coals primary or important secondary source facies in Australasia/ SE Asia. In other regions of world no

evidence they expelled major oil, but sourced significant amounts of gas. Liquid hydrocarbons restricted to two 'fairways'. (1) Tertiary angiosperm assemblages within 20° of Paleo-Equator and (2) Late Jurassic-Eocene gymnosperm assemblages formed on Australian and associated plates)

MacGregor, D.S. (1995)- The exploration significance of surface oil seepage: an Indonesian perspective. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 97-109.
(Majority of Indonesian oil provinces with belt of seeps on basin edge. Relationship between seeps and reserves good on basin scale, but poor at sub-basin and field scale. Seeps in W Indonesia controlled by extent of Plio-Pleistocene structural inversion over oil-bearing portions of backarc basins. Less disturbed extensional fabric of C. Sumatra less seepage than inverted fabric of N and S Sumatran basins, despite higher oil reserves. Active seeps frequent over active reverse faults and eroded steep anticlinal crests. High success rate of wells near seeps, but most seeping fields shallow and small. In inverted areas, oil generation usually no longer active and surface oil shows represent destruction of oil pools. Larger fields generally basinward of seep belt)

MacGregor, D.S. (2018)- Physics and biology of biogenic gas plays: implications for SE Asia In: PEGSB SEAPEX Asia Pacific E&P Conference, London, 26p. *(Abstract + Presentation)*
(Surge in biogenic gas discoveries worldwide, particularly in deepwater settings. In SE Asia represented by Rakhine Basin, Myanmar. Also Terang-Sirasun (NE Java - Madura Straits), Niengo (N West Papua), Pandora (Gulf of Papua), etc.. Biogenic gas generation shut off at ~60-70° C.,)

Mann, A.L., N.S. Goodwin & S. Lowe (1987)- Geochemical characteristics of lacustrine source rocks: a combined palynologial/ molecular study of a Tertiary sequence from offshore China. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 241-258.
(Study of Eocene-Miocene lacustrine source rocks from undisclosed well offshore China)

Marty, D.G. & J.E. Garcin (1987)- Presence de bacteries methanogenes methylotrophes dans les sediments profonds du detroit de Makassar (Indonesie). Oceanologica Acta 10, 2, p. 249-253.
(online at: http://archimer.ifremer.fr/doc/00109/22074/19716.pdf)
('Occurrence of methylotrophic methane-producing bacteria in deep-sea sediments from Makassar Strait (Indonesia)'. Competition between sulfate reducing and methane producing bacteria one of main factors controlling biogenic methane genesis in anoxic marine sediments. Methylotrophic methanogenic bacteria found in shallow marine sediments, and methanogenic bacteria able to produce methane from methylamines in sediments from oceanic trench at depth of 2000m in Makassar Strait)

McKirdy, D.M. & A. Horvath (1976)- Geochemistry and significance of coastal bitumen from southern and northern Australia, Australian Petrol. Explor. Assoc. (APEA) J. 16, p. 123-136.
(Bitumen strandingsin N Territory of Australia are paraffinic oils, probably from natural submarine oil seeps in Money Shoal Basin. Probably derived from Cretaceous or younger non-marine or deltaic source rocks (see also Summons et al. 1993))

Michels, R., N. Enjelvin-Raoult, E. Marcel, L. Mansuy, P. Faure & J.L. Oudin (2002)- Understanding of reservoir gas compositions in a natural case using stepwise semi-open artificial maturation. Marine Petroleum Geol. 19, 5, p. 589-599.
(Two types of variations with depth of d13C values of gases observed in multilayered gas fields in SE Asia (E Kalimantan?). In normally pressured zones steady increase of d13C values of methane with depth; in overpressured zones first decrease with depth, then regular trend. Experiments on pyrolysis of Mahakam Delta coal show closed pyrolysis carbon isotope trends very similar to high pressured reservoirs; normal pressured reservoirs follow values of semi-open pyrolysis. Gas distributions and d13C isotope composition may be explained in terms of degree of opening of system: high P reservoirs fairly closed systems, with in situ gas generation, normally pressured zones more open and subject to lateral migration)

Munir, N., S. Sanusi, S. Gunawan, T. Nugroho & M. Dwiantoro (2015)- Early screening tools to determine the hydrocarbon potential from unconventional coals and shales source rocks: organic petrology and geochemistry. Proc. Joint Conv. HAGI-IAGI-IAFMI-IATMI, Balikpapan, JCB2015-096, 12p.

(Organic petrology and geochemistry of lignite from Muara Enim Fm (S Sumatra), shales from Sangkarewang Fm (Ombilin Basin) and Brown Shale Fm (C Sumatra). All potential for unconventional oil and gas)

Murray, A.P., I.B. Sosrowidjojo, R. Alexander, R.I. Kagi, C.M. Norgate & R.E. Summons (1997)- Oleananes in oils and sediments: evidence of marine influence during early diagenesis? Geochimica Cosmochimica Acta 61, 6, p. 1261-1276.
(Oleananes derived from angiosperm plants. Abundance of oleananes in terrigenous oils and sediments may be sensitive to changes in early diagenetic conditions and need to be used with caution as age and source markers in fluvio-deltaic and lacustrine petroleum systems. Oleananes absent from base of Eocene coal seam affected by postdepositional seawater intrusion. In deltaic sediments from S Sumatra Basin, oleanane/hopane is strongly correlated with indicators of marine influence. Angiosperm-derived Miocene coal from Philippines, deposited under freshwater conditions, abundant aromatic oleanoids but no oleananes)

Murray, A.P., I.B. Sosrowidjojo, R. Alexander & R.E. Summons (1997)- Locating effective source rocks in deltaic petroleum systems; making better use of land-plant biomarkers. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 939-945.
(Distribution of oleananes and bicadinanes, land plant biomarkers in many SE Asian oils, can be used to better define maturity and depositional environment of effective source rocks)

Murray, A.P., R.E. Summons, C.J. Boreham & L.M. Dowling (1994)- Biomarker and n-alkane isotope profiles for Tertiary oils: relationship to depositional setting. Organic Geochem. 22, p. 521-542.
(Biomarker and n-alkane isotope profiles for Late Cretaceous/Tertiary oils from SE Asia, China, PNG, etc., interpreted with respect to six kinds of source rock depositional settings: fluvio-deltaic (S Sumatra, NW Java, NE Kalimantan, etc.), freshwater transitional, lacustrine (C Sumatra), saline lacustrine, marine deltaic and marine carbonate. Oleanane/hopane ratio may overestimate higher plant contribution to marine oils)

Murtrijito, N.A., F.M. Naibaho & W. Ashuri. (2014)- Shale gas: geological perspective of Baong Formation for future chances of North Sumatra Basin; compared to Fort Worth Basin in USA. Majalah Geologi Indonesia (IAGI) 28, 1, p. 41-49.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/719)
(Interbedded black shale and limestone of M Miocene Baong Fm in N Sumatra Basin similarities with Barnett Shale of Fort Worth Basin, therefore Baong Fm may also become commercial gas resource)

Noble, R., D. Orange, J. Decker, P. Teas & P. Baillie (2009)- Oil and gas seeps in deep marine sea floor cores as indicators of active petroleum systems in Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-044, p. 385-394.
(Results of geochem analysis of deep sea floor samples from ten 'Black Gold- TGS' areas in Indonesia, suggesting presence of mainly marine-origin Mesozoic and Tertiary source rocks)

Nytoft, H.P., G. Kildahl-Andersen & O.J. Samuel (2010)- Rearranged oleananes: structural identification and distribution in a worldwide set of Late Cretaceous/Tertiary oils. Organic Geochem. 41, p. 1104-1118.
(Angiosperm biomarkers include oleanane isomers 18a(H) and 18b(H) oleanane, also C30 angiosperm markers lupane and taraxastanes. Rearranged oleananes probably formed by dehydration and rearrangement of higher plant triterpenoids; present in all 25 oleanane-containing oils used. Include analyses from Kutei Basin and Lufa seep, PNG)

Nurachman, Z., Hartati, S. Anita, E.E. Anward, G. Novirani, B. Mangindaan et al. (2012)- Oil productivity of the tropical marine diatom *Thalassiosira* sp.. Bioresource Technology 108, p. 240-244.
(Successful laboratory experiment in generating biofuel from cultures of marine diatoms)

Okui, A. (2005)- Characteristics of non-marine dual petroleum systems in Southeast Asia. In: Oil and gas from the Cenozoic non-marine source rocks in East Asia; a point of contact between petroleum system and Earth system, Sekiyu Gijutsu Kyokaishi (J. Japanese Assoc. Petroleum Technologists), Tokyo, 70, 1, p. 91-100.

(Miocene coal formerly thought to be main source rock in basins in and around Indochina Peninsula in SE Asia. However, new investigations reveal important role of Oligocene lacustrine source rocks)

Orange, D.L., P.A. Teas, J. Decker, P. Baillie & T. Johnstone (2009)- Using SeaSeep surveys to identify and sample natural hydrocarbon seeps in offshore frontier basins. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-090, p. 363-383.
(Black Gold-TGS methodology of deep water hydrocarbon seeps detection from multibeam bathymetry and backscatter surveys)

Permana, A.K. (2017)- Aplikasi petrologi organik dalam analisis cekungan dan eksplorasi hidrokarbon pada beberapa cekungan di Indonesia dan Australia. J. Geologi Sumberdaya Mineral 18, 3, p. 117-135.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/235/289)
('Application of organic petrology in basin analysis and hydrocarbon exploration in several basins in Indonesia and Australia'. Brief review of organic petrology in Miocene of S Sumatra, Triassic of W Timor and Permian-Triassic of Bowen Basin, NE Australia)

Peters, K.E., T.H. Fraser, W. Amris, B. Rustanto & E. Hermanto (1999)- Geochemistry of crude oils from Eastern Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 83, 12, p. 1927-1942.
(Oils from Irian Jaya and Sulawesi from Tertiary marine source. Seram oils from Triassic-Jurassic marine carbonate source. Timor seep oil Triassic-Jurassic clastics. Irian Jaya Wiriagar field oil from Jurassic, gas from Permo-Carboniferous)

Peters, K.E., C.C. Walters & J.M. Moldowan (2005)- The biomarker guide: Vol. 2, Biomarkers and isotopes in petroleum systems and Earth history, 2nd Ed., Cambrige University Press, p. 1-1150.
(Geochemistry text book, with sections on petroleum source rocks of Mahakam Delta, etc.)

Petersen, H.I., C. Andersen, P.H. Anh, J.A. Bojesen-Koefoed, L.H. Nielsen et al. (2001)- Petroleum potential of Oligocene lacustrine mudstones and coals at Dong Ho, Vietnam- an outcrop analogue to terrestrial source rocks in the greater Song Hong Basin. J. Asian Earth Sci. 19, p. 135-154.

Petersen, H.I., M.B.W. Fyhn, L.H. Nielsen, H.A. Tuan, C.D. Quang, N.T. Tuyen, P.V. Thang, N.T. Tham, N.K. Oang & I. Abatzis (2014)- World-class Paleogene oil-prone source rocks from a cored lacustrine synrift succession, Bach Long Vi Island, Song Hong Basin, offshore northern Vietnam. J. Petroleum Geol. 37, 4, p. 373-389.
(Oil-prone source rocks in lacustrine syn-rift successions of inverted Bach Long Vi Graben exposed on Bach Long Vi island. Cored 500m dominated by lacustrine mudstones interbedded with gravity flow deposits. Mudstones thermally immature, eith sapropelic Type I and mixed Types I- III kerogen. Average TOC 2.88%, Hydrogen Index 566 mg HC/g TOC. Net-source rock thickness of ENRECA-3 well ~233 m)

Petersen, H.I., H.P. Nytoft, M.B.W. Fyhn, N.T. Dau, H.T. Huong, J.A. Bojesen-Koefoed & L.H. Nielsen (2012)- Oil and condensate types in Cenozoic basins Offshore Vietnam: composition and derivation. Proc. Int. Petrol. Techn. Conf. (IPTC), Bangkok 2012, 1, IPTC 14383, p. 612-621.
(Vietnamese shelf several petroleum-producing Cenozoic rift basins, including Song Hong, Cuu Long, Nam Con Son and Malay-Cho Thu basins. Cuu Long Basin is main oil-producing basin, with paraffinic oils from lacustrine source. Lacustrine oils also known from N margin of Song Hong Basin. Oil with coaly biomarker signature in the Nam Con Son Basin; also condensates from Song Hong Basin contain high proportions of higher land plant biomarkers. Oils from N margin of Malay Basin suggestive of coaly source)

Petersen, H.I., H.P. Nytoft & L.H. Nielsen (2004)- Characterisation of oil and potential source rocks in the northeastern Song Hong Basin, Vietnam: indications of a lacustrine-coal sourced petroleum system. Organic Geochem. 35, p. 493-515.
(Oil in B10-STB-1x well in NE Song Hong Basin, Vietnam, has typical lacustrine-coaly geochemical features. Presence of lacustrine source rocks in basin indicated by high-amplitude seismic reflectors in undrilled half-

grabens and outcrops of Oligocene immature mudstones and humic coals at Dong Ho (Type I kerogen, TOC 8-17%, HI >500) and on Bach Long Vi Island (TOC 2-7%, HI 200-700))

Petersen, H.I., Vu Tru, L.H. Nielsen, Nguyen A. Duc & H.P. Nytoft (2005)- Source rock properties of lacustrine mudstones and coals (Oligocene Dong Ho Formation), onshore Song Hong Basin (northern Vietnam). J. Petroleum Geol. 28, p. 19-38.
(Oligocene lacustrine mudstones and coals outcropping at N margin of mainly offshore Song Hong Basin include oil-prone potential source rocks. Organic material in mudstones mainly amorphous (Type I), up to 19.6.% TOC and Hydrogen Index values 436-572 mg HC/g TOC. Only 0.5 wt.% TOC required to saturate source rock to expulsion threshold. Coals and coaly mudstones dominated by huminite (Type III kerogen) and contain terrestrial-derived liptodetrinite. Coals generate at or before maturity of vitrinite 0.97%Ro)

Philp, R.P. & T.D. Gilbert (1986)- Biomarker distributions in Australian oils predominantly derived from terrigenous source material. Organic Geochem. 10, p. 73-84.

Pillon, P., L. Jocteur-Monrozier, C. Gonzalez & A. Saliot (1986)- Organic geochemistry of Recent equatorial deltaic sediments. Organic Geochem. 10, p. 711-716.
(Study of organic matter of recent deltaic sediments cored in Misedor core hole, Mahakam delta, E Kalimantan)

Prabowo, B. & G.B. Sulistyo (1999)- Organic geochemical study for hydrocarbon generation identification. Proc. 28th Ann. Conv. Indon. Assoc. Geol. (IAGI), Jakarta, 2, p. 79-98.
(Geochemistry of 22 oils from C Sumatra basin. Two groups, both sourced from lacustrine facies in Pematang Fm: (1) Minas, Oki and Libo fields (with botryococcane, heavy C-isotopes, etc.); (2) Kotabatak area, Kotagaro, Nusa, NW Minas (Telisa Fm) (no botryococcane, light C-isotopes, etc.))

Pramana, A.A., S. Rachmat, D. Abdassah & M. Abdullah (2012)- A study of asphaltene content of Indonesian heavy oil. Modern Applied Science 6, 5, p.
(online at: http://ccsenet.org/journal/index.php/mas/article/view/15690/11133)

Robertson/ Horizon (1998)- Timor Sea: Mesozoic source rock distribution and palaeoenvironments. Multi-client study, 65p. *(Unpublished)*

Robertson Utama (2000)- Eastern Indonesia and northern Papuan New Guinea- a review of Tertiary oil occurrences. Mult-client study, p. 1-9 + figs., tables *(Unpublished)*
(Geochemical study of Tertiary-sourced oils and oil stains from Salawati Basin, Bintuni Basin, E Sulawesi Basin and oil seeps from PNG N New Guinea Basin. Presence of angiosperm-derived biomarkers (oleanane) used to distinguish Tertiary-sourced oils, but oil stains lacking oleanane from S Salawati Basin included, due to similarity to main group of Salawati oils. All oils similar and derived from mixture of marine-derived organic matter and terrigenous debris, deposited in marine facies, and deeper marine time-equivalents of carbonate reservoir horizons or slightly younger, more open marine horizons)

Robertson Research (Singapore) Pte Ltd. (1983)- Petroleum geochemistry of Indonesian basins. Unpublished multi-client study, 5 vols.

Robinson, K.M. (1987)- An overview of source rocks and oils in Indonesia. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 97-122.
(Indonesia source rocks lacustrine, fluvio-deltaic and marine. Lacustrine source most productive (most oil in C Sumatra, some Sunda Basin, possibly oil in W Natuna). Fluvial-deltaic source rocks sourced oil in majority of foreland/back-arc basins of W Indonesia. Marine source rocks in E Indonesia (Salawati, E Sulawesi). Pre-Tertiary (Permian/Jurassic) oil source in Bintuni and Bula (Seram) and possible source in E Sulawesi and Banggai-Sula. Lacustrine oils low-medium gravity, waxy, low sulfur and often high C30 4-methyl steranes. Marine oils low-medium gravity, low wax, medium-high sulfur oils and high C27-C29 diasteranes and steranes. Fluvio-deltaic oils from higher plants medium-high gravity, waxy, low sulfur and abundant C30 alkanes)

Saller, A., R. Lin & J. Dunham (2006)- Leaves in turbidite sands; the main source of oil and gas in the deep-water Kutei Basin, Indonesia. American Assoc. Petrol. Geol. (AAPG) Bull. 90, 10, p. 1585-1608.
(Gas-oil- condensate in Upper Miocene in deep-water Kutei Basin, off E Kalimantan, derivated from land-plant source material. Best source rocks are deep-water sandstones with coaly fragments, pieces of wood, resinite, and other coaly debris. Laminar coaly fragments are dominant, and were leaf fragments, carried into deep water by turbidity currents during lowstands of sea level. Kutei Basin deep-water shales contain mainly silt-size vitrinite grains with poor generative qualities. Liquids from leaves high wax contents)

Saptorahardjo, A. (1985)- Diagenese precoce de la matiere organique dans la serie sedimentaire du delta de la Mahakam, Indonesie: aspects moleculaires. Doct. Thesis Universite Louis Pasteur, Strasbourg, p. 1-181. *(Unpublished)*
('Early diagenesis of organic matter in the sedimentary series of the Mahakam Delta: molecular aspects')

Saptorahardjo, A., J.M. Trendel & P. Albrecht (1987)- Diagenese precoce de la matiere organique dans la serie sedimentaire du delta de la Mahakam, Indonesie: aspects moleculaires. In: A. Combaz (ed.) Geochimie organique des sediments plio-quaternaires du delta de la Mahakam (Indonesie)- le sondage Misedor, Editions TECHNIP, Paris, p. 307-316.
('Early diagenesis of organic matter in the sedimentary series of the Mahakam Delta, Indonesia: molecular aspects'. Analysis of lipids of shales and coals from Misedor cored well (0-617m), to study molecular transformations of organic matter during early stages of diagenesis)

Satyana, A.H. (2005)- Possible an-organic petroleum formation in collision zones of eastern Indonesia: abiogeneic genesis of petroleum by "Fischer-Tropsch" synthesis. Proc. Joint 34th Ann. Conv. Indon. Assoc. Geol. (IAGI), 30th Indon. Assoc. Geoph. (HAGI), Surabaya, Poster JCS2005-G059, p. 886-898.
(Possibility of abiogenic petroleum formation from CO2 and H2 by FT synthesis is reviewed for collision zones of E Sulawesi-Banggai, Buton-Tukang Besi, Timor-Seram-Buru, Halmahera, and Papua. Stratigraphy and tectonics of these collision zones fulfill requirements for organic petroleum formation by FT synthesis. Gas discovered recently in E Sulawesi- Banggai collision may represent such hydrocarbon)

Satyana, A.H. (2010)- Regional petroleum geochemistry of Mesozoic and Paleozoic systems of Indonesian Basins. Int. Symp. Mesozoic- Paleozoic petroleum basins in Indonesia, Indon. Assoc. Geol. (IAGI), Bandung 2010, 9p.
(Mesozoic and Late Paleozoic source rocks identified in Indonesian basins, primarily in basins with Australian crustal affinity; accordingly they are all located in E Indonesia)

Satyana, A.H. (2010)- Proven and potential Mesozoic and Paleozoic exploration play types of Indonesia. Int. Symp. Mesozoic- Paleozoic petroleum basins in Indonesia, Indon. Assoc. Geol. (IAGI), Bandung 2010, 4p.
(Brief review of pre-Tertiary play types in Indonesia)

Satyana, A.H. (2016)- The power of oil biomarkers for regional tectonic studies: how the molecular fossils imply exploration ventures- cases from Indonesia. Proc. 40th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA16-582-G, 28p.
(Three case studies of use of biomarkers in identifying source rock depositional environments: (1) Paleogene rift basins of Sumatra, with different biomarkers for early rift lacustrine facies, late rift fluviodeltaic and marine facies; (2) Eocene of Makassar Straits and W Sulawesi (with Eocene waxy lacustrine oil in Kaluku 1), and(3) Salawati Basin, with Tertiary anoxic marine, possibly lagoonal source rocks)

Satyana, A.H. (2017)- Regional petroleum geochemistry of Indonesian basins: updated, and implications for future exploration. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-555-G, 32p.
(Comprehensive review of petroleum geochemistry of Indonesian basins. Oils of W Indonesian basins three broad families: (1) lacustrine (C Sumatra, Sunda-Asri, partly W Natuna, and W Sulawesi offshore/N Makassar Straits);(2) fluvio-deltaic (S Sumatra, W Java, E Java, Barito, Kutai, Tarakan), and (3) marginal-shallow marine (N Sumatra. W Sulawesi onshore). Most oils from E Indonesia basins marginal-shallow marine;

sourced from Neogene (Salawati, Banggai), Jurassic (Bintuni), Triassic-Jurassic (Timor, Buton, Seram, Timor). Both thermogenic and biogenic gases)

Satyana, A.H. (2017)- Future petroleum play types of Indonesia: regional overview. Proc. 41st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA17-554-G, 33p.
(Review of 8 future hydrocarbon play types (proven and unproven) in Indonesia: (1) Paleogene synrift and pre-Tertiary Basement (Sumatra-Java-Natuna-Barito); (2) Neogene delta and deepwater of E Kalimantan-Makassar Straits, (3) Paleogene synrift and postrift of W Sulawesi offshore-Bone-Gorontalo; (4) Gondwanan Mesozoic sections of Sumatra-Java-Makassar Straits; (5) Paleogene-Neogene sub- and intra-volcanic of Java-W Sulawesi, (6) collided Mesozoic Australian passive margin sediments (Gorontalo-Buton-Banggai-Sula-Outer Banda Arc-Lengguru-Central Ranges of Papua); (7) Paleozoic of Arafura Sea- S Papua; (8) Neogene Pacific province of North Papua)

Satyana, A.H., L.P. Marpaung, M.E.M. Purwaningsih & M.K. Utama (2007)- Regional gas geochemistry of Indonesia: genetic characterization and habitat of natural gases. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-050, 31p.
(Geochemistry of natural gases in Indonesian basins, using 350 gas occurrences. Both thermogenic and biogenic (bacterial) gas types recognized. Thermogenic gases generally <95% methane and heavier C isotope ratios (>-45‰). Biogenic gases >98% methane and lighter C isotope ratios (< -60‰). Thermogenic gases dominate in Indonesia. Biogenic gases mainly in W Sumatra fore-arc basins, E Java Basin and foredeep of Sorong Fault Zone, NW Papua. High CO2 mainly inorganic origin (thermal destruction of carbonates or volcanic degassing). H2S in some gas fields due to thermo-chemical sulfate reduction of deep, hot carbonates)

Satyana, A.H. & M.E.M. Purwaningsih (2013)- Variability of Paleogene source facies of circum- and drifted Sundaland Basins, Western Indonesia: constraints from oil biomarkers and Carbon-13 isotopes. AAPG Int. Conv. Exhib., Singapore 2012, Search and Discovery Art. 10474, p. 1-36. *(Abstract + Presentation)*
(online at: www.searchanddiscovery.com/documents/2013/10474satyana/ndx_satyana.pdf)
(Tertiary basins around Sundaland of W Indonesia and its drifted parts (S Makassar Strait, W & S Sulawesi, and Bone Basins) initially formed in Mid- Late Eocene. Thick Paleogene sediments in rift and early post-rift phases of basins contain important hydrocarbon source rocks. Biomarkers and carbon isotopes of oils allow identification of Paleogene lacustrine, fluvio-deltaic and marine source facies)

Satyana, A.H. & M.E.M. Purwaningsih (2013)- Variability of Paleogene source facies of Circum-Sundaland basins, Western Indonesia: tectonic, sedimentary and geochemical constraints- implications for oil characteristic. Proc. 37th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA13-G-162, p. 1-23.
(Similar to paper above. Paleogene source rocks in Sundaland basins include lacustrine facies (most significant; C Sumatra, Sunda-Asri, S Sumatra, W Natuna) to carbonaceous shales and coals of fluvio-deltaic and paralic facies (S Sumatra, W Java, E Java, Barito, W Sulawesi) and marine facies (N Sumatra))

Schiefelbein, C.F., J.E. Zumberge & S.W. Brown (1997)- Petroleum systems in the Far East. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum systems of SE Asia and Australasia, Jakarta 1997, Indon. Petroleum Assoc. (IPA), p. 101-113.
(~350 crude oils analyses used to identify different petroleum systems in Far East. Oils separated into three groups: terrigenous, lacustrine, and marine. More specific geochemical criteria allowed establishment of sub-groups of oils according to specific source environment)

Schiefelbein, C. & N. Cameron (1997)- Sumatra/Java oil families. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia. Geol. Soc., London, Spec. Publ. 126, p. 143-146.
(122 oils analyzed. Majority of oils either 'lacustrine' or 'terrigenous' Tertiary source. Two oils from N Sumatra marine signature. Several oils from C and S Sumatra mixed characteristics)

Schumacher, D. & L. Clavareau (2015)- Geochemical exploration strategies for Southeast Asia. Asia Petrol. Geoscience Conf. Exhib. (APGCE), Kuala Lumpur, 25954, 2015, 5p. *(Extended Abstract)*

(Brief review of hydrocarbon microseepage surveys. Microseepage predominantly vertical, so surface anomalies may approximate size and shape of hydrocarbon accumulation. Little detail)

Sosrowidjojo, I.B. (2006)- On going Coalbed Methane (CBM) development in the South Sumatera Basin. Lemigas Scientific Contr. 23, 3, p. 15-29.

Sosrowidjojo, I.B., A.P. Murray, R. Alexander, R.I. Kagi & R.E. Summons (1996)- Bicadinanes and related compounds as maturity indicators for oils and sediments. Organic Geochem. 24, p. 43-55.
(Maturity of oils and sediments derived from catagenetic products of plant material. Polycadinene indices tested for Tertiary oils from S Sumatra, PNG, New Zealand and Australia. Bicadinane maturity indicator continues to change into oil window and may be useful in ranking relative maturity of oils)

Stout, S.A. (1995)- Resin-derived hydrocarbons in fresh and fossil dammar resins and Miocene rocks and oils in the Mahakam Delta, Indonesia. In: K.B. Anderson & J.C. Crelling (eds.) Amber, resinite, and fossil resins, Chapter 3, American Chemical Soc., Washington, Symposium Series 617, p. 43-75.
(Hydrocarbons derived from fresh dammar resin are compared to those in Miocene fossil resins and Miocene-sourced oils in Mahakam Delta. Dammar resins undergo few chemical changes during early diagenesis. Bicadinanes are absent in immature resins, but form upon heating in lab or subsurface)

Subono, S. (1996)- Hydrocarbon generation and multiprocess thermal model in oil basins of Indonesia. In: S.Y. Kim et al. (eds.) Proc. 32nd Ann. Sess.(CCOP), Tsukuba 1995, p. 53-68.

Subroto, E.A. (1990)- 30-NOR-17 [alpha] (H)- hopanes and their applications in petroleum geochemistry. Ph.D. Thesis Curtin University, Perth, p. 1-186.
(online at: http://espace.library.curtin.edu.au)
(22 oils and sediments analysed for biological marker compounds. Compounds typical of carbonate-rich source rocks identified. Sediments and oils from N Sumatra Basin contain very different biomarkers)

Subroto, E.A. (1990)- 30-Norhopane, biomarker baru penunjuk lingkungan karbonat: suatu studi geokimia petroleum terhadap sampel batuan dan minyak mentah. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 230-241.
('30-Norhopane, a new biomarker as carbonate environment indicator: a study of petroleum geochemistry of rock and crude samples'. Study of rocks and oil samples from Seram and other countries identify C30 biomarker as typical of carbonate hydrocarbon source rocks)

Subroto, E.A., B.Y. Afriatno & P. Sumintadireja (2007)- Prediction of the biogenic gas occurrences in Indonesia based on studies in East Java and Tomori (Central Sulawesi). Jurnal Teknologi Mineral 14, 2, p. 115-124.
(online at: www.fttm.itb.ac.id/galeri/prediction.pdf)
(Some Indonesian gas fields with biogenic gas, characterized by dryness (>99% methane) and light carbon-isotopes (-61 to -67‰). One field producing biogenic gas in E Java Basin, probably derived from Plio-Pleistocene. Similar situation in Tomori, Sulawesi. Plio-Pleistocene sediments in Indonesia generally high sedimentation rates, low thermal gradients and high organic content, thus potential source for biogenic gas)

Subroto, E.A., R. Alexander & R.I. Kagi (1991)- 30-Norhopanes: their occurrence in sediments and crude oils. Chemical Geology 93, 179-192.
(Ratios of hopanes types geochemical biomarker in oils and sediments reflect sample maturity, with higher norhopanes in more mature samples. Incl. examples from Triassic oils from Seram and Buton asphalt)

Subroto, E.A., R. Alexander, U. Pranjoto & R.I. Kagi (1992)- The use of 30-Norhopane series, a novel carbonate biomarker, in source rock to crude oil correlation in the North Sumatra Basin, Indonesia. Proc. 21st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 145-163.
(30-norhopanes as carbonate biomarker proposed recently. Three types of source rocks in N Sumatra Basin: shale, carbonaceous shale and calcareous shale. n-Alkanes and steranes can only be used to distinguish two

source types since shale and calcareous shale show similar characteristics. Recognition of three source types can only be observed using the hopane distribution. One crude oil can be correlated to calcareous shale and two crude oils are correlative to shale source rock. Crude oil of coaly shale type is not found during this study)

Subroto, E.A., A. Bachtiar, B. Priadi, R.P. Koesoemadinata & D. Noeradi (1998)- Could oleanoids, substances found abundantly in coaly sediments, be used as geochemical maturity indicator? A case study in the Kutai Basin. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, 1, p. 129-139.
(Oleanoid ratio OR1 correlates with vitrinite reflectance, and may be maturity indicator)

Subroto, E.A., D. Noeradi & B.Y. Afriatno (2009)- Geochemical identification of favorable basins for biogenic gas exploration in Indonesia. Proc. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-185, p. 405-415.
(Biogenic gas formed at T <75°C is dry (>95% methane) and isotopically light (<-55‰). May contribute >20% of global gas resources. Biogenic gas large component of gas produced from E Java. Other favorable sites for biogenic gas are basins with young sediments (Plio-Pleistocene), high sedimentation rates (>50 m/My) and low Temp (0-75°C))

Sudarmono, T. Suherman & B. Eza (1997)- Paleogene basin development in Sundaland and its role to the petroleum systems in Western Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 545-560.
(ARCO paper with Eo- Oligocene paleogeography maps based on Daly (1987) reconstructions. Syn-rift continental deposits followed by late rift marine incursion and fully marine facies during post-rift. Paleogene basins commonly complete petroleum systems with source, reservoirs and seals. Maturity only after Neogene deposition. Lacustrine source rocks during rifting; marine carbonaceous shales and coals during late rift to post-rift. Productive reservoirs mostly upper syn-rift or post-rift. E Java- E Kalimantan- W Sulawesi rifts older (Late Paleocene- E Eocene) than Sumatra- W Java- W Kalimantan systems (Late Eocene- E Oligocene)

Sujanto, F.X. (1997)- Substantial contribution of petroleum systems to increase exploration success in Indonesia. In: J.V.C. Howes & R.A. Noble (eds.) Proc. Int. Conf. Petroleum Systems of SE Asia and Australasia, Jakarta, Indon. Petroleum Assoc. (IPA), p. 1-14.
(Overview of Indonesia basins and petroleum systems)

Summons, R.E., M. Bradshaw, J. Crowley, D.S. Edwards, S. George & J.E. Zumberge (1998)- Vagrant oils; geochemical signposts to unrecognised petroleum systems. In: P.G. & R.R. Purcell (eds.) The sedimentary basins of Western Australia 2., Proc. Petroleum Expl. Soc. Australia (PESA) Symp. 2, p. 169-184.
(Study of biodegraded oils and stains from wells in Arafura, Bonaparte and Carnarvon basins. Biodegraded Arafura 1 oil shares many characteristics with E Paleozoic oils of Canning Basin)

Sunarjanto, D. & S. Widjaja (2013)- Potential development of hydrocarbon in Basement reservoirs in Indonesia. J. Geologi Indonesia 8, 3, p. 151-161.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/165/165)
(Review of hydrocarbon occurrences in Pretertiary 'basement' in Sumatra (granitoids and metamorphics in NE Beruk, Suban, Sei Teras), Kalimantan (Tanjung granitoid, volcanics, metamorphics) and Seram (Oseil Mesozoic limestone))

Sutadiwiria, Y., A.H. Hamdani, Y.A. Sendjaja, I. Haryanto & Yeftamikha (2018)- Biomarker composition of some oil seeps from West Sulawesi, Indonesia. Indonesian J. Geoscience 5, 3, p. 211-220-160.
(online at: http://ijog.bgl.esdm.go.id/index.php/IJOG/article/view/397/268)
(Nine oil seep samples from Lariang and Karama Basins, SW Sulawesi. Some biodegradation. High oleanane content interpreted as evidence for marine influence. Organic matter facies mixed allochthonous macerals from terrestrial higher plants, transported into basin from distal swamps and soils and some marine organic matter)

Suwarna, N., H. Panggabean, M.H. Hermiyanto & A.K. Permana (2007)- Characterization of unconventional fossil fuels of selected areas, in Sumatera and Kalimantan, using organic petrography and geochemistry. Proc. 31st Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA07-G-079, 15p.
(Oil shale and coalbed methane studies in Sumatra and Borneo)

Sykes, R. & I. Cibaj (2010)- Peat biomass and early diagenetic controls on oil generation from Mahakam Delta coals, Kutei Basin: preliminary study of coals from the Jalan Baru section near Samarinda. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-105, 17p.
(Geochem study of 11 outcrop coal samples from M Miocene Balikpapan Group near Samarinda. Analysed coals have potential to expel oils ranging from borderline gas condensate to high-wax, paraffinic- naphthenic-aromatic oil. Non-volatile, paraffinic oil potential of Mahakam Delta coals controlled primarily by abundance of leaf- and cork-derived macerals. These macerals expected to be more abundant in thin, planar mire coals and coaly mudstones than in thicker, raised mire coals owing to better preservation potential of surface leaf biomass under higher groundwater levels in planar mires)

Tahir, N.T., H.M. Abd. Rahim, Tay Joo Hui, Tan Hock Seng, M.F. Fadzil & M.R. Abas (2009)- Distribution and sources of hydrocarbons in lagoon sediments of Setiu Wetland, Terengganu, Malaysia. Aquatic Ecosystem Health and Management 12, 4, p. 344-349.
(Hydrocarbon compounds in surface sediment of Setiu Wetland analysed and characterized using GCMS. Terrestrial plants input (epicuticular plant waxes) are dominant contributor of organic compounds in the sediments with a minor input from marine phytoplankton (algae) as well as bacteria)

Teerman, S.C. & R.J. Hwang (1989)- Evaluation of the source rock potential of Sumatran coals by artificial maturation of coal. Proc. 18th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 469-489.
(Hydrous pyrolysis experiments on Miocene Muara Enim Fm lignite from Bukit Asam, S Sumatra. Lignite is liptinite-rich (32% of total macerals); resinite is the most abundant liptinite maceral (13.7%). Rock Eva1 Hydrogen Index values of 483 mg HC/g OC. Significant amounts of liquid hydrocarbons assimilated by vitrinitic matrix of coal prior to expulsion, making vitrinite-rich coals poor oil source rocks. Only liptinite-rich coals (>15-20% of total macerals) appear capable of generating significant amounts of liquid hydrocarbons but expelled product will probably be low. Most Sumatran coals not liptinite-rich (typically 5-10%))

Teerman, S.C., R.J. Hwang, Y.C. Tang, B. Mertani, M. Stauffer & T.T. Ta (1994)- Geochemical evaluation of the liquid hydrocarbon potential of "marginal source rocks"- application to Indonesian basins. Proc. 23rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 457-478.
(Expulsion efficiency is critical factor in potential of marginal source rocks to provide adequate hydrocarbon charge. Expulsion efficiency in marginal source rocks highly variable due to amount of hydrocarbon generation and adsorptive capacity of certain organic matter assemblages. Numerous examples of marginal source rocks in Indonesian region. With case study of Telisa Fm in Sumatra.)

Ten Haven, H.L. & C. Schiefelbein (1995)- The petroleum systems of Indonesia. Proc. 24th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 443-459.
(>200 oil analyses. W Indonesia 2 main petroleum systems: Tertiary lacustrine and Tertiary terrigenous, with additional marine petroleum system in N Sumatra and E Natuna. E Indonesia 3 main systems: Tertiary marine carbonate, Mesozoic marine carbonate and Mesozoic marine siliciclastic)

Thompson, M., C. Remington, J. Purnomo & D. MacGregor (1991)- Detection of liquid hydrocarbon seepage in Indonesian offshore frontier basins using Airborne Laser Fluorosensor (ALF); the results of a Pertamina/ BP joint study. Proc. 20th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, p. 663-689.
(ALF surveys over Sumatra Forearc, Java Forearc, Billiton Basin, Salayar, Spermonde, S and N Makassar, Bone, Gorontalo and Halmahera Basins. Hydrocarbons seeping from all basins except Java forearcs, though further analysis is required. Areas of greatest interest are Billiton, S Bone and S Makassar basins)

Thompson, S., B.S. Cooper & P.C. Barnard (1994)- Some examples and possible explanations for oil generation from coals and coaly sequences. In: A.C. Scott & A.J. Fleet (eds.) Coal and coal-bearing strata as oil-prone source rocks?, Geol. Soc. London, Spec. Publ. 77, p. 119-137.
(Coals and associated shales important oil source rocks in some deltaic environments. Formation of hydrogen-rich kerogen either by concentration of plant cuticles and spores after reworking of delta top freshwater peats, or by accumulation of delta margin peats under saline conditions. Examples include Oligo-Miocene Talang Akar Fm of S Sumatra-NW Java (perhydrous vitrinite source of isotopically light waxy oils with biomarkers from tree resins). Waxy oils also produced in Sunda Basin (derived from algal kerogen in older, lacustrine Banuwati Fm shales (low contents of land plant biomarkers and heavier carbon isotopic signature))

Thompson, S., R.J. Morley, P.C. Barnard & B.S. Cooper (1985)- Facies recognition of some Tertiary coals applied to prediction of oil source rock occurrence. Marine Petroleum Geol. 2, 4, p. 288-297.
(Coals are oil source rocks in many Tertiary basins of SE Asia. Precursors of these hydrogen-rich and oxygen-poor coals are coastal plain peats in everwet tropical climate. Distribution, petrography and chemistry of coaly Miocene source rocks present in Kutai Basin described)

Todd, S.P., M.E. Dunn & A.J.G. Barwise (1997)- Characterizing petroleum charge systems in the Tertiary of SE Asia. In: A.J. Fraser, S.J. Matthews & R.W. Murphy (eds.) Petroleum Geology of Southeast Asia, Geol. Soc., London, Spec. Publ. 126, p. 25-47.
(Most SE Asian Tertiary petroleum from paralic (higher land plant) source, although larger proportion of oil from lacustrine algal sources. Lacustrine sources mainly in Paleogene syn-rift lakes, paralic coals and coaly mudrocks in Miocene post-rift. Oil-prone source rocks preferentially paralic between lower coastal plain and lower estuary/delta front facies, perhaps involving mangrove system. Younger plays more gas prone. Significance of biogenic gas poorly understood. Vertical migration common; lateral migration restricted to ~20 km or less from kitchen)

Tran Cong Tao (1994)- Maturation of organic matter in Tertiary sediments of the Mekong Basin, offshore South Vietnam. In: J.L. Rau (ed.) Proc. 29th Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Hanoi 1992, Bangkok, 2, p. 169-181.

Van Aarssen, B.G.K., H.C. Cox, P. Hoogendoorn & J.W. De Leeuw (1990)- A cadinene biopolymer present in fossil and extant dammar resins as a source for cadinanes and bicadinanes in crude oils from Southeast Asia. Geochimica Cosmochimica Acta 54, p. 3021-3031.
(Chemical composition of fossil resin from Miocene outcrop in Lumapas, Brunei, compared to Recent counterpart dammar from trees of family Dipterocarpaceae, to establish nature of precursor of bicadinanes)

Van Aarssen, B.G.K., J.K.C. Hessels, O.A. Abbink & J.W. de Leeuw (1992)- The occurrence of polycyclic sesqui-, tri-, and oligoterpenoids derived from a resinous polymeric cadinene in crude oils from southeast Asia. Geochimica Cosmochimica Acta 56, 3, p. 1231-1246.
(Structurally related hydrocarbons consisting of one or more sesquiterpane units in saturated and aromatic hydrocarbon fractions of crude oils from SE Asia (Java, Sumatra, Malaysia). Thought to originate from cadinene polymer present in dammar resins from angiosperms like Dipterocarpaceae trees, which depolymerises on thermal stress)

Wahab, A. & Harun Nasir (1987)- Petroleum geochemistry of Western Indonesia Basins. Proc. 16th Ann. Conv. Indon. Assoc. Geol. (IAGI), p.

Williams, H.A., M. Fowler & R.T. Eubank (1992)- Geochemical characteristics of Paleogene and Cretaceous hydrocarbon source basins in Southeast Asia. In: 9th Offshore Southeast Asia Conf., Singapore 1992, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 10, OSEA 92101, p. 35-66.
(Lacustrine rift systems sourced large portion of SE Asia hydrocarbons. Description of rift systems Bandar Jaya- S Sumatra, Kampar Kanan- C Sumatra, Petchabun-Thailand (all Paleogene- humid) and Dongting-China (Cretaceous-Paleogene; arid))

Williams, H.H., M. Fowler & R.T. Eubank (1995)- Characteristics of selected Palaeogene and Cretaceous lacustrine source basins of Southeast Asia. In: J.J. Lambiase (ed.) Hydrocarbon habitat in rift basins. Geol. Soc. London, Spec. Publ. 80, p. 241-282.
(Rift architecture, sequences and sedimentary geochemistry of four Paleogene and one Cretaceous/ Paleogene graben systems: Bandar Jaya Basin (S Sumatra), Kampar Kanan Basin (C Sumatra), Ombilin Basin (W Sumatra), Phetchabun Basin (N Thailand) and Dongting Basin (China). Geochemical characteristics of source rocks described in context of depositional systems)

Williams, H., E.N. Reyes & R.T. Eubank (1992)- Geochemistry of Palawan oils, Philippines: source implications. In: 9th Offshore Southeast Asia Conf. (OFFSEA 92), Singapore 1992, Proc. SE Asia Petroleum Expl. Soc. (SEAPEX) 10, OSEA 92103, p. 115-129.
(Palawan non-waxy oils traditionally interpreted as marine sourced. Oils from recent Calauit fields characteristics of non-marine algal source)

Williams, S.L. & H.H. Williams (1994)- Carbon isotopes in Southeast Asian lacustrine sourced oils and source rocks. In: 10th Offshore SE Asia Conf., Singapore 1994, p. 167-183.
(Review of carbon isotopes of 174 lacustrine sourced oils and 109 lacustrine source rocks suggest carbon isotopes can not be used to differentiate between marine and lacustrine environments)

XI.3. Coal - Peat deposits

(Additional references on coal that are specific to one region are listed under these regions)

Adhi, R.N., A. Pujobroto, C.K.K. Gurusings, U. Kuntjara, D.N. Sunuhadi et al. (2004)- National resources and reserves of mineral, coal, and geothermal. Indonesian Direct. Gen. Geology and Mineral Resources, Special Publ. 103, p. 1-130.

Anderson, J.A.R. (1961)- The ecology and forest types of the peat swamp forests of Sarawak and Brunei in their relation to sylviculture. Ph.D. Thesis Edinburgh University, p. *(Unpublished)*

Anderson, J.A.R. (1964)- The structure and development of peat swamps of Sarawak and Brunei. J. Tropical Geography, Singapore, 18, p. 7-16.

Anderson, J.A.R. (1983)- The tropical peat swamps of western Malesia, In: A.J.P. Gore (ed.) Ecosystems of the World: mires, swamp, bog, fen and moor, 4B. Regional studies, Elsevier, New York, p. 181-199.

Andriesse, J.P. (1974)- The characteristics, agricultural potential and reclamation problems of tropical lowland peats in Southeast Asia. Communication Koninklijk Instituut voor de Tropen, Amsterdam, 63, 63p.

Atkinson, C.M. (1989)- Coal and oil shale in Tertiary intermontane basins of Indonesia and eastern Australia. In: T. Thanasuthipitak & P. Ounchanum (eds.) Proc. Int. Symp. Intermontane basins: geology and resources, Chiang Mai 1989, p. 77-88.

Bainton, C.S. (1978)- Coal formations in Indonesia. In: S. Wiryosujono & A. Sudradjat (eds.) Proc. Regional Conf. Geology and Mineral Resources of Southeast Asia (GEOSEA), Jakarta 1975, Indon. Assoc. Geol. (IAGI), p. 55-63.
(Organized coal mining in Indonesia started in 1849 at Pengaron, SE Kalimantan. Most important surface mine in Indonesia Bukit Asam in S Sumatra, opened in 1919. Coal deposition requires paralic- limnic environments with slow subsidence, mainly in backarc basins)

Belkin, H.E. & S.J. Tewalt (2007)- Geochemistry of selected coal samples from Sumatra, Kalimantan, Sulawesi, and Papua, Indonesia. U.S. Geol. Survey (USGS) Open-File Report 2007-1202, 34p.
(online at: http://pubs.usgs.gov/of/2007/1202/ofr2007-1202.pdf)
(Brief report on geochemical analysis of 8 coal samples from Sumatra (3; Eocene- Miocene), Kalimantan (3; Eocene-Miocene), W Papua (Timika, Permian) and S Sulawesi (1; Eocene))

Belkin, H.E., S.J. Tewalt, J.C. Hower, J.D. Stucker & J.M.K. O'Keefe (2008)- Geochemistry and petrology of selected coal samples from Sumatra, Kalimantan, Sulawesi, and Papua, Indonesia. Int. J. Coal. Geol. 77, 4, p. 260-268.
(Most of Indonesian coal Paleogene and Neogene age, low- moderate rank and low ash and sulfur. Tectonic and igneous activity resulted in significant rank increase in some basins. Eight coal samples described from Sumatra, Kalimantan, Sulawesi and Papua)

Biagioni, S., V. Krashevska, Y. Achnopha, A. Saad, S. Sabiham & H. Behling (2015)- 8000 years of vegetation dynamics and environmental changes of a unique inland peat ecosystem of the Jambi Province in central Sumatra, Indonesia. Palaeogeogr. Palaeoclim. Palaeoecology 440, p. 813-829.
(Study of 7.3m peat core from Air Hitam peatland in Jambi Province. In last ~7800 years site covered by dipterocarp-swamp mixed rainforest during first 2000 years, after which freshwater swamp taxa more important, in particular Durio trees. At ~4500 years ago swamp vegetation shifted to pole forest with Pandanus thickets in response to change from minerotrophic to ombrotrophic conditions)

Bowe, M. & T.A. Moore (2015)- Coalbed methane potential and current realisation in Indonesia. In: AAPG Asia Pacific Region GTW, Opportunities and advancements in coal bed methane in the Asia Pacific, Brisbane, Search and Discovery Art. 90234, 5p. *(Extended Abstract)*

(Estimates for CBM potential ranged up to 450 TCF, but realisation of resource limited so far. Main CBM targets Miocene coal seams in S Sumatra and Kutai Basins. S Sumatra coal seams generally thicker (5-25 m) than Kutai Basin and laterally continuous over 10s of km. 54 PSCs since 2008. 84 CBM core and pilot wells drilled by 18 operators. Gas contents generally higher in Kutai Basin (2-10 m3/t) than in S Sumatra Basin (<3 m3/t). Gas saturations tend to be >80% at depths >300m. Gas dominated by biogenically-derived methane)

Boudou, J. (1983)- Chloroform extracts of a series of coals from the Mahakam Delta. Organic Geochem. 6, p. 431-437.
(Study of changes in organic matter during early thermal maturation in Mahakam delta Tertiary coals)

Boudou, J.P., B. Durand & J.L. Oudin (1984)- Diagenetic trends of a Tertiary low-rank coal series. Geochimica Cosmochimica Acta 48, 10, p. 2005-2010.
(Mahakam delta coals all stages between peat, lignites and bituminous coals. Mechanisms of early maturation are loss of oxygenated compounds, aromatisation and condensation of organic matter, similar to other coals)

Boudou, J., R. Pelet & R. Letolle (1984)- A model of diagenetic evolution of coaly sedimentary organic matter. Geochimica Cosmochimica Acta 48, 6, p. 1357-1362.
(Diagenetic evolution of coal from Mahakam delta. Carbon loss during diagenesis mainly as CO_2, hydrogen loss mainly as H_2O. Hydrocarbon production negligible, in accordance with absence of bacterial methane accumulations in Mahakam Delta. δ13C of coals becomes ~2 per mil more positive with diagenesis)

Brady, M.A. (1997)- Organic matter dynamics of coastal peat deposits in Sumatra. Ph.D. Thesis, University of British Columbia, Vancouver, p. 1-258.
(online at: https://open.library.ubc.ca/cIRcle/collections/ubctheses/831/items/1.0075286)
(Organic matter characteristics of Holocene surface peat layers in 3 raised ombrothrophic peat deposits on E coast of Sumatra. Thickness of peat 3-12m, age 4500/4000 yrs and younger)

Bruenig, E.F. (1990)- Oligotrophic forested wetlands in Borneo. In: A.E. Lugo et al. (eds.) Ecosystems of the World 15, Elsevier, p. 299-334.

Calvert, G.D., J.R. Durig. & J.S. Esterle (1991)- Controls on the chemical variability of peat types in a domed peat deposit, Baram River Area, Sarawak, Malaysia. Int. J. Coal Geology 17, p. 171 188.
(Chemical analyses of domed peat deposits of Baram River delta. Four end members distinguished, which can be traced to type of plants and degree of degradation. Pollen from center of deposit indicates succession from mangrove substrate followed by fresh water peat forest, then stunted vegetation)

Cameron, C.C., J.S. Esterle & C.A. Palmer (1989)- The geology, botany and chemistry of selected peat-forming environments from temperate and tropical latitudes. Int. J. Coal Geology 12, p. 105-156.
(Peat studied in several geologic settings, including coast of Sarawak and delta of Batang Hari River, Sumatra. Most deposits are domed bogs in which peat accumulation continued above surface of surrounding soil. Typical sequence of environments from pond stage, through grassy marsh, through forested swamp to heath dome stage, with associated changes in acidity and ash, volatile matter, carbon, hydrogen, nitrogen, sulfur and oxygen contents, as well as trace elements. Ombrotrophic peat deposits of tropical Sarawak and Sumatra thick and extensive, low-ash and low-sulfur, and high heating values)

Casdira, R. Budiana & E.R. Tantoro (2014)- Coal Bed Methane exploration in Sumatera. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 461-466.
(Although gas resource probably huge, CBM is yet to be proved that it can be produced economically)

Chen, S.P. (1993)- Coal as an energy resource in Malaysia. In: Proc. Tectonic framework and energy resources of the western margin of the Pacific basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 399-410.
(online at: www.gsm.org.my/products/702001-100999-PDF.pdf)

(Review of coal resources in Malaysia: 98% in Sarawak and Sabah. All coal of Tertiary age and quality ranges from lignite to anthracite, with bituminous coal predominant. Largest known coal deposits in Merit Pila and Mukah- Balingian in Sarawak and in Meliau basin in south C Sabah.)

Cole, J.M. (1987)- Some fresh/brackish water depositional environments in the SE Asian Tertiary with emphasis on coal-bearing and lacustrine deposits and their source rock potential. Proc. 16th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, 1, p. 429-449.
(Review of terrestrial coal bearing sedimentary sequences where oil-prone organic material was deposited in SE Asian Tertiary. Autochthonous coal deposits more favourable oil sources than allochthonous coals. Lacustrine environments may be most prolific (Botryococcus-derived) oil source in SE Asia)

Cook, A.C. & B. Daulay (2000)- Comparative analysis of Indonesian coal fields. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 16-17. *(Abstract)*

Cook, A.C. & B. Daulay (2000)- The Indonesian coal industry. The Australian Coal Rev., April 2000, p. 4-15.
(online at: www.australiancoal.csiro.au/pdfs/cook_daulay.pdf)

Croockewit, J.H. (1854)- Scheikundig onderzoek van steenkolen. Natuurkundig Tijdschrift Nederlandsch-Indie 6, p. 123-130.
('Chemical analysis of coal samples'. Four samples from Oranje Nassau mine in SE Kalimantan)

Daulay, B. (1985)- Petrology of some Indonesian and Australian Tertiary coals. M.Sc. Thesis University of Wollongong, p. 1-265. *(Unpublished)*

Daulay, B. (1998)- Exsudatinite in Eastern Kalimantan coals. Indonesian Mining J. 4, 1-2, p.
(Five types of exsudatinite in E Kalimantan coals)

Daulay, B. (2005)- Petrography of raw coal and its UBC product. Indonesian Mining J. 8, 3, p.

Daulay, B. (2010)- Evaluation of Kalimantan coal quality in order to select the appropriate and effective utilizaton tecnologies. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. Kalimantan coal and mineral resources, MGEI-IAGI Seminar, Balikpapan 2010, p. 49-59.
(Most Kalimantan coal mainly low rank with high moisture content. Most coal currently exploited medium-high rank)

Daulay, B. & A.C. Cook (1988)- The petrology of some Indonesian coals. J. Southeast Asian Earth Sci. 2, p. 45-64.
(Indonesian coals rich in vitrinite and variable contents of liptinite. Inertinite rare to sparse, with exception of a few (typically Neogene) coals. No major differences between Paleogene and Neogene coals. Most coals low in rank. Coals, and associated dispersed organic matter, important source rocks for some oil accumulations)

Daulay, B., N.S. Ningrum & A.C. Cook (2000)- Coalification of Indonesian coal. In: Proc. Southeast Coal Geology Conference, Directorate General of Geology and Mineral Res. Indonesia, Bandung, p. 85-92.

Daulay, B., B. Santoso & N.S. Ningrum (2015)- Evaluation of selected high rank coal in Kutai Basin, East Kalimantan, relating to its coking properties. Indonesian Mining J. 18, 1, p. 1-10.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/301/186)

De Groot, C. (1865)- Eene bijdrage tot de kennis van de Nederlandsch Indische steenkolen. Kramers, Rotterdam, 55p.
('A contribution to the knowledge of the Netherlands Indies coals'. Mainly on composition and quality of coal in 'Oranje Nassau' government-operated coal mine at Pengaron, Barito Basin, SE Kalimantan, which produced

coal since 1848. Five Eocene coal horizons, three of which deemed suitable for use on navy steam ships. Ash content 2.7-6.3%)

De Gruyter, P. (1940)- Een voorloopige classificatie der Indische steenkolen, gericht op hun technische toepassing. De Ingenieur in Nederlandsch-Indie (III) 7, 12, p.
('A provisional classification of the Indonesian coals, aimed at their technical application'. First part mainly of general coal classification properties)

De Gruyter, P. (1941)- Een voorloopige classificatie der Indische steenkolen, gericht op hun technische toepassing- vervolg. De Ingenieur in Nederlandsch-Indie (III) 8, 1, p. 1-14.
('A provisional classification of the Indonesian coals, aimed at their technical application- continued'. Second part mainly on properties of Bukit Asam coal. S Sumatra, also Ombilin, Borneo)

De Loos, D. (1899)- Gesteenten en mineralen van Nederlandsch Oost-Indie, 3: Steenkolen. Koloniaal Museum Haarlem, Erven Loosjes, p. 1-42.
('Rocks and minerals from Netherlands East Indies- 3: Coal'. Early, popular review of occurrences and quality of coal in Indonesia, mainly on Java, Sumatra and Kalimantan)

Dehmer, J. (1993)- Petrology and organic geochemistry of peat samples from a raised bog in Kalimantan (Borneo). Organic Geochem. 20, 3, p. 349-362.
(Peat cores, from margin and center of tropical raised bog from Sebangau River near Palangkaraya. Peats from margin of raised bog more decomposed than center and basal peats more decomposed than peats from upper layers. Basal peats deposited under mesotrophic conditions and more seasonal climate)

Dommain, R., J. Couwenberg & H. Joosten (2011)- Development and carbon sequestration of tropical peat domes in south-east Asia: links to post-glacial sea-level changes and Holocene climate variability. Quaternary Science Reviews 30, p. 999-1010.
(Three peat dome regions distinguished: inland C Kalimantan, Kutai basin and coastal areas across entire region. With the onset of Holocene first peat domes developed in C Kalimantan as response to rapid post-glacial sea-level rise over Sunda Shelf and intensification of Asian monsoon. Peat accumulation rates in C Kalimantan declined after 8500 BP with lower rate of sea-level rise. Kutai basin peat domes younger than ~8300 BP, driven by accretion rates of Mahakam River. Most coastal peat domes initiated between 7000-4000 BP as consequence of Holocene maximum in regional rainfall and stabilisation and regression of sea-level)

Dunlop, N. F. & R. B. Johns (1999)- Thermally induced chemical changes in the macromolecular structure of an Indonesian coal. Organic Geochem. 30, p. 1301-1309.

Esterle, J.S. (1990)- Trends in petrographic and chemical characteristics of tropical domed peats in Indonesia and Malaysia as analogues of coal formation. Ph.D. Thesis University of Kentucky, Lexington, p. 1-270. *(Unpublished)*

Esterle, J.S. (1999)- Can peats be used to discriminate local subsidence from regional tectonism? Examples from Sarawak, Malaysia and Sumatra, Indonesia. In: H. Darman & F.H. Sidi (eds.) Tectonics and sedimentation of Indonesia, FOSI-IAGI-ITB Regional Seminar to commemorate 50th anniversary of Van Bemmelen's Geology of Indonesia, Bandung 1999, p. 24-28.
(Holocene peats of E Sumatra and Sarawak started forming at ~6000 BP and are models for formation of coal measures. Two modes of peat accumulation, one where it keeps up with clastic sedimentation (rel. high preservation potential), and one where it outstrips clastic sedimentation (rel. poor preservation potential))

Esterle, J.S., G. Calvert, D. Durig et al. (1992)- Characterization and classification of tropical woody peats from Baram River, Sarawak and Jambi, Sumatra. In: B.Y. Aminuddin (ed.) Proc. Int. Symposium on Tropical Peatland, Kuching, MARDI, Kuala Lumpur, p. 33-48.

Esterle, J.S. & J.L. Ferm (1994)- Spatial variability in modern tropical peat deposits from Sarawak, Malaysia, and Sumatra, Indonesia. Int. J. Coal Geology 26, p. 1-41.
(Study of two Recent (<5,000 yrs) domed peat deposits at Baram River (Sarawak) and Jambi area (Sumatra), examined as modern analogues for coal. Both in microtidal alluvial-deltaic plain settings, similar vegetation. One deposit convex, mature dome, rising 10m above river level; the other is low-gradient dome, rising only x m above river level but with concave base up to 6m below. Both deposits eroded by adjacent rivers)

Fatimah (2008)- Potensi Batubara bawah permukaan di Indonesia. Proc. 37th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 501-512.
(Assessment of potential volumes of deep-seated coal in Sumatra and Kalimantan)

Flores, R.M. & Hadiyanto (2006)- Patterns of Sumatran domed peatlands; from alluvial to coastal settings. Geol. Soc. America (GSA), 2006 Ann. Mtg., Abstracts with Programs 38, 7, p. 233. *(Abstract only)*
(Sumatran rain-fed and domed (ombrogenous) mires used as models for thick coal deposits worldwide. Kumpeh and Dendang peatlands between anastomosing Batang Hari and Kumpeh Rivers domed topography despite meander channels and tributaries forming re-entrants into peatlands and flood-plain levee sediments. Resulting peat deposits small area (240-540 km2), discontinuous, lenticular, <9 m thick. Endapan domed to flat peatland from edge of Batang Hari and Kumpeh Rivers to coast, is blanket-like (4000 km2) peat deposit, >11m thick. Raised peatlands along rivers reflect buildup of flood sediments that sustained robust vegetation, which in turn, accumulated raised peat (<9 m) that reduced extent of flooding. Flat coastal peatlands (Endapan) reflect peat accumulation (>11m) from stunted vegetation removed from flood-sustaining nutrients)

Friederich, M., J. Esterle, T. Moore & C. Nas (2009)- Variations in the sedimentological characteristics of Tertiary coals in SE Asia; and climatic influences on Tertiary coals and modern peats. In: Variations in fluvial-deltaic and coastal reservoirs deposited in tropical environments, AAPG Hedberg Conf., Jakarta 2009, 6p. *(Extended abstract)*
(online at: www.searchanddiscovery.com/abstracts/pdf/2010/hedberg_indonesia/abstracts /ndx_friederich.pdf)
(Modern domed peat swamps in Sumatra and Sarawak may be used as analogues of Tertiary coals of Kalimantan)

Friederich, M.C., R.P. Langford & T.A. Moore (1999)- The geological setting of Indonesian coal deposits. In: G. Weber (ed.) Proc. PACRIM '99 Congress, Bali 1999, Australasian Inst. of Mining and Metallurgy Publ. 4/99, p. 625-631.
(Indonesia economic coal deposits mainly of Eocene and Miocene-Pliocene age and mainly in Kalimantan and Sumatra. Formed from peat deposits in equatorial paleoclimate. Some peats domed peats, which grew above normal water tables in climate of year-round rainfall, are low in ash and sulphur and locally thick (Miocene coals). Eocene coals typically thinner, with higher contents of ash and sulphur. Eocene coals formed mainly in extensional tectonic settings. Miocene-Pliocene coals in range of tectonic settings)

Friederich, M.C., G. Liu, R.P. Langford, C. Nas & B. Ratanasthien (2000)- Coal in Tertiary rift systems in Southeast Asia. In: Proc. Southeast Asia Coal Geology Conference, Bandung 2000, p. 33-43.

Friederich, M.C., T.A. Moore & R.M. Flores (2016)- A regional review and new insights into SE Asian Cenozoic coal-bearing sediments: why does Indonesia have such extensive coal deposits? Int. J. Coal Geology 166, p. 2-35.
(SE Asia Cenozoic coal-bearing basins grouped in five regions: N Sundaland, S Sundaland, Philippines, W Myanmar and E Indonesia; first three discussed here. Most significant coal deposits of SE Asia in Neogene of S Sundaland (Borneo, Sumatra), over extensive coastal plains in regressive setting. Coal deposits of N Sundaland (i.e. SE Asian continental) in small disconnected non-marine grabens, and are areally restricted. S Sundaland resided mainly within ± 10° of equator, with paleoclimate conducive to ever-wet conditions. N Sundaland resided >10°N of equator, probably monsoonal with annual dry periods. Etc.)

Friederich, M.C., T.A. Moore, M.S.W. Lin & R.P. Langford (1995)- Constraints on coal formation in Southeast Kalimantan, Indonesia. Proc. 6th New Zealand Coal Conf., Coal Research Ltd., 1, p. 137-149.

Friederich, M.C. & T. van Leeuwen (2017)- A review of the history of coal exploration, discovery and production in Indonesia: the interplay of legal framework, coal geology and exploration strategy. Int. J. Coal Geology 178, p. 56-73.
(Review of geologic setting and 160 years history of coal exploration and commercial production in Indonesia. Coal exploration and production of Eocene and Miocene coal started in late 1800's in SE Kalimantan and W and S Sumatra. Very limited production from World War 2 until 1980s when modern coal mining industry started to develop. In 2005 Indonesia became world's largest coal exporter)

Furukawa H (1988)- Stratigraphic and geomorphic studies of peat and giant podzols in Brunei: 1. Peat. Pedologist 32, 1, p. 26-42.

Gastaldo, R.A. (2010)- Peat or no peat: Why do the Rajang and Mahakam Deltas differ? Int. J. Coal Geology 83, p. 162-172.
(Borneo Holocene peats are models for Tertiary coals. Sarawak Rajang River delta- coastal plain with extensive peat up >13 m thick in ombrogenous peat domes, deposited over Pleistocene podzols when sea level stabilized at 7.5 ka and delta progradation started. Mahakam River delta also began progradation at this time, but no peat accumulation. Rajang River clays up to 60% mixed layer and expandable clays that restrict pore water flow in tidal and overbank deposits, promoting accumulation of organic matter. Mahakam River low % mixed-layer and expandable clays in system)

Gastaldo, R.A. & J.R. Staub (1999)- A mechanism to explain the preservation of leaf litter lenses in coals derived from raised mires. Palaeogeogr. Palaeoclim. Palaeoecology 149, p. 1-14.
(Leaves are easily degradable and rarely preserved in coals. May be preserved in acid-water filled depressions)

Gastaldo, R.A., G.P. Allen & A.Y. Huc (1993)- Detrital peat formation in the tropical Mahakam River delta, Kalimantan, eastern Borneo: sedimentation, plant composition, and geochemistry. In: J.A. Cobb & C.B. Cecil (eds.) Modern and ancient coal-forming environments, Geol. Soc. America (GSA), Spec. Paper 286, p. 107-118.
(In Mahakam Delta fluvial distributary channels are main conduits for transport of plant parts to delta front, where they are commonly reworked into up to 2.5m thick accumulations, onlapping interdistributary tidal flats. Allochthonous peat composed of fragmented canopy detritus from various sources, including leaves, cuticles, wood, petiole parts, damar (dipterocarp resins), fruits, and seeds. Deposits occur as high-tide beach ridges)

Godfrey, P., Tan Ee & T. Hewitt (2010)- Coal Bed Methane development in Indonesia: golden opportunity or impossible dream ? Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IAP), Jakarta, IPA10-BC-180, 19p.
(Mainly on commerciality and regulatory environment of Indonesian CBM projects)

Grady, W.C., C.F. Eble & S.G. Neuzil (1993)- Brown coal maceral distributions in a modern domed tropical Indonesian peat and a comparison with maceral distribution in Middle Pennsylvanian-age Appalachian bituminous coal beds. In: J.C. Cobb & C.B. Cecil (eds.) Modern and ancient coal-forming environments, Geol. Soc. America (GSA), Spec. Paper 286, p. 63-82.

Hadianto (2000)- Coal bed methane resources of Indonesia. Proc. 36th Sess. Coord. Comm. Coastal and Offshore Program East and SE Asia (CCOP), Hanoi 1999, p. 51-65.
(Statistics of coal and coalbed methane resources in Indonesia. CBM resource of Indonesia estimated 2.89 Tm3, with greatest resource in S Sumatra, followed by Ketungau and Kutai basins on Kalimantan)

Hadiyanto & S.H. Stevens (2005)- Coal bed methane prospects in lower rank coals of Indonesia. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, IAGI Spec. Issue, p. 152-162.
(Brief overview of Indonesian basins with coalbed methane potential. Over 12.7 Tm3 (450 TCF) of CBM resources identified in 11 basins (similar paper to to Stevens and Hadiyanto 2004))

Hadiyanto, S.S. & R. Susilawati (1998)- Geological overview, coal resources and Coalbed Methane potential of Indonesia. Proc. 27th Ann. Conv. Indon. Assoc. Geol. (IAGI), Yogyakarta, p. 213.

Haris, A., A. Mujiantoro & R.E Kurniawan (2010)- Evaluation of Coal Bed Methane potential of Bentian Besar, Kutei Basin. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-139, 10p.

Harrington, J. (2016)- CBM Indonesia- dull past, bright future. In: 2016 Technical Symposium Where from, where to, Indon. Petroleum Assoc. (IPA), Jakarta, p.

Hooze, J.A. (1892)- Overzicht der voornaamste kolenterreinen van den Nederlandsch Indischen Archipel. Tijdschrift Kon. Nederlands Aardrijkskundig Genootschap (2) 9, p. 129-160.
(online at: https://resolver.kb.nl/resolve?urn=MMUBA13:001625001:pdf)
('Overview of the principal coal terrains of the Netherlands East Indies Archipelago'. Coal in Netherlands Indies only in Tertiary formations. Best quality coal in Eocene. Main exploitation on Sumatra and Kalimantan. No figures)

Hope, G., U. Chokkalingam & S. Anwar (2005)- The stratigraphy and fire history of the Kutai Peatlands, Kalimantan, Indonesia. Quaternary Research 64, p. 407-417.
(Equatorial peatlands of Kutai lowland generally 4-10m thick, but some sections >16m thick. Deposition of peat started ~8000 yrs ago after flooding of basin by Mahakam River. Earliest vegetation is Pandanus swamp which grades upwards to dipterocarp-dominated swamp forest. Peatland expanded laterally and rivers maintained narrow levee-channels through swamp. Fires of 1982 and 1997 burnt up to 85% of vegetation)

Horkel, A. (1990)- On the plate tectonic setting of the coal deposits of Indonesia and the Philippines. Mitteilungen Osterreichischen Geol. Gesellschaft 82 (1989), p. 119-133.
(online at: http://geologie.or.at/index.php/downloads2/category/7-archiv-mitteilungen)
Geodynamic evolution of SE Asian archipelago controls development of Tertiary sedimentary basins that contain coal deposits of Indonesia and Philippines. Plate-tectonic setting and associated geothermal gradients and tectonic stress are more relevant for quality and rank of Tertiary coals than age. With brief discussions of coal in Sumatra and E Kalimantan)

Hutton, A., B. Daulay, Herudiyanto, C. Nas, A. Pujobroto and H. Sutarwan (1994)- Liptinite in Indonesian Tertiary coals. Energy Fuels 8, 6, p. 1469-1477.
(Indonesian Tertiary coals similar compositions with vitrinite dominant maceral group. Most coals abundant secondary liptinite, especially exsudatinite but also fluorinite. Association of exsudatinite with oil suggests it is an indicator of early stage oil generation, and probably intermediate product in pathway vitrinite/ liptinite to oil. Where exsudatinite present in other rocks it should be termed bitumen)

Jaenicke J. (2010)- 3D modelling and monitoring of Indonesian peatlands aiming at global climate change mitigation. Dissertation Ludwig-Maximilians Universitat, Munich, 89p.
(online at: http://edoc.ub.uni-muenchen.de/11761/2/Jaenicke_Julia.pdf)

Jaenicke J., J.O. Rieley, C. Mott, P. Kimman & F. Siegert (2008)- Determination of the amount of carbon stored in Indonesian peatlands. Geoderma 147, p. 151-158.

Katili, J.A. (1984)- Coal and peat in Indonesia: potentials and prospects. Indonesian Quart. 12, 1, p. 50-61.

Kendarsi, R. (1985)- The coal resources of Indonesia and South East Asia. In: M.B. Katz & E. Langevad (eds.) Geosciences in International Development, Assoc. Geosc. Int. Development (AGID), Report 11, p. 23-57.

Kleinschmiede, J. (1937)- Coal in the East Indian Archipelago. IV. Borneo. Geol. Survey Indonesia, Bandung, Open File Report F37-04, 36p.

Kleinschmiede, J. (1939)- Coal in the East Indian Archipelago. VI. New Guinea. Geol. Survey Indonesia, Bandung, Open File Report. F39-01, 39p.

Koesoemadinata, R.P. (1978)- Sedimentary framework of Tertiary coal basins of Indonesia. In: P. Nutalya (ed.) Proc. 3rd Regional Conf. Geology and Mineral Resources of SE Asia (GEOSEA III), Bangkok, p. 621-639.

Koesoemadinata, R.P. (2000)- Tectono-stratigraphic framework of Tertiary coal deposits of Indonesia. Proc. Southeast Coal Geology Conference, Dir. Gen. Geol. Mineral Res. Indonesia, Bandung 2000, p. 8-16.

Koesoemadinata, R.P. (2002)- Outline of Tertiary coal basins of Indonesia. Berita Sedimentologi (FOSI) 17, p. 2-13.
(Tertiary coals found mainly in basins of W Indonesia, on continental crust of Sunda shield. Tectonostratigraphic settings include (1) syn-rift deposits, (2) post-rift Transgressive sequence and (3) 'syn-orogenic' Regressive sequence In E Indonesia lignite/ coal in West Papua syn-orogenic basins)

Koesoemadinata, R.P. & Harjono (1977)- Kerangka sedimenter endapan Batubara Tersier di Indonesia. Proc. 6th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 1-21.
('Depositional framework of Tertiary coals in Indonesia')

Koesoemadinata, R.P., Hardjono, I. Usna & H. Sumadirdja (1978)- Tertiary coal basins of Indonesia. CCOP Techn. Bull. 12, p. 43-86.
(Overview of Indonesian Tertiary basin types and coal basins of Sumatra, Kalimantan, W Java and W Sulawesi. More detailed discussions of W Sumatra Ombilin Basin, S Sumatra Bukit Asam and E Kalimantan)

Korasidis, V.A., M.W. Wallace & B. Jansen (2017)- The significance of peatland aggradation in modern and ancient environments. Palaios 32, 10, p. 658-671.
(Modern and ancient Cenozoic peat cycles commonly evolve from inundated wetland assemblages to more elevated and well-drained forest. Changing floral compositions result from changes in substrate wetness during peatland aggradation in high rainfall settings. Includes some discussion of SE Asian peatlands)

Lalean, B. (2010)- Launching a first Coalbed Methane (CBM) project In Indonesia- a case study. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-BC-189, 7p.
(Account of Medco S Sumatra work on Sekayu and Rambutan CBM projects)

Maltby, E., C.P. Immirzi & R.J. Safford (1996)- Tropical lowland peatlands of Southeast Asia. IUCN, Cisarua, Indonesia, p. 1-294.

Moore, T.A. (2010)- Critical reservoir properties for low-rank Coalbed Methane resources of Indonesia. Proc. 34th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA10-G-055, 5p.
(Most of Indonesian's coalbed methane resources from low-rank coals and of biogenic origin, requiring different assessment than more mature strata. Macroporosity- permeability in low rank coal largely function of cleat spacing, which may vary with coal composition. High moisture content reduces gas holding capacity)

Moore, T. (ed.) (2015)- Hydrocarbons in the tropics: on the edge. A field trip guide to ancient and modern organic-rich environments in Kalimantan Timur (Borneo), Indonesia. 32nd Ann. Meeting Society for Organic Petrology, Yogyakarta 2015, Field guide, p. 1-107.
(Guidebook to 4-day fieldtrip in Paleo-Mahakam delta deposits around Samarinda-Balikapapan)

Moore, T.A. & C.I. Butland (2005)- Coal seam gas in New Zealand as a model for Indonesia. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI), Spec. Issue, p. 192-200.
(On similarities between Indonesian and New Zealand low rank coal seam gas reservoirs)

Moore, T.A. & J.C. Ferm (1988)- A modification of procedures for petrographic analysis of Tertiary Indonesian coals. J. Southeast Asian Earth Sci. 2, p. 175-183.

(Study of SE Kalimantan Eocene coals required new procedures which relates megascopic appearance to petrographic character. Highest concentration and best preservation of plant parts in banded coal)

Moore, T.A., T.E. Mares & C.R. Moore (2010)- Assessing uncertainty of coalbed methane resources. Proc. Indon. 33rd Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA09-G-056, 11p.

Moore, T.A. & S.J. Zarrouk (2011)- The origin and significance of gas saturation in Coalbed Methane plays: implications for Indonesia. Proc. 35th Ann. Conv. Indon. Petroleum Assoc. (IPA), Jakarta, IPA11-G-195, 10p.

Morley, R.J. (1981)- Development and vegetation dynamics of a lowland ombrogenous peat swamp in Kalimantan Tengah, Indonesia. J. Biogeography 8, p. 383-404.
(Palynological study of 6 sediments cores from Holocene lowland peat swamp along Sebangau River near Palangkaraya, C Kalimantan. Peat formation started abruptly over freshwater topogenous swamp with common Graminae and Lycopodium. Local river patterns may have changed markedly during Holocene)

Morley, R.J. (2013)- Cenozoic ecological history of Southeast Asian peat mires based on comparison of coals with present day and Late Quaternary peats. J. Limnology 72, 2s, p. 36-59.
(online at: www.jlimnol.it/index.php/jlimnol/article/view/jlimnol.2013.s2.e3/573)
(Tropical peat swamps more widespread in Sundaland than any other equatorial region, with ombrotrophic, rheotrophic and brackish mangrove peat swamps. Cenozoic deposits from area rich in coals. Extensive brackish water peats formed M-L Eocene and M-L Miocene, often laterally very extensive. Rheotrophic peats formed widely through most of Cenozoic. Ombrotrophic kerapah type peats are first recognised in Late Oligocene. Kerapah peats sometimes developed great thickness. Basinal peats increased during Miocene. No convincing evidence for doming in Cenozoic peats has yet been noted)

Nas, C. (2003)- Sedimentary features in some Indonesian coal seams. Proc. 32nd Annual Conv. IAGI and 28th Ann. Conv. HAGI, Jakarta, 8p.
(Brief review of coal seam geometries and coal sedimentology)

Nas, C. (2005)- Coking coals in Indonesia: occurrences and properties. In: S. Prihatmoko et al. (eds.) Indonesian mineral and coal discoveries, Indon. Assoc. Geol. (IAGI), Jakarta, Spec. Publ., p. 163-176.

Nas, C. & Hidartan (2010)- The quality of Kalimantan coking coals, Indonesia. In: N.I. Basuki & S. Prihatmoko (eds.) Proc. MGEI-IAGI Seminar Kalimantan coal and mineral resources, Balikpapan 2010, p. 1-11.
(Kalimantan coals wide variation in quality. Neogene coals generally low rank. Eocene coals locally high rank and of coking coal quality. Descriptions of coking coal deposits in N Barito (Buntok) and Upper Kutai (Muara Teweh) basins)

Nas, C. & Hidartan (2010)- Quality of Kalimantan coking coals, Indonesia. In: Proc. 37^{th} Symp. Geology of the Sydney Basin, Hunter Valley, NSW 2010, p.
(Same paper as above?)

Nas, C., B.G. Jones & E. Baafi (2000)- Statistical variation in coal data sets: are they of geological significance? Proc. Southeast Asian coal geology conference, Bandung 2000, p. 175-182.

Nas, C. & A. Pujobroto (2000)- Vitrinite macerals in Indonesian coal. In: Proc. Southeast Asian Coal Geology Conference, Bandung 2000, p. 215-226.

Neuzil, S.G. (1997)- Onset and rate of peat and carbon accumulation in four domed ombrogenous peat deposits, Indonesia. In: J.O. Rieley & S.E. Page (eds.) Biodiversity and Sustainability of tropical peatlands, Samara Publishing Ltd, Cardigan, p. 73-80.

Neuzil, S.G., Supardi, C.B. Cecil, J.S. Kane & K. Soedjono (1993)- Inorganic geochemistry of domed peat in Indonesia and its implications for the origin of mineral matter in coal. In: J.C. Cobb & C.B. Cecil (eds.) Modern and ancient coal-forming environments, Geol. Soc. America (GSA), Spec. Paper 286, p. 23-44.
(Inorganic geochemistry of three domed ombrogenous peat deposits in Riau (Siak, Bengkalis peats) and W Kalimantan (Keramat peat). Mineral matter limited to small amounts from allogenic sources of dryfall, rainfall and diffusion from substrate pore water. In interior of deposits much of mineral matter is authigenic. Ash yield (av. 1.1%) and sulfur content (av. 0.14%) generally low, but exceed 5% and 0.3% near base of deposits. Domed ombrogenous peat deposits will result in low ash and sulfur coal, even if marine rocks adjacent to coal)

Orem, W.H., S.G. Neuzil, H.E. Lerch & C.B. Cecil (1996)- Experimental early-stage coalification of a peat sample and a peatified wood sample from Indonesia. Organic Geochem. 24, 2, p. 111-125.

Osman, T.H. (2013)- The development of the Indonesian coal industry. Australasian Inst. of Mining and Metallurgy (AusIMM), Bull. 2013, 3, p. 38-40.

Page, A., A. Hooijer, J. Rieley, C. Banks & A. Hoscilo (2012)- The tropical peat swamps of Southeast Asia. In: D. Gower et al. (eds.) Biotic evolution and environmental change in Southeast Asia, Cambridge University Press, Chapter 16, p. 406-433.

Page, S.E., J.O. Rieley, O.W. Shotyk & D. Weiss (1999)- Interdependence of peat and vegetation in a tropical peat swamp forest. Philos. Trans. Royal Soc. London, B354, p. 1885-1897.
(online at: www.ncbi.nlm.nih.gov/pmc/articles/PMC1692688/pdf/11605630.pdf)
(Study of peat swamp forest composition in upper Sungai Sebangau area, S of Palangkaraya, C Kalimantan. Peat thickness up to 10m. Radiometric age dating suggest young peat (~400- 1760 yr BP) overlying older peat (~6-10.3 ka))

Page, S.E., J.O. Rieley & R. Wust (2006)- Lowland tropical peatlands of Southeast Asia. In: I.P. Martini, et al. (eds.) Peatlands: evolution and records of environmental and climate changes, Dev. Earth Surface Proc. 9, Chapter 7, Elsevier, p. 145-172.
(Review of SE Asia peatlands. Most AE Asia peatlands in low altitudes, and almost all domed/ ombrogenous. Geogenous peatlands confined to edges of coastal lagoons, banks and floodplains of rivers and margins of upland lakes. C Kalimantan peatland surface rel. flat: gradient (7.6m over 5500m). Ash in ombrogenous peats generally <1%. Most SE Asia peat deposits started to form around 4000- 5500 yr BP.; some Borneo peats older, up to 29,000 yr BP.)

Page, S., R. Wust & C. Banks (2010)- Past and present carbon accumulation and loss in Southeast Asian peatlands. PAGES news 18, 1, p. 25-27.
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(Peat accumulation rates in SE Asia studied peatlands average 1.3 mm/year, highside 4-6 mm/year)

Page, S., R.A.J. Wust, J.O. Rieley, W. Shotyk & S.H. Limin (2004)- A record of Late Pleistocene and Holocene carbon accumulation and climate change from an equatorial peat bog (Kalimantan, Indonesia): implications for past, present and future carbon dynamics. J. Quaternary Science 19, p. 625-635.

Pei, C.S. (1993)- Coal as an energy resource in Malaysia. In: G.H. Teh (ed.) Proc. Symposium on tectonic framework and energy resources of the Western margin of the Pacific Basin, Kuala Lumpur 1992, Bull. Geol. Soc. Malaysia 33, p. 399-410.
(98% of Malaysian coal in Tertiary of Sarawak and Sabah. Quality ranges from lignite to anthracite, mainly bituminous coal. Summaries of Merit Pila and Mukah-Balingin coal fields, Sarawak, and Meliau coal, Sabah)

Phua, M.H., O. Conrad, K.U. Kamlun, M. Ficher & J. Bohner (2008)- Multitemporal fragmentation analysis of peat swamp forest in the Klias Peninsula, Sabah, Malaysia using GIS and remote sensing techniques. Hamburger Beitrage zur Phys. Geographie und Landschaftsokologie 19, p. 81-90.

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(online at: www.dwc.knaw.nl/DL/publications/PU00011853.pdf)
('On peat and swamps in the Netherlands Indies'. Swamp areas subdivided into: (1) regionally extensive coastal peat swamps of Sumatra and Borneo and (2) 'topogenous' raised mires on the plains of Java, Sumatra and mountains of Java, Sulawesi and Buru. Mainly on plant and pollen distributions)

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('Peat research in the Netherlands Indies: an outline of the problems')

Polak, B. (1952)- Veen en veenontginning in Indonesia. Majalah Ilmu Alam Indon. (Indonesian J. Natural Science) 5-6, p. 146-160.
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Prijono, A. (1989)- Overview of the Indonesian coal development. Geologi Indonesia 12, 1 (Katili Comm. Volume), p. 253-278.
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(online at: www.ccop.or.th/download/pub/43as_ii.pdf)
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Ratanasthien, B., W. Kandharosa, S. Chompusri & S. Chartprasert (1999)- Liptinite in coal and oil source rocks in northern Thailand. J. Asian Earth Sci. 17, p. 301-306.
(N Thailand Tertiary coal and oil deposits similar palynological associations to Borneo region. Oldest coal-oil deposits of Late Oligocene- E Miocene age and dominated by Botryococcus or related algae. Thick-walled lamaginites and temperate spores- pollen in some areas. Thin-walled lamaginite dominant in late M Miocene time. Resinite, suberinite, and cutinite dominant in forest swamp coals; alginite, cutinite and lycopodium spores dominant in lacustrine environments. Liptinite macerals can be major source of oil and gas)

Rieley, J.O., A.A. Ahmad-Shah & M.A. Brady (1996)- The extent and nature of tropical peat swamps. In: E. Maltby et al. (eds.) Tropical lowland peatlands of Southeast Asia, Gland, Switzerland, p. 17-53.

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('Petrology of coals from Sumatra and Kalimantan: types, ratings and applications')

Santoso, B. (2017)- Petrographic characteristics of selected Tertiary coals from Western Indonesia according to their geological aspects. Indonesian Mining J. 20, 1, p. 1-30.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/178/110)
(Tertiary coals from W Indonesia (Sumatra, Kalimantan, Java) similarities and differences. Coals dominated by vitrinite (detrovitrinite,telovitrinite), common liptinite (resinite, cutinite, suberinite) and rare inertinite (semifusinite, sclerotinite, inertodetrinite) and mineral matter. Differences reflect differences in climate and peat conditions. Vitrinite reflectance variations caused by variations in burial and effects of igneous intrusions)

Santoso, B. & N. Suwarna (1998)- Indonesian coal: its potential, production and utilization. J. Geologi Sumberdaya Mineral 8, 78, p. 20-26.
(Indonesia coal reserves 36.6 billion tonnes. Economic coal resources mainly in Tertiary basins of Sumatra (67.4% of total) and Kalimantan (32.2%). Minor resources on Java (0.2%), Sulawesi (0.1%) and W Papua (0.2%). 59% of coal classified as lignite, 26.6% sub-bituminous, 14.4% bituminous and 0.4% anthracite)

Sanusi, S., A. Kuswandi, Radian M. Jufri & K.S. Anggarini (2014)- Evaluation of Coalbed Methane potential of Muara Enim Formation in the Muara Enim Area, South Sumatera. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 467-483.
(Three well drilling program for CBM evaluation in Late Miocene lignite- sub-bituminous coals of Muara Enim Fm indicates favourable gas content: average 3.55 m3/t (125.31 scf/t) at depth of 410- 812m)

Shearer, J.C., J.R. Staub & T.A. Moore (1994)- The conundrum of coal bed thickness: a theory for stacked mire sequences. J. Geology 102, 5, p. 611-617.
(Modern peat deposits up to ~20m thick and will compact appreciably during burial, whereas coal beds can be 90m thick. Thick coal beds likely composed of multiple, stacked paleo-peat bodies. Three types of bounding surfaces seen in modern peat bodies can be used to distinguish individual paleo-peats in coal beds)

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Sieffermann, G., S. Triutomo, M.T. Sadelman, A. Kristijono & S.A. Parhadimulyo (1987)- The peat genesis in the lowlands of Central Kalimantan province, the respective influence of podzolisation and bad drainage, the two main processes of peat genesis in Kalimantan. Int. Peat Congress, Yogyakarta, ORSTOM, 17p.
(online at: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_5/b_fdi_18-19/26068.pdf)

(Profiles of modern peat deposits in Sebangau valley (<1 to >5m thick) near Palangkaraya, S Central Kalimantan. Peat formation tied to podzolization led to decrease of microbiological activity, thus facilitating accumulation of non-decomposed organic matter, and to bad drainage)

Sigit, S. (1964)- A brief explanatory note to the distribution map of coal deposits, industrial minerals and rocks of Indonesia, scale 1:5000,000. Direktorat Geologi, p. 1-12.

Sigit, S. (1981)- Pengembangan batubara Indonesia, prospek dan permasalahannya. Proc. 10th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 1-6.
('Development of coal in Indonesia, prospects and its issues')

Sigit, S. (1981)- Coal development in Indonesia: past performance and future prospects. Journal Indon. Assoc. Geol. (IAGI) 8, p. 3-9.

Soehandojo (1989)- Coal exploration and exploitation review in Indonesia. Geologi Indonesia (J. Indon. Assoc. Geol. IAGI) 12, 1 (Katili Comm. Volume), p. 279-325.
(Overview of Indonesia coal concessions, mine operators, etc.. Most reserves on Sumatra and Kalimantan, lesser reserves on Sulawesi, Java, Irian Jaya)

Staub, J.R. & J.S. Esterle (1994)- Peat-accumulating depositional systems of Sarawak, East Malaysia. Sedimentary Geology 89, p. 91-106.
(Sarawak prograding coastal depositional systems contain domed peat-accumulating environments in which low-ash, low-sulfur peats are deposited in areas of active siliciclastic sedimentation. Depositional systems up to 11,400 km2 large, individual peat deposits >20m thick and 1000 km2 in area. Basal high-ash, high-sulfur, degraded peats overlain by low-ash, low-sulfur, well preserved peats)

Staub, J.R., J.S. Esterle & A.L Raymond (1991)- Comparative geomorphic analysis of Central Appalachian coal beds and Malaysian peat deposits. Bull. Geol. Soc. France 162, p. 339-351.

Stevens, S.H. & Hadiyanto (2004)- Indonesia: coalbed methane indicators and basin evaluation. Soc. Petrol. Engineers (SPE) Asia Pacific Oil and Gas Conf., Perth 2004, Paper SPE 88630, 8p.
(Indonesia has many untested thick, low-rank coal deposits, prospective for coalbed methane development. Assessed resource 12.7 trillion m3 (450 Tcf) of prospective CBM in 11 onshore basins)

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(Study sponsored by Caltex estimates 337 TCF of potentially completable CBM resources in S and Central Sumatra, Barito, Kutei and other coal basins in Indonesia. 10% of this resource (~30 TCF) may be in high-quality, gas-saturated, permeable 'fairways', where development may be economic)

Stevens, S.H., K. Sani & S. Hardjosuwiryo (2001)- Indonesiaǿs 337 TCF CBM resource a low-cost alternative to gas, LNG. Oil and Gas J. 99, 43, p. 40-45.
(337 TCF of coalbed methane (CBM) resource potential in 11 Indonesian coal basins)

Suparka, S., M. Djuwansah & S. Siregar (1996)- Peat in Indonesia: a dilemma of utilization and environmental impact. In: B. Ratanasthien & S.L. Rieb (eds.) Proc. Int. Symposium on Geology and Environment, Chiang Mai, Thailand, p. 109-121.
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(Modern peat deposits cover 48,000 km2 on lowlands of Riau Province, Sumatra. Two peat dome areas studied. Domes formed in last 5000 yrs, on flat surface, growing 4-5 mm/yr in first 1000 yrs, then 2 mm/yr for past 3500-4000 years. Low ash and sulfur content)

Supiandi, S. (1988)- Studies on peat in the coastal plains of Sumatra and Borneo Part I: physiography and geomorphology of the coastal plains. Southeast Asian Studies 26, p. 308-335.

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(Indonesia has abundant coal resources. Most coals thermally immature, but composed of hydrogen-rich organic components suitable for biogenic methane production. Gas isotope results from pilot wells in S Sumatra interpreted to indicate biogenic origins for methane)

Suwarna (2002)- Coalbed methane in Indonesia. Bull. Geol. Res. Dev. Centre 22, p. 19-39.
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Teodosio, N.R. (1987)- An overview of coal deposits in the Philippines. ESCAP Series on Coal. 5, p. 142-150.

Tie, Y.L. & J.S. Esterle (1992)- Formation of lowland peat domes in Sarawak, Malaysia. In: B.Y. Aminuddin (ed.) Proc. Int. Symp. on Tropical Peatland, Kuching, MARDI, Kuala Lumpur, p. 81-89.

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(Good overview of modern peat formation and distribution in W Indonesia)

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(online at: https://resolver.kb.nl/resolve?urn=MMKB21:029140000:pdf)
('The cokes question of coal in the Netherlands Indies. Study of suitability of Indies coals as cokes for steel industry. Results not good)

Van Diest, P.H. (1871)- De kolenrijkdom der Padangsche Bovenlanden en de mogelijkheden van de voordeelige ontginning. Stemler, Amsterdam, p. 1-76.
(online at: https://books.googleusercontent.com/books/..)
('The coal resources of the Padang Highlands and the possibilities of profitable exploitation'. Historic economic evalution of Ombilin coalfield in West Sumatra. Ombilin coals relatively high in carbon (79-80%) and low in ash (0.27-0.95%), sulfur (0.34-0.87%))

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('On the value of some Indonesian coal types'. Brief discussion of coals SE Kalimantan, Bengkulu-Sumatra)

Van Doorn, Z. (1959)- Enkele waarnemingen aan oorspronkelijke Indonesische veenmoerassen ter vergelijking met de Hollands-Utrechtse venen. Boor en Spade 10, p. 156-170.
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('Some observations on original peat bogs in Indonesia for comparìson with the Holland-Utrecht peat area')

Van Lier, R.J. (1917)- Onze koloniale mijnbouw, III, De steenkolenindustrie. Tjeenk Willink, Haarlem, p. 1-87.
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('Our colonial mining industry, III, the coal industry'. Popular 1917 booklet on coal mining industry in Indonesia by mining engineer and former chief engineer of Ombilin mines)

Winarno, T. & C. Drebenstedt (2014)- Opportunity of low rank coal development in Indonesia. In: C. Drebenstadt & R. Singhal (Eds.) Mine planning and equipment selection, Proc. 22nd MPES Conf., Dresden 2013, Springer Int., p. 1485-1494.

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(online at: http://www.ejurnal.its.ac.id/index.php/teknik/article/viewFile/49742/5673)
(Organic geochemistry of crude oil from Pamusian field, Tarakan Basin, N Borneo. Presence of long chain n-alkanes, cadinane, 4β(H)-eudesmane, and 18α (H)-oleanane indicates organic matter derived from dammar resin dammar of Dipterocarpaeae. Also indicators of photosynthetic bacteria. Pr/Ph ratio of 3.76 and drimane/ homodrimane ratio of 1.058 indicate oxic depositional environment. Crude oil from Tarakan Basin mature.)

Zetra, Y., H.S. Kusuma, F. Riandra, I.B. Sosrowidjojo & R.Y. Perry Burhan (2018)- The oxygenated biomarker as an indicator of origin and maturity of Miocene brown coal, Sangatta coal mines, East Kalimantan. Indonesian J. Geoscience 5, 2, p. 107-116.
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/289/260)

Ziegler, K.G.J. (1915)- Kritische Studie uber die auf Java bekannten Kohlenvorkommen. Geol. Survey, Bandung, Open File Report E15-04, p. 1-107.
('Critical study of the known coal occurrences on Java')

Zulkifley, M.T.M., Ng T.F., W.H. Abdullah, J.K. Raj, S.P. Param, R. Hashim & M.A. Ashraf (2013)- Distribution, classification, petrological and related gochemical (SRA) characteristics of a tropical lowland peat dome in the Kota Samarahan-Asajaya area, West Sarawak, Malaysia. Open Geosciences (C. European J. Geoscience) 5, 2, p. 285-314.
(online at: www.degruyter.com/downloadpdf/j/geo.2013.5.issue-2/s13533-012-0130-y/s13533-012-0130-y.pdf)
(Lateral variations in Plaie peat forest W of Samarahan, Sarawak. Peat thickness 0.2-2.3m, increasing to W)

Zwierzycki, J. (1922)- De ouderdomsbepaling van formaties volgens het watergehalte van kolen. De Mijningenieur 3, 8, Weltevreden, p.
(Age determinations of formations according to the water content of coals)

XI.4. Minerals, Mining

(Many additional references on minerals/mining that are specific to one region are listed under these regions)

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('Volcanogenic Massive Sulphide deposits: characteristics and distribution in Indonesia'. Reprinted in Metalogeni Sundaland I (2014), p. 263-273. Polymetallic Massive Sulfide deposits always associated with volcanics and sediments. VMS deposits in Indonesia two types (1) Kuroko-type Sangkaropi (S Sulawesi, Cu-Pb-Zn), (2) Lerokis and KaliKuning (Wetar), with stratabound Au-Ag bodies of sedimentary exhalative origin)

Agoes, E. (1988)- Uranium exploration in Indonesia. In: Proc. Conf. Uranium deposits in Asia and the Pacific; geology and exploration, Jakarta 1985, Int. Atomic Energy Agency (IAEA), Vienna, IAEA-TC-543/12, p. 167-178.
(Radioactive minerals found in several areas in W and E Indonesia)

Andrew, R.L. (1995)- Porphyry copper-gold deposits of the southwest Pacific. Mining Engineering 47, 1, p. 33-38.

Anonymous (1918)- Voorkomen en gebruik van mangaanertsen. Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnwezen Nederlandsch Oost-Indie, 5, p. 1-51.
('Occurrences and application of manganese ores'. Review of manganese ore occurrences around world and in Indonesia. Manganese ore occurrences known from Java (mined at Keliripan, Kulun Progo). Also near Tasikmalaya, W Java, SE Kalimantan (Gunung Besi near Pengarion). Also possibly in Sumatra, Timor)

Anonymous (1919)- Phosphaat. Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnwezen Nederlandsch Oost-Indie, 6, p. 1-23.
('Phosphate'. Brief review of phosphate occurrences in Indonesia. Usually associated with bat caves. No commercially significant deposits)

Anonymous (1919)- Yzerertsen in Nederlandsch-Indie. Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnwezen Nederlandsch Oost-Indie, 7, p. 1-71.
(Read-only online at: https://babel.hathitrust.org/cgi/pt?id=uiug.30112112309114&view=1up&seq=191)
('Iron ores in the Netherlands Indies'. Iron ore widespread in Netherlands Indies, but rarely commercially viable: Tanah Laut (SE Kalimantan),C Sulawesi, Lampung (S Sumatra), etc.. Incl. lateritic and detrital iron ores)

Anonymous (1922)- Jodium. Verslagen Mededelingen Indische delfstoffen en hare toepassingen, Dienst Mijnwezen Nederlandsch Oost-Indie, 14, p. 1-64.
('Iodine'. Review of iodine occurrences in Indonesia, mainly from brine in wells in Tertiary basins of East Java, north of the volcanic arc)

Balce, G.R. (1990)- Coastal and offshore mineral development in the East Asian region:the CCOP experience. In: Second Asia/Pacific Mining Conf. Exhib., Jakarta 1990, ASEAN Federation of Mining Association, Manila, p. 141-170.

Bartels, T.T. (1950)- Bauxietwinning der Nederlandsch-Indische Bauxiet Exploitatie Maatschappij op Bintan. De Ingenieur in Indonesie 2, 1, IV, p. 1-5.
('Bauxite exploitation of the Netherlands Indies Bauxite Exploitation Company on Bintan'. Brief history of exploitation of bauxite in SE Bintan island, which started in 1935, continued during Japanese occupation, then resumed in 1947. Bauxite believed to have formed from lateritic weathering of hornfels (Van Bemmelen 1940))

Barthel, F.H. (1988)- Sandstone uranium deposits in central Sumatera, Indonesia and northern Thailand. In: Uranium Deposits in Asia and the Pacific: geology and exploration. Int. Atomic Energy Agency, Vienna, p. 179-192.

(Regional stream sediment surveys combined with radiometric measurements carried out over large areas in C Sumatera, but results disappointing. In NE Thailand more favourable conditions in Tertiary sandstone basins)

Binns, R.A. (2013)- Seafloor massive sulfide deposits and 'black smokers': the potential in Maluku and Papua, and guides for exploration. Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Convention 2013, Kuta, p. 1-9.

Bothe, A.C.D. (1920)- Ores and mining. In: Sluyterōs Monthly, East Indian Magazine 1, 8, p 177-189.
(Notes on mines in the Netherlands Indies, Redjang Lebong; Sawah Loento, etc.)

Bousquet, J.G. (1904)- Les richesses minerales des Indes Orientales neerlandaises. Mem. C.R. Travaux Soc. Ingenieurs civils de France, 57, Paris, p. 436-495.
('The mineral riches of the Netherlands East Indies' First countrywide review of mineral occcurences in Indonesia, including oil, coal, tin, iron, diamonds, etc.)

Bowles, J.F.W. (1984)- The distinctive low-silver gold of Indonesia and East Malaysia. Proc. Gold '82 Symposium, Harare 1982, Geol. Soc. Zimbabwe, Spec. Publ. 1, Balkema, Rotterdam, p. 249-260.

Braat, M.C. & D.W.N. de Boer (1949)- De wederopbouw van de tinwinning in Indonesie. Jaarboek Mijnbouwkundige Vereeniging te Delft 1948-1949, p. 162-185.
(online at: https://lib.tudelft.nl/mscans/mscans0080)
('The restoration of tin exploitation in Indonesia')

Carlile, J.C., I.J.L Heesterman & A.H.G. Mitchell (1996)- Gold distribution, production and potential in Indonesia. The AusIMM Bull. 1, p. 42-46.

Caron, M.H. (1928)- Over ijzer en nikkel in Ned. Indie. Jaarboek Mijnbouwkundige Vereeniging Delft 1926-1927-1928, Waltman, p. 51-67.
(online at: http://lib.tudelft.nl/mscans/mscans0121)
('On iron and nickle in the Netherlands Indies'. Inaugural address for Professor of Mijnbouwkunde at Technische Hoogeschool, Delft in May 1928. Discussion of lateritic iron and nickel deposits in Sulawesi and Borneo and problems associated with mining economics and processing)

Cooke, D.R., P. Heithersay, R. Wolfe & A.L. Losada Calderon (1998)- Australian and western Pacific porphyry Cu-Au deposits. AGSO J. Australian Geol. Geophysics 17, 4, p. 97-104.
(online at: https://d28rz98at9flks.cloudfront.net/81527/Jou1998_v17_n4_p097.pdf)
(Porphyry copper-gold deposits in PNG (Panguna, Wafi, Ok Tedi), W Papua (Grasberg), Sumbawa (Batu Hijau), Philippines, generally associated with andesitic volcanics and diorite to quartz diorite intrusions. Cu-Au porphyries generally in island arc tectonic setting, Cu-Mo porphyries in continental margin or cratonic settings. Some deposits localized at fault intersections (Grasberg, Batu Hijau). Depth of emplacement ~1-2 km; mineralization may extend 1.5 km vertically (Grasberg). Many formed in island arcs after period of reversal in arc polarity)

Dahlkamp, F.J. (2009)- Uranium deposits of the world, Chapter 3- Indonesia. Springer Verlag, Berlin, p. 157-173.
(Mainly summary of Uranium deposits in Kalan Region, W-C Kalimantan, explored in 1970's by CEA- BATAN. U deposits hosted by Paleozoic meta-sediments and meta-volcanics)

De Groot, C. (1864)- Overzigt van de voornaamste proeven omtrent mijn-ontginning, sedert een tiental jarin in Nederlandsch Indie genomen,..., van de redenen waarom zij niet zijn doorgezet en van de mijn-ontginningen van welke men voor de toekomst nog gunstige resultaten verwacht. Natuurkundig Tijdschrift voor Nederlandsch Indie 26, p. 72-124.
(online at: https://books.googleusercontent.com/books/content.....)
('Overview of the main tests on mine development, since around 10 years years in the Netherlands Indies, ..., of the reasons why they have not been continued and of the mine developments of which future favorable results

are expected'. Review of Mines Department evaluations of coal and mineral occurrences across Indonesia in 1850's -1860's (not including Bangka and Belitung))

De Groot, C. (1865)- Vervolg van het overzigt van de voornaamste proeven omtrent mijnontginningen sedert een tiental jaren in Ned. Indie genomen. Natuurkundig Tijdschrift voor Nederlandsch Indie 28, p. 1-88.
(online at: https://www.biodiversitylibrary.org/item/48369page/10/mode/1up)
(Continuation of De Groot (1864). Discussion of tin operations on Bangka and Belitung)

De Groot, C. (1872)- Aanwijzingen en mededelingen op het gebied van mijnontginning in Nederlandsch-Indie. ós-Gravenhage, p. 1-21.
(online at: http://books.google.com/books?vid=KBNL:UBL000015235)
(Guidelines and information on mining exploitation in the Netherlands Indies'))

De Jongh, A.C. (1913)- Ijzererts in de Molukken. Tijdschrift Nijverheid Landbouw Nederlandsch-Indie 86, 1, p. 35-42.
('Iron ore in the Moluccas'. Laterite deposits associated with weathering of peridotites across East Indonesia (e.g. Obi island) may have good iron ore potential. Reddish lateritic soils generally very high in iron and also contain chromite. They carry little or no vegetation and are not suitable for any kind of agriculture)

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('On the occurrence of sulfur and natural sulfur minerals in Netherlands Indies'. Brief review of sulfur occurrences associated with Quaternary volcanoes of Indonesia)

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(Summary of research project on characteristics of hydrothermal alteration associated with low sulfidation, gold-silver epithermal deposits. Deposits investigated were Ladolam (PNG, Pleistocene), Gosowong (Halmahera, Pliocene mineralization in Miocene andesitic rocks) and Mt Muro (Miocene mineralization in Oligocene andesitic rocks))

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(online at: http://pubs.usgs.gov/sir/2010/5090/d/sir2010-5090d_text.pdf)
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(In Indonesia REE minerals monazite, xenotime and zircon are associated with tin, uranium and gold in alluvial deposits. REE range from 30-400 ppm in sands on Bangka and Belitung REE minerals, and are by-product of tin ore mining and extraction. Also: lower grade monazite and xenotime as alluvial in Kampar and Riau Islands, REE minerals in uranium alluvial in W Kalimantan)

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Hosking, K.F.G. (1979)- Tin distribution patterns. Bull. Geol. Soc. Malaysia 11, p. 1-70.
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(Tin belt of SE Asia composed of two parallel E and W belts, with primary tin deposits of different ages and types in each. Intensely red-pale cassiterites with Ta and possibly Nb in lattice, restricted to W belt and are paramagnetic; brown-pale colour pleochroic (also due to Nb/Ta or W in lattice) in both belts and may be ferromagnetic. Tin sources in both belts crustal, in W belt comparatively rich in Ta and Nb, E belt rel. rich in iron)

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(SE Asia tin-bearing alluvial sediments commonly with authigenic minerals like pyrite, marcasite, siderite, etc.)

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(Early overview of mining in the Netherlands Indies)

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(online at: http://lib.tudelft.nl/mscans/mscans0121)
(Review of native artisanal mining activities in Indonesia before and during the colonial period)

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(online at: https://gsmpubl.files.wordpress.com/2014/09/ngsm1978002.pdf)
(Review of 'impurities' in tin ore concentrates from smelters in W Malay Peninsula, SW Thailand and Bangka-Belitung, Indonesia. Tin concentrate generally of cassiterite with 70-75% Sn content)

Hutchison, C.S. (1988)- The tin metallogenic provinces of S.E. Asia and China: a Gondwanaland inheritance. In: C.S. Hutchison (ed.) Geology of tin deposits in Asia and the Pacific, Selected papers from Int. Symp. Geology of tin deposits, Nanning, China, 1984, Springer Verlag, p. 225-234.
(SE Asia is composite of stable continental blocks which rifted from N margin of Australia. Tin was carried in continental infrastructure of these blocks, which are all of Gondwanaland ancestry. Tectonic events which have greatest continental crustal involvement are most important in mobilizing tin into economic concentrations. Main metallogenic events are Malayan-type collisions between two continental blocks, resulting in crustal thickening and S-type granite batholiths: (1) Mesozoic belt formed by collision of Sinoburmalaya, Burma Plate, Qantang-Tangla, and Lhasa-Gandise blocks with E Asian Continent, (2) Caledonian E China belt)

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(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1979002.pdf)
(Primary tin deposits overwhelmingly associated with acid igneous or quartz-rich hydrothermal rocks; genetically related to granites. Distribution of tin deposits suggests anatexis of sialic crust most likely cause of evolved SiO2 and K2O rich tin granites. Tin commonly associated with high sphene and biotite)

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(Overview of SE Asia economic metals distribution. Three metallogenic provinces (1) peripheral Cenozoic volcanic arc (copper, gold, silver), (2) Mesozoic Sundaland core (tin with minor tungsten, antimony), and (3) cratonic China N of Red River Suture (tungsten, antimony with tin, mercury). Ophiolites, obducted from Pacific and marginal basin lithosphere, yield substantial chromite and nickel from residual laterite)

Hutchison, R.W. (1986)- Massive sulphide deposits and their possible significance to other ores in Southeast Asia In: G.H. Teh & S. Paramananthan (eds.) Proc. 5th Reg. Congress Geology, Mineral and Energy Resources of SE Asia (GEOSEA V), Kuala Lumpur 1984, 1, Bull. Geol. Soc. Malaysia 19, p. 1-22.
(online at: https://gsmpubl.files.wordpress.com/2014/09/bgsm1986001.pdf)
(Discussion of massive base metal sulphide deposits, which formed on sea floor by chemical precipitation from metalliferous hydrothermal fluids. Many geological characteristics of massive base metal sulphides duplicated in barite, manganese, iron-tin, iron skarn and base metal deposits of C and E belts in Peninsular Malaysia (Sokor, Bukit Besi, Bukit Bangkong, Tasek Cini) and extensions N into Thailand (Pinyok) and S into Indonesia (stratiform zinc-lead-silver at Kelapa Kampit and Selumar, Belitung))

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(online at: http://psdg.bgl.esdm.go.id/images/buletin/)
('Review of gold deposits in ophiolite complexes in Indonesia'. On little-known gold occurrences in Bobaris and Meratus Mts in S Kalimantan, Tanah Grogot in E Kalimantan, Bombana in SE Sulawesi and CycloopsMts/ Lake Sentani in NE West Papua. No commercial occurrences identified yet)

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('Rare Earth Elements in tailings from tin mining on Singkep Island'. Tailings of former tin mines on Singkep island (probably also on Bangka, Belitung) contain 123-368 ppm Rare Earth Elements (REE) in monazite, etc. In concentrate upto 5800 ppm)

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(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/article/view/344/226)
(Rare Earth Eelemnts in Muncung Granite and its weathered layers on Lingga, Selayar and Singkep islands, Riau Province. Average REE content of 7 granites 265 ppm, but 4x enrichment in laterization layer)

Jackson, K.J. & H.C. Helgeson (1985)- Chemical and thermodynamic constraints on the hydrothermal transport and deposition of tin: II. Interpretation of phase relations in the Southeast Asian tin belt. Economic Geology 80, p. 1365-1378.
(On Thailand- Malay Peninsula tin deposits. Hydrothermal mineral assemblages in SE Asian tin deposits consist of quartz, cassiterite, muscovite, K-feldspar, topaz, magnetite, and rarely, hematite, fluorite, tourmaline, and zinnwaldite. Assemblage estimate to have formed at ~350°C and 500 bars)

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Johari, S. & U. Kuntjara (1990)- The occurrences of rare metal minerals in Indonesia. Proc. 19th Ann. Conv. Indon. Assoc. Geol. (IAGI), Bandung, 1, p. 350-364.
(Indonesia potential for yttrium group REE mainly in xenotime from cassiterite placers in Tin Islands, particulary Belitung, and likely equivalents in Tigapuluh Mts and Bangkinang areas of Riau, Sumatra. Areas with (mainly pre-Jurassic) granitic intrusions with favorable characteristics for lithophile rare metal mineralization mainly in Sumatra, Banggai-Sula islands and W Papua)

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(Ultramafic rocks exposed in many parts of Indonesia. May be source of Fe, Cr, Platinum-Group Minerals, V, Ti, Ni, Co and Cu deposits)

Koesoemadinata, R.P. & V.E. Nelson (1970)- Mineral resources in Indonesian development. In: H.W. Beers (ed.) Indonesia; resources and their technological development, University Press of Kentucky, p. 117-139.

(Brief review of Indonesia petroleum and mineral deposits)

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('The tin, niobium and tantalium deposits of SE Asia')

Kurnio, H. (1999)- Review and recent data on the occurrences of offshore minerals in Indonesia. Bull. Marine Geol. (MGI, Bandung), 14, 2, p. 9-27.
(Indonesian offshore minerals tin and iron sand already exploited. Recent data on offshore gold, silver, quartz sand, coal and zircon discovered by Marine Geological Institute expected to become future reserves. Offshore aggregates in Java Sea and Malaka Strait potential construction materials)

Kurnio, H. (2007)- Coastal characteristics of iron sand deposits in Indonesia. Indonesian Mining J. 10, 3, p. 27-38.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/611/473)
(Review of coastal iron sand deposits in Indonesia. Black or gray iron sands in Sumatra, Java, Bali and Nusatenggara Islands largely derived from denudation of andesite and 'Old Andesite Fm' enriched in magnetite and ilmenite minerals. Coastal zones, especially S parts of Neogene Sunda Banda magmatic arc from N Sumatra to E Indonesia, potential areas for iron sand deposits)

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(online at: https://babel.hathitrust.org/cgi/pt?id=uc1.31822032651069;view=1up;seq=241)
('Occurrences and exploitation of gold in the Netherlands East Indies (after a presentation by S.J. Truscott,..')
(German translation of original review of gold mining regions of Sumatra, Kalimantan and N Sulawesi, as known in 1902)

MacDonald, E.H. (1971)- Detrital heavy minerals. Country report: Indonesia. United Nations ECAFE CCOP Techn. Bull. 5, p. 48-53.

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('Extractive industries in Indonesia')

Madiadipoera, T. & S. Harjanto (1988)- Potential of industrial minerals in Indonesia. Directorate Mineral. Res., Bandung, p.

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(online at: http://download.portalgaruda.org/article.php?article=101637&val=1606)
('Bauxite potential in the Ligga Districts, Riau Islands'. Potential bauxite evenly distributed on Singkep, Selayar, Bendahara and Rusuk Buaya Islands)

McDivitt, J.F. (1989)- Overview of mineral development in Indonesia. Geologi Indonesia (J. Assoc. Indon. Geol. IAGI) 12, 1 (Katili volume), p. 327-343.
(Brief historic overview of mining in Indonesia until 1988. Little or no detail on geology, areas or projects)

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(online at: www.jstage.jst.go.jp/article/jgeography1889/55/7/55_7_229/_pdf)
(In Japanese. Mainly literature review. No maps or sections)

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('Diatomaceous earth in Netherlands Indies'. Very brief review of diatomite occurrences in Indonesia, incl. Samosir (Lake Toba) and Cirebon, Cicurug areas of Java)

Molengraaff, G.A.F. (1910)- Das Vorkommen und die Gewinnung von Eisenerz in den Niederlandischen Kolonien. In: The iron ore resources of the world, 11th Int. Geol. Congress, Stockholm 1910, 2, p. 993-996.
(online at: https://babel.hathitrust.org/cgi/pt?id=nyp.33433089972370;view=1up;seq=489)
('The occurrence and exploitation of iron ore in the Netherlands colonies'. Very brief listing of known iron ore occurrences in Indonesia: Gunung Besi (Sumatra; hematite), Teluk Betung (S Sumatra; magnetite), Banyumas (Java; iron sand) Gunung Tambaga (SE Kalimantan; hematite). None producing. All of questionable commercial value)

Muller, D. & D.I. Groves (2015)- Direct associations between potassic igneous rocks and gold-copper deposits in volcanic arcs. In: Potassic igneous rocks and associated gold-copper mineralization, 4th Ed., Mineral Resource Reviews, Springer, p. 97-190.
(Examples of direct associations between potassic igneous rocks and copper-gold deposits include: (1) Late Oceanic Arc associations: Ladolam gold (Quaternary, Lihir Island, PNG); Emperor gold (Tertiary, Viti Levu, Fiji), Dinkidi copper-gold (Miocene, Didipio district, Philippines); and (2) Post-collisional Arc associations: Grasberg copper-gold (Pliocene, W Papua), Misima gold (Pliocene, Misima Island, PNG); Porgera gold (Miocene, PNG))

Palfreyman, W.D., H.F. Doutch, R.L. Brathwaite et al. (1996)- Mineral-resources map of the Circum-Pacific region, Southwest Quadrant. U.S. Geol. Survey (USGS) Circum-Pacific Map 42, 1: 10M scale.
(online at: https://pubs.usgs.gov/cp/42/plate-1.pdf)

Palfreyman, W.D., H.F. Doutch, R.L. Brathwaite et al. (1996)- Explanatory notes for Mineral-resources map of the Circum-Pacific region, Southwest Quadrant. U.S. Geol. Survey (USGS) Circum-Pacific Map CP-42, p. 1-66.
(online at: http://pubs.usgs.gov/cp/42/report.pdf)

Peters, S.G. (2006)- The distribution of major copper deposits in the Southeast Asia region. In: Q. He et al. (eds.) Proc. 42nd CCOP Ann. Sess., Beijing 2005, p. 55-58.
(Brief overview of distribution of porphyry copper deposits in SE Asia. No figures)

Peters, S.G., W.J. Nokleberg, J.L. Doebrich, W.J. Bawiec, G. Orris, D.M. Sutphin & D.R. Wilburn (2006)- Geology and nonfuel mineral deposits of Asia and the Pacific. U.S. Geol. Survey (USGS) Open-File Report 2005-1294C, p. 1-63.
(online at: http://pubs.usgs.gov/of/2005/1294/c/OFR2005-1294C.pdf)
(Overview of mineral deposits in SE Asia (China, India, Indonesia)- Pacific (Japan, Australia, New Zealand)

Pott, G. (1943)- On the occurrence of limestone, clay, gypsum and quartz sand in East Java and Madoera. Geol. Survey Indonesia, Bandung, Unpublished Report, p.
(Probably compiled during Pott's time as Japanese prisoner of war)

Pudjowalujo, H. (1981)- Copper exploration in Indonesia. Proc. 10th Ann. Conv. Indon. Assoc. Geol. (IAGI), p. 209-317.

Reksalegora, W. & Djumhani (1973)- Metallic mineral deposits of Indonesia. In: N.H. Fisher (ed.) Metallic provinces and mineral deposits in the Southwest Pacific, 12th Pacific Science Congress Symposium, Canberra 1971, Bureau Mineral Res. (BMR), Geol. Geophysics, Bull. 141, p. 59-67.
(online at: www.ga.gov.au/corporate_data/108/Bull_141.pdf)
(Brief review of Indonesian mineral provinces. Malaya orogen (Late Jurassic) characterized by cassiterite-bearing pegmatites and veins. Pyrosomatic iron and copper ores tied to Sumatra orogen (U Cretaceous). Epithermal gold-silver important in Sunda orogen (M Miocene) in W Sumatra and S Mountains of Java. West Papua separate unit, with lateritic deposits in N and gold-silver-copper in C Range))

Reynolds, N. (2013)- Tectonics and metallogeny of mainland Southeast Asia- framework for new discovery opportunities. In: Proc. Symp. East Asia: Geology, Exploration Technologies and Mines, Bali 2013, Australian Inst. Geoscient., Bull. 57, p. 78-79. *(Extended Abstract)*
(Mainland SE Asian metallogeny related to history of accretion of Gondwanan terranes. Late Carboniferous-Triassic development and accretion of arc/ back-arc belts fringing Indochina block important metallogenic period in SE Asia. Indosinian orogenic gold in Raub-Bentong zone of Malaysia. Late Triassic first phase of SE Asian tin-tungsten belt, related to Indosinian late orogenic granites. Re-initiation of subduction outboard of collision zones along W Sibumasu margin and E Indochina-South China margin in Late Triassic- Jurassic. In S China- Indochina, Jurassic-Cretaceous 'Yanshanian' magmatism evolved from I-type to A-type in continental arc setting and associated with mineral systems. On W Sibumasu margin, Late Cretaceous second phase of tin-tungsten mineralisation associated with A-type magmatism. Porphyry copper-gold and epithermal systems in C Myanmar arc belt in Oligocene- Miocene)

Rochani, S., Pramusanto, Sariman & R.I. Anugrah (2008)- The current status of iron minerals in Indonesia. Indonesian Mining J. 11, 2, p. 1-17.
(online at: http://jurnal.tekmira.esdm.go.id/index.php/imj/article/view/590/452)
(Indonesia iron resources include (1) primary iron ore (hematite, magnetite; 17%), (2) iron sand; commonly used for cement industries (8%) and (3) lateritic iron ore (limonite, from weathered ultrabasic rocks) used as coal liquefaction catalyst (75%). With listings of main iron sand deposits (10) and lateritic deposits (10) and primary iron ore deposits (10))

Sainsbury, C.L. (1969)- Tin resources of the world. U.S. Geol. Survey Bull. 1301, p. 1-55.
(online at: https://pubs.usgs.gov/bul/1301/report.pdf)
(With brief reviews of tin deposits of Indonesia, Malaysia, Thailand, Burma)

Sanematsu, K. (2014)- Resource potential of REE in Sundaland, Southeast Asia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 163-180.
(Rare Earth Elements ore deposit types in SE Asia mainly placer and ion adsorption (weathered granite) types. Placer monazite and xenotime mostly in ilmenite-series granite areas of SE Asian Sn Belt. Few prospective areas identified in Indonesia, except possibly Bangka, with possible placer REE from tailings of Sn processing or from beach sand)

Sanematsu, K. (2014)- Rare Earth element deposits and prospective areas in South East Asia. In: Proc. PACRIM 2015 Congress, Hongkong, Australasian Inst. of Mining and Metallurgy (AusIMM), Melbourne, Publ. Ser. 2/2015, p. 671-677. *(Extended Abstract)*
(Rare Earth Element in mainland SE Asia (nothing in Indonesia))

Sendo, T. (1941)- Tin of the Dutch East Indies. J. Geography, Tokyo, 53, 633, p. 475-500.
(online at: www.jstage.jst.go.jp/article/jgeography1889/53/11/53_11_475/_pdf)
(In Japanese. Mainly literature compilation of 'Tin Islands' geology)

Setiawan, I. (2018)- Towards the challenging REE exploration in Indonesia. Proc. Global Colloquium on GeoSciences and Engineering, Bandung 2017, IOP Conf. Series, Earth Environm. Science 118, 012075, p. 1-5.
(online at: http://iopscience.iop.org/article/10.1088/1755-1315/118/1/012075/pdf)
(In Indonesia potential sources of REE in tin mining residues of Bangka islands, but REE from monazite and xenotime difficult to extract and contain high radioactivity. Granitoids in Sumatra, Sulawesi, Kalimantan and Papua may have weathering crusts with REE-bearing allanite and titanite)

Setijadji, L.D. (2014)- Regional evaluation on the Rare Earth Elements (REE) mineralization potentials in the Sundaland of Indonesia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Ann. Conv. Indon. Soc. Econ. Geol. (MGEI), Palembang, p. 145-162.
(Study of REE potential in Indonesia. Prospectivity in areas of continental crust, where multiple events of granitoid magmatism took place. Tin Islands and West Kalimantan granitoids may be linked. REE exploration

targets in Indonesia: (1) primary alkaline-peralkaline igneous rocks, (2) lateritic deposits, and (3) placer monazite (xenotime; byproducts of placer tin mining))

Setijadji, L.D., I.W. Warmada, A. Imai & K. Sanematsu (2009)- Investigation on Rare Earth Elements mineralization in Indonesia. In: 2nd Reg. Conf. Interdisciplinary Research on Natural Resources and Materials Engineering, Yogyakarta, p. 53-58.
(REE most likely associated with Mesozoic granitic rocks in W Indonesian, i.e. Tin islands (Bangka, Belitung, Bintan and Singkep) and west C Kalimantan. Tin islands similar geology with REE-producing China and SE Asia granite belts)

Sigit, S. (1973)- Large scale mineral exploration and new mining development prospects in Indonesia. Bull. Geol. Soc. Malaysia 6, p. 288-296.
(online at: https://gsm.org.my/products/702001-101341-PDF.pdf)
(From outbreak of Pacific War untiI 1967 no large scale and systematic mineral exploration activities in Indonesia. Since then with changes of political situation and Governments economic policy of opening up to international companies in late 1967 significant increase in mineral exploration in Indonesia)

Sigit, S., M.M. Purbo-Hadiwidjojo, B. Sulasmoro & S. Wirjosudjono (1969)- Minerals and mining in Indonesia. Ministry of Mines, Jakarta, p. 1-123.
(1969 overview of Indonesia coal and minerals mining)

Sillitoe, R.H. (1994)- Indonesian mineral deposits- introductory comments, comparisons and speculations. J. Geochemical Exploration 50, p. 1-11.
(Indonesia has range of precious and base metal deposits typical of Cenozoic volcano-plutonic arcs. Porphyry Cu-Au, skarn Cu-Au and low-sulphidation epithermal Au economically most important, including world-class ore bodies. Also present: porphyry Mo, sediment-hosted Au, high-sulphidation epithermal Au and volcanogenic massive sulphide Au. 70% of deposits discovered by regional geochemical surveys)

Sillitoe, R.H. (1995)- Exploration and discovery of base- and precious-metal deposits in the Circum-Pacific region during the last 25 years. Resource Geology (Shigen Chishitsu), Special Issue 19, p. 1-119.
(Exploration and discovery histories of 54 major base- and precious-metal deposits around Pacific Rim from 1970-1995)

Sillitoe, R.H. (1997)- Characteristics and controls of the largest porphyry copper-gold and epithermal gold deposits in the circum-Pacific region. Australian J. Earth Sci. 44, 3, p. 373-388.
(Includes data from Indonesia- Philippines porphyry copper deposits. Grasberg, Ok Tedi and Porgera in New Guinea, Ladolam and Panguna in nearby islands and Baguio in N Philippines all very young and emplaced during rapid tectonic uplift induced by collision processes)

Sillitoe, R.H. (2010)- Exploration and discovery of base- and precious metal deposits in the Circum-Pacific region- a 2010 perspective. Resource Geology, Spec. Issue 22, p. 1-139.
(Review of 101 case histories of metal deposits discovered in Circum-Pacific region in last 40 years)

Silitonga, P.H. & Surjono (1985)- Exploration for titaniferous iron sand in the coastal area of Cipatujah, West Java. Proc. 21st Sess. Comm. Co-ord. Joint Prospecting Mineral Resources in Asian Offshore Areas (CCOP), Bandung, 2, p. 40-45.

Solomon, M. (1990)- Subduction, arc reversal, and the origin of porphyry copper-gold deposits in island arcs. Geology 18, 7p. 630-633.
(Tertiary-Quaternary porphyry copper-gold deposits of SW Pacific rim (Luzon, New Guinea, Bougainville, Guadalcanal, Fiji) mostly formed after reversal of arc polarity. Where this reversal has not occurred (New Zealand and Japan), porphyry copper-gold deposits absent or scarce. Gold enrichment of magmas may be result of two-stage melting)

Sopaheluwakan, J. (1985)- Komoditi strategis khromit, geologi teknologi dan potensinya di Indonesia. J. Riset Geologi Pertambangan (LIPI) 6, 1, p. 20-31.
('The strategic commodity chromite, geology technology and its potential in Indonesia'. Chromite known from several areas in Indonesia (associated with peridotites): SE Kalimantan, Latau, Barru, Malili, Halmahera, Gebe. Small scale mining in Gebe in 1970's, but most deposits in Indonesia non-commercial at the moment)

Subandrio, A.S. (2014)- Mesozoic-Cenozoic iron ore mineralization associated with magmatism in the Indonesian Sundaland Region. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 425-447.
(Iron ore deposits widespread in Sumatra and Kalimantan, but little explored. 'Banded' iron ore deposits probably related to Mesozoic submarine hydrothermal activity described from Subullusalam (Aceh, N Sumatra), Tanggamus (Lampung, S Sumatra) , Kendawangan (W Kalimantan; ore mined from late Mesozoic Pinoh meta-sedimentary complexes), and Balaisebut iron ore mineralization (NE of Pontianak, NW Kalimantan, in Sanggau area))

Sunarya, Y. (1989)- Overview of gold exploration and exploitation in Indonesia. Geologi Indonesia (J. Assoc. Indon. Geol., IAGI) 12 (Katili volume), 1, p. 345-357.
(Widespread epithermal gold deposits associated with subduction volcanism in Indonesia. Gold production from 1899-1989 130 tonnes: 80 from Bengkulu (W Sumatra), 10 from Cikotok (W Java), 20 from N Sulawesi) + additional production from Kalimantan and West Papua)

Sunarya, Y. (1992)- Overview of gold exploration and exploitation in Indonesia. In: Epithermal gold in Asia and the Pacific, mineral concentrations and hydrocarbon accumulations in the ESCAP Region series, UN ESCAP, 6, p. 155-161.
(Same paper as Sunarya 1989. Gold mining in Indonesia began in 1899. Early mining from epithermal lode deposits hosted by volcanics in W Sumatra and W Java, with subsequent discoveries in Kalimantan (Kelian, Mt Muro, Muyuo, etc.) and on Flores-Wetar. Porphyry copper- associated gold in Ertsberg (Irian Jaya), N Sulawesi and Bacan. Alluvial gold exploited on Sumatra, Kalimantan and Sulawesi)

Sunarya, Y. & J. J. Bache (1995)-Previous epithermal gold mines in Indonesia. Direktorat Sumberdaya Mineral, Spec. Publ. 80, p.

Supriyadi & N. Umar (1996)- Tin exploration in Indonesia; problems and solution. In: Diversity; the key to prosperity, AusIMM Ann. Conf., Perth 1996, Australasian Inst. of Mining and Metallurgy 1/96, p. 385-391.
(Exploration for tin deposits has been ongoing in Indonesia over ~300 years. Indonesia is part of tin belt from Myanmar in N through Malaysia to Singkep, Bangka and Belitung islands in Indonesia in S. Discovery of alluvial tin deposits becoming harder as obvious geological targets are exhausted and topographical conditions become more difficult)

Syaeful, H., K. Setiawan W., I.G. Sukadana & A. Gunawan (2014)- Rare Earth Element exploration in Indonesia. In: I. Basuki & A.Z. Dahlius (eds.) Sundaland Resources, Proc. Indon. Soc. Econ. Geol. (MGEI) Ann. Conv., Palembang, p. 205-217.
(REE Regions in Indonesia with potential REE resources in Bangka Belitung, Kalimantan and W Sulawesi)

Tampubolon, A. (2013)- The Indonesia Titanium deposit types and their resources, The aspects for Titanium commodity development. Bul. Sumber Daya Geologi 8, 3, p. 100-109.
(online at: www.bgl.esdm.go.id/publication/index.php/dir/article_detail/682)
(Indonesia has beach placer, alluvial and lateritic types of titanium deposits. Sumatra, Java and Flores with beach placers of iron sands, derived from Tertiary volcanics. Alluvial deposits associated with cassiterite alluvial from Triassic-Jurassic granites of Bangka-Belitung Islands. Lateritic deposits associated with bauxite and nickel in Riau, Kalimantan, Sumatra and Sulawesi)

Taranik, J.V., C.D. Reynolds, C.A. Skeenan & W.D. Carter (1978)- Targeting exploration for nickel laterites in Indonesia with Landsat data. Proc. 12th Symposium of Remote Sensing, Manila, Environmental Research Institute of Michigan, p. 1037-1051.
(Using vegetation anomalies on satellite imagery to target nickel laterites)

Teh, G.H. (1986)- Significance of minor and trace elements in cassiterites from primary tin deposits of S.E. Asia. In: Proc. Seminar Importance of primary tin deposits of S.E. Asia, Bandung 1986, p.

Ter Braake, A.L. (1944)- Mining in the Netherlands East Indies. Netherlands and Netherlands Indies Council of the Institute of Pacific Relations, New York, Bull. 4, p. 1-110.
(Overview of mineral deposits in Indonesia as known during WW-II. Reprinted in 1977)

Ter Braake, A.L. (1977)- Mining in the Netherlands East Indies. Arno Press, New York, p. 1-110.
(Reprint of Ter Braake (1944))

Thaib, J. (1960)- Tanah diatomea di Indonesia. Publikasi Teknik, Seri Geol. Ekonomi, Djawatan Geologi, Bandung, 1, p. 1-24.
('Diatomaceous earth in Indonesia')

Truscott, S.J. (1899)- The position of gold mining in the Dutch East Indies. The Mining J. Railway Commercial Gazette 69, 3337, p. 925.
(50 gold exploration companies formed in the Netherlands Indies between 1897 and 1898, mainly for operations in Sumatra, Central Borneo and North Sulawesi. To obtain licenses from the government companies had to be domiciled in the Netherlands or Netherlands Indie. On majority of properties 'nothing has been discovered'. One of most interesting properties is Redjang Lebong in W Sumatra; will start production soon)

Truscott, S.J. (1902)- The occurrence and mining of gold in the Dutch East Indies. Trans. Inst. Mining Metallurgy 10, 31, p. 52-86.

Truscott, S.J. (1902)- The mining and occurrence of gold in the Dutch East Indies The Engineering Mining J. 74, p. 444-445 and 479-481.
(Brief review of status of gold mining in Sumatra, Kalimantan and N Sulawesi in 1902)

Van Bemmelen, R.W. (1940)- Bauxiet in Nederlandsch-Indie. Dienst Mijnbouw Nederlandsch-Indie, Verslagen Mededelingen betreffende Indische delfstoffen en hare toepassingen 23, p. 1-115.
('Bauxite in Netherlands Indies'. Lateritic weathering of probably basic igneous rocks lead to formation of bauxite. Occurrences in Indonesia on islands of Banka and Bintan)

Van Bemmelen, R.W. (1940)- Delfstoffen van Nederlandsch Indie als grondstoffen der inheemsche industrie. Natuurwetenschappelijk Tijdschrift voor Nederlandsch Indie 101, 1, p. 11-19.
('Minerals from the Netherlands Indies as raw materials for local industry'. A brief review)

Van Bemmelen, R.W. (1941)- Aluminiumertsen en hun vindplaatsen. De Ingenieur in Nederlandsch-Indie (IV) 8, 9, p. 124-128.
('Aluminium ores and their occurrences'. Lateritic bauxites, as weathering products of granites, etc. In Indonesia mainly on on Bintan, Riau islands)

Van Bemmelen, R.W. (1945)- On the mineral resources of the Netherlands Indies and their industrial possibilities. In: P. Honig & F. Verdoorn (eds.) Science and scientists in the Netherlands Indies, Board for Netherlands Indies, Surinam and Curacao, New York, p. 5-10.
(Brief review of minerals and production volumes in late 1930's in Indonesia)

Van Bemmelen, R.W. (1949)- The geology of Indonesia. Government Printing Office, Martinus Nijhoff, The Hague, vol. 2, Economic geology, p. 1-265.

(Comprehensive review of deposits of oil, coal, metals, industrial minerals in Indonesia, as known in 1949)

Van den Broek, J. (1921)- Onze koloniale Mijnbouw, IV. Tinmijnbouw. Tjeenk Willink, Haarlem, p. 1-95.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02A:000030379:pdf)
('Our colonial mining industry, IV, Tin mining'. Early popular overview of tin mining in Bangka, Belitung and Singkep, Indonesia. Main tin ore cassiterite (SnO2). Banka mining since ~1710, Belitung (Billiton) since 1851 and Singkep since 1860. Mining in alluvial deposits, eroded from granites. Max. depth of exploitation ~100m)

Van den Ploeg, F.P.C.S. (1945)- Insulinde, schatten van den bodem. W. van Hoeve, Deventer, p. 3-216.
(Overview of natural resources and mining activity in Netherlands Indies until 1940. Written for broad audience, but quite thorough)

Van Leeuwen, T.M. (1994)- 25 years of mineral exploration and discovery in Indonesia. J. Geochemical Exploration 50, 1-3, p. 13-90.
(Extensive review of mineral exploration by foreign companies in Indonesia between 1967 and 1991. Four main phases: (1): 1967-1976, mostly investigations of mineral prospects previously identified by Dutch; (2) 1970-1975, extensive porphyry copper search in Sunda arc, W Sulawesi and central belt of Irian Jaya; (3) 1981-1988, extensive coal exploration in S and E Kalimantan; (4) 1984-1990, second gold rush, ~100 years after first, focused primarily on Cenozoic magmatic belts of Kalimantan, Sulawesi, Moluccas and Sunda arc. Only significant uranium discovery was at Kalan in fault breccias in metasediments in W Kalimantan)

Van Leeuwen, T.M. (2018)- Twenty five more years of mineral exploration and discovery in Indonesia (1993-2017). Masyarakat Geologi Ekonomi Indonesia (MGEI), Spec. Publ., p. 1-318.

Van Lier, R.J. (1918)- De mijnbouw in Nederlandsch-Indie. Koloniaal Instituut, Amsterdam, p. 1-60.
(online at: https://resolver.kb.nl/resolve?urn=MMUBL07:000003974:pdf)
('Mining in the Netherlands Indies'. Early popular overview of coal, mineral (tin, gold-silver, iron) and petroleum exploitation in Netherlands Indies since 1700's, by former Head of Ombilin coal mines)

Van Waterschoot van der Gracht, W.A.J.M. (1915)- Rapport over de opsporing van delfstoffen in Nederlandsch-Indie, krachtens opdracht bij Kon. Besluit van 9 Juni 1913, No. 54, Landsdrukkerij, The Hague, 110p.
(online at: https://resolver.kb.nl/resolve?urn=MMKB02:100002292:pdf)
(Extensive report on status and evaluation of mining operations in The Netherlands Indies. With two 1:6 Million scale maps)

Verloop, J.H. (1916)- Onze koloniale Mijnbouw, I. De Goudindustrie. Tjeenk Willink, Haarlem, p. 1-95.
(online at: https://resolver.kb.nl/resolve?urn=MMUBL07:000003474:pdf)
(('Our colonial mining industry, I, The gold industry'. Early popular overview of gold mining in Indonesia)

Verloop, J.H. (1917)- De economische beteekenis van onze koloniale goudindustrie. H.A. van Bottenburg, Amsterdam, p. 1-91.
('The economic significance of our colonial gold industry')

Wacaster, S. (2015)- The mineral industry of Indonesia. In: 2013 Minerals Yearbook, Indonesia, U.S. Geol. Survey, p. 12.1-12.7.
(online at: https://minerals.usgs.gov/minerals/pubs/country/2013/myb3-2013-id.pdf)
(Listing of minerals produced in Indonesia in 2013. No geology)

Wahju, B.N. (2004)- Current status of mining in Indonesia. J. Mines Metals and Fuels 52, p. 158-166.

Wanner, J. (1942)- Die mineralischen Rohstoffe der Niederlande und der niederlandischen Kolonien. Kriegsvortage Rheinischen Friedrich-Wilhelms-Universitat, Bonn, 70, p. 1-24.

('Mineral resources of The Netherlands and Netherlands Indies'. Brief wartime review, mainly on distribution of petroleum and minerals of Indonesia)

White, N.C., M.J. Leake, S.N. McCaughey & B.W. Parris (1995)- Epithermal gold deposits of the southwest Pacific. J. Geochemical Exploration 54, 2, p. 87-136.
(BHP data tabulation for 137 epithermal gold deposits and prospects in Australia (30), Fiji (2), Indonesia (43), New Zealand (22), Palau and Yap (2), Papua New Guinea (18), Philippines (19), and Solomon Islands (1). Epithermal deposits in SW Pacific similar to other regions, but low-sulfidation style deposits formed at deeper levels than typical elsewhere; high-sulfidation deposits more common than along NE Pacific margin. Differences can be partly understood in terms of tectonic setting and evolution of volcanic arcs of SW Pacific)

Whitehouse, J. (2011)- Manganese resource potential Banda arc region, Eastern Indonesia. Stratum Resources Pty Ltd, non-confidential report, p. 1-31.
(N Flores and Timor with many scattered occurrences of manganese)

Wijayanti, K., M.F. Rosana, E.T. Yuningsih, R.I. Sulistyawan (2017)- Karakteristik jasper merah di Pulau Jawa bagian selatan berdasarkan analisis SEM dan XRF. J. Geologi Sumberdaya Mineral 18, 1, p. 25-32.
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/article/view/82/123)
('Characteristics of red jasper in S Java based on SEM and XRF analysis'. Red, yellow and green jasper widespread in Indonesia. Red jasper most common, especially in S Mountains of Java. All S Java samples same cryptocrystalline texture. Red color from Fe, Cr, and V. High Ti content in Pacitan red jasper)

Wing Easton, N. (1916)- De voorgestelde wijziging der Indische mijnwet. De Economist 65, 1, p. 795-820.
('The proposed changes to the Indies Mining Law')

Wing Easton, N. (1917)- De minerale rijkdom van Ned. Oost-Indie en de toekomstige mijnbouwpolitiek aldaar. De Ingenieur 1917, 11, 15p.
('The mineral wealth of the Netherlands East Indies and the future mining politics there'. Early review of mineral potential of Indonesia. Argues that potential is limited to orogenic belts. Gold-silver deposits found only in areas with Late Tertiary acid volcanics, tin in Paleozoic granites, etc.)

Zaw, K. (2016)- Volcanic-hosted massive sulphide deposits in mainland SE Asia: their potential and prospectivity. In: 35th Int. Geol. Congress, Cape Town 2016, Mineral deposits and ore forming processes Symposium, T18.2, 963, 2p. *(Abstract only*
(online at: https://www.americangeosciences.org/sites/default/files/igc/963.pdf)
(Volcanic-hosted massive sulphide (VHMS) deposits formed during rifting of oceanic ridges or back-arc basins. SE Asia region mineralization includes porphyry-related skarn deposits, epithermal deposits, sediment-hosted/orogenic gold deposits, gem deposits, Sn-W and REE deposits and VHMS deposits (Ordovician-Silurian Duc Bo Cu-Pb-Zn deposit in C Vietnam, E Permian Tasik Chini iron-manganese-barite deposit in C Malaysia and Cambro-Ordovician Bawdwin Pb-Zn-Ag deposit in N Myanmar)

Zen, M.T. (1969)- On the Indonesian sulphur deposits. Bull. Nat. Inst. Geology and Mining, Bandung, 2, 2, p. 33-41.
(Sulfur deposits in Indonesia are of volcanic origin. Pure sulphur produced from sublimation of volcanic gases from solfatara fields in extinct and active volcanic regions. Crater lakes contain sulfuric mud with >40% sulfur. Potential crater deposits in Sumatra (Namora Langit, Sorik Merapi), Java (Kawah Putih, Telaga Bodas, Tangkuban Perahu, Kawah Karaha, Siterus, Idjen) and N Sulawesi (Mahawu, Telaga Masem))

Zientek, M.L. & N.J. Page (1990)- Consultancy services in Platinum-group mineral exploration for the Directorate of Mineral Resources. U.S. Geol. Survey, Open-File Report 90-527, p. 1-332.
(online at: http://pubs.usgs.gov/of/1990/0527/report.pdf)
(Review of platinum-group mineral occurrences in Indonesia. Generally in placer deposits derived from ultramafic rocks. Main occurrences in SE Kalimantan (placers in front Meratus Range). Traces of platinum-

group in N Sumatra (Woyla River), C Sumatra (Bengkalis, Riau), S Java (Cilacap, Jampang Kulon), S Sulawesi)

Zwierzycki, J. (1921)- De invloed van de tektoniek op het ontstaan van delfstoffen in Nederlandsch-Indie. Verslag Algemeen Ingenieurs Congres, Batavia 8-15 May 1920, 5th sect., Mining-industry and geology, 6p.
('The influence of tectonics on the origin of economic minerals in the Netherlnds Indies')

Zwierzycki, J. (1957)- Cyna i jej wystepowanie w przyrodzie. Wszechswiat 2, Krakow, p.
('Tin and its occurrence in nature'. Mainly based on Bangka- Belitung tin province of Indonesia. In Polish)

XII. HISTORIC INTEREST, LINKS

XII.1. Historic Interest, Biographies

Abendanon, E.C. (1913)- De Nederlandsche Regeering en de mijnbouw in Ned.-Indie. De Ingenieur 28, 32, p. 668-670.
(online at: https://resolver.kb.nl/resolve?urn=dts:2960045:mpeg21:pdf)
('The Dutch government and mining in the Netherlands Indies'. Critical review of the Dienst van het Mijnwezen/ Bureau of Mines, suggesting the lack of geologic capabilities of its mining engineers and their inadequate methods resulted in lack of success compared to organizations in the British Indies and The Philippines)

Ampferer, O. (1915)- Zur Erinnerung an Richard Johann Schubert. Jahrbuch Kaiserlich Koniglichen Geol. Bundesanstalt 66, 3-4, p. 261-276.
(online at: https://opac.geologie.ac.at › wwwopacx › wwwopac)
('In memory of Richard Johann Schubert', pioneering Austrian micropaleontologist in early 1900's. Classic papers on Permian fusulinid foraminifera from Timor and Letti, and foraminifera from New Guinea and Sulawesi)

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(Pioneers in Austrian geology in 1800's earned medical degree before they changed to geology. Incl portrait of Hungarian geologist Theodor Posewitz, author of the first geologic book on Borneo (1889, 1892) (at that time part of the Austria-Hungarian monarchy))

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(online at: https://archive.org/details/DAmboinscheRari00Rump/page/n39)
('The Ambonese curiosity cabinet, containg a description of all sorts of soft and hard-shelled molluscs, strange lobsters and related sea animals, as well as all sorts of snails and shells that are found in the Sea of Ambon, as well as some minerals, rocks and kinds of earth that are found on Ambon and surrounding islands'. Classic description of marine fauna, geology and mineralogy of Moluccan islands by Rumphius, merchant of Dutch East-India Company (VOC), stationed on Ambon islands from 1653-1702. Includes first descriptions of geodes and Jurassic? belemnites from Taliabu, Sula islands, described as 'stone fingers, like Belemnites' (p. 253-254))

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(online at: http://repository.tudelft.nl/view/ir/uuid%3Ae9a1d32b-641e-40d3-9879-5547336edc3c/)
(Biography of famous Dutch mining engineer Waterschoot van der Gracht. Did fieldwork in Toraja lands of SW Sulawesi in 1913. Partly based on observations in Netherlands Indies, and, like most other Dutch geologists (Molengraaff, Wing Easton, Escher, Smit Sibinga) active in Indonesia in 1920's, WvdG was an early supporter of the Continental Drift Theory of Wegener (also editor of AAPG Symposium on Continental Drift, 1926))

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(Initial volume of bibliography series by Verbeek, listing 2665 titles on geology and mining in and around the Netherlands East Indies until 1912)

Verbeek, R.D.M. (1914-1923)- Opgave van geschriften over geologie en mijnbouw van Nederlandsch Oost-Indie, 1e tot 10e vervolg. Verhandelingen Geologisch-Mijnbouwkundig Genootschap Nederland Kol., Geol. Serie, vols. 1-7.
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(Continuation of Verbeek series of 'Netherlands Indies' geology bibliography, supplements 21-22, listing papers nrs. 5519-5959, published 1935, 1937) (Final volume 23e vervolg by Steenhuis 1951)

Dutch colonial period geological journals

A. Dienst Mijnbouw Nederlands Indie (Netherlands Indies Department of Mines), Bandung

a1. ***Jaarboek van het Mijnwezen in Nederlandsch Oost-Indie*** (Vols. 1-52; 1872-1923)
("Yearbook of the Department of Mines in Netherlands East Indies").
a2. ***Jaarboek van het Mijnwezen in Nederlandsch-Indie*** (Vols. 53-68; 1924- 1939)
("Yearbook of the Department of Mines in Netherlands Indies").
(Published annually in 2 parts: (Technical/administrative and 'Wetenschappelijk' (scientific). From vol. 39 (1910) divided into General part ('Algemeen Gedeelte') and Transactions ('Verhandelingen'). From vol. 26 (1897) also periodically separate Atlas volumes)

(N.B.: Many volumes of the 'Jaarboek' are available online from Google.com, Archive.org or https://catalog.hathitrust.org/Record/007171827, and were also reprinted in 2010 by Nabu Press/ Bibliolife LLC, S. Carolina, USA. Unfortunately the folded plates, which are generally the most valubable parts of the reports, were generally not copied, limiting the value of all these reproduction versions)

b. ***Wetenschappelijke Mededeelingen-*** Dienst Mijnbouw, Bandung (1924- 1940)
('Scientific contributions- Mines department')
- 28 issues; mainly on paleontology topics, 3 volumes on petrography
- continued as Publikasi Keilmuan, vols. 29-33 in 1955-1957 (A. Kraeff (1955), P. Marks (1956, 1957), R. Osberger (1956), F. Laufer (1957), etc.)

c. ***De Mijningenieur*** *('The Mining engineer')*- Dienst Mijnbouw, Bandung (1920-1933; vols. 1-14)
- short papers on mining and geology in Indonesia, issued by 'Vereeniging van Ingenieurs en Geologen bij den Dienst van den Mijnbouw in Nederlandsch-Indie' *(rare!)*

d. ***Vulkanologische Mededeelingen-*** Dienst Mijnbouw, Weltevreden and Bandung (1921-1940)
('Volcanological contributions'- After 1928 named ***Vulkanologische en Seismologische Mededeelingen****)*
(13 monograph issues on active volcanoes of Indonesia)

e. ***Bulletin of the Netherlands Indies Volcanological Survey*** (~1927- 1941)
- issues 1-94 + issues 95-98 by Van Bemmelen during early part of Japanese occupation

f. ***Verslagen en Mededeelingen betreffende Indische delfstoffen en hare toepassingen*** (1917-1940)
('Reports on Indies minerals and their applications') (23 issues)

g. ***Geological maps*** produced before 1941:
- Geological overview maps Netherlands East Indies Archipelago 1: 1,000,000 (1915-1932) (12 of 21 planned sheets published)
- Geologische kaart van Sumatra 1: 200,000 (1927-1937; incomplete series; 13 sheets published)
- Geologische kaart van Java 1: 100,000 (1927-1941 ; incomplete series; 11 sheets published)

B. Other journals with geology papers, published in Indonesia

1. ***Natuurkundig Tijdschrift van Nederlandsch Indie*** (1850- 1940, vols. 1-100), Batavia.
('Journal of Natural Sciences of Netherlands Indies')
- Continued as:
  1a. Natuurwetenschappelijk Tijdschrift van Nederlandsch Indie (1941-1942 and 1946, vols. 101-102)
  1b. Chronica Naturae (1947-1950; vols. 103-106)
  1c. Indonesian Journal for Natural Science/ Madjalah Ilmu Alam untuk Indonesia (1951- 1957; vols. 107-113)
- Natural history journal, and main journal for Indonesia geology papers in late 1800ŝ
- Selected issues digitized and online at: *www.biodiversitylibrary.org/bibliography/13350*
- Chronica Naturae also online at: *http://colonial.library.leiden.edu/...*

2. ***De Mijningenieur*** *('The Mining Engineer')* (1920-1933)
- Published by 'Vereeniging van Ingenieurs en Geologen bij den Dienst van den Mijnbouw in Nederlands Oost-Indie', Bandung;
- Hard to find journal; after 1933 continued as section IV of '*De Ingenieur in Nederlandsch-Indie*'

2b. ***De Ingenieur in Nederlandsch-Indie*** (*'The Engineer in Netherlands Indies'*), 1934-1942.
- continuation of 'De Mijningenieur'
- vols. 1-9 (final issue 9-1, January 1942)
- most issues were available online at: website of Royal Tropical Institute (KIT), Amsterdam, now at: *http://colonialarchitecture.eu/obj?sq=id:jn:15*

2c. ***De Ingenieur in Indonesie*** (*'The Engineer in Indonesia'*), 1948-1957.
- continuation of 'De Ingenieur in Nederlandsch-Indie'
- vols. 1-9 (final issue 9-4, December 1957)
- available online at: *http://koloniaal.library.leiden.edu/...*

C. Journals containing papers on Indonesia geology, published in The Netherlands

1. ***Geologie en Mijnbouw*** *(now: Netherlands Journal of Geoscience)*, Netherlands Geological and Mining Society (KNGMG), Delft, since 1923
   - from 1923-1931 the journal is called *Mijnwezen*
   - most older issues online at: *https://www.kngmg.nl/wp-content/uploads/2018/05/Pre1961.pdf* and at: *https://www.kngmg.nl/wp-content/uploads/2016/03/Index_1961_2004.pdf*

2. ***Verhandelingen Koninklijk Nederlands Geologisch en Mijnbouwkundig Genootschap*** *('Transactions of the Royal Netherlands Geological and Mining Society')*, KNGMG, Delft

3. ***Tijdschrift van het Koninklijk Nederlands Aardrijkskundig Genootschap*** (since 1876) *('Journal of the Royal Netherlands Geographic Society')*
   - many papers on geography and travels in Indonesia, some with geological observations.

4. ***Sammlungen des Geologischen Reichs-Museums in Leiden*** (1881-1924), Leiden Natural History Museum *('Proceedings of the National Geological Museum in Leiden')*
   - mainly collection of paleontological papers on fossils from across 'Netherlands Indies'
   - after 1925 continued as: ôLeidsche Geologische Mededeelingenô and also óScripta Geologicaô
   - all issues available online at: *www.repository.naturalis.nl/*

5. ***Verhandelingen Koninklijke Nederlandse Akademie van Wetenschappen, Amsterdam*** *(Proceedings Royal Netherlands Academy of Sciences)*
   - many of the 1899-1950 papers available for download at *www.digitallibrary.nl* or
   - online at: *www.dwc.knaw.nl/english/academy/digital-library/..*

6. ***Bulletin Maatschappij ter Bevordering van het Natuurkundig Onderzoek der Nederlandsche Kolonien*** *('Society for the promotion of Natural Science exploration of the Netherlands colonies'*)
   - Society founded in 1890, sponsored expeditions to Borneo, New Guinea, etc.
   - Bulletin Issues 3-102, 1891-1913?
   - mainly reports on travels in remote regions of Indonesia, with relatively little on geology.

7. ***Nova Guinea.*** **Uitkomsten der Nederlandsche Nieuw-Guinea-Expeditie(s) in 1903 (1907, 1909, 1912, 1913 en 1920)** *('Nova Guinea. Results of the Netherlands New Guinea expeditions...'*)
   - Journal series documenting ethnological, biological and geological results of New Guinea expeditions of 1903, 1907, 1909, 1912-1913, 1920, 1926.
   - published by E.J. Brill, Leiden
   - Series 1: Volumes 1-18 (1909-1936)
   - New series: volumes 1-10 (1937-1967) (>90% of papers on biology)

8. ***Jaarboek van de Mijnbouwkundige Vereeniging te Delft (1903-1949)***. (*'Yearbook of the Mining students organization, Technical University, Delft'*)
   - Delft mining engineering students yearbooks, which include presentations on Indonesia geology and personnel movement (the majority of geologists- mining engineers in the Netherlands Indies came from Delft)
   - *online at: https://tresor.tudelft.nl/tijdschrift/jaarboeken/*

D. Other Journals/ Publication series of interest to Indonesia SE Asia geology

Geology and Palaeontology of Southeast Asia **(**1964-1984)

- Significant series of 25 books on paleontology of SE Asia, published by University of Tokyo Press; edited by T. Kobayashi or T. Kobayashi and R. Toriyama;
- Results of research by Japanese geologists and paleontologists, organized in research group Association for Paleontological Research in Southeast Asia (APRSA);
- Total of 297 papers, ~80% on paleontology-biostratigraphy topics, spanning fossils from Cambrian-Quaternary age, mainly from Thailand, Malaysia, Indonesia, Philippines;
- First two volumes reprints of papers from other journals, subsequent volumes original contributions
- Volume 15 (1975): interim summary of APRSA activities
- Volume 17 (1976): Special problems of Late Paleozoic
- Volume 21 (1980): Proceedings of Symposium on geology and Palaeontology of Southeast Asia, Tsukuba 1978
- Volume 25 (1984) with 22 useful review papers summarizing knowledge of fossil groups in SE Asia.

XII.3. Links

1. Earth Science organizations

AAPG- AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, Tulsa, USA
- AAPG Bulletin, AAPG Memoirs, Special Volumes, etc.
- Selected papers and conference abstracts online (open access) at: *www.searchanddiscovery.net*
- Online access to AAPG, IPA, SEAPEX papers at *http://payperview.datapages.com/data/open/ppv.do* (subscription required)

CENTER FOR MINERAL AND COAL TECHNOLOGY (Puslitbang Teknologi Mineral dan Batubara, Bandung)
- Jurnal Teknogi dan Batubara (vols. 1-14; 2005-2018) (selected issues online at: *http://jurnal.tekmira.esdm.go.id/index.php/minerba/issue/archive*)
- Indonesian Mining Journal (vols. 1-21; 1998-2018) (2005-2017 issues online at: *http://jurnal.tekmira.esdm.go.id/index.php/imj/issue/archive*)

CENTER FOR VOLCANOLOGY AND GEOLOGICAL HAZARD MITIGATION, Bandung (Pusat Vulkanologi dan Mitigasi Bencana Geologi (PVG); formerly Volcanological Survey of Indonesia)
- Website: *www.vsi.esdm.go.id*

COORDINATING COMMITTEE FOR GEOSCIENCE PROGRAMMES IN E AND SE ASIA (CCOP)
- United Nations program, based in, Bangkok
- CCOP publications since 1967; 2007 catalogue online at: *www.ccop.or.th/download/pub/list_pub.pdf*
- Proceedings Annual Meetings, Technical Bulletins, Special Publications, etc.
- Website with downloads of selected publications: *www.ccop.or.th/..*

DIPONEGORO UNIVERSITY, Semarang
- Repository of geology theses at: *http://eprints.undip.ac.id/view/subjects/QE.html*
- Jurnal Geosains dan Teknologi (vol. 1, 2018) (online at: *https://ejournal2.undip.ac.id/index.php/jgt/issue/archive*)

GADJAH MADA UNIVERSITY, Yogyakarta
- Library website: *http://i-lib.ugm.ac.id/jurnal/* or *http://lib.geologi.ugm.ac.id/web/*
- Archive of papers: *https://repository.ugm.ac.id/*
- Jurnal Teknik Geologi (2013-2014) (online at: *http://lib.geologi.ugm.ac.id/ojs/index.php/geo/issue/archive)*
- Journal of Southeast Asian Applied Geology (vols. 1-7, 2009-2015); continued as Journal of Applied Geology (vols. 1 (2016)- 2 (2017); (online at: *https://jurnal.ugm.ac.id/jag/issue/archive)*

GEOLOGICAL SOCIETY, LONDON
- Journal and book publications online at: Lyell collection: *www.lyellcollection.org* *(not open access)*

GEOLOGICAL SOCIETY OF MALAYSIA, Kuala Lumpur
- Website *www.gsm.org.my/publications/biblio&index*
- Bulletin Geological Society of Malaysia (vols. 1-64, 1968- 2017) (online at: *https://gsmpubl.wordpress.com/category/bulletin/* or at: *www.gsm.org.my/bulletin_archive.php)*
- Warta Geologi (Newsletter Geological Society of Malaysia), 1975-now. (1975-2017 issues online at: *https://gsmpubl.wordpress.com/category/warta-geologi/* or at: *https://gsmpubl.wordpress.com/2014/09/15/warta-geologi/)*

GEOLOGICAL SURVEY INDONESIA (Center of Geological Survey(CGS), Bandung

Jl. Diponegoro 57, Bandung 40122
(several name changes; formerly Dienst Mijnwezen Nederlands Indie, Geological Survey of Indonesia, Geological Research and Development Centre (GRDC), Pusat Survei Geologi (PSG), etc.)
- Website: *www.bgl.esdm.go.id/*
(online papers by author at: *www.bgl.esdm.go.id/publication/index.php/dir/author*)
- Geological Museum website: *http://museum.bgl.esdm.go.id/*
- Geological map series Indonesia 1:250,000 and 1: 1,000,000; Java also 1:100,000 scale

Publications (some of more recent journals online at: *www.bgl.esdm.go.id/dmdocuments*):
- GRDC Special Publications 1-38 (1978-2009)
- Bulletin Geological Research and Development Centre (vols. 1-21; 1979-1997)
- GRDC Paleontology Series and Geophysical Series (vols. 1-10; 1981- 1999)
- Jurnal Geologi Indonesia (Indonesian Journal of Geology) (JGI; vols. 1-8, 2006-2013)
(online at: www.bgl.esdm.go.id/publication/index.php/dir/publisher_detail/4)
continued as Indonesian Journal on Geoscience (IJOG; vols. 1-5, 2014-2018)
(online at: https://ijog.geologi.esdm.go.id/index.php/IJOG/issue/archive)
- Jurnal Geologi dan Sumberdaya Mineral/ J. Sumber Daya Geologi (J. Geol. Mineral Res.) (1991- 2018)
(online at: http://jgsm.geologi.esdm.go.id/index.php/JGSM/issue/archive)
- Buletin Sumber Daya Geologi (vols. 1-13, 2006-2018)
(vols. 1- 13/1 online at: http://buletinsdg.geologi.esdm.go.id/index.php/bsdg/issue/archive)
- Warta Geologi (2006-2010; popular geology magazine; same name as GSM-Malaysian magazine)
(vols. 1-5 online at: http://www.bgl.esdm.go.id/index.php/koleksi-warta-geologi)
- GEOMAGZ Majalah Geologi Populer (continuation of Warta Geologi)
Popular geology journal, since 2011; published by Badan Geologi, Bandung
(online at: http://geomagz.geologi.esdm.go.id/category/s15-egeomagz/c86-egeomagz/)
- Publikasi Ilmiah Pendidikan dan Pelatihan Geologi (vols. 1- 12? (2016))
('Scientific Publication for Education and Geology Training')

GEOSCIENCE AUSTRALIA (GA), Canberra, Australia
- Formerly Australian Bureau of Mineral Resources (BMR), Australian Geological Survey Organization (AGSO), etc.
- Website: *www.ga.gov.au*
- Extensive online data bases on Australian wells data, well logs, reports, etc.
- Publications and Data search tool at: *https://ecat.ga.gov.au/geonetwork/srv/eng/search*
BMR Journal of Australian Geology and Geophysics (1976-1992), AGSO J. Australian Geology and Geophysics (1993-2000) (*online at: www.ga.gov.au/data-pubs/library/legacy-publications/journals*)
Bulletin Bureau Mineral Resources (1932-2001)
Numerous unpublished Reports, Records.

HASANUDDIN UNIVERSITY (UNHAS), Makassar, Sulawesi
- Website: *http://repository.unhas.ac.id/*
- Jurnal Penelitian Geosains (Teknik Geologi Universitas Hasanuddin), vols. 1 (2004?)- now
- International Journal of Engineering and Science Applications (IJEScA, vols. 1-4 (2014-2017)
(online at: *http://pasca.unhas.ac.id/ojs/index.php/ijesca/issue/archive*)

INDONESIAN GEOLOGISTS ASSOCIATION (IAGI) (Ikatan Ahli Geologi Indonesia), Jakarta
- Website: *www.iagi.or.id/* (restricted access)
- Proceedings of Annual IAGI Conventions (ôPertemuan Ilmiah Tahunan xx IAGIö), since 1971
(Titles/abstracts of years 2006-2013 online at: *www.iagi.or.id/paper*; volumes generally hard to find or buy)
- Newsletters: Warta IAGI, Berita IAGI
- Journals: Geologi Indonesia (since 20xx: Majalah Geologi Indonesia; since ~1974?, MGI)
- Special publications (no listings or purchasing information online).

INDONESIAN ASSOCIATION OF GEOPHYSICISTS (Himpunan Ahli Geofisika Indonesia; HAGI),

Jakarta
- Website: *www.hagi.or.id/*
- Proceedings of Annual Conventions since 1973 *(hard to find)*
- Jurnal Geofisika

INDONESIAN ASSOCIATION OF SEDIMENTOLOGISTS (FOSI), Jakarta
- Website: *www.iagi.or.id/fosi/*
- Berita Sedimentologi (Indonesian Journal of Sedimentary Geology), vols. 1-40 (1996-2018) (volumes 20-40 online at: *www.iagi.or.id/fosi/*)
- LinkedIn page at *www.linkedin.com*

INDONESIAN PETROLEUM ASSOCIATION (IPA), Jakarta
- Website: *www.ipa.or.id*
- Proceedings of Annual IPA Conventions since 1972 (online at AAPG Datapages; subscription required)
- Special Publications (Atlas of oil and gas fields, geothermal gradient map, etc.)
- Fieldtrip Guidebooks, short courses, etc.

INDONESIAN SOCIETY OF ECONOMIC GEOLOGISTS (MGEI), (Masyarakat Geologi Ekonomi Indonesia), Jakarta
- Subdivision of IAGI, with separate Annual conventions since 2009.
- Website: *http://mgei-iagi.org/*

INDONESIAN INSTITUTE OF SCIENCES (LIPI), Research Center for Geotechnology, Bandung
- Formerly Lembaga Geologi dan Pertambangan Nasional (National Institute of Geology and Mining)
- Website: *www.geotek.lipi.go.id*
- Online Indonesian Scientific Journal Database: *http://isjd.pdii.lipi.go.id/*
- Bulletin of National Institute of Geology and Mining Bandung (vols. 1-5, 1968-1975) (online at: *http://pustaka.geotek.lipi.go.id/index.php/category/jurnal/nigm/*)
- Journal RISET Geologi dan Pertambangan (Indonesian Journal of Geology and Mining)
  (vols. 1-10 (1977-1991) online at: *http://pustaka.geotek.lipi.go.id/index.php/category/jurnal/riset/)*
  (vols. 15-27 (2005-2017) online at: *http://jrisetgeotam.com/index.php/jrisgeotam/issue/archive*)
- Proceedings Annual Geoteknologi Research Conferences
  (1995-1996 and 2006-2016 online at: *http://pustaka.geotek.lipi.go.id/index.php/category/prosiding/*)

INSTITUTE TECHNOLOGY, BANDUNG (ITB), Bandung
- Library website: *http://digilib.batan.go.id/;* restricted access*; also at: http://isisnetwork.lib.itb.ac.id/)*
- Buletin Geologi, ITB (vols. 1 (1980)- 42 (2015))
  (initially as Buletin Dept. Teknik Geologi ITB/ Jurusan Geologi ITB (= Bull. Geology Dept. ITB))
- Bulletin of Geology, vols. 1-2 (2017-2018)
  (online at: *http://buletingeologi.com/index.php/buletin-geologi/issue/archive*)
- Jurnal Teknologi Mineral (JTM) (Journal of Mineral Technology, ITB) (1994-)
  (abstracts 1994-2007 online at: *www.fttm.itb.ac.id/jtm/index.php)*
  (2009-2012 volumes online at: *http://idci.dikti.go.id/pdf/JURNAL/JTM/)*
- ITB Journal of Mathematical and Fundamental Sciences (1961- now)
  (previously known as: ITB Journal of Science (2008-2012), Proc. ITB Science and Technology (2003-2007), Proceedings ITB (1961-2002) (includes some geology papers; online at: *http://journal.itb.ac.id/)*

INSTITUT SAINS & TEKNOLOGY AKPRIND, Yogyakarta
- Jurusan Teknik Geologi website: *https://geologi.akprind.ac.id/*
- Jurnal Technoscientia (vols. 1-11, 2008-2018)
  (some issues online at: *https://journal.akprind.ac.id/index.php/technoscientia/issue/archive*)

LEMIGAS (Pusat Penelitian dan Pengembangan Teknologi Minyak dan Gas Bumi), Jakarta
(formerly Lembaga Minyak dan Gas Bumi; R&D Centre for Oil and Gas Technology)

- Website: *www.lemigas.esdm.go.id*
  (Lemigas website(s) changed frequently and tends to function very poorly; HvG 6/2018)
- LEMIGAS Scientific Contributions (Oil and Gas), vols. 1 (1977)- 40 (2017)
  (selected recent issues online at: *http://www.journal.lemigas.esdm.go.id/ojs/*)
- Lembaran Publikasi Minyak dan Gas Bumi, vols. 7 (1973)- 51 (2017)
  (selected issues online at: *www.lemigas.esdm.go.id/publikasi/read/lembar/1/* or
  www.journal.lemigas.esdm.go.id/index.php/LPMGB/issue/archive?issuesPage=1issues)

MARINE GEOLOGICAL INSTITUTE OF INDONESIA (Puslitbang Geologi Kelautan), Bandung
- Website: *www.mgi.esdm.go.id*
- Bulletin of the Marine Geological Institute of Indonesia (1985- 1996?)
- Jurnal Geologi Kelautan (2003-2017)
  (online at: *http://ejournal.mgi.esdm.go.id/index.php/jgk/issue/archive?issuesPage=1issues*)
- Bulletin of the Marine Geology (1997-2017)
  (vols. 22-32 online at: *http://ejournal.mgi.esdm.go.id/index.php/bomg/issue/archive)*

NATURALIS BIODIVERSITY CENTER (National Museum of Natural History), Leiden, Netherlands
- Long history of collection and study of fossil and modern fauna and flora in Indonesia
- Main publication series since late 1800's: Sammlungen Geol. Reichsmuseum Leiden, Scripta Geologica, Leidsche Geologische Mededelingen, Zoologische Verhandelingen.
- Most publications online at: *www.repository.naturalis.nl/*

OCEAN DRILLING PROGRAM (IODP), College Station, Tx, USA
- Information on worldwide deep sea drilling programs (but none in Indonesian deep waters!)
- Website *www-odp.tamu.edu/*
- Deep Sea Drilling Reports (DSDP) Volumes 1-96 (1968- 1985)
- Ocean Drilling Program (ODP) Legs 100-210 (1985- 2003)
- Integrated Ocean Drilling Program (IODP) Legs 301-321 (2003- now)

PADJADJARAN UNIVERSITY (UNPAD), Bandung
- Bulletin of Scientific Contribution, vols. 1-16 (2003-2018)
  (most papers of volumes 3-16 online at: http://jurnal.unpad.ac.id/bsc/issue/archive)
- Journal of Geological Sciences and Applied Geology (2016-)
  (volume 2 online at: http://jurnal.unpad.ac.id/gsag/issue/archive)

PETROLEUM EXPLORATION SOCIETY OF AUSTRALIA (PESA)
- PESA journal available through AAPG Datapages (since 2017; subscription)

THE PETROLEUM GEOLOGY OF SE ASIA (PGSEA)
- Website: *www.pgsea.com*
- Short course on SE Asia petroleum geology by Ian Longley (formerly with Dick Murphy)
- Data packages of SE Asia geolocated images, cross-sections, etc. (for sale)

PT PATRANUSA DATA (PND), Jakarta
- Official government supplier of Indonesia well and seismic data for oil and gas industry
- Website: *www. www.patranusa.com/*
- Inameta Journal (information on bid rounds, tender blocks, etc.) (vols. 1-8 online)

PUSAT TEKNOLOGI BAHAN GALIAN NUKLIR (BATAN), Jakarta
- Technology Center for Nuclear Minerals
- Journal: EKSPLORIUM- Buletin Pusat Teknologi Bahan Galian Nuklir
  (2011-2017 issues online at: *http://jurnal.batan.go.id/index.php/eksplorium/issue/archive)*

SOCIETY OF INDONESIAN PETROLEUM ENGINEERS (IATMI; Ikatan Ahli Teknik Perminyakan Indonesia), Jakarta
- Website: *https://iatmi.or.id/*
- Journal: Jurnal Teknologi Minyak dan Gas Bumi (2009?- now)
  (some issues online at: *www.iatmi.or.id/assets/bulletin/pdf/JTMGB/*)

SOUTHEAST ASIA PETROLEUM EXPLORATION SOCIETY (SEAPEX), Singapore
- Website: *www.seapex.org*
- Offshore SE Asia Conferences every second year since 1973
  - 1976-1994 SEAPEX proceedings online at: *www.seapex.org/press-list.php* (members only)
..- 1974-2017 proceedings online through AAPG Datapages paid subscription
  (online at: *http://archives.datapages.com/data/browse/southeast-asia-petroleum-exploration-society-seapex/)*
- Special Publications, Short courses
- ōSEAPEX Pressô quarterly newsletter.

SE ASIA RESEARCH GROUP (SEARG), ROYAL HOLLOWAY, University of London, Egham, UK.
- Industry-sponsored academic research group, active since 1970's
- Website (with selected downloadable publications): *http://searg.rhul.ac.uk/*

SEKOLAH TINGGI NASIONAL (STTNAS), Yogyakarta
- Prosiding Seminar Nasional RETII
  (seminars 8 (2013)- 12 (2017) online at: https://journal.sttnas.ac.id/ReTII/issue/archive)

TRISAKTI UNIVERSITY, Jakarta
- Bulletin Ilmiah Mineral dan Energi (MINDAGI) (since 2007)
  (few issues online at: *http://www.trijurnal.lemlit.trisakti.ac.id/index.php/mindagi/issue/archive)*
- Jurnal Ilmiah Teknik Perminyakan

UNIVERSITAS ISLAM RIAU, Dept. Geological Engineering, Pekanbaru
- Journal of Geoscience, Engineering, Environment and Technology (JGEET) (since 2016)
  (online at: http://journal.uir.ac.id/index.php/JGEET/issue/archive)

UNIVERSITI KEBANGSAAN MALASIA (National University of Malaysia), Kuala Lumpur
- Sains Malaysiana (vols. 1-46, 1971-2017; general science journal with occasional geology papers)
  (2010-2017 issues online at: *www.ukm.my/jsm/contents.html*)

UPN 'VETERAN' UNIVERSITY, Yogyakarta
- Jurnal Ilmiah Magister Teknik Geologi (MTG), 2008- 2015
  (vols. 1-8 online at: *www.trijurnal.lemlit.trisakti.ac.id/index.php/petro/issue/archive)*
- Jurnal Mineral Energi dan Lingkungan (vol. 1, 2017-)
  (online at: *http://jurnal.upnyk.ac.id/index.php/JMEL/issue/archive)*
- Repository of geological thesis summaries: *http://eprints.upnyk.ac.id/view/subjects/QE.html*

U.S. GEOLOGICAL SURVEY (USGS), Denver, etc., USA
- Includes petreum system studies on selected Indonesian basins
- Website: *http://energy.cr.usgs.gov/oilgas/...*

2. Other Websites of Interest

Archive.org (Website: *www.archive.org)*
Digital library of older, non-copyrighted books and journals (including some issues of ōJaarboek van het Mijnwezen', 'Natuurkundig Tijdschrift voor Nederlandsch Indieö, Sarasin Sulawesi books, Junghuhn Java book, etc.) *(unfortunately generally scanned without foldout maps, often the most useful items!)*

Biodiversity Heritage Library (BHL)
Digital library of older, non-copyrighted books and journals
- including many issues of Natuurkundig Tijdschrift voor Nederlandsch Indieô (1851-1922)
  (online at: https://www.biodiversitylibrary.org/bibliography/13350/summary)

DMR (Department of Mineral Resources) Library, Bangkok
- Numerous publications on geology of Thailand can be searched and downloaded from DMR Web Gateway at *www.dmr.go.th/main.php?filename=Library2015___EN*
- Website with additional geological information: *www.dmr.go.th/main.php?filename=web_en*

Elsevier Publishing Co, Amsterdam
Geoscience journals online for subscribers at: *www.sciencedirect.com*
- Journal Southeast Asian Earth Sciences 1986-1996, Journal of Asian Earth Sciences 1997- now
- Also: Tectonophysics, Earth Science Reviews, Palaeogeography, Palaeoecology, Palaeoclimatology, Marine Micropaleontology, Marine Geology, Sedimentary Geology, etc.,

Google Books
Many of the older, non-copyright-protected books/ journals are in the Google digitized books collection (unfortunately maps and foldout figures/ tables generally not copied)
- website: *www.google.com/books*

Japan Science and Technology Agency
- Many geology papers published in Japan are available online here
- Website: *www.journalarchive.jst.go.jp/archivesearch*

KITLV- Koninklijk Instituut voor Taal, Land en Volkenkunde (Royal Netherlands Institute of Southeast Asian and Caribbean Studies), Leiden, Netherlands.
- Website: *www.kitlv.nl*

Royal Netherlands Geographic Society (Kon. Nederlands Aardrijkskundig Genootschap/ KNAG)
- Journal (ôTijdschrift KNAGö) most issues online at *www.delpher.nl/*)
- Information on expeditions sponsored to Central Sumatra (1979) and New Guinea (1939, 1959)
- Website: *www.knag-expedities.nl/pages/expedities.php*

Royal Tropical Institute (KIT), Amsterdam ('Tropenmuseum')
- Dutch colonial historic maps, photos, etc. *(much of this was closed in ~2013 due to budget cuts)*
- Website: *www.kit.nl*

Seismic Atlas of SW Asian Basins
Website co-ordinated by Herman Darman; a collection of non-proprietary seismic lines across SE Asia basins
- website: *http://geoseismic-seasia.blogspot.com*

University of Texas Library
- Downloadable US Army 1954 1:250,000 scale topographic maps of Indonesia
- Website: *www.lib.utexas.edu/maps/indonesia.html*

VSA- Virtual Seismic Atlas
Library of seismic lines across globe, with some (older) examples from Indonesia
- Website: *http://see-atlas.leeds.ac.uk:8080/search?s=indonesia*